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Adaptation Fund Board
Project and Programme Review Committee
Thirty-fourth Meeting
Bonn, Germany, 8-9 October 2024

PROPOSAL FOR MONGOLIA

ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT/PROGRAMME CATEGORY: Regular-sized Project Concept

Country/Region: Mongolia
Project Title: Sustainable Pasture Management and Adaptation with Resilient Technologies for Herders in Mongolia (SMART-Herders)
Thematic Focal Area: Agriculture
Implementing Entity: International Fund for Agricultural Development (IFAD)
Executing Entities: Ministry of Food, Agriculture and Light Industry (MoFALI)
AF Project ID: AF00000404
IE Project ID:
Requested Financing from Adaptation Fund (US Dollars): 2,038,883
Reviewer and contact person: Estefanía Jiménez
Co-reviewer(s): Hugo Remaury
IE Contact Person: Janie Rioux

Technical Summary	The project "Sustainable Pasture Management and Adaptation with Resilient Technologies for Herders in Mongolia (SMART-Herders)" aims to assist herders and the livestock sector in transitioning to sustainable and climate-resilient management of pastures and livestock. This will be done through the three components below: Component 1: Improving climate change risk awareness among herders, policy makers and public for resilience building (USD 250,000); Component 2: Piloting climate-resilient herding practices and technologies (USD 1,398,883); Component 3: Promoting knowledge sharing for replicating and scaling up best practices (USD 70,000). Requested financing overview: Project/Programme Execution Cost: USD 164,000 Total Project/Programme Cost: USD 1,882,883 Implementing Fee: USD 156,000 Financing Requested: USD 2,038,883

	The initial technical review raises several issues, such as the proposal's unclear pilots, risks and compliance with the AF ESP, and the project's cost-effectiveness as is discussed in the number of Clarification Requests (CRs) and Corrective Action Requests (CARs) raised in the review.
Date:	August 26, 2024

Review Criteria	**Questions**	**First Technical Review Comments (August 26, 2024)**
Country Eligibility	1. Is the country party to the Kyoto Protocol, and/or the Paris Agreement?	**Yes.**
	2. Is the country a developing country particularly vulnerable to the adverse effects of climate change?	**Yes.** Dzud events, severe winters causing significant livestock mortality, have become more frequent and intense, often following dry summers.
Project Eligibility	1. Has the designated government authority for the Adaptation Fund endorsed the project/programme?	**Yes.** As per the Endorsement letter dated May 13, 2024.
	2. Does the length of the proposal amount to no more than Fifty pages for the project/programme concept, including its annexes?	**Yes.**
	3. Does the project / programme support concrete adaptation actions to assist the country in addressing adaptive capacity to the adverse effects of climate change and build in climate resilience?	**Yet to be demonstrated.** The description of the project activities in paragraphs 39-63 is too generic. The document should clearly identify and describe the characteristics and scope of the proposed activities. This is particularly critical to highlight the concreteness (i.e., producing visible and tangible results on the ground) of activities expected to be delivered under Component 2 **CAR1:** Please strengthen the proposal by:

		1. clearly identify and describe the characteristics and scope of the proposed activities. 2. Demonstrate the concreteness of proposed activities under component 2. 3. Please be guided by the Funds Unidentified Sub-Projects (USPs) in so doing. **CAR2**: When elaborating on the intended project activities, the document should highlight how the project activities are different from a business-as-usual agricultural development project, notably by demonstrating that they are suited to the identified climate threats. The background section describes a few non-climatic threats that seem critical to consider in achieving the project objectives (namely increase in goat rearing/cashmere production, unsustainable land and forest management practices/ overgrazing, perception of extension services as weak, extension officers' lack of knowledge of climate risks, pasture restoration and sustainable livestock management practices, and limited herders' access to information, support services, and financial support, among others). **CR1:** When expanding on the concrete activities under Part II.A, please describe how such non-climatic threats have been considered in the design of activities, and how they will be managed during project implementation. **CR2**: Please describe in Part II.A how the concrete investments proposed under Component 2 (e.g., solar-powered, motion-activated water wells, equipment for

		forage preparation and storage, fodder collection and processing centers etc.) will be made themselves resilient to the impacts of climate change (e.g., increasing frequency of dzud events, summer droughts etc.). The description of Component 1 includes various activities as means to enhance climate change risk awareness among herders, policymakers, and the public, such as the establishment and maintenance of social media platforms, organization of online discussions, dissemination of newsletters, development of an online portal, and broadcasting a series of documentaries on climate change. **CR3**: The concept proposal should reinforce these activities' rationale by describing how such tools are proven to be effective in raising climate change awareness in Mongolia. **CR4**: The document should clarify whether Output 2.1.4. would include the establishment of one or more Small and Medium-Sized Enterprise (SME) feed and fodder center(s), which are mentioned in paragraph 70. **CR5**: When elaborating on the intended project activities, the document should clarify whether it will include activities related to Index Based Livestock Insurance, Forecast-Based Financing and/or Early Warning Anticipatory Action.

		Various sections of the document refer to the participatory approach and planning the project is intended to follow. **CR6:** Please describe in relevant sections of the concept note, including Part II.A, what this approach will look like, and how the project will ensure ownership at local level. **CR7:** A TOC is strongly encouraged. **CR8:** Outputs on A. (Part II) and Table on Project/Programme Components and Financing do not match. Please review throughout the document. **CR9:** In Table A (Part III), is stated that '*Number of climate-resilient practices and technologies demonstrated, scaled up, and adopted in critical regions*' is a project indicator, nevertheless, the project proposal does not suggest that the pilot projects will be scaled up. Please clarify. **CAR3:** Table A (Part III) format was changed, please use the format as presented in the template. **CR10:** In paragraph 30, Fund Outcome 8 is not mentioned, but it is in mentioned in Table A (Part III). Please review and clarify.
	4. Does the project / programme provide economic, social and environmental benefits, particularly to vulnerable communities, including gender considerations, while avoiding or mitigating negative impacts, in compliance with the	**Yes, but needs more information.** **CAR4**: Please include in the Concept proposal (either in this section or as an annex) a preliminary gender analysis determining the different needs, capabilities,

	Environmental and Social Policy and Gender Policy of the Fund?	roles and knowledge resources of women and men, and identifying how changing gender dynamics might drive lasting change. Please refer to the Guidance document for Implementing Entities on compliance with the AF Gender Policy. **CR11**: The document should provide specific information on the expected beneficiaries (beyond the "6,000 households" across "2 aimags and 12 soums") and should at least describe project beneficiaries (herders, as well as others), their main socioeconomic characteristics, and provide a list and/or maps of the targeted aimags and soums. **CR12**: Please describe the process and associated criteria through which the project will select the beneficiaries. **CR13**: Please convert the number of target households into direct and indirect beneficiaries (individuals) disaggregated by gender if possible, to ensure alignment with the AF core indicators reporting requirements. This is a requirement for FP stage. **CR14**: Please explain in this section how the project will ensure an equitable distribution of benefits (e.g., tractors, fodder storage centers, wells) across the target communities, households and individuals. **CR15**: Please confirm whether any marginalized and/or vulnerable communities were identified in the target areas. If some were identified, please describe the benefits provided by the project to such groups.

		CR16: When expanding on the proposed activities and target sites, the concept proposal should explain how it would avoid the risks of maladaptation mentioned in the project background and context section (i.e. "*increasing livestock numbers is a strategy to recover quickly from disasters […] However, the high concentration of herding in the Khangai and Western regions has led to overgrazing, with pasturelands operating at 140% of capacity, causing severe ecological degradation*"). **CR17**: Considering the wealth of experience IFAD has gained in Mongolia and in such assessments, the concept document should include quantitative estimates of the expected benefits listed in this section, to help demonstrating that the project has indeed "a strong cost-benefit ratio". **CR18**: The description of social benefits indicates that Component 2 would prioritize "*problem identification*" to identify "*specific climate-related challenges that these groups face and appropriate practices and technologies that can address these challenges*". As raised in CARs/CRs above, the climate-related challenges and corresponding activities intended to be implemented by the project should be identified and described in the concept proposal. Please revise this statement accordingly.
	5. Is the project / programme cost effective?	**Unclear.** The concept note explains the project's cost-effectiveness in comparison to a baseline scenario; however, the pilots of Component 2 are not defined and

		it is not possible to appreciate the project's cost-effectiveness at this stage. **CAR5:** Please provide more detailed information to justify the cost effectiveness of the proposed measures.
	6. Is the project / programme consistent with national or sub-national sustainable development strategies, national or sub-national development plans, poverty reduction strategies, national communications and adaptation programs of action and other relevant instruments?	**Yes, but more information is needed.** **CR19:** The concept note indicates alignment with the national adaptation plan – NAP (kindly provide the link to the document as it is not accessible on the UNFCCC website). **CR20:** Please reinforce the alignment of the project with the country's National Adaptation Plan, as it is currently limited to a statement of intention. **CR21**: Please confirm whether the project would align with any relevant sub-national-level plans and strategies, if any.
	7. Does the project / programme meet the relevant national technical standards, where applicable, in compliance with the Environmental and Social Policy of the Fund?	**Unclear.** **CAR6**: Building on the list of standards provided, the document should describe in a logical manner how the project will comply with each of them (e.g., whether any of the proposed activities may trigger the need for an Environmental Impact Assessment as per the Law on Environmental Impact Assessment, or how the project will comply with the water-related regulations currently listed, etc.). A description of each of these regulations is not required.

	8. Is there duplication of project / programme with other funding sources?	**No.** **CR22:** The concept note has identified upcoming projects, their complementarity and lack of overlap. However, since the pilots of the proposal are not yet defined, there is misalignment between Table 6 and the project's outputs. Please review and clarify. **CR23:** Please analyse complementarity with GCF project FP154 Mongolia: Aimags and Soums Green Regional Development Investment Program (ASDIP). **CR24**: Please describe the lack of overlap / complementarity with both the WB "Virtual Cooperatives of Pastoral Livestock Communities" and the FAO/GEF/WWF "Promoting Dryland Sustainable Landscapes and Biodiversity Conservation in the Eastern Steppe of Mongolia" initiatives, as the current inputs on p.24 seem to pertain to the UNDP/GCF project instead. **CR25**: This section mentions that "a key outcome 1.1.1. will in fact be a review and coalition development activity to help build on successes, identify complementarities and synergies, and insure information sharing". The identification of all potentially overlapping project/programme and possible complementarities and synergies must be done as part of the concept proposal. Please revise this statement accordingly. **CR26**: Although marked as "active" in the document, IFAD's website indicates that the Project for Market and Pasture Management Development was to end in 2023. Please kindly confirm what the project's status is, and

		revise the corresponding information provided in the document accordingly, if relevant. **CR27:** Kindly elaborate on lessons from the earlier initiatives during the project design and lessons learned from their mistakes.
	9. Does the project / programme have a learning and knowledge management component to capture and feedback lessons?	**Yes but more information required.** **CR28:** The project has a knowledge management strategy designed to capture, disseminate, and utilize information and knowledge generated throughout Outputs 1.1.1, 3.1.1 and 3.1.2 stated in Section G of Part II, however, Outputs 1.1.2.and 3.1.1 on lessons learned and dissemination are not mentioned. Please clarify. **CR29**: Please describe in this section how the project will keep track and analyse the experiences gained during implementation to enrich the global, national and local knowledge on climate change adaptation and to accelerate understanding about what kind of interventions work.
	10. Has a consultative process taken place, and has it involved all key stakeholders, and vulnerable groups, including gender considerations in compliance with the Environmental and Social Policy and Gender Policy of the Fund?	**Partly.** **CAR7**: Initial consultation process has been carried out with some institutional stakeholders, and community members, however, no women organizations were listed. Please clarify as is required to have gender considerations. **CAR8**: Please confirm whether any marginalized and/or vulnerable communities were identified in the target areas and whether they were consulted at this

		stage. If such groups are identified, their interests or concerns must be reflected in the concept proposal. **CR30**: Apart from the Governor of Bombogor soum, Bayankhongor Aimag, no representatives of local communities seem to have been consulted thus far. Given their expected strong involvement in the project activities, local communities (especially herders) and local governments should be consulted, and their views reflected in the concept proposal. **CR31**: Please kindly confirm the extent to which private sector representatives and universities/research centres have been consulted or will be consulted during the design of the fully-developed proposal.
	11. Is the requested financing justified on the basis of full cost of adaptation reasoning?	**Partly.** **CAR9**: Please further explain how the proposal meets the the full cost of adaptation as required by the AF. **CR32**: The Outputs on Table 8 and Table on Project/Programme Components and Financing do not match. Please review throughout the document. **CR33:** Please confirm whether the proposed project would be implemented in parallel with any IFAD-funded initiative(s) in the country.
	12. Is the project / program aligned with AF's results framework?	**Yes, but more information is needed.**

		The project is aligned with AF Outcomes 2, 3, 5, 7 and 8. **CR34:** In Table A of Part III, the grant amount should be equal to the amount of the activities specified in the budget (1,718,883). Please review.
	13. Has the sustainability of the project/programme outcomes been taken into account when designing the project?	**Partly.** **CR35:** Since the pilots of Component 2 are not fully defined it is not possible to determine if they will be sustainable in time. Please provide additional information as required by the AF USP guidance as requested in CAR1 above. **CR36**: For the hard investments planned under Component 2, please emphasize in Part II.J how the project will prioritize the purchase of durable equipment, hence contributing to the project's investments technical sustainability. **CR37**: Please elaborate on the arrangements through which the project will ensure continuity in maintenance and operations beyond the project lifetime of the proposed i) hard investments (i.e., solar-powered, motion-activated water wells, equipment for forage preparation and storage, fodder collection and processing centers, tractor(s)); and ii) soft investments (knowledge generated under Components 1 and 2). Should any commitments be already made by some stakeholders in sustaining such activities beyond the project lifetime, please add such information in the concept proposal accordingly.

	14. Does the project / programme provide an overview of environmental and social impacts / risks identified, in compliance with the Environmental and Social Policy and Gender Policy of the Fund?	**Unclear.** **CAR9**: Part II.K should be revised to better align with the Environmental and Social Policy of the Fund (please refer to the ESP guidance document and/or the ESP itself, as needed). The ESP being risk-based, please screen the proposal to describe in a substantiated manner potential impacts and risks for each ESP principle, and need for further assessment and management in the column "*Potential impacts and risks – further assessment and management required for compliance*". While undertaking such a screening, please i) keep in mind that no risk mitigation measures or expected positive project outcomes should be considered during the risk screening process since such measures will be described in the fully-developed proposal ESMP; ii) consider all potential direct, indirect, transboundary, and cumulative impacts and risks that could result from the project; iii) ensure that findings are evidence-based and substantiated; iv) note that principles 1, 4 and 6 always apply; and v) note that the column "No further assessment required for compliance" should be ticked only for those principles for which risks have not been identified. **CAR10:** Based on the ESP screening process, please explicitly state in paragraph 108 that the project is classified as "B" (as opposed as "moderate-risk") and that an ESMP describing the risk mitigation actions required to comply with the ESP will be developed and shared as part of the fully-developed proposal. **CR38:** Table 9 states that '*The initial phase of SMART-HERDERS will not involve site-specific activities*',

		nevertheless, the checklist needs to be completed against the entire duration on the project. Please clarify.
Resource Availability	1. Is the requested project / programme funding within the cap of the country?	**Yes.**
	2. Is the Implementing Entity Management Fee at or below 8.5 per cent of the total project/programme budget before the fee?	**Yes.**
	3. Are the Project/Programme Execution Costs at or below 9.5 per cent of the total project/programme budget (including the fee)?	**Yes.**
Eligibility of IE	1. Is the project/programme submitted through an eligible Implementing Entity that has been accredited by the Board?	**Yes.** Accreditation Expiration Date: 21 December 2025
Implementation Arrangements	1. Is there adequate arrangement for project / programme management, in compliance with the Gender Policy of the Fund?	n/a at concept stage
	2. Are there measures for financial and project/programme risk management?	n/a at concept stage
	3. Are there measures in place for the management of for environmental and social risks, in line with the Environmental and Social Policy and Gender Policy of the Fund?	n/a at concept stage
	4. Is a budget on the Implementing Entity Management Fee use included?	n/a at concept stage

	5. Is an explanation and a breakdown of the execution costs included?	n/a at concept stage
	6. Is a detailed budget including budget notes included?	n/a at concept stage
	7. Are arrangements for monitoring and evaluation clearly defined, including budgeted M&E plans and sex-disaggregated data, targets and indicators, in compliance with the Gender Policy of the Fund?	n/a at concept stage
	8. Does the M&E Framework include a break-down of how implementing entity IE fees will be utilized in the supervision of the M&E function?	n/a at concept stage
	9. Does the project/programme's results framework align with the AF's results framework? Does it include at least one core outcome indicator from the Fund's results framework?	n/a at concept stage
	10. Is a disbursement schedule with time-bound milestones included?	n/a at concept stage

CONCEPT NOTE PROPOSAL FOR SINGLE COUNTRY

PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme:	Sustainable Pasture Management and Adaptation with Resilient Technologies for Herders in Mongolia (SMART-Herders)
Country:	Mongolia
Thematic Focal Area:	Agriculture
Type of Implementing Entity:	Multilateral Implementing Entity
Implementing Entity:	International Fund for Agricultural Development (IFAD)
Executing Entities:	Ministry of Food, Agriculture and Light Industry (MoFALI)
Amount of Financing Requested:	Two million, Thirty-Eight Thousand Eight Hundred and Eighty Three (in U.S Dollars Equivalent): 2,038,883

Project Formulation Grant Request (available to NIEs only): Yes ☐ No ☒

Amount of Requested financing for PFG: (in U.S Dollars Equivalent)

Letter of Endorsement (LOE) signed: Yes ☒ No ☐

NOTE: LOEs should be signed by the Designated Authority (DA). The signatory DA must be on file with the Adaptation Fund. To find the DA currently on file check this page: https://www.adaptation-fund.org/apply-funding/designated-authorities

Stage of Submission:

☐ This concept has been submitted before

☒ This is the first submission ever of the concept proposal

In case of a resubmission, please indicate the last submission date: Click or tap to enter a date.

Please note that concept note documents should not exceed 50 pages, including annexes.

Project/Programme Background and Context:

NATIONAL CONTEXT

1. Mongolia is in the northeast of the central Asian plateau with an area of 1.56 million square kilometers (km^2). It is a landlocked country, bordering the Russian Federation to the north and the People's Republic of China to the south, with unique ecosystems and cultures (see Figure 1). Administratively, there are 21 aimags (provinces), and the capital city is Ulaanbaatar. This vast territory is home to a relatively small population of 3.5 million people in 2022, growing at an annual rate of 1.6 - 2% since 2010 (MET, 2023a; NSO, 2023a). Over 90% of the population is of Mongol background, mainly Khalkh and Durvud, and there is a very small group of Kazakh-speaking minority group found in the northwestern part of the country. Nearly 68% of the country's population lives in Ulaanbaatar, and national unemployment and poverty rates are high at 21.3% and 28.4%, respectively (ADB & WB, 2021).

Figure 1: Map of Mongolia (MET, 2023a)

2. Mongolia is a mountainous country with a limited extent of plains. The western region is home to the expansive Altai range, the country's largest mountain range. The Altai range stretches 1,500 km and divides into the Mongol Altai and Gobi Altai ranges. The average elevation of Mongolia is around 1,580 meters above sea level. Plains characterize the landscapes in both the western and eastern parts of Mongolia, with the Dornod plain being the largest at around 250 km^2. The Gobi Desert, located in the south, covers one-third of Mongolia's territory.

3. Mongolia's Central Asian Steppe, surrounded by mountain ranges that provide essential water sources and at relatively high elevations, is a unique and vital biome that sustains traditional nomadic herding. The livelihood and food security of Mongolian people largely depend on their livestock, as only 1% of the total area is cultivated cropland in the central-northern part (FAO, 2011). Approximately 73% of the land is designated as agricultural, primarily for grazing, while 8% is classified as boreal and Saxaul forests (MET, 2023). The Steppe serves as vital grazing grounds for livestock playing a significant role in shaping Mongolia's cultural heritage, economy and society.

4. Mongolia is a middle-income country with a GDP per capita of US$ 5,045 in 2022 (WB, 2023). Although agriculture (primarily livestock) only accounts for 13% of the country's GDP in 2022, it remains a significant source of income and livelihood for a large part of the population, primarily through livestock herding (over 80% of gross agriculture outputs and employing one-third of the labor force (FAO, 2023)). Mongolia's economy is characterized by a traditional reliance on nomadic herding and a burgeoning mining sector, attracting foreign investment and driving government revenues (WB, 2023). Nomadic herding of livestock, including horses, cattle and yaks, goats, sheep, and camels (Gobi region), has been a historic mainstay, contributing meat, wool, and cashmere to both domestic use and exports. In 2020, there were 67.1 million livestock animals reported, marking a substantial increase of 159.4% from the 25.8 million recorded in 1990, while

the country's pasture grazing capacity was determined to be suitable for accommodating only 51.6 million heads of livestock in 2018 (MET, 2023a). The largest increase has been goats which on the one hand give high value cashmere that is currently in high demand internationally but on the other hand have destructive feeding habits that can destroy pastures. While raising more livestock can result in higher income for herders, their traditional herding practices are facing environmental limitations, especially in terms of the carrying capacity of the Steppe.

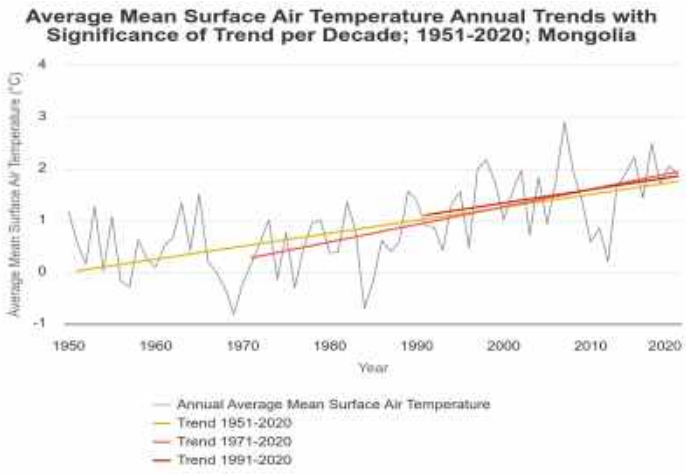
5. According to Chan et al. (2023), unsustainable land management practices since the 1990s, coinciding with Mongolia's transition to a market economy, have significantly degraded the country's pastureland and forests. This degradation has been exacerbated by the increased frequency and intensity of summer droughts observed between 2001 and 2010 (Nandintsetseg and Shinoda, 2013). Mongolia's Third National Communication (NC3) to the UNFCCC (MET, 2017) indicates that these droughts often coincide with severe winter storms known as dzud, characterized by harsh winters followed by dry summers. Poor pastures exacerbate mortality numbers as livestock enter winter in poor condition. Between 2000 and 2016, there have been more consecutive occurrences of dzud compared to the period between 1940 and 1999 (MET, 2017). These extreme weather events not only lead to the loss of livestock but also the drought action decreases pasture productivity by up to 30%, affecting nearly 80% of the country's pastureland. The combination of pastureland degradation due to overgrazing and the impacts of droughts and dzud events have significant implications for Mongolia's economy, food security, and the livelihoods of nomadic herders (FAO, 2022). In this context, Mongolia ranked 101 out of 191 countries on the INFORM 2019 risk index, indicating notable levels of exposure to hazards and vulnerability, including snowstorms, extreme temperatures, and droughts which are also associated with dust storms in the south.

CLIMATE BASELINE AND OBSERVED TRENDS

6. Mongolia has a distinctly continental climate with wide temperature fluctuations and low precipitation. Average temperatures range from -4°C to -8°C in mountainous areas, around 2°C in the steppe desert, and approximately 6°C in the southern desert bordering China. July sees peak temperatures of about 24°C, while January temperatures can drop to -28°C and as low as -40°C for short periods. Annual precipitation rarely exceeds 400 mm, with the Gobi Desert receiving just 40 mm. About 85% of precipitation occurs between April and September, and fluctuations can lead to severe droughts, impacting livestock productivity.

7. Mongolia's climate has warmed significantly, with the annual average temperature increasing by around 2.24°C between 1940 and 2015 (MET, 2017). The average mean surface air temperature rose by 0.26°C per decade from 1951 to 2020 (WB, 2021). This warming trend is more pronounced in mountainous regions and is marked by more consecutive hot days and fewer cold and frozen days. Between 1975 and 2015, the number of frost days decreased by 15, while the duration of warm spells increased by 13 days, extending the growing season by 19 days on average (MET, 2017). However, most increased precipitation occurred in winter, with summer precipitation

Figure 2: Annual Mean Surface Air Temperature Annual Trends with Significance of Trend per Decade; 1951-2020



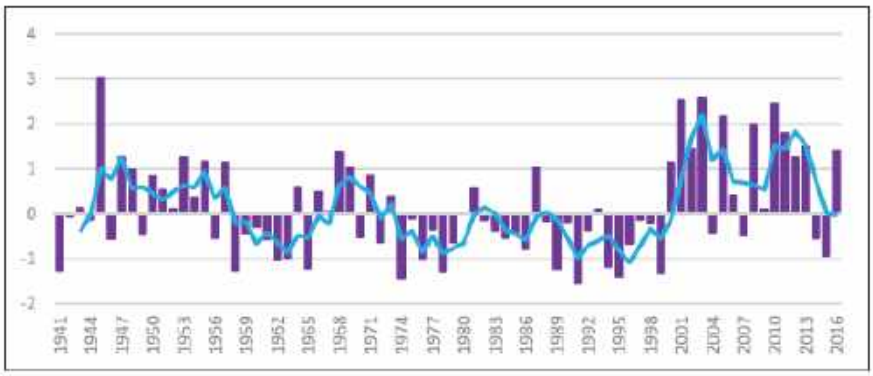
decreasing, particularly in regions where livestock herding is crucial.

8. According to Mongolia's NC3 (MET, 2017), the annual average temperature increased by around 2.24 °C between 1940 and 2015, with maximum temperatures rising by 2.6 °C and minimum temperature by 0.3 °C. According to the Climate Change Knowledge Portal of the World Bank (WB, 2021), the average mean surface air temperature increased by 0.26°C per decade between 1951 and 2020 (Figure *2*). While significant variability across different landcover types and elevations was recognized, the increase was generally more pronounced in mountain regions, and there were general trends, marked by an increase in the frequency of consecutive hot days and sudden temperature spikes, along with a decrease in the occurrence of cold and frozen days (ADB & WB, 2021).

9. With these precipitation and temperature trends, dzud and drought severely affect livestock animals and Steppe and forest ecosystems that support them, and ultimately, the food security and socioeconomic conditions of those who both directly and indirectly depend on the livestock sector. Figure *3* shows an upward trend in the incidence of dzud over the last two decades.

10. Dzud events, severe winters causing significant livestock mortality, have become more frequent and intense, often following dry summers. Mongolia experienced three consecutive dzud events from 1999-2002, resulting in substantial livestock losses (MET, 2017). The dzud of 2022-2023 affected over 60% of the territory and nearly all herder households, impacting around 190,000 families, many of whom were below the poverty line (OCHA, 2023; WB, 2023b). Approximately 36 million livestock animals were affected, with 417,000 dying due to harsh weather conditions (UN, 2023). These events severely impact food security and the socioeconomic conditions of those dependent on the livestock sector.

Figure 3: Interannual Change of Dzud Index (positives refer to dzud conditions 1941-2016 (MET, 2017)



FUTURE CLIMATE FORECASTS

11. These observed trends are expected to worsen in both the near and far future. According to downscaled projections from the Coupled Model Inter-comparison Project Phase 5 (CMIP5) models (ADB and WB, 2021), Mongolia's average daily temperature is forecasted to increase significantly by mid-century and the 2090s across various Representative Concentration Pathways (RCPs). Table 1 also indicates that increases in minimum and maximum temperatures will be more rapid, which will have significant implications on livestock animals and supporting ecosystems, evapotranspiration, livelihoods, human health and the economy. The probability of dzud events, including summer droughts, is expected to increase between 5% and 40% by 2080, and by mid-century, 6,000-28,000 people will be affected by localized flooding in the northern and western regions due to increased temperatures, particularly in winter and spring (ADB and WB, 2021).

Table 1 Projected anomaly (changes °C) for max, min and average daily temperatures for 2040-2059 and 2080-2099

from the reference period of 1986–2005 (ADB and WB, 2021)

Scenario	Average Daily Maximum Temp		Average Daily Temp		Average Daily Minimum Temp	
	2040-2059	2080 - 2099	2040-2059	2080 - 2099	2040-2059	2080 - 2099
RCP 2.6	1.6	1.4	1.7	1.5	1.8	1.6
RCP 4.5	1.8	2.6	1.9	2.7	2.1	2.9
RCP 8.5	2.5	5.3	2.6	5.5	2.8	5.9

SENSITIVITY AND ADAPTIVE CAPACITY OF HERDING COMMUNITIES

12. In 2022, there were 190,776 herder households in the country (NSO, 2023a). Herders make up almost 80% of the rural population in the country and are highly vulnerable to the effects of climate change (OCHA, 2023; UN, 2023). This is due to several socioeconomic and socioecological factors, such as poverty and their livelihood dependence on livestock. The productivity and value of their livestock are closely related to the ecological functions of the Steppe and the surrounding boreal forests in the transition zones. The country is highly prone to dzud events that caused nearly 40% of the total economic losses between 1996 and 2013, and in 2010 alone, it resulted in a 4% loss to annual GDP (GIZ, 2023).

13. Herders rely heavily on livestock meat and dairy products for their diet, which makes them more vulnerable to food insecurity during dzud events. Compared to urban households that have access to a variety of food, herders consume 396g of meat and 316g of dairy per person daily, while urban households consume only 265g of meat and 129g of dairy (NSO, 2919). Therefore, the loss of livestock animals during dzud events places an enormous strain on the food security and subsistence livelihoods of herder households.

14. During dzud events, high mortality of livestock occurs due to drought conditions during the preceding and following summers, leading to malnutrition, and extreme temperatures during the winter (Haraguchi et al., 2022). These factors can account for about 48% of the total variability in the mortality of the total livestock mortality (Rao et al., 2015). Furthermore, herders may experience devastating losses of livestock, which can force them to abandon their traditional livelihoods and migrate to urban areas (Rao et al., 2015). Such urban migration can lead to herders experiencing urban poverty, further increasing their socioeconomic vulnerabilities (GIZ, 2023; UN, 2023).

Table 2: Number of households and livestock animals and poverty rates (NSO, 2023a)

Region	Livestock (2022)		Herder Household (2022)		Poverty, % of Population (2020)
	#	%	# (2022)	%	
National	71,121,500	100%	190,776	100%	28
Western region	16,131,000	23%	46,646	24%	32
Khangai region	24,513,100	34%	76,702	40%	31
Central region	16,970,900	24%	39,912	21%	25
Eastern region	13,063,700	18%	24,203	13%	33
Ulaanbaatar	442,800	1%	3,313	2%	25

15. **Socioeconomic factors**: Herder households in Mongolia face higher poverty rates than the national average, with 32% in the Western region, 31% in the Khangai region, and 33% in the Eastern region. Their semi-nomadic livelihoods limit their ability to cope with and adapt to climate-related disasters. Limited access to finance hinders the adoption of climate-resilient practices, such

as winter fodder storage, well construction, and insurance purchases (ADB, 2013; WWF, n.d.). Rural areas lack commercial banking services due to high costs, perceived risks, lack of collateral, and high-interest rates (Trent and Bayartsogt, 2019; WB, 2012). Although livestock can be collateral, fluctuating market values and dzud risks increase financial insecurity for herders (Bristley, 2021).

16. Despite high rates of bank account ownership, many herders prefer borrowing from informal sources due to limited financial services in rural areas with spotty cellular and internet coverage (NSO, 2023b). Group savings and credit schemes have emerged to address these challenges, supported by projects like IFAD's PMPMD, which aids 250 income-generating groups and provides training to thousands of herders (Trent and Bayartsogt, 2019). Gender inequality further exacerbates vulnerability, with women facing higher workloads and limited decision-making power despite legal guarantees of equal rights (ADB, 2022a; NSO, 2023a).

17. Herders commonly use short-term coping strategies such as Otor migration and destocking during dzud events, although animal prices are typically low during these times (Gros et al., 2022a). In the long term, increasing livestock numbers is a strategy to recover quickly from disasters (Oniki and Dagys, 2017; Kakinuma et al., 2023). However, the high concentration of herding in the Khangai and Western regions has led to overgrazing, with pasturelands operating at 140% of capacity, causing severe ecological degradation (ADB, 2013; MET, 2023a). While some studies suggest increased biomass and carrying capacity in certain areas due to higher spring temperatures, frequent summer droughts exacerbate pasture degradation and livestock malnutrition (Haraguchi et al., 2022; Gros et al., 2022a).

18. Mining impacts and forest grazing further strain pasture resources, with 40% of livestock grazing in forests during winter and spring (UN-REDD Mongolia, 2017). Mongolia's pasturelands and forests, already degraded by deforestation and overgrazing, face additional pressure from these practices, highlighting the urgent need for sustainable management and climate-resilient strategies.

19. **Technical and institutional factors:** Another challenge arises from the limited technical and outreach capacity of livestock extension services, particularly at the soum level, where such assistance is most crucial. These services are often perceived as weak at the national and aimag levels and nearly non-existent at the soum level where such services are most needed, relying heavily on support from international development partners (ADB, 2013; FAO, 2017).

20. Government entities at the national, aimag, and soum levels set extension-related policy directions, coordinate with research and training centers, and provide livestock extension services to herders. NGOs, PUGs, and FUGs play a vital role in last-mile services, while the private sector's role remains limited. Extension services are provided at central, aimag, and soum levels. The National Agricultural Extension Center (NAEC) and the Ministry of Food, Agriculture, and Light Industries (MOFALI) coordinate central-level services, while the Department of Agriculture and the Animal Health and Breeding Unit handle aimag and soum levels, respectively. The NAEC relies heavily on international support, with recent decentralization reducing extension budgets at lower levels, resulting in limited full-time services (FAO, 2017).

21. Public extension services have struggled post-transition from a centrally planned economy, failing to effectively interface between research and herders. Extension officers lack knowledge of climate risks, pasture restoration, and sustainable livestock management practices (FAO, 2017).

Efforts supported by FAO and IFRC aim to establish an Early Warning Anticipatory Action (EWAA) system with forecast-based financing (FbF) for herders (FAO, 2018). Extension services often use top-down methods with little modern technology, limiting effectiveness and demand. Training events are inconsistent and dependent on international project budgets (ADB, 2013; FAO, 2017). Mongolia's livestock extension needs better coordination with research institutions, increased outreach capacity, and integration of modern technologies to enhance EWAA and IBLI support.

22. **Capacity needs**: Establishing upper limits for grazing livestock is crucial for restoring and protecting pasture and forested grazing areas through the ecosystem-based adaptation (EbA) approach. Localized measures, such as infrastructure for sheltering animals, storing fodder, improving breeding practices, animal health, feed quality, and livestock product marketing, can increase livestock resilience and support higher-value livestock management practices, enhancing the resilience of herder households (ADB, 2013). Access to finance is essential for herders to adopt climate-resilient practices and respond to disasters. Forecast-based financing (FbF) supports quick deployment of financial resources and veterinary kits, while index-based livestock insurance (IBLI) reduces financial losses from livestock loss (Gros et al., 2022b). Increasing awareness among herders about these solutions is crucial for their effectiveness.

23. Enhancing support services' capacity is essential to provide timely technical guidance to herders, including best practices, early warning information, and financial support. Television is a key information tool in Mongolia, especially during winter months, and can help build public consensus on pasture conditions and future sustainability. Mongolia's "Vision 2025" and its National Adaptation Plan (NAP) aim to boost livestock sector productivity while ensuring sustainability and resilience to climate change (MET, 2020). The NAP focuses on climate-resilient livestock breeds, efficient fodder production, and sustainable pastureland management. The International Year of Rangelands and Pastoralists (IYRP) in 2026 will provide an opportunity for national discussion on climate change impacts and necessary policy changes, involving both rural and urban households.

PROBLEM STATEMENT

24. As described above, herders in Mongolia are highly vulnerable to the effects of climate change. They are among the poorest groups in the country and rely heavily on livestock for their subsistence and livelihoods, which makes them particularly sensitive to climate-related disasters and shocks, caused by dzud and drought. Due to limited access to information, support services, and financial support, herders are largely unaware of climate risks and climate-resilient options. As a result, there is a significant knowledge gap in terms of risk-informed practices and technologies, and support services such as EWAA, FbF, and IBLI. Furthermore, the medium- to long-term adaptive strategy currently employed by some herders by increasing their livestock numbers is likely to have maladaptive outcomes, considering Mongolia's pastures are already stretched beyond capacity. Although there have been successful initiatives introducing alternative practices and technologies in the livestock sector to enhance the resilience and adaptation of herder livelihoods and pasture ecosystems, there remains a need for sustained efforts to improve herders' access to information, knowledge, and support services. This can be achieved through on-the-ground dedicated medium-scale pilots showcasing integrated access and application methods. At the same time, it is also crucial to improve the coverage and quality of livestock support services to provide the most relevant and timely assistance to herders while informing both rural and urban stakeholders of successful practices and policies. Furthermore, there is a need for a nationally harmonized approach and knowledge hub to provide integrated support to herders, policymakers, and investors in making evidence-based decisions through social media, television, and annual events, which will expedite sectoral transformation.

Project/Programme Objectives:

PROJECT GOAL

25. The proposed project, “Sustainable Pasture Management and Adaptation with Resilient Technologies for Herders in Mongolia” (SMART-Herders), aims to assist herders and the livestock sector in transitioning to sustainable and climate-resilient management of pastures and livestock. The goal is to improve food security and livelihoods through the adoption of climate-resilient practices and technologies. The SMART-Herders project will focus on supporting herders and their communities by providing them with the necessary tools and knowledge to implement these practices. Additionally, the project will facilitate improved access to information for herders, ensuring they are well-equipped to manage the challenges posed by climate change. The project will be implemented through the Ministry of Food, Agriculture, and Light Industry (MOFALI) in Mongolia.

PROJECT OBJECTIVE

26. Under this goal, the SMART-Herders project aims to pilot and disseminate climate-resilient practices, technologies and policy with wide public media dissemination, and improve access to information and existing support services (e.g., EWA, FbF and IBLI) to catalyze transformation in the sector. Dedicate pilots in at least two aimags and 12 soums covering directly about 6,000 households (approximately 500 per soum) with specific activities for men, women and youth as explained below (II A/B). The project also will aim to contribute to the national and international dialogue for the International Year of Rangelands and Pastoralists. The project will build upon past and ongoing initiatives within Mongolia and develop replicable and scalable innovative adaptation actions.

27. The Government of Mongolia has prioritized Steppe and Gobi ecosystems strongly threatened by climate change, specifically Arkhangai, Bayankhongor, Uvurkhangai, Khentii, and Dornod Aimags, for this project. Dedicated adaptation pilot activities will primarily focus on at least one steppe and one Gobi ecozone region, Specific soums will be identified during project formulation. Representatives from PUGs and FUGs, community organizations including women leaders will participate in pilot activities. Positive results will be disseminated in coordination with the PMPMD sites which will work in approximately 30 soums with 20,000 herder households as well as via social media and annual meetings.

Project/Programme Components and Financing:

Project/Programme Components	Expected Outputs	Expected Outcomes	Amount (US$)
1. Component 1: Improving climate change risk awareness among herders, policy makers and public for resilience building	Output 1.1.1: National networking via social media strengthened with national, aimag, and soum governments, research institutions, FUGs/PUGs, NGOs, and private-sector actors for providing integrated and harmonized climate-informed and evidence-based livestock information exchange and dialogue network. Output 1.1.2. Television/YouTube	Outcome 1.1: Public service providers, research institutions, FUGs/PUGs, NGOs, and private-sector actors have improved coordination and technical capacity to deliver climate-informed and evidence-based support services, enhancing herders' knowledge of climate risks,	250,000

	based documentary produced with high quality content and narration to build national understanding of climate change and adaptation responses required. Series to be suitable for broadcast nationally as well as used in schools to build national consensus on present and future of climate impact our environment.	adaptive options, and available support services. Outcome 1.2. Wide outreach among rural and urban population on climate change and adaptation actions established.	
2. Component 2: Piloting climate-resilient herding practices and technologies	Output 2.1.1: Two dedicated adaptation pilot sites, located in steppe and Gobi eco-regions, established to promote climate-smart practices and technologies (e.g., winter fodder production and storage, shelters, resilient breeds, well restoration, windbreak fencing also for spring irrigation), integrating the application of EWAA, FbF and IBLI among local herders. The 3 year process of piloting will be documented by TV and other social media. Output 2.1.2: A hands-on herder field school training system to disseminate alternative practices, aimed at training leaders and women representatives from across the similar eco-regions.	Outcome 2.1: Herders and their households are equipped with practical knowledge and skills acquired from pilot activities, facilitating the effective adoption of climate-resilient and sustainable practices and technologies. At least 6,000 households in 12 soums in two vulnerable aimags will participate in the pilots.	1,398,883
3. Component 3: Promoting knowledge sharing for replicating and scaling up best practices	Output 3.1.1: Best practices and lessons from diverse success stories will be gathered, and disseminated through the national consortium (output 1.1.1.) and as inputs to the International Year of Rangelands and Pastoralists. Output 3.1.2: Two annual consortium building forums among policymakers, PUG/FUG representatives, support providers, research institutions, private-sector actors, NGOs, and development partners organized to present best practices, share lessons, and gather policy feedback for replicating and scaling up climate-resilient pasture and livestock management and herder livelihoods. Forums will support the International Year of Rangelands and Pastoralists.	Outcome 3.1: Policy decisions are guided by best practices and lessons learned from training and pilot activities, enabling the systematic replication, and scaling up of climate-resilient livestock and pasture management, ultimately enhancing herder livelihoods.	70,000
6. Project/Programme Execution cost			164,000
7. Total Project/Programme Cost			1,882,883
8. Project/Programme Cycle Management Fee charged by the Implementing Entity (if applicable)			156,000
Amount of Financing Requested			**2,038,883**

Projected Calendar:

Indicate the dates of the following milestones for the proposed project/programme

Milestones	Expected Dates
Start of Project/Programme Implementation	January 2025
Mid-term Review (if planned)	June 2027
Project/Programme Closing	December 2028
Terminal Evaluation	March 2029

PART II: PROJECT / PROGRAMME JUSTIFICATION

A. Describe the project/programme components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience. For the case of a programme, show how the combination of individual projects will contribute to the overall increase in resilience.

28. The project aims to contribute to reducing climate vulnerability among herders and pasture management in Mongolia by increasing their adaptive capacity, address impacts of dzud (harsh winters) on livestock, and the restoration of pasture landscapes.

29. The participatory planning and capacity building will facilitate the implementation of climate resilient adaptive measures and actions that aim to improve the pastureland management of herders, as well as support better feed. The project will also support and better market access which will allow herder households to have more sustainable livelihoods strategies in changing climatic and economic conditions.

30. This objective closely aligns with four Adaptation Fund outcomes:
Fund Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses.
Fund Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at the local level.
Fund Outcome 5: Increased ecosystem resilience in response to climate change and variability-induced stress
Fund Outcome 7: Improved policies and regulations that promote and enforce resilience measures.

31. Low agricultural production and losses in livestock and pasture productivity suffered by herders in Mongolia are directly related (dzuds), prolonged droughts and extreme weather events resulting from climate change. Additional challenges, irrigation, and livestock during the dry season, as well as low levels of education and limited training opportunities that reduce herders' adaptive capacities. To address this situation, resources from the Adaptation Fund will be used to improve the adaptive capacity of a targeted number of herders through the project activities that address adaptation options and strategies. These strategies focus on maintaining livestock productivity and reducing vulnerability to climate change by developing capacities to restore their agricultural livelihoods, utilizing climate-smart agricultural practices, and restoring pasture landscapes.

32. Building on the success of previous IFAD project, this initiative will incorporate enhancements and refinements drawing from past experiences, increased human and social capacity, and shifts in governmental policies. These projects have included: Pasture Management and Climate Change Adaptation: Increasing the capacity and resilience of herders to cope with climate change impacts and establishing grassroots herder institutions for sustainable pasture management.
33. The Adaptation Fund initiative will build upon these existing components, aiming to empower poor rural women and men to achieve higher incomes and sustainable improvements in their livelihoods while adapting to the impacts of climate change in the Mongolian context.

34. The project consists of three interrelated components, as described below:

35. **Component 1**: **Enhancing Climate Change Risk Awareness Among Herders, Policymakers, and the Public for Resilience Building.**

36. It addresses these gaps by leveraging social media and television to promote policies and political support for climate resilience. Platforms like Facebook, YouTube, and Viber will be used to create an integrated network connecting national, aimag, and soum governments, research institutions, FUGs/PUGs, NGOs, and private-sector actors. This network will enhance dialogue and coordination on climate adaptation.

37. By improving coordination and technical capacity among stakeholders, Component 1 will increase herders' knowledge of climate risks and adaptive options. Additionally, high-quality documentaries for national broadcast and school use will build a national consensus on the impacts of climate change and necessary adaptation actions.

38. The project aims to enhance network capital among rural and urban stakeholders to significantly improve awareness and understanding of climate change and adaptation strategies. Currently, many communities and local governments in Mongolia lack knowledge of the national goals for climate mitigation and adaptation. Few are aware of successful adaptation projects, and there is little effort to inform urban stakeholders, including academics and politicians, about these the implementation of these projects and the synergies required.

39. **Outcome 1:** Improved coordination and technical capacity among public service providers, research institutions, FUGs/PUGs, NGOs, and private-sector actors, enhancing herders' knowledge of climate risks and adaptive options. This will increase rural and urban awareness and consensus on necessary climate change adaptation actions. It also reflects on the **Fund Outcome 7**: Improved policies and regulations that promote and enforce resilience measures.

40. **Output 1.1: Strengthened National Networking**
    - Establish and maintain social media platforms (Facebook, YouTube, Viber) to connect stakeholders at national, aimag, and soum levels.
    - Facilitate regular online discussions and webinars involving government officials, researchers, NGOs, and private-sector actors.
    - Create and distribute climate adaptation newsletters and updates through social media channels.
    - Develop a centralized online portal for sharing climate adaptation resources, research findings, and best practices.
    - Organize virtual workshops and training sessions to build capacity and share knowledge on climate-informed investments and livestock management.

41. **Output 1.2: Production of High-Quality Documentaries**
    - Produce a series of documentaries focusing on climate change impacts in Mongolia and adaptive responses, including real-life stories of herders.
    - Partner with local TV stations and educational institutions to broadcast these documentaries nationally and incorporate them into school curricula.
    - Use documentaries to highlight successful adaptation projects and showcase innovative

practices.

- Engage professional filmmakers and climate experts to ensure high-quality production and accurate information.
- Conduct pre-and post-screening discussions and workshops in communities to deepen understanding and engagement.

42. **Component 2: Implementing Pilot Projects for Capacity Building and Resilience.**

43. The project's core involves pilot initiatives in at least two vulnerable aimags and 12 soums, engaging a minimum of 6,000 households. These pilots encompass human capacity building for men, women, and youth; enhancing social capital; managing natural resources; and developing fodder infrastructure.

44. **Priority Human Resource Development:** Human resources are prioritized for sustainable climate resilience. Specific activities are planned for major stakeholder groups: **Herder households:** Men will be trained in herd management, pasture recovery, and re-grazing capacity. Women will focus on lactating animal care and strengthening livelihood income. Youth education will cover pasture management and life skills. Gender-appropriate training activities will be developed with strong field applications, leveraging existing community groups and local soum staff expertise.

45. **Social Capital Enhancement:** Social capital is crucial for managing herds and common pastures. Pasture and Forest User groups, in collaboration with local government, determine pasture use and herd sizes. Transhumance movements require communication and coordination. Destocking, and other related climate change policies, will be carried out through planned methods, including early slaughter.

46. **Natural Capital Development:** Natural capital, including pastures and water, will be addressed through initiatives such as solar-powered-motion-activated water well development. Pasture-focused pilot activities will emphasize training and development of user group agreements. The aim is to reverse the cycle of pasture damage while controlling livestock pressure.

47. **Infrastructure Strategy:** Infrastructure for fodder is a key strategy, necessitating the introduction of equipment and structures such as tractors for forage preparation and roofing for fodder storage. Co-financing and subsidies will follow established models, addressing insufficient infrastructure in soums and winter camps.

48. **Capital Development and Evaluation:** Human, social, natural, and infrastructure capital will be developed in the pilots, with thorough evaluation and documentation. Pilot activities will be implemented across 12 soums in at least two vulnerable aimags, benefiting 6,000 households. Evaluation will include assessments of area and methane emissions, with results disseminated through component 1 and component 3.

49. **Outcome 2:** Enhanced institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses, leading to increased ecosystem resilience and improved adaptive capacities and sustainable livelihoods among herder communities. It also reflects on the **Fund Outcome 5:** Increased ecosystem resilience in response to climate change and variability-induced stress.

50. **Output 2.1.1: Human Capacity Building Initiatives**

- Conduct comprehensive training programs in 12 soums across at least two vulnerable aimags, targeting 6,000 households.
- Develop specialized training modules for men, women, and youth on topics such as herd management, pasture recovery, and disease management.
- Empower decision-making through workshops on climate risk assessment and adaptive planning.
- Use participatory approaches to ensure training is context-specific and addresses local needs.
- Establish demonstration plots and model farms to provide hands-on learning experiences.

51. **Output 2.1.2: Strengthening Social Capital**
    - Enhance the capacity of Pasture and Forest User Groups (FUGs/PUGs) through targeted training and support.
    - Facilitate the formation of new user groups in areas lacking organizational structures.
    - Organize regular meetings and forums for user groups to share experiences and best practices.
    - Develop guidelines and tools for effective pasture management and conflict resolution.
    - Promote community-led initiatives for sustainable pasture use and livestock management.

52. **Output 2.1.3: Development of Solar-Powered Water Wells**
    - Identify suitable locations for installing solar-powered, motion-activated water wells in collaboration with local communities.
    - Train community members on the operation and maintenance of the water wells.
    - Develop water management plans to ensure sustainable use of water resources.
    - Establish user agreements to regulate access and use of water wells.
    - Monitor the impact of water wells on pasture health and livestock productivity.

53. **Output 2.1.4: Infrastructure Improvements for Fodder**
    - Introduce modern equipment for forage preparation and roofing for fodder storage.
    - Develop co-financing and subsidy models to support the acquisition of fodder infrastructure.
    - Provide training on fodder production, processing, and storage techniques.
    - Establish fodder processing and collection centers (AgroHubs) under cooperatives to improve supply chain efficiency.
    - Conduct regular assessments to ensure the infrastructure meets the needs of herders and adapts to changing conditions.

54. **Component 3: Disseminating Results and Engaging in Policy Development**

55. Component 3 plays a vital role in disseminating project results and engaging in policy development to ensure the sustainability and scalability of the project's impact. Through targeted strategies, this component aims to share project outcomes with key stakeholders, policymakers, and the broader community.

56. Field visits by policymakers, herder cross-visits with other programs, and engagement with local governments are integral to this component. These interactions provide opportunities to showcase the project's achievements, share best practices, and gather feedback from stakeholders. By fostering collaboration and knowledge exchange, Component 3 facilitates the integration of project outcomes into policy discussions and decision-making processes.

57. Furthermore, Component 3 includes participation in annual climate adaptation forums, where project results can be presented and discussed among experts and stakeholders. These forums serve as platforms for networking, learning, and shaping policy agendas related to climate resilience.

58. The dissemination of project results through Component 3 contributes to the Ministry of Food, Agriculture, and Light Industry's (MOFALI) inputs for the International Year of Rangeland and Pastoralists. By aligning with broader initiatives and policy frameworks, the project enhances its visibility and ensures that its findings inform national and international discussions on climate adaptation and pastoral livelihoods.

59. **Outcome 3:** Strengthen institutional capacity and awareness for climate resilience. It involves enhancing frameworks to mitigate climate risks, raising awareness among stakeholders, and advocating for supportive policies at all levels. It also reflects the **Fund Outcome 7**: Improved policies and regulations that promote and enforce resilience measures.

60. **Output 3.1.1: Field Visits for Policymakers**

- Organize field visits to project sites for policymakers to observe the implementation of climate-resilient practices.
- Provide detailed briefings and discussions during visits to explain the methodologies and benefits of the interventions.
- Facilitate direct interactions between policymakers and herders to understand the practical challenges and successes.
- Document and share the insights and feedback gathered during these visits to inform policy decisions.
- Use these visits to advocate for supportive policies and resource allocation to scale up successful initiatives.

61. **Output 3.1.2: Cross-Visits with Other Programs**

- Arrange cross-visits between SMART-Herders project participants and other climate adaptation programs within Mongolia.
- Facilitate knowledge exchange and experience sharing through structured workshops and site visits.
- Identify and leverage synergies between different programs to enhance overall impact.
- Encourage collaborative projects and partnerships among different initiatives.
- Develop a repository of case studies and best practices from these cross-visits to share widely.

62. **Output 3.1.3: Annual Climate Adaptation Forums**

- Host annual forums to present and discuss project results, involving stakeholders from government, academia, NGOs, and the private sector.
- Use forums as platforms for networking, learning, and shaping policy agendas related to climate resilience.
- Feature presentations, panel discussions, and interactive sessions to engage participants actively.
- Disseminate forum outcomes and recommendations through policy briefs and reports.
- Foster ongoing dialogue and collaboration among stakeholders beyond the forums.

63. **Output 3.1.4: Contribution to MOFALI's Inputs for International Initiatives**
    - Align project activities with international initiatives such as the International Year of Rangelands and Pastoralists.
    - Document and share project findings and best practices to contribute to global discussions on climate adaptation.
    - Participate in international conferences and workshops to showcase Mongolia's efforts and achievements.
    - Collaborate with international organizations to ensure project activities meet global standards and expectations.
    - Develop a communication strategy to elevate the visibility of Mongolia's climate adaptation efforts on the global stage.

B. Describe how the project/programme provides economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project/programme will avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

64. SMART-HERDERS project will produce several social, economic and environmental benefits. To ensure these benefits, the project will follow the Social and Environmental Policy of the Adaptation Fund[1].

SOCIAL BENEFITS

65. The project aims to achieve significant social benefits by adopting a well documented stakeholder-driven and gender-responsive approach, particularly at the sub-national level. The benefits are mainly through participatory and inclusive decision-making and planning, which ensures that the specific needs of herders, especially women, are well-reflected in the decisions and support activities. Under Component One, a panel of experts and stakeholders, including herders, will collaboratively evaluate current institutional arrangements and coordination mechanisms for delivering improved livestock support services. The project aims to advocate for an improved coordination and implementation framework that emphasizes participation, interaction, and gender responsiveness. Participatory approaches and diverse success examples are crucial for effectively addressing the challenges faced by herders and meeting the diverse needs of both men and women.

66. The second component of the project will prioritize collaborative problem identification with selected host groups for pilot activities. The focus will be on identifying specific climate-related challenges that these groups face and appropriate practices and technologies that can address these challenges. By fostering a collaborative approach to problem and solution identification, the project aims to ensure that the identified practices and technologies are effective and widely adopted.

[1] https://www.adaptation-fund.org/wp-content/uploads/2015/09/Environmental-Social-Policy-approved-Nov2013.pdf

67. The third component aims to establish a strong public awareness and policy feedback mechanism that will enable herders and local service providers to provide valuable insights on crucial matters related to livestock management and support programs. This feedback loop will be designed with the purpose of enhancing the quality, scale and scope of support services that are available to herders while building a national consensus.

68. Further, the project prioritizes gender balance, responsiveness, and women's empowerment throughout all its components. It will assess needs through a gender-responsive lens and implement tailored actions to ensure the overall effectiveness of the project to specifically address men and women's roles in herder communities.

ECONOMIC BENEFITS

69. The dzud 2024 poses a risk to target beneficiaries which may fall back into poverty. The primary advantage of the Adaptation Fund in this project aims to enhance the resilience of target herders (especially women) to dzud through improvement of the supply chain of animal feed and livestock products. The project aims to improve livestock management and livelihoods by promoting climate-resilient and sustainable technologies and practices. These efforts are expected to reduce livestock losses, promote better livestock health and value, and ultimately increase household income, generate employment opportunities, expand market access, and promote sustainable growth in the sector. Climate shocks that are especially dramatic to families and the national economy during dzud years should be minimized. Though the economic benefits may be concentrated at the pilot sites initially, the activities related to training and knowledge management are expected to increase stakeholders' awareness about alternative technologies and practices beyond the pilot sites. This, in combination with supportive institutional and policy environments at the sub-national and national levels, is expected to push a broader sector-wide change to provide increased economic benefits to herders.

70. To address the increased frequency of extreme climate events in Mongolia, particularly dzuds and droughts, the establishment of a Small and Medium-sized Enterprise (SME) feed and fodder center emerges as a sustainable solution. Through the project's outputs, policymakers will witness the implementation of these climate-resilient practices. Cross-visits facilitated by activities from this project will allow for knowledge exchange and collaboration among stakeholders, fostering a coordinated approach to climate adaptation. The hosting of annual climate adaptation forums will disseminate project results, raising awareness and promoting policy engagement.

71. It is estimated that around 6000 herders will directly benefit from the project components. The benefits will be assessed in terms of improved livelihoods, reduced losses due to climate-induced disasters like dzuds and droughts, and enhanced sustainability of interventions:

72. **Improved Livelihoods**: The project's interventions, including capacity building, infrastructure development, and market access enhancement, aim to improve the livelihoods of 6,000 herder households. This improvement can be quantified by estimating the increase in household income resulting from enhanced livestock productivity and market opportunities. Pasture and livestock productivity is expected to improve through appropriate management practices such as the use of better seeds, fencing, provision of water facilities, fodder storage, etc., through organized groups and linkages between them. Members of PHGs are organized into cooperatives with enhanced performance through training and capacity building. The project will organize these new cooperatives based on the experience gained under the ongoing PMPMD in phase I and II areas. PHGs are expected to leverage significant value addition and employment along the value chain, increasing incomes and employment for numerous people living in poverty. By improving the market information systems, organizing target groups into cooperatives, and providing marketing support and other attendant facilities, participating households are expected to realize increased margins for their produce.

73. **Reduction in Losses:** By increasing resilience to climate-induced disasters such as dzuds and droughts, the project aims to reduce livestock losses and mitigate economic hardships for herders. The economic benefit can be estimated by calculating the value of avoided losses, including livestock mortality, reduced agricultural yields, and income loss. The current mortality rate is about 7%, and due to project interventions, the mortality rate is expected to be reduced by 1%.

74. **Sustainability and Efficiency**: The project's efficient operations, technical support, and community involvement contribute to cost savings and sustainable outcomes. By conducting in-depth assessments of technical options based on cost-feasibility and resilience criteria, the project ensures optimal resource allocation and long-term sustainability. From a herder household perspective, activities to increase incomes will help to sustainably finance fodder purchases and other adaptations.

75. Considering these parameters, the SMART-Herders project demonstrates a **strong cost-benefit ratio.** The upfront investment in infrastructure development, capacity building, and market access enhancement is expected to yield substantial economic returns in the form of increased household income, reduced losses from climate-induced disasters, and sustainable livelihoods for herder communities. By prioritizing cost-feasible and resilient interventions, the project maximizes its economic benefits while minimizing long-term risks and vulnerabilities.

ENVIRONMENTAL BENEFITS

The project promotes a public consensus on climate change adaptation through pilots and media on sustainable livestock and pasture management practices, encompassing livestock population management according to the pasture carrying capacity, enhanced animal health, and sustainable pasture management, with the aim of yielding local environmental benefits. These include minimized soil erosion, improved pasture ecosystems, and the regeneration of adjacent forests. Such efforts seek to bolster the resilience of ecosystem services, ensuring vital functions such as soil nutrient cycling, water provisioning, biodiversity, and the production of non-wood forest products like pine nuts, berries, and medicinal plants. By utilizing the EbA approach, the project aims to demonstrate the resilience of the livestock sector and improve herders' livelihoods in the face of climate change.

C. Describe or provide an analysis of the cost-effectiveness of the proposed project/programme.

Project/Programme Components	With Project	Without project
1. Component 1: Improving climate change risk awareness among herders, policy makers and public for resilience building	Awareness on climate change is efficiently raised through networking, social media sharing among stakeholders and policy makers with no-charge social media channels (Facebook, Youtube, Viber, etc.) commonly used by herders and urban stakeholders. A television documentary with national broadcasting will building climate literacy and	The current situation of wastefully reinventing the wheel for pasture management, community strengthening and infrastructure placement will continue uncoordinated without a clear assessment of lessons learned and building on successes. Policy will also be based on chaotic access to information from various factual or fake sources.

	support both rural and urban stakeholders understand current and future climate change issues and successful climate adaptation actions from well recognized sources.	
2. Component 2: Demonstrating climate-resilient herding practices and technologies	Clear package of best practices agreed from numerous sources and field successes will make up pilots to be assessed and documented for dissemination. Pilots allow for field visits and models to be replicated by others when well documented.	Herders will continue to suffer from increased vulnerability to climate change impacts, including dzud, droughts, and pasture degradation, without access to effective adaptation strategies. The lack of coordinated and holistic approaches to pasture management and climate adaptation will exacerbate the degradation of pastures and the loss of livestock, further threatening herders' livelihoods and food security.
3. Component 3: Promoting knowledge sharing for replicating and scaling up best practices	People-centred knowledge sharing through annual events, field visits and documentation efficiently add value to the project and make it transparent across stakeholders.	Lack of communication, cross visits, and documentation are key issues from the current situation with many government and donor partner related programmes working in their silo.

76. During the project preparation phase, further analysis of the project's cost-effectiveness will be assessed in terms of its economic and financial impacts.

D. Describe how the project/programme is consistent with national or sub-national sustainable development strategies, including, where appropriate, national adaptation plan (NAP), national or sub-national development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist.

77. The project adopts a collaborative and integrated approach to providing services providers and related support, engaging not only the public sector but also various stakeholders supporting herders, including local government, research institutions, NGOs, PUGs/FUGs, and private actors in livestock value chains. This comprehensive strategy targets financial constraints encountered by aimag and soum governments, hindering the provision of adequate support to herders due to fiscal decentralization while also enhancing the quality, scale, and scope of support services available to herders.

Table 5: Relevant National Policies and Strategies

Relevant Development Policy/Strategy	Objectives	Alignment with SMART-HERDERS
Vision-2050 Policy (2020)	The policy has nine fundamental goals – of which the 6th goal is dedicated to green	The project fully supports the principle of green development.

	development, which encompasses the principles and objectives of the Green Development Policy (2014-2021). The green development goal is to promote an environmentally friendly development, maintain the balance of the ecosystem, ensure environmental sustainability, create conditions for present and future generations to reap its benefits and improve the quality of human life.	
Government Action Programme (2020)	The Programme outlines actions to be implemented for the next four years until 2024. It includes a focus on green development, with an emphasis on creating a climate-resilient and sustainable livestock sector, as well as supporting the livelihoods of herders.	The project aims to help the country achieve its emission reduction target.
New Revival Policy (2021)	The policy aims to strengthen economic independence, lay the foundation for the successful implementation of a long-term development Vision-2050 policy, and strengthen the economy, infrastructure, and government productivity for the next 10 years. Under its focus on green development, it promotes the restoration of degraded ecosystem services, including forests and water sources, the adoption of environmentally sound technologies and the development of green development models.	The aim of the project is to demonstrate practices and technologies that contribute to building resilience among herders and the surrounding ecosystems in support of this policy.
Sustainable Finance Roadmap (2022)	The roadmap outlines an integrated, multistakeholder, strategic approach towards accelerating the development of a sustainable financial system by 2030 in alignment with the national sustainable development and climate targets. It aims to mainstream climate, environmental, social and governance concerns into financing and investment policies and increase the flow of finance for climate-resilient and sustainable economic development.	The project aims to develop a sustainable financing mechanism for transitioning to a climate-resilient livestock sector by leveraging internationally available performance-based financing opportunities. This contribute to the advancement of this roadmap.
Nationally Determined Contribution (NDC) (2020)	The NDC aims to boost the productivity of the livestock sector without compromising its sustainability and resilience to climate change. It estimates its financial needs to be USD11.5 billion, of which USD 5.2 billion for adaptation.	The project is in complete alignment with the adaptation targets of the NDC. The main objective of the project is to promote the use of climate-resilient practices and technologies that also increases the sector's productivity and improves herder livelihoods for the sustainable transition of the livestock sector. This will help to enhance the resilience of the sector.
National Adaptation Plan (NAP) (recently approved - March 2024)	The NAP targets the livestock sector to ensure climate-resilient breeds, enhancing fodder production, and managing pasturelands efficiently for improved food security, herder livelihoods, and market access.	SMART-HERDERS will continue coordinating with UNEP and the Government of Mongolia to ensure its complementary and additionality.
Mongolian Agenda for Sustainable Livestock	The agenda is to support the sustainable development of the livestock sector as economically efficient while implementing	The project is fully aligned with this agenda to support the sector in promoting sustainable pasture

	sustainable pastureland management, enhancing food security and safety and social inclusiveness, and strengthening stakeholder partnerships and participation.	management and food security and safety through increased stakeholder participation in decision making and policy processes.
International Year of Rangelands and Pastoralists	Sponsored in the United Nations by the Government of Mongolia and MOFALI initially.	The project provides dialogue space, support for, and advancement of Mongolian rangeland and pastoralists.

E. Describe how the project/programme meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes,

78. The project is aligned with national laws and regulations, as detailed in the table above. It is also in keeping with the Environmental and Social Policy (ESP) of the Adaptation Fund.

79. The extensive proposal will analyse in detail how the activities proposed line up with the regulation covering its sphere of action, describing how it complies with the pertinent environmental regulation, including issues such as land tenancy /use, and associated resources. It will also detail how the project intends to approach the principles set forth in the Adaptation Fund's ESP. Further, an Environmental and Social Management Plan will be drawn up. Controls will be implemented to ensure that the project does not deepen inequalities or have a negative impact on marginalized populations and the environment.

80. The following regulations and institutional frameworks will be considered that align the project legislative base:

Institutional and Legal Framework

81. Law on Environmental Protection (1995, amended several times): This law provides a framework for safeguarding the environment and regulating activities that guides environmental impacts, aligning with the project's objectives to mitigate soil erosion, land degradation, and ensure sustainable natural resource management (Last updated in 2023).

82. Law on Environmental Impact Assessment (LEIA, updated in May 2012, 2023) and relevant regulations and standards: LEIA ensures that environmental considerations are integrated into project planning and decision-making processes,

83. Law on Air (revised in 2012, amended several times): This law addresses air quality concerns and is relevant for the project's efforts to minimize pollution and ensure air quality, particularly in areas where processing facilities or transportation activities are involved (Last updated in 2023).

84. Law on Water (2012) (Last updated in 2023) and Law on Water Contamination Fees (2012) (Last updated in 2022): These laws govern water management and usage, ensuring the sustainable use of water resources, which is essential for the project's activities related to pasture management and livestock.

85. Law on Waste (2017): This law regulates waste management practices, which is important for the project's activities to ensure proper handling and disposal of waste generated, such as agricultural waste or processing by-products) (Last updated in 2023).

86. Labour Law (1999, revised in 2021, last updated in 2023) and Law on Occupational Safety and Hygiene (2008, amended several times, last updated in 2023): These laws protect the rights and safety of workers, including those involved in project implementation. Compliance with labour regulations is essential for ensuring the well-being of project staff and contractors.

87. Law on Construction (revised in 2016, last updated in 2023): This law governs construction activities and ensures compliance with building standards and safety regulations, which may be

relevant for infrastructure development under the project.

88. Law on Receiving and Resolving Citizen's Grievance by Public Officials and Organizations (1995, last amended in 2017): This law provides mechanisms for addressing grievances related to project activities, ensuring transparency and accountability in project implementation.

89. Law on Transparency of Public Information (2021, last updated in 2023): The purpose of this law is to ensure the right of citizens to seek and receive information in accordance with the grounds and procedures outlined in the law, and to establish the legal basis of public information infrastructure, conduct state activities in an electronic form by creating a public information system, and to establish public supervision over government activities.

90. Law on public Hearing (2015, last updated in 2022): This law guides and provide opportunities for public consultation and engagement in project activities, facilitating community involvement and feedback.

91. Law on Climate (under development): The Climate Law, once enacted, will provide a legal framework for climate action, including mitigation, adaptation, and resilience-building measures, shaping the project's compliance and alignment with national climate policies.

92. Public Procurement Law including Green Aspects, 2019 and amended in 2023: This law promotes environmentally sustainable procurement practices, which guides the project's procurement processes to prioritize green and sustainable solutions.

93. Among climate adaptation activities, two areas require specific compliance with local codes and Adaptation Fund policies: Water wells in Mongolia need Soum Government approval including an environmental assessment.

94. Other planned programme activities such as pilot sites will follow national and Adaptation Fund as well as ensure wide stakeholder participation in terms of knowing rights and obligations:

F. Describe if there is duplication of project/programme with other funding sources, if any.

95. **Error! Reference source not found.** outlines a list of baseline and parallel investments, along with areas where the proposed project will provide complementary support. Further analysis and stakeholder consultations will be conducted during the development of the funding proposal to identify specific areas and coordination mechanisms for the proposed project to ensure its complementarity and additionality. A key outcome 1.1.1. will in fact be a review and coalition development activity to help build on successes, identify complementarities and synergies, and insure information sharing. When developing pilot sites, other projects from local governments, NGOs, private sector, development partners and others will be considered. Other projects and programmes will be invited to activity participate in the coalition platform, pilot design and annual climate adaptation events including documentary.

Table 6: Relevant baseline and parallel investments

Baseline/Parallel Investment	Objective and Results	Complementary support provided by SMART-Herders
Mongolia Index-based Livestock Insurance (IBLI) (World Bank, USD 17 million) *Completed 2010*	To ascertain the viability of Index Based Livestock Insurance in Mongolia to reduce the impact of livestock mortality for herders' livelihoods through: (i) scaling up Index Based Livestock Insurance Program in Selected Aimags; and (ii) building the institutional capacity and legal and institutional framework for the sustainability of the Index Based Livestock Insurance Program.	**Synergies:** The project will take advantage of the completed project by WB, and use lessons learned from the IBLI program to improve the resilience of herders. **Non-Duplication action:** SMART-Herders will operate independently, promoting IBLI

Baseline/Parallel Investment	Objective and Results	Complementary support provided by SMART-Herders
	Results: In 2014, the IBLI Law was passed after the piloting of IBLI project. Agricultural Reinsurance Company of Mongolia was established to implement the law with an initial public capital investment of 20 billion MNT.	through its own training and pilot activities. The project is not reliant on IBLI outcomes and will ensure its activities are distinct and complementary.
Project for Market and Pasture Management Development (PMPMD) (IFAD, Budget: Initial phase: USD 11.5 million IFAD loan in 2011 combined with USD 1.5 million in GEF grant (ID3695), follow up phase: additional loan of USD 9 million in 2016, and current phase: USD 10 million) *Project: Active.*	To reduce poverty and improve livelihoods of nomadic herder households. Expected results: • Improved value addition in production and processing, and market access – formation of cooperatives and improved financial access. • Sustainable management of pastures in the project areas, through the development and approval of pasture management plans to strengthening resilience to climate change.	**Synergies**: IFAD PMPMD has already been implemented: promoting best practices in pasture management and market access. The project will incorporate successful elements from PMPMD to enhance the adaptive capacity of herders, ensuring complementary actions that enhance resilience and sustainable livelihoods. **Non-Duplication action:** In the design of the full proposal, SMART-Herders will focus on unique aspects of pasture and livestock management, ensuring no overlap or dependency on PMPMD. The project will incorporate best practices and the project sites will be independent from previous IFAD funded projects.
Early Warning Anticipatory Action (EWAA) and Forecast-based Financing for Vulnerable Herders (FAO, IFRC, pilot activities) *Project: Active*	To take timely action to support herders based on reliable early warning of Dzud impacts to prevent large-scale losses of livestock. This reduces the negative impact of Dzud on herders and their livelihoods. Results: • 2,000 vulnerable herders were given cash and animal care kits to prevent loss of livestock and livelihoods. • FbF module for Dzud developed. • Cost-benefit analysis ongoing for FbF in Mongolia.	**Synergies:** The project will take advantage of the FAO's project and promote the application of EWAA and FbF as relevant for dzud and forecasting: through training and pilot activities. **Non-Duplication action:** During the design phase stakeholder consultations will be held with development partners to understand the use of this: SMART-Herders will independently utilize EWAA and FbF methodologies, ensuring no duplication of existing efforts. The project will complement existing systems with additional training and activities.
Improving Adaptive	To strengthen the resilience of resource-	**Synergies:**

Baseline/Parallel Investment	Objective and Results	Complementary support provided by SMART-Herders
Capacity and Risk Management of Rural Communities in Mongolia (UNDP/GCF: FP141, Budget: USD 23 million): *Project Active*	dependent herder communities in four aimags vulnerable to climate change in Zavhkhan, Khovd, Dornod and Sukhbaatar Aimags (Western and Eastern regions). Expected results: • Climate-integrated land and water use planning. • Climate-resilient water and soil management practices. • Improved market access for herders.	Collection and analysis of lessons learned and best practices for systematic replication and scaling up at the national level through a structured approach to increasing resilience and through innovative financing options that support the adaptation of herders and the livestock industry. Such lessons and best practices include the use of the internet to enhance service delivery in areas such as agrometeorological forecasting, livestock extension, and financial and market access. **Non-Duplication action:** During design lessons learned from the UNDP/ GCF projects will be applied to new independent project sites. Thus SMART-Herders will integrate digital technologies independently, ensuring distinct and complementary applications without duplicating the Virtual Cooperatives project.
Virtual Cooperatives of Pastoral Livestock Communities (WB: P174733, Budget: USD 2.7 million) *Project Active*	To improve livelihoods of remote pastoral livestock communities in targeted locations by harnessing digital technologies and services. Expected results: • Improved use of digital technologies among herders for improved livelihoods.	
Promoting Dryland Sustainable Landscapes and Biodiversity Conservation in the Eastern Steppe of Mongolia (FAO/WWF/GEF: 10249, Budget: USD 5.3 million) *Project Active*	To reverse and prevent dryland ecosystem degradation and biodiversity loss through an inclusive, integrated landscape and value chain approach securing multiple environment benefits and sustainable, resilient livelihoods in the Eastern Steppe. Expected results: • Strengthened policies and planning mechanisms for sustainable dryland management. • Improved fodder and crop production practices. • Improved protected areas management for conservation.	
Pastures, Conservation and Climate Action, Mongolia, Plan Vivo Project (Phase II) (University of Leicester and the Mongolian Society for Range Management (MSRM)/Darwin Initiative, Budget: GBP 240,000) *Project Active*	To enhance carbon sequestration, biodiversity conservation and herders' livelihoods at sites in rural Mongolia, thus contributing to national efforts to combat degradation of ecosystem services and growing rural poverty, whilst protecting a globally important biodiversity heritage in three herder communities in Arkhangai, Tov and Bayanhongor Aimags. Expected results: • Continued operation of a PES scheme established in Phase 1 through Plan Vivo carbon financing (120,000 verified tCO2eq between 2015-2021 over 77,000ha, distributed about USD 90,000 to herders through PES). • Increased soil carbon stocks through sustainable land management.	**Synergies:** The project will be able to draw lesson from the ongoing PES scheme and soil carbon stock thought sustainable land management, as these objective align with SMART Herders. **Non-Duplication action:** The project will identify a few successful aspects of the PES mechanism, focusing on carbon financing and sustainable livelihood building and use them in training and awareness building.

Baseline/Parallel Investment	Objective and Results	Complementary support provided by SMART-Herders
	• Increased herders' food security and income from improved livestock productivity and market access.	
Rehabilitating and conserving the mountain landscapes in Khangai region of Mongolia for improved ecosystem services and community livelihoods (FAO/GEF: 111114, Budget: USD 2.8 million). *Project Planned*	To rehabilitate degraded lands and promote community-based natural resource management in the Khangai mountain landscapes to reduce land degradation and biodiversity loss, improve ecosystem services, and support sustainable community livelihoods. Expected Results: • Strengthen local planning through data management, coordination, and improved private sector engagement. • Restored high conservation value areas through planning.	**Synergies:** The project will be able to strengthen local planning through data management and most importantly coordination **Non-Duplication action:** Activities are distinct, focusing on additional and complementary actions that enhance resilience without duplicating efforts in the new project areas.

G. If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.

96. The project's knowledge management strategy is designed to capture, disseminate, and utilize information and knowledge generated throughout its implementation, especially through TV and other social media outlets. Networking stakeholders through low maintenance social media and annual forums are critical to linking results to dissemination.

97. Firstly, the establishment of a knowledge network (Outputs 1.1.1. and 3.1.1) serves as a central hub for multi-stakeholder and multi-level knowledge sharing. This web-based and mobile-friendly platform caters to diverse stakeholders, including policymakers, sector experts, local extension officers, herders, and private-sector actors involved in value chain activities. Facebook and YouTube are widely used in Mongolia for knowledge sharing – this project will provide regular content and broadly foster subscribers. It covers critical information and knowledge categories, such as livestock and pasture management practices and technologies, early warning and disaster risk reduction, legal and policy frameworks, institutional responsibilities and arrangements, financial and technology access, value addition, quality standards, and market development. Further, the platform incorporates a dynamic interactive mechanism between users, particularly service providers and herders and other stakeholders.

Secondly, the project will organize a multi-stakeholder forum (Output 3.1.2) on an annual basis to ensure that evidence-based knowledge gathered through project activities and policy feedback from local extension providers and herders informs necessary policy reforms and improvements in institutional support services. These forums will bring together policymakers, community representatives, service providers, research institutions, private-sector actors, NGOs, and development partners to reinforce the feedback loop as well as contribute strongly to dialogue in the International Year of Rangelands and Pastoralists. Additionally, the forums will provide an opportunity for better coordination and synergy-building among initiatives supporting sustainable development in the livestock sector and herder livelihoods through building public awareness and dialogue.

H. Describe the consultative process, including the list of stakeholders consulted, undertaken during project preparation, with particular reference to vulnerable groups,

including gender considerations, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

98. Throughout the development of this concept note, input was gathered from various stakeholders (refer to Table 3). During the preparation of the funding proposal, a more comprehensive group of stakeholders at both the national and sub-national levels will be consulted. A stakeholder engagement plan will be developed and included as an appendix to the funding proposal.

Table 3: List of stakeholder meetings consulted.

Name	Title	Organization
Mr.Batjargal Zamba	National Focal Point to Adaptation Fund	MET
Mr.Batkhuu Nyam-Osor	Environment and Green Development Advisor to the President of Mongolia	Cabinet of the President
Mr. Munkhnasan Ts.	Director & Senior Officer	Animal Genetic Resources Division & Livestock Policy Implementation and Coordination Department, MoFALI
Ms.Enkhmunkh Otgontogtokh	Senior Specialist	Integrated Policy and Planning Department, Ministry of Economy and Development
Ms. Erdenetsetseg Sugar	Senior Analyst	Climate Change Department, MET
Mr Altansukh Tumee	AUO Cooperative head	Altain Uulsiin Orgil (Altai Mountain Peak) Khovd Aimag, Must Soum [herder cooperative with herders]
M.Bayarsaikhan The Governor of Bombogor soum G.Magnaibayar, Speaker of soum parliament Ts.Munkhjargal, Head of Governor's office B.Bolortsetseg, Officer for pasture and crop production L.Otgontuu, Zootechnician	Bayankhongor Aimag, Bombogor Soum	Soum meeting with government facilities, community members
Ms. Khishigjargal (UNDP)	Project manager	Ensuring Sustainability and Resilience (ENSURE) of Green Landscapes in Mongolia
Mr. Erdenebat (UNDP)	Project manager	Improving Adaptive Capacity and Risk Management of Rural

Name	Title	Organization
		Communities
Ms. Lin Cao	Deputy Country Director	UNDP
Ms. Sergelen Munkhuu (FAO)	Project Manager	Support Programme on Scaling up Climate Ambition on Land Use and Agriculture through NDCs and NAPs (SCALA)
Dr Tungalag Ulambayar	Country Director	Zoological Society of London [for wildlife]
Mr. Vandandorj Sumiya	Country Coordinator	Sustainable Fibre Alliance
Dr Atarbiold Tsagaan	DCTA Khovd Office	Biodiversity and Adaptation to Climate Change Project [for wildlife]
Ms Tumenjargal Basan	Climate Change and DRR specialist	World Vision, Climate Resilient Communities Project

Table 7b. Results of consultations at national and local level.

Workshops / Field Visit	Issues identified at consultative meetings	Recommendations of Adaptive measures
AUO Cooperative Mr Altansukh Tumee,	Changing precipitation and need for winter fodder, preparation of collection centres for group sales and purchases of fodder, development of sheep shearing improved income from wool and provided jobs, unaware of other projects in other aimags.	Fodder purchase, preparation and storage combined with better sales and profits from cooperative sales. Cross visits with other projects and information sharing. AUO can assist other cooperatives with herder to herder training.
Herder meeting, M.Bayarsaikhan, Governor of Bombogor soum, Bayankhongor Aimag,	Women especially noted more effort on goat milk processing and red cashmere for labour savings, and better marketing, need for early warning, and better coordination. Not aware of work in other aimags.	Labour saving technology, better packaging for local and online sales of goat dairy products to increase income to purchase fodder. Would like more information access to new technologies.
Dr Tungalag Ulambayar, Zoological Society of London [for wildlife]	Community mobilization for wildlife protection and pasture management in light of increasing livestock	Community mobilization with clear pilots. ZSL communities prepared to assist. Cross visits and

Workshops / Field Visit	Issues identified at consultative meetings	Recommendations of Adaptive measures
	population. Pilot programmes successful but unknown outside local area. Unaware of other projects.	learning about other programmes desired. Linkages across community levels.
ADAPT and ENSURE (UNDP programmes)	Pilot activities underway, including innovations on down-sizing herds, fodder and herd management in light of changes in pasture quality. Unaware of other project pilots.	Sharing results from projects. Expanding pilots and information sharing for successes, especially fodder and downsizing demonstration pilots.

99. In general, consultations revealed that projects are have some isolated successes that have little national or even local awareness raising. Meetings with institutions and senior officials in Ulaanbaatar were notable for seeing isolated activities with some very innovative methods but with little or no awareness of other projects doing similar work and no attempt to institutional or capture results for higher level information sharing.

I. Provide justification for funding requested, focusing on the full cost of adaptation reasoning.

100. The funding requested for this project is not only essential but also highly justified given its potential impact and strategic importance for Mongolia to address climate change adaptation and contribute to international dialogue in the International Year of Rangelands and Pastoralists. This project is designed to significantly enhance the effectiveness and reach of existing support services for herders, a vital segment of Mongolia's population facing numerous challenges and build national public consensus on local and national action. All herders have urban family members.

101. By improving and integrating support services, implementing pilot activities, and facilitating knowledge sharing through knowledge management activities, the project aims to amplify its impact far beyond its initial investment areas.

102. Investing in this project is crucial for Mongolia's long-term development goals. The livestock sector plays a central role in the country's economy and the livelihoods of herders who make up 80% of Mongolia’s rural population. By strengthening support services and adopting a systematic approach, Mongolia can better mitigate risks, enhance resilience, and promote sustainable practices within the sector, which are critical for Mongolia’s sustainable development.

103. Further, the funding requested for this project aligns seamlessly with Mongolia's broader strategy to address the substantial financial shortfall in climate finance, estimated at USD 11.5 billion by 2030, according to Mongolia’s NDC (MET, 2020). This funding is pivotal for propelling Mongolia towards a proactive and sustainable trajectory in climate adaptation, fortifying the resilience of its crucial livestock sector and the well-being of herder communities.

Table 8: Cost of Adaptation Reasoning:

Project Outcomes/	Baseline Scenario (Without AF	Additionality (With AF Project)

Outputs	Project)	
Component 1: Improving climate change risk awareness among herders, policy makers and public for resilience building **Output 1.1:** Strengthened National Networking **Output 1.2**: Production of High-Quality Documentaries	Awareness of climate change among herders and policymakers is low, with disorganized efforts in pasture management and community strengthening. There is uncoordinated access to information, often from unreliable sources, leading to ineffective adaptation strategies. Policies and decision-making processes are based on fragmented and often inaccurate information, hindering effective climate adaptation. There is a lack of comprehensive and integrated communication strategies to address climate change impacts, leading to redundant and inefficient efforts.	The project will raise awareness efficiently through networking and social media, using popular platforms like Facebook, YouTube, and Viber. It will produce a nationally broadcast television documentary to build climate literacy, helping both rural and urban stakeholders understand current and future climate change issues and successful adaptation actions. By improving coordination and technical capacity among stakeholders, the project will enhance the ability to make informed decisions, leading to more effective and coherent climate adaptation strategies. The project will establish an integrated network connecting governments, research institutions, NGOs, and the private sector, facilitating effective dialogue and coordination on climate adaptation.
Component 2: Implementing Pilot Projects for Capacity Building and Resilience. **Output 2.1.1**: Human Capacity Building Initiatives **Output 2.1.2:** Strengthening Social Capital **Output 2.1.3:** Development of Solar-Powered Water Wells **Output 2.1.4:** Infrastructure Improvements for Fodder	Herders face increased vulnerability to climate change impacts, including dzud, droughts, and pasture degradation, without access to effective adaptation strategies. Existing efforts in pasture management and climate adaptation are fragmented, with no holistic approach, leading to partial and inefficient replication. There is insufficient infrastructure and capacity to support sustainable herding practices, exacerbating the negative impacts of climate change.	The project will implement pilot projects showcasing best practices in climate-resilient herding, which will be assessed, documented, and disseminated for replication. The project will provide a clear package of best practices for climate-resilient herding, allowing for field visits and models to be replicated effectively by others. The project will develop infrastructure improvements for fodder preparation and storage, introduce modern equipment, and establish training programs to enhance the adaptive

		capacity of herders.
Component 3: Disseminating Results and Engaging in Policy Development **Output 3.1.1:** Field Visits for Policymakers **Output 3.1.2:** Cross-Visits with Other Programs **Output 3.1.3:** Annual Climate Adaptation Forums **Output 3.1.4:** Contribution to MOFALI's Inputs for International Initiatives	Lack of communication, cross visits, and documentation among existing government and donor partner programs leads to isolated efforts and missed opportunities for learning and replication. Existing programs operate in silos, with limited collaboration and information exchange, reducing the overall impact of climate adaptation efforts. There is a lack of systematic approaches to disseminate project results and engage in policy development, limiting the influence on broader climate adaptation strategies.	The project will facilitate people-centered knowledge sharing through annual events, field visits, and comprehensive documentation, ensuring transparency and efficiency across stakeholders. By fostering collaboration and knowledge exchange, the project will enhance the scalability and replicability of successful practices, increasing the overall effectiveness of climate adaptation efforts. The project will host annual climate adaptation forums and contribute to policy development, ensuring that successful practices and lessons learned inform national and international climate adaptation strategies.

J. Describe how the sustainability of the project/programme outcomes has been taken into account when designing the project/programme.

104. Climate adaptation activities after the project will be sustained with investment in human and social capital, natural resources, and infrastructure. Coalitions and networks developed under component 1 will continue to promote sharing information, bolstered by recruiting stakeholders during the project. The documentary will help build national interest and engagement in networks. Component 2 is designed to create a state-of-the-art pilot programme, bringing best practices together to be assessed and documented. This will prepare a specific output of the climate change adaptation community with joint ownership and a community starting point for further activities. Component 3 builds face to face interactions with national events, field visits and other stakeholders leading to better policy and policy maker comprehension of climate change and climate adaptation. MOFALI, as first supporter of the International Year of Rangelands and Pastoralists, will benefit from having real practical examples from Mongolia field sites. The entire project is aligned with national policies such that results will be compatible with government programmes in the future.

105. Additionally, the project's collaborative problem identification and solution-seeking processes with selected groups for pilot activities increase not only the effectiveness of interventions but also the ownership and adoption of demonstrated solutions and national awareness through TV. This is complemented by training activities, which further enhance the replication and ownership potential alongside the policy feedback process through knowledge

management whereby herders and local support providers influence policy and institutional support. Broad TV and media dissemination will magnify the impact of local successes to national audiences which have stake nationwide through their own families and cultural roots.

106. Collectively, these approaches ensure the project's overall sustainability. The SMART-HERDERS project not only contributes to the sustainable development of Mongolia's livestock sector but also builds public support and institutional and community capacities, fostering a sense of ownership and commitment crucial for the long-term success of climate resilience initiatives.

K. Provide an overview of the environmental and social impacts and risks identified as being relevant to the project/programme.

107. The Project proposed herein is entirely aligned with the Adaptation Fund's Environmental and Social Policy (ESP). It has been designed to generate positive economic, social and environmental outcomes. To achieve these, it will use contributions made available by local and national authorities and participating institutions. Further, the project intends to incorporate best practices from other projects, while simultaneously prioritising contributions made by women and marginalized, vulnerable groups that are included among the target population. The proposed adaptation and actions will be selected together with beneficiary farmers and participating institutions, thus ensuring they are culturally and locally appropriate.

108. The initial screening of the project proposal (**Error! Reference source not found.**9) shows that the proposed project falls under the moderate-risk category, mainly due to climate risks at the pilot site level. Further analysis is required to assess these risks. During the project proposal preparation stage, the proposal will be thoroughly assessed for potential risks in compliance with the social and environmental policy of the Adaptation Fund.

109. While applying E&S, a project preparation team will involve all relevant stakeholders at the national and sub-national levels to identify any social and environmental risks and potential mitigation measures. During this process, the team will keep comprehensive records of stakeholder consultations as evidence of consultation. The team will prepare a social and environmental management framework to address the overall set of risks. If necessary, an action plan for each risk category will also be prepared.

110. Furthermore, the team will follow IFAD's gender policy and guidelines, gathering gender-disaggregated data during the project preparation. The team will ensure gender balance during stakeholder consultations and make sure that the consultations are facilitated in a gender-responsive manner, such as considering the timing and locations of consultation.

Table 9: Environmental and social checklist

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
Compliance with the Law	x	Low risk (C): The project adheres to all applicable laws, policies, and strategies in full compliance.
Access and Equity	x	Low risk (C): The main objective of this project is to enhance access to information, knowledge, and technologies in a fair manner, and to promote inclusive decision-making and policy

		processes. A further analysis of this risk may be necessary.
Marginalized and Vulnerable Groups	x	Low risk (C): The project's main goal is to promote social inclusion and gender responsiveness in decision-making and policy processes. As a result, it supports the involvement of marginalized and vulnerable groups in these processes. However, there is a slight chance that the project may not effectively involve poor and highly marginalized groups in consultations. This could be due to various reasons such as physical barriers, time constraints, and social stigma. A further analysis of this risk may be necessary.
Human Rights		No risk (C): The project affirms the rights of all people and does not violate any pillar of human rights.
Gender Equality and Women's Empowerment	x	Low risk (C): The primary objective of the project is to encourage gender responsiveness and empower women by involving them in decision-making. The project aims to identify climate-resilient technologies and practices that are gender-responsive. However, it is necessary to conduct a thorough assessment, and the project should develop a clear gender action plan to achieve its goals.
Core Labour Rights		No risk (C):: The project fully respects international and national labour laws and codes.
Indigenous Peoples	x	Low risk (C): Government of Mongolia has prioritized Steppe and Gobi ecosystems strongly threatened by climate change. The Gobi region and aimags (provinces) include Dundgobi and Umnugobi. The AF will be implemented in these aimags. These areas do not have minority groups such as Kazakhs, Uyghurs, Uzbeks, Tuvinians, Urianhais, and Hotons. Therefore, this will be considered low-risk. During the design phase, the project team will conduct a Stakeholder Engagement Plan (SEP), and consultation reports will be shared.
Involuntary Resettlement		No risk (C): There is no plan for resettlement.
Protection of Natural Habitats		No risk (C): The project aims to restore and protect natural habitats and ecosystems. However, a site-level assessment is necessary to address potential negative impacts.
Conservation of Biological Diversity		No risk (C): The same as the above.
Climate Change	x	**Moderate risk (B):** The project aims to mitigate the risk of maladaptation to climate change by showcasing alternative practices and assessing the impacts at the pilot site level. However, further analysis is necessary to fully understand the potential intervention options, their effectiveness, and any maladaptive risks. This will help us ensure positive outcomes and avoid any negative consequences.
Pollution Prevention and Resource Efficiency		No risk (C): The initial phase of SMART-HERDERS will not involve site-specific activities.
Public Health		No risk (C): The initial phase of SMART-HERDERS will not involve site-specific activities.
Physical and Cultural Heritage		No risk (C): The initial phase of SMART-HERDERS will not involve site-specific activities.

Lands and Soil Conservation		No risk (C): The initial phase of SMART-HERDERS will not involve site-specific activities.

PART III: IMPLEMENTATION ARRANGEMENTS

A. Demonstrate how the project/programme aligns with the Results Framework of the Adaptation Fund

Project Objective(s)	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
To demonstrate climate-resilient practices and technologies with herder communities, wide public media dissemination, and improve access to information and support services to catalyze transformation in the sector. The project will also aim to contribute to the national and international dialogue for the International Year of Rangelands and Pastoralists.	• Enhanced support capacity through multi-stakeholder coordination and service integration with broad public awareness and support demonstrated, documented and disseminated.	Outcome 2: Strengthened institutional capacity to reduce risks associated with climate-induced socioeconomic and environmental losses.	2.1. Capacity of staff to respond to, and mitigate impacts of, climate-related events from targeted institutions increased	100,000
	• Enhanced support capacity through multi-stakeholder coordination and service integration in two high risk ecozones.	Outcome 3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	3.1. Percentage of targeted population aware of predicted adverse impacts of climate change, and of appropriate responses	100,000
	• Number of climate-resilient practices and technologies demonstrated, scaled up, and adopted in critical regions.	Outcome 8: Support the development and diffusion of innovative adaptation practices, tools and technologies	8. Innovative adaptation practices are rolled out, scaled up, encouraged and/or accelerated at regional, national and/or subnational level	600,000
	• Improved coverage of sustainable pasture management in two high risk ecozone regions.	Outcome 5: Increased ecosystem resilience in response to climate change and variability-induced stress	5. Ecosystem services and natural resource assets maintained or improved under climate change and variability-induced stress	100,000
	• Number of key policy and institutional improvements resulting from the project's knowledge management and	Outcome 7: Improved policies and regulations that promote and enforce resilience measures	57. Climate change priorities are integrated into national development strategy	70,000

Project Objective(s)	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
	policy feedback efforts.			
Outcome 1.1: Public service providers, research institutions, FUGs/PUGs, NGOs, and private-sector actors have improved coordination and technical capacity to deliver climate-informed and evidence-based support services, enhancing herders' knowledge of climate risks, adaptive options and available support services.	• Integrated coordination arrangements and implementation framework for climate-informed livestock support services • Number of service providers trained to deliver gender-sensitive, participatory, and climate-informed services	Output 2.1: Strengthened capacity of national and sub-national centres and networks to respond rapidly to extreme weather events	2.1.1. No. of staff trained to respond to, and mitigate impacts of, climate-related events (by gender)	100,000
	• Number of herders with enhanced understanding of climate risks, alternative options, and support services as well as public awareness raised on climate change issues and responses.	Output 3.1: Targeted population groups participating in adaptation and risk reduction awareness activities	3.1 No. of news outlets in the local press and media that have covered the topic	225,000
Outcome 2.1: Herders and their households are equipped with practical knowledge and skills acquired from pilot activities, facilitating the effective adoption of climate-resilient and sustainable practices and technologies.	• Two pilot sites for climate-resilient livestock and pasture management • Number of herders adopting demonstrated climate-resilient practices and technologies • Number of herders trained to scale up climate-resilient practices and technologies through the training program.	Output 8: Viable innovations are rolled out, scaled up, encouraged and/or accelerated.	8.1. No. of innovative adaptation practices, tools and technologies accelerated, scaled-up and/or replicated.	573,883
	• Size of pastures under sustainable management and restoration.	Output 5: Vulnerable ecosystem services and natural resource assets	5.1. No. of natural resource assets created, maintained or improved to withstand	100,000

Project Objective(s)	Project Objective Indicator(s)	Fund Outcome	Fund Outcome Indicator	Grant Amount (USD)
		strengthened in response to climate change impacts, including variability	conditions resulting from climate variability and change (by type and scale)	
Outcome 3.1: Policy decisions are guided by best practices and lessons learned from training and pilot activities, enabling the systematic replication and scaling up of climate-resilient livestock and pasture management, ultimately enhancing herder livelihoods and public awareness.	• Knowledge management consortium and platform • Number of beneficiaries utilizing information for decision-making in policy, investment, livestock, and pasture management via the consortium. • Annual multi-stakeholder forum • Number of policy and institutional improvements informed by the forum	Output 7: Improved integration of climate-resilience strategies into country development plans	7.1. No. of policies introduced or adjusted to address climate change risks (by sector)	70,000
Total				**2,038,883**

[1] The AF utilized OECD/DAC terminology for its results framework. Project proponents may use different terminology but the overall principle should still apply

PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY

A. Record of endorsement on behalf of the government[2]

Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/programme, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/programme proposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/programme:

Batjargal Zamba, PhD. *National Focal Point for Adaptation Fund, Senior Science Advisor to Information and Research Institute for Meteorology, Hydrology and Environment of Mongolia*	Date: 13 May 2024

B. Implementing Entity certification

Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/programme contact person's name, telephone number and email address

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.	
Implementing Entity coordinator: Ms Janie Rioux Senior Climate Finance Specialist ECG Division	email: j.rioux@ifad.org
Mr Juan Carlos Mendoza Casadiegos Director Environment, Climate, Gender and Social Inclusion Division	
Date: 23 July 2024	e-mail: ecgmailbox@ifad.org
Project contact persons:	
Ms Anupa Rimal Lamichhane Regional Climate and Environment Specialist	e-mail: a.rimallamichhane@ifad.org
Mr Sakphouseth Meng IFAD Mongolia Country Director	e-mail: m.sakphouseth@ifad.org

[6.] Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities

Annex 1 Letter of Endorsement

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FAX: 202 522 3240/5

Date 13 May 2024
Ref. 1/57

LETTER OF ENDORSEMENT

Subject: Endorsement for Sustainable Pasture Management and Adaptation with Resilient Technologies for Herders in Mongolia (SMART-Herders)

In my capacity as designated authority for the Adaptation Fund in Mongolia, I confirm that the above national project/programme proposal is accordance with the government's national priorities in implementing adaptation activities to strengthen resilience, reduce adverse impact of any risks posed by climate change in Mongolia.

Accordingly, I am pleased to endorse the above project proposal with support from the Adaptation Fund. If approved, the project will be implemented by International Fund for Agricultural Development and executed by Project Management Unit of Project for Market and Pasture Management Development (PMPMD).

Sincerely,

Dr. BATJARGAL Zamba
National Focal Point for Adaptation Fund,
Science Advisor to Information and Research Institute for Meteorology, Hydrology and Environment, Mongolia

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Annex:

Abbreviations

ADB	Asian Development Bank
CMIP5	Coupled Model Inter-comparison Project Phase 5
EbA	Ecosystem-based Adaptation
EWAA	Early Warning Anticipatory Action
FAO	Food and Agriculture Organization of the United Nations
FbF	Forecast-based Financing
FUG	Forest User Group
GBP	Great British Pound
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Global Environment Facility
Gg CO2-eq	Giga Tonnes of carbon dioxide equivalent
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
IBLI	Index-Based Livestock Insurance
IFAD	International Fund for Agricultural Development
IFRC	International Federation of Red Cross and Red Crescent Societies
ILO	International Labor Organization
INFORM	Index for Risk Management
IYRP	International Year of Rangelands and Pastoralists
MET	Ministry of Environment and Tourism
MNT	Mongolia Tugrik
MOFALI	Ministry of Food Agriculture and Light Industries
MSRM	Mongolian Society for Range Management
NAEC	National Agricultural Extension Center
NAP	National Adaptation Plan
NC3	Third National Communication Report
NDC	Nationally Determined Contribution
NIR	National Inventory Report
NGO	Non-governmental Organization
NSO	National Statistics Office
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
PES	Payments for Environmental Services
PMPMD	Project for Market and Pasture Management Development
PUG	Pasture User Group
RCP	Representative Concentration Pathway
REDD+	Reducing Emissions from Deforestation and Forest Degradation
SDC	Swiss Agency for Development and Cooperation
SECAP	Social, Environmental and Climate Assessment Procedures
SMART-HERDERS	Sustainable Pasture Management and Adaptation with Resilient Technologies for Herders in Mongolia
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States Dollar
WB	World Bank
WWF	World Wide Fund for Nature

Mongolian Terms

Aimag	Equivalent to province and comprised of soums
Soum	Equivalent to provincial district or county and comprised of baghs
Baghs	Equivalent to hamlet and make up basic governance unit
Tugrek	(MNT) Monetary unit
Dzud	A crisis of high mortality of livestock brought on by drought in summer followed by cold winters
Otor	Transhumance migration, usually due to poor winter pasture