United Nations Development Programme

Project Document

Project title: Improving Adaptive Capacity and Risk Management of Rural Communities in Mongolia		
Country(ies): Mongolia	**Implementing Partner (GCF Executing Entity):** Ministry of Environment and Tourism	**Execution Modality**: National Implementation (NIM)
Contributing Outcome (UNDAF/CPD): Outcome 1. Growth and development are inclusive and sustainable, incorporating productive capacities that create employment and livelihoods for the poor and excluded.		
UNDP Social and Environmental Screening Category: Moderate	**UNDP Gender Marker:** *2*	
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LPAC meeting date: 25 February 2021		
Planned start date: 9 February 2021	**Planned end date:** 9 February 2028	
Expected date of posting of Mid-Term Review to ERC: 9 November 2024	**Expected date of posting Terminal evaluation report to ERC:** Within six (6) months after submission of Project Completion Report or 9 November 2028, whichever is earlier.	

Brief project description:

With an observed temperature increase of 2.1°C over the past 70 years[1], Mongolia is among the countries most impacted by climate change. Increased temperatures, coupled with decreased precipitation, have resulted in a drying trend impacting pastures and water sources, and shifting natural zones. Changes have also been observed related to the frequency and intensity of extreme events, including disasters brought about by dzud (summer drought followed by harsh winters [low temperatures and higher snowfall]), drought, snow and dust storms, flash floods and both cold and heat waves. Responses to climate impacts by herders have, furthermore not been informed by climate information or by the potential impact of those responses on land and water resources. Unsustainable herding practices and livestock numbers are further stressing increasingly fragile ecosystems and related ecosystem services.

Livestock productivity and quality has been declining in the changing landscape due to drought conditions, heat stress, harsh winters and unsustainable practices, resulting also in reductions in outputs for subsistence and important income sources. Studies indicate that livestock sector production decreased by 26% compared to that of the 1980s, along with its contribution to the country's economy.

Herder households make up one third of the population in Mongolia, approximately 160,000 households or 90% of the agriculture sector. Around 85% of all 332 soum economies in 21 provinces of the country are agriculture based. While herder households are the most exposed to climate risks, their scale and thus potential impact also means that tailored interventions can support transformational change towards more climate-informed and sustainable herder practices, benefitting the sector, the economy and the environment.

[1] Technology Needs Assessment, Volume 1 – Climate Change Adaptation in Mongolia, Ministry of Environment and Green Development, 2013

The proposed project seeks **to strengthen the resilience of resource-dependent herder communities in four aimags vulnerable to climate change.** This will be achieved through three complementary Outputs:

- **Integrate climate information into land and water use planning at the national and sub-national levels**
- **Scaling up climate-resilient water and soil management practices for enhanced small scale herder resource management**
- **Build herder capacity to access markets for sustainably sourced, climate-resilient livestock products**

The proposed project brings together climate-informed natural resources management and sustainable livestock practices – building on traditional cooperative approaches among herders, innovative technologies, such as blockchain for traceability of sustainably sourced and climate-resilient livestock products, and with links to a responsible private sector investment fund to ensure long term, market-driven sustainability. As 80% of Mongolia is rangeland, information generated under Output 1 is relevant across the country and will be applied at the sectoral, national and local levels. Interventions under Outputs 2-3 are focused on priority aimags identified by government, with high vulnerability to climate change impacts and slow onset disasters, as well as fragile catchment areas that need protection/rehabilitation. As the areas are also representative of diverse ecological zones, the approaches and interventions of the project can be replicated in other aimags of the country.

With Mongolia, represented by the Ministry of Environment and Tourism (MET) as the executing entity (implementing partner), and the Ministry of Agriculture and Light Industry (MoFALI) as a key partner, this integrated proposal is fully aligned with national priorities and is in support of Mongolia's adaptation and mitigation goals detailed in the nationally determined contribution (NDC), namely: to implement sustainable pasture management and emissions reductions in the livestock sector through soil carbon sequestration, to maintain availability of water resources through protection of runoff formation zones and their native ecosystems in river basins, and to introduce water saving technologies. The proposed project contributes to several Sustainable Development Goals (SDGs): SDG1 No Poverty, SDG12 Responsible Consumption and Production, SDG13 Climate Action, SDG15 Life on Land and SDG17 Partnerships for the Goals.

FINANCING PLAN	
GCF grant	USD 23,101,276
(1) Total Budget administered by UNDP	**USD 23,101,276**
CONFIRMED (PARALLEL) CO-FINANCING	
Ministry of Environment and Tourism	USD 20,000,000
National Emergency Management Agency	USD 3,000,000
Ministry of Food, Agriculture and Light Industry	USD 33,200,000
(2) Total confirmed co-financing	**USD 56,200,000**
(3) Grand-Total Project Financing (1)+(2)	**USD 79,301,276**

SIGNATURES

Signature: N.Urtnasan, Minister of Environment and Tourism	**Agreed by Implementing Partner[2]**	**Date/Month/Year:** **30th March 2021**
Signature: Elaine Conkievich Resident Representative UNDP Mongolia	**Agreed by UNDP**	**Date/Month/Year:** **30th March 2021**

Disbursement: Government is aware of the conditions of disbursement ascribed to the first and subsequent tranches of the GCF funding as specified in the FAA (and in particular Clause 9 of the FAA). To the extent that these obligations reflect actions of the Government, the Government must ensure that the conditions are met and there is continuing compliance, as well as understanding that availability of GCF funding is contingent on meeting all conditions listed in the FAA.

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II. DEVELOPMENT CHALLENGE

Observed climate change trends in Mongolia are evident since the 1940's, with impacts on traditional herder households (30% of the population) and on the natural resources upon which they rely. These impacts are multi-faceted and interlinked, and include increases in air temperatures resulting in melting glaciers and permafrost, precipitation reductions (particularly during summer), intensifying desertification and an overall shift of desert zones to the North. Overall, climate change is having a drying effect on Mongolia and is contributing to land degradation and desertification - 90% of the Mongolian territory is regarded as vulnerable to desertification.[1]

Over the past 70 years the mean annual air temperature has increased by 2.1°C[2]. Annual and summer rainfall has decreased and is expected to continue to decrease, whilst winter snowfalls have increased in places. Together these increases in summer drought and increasing winter snowfalls contribute to more extreme dzud events resulting in high livestock losses. Average annual precipitation (90% of which falls as rainfall during April-September) has decreased by 10% over the past 70 years, resulting in overall higher aridity, particularly during summer. This warming and drying trend has contributed to desertification in Mongolia, affecting 70% of the grasslands of the country to varying degrees. Pastureland health and availability of biomass heavily affect livestock and livelihoods of herders. Winter pasture yield and grazing capacity following a dry summer versus a relatively mild summer significantly affects the survival rates of animals. Ecosystems of the forest steppe and the high mountains are projected to decrease and the steppe and the desert steppe are expected to expand. Pasture biomass is expected to decrease significantly in all regions, especially in the forest-steppe and steppe regions[3].

Seasonal thawing of permafrost layers has also increased, changing the patterns and typology of permafrost, as well as vegetation patterns and water resources. The area of glaciers has decreased by 30% over the last 70 years, leading to changes in river runoff - expected to be lower in most regions of Mongolia, and higher in some mountain areas. Lake volumes are expected to change, with some rising due to glacier and permafrost melting, but mostly lowering or disappearing altogether[4]. The latest study commissioned by Ministry of Environment and Tourism (MET)/UNDP shows that the permafrost distribution shrunk by 5% in the last 20 years over the country's territory[5].

General Circulation Models (GCM) project that Mongolia will be warmer by 2.56°C and 5.16°C by 2050 and 2090 respectively. Studies further suggest that for East Asia by the end of the century, 1-in-20-year maximum daily precipitation events are likely to become 1-in-4-year to 1-in-15-year events, and the 1-in-20-year hottest day will likely become 1-in-2-year or annual events.[6] Whilst there may potentially be an overall increase in precipitation, this will be exceeded by increases in the evaporation rate[7], reducing water availability and subsequent water resources. According to downscaled projections (scenario RCP8.5) using a regional climate model (RegCM4)[8] [9], Mongolia's annual mean temperature will be warmer by 1.1-1.5°C, 2.2-3.4°C and 4.0-5.7°C by 2030, 2050 and 2080. Mean annual precipitation is projected to increase by 5.3-5.6%, 13.7-14.5% and 25.8-32.1% respectively at the same time, though there is an accompanying projected 10-20% decrease in summer rainfall throughout central parts of Mongolia. These projected decreases in summer rainfall and increases in temperature (increasing aridity during

[1] Batjargal, Zambyn; Desertification in Mongolia, RALA Report 200 (NEMA)
[2] Technology Needs Assessment, Volume 1 – Climate Change Adaptation in Mongolia, Ministry of Environment and Green Development, 2013
[3] MARCC (2014) Mongolia Second Assessment Report on Climate Change 2014. Minist. Environ. Green Dev. Mong. pp. 1-302.
[4] https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2016GL072033
[5] Permafrost mapping in Mongolia, Insitute of Geoecology, 2016
[6] IPCC. 2012. Summary for Policymakers. In Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change. Edited by C. B. Field et al. Cambridge, UK and New York: Cambridge University Press, 1–19 (Figure SPM.4A and SPM.4B).
[7] UNFCCC Third National Communication, 2018
[8] Future projections of climate change over Mongolia is predicted using an ensemble mean of 10 Global Climate Models (GCMs). However, GCMs output (200km) have been downscaled to regional scale using Regional Climate Model (RCMs) similar to the CORDEX (Coordinated Downscaling Experiment, 50-60km) experiment, except down to a finer spatial resolution (30km). All climate change impact assessments on socio-economic sectors in the country were done based on these high resolution results during TNC (Third National Communication).
[9] Third National Commination of Mongolia under UNFCCC, p.134-137, 2018

summer) are consistent with observed trends in historical climate, both at the national level and in target aimags, where decreasing precipitation, increasing temperatures and potential evapotranspiration during summer combine with increases in winter snowfall in 3 aimags (Figures 26-30, FS) to increase the intensity of dzuds (Figure 46 and 47, FS). These trends are consistent with downscaled projections using a regional climate model, which indicate increasing temperatures and decreasing precipitation during the summer season in the target aimags (Figures 37-40, FS) and simulated increases in the intensity of dzuds (Figure 44, FS).

The country is also impacted by natural disasters, including harsh winters, drought, snow and dust storms, flash floods and both cold and heat waves, which take a heavy toll on livestock and thereby rural livelihoods. The magnitude and frequency of natural disasters have nearly tripled due to climate change[10] in the last decade. Related economic costs are estimated to be USD10-15million annually. Studies indicate drought as the most serious extreme disaster affecting the country in the last 50 years, with an increasing trend in the area affected by drought between 1951 and 2012.[11] Observations indicate that since 2000, summer droughts, which reduce pasture for livestock, are more frequently followed by harsh winters with heavy snowfalls and/or lower temperatures, the combination of which led to dzud events. Since 1940 winter snowfall has increased by 22%, which combined with increasing summer drought (reducing pastures) leads to a significant increase in dzud events since 1999.

Extended periods of summer drought and winter snow coverage, as with dzud events, result in significant losses of livestock due to the lack of vegetation for grazing, and thus impacts herder livelihoods. This is consistent with experiences shared by herder representatives, who have reported increases in dzuds events and related losses to livestock.[12] The 2009-10 dzud winter disaster was particularly devastating, when over 10 million head of livestock perished; 22% of the national herd. The disaster directly affected 200,000 households or nearly a million people in a country of 2.8 million[13].

The climate rationale for the project is primarily based on observed and projected increases in the frequency and severity of dzud events, which quantify the combination of summer drought, followed by harsh winters (high snowfall and/or low temperatures), and which lead to increased livestock losses (91% of non-natural livestock mortality) during winter. The climate changes that contribute to increasing dzud intensity and frequency, particularly increases in summer drought, also lead to other secondary effects:

- Reductions in the number and area of lakes on the plateau[14] which reduce access to water resources for livestock;
- Reduced vegetation and fodder available at the end of the summer and throughout the winter.

These increases in drought and consequent reductions in water and vegetation reduce the condition of livestock by the end of summer, which increases the risk of mortality during the following winter. If the winter is harsh (either low temperatures or high snowfalls) then mortality is higher. Unsustainable livestock practices also contribute to land degradation and affect water resources in Mongolia. Coping mechanisms, such as increasing the herd size to avoid a total loss during a dzud, have in part contributed to the growing number of livestock in Mongolia – now 70.9 million animals. The growing size, and changing make-up of the herds, apply pressure on land and water resources, accelerating land degradation and water scarcity.

The impact of climate change is therefore two-fold and mutually compounding 1) climate change is having an overall drying effect on Mongolia, changing the availability or condition of land and water resources, and 2) the choices made by herders to protect their herds against extreme events (i.e. increasing herd size to save from total loss during dzud) are adding pressure to increasingly fragile land and water resources. Recognizing this relationship, 3% of the national budget is allocated to support the National Mongolian Livestock Program[15] which sets ambitious livestock

[10] Mongolia SNC, Ministry of Nature and Environment, UNEP, 2010
[11] Wang, L., Yao, Z-J., Jiang, L., Wang, R., Wu, S-S., & Liu, Z-F. (2016). Changes in Climate Extremes and Catastrophic Events in the Mongolian Plateau from 1951 to 2012. Journal of Applied Meteorology and Climatology, 55(5), 1169-1182. DOI: 10.1175/JAMC-D-14-0282.1
[12] Discussions with Ministry of Agriculture officials and with representatives of the four aimags.
[13] UNDP, NEMA, SDC (2010) The 2009-10 Dzud Winter Disaster in Mongolia: Lessons Learned (unpublished)
[14] see https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2016GL072033
[15] Approximately US$75 million against 2017 budget.

reduction targets, with an overall purpose of developing "a livestock sector that is adaptable to climate change and social development and to create an environment where the sector is economically viable and competitive in the market economy, to provide safe and health food supply to the population, to deliver quality raw materials to processing industries, and to increase exports." The Programme includes investments in livestock health and veterinary services (including measures to combat and prevent infectious animal diseases which currently prevent Mongolian livestock products from export), guidance for herders on herd structure, development of an animal registration database and network, construction of wells for livestock water supply, and development of industry marketing to capture the intended market.

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Further, the Government of Mongolia has highlighted the impact of climate change on land and water resources and the vulnerability of herders in its adaptation strategy and programmes. As a party to the UNFCCC, Mongolian Parliament approved the National Action Programme on Climate Change (NAPCC) and updated it in 2011 to include concrete measures in response to climate change covering all principal sectors of the economy. Further, a technology needs assessment (TNA) was conducted to determine the highest priority sectors, and technologies needed, in order to adapt to climate change. The participatory TNA process led by the National Climate Change Coordination Office (CCCO) under the MET, applied Multi Criteria Decisions Analysis (MCDA), through which animal husbandry was identified among the most vulnerable sectors, given social, economic and environmental losses due to climate change impacts are expected to be higher than those of other sectors[17]. The agriculture sector is the second largest contributor (13.7% of GDP) and employs almost 40% of country's workforce.
The project is consistent with Mongolia's development and adaptation strategies and plans. In the NDC submitted by Mongolia priorities for adaptation are based on" a detailed analysis of the expected impacts, potential solutions and challenges, and of possible synergies between adaptation and mitigation activities". In its vision for adaptation, NDC highlights animal husbandry, water resources management and natural disaster management.

For livestock management, the NDC states the need to "maintain ecosystem balance through improving pasture management". It suggests doing so by; reducing rate of pasture degradation, regulating headcounts to match with

[16] Approximately US$75 million against 2017 budget.
[17] Technology Needs Assessment, Volume 1 – Climate Change Adaptation in Mongolia, Ministry of Environment and Green Development, 2013

pasture carrying capacities, regulating pasture use, increasing community participation in proper use of pastures, their monitoring and conservation, and by building early warning systems for drought and dzuds to prevent animal loss.

For water resources the NDC stresses the need "to ensure proper use of water resources, and to strengthen integrated water resource management in river basins" through IWRM and multi-stakeholder relations (sic), strengthening human resource capacity, implementing ecosystem based technologies and by supporting ecosystem services.

In the context of natural disaster management, the NDC emphasizes the need to strengthen early warning system for natural disasters by establishing early detection and prediction systems, disaster risk assessments at local and sub-national levels and by improving forecast quality through increasing computing and storage capacity.

As a party to the UNFCCC, Mongolian Parliament approved the National Action Program on Climate Change (NAPCC) in 2000 and updated it in 2011. The goals of the program are to ensure environmental sustainability, development of socio-economic sectors adapted to climate change, reduction of vulnerabilities and risks, and mitigation of GHG emissions as well as promoting economic effectiveness and efficiency and implementation of 'green growth' policies. The goals of this proposed project are fully aligned with NAPCC and strategic objective 2 entitled with "Ensure environmental sustainability and reduce socio-economic vulnerabilities and risks through strengthening the national climate change adaptive capacity".

NAPCC Strategic objective 2 includes the following broad categories of activities in the first phase: early warning, disaster response systems, integrated water and basin management plans, water efficiency and re-use of waste water, water harvesting, water resources assessment in the most vulnerable regions and coordinated development strategies and policies, reduce land degradation and desertification, measures to reduce livestock vulnerability and risks, irrigated agriculture through the use of drought resistant crops, and water saving and soil protection technologies. In the second phase NAPCC will expand on phase 1 activities including: water harvesting structures, IWRM in major basins, measures against land degradation and desertification, policies for livestock management adapted to climate change, and early warning systems for natural disasters.

Mongolia's 2nd National Communication to UNFCCC highlights the livestock sector as the key sector requiring adaptation assistance. It recommends a number of adaptation measures including all measures proposed in this project. Some of the corresponding measures suggested in the submission include: building capacity of livestock managers, introduction of technology for the processing of livestock raw materials, support to household and community based enterprise, regulation of animal numbers, development of pasture appropriate management systems, imposing legislation on pasture leasing, utilization and ownership, ensuring sustainable pasture utilization through improving pasture water availability, and the setting up of pastureland irrigation system.

A Technology Needs Assessment for Climate Change in Mongolia conducted by the Ministry of Environment indicates the following in order of priority for the livestock Sector:

Technology	The main climate change adaptation benefits
Seasonal to inter-annual prediction and early warning system	Improving climate change prediction and research capacity Reducing economic losses caused by climate related disasters Strengthening capacity to plan and implement climate change adaptation measures Increased resilience to natural disasters
Planting of forage perennials resistant to drought and cold winter for fodder production	Improving vegetation cover and biodiversity Reducing pasture degradation
Selective breeding of livestock	Improving livestock quality and new breeds resilient to climate change and local context Controlled animal numbers and composition
Producing supplement feed for winter and spring	Efficient use of pasture plants Increased resilience of livestock to dzud and drought

Rain and snow water harvesting for herder groups	Efficient water resource usage Improving vegetation cover if water is used for forage planting Better resilience to drought and drier climate
Producing supplement forage with bacterial enzymes for livestock	Efficient use of pasture plants Increased resilience of livestock to dzud and drought Decreased methane release from ruminant animals
Sustainable Pasture Management	Efficient use of pasture Decreased pasture degradation Increased animals resilience
Livestock disease management	Better control livestock diseases specially vector- borne. Increase resilience of livestock to diseases

In Mongolia's Sustainable Development Vision 2030 highlights the need to "ensure appropriate number and herd structure in the total livestock, have no less than 60% of Mongolia's territory as free of animal disease, for trade and quarantine, confirmed by the World Organization for Animal Health, develop veterinary services that are compliant with animal health standards for the export of livestock and livestock products to the neighboring countries, and increase the head of pure breed cattle to 200,000 in intensive livestock farming".

There are a number of governing policies and programmes supporting development of a climate resilient livestock sector. Those that are currently implemented along with relevant interventions and targets can be summarized as the following:

State policy on food and agriculture sector 2015-2025
Overall objective is to develop self-sustaining and high production livestock subsector that is resilient to climate change. Specific interventions include incentivizing the use of long-distance and underutilized pastures, planting fodder plants, establishing water sources, as well as fencing of reserve pastures by herders and herder user groups. It also incorporates actions to increase the pastureland carrying capacity by promoting sustainable management and rehabilitation of pasture and applying pasture user agreements with local communities. Furthermore, the interventions include overall increased productivity of animals through enhanced animal breeding services, animal disease control, as well as increased coverage of vaccination and vaccine production. Specific targets include:

- Reduce overall number of livestock and adjust the number, type and composition of livestock based on assessment of pasture carrying capacity and status
- Composition of cattle from 6.7 to 10% and processed meat 16,800 tonnes to 200,000 tonnes compared to 2014.

State policy on herders 2009-2020
The policy aims at improving the prosperity of herder households by implementing several strategic priority areas:

- Create favorable legal, economic and business environment which enables decent living and working conditions for herders, prevention of poverty in herders through employment and social security;
- Improve livestock production and develop an adequate marketing network;
- Make changes in the lifestyle and livelihood of herders through supporting development of self-assisting and self-governing civil society structures, enhancement of herders' knowledge and skills.

National Mongolian Livestock Programme 2010-2021
It aims to develop a livestock sector that is able to adapt to climate change and social development trends and create an environment where the sector is economically viable and competitive in the market economy, to provide a safe and healthy food supply to the population, to deliver quality raw materials to processing industries, and to increase exports. There are five specific objectives to improve livestock sector governance, animal breeding and veterinary service standards, to develop climate and risk resilient livestock sector and create favorable marketing conditions. Within the objective to develop climate and risk resilient livestock sector, the interventions include:

- Improved pasture management through establishment of regulatory framework for pastureland management and introduction of pasture use fee, improved pasture use planning system, keeping optimal herd structure and size to pasture carrying capacity, as well as improved rodent and pest control;

- Increased hay and fodder production through both promoting natural hay making and good quality fodder plantations;
- Improved livestock water supply through establishment and rehabilitation of groundwater wells and rain and snow water harvesting;
- Create livestock risk management capacity by improved monitoring of changes, developing risk insurance system, developing innovative training methods and train herders on adaptation to climate and ecological changes including breeding of livestock for meat production

For the implementation of the programme, the Government pledges to allocate 3% of the state budget annually. Specific targets by the year 2021 include:

- Increase the number of large livestock camel 0.3%, horse 3.1%, cattle 8%, and sheep 2.70%. Reduce number of goat by 14.1%.
- Increase meat export volume to 50,000 tons.
- Be free from animal diseases, including brucellosis, glanders, anemia, leucosis and brucellosis and achieve a low risk status for contagious bovine pleuropneumonia, foot and mouth disease and sheep pox
- Establish 2,686 new wells

Mongolian Agenda for Sustainable Livestock (MASL)

The MASL action plan seeks to support the sustainable development of the Mongolian livestock sector as economically efficient while implementing sustainable pastureland management, enhancing food security and safety and social inclusiveness, and strengthening stakeholder partnerships and participation. Its objectives include:

- to restore, rehabilitate and utilize pastureland and water resources sustainably and responsibly, to adapt to climate change, and to mitigate climate change impacts
- to improve the efficiency and productivity of livestock production in various livestock product value chains, and to develop export-oriented livestock production
- to develop veterinary and animal breeding services, and to improve food security and safety
- to support rural development, to reduce poverty and income inequality, and to improve the social service delivery and quality
- to develop partnerships between stakeholders including professional associations, research organizations, non-governmental organizations, herder organizations, cooperatives and international organizations, and to support public-private partnerships

National sub-programme to support productivity of animal husbandry 2016-2018

The objective of the sub programme is to increase income of herders and farmers and add value to livestock products through promoting export-oriented livestock sector development and transferring innovative technologies in the sector. The indicators include:

- increase in agriculture sector contribution to a national economy
- decrease in infectious animal disease outbreak
- increase in animal productivity and
- increase in livestock sector exports

Baseline Scenario

Land and water use planning at the national and sub-national levels

Already, climate change impacts to Mongolia's ecosystems are notable; natural zones are shifting and vegetation cover has reduced significantly. Plant species composition of rangelands has changed, palatable species have decreased and so has the total biomass available as livestock forage. Changes in temperature, rainfall patterns, permafrost and glacial coverage further affect the availability of fresh water. With such a complex set of interacting factors impacting the ecological balance needed for sustainable herder livelihoods, an integrated ecosystems approach, informed by knowledge of the climate, is needed for effective management of natural resources, particularly of water and pastureland. Going forward the sustainable use of water and land resources will be critical for Mongolia to meet its goals of livestock sector development. Planning must be informed by climate knowledge, in particular, the impacts of climate change on water and land resources.

The Government makes winter plans regarding animals' location and their movements. The plan is based on pastureland carrying capacity defined by maximum biomass stock, but seasonal forecasts are not taken into account due to insufficient capacity[18]. Information on the changing landscape and available water resources would further inform these plans, providing guidance to herder households which could maximize the survival rate of their livestock. Greater coordination among agencies is also needed in order to fully realize the benefits that climate information could generate. At the national and sub-national planning level, climate information paired with data on the pastureland conditions and water resources, can inform sustainable water and land use planning, to ensure preparedness for extreme events, as well as for continuity and enhancement of ecosystem services in changing conditions.

In the absence of climate-informed planning, the livestock sector is placing incredible pressure on already fragile ecosystems. Mongolian herders are mostly nomadic or semi-nomadic; winter and spring camps are chosen for availability of some shelter and access to forage and water (access to summer and autumn pasture is less contested than to winter camps and, traditionally within a soum or similar sub-unit, are usually communally used). Migration circuits and extent are dependent largely on the availability of water and adequate grazing. For instance, with the drying affect climate change is having in Mongolia, herders are basing their movement on the availability of water at fewer points, resulting also in increased pressure on land resources around those water sources. Further, to protect themselves from excessive losses (i.e. during droughts or dzuds), herders have increased their number of livestock. Unchecked, this has resulted in an increase of over 50% in total number of livestock since 2012 – placing further stress on water and land resources already impacted by climate change. And the current numbers have more than doubled, to a total of 70.9 million, since 1990 (marked by the democratic transition).

Currently, the two largest groups of animals are represented by sheep (32.2 million, 45.5%) and goats (29.2 million, 41.2%) representing roughly a 1:1 ratio. Goats are particularly destructive to the landscape - pulling grass out by the root and keeping it from regenerating, thereby accelerating land degradation. Per traditional knowledge, the ideal ratio within herds is 3 sheep to 1 goat, to avoid overstressing land. Other major livestock groups include cattle (4.7 million, 6.7%), horses (4.2 million, 5.9%) and camels (0.5 million, 0.7%).

The ongoing National Mongolian Livestock Programme (closing in 2021) set both overall livestock reduction targets and improved herd structure targets. The programme sought to reduce the total number of livestock by 16% or 6.8 million from the 2008 baseline, while improving the ratio of animals within the national herd – reducing the number of smaller animals, especially goats, while moderately increasing the number of larger animals. The target for reduction of small animals acknowledged the impact that large numbers of sheep, and goats especially, have on the landscape, while the increase in large animals sought to diversify livelihoods and improve productivity. However, as it was developed over 10 years ago, the targets did not adequately take into account the additional stresses that climate change would place on land and water resources. Had the current programme achieved its 2021 herd structure and herd size targets, it would have supported relieving some pressure on land resources, but the demand for water would have increased (see Annex 2 of the Funding Proposal). Current livestock figures, however, far exceed the programme's 2021 targets, and pressure on both water and land resources have increased significantly from the 2008 baseline. The programme's baseline and targets, compared to current figures are provided below.

	2008 NMLP Baseline		**2021 NMLP Targets**		**Current Figures (2019)**	
	Livestock (000s)	%	Livestock (000s)	%	Livestock (000s)	%
Camel	260	0.60%	328	0.90%	472	0.70%
Horse	2,208	5.10%	2,990	8.20%	4,215	5.90%
Cattle	2,511	5.80%	5,031	13.80%	4,753	6.70%
Sheep	18,354	42.40%	16,442	45.10%	32,267	45.50%

[18] Technology Needs Assessment, Volume 1 – Climate Change Adaptation in Mongolia, Ministry of Environment and Green Development, 2013

Goat	19,956	46.10%	11,666	32.00%	29,262	41.20%
Totals	**43,288**	**100.00%**	**36,458**	**100.00%**	**70,969**	**100.00%**

A national programme, a successor to the Mongolian Livestock Programme, will be developed over the next 2 years. Similarly, the programme is expected to include livestock reduction targets and herd structure targets. These targets will need to take into account the new baseline of 70.9 million animals and the significant impact that the larger herd has on the landscape and on water resources. It is also critical that targets are informed by the impacts of climate change on natural resources, and that policies and incentives for herders are in place, to support overall sustainable livestock management and sustainable use of natural resources. For instance, larger animals demand more fodder and water, but the productivity and outputs of large animals are much greater, at the same time the impact of smaller animals on the landscape should not be underestimated, especially at the current scale.

While the new national programme is still under development, it is expected to include a) livestock reduction targets of over 25% b) herd structure targets and c) the establishment of a land use payment system based on regional differences to limit the number of livestock within the carrying capacity, and to balance the grazing pressure (2050 Vision document).

Community level ecosystems-based adaptation approaches to protect land and water resources

The main climate change impacts in Mongolia are to natural resources and related ecosystems, specifically decreasing of green mass in rangelands and drying of water resources. Land degradation contributes to erosion and compaction of soil, which can reduce the soil's capacity to regulate water. Similarly, decreases in water resources, as well as contributes to loss of biomass and soil erosion - accelerating desertification and affecting land productivity.

Such impacts pose a threat to the rural population whose livelihood is directly dependent on availability of land and water resources. Mongolian livestock obtains over 90% of its annual feed intake from the natural pastures. Pasture yields are strongly affected by climate and weather conditions. The peak of pasture biomass has declined by 20 to 30% during the past 40 years and is projected to continue to decline as climate conditions change. Likewise, palatable species composition has also declined. In addition to reduced nutrition from pastures, rising temperatures are expected to adversely affect the grazing time available to livestock. Water availability will be affected due to inconsistent-high, intensity-short-duration rainfall events. Extreme cold spells and higher frequency of dzud events will likely increase mortality and further stress animals. This will also combine to result in a continued trend of reduction in average body weight and productivity.

Monitoring of ecosystems and ecosystem services, and related protection measures, can therefore be categorized into two areas a) sustainable pasture management and b) water resources management and efficient use. Related baseline efforts include: cooperative use among herders of shared natural resources, increased fodder production, sustainable land management and integrated water resources management (IWRM). While baseline efforts were not specifically designed as adaptation interventions, there are clear adaptation co-benefits – cooperation among herders prevents overexploitation of natural resources and therefore greater resilience to the drying effects of climate change, and better fodder production reduces the impact of harsher winters and dzuds on livestock. There is potential to build on these existing best practices, to include climate projections and related impacts on the landscape and on water resources. In this way, herder groups and soum governors can build adaptation into planning and include those projections in the design of support to herder communities.

<u>Pasture Management</u>

A nationwide assessment of rangeland health in 2015 indicated that 65% of Mongolian rangelands are significantly altered but that 90% still maintain the capacity to regenerate naturally through improved grazing management informed by the impact of climate change on land and reduced stocking rates. Without immediate interventions at scale, land degradation in Mongolia will continue beyond levels which can be naturally regenerated. Herder communities rely on healthy rangelands for livestock production and to prepare for winter, as they promote greater overall forage and better nutrition for animals, leading to healthy animals for a) better quality livestock products and b) higher survival rate of animals during increasingly harsh winters and dzuds.

Increased temperatures and decreased overall precipitation further exacerbate land degradation and accelerate desertification. In the proposed project aimags, desertification is a growing concern. A desertification map developed by the Institute of Geo-Ecology shows that an average of 62.8% of territories of the Dornod, 76.8% of Sukhbaatar, 58.4% of Khovd and 64.4% of Zavkhan aimags are showing signs of desertification to some extent, with an average of 26% of territories of Dornod aimag, 21.4% of Sukhbaatar, 5.3% of Khovd and 4.6% Zavkhan aimags are categorized as 'very severe'. Territories in eastern provinces (Sukhbaatar and Dornod) are estimated to have the highest percentage of strongly desertified areas compared to other provinces in Mongolia.

Pasture land in Mongolia is a public good and not yet adequately regulated to prevent unsustainable herding practices, including herd sizes that exceed the carrying capacity of the land. Traditional herder group-based approaches, however, have proven successful to foster the necessary cooperation for sustainable pasture management through herder group-based approaches. Community organizations of herders and forest user groups, are recognized as entities under the Civil Code (4.8.1.). Current land law provides for the option to allocate use rights to natural resources including winter and spring pastures to customary resource users. It also enables contracts between the soum governor and a group of herders/customary resource users for management and protection of an area of which the boundary should be agreed by neighboring users or groups.

At the local level, aimag and soum administrations have critical roles in providing technical assistance to herder associations and herder households in joint planning and co-management of natural resources. In this regard, annual land management plans of the soums are developed under participatory approach including herders and soum government officials and officers in charge of land, environment and agriculture. This community-based rangeland management (CBRM) approach is implemented successfully in parts of the country where the herder groups or pasture user groups are active. Through this approach, herders use grassland in accordance with the pasture management plan developed by them and the pasture use contract entered into with soum governors. Related ecological improvements are most notable for winter pastures – steppe landscapes in CBRM communities are healthier than those of non-CBRM communities. And winter/fodder preparation approaches through reserve pastures, small areas protected by fencing and large areas protected by consensus and guarding, have been successfully (re-) introduced. CBRM member households are therefore better prepared for dzud and lose a smaller proportion of their herds, indicating that CBRM can help reduce vulnerability and increase adaptive capacity[19]. Social cohesion developed through joint activities in natural resource management, and basic income generating activities are the basis for developing organizations such as cooperatives for production and marketing – a strategy that is pursued by the government. Successful interventions applying CBRM include those supported by development partner such as the Swiss Agency for Development and Cooperation (SDC) and International Fund for Agriculture Development (IFAD).

Further, a newly introduced process by ALAMGaC promotes group-based pasture land management through allocation of natural resource use rights at soum level, based on customary use, and facilitation of agreements among herders, herder groups and soum government. ALAMGaC is responsible for overseeing country's land use and management. The agency monitors changes in land use characteristics, develops and implements policy on land ownership, possession, and use, and protection and rehabilitation of land resources, organizes and provides professional guidance for the development of land management plans at national and local levels.

There are opportunities to build on the CBRM approach to ensure that decision-making is informed by climate information and includes best practices related sustainable land management and ecosystems based adaptation, a) establishing reference sites in different ecological zones, b) aligning monitoring methods, and c) evaluating results of different approaches to pasture use planning and management.

To inform sustainable land management practices, guidelines are available. The *Sustainable Land Management for Combating Desertification* project (SLM Project) implemented by the Ministry of Food, Agriculture and Light Industry

[19] MOR2 Policy Brief No. 2 Community-based Rangeland Management in Mongolia: Outcomes and Keys to Success

(MoFALI) and MET successfully piloted and scaled up sustainable land management practices based on a collaborative management approach from 2008 to 2012. In collaboration with other development partners, the SLM project developed guidelines for the development of the soum level annual pasture land management plan. This strengthened the capacity for collaborative management among the soum government land officers and organized herder groups, a key element for sustainable pasture land management in Mongolia. The project successfully piloted a series of practices for sustainable pasture use, (re)-introducing rotation and resting, fodder production, rehabilitation of water sources, protection from soil erosion, establishment of wind-breaks, intercropping, and cultivation of trees and bushes. The project generated technical reports to inform on species for fodder production windbreaks and soil protection feasible for different zones. The SLM project also supported establishment of the Center for Desertification Research and introduced SLM as a degree course at the National University of Mongolia, thus improving national research capacity for SLM and combating desertification. These resources can be drawn on in sustainable land management activities under the proposed project.

Water Resources Protection and Use

Given the drying effects of climate change in Mongolia, it is critical to monitor, protect and manage water resources. With increased temperatures, water resources are becoming increasingly scarce. Latest observation of glacier retreat in the western mountainous region of the country indicates that water resources from glaciers may get completely exhausted within the next 2-3 decades[20], affecting the rivers and streams originating from these glaciers that have been providing water to the mountain valleys and grazing lands downstream, and communities for thousands of years.

As herders respond to climate change by migrating in search of healthier pastures, similarly the impacts of climate change on water resources also trigger migration. As water sources dry up, herders migrate in search of other sources for their herds. Water wells have traditionally been a source of water for livestock, however, the number of functioning livestock watering wells has fallen, while the livestock numbers have increased. This drop in functioning wells was mainly due the collapse of the state systems to maintain and renovate water infrastructure. In 2000, the GoM initiated a new programme to construct new wells and rehabilitate existing structures under the National Mongolian Livestock Program. In addition, around 500 reservoirs and ponds with a capacity of 92,500m^3 are used for livestock water supply.

Combined, the drying of water sources due to climate change and decreased number of wells, result in increased pressure on rivers, springs, lakes and ponds that do have water. Related land degradation around those water sources and river basins affects hydrologic cycles and ecosystem services – reduced vegetation that prevents soil erosion, and compacting soil resulting in accelerated runoff and inhibited absorption of water and ground water recharge.

Overall the country's surface water resources have been declining and are expected to continue to decline through the drying effects of climate change. At the same time, however, the western mountainous region that contain half of country's surface water resources will have temporary abundance of water resources due to thawing of glaciers and permafrost that supply origin of major rivers – the western mountainous areas (Zavkhan, Khovd and Dornod aimags) show a temporary increase in number of surface water bodies due to melting glaciers, while in the eastern region's semi desert area (Sukhbaatar aimag) there has been a decrease. At the national level, glaciers have retreated by 30% in the last 70 years and permafrost areas have shrunk by 5% in last 20 years[21].

The concept of IWRM was introduced in Mongolia to improve planning and ensure coordinated usage of water resources. As a part of the IWRM process, River Basin Administrations (RBAs) have been formally established in 21 of the 29 water basins and have been tasked with developing Integrated Water Management Plans. So far, of the 12 river or lake basins pertinent to proposed aimags for intervention[22], IWRM Plans incorporating preliminary climate

[20] Mongolia Assessment report on Climate change, Government of Mongolia, 2014

[21] Permafrost mapping in Mongolia, Institute of Geoecology, 2016

[22] The four project aimags are covered by 13 river basins. However, one river basin only includes 2% of one aimag and therefore is not considered under this project.

change adaptation strategies have been developed for seven and plans are under development for four. However, the critical step of implementing these plans at the pasture level has not yet been taken and lacking are related climate change forecasts to ensure plans are climate-informed. There are however best practices, which can serve as a model, applying ecosystem based approaches for protection of water resources.

The UNDP/Adaptation Fund *Ecosystem Based Adaptation Approach to Maintaining Water Security in Critical Water Catchments in Mongolia* (EbA) project has built on experiences of the SLM project, promoting user groups and community participation to implement local adaptation measures, and is successfully introducing measures in water resources protection and efficient use. Under this project, integrated strategies/management plans for target landscapes and river basins have been developed, ratified and are under implementation already in Khentii, Uvs and Dornod aimags and 17 soums. The project has supported the development of IWRM plans for two RBAs including one that is pertinent to the proposed GCF project. Institutional structures for river basin management integrating climate change risks were established and are in operation in the target areas as model for replication. Commencing in 2012, its implementation is planned for completion in 2017. Target areas are the two main critical and unique landscapes - Turgen and Kharhiraa river basins in Western Mongolia, and the Ulz river basin in the Eastern Steppes. The main objective of the project is to maintain the water provisioning services supplied by mountain and steppe ecosystems by internalizing climate change risks within land water resource management. Project implementation is organized under three components on:

- Integrated strategies/management plans for target landscapes/river basins developed and under Implementation
- Implementing landscape level adaptation techniques to maintain ecosystem integrity and water security under conditions of climate change
- Strengthening capacities/institutions to support EbA strategies and integrated river basin management, their replication and mainstreaming in sector policies

There is also opportunity for water harvesting through small ponds. In the Altai Mountain ranges of western Mongolia in particular, there is a high potential to harvest water from glacier and snow melt to compensate for the water deficit during the hot and dry spell in summer. Through the pilot sites of the EbA project, water harvesting in high altitudes from snow and glacier melt and heavy summer rainfalls has shown to have multiple ecosystem service benefits:

- Regulated and stable water supply for livestock and wildlife and for irrigation with relatively low level of evaporation
- Ground water recharge
- Replenishment of soil moisture
- Minimizing soil erosion from intensive rain and potential land slides

Further, the National Mongolian Livestock Program is working to improve livestock water supply. This includes digging new and rehabilitating existing wells, creating new reservoirs, and introducing water harvesting measures to collect rain water or snow. The program works closely with herder groups and communities to establish agreements to ensure ownership as well as long term maintenance of the investments.

Best practices developed by the EbA project, as well as the SLM project, are well documented and should be used as guiding materials for further related work. Given the inextricable nature of herders and the landscape, any interventions seeking to rehabilitate or protect land and water resources must include and consider herder livelihoods – their challenges and their adaptation needs. Without which, maladaptive measures can continue to stress natural resources beyond tipping points, with implications for ecosystems, ecosystem services and for the people which rely on them.

Support to herder households and livestock productivity

Herder households make up 30% of the population of Mongolia. Given their reliance on natural resources, herders are the most sensitive to changes in the landscape and availability of water resources. While herders are extremely vulnerable to climate change, they can also inadvertently contribute to land degradation through unsustainable livestock management – exacerbating land degradation and stressing water sources.

Impacts of climate change on land and water resources, and market forces, have resulted in response measures by herders that contribute to their vulnerability. For instance, as the market for meat is limited and value chains are undeveloped, herders have opted to raise more goats in order to benefit from the raw cashmere market. As a result, the number of livestock of Mongolia has increased to 70.9 million animals[23], with a disproportionate number of goats[24]. This approach has several drawbacks 1) overpopulation of livestock degrades pasture and water sources, resulting in poor animal health and in substandard quality of livestock products (meat, milk, wool, leather etc), 2) as goats are more vulnerable to extreme cold, they ultimately incur greater losses during dzud events impacting herder livelihoods and 3) goats, in particular, are destructive to the landscape, pulling grass out by the root and keeping it from regenerating – contributing to land degradation.

The Government of Mongolia recognizes the growing number of livestock and is working towards addressing it through the National Mongolian Livestock Programme[25]. The Programme seeks to reduce the overall number of livestock by addressing the animal health challenges (e.g. hoof-and-mouth disease) that prevent export of livestock products and contribute to the low livestock off-take rate. The Programme invests in livestock health and veterinary services, guidance for herders on herd structure, development of an animal registration database and network, construction of wells for livestock water supply, and development of industry marketing to capture the intended market. The Programme will be implemented in two phases; the first 2010-2015 was recently completely, and the second will soon commence and continue until 2021.

While the programme has fallen short of its Phase I targets, important progress and achievements have been made. A review of the program's first phase was undertaken in early 2015. The rate of implementation was estimated at 36.0% against the Phase I target, as at end-2014. The achievements from the Phase I of the Programme are as follows:

- Legislative framework strengthened by draft Laws on Animal health and Domestic animal gene fund, as well as a National sub programme to support productivity of animal husbandry;
- Approximately 21,000 herders and 16,000 professionals received refresher training opportunities through 332 state and 133 private entities.
- 859,229 animals got ear-tagged in 2014 alone and were entered into the national database with which a percentage of traceability reached 22% of all animals.
- Number of newly established wells for rural water supply reached a total of 2,067 wells. In 2014 alone 1,128 wells were established by allocating MNT10 Bln (approx. USD4.2 million).
- Although the overall number of animals has not yet begun to decrease, the herd structure improved with the percentage of goats in country's total livestock reduced by 0.2%.
- Land area allocated for special purposes and classified as long-distance and reserve pastures reached 5.4% of the country's total territory.
- And 10.3% of the country's herders covered by index-based livestock insurance scheme.

A national programme, a successor to the Mongolian Livestock Programme is expected to include creating "favorable investment and business conditions for development of the pasture and intensive livestock industries simultaneously, and decrease the exposure to natural risk and increase the productivity of the livestock industry".

[23] http://en.montsame.mn/agriculture/number-livestock-increases-almost-56-million-heads

[24] Per traditional knowledge, the ideal ratio within herds is 3 sheep to 1 goat to avoid overstressing land. Currently, the two largest groups of animals are represented by sheep (32.2 million) and goats (29.2 million) representing approximately a 1:1 ratio, followed by cattle, horses and camels.

[25] 3% of the national budget is allocated to the Programme, or approximately USD75 million against 2017 budget.

Improvements to livestock health and reductions to livestock numbers will not be sufficient to increase adaptive capacity of herder households. Significant investment has been made by the government to support livestock product processing of raw materials (see Annex 2 of the Funding Proposal), with the goal of broadening the domestic market and extending into the international market. However, herders will require support in order to eventually access markets for products which are of higher value and which are consistent with sustainable land and water management criteria in the face of climate change (e.g. sustainably-sourced cashmere).

If practices continue as usual, herders will produce only raw materials, but of decreasing value. As climate change is impacting the grasslands and water sources that animals need for sustenance, the result is increasingly undernourished or unhealthy animals, and therefore lower quality livestock products. For cashmere, this means undernourished goats with coarser hairs. The same can be said of other livestock products – increasingly undernourished and unhealthy animals result in reduced quality of livestock products. In response, herders have opted for larger herds to cover the losses of decrease quality and thus value of livestock products – adding more pressure on grasslands and water resources. While there is still time for impactful interventions, this dangerous cycle can quickly push Mongolia towards a tipping point. Support is needed for herders to move away from low quality raw materials, and towards climate-informed herding practices for both sustainability of herder livelihoods as well as the natural resources on which herders rely.

The livestock sector overall can be described as a low input – high risk-low productivity sector. In 2015, there were 153,085 herder households corresponding to around 30% of the people living in the country. The agriculture sector contributes 14.7% to the country's economy, 85.6% of which is livestock husbandry and ~7% of export income, whereas the contribution to a national economy was 38% in 1995.

Livestock is the main livelihood source for more than 70% of the rural population. Although there are 70.9 million head of livestock in Mongolia, MoFALI and Green Gold project data shows that more than 60% of herder households own less than 200 animals which makes their annual disposable income below national poverty line and therefore the most vulnerable population segment in the country. During project consultations, aimag officials stated that up to 88% of the herder households in the Dornod aimag are indebted. The debt is due to combined impacts of remoteness, lack of regular cash income, land-use conflict, and, now, increasing climate change risks and related disasters.

Climate change renders current herding practices and production systems more unviable than they have already become (in part, due to increasing intensity of climate variability, but also reflecting the emphasis on herd sizes as a proxy for collateral by informal and formal purveyors of finance). The impact of climate change hampers efforts to reduce animal numbers with a view to increasing incomes by boosting the value per unit of production. This further compromises the ability to develop markets and lowers incomes for herders. Breaking this cycle and promoting a sustainable pasture management practices is key to developing a climate resilient livestock industry and to reducing vulnerability of herder communities. Thus, recalibrating the livestock sector requires climate-adaptive and resilient strategies which, in turn, require investment, training and upskilling at the herder level, improved processing and reduced value-chain fragmentation.

Knowledge on herders' institutions for pasture management and income generation, and on apex organizations for processing and marketing, has been much expanded in recent years, with contributions by other projects supported by the UNDP, World Bank (*Sustainable Livelihoods Project*, now in Phase III), SDC (*Green Gold* Project), and IFAD (*Project for Market and Pasture Management Development*); all of which share approaches of collective action by herders. The government's Herder Policy and the Law on Cooperatives likewise seek to promote collective action and community organization. The concept of the Law on Pastureland was approved by the Government in May 2016 after pending almost a decade. The law allows pasture user groups to obtain possession rights over the land where they reside.

The government, development partners and development banks have been active in the livestock sector over the last two decades. The World Bank's *Integrated Livestock-based Livelihoods Support Project* has been mainstreamed into all aimags. It has supported livestock production, pasture management and rural community development in all aimags and focused on linking herders to markets and raising livestock productivity through animal health, breeding and genetic improvement and nutrition. SDC, the International Fund for Agriculture Development (IFAD) and the United States Agency for International Development (USAID) through Mercy Corps are active in livestock and pastureland management, value addition to livestock products and rural business development. Further, there are other programmes on quality upgrading, better pricing methods, business capacity development of herder groups, milk sector development, fodder supply system, food safety system, intensive livestock production systems, animal health systems, drugs and epidemic prevention, and rural income diversification. The GoM has also invested significantly in value chain development (e.g. processing centers for livestock products, the Cashmere Program), poor quality products and animal health however has been challenges for maximizing impact of these investments. Climate change is exacerbating these challenges, as pasture and water resources become increasingly degraded or scarce.

Overall, livestock sector interventions are focused largely on animal health and short term measures to improving herder livelihoods (e.g. dzud relief programmes), but not necessarily on building long term climate resilience, nor on ensuring that livestock practices are in the long term climate resilient or sustainable. There are opportunities to integrate climate resilience into programmes that support herder households, while extending support to help herders access markets for livestock products, particularly products which were sourced sustainably through climate informed use of natural resources.

Summary of Gaps Related to Baseline Efforts

There are opportunities to bring available information, climate and environmental, together to produce tailored products that could inform livestock planning towards greater climate-resilience, and ensure medium to long-term preparedness measures. For instance, the National Agency for Meteorology and Environmental Monitoring (NAMEM) collects environmental data related to land carrying capacity, and officers of the soum livestock unit undertake data collection on indicators to monitor implementation of the five priority areas of the National Livestock Program, including pastureland management. These data however are not analyzed in the context of climate change and vulnerability in a manner that could inform climate-resilient livestock planning.

While there are several successful interventions related to sustainable use of natural resources and herder livelihoods in Mongolia, efforts have been siloed, focused for instance solely on development of value chains, or cooperation of herders on natural resources management. Cooperative approaches among herders for pastureland and water management have been developed for sustainable use of land and water resources, but not necessarily considering the impact climate change is having, or will have, on natural resources. Similarly, investments into value chains have been with a focus on economic development and herder productivity, without necessarily considering the longer-term sustainability of herder practices given limits of natural resources in the changing climate. There are opportunities to foster an integrated approach, building on established efforts and best practices, while applying a climate lens to interventions.

Importantly, the link to markets for sustainable livestock products is needed to ensure adaptation is a viable solution for land and water resources, as well as herder livelihoods. For instance, the natural and organic quality of Mongolian livestock products, idle production capacity, availability of educated workers, relatively low labor costs, agro-processing and other value addition for primary agricultural products, together provide an opportunity to reduce the vulnerability of not only herder livelihoods but also the overall economy of Mongolia. Current government policies consider agro-processing as one of the priorities for transforming the economy from low-value-added to high-value-added production and its diversification. To promote the premium quality of the sector and regulate labeling and certification processes, Organic Food Law has been drafted and approved by the Government in 2016.

The Government of Mongolia (GoM) seeks a long term solution that ensures continued service of its ecosystems in the face of climate change, while also building resilience of its most climate-vulnerable group, herders. To do this, an integrated approach which brings together a) climate-informed planning and disaster preparedness, b)

cooperative approaches for protection of land and water resources and c) a forward-thinking approach to increase resilience and improve productivity for herder livelihoods is needed.

Key barriers that must be addressed in order to achieve the long term solution

Technical capacity and limited computing/storage capacity, prohibiting longer term climate-resilient planning

Mongolia has a well-established hydro met system. Currently, hydrometeorological data are collected through a national monitoring network of 135 meteorology stations operating 24 hours with 5-6 employees and in 95 of them automatic data loggers are coupled with traditional (analog) data collection system. The network also includes 181 monitoring posts with 1-2 employees each. There are 7 upper-air, as well as 147 hydrological and 152 agro-meteorological observation posts. The hydrometeorology agency employs 1,979 individuals at central and local (aimag and soum) levels. Complementing this are internationally available seasonal and monthly forecasts. Accuracy for these are, however, relatively low for seasonal and monthly forecasts.

While existing computing and storage capacity is sufficient to use the data for current application (i.e. daily to weekly weather forecasts), investment is needed for improved accuracy of monthly and seasonal forecasts and to generate models needed to inform longer term climate-informed planning. The national weather service (NWS) needs to move towards and initiate impact-based forecasts (IBF) and ensure forecast based finance (FBF). Towards that end, there are gaps related to computing and storage capacities, setting-up an early warning system (particularly for dzuds), effectively using radar and satellite remote sensing data, as well as processing these data in GIS environments to produce IBF which can support the requirements. Capacity upgrades would allow for more accurate projections to better inform planning and adaptation measures (i.e. land and water resources management, livestock, rangeland, arable farming, health, infrastructure, disaster management, water resource, forest, permafrost, wild animals, ecosystem etc.). Applying this information, will also require strengthening capacity of technical staff, as well as sensitization of decision-makers to the impacts of climate change on natural resources and herder livelihoods.

Drying water sources due to climate change and limited wells presenting challenges for herders to access water for livestock

Rivers, streams and ponds, and related ecosystems are facing increasing pressure by grazing animals due to the decline in functional livestock water wells. The national IWRM plan indicates that between 1990 and 2000 the number of functioning livestock watering wells fell from 38,000 to 31,000[26], while the number of livestock has significantly increased. This drop in functioning wells was mainly due the collapse of the state systems to maintain and renovate livestock infrastructure.

In 2000 the GoM initiated a new program to construct new wells and rehabilitate existing structures under the Mongolian National Livestock Program but progress has been slow with most investments being close to Ulaanbaatar. In 2009, totally 39.3 thousand wells were operational for livestock watering and from which 26.8 thousand are located in the pasture. In addition, around 500 reservoirs and ponds with a capacity of 92,500m^3 are used for livestock water supply.

Support is needed to expand the coverage for water well construction and rehabilitation to reach underserved remote herder communities, in order to improve access to underutilized pastures and relieve pressure from overstressed land and water sources that are increasingly fragile due to climate change. Importantly, planning of these wells must be informed by climate change to avoid overexploitation of groundwater in areas which will become increasingly water stressed by climate change. Further, opportunities to harvest existing water supplies are underutilized. In the western Altai Mountain ranges and Great Lakes Valley, there are opportunities to better harvest glacier melt through rehabilitation of ancient water supply networks, which should be further explored.

Limited haymaking and storage impacting livestock health and survival, resulting in significant economic loss to herders during winters/dzud events

[26] IWRM plan of Mongolia, 2013, Chapter: 5.2 Agriculture sector, pp 64

In nomadic livestock husbandry, animals are raised throughout the year in open pastures. However, the availability of forage decreases in August and the grass starts to dry from late August-September. After October, feed is deficient in both quantity and quality. With the impact of climate change, winters are becoming harsher and the incidence of dzud is increasing, with corresponding increases in losses, particularly for subsistence herders who make up the majority. Just a few more centimeters of snow beyond the average locks the forage under a thick frozen layer, preventing animals from reaching it and causing high mortality among the livestock. The winter dzud of 1999, 2000 and 2001 reduced the national herd by about one-third. The dzud of 2009-2010 resulted in the death of over 10 million animals out of 43 million, at an estimated cost of more than USD 340 million. As a result of these two dzuds, more than 20,000 households lost their livelihoods.

As a coping mechanism, some herder households allow for a larger herd. This approach has several set backs, 1) more animals against limited natural resources result in unhealthy animals and low quality livestock products, and 2) at scale this approach further exacerbates land degradation. Increased haymaking and related storage can ensure that animals have nourishment through the increasingly harsh winters, resulting in stronger and healthier animals, fewer losses and increased quality of livestock products. This can also give herders the assurance needed to cope with harsh winters by increasing their herd size.

Policy, regulatory or market factors that contribute to increased number of livestock and thus pressure on land and water resources

Overpopulation of livestock degrades pasture and water resources resulting in substandard animal health and low quality of livestock products (*i.e.* cashmere, wool, milk, meat, leather, etc), which further compromises the ability to develop markets and ensure reliable income for herders. Breaking this cycle and promoting sustainable pasture management practices is key to protecting land and water resources, developing a climate resilient livestock sector and to reducing vulnerability of herder communities. The following are the main drivers inhibiting reduction of livestock numbers:

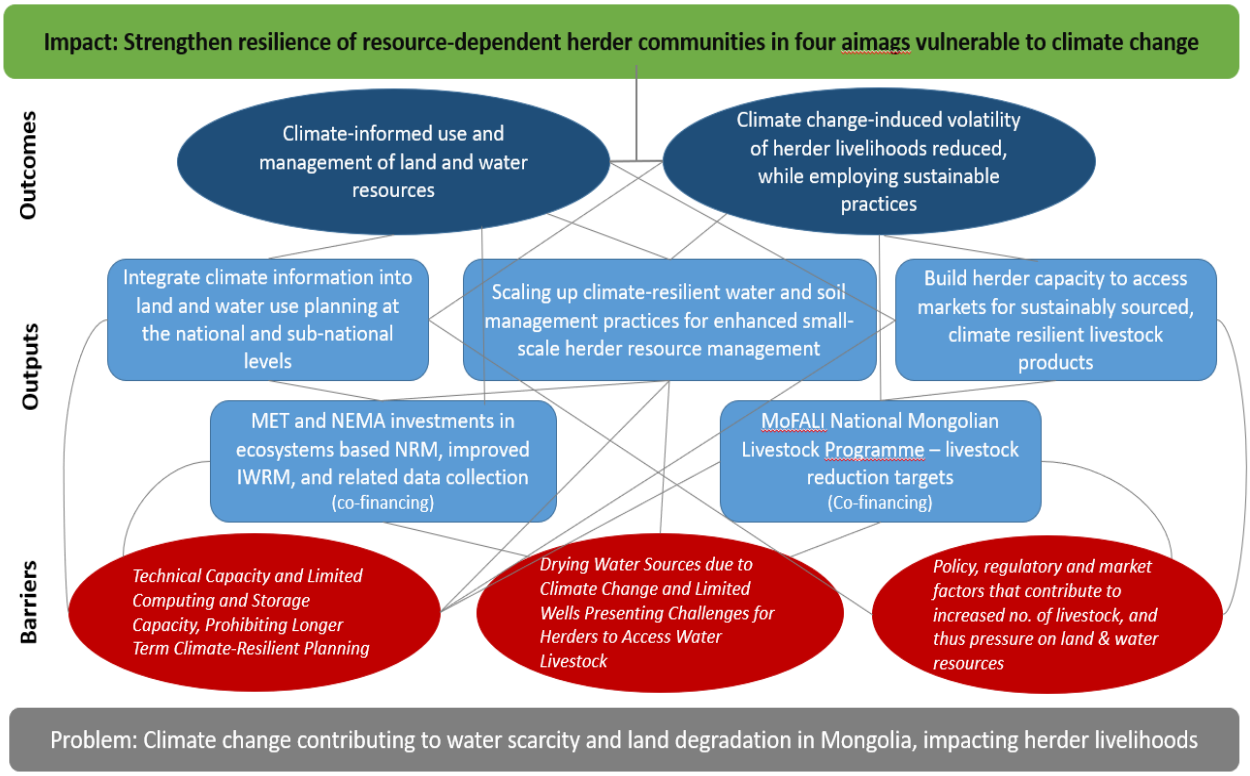
- Lack of markets – with unrestricted access to pasture and lack of access to markets, the livestock off-take rate is below the replacement rate
- Lack of individual or group land tenure – land is owned by the state therefore a non-exclusive public good
- Government subsidies – public transfer payments and commercial credits tied to number of livestock owned
- Economic model for livestock value chains dominated by payments based on volume

Without intervention in the form of policy transformation towards an enabling environment for sustainable livestock products and away from incentives that favor a large number of animals, livestock numbers will continue to increase beyond carrying capacity of the land.

III. STRATEGY

The objective of the proposed project is **to strengthen the resilience of resource-dependent herder communities in four aimags vulnerable to climate change.** The proposed project seeks an integrated approach to address climate change impacts on herder livelihoods and on the natural resources on which they rely. This will require strengthening capacity to generate climate models for longer term climate resilient planning, while reconciling the ambitious economic development goals of livestock sector with the limits of increasingly fragile land and water sources due to climate change. To do this, the project complements significant investment from the Government of Mongolia related to the livestock sector and natural resources management, while addressing the key barriers through strengthening the computing and capacity needs for long term climate-informed planning, investments in water access points, and support to the policy transformations needed to remove incentives for maladaptive herder practices.

Theory of Change Diagram



To address the barrier related to capacity, the project will strengthen capacity of NAMEM to collect and analyze the data necessary for climate-informed planning. This will include investments to computing equipment and data storage, as well as technical training to enable climate-informed and risk-informed livestock planning. Support will also be provided to integrate climate change into aimag and soum level development plans to ensure that local planning considers climate change in regards to carrying capacity of land resources and guidance to herders on Integration of climate change and climate-informed carrying capacity into aimag and soum level development plans.

To address the barrier of water access, the project will apply EbA measures to protect land and natural water resources, while also establishing or rehabilitating water wells for livestock. Using community-based resources management, herders will coordinate on rotational pastures and sustainable use of water resources, as well as establishing means of maintaining EbA results and water well investments. This will relieve pressure on rivers, streams and ponds as well as on over-utilized pastures which are increasingly fragile due to climate change.

Support to haymaking and pasture reserves, and related storage, will ensure livestock are better able to survive increasingly harsh winters, and losses to subsistence herders are reduced. Stronger and healthier animals are not only able to survive the harsh climatic events (i.e. dzud) but also are less likely to be affected by outbreak of infectious diseases.

And to address the policy barrier, the project will support the planned policy transformations under the National Mongolian Livestock Programme, by ensuring that changes are informed by climate risk. Also, analytical products will be developed to inform related programmes, such as government investments in livestock commodities development and dzud relief programmes to ensure that support does not inadvertently incentivize growing livestock numbers against land and water resources which are increasingly drying due to climate change.

This approach is underpinned by a number of assumptions, including: a) MET and MoFALI commitment to climate-informed planning, including the integration of climate information into national and sub-national planning, co-

financing for investments and the approval of needed reforms, b) investments identified during proposal development (e.g. water wells, SLM measures, etc.) are validated with resource user agreements and c) herders adopt adaptive practices and are willing to cooperate through herder producer organizations.

IV. RESULTS AND PARTNERSHIPS

Expected Results

The project objective to **strengthen the resilience of resource-dependent herder communities in four aimags vulnerable to climate change** will be achieved through a combination of a) enhanced climate informed planning for land and water use localized to the aimag level, b) ecosystem-based adaptation measures and c) building herder capacity to pursue climate resilient livelihoods. The proposed project takes an integrated approach, implemented by MET, in close collaboration with MoFALI, particularly the National Mongolian Livestock Programme (NMLP), to address the impacts of climate change on natural resources, as well as supporting the necessary changes to the livestock sector through planning, policy transformations and adaptive herder practices.

Output 1:	**Integrate climate information into land and water use planning at the national and sub-national levels**
Output 2:	**Scaling up climate-resilient water and soil management practices for enhanced small scale herder resource management**
Output 3:	**Build herder capacity to access markets for sustainably sourced, climate resilient livestock products**

Proposed areas for intervention are the Zavhkhan, Khovd, Dornod and Sukhbaatar aimags covering steppe, desert steppe, mountain, mountain steppe and forest steppe zones (see Annex 16 of the Funding Proposal). These sites were selected by government, not because they are the most degraded areas of the Mongolia, but rather the urgent need to protect critical watersheds in a drying environment. The selection criteria were as follows:

- High vulnerability to climate change impacts and slow onset disasters
- Fragile catchment areas that need protection/rehabilitation
- Representation of diverse ecological zones to maximize impact of interventions
- Availability of previously generated adaptation best practices in similar eco-regions
- Isolation or distance from the central area and support

GCF resources will finance the additional costs of integrating climate change into land and water use planning, management and development, as well as investments in water harvesting, management and access structures in all soums of the four project aimags to address issue of few watering points in the four target aimags. The project will also support land-use planning and management, emphasizing climate-resilient, sustainable and ecosystem-focused pasture management. The project together with local government authorities will assist communities develop and implement land and water management plans incorporating ecosystem based adaptation principles and fund the development of small-scale infrastructures required to reduce the negative impacts of adverse weather events and trends. Importantly, through support to policy transformation and market access for sustainably-sourced livestock products, the project will incentivize behavior change among herders towards greater climate resilience.

Output 1: Integrate climate information into land and water use planning at the national and sub-national levels (GCF grant: USD 5,236,744; Co-financing: USD 11,200,000)

Output 1 is focused on supporting the GoM to move beyond short term preparedness and emergency response, and towards longer term climate-informed planning. This will include developing the technical capacity to forecast medium-to-long term climate change, then applying that information to predict related changes to water and land resources. Support will be provided at both the national and sub-national levels to effectively integrate this climate

change and related impacts into climate-resilient planning. Importantly, GCF resources will complement the GoM's NMLP, by bringing a climate lens to planned policy and regulatory reforms.

Output 1 is focused on supporting the Government of Mongolia to move beyond short term preparedness and emergency response, and towards longer term climate-informed planning. This will include developing the technical capacity to forecast medium-to-long term climate change, then applying that information to predict related changes to water and land resources. Support will be provided at both the national and sub-national levels to effectively integrate this climate change and related impacts into climate-resilient planning. Importantly, GCF resources will complement the Government of Mongolia's National Mongolian Livestock Programme, by bringing a climate lens to planned policy and regulatory reforms.

Activity 1.1. Enhance technical capacity for long-term climate resilient development planning, and medium-term response planning capacity

GCF resources will support NAMEM to enhance their capacity to develop seasonal and long-term climate change forecasts. GCF funds will invest in the acquisition and installation of weather/climate forecasting/prediction software and equipment, to enable NAMEM to develop longer term (seasonal, decadal and climate change) models and deliver forecasts. This will considerably increase technical and computing capacities and capabilities compared to the current system and allow the agency to increase accuracy and spatial resolution of the atmospheric models (GCMs, RCMs) and use dynamic models for forecasting. The introduction of this additional computing capacity will strategically complement the existing capacity allowing NAMEM to provide the key weather forecasts and climate predictions required for planning and preparedness for enhancement of subnational and national natural resources management (water, land and forest) planning, with key focus on pasture management and livestock husbandry.

The proposed project will also invest in strengthening human resources capacity at NAMEM with targeted training courses and workshops. The training will include:

- Training to NAMEM senior and technical staff on applying methods, models, and post-processing approaches including: weather research and forecasting (WRF) model, Community Earth System Model (CESM), and NCAR command language (NCL)
- Training to technical and operational level staff of NAMEM and NEMA on the processing, interpretation and use of outputs generated by the climate modelling results, climate change impact, vulnerability and risk assessments and climate informed development planning and emergency planning and coordination at central level.

The project will also provide training to local government at the aimag and soum levels on climate change impacts, conducting vulnerability and risk assessments and integrating climate change and the results of vulnerability and risk assessments into planning. The training will emphasize cross-sectoral planning approaches by including environmental, land and agricultural officers, as well as hydro-met and NEMA personnel. The personnel trained will lead the development planning to guide adaptation measures (management and infrastructure) under Output 2 of the proposed project. The four aimags will pilot the incorporation of climate change into development planning for replication across the country. Strengthened national technical capacity (i.e. NAMEM and NEMA), guidelines for climate risk informed forecasts and projections can therefore be applied across the country.

Improved data and forecasting ability, coupled with local information (e.g. vulnerability assessments and information on environmental conditions supported under Output 2), the project will support a quantitative approach to impact and risk. Consistent with the impact based forecasting (IBF) methodology supported by WMO, the project will support MET and MoFALI with guidelines, tools and training on impact estimation (developing operational impact models for water availability, operational pasture yield/fodder and dzuds), as well as risk reduction and response scenarios to inform decision making. This would inform early warning to herders, as well as government preparatory planning and related investment, including for instance: increasing fodder production if a dzud is expected or if pasture yield is expected to be low, informing herders of which water sources are expected to dry up due to increased temperature or drought, or taking additional adaptation or conservation measures in areas

where land is particularly vulnerable to degradation due to conditions. Training will extend to each of the four selected aimags for government officials on the interpretation and use of outputs generated by climate modelling and climate informed development planning, as well as seasonal livestock sector planning and emergency planning and coordination at provincial levels.

Importantly, this Output would support the development of the national programme, a successor to the Mongolian Livestock Programme, – ensuring it is informed by projected climate impacts on the natural resources upon which herders rely. This national programme is expected to have a greater focus on climate smart livestock management and sustainability. And like the ongoing programme, it will seek to improve herd structure, while reducing overall herd size. This builds on work started under the Fourth Priority Area of the ongoing phase: Develop livestock production that is adaptable to climatic and ecological changes with strengthened risk management capacity.

Ensuring that climate risk informed planning is paired with the necessary finance and support is critical. The project will support integration of climate information and related risks into planning and public budgeting. The project will also support dialogue and the development of methodologies towards forecast based financing (FBF), for public planning but also for coordination of other potential funding sources. The Humanitarian Country Team (HCT)[27] will serve as the platform for dialogue and decision making, where aspects such as triggers for action, flexible funding, contingency plans and an enabling environment28 can be discussed and agreed. This will build on and be informed by the best practices and lessons learned of the IFRC's Forecast-based Financing for Vulnerable Herders in Mongolia pilot project, which developed an FBF module for dzud as well as related cost benefit analyses.

The project will assist State Emergency Commission Secretariat hosted by NEMA to improve medium term response planning (i.e. planning for projected seasonal extreme weather events). Support will include technical support for emergency planning and coordination, and guidelines and procedures for seasonal planning, and coordinating of national and international responses. The project together with NEMA will fund the training of aimag level government representatives in contingency planning for projected extreme weather events.

Information generated and capacity developed under this Output will also support transboundary climate-informed planning. The improvement of Mongolia's Hydromet system, and data and analyses generated through this project, are beneficial to neighboring countries, as well as the Central Asia sub-continent with similar landscape and climate conditions. More accurate hydromet forecasts and data can be used for reducing regional vulnerabilities to climate risks and weather hazards, in particular transboundary eco-regions of global significance, such as Daurian Steppes and Altai Mountains. NAMEM already has bilateral cooperation agreements with the Russian Federation and the People's Republic of China (PRC), where information and data sharing protocols are defined.

Sub-activities include:

- Validation of specifications for NAMEM technical capacity and computing equipment
- Strengthen the technical and human resources capacity within NAMEM to produce seasonal to long term climate models
- Support development of guidelines and tools (incl water availability, operational pasture yield/fodder and dzud impact models) for impact based forecasting (IBF), climate risk informed land, water and livestock planning to be adopted at the national and aimag level

[27] The HCT is made up of UN agencies (incl. UNDP) and International Organizations (incl. the International Federation of Red Cross and Red Crescent Societies (IFRC)) that undertake humanitarian actions and have accepted to co-lead, with government, sector wide approaches to preparing for and responding to disasters in Mongolia. The overall objective of the HCT is to facilitate a harmonized and effective approach to assist people affected by humanitarian crisis. Results to be achieved by this high-level body will ensure that the activities of both Government and supporting organizations are coordinated, that humanitarian assessments are jointly conducted, that support is delivered in a timely and efficient manner and longer-term recovery from humanitarian crisis is achieved. In times of non-disaster, its activities focus on preparedness, especially on areas of policy coordination, response planning, monitoring sectoral work, information sharing and resource mobilization. One of the major tasks of the Humanitarian Country Team is to ensure linkages to national and international non-governmental organizations, providing opportunities for dialogue and consultation.

[28] Early Warning Early Action: Mechanisms for Rapid Decision Making (IFRC, Save the Children, OXFAM, FAO, WFP)

- Support to MoFALI and MET to integrate climate change and risks and plan for long-term climate resilient development at the national, aimag level (dissemination and application following Development Planning Law)
- Support to NEMA planning, applying projected seasonal extreme weather events
- Support application of seasonal forecasts to national and aimag level systems and planning/budgeting to respond to extreme events (e.g. drought, dzud), incl forecast based financing (FBF)
- Strengthen technical capacity in the State Emergency Commission (under NEMA) in emergency planning, incl guidelines and procedures for seasonal planning, and coordination of national and international responses and related finance

Activity 1.2. Integration of climate change and climate-informed carrying capacity into aimag and soum level development plans (incl. Integrated River Basin Management Plans (IRBMP))
The project will build on the existing Integrated River Basin Management Plans (IRBMP) for the 14 river/lake basins in the target aimags to include climate change considerations, as historically NAMEM was not able to produce detailed forecasts specific to the basin. The IRBMPs developed by various development partners and NGOs are varied in their resolution and level of detail. The planning process proposed in this project starts with these IRBMPs, develops River Basin climate risk and adaptation profiles and options, and then downscales that to soum level development plans and Resource User Agreements (RUAs) at the herder level. As herder groups are the key stakeholder in developing RUAs together with local government, the process facilitates a bottom-up feedback mechanism for the large-scale IRBMPs.

The project will downscale these national and regional strategies and incorporate climate change projections to develop climate risk and adaptation profiles as a common platform to guide access, synthesis, and analysis of relevant data and information for disaster risk reduction and adaptation to climate change. The profiles developed at the river basin level and disaggregated to the aimag and soum levels will provide a reference source for the project to guide soum level officials and the community better integrate climate resilience in the development of soum Level Development Plans and Resource Use Agreements (RUAs) (see Output 2).

Based on the Climate Risk and Adaptation Profiles developed and using lessons learned from the UNDP EbA project, this component will support the development of Water Use and Management Plans for each soum. These will be comprehensive multi-year management and investment plans and monitoring and evaluation tools that will effectively set the baseline for the use and management of the hydrological and land assets of the watershed and serve as a road map for the implementation of subsequent project activities and investments. They will include a rapid resource mapping, water budgeting and ecological site descriptions to guide investments in infrastructure, integrated water resources management and sustainable pasture management. These plans will serve as a road map for the development of RUAs by the Resource User Groups (referring to the existing community groups) and guide the implementation of subsequent activities and investments under the proposed project.

To provide technical input for the development of the Water Use and Management Plans on a participatory basis and in close collaboration with local agencies, the project will recruit external technical agencies to support the project teams. These external agencies will help define watersheds, conduct surface and groundwater balance assessments, link watershed plans to river basin management plans and recommend a suite of management options and infrastructure options. Activities and investments will be prioritized during the planning process, by applying criteria related to ecosystem services benefits (e.g. greater access to water sources for herder households and reducing pressure on land). The Water Use Plans will undergo a rigorous quality review and validation process before being used to prioritize and place investments (Activity 2.2 and 2.4). Criteria for prioritization will be informed by urgency, water access benefits to herders and potential of investments to relieve pressure on degraded rangeland.

Sub-activities include:

- Development of river basin climate risk and adaptation profiles and options
- Development of soum level resilience-based land and water use and management plans

While the river basin climate risk and adaptation profiles are specific to the project area - priority areas for this project as identified by the Government of Mongolia - the approach applied can be replicated in other river basins in the country.

Activity 1.3. Analytical products to support policy and regulatory transformation promoting sustainable land and water management and resilient herder livelihoods

The proposed GCF project will develop scenario analyses, to support the planned policies and reforms relevant to the livestock sector – comparing a business-as-usual scenario in which rangeland ecosystems eventually collapse versus an ecosystem based adaptation scenario in which productivity losses are halted and then reversed. With this important tool, the proposed GCF project can inform the necessary reforms to policies and programmes which inadvertently contribute to the unsustainable number of livestock in the country against a drying landscape due to climate change. Support will be provided to decision-makers in applying this information in drafting changes to existing policies and programmes, which still assists herders, but in a manner which does not accelerate degradation of already fragile ecosystems. To complement this work, the proposed project will also support sensitization of decision-makers and ministry staff, climate change impacts on land and water resources, related ecosystem services and on livestock productivity and herder livelihoods. Products will consider available or potential resources, to support sustainable land and water management and resilient herder livelihoods, including: central and local government budgets, BIOFIN, the Mongolia Conservation Trust Fund (MCTF), impact investment (where investors could include private sector actors, development financing institutions (DFIs), multilateral development banks (MDBs), foundations, family offices, and high net-worth individuals), and access to finance supported by ADB's Aimag and Soum Centers Green and Resilient Regional Development Investment Program (ASDIP).

Sub-activities include:

- Review of current livestock policy, investments and related public/private programmes which could inadvertently contribute to land degradation by incentivizing maintenance of large herds (e.g. dzud relief programmes, insurance schemes, etc.)
- Drafting of policy transformations to support sustainable use of natural resources and climate-resilience in the livestock sector and submission for approval by appropriate ministerial party
- Informed by results of Activity 1.1, conduct scenario analyses to inform resilient land and water management and livestock sector, and related (e.g. finance sector) policies
- Sensitization on climate change impacts on natural resources and the livestock sector for decision-makers to enable the necessary reforms

Output 2: Scaling up climate-resilient water and soil management practices for enhanced small scale herder resource management

(GCF grant: USD 11,103,118, Co-financing: USD 26,200,000)

To address the challenges presented by climate change, there is an urgent need to conserve and rehabilitate the ecosystem services upon which Mongolia's rural economy, traditional culture, and rich biodiversity depend. This Output is focused on investments needed to protect land and water resources and the cooperation mechanisms necessary sustainable management of shared resources, using traditional community level agreements informed by best practices. The project will also invest in infrastructure measures such as wells, community water harvesting ponds and tanks as well in land management measures such as fences and fodder cultivation to reduce the impact of prolonged dry spells and slow onset disasters. Building on best practices, the Output will foster sustainable use of land and water resources by herder communities, while making critical investments to protect catchment areas and overstressed land.

Activity 2.1. Enhance cooperation among herders on sustainable use and stewardship of shared land and water resources (formalized through Resource User Agreements)

Community based Resource User Groups (RUGs) will be the key point of focus for the implementation of activities under this Output. All herder households in four target provinces are expected to benefit from the project. The project will focus on identifying and working with already existing user groups established through the past interventions, at the same time create new ones wherever there is need. The Green Gold project has already successfully established and capacitated user groups in Khovd and Zavkhan and initiated activities in Dornod in 2016 – three of the four target aimags for this project. These will be strengthened and others established in uncovered areas. Given the remoteness and distance between households, RUGs per soum are expected to have 15-20 herder households each. The proposed project will support RUGs in developing or compiling Resource Use Agreements (RUA) for an integrated approach towards shared sustainable land and water use. RUAs will be guided by soum development plans supported under Output 1, which will consider climate change impacts on land and water resources as well as carrying capacity. The Resource User Agreements will define:

- Climate risk informed practices for pastures (and forests where appropriate)
- Climate risk informed practices for water use and management, including ownership and use of engineered wells, hand wells and water harvesting investments and
- Small scale community infrastructure, and related commitment for operations and maintenance

The RUAs would define the stocking rates within a resilient carrying capacity, management principle to ensure rangeland health, and the rights of access, rights of exclusion and rights of tenure by the RUGs who enter the agreement. Based on lessons learned from ongoing programmes including the Green Gold and IFAD projects, incentives will be developed to discourage overgrazing and encourage sustainable use and finance community investments. This includes supporting the establishment of a risk management facility, cost-shared between herders and the local government, for disaster preparedness and response, and to further finance pasture and water management activities, and to establish or rehabilitate wells. Any existing land use agreements on rangelands will be extended to encompass all seasonal pastures and clearly specify herders' responsibilities.

In partnership with local government officials and community representatives will help register the RUGs with local authorities, define their operating procedure and legitimize their user rights and responsibilities. Cadres of facilitators will be trained to continuously engage with the community to establish RUGs and then continue through the other activities described below.

Sub-activities include:

- Formalize and/or strengthen Resources User Groups
- Development, consolidation and registration of resilience-based Resource Use Agreements (RUA) (including Watershed Agreements)

Enhanced cooperation among herders will ensure greater sustainability in the use of natural resources. In addition, however, investments are needed to protect catchment areas (Activity 2.2), establish haymaking and pasture reserve areas (Activity 2.3) and improve water access (Activity 2.4) in response to the impacts of climate change. Adaptation measures supporting conditions and availability of water and pasture resources are based on the best practices generated through relevant interventions by UNDP and other development partners. Immediate needs were identified during the project development phase through consultation with local governments and communities. These will be implemented through active cost-sharing by both Government and local communities. Project will support technical oversight and professional entities will be contracted for the actual investments. Not only the local herder communities are expected to contribute their labor, they will be monitoring the process jointly with local Government entities. Following local law, costs of such investments are to be shared by the local government 29; and full operations and maintenance (O&M) costs related to wells are borne by the local government. The related

[29] Cost support by local government: wells - 5% + O&M, hand wells - 30% + O&M, natural spring protection – 30% + O&M. Similarly, local government shall be responsible to allocate 15% of investments related to catchment reforestation, haymaking and pasture reserves, plus 3 years nursing.

co-financing for this investment is captured in the letter from MET and MOFALI (see Annex 13a of the Funding Proposal). For further information related to operations and maintenance, please see the related plan in Annex 21, related commitment letters have also been provided in Annex 13b of the Funding Proposal.

Activity 2.2. Reforestation of critical catchment areas to protect water resources and ecosystem services
The project will support ecosystem based measures to promote climate risk informed use and management of land and water resources. Riparian degradation is a major contributor to vulnerability of water provisioning ecosystem services. The project will invest in catchment reforestation and replanting native vegetation along riparian areas and degraded lands to minimize undermining and increase water retention and grassland productivity. Where appropriate, enclosures30 along riparian areas to enhance and restore watershed health. Enclosures will be placed strategically to restore function to severely degraded riparian areas in areas of high biological value, including wetlands. Within enclosures, the project will regenerate native woodland and grassland species.

Interventions will focus mainly on forest restoration at river headwaters where there was previous tree cover. Best practices will be applied to reforestation efforts. For instance, where trees need to be actively planted or sown, indigenous trees have shown to be generally better conservers of water than exotics. Spacing will depend on species and purpose. Stakeholder consultations in the target aimags indicate the need for 2500ha of reforestation in catchment areas. This includes: Khovd, 1200ha; Dornod 400ha, Sukhbaatar 300ha; and Zavkhan 600ha. Estimated costs are USD2.982million. USD2.535million is requested from GCF with the balance to be provided by local governments. In accordance with the national law, local government shall be responsible to allocate 15% of the total cost as well as 3 years of nursing.

GCF resources will also support the development of guidance materials and related training to herder for effective management of catchment areas going forward. Roles and responsibilities will be defined and enforced through the RUAs.

Sub-activities include:

- Validate identified investments through RUAs
- Implementation of Rangeland User Agreements
  - 2500ha catchment reforestation
- Development of guidance materials and delivery of training to herders on effective and optimal management of catchment areas

Activity 2.3. Establish haymaking and pasture reserve areas, and emergency fodder storage facilities to reduce volatility to livelihoods related to climate change induced extreme events
Otor is a traditional practice of migration to specially-reserved remotely located pasture areas in preparation for winter or in times of winter disasters like dzud or other extreme events. This practice is consistent with sustainable land management practices. In order to avoid excessive winter losses, the project will support implementation of the pasture management plans of RUAs related to haymaking and pasture reserves, including use and exclusion agreements and infrastructure measures to increase capacity and resilience of herders to cope with climate change impacts and manage pastoral risks. Infrastructure investments will include collective activities such as the fencing of hayfields for winter pasture conservation and fodder preparation, construction of winter shelters for livestock, and fodder storages structures.

Stakeholder consultations indicate the need to protect pastures in all four of the target aimags: Khovd 1200 ha (USD 907K), Dornod 400ha (USD 756K), Sukhbaatar 720ha (USD 538K), Zavkhan 900ha (USD1M). 48 storage facilities across the four aimags will also be supported, for a total of USD600K. The total requested from GCF is USD1.7M, with the balance to be covered by local governments, as well as costs related to maintenance.

[30] Cultural sensitivity will be respected when selecting the type of fencing supported by this project. Mongolian traditional belief systems oppose the piercing of the ground for fencing.

Rangeland Use Agreements for the sustainable management of pasture will enforce seasonal rotational grazing and resting schedules, long term agreements for the maintenance of rangeland health and plans to adjust and reduce stocking rate to rangeland carrying capacity agreed between RUGs and soum governments. And GCF resources will support guidance material and related training.

As haymaking and pasture reserves are included in RUAs, sub-activities are similar and linked to the above Activity. These include:

- Validate identified investments through RUAs
- Implementation of Rangeland User Agreements
  - 3,720ha of haymaking or pasture reserve areas
  - 48 emergency fodder storage facilities
- Development of guidance materials and delivery of training to herders on effective and optimal management of pasture reserves

Activity 2.4. Improve water access through protection of natural springs, construction of new water wells, rehabilitation of existing wells and water harvesting measures

With limited number of functioning wells, herders increasingly rely on water sources such as rivers for their livestock, adding pressure to catchment areas. Under Activity 2.4, where ground water extraction is found feasible and sustainable based on the results of Output 1, the project will rehabilitate existing wells (including solar-powered pumps when appropriate) for regulated water extraction as per the Water Use and Management Plans. In cases where grazing land is underutilized due to the lack of water sources, the project will support establishment of new groundwater wells and rehabilitation of abandoned wells, for an estimated cost of USD 2M. The main criteria of site selection for newly established or rehabilitated wells is highest reduction of pressure on grazing land and increasing carrying capacity of pasture. Shortage of water sources can be a key factor in underutilizing grazing land in good condition. Ownership of the wells will remain with local Governments as per Law on Water, but herder groups can obtain possession right and sign User agreement to ensure operation and maintenance thereof.

Where gully erosion is taking place, the project will invest in construction of small-scale erosion controls to rehabilitate and maintain riparian habitat including water harvesting with 18 earthen weirs based upon successful international approaches designed to slow flow rates, retain soil, and restore/maintain natural flow and vegetation, for an estimated cost of USD 453K. Similarly, the project will support protection of 88 natural springs for an estimated cost of USD 83K. Soum officials will be responsible for ensuring enclosures are respected and enforcing any restrictions.

Further, in the western Altai Mountain ranges and Great Lakes Valley there are opportunities to undertake ecosystem-based adaptation measures that are low cost and supportive to primary ecosystems based on traditional knowledge and practices enhanced by modern knowledge. To ensure glacier melt is efficiently used to support water security, water harvesting in high altitudes will be replicated upon through best practices established by the EbA project. There are a number of abandoned ancient irrigation and water supply networks that are transformed into almost a natural landscape, which can be restored at low cost and reused without requiring new studies of soil conditions and water sources, as well as costly engineering design work for water channels and reservoirs and large investments for construction.

Sub-activities include:

- Ensure appropriate, climate-informed siting for investments, based on Output 1
- Implementation of resiliency-based Watershed Agreements through Public Private Community Partnerships
  - 88 natural springs protected
  - 285 wells rehabilitated or constructed
  - 18 water harvesting structures
- Restoration of 3 ancient irrigation schemes applying ecosystems based adaptation measures and traditional knowledge

Upon the project closure, RUAs typically spanning over 10-15 years, are expected to be extended formally between resource user groups and local Governments. Amendments may reflect changes based on the lessons learned through the previous phase. Specific activities in RUAs will be funded by herders themselves. Moreover, RUGs will be able to access the fee for using natural resources collected by Local Governments, 30-80% of which is expected to be invested back to restoration of natural resources[31].

RUAs will be registered at the national level in a database established by ALAMGaC. They will be developed in accordance with procedures established by ALAMGaC, and with the participation of all relevant local government entities. The plans will include the identified key investments and seek funding from public resources (e.g. local budgets, soum development budget, pasture management fund).

Output 3: Build herder capacity to access markets for sustainably sourced, climate-resilient livestock products (GCF grant: USD 5,645,864, Co-financing USD 15,800,000)

The climate-informed planning and policy transformations supported by Output 1, and the investments and cooperation on shared use of natural resource supported under Output 2, will contribute to protection of catchment areas and pasture land. Interventions are needed however to also support behavior change by herders – enabling herders to move away from practices that are not compatible with the changing landscape and increasingly volatile due to climate change. With climate change, most herders in the target aimags face the following challenges: 1) reduced grassland and water resources for livestock, resulting in undernourished or unhealth animals, and therefore decreased value of livestock products, 2) herders struggle to market livestock products, leaving them with neither the capital nor the incentive to invest in sound herd management focused on quality and manageable quantity, and 3) herders fail to insert themselves into value chains which would provide consistent off-take because they are unable/disincentivized to supply consistent, sustainably sourced products of high quality.

The Output will be implemented in close collaboration with the National Mongolian Livestock Programme. As co-financing investment, the Programme has committed to addressing factors that burden herder livelihoods and stifle the domestic and international markets for livestock products, namely animal health and livestock traceability. GCF will complement this investment, with industry wide initiatives to raise awareness and build capacity related to sustainably-sourced climate resilient products.

Activity 3.1. Identify public-private-community partnership for sustainably sourced climate resilient livestock products
Market analyses, as well as stakeholder consultations, have highlighted interest and potential for sustainably sourced, climate resilient livestock products from both local and international buyers. This Activity is focused further exploring that potential, raising awareness of the private sector about the products available. To begin this process, the proposed project would engage experienced private entities and/or CSOs as service providers to support the identification, selection and facilitation of these partnerships. Consistent with recommendations from the private sector during project development, Investment Fairs will be organized linking herders and organized herder groups and/or cooperatives with buyers, and meat and fiber processors. These will be conducted in the four aimags selected for the project and enable herder groups to display their products, and provide for site visits for the private sector commodity associations to meet with herders, as well as meetings with aimag level government officials, development projects and civil society organizations active in this sector.

The project will support public-private-community partnerships; these would be commodity-specific agreements between a private entity (or consortium of private entities) and an HPO to promote backward vertical integration and develop viable value chains. The proposed project will assist these partnerships with the identification of profitable strategies, coordination of activities and support to HPOs in improvements in the sustainability of value chains that promote climate-adaptive herder practices and sustainable use of land and water resources. Recalibration of herd size with the carrying capacity of specific geographic ecosystems will be promoted as one of sustainability considerations. Once finalized, the agreements would be validated by a multi-stakeholder committee

[31] Mongolian Law on reinvestment of natural resource use fees for the protection of the environment and the restoration of natural resources, 2012

set up by the project for this purpose to ensure consistency with the project objective. The project will develop a legal template for these agreements detailing roles and responsibilities including financial and in-kind support from all concerned parties (herders, local government, project, other). A unified screening tool will be developed for the validation of these agreements.

The target aimags of the proposed project are in the Western and Eastern regions, which have consistently been among the poorest in the country (36% and 43.9% respectively); and studies have shown that gains related to poverty rates particularly in rural areas are fragile - vulnerable to minor socio-economic difficulties and weather conditions32. With buyers committed through the partnership agreement, herders can have assurance that the risk of losses related to change is mitigated.

Sub-activities include:

- Consultations with private sector to assess the type/level of information needed to further engagement and investment in climate-resilient livestock products
- Promotion and conduct of livestock investment fairs to identify public-private-community partnership (PPCP) opportunities
- Based on identified opportunities, facilitation and finalization of PPCP agreements

Activity 3.2. Establishment and training of Herder Producer Organizations (or cooperatives)
This Output builds on the Resource User Groups and the Resource User Agreements established in Output 2 to form and channel project interventions via Herder Producer Organizations (HPOs) (similar to herders' cooperatives). These will be collective action enterprises that are formed by one or more RUGs coming together to collectively engage with the private sector, where demand and supply are consistent with the overall project approach of climate-resilient planning and sustainable land and water use.

Based on the needs agreed above, the project will facilitate the setting up of Herder Producer Organizations (HPOs). A readiness assessment will be developed and conducted prior to a formal establishment of an HPO to gauge existing decision-making and community governance mechanisms, as a pre-condition for a fair and equal involvement of all interested members of the community to participate in the HPOs. The Resource User Groups (RUGs) the project will set up and strengthen under Output 2 will be essentially geographically based extended family unit of 15-20 households on average. These RUGs will be aggregated to set up Herder Producer Organizations through the application of organizational models and intensive sensitization and training programs. The strategy will be sufficiently flexible to not only promote adaptive cooperative models but also to embrace other forms of business-oriented collective action and producer groupings that contribute to economic development and the well-being of herder households. These can include producer associations, Limited Liability Companies (LLCs), partnerships, other standard legal entities, and even loose temporary relationships to address specific issues or activities (in this document all such forms of corporative organizations will be referred to as Herder Producer Organizations - HPOs).

Training will be provided to the HPOs on the commodities detailed in the public-private-community agreements, including production, post-harvest processing, post-harvest value addition and on-site storage. The project will also support the HPOs to plan and prepare business proposals including cost-benefit analysis for future resource mobilization and partnership building for sustainably sourced livestock products.

Sub-activities include:

- Readiness assessment to gauge existing decision-making and community governance mechanisms, as a pre-condition for a fair and equal involvement of all interested members of the community to participate in the HPOs
- Market specific training in production, post-harvest processing, post-harvest value addition and on-site storage

[32] http://www.worldbank.org/en/news/press-release/2017/10/17/2016-poverty-rate-in-mongolia-estimated-at-296-percent

- Small upfront investments to support business needs (e.g. equipment to assess microns for wool and cashmere)
- Impact evaluation of project interventions on herder households

Activity 3.3. Improve traceability for sustainably sourced, climate resilient livestock products
GCF funding will provide technical assistance to develop the knowledge base required to improve traceability for sustainably sourced, climate resilient livestock products to access higher value domestic and international markets. This will entail surveying and analysis the premium range for various products and understand their market position, workshops to facilitate private off-takers with herder groups to bridge the supply and demand of these high-end products and drafting legal documents into the PPCP agreements detailing the roles of each stakeholder. GCF funding will also be used to develop a demo product of a traceable cashmere that tracks the movement of a sustainably sourced, high-quality cashmere bail from herder's handoff to transport personnel to factory intake point all the way to a buyer. Once this produce traceability system is proven, government co-finance will be used to purchase equipment at mass scale and IT infrastructure to replicate the produce traceability design to wider groups of herders.

The traceability demo will ensure offline and online options for herders without reliable connectivity. GCF funding will be used to provide technical assistance to train the government and selected HPOs on using the system. The overall results and performance of the system will be recorded. A pipeline of other products will be identified and prioritized accordingly. This will assist the herders to have a range of high-end products with stable buyers and therefore diversifying their income sources and reduce climate impact on their livestock portfolio. The community usage of traceable products will also encourage the behavior of increase livestock quality and gradually decrease the overall low quality, climate vulnerable livestock.

Traceability of sustainably sourced products is critical to support herders to ultimately get a premium for sustainably sourced products. A universally accepted definition of "sustainably sourced", however, is lacking. To that end, the project will collaborate closely with ongoing and planned efforts related to branding and certification in Mongolia and globally. For instance, through collaboration with Sustainable Fibre Alliance (SFA) on cashmere traceability, the principles of certification of sustainability sourced cashmere introduced by SFA have been further developed. The approach applies a practice-based standard that reviews the quality of a) animal husbandry and b) rangeland stewardship using 23 assessment criteria. Trained independent examiners review the community practices every year using a traffic-light system to incentivize continuous improvement in practices to gain accreditation. The certificate is valid for three years. Every year the producer/herder organizations undergo external assessment. If, during the three-year period, the compliance score improves compared to the initial assessment result, the herder organization may request that their accreditation is extended for another three-year period. The inventory of the accredited herder groups and organizations would then be incorporated into the (blockchain) database, which helps trace the source of raw cashmere for the producers and end users. It is being tested for cashmere at first and the same principle will apply for other types of commodities. The project will facilitate the process of third-party certification process through capacity building.

Sub-activities include:
- Surveying and analysis of traceability of sustainably sourced climate resilient livestock products
- Review/Drafting standards for climate-resilient products (third-party) certification process
- Drafting agreements in PPCP to support traceable products development
- Develop a demo traceable livestock product with offline and online options for herders
- Analyze and document traceability system results, disseminate for knowledge sharing

Activity 3.4. Generation and dissemination of knowledge products to support private-sector engagement and herder enfranchisement in climate-resilient and sustainable production in Mongolia
Realization of the three above Activities will build capacity of herder households and related cooperatives to ensure (i.e. branding and certification) that livestock products were sustainably sourced and are climate resilient, while co-financing (e.g. National Mongolian Livestock Programme) will support herders to meet international health and

hygiene standards related to livestock. In combination, these investments will provide the necessary assurances to private-sector investors that there is an enabling environment in the four aimags to produce a consistent supply of quality primary and value-added products for domestic and, in time, international customers.

This Activity is focused on building the evidence base of benefits of sustainably sourced, climate resilient products. Knowledge products and communications materials will be developed for different audiences, including herders to provide assurance for behavior change, the private sector to mobilize partnerships and responsible investment, and the public to influence demand.

Sub-activities include:

- Generate knowledge products detailing best practices for innovative financing mechanisms (e.g. sustainable sourcing platforms, impact investment fund)
- Promotion of project achievements to raise awareness of private sector and/or potential investors and consumer/public awareness about need for sustainable practice

Impact potential

The direct beneficiaries of the project will be 26,000 herder households (130,000 people) in the four target aimags. As Output 1 national policy, indirect beneficiaries include all 160,000 herder households (800,000 people). The project will directly benefit 4.5% of the Mongolian population and indirectly 26%.

47% of the people in the four target aimags are herders by livelihood. Across Mongolia 50% of the herders live below the poverty line with high rates of indebtedness. Considering the four aimags selected for the project are some of the furthest from the capital, the poverty rates are higher than the national average by 4% in the western provinces and almost 10% in the eastern region. Some of these families are single parent, female headed households. A gender-balanced approach will be taken and inclusion of female-headed households will be encouraged in all activities.

The core of the project is to improve the resiliency of the livestock sector through ecosystems based adaptation principles. The Resources Use Agreements supported by the project will be agreements within and between herder groups and local government to manage rangeland resources in an ecologically sustained manner sustainable manner informed by the integrated river-basin management plans, downscaled into soum level development plans. The project will make a substantial contribution towards developing the sector from its current subsistence level with high volatility towards a resilient system that is able to withstand economic and climate shocks through conserved ecosystem services, enhanced social capital and increased economic and livelihood security.

Output 1 and 2 further focus on the strengthening of institutional and regulatory systems for climate-responsive planning and development. In Output 1 GCF funds will invest in the national meteorological agency to enhance their capacity to forecast and inform development planning. MET, MoFALI, NEMA and aimag and soum governments will gain practical training and install climate responsive planning processes when they revise their development plans based on the climate forecasts developed by the metrological agency with GCF support. Through project interventions, Rangeland Use Agreements for the sustainable management of pasture will be implemented with local governments and ALAMGaC.

The net outcome of project interventions will be strengthened adaptive capacity and reduced exposure to climate risks. The enhanced climate forecasting capacity, improved planning process, the implementation of improved land and water management, enhanced infrastructure and improved market access and value chain development will all contribute to enhancing the adaptive capacity of herder households.

The government of Mongolia and several international development partners have invested in the building of the hydrological and meteorological monitoring network in Mongolia. As the Feasibility Study shows, currently an adequately functioning network provides data and information to NAMEM. The project will invest in the generation of seasonal and long-term climate forecasting information and provide practical hands-on training in climate

informed decision-making. Based on the training received the project will implement climate resilient water and land management practices in four aimags.

Partnerships

There are a number of best practices that the project will build on, *i.e.* knowledge on herders' institutions for pasture management and income generation, and on apex organizations for processing and marketing, has been much expanded in recent years, with contributions by other projects supported by the UNDP, World Bank (Sustainable Livelihoods Project, now phase 3), SDC (Green Gold Project), and IFAD (Project for Market and Pasture Management Development); all of which share approaches of collective action by herders. The government's Herder Policy and the Law on Cooperatives likewise seek to promote collective action and community organization.

The Ensuring Sustainability and Resilience (ENSURE) of Green Landscapes in Mongolia project, funded by the Global Environment Facility (GEF) commenced activities in 2019. The biodiversity project will support complementary activities related to rangeland management and sustainable value chains in the Zavkhan aimag. GCF project will complement ongoing work through the ENSURE project to establish a multi-stakeholder cashmere platform, which will clear and disseminate market information of sustainable cashmere in a transparent and inclusive manner. Critical to the success of the livestock value-chain work is traceability of climate-resilient livestock products, to that end, GCF project will upscale the traceability blockchain technology, piloted by UNDP and the Sustainable Fibre Alliance (SFA).

Across Outputs, the project will ensure synergies and complementarity with related programmes. ADB's Aimag and Soum Centers Green and Resilient Territorial Development Investment Program applies a similar model related to land management, value chains and herder livelihoods. Sharing of lessons learned and best practices would benefit both projects and ensure success of upscaling and replication efforts. Further, the ADB project supports access to financing and credit risk guarantee for agri-business companies and agri-cooperatives. Related successes and best practices could further inform the sustainability plan or exit strategy of the project. As the UNDP project will be implemented for a shorter duration, a solid basis set through UNDP project at the target areas with herders, herder producer organizations and local government will be taken over by ADB's Tranche 2 and 3 investments in ensuring sustainability and access to financing and markets by herder communities and enabling mitigation benefits (methane reduction) through reduction of livestock number that exceeds the carrying capacity of pastureland.

The project will ensure collaboration with SDC and complementarity to the Green Gold project in enhancing pastureland management in Mongolia. The project will build on the outcomes and knowledge generated through the GG phases and related to traceability.

The project is also designed to support enterprise development and mobilize SMEs and private sector investments. By crowding in public and private sector financing and mobilizing community-level investments, GCF resources will help lay the critical foundation for transformational change.

In addition, GCF project will collaborate closely with the Mongolia Multi-Stakeholder Sustainable Cashmere Platform to ensure herder and environmental needs are considered in their deliberations and vice versa to ensure herders are able to meet the sustainability standards to be defined by the platform (i.e. at present there is no universal definition of sustainably sourced cashmere). This platform will help support the critical link to markets that herders and SMEs along the supply chain need to commit to producing sustainably sourced products. Supported by UNDP, stakeholder consultations have begun for the establishment of the Mongolia Multi-Stakeholder Sustainable Cashmere Platform. The platform is a national level umbrella mechanism, committed to collective action towards producing cashmere in a way that is "respectful to the environment, expands social and economic benefits for herders and their communities and ensures animal welfare." The platform brings together leaders from industry, herders, government, civil society and development partners. Private sector parties which have formally supported establishment of the platform thus far include: Theory, Tommy Bahama, UPW, Next Retail, Tiger of Sweden, The Schneider Group, H&M Group, NOYA Fibres, Lindex and Garnet Hill.

Risks

As the proposed project builds on the successes of previous and ongoing programmes, it benefits from related best practices and lessons learned. Its design, therefore, reduces exposure to design and implementation related risks. In addition, UNDP's relationship with government partner agencies is well established, with financial and programme monitoring systems in place to provide on-going technical and other oversight. As such, risks for the project are considered mainly low or medium. In addition, the proposed project has been formulated based on consultations at national and aimag level, and the project design has been reviewed by stakeholders at all levels, including a sample of community representatives. That notwithstanding, a number of potential risks have been identified and have been detailed below along with mitigation measures. See Annex K for detailed risk log and Annex H for social and environmental risks.

Stakeholder engagement plan

Stakeholder consultation process during the project formulation helped identify the key stakeholders and with a series of consultations and inputs received, three project outputs have been formulated and refined. At all stages of the project implementation of the project, the stakeholders will be a part of. the See stakeholder engagement plan in Annex I The main beneficiaries will be presented through an umbrella NGO to the Technical Advisory Group as a part of decision making at the central level. On the ground, the stakeholders are expected to help validate the immediate needs during the project inception phase and contribute and share costs for the project support and investments. The immediate needs were identified during the project development phase through consultation with local governments and communities. Upon validation, these will be implemented through active cost-sharing by both Government and local communities. Project will support technical oversight and professional entities will be contracted for the actual investments. Not only the local herder communities are expected to contribute their labor, they will be monitoring the process jointly with local Government entities. Following local law, costs of such investments are to be shared by the local government; and full operations and maintenance (O&M) costs related to wells are borne by the local government.

Gender equality and Women's Empowerment

The project is designed to integrate gender sensitive planning and implementation, particularly for female herders and female-headed households. A gender analysis and action plan was prepared with specific recommendations that are expected to reduce household vulnerability to climate change while ensuring a key role for women in the implementation process. These include:

- Collection of sex-disaggregated data,
- Enabling gender-sensitive decision making, access and control over resources (particularly for vulnerable people)
- Gender analysis of loan system in Mongolia to identify any indirect discrimination against minority groups,
- Increasing women's participation and leadership in community activities.

Capacity-building: The project's local training programs will help to ensure balanced political participation and decision-making of women and men. In addition, the project will seek to ensure that women are well represented within RUGs, State-level committees and task forces as well as within the local project management team. This will contribute to the integration of gender-considerations in all parts of the project management, including in the monitoring and evaluation.

Please refer to the Gender Assessment and Action Plan for further details (Annex J).

South-South and Triangular Cooperation (SSTrC)

In addition, to bring the voice of Mongolia to global and regional fora, the project will explore opportunities for meaningful participation in specific events where UNDP could support engagement with the global development discourse on pastureland carbon. The project will furthermore provide opportunities for regional cooperation with countries that are implementing initiatives on pastureland carbon in geopolitical, social and environmental contexts relevant to the proposed project in Mongolia.

Innovation

The project's innovation comes in integrated approach to address a complex problem. This is the first project in Mongolia that promotes an end-to-end approach from climate forecasting to climate informed planning to implementation of ecosystem-based adaptation for land and water, to value chain development and market access to policy reform. Hitherto projects have focused on components in isolation whereas this proposed project targets all key aspect required to transform the sector from its current state to climate resiliency. At the watershed and rangeland level, the projects build on previous projects but adds a climate change planning component and ecosystem based adaptation components. The Resource Use Agreements which in previous projects focused on mostly management approaches, in this project will be complemented by climate resilient infrastructure development as well.

Building on methodologies pilot tested by other projects, this project builds climate resilience of the sector through community mobilization and ownership. The project lifts key barriers to sustainable rangeland management by forming Resource User Groups and by facilitating Rangeland and Water Use Agreements which instill ownership and accountability. Adherence to these agreements are further incentivized through investments in critical infrastructure that further consolidates climate resilient and sustainable land water use. These can be considered to second-stage innovative approaches to developing climate resiliency in contexts such as these where proven innovation is applied at a larger scale.

Sustainability

The project has been designed in close consultation with and involvement of relevant government agencies and technical line departments, international development partners such as ADB, SDC, IFAD and FAO, and national private sector groups. These consultations and discussions, combined with tried and tested models for improved and resilient land and water management provide the project with a sound approach and suite of interventions which are implemented with strong community participation and engagement of local officials. Building on this foundation, the project ensures that the investments as well as the results of the interventions are sustained beyond the project period and in the longer-term through the elements of project design and implementation.

With the technology and training provided to NAMEM by the project, the agency will continue to be able to serve the country with accurate climate change modelling and forecasting. This capacity will remain with the agency for the lifetime of the technology. Likewise, the technology and capacity building provided to NEMA will act as a pilot to be replicated in aimags not covered by this project.

GCF resources will invest in building capacities for climate-resilient, integrated solutions following a landscape or ecosystem approach based on river basins, soums and rangelands. The project promotes planning and coordination across government officials and communities to overcome the sectoral and piecemeal approach to land and water management that had been adopted in the past. Project outputs will also contribute to enhancing organizational capacity of herders to plan for and implement climate-risk informed local land and water management solutions, adopt technologies and systems for climate-smart production and integrate climate information and advisories ensuring their financial and human resource viability post-project. Considering that the project anchors all land and water management investments through agreements negotiated between herder groups and local government, the project promote explicit ownership of these investments. By doing so, the project will not only ensure that the investments respond to beneficiary needs but also ensure that community organizations, including youth and women's groups, will have sufficient technical and financial capacity to keep improving system design and operations, even as climate variability increases and seasons become more unpredictable.

The agreements also include O&M provisions with contribution from both the community and the local government that are expected to last beyond the project period and will be designed in a way that the communities can hold the local government accountable and vice versa. The type of investments proposed are not technically complex, therefore the materials required for O&M will be readily available.

Through Output 3 the project intervention is to essentially provide the required viability gap funding to activate market forces. Upon project completion, the Herder Producer Organizations as a unit and the members as individuals will have organizational and marketing capacity to continue to engage with private sector in a manner that continues to be profitable for both parties. Likewise, once the value chains are established and functional, market incentives should serve to reinvest for their maintenance.

Scalability

GCF resources will complement government investment to ensure that planning related natural resources management and the livestock sector are informed by climate change, and that policies take a longer term towards climate resilient development. Through analytical products and technical support will inform public investment in improved coordination, mobilization of communities to invest in managing natural resources, encouraging herders to invest in land and water management, and through positive externalities, incentivize private sector investments beyond the project lifetime. The project brings together a number of interventions extensively tested, piloted and proven into an innovative package that provides end-to-end solutions to overcome barriers faced by herder households in Mongolia. While the policy support under the project benefit sector, aimag level planning and on site interventions are to be implemented in four aimags – this can be further replicated in other aimags.

SDG Potential

The project contributes to several SDGs. These include:

- SDG 1 (No poverty) – by reducing losses of animals and the related impact on livelihoods, which result from extreme events and the decline in seasonal water availability. The project will support climate informed livestock planning, EbA meansures to protect water sources and enhance fodder availability. Further, the project complements government co-financing that will promote animal health through vaccination programmes and veterinary services. Further, engagement of the private sector will support herders in obtaining a value from sustainably sourced products.
- SDG 12 (Responsible consumption and production) –by supporting and promoting sustainable sourcing of livestock products, and integrating climate and environmental information into land management and livestock planning
- SDG 13 (Enhanced climate action) – by means of addressing climate change-related concerns in the soum-level sustainable rangeland planning and its implementation in the target region. However, due to poor climate change relevance in three out of four target aimags, the real potential is somewhat low. Moreover, the somewhat conflicting plan of the Government of Mongolia to implement the said NMLP does not give confidence that the resilience-building efforts, as planned in the project, will be successfully implemented simultaneously with the implementation of the NMLP.
- SDG 15 Life on Land through sustainable land management and livestock planning
- SDG 17 Partnership for the Goals though its intersectoral approach and engagement with development partners, CSOs and the private sector

V. PROJECT RESULTS FRAMEWORK

This project will contribute to the following Sustainable Development Goal (s): *SDG1 No Poverty, SDG12 Responsible Consumption and Production, SDG13 Climate Action, SDG15 Life on Land and SDG17 Partnerships for the Goals*					
This project will contribute to the following country outcome included in the UNDAF/Country Programme Document Outcome 1. Growth and development are inclusive and sustainable, incorporating productive capacities that create employment and livelihoods for the poor and excluded.					
GCF Paradigm shift objectives: *Increased climate resilient sustainable development*					
	Objective and Outcome Indicators	**Baseline**	**Mid-term Target**	**End of Project Target**	**Assumptions**
SDG indicators	*1.5.4 Number of local governments that adopt and implement local DRR strategies in line with national strategies (number)* *13.2.1 Whether or not the establishment or operationalization of an integrated policy/strategy/plan have communicated which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (yes-1, no-2)*	*0* *No*	*2 aimags* *No*	*4 aimags* *Yes*	
FUND LEVEL IMPACT: ***Copy from GCF funding proposal (no changes can be made) These are pre-defined and selected from the GCF performance measurement framework, should be limited to one or two only.***					
A1.0 Increased resilience and enhanced livelihoods of the most vulnerable people, communities and regions	A1.2 Number of males and females benefiting from the adoption of diversified, climate resilient livelihood options (including fisheries, agriculture, tourism, etc.)	0	65,000 people (32,500 male, 32,500 female) (direct) 0 (indirect)	130,000 people (65,000 male, 65,000 female) (direct) 800,000 people (400,000 male, 400,000 female) (indirect)	Herders adopt adaptive practices, and attribution for changes in environmental conditions and access to markets is possible. Government commitment to climate-informed and climate-resilient planning; climate information is adequately integrated into livestock planning and needed reforms are approved.
A4.0 Improved resilience of ecosystems and ecosystem services	A4.1 Coverage/scale of ecosystems protected and stregnthened in response to climate variability and change	0	7 watersheds and 18.22M ha	14 watersheds and 36.44M ha	Investments identified during proposal development are validated by RUAs
PROJECT OUTCOMES: ***Copy from GCF funding proposal (no changes can be made). These are pre-defined outcomes selected from the GCF performance measurement framework and should be limited to one or two only.***					

A5.0 Strengthened institutional and regulatory systems for climate-responsive planning and development	A5.1 Institutional and regulatory systems that improve incentives for climate resilience and their effective implementation[33]	0	3	3	Climate information will be integrated into planning and reforms will be approved, as per commitment expressed by MET and MoFALI
A6.0 Increased generation and use of climate information in decision-making	A6.1 Use of climate information products/services in decision-making in climate sensitive sectors[34]	0	4	1	Climate information will be integrated into planning and reforms will be approved, as per commitment expressed by MET and MoFALI Government commitment to climate-informed and climate-resilient planning.
A7.0 Strengthened adaptive capacity and reduced exposure to climate risks	A7.1 Use by vulnerable households, communities, businesses and public-sector services of Fund-supported tools instruments, strategies and activities to respond to climate change and variability [35]	0	0	Improvement of score for 30% of rangeland covered by project[36]	Herders adopt adaptive practices, and attribution for changes in environmental conditions and access to markets is possible.
PROJECT RESULTS: ***Copy from GCF funding proposal (no changes can be made).***					
Output 1: Integrate climate information into land and water use planning at the national and sub-national levels	Number of tailored products and plans applying climate information	0	2 tailored climate products for natural resources management (MET) and the livestock sector (MoFALI)	2 tailored climate products for natural resources management (MET) and the livestock sector (MoFALI)	Climate information is sufficiently downscaled for application in sub-national planning Government commitment to climate-informed planning and planned policy transformations towards sustainability in the livestock sector
			1 analytical document to guide development of a national programme as a successor to the Mongolian Livestock Programme, detailing climate informed	1 analytical document to guide development of of a national programme as a successor to the Mongolian Livestock Programme,	

[33] Climate informed policy transformation scorecard – 4 policy transformation document drafted, 3 policy transformation document reviewed by stakeholders and comments integrated to the extent possible, 2 stakeholders endorse policy transformation and documents presented for approval by Cabinet/Parliament, 1 policy transformations approved by Cabinet/Parliament (Note: endorsement and approval of policy transformations will be supported by the project, but are outside the control of the project. Therefore the targets are set at 3. Disincentives, however, must be addressed through policy transformations in order for interventions to succeed and related progress should be reviewed at the midterm)

[34] Climate informed planning scorecard – 4 climate information tailored to MET and MoFALI and related adaptation guidelines available, 3 evidence of climate information integrated into strategies and policies, 2 evidence of climate information integrated into approved planning with corresponding financing allocated, 1 adaptation investments ongoing

[35] Rangeland health scorecard – 4 land severely degraded, 3 land moderately degraded, 2 land slightly degraded, 1 land not degraded. Note: It could take several years for degraded land to improve, therefore a conservative target within the project duration has been selected.

[36] Note: It could take several years for degraded land to improve, therefore a conservative target within the project duration has been selected.

			livestock herd size and herd structure targets	detailing climate informed livestock herd size and herd structure targets	
		0	0	3 policy transformation documents informed by climate change impact on land and water resources[37]	
		0	2 aimag plans	4 aimag plans	
			34 soum plans	68 soum plans	
			6 climate risk and adaptation profiles for river/lake basins in project area	12 climate risk and adaptation profiles for river/lake basins in project area	
Output 2: Scaling up climate-resilient water and soil management practices for enhanced small scale herder resource management	*Number of structures built and/or rehabilitated*	*0*	1000ha catchment reforestation	2500ha catchment reforestation	Central and local government co-financing is available to support investments. Investments are consistent with RUAs.
			44 natural springs protected	88 natural springs protected	
			143 wells rehabilitated or constructed	285 wells rehabilitated or constructed	
			9 water harvesting structures	18 water harvesting structures	
			1,445ha of haymaking or pasture reserve areas	2,890 ha of haymaking or pasture reserve areas	
	Herders apply adaptive practices to use of natural resources (e.g. rotational herding practices, RUAs)[38]	0	4	1	Herders adopt adaptive practices, and attribution for changes in

[37] The National Mongolian Livestock Program includes the following transformations "to develop a livestock sector that is adaptable to changing climatic and social conditions and create an environment where the sector is economically viable and competitive in the market economy" where Output 1 will support in integrating climate information 1) Create a legal framework for regulating pasture and protect at least 30% of land as state, aimag and soum level otor reserve area for use during times of hardship, 2) Link animal numbers and types of herd with pasture carrying capacity and limit the number of animals in areas where pasture capacity is already exceeded, and implemented related economic incentives to maintain this provision, and 3) Create a legal framework on pasture use fees collected from herders and people with livestock, based on regional characteristics and type of herd and use some portion of it for improving pasture condition.

[38] Adaptive practices by herders scorecard – 4 majority of herders not engaged in cooperatives, 3 majority of herders engaged in cooperatives, 2 majority of herders sign on to RUAs, 1 majority of herders applying RUA

					environmental conditions and access to markets is possible.
	RUAs include targets for climate informed livestock herd size and herd structure targets[39]	0	4	1	Herders adopt adaptive practices, and attribution for changes in environmental conditions and access to markets is possible.
Output 3: Build herder capacity to access markets for sustainably sourced, climate-resilient livestock products	% of HPO herders able to secure contracts with buyers for sustainably sourced livestock products, thereby enhancing livelihoods through improved market access	0	0%	50%	Willingness of herders to join HPOs Herders adopt adaptive practices, and attribution for changes in environmental conditions and access to markets is possible.

measures and practices (e.g. protecting identified land and water resources, planning natural resources use in cooperation with other herders, applying rotational herding practices, etc.)

[39] Scorecard – 4 -Herders have received sensitization/training pressure on natural resources dues to climate change and livestock, 3 - RUAs include climate informed livestock herd size and herd structure targets, 2 – support provided to herders to incentive progress towards targets (Outputs 1, 3), 1 – measurable progress made towards livestock herd size and herd structure targets

VI. MONITORING AND EVALUATION (M&E) PLAN

The project results, corresponding indicators and mid-term and end-of-project targets in the project results framework will be monitored annually and evaluated periodically during project implementation. If baseline data for some of the results indicators is not yet available, it will be collected during the first year of project implementation. The Monitoring Plan included in Annex O details the roles, responsibilities, frequency of monitoring project results.

Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the UNDP POPP and UNDP Evaluation Policy. The UNDP Country Office is responsible for ensuring full compliance with all UNDP project monitoring, quality assurance, risk management, and evaluation requirements.

Additional M&E requirements will be undertaken in accordance with the GCF initial approach to monitoring and evaluation policy and other relevant GCF policies. The costed M&E plan included below, and the Monitoring plan in Annex O, will guide the GCF-specific M&E activities to be undertaken by this project.

In addition to these mandatory UNDP and GCF M&E requirements, other M&E activities deemed necessary to support project-level adaptive management will be agreed during the Project Inception Workshop and will be detailed in the Inception Report.

GCF monitoring and reporting requirements:

Inception Workshop and Report: A project inception workshop will be held after the Funded Activity Agreement becomes effective, with the aim to:

a. Familiarize key stakeholders with the detailed project strategy and discuss any changes that may have taken place in the overall context since the project idea was initially conceptualized that may influence its strategy and implementation.
b. Discuss the roles and responsibilities of the project team, including reporting lines, stakeholder engagement strategies and conflict resolution mechanisms.
c. Review the results framework and monitoring plan.
d. Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutes to be involved in project-level M&E; discuss the role of the GCF National Designated Authority and other stakeholders in project-level M&E.
e. Update and review responsibilities for monitoring project strategies, including the risk log; SESP report, Social and Environmental Management Framework and other safeguard requirements; project grievance mechanisms; gender strategy; knowledge management strategy, and other relevant management strategies.
f. Review financial reporting procedures and budget monitoring and other mandatory requirements and agree on the arrangements for the annual audit.
g. Plan and schedule Project Board meetings and finalize the first-year annual work plan.
h. Formally launch the Project.

The inception report is to be submitted to GCF within six months of project start (i.e. Funded Activity Agreement effectiveness)[40]. The inception report will be cleared by the UNDP Country Office and the NCE-VF Regional Technical Adviser and approved by the Project Board.

GCF Annual Performance Report (APR) (due 1 March each year of project implementation):

[40] See Schedule 4 of the Funded Activity Agreement

The annual GCF APR covering the reporting period January to December will be completed for each year of project implementation. The APR will include reporting of: environmental and social risks and related management plans, gender, co-financing and financial commitments, GCF 'conditions precedent' outlined in the FAA, amongst other issues. The APR submitted to the GCF shall be shared with the Project Board.

The Project Manager, the UNDP Country Office, and the NCE-VF Regional Technical Advisor will provide objective input to the annual project report covering the calendar year for each year of project implementation. The Project Manager will ensure that the indicators included in the project results framework are monitored annually in advance so that progress can be included in the report.

The Annual Project Report submitted to the GCF will also be shared with the Project Board. The UNDP Country Office will coordinate the input of other stakeholders to the report as appropriate. The quality rating of the previous year's report will be used to inform the preparation of the subsequent report.

The last APR (i.e. Project Completion Report) will be due for submission within 3 months after the project completion date.[41]

Knowledge management: The project team will ensure extraction and dissemination of lessons learned and good practices to enable adaptive management and upscaling or replication at local and global scales. Results will be disseminated to targeted audiences through relevant information sharing fora and networks. The project will contribute to scientific, policy-based and/or any other networks as appropriate (e.g. by providing content, and/or enabling participation of stakeholders/beneficiaries)

Independent Interim Evaluation Report (IER):

An interim independent evaluation report will be completed within nine (9) months after Year three (3).

The terms of reference, the review process and the final IER report will follow the standard templates and guidance prepared by the UNDP IEO for GCF-financed projects available on the UNDP Evaluation Resource Center (ERC).

The evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired by UNDP evaluation specialists to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Equally, the consultants should not be in a position where there may be the possibility of future contracts regarding the project being reviewed.

The GCF NDA and other stakeholders will be involved and consulted during the evaluation process. Additional quality assurance support is available from the NCE-VF Directorate.

The final interim evaluation report will be available in English and will be cleared by the UNDP Country Office and the NCE-VF Regional Technical Adviser and approved by the Project Board.

The final IER report and IER TOR will be publicly available in English and will be posted on the UNDP ERC 9 November 2024. A management response to IER recommendations will be posted in the ERC within six weeks of the IER report's completion.

Terminal Evaluation (TE):
An independent terminal evaluation (TE) will take place upon completion of all major project outputs and activities. The terms of reference, the evaluation process and the final TE report will follow the standard templates and guidance prepared by the UNDP IEO for GCF-financed projects available on the UNDP Evaluation Resource Center.

[41] See Schedule 4 of the Funded Activity Agreement

The evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired by UNDP evaluation specialists to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Equally, the consultants should not be in a position where there may be the possibility of future contracts regarding the project being evaluated.

The GCF NDA and other stakeholders will be involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the NCE-VF Directorate.

A final independent evaluation report will be completed within six (6) months after submission of Project Completion Report.

The final evaluation report will be cleared by the UNDP Country Office and the NCE-VF Regional Technical Adviser and will be approved by the Project Board.

The final TE report and TE TOR will be publicly available in English and posted on the UNDP ERC by 9 November 2028 or within six (6) months after submission of Project Completion Report, whichever is earlier. A management response to the TE recommendations will be posted to the ERC within six weeks of the TE report's completion.

Final Report:
The project's final APR along with the terminal evaluation (TE) report and corresponding management response will serve as the final project report package. The final project report package shall be discussed with the Project Board during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.

Agreement on intellectual property rights and use of logo on the project's deliverables and disclosure of information**:**
To accord proper acknowledgement to the GCF for providing grant funding, the GCF logo will appear together with the UNDP logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GCF will also accord proper acknowledgement to the GCF. Information will be disclosed in accordance with relevant policies notably the UNDP Disclosure Policy[42] and the GCF Disclosure Policy[43]. See also GCF Branding Guidelines.

Carbon offsets or units: As outlined in the AMA agreement between UNDP and the GCF, to the extent permitted by applicable laws and regulations, the Implementing Partner will ensure that any greenhouse gas emission reductions (e.g. in emissions by sources or an enhancement of removal by sinks) achieved by this project shall not be converted into any offset credits or units generated thereby, or if so converted, will be retired without allowing any other emissions of greenhouse gases to be offset.

GCF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget[44] (US$)	Time frame
Inception Workshop	Implementing Partner Project Manager (PM)/Coordinator/Chief Technical Advisor (CTA)	9,600	
Inception Report **Baseline assessments**	PM/Coordinator/CTA	None	*9 August 2021* *9 February 2022*

[42] See https://www.undp.org/content/undp/en/home/accountability/transparency/information-disclosure-policy.html
[43] See https://www.greenclimate.fund/documents/20182/184476/GCF_B.12_24_-_Comprehensive_Information_Disclosure_Policy_of_the_Fund.pdf/f551e954-baa9-4e0d-bec7-352194b49bcb
[44] Excluding project team staff time and UNDP staff time and travel expenses.

GCF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget[44] (US$)	Time frame
Risk management (including Atlas Risk logs)	PM/Coordinator/CTA Country Office	None	On-going
Monitoring of indicators in project results framework ***(including hiring of external experts, project surveys, data analysis etc…)***	PM/Coordinator/CTA	159,600	Annually
GCF Annual Project Report	RTA UNDP Country Office[45] PM/Coordinator/ CTA	30,000	Annually as per FAA
Audit of Implementing Partner as per UNDP audit policies	UNDP Country Office	Per year: USD 5,000 Total: 35,000	As per UNDP Audit policies
Lessons learned, case studies, and knowledge generation	Project Manager	20,000	On-going
Monitoring of gender action plan	Project Gender Officer	35,000	On-going
Monitoring of stakeholder engagement plan	Project Stakeholder Engagement Officer	35,000	On-going
Addressing environmental and social grievances	Project Manager UNDP Country Office BPPS as needed	50,000	*Costs associated with missions, workshops, BPPS expertise etc. can be charged to the project budget.*
Project Board meetings	Project Board UNDP Country Office PM	Per year: USD 10,000 Total: 70,000	At minimum annually
Supervision missions	UNDP Country Office	None[46]	Two per year
Oversight missions	RTA NCE-VF Unit	None[47]	Troubleshooting as needed
GCF learning missions/site visits	UNDP Country Office and Project Manager and NCE-VF Unit	30,000	To be determined.
Interim independent evaluation (add additional lines if more than one interim evaluation is required)	Independent evaluators	50,000	
Oversight of MTR process and MTR management response	UNDP Country Office and BPPS/NCE	None**Error! Bookmark not defined.**	9 November 2024
Final independent evaluation	Independent evaluators	100,000	Within six (6) months after submission of Project Completion Report or 9

[45] Or equivalent for regional or global project

[46] The costs of UNDP Country Office and NCE-VF Unit's participation and time are charged to the GCF Agency Fee.

[47] The costs of UNDP Country Office and NCE-VF Unit's participation and time are charged to the GCF Agency Fee.

GCF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget[44] (US$)	Time frame
			November 2028, whichever is earlier.
Translation of evaluation reports into English	UNDP Country Office	5,000	As required. GCF will only accept reports in English.
Oversight of TE process and TE management response	UNDP	None**Error! Bookmark not defined.**	
TOTAL indicative COST Excluding project team staff time, and UNDP staff and travel expenses		**629,200**	

VII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

Roles and responsibilities of the project's governance mechanism:

Implementing Partner: The Implementing Partner for this project is Ministry of Environment and Tourism (MET)

The Implementing Partner is the entity to which the UNDP Administrator has entrusted the implementation of UNDP assistance specified in this signed project document along with the assumption of full responsibility and accountability for the effective use of UNDP resources and the delivery of outputs, as set forth in this document.

The Implementing Partner is responsible for executing this project. Specific tasks include:

- Project planning, coordination, management, monitoring, evaluation and reporting. This includes providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes and is aligned with national systems so that the data used and generated by the project supports national systems.
- Risk management as outlined in this Project Document;
- Procurement of goods and services, including human resources;
- Financial management, including overseeing financial expenditures against project budgets;
- Approving and signing the multiyear workplan;
- Approving and signing the combined delivery report at the end of the year; and,
- Signing the financial report or the funding authorization and certificate of expenditures.

The national executing entity – also referred to as the national 'Implementing Partner' in UNDP terminology – is required to implement the project in compliance with UNDP rules and regulations, policies and procedures, including NIM guidelines. These include relevant requirements on fiduciary, procurement, environmental and social safeguards, and other performance standards. In legal terms, this is ensured through the national government's signature of the UNDP Standard Basic Assistance Agreement (SBAA), together with a UNDP project document which will be signed by the Implementing Partner to govern the use of the funds.

Responsible Parties: The Responsible Parties for this project are: Ministry of Food, Agriculture and Light Industry (MoFALI), National Emergency Management Agency (NEMA); and National Agency for Meteorology and Environmental Monitoring (NAMEM), an agency under the MET.

Project stakeholders and target groups:

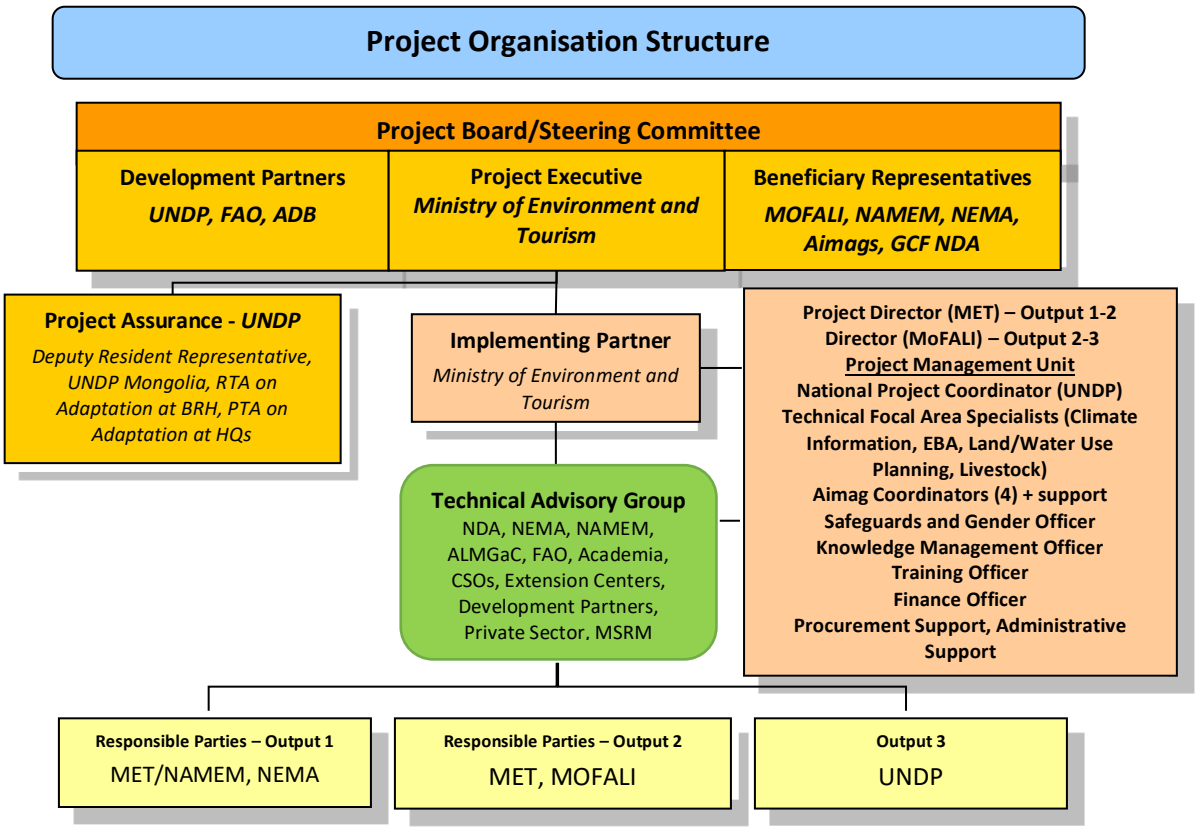
In addition to the responsible parties, project stakeholders include:

- Agency for Land Management, Geodesy and Cartography (ALMGaC)
- National Development Agency (NDA)
- State Emergency Commission
- River Basin Administrations
- Provincial and soum Government authorities, including Soum level Veterinary and animal breeding centers
- Forest Research and Development Center
- Private sector – Commercial Banks, Cashmere platform, Wool and cashmere association, Meat producer's association, Hydraulic engineering companies, professional forest entities, etc.
- SME Fund managed by the Ministry of Finance
- Development partners and their projects
- NGOs/CSOs in areas of pastureland management, agricultural value chain development and natural resources management
- Herder communities in all 68 soums of four target provinces and Herder User Groups, Producer organizations as key beneficiaries

The herder communities, as key beneficiaries will be consulted in making decisions through regular consultations, including work panning, implementation and monitoring processes. Representing key beneficiaries, the Mongolian Society for Rangeland Management (MSRM) will be represented in Project Technical Advisory Panel.

UNDP: UNDP is accountable to the GCF for the implementation of this project. This includes oversight of project execution to ensure that the project is being carried out in accordance with agreed standards and provisions. UNDP is responsible for delivering GCF project cycle management services comprising project approval and start-up, project supervision and oversight, and project completion and evaluation. UNDP is responsible for the Project Assurance role of the Project Board/Steering Committee.

Project organisation structure:



Project Board: The Project Board (also called Project Steering Committee) is responsible for taking corrective action as needed to ensure the project achieves the desired results. In order to ensure UNDP's ultimate accountability, Project Board decisions should be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition.

In case consensus cannot be reached within the Board, the UNDP Resident Representative (or their designate) will mediate to find consensus and, if this cannot be found, will take the final decision to ensure project implementation is not unduly delayed.

Specific responsibilities of the Project Board include:

- Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;
- Address project issues as raised by the project manager;
- Provide guidance on new project risks, and agree on possible mitigation and management actions to address specific risks;
- Agree on project manager's tolerances as required, within the parameters set by NCE-VF, and provide direction and advice for exceptional situations when the project manager's tolerances are exceeded;
- Advise on major and minor amendments to the project within the parameters set by NCE-VF;
- Ensure coordination between various donor and government-funded projects and programmes;
- Ensure coordination with various government agencies and their participation in project activities;
- Track and monitor co-financing for this project;
- Review the project progress, assess performance, and appraise the Annual Work Plan for the following year;
- Appraise the annual project implementation report, including the quality assessment rating report;

- Ensure commitment of human resources to support project implementation, arbitrating any issues within the project;
- Review combined delivery reports prior to certification by the implementing partner;
- Provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans;
- Address project-level grievances;
- Approve the project Inception, Interim Evaluation and Terminal Evaluation reports and corresponding management responses;
- Review the final project report package during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.

The composition of the Project Board must include the following roles:

a. Project Executive: Is an individual who represents ownership of the project and chairs the Project Board. The Executive is normally the national counterpart for nationally implemented projects. The Project Executive include:
   - *State Secretary of Ministry of Environment and Tourism*
   - *UNDP Resident Representative (co-chair)*
   - *State Secretary of Ministry of Food, Agriculture and Light Industry (co-chair)*

b. Beneficiary Representative(s): Individuals or groups representing the interests of those who will ultimately benefit from the project. Their primary function within the board is to ensure the realization of project results from the perspective of project beneficiaries. Often civil society representative(s) can fulfil this role. The Beneficiary representatives are:
   - *State Secretary of Ministry of Food, Agriculture and Light Industry*
   - *Deputy Chief of National Emergency Management Agency*
   - *Director of Agency for Land Administration and Management, Geodesy and Cartography (ALAMGaC)*
   - *Director of National Agency for Meteorology and Environmental Monitoring*
   - *Governors of four target aimags*
   - *National Designated Authority (NDA) for GCF*
   - *Director of National Chamber of Commerce*

c. Development Partner(s): Individuals or groups representing the interests of the parties concerned that provide funding and/or technical expertise to the project (and can include UNDP in a NIM project). The Development Partner(s) are:
   - *Resident Representative, UNDP*
   - *Assistant Resident Representative (Programme), FAO*
   - *Programme Specialist, ADB*

d. Project Assurance: UNDP performs the quality assurance role and supports the Project Board and Project Management Unit by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed. The Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. UNDP provides a three – tier oversight services involving the UNDP Country Offices and UNDP at regional and headquarters levels. Project assurance is totally independent of the Project Management function.

UNDP's overall role as an Accredited Entity is to provide oversight and quality assurance through its Headquarter, regional and Country Office units. This role includes: (i) Day-to-day oversight supervision; (ii) Oversight of project completion; and (iii) Oversight of project reporting. It also includes oversight role in relation to reporting and knowledge-management. The 'project assurance' function of UNDP is to support the Project Board by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed. Project assurance has to be

independent of the Project Management; therefore, the Project Board cannot delegate any of its assurance responsibilities to the Project Manager, CTA or Project Directors[1].

MET will lead the implementation for Outputs 1 and 2 and will assign MoFALI, NAMEM (part of MET) and NEMA as key Responsibility Parties. UNDP will provide support services in both technical and operations support for Output 3 whereby UNDP will assume the responsibility for mobilizing and applying effectively the required inputs and partnerships to reach its expected deliverables. For this Output, UNDP will assume the overall management responsibility and accountability for project implementation and ensure close cooperation with the MoFALI as the critical government counterpart in its implementation.

The justification to engage UNDP as Service Provider is as follows: successful implementation of Output 3 requires close collaboration and coordination of technical inputs from the MET, MoFALI, local governments, FAO, domestic and international private sector companies, industry associations and cooperatives. Given the complexity of partnerships envisaged under the Output 3 and the need to continuously build trust for these partnerships to succeed, UNDP will be the best entity to engage various partners from both public and private sector, either following competitive procurement process or other partnership arrangement. Such support services and the cost involved, shall be detailed in LOA for UNDP support services. As the support services will be provided by UNDP, usual UNDP regulations, rules and procedures apply.

In addition, the Government of Mongolia may request UNDP to provide direct project services for this project. The UNDP and Government of Mongolia acknowledge and agree that those services are not mandatory, and will be provided only upon Government request and specified in the Letter of Agreement. If requested, the direct project services would follow UNDP policies on the recovery of direct project costs relating to GCF funded projects.

Project Management Unit: The National Project Coordinator (NPC) will lead the Project Management Unit and run the project on a day-to-day basis on behalf of UNDP and MET within the constraints laid down by the Project Board. The NPC function will end when the final project terminal evaluation report and other documentation required by the GCF and UNDP has been completed and submitted to UNDP. S/he is responsible for day-to-day management and decision-making for the project and has the responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost. The annual work plan is prepared by the NPC and reviewed and endorsed by the Project Board. However, the final approval is provided by the Regional Technical Advisor, Nature, Climate and Energy of UNDP as part of the quality assurance role. The NPC is also responsible for managing and monitoring the project risks initially identified and submit new risks to the Project Board for consideration and decision on possible actions if required and update the status of these risks by maintaining the project risks log according to the NIM Guidelines.

The Project Management Unit (PMU) will implement the project as per the work plan approved by the Project Board. One National Project Director will be appointed by each the MET and MoFALI, tasked with oversight to implement Output 1 and 2 respectively. They will ensure coordination and mobilize project implementation support from their respective ministries and partner organizations, and manage inter-sectoral coordination required in project implementation. In addition, the project will have key staff tasked with the following: safeguards and gender, communications, M&E, training, finance, procurement and admin support. When fully staffed, the total number of key staff and support staff in the PMU will be approximately twenty. In addition, the PMU will recruit consultants as needed.

As aimag level extensions of the PMU, four Project Coordination Offices (PCUs) will be set up. These offices will be responsible for the field implementation of the project. Each PCU will be headed by a coordinator and will consist of a team trained to facilitate RUGs and RUAs across the aimag and a team trained to set up HPO and facilitate market access. An engineer or a technical expert will be recruited to design and place infrastructure under Output 2. In additional the PCU will retain procurement and admin support.

Project extensions: The NCE-VF Executive Coordinator must approve all project extension requests. Note that all extensions incur costs and the GCF project budget cannot be increased. A single extension may be granted on an exceptional basis and only if the following conditions are met: one extension only for a project for a maximum of six months; the project management costs during the extension period must remain within the originally approved amount, and any increase in PMC costs will be covered by non-GCF resources; the UNDP Country Office oversight costs during the extension period must be covered by non-GCF resoruces.

VIII. FINANCIAL PLANNING AND MANAGEMENT

The total cost of the project is *USD* 79,301,276. This is financed through a GCF grant of USD 23,101,276 and USD 56,200,000 in other parallel co-financing. UNDP is responsible for the oversight of the GCF resources and the cash co-financing transferred to UNDP bank account only.

Co-finance monitoring: The actual realization (materialization) of project co-financing will be monitored annually and will be reported to the GCF through annual progress reports. Signed letters from co-financiers will be requested to confirm the amounts that have materialized for the respective year.

Co-financing will be used for the following project activities/outputs:
(*complete table below based on Schedule 2 of the FAA/add rows/columns, as needed)*

Co-financing source	Co-financing type/financial instrument	Co-financing amount USD	Planned Co-financing Activities/Outputs	Risks	Risk Mitigation Measures
MET	Cash	20,000,000	Output 1,2 and 3 • Policy and regulatory framework for climate resilient planning and ecosystem based NRM – USD 1 million (Activity 1.3, 3.4) • Natural spring protection – USD 0.5 million (Activity 2.2) • Implementation of IWRMP in 14 River Basin Administrations– USD 3 million (Activity 1.2, 2.1) • Water catchment protection and reforestation – USD 3.5 million (Activity 2.2) • Establishment of hydromet stations– USD 4 million (Activity 1.1) • Capacity building for hydromet professionals – USD 1.5 million (Activity 1.1, 3.4) • Financing of adaptation measures through Environment and climate change fund – USD 5.5 million (Activity 2.3, 2.4) • Project management support – USD 1 million	Change of Government in the election year (2024) and potential shift in ruling party priorities	Immediate and close engagement by UDNP with newly elected Government to ensure investment in climate change as a priority
MOFALI	Cash	33,200,000	Output 1,2 and 3 • Livestock vaccination programme USD 1.71 million annually and USD	Change of Government in the election	Immediate and close engagement by UDNP with

			12 million for the project duration (Activity 1.1, 1.2, 1.3, 2.1, 3.2, 3.3, 3.4) • Groundwater wells– USD 2 million for the project target provinces (Activity 2.4) • Animal breeding services through 68 centers in four aimags – USD 1.3 million (Activity 2.1) • Livestock traceability improvement, ear-tagging and database – USD 5 million (Activity 3.3) • Livestock fodder production – USD 4.8 million (Activity 2.3) • Establishment of hay and fodder reserves– USD 1.3 million (Activity 2.3) • Pastureland improvement and rodent control– USD 3.5 million (Activity 2.2) • SME financing support to agriculture producers – USD 1.3 million in target soums (Activity 3.1) • Project management support – USD 2 million	year (2024) and potential shift in ruling party priorities	newly elected Government to ensure investment in climate change as a priority
NEMA	Cash	3,000,000	Output 1 and 2 • Capacity building to coordinate and plan responses to slow onset natural hazards– USD 1.5 million (Activity 1.1) • Emergency supply storage facilities – USD 0.8 million (Activity 2.3) • Early warning system operation – USD 0.7 million (Activity 1.1)	Change of Government in the election year (2024) and potential shift in ruling party priorities	Immediate and close engagement by UDNP with newly elected Government to ensure investment in climate change as a priority

GCF Disbursement schedule: GCF grant funds will be disbursed according to the GCF disbursement schedule. The Country Office will submit an annual work plan to the NCE-VF Unit and comply with the GCF milestones in order for the next tranche of project funds to be released. All efforts must be made to achieve 80% delivery annually to accomplish the expected outputs/activities on a timely manner, within the planned duration to avoid extension of the project.

Disbursement	GCF proceeds (USD)	Indicative Disbursement Schedule
Disbursement 1	1,018,537	May 2021
Disbursement 2	5,298,430	May 2022
Disbursement 3	6,871,736	May 2023
Disbursement 4	4,523,922	May 2024
Disbursement 5	2,522,774	May 2025
Disbursement 6	1,658,308	May 2026

Disbursement 7	1,207,569	May 2027
Total	**23,101,276**	

Direct Project Services as requested by Government: services provided to government directly under NIM. The UNDP Country Office will also deliver a pre-determined set of project-specific execution services at the request of the Government. To ensure the strict independence required by the GCF and in accordance with the UNDP Internal Control Framework, these execution services should be delivered independent from the GCF-specific oversight and quality assurance services (i.e. not done by same person to avoid conflict of interest). These execution services will be charged to the project budget in accordance with the UNDP's Harmonized Conceptual Funding Framework and Cost Recovery Methodology and Partner Capacity Assessment Tool (PCAT). Completing the partner capacity assessment tool and the HACT capacity assessment is required early during the project preparation stage. The partner capacity assessment tool considers project management capacities and the HACT assessment helps to identify capacity gaps in the partner's financial management system and practices, and to determine ways and means of addressing them. The assessment also informs decisions on the use of national implementation and the role of UNDP in providing support services at the request of the Implementing Partner. If the Implementing Partner requests UNDP support services (both Technical and Administrative Support Services) these costs need to be transparently and correctly budgeted in the TBWP and approved by GCF.

The government has requested UNDP to undertake the following services:

A. Technical services including, but not limited to:

- Implementation
- Institutional development
- Policy transformation
- Partnerships
- Technical advice to Implementation of Output 3 of the project.

Total: $635,980

B. Services related to procurement and finance in accordance with UNDP regulations and policies, which include but not limited to:

- HR services
- Procurement services
- Finance services
- IT support services
- Administrative services for consultant mobilization

Total: $201,750

The Implementing Partner and GCF National Designated Authority have requested UNDP to provide support services in the amount of **USD$ 837,730** for the full duration of the project. The **request letter** (signed by the GCF National Designated Authority and the IP) and the signed letter of agreement between UNDP and the Implementing Partner detailing these support services are included in Annex L. To ensure the strict independence required by the GCF and in accordance with the UNDP Internal Control Framework, these execution services should be delivered independent from the GCF-specific oversight and quality assurance services (i.e. not done by same person to avoid conflict of interest).

Budget Revision and Tolerance:

Any reallocation of the GCF grant among the outputs that result in a variation of more than 10% of the GCF agreed budget for that output must be approved by the GCF in advance.

Any increase in the amount allocated to project management costs must be communicated by the Accredited Entity to the Fund and approved in writing by the Fund in advance

Any budget reallocation involving a major change in the project's scope, structure, design, or objectives or any other change that substantially alters the purpose or benefit of the project requires the GCF's prior written consent.

As per UNDP requirements outlined in the UNDP POPP, the project board will agree on a budget tolerance level for each plan under the overall annual work plan allowing the project manager to expend up to the tolerance level beyond the approved project budget amount for the year without requiring a revision from the Project Board (within the GCF requirements noted above). Should such deviation occur, the Project Manager and UNDP Country office will seek the approval of the NCE-VF Unit.

Any over expenditure incurred beyond the available GCF grant amount will be absorbed by non-GCF resources (e.g., UNDP TRAC or cash co-financing).

Audit: The project will be audited as per UNDP Financial Regulations and Rules and applicable audit policies. Audit cycle and process must be discussed during the Inception workshop. If the Implementing Partner is an UN Agency, the project will be audited according to that Agencies applicable audit policies.

Project completion: Project completion will be conducted as per UNDP requirements outlined in the UNDP POPP. Please note that extensions of the timeline for project closure will require consultations with the GCF and possible further action, as per the instruction of the GCF. Please see GCF policy on cancellation and restructuring. The only costs a project may incur following the final project review are those included in the project completion budget.

Operational closure: The project will be operationally closed when the last UNDP-financed inputs have been provided and the related activities have been completed. This includes the final clearance of the Terminal Evaluation Report (that will be available in English) and the corresponding management response, and the end-of-project review Project Board meeting, including the project completion budget. **Operational closure must happen with 3 months of posting the TE report to the UNDP ERC**. The Implementing Partner through a Project Board decision will notify the UNDP Country Office when operational closure has been completed. At this time, the relevant parties will have already agreed and confirmed in writing on the arrangements for the disposal of any equipment that is still the property of UNDP.

Transfer or disposal of assets: In consultation with the NIM Implementing Partner and other parties of the project, UNDP programme manager (UNDP Resident Representative) is responsible for deciding on the transfer or other disposal of assets. Transfer or disposal of assets is recommended to be reviewed and endorsed by the project board following UNDP rules and regulations. Assets may be transferred to the government for project activities managed by a national institution at any time during the life of a project. In all cases of transfer, a transfer document must be prepared and kept on file[48]. The transfer should be done before Project management Unit (team) complete their assignments.

In addition, the following GCF requirements must be followed: As stated in Clause 9.03 of the Funding Activity Agreement included in Annex[1], the Accredited Entity shall inform the GCF, in the final Annual Progress Report (APR), which steps it intends to take in relation to the durable assets and/or equipment purchased with the GCF Proceeds to implement the Funded Activity.

Financial completion: The project will be financially closed when the following conditions have been met: a) The project is operationally completed or has been cancelled; b) The Implementing Partner has reported all financial transactions to UNDP; c) UNDP has closed the accounts for the project; d) UNDP and the Implementing Partner have certified a final Combined Delivery Report (which serves as final budget revision).

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[48] See https://popp.undp.org/_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/PPM_Project%20Management_Closing.docx&action=default.

[1] 23.04 of the AMA states: " In relation to a Funded Activity that is a grant financed in whole or in part with GCF Proceeds, if any part of such grant is used to purchase any durable assets or equipment used to implement the relevant Funded Activity (such as vehicles or office equipment), upon completion of the Funded Activity or termination of the relevant FAA in accordance with its terms, the Accredited Entity shall take such steps in relation to such assets or equipment which it reasonably deems in the best interest of the continued operation of the Funded Activity taking into consideration the objectives of the Fund and the terms of the applicable SBAA."

The project is required to be financially completed within 6 months of operational closure or after the date of cancellation. Between operational and financial closure, the implementing partner will identify and settle all financial obligations and prepare a final expenditure report. The UNDP Country Office will send the final signed closure documents including confirmation of final cumulative expenditure and unspent balance to the NCE-VF Unit for confirmation before the project will be financially closed in Atlas by the UNDP Country Office.

Refund to GCF: Should a refund of unspent funds to the GCF be necessary, this will be managed directly by the NCE-VF Directorate in New York. No action is required at CO level on the actual refund from UNDP project to the GCF.

IX. TOTAL BUDGET AND WORK PLAN

Award ID:	00097281	**Project ID(s):**	00101070
Award Title:	Improving Adaptive Capacity and Risk Management of Rural Communities in Mongolia		
Business Unit:	MNG10		
Project Title:	Improving Adaptive Capacity and Risk Management of Rural Communities in Mongolia		
PIMS Number:	5873		
Implementing Partner (Executing Agency)	Ministry of Environment and Tourism (MET)		

Output	Activity	Responsible Party	Financing Source	Atlas Budget Account Code	Atlas Budget Account Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Amount Year 6 (USD)	Amount Year 7 (USD)	TOTAL (USD)	Budget Note
1. Integrate climate information into land and water use planning at the national and sub-national levels	1.1 Enhance technical capacity for long-term climate resilient development planning, and medium-term response planning capacity	MET	GCF	61100	Salary costs - NP staff	27,257	27,257	27,256	27,256	27,256	27,256	27,256	**190,794**	**1A**
				71200	International Consultants	57,400	180,800	129,600	11,600	4,600	34,600	12,600	**431,200**	**1B**
				71300	Local Consultants	-	60,000	205,000	25,000	-	-	-	**290,000**	**1C**
				71400	Contractual Services - Individ	9,000	9,000	9,000	9,000	9,000	9,000	9,000	**63,000**	**1D**
				71600	Travel	-	8,000	32,000	-	-	-	-	**40,000**	**1E**
				71800	Contractual Services - IP	41,250	41,250	41,250	41,250	41,250	41,250	41,250	**288,750**	**1F**
				72800	Information Technology Equipmt	-	1,350,000	70,000	-	-	-	150,000	**1,570,000**	**1G**
				75700	Training, Workshops and Conference	-	100,000	295,000	35,000	-	-	-	**430,000**	**1H**
				Activity 1.1 Total		**134,907**	**1,776,307**	**809,106**	**149,106**	**82,106**	**112,106**	**240,106**	**3,303,744**	
	1.2 Integration of climate change and climate-informed carrying capacity into aimag and soum level development plans (including Integrated River Basin Management Plans (IRBMP))	MET		71600	Travel	-	6,000	4,000	-	-	-	-	**10,000**	**1I**
				75700	Training, Workshops and Conference	-	70,000	70,000	-	-	-	-	**140,000**	**1J**
				72100	Contractual Services - Companies	-	780,000	618,000	42,000	-	-	-	**1,440,000**	**1K**
				Activity 1.2 Total		**-**	**856,000**	**692,000**	**42,000**	**-**	**-**	**-**	**1,590,000**	
	1.3 Analytical products to support policy and	MET		71200	International Consultants	30,000	30,000	-	-	-	-	-	**60,000**	**1L**
				71300	Local Consultants	25,000	25,000	-	10,000	-	10,000	-	**70,000**	**1M**

Output	Activity	Responsible Party	Financing Source	Atlas Budget Account Code	Atlas Budget Account Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Amount Year 6 (USD)	Amount Year 7 (USD)	TOTAL (USD)	Budget Note
	regulatory transformation promoting sustainable land and water management and resilient herder livelihoods			74200	Audio Visual & Print Prod Costs	-	6,000	-	6,000	-	6,000	-	**18,000**	**1N**
				75700	Training, Workshops and Conference	-	45,000	-	25,000	-	25,000	-	**95,000**	**1O**
				72100	Contractual Services - Companies	-	-	100,000	-	-	-	-	**100,000**	**1P**
				Activity 1.3 Total		**55,000**	**106,000**	**100,000**	**41,000**	**-**	**41,000**	**-**	**343,000**	
	GCF Total Output 1					**189,907**	**2,738,307**	**1,601,106**	**232,106**	**82,106**	**153,106**	**240,106**	**5,236,744**	
	Co-financing Total Output 1					**1,120,000**	**5,040,000**	**5,040,000**	**-**	**-**	**-**	**-**	**11,200,000**	**1 Co-fin**
	Grand Total Output 1					**1,309,907**	**7,778,307**	**6,641,106**	**232,106**	**82,106**	**153,106**	**240,106**	**16,436,744**	
2. Scaling up climate-resilient water and soil management practices for enhanced small scale herder resource management	2.1 Enhance cooperation among herders on sustainable use and stewardship of shared land and water resources (formalized through Resource User Agreements)	MET	GCF	61100	Salary costs - NP staff	36,342	36,342	36,342	36,342	36,342	36,341	36,341	**254,392**	**2A**
				71200	International Consultants	4,800	103,800	13,800	34,800	13,800	103,800	37,800	**312,600**	**2B**
				71400	Contractual Services - Individ	9,000	9,000	9,000	9,000	9,000	9,000	9,000	**63,000**	**2C**
				71800	Contractual Services - IP	78,750	78,750	78,750	78,750	78,750	78,750	78,750	**551,250**	**2D**
				73400	Rental & Maint of Other Equip	15,000	10,000	10,000	10,000	10,000	10,000	10,000	**75,000**	**2E**
				74200	Audio Visual & Print Prod Costs	5,000	17,500	13,500	13,500	10,500	-	-	**60,000**	**2F**
				75700	Training, Workshops and Conference	12,000	72,500	57,000	48,500	40,000	-	-	**230,000**	**2G**
				72100	Contractual Services - Companies	45,000	320,750	229,650	174,500	108,100	-	-	**878,000**	**2H**
				Activity 2.1 Total		**205,892**	**648,642**	**448,042**	**405,392**	**306,492**	**237,891**	**171,891**	**2,424,242**	
	2.2 Reforestation of critical catchment areas to protect water resources and ecosystems services	MET		71300	Local Consultants	-	55,000	51,000	34,000	34,000	34,000	-	**208,000**	**2I**
				74200	Audio Visual & Print Prod Costs	-	5,000	25,000	15,000	5,000	-	-	**50,000**	**2J**
				75700	Training, Workshops and Conference	-	6,800	13,600	6,800	6,800	-	-	**34,000**	**2K**
				72100	Contractual Services - Companies	-	126,735	887,145	506,940	506,940	506,940	-	**2,534,700**	**2L**
				Activity 2.2 Total		**-**	**193,535**	**976,745**	**562,740**	**552,740**	**540,940**	**-**	**2,826,700**	
		MoFALI		71300	Local Consultants	-	38,000	-	-	-	-	-	**38,000**	**2M**

Output	Activity	Responsible Party	Financing Source	Atlas Budget Account Code	Atlas Budget Account Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Amount Year 6 (USD)	Amount Year 7 (USD)	TOTAL (USD)	Budget Note
	2.3 Establish haymaking and pasture reserve areas, and emergency fodder storage facilities to reduce volatility to livelihoods related to climate change induced extreme events			74200	Audio Visual & Print Prod Costs	-	12,750	-	4,250	-	-	-	**17,000**	**2N**
				75700	Training, Workshops and Conference	-	6,800	6,800	6,800	6,800	6,800	-	**34,000**	**2O**
				72100	Contractual Services - Companies	-	1,101,159	1,835,266	734,106	-	-	-	**3,670,531**	**2P**
				Activity 2.3 Total		**-**	**1,158,709**	**1,842,066**	**745,156**	**6,800**	**6,800**	**-**	**3,759,531**	
	2.4 Improve water access through protection of natural springs, construction of new water wells, rehabilitation of existing wells and water harvesting measures	MET		71300	Local Consultants	-	13,600	27,200	13,600	13,600	-	-	**68,000**	**2Q**
				72100	Contractual Services - Companies	-	143,732	968,590	714,858	197,465	-	-	**2,024,645**	**2R**
				Activity 2.4 Total		**-**	**157,332**	**995,790**	**728,458**	**211,065**	**-**	**-**	**2,092,645**	
	GCF Total Output 2					**205,892**	**2,158,218**	**4,262,643**	**2,441,746**	**1,077,097**	**785,631**	**171,891**	**11,103,118**	
	Co-financing Total Output 2					**620,000**	**11,790,000**	**11,790,000**	**2,000,000**	**-**	**-**	**-**	**26,200,000**	**2 Co-fin**
	Grand Total Output 2					**825,892**	**13,948,218**	**16,052,643**	**4,441,746**	**1,077,097**	**785,631**	**171,891**	**37,303,118**	
3. Build herder capacity to access markets for sustainably sourced, climate resilient livestock products	3.1 Identify public-private-community partnership for sustainably sourced climate resilient livestock products	UNDP	GCF	61100	Salary costs - NP staff	27,257	27,257	27,256	27,256	27,256	27,256	27,256	**190,794**	**3A**
				71200	International Consultants	1,600	34,600	49,600	56,600	4,600	34,600	12,600	**194,200**	**3B**
				71300	Local Consultants	-	-	30,000	15,000	15,000	-	-	**60,000**	**3C**
				71400	Contractual Services - Individ	9,000	9,000	9,000	9,000	9,000	9,000	9,000	**63,000**	**3D**
				71800	Contractual Services - IP	78,981	78,981	78,981	78,981	78,982	78,982	78,982	**552,870**	**3E**
				75700	Training, Workshops and Conference	-	-	60,000	60,000	-	-	-	**120,000**	**3F**
				72100	Contractual Services - Companies	-	-	198,000	198,000	168,000	168,000	168,000	**900,000**	**3G**
				Activity 3.1 Total		**116,838**	**149,838**	**452,837**	**444,837**	**302,838**	**317,838**	**295,838**	**2,080,864**	
	3.2 Establishment and training of	UNDP		71200	International Consultants	28,500	-	-	-	-	-	28,500	**57,000**	**3H**

Output	Activity	Responsible Party	Financing Source	Atlas Budget Account Code	Atlas Budget Account Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Amount Year 6 (USD)	Amount Year 7 (USD)	TOTAL (USD)	Budget Note
	Herder Producer Organizations (or cooperatives)			71300	Local Consultants	9,000	-	10,000	40,000	-	-	9,000	**68,000**	**3I**
				72300	Materials & Goods	-	-	75,000	375,000	300,000	-	-	**750,000**	**3J**
				75700	Training, Workshops and Conference	-	-	20,000	80,000	-	-	-	**100,000**	**3K**
				72100	Contractual Services - Companies	262,500	-	150,000	300,000	150,000	-	262,500	**1,125,000**	**3L**
				Activity 3.2 Total		**300,000**	**-**	**255,000**	**795,000**	**450,000**	**-**	**300,000**	**2,100,000**	
	3.3 Improve traceability for sustainably sourced, climate-resilient livestock products	UNDP		71200	International Consultants	-	-	25,000	75,000	25,000	-	-	**125,000**	**3M**
				71300	Local Consultants	-	-	7,500	25,500	7,000	-	-	**40,000**	**3N**
				75700	Training, Workshops and Conference	-	-	37,500	62,500	-	-	-	**100,000**	**3O**
				72100	Contractual Services - Companies	-	75,000	25,000	150,000	300,000	150,000	-	**700,000**	**3P**
				Activity 3.3 Total		**-**	**75,000**	**95,000**	**313,000**	**332,000**	**150,000**	**-**	**965,000**	
	3.4 Generation and dissemination of knowledge products to support private-sector engagement and herder enfranchisement in climate-resilient and sustainable production in Mongolia	UNDP		72100	Contractual Services - Companies	-	16,667	50,000	133,333	133,333	108,333	58,334	**500,000**	**3Q**
				Activity 3.4 Total		**-**	**16,667**	**50,000**	**133,333**	**133,333**	**108,333**	**58,334**	**500,000**	
	GCF Total Output 3					**416,838**	**241,505**	**852,837**	**1,686,170**	**1,218,171**	**576,171**	**654,172**	**5,645,864**	
	Co-financing Total Output 3					**705,020**	**3,055,156**	**4,477,215**	**3,057,357**	**2,200,047**	**1,610,205**	**695,000**	**15,800,000**	**3 Co-fin**
	Grand Total Output 3					**1,121,858**	**3,296,661**	**5,330,052**	**4,743,527**	**3,418,218**	**2,186,376**	**1,349,172**	**21,445,864**	
Project Management	Project Management	MET	GCF	71400	Contractual Services - Individ	39,643	39,643	39,643	39,643	39,643	39,643	39,642	**277,500**	PM1
				71800	Contractual Services - IP	40,557	40,557	40,557	40,557	40,557	40,557	40,558	**283,900**	PM2
				72200	Equipment and Furniture	45,000	-	-	15,000	-	-	-	**60,000**	PM3

Output	Activity	Responsible Party	Financing Source	Atlas Budget Account Code	Atlas Budget Account Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Amount Year 6 (USD)	Amount Year 7 (USD)	TOTAL (USD)	Budget Note
				72400	Communic & Audio Visual Equip	2,600	2,600	2,600	2,600	2,600	2,600	2,600	**18,200**	PM4
				72500	Supplies	10,600	10,600	10,600	10,600	10,600	10,600	10,600	**74,200**	PM5
				73100	Rental & Maintenance-Premises	15,000	16,000	16,000	16,000	16,000	16,000	16,000	**111,000**	PM6
				73400	Rental & Maint of Other Equip	12,000	7,000	7,000	7,000	7,000	7,000	7,000	**54,000**	PM7
				74100	Professional Services	5,000	5,000	5,000	5,000	5,000	5,000	5,000	**35,000**	PM8
				74500	Service to Projects – GOE	35,500	39,000	33,750	27,500	24,000	22,000	20,000	**201,750**	PM9
	GCF Total Project Management Cost					**205,900**	**160,400**	**155,150**	**163,900**	**145,400**	**143,400**	**141,400**	**1,115,550**	
	Co-financing Total Project Management Cost					**200,000**	**900,000**	**900,000**	**250,000**	**250,000**	**250,000**	**250,000**	**3,000,000**	**4 Co-fin**
	Grand Total Project Management Cost					**405,900**	**1,060,400**	**1,055,150**	**413,900**	**395,400**	**393,400**	**391,400**	**4,115,550**	
GCF Total - Project						**1,018,537**	**5,298,430**	**6,871,736**	**4,523,922**	**2,522,774**	**1,658,308**	**1,207,569**	**23,101,276**	
Co-financing Total - Project						**2,645,020**	**20,785,156**	**22,207,215**	**5,307,357**	**2,450,047**	**1,860,205**	**945,000**	**56,200,000**	
Grand Total - Project						**3,663,557**	**26,083,586**	**29,078,951**	**9,831,279**	**4,972,821**	**3,518,513**	**2,152,569**	**79,301,276**	

Budget Note:

Note	Description of Cost Items	Unit Cost (USD)	Quantity	Unit	Amount (USD)
1A	UNDP Technical support to implementation (1 Climate Change Specialist @ 75%, Programme Support Staff @ 30%) - across 3 Outputs UNDP will directly charge the Project upon approval of annual work and monthly record of experts time spent to provide the service to the Project. Actual charge will include staff cost.	635,980	30%	For Output 1	190,794
1B	International Consultant to provide services related to the validation assessment for the National Agency for Meteorology and Environmental Monitoring's (NAMEM) weather forecasting technical capacity and related computing equipment requirements (USD700 x 50 days)	35,000	1	Contract	35,000
	International Consultant to provide training to senior and technical NAMEM staff on applying new methods, models, and post-processing approaches including weather research and forecasting (WRF) Model for 8 staff, community earth system model (CESM) for 4 staff and NCAR command language (NCL) for 4 staff	50,000	1	Contract	50,000

Note	Description of Cost Items	Unit Cost (USD)	Quantity	Unit	Amount (USD)
	International Consultant for providing services for the development of guidelines on climate risk informed planning (1 Consultant for 100 days)	70,000	1	Contract	70,000
	International Consultant to provide climate informed livestock size and herd structure target analysis, to inform development of next phase of livestock programme (1 Consultant for 120 days)	102,000	1	Contract	102,000
	International Consultant for providing services for the development of IBF and FBF guidelines and tools (1 Consultant for 100 days)	70,000	1	Contract	70,000
	Consultant – mid-term review (MTR) (USD50,000), terminal evaluation (TE) (USD100,000) - shared across outputs	150,000	0.2	contract	30,000
	Consultant - Project Monitoring and Evaluation (@ 20% for Output 1)	371,000	0.2	Contract	74,200
1C	5 National Consultants to provide services for the development of guidelines on climate risk informed planning (5 Consultants @ USD200 per day for 100 days over 2 years)	20,000	5	Contracts	100,000
	2 National Consultants for the provision of training services on climate change impacts, risks assessments and cross-sectoral planning approaches (2 National Consultants @ USD 200 per day for 125 days)	25,000	2	Contracts	50,000
	2 National Consultants to provide training and technical support services including development of guidelines for the improvement of medium term response planning for projected seasonal extreme weather events (2 Consultants @ USD 200 per day for 100 days each)	20,000	2	Contracts	40,000
	National Consultants for providing services for the development of IBF and FBF guidelines and tools (2 Consultants USD200/day for 125 days)	25,000	2	Contracts	50,000
	2 National Consultants to provide training on application of seasonal forecasts to aimag level systems and planning in responding to extreme events (e.g. drought, dzud) (2 Consultants @ USD 200 per day for 125 days each)	25,000	2	Contracts	50,000
1D	National Project Coordinator (30% for Output 1)	210,000	0.3	Contract	63,000
1E	Travel arrangements for training participants for the 7 workshops to be conducted under Activity 1.1 by NAMEM staff (a) Three training workshops in Ulaanbaatar technical and operational level staff of NAMEM and NEMA. Each of them with minimum 40 participants. (b) Four training workshops in each of the four selected aimags for government officials.	20,000	1	N/A	20,000
	Travel arrangements for training participants traveling from each locality to provincial centers (for MoFALI) – Activity 1.1	20,000	1	N/A	20,000
1F	Technical Specialist for Climate Information	154,000	1	Contract	154,000
	1/3 time of (1) Training officer (to oversee all the training workshops to be conducted throughout the Project implementation); (2) Knowledge Management, Monitoring and Evaluation Officer; and (3) Gender and Safeguards Officer	44,917	3	Contracts	134,750
1G	Purchase of a High-Performance Computer for the provision of weather forecasting services including installation and training. The breakdown of the costs is as below (i) Hardware - USD 1,280,000 of which:- (a) Two XC50 AC Cabinets - USD 160,000; (b) Blades and Areies Network (includes 17XC50 compute blades, 68 compute nodes, 4 IO2 service blades and 16 service nodes) -	1,500,000	1	Item	1,500,000

Note	Description of Cost Items	Unit Cost (USD)	Quantity	Unit	Amount (USD)
	USD 923,000; and (c) Direct Attached Lustre parallel file system (768 PB usable @ 5 GB/s I/O bandwidth) - USD 197,000 (ii) Software (Cray Programming Environment, Intel compiler, PBS professional) - USD 65,000 (iii) Post installation service and assistance for 3 years - USD 115,000 (iv) Installation - USD 25,000 (v) Freight - USD 15,000				
	Purchase of Information Technology Equipment. This includes the following: - ARC-GIS licensed software for database for improving herder resilience (USD8,000 x 4) - Automatic data logger (USD8,000 x 4) - Two-way radio transmitter dual band digital/analogue (USD150 x 40)	70,000	1	N/A	70,000
1H	7 Trainings to be conducted for NAMEM staff. (a) Three training workshops in Ulaanbaatar technical and operational level staff of NAMEM and NEMA. Each of them with minimum 40 participants; and (b) Four training workshops in each of the four selected aimags for government officials	17,143	7	Workshops	120,000
	4 regional workshops with 100 participants each, including travel cost from their respective areas, to be conducted on for developing Guidelines on Climate informed planning and IBF/FBF	30,000	4	Workshops	120,000
	Workshops for MoFALI staff in each province (4) with minimum 80 participants	20,000	4	Workshops	80,000
	National-level training workshop to be conducted on technical support services including development of guidelines for the improvement of medium term response planning for projected seasonal extreme weather events (for 80 participants, including travel arrangements)	40,000	1	Workshop	40,000
	4 regional workshops to be conducted on application of seasonal forecasts to aimag level systems and planning in responding to extreme events (50 participants each workshop, including travel cost from their respective areas)	17,500	4	Workshops	70,000
1I	Travel arrangements for central and local government and UNDP officials traveling to support the consultations with local stakeholders on development of soum level resilience-based land and water use and management plans	10,000	1	N/A	10,000
1J	4 regional stakeholder participation workshops organized to present the findings of the assessment and of climate risk and adaptation profiles for the Integrated River Basin Management Plans of the 12 river/lake basins in the target aimags and soums (2 times with 50 participants each region and time including travel arrangements)	17,500	8	Workshops	140,000
1K	2 Consultancy firms engaged for the assessment and development of climate risk and adaptation profiles for the Integrated River Basin Management Plans for the 12 river/lake basins in the target aimags and soums	210,000	2	Contracts	420,000
	Provision of Consultancy Services to develop soum level resilience-based land and water use and management tool and plans for 68 soums in 4 aimags, average cost 15,000 USD including consultations with local stakeholders and travel costs within soums	1,020,000	1	Contract	1,020,000
1L	International Consultant to provide technical inputs to improve the planned policies and reforms relevant to livestock sector (USD750x40 days)	30,000	1	Contract	30,000
	International Consultant to provide services for conducting analysis to the existing ecoservices systems for the provision of sustainable policy and investment choices in livestock sector (USD750 x 40 days)	30,000	1	Contract	30,000

Note	Description of Cost Items	Unit Cost (USD)	Quantity	Unit	Amount (USD)
1M	National Consultant to provide technical inputs to improve the planned policies and reforms relevant to livestock sector (USD200 x 125 days)	25,000	1	Contract	25,000
	National Consultant to provide services for conducting analysis to the existing ecoservices systems for the provision of sustainable policy and investment choices in livestock sector (USD200 x 75 days)	15,000	1	Contract	15,000
	National consultant to provide training services on the New Developed Policies on Ecoservices Systems Related to Livestock Sector (USD 200 per day for 150 days over 3 years)	30,000	1	Contract	30,000
1N	Printing and material costs for fliers and booklets to be used for sensitization on climate change impacts on natural resources and the livestock sector	18,000	1	N/A	18,000
1O	4 workshops for validation of Targeted Scenario Analysis (TSA) in each locality (30 participants each)	5,000	4	Workshops	20,000
	3 sensitization workshops to be conducted over 3 years for 40 participants each at aimag level officials.	25,000	3	Workshops	75,000
1P	Provision of Consultancy Services to improve the existing Ecoservices policies based on the conducted Analysis on best Ecoservices systems analysis in livestock Sector.	100,000	1	Contract	100,000
Total of Output 1					**5,236,744**
2A	UNDP Technical support to implementation (1 Climate Change Specialist @ 75%, Programme Support Staff @ 30%) - across 3 outputs UNDP will directly charge the project upon approval of annual work and monthly record of experts time spent to provide the service to the project. Actual charge will include staff cost.	635,980	40%	For Output 2	254,392
2B	Consultancy - Project Monitoring and Evaluation (@ 60% for output 2), including progress of RUA implementation	371,000	0.6	Contract	222,600
	Consultant - MTR (USD50,000), TE (USD100,000) - shared across outputs	150,000	0.6	Contract	90,000
2C	National Project Coordinator (30% for Output 2)	210,000	0.3	Contract	63,000
2D	Technical specialist for Land and Water Management	154,000	1	Contract	154,000
	1/3 time of (1) Training officer (to oversee all the training workshops to be conducted throughout the project implementation); (2) Knowledge Management, Monitoring and Evaluation Officer; and (3) Gender and Safeguards Officer	44,917	3	Contracts	134,750
	Aimag (Field) officers x 2 persons	57,750	2	Contracts	115,500
	Field Support staff at aimag level for output 2 (6 persons)	24,500	6	Contracts	147,000
2E	Costs for rental of central office unit travel from the capital city for implementation and monitoring of the project (rental cost - 2 car rule for security - USD0.4/km x 100,000 km)	75,000	1	Contract/Rental(s)	75,000
2F	Costs for printing of publications, official agreements, reference materials for resource users including climate informed plans etc.	30,000	1	N/A	30,000
	Printing costs for publications, official agreements, reference materials for resource users including climate informed plans	30,000	1	N/A	30,000

Note	Description of Cost Items	Unit Cost (USD)	Quantity	Unit	Amount (USD)
2G	Participation workshops for communities and Herder groups to coordinate information gathering as well as present findings. To consult at least 7,000 individuals (approx. 100 in each soum).	60,000	1	N/A	60,000
	Events management to present the findings of the RUA. To consult with at least 17,000 individuals (approx. 250 in each soum).	170,000	1	N/A	170,000
2H	Consultancy service firm engaged to conduct field missions for gathering information existing communities and herder groups on current practices for pasture, forests, water use and other related aspects. Services to travel to aimags and consult with herders - 4 companies including travel of USD50,000	112,500	4	Contracts	450,000
	Consultancy Services for the Provision of developing, consolidating the Resource Use Agreement (RUA) to define climate risk informed herder practices including herd size and herd structure targets, pastures, water use, use of engineered wells and other related fields and developing the operation & maintenance (O&M) on related investments – 4 companies	107,000	4	Contracts	428,000
2I	4 National Consultants to review the RUA identified investments methods spread equally across activities 2.2 and 2.3 (4 consultants @ USD 200 per for 75 days each + travel @ USD 4,000 allowance per consultant)	9,500	4	Contracts	38,000
	8 Local Consultants (2 per province) hired for the supervision of the construction works implemented under sub-activity 2.2.3 - implementation of ecosystems based adaptation measures through RUAs (8 supervisors @ USD 170 per day for 125 days each over 5 years)	21,250	8	Contracts	170,000
2J	Printing costs for publications, guidelines on O&M of established facilities - watersheds	50,000	1	N/A	50,000
2K	Provision of workshop arrangement for training herders on effective and optimal O&M and livelihoods - pasture	34,000	1	N/A	34,000
2L	Provision of contractual services for the implementation of ecosystem-based adaptation (EBA) measure such as (i) rehabilitation of pasture reserves; (ii) Catchment reforestation; and (iii) provision of emergency fodder storage facilities across the 4 aimags. (Break-up across the 4 aimags: Khovd province - USD 2.38mn; Dornod province - USD 1.24mn; Sukhbaatar province - USD 0.92mn; Zavkhan province - USD 2.31mn)	2,534,700	1	Contract	2,534,700
2M	4 National Consultants to review the RUA Identified investments Methods spread equally across activities 2.2 and 2.3 (4 consultants @ USD 200 per for 75 days each + travel @ USD 4,000 allowance per consultant)	9,500	4	Contracts	38,000
2N	Printing costs for publications, guidelines on O&M of established facilities - pasture	17,000	1	N/A	17,000
2O	Provision of workshop arrangement for training herders on effective and optimal O&M and Livelihoods - watersheds	34,000	1	N/A	34,000
2P	Provision of contractual services for haymaking/pasture reserve: Khovd 1,200ha (USD907K), Dornod 400ha (USD643K), Sukhbaatar 300ha (USD456K), Zarkhan 900ha (USD1.058M); Fodder storage: Khovd 15 units (USD221K), Dornod 9 units (USD132K), Sukhbaatar 9 units (USD132K), Zarkhan 15 units (USD120k)	3,670,531	1	Contract	3,670,531
2Q	4 Local consultants hired for the supervision of the construction works implemented under sub-activity 2.2.4 - implementation of resiliency-based watershed agreement (4 consultants @ USD 170 per day for 100 days each over 4 years)	17,000	4	Contracts	68,000
2R	Contractual Services for the Design, Development of bill of quantities (BoQs), Identification of Locations of Small Scale Water Infrastructure in the Rangeland Including Supervision of Construction Works - at least two companies	200,000	1	Contract	200,000

Note	Description of Cost Items	Unit Cost (USD)	Quantity	Unit	Amount (USD)
	Provision of contractual services for the implementation of resiliency-based Watershed measures such as (i) construction of new boring and hand wells; (ii) rehabilitation of existing boring and hand wells; (iii) Catchment protection for natural springs and (iii) provision of water harvesting structures across the 4 aimags. (Break-up across the 4 aimags: Khovd - USD 0.53mn; Dornod - USD 0.26mn; Sukhbaatar - USD 0.29mn; Zavkhan - USD 0.62mn)	1,674,645	1	Contract	1,674,645
	Provision of contractual services for the restoration and rehabilitation of 3 ancient schemes based on best practices and traditional knowledge at USD 50,000 per site	50,000	3	Contracts	150,000
Total of Output 2					**11,103,118**
3A	UNDP Technical support to implementation (1 Climate Change Specialist @ 75%, Programme Support Staff @ 30%) - across 3 outputs UNDP will directly charge the project upon approval of annual work and monthly record of experts time spent to provide the service to the project. Actual charge will include staff cost.	635,980	30%	For Output 3	190,794
3B	Consultancy Services to provide support to PPCP for Climate Resilient Agricultural Development (PPCP-CRAD) and HPO on identification of profitable strategies related to climate adaptive herder practices and sustainable use of land and water resources	90,000	1	Contract	90,000
	Consultant - MTR (USD50,000), TE (USD100,000) - shared across outputs	150,000	0.2	Contract	30,000
	Consultancy - Project Monitoring and Evaluation costs (@ 20% for output 3), including progress of RUA implementation	371,000	0.2	Contract	74,200
3C	National Consultant to verify the services conducted by the company on identification of the Profitable Strategies (USD200 per day for 300 days)	60,000	1	Contract	60,000
3D	National Project Coordinator (30% for Output 3)	210,000	0.3	Contract	63,000
3E	Technical specialist - Agriculture and Livestock	154,000	1	Contracts	154,000
	1/3 time of (1) Training officer (to oversee all the training workshops to be conducted throughout the project implementation); (2) Knowledge Management, Monitoring and Evaluation Officer; and (3) Gender and Safeguards Officer	44,917	3	Contracts	134,750
	Aimag (Field) officers x 2 persons	58,560	2	Contracts	117,120
	Field Support staff at aimag level for output 3 (6 persons)	24,500	6	Contracts	147,000
3F	300 local level community consultations and to present the findings of the Established Agreements between PPCP-CRAD and HPOs.	400	300	Workshops	120,000
3G	Consultancy Service company engaged to undertake consultations with the private sector for the assessment and recommendation of investment gaps and opportunities for developing climate resilient livestock products.	60,000	1	Contract	60,000
	Consultancy company to organize 80 investment fairs to be organized across 5 year in 4 aimags including travel @ USD40,000	840,000	1	Contract	840,000
3H	International economist hired to design the impact evaluation survey and analyze the terminal survey results for project interventions on herder households including travel costs	57,000	1	Contract	57,000

Note	Description of Cost Items	Unit Cost (USD)	Quantity	Unit	Amount (USD)
3I	National Consultant to provide assessment on the readiness to establish Herder Producer Organizations (HPOs)	50,000	1	Contract	50,000
	Local economist hired to for 45 days during baseline survey of impact evaluation and 60 days during terminal survey period.	18,000	1	Contract	18,000
3J	Purchasing of equipment related to Animal Traceability System, Health Monitoring Equipment, Quality Assurance Tools and Measure Cashmere/Wool Microns (required for supporting HPOs). This will include the purchase of the following items:				
	• pH and thermometer (for milk and dairy)	150	350	Items	52,500
	• Refractometer/Hydrometer for milk density/fa measurement	30	350	Items	10,500
	• Food sniffer for meat products	150	350	Items	52,500
	• Portable on farm fleece test (wool and cashmere)	105,750	6	Items	634,500
3K	250 local level consultations and to present the findings of the assessment on the readiness to establish Herder Producer Organizations (HPOs)	400	250	Workshops	100,000
3L	Consultancy company hired to conduct (1) baseline survey; and (2) terminal survey for 3,300 units each survey to evaluate impact of project interventions on herder households. 3,300 samples include 1,100 herders for activity 2.1; 1,100 households for activity 2.2; and 1,100 of herders for activity 3.2.	525,000	1	Contract	525,000
	Consultancy company working on and off site to develop traceability demo to ensure the transfer data of sustainably sourced climate resilience livestock products across the value chain (e.g. blockchain). This includes ensuring that the climate resilience certification code is transferred across the value chain. The company will also provide trainings on the findings of the assessment related to traceability systems results and publications, training materials and offline support for the dissemination of knowledge products.	600,000	1	Contract	600,000
3M	International Consultant to develop and draft the standards for Climate-Resilience Products Certification Process (approx. 70 days)	50,000	1	Contract	50,000
	International Consultant to develop and draft the PPCP agreements in relation to the Terms and Conditions Required for Traceable Products Development	75,000	1	Contract	75,000
3N	Local consultant to support the drafting and translation of the standards for Climate-Resilience Products Certification Process (USD200/person for 70 days in total - 2 consultants). Local travels included.	15,000	1	Contract	15,000
	Local consultants to support the development, drafting and translation of the PPCP Agreements in relation to the Terms and Conditions Required for Traceable Products Development (2 consultants, 125 days in total). Local travels included.	12,500	2	Contracts	25,000
3O	Training workshops for HPOs, relevant government staff, and private sector in 4 aimags, including travel costs	25,000	4	Workshops	100,000
3P	Provision of Consultancy Services for conducting a technical assessment and analysing the market for sustainably sourced climate resilient livestock Products such as organic/free range meat, sustainably-sourced cashmere, etc.)	100,000	1	Contract	100,000
	5 companies to provide training services in Production, Post Harvest Processing and Value Addition Including On-Site Storage to Selected Herder Producer Organizations	120,000	5	Contracts	600,000

Note	Description of Cost Items	Unit Cost (USD)	Quantity	Unit	Amount (USD)
3Q	Provision of Consultancy Services to generate knowledge products detailing best practices for sustainably sourced climate resilient livestock products for dissemination through multiple media channels (print, video, social media, TV) - this is to target public sector	250,000	1	Contract	250,000
	Provision of Consultancy Services to implement Awareness Campaigns Related to Private Sector Involvement and Investors in Relation to Sustainable Livelihood Projects Achievements (preparation of investment pack, hosting investor meetings and events)	250,000	1	Contract	250,000
Total of Output 3					**5,645,864**
Project Management					
PM1	National project coordinator (10% for Project Management)	210,000	0.1	Contract	21,000
	Admin & Finance Officer	151,000	1	Contract	151,000
	Procurement Associate	105,500	1	Contract	105,500
PM2	Support Staff - Secretary/translator	74,700	1	Contract	74,700
	Admin at local aimag level x 4 persons	42,000	4	Contracts	168,000
	Driver/messenger at central level	41,200	1	Contract	41,200
PM3	Equipment and furniture - office set up	60,000	1	N/A	60,000
PM4	Running costs, telephone, internet	2,600	7	Years	18,200
PM5	Supplies and stationery	10,600	7	Years	74,200
PM6	Rental and maintenance of premises	15,857	7	Years	111,000
PM7	Transportation - car rental	7,714	7	Years	54,000
PM8	Audits (USD5,000/year)	5,000	7	Years	35,000
PM9	Procurement, finance, admin, IT services to support PMU in project implementation, cost estimated following UNDP cost-recovery policy, using universal price list (UPL)/local price list (LPL)	28,821	7	Years	201,750
Total of PMC					**1,115,550**
Grand Total (GCF)					**23,101,276**
Co-finance					
1 Co-fin	**MoFALI** - USD 1 million (Activity 1.1 and 1.2 each) and USD 0.5 million (Activity 1.3) out of the 12 million livestock vaccination programme against sheep pox, bovine PPR, pleuropneumonia, bovine spongiform encephalopathy and foot and mouth disease (approx. USD 1.71 million annually and USD 12 million for the project duration)	2,500,000	Multiple	Contracts	2,500,000

Note	Description of Cost Items	Unit Cost (USD)	Quantity	Unit	Amount (USD)
	MET - Establishment of hydro-meteorological stations in target provinces – USD 4 million for Activity 1.1 - Capacity development for hydro-meteorology service professionals – total USD 1.5 million (USD0.5 million for Activity 1.1 and USD1 million for Activity 3.4) - Implementation of Integrated Water Resources Management Plans through 14 River Basin Administrations in four target provinces – total USD 3 million (USD 1 million for Activity 1.2 and USD 2 million allocated for Activity 2.1) - Improvement of policy and regulatory framework for climate resilient development planning and ecosystem based natural resources management – USD 1 million for Activity 1.3	6,500,000	Multiple	Contracts	6,500,000
	NEMA - Implementation of capacity improvement for the central and local level NEMA to coordinate and plan responses to slow onset natural hazards– USD 1.5 million for Activity 1.1 - Financing for early warning system operation – USD 0.7 million for Activity 1.1	2,200,000	Multiple	Contracts	2,200,000
2 Co-fin	**MoFALI** - Animal breeding services through 68 centers in four aimags – USD 1.3 million for Activity 2.1; - 1 million out of the 12 million livestock vaccination programme against sheep pox, bovine PPR, pleuropneumonia, bovine spongiform encephalopathy and foot and mouth disease (approx. USD 1.71 million annually and USD 12 million for the project duration) for Activity 2.1 - Pastureland improvement and rodent control measures in target provinces – USD 3.5 million for Activity 2.2 - Livestock fodder production – USD 4.8 million for Activity 2.3 - Establishment of hay and fodder reserves in target provinces – USD 1.3 million for Activity 2.3 - Establishment of groundwater wells for improved pastureland management – USD 2 million for the project target provinces for Activity 2.4	13,900,000	Multiple	Contracts	13,900,000
	MET - Implementation of Integrated Water Resources Management Plans through 14 River Basin Administrations in four target provinces – total USD 3 million (USD 2 million allocated to Activity 2.1 and USD 1 million allocated to Activity 1.2) - Water catchment protection and reforestation – USD 3.5 million for Activity 2.2 - natural spring protection USD 0.5 million for Activity 2.2 - Financing of climate change adaptation measures through Environment and climate change fund – USD 5.5 million (USD 3 million allocated to Activity 2.3 and USD 2.5 million to Activity 2.4)	11,500,000	Multiple	Contracts	11,500,000
	NEMA - Establishment of emergency supply storage facilities in target provinces – USD 0.8 million for Activity 2.3	800,000	Multiple	Contracts	800,000
3 Co-fin	**MoFALI** - SME financing support to agriculture producers – USD 1.3 million in target soums for Activity 3.1	14,800,000	Multiple	Contracts	14,800,000

Note	Description of Cost Items	Unit Cost (USD)	Quantity	Unit	Amount (USD)
	- USD 7 million (for Activity 3.2); USD 0.5 million (for Activity 3.3) and USD 1 million (for Activity 3.4) out of out of the 12 million livestock vaccination programme against sheep pox, bovine PPR, pleuropneumonia, bovine spongiform encephalopathy and foot and mouth disease (approx. USD 1.71 million annually and USD 12 million for the project duration) - Livestock traceability improvement, ear-tagging and database – USD 5 million for Activity 3.3				
	MET - Capacity development for hydro-meteorology service professionals – total USD 1.5 million (USD0.5 million for Activity 1.1 and USD1 million for Activity 3.4)	1,000,000	Multiple	Contracts	1,000,000
4 Co-fin	Support to Project Management (USD2 million from MoFALI and USD1 million from MET)	3,000,000	Multiple	Contracts	3,000,000

X. LEGAL CONTEXT

This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of Mongolia and UNDP, signed on 28 September 1976. All references in the SBAA to "Executing Agency" shall be deemed to refer to "Implementing Partner."

This project will be implemented by Ministry of Environment and Tourism ("Implementing Partner") in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.

The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations or UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

XI. RISK MANAGEMENT

Option a. Implementing Partner is a Government Entity (NIM)

1. Consistent with the Article III of the SBAA *[or the Supplemental Provisions to the Project Document]*, the responsibility for the safety and security of the Implementing Partner and its personnel and property, and of UNDP's property in the Implementing Partner's custody, rests with the Implementing Partner. To this end, the Implementing Partner shall:
   a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
   b) assume all risks and liabilities related to the Implementing Partner's security, and the full implementation of the security plan.

2. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the Implementing Partner's obligations under this Project Document.

   The Implementing Partner agrees to undertake all reasonable efforts to ensure that no UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/sc/committees/1267/aq_sanctions_list.shtml.

3. The Implementing Partner acknowledges and agrees that UNDP will not tolerate sexual harassment and sexual exploitation and abuse of anyone by the Implementing Partner, and each of its responsible parties, their respective sub-recipients and other entities involved in Project implementation, either as contractors or subcontractors and their personnel, and any individuals performing services for them under the Project Document.

   (a) In the implementation of the activities under this Project Document, the Implementing Partner, and each of its sub-parties referred to above, shall comply with the standards of conduct set forth in the Secretary General's Bulletin ST/SGB/2003/13 of 9 October 2003, concerning "Special measures for protection from sexual exploitation and sexual abuse" ("SEA").

(b) Moreover, and without limitation to the application of other regulations, rules, policies and procedures bearing upon the performance of the activities under this Project Document, in the implementation of activities, the Implementing Partner, and each of its sub-parties referred to above, shall not engage in any form of sexual harassment ("SH"). SH is defined as any unwelcome conduct of a sexual nature that might reasonably be expected or be perceived to cause offense or humiliation, when such conduct interferes with work, is made a condition of employment or creates an intimidating, hostile or offensive work environment.

4. a) In the performance of the activities under this Project Document, the Implementing Partner shall (with respect to its own activities), and shall require from its sub-parties referred to in paragraph 4 (with respect to their activities) that they, have minimum standards and procedures in place, or a plan to develop and/or improve such standards and procedures in order to be able to take effective preventive and investigative action. These should include: policies on sexual harassment and sexual exploitation and abuse; policies on whistleblowing/protection against retaliation; and complaints, disciplinary and investigative mechanisms. In line with this, the Implementing Partner will and will require that such sub-parties will take all appropriate measures to:

    i. Prevent its employees, agents or any other persons engaged to perform any services under this Project Document, from engaging in SH or SEA;

    ii. Offer employees and associated personnel training on prevention and response to SH and SEA, where the Implementing Partner and its sub-parties referred to in paragraph 4 have not put in place its own training regarding the prevention of SH and SEA, the Implementing Partner and its sub-parties may use the training material available at UNDP;

    iii. Report and monitor allegations of SH and SEA of which the Implementing Partner and its sub-parties referred to in paragraph 4 have been informed or have otherwise become aware, and status thereof;

    iv. Refer victims/survivors of SH and SEA to safe and confidential victim assistance; and

    v. Promptly and confidentially record and investigate any allegations credible enough to warrant an investigation of SH or SEA. The Implementing Partner shall advise UNDP of any such allegations received and investigations being conducted by itself or any of its sub-parties referred to in paragraph 4 with respect to their activities under the Project Document, and shall keep UNDP informed during the investigation by it or any of such sub-parties, to the extent that such notification (i) does not jeopardize the conduct of the investigation, including but not limited to the safety or security of persons, and/or (ii) is not in contravention of any laws applicable to it. Following the investigation, the Implementing Partner shall advise UNDP of any actions taken by it or any of the other entities further to the investigation.

    b) The Implementing Partner shall establish that it has complied with the foregoing, to the satisfaction of UNDP, when requested by UNDP or any party acting on its behalf to provide such confirmation. Failure of the Implementing Partner, and each of its sub-parties referred to in paragraph 4, to comply of the foregoing, as determined by UNDP, shall be considered grounds for suspension or termination of the Project.

5. Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (http://www.undp.org/ses) and related Accountability Mechanism (http://www.undp.org/secu-srm).

6. The Implementing Partner shall: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and

timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.

7. All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.

8. The Implementing Partner will take appropriate steps to prevent misuse of funds, fraud or corruption, by its officials, consultants, responsible parties, subcontractors and sub-recipients in implementing the project or using UNDP funds. The Implementing Partner will ensure that its financial management, anti-corruption and anti-fraud policies are in place and enforced for all funding received from or through UNDP.

9. The requirements of the following documents, then in force at the time of signature of the Project Document, apply to the Implementing Partner: (a) UNDP Policy on Fraud and other Corrupt Practices and (b) UNDP Office of Audit and Investigations Investigation Guidelines. The Implementing Partner agrees to the requirements of the above documents, which are an integral part of this Project Document and are available online at www.undp.org.

10. In the event that an investigation is required, UNDP has the obligation to conduct investigations relating to any aspect of UNDP projects and programmes in accordance with UNDP's regulations, rules, policies and procedures. The Implementing Partner shall provide its full cooperation, including making available personnel, relevant documentation, and granting access to the Implementing Partner's (and its consultants', responsible parties', subcontractors' and sub-recipients') premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with the Implementing Partner to find a solution.

11. The signatories to this Project Document will promptly inform one another in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality.

    Where the Implementing Partner becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, the Implementing Partner will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). The Implementing Partner shall provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.

13. UNDP shall be entitled to a refund from the Implementing Partner of any funds provided that have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document. Such amount may be deducted by UNDP from any payment due to the Implementing Partner under this or any other agreement. Recovery of such amount by UNDP shall not diminish or curtail the Implementing Partner's obligations under this Project Document.

    Where such funds have not been refunded to UNDP, the Implementing Partner agrees that donors to UNDP (including the Government) whose funding is the source, in whole or in part, of the funds for the activities under this Project Document, may seek recourse to the Implementing Partner for the recovery of any funds determined by UNDP to have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document.

    Note: The term "Project Document" as used in this clause shall be deemed to include any relevant subsidiary agreement further to the Project Document, including those with responsible parties, subcontractors and sub-recipients.

14. Each contract issued by the Implementing Partner in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from the Implementing Partner shall cooperate with any and all investigations and post-payment audits.

15. Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.

16. The Implementing Partner shall ensure that all of its obligations set forth under this section entitled "Risk Management" are passed on to each responsible party, subcontractor and sub-recipient and that all the clauses under this section entitled "Risk Management Standard Clauses" are included, *mutatis mutandis*, in all sub-contracts or sub-agreements entered into further to this Project Document.

XII. MANDATORY ANNEXES

Annex A: GCF Funded Activity Agreement and Notice of Effectiveness

Annex B: GCF Board-approved Funding Proposal

Annex C: Letter of agreement between the Implementing Partner and Responsible Parties (n/a)

Annex D: Letters of co-financing (commitment letters from the project design stage)

Annex E: Timetable of project implementation

Annex F: Procurement and HR plans

Annex G: Terms of References for Project Board and Project Team

Annex H: UNDP Social and Environmental and Safeguards screening procedure (SESP) and Environmental and Social Management Framework (ESMF)

Annex I: Stakeholder Engagement Plan

Annex J: Gender Analysis and Action Plan

Annex K: UNDP Risk Log

Annex L: Letter of Agreement with the government on UNDP Support Service Costs

Annex M: HACT micro assessment and Partner Capacity Assessment

Annex N: UNDP Project Quality Assurance Report

Annex O: Monitoring and evaluation plans

Annex A: GCF Funded Activity Agreement (FAA) and Notice of Effectiveness

GCF Funded Activity Agreement (FAA) can be accessed via the link below:
https://undpgefpims.org/attachments/5873/215883/1740898/1769897/FAA_UNDP%20MNG_FP141_Exec%20Ver_20201113%20Signed.pdf

GCF Notice of Effectiveness can be accessed via the link below:
https://undpgefpims.org/attachments/5873/215883/1743001/1772512/20210209_NoE_FAA_UNDP_Mongolia%20_FP141_.pdf

Annex B: GCF Board-approved Funding Proposal

GCF Board-approved Funding Proposal can be accessed via the link below:
https://www.greenclimate.fund/document/gcf-b27-02-add01

Annex C: Letter of agreement between the Implementing Partner and Responsible Parties

N/A

Annex D: Letters of co-financing

1) Ministry of Environment and Tourism ($20,000,000)
2) National Emergency Management Agency ($3,000,000)
3) Ministry of Food, Agriculture and Light Industry ($33,200,000)

MINISTER FOR ENVIRONMENT AND TOURISM OF MONGOLIA

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Chingeltei district, Ulaanbaatar, MONGOLIA
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Date 24 Jan 2018
Ref. 01/491

To: Green Climate Fund Board
Songdo Business District
175 Art center-daero
Yeonsu-gu, Incheon 22004
Republic of Korea

On behalf of the Government of Mongolia, the Ministry of Environment and Tourism (MET) with the Ministry of Food, Agriculture and Light Industry (MoFALI) have developed a programme proposal entitled "Improving the Adaptive Capacity and Risk Management of Rural Communities in Mongolia" for funding consideration of the Green Climate Fund (GCF) as supported by the United Nation Development Programme (UNDP) in Mongolia.

The proposed project is crucial for Mongolia as it aims at reducing adverse impacts of climate change and strengthen the resilience of key economic sectors, especially agriculture sector which is very vulnerable to the changes in climate system, implementing National programme to decrease environment and air pollution and also to decrease consumption of raw coal of the people. A successful climate adaptation in Mongolia requires a paradigm shift to ensure that the very foundation of human livelihood – ecosystems and their services – is sufficiently resilient to climate risks, and to enable local communities to adapt to climate change. The project offers an opportunity to set in place capacities and tools to remove barriers that currently hinder climate risks to be integrated within land and water resource planning and management by applying best practices generated through earlier interventions. It will also help improve capacities of government decision-makers to address climate change concerns and local resource users to conserve and rehabilitate natural ecosystems. Therefore, project interventions are in-line with the Mongolian Government policies on sustainable development, climate change and green development.

As a key implementing partner for the project, the Ministry of Environment and Tourism will contribute 20,000,000.00 USD (twenty million) to the proposed project for the duration of the project. The Ministry strongly believes that the project will significantly contribute to the country's efforts to pursue climate resilient and low carbon development.

Sincerely,

TSERENBAT Namsrai

MINISTER

D/2018onii gargasan bichig/gadaad bichig/

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Date 15.09.2017
Ref. 2/1876

UNITED NATIONS DEVELOPMENT
PROGRAMME IN MONGOLIA

Date Recd: 2017 .09. 1 8
Ref. ORC/1229/1 – NEMA
RC/RR
Action: DRR

On behalf of National emergency management agency of Mongolia, I would like to express my gratitude to United nations development programme office of Mongolia for developing the project "Modernization of rural population's climate change adaptation capacity and risk management" for the submission to Green Climate Fund.

Disaster risk management and climate change adaptation capacity of rural population are high priority areas for National emergency management agency and we seek to collaborate on the proposed project as co-implementer.

National emergency management agency actively works to implement "State Policy on Disaster Protection", "National Programme on Strengthening Disaster Protection Capacity", "Sendai framework for disaster risk reduction" and other key policy documents by reflecting them in Government of Mongolia's action plan and state socio-economic development directive.

There fore, the project initiator's proposed amount of 3 million USD funding to be contributed for the project by National emergency management agency can be reflected in institutional budget.

G.ARIUNBUYAN
BRIGADIER GENERAL, FIRST DEPUTY CHIEF
NATIONAL EMERGENCY MANAGEMENT AGENCY
MONGOLIA

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МОНГОЛ УЛСЫН ЗАСГИЙН ГАЗРЫН ТОХИРУУЛАГЧ АГЕНТЛАГ
ОНЦГОЙ БАЙДЛЫН ЕРӨНХИЙ ГАЗАР

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2017.09.15 № 2/1876

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МОНГОЛ УЛС ДАХЬ НҮБХХ-ИЙН СУУРИН ТӨЛӨӨЛӨГЧИЙН ГАЗАРТ

Хамтран ажиллах тухай

Монгол Улс дахь НҮБХХ-ийн Суурин төлөөлөгчийн газраас "Монгол орны хөдөөгийн иргэдийн уур амьсгалын өөрчлөлтөд дасан зохицох чадамж болон эрсдэлийн менежментийг боловсронгуй болгох нь" төслийг санаачлан "Уур амьсгалын ногоон сан"-д хүргүүлж буйд талархаж байна.

Онцгой байдлын ерөнхий газар нь цаг уурын өөрчлөлтөөс үүдэлтэй гамшгийн эрсдэлийг бууруулах, менежментийг сайжруулах, хөдөө орон нутгийн иргэдийн цаг уурын өөрчлөлтөд дасан зохицох чадавхыг нэмэгдүүлэх чиглэлээр анхааран ажиллаж байгаа бөгөөд энэхүү төсөлд хамтран хэрэгжүүлэгчээр оролцох саналтай байна.

Онцгой байдлын асуудал эрхэлсэн байгууллага нь Гамшгаас хамгаалах талаар төрөөс баримтлах бодлого, Гамшгаас хамгаалах чадавхыг бэхжүүлэх үндэсний хөтөлбөр, Гамшгийн эрсдэлийг бууруулах Сендайн үйл ажиллагааны хүрээ зэрэг бодлогын баримт бичгүүдийг Монгол Улсын Засгийн газрын үйл ажиллагааны хөтөлбөр, Монгол Улсын эдийн засаг, нийгмийг хөгжүүлэх үндсэн чиглэлд жил бүр тусган хэрэгжүүлж байгаа бөгөөд, төслийг хамтран хэрэгжүүлэхэд шаардагдах 3 сая ам.долларыг байгууллагын төсвөөс жил бүр санхүүжүүлэх боломжтой.

ТЭРГҮҮН ДЭД ДАРГА,
БРИГАДЫН ГЕНЕРАЛ Г.АРИУНБУЯН

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MINISTER
FOR FOOD, AGRICULTURE AND
LIGHT INDUSTRY OF MONGOLIA

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Date 26 Feb 2018
Ref. 01/ 613

To: GREEN CLIMATE FUND BOARD
Songdo Business District
175 Art center-daero
Yeonsu-gu, Incheon 22004
Republic of Korea

To whom it may concern
Subject: Co-financing commitment

Ministry of Food, Agriculture and Light Industry (MoFALI) of Mongolia ,jointly with the Ministry of Environment and Tourism (MET) have developed a grant project proposal entitled "Improving the Adaptive Capacity of Rural Communities in Mongolia" for funding consideration of the Green Climate Fund (GCF) through the support of the United Nations Development Programme (UNDP) in Mongolia.

The proposed project is fully in-line with the Government policy to support the resource dependent rural communities in adapting to climate change through building their resilience and ensuring ecosystem health. The project focusing heavily on herder communities is specifically aligned with sectoral policies, including State policy on food and agriculture sector 2015-2025, Mongolian Livestock programme 2010-2021, State policy on herders 2009-2020 and National sub-programme to support productivity of animal husbandry 2016-2018.

As one of the responsible parties of the project, the MOFALI will contribute 33,200,000 USD throughout the project lifetime. The amount will be invested in livestock vaccination, establishment of groundwater wells for improved pastureland management, animal breeding services, livestock traceability improvement, livestock fodder production, establishment of hay and fodder reserves in target provinces, pastureland improvement and rodent control measures and SME financing support to agriculture producers.

We hope for the positive consideration of this extremely important project by the Fund.

SINCERELY YOURS,

BATZORIG BATJARGAL
MINISTER OF FOOD, AGRICULTURE AND LIGHT INDUSTRY

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Annex E: Timetable of project implementation

Please see next page

Output/Activity	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6				Year 7				Year 8	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Output 1. Integrate climate information into land and water use planning at the national and sub-national levels																														
Activity 1.1. Enhance technical capacity for long-term climate resilient development planning, and medium-term response planning capacity		X	Validation assessment for the National Agency for meteorology and Environmental Monitoring (NAMEM) weather forecasting technical capacity and related computing equipment requirements	X	Acquisition and installation of weather/climate forecasting/prediction software and computing facilities to enable NAMEM to develop long-term models and deliver forecasts	Training of NAMEM staff on applying methods, models and post-processing approaches	X	Guidelines on climate risk informed planning	Guidelines for the improvement of medium term response planning for projected extreme weather events	Training on climate change impacts, risk assessments and cross-sectoral planning	X	X	X	Training on climate change impacts, risk assessments and cross-sectoral planning	X	X	Training on climate change impacts, risk assessments and cross-sectoral planning	X	X	X	Training on climate change impacts, risk assessments and cross-sectoral planning	X	X	X	X	X	X	X		

Output/Activity	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6				Year 7				Year 8	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Activity 1.2. Integration of climate change and climate-informed carrying capacity into aimag and soum level development plan (including Integrated River Basin Management Plans (IRBMP))						X	Downscaling data and integration into sub-national plans	X	X	Train local government on climate change impact, vulnerability and risk assessments and related integration into planning. The personnel training will lead the development planning to guide adaptation measures under Output 2.	X	X	X	Train local government on climate change impact, vulnerability and risk assessments and related integration into planning. The personnel training will lead the development planning to guide adaptation measures under Output 2.	X	X	Train local government on climate change impact, vulnerability and risk assessments and related integration into planning. The personnel training will lead the development planning to guide adaptation measures under Output 2.														

Output/Activity	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6				Year 7				Year 8	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Activity 1.3. Analytical products to support policy and regulatory transformation promoting sustainable land and water management and resilient herder livelihoods			Review of policies and programmes	Proposed draft changes to policies	X	Knowledge/analytical products to support policy transformations and related sensitization workshops	Aimag level sensitization workshops	X	X	Knowledge/analytical products to support policy transformations and related sensitization workshops	Aimag level sensitization workshops	Knowledge/analytical products to support policy transformations and related sensitization workshops	Aimag level sensitization workshops	X	X	X	X	X	X	X	X	X	X	X						
Output 2. Scaling up climate-resilient water and soil management practices for enhanced small scale herder resource management																														
Activity 2.1. Enhance cooperation among herders on sustainable use and stewardship of shared land and water resources (formalized through Resource User Agreements)			Consultations with herders and related documentation	X	Consultations with herders and related documentation	Development, consolidation, and registration of resilience-based of the Resource User Agreements (RUAs)	X	X	Consultations with herders and related documentation	Development, consolidation, and registration of resilience-based of the Resource User Agreements (RUAs)	X	X	Consultations with herders and related documentation	Development, consolidation, and registration of resilience-based of the Resource User Agreements (RUAs)	X	X	Consultations with herders and related documentation	Development, consolidation, and registration of resilience-based of the Resource User Agreements (RUAs)	X	X	Consultations with herders and related documentation	Development, consolidation, and registration of resilience-based of the Resource User Agreements (RUAs)	X	X	Consultations with herders and related documentation	Development, consolidation, and registration of resilience-based of the Resource User Agreements (RUAs)				

Output/Activity	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6				Year 7				Year 8	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Activity 2.2. Reforestation of critical catchment areas to protect water resources and ecosystem services								Validation of the identified investments through RUAs	Implementation of EBA measures across the 4 aimags; Training provided to herders on effective and optimal O&M and livelihoods - watersheds	X	X	X	Implementation of EBA measures across the 4 aimags; Training provided to herders on effective and optimal O&M and livelihoods - watersheds	X	X	X	Implementation of EBA measures across the 4 aimags; Training provided to herders on effective and optimal O&M and livelihoods - watersheds	X	X	X	Implementation of EBA measures across the 4 aimags; Training provided to herders on effective and optimal O&M and livelihoods - watersheds	X	X	X	Implementation of EBA measures across the 4 aimags; Training provided to herders on effective and optimal O&M and livelihoods - watersheds	X	X	X		

Output/Activity	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6				Year 7				Year 8	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Activity 2.3. Establish haymaking and pasture reserve areas, and emergency fodder storage facilities to reduce volatility to livelihoods related to climate change induced extreme events								Validation of the identified investments through RUAs	Implementation of RUAs - haymaking or pasture reserve areas; Training provided to herders on effective management of pasture services	X	X	X	Implementation of RUAs - haymaking or pasture reserve areas; Training provided to herders on effective management of pasture services	X	X	X	Implementation of RUAs - haymaking or pasture reserve areas; Training provided to herders on effective management of pasture services	X	X	X	X	X	X	X	X	X	X	X	X		

Output/Activity	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6				Year 7				Year 8	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Activity 2.4. Improve water access through protection of natural springs, construction of new water wells, rehabilitation of existing wells and water harvesting measures									Identification of Locations of Small Scale Water Infrastructure in the Rangeland	X	Implementation of resiliency-based watershed measures; Restoration and rehabilitation of ancient schemes based on best practices and traditional knowledge	X	X	X	X	Implementation of resiliency-based watershed measures; Restoration and rehabilitation of ancient schemes based on best practices and traditional knowledge	X	X	X	Implementation of resiliency-based watershed measures; Restoration and rehabilitation of ancient schemes based on best practices and traditional knowledge										
Output 3. Build herder capacity to ac4cess markets for sustainably sourced, climate-resilient livestock products																														

Output/Activity	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6				Year 7				Year 8	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Activity 3.1. Identify public-private-community partnership for sustainably sourced, climate resilient livestock products			X	X	X	X	X	Consultations with the private sector for the assessment and recommendation of investment gaps and opportunities for developing climate resilient livestock products	X	Consultations with PPCP-CRAD and HPO on identification of profitable strategies related to climate adaptive herder practices and sustainable use of land and water resources	Livestock investment fairs to identify PPCP opportunities	X	X	Consultations with PPCP-CRAD and HPO on identification of profitable strategies related to climate adaptive herder practices and sustainable use of land and water resources	Livestock investment fairs to identify PPCP opportunities	Presentation of findings of the Established Agreements between PPCP-CRAD and HPOs	X	X	Livestock investment fairs to identify PPCP opportunities	X	X	X	Livestock investment fairs to identify PPCP opportunities	X	X	X	Livestock investment fairs to identify PPCP opportunities	X		

Output/Activity	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6				Year 7				Year 8	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Activity 3.2. Establishment and training of Herder Producer Organizations (or cooperatives)						Design of impact evaluation survey for Project interventions on herder households	X	X	Local level consultations and assessment on the readiness to establish Herder Producer Organizations (HPOs)	X	X	X	X	X	X	X	X	Training on Production, Post Harvest Processing and Value Addition Including on-site Storage to Selected Herder Producer Organizations	X	X	X	Training on Production, Post Harvest Processing and Value Addition Including on-site Storage to Selected Herder Producer Organizations	X	X	X	X	Impact evaluation of the Project interventions on herder households	X		

Output/Activity	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6				Year 7				Year 8	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Activity 3.3. Improve traceability for sustainably sourced, climate-resilient livestock products			Technical assessment and market analysis for sustainably sourced climate resilient livestock products such as organic/free range meat, sustainably-sourced cashmere, etc.)	Facilitation of partnership development between suppliers (herders) and producers (high-end off-takers)	X	X	X	X	Develop and draft the standards for Climate-Resilience Products Certification Process	X	Training workshops for HPOs, relevant government staff, and private sector in 4 aimags	Development of traceability demo to ensure the transfer data of sustainably sourced climate resilient livestock products across the value chain	X	X	Training workshops for HPOs, relevant government staff, and private sector in 4 aimags	Develop and draft the PPCP agreements in relation to the Terms and Conditions Required for Traceable Products Development	X	X	X	X	X	X	X	X						

Output/Activity	Year 1				Year 2				Year 3				Year 4				Year 5				Year 6				Year 7				Year 8	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Activity 3.4. Generation and dissemination of knowledge products to support private-sector engagement and herder enfranchisement in climate-resilient and sustainable production in Mongolia														Knowledge products detailing best practices for sustainably sourced climate resilient livestock products	X	Awareness Campaigns Related to Private Sector Involvement and Investors in Relation to Sustainable Livelihood Projects Achievements		Knowledge products detailing best practices for sustainably sourced climate resilient livestock products	X	X	Awareness Campaigns Related to Private Sector Involvement and Investors in Relation to Sustainable Livelihood Projects Achievements		Knowledge products detailing best practices for sustainably sourced climate resilient livestock products	X	X	Awareness Campaigns Related to Private Sector Involvement and Investors in Relation to Sustainable Livelihood Projects Achievements		X	X	Awareness Campaigns Related to Private Sector Involvement and Investors in Relation to Sustainable Livelihood Projects Achievements	X		
Project Management																														
Project Management		Inception report			APR				APR				APR		Interim Evaluation		APR				APR				APR				Completion Report	Final Evaluation

Annex F: Procurement and HR plans

A. Process Thresholds, Review and 12 Month Procurement Plan

1. Project Procurement Thresholds

The following UNDP procurement thresholds shall apply to procurement of goods and works, consulting services, and Human resources (project staff)

Procurement method	Contract value	Type of requirement	Method of Solicitation	Type of Competition
Micro-purchasing	Below US $5,000 ($10,000 if approved by the Bureau)	Goods, services or simple works	Canvassing (by phone, Internet, shopping, etc.)	Limited international or national
Request for quotation (RFQ)	US $5,000 ($10,000 if approved by the Bureau) to $149,999	Goods, services or simple works	Written request for quotation	Limited international or national
Invitation to bid (ITB)	US $150,000 and above	Goods or works	Advertisement in international media	Open international
Request for proposal (RFP)	US $150,000 and above	Services	Advertisement in international media	Open international
Individual consultant (IC) contract	Below $100,000	Individual consultancy services	Direct invitation from roster or Advertisement in international/national media	Limited international or national
	$100,000 and above	Individual consultancy services	Advertisement in international/national media	Open international or national

2. Prior or Post Review

The following UNDP prior or post review requirements apply to the various procurement and consultant recruitment methods used for the project.

Please see Annex 1

3. Estimated Goods and Works Contracts

The following table lists goods and works contracts for which procurement activity is either ongoing or expected to commence within the first 12 months.

General Description	Est. Cumulative Value of Contracts (USD)	Procurement Method	Prequalification of Bidders	Start of procurement process	Type of Competition
Equipment and furniture - office set up	60,000	RFQ	No	Y1-Q1	Limited international or national
Running costs, telephone, internet	18,200	RFQ	No	Y1-Q1	Limited international or national
Supplies, stationery	74,200	RFQ	No	Y1-Q1	Limited international or national
Rental and maintenance of premises	111,000	RFQ	No	Y1-Q1	Limited international or national
Costs for rental of central office unit travel from the capital city for implementation and monitoring of the project. (Rental cost - 2 car rule for security - $0.4/km x100,000 km)	75,000	RFQ	No	Y1-Q1	Limited international or national
Transportation - car rental for PMU	54,000	RFQ	No	Y1-Q1	Limited international or national
Costs for printing of publications, official agreements, reference materials for resource users including climate informed plans etc.	30,000	RFQ	No	Y1-Q1	Limited international or national
Workshop arrangement for communities and Herder groups to coordinate information gathering as well as present findings. To	60,000	RFQ	No	Y1-Q1	Limited international or national

General Description	Est. Cumulative Value of Contracts (USD)	Procurement Method	Prequalification of Bidders	Start of procurement process	Type of Competition
consult at least 7,000 individuals (Approx. 100 in each soum)					
Total	**482,400**				

4. Estimated Consulting Services Contracts

The following table lists consulting services contracts for which procurement activity is either ongoing or expected to commence within the first 12 months.

General Description	Est. Total value of Contracts (USD)	Recruitment Method	Advertisement Date (quarter/year)	Type of Assignment	Type of competition
International Consultant to provide services related to the validation assessment for the National Agency for Meteorology and Environmental Monitoring s (NAMEM) weather forecasting technical capacity and related computing equipment requirements ($700 x 50 days)	35,000	RFQ	Y1-Q2	International	Limited international or national
International Consultant to provide technical inputs to improve the planned policies and reforms relevant to livestock sector ($750x40 days)	30,000	RFQ	Y1-Q2	International	Limited international or national
International Consultant to provide services for conducting analysis to the existing ecoservices systems for the provision of sustainable policy and investment choices in livestock sector. ($750x40 days)	30,000	RFQ	Y1-Q2	International	Limited international or national
International Consultant to provide climate informed livestock size and herd structure target analysis, to inform development of next phase of livestock programme (1 consultant for 120 days)	102,000	RFQ	Y1-Q1	International	Limited international or national
Consultant - Project Monitoring and Evaluation throughout the project	371,000	RFQ	Y1-Q1	International	Open international
National Consultant to provide technical inputs to improve the planned policies and reforms relevant to livestock sector ($200 x 125 days)	25,000	RFQ	Y1-Q2	National	Limited international or national

General Description	Est. Total value of Contracts (USD)	Recruitment Method	Advertisement Date (quarter/year)	Type of Assignment	Type of competition
National Consultant to provide services for conducting analysis to the existing ecoservices systems for the provision of sustainable policy and investment choices in livestock sector. ($200x75 days)	15,000	RFQ	Y1-Q2	National	Limited international or national
Consultancy service firm engaged to conduct field missions for gathering information existing communities and herder groups on current practices for Pasture, Forests, Water Use and other related aspects. Services to travel to aimags and consult with herders - 4 companies including travel of 50k	450,000	RFQ	Y1-Q1	National	Open international
Consultancy company hired to conduct (1) baseline survey and (2) terminal survey for 3,300 units each survey to evaluate impact of project interventions on herder households. 3,300 samples include 1,100 herders for activity 2.1; 1,100 households for activity 2.2; and 1,100 of herders for activity 3.2.	525,000	RFQ	Y1-Q1	National	Open international
Total	**1,583,000**				

B. Indicative List of Packages Required Under the Project

The following table provides an indicative list of all procurement (goods, works and consulting services) over the life of the project.

1. GOODS & WORKS

PROCUREMENT METHOD 1: MICRO-PURCHASING

N/A

PROCUREMENT METHOD 2: REQUEST FOR QUOTATION

General Description	Estimated Total Value (cumulative)	Estimated Number of Contracts	Type of competition
Purchase of Information Technology Equipment. This includes the following: - ARC-GIS licenced software for database for improving herder resilience ($8000x4) - Automatic data logger ($8,000 x 4) - Two-way radio transmitter dual band dogotal/ analogue ($150 x 40)	70,000	1	Limited international or national
7 Trainings to be conducted for NAMEM staff. a) Three training workshops in Ulaanbaatar technical and operational level staff of NAMEM and NEMA. Each of them with minimum 40 participants; b) Four training workshops in each of the four selected Aimags for government officials;	120,000	1 (LTA)[49]	Limited international or national
4 regional workshops with 100 participants each, including travel cost from their respective areas, to be conducted on for developing Guidelines on Climate informed planning and IBF/FBF	120,000	1 (LTA)	Limited international or national
Events Management contract for organizing workshops for MoFALI staff in each province (4) with minimum 80 participants	80,000	1 (LTA)	Limited international or national
National-level training workshop to be conducted on Technical Support Services including development of guidelines for the Improvement of Medium Term Response Planning for Projected seasonal extreme weather events (for 80 participants, including travel arrangements)	40,000	1 (LTA)	Limited international or national
4 regional workshops to be conducted on application of seasonal forecasts to aimag level systems and planning in responding to extreme events (50 participants each workshop, including travel cost from their respective areas)	70,000	1 (LTA)	Limited international or national

[49] *Long term Agreements (LTAs) are employed as framework agreement set-up for the for procurement repetitive items to reduce procurement costs. Such procurements within the context of this project include i) Event Management services for conducting of regular workshops and meetings; ii) Catering services to be arranged during events/meetings; iii) Travel services to facilitate travel and logistics arrangements for Project staff, consultants and/or government officials; and iv) Printing costs. Multiple vendors will be contracted through LTA's set-up with a ceiling for procurement threshold amounts permissible under each contract to reduce the total cumulative value of contracts per vendor.*

4 regional stakeholder participation workshops organized to present the findings of the assessment and of climate risk and adaptation profiles for the Integrated River Basin Management Plans of the 12 river/lake basins in the target Aimags and Soums. (2 times with 50 participants each region and time including travel arrangements)	140,000	1 (LTA)	Limited international or national
4 workshops for validation of TSA in each locality (30 participants each)	20,000	1 (LTA)	Limited international or national
3 sensitization workshops to be conducted over 3 years for 40 participants each at aimag level officials.	75,000	1 (LTA)	Limited international or national
Participation workshops for Communities and Herder groups to coordinate information gathering as well as present findings. To consult at least 7,000 individuals (Approx 100 in each soum)	60,000	1 (LTA)	Limited international or national
Provision of workshop arrangement for training herders on effective and optimal O&M and Livelihoods - Pasture	34,000	1 (LTA)	Limited international or national
Provision of workshop arrangement for training herders on effective and optimal O&M and Livelihoods - Watersheds	34,000	1 (LTA)	Limited international or national
300 local level community consultations and to present the findings of the Established Agreements between PPCP-CRAD and HPOs.	120,000	1 (LTA)	Limited international or national
250 local level consultations and to present the findings of the Assessment on the Readiness to Establish Herder Producer Organizations (HPOs)	100,000	1 (LTA)	Limited international or national
Training workshop for HPOs, relevant government staff, and private sector in 4 aimags, including travel costs ($25,000 x 4)	100,000	1 (LTA)	Limited international or national
Travel arrangements for training participants for the 7 workshops to be conducted under 1.1.2 by NAMEM staff a) Three training workshops in Ulaanbaatar technical and operational level staff of NAMEM and NEMA. Each of them with minimum 40 participants b) Four training workshops in each of the four selected Aimags for government officials	20,000	1 (LTA)	Limited international or national
Travel arrangements for training participants traveling from each locality to provincial centers. (for MoFALI) - activity 1.1.4	20,000	1 (LTA)	Limited international or national
Travel arrangements for central and local government and UNDP officials travelling to support the consultations with local stakeholders on development of soum level resilience-based land and water use and management plans	10,000	1 (LTA)	Limited international or national
Printing and material costs for fliers and booklets to be used for sensitization on climate change impacts on natural resources and the livestock sector	18,000	1 (LTA)	Limited international or national

Costs for printing of publications, official agreements, reference materials for Resource users including climate informed plans etc.	30,000		
Printing costs for publications, official agreements, reference materials for Resource users including climate informed plans	30,000		
Printing costs for publications, guidelines on O&M of established facilities - Pasture	17,000		
Printing costs for publications, guidelines on O&M of established facilities - Watersheds	50,000		
Car rental (x 2) for project implementation and monitoring	129,000	1	Limited international or national
Running costs, telephone/internet	18,200	1	Limited international or national
Supplies, stationery	74,200	1	Limited international or national
Rental & maintenance of Premises	111,000	1	Limited international or national
Equipment and furniture for office set up	60,000	1	Limited international or national
Total	**1,770,400**		

PROCUREMENT METHOD 3: INVITATION TO BID

General Description	**Estimated Value (cumulative)**	**Estimated Number of Contracts**	**Type of competition**
Purchase of a High-Performance Computer for the provision of weather forecasting services including installation and training	1,500,000	1	Open international
Events management to present the findings of the RUA. To consult with at least 17,000 individuals (approx. 250 in each soum)	170,000	1	Open international
Consultancy service firm engaged to conduct field missions for gathering information existing communities and herder groups on current practices for Pasture, Forests, Water Use and other related aspects. Services to travel to aimags and consult with herders - 4 companies including travel of 50k	450,000	1	Open international
Purchasing of equipment related to Animal Traceability System, Health Monitoring Equipment, Quality Assurance Tools and Measure Cashmere/Wool Microns (Required for Supporting HPOs). This will include the purchase of the following items		1	Open international
- pH and thermometer (for milk and dairy)	52,500		
- Refractometer/Hydrometer for milk density/fat measurement	10,500		

- Food sniffer for meat products	52,500		
- Portable on form fleece test (wool and cashmere)	634,500		
Total	**2,870,000**		

2. SERVICES & CONSULTANCIES

RECRUITMENT METHOD 1: REQUEST FOR QUOTATION

General Description	**Estimated Value (cumulative)**	**Estimated Number of Contracts**	**Type of competition**
Professional services to provide audit	35,000	1	Limited international or national
International Consultant to provide services related to the validation assessment for the National Emergency Management Agency's (NAMEA) weather forecasting technical capacity and related computing equipment requirements ($700 x 50 days)	35,000	1	Limited international or national
International Consultant to provide technical inputs to improve the planned policies and reforms relevant to livestock sector ($750x40 days)	30,000	1	Limited international or national
International Consultant to provide services for conducting analysis to the existing ecoservices systems for the provision of sustainable policy and investment choices in livestock sector. ($750x40 days)	30,000	1	Limited international or national
National Consultant to provide technical inputs to improve the planned policies and reforms relevant to livestock sector ($200 x 125 days)	25,000	1	Limited international or national
National Consultant to provide services for conducting analysis to the existing ecoservices systems for the provision of sustainable policy and investment choices in livestock sector. ($200x75 days)	15,000	1	Limited international or national
International Consultant for providing services for the development of IBF and FBF guidelines and tools (1 Consultant for 100 days)	70,000	1	Limited international or national
International Consultant to provide training to senior and technical NAMEM staff on applying new methods, models, and post-processing approaches including WRF Model for 8 staff, CESM for 4 staff and NCL for 4 staff	50,000	1	Limited international or national
International Consultant for providing services for the development of Guidelines on Climate risk informed planning (1 Consultant for 100 days	70,000	1	Limited international or national
International Consultant to provide climate informed livestock size and herd structure target analysis, to inform development of next phase of livestock programme (1 consultant for 120 days)	102,000	1	Limited international or national

General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Type of competition
Consultancy Services to provide support to PPCP-CRAD and HPO on identification of profitable strategies related to climate adaptive herder practices and sustainable use of land and water resources	90,000	1	Limited international or national
International economist hired to design the impact evaluation survey for project interventions on herder households including travel costs	57,000	1	Limited international or national
International Consultant to develop and draft the standards for Climate-Resilience Products Certification Process (approx. 70 days)	50,000	1	Limited international or national
International Consultant to develop and draft the PPCP agreements in relation to the Terms and Conditions Required for Traceable Products Development	75,000	1	Limited international or national
5 National Consultants to provide services for the development of Guidelines on Climate risk informed planning (5 Consultants @ USD200 per day for 100 days over 2 years)	100,000	5	Limited international or national
2 National Consultants for the Provision of Training Services on climate change impacts, risks assessments and cross-sectoral planning approaches. (2 National Consultants @ USD 200 per day for 125 days)	50,000	2	Limited international or national
2 National Consultants to Provide Training and Technical Support Services including development of guidelines for the Improvement of Medium Term Response Planning for Projected seasonal extreme weather events (2 Consultants @ USD 200 per day for 100 days each)	40,000	2	Limited international or national
National Consultants for providing services for the development of IBF and FBF guidelines and tools (2 Consultants $200/day for 125 days)	50,000	2	Limited international or national
2 National Consultants to provide Training on application of seasonal forecasts to aimag level systems and planning in responding to extreme events (e.g. drought, dzud) (2 Consultants @ USD 200 per day for 125 days each)	50,000	2	Limited international or national
National consultant to provide training services on the New Developed Policies on Ecoservices Systems Related to Livestock Sector. (USD 200 per day for 150 days over 3 years	30,000	1	Limited international or national
4 National Consultants to review the RUA Identified Investments Methods. (4 consultants @ USD 200 per for 75 days each + travel @ USD 4000 allowance per consultant)	76,000	4	Limited international or national
4 Local consultants hired for the supervision of the construction works implemented under sub-activity 2.2.4 - implementation of resiliency-based watershed agreement (4 consultants @ USD 170 per day for 100 days each over 4 years)	68,000	4	Limited international or national
National Consultant to Verify the Services Conducted by the Company on Identification of the Profitable Strategies - @ 200 USD per day for 300 days	60,000	1	Limited international or national

General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Type of competition
National Consultant to Provide Assessment on the Readiness to Establish Herder Producer Organizations (HPOs)	50,000	1	Limited international or national
Local economist hired to for 45 days during baseline survey of impact evaluation and 45 day during terminal survey period.	18,000	1	Limited international or national
Local consultant to support the drafting and translation of the standards for Climate-Resilience Products Certification Process ($200/person for 70 days in total - 2 consultants). Local travels included	15,000	2	Limited international or national
Local consultants to support the development, drafting and translation of the PPCP Agreements in relation to the Terms and Conditions Required for Traceable Products Development (2 consultants, 125 days in total). Local travels included	25,000	2	Limited international or national
Provision of Consultancy Services to improve the existing Ecoservices policies based on the conducted Analysis on best Ecoservices systems analysis in livestock sector.	100,000	1	Limited international or national
Consultancy Service company engaged to undertake consultations with the private sector for the Assessment and Recommendation of Investment gaps and opportunities for developing Climate Resilient Livestock Products.	60,000	1	Limited international or national
Provision of Consultancy Services for conducting a technical assessment and analysing the market for sustainably sourced climate resilient livestock Products such as organic/free range meat, sustainably-sourced cashmere, etc)	100,000	1	Limited international or national
Total	**1,626,000**		

RECRUITMENT METHOD 2: REQUEST FOR PROPOSAL (NATIONAL/ INTERNATIONAL)

General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Type of assignment	Type of competition
8 Local consultants (2 per province) hired for the supervision of the construction works implemented under sub-activity 2.2.3 - implementation of ecosystems based adaptation measures through RUAs (8 supervisors @ USD 170 per day for 125 days each over 5 years)	170,000	8	National	Open international
2 Consultancy firms engaged for the assessment and development of climate risk and adaptation profiles for the Integrated River Basin Management Plans for the 12 river/lake basins in the target Aimags and Soums	420,000	2	International	Open international
Provision of Consultancy Services to Develop soum level resilience-based land and water use and management tool and plans for 68 soums in 4 aimags, average cost 15,000 USD including consultations with local stakeholders and travel costs within soums	1,020,000	1	International	Open international

General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Type of assignment	Type of competition
Consultancy Services for the Provision of developing, consolidating the Resource Use Agreement (RUA) to define climate risk informed herder practices including herd size and herd structure targets, pastures, water use, use of Engineered wells and Other Related Fields and Developing the O&M on related investments. - 4 companies	428,000	4	International	Open international
Contractual Services for the Design, Development of BoQs, Identification of Locations of Small Scale Water Infrastructure in the Rangeland Including Supervision of Construction Works - 2 companies	200,000	2	International	Open international
Provision of contractual services for the implementation of EBA measure such as i) rehabilitation of pasture reserves; ii) Catchment reforestation; and iii) provision of emergency fodder storage facilities across the 4 aimags. (Break-up across the 4 aimags: Khovd province - USD 2.38mn; Dornod province - USD 1.24mn; Sukhbaatar province - USD 0.92mn; Zavkhan province - USD 2.31mn)	2,534,700	1	International	Open international
Provision of contractual services for haymaking/pasture reserve: Khovd 1200ha ($907K), Dornod 400ha ($643K), Sukhbaatar 300ha ($456K), Zarkhan 900ha ($1.058M); Fodder storage: Khovd 15 units ($221K), Dornod 9 units ($132K), Sukhbaatar 9 units ($132K), Zarkhan 15 units ($120k)	3,670,531	1	International	Open international
Provision of contractual services for the implementation of resiliency-based Watershed measures such as i) construction of new boring and hand wells; ii) rehabilitation of existing boring and hand wells; iii) Catchment protection for natural springs and iii) provision of water harvesting structures across the 4 aimags. (Break-up across the 4 aimags: Khovd province - USD 0.53mn; Dornod province - USD 0.26mn; Sukhbaatar province - USD 0.29mn; Zavkhan province - USD 0.62mn)	1,674,645	1	International	Open international
Consultancy company to organize 80 investment fairs to be organized across 5 year in 4 Aimags including travel @ 40k	840,000	1	International	Open international
5 companies to provide training services in Production, Post Harvest Processing and Value Addition Including on-site Storage to Selected Herder Producer Organizations	600,000	5	International	Open international
Consultancy services for project monitoring and evaluation – throughout the project. This includes progress of RUA implementation	371,000	1	International	Open international
International Consultants to conduct external and independent Mid-Term Evaluation and Terminal Evaluation	150,000	2	International	Open international
Consultancy company hired to conduct (1) baseline survey and (2) terminal survey for 3,300 units each survey to evaluate impact of project interventions on herder households.	525,000	1	International	Open international
Provision of Consultancy Services to generate knowledge products detailing best practices for sustainably sourced climate resilient livestock products for dissemination through multiple media channels (print, video, social media, TV) - this is to target public sector	250,000	1	International	Open international
Provision of Consultancy Services to implement Awareness Campaigns Related to Private Sector Involvement and Investors in Relation to Sustainable Livelihood Projects Achievements	250,000	1	International	Open international

General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Type of assignment	Type of competition
(preparation of investment pack, hosting investor meetings and events)				
Consultancy company working on and off site to develop traceability demo to ensure the transfer data of sustainably sourced climate resilience livestock products across the value chain (e.g. blockchain). This includes ensuring that the climate resilience certification code is transferred across the value chain. The company will also provide trainings on the findings of the assessment related to traceability systems results and publications, training materials and offline support for the dissemination of knowledge products	600,000	1	International	Open international
Provision of constractual services for the restoration and rehabilitation of 3 ancient schemes based on best practices and traditional knowledge at USD 50,000 per site	150,000	3	International	Open international
Total	**13,853,876**			

HUMAN RESOURCES PLAN

Estimated HR Contracts for the project

General Description	Est. Total Value of Contracts (USD)	Recruitment Method	Start of procurement process	Type of competition
National Project Coordinator	210,000	RFP	Y1-Q1	Open international
Admin & Finance Officer	151,000	RFP	Y1-Q1	Open international
Procurement Associate	105,500	RFQ	Y1-Q1	Limited international or national
Technical Specialist for Climate Information	154,000	RFP	Y1-Q1	Open international
Technical specialist for Land and Water Management	154,000	RFP	Y1-Q1	Open international
Technical specialist Agriculture and Livestock	154,000	RFP	Y1-Q1	Open international
Gender and Safeguards Expert	134,750	RFQ	Y1-Q1	Limited international or national
Training officer (to oversee all the training workshops to be conducted throughout the project implementation)	134,750	RFQ	Y1-Q1	Limited international or national
Knowledge Management, Monitoring and Evaluation Officer	134,750	RFQ	Y1-Q1	Limited international or national
Aimag (Field) Officers (x2) for Output 2	115,500	RFQ	Y1-Q1	Limited international or national
Field Support staff (x6) at Aimag level for output 2	147,000	RFQ	Y1-Q1	Limited international or national
Aimag (Field) Officers (x2) for Output 3	117,120	RFQ	Y1-Q1	Limited international or national
Field Support staff (x6) at Aimag level for output 3	147,000	RFQ	Y1-Q1	Limited international or national
Support Staff - Secretary/translator	74,700	RFQ	Y1-Q1	Limited international or national
Admin at local aimag level x4	168,000	RFP	Y1-Q1	Open international

General Description	Est. Total Value of Contracts (USD)	Recruitment Method	Start of procurement process	Type of competition
Driver/messenger at central level	41,200	RFQ	Y1-Q1	Limited international or national
Procurement, finance, admin, IT services to support PMU in project implementation, cost estimated following UNDP cost-recovery policy, using UPL/LPL	201,750	N/A (existing support from UNDP)	N/A (existing support from UNDP)	
UNDP Technical support to implementation (1 Climate Change Specialist @ 75%, Programme Support Staff @ 30%) - across 3 outputs	635,980	N/A (existing support from UNDP)	N/A (existing support from UNDP)	
Total	**2,981,850**			

Annex 1. UNDP Policy on Prior and Post Review

	Level 1 (Country Level): Contracts, Assets and Procurement Committee	**Level 2 (Regional):** Regional Advisory Committee on Procurement (country offices only)	**Level 3 (HQ):** Advisory Committee on Procurement
Competitive procurement process			
Any contract or series of contracts including amendments to be awarded to a vendor *in a calendar year* that in aggregate has a cumulative value:	Above US $50,000 (above US $150,000 for Individual Contracts) and up to the standard delegated procurement authority – Direct Review by CAP Chairperson Above the standard delegated procurement authority and up to any increased delegated procurement authority – by CAP Committee	Above the delegated procurement authority and up to US $2 million (applies per year for Long-Term Agreements)	Country offices: above US $2 million (applies per year for Long-Term Agreements)
Direct contracting			
Any contract or series of contracts, including amendments to be awarded to a vendor *in a calendar year* that in aggregate has a cumulative value:	Above US $50,000 and up to 50 percent of the standard delegated procurement authority – Direct Review by CAP Chairperson Above 50 percent of the standard delegated procurement authority and up to 50 percent of any increased delegated procurement authority – by CAP Committee	Above 50 percent of the delegated procurement authority and up to US $2 million (applies per year for long-term agreements)	Headquarters units: above 50 percent of the delegated procurement authority Country offices: above US $2 million (applies per year for long-term agreements)
Amendment of all contracts			
Any amendment or series of amendments to a contract which, in aggregate, increases	Above US $50,000 and up to the standard delegated procurement	Above the delegated procurement authority and up to US $2 million (applies	Country offices: above US $2 million (applies per year for long-term agreements)

	Level 1 (Country Level): Contracts, Assets and Procurement Committee	**Level 2 (Regional):** Regional Advisory Committee on Procurement (country offices only)	**Level 3 (HQ):** Advisory Committee on Procurement
the contract value by 20 percent or the delegated procurement authority, whichever is less:	authority – Direct Review by CAP Chairperson. Above the standard delegated procurement authority and up to the increased delegated procurement authority - by CAP Committee	per year for long-term agreements)	
Ex ante review			
Ex ante review refers to the review of the procurement strategy roadmap prior to commencement of the procurement process for complex procurement actions with a value:	N/A	Above US $1 million and up to US $2 million (applies per year for long-term agreements)	Above US $2 million (applies per year for long-term agreements)
Notes:	1. The procurement support unit shall participate when requested in the committee review of ex ante submissions. 2. An ex ante review is not required if: (a) The business unit has had a previous successful experience in the procurement of similar goods/services/works that was already subject to an ex ante review; or (b) There is sufficient specific corporate guidance and templates on the procurement of the said goods/services. 3. Irrespective of the above, the procurement authority may submit the cases for ex ante review if significant risks are perceived.		

Annex G: Terms of References for Project Board and Project Team

Terms of Reference of Project Board

The Project Board will:

- Ensure that there is coherent project organization at both the National, Provincial and Area Council levels
- Following agreement, set tolerances in the Annual Work Plans and other plans as required with the Project Manager, with the involvement of the Project Director (as necessary)
- Monitor and control the progress of the project activities at a strategic level considering the changes influenced by the project on any baseline investments
- Ensure that risks are being tracked and mitigated as effectively as possible
- Organise Project Board meetings, to be Chaired by the Project Director, on a regular basis to be defined by the Board in agreement with the Project Director and Project Manager. Normally these meetings will take place quarterly.
- Review and assess progress towards achieving the outputs is consistent from a project supplier perspective
- Promote and maintain focus to deliver the outputs from the project
- Ensure that the resources from the project supplier are readily available
- Arbitrate on, and ensure resolution of any supplier priority or resource conflicts
- Ensure that the expected project outputs and related activities of the project remains consistent with the perspective of project beneficiaries
- Be informed of meetings relevant to overall regional project implementation, including any regional activities conducted in partnership
- Facilitate national policy and institutional changes necessary to engender success in project activities.
- Annually review project progress and make managerial and financial recommendations as appropriate, including recruitment for the Project Management Unit, review and approval of annual reports, budgets and workplans.

Terms of Reference of Techncial Services to be provided by UNDP:

- *These staff costs cannot include any oversight functions as this would duplicate GCF implementation functions paid by the GCF Fee.*
- *All technical services must be specified and known and cannot refer to anticipated or expected technical support services.*
- *The qualifications necessary to undertake these technical services must be included in the TOR.*
- *The NCE-VF RTA and the PTA must approve the technical services included in the TOR (and the qualifications). The RTA and the PTA have the full authority to edit, revise, and/or refuse the technical services if they are contrary to GCF policy.*

Terms of Reference for Key Project Staff

1. National Project Coordinator (NPC)/ Project Manager (PM)

Background

The Project Manager (PM) will be appointed by the project implementing partner. The PM will be responsible for the overall management of the Project, including the mobilisation of all project inputs, supervision over project staff, consultants and sub-contractors.

Duties and Responsibilities

- Manage the overall conduct of the project.
- Plan the activities of the project and monitor progress against the approved workplan.

- Execute activities by managing personnel, goods and services, training and low-value grants, including drafting terms of reference and work specifications, and overseeing all contractors' work.
- Monitor events as determined in the project monitoring plan, and update the plan as required.
- Provide support for completion of assessments required by UNDP, spot checks and audits.
- Manage requests for the provision of UNDP financial resources through funding advances, direct payments or reimbursement using the FACE form.
- Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports.
- Monitor progress, watch for plan deviations and make course corrections when needed within project board-agreed tolerances to achieve results.
- Ensure that changes are controlled, and problems addressed.
- Perform regular progress reporting to the project board as agreed with the board, including measures to address challenges and opportunities.
- Prepare and submit financial reports to UNDP on a quarterly basis.
- Manage and monitor the project risks – including social and environmental risks - initially identified and submit new risks to the Project Board for consideration and decision on possible actions if required; update the status of these risks by maintaining the project risks log;
- Capture lessons learned during project implementation.
- Prepare revisions to the multi-year workplan, as needed, as well as annual and quarterly plans if required.
- Prepare the inception report no later than one month after the inception workshop.
- Ensure that the indicators included in the project results framework are monitored annually in advance of the GCF APR submission deadline so that progress can be reported in the GCF APR.
- Prepare the GCF APR;
- Assess major and minor amendments to the project within the parameters set by NCE-VF;
- Monitor implementation plans including the gender action plan, stakeholder engagement plan, and any environmental and social management plans;
- Monitor and track progress against the GCF Core indicators.
- Support the Mid-term review and Terminal Evaluation process.

Required skills and expertise

- A university degree (MSc or PhD) in a subject related to natural resource management or environmental sciences.
- At least 5 years of demonstrable project/programme management experience.
- At least 5 years of experience working with ministries, national or provincial institutions that are concerned with natural resource and/or environmental management.

Competencies

- Strong leadership, managerial and coordination skills, with a demonstrated ability to effectively coordinate the implementation of large multi-stakeholder projects, including financial and technical aspects.
- Ability to effectively manage technical and administrative teams, work with a wide range of stakeholders across various sectors and at all levels, to develop durable partnerships with collaborating agencies.
- Ability to administer budgets, train and work effectively with counterpart staff at all levels and with all groups involved in the project.
- Ability to coordinate and supervise multiple Project Implementation Units in their implementation of technical activities in partnership with a variety of subnational stakeholder groups, including community and government.
- Strong drafting, presentation and reporting skills.
- Strong communication skills, especially in timely and accurate responses to emails.
- Strong computer skills, in particular mastery of all applications of the MS Office package and internet search.
- Strong knowledge about the political and socio-economic context related to the Natural resources management, land management and law enforcement at national and subnational levels.
- Excellent command of English and local languages.

2. Project Safeguards and Gender Officer

Under the overall supervision and guidance of the Project Manager, the Safeguards and Gender Officer (SGO) will have the responsibility for the implementation of the environmental and social management plan/framework and Gender Action Plan. The SGO will work closely with the M&E Officer and Communications Officers on related aspects of project implementation, reporting, monitoring, evaluation and communication. Specific responsibilities will include:

- Monitor progress in development/implementation of the project ESMP/ESMF and gender action plan, ensuring that UNDPs SES and Gender policies are fully met, and the reporting requirements are fulfilled;
- Oversee/develop/coordinate implementation of all safeguard and gender related plans;
- Ensure social and environmental grievances are managed effectively and transparently;
- Review the SESP and gender action plans annually, and update and revise corresponding risk log; mitigation/management plans as necessary;
- Ensure full disclosure with concerned stakeholders;
- Ensure environmental and social risks are identified, avoided, mitigated and managed throughout project implementation;
- Work with the M&E officer to ensure reporting, monitoring and evaluation fully address the safeguard and gender issues of the project;

The Project SGO will be recruited based on the following qualifications:

- Master's degree in safeguards, gender studies, gender and development, environment, sustainable development or closely related area.
- An environmental and safeguards qualification (certificate, demonstrated experience) is preferable;
- Previous experience in developing and implementing environmental and social safeguard strategies for organizations or projects
- Demonstrated understanding of issues related to gender and sustainable development; at least 5 years of practical working experience in gender mainstreaming, women's empowerment and sustainable development in relevant Country/Region/Area of Work;
- Proven experience in gender issues in Country/Region/Area of Work
- Previous experience in UN project or programme implementation, ideally involving international donors will be a definite asset;
- Demonstrated understanding of the links between sustainable development, social and gender issues;
- Experience in gender responsive capacity building;
- Experience with project development and results-based management methodologies is highly desired/required;
- Excellent analytical, writing, advocacy, presentation, and communications skills.
- Excellent language skills in English (writing, speaking and reading) and in local languages.

3. Project Knowledge Management Officer

Under the overall supervision and guidance of the Project Manager, the Knowledge Management Officer (KMO) will have the responsibility for leading knowledge management outputs and developing the project communications strategy at the project outset and coordinating its implementation across all project components. The KMO will work on M&E aspects of the project. Specific responsibilities will include:

- Develop a project communications strategy / plan, incorporate it with the annual work plans and update it annually in consultation with project stakeholders; coordinate its implementation
- Monitor project progress and participate in the production of progress reports ensuring that they meet the necessary reporting requirements and standards;

- Ensure project's M&E meets the requirements of the Government, the UNDP Country Office, and NCE-VF; develop project-specific M&E tools as necessary;
- Oversee and ensure the implementation of the project's M&E plan, including periodic appraisal of the Project's Theory of Change and Results Framework with reference to actual and potential project progress and results;
- Coordinate and oversee the implementation of public awareness activities across all project components;
- Facilitate the design and maintenance of the project website/webpages and ensure it is up-to-date and dynamic;
- Facilitate learning and sharing of knowledge and experiences relevant to the project;

The Project KMO will be recruited based on the following qualifications:

- A Bachelors degree, preferably in the field of community development or natural resource / environmental management;
- A communications qualification (diploma, Bachelors degree)
- At least three years of relevant work experience of communications for project or programme implementation, ideally involving international donors. Previous experience with UN projects will be a definite asset;
- Significant experience in collating, analyzing and writing up results for reporting purposes;
- Very good knowledge of results-based management and project cycle management, particularly with regards to M&E approach and methods;
- Previous experience in developing and implementing communications and knowledge management strategies for organizations or projects
- Strong professional working capacity to use information and communications technology, specifically including website design and desk top publishing software
- Understanding of pastureland and livestock management, climate adaptation, sustainable livelihoods and associated issues;
- Very good inter-personal skills;
- Excellent language skills in English (writing, speaking and reading) and in local languages

4. Project Admin and Finance Officer

Under the guidance and supervision of the Project Manager, the Project Admin and Finance Officer will have the following specific responsibilities:

- Keep records of project funds and expenditures, and ensure all project-related financial documentation are well maintained and readily available when required by the Project Manager;
- Review project expenditures and ensure that project funds are used in compliance with the Project Document and Government financial rules and procedures;
- Validate and certify FACE forms before submission to UNDP;
- Provide necessary financial information as and when required for project management decisions;
- Provide necessary financial information during project audit(s);
- Review annual budgets and project expenditure reports, and notify the Project Manager if there are any discrepancies or issues;
- Consolidate financial progress reports submitted by the responsible parties for implementation of project activities;
- Liaise and follow up with the responsible parties for implementation of project activities in matters related to project funds and financial progress reports.

The Project Admin and Finance Officer will be recruited based on the following qualifications:

- A Bachelors degree or an advanced diploma in accounting/ financial management;
- At least five years of relevant work experience preferably in a project management setting involving multi-lateral/ international funding agency. Previous experience with UNDP or UN project will be a definite asset;
- Proficiency in the use of computer software applications particularly MS Excel;

- Excellent language skills in English (writing, speaking and reading) and in local languages.

5. Procurement Associate

Under the guidance and supervision of the Project Manager, the Procurement Associate will have the following specific responsibilities:

- Prepare the project procurement plan, monitor timeliness of its implementation, and provide regular updates to the Project Manager;
- Organize procurement processes including preparation and conduct of RFQs, ITBs or RFPs, receipt of quotations, bids or proposals, their evaluation, negotiation of certain conditions of contracts in full compliance with UNDP rules and regulations and/or of Government, as applicable;
- Review and advertise Individual Contract (IC) TOR, prepare contracts and monitor the deliverables for project/programme.
- Prepare Purchase orders and contracts in and outside Atlas, vendors' creation in Atlas, review and close Purchase Order on quarterly basis;
- Prepare submissions to the Contract, Asset and Procurement Committee (CAP), where needed;
- Assist in developing and updating the rosters of suppliers, supplier selection and evaluation;
- Collect information and analysis of market situation for different types of procurement including travel and, conference facilities services;
- Provide capacity building support to partner agencies on compliance with UNDP rules and regulations, by undertaking short information sessions and/trainings;
- Ensures proper control of project Assets, Implementation of Inventory and physical verification check-up in projects.

The Procurement Associate will be recruited based on the following qualifications:

- University degree in business administration, economics and other related fields;
- Completion of specialized trainings in procurement, including certificate training in government procurement procedures, is an asset;
- At least 3 years of procurement and administrative work experience;
- Proficient knowledge of English and Mongolian languages.

Annex H: UNDP Social and Environmental and Safeguards screening procedure (SESP) and Environmental and Social Management Framework (ESMF)

SESP: https://undpgefpims.org/attachments/5873/215883/1717132/1774232/Approved-FP-UNDP-120320-5873-Annex_6a_SESP.pdf

ESMF: https://undpgefpims.org/attachments/5873/215883/1717203/1754662/FP-UNDP-120320-5873-Annex%206b%20ESMF.pdf

Annex I: Stakeholder Engagement Plan

Throughout the proposal development process regular consultations were held with the NDA, UNFCCC and UNCCD focal points, officials from the Ministry of Environment and Tourism (MET), National Agency for Meteorology and Environmental Monitoring (NAMEM), Ministry of Finance (MOF), Ministry of Food, Agriculture and Light Industry (MoFALI), National Emergency Management Agency (NEMA), Administration for Land Affairs, Geodesy and Cartography (ALAMGaC), National Development Agency, aimag level representatives and communities, as well as other development partners and their projects implemented in relevant field and same geographical target areas.

Through a series of stakeholder consultations and inputs received, three project outputs have been formulated and refined: 1) Integrate climate information into land and water use planning at the national and sub-national levels, 2) Scaling up climate-resilient water and soil management practices for enhanced small scale herder resources management, and 3) Build herder capacity to access markets for sustainably sourced, climate-resilient livestock products.

Successful implementation of GCF projects depends on buy-in across a wide range of government bodies, ethnic minorities and local communities, society, businesses and institutions. Engagement is not merely a matter of integrating the views of the different actors, men and women alike, who may be affected by the project, but also to craft partnerships, consensus and inclusive policies and processes that involve and benefit women and men alike. It is such actions that will make GCF projects transformational, achievable and long lasting.

Adopting a participatory approach to planning site-level interventions will help ensure that activities are context-sensitive, have community buy-in, and are sustainable over the long term. The communities that are being targetted are remote and often mobile, so the success of the various engagement activities will be closely monitored and amended as required to make sure that all stakeholders have an opportunity to participate and that none are marginalized.

Engagement activities will include: workshops, trainings, agency (government, NGO, CBO) meetings, user group formation and capacity building, community meetings, face-to-face meetings with herders and pasture users, media (radio, newspapers, television, newsletters, websites and social media). Remote communications (internet/telephones) will also be employed as appropriate.

The following Stakeholder Engagement Plan provides an indicative list of stakeholders for the outputs and activities for the lifetime of this project. The plan will be reviewed and updated on needs basis, during the project inception period, as well as throughout implementation.

Outputs	Activity	Stakeholders
Output 1: Integrate climate information into land and water use planning at the national and sub-national levels	1.1. Enhanced technical capacity for long-term climate resilient development planning, and medium-term response planning capacity	Ministry of Environment and Tourism (MET) National Agency for Meteorology and Environmental Monitoring (NAMEM) Ministry of Food and Agriculture (MOFA) National Emergency Management Agency (NEMA)
	1.2. Integration of climate change and climate-informed carrying capacity into aimag and soum level development plan (incl. Integrated River	Ministry of Environment and Tourism (MET) National Agency for Meteorology and Environmental Monitoring (NAMEM) Ministry of Food and Agriculture

Outputs	Activity	Stakeholders
	Basin Management Plans (IRBMP))	National Development Agency (NDA) National Emergency Management Agency State Emergency Commission Provincial Government authorities Development partners and their projects
	1.3. Analytical products to support policy and regulatory transformation promoting sustainable land and water management and resilient herder livelihoods	Ministry of Environment and Tourism (MET) National Agency for Meteorology and Environmental Monitoring (NAMEM) Ministry of Food and Agriculture National Emergency Management Agency State Emergency Commission Provincial (Aimag) and District (Soum) Government authorities Development partners and their projects Herder communities and NGOs/CSOs
Output 2: Scaling up climate-resilient water and soil management practices for enhanced small scale herder resources management	2.1. Enhance cooperation among herders on sustainable use and stewardship of shared land and water resources, formalized through Resource User Agreements	Ministry of Food and Agriculture Ministry of Environment and Tourism (MET) Agency for Land Administration and Management, Geodesy and cartography (ALAMGaC) River Basin Administrations Provincial (Aimag) and District (Soum) Government authorities Herder communities and User Groups ADB's ASDIP and other development partner projects
	2.2. Reforestation of critical catchment areas to protect water resources and ecosystem services	Ministry of Environment and Tourism (MET) Forest Research and Development Center Agency for Land Administration and Management, Geodesy and cartography (ALAMGaC) River Basin Administrations Provincial (Aimag) and District (Soum) Government authorities, including Forest Units Private sector – Professional Forest Entities Local communities and Forest User Groups ADB's ASDIP and development partner projects, including those by SDC
	2.3. Establish haymaking and pasture reserve areas, and emergency fodder storage facilities to reduce volatility to livelihoods related to climate change induced extreme events	Ministry of Food and Agriculture and local level departments Ministry of Environment and Tourism (MET) and local level departments National Emergency Management Agency Provincial Government authorities

Outputs	Activity	Stakeholders
		Local communities and Pasture User Groups ADB's ASDIP and other development partner projects
	2.4. Improve water access through protection of natural springs, construction of new water wells, rehabilitation of existing wells and water harvesting measures	Ministry of Environment and Tourism (MET) Ministry of Food and Agriculture Provincial (Aimag) and District (Soum) Government authorities Private sector – Hydraulic engineering companies Local communities and Resource User Groups ADB's ASDIP and other development partner projects
Output 3: Build herder capacity to access markets for sustainably sourced, climate-resilient livestock products	3.1. Identify public-private-community partnerships for sustainably sourced, climate resilient livestock products	Ministry of Food and Agriculture Provincial (Aimag) and District (Soum) Government authorities Ministry of Finance and SME Fund Private sector – Commercial Banks, Cashmere platform, Wool and cashmere association, Meat producer's association etc. Herder Producer organizations and Cooperatives and local SMEs Food and Agriculture Organization (FAO) Soum level Veterinary and animal breeding centers ADB's ASDIP and other development partner projects
	3.2. The establishment and training of Herder Producer Organizations (or cooperatives)	Ministry of Food and Agriculture Ministry of Labor and Social Protection Provincial (Aimag) and District (Soum) Government authorities Ministry of Finance and SME Fund Food and Agriculture Organization (FAO) ADB and ASDIP and other development partner projects Private sector – Commercial Banks, Cashmere platform, Wool and cashmere association, Meat producer's association etc. Herders, herder communities Herder Producer Organizations and Cooperatives
	3.3. Improve traceability for sustainably sourced, climate-resilient livestock products	Ministry of Food and Agriculture Private sector - Cashmere platform, Wool and cashmere association, Meat producer's association etc. Food and Agriculture Organization (FAO)

Outputs	Activity	Stakeholders
		Provincial (Aimag) and District (Soum) Government authorities Herder Producer Organizations and Cooperatives Soum level Veterinary and animal breeding centers ABD's ASDIP and other development partner projects
	3.4. Generation and dissemination of knowledge products to support private-sector engagement and herder enfranchisement in climate-resilient and sustainable production in Mongolia	Ministry of Food and Agriculture Ministry of Labor and Social Protection Provincial (Aimag) and District (Soum) Government authorities Food and Agriculture Organization (FAO) Private sector - Cashmere platform, Wool and cashmere association, Meat producer's association Herder Producer Organizations and Cooperatives ADB's ASDIP and other development partner projects

Annex J: Gender Assessment and Action Plan

Please access the annex via this link here.

Annex K: UNDP Risk Log

#	Description	Date Identified	Risk Category	Impact & Probability	Risk Treatment / Management Measures	Risk Owner	Status
1	Long term sustainability of interventions to protect/rehabilitate land and river basin areas, O&M of technological investment. The probability and impact have been set at medium given the importance of O&M for sustainability of investments.	2018	Technical and operational	P =2 I = 2	The project design phase included thorough consultation, investments are therefore in line with needs of stakeholders. Commitments have been made for both co-financing and maintenance of investments highlighting ownership and ensuring sustainability of investments (e.g. physical structures, computing equipment, etc.). Further, the project will build on traditional practices of user groups, building partnerships and fostering collaboration for shared benefits of land and water resources. While the project will support establishment of new user groups where needed, in most cases the project will support already existing groups. Training will be provided to ensure value of natural resources and ecosystems benefits are understood.	MET/ MOFALI	Will be monitored during the implementation
2	Loss of soil material and sedimentation to the surface and/or groundwater systems from site due to earthwork activities	2018	Technical and operational	P =1 I = 1	An Erosion, Drainage and Sediment Control Plan will be developed prior to any activities, and closely monitored. Rainfall and melt water runoff can have a significant impact on the ability to manage environmental impacts, particularly in terms of managing drainage, erosion and sedimentation. Therefore, activities which involve significant disturbance of soil or operating with drainage lines and waterways should be undertaken with the likely weather conditions in mind. It is also important to ensure that all required erosion and sediment control mechanisms are in place before works commence.	MET	Will be monitored during the implementation
3	Project interventions do not have intended impacts, because behavior that is not conducive to the project objective continues. The probability and impact have been set at medium, as the risk is related to herder behavior, and overgrazing by livestock is a serious challenge in Mongolia.	2018	Technical and operational	P =2 I = 2	Support will be provided through Output 3 to support climate-resilient and environmentally-responsible value chains and strengthening access to related markets. Data and training will be provided to herders that will help inform choices related livestock management. The Activity 1.3 will support policy review and development of transformative policies disincentivizing large herds. Further, this project will be implemented in close collaboration with ADB, whose project includes financial incentives and support services conditionality which make the reduction in animal numbers attractive for herders. Related activities can be linked with the RUGs goal to keep appropriate herd structure and number to reduce pressure on gazing land.	UNDP, MET	Mitigation measures will be put in place
4	Livestock numbers continue to grow, further pressuring land and water resources.	2018	Social and Environmental	P =3 I = 3	The Government of Mongolia (GoM) acknowledges the challenge of growing livestock numbers to sustainable land and water management going forward, particularly considering the drying trend	UNDP/ MOFALI	Will be monitored during the implementation

	The probability and impact have been set to medium given upward trend of livestock numbers, despite animal reduction efforts.				climate change is having on the country and related impacts on the natural resources upon which herders rely. The National Mongolian Livestock Programme (NMLP) Phase I included targets to establish protected areas as well as to significantly reduce the total livestock in the country.. Priority 1 of the Programme is to "ensure the sustainable development of the livestock sector and create a legal environment that will promote economic turnover. The proposed GCF project will be implemented closely with the NMLP, with support provided to climate-resiliency focused activities for herders, and includes the generation of analytical products to support reform for policies/programmes which inadvertently contribute to large livestock numbers (i.e. subsidies, commercial credits). In addition, the ADB ASDIP programme will provide incentives to herder to reduce livestock numbers. ADB's project can benefit herders in both projects. The Programme has fallen short of its first phase targets, however the GoM has invested significantly in the Programme, and herder livelihoods and the livestock sector are priority sustainable development areas for the Government of Mongolia. Related co-financing has been identified for the proposed GCF project in the amount of USD33.2million. Support to critical policy transformations, needed to support the behavior change needed by herders, have been planned under the project in the first half. Review of the project progress in this regard will be monitored closely.		
5	Staff turnover or lack of technical capacity within implementing partners and responsible parties	2018	Technical and operational	P =1 I = 1	Implementation arrangements have been discussed and agreed with government, informed by capacity assessments. Where necessary, UNDP is able to provide support related to direct implementation.	UNDP	Mitigation measures will be put in place

Annex L: Letter of Agreement with the government on UNDP Support Service Costs

STANDARD LETTER OF AGREEMENT BETWEEN UNDP AND THE GOVERNMENT FOR THE PROVISION OF SUPPORT SERVICES

19 March 2020

Dear Mr. D. Ganbold,

1. Reference is made to consultations between officials of the Government of Mongolia (hereinafter referred to as "the Government") and officials of UNDP with respect to the provision of support services by the UNDP country office for nationally managed programmes and projects. UNDP and the Government hereby agree that the UNDP country office may provide such support services at the request of the Government through its institution designated in the project document, as described below.

2. The UNDP country office may provide support services for assistance with reporting requirements and direct payment. In providing such support services, the UNDP country office shall ensure that the capacity of the Government-designated institution is strengthened to enable it to carry out such activities directly. The costs incurred by the UNDP country office in providing such support services shall be recovered from the administrative budget of the office.

3. The UNDP country office may provide, at the request of the designated institution, the following support services for the activities of the programme/project:
   (a) UNDP's technical assistance;
   (b) Administrative and operations support;

4. The procurement of goods and services and the recruitment of project and programme personnel by the UNDP country office shall be in accordance with the UNDP regulations, rules, policies and procedures. Support services described in paragraph 3 above shall be detailed in an annex to the programme support document or project document, in the form provided in the Attachment hereto. If the requirements for support services by the country office change during the life of a programme or project, the annex to the project document is revised with the mutual agreement of the UNDP Mongolia resident representative and the designated institution.

5. The relevant provisions of the *Standard Basic Assistance Agreement between UNDP and the Government* (the "SBAA"), dated 28 September 1976, including the provisions on liability and privileges and immunities, shall apply to the provision of such support services. The Government shall retain overall responsibility for the nationally managed programme or project through its designated institution. The responsibility of the UNDP country office for the provision of the support services described herein shall be limited to the provision of such support services detailed in the annex to the project document.

6. Any claim or dispute arising under or in connection with the provision of support services by the UNDP country office in accordance with this letter shall be handled pursuant to the relevant provisions of the SBAA.

7. The manner and method of cost-recovery by the UNDP country office in providing the support services described in paragraph 3 above shall be specified in the annex to the programme support document or project document.

8. The UNDP country office shall submit progress reports on the support services provided and shall report on the costs reimbursed in providing such services, as may be required.

9. Any modification of the present arrangements shall be effected by mutual written agreement of the parties hereto.

10. If you are in agreement with the provisions set forth above, please sign and return to this office two signed copies of this letter. Upon your signature, this letter shall constitute an agreement between your Government and UNDP on the terms and conditions for the provision of support services by the UNDP country office for nationally managed programmes and projects.

Yours sincerely,

For the Government of Mongolia
D. Ganbold
State Secretary,
Ministry of Environment and Tourism
of Mongolia
Date:_____

Signed on behalf of UNDP
Elaine Conkievich
Resident Representative to Mongolia
Date: 19/3/2020

Attachment

DESCRIPTION OF UNDP COUNTRY OFFICE SUPPORT SERVICES

1. Reference is made to consultations between Ministry of Environment and Tourism, Ministry of Food, Agriculture and Light Industries (MoFALI) and National Emergency Management Agency, the institution designated by the Government of Mongolia and officials of UNDP with respect to the provision of support services by the UNDP country office for the nationally managed project *Improving Adaptive capacity and Risk Management of Rural Communities in Mongolia* (*the Project*).

2. In accordance with the provisions of the letter of agreement signed on *07 June 2017* and the *project document*, the UNDP country office shall provide support services for the Project as described below.

3. Support services to be provided: *Through this LOA, MET requests UNDP Mongolia to provide the following services. The services described below are separate from and complement to the project implementation by UNDP as outlined in the project document.*

Support services (insert description)	Schedule for the provision of the support services	Cost to UNDP of providing such support services (where appropriate)	Amount and method of reimbursement of UNDP (where appropriate)
Technical services including, but not limited to: Implementation support: • Policy analysis, guidance and advisory services on Climate change (CC), Disaster Risk Reduction (DRR), Land and water management and Agriculture sectors. • Introduction of customized technical tools and guidance, including capacity needs assessment, randomized control trial, targeted scenario analysis, resilience-based land and water use and management planning guidelines and tools, ICT platform for community-based NRM and O&M manuals. • Peer reviews of deliverables at all stages of project implementation, inception/baseline /final and other technical reports; • Substantive guidance to synthesizing and dissemination of	Throughout project implementation when applicable	As per percentage of pro-forma costs, based on an agreed actual working days for the project and time-sheet records. • Part-time technical specialist on climate change (75% divided between 3 outputs for 7 years) • Part-time Programme support staff, 1 person (75% over three components over 7 years Estimated subtotal: USD 708,750	UNDP will directly charge the project upon approval of annual work and monthly record of experts' time spent to provide the service to the project. Actual charge will include staff cost and general operating expense.

lessons learned and best practices through high quality knowledge products • Direct technical inputs to training and capacity development materials and acting as resource persons as required. Institutional development: • Building capacities for agencies in charge of CC, DRR, Land and water management and agriculture sector, including financing and value chain in the agriculture sector Policy transformation: • Policy reviews and reform policies and actions recommended for reducing grazing pressure on land, mainstreaming climate change into planning. Partnerships: • Analyzing options, approaches and action plans to engage with and benefit from global and regional think tanks, center of excellence and private sector, social impact investors within the CC, DRR, land and water and agriculture sectors. Technical advice to Implementation of Output 3 of the project.			
Services related to procurement and finance in accordance to UNDP regulations and policies, which include but not limited to: Procurement services: • Processing terms of reference for recruitments • Consultant recruitments • Advertising • Short listing and selection • Contract issuance	Ongoing throughout implementation when applicable	As per the attached universal Price List (UPL)/ Local Price List (LPL) Estimated ISS cost: USD 201,750	UNDP will directly charge as per ISS

Administrative services for consultant mobilization: • Payments • Creation of vendor forms • Issuing cheques • Mission and travel arrangements						
Average DPC/year over 7 years				USD 910,500		
DPC schedule (USD)						
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year7**
136,750	140,250	135,000	128,750	125,250	123,250	121,250

Annex to LOA – Updated UNDP Support Services (as approved in the FAA Budget)[50]

Description of Support Services	Amount

Technical (programme) services including, but not limited to:
• Implementation:
  • Policy analysis, guidance and advisory services on Climate change (CC), Disaster Risk Reduction (DRR), Land and water management and Agriculture sectors.
  • Introduction of customized technical tools and guidance, including capacity needs assessment, randomized control trial, targeted scenario analysis, resilience-based land and water use and management planning guidelines and tools, ICT platform for community-based NRM and O&M manuals.
  • Peer reviews of deliverables at all stages of project implementation, inception/baseline /final and other technical reports;
  • Substantive guidance to synthesizing and dissemination of lessons learned and best practices through high quality knowledge products
  • Direct technical inputs to training and capacity development materials and acting as resource persons as required.
• Institutional development:
  • Building capacities for agencies in charge of CC, DRR, Land and water management and agriculture sector, including financing and value chain in the agriculture sector
• Policy transformation:
  • Policy reviews and reform policies and actions recommended for reducing grazing pressure on land, mainstreaming climate change into planning.
• Partnerships:
  • Analyzing options, approaches and action plans to engage with and benefit from global and regional think tanks, center of excellence and private sector, social impact investors within the CC, DRR, land and water and agriculture sectors.
• Technical advice to Implementation of Output 3 of the project
	US$635,980
	(reduced from US$708,750)
	As per percentage of pro-forma costs, based on an agreed actual working days for the project and time-sheet record.
	• Part-time technical specialist on climate change (75% across 3 outputs for 7 years)
	• Part-time programme support staff (30% across 3 outputs for 7 years)

Services related to operational services, which include but not limited to:
• Human resources
  o Staff selection and recruitment process
  o Staff benefit administration and management
  o Staff payroll; banking administration and management
• Finance
  • Transaction processing (voucher creation, approval, payment processing)
• Procurement services
	US$201,750
	$10,536.13
	
	$101,120.76
	
	$54,204.72

[50] The change will be presented during LPAC meeting and will be recorded in LPAC meeting minutes.

• Processing TORs for recruitment • Consultant recruitment • Selection processes • Contract issuance and management • Administrative and logistics • Travel management, visa • Customs clearance and tax exemption, registry • Meeting support services • ICT support	$34,698.44 $1,189.95
Total	**US$837,730**

Annex M: HACT micro assessment and Partner Capacity Assessment

Please access HACT Micro Assessment Reports for the following entities via the link here.
PCAT reports can also be accessed via the link here.

- Ministry of Environment and Tourism
- National Emergency Management Agency
- Ministry of Food, Agriculture and Light Industry

Annex N: UNDP Project Quality Assurance Report

This report has been completed and approved via UNDP corporate planning system. The report can be accessed via the link below:

https://undpgefpims.org/attachments/5873/215883/1742524/1771303/QA-design_completed%20and%20approved.pdf

Annex O: Monitoring and evaluation plans

Please fill in this Monitoring Plan and attach here also the M&E Plan from the project design stage (i.e. one submitted to the GCF prior to approval by its Board.) These plans will guide monitoring and evaluation at the project level for the duration of project implementation.

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[51]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
Project objective from the results framework	**Indicator 1** Number of males and females benefiting from the adoption of diversified, climate resilient livelihood options (including fisheries, agriculture, tourism, etc.)	130,000 people (65,000 male, 65,000 female) (direct)	Beneficiaries who are directly benefiting from project interventions and other beneficiaries who are not directly connected to the project but will still benefit from it.	Independent project reviews; Randomized Control Trial (RCT) Surveys	Mid-term and End of Term	UNDP, MET, MOFALI, Aimag and Soum Governments, PMU	Independent project review reports	Herders adopt adaptive practices, and attribution for changes in environmental conditions and access to markets is possible. Government commitment to climate-informed and climate-resilient planning; climate information is adequately integrated into livestock planning and needed reforms are approved.
	Indicator 2 Coverage/scale of ecosystems protected and strengthened in response to climate variability and change	14 watersheds and 36.44M ha	The project target territories belong to these water catchments.	Independent project reviews; Randomized Control Trial (RCT) Surveys	Mid-term and End of Term	Aimag and Soum Governments, MET, PMU	Independent project review reports	Investments identified during proposal development are validated by RUAs
Project Outcome	**Indicator 3.** Institutional and regulatory	Final 3	MET and MoFALI policy transformation	Independent project reviews; Randomized	Mid-term and End of Term	UNDP, MET, MOFALI, Aimag	Independent project review reports,	Climate information will be integrated into planning and reforms

[51] Data collection methods should outline specific tools used to collect data and additional information as necessary to support monitoring. The PIR cannot be used as a source of verification.

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[51]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
Strengthened institutional and regulatory systems for climate-responsive planning and development	systems that improve incentives for climate resilience and their effective implementation		draft documents	Control Trial (RCT) Surveys		and Soum Governments, PMU	stakeholder consultations	will be approved, as per commitment expressed by MET and MoFALI
Project Outcome 2. Increased generation and use of climate information in decision-making	**Indicator 4.** Use of climate information products/services in decision-making in climate sensitive sectors	Mid term 4 Final 5 Cumulative		Independent project reviews; Randomized Control Trial (RCT) Surveys	Mid-term and End of Term	UNDP, MET, MOFALI, Aimag and Soum Governments, PMU	Independent project review reports, stakeholder consultations	Climate information will be integrated into planning and reforms will be approved, as per commitment expressed by MET and MoFALI Government commitment to climate-informed and climate-resilient planning.
Project Outcome 3. Strengthened adaptive capacity and reduced exposure to climate risks	**Indicator 5.** Use by vulnerable households, communities, businesses and public-sector services of Fund-supported tools instruments, strategies and activities to respond to climate change and variability	30% of improvement	Score improvement achieved in 30% of rangelands in project supported provinces	Independent project reviews; Randomized Control Trial (RCT) Surveys Data collected annually by MET from NAMEM rangeland monitoring	Mid-term and End of Term	UNDP, MET, MOFALI, Aimag and Soum Governments, PMU UNDP, MET, MOFALI, Aimag and Soum Governments, PMU	Independent project review reports, Reports, stakeholder consultations Rangeland health scorecard	Herders adopt adaptive practices, and attribution for changes in environmental conditions and access to markets is possible.

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[51]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
Project Output 1. Integrate climate information into land and water use planning at the national and sub-national levels	**Indicator 6.** Number of tailored products and plans applying climate information	Mid-term: 2 Final: 4 Cumulative	tailored climate products for natural resources management (MET) and the livestock sector (MoFALI) Analytical document to guide development of a national programme as a successor to the NMLP, detailing climate informed livestock herd size and herd structure targets	MET, NAMEM and MoFALI progress reports against national progammes	Annual	UNDP, MET, MOFALI, NAMEM, NEMA, Aimag and Soum Governments, PMU	Project reports, monitoring visits, MET and MoFALI strategies, policy and planning documents	Climate information is sufficiently downscaled for application in sub-national planning Government commitment to climate-informed and climate-resilient planning
	Indicator 7. Increased institutional capacity for climate-informed natural resources and livestock	Average increase of scores by 60% from baseline	To be evaluated against capacity scorecard baseline with	Capacity surveys, MoFALI and MET progress reports against national progammes	Annual	UNDP, PMU, MET, MOFALI	Capacity scorecard, Survey conducted prior to trainings	Climate information is sufficiently downscaled for application in sub-national planning Government commitment to climate-

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[51]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
	planning and management		MET and MoFALI					informed and climate-resilient planning
Project Output 2. Scaling up climate-resilient water and soil management practices for enhanced small scale herder resource management	**Indicator 8.** Number of structures built and/or rehabilitated	2500ha reforestation 88 natural springs protected 285 wells rehabilitated or constructed 18 water harvesting structures 2,890 ha of haymaking or pasture reserve areas	Investment needs are established through requests from the local Governor offices of target provinces	MET and MoFALI reports against national programmes Aimag reports	Annual	Sub-contractors, UNDP, MET, MOFALI, NEMA, PMU	Contractor reports, monitoring visits, RCT surveys, consultations	Central and local government co-financing is available to support investments. Investments are consistent with RUAs.
	Indicator 9. Herders apply adaptive practices to use of natural resources (e.g. rotational herding practices, RUAs)	Mid-term 1 Final 5 Cumulative	Validated against clauses in the Agreements stipulating intentions by herders	MET and MoFALI reports against national programmes Provincial government reports Adaptive practices by herders scorecard	Annual	Sub-contractors, PMU, Aimag and soum Governments	Review reports monitoring visits, RCT surveys, consultations	Herders adopt adaptive practices, and attribution for changes in environmental conditions and access to markets is possible.
	Indicator 10. RUAs include targets for climate informed livestock herd	Mid-term 1 Final 5	Clauses in the Agreements stipulating intentions by herders	Progress / completion reports submitted by contractors, Aimag reports, Reviews, monitoring visits	Annual	Sub-contractors, UNDP, MOFALI and PMU, Aimag and	Review reports Annual MoFALI	Herders adopt adaptive practices, and attribution for changes in environmental

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[51]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
	size and herd structure targets	Cumulative				soum Governments	livestock census	conditions and access to markets is possible.
Project Output 3. Build herder capacity to access markets for sustainably sourced, climate-resilient livestock products	**Indicator 11.** % of HPO herders able to secure contracts with buyers for sustainably sourced livestock products	50% by EOP	Contracts by HPOs will help enhance livelihoods through improved market access	Reports, site visits, consultations Reviews	Annual	Sub-contractors, UNDP, MOFALI and PMU	Randomized control trial surveys, review reports Formalized contracts	Willingness of herders to join HPOs Herders adopt adaptive practices, and attribution for changes in environmental conditions and access to markets is possible.