Project ID/Number: P174733

MONGOLIA: VIRTUAL COOPERATIVES OF PASTORAL LIVESTOCK COMMUNITIES PROJECT

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK
(Final)

Prepared by: Ministry of Food, Agriculture and Light Industry, Government of Mongolia

October 2020

CONTENTS

LIST OF TABLES

ABBREVIATIONS

AP	Affected person/party
CITA	Communications and Information Technology Authority
CSO	Civil society organization
EHS	Environmental, health and safety
EIA	Environmental impact assessment
EMP	Environmental management plan
EMoP	Environmental monitoring program
ESMF	Environment and social framework
ESS	Environmental and social standard
FA	Facilitating agency
FAO	Food and Agricultural Organization
GRM	Grievance redress mechanism
ICT	Information and communication technology
IFC	International Finance Corporation
IT	Information technology
JICA	Japan International Cooperation Agency
JSDF	Japan Social Development Fund
LCP	Livestock Commercialization Project
MAHIS	Mongolia Animal Health Identification System
MET	Ministry of Environment and Tourism
M&E	Monitoring and evaluation
MOFALI	Ministry of Food, Agriculture and Light Industry
NGO	Non-governmental organization
OIE	World Organization for Animal Health
PCU	Public complaint unit
PDO	Project development objective
PIU	Project implementation unit
PMU	Project management unit
PPE	Personal protective equipment
ToR	Terms of Reference
WB	World Bank
WHO	World Health Organization

1. INTRODUCTION

Mongolian Ministry of Food, Agriculture and Light Industry (MOFALI) with support of World Bank is proposing to carry out "Virtual cooperatives of pastoral livestock communities" project in target areas. The project aim is to improve livelihoods and quality of life of remote pastoral livestock communities in targeted locations by harnessing digital technologies and services. To achieve this objective, MOFALI is going to take innovative approach of utilizing digital solutions.

This ESMF is prepared to serve as a framework to examine the environmental and social impacts of the project. This document was prepared by conducting desktop studies, reviewing policy and regulatory framework and consulting with stakeholders.

2. ESMF OBJECTIVE AND METHODOLOGY

Project environmental and social management framework (ESMF) aims to strengthen the MOFALI's approach to managing environmental and social risks and impacts. The proposed design for Virtual Cooperatives of Pastoral Livestock Communities Project has an "open programme" characteristic, so the exact design and location of future interventions are not yet decided. This ESMF provides a guiding framework for the identification and management of environmental, social and climate risks and potential impacts that may be associated with the development and implementation of project activities.

The ESMF sets out procedures to enable screening of project activities for potential adverse environmental or social impacts, including those on indigenous people and ethnic minorities, and specifies processes and requirements to ensure that potential adverse impacts are identified, avoided, minimized or mitigated with the appropriate involvement of project affected people and other stakeholders.

3. PROJECT DESCRIPTION

Project's proposed development objective is to improve livelihoods and quality of life of remote pastoral livestock communities in targeted locations by harnessing digital technologies and services.

Project key results shall be:

1. Rural herders organized into virtual cooperatives
2. Rural herders (extension and market) accessing services rolled out through the digital platform
3. Rural herders adopting sustainable livestock management practices
4. Enhanced capacities of women doing business and better market linkages

3.1. Activities

The project activities are organized into three components would be implemented over four years period.

Component 1: Mobilizing poor herders into virtual cooperatives (US$ 1.50 million).
The key objective of this component is to strengthen the social mobilization of herder organizations by empowering herders with information and improving their access to livelihood services by creating a trusted digital platform (virtual cooperative). Similar to cooperatives known from the physical world, a virtual cooperative is a voluntary association of agricultural producers who act together to provide services to its members that solve jointly identified business challenges. Those challenges may include sourcing inputs, accessing processing equipment, finding buyers for their produce, or organizing its transportation. In the virtual realm, assemblies, decision-making and information exchange happen

virtually, and the internet platform will be designed to organize joint action that the cooperative prioritized for its members. During preparation, the pilot will analyze existing gender gaps among herders, including in accessing and using ICT, and develop approaches to ensure the participation of women in virtual cooperatives. To overcome issues of herders' trust in a digital platform, the project will take a participatory approach for formulating the virtual cooperatives' governance structure, roles and responsibilities of and relationship among all parties, the rules for offering, accessing and paying services through the platform, as well as for data protection. When developing the governance structure, due attention will also be given on developing suitable models for financing platform services. The participation of herders and other players in this process will build trust among the herders and other platform participants.

Capacity building: It will help pilot innovative mobilization of herders into virtual cooperatives, use digital channels for streaming technology extension, agri-service delivery, connect them with local governance systems and build business linkages with private sector for improved market access. This approach complemented with periodic face-to-face interactions will ensure connectedness between pastoral communities throughout their transhumance trails and improve the quality of outreach and service delivery. The component will enhance capacity building and other knowledge services by strengthening the capacity of herders to develop locally relevant and culturally appropriate content and adjust their business processes to maximize their benefits from the digital platform. The project will provide professional training on video production, on using the platform, on (virtual) collective action to pool input provision, organizing a certain amount of livestock of the required quality for a processing enterprise at a specified time. The participatory approach will ensure that the content is relevant for herders and meets their knowledge needs. In this activity block, the pilot will use existing knowledge on best practices from research institutions and agricultural universities, national extension centers, ongoing projects in the cashmere sector, as well as from collectors, buyers, and processors. The pilot will also build the capacity of other linked service providers to offer their services via the platform and maximize its use for their purposes as well as on the platform's institutional and operational framework.

Digital service stack: The project will take a participatory approach for developing and delivering a stack of digital services. Using herders' inputs and iterative feedback, the project will develop a stack of digital services with Digital Green designing an appropriate interface that suits local needs. It will apply digital innovation to reach otherwise left out, remote herders, and promote sustainable livestock management and cashmere wool production practices and disseminate price and quality and other information that herders identified as relevant for them. The IT solution will offer alternative suitable access channels that herders have identified as desirable, such as mobile applications, SMS, online and offline videos, voice recordings, as well as a variety of devices and channels for access (such as smartphones, tablets, or computers, helplines, etc.). This subcomponent will help develop a *Virtual Training Academy*: Jointly with herders, livestock researchers, and practitioners in the sector, it will develop digital libraries of indigenous knowledge on livestock production and breeding practices. It is envisaged to form partnerships with existing institutions that already provide locally relevant extension content, such as, for example, the Mongolian University of Life Sciences and other institutions collaborating in the Responsible Cashmere Round Table (RCRT).

Component 2: Linking herders with markets (US$ 1.00 million)

This component will finance technical assistance, common facilities, small scale productivity infrastructure, working capital to the virtual cooperatives based on institutional performance criteria for availing high-quality services from technical assistance providers, acquiring small scale productive infrastructure, working capital for collective production and market activities, etc. The delivery approach is mostly through forging partnerships with existing public and private actors and may include organizing

an innovation challenge to crowdsource disruptive ideas for piloting service provision in the domain of virtual cooperatives.

Digital financial services: The project will collaborate with existing digital financial services providers to pilot design and distribute sustainable livestock finance products on a virtual cooperative platform to improve their outreach to isolated herder communities. This model for digital livestock finance will have a high potential to be replicated by other players;

Livestock services: Develop partnerships with public and private players for delivering services through the platform. Players include animal health services, market information (such as prices, information on processing enterprises and their requirements), weather and climate advisory, providers of digital payment services, nutrition information, or One Health approaches. Offering an integrated interface and one stop point for fragmented services will help facilitate the convergence of public and private services.

Marketing services: The project will prepare virtual cooperatives for participation in high impact value chains by promoting principles of animal welfare, sustainable livestock practices, grass-fed organic livestock, fair trade, and responsible sourcing mechanisms. Support will be provided to the targeted livestock producers for (i) improving their product quality and safety, (ii) building traceability system for responsible practices and chain of custody mechanism, and (iii) instituting third-party certification process for marketing premium quality animal fiber.

Component 3: Project Management (US$ 230,000).

This component will support the project's implementation. It will support the coordination of project activities of Digital Green, digital service providers, and the local facilitating agencies. The Project Management Unit will be staffed and equipped to enable it to effectively carry out monitoring and evaluation, environmental and social safeguards management, and the fiduciary functions of the project under the guidance of MOFALI. The component will finance incremental staff, consultants, operating costs, technical assistance (TA), training, monitoring and evaluation (M&E) activities, baseline and final impact assessments, information dissemination, and annual audits.

3.2. Beneficiaries

The proposed grant activity will have four sets of target beneficiaries. First, small herders , poor, and other vulnerable households in remote pastoral communities. Second, community organizations such as herder groups, pasture groups, producer organizations, and civil society organizations (CSOs). Third, the livestock extension, animal health service delivery agents in the last mile such as private veterinary clinics (para-professionals), digital financial and other service providers. Fourth, aimag/soum (Provincial and Local Governments) Governments, local staff particularly engaged in food, agriculture, and light industry program implementation in the target aimags/soums.

3.3. Target areas

The project is going to be implemented in following areas:

Figure 1 Project aimags

- Arvairkheer soum, Uvurkhangai province (as of 2019, population – 32891)
- Bayangol soum, Uvurkhangai province (as of 2019, population – 3830)
- Darvi soum, Khovd province (as of 2019, population – 3022)
- Must soum, Khovd province (as of 2019, population – 3141)
- Battsengel soum, Arkhangai province (as of 2019, population – 3759)
- Tsenkher soum, Arkhangai province (as of 2019, population – 5933)

The project activities shall benefit 2500 households and 8500 to 9000 individual herders, which 40 percent are vulnerable and 50 percent are women. .

4. LEGAL, POLICY FRAMEWORK AND REGULATORY REQUIREMENTS

4.1. The World Bank Environmental and Social Framework

The World Bank's ESF is applicable to this project, under which the relevance of environmental and social standards in the context of this project is summarized in Table 1.

Table 1 Project ESSs relevance

No.	Environmental and social standard	Relevant or not	Analysis
1	ESS1. Assessment and management of environmental and social risks and impacts	Relevant	As per this standard, MOFALI is required of assessing, managing and monitoring environmental and social risks associated with the project.
2	ESS2. Labor and working conditions	Relevant	Based on the current design, the project will not support large scale civil works nor involve any community workers. ESS2 is deemed relevant considering that the project may involve a small number of locally sourced construction workers, and direct or contracted workers who are mostly white collar knowledge workers.

3	ESS3. Resource efficiency and pollution prevention	Relevant	The small-scale civil works associated with equipment installation or facility improvement will generate some dust, wastewater and solid wastes. The operation of livestock production and cashmere wool production facilities will bring impacts and pressures on the environment, including consumption of resources (especially water), management of chemicals, generation of solid wastes, wastewater, and various air emissions. The project will avoid release of pollutants or, when avoidance is not feasible, minimize and control concentration and mass flow of their release.
4	ESS4. Community health and safety	Relevant	This standard aims to anticipate and avoid adverse impacts on the health and safety of local communities during the project implementation. Given the scale and nature of civil works, the project will not bring significant construction nuisance to nearby communities or affect any ecosystem services. The temporary and localized impacts of noise, dust, waste generation and traffic disturbance during the construction period could be readily mitigated by incorporating good civil works management practices. The civil works will involve a small number of workers sourced locally. Therefore, there should be no significant risks associated with worker camps, labor influx or gender-based violence. However, the project may involve support for meetings with beneficiaries, and travel by project workers to the field, in which case there is the possibility of the transmission of communicable diseases such as COVID19. Therefore, this standard is relevant to ensure that preventative measures are built into project design and operating procedures to minimize the risk of person-person transmission. Furthermore, preventative measures will be built into project design, to minimize the risk of pandemics caused by animal raising.
5	ESS5. Land acquisition, restrictions on land use and involuntary resettlement	Not relevant	The project will not fund any activities in relation to land acquisition and land rights.
6	ESS6. Biodiversity conservation and sustainable management of living natural resources	Relevant	This standard aims to protect and conserve biodiversity and habitats, and promote sustainable management of living natural resources. The project will address sustainable management of livestock husbandry, which is a form of primary production of living natural resources. Given the country context, the livestock producers are generally small-scale and located dispersedly, and the number of producers to be supported under the project is expected to be small. Therefore, the potential for cumulative risks and impacts is low.
7	ESS7. Indigenous peoples/Sub-Saharan African	Relevant	Whether there is ethnic minority presence in project areas will be assessed further during implementation. Once ethnic minority groups is identified, a process to

	historically underserved traditional local communities		foster full respect for the human rights, dignity, aspirations, identity, culture, and natural resource-based livelihoods of ethnic minorities will be developed.
8	ESS8. Cultural heritage	Not relevant	This standard is considered not relevant based on the available information and project design during preparation. The small infrastructure of the project will be on existing land holding in existing enterprises. These activities are unlikely to be located in or in the vicinity of legally protected tangible cultural heritage and customarily recognized cultural heritage sites. The project also unlikely involves the risks on intangible cultural heritage because it will not use cultural heritage for commercial purposes.
9	ESS9. Financial intermediaries	Not relevant	This standard is not relevant to the proposed project, as MOFALI will implement the project, and commission Digital Green as TA agency. No financial intermediaries will be involved.
10	ESS10. Stakeholder engagement and information disclosure	Relevant	LCP PIU recognizes the importance of transparent and meaningful engagement with project stakeholders since it can improve the environmental and social sustainability of projects and enhance project acceptance. As per this standard, the PIU will develop and implement a Stakeholder Engagement Plan (SEP) with the objective to establish a systematic approach to stakeholders' engagement, which will guide the identification of stakeholders and project affected parties, as well as building and maintaining constructive relationships throughout the project implementation.

In addition, the following EHS guidelines of the World Bank Group are considered applicable to the project, namely:

- EHS General Guidelines
- EHS Guidelines for Dairy Processing
- EHS Guidelines for Mammalian Livestock Production
- EHS Guidelines for Meat Processing
- EHS Guidelines for Textile Manufacturing
- IFC's Good Practice Note: Improving Animal Welfare in Livestock Operation

4.2. Mongolian National Laws and Regulation

Mongolia has enacted a comprehensive policy and legal framework for environmental assessment and management. It has policies, legislation and strategies in place to manage the protected estate, to satisfy its international obligations, and to protect the quality of the environment for the health and well-being of its citizens. A fundamental principle of the Mongolian state environmental policy is that economic development must be in harmony with the extraction and utilization of natural resources and that air, water and soil pollution will be controlled. In April 1996, Mongolia's National Council for Sustainable Development was established to manage and organize activities related to sustainable development in the country. The country's strategy is designed for environmentally friendly, economically stable and socially wealthy development, which emphasizes people as the determining factor for long-term sustainable development. Key Mongolian laws relevant to the project is shown in below table.

Table 2 National laws relevant to the project

No.	Regulation	Requirement	Project relevancy
1	Law on Environmental Impact Assessment (2012)	Agricultural projects may have environmental impact assessment done.	Relevant
2	Law on Environmental Protection (1995)	Socio-economic development may be balanced with environmental protection.	Relevant
3	Law on Protected Areas (1994)	Only certain activities are allowed in protected areas and their protection zones.	Relevant
4	Law on Cultural Heritage (2014)	Tangible and intangible cultural heritages must be explored and protected before any large scale earth work takes place.	Relevant
5	Law on Waste (2017)	Impacts and risks from potential waste generation shall be identified, mitigated, minimized and managed.	Relevant
6	Law on Water (2012)	Water resources shall be effectively used and managed.	Relevant
7	Law on Labor (1999)	Rights and responsibilities of employees shall be respected and workers shall be provided with safe and healthy working environment.	Relevant
8	Law on Occupational Health and Safety (2008)	This law and its requirements must be strictly followed at all work environment.	Relevant
9	Law on Promotion of Gender Equality (2011)	Both women and men shall be provided with equal opportunities.	Relevant

The environmental impact assessment (EIA) requirements of Mongolia are regulated by the Law on Environmental Impact Assessment (2012). The purpose of this law is to protect the environment, prevent ecological imbalance, ensure minimal adverse impacts on the environment from the use of natural resources, and regulate relations that may arise in connection with the assessment of environmental impacts of and approval decisions on regional and sectorial policies, development programs and plans and projects.

There are two types of EIAs defined in the EIA law:

(i) General EIA (screening) - to initiate a General EIA, the project implementer submits to Ministry of Environment and Tourism (MET) (or Aimag government) a brief description of the project including feasibility study, technical details, drawings, and other information. The General EIA may lead to one of four conclusions: (i) no detailed EIA is necessary, (ii) the project may be completed pursuant to specific conditions, (iii) a Detailed EIA is necessary, or (iv) project cancellation. The General EIA is free and usually takes up to 14 working days.

(ii) Detailed EIA – the scope is defined by the General EIA. The Detailed EIA report must be produced by a Mongolian company which is authorized by the MET by means of a special procedure. The developer of the Detailed EIA should submit it to the MET (or *Aimag* government). An expert of the organization who was involved in conducting General EIA should make a review of the

Detailed EIA within 18 days and present it to MET (or *Aimag* government). Based on the conclusion of the expert, the MET (or *Aimag* government) takes a decision about approval or disapproval of the project.

(iii) The Detailed EIA must contain the following chapters: (i) Environmental baseline data; (ii) Project alternatives; (iii) Recommendations for minimizing, mitigation and elimination of impacts; (iv) Analysis of extent and distribution of adverse impacts and their consequences; (v) Risk assessment; (vi) Environmental Protection Plan; (vii) Environmental Monitoring Program; and (viii) Opinions of residents on whether the project should be implemented.

The type and size of the planned activities define responsibility for the Ministry of Environment and Tourism (MET) or Aimag (provincial) government in making EIA.

The establishment of a baseline for environmental monitoring is to determine trends in the quality of ambient air, water, ambient noise and soil and how that quality is affected by the release of contaminants, other anthropogenic activities, and/or by waste treatment operations (impact monitoring). Environment monitoring needs to be carried out to estimate nutrient or pollutant fluxes discharged in atmosphere or ground waters or lakes or to the land across project and nearby areas. Monitoring is done to determine the quality of the ambient Environment before start of any kind of project related activities, as it provides a means of comparison with impact monitoring. It will be also used simply to check whether any unexpected change is occurring in otherwise pristine conditions. The National Agency for Meteorology, Hydrology and Environmental Monitoring (NAMHEM) is responsible for environmental monitoring of water, air, acid deposition, soil, environmental radiation, dust-deposition and Sulphur gases to control the environmental quality. The laboratories in main cities make permanent measurements on air, water, soil quality and radiation level, meanwhile, control waste sources of pollution from such power plants and vehicles; carries necessary monitoring activities on environmental assessment; control industry wastes in cooperation with other environmental controlling organizations.

4.3. Gap analysis between International and National requirements for ESMF

There are some gaps identified between international and national environmental and social requirements and key findings of analysis of gaps between international and national requirements are presented in Table 3 highlighting gaps identified and measures through which the ESMF can close those gaps.

Table 3 Environmental and social policy gap analysis

Topic	Gaps identified (reference to international standard)	Gap-filling measures according to International standards
Scope of environmental assessment	Mongolian EIA law covers human health & environment only (WB ESF ESS1)	EIA shall include natural environment, human health & safety; social impacts (involuntary resettlement, indigenous peoples, and physical cultural resources); and trans boundary and global environmental aspects.
	Only certain types of activity in protected area buffer zones are subject to EIA (WB ESF ESS1)	All sub-projects shall be appraised.
Public participation in E&SIA	EIA Law does not require public participation in general EIAs	ESMF shall ensure key stakeholders are meaningfully consulted and their views taken

Topic	Gaps identified (reference to international standard)	Gap-filling measures according to International standards
	(WB ESF ESS1, ESS10)	into account before submission of general EIAs.
	Regulations on public participation in detailed EIAs give only general guidance on public participation	ESMF shall ensure key stakeholders are meaningfully consulted and their views taken into account.
Public notification and disclosure	EIA Law provisions on public notification and disclosure are incomplete (WB ESF ESS10)	ESMF and sub-projects EMP shall specify procedures for public notification and disclosure of project plans and E&SIAs in line with international standards.
Reporting	EIA Law only requires reporting on EMPs pursuant to detailed EIAs (WB ESF ESS1, ESS10)	Status of all EMPs and monitoring results shall be reported and disclosed.
Capacity for E&S management	National law has no capacity requirements (WB ESF ESS1)	ESMF and sub-projects EMP shall include capacity building activities
Land conversion	National law has no provisions to mitigate conversion or degradation of natural habitats outside designated areas (e.g. protected areas, buffer zones, conservation forests) (WB ESF ESS6)	All sub-projects with potential to convert or degrade natural habitats shall have mitigation measures designed, implemented and monitored.
Involuntary Resettlement	National law has no provisions to avoid or minimize resettlement (WB ESF ESS5)	WB will not support any sub-project activities that may result in physical and economic displacement impact.
Indigenous peoples	National law does not formally define indigenous peoples or vulnerable ethnic minorities, and does not require preparation of indigenous peoples plans. (WB ESF ESS7)	The impact on IP and associated mitigation measures have been incorporated in the ESMF. The project will undertake consultation and mobilization of ethnic minority groups to ensure their participation in project activities using culturally appropriate means.

The Project will not support any subproject activities that potentially trigger WB ESF ESS5 and ESS8. All subproject proposals that may result in physical and economic displacement impact, on other's land and property shall be disqualified at the screening stage. The activities that may affect cultural heritages shall also be disqualified at the screening stage.

The scope of environmental assessment in the EIA law is limited to human health and environmental impacts, but social impacts are considered in Regulations for Public Participation in EIAs. For general EIAs, it is required local administrative agencies make information on the general EIA results publicly accessible, and decisions must be made public on the environment agency's website. For detailed EIAs, public participation is required in identifying, estimating and evaluating impacts, and public consultation on the detailed results (not a non-technical summary) are required at *bagh* level over a 15-day period and/or through *bagh* or *soum* citizen representative khural meetings. Public participation is required in elaboration of Environmental Management Plans (EMPs) pursuant to detailed EIAs, and affected persons shall be informed annually on implementation of these EMPs. Given that the requirements for public participation set out in formal regulation is general, the ESMF shall provide further guidance on stakeholder participation to ensure information disclosure, such as non-technical summaries, meaningful consultation and participation in decision-making as per ESS10.

Laws related to potential project social impacts. Mongolia has no national law specific to land acquisition and resettlement. The Mongolian Law on Land defines ownership and possession rights to specific categories of land, and allows *soum* governors to sign land use contracts with herder groups. Soum Citizens' Representative Meeting holds the right to approve or decline soum annual land management plan that is submitted by soum governor, which reflects various requests to use local land for different purposes and this procedure shall be adhered during the project implementation. The vast majority of herders using pasture in protected areas or buffer zones have no formally titled land rights, although some may have contracts for limited-term use rights for winter-spring camps. Customary land use is recognized as a consideration in land management planning, but customary rights have no formal status in national law. Mongolia has no current law applicable to expropriation of land under customary use by the state. A draft Law on Land Acquisition for Unavoidable Public Need has been prepared in line with World Bank standards, but not yet been passed. If passed into law, the ESMF may need to be revised.

Laws relating to physical cultural resources. Relevant laws include the Law on Protected Area and the Law on Cultural Heritage. The Law on Protected Area specifies permitted and prohibited activities in different zones in national protected areas of different status and the roles and responsibilities of different levels of government in granting permissions for land use. The Law on Cultural Heritage has initiated a process of registration of tangible culture and specifies roles and responsibilities for the protection of tangible culture. The project should support stakeholders in the identification, registration and protection of physical cultural resources.

Laws relating to ethnic minorities. Mongolia's constitution states that "no person shall be discriminated against on the basis of ethnic origin, language, race, age, sex, social origin and status, property, occupation and position, religion, opinion and education". However, there is no other specific legislation onethnic minorities. National education and language policies have generally tended to promote Mongolian language, and Khalkh Mongolian is the official language of government business. The project shall ensure inclusion of indigenous people and ethnic minorities in project activities through free and informed consultations during implementation through provision of culturally appropriate project benefits by using their languages in the provision of services and measuring their inclusion to the project benefits/services including tracking their usage of animal health services, local disclosures, feedback loops, etc. informing and guiding the implementation of the project.

Labor conditions & OHS. Mongolian Labor Law (1999) and Law on Occupational Safety and Hygiene (2008) implement the ILO core labor standards, and establish rights and responsibilities for ensuring health and safety in the workplace. However, because national laws apply to all employers, there is no legal obligation to ensure that labor and OHS requirements are met by sub-contractors. Specific measures to mitigate OHS related risks are not set out in national law, although some are set out in national standards and regulations. The ESMF shall therefore contain provisions to ensure that sub-contractors are subject to the same labor and OHS requirements, and to ensure that appropriate mitigation options are designed in sub-project ESMPs.

5. ENVIRONMENTAL AND SOCIAL BASELINE

5.1. Environmental baseline

The topography of Mongolia consists mainly of a plateau with an elevation ranging from 914 to 1524 m broken by mountain ranges in the north and west. The country has an average elevation of 1580 meters. The Altai Mountains stretch across the western and the southwestern regions of the country, and Khuiten

Peak in far western Mongolia is the highest point (4375 meters). The east and the south are characterized by plains and depressions. The landscape includes one of Asia's largest freshwater lakes (Lake Khuvsgul), many salt lakes, marshes, sand dunes, rolling grasslands, alpine forests, and permanent mountain glaciers. Northern and western Mongolia are seismically active zones, with frequent earthquakes and many hot springs and extinct volcanoes.

Climate. Mongolia has a severe continental climate due to its long distance from oceans, the high mountains in the north and west, and high average elevation above sea level. Average annual temperature is below 2°C above 45° latitude, and below -4°C in the northwest of the country, while in the south Gobi, the average temperature is higher than 6°C. Average winter temperatures range between -8°C and -32°C, while summer temperatures range between 6°C and 24°C. Annual total precipitation ranges between 50 mm in the southern Gobi to 450 mm in the north. Annual mean precipitation is 300-400 mm in the northern and western areas, 250-300 mm in the Altai and central-northern forest steppe zones, and 150-200 mm in the eastern steppe zone. Potential evapotranspiration is above 500 mm across most of the country.

Vegetation. Mongolia's vegetation can be classified into five ecological zones that generally follow a north to south gradient: the high mountain, forest steppe, steppe, desert steppe, and desert zones. Forests cover 9.2% of the land area, mostly in the northern taiga and forest steppe zones. The forest steppe and steppe zones comprise over half of the land area (30% and 20% respectively) and have the highest concentration of people and livestock, mainly due to the relatively high biomass productivity (600–1,800 kg/ha). The desert steppe and desert zones occupy approximately 37% of land area with lower productivity (30–400 kg/ha).

Ecosystem and biodiversity. Located between the Russian Federation and the People's Republic of China, in the heart of Central Asia, Mongolia spans across the Siberian taiga, Eurasian steppes and the Gobi deserts of Central Asia, and is situated in the watersheds of the Arctic, Pacific, and Central Asian Internal Drainage basins. Mongolia is of global significance because of its location at the convergence of the Siberian taiga and the Central Asian steppe and deserts that form a rich diversity due to the transitional ecosystems that occur nowhere else and unique assemblage of species. Therefore, it hosts a range of globally important biodiversity, including parts of two WWF Global 35 priority eco-regions (the Amur-Heilong in Eastern Mongolia and the Altai-Sayan in Western Mongolia), as well as 2 UNESCO natural World Heritage Sites, 11 Ramsar sites, 70 Important Bird Areas (IBA) and habitat of globally endangered mammals like wild horse/Takhi (Equus ferus przewalskii), Wild Bactrian camel (Camelus ferus), Asiatic wild ass (Equus hemionus), Gobi bear/Mazaalai (Ursus arctos gobiensis), Saiga antelope (Saiga tatarica mongolica) and others.

Protected areas. Mongolia's protected area network consists of 99 protected areas covering 17.4% (27.2 million ha) of the country's territory. In addition, there are 911 locally protected areas covering 16.3 million ha and 10.4% of the total territory of Mongolia.

Physical cultural resources. Mongolia is rich in physical cultural resources. The list of important heritage, cultural and religious sites of Mongolia and its provinces revised in 1994, 1998 and 2008. In this list, total of 460 objects were registered.

Air quality is a significant environmental problem in big cities and aimag centers of Mongolia. Primary sources of air pollution include thermal power plants, small and medium sized heating boilers, traditional Gers and wooden houses, and over 400,000 automobiles. Topography and meteorology exacerbated ambient air quality conditions in the country, and particularly in Ulaanbaatar. As a result, ambient pollutant concentrations often remained for days or weeks at a time to exceed Mongolian and other international ambient air quality standards. Burning of coal and woods in the households in urban cities has been identified as major sources of air pollution, which affects ambient air quality and human health.

Energy. During the winter season, three large diesel power plants in Ulaanbaatar release 4.5 million cubic meters of gaseous pollutants, 4.14 tonnes of particulate matter, and 6.76 kilograms of carbon monoxide

into the air every hour. More than 250 steam boilers burn over 400,000 tonnes of coal every year. Gers and wooden houses with manual heating (in which 48% of the city population lives), use over 200,000 tons of coal and more than 160,000 cubic meters of fuel wood each year. For the cold seasons, the atmospheric content of carbon monoxide exceeds the permissible norm by 2-4 times.

Transportation is a major source of air pollution in urban cities and countryside. The number of motor vehicles has increased vary rapidly in big cities and settlements in a short period of time.

Water shortage and pollution. Water shortage is one of Mongolia's major socio-economic and ecological problems. Though adequate in the north it is clearly a constraint on development in the south and particularly serious in urban areas including Ulaanbaatar, where water supplies are pumped from groundwater. Little care has been taken over water supply and use. Water supply in pasture areas was improved over the period 1960/90 by construction of many wells to provide water to more than 60 percent of the rangeland, but only 40% of the existing 48,000 wells are currently functioning. Most wells drilled during the Socialist time are out of production. Effluent from factories, tanneries, processing plants, households, waste disposal sites and road runoff has polluted the main rivers where people and industry are concentrated, particularly the Tuul, Yuro, Selenge and Orkhon Rivers.

Land degradation. The change in traditional ways of livestock breeding, over cultivation of land, overuse of natural resources and other types of pressure on ecosystems combined with climate change are leading to degradation of species habitats, shrinking of the home range, fragmenting of habitat, and decreasing of their resources. Causes of land degradation in Mongolia can be divided into two categories: human-induced and natural causes. Natural causes include droughts with frequency of 2-3 years, natural drying, deficit in soil moisture, very thin layer of fertile soil, specifics of mechanical composition of soils, and strong wind in spring and autumn and dust storms. Human causes include effects raised from rapid development of farmland, mining industry, changes in traditional livestock husbandry, and overgrazing, especially around settlement areas and water points. The livestock production sector in Mongolia has reached a crossroads. The absence of policy or market-based mechanisms to control livestock numbers and a lack of awareness about rangeland degradation has led to increasing herd sizes. Increasing livestock numbers beyond the capacity of rangeland to support them can lead to acute limitations of forage and persistent rangeland degradation.

Solid waste nuisance. In Mongolia, solid wastes are disposed in the open air near the cities, towns and soum centers. These wastes are scattered about and the disposition for soil to be polluted is becoming remarkable. Particularly, there is a big gap between city enlargement and city planning projects in Ulaanbaatar, Erdenet and Darkhan cities. In Mongolia, there are no proper wastes treatment facilities. Therefore, the wastes are thrown away across the township. Particularly, Ulaanbaatar city has the serious wastes problem.

Soil contamination. In Mongolia, the soil pollution raises due to widespread drainage of chemicals from the waste oil from cars and mining process, employment of agricultural chemicals, etc. Soil is polluted due to coal handling as well as scattering of ashes on the ground.

Livestock production and cashmere manufacture. The agriculture and livestock sector in Mongolia constitute about 12.2% of GDP (2016) in comparison to the mining sector, employing about 30% of the working population. The food processing sector (such as meat processing, dairy products, and beverage) and the textiles processing sector (such as wool and cashmere) are the two fields that account for 52% (2016) of the production value in the manufacturing sectors. In terms of types of livestock recorded in 2016, the number of sheep, goats, cattle, horses, and camels are 27.9 million, 25.6 million, 4.1 million, 3.6 million, and 400 thousand heads. In the previous year of 2015, the livestock production volume was 448 thousand tons of meat, 874 thousand tons of milk, 8,900 tons of cashmere, and 26 thousand tons of wool. In 2017, the cashmere sector produced about 7,000 tons of raw cashmere, 7,000 tons of washed cashmere (85% exported), 1,050 tons of de-haired cashmere, 620 tons of spun yarn, 434 tons of knitted garments, and 186 tons of woven garment. Due to the fact that agriculture and livestock depend on diverse natural

resources, the different regional conditions directly impact the production level. Changing seasons, harsh weather, zuds or snowstorms, and other inevitable climate change implications further fluctuate and challenge the supply of raw materials and pose as a nationwide threat to the development of agriculture and livestock.

5.2. Social baseline

Population. Mongolia is one of the most sparsely populated countries in the world, as of 2019 with a population of 3 296 866 with an average growth rate of 1.9%. Approximately 67.5% (2 146 716) of the total population lives in cities, out of which about 68% (1 462 973) is accounted for by the capital Ulaanbaatar. Population density in rural areas thus averages 0.5 inhabitants per square kilometer, which reflects also the dominance of mobile pastoralism as the main rural livelihood throughout the country.
Indigenous people and ethnic and minority groups. Mongolia is a quite homogenous, sparsely populated country. While some 85 percent of the population is of Mongol background, there is a fairly substantial (about 4 percent) Kazakh-speaking Muslim minority concentrated mainly in the northwest corner of the country in the western province of Bayan-Ulgii. Documented Kazakh migration to Mongolia begins in 1840 with many migrants arriving from areas now Western China. Records suggest that in 1905, there were 1370 Kazakh households, increasing to 1,870 households by 1924 (the year Mongolia adopted socialism). By 1989, the Kazakh population grew to approximately 120,000 individuals. As of September 2020, Mongolia has not ratified the ILO C169 Indigenous and Tribal People's Convention.
Gender. In 2011, the peak year of Mongolia's economic growth, the Law on the Promotion of Gender Equality was passed, with its Article 5 defining the principle of gender equality as "men and women shall have opportunities and conditions to enjoy and to equally participate in political, economic, social, cultural, family and other relations, and to equally participate in social life and equally access the benefits of development and social wealth." The World Economic Forum's gender gap indicator for economic participation and opportunity which placed Mongolia 21st in 2006 with a score of 0.704 and moved up to the 20th place in 2018 with a score of 0.780.
Poverty. According to the World Bank and the National Statistics Office joint study, in 2018, the poverty gap—which measures the depth of poverty by estimating how far off households are from the poverty line—was estimated at 7.2 percent. Poverty severity, which measures the degree of inequality among the poor by putting more weight on the position of the poorest, has decreased to 2.7 percent as of 2018. Poverty concentration is growing in urban areas. During the period between 2016 and 2018, the poverty rate declined by 4.1 percentage points in rural areas but increased by 0.1 percentage point in urban areas. While poverty rate remains high in rural areas, with two-thirds of the total population of Mongolia living in urban cities, poverty has become concentrated in urban areas. As of 2018, proportion of population living below the national poverty line was 28.4%.
Education. The educational system of Mongolia is composed of kindergarten, primary school, secondary school and university facilities. Every Soum has at least one nursery school and kindergarten. There are often also privately-run nursery building and facilities (for children over the age of 3). Each Soum centre has building with boarding facilities, where children from the more remote herder families are accommodated. Primary and secondary schooling used to be for 10 years, but was extended to 11 years. The school year of 2008-2009 marked the beginning of the 12-year system. In Mongolia, the school year begins in September. Pupils who want to complete secondary school often need to attend building in the Aimag centres. Generally, men and women in rural areas have attended school up to year 8 and can read and write. Girls and boys have equal access to building, vocational training and other state services.
Health care. In the mid-1990s, the health sector reform focused on improving primary health care and disease prevention. This, along with economic development, contributed to improvements in health status over the last 15 years. Within the framework of health, the most critical gender issue is the gap

between female and male average life expectancy. At the global level, women on an average live 4.3 years longer than men, in 2018, this figure for Mongolia was 9.67 years, compared to 4.19 years in 1992. But the average life expectancy of men dropped suddenly in the years from 1995 to 1998, which was the negative impact of the transition to a free market economy. However, after 2000, average life expectancy has been growing consistently, while gender inequality has been increasing (Asian Development Bank, 2018). The leading causes of mortality are non-communicable diseases (cardiovascular diseases and oncological) and external causes (injuries and poisonings). Respiratory and digestive system diseases are the main causes of morbidity, along with external causes (injuries and poisonings) in urban areas and urinary tract diseases in rural settings. The health system is decentralized to the level of the Aimag. The majority of health services are delivered by the public sector.

6. POTENTIAL IMPACTS AND MITIGATION MEASURES

6.1. Environmental impacts and mitigation measures

Given the digital nature of the proposed project, it will not lead to any large scale or significant impacts on the environment in its target areas. However, as part of the component 2 of the proposed project, herder cooperatives may be able to acquire some assistance on establishing small scale productive infrastructure such as sheds, fences or bath tubs, which might have a low degree of environmental impact on the ground.

Potential environmental impacts of small civil works such as animal shelter refurbishment and installation of mobile baths or fences may include but are not limited to:

- Dust emission
- Noise pollution
- Wastewater and solid waste generation
- Traffic disturbance of local areas

While these impacts may occur, they are likely to be small, temporary and localized, hence, could be mitigated by adopting good civil works practices outlined in Annex 2.

The project potential environmental impacts and mitigation measures are shown in below table.

Table 4 Project environmental impacts and mitigation measures

Project phase	Potential environmental impacts	Mitigation measures
Construction	• Noise pollution • Dust emission • Solid waste generation (such as trash and garbage, demolition materials, empty containers) • Traffic disturbance	• Small civil work planning activities in consultation with local communities to ensure least disturbance to their day to day life • Avoiding or minimizing project transportation through community areas • Minimizing dust from material handling sources and utilize dust suppression techniques • Instituting good housekeeping and operating practices • Implement waste segregation at small civil work sites • On-site and off-site transportation of waste should be conducted so as to

		prevent or minimize releases and exposures to employees and the public • Maintain supplies for traffic signs to maintain pedestrian safety during small civil work
Operation	• Wastewater generation • Dust emission • Solid waste generation • Water and soil pollution due to chemical substance use in bath tubs • Excessive use of electricity • Excessive use of water • Pasture degradation due to increased goat numbers in relation to cashmere production	• Effectively implement project ESMF • Provide guidance and training to stakeholders • Development and implementation of subproject EMP that outlines mitigation measures such as waste management • Adopt environment friendly practices • Minimizing dust from material handling sources and utilize dust suppression techniques • Regular review of energy use and training on efficient use of energy • Regular measurement and recording of water use • Regularly maintain plumbing, and identify and repair leaks • Develop and distribute pasture and natural resources management guidance and handouts to herders and other stakeholders

6.2. Social impacts and mitigation measures

The project is expected to have positive social impacts on the ground by introducing innovative digital solutions. Not only that, it may improve herders' connectivity to other stakeholders, markets and services, hence, could increase their household income from livestock products, particularly wool and cashmere. The project will not create resettlement or income loss of households and also will not have any adverse impacts on ethnic minorities. According to the reports from the Cabinet Office of Mongolia, the projects being implemented in rural area have positive impact on the local employment as these projects organize extensive capacity building activities and trainings for local herders and farmers. Construction of small buildings/facilities will generate local employment, as number of unskilled laborers (both men and women) will be required at the time of small civil work activities. Local employment during this period will increase socio-economic standards. The project will not affect any sites or locations of archaeological, historical or cultural importance. Neither will it affect recognized or registered national/provincial objects of cultural heritage and religious sites in project aimags under State and Provincial protection.

Potential social impacts of the project during construction and operation stages are identified in Table 5 along with mitigation measures.

Table 5 Project social impacts and mitigation measures

Project phase	Potential social impacts	Mitigation measures
Construction	• Slips and falls • Work in heights • Moving machinery	• Implementing good house-keeping practices such as the sorting and placing loose construction

	• Increase in local soum traffic	materials in established areas away from foot paths • Training and use of personal fall arrest systems such as full body harnesses • Planning and segregating the location of vehicle traffic, machine operation and walking areas • Maintain supplies for traffic signs to maintain pedestrian safety during small civil work
Operation	• Conflict between digital cooperative and non-digital cooperative households • Increase in local soum traffic • Increase in local labor hire	• Effectively implement project ESMF, particularly SEP and LMP • Provide guidance and training to stakeholders

6.3. Occupational health and safety hazards and mitigation measures

The IFC and WB's Environmental, Health, and Safety (EHS) Guidelines are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP). The Environmental, Health and Safety Guidelines for Dairy processing, Meat processing, Mammalian livestock production and Textile manufacturing will be applied for occupational safety framework of the Virtual cooperatives project. These industry sector EHS guidelines are designed to be used together with the General EHS Guidelines document, which provides guidance to users on common EHS issues potentially applicable to all industry sectors.

Table 6 OHS hazards and mitigation measures

Production sector	Occupational health/safety hazards	Measures for occupational health and safety controls
Dairy processing	Physical hazards	Maintain walking and working surfaces clean and dry and provide workers with antislip footwear; Provide workers with training in the proper use of equipment (including the proper use of machine safety devices) and personal protective equipment (PPE), such as hearing protection; Ensure that the process layout reduces opportunities for process activities to cross paths, thus avoiding collisions and falls; Demarcate transport corridors and working areas and ensure the proper placement of handrails on platforms, ladders, and stairs; Ground all electrical equipment and installations in wet rooms.
	Biological hazards	Avoid dust- and aerosol-generating activities (e.g. use of compressed air or high-pressure water for cleaning) and, where they cannot be avoided, provide proper ventilation of enclosed or semi-enclosed areas to reduce or eliminate exposure to dust and aerosols;

		Install exhaust ventilation equipped with filters and / or cyclones, at sources of dust; Provide workers with PPE that is appropriate for the process activity; Ensure physical segregation of work and welfare facilities to maintain worker personal hygiene; Avoid direct contact with non-conforming dairy products
	Chemical hazards	Replacement of the hazardous substance with a less hazardous substitute Implementation of engineering and administrative control measures to avoid or minimize the release of hazardous substances into the work environment keeping the level of exposure below internationally established or recognized limits Keeping the number of employees exposed, or likely to become exposed, to a minimum Communicating chemical hazards to workers through labeling and marking according to national and internationally recognized requirements and standards, including the International Chemical Safety Cards (ICSC), Materials Safety Data Sheets (MSDS), or equivalent. Any means of written communication should be in an easily understood language and be readily available to exposed workers and first-aid personnel Training workers in the use of the available information (such as MSDSs), safe work practices, and appropriate use of PPE
	Exposure to heat, cold and radiation	Workers at dairy processing facilities may be exposed to heat from process activities and cold in refrigeration areas and rooms. Recommendations for the management of exposure to heat and cold are presented in the General EHS Guidelines.
Mammalian livestock production	Exposure to physical hazards	Ensure that all underground manure storage tanks and lagoons are properly covered and fenced off at a sufficient height; Store liquid manure (e.g. in barn pits, pumping stations, storage tanks, and application tankers) to minimize release of dangerous gases (e.g hydrogen sulfide); Design pens, gates, and chutes to facilitate movement of livestock and reduce the need for farm workers to enter pens; Instruct staff in correct livestock care, to reduce the incidence of bites and kicks.
	Exposure to chemical hazards	Replacement of the hazardous substance with a less hazardous substitute Implementation of engineering and administrative control measures to avoid or minimize the release of hazardous substances into the

		work environment keeping the level of exposure below internationally established or recognized limits Keeping the number of employees exposed, or likely to become exposed, to a minimum Communicating chemical hazards to workers through labeling and marking according to national and internationally recognized requirements and standards, including the International Chemical Safety Cards (ICSC), Materials Safety Data Sheets (MSDS), or equivalent. Any means of written communication should be in an easily understood language and be readily available to exposed workers and first-aid personnel Training workers in the use of the available information (such as MSDSs), safe work practices, and appropriate use of PPE
	Exposure to biological agents	Inform workers of potential risks of exposure to biological agents and provide training in recognizing and mitigating those risks; Provide personal protective equipment to reduce contact with materials potentially containing pathogens; Ensure that those who have developed allergic reactions to biological agents are not working with these substances.
	Confined spaces	Engineering measures should be implemented to eliminate, to the degree feasible, the existence and adverse character of confined spaces. Permit-required confined spaces should be provided with permanent safety measures for venting, monitoring, and rescue operations, to the extent possible. The area adjoining an access to a confined space should provide ample room for emergency and rescue operations. Access hatches should accommodate 90% of the worker population with adjustments for tools and protective clothing. Before workers are required to enter a permit-required confined space, adequate and appropriate training in confined space hazard control, atmospheric testing, use of the necessary PPE, as well as the serviceability and integrity of the PPE should be verified.
Meat processing	Physical hazards	Providing workers with training in the proper use of cutting equipment (including the proper use of machine safety devices) and personal protective equipment (PPE) such as metallic gloves and leather aprons for cutting activities; Ensuring that ritual slaughter is carried out by individuals who have received the correct training and have subsequently been approved to slaughter animals; Designing a proper slaughterhouse floor that is slip-proof when wet.

		Training workers in proper live animal handling methods including the use of structures and equipment for handling and restraining animals; Designing appropriate pen /lairage/ livestock yards such that the animals can be calmly moved into the facility, and which allows for escape routes for the workers; Conducting stunning of cattle in a controlled setting (e.g. stun-box).
	Biological hazards	Avoiding dust and aerosol generating activities (e.g. use of compressed air or high pressure water for cleaning) and where they cannot be avoided providing proper ventilation of enclosed or semi-enclosed areas to reduce or eliminate exposure to dust and aerosols; Providing workers with PPE that is appropriate for the activity (e.g. protective clothing, gloves and masks) for workers in intestine and stomach cleaning operations; Ensuring physical segregation of work and welfare facilities to maintain worker personal hygiene; Designing holding areas for detained animals and high-risk materials to avoid direct contact with workers and ensuring that all waste materials, including those from rejected animals, are removed daily.
	Chemical hazards	Take precautions (as described in the General EHS Guidelines) when handling and storing detergents and disinfectants. Chemicals should not be stored or transported with food or beverages, and should be secured in a locked and clearly identified area; Prevent seasonal and other temporary workers from working with chemicals until they have been fully trained; Provide respiratory protection and impermeable clothing for use during disinfection of pens and lairage areas.
	Exposure to heat, cold and radiation	Workers may be exposed to fluctuating internal climatic conditions, including heat and radiation from scalding, singers, brushing, black scrapers, and flame off, and cold from refrigerated rooms. Recommendations for the management of these hazards can be found in the General EHS Guidelines.
	Exposure to sources of noise	Occupational noise and vibration exposure sources include electrical stunning of pigs, electric saws, steam, condensers, ventilation, banging of equipment, and pressurized air equipment. Recommendations for the management of noise and vibration hazards can be found in the General EHS Guidelines.
Textile manufacturing	Chemical hazards	Installation of dust extraction, recycling and ventilation systems to remove dust from work areas, especially in cotton mills; Use of vacuum cleaning of surfaces instead of compressed air “sweeping” techniques; Implementation of regular housekeeping procedures, especially in the “flocking” area;

		Use of mechanical methods to handle cotton and cotton waste; Use of personal protective equipment (PPE) for exposed workers, such as masks and respirators, as necessary.
	Physical hazards	Provide workers with training in the proper use of equipment (including the proper use of machine safety devices) and personal protective equipment (PPE), such as hearing protection; Ensure that the process layout reduces opportunities for process activities to cross paths, thus avoiding collisions and falls; Demarcate transport corridors and working areas and ensure the proper placement of handrails on platforms, ladders, and stairs; Ground all electrical equipment and installations in wet rooms.
	Heat	The most significant risk of exposure to heat and high humidity occurs during wet processing and dry finishing operations and is caused by the use of steam and hot fluids in these processes. Prevention and control recommendations are presented in the General EHS Guidelines.
	Noise	The main sources of noise in textile plants are associated with yarn processing (e.g. texturizing and twisting and doubling) and woven fabric production. Noise management, including the use of personal hearing protection, is described in the General EHS Guidelines.
	Ionizing and non-ionizing radiation	X-ray stations are sometimes used for continuous monitoring of the foam thickness in continuous foam dyeing and for tank level control systems. Operators of this equipment should be protected through the use of ionizing radiation protection measures to limit exposure doses, as described in the General EHS Guidelines.

6.4. Measures to improve animal welfare

The animal welfare will be recognized in importance in commercial livestock operations within the project. National and local Governments, livestock husbandry institutions, and herders and other project stakeholder should address animal welfare at different points in the agricultural supply chain, while consumers are demanding higher standards for food safety and animal welfare. Therefore, MOFALI and its PIU will apply the IFC's guidance on acceptable animal welfare practices.

Measures of animal welfare include behavior and physiology, productivity, reproductive success, mortality rates, and incidence of injury and disease. Attention to animals' housing, food, water, and health can improve their welfare, their productivity, and profitability. Productivity should be assessed in conjunction with other measures to ensure that animal welfare is appropriately addressed and managed. The project will focus not only on productivity of livestock but also concern to develop good animal welfare conditions. Therefore, herders, farmers and cooperatives should adhere to following requirements:

- Ensure livestock is provided with adequate pasture and water sources
- Ensure livestock is not caged or fenced

- Ensure livestock has freedom to express their natural behavior
- Ensure livestock is provided with shelter that is protected from extreme sunlight, cold or wind
- Ensure cattle has larger space compare to other small animals
- Ensure livestock is not separated from its herd unless it is giving birth or sick
- Ensure livestock shelter remains clean at all times

6.5. Procedures to address environmental and social impacts

In order to fulfill the requirements of the Bank environmental policy and the ESSs, the ESMF process will follow the stages of screening-assessment, preparation-appraisal, approval-implementation and monitoring-evaluation. Initially, a scoping/screening will be carried out to categorize subproject into one of high, substantial, moderate or low risk. The complete scoping/screening form is set out in Annex 1. The results of the such screening shall indicate the follow-up actions required for subprojects categorized as moderate. An in-depth assessment of adverse environmental, social and climate impacts and risks is obligatory for subprojects categorized as moderate. Project impacts that would lead to a subproject being categorized as high or substantial make the subproject ineligible for funding.

Where national law does not require a detailed EIA, but the subproject is categorized as moderate, depending on the results of environmental and social risk screening, the PIU may decide any of the following: (a) if potential impacts are significant, issue a ToR for in-depth ESIA, or if the potential risks are minor and (b) within the field of expertise of the subproject proponent, request the project proponent to develop an Environmental and Social Management Plan (ESMP), or not within the field of expertise of the project proponent, (c) issue a ToR for an ESMP to be produced by a consultant.

The ESMP should be prepared in line with WB's ESF and include measures relevant to all subproject sites. Mitigation measures are developed in relation to the design, construction and operation of each subproject output, and the impacts identified in relation to the resources in the environmental baseline, as set out in this ESMF.

The ESMP need to define the roles and responsibilities of the institutions involved in ESMP implementation. Such institutions will seek to ensure continuous improvement of environmental protection activities during preconstruction, construction, and operation of the project in order to prevent, reduce, or mitigate adverse impacts. The key sections of the ESMP include:

- Implementing organizations and their responsibilities
- Mitigation measures
- Monitoring plan
- Reporting
- Training, capacity building and awareness
- ESMP costs
- Mechanism for feedback and adjustment

Once subproject ESMP is developed and approved by the relevant regulatory body or the PIU, it shall be set out for implementation. During the ESMP implementation, the monitoring of the environmental and social aspects shall be done at the subproject sites by the ESS of the PIU of MOFALI as per prior defined schedule. During the construction phase, small civil works contractors should ensure that activities like handling of earth works clearing work, access road construction, putting proper traffic signals is done

properly to have minimum impact. (The Environmental Specifications for Small civil work is attached in the Annex 2).

The environmental monitoring plan is to be utilized for measuring the extent of compliance with the ESMP during the project implementation. The main objective of environmental monitoring is:

- to evaluate the performance of construction company in mitigating negative impacts vs. the proposed measures in the
- to provide information on unanticipated adverse impacts or sudden change in impact; to determine if any impacts are irreversible in nature which required remedial measures and monitoring
- to suggest improvement in environmental mitigation measures, if required

Implementation of environmental mitigation measures will be ensured through both routine and periodic monitoring. Implementation of environmental mitigation measures will be ensured through both routine and periodic monitoring. Environmental monitoring activities during construction and operational phases are shown in below tables.

Table 7 Construction phase monitoring

No.	Indicators of Monitoring	Types of Monitoring/ Method of Monitoring	Monitoring Frequency	Responsibility
1	Safe transportation of construction material through neighborhood and roads	Visual Inspection Continuous	Regular during construction	Small civil works contractors
2	Stockpiling of excavated materials and appropriate disposal	Visual Inspection	Regular during construction	Soum/small civil works contractors
3	Occupational health and safety, use of safety gears by workers	Use of PPE Visual Inspection	Regular during construction	Small civil works contractors
4	Safety to residents, staff, ger dwellers etc.	Record of injury or accidents	Regular during construction	Soum government
5	Inconvenience to ger dwellers, water logging etc.	Visual Inspection Continuous	Regular during construction	Soum/small civil works contractors
6	Solid waste segregation disposal	Visual Inspection	Regular during construction	Small civil works contractors
7	Cutting/trimming of trees	Continuous	Regular during construction	Soum, small civil works contractors

Table 8 Operations phase monitoring

No.	Indicators of Monitoring	Types of Monitoring/ Method of Monitoring	Monitoring Frequency	Responsibility
1	Solid waste management system	Records of waste collected and managed	Bi-annual	Soum/ PIU
2	Number of orientation and trainings on safety, facility usage to workers, staff	Number of orientation and trainings conducted	Regular	Soum/ PIU
3	Preparation of monitoring reports and Impact audits	Preparation of monitoring reports and Compliance with EMP	Bi-Annual	Soum/ PIU

The construction company will adhere and comply with all measures and procedures identified in the EMP. The plans, endorsed by the Government of Mongolia, will be monitored in accordance to WB ESF requirements. Mitigation measures related to small civil works will be incorporated into civil works contracts, and their implementation will be primarily the responsibility of small civil works contractors. In addition, small civil works contractors will be requested to submit monthly progress reports on the implementation of EMP measures. The PIU ESS in turn will be expected to report to the WB on progress achieved against the EMP activities and milestones on a quarterly basis. Progress reports will include a description of implementable activities and their status; identify the responsible party (ies) involved in their implementation; and provide project management schedules and timeframes for doing so, along with their associated costs.

7. PROJECT IMPLEMENTATION ARRANGEMENTS, RESPONSIBILITIES AND CAPACITY BUILDING

7.1. Project implementation organization: Roles and responsibilities

Grant Recipient. The MOFALI is the grant recipient and will create a dedicated project management unit (PMU) for the JSDF project. The PMU will be responsible for overall day-to-day implementation and coordination and shall be led by the Project Coordinator of the already established Project Implementation Unit (PIU) of the Livestock Commercialization Project (LCP). Key staff will include qualified staff under satisfactory terms of references (ToRs), notably a livestock extension expert, an e-agriculture expert, and a fair-trade expert. The PMU will leverage the monitoring, safeguards, fiduciary management systems, and other back-end support of the LCP PIU. The functions of the PMU will include (i) developing project implementation strategies, (ii) coordination with implementing agencies and field facilitation partners, (iii) leading digital content development and service deployment, (iv) developing partnerships with leading wool and cashmere firms and other services providers; (v) coordinating with the Livestock Commercialization PIU for procurement and fiduciary activities; (viii) monitoring reporting and verification protocols.

Technical Support Agency. Digital Green - a non-profit development organization with global impact - brings together technology and social organizations to improve agriculture, health, and nutrition. Digital Green will take the lead on (i) conceptualizing, developing and deploying the digital platform for use of the project, (ii) training of local partners and key agencies in developing high-quality knowledge content and service stack in the areas of animal health, livestock productivity, women enterprise training in wool and cashmere sectors, diet, nutrition and health counseling for women beneficiaries, etc., (iii) facilitate collaboration with other digital service providers for integrating with the digital platform, (iv) providing technical oversight and reports to MOFALI/World Bank. Digital Green specializes in collaborating with local governments and mobilizing rural communities to jointly digital solutions that are 'of the community' and 'for the community'. Digital Green has proven experience working with poor and vulnerable households and is actively engaged in India, Ethiopia, Afghanistan, Bangladesh, Ghana, Guinea, Malawi, Mozambique, Niger, Senegal, and Tanzania. They have also collaborated with several World Bank projects in agriculture and rural development sectors for revitalizing extension systems and information, education, and communication (IEC) campaigns, backed by behavioral insights research.

Facilitating Agencies. The project will hire Facilitating Agencies (FAs), as needed, NGOs, CSOs, professional associations, and/or development agencies to mobilize rural herder communities into virtual cooperatives, build their capacities, facilitate the delivery of services to herder cooperatives. The pilot will consider partnering with successful fintech and IT start-ups in Mongolia, such as NEST Academy and START Mongolia. Competitive recruitment or a mini-innovation challenge may help to identify potential partners with innovation potential that could work with PIU and Digital Green and help to create a local ecosystem

to accompany Digital Green. This approach would also build local capacity to maintain and update the platform after the pilot project ends.

7.2. Project organization structure

The interactions between MOFALI, technical agency, facilitating agency and the LCP PIU at the project level are shown in Figure 1.

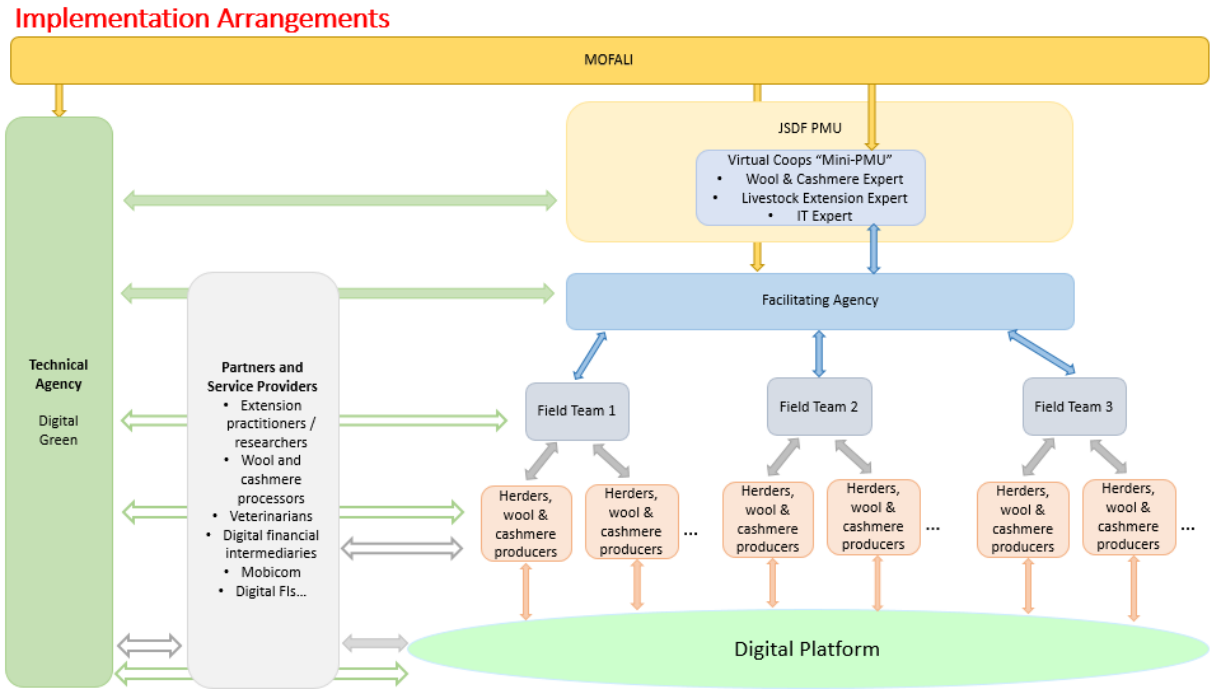

Figure 2 Project implementation arrangements

7.3. ESMF implementation arrangements

The PIU will assume primary responsibility for the environmental assessment as well as implementation of ESMF. The Project Coordinator will be assisted by the PIU's Environmental and Social Specialist (ESS) for environmental assessment and monitoring. The duties of the PIU's Environmental and Social Specialist will include at a minimum: (i) oversight of Small civil work contractors and all subprojects for monitoring and implementing mitigation measures; (ii) liaising with the local Government, subproject proponents and Civil works contractors and seeking their help to solve the environment-related issues of project implementation; and (iii) technical progress reporting as well as preparation of environmental management reports every 6 months (as required by WB).

7.4. Capacity building for implementing ESMF

All local staff and contractors of the project must be adequately trained prior to implementing the project activities on the ground. During signing the employment contract the Project Coordinator and ESS should review the staffs' skill sets against new roles or responsibilities needed for following-up the ESMF. Each staff should explain where additional training might be needed to have the necessary skills to ensure and execute the ESMF for project aimag/soums.

ESS and M&E officer provide an orientation to the ESMF. The orientation discusses the following topics:

- Background and Current Status of the LCP Project.
- Overview of the project soums' social and environmental conditions,
- LCP's PDO and planned activities, potential processing units/activities could be supported by project including planned investment, coordination, supervision, assistance needed etc.
- Introduction to the Staff and Consultants, and their role and responsibilities.
- Introduction to project applicants
- Introduction important standards and their use and control
- Specific Job Duties and Expectations relevant to ESMF.
- Introduction on supervising and monitoring process
- Overview of the facility, equipment and logistics.
- Result of reviewing of ESMF and EMPs.
- Introduction to principles e.g. communicating with applicants and stakeholders, data collecting, monitoring in the field sites etc.
- Introduction to monitoring schedules and other information.

Each of training should last 1-2 days minimum with specific program and should include interactive problem-solving tasks. The training program will be developed by a consultant which will be contracted with the PIU during project implementation. The effectiveness of trainings conducted will be evaluated and reported in the semi-annual project progress report.

Table 9 Training program - summary of training needs

Training topic	Training purpose and content	Participant	Frequency or target date	Estimated cost for training (USD)
Induction to ESMF	Overview of ESMF including site information, pollution risks and controls, and E&S procedures, SEP, LMP and GRM.	All staff of the project / local staff, contractors	At beginning of employment / contract	5000
Project environmental and social instruments	Project environmental and social procedures, SEP, LMP and GRM. Restrictions related to Covid-19.	All staff of the project / local staff, contractors	At beginning of employment / contract	3000
Refresher training on ESMF	Review of ESMF including new changes and updates	All staff of the project / contractors	One year after employment or commences, or more frequently if required	3400
Waste management	General Waste Management, Waste Management Planning, Waste Recycling and Reuse, Treatment and Disposal. Hazardous Waste Management, Waste	All stakeholders	Within project framework	5000

	Storage, Transportation, Treatment and Disposal Commercial or Government Waste Contractors Small Quantities of Hazardous Waste Monitoring			
Environmental issues of cashmere and livestock sector	Resource efficiency, pollution management, OHS management and animal welfare in livestock and cashmere sector	Virtual cooperative members/herders	Within project framework	7000
Environmental code of practice for small civil works and measures for resource efficiency and pollution management	Environmental and OHS requirements for small civil work	Small civil work contractors	Prior to commencement of small civil works	5000

8. INFORMATION DISCLOSURE, CONSULTATION AND PARTICIPATION

8.1. Public consultations during project preparation

Before finalizing the project design and ESMF, a number of consultations and engagement sessions were held with stakeholders representing different sectors to inform of the proposed project and receive their feedback on the project design and ESMF. These activities are summarized below.

Table 10 Summary of previous engagement/consultation

No.	Date and location	Participant(s)	Topic	Outcome
1	Sept 9, 2020 Virtual call	Batsukh, Director Animal Hygiene, General Authority for Veterinary Services Khanimkhan, National Agricultural Extension Center Erkhembayar, President, National Association of Zoo Technicians and Animal Breeders Altantuya, National Association of Mongolian Agricultural Cooperatives	Shared project concept note, heard their view and received feedback.	Mobilizing herder cooperatives virtually can be challenging as a large number of them do not function well in the real world. Consider virtually linking cooperatives, first, then link the individual herders in the second step. Agreeing with project design, activities and strategies.

		Dondogdorj, MOFALI		
2	Sep 10, 2020 Virtual call	Bolor-Erdene Battsengel, Chairperson, Mongolian Communications and Information Technology Authority (CITA)	Shared project concept note, heard their view and received feedback.	Agriculture Gov't services should be linked to the e-Governance platform under which MOFALI will set up its digital services A multi-step approach seems sensible: the pilot will test approaches in few locations ("laboratory") and will produce lessons learned; MOFALI can migrate successful elements into its platform once developed
3	Sep 10, 2020 Virtual call	Enkh-Amgalan Tseelei, Project Manager of Green Gold, Swiss Government funded project	Shared project concept note, heard their view and received feedback.	Agrees with project design, activities and strategies Consider diversification since herders have a variety of animals: Yak wool is compared to “3d grade cashmere”, more pasture friendly grazing, good productivity
4	Sep 11, 2020 Virtual call	Eriko Tamura, Chief Representative, JICA Mongolia Office	Shared project concept note, heard their view and received feedback.	Confirmed project concept, interested in collaborating Connectivity is a big problem in remote areas; connectivity is available just in aimag centers
5	Sep 11, 2020 Virtual call	Vinod Ahuja, Country Director, FAO Amartogtokh Misha, Mongolia Animal Health Identification System (MAHIS)	Shared project concept note, heard their view and received feedback.	Concerns on integrating various existing platforms and databases
6	Sep 16, 2020 Virtual call	Enkh-Ireedui, Head of SME Banking Department, Khan Bank Bilguun, Manager, SME Banking Department, Khan Bank Ulambayar, Head of Retail Banking Department, Xac Bank Altanzul, CEO, TransCapital NBFI	Shared project concept note, heard their view and received feedback.	Agrees with project design, activities and strategies, and interested in collaborating in various areas
7	Sep 16, 2020	Herders and local government officials of Zuunmod soum	Shared project concept note, heard their view and received feedback.	Fully supports and agrees with project design, activities and strategies

	Zuunmod soum, Tuv aimag			Herders' digital literacy is a big concern
8	Sep 17, 2020 Erdene soum, Tuv aimag	Herders, local government officials and herders' cooperative of Erdene soum	Shared project concept note, heard their view and received feedback.	Fully supports and agrees with project design, activities and strategies Herders' digital literacy is a big concern
9	Sep 17, 2020 Virtual call	Enkhbat, Chief Executive Director, Unitel Group Juldyz, Business Development and Data Analysis Division Manager, Unitel Group	Shared project concept note, heard their view and received feedback.	They have a variety of applications and tools that they are ready to offer for use and interested in collaborating
10	Sep 17, 2020 Virtual call	Chantsallkham Jamsranjav, Manager South Gobi Cashmere Project, WCS Mongolia Jutta Reahg, Senior Technical Expert, GIZ Nyamkhuu Tsoodol, ICT/IT Technical Advisor to MOFALI, FAO Shinenemekh Volooj, Sustainable Cashmere Platform, UNDP Mongolia Jan Hinrichs, Senior Natural Resources Economist, Environment, Natural Resources and Agriculture Division, ADB	Shared project concept note, heard their view and received feedback.	Digital tools are promising to use; establish cashmere traceability (blockchain successfully tested in cashmere and applied by the private sector in meat), important to coordinate standards with ongoing activities in cashmere; link to resource management, which is critical for sustainability of the cashmere industry
11	Sep 17, 2020 Ulaanbaatar	Tatsuya Hamada, CEO, Mobicom Corporation Oyunchimeg, Director, Digital business division, Mobicom Corporation Munkhzorig, Director, ICT Department, Mobicom Corporation	Shared project concept note, heard their view and received feedback.	They have a variety of applications and tools that they are ready to offer for use and interested in collaborating

12	Sep 18, 2020 Virtual call	Miyashita Hiromichi, Japanese Embassy	Shared project concept note, heard their view and received feedback.	Confirms project design Requests to link to JICA projects
13	Sep 18, 2020 Virtual call	Batkhishig Baival, Country Director, Sustainble Fibre Alliance Mongolia	Shared project concept note, heard their view and received feedback.	Validates project design: linking remote herders into organized value chains using digital tools = needed and timely; lots of potential
14	Sep 18, 2020 Virtual call	Nyam-Ochir Gankhuyag, Executive Director, National Federation of Pasture User Groups Namuulan, Training Officer, National Federation of Pasture User Groups	Shared project concept note, heard their view and received feedback.	Project concept is feasible Timely to harness digital technologies
15	Sep 18, 2020 Virtual call	Erdenebayar, Lecturer and Head of the Board of Directors, Mongolian University of Life Sciences (MULS) Erdenechuluun, Prof. of Economics, MULS Batjargal, Prof. of Statistics and Econometrics, MULS	Shared project concept note, heard their view and received feedback.	Have knowledge base that can support the project

8.2. Public consultations during project implementation

Stakeholder consultation involves the development of constructive, productive relationships over the long term. It would enable the MOFALI to understand stakeholders' concerns regarding project activities and outcomes, and will be used to improve the project efficiency and effectiveness. It would also allow for identifying environmental and social risks and impacts at early stages to ensure immediate mitigation or intervention. Virtual cooperatives project will employ instruments such as in-person and virtual meetings, focus group discussions, key informant interviews and surveys for consultation. Given the project priority to empower vulnerable herder households and support women, the MOFALI will identify potential barriers and difficulties, which may prevent these groups from attending the project stakeholder meetings and receiving project related information and news. Project information disclosure and stakeholder consultation systems will therefore be particularly attuned to the challenges and obstacles faced by vulnerable and disadvantaged groups and the LCP PIU will take special measures that suits these stakeholders' needs. Since some disadvantaged households may lack means of transporting to meeting locations or having labor who could replace them in their absence, the PIU will ensure to organize project dissemination workshops and stakeholder consultations closer to their residence and where required, may provide some assistance with transportation and meal allowances.

Table 11 Project public consultation

No.	Stakeholders	Topic of consultation	Method used	Location/Dates	Responsibilities
1	Project beneficiaries	Project introduction, announcements of planned activities, associated risks and mitigation measures. Project progress Project outcomes and major achievements	Focus group Community events Key informant interview	Project soums/ bi-annually	PIU
2	Local government	Project progress updates Project cooperation opportunities Project outcomes and major achievements	Project progress workshops Key informant interview	Project soums/ bi-annually	PIU
3	Wool and cashmere producers and buyers	Project progress Project cooperation opportunities	Community events Workshops	Project soums/ bi-annually	PIU
4	Livestock service providers	Project progress Project cooperation opportunities	Community events Workshops	Project soums/ bi-annually	PIU
5	NGOs and CSOs	Project progress Project cooperation opportunities	Community events	Project soums/ bi-annually	PIU
6	Government stakeholders	Project progress updates Project outcomes and major achievements	In-person meetings	Project soums/ bi-annually	PIU

8.3. Information disclosure

In order to ensure effective and meaningful engagement with project stakeholders, the MOFALI will utilize various kinds of tools. During the project design consultation meetings, local stakeholders such as herders and government officials have identified TV, text messages and community meetings as most useful and engaging tools to receive information and exchange ideas. Therefore, in addition to these approaches, news releases on LCP and MOFALI websites as well as social networking websites will be used to disclose information to project stakeholders. MOFALI will respond to concerns and grievances of project-affected parties related to the environmental and social performance of the project in a timely manner. For this purpose, a Grievance Redress Mechanism (GRM) will be established and widely communicated with the project stakeholders.

Table 12 Project information disclosure

No.	Stakeholders	List of information to be disclosed	Method	Location/ Frequency	Responsibilities
1	Project beneficiaries	Project information including E&S instruments Benefits of the project Grievance redress mechanism	Information meetings Social media posts through platforms such as Facebook Printed materials	Project soums/ Bi-annually.	Environmental and social specialist
2	Local government	Project information and updates including its benefits	Information meetings Social media posts through platforms such as Facebook Printed materials	Project soums/ Bi-annually.	Communication and Advocacy specialist
3	Wool and cashmere producers and buyers	Project information, opportunities and updates	Information meetings Social media posts through platforms such as Facebook	Project soums and Ulaanbaatar/ Quarterly	Communication and Advocacy specialist
4	Livestock service providers	Project information, opportunities and updates	Information meetings Social media posts through platforms such as Facebook	Project soums and Ulaanbaatar/ Quarterly	Communication and Advocacy specialist
5	NGOs and CSOs	Project information and updates	Information meetings Social media posts through platforms such as Facebook	Project soums and Ulaanbaatar/ Quarterly	Communication and Advocacy specialist
6	Government stakeholders	Project information and updates	Information meetings Social media posts through platforms such as Facebook Printed materials	Project soums and Ulaanbaatar/ Quarterly	Communication and Advocacy specialist
7	Disadvantaged or vulnerable groups	Project information including	Information meetings	Project soums/ Bi-annually.	Communication and Advocacy specialist

		opportunities and benefits Grievance redress mechanism	Printed materials Workshops		

8.4. Grievance redress mechanism

8.4.1. Grievance redress mechanism objective

The objective of this GRM is to address complaints if or when they arise. As a result, a GRM will be established in each project aimag, in accordance with relevant laws and Government practices. The GRMs will remain accessible throughout project implementation stage until a Project Completion Report is issued.

8.4.2. The Grievance redress mechanism

Timely and effective redress of stakeholder grievances will contribute to bringing sustainability in the operations of a project. In particular, it will help advocate the process of forming and strengthening relationships between project management and the stakeholder community groups and bridge any gaps to create a common understanding, helping the project management to efficiently operate in the area. MOFALI does not have any specific Environment or Social Safeguards Policy currently. World Bank safeguard policy procedures require MOFALI to establish a Public Complaint Unit (PCU) for Environment and Social impacts having suitable grievance redress procedure for the project affected persons. The GRM would address affected persons/parties' concerns and complaints promptly, using an understandable and transparent process that is gender responsive, culturally appropriate, and readily accessible to the affected persons at no cost. This GRM consists of a PCU for Environment and Social safeguarding coordinated by the PIU Environmental and Social Specialist. The committee consists of the following constitution as listed in Table 13.

Table 13 Constitution of Public complaint unit

1	PIU Environmental and Social Specialist
2	PIU M&E Specialist
3	PIU Communications and Advocacy Specialist

Responsibilities of the PCU will include:

- Instructing contractors to refer any complaints that they have received directly to the PCU. Similarly, the PCU will coordinate with local government departments to capture complaints made directly to them
- Logging complaints and date of receipt onto a complaints database and inform the Contractor or responsible parties
- Investigating the complaint to determine its validity and to assess whether the source of the problem is because of project activities, and identify appropriate corrective measures and responsible persons
- Informing the AP of investigation results and the action taken
- Submitting an interim report to local government agencies on status of the complaint investigation and follow-up action within the time frame assigned if a complaint is transferred from local government agencies

- Reviewing the contractor's response to the identified corrective measures, and the updated situation
- Undertaking additional monitoring, as necessary, to verify as well as review that any valid reason for complaint does not reoccur.

This GRM would provide an effective approach for resolution of complaints and issues of the affected persons/parties with procedures for timely disclosure of project information, and contact details of designated staff at all levels will be made available to the public for raising concerns/complaints. Grievances of APs will first be brought to the attention of the Environmental and Social Specialist of the LCP PIU. Grievances not redressed by them will be brought to the PCU set up to monitor project Implementation for each project area. The PCU will determine the merit of each grievance, and resolve grievances within 15 days of receiving the complaint; further grievances will be referred by APs to the appropriate courts of law. The PIU will keep records of all grievances received including: contact details of complainant, date that the complaint was received, nature of grievance, agreed corrective actions and the date these were effected, and final outcome. Procedures and timeframes for the grievance redress process are as follows and shown in Table 14.

Table 14 Grievance redress mechanism

Stage 1	Access to GRM. If a concern arises, the AP may resolve the issue of concern directly with the contractor, or make his/her complaint known to either the LCP Public Complaint Unit (PCU) directly, or through the Bagkh or Soum government, whichever level of authority he/she is most comfortable with.
Stage 2	Official Complaint to PCU. If a complaint is filed at bagkh/soum level, the bagkh/soum representative will submit an oral or written complaint to the PCU. For an oral complaint the PCU must make a written record. For each complaint, the PCU must assess its eligibility. If the complaint is not eligible, e.g. related to an issue outside the scope of the project, PCU will provide a clear reply within five working days to the AP.
Stage 3	PCU Complaint Resolution. The PCU will register the eligible complaint. The PCU, with support of the PIU's Environmental and Social Specialist, will take steps to investigate and resolve the issue. This may involve instructing the contractor to take corrective actions. Within seven days of the redress solution being agreed upon, the contractor should implement the redress solution and convey the outcome to the PCU.
Stage 4	Stakeholder Meeting. If no solution can be identified by the PCU or if the AP is not satisfied with the suggested solution under Stage 3, within two weeks of the end of Stage 3, the PCU will organize a multi-stakeholder meeting under the auspices of the Governor of the concerned soum, where all relevant stakeholders will be invited. The meeting should result in a solution acceptable to all, and identify responsibilities and an action plan. The contractor should implement the agreed redress solution and convey the outcome to the PCU within seven working days.
Stage 5	Aimag Governor Resolution. If the multi-stakeholder meeting cannot resolve the problem, and the AP is unsatisfied, the PCU will set up a meeting with the relevant aimag Governor to identify a solution.

The estimated budget for implementing the web-enabled GRM mechanism throughout the project is USD $ 5000. An estimated total budget for whole ESMF implementation is USD $30 000.

World Bank Special Mission. If the aimag Governor is unable to find a resolution, the PCU will inform WB and a special mission will be initiated to resolve the issue. Note that if the APs are still not satisfied with the outcome, they can go through local judicial proceedings.

The World Bank's Grievance Redress Service (GRS). GRS provides an additional, accessible way for individuals and communities to complain directly to the World Bank if they believe that a World Bank-financed project had or is likely to have adverse effects on them or their community. The GRS enhances the World Bank's responsiveness and accountability by ensuring that grievances are promptly reviewed and responded to, and working together identifies problems and solutions.

Accountability Mechanism of GRS. In addition, affected people may always contact or submit their complaint to the GRS of the WB via the following addresses, which will be included in the signboard of sub-project sites.

The GRS accepts complaints that are:

- related to an active World Bank-supported project (IBRD or IDA)
- filed by a person or community who believes they have been adversely affected by a World Bank-financed project
- filed by a bidder or potential bidder about the procurement process on a World Bank-financed contract

Complaints must:

- identify the project subject of the complaint
- clearly state the project's adverse impact(s)
- identify the individual(s) submitting the complaint and whether confidentiality is requested
- specify if the complaint is submitted by a representative of the person(s) or community affected by the project
- if the complaint is submitted by a representative, include the name, signature, contact details, and written proof of authority of the representative
- Supporting evidence is not necessary but may be helpful in reviewing and resolving the complaint. The complaint may also include suggestions on how the individuals believe the complaint could be resolved. The identity of complainants will be kept confidential upon request. More instructions available at: http://www.world bank.org/grs

The GRS accepts complaints in English or the official language of the country of the person submitting the complaint. (The Complaint Form of WB Grievance Redress Service is attached in Annex 3). Submissions to the GRS may be sent by:
Email: grievances@worldbank.org
Fax: +1-202-614-7313
Letter: The World Bank Grievance Redress Service (GRS)
MSN MC 10-1018
1818 H St NW
Washington, DC 20433, USA

Reporting. The PCU will record the complaint, investigation, and subsequent actions and results. The aimag level Project Support Group will include this information in the quarterly progress reports to the PIU. In the construction period and the initial operational period until project completion report. The WB

should receive reports on performance of the GRM on regular basis during supervision mission or more frequently as requested.

Stakeholder meetings. The invitees to this meeting will depend on the nature of the complaint. For example, if the complaints relate to health, land disputes, or labor issues, the appropriate specialist in this field will be invited to the stakeholder meeting. This may include officers from the Land Agency (land rights issues), Women's Association NGO (gender issues), Health authorities (health issues), aimag environment protection authorities, aimag Professional Inspection Agency (occupational and community safety as well as environmental issues); and the Ministry of Labor & Social Security Officer (labor issues).

Annex 1. Subproject environmental and social review form

A. Applicant information

Organization:	
Individual contact and title:	Address, phone & e-mail:
Subproject (brief description):	Total value of subproject:
Location of subproject (aimag and soum):	Start and end date of subproject:

B. Screening questions and actions

Question	Answers		ESS relevance	If yes, provide additional documents specified below
	Yes	No		
Does subproject cause long term, permanent and/or irreversible adverse environmental impacts?			ESS1	If yes, subproject is ineligible for project financing
Does the subproject involve civil works including new construction, expansion, upgrading or rehabilitation of old facilities?			ESS1	Subproject ESMP and Environmental code of practice for small civil works
Is there "associated facilities" involved in the subproject?			ESS1	If yes, then the same safeguards requirements for the subproject will apply to the "associated facilities".
Is there potential significant environmental impacts?			ESS1	Subproject ESMP
Does the subproject involve uses of goods and equipment involving forced labour, child labour, or other harmful or exploitative forms of labour?			ESS2	If yes, subproject is ineligible for project financing
Does the subproject involve recruitment of workers including direct, contracted, primary supply, and/or community workers?			ESS2	Subproject LMP
Will the subproject cause significant labor safety and health risks?			ESS2	Subproject ESMP, LMP

Does the subproject have high probability of causing serious adverse effects to human health?			ESS4	If yes, subproject is ineligible for project financing
Does the subproject involve any resettlement or land acquisition/use restriction?			ESS5	If yes, subproject is ineligible for project financing
Does the subproject cause any negative impacts on critical or natural habitats?			ESS6	If yes, subproject is ineligible for project financing
Do subproject activities take place in local or state protected areas or their prohibition zones?			ESS6	If yes, subproject is ineligible for project financing
Will the subproject implementation lead to impacts on non-critical natural habitat?			ESS6	If yes, the sub-project shall require an environmental impact assessment and mitigation measures.
Are there any indigenous groups present in the subproject area and are they likely to be affected by the proposed subproject negatively or positively?			ESS7	Subproject SEP
Will the subproject cause any adverse impacts on cultural heritage?			ESS8	If yes, subproject is ineligible for project financing

Environmental and social management plans/instruments to follow:

Remarks:

Sign by:

Position: Date:

Annex 2. Environmental code of practice for small civil works

General

The Contractor and his employees shall adhere to the mitigation measures set down in these specifications to prevent harm and nuisances on local communities, and to minimize the impacts in construction and operation on the environment.
Remedial actions, which cannot be effectively carried out during construction, should be carried out on completion of the works (and before issuance of the acceptance of completion of works):

- All affected areas should be landscaped and any necessary remedial works should be undertaken without delay, including grassing and reforestation;
- water courses should be cleared of debris and drains and culverts checked for clear flow paths; and
- All sites should be cleaned of debris and all excess materials properly disposed;
- Borrow pits should be restored.

Construction Activities and Environmental Rules for Contractors

The following information is intended solely as broad guidance to be used in conjunction with local and national regulations. Before initiation of construction activities, the Contractor shall present the Project Engineer with a Construction Plan which explicitly states how he plans to abide by these specifications. After approval of such Plan by the Project Engineer, construction activities can proceed.

Prohibitions

The following activities are prohibited on or near the project site:

- Cutting of trees for any reason outside the approved construction area;
- Hunting, fishing, wildlife capture, or plant collection;
- Use of unapproved toxic materials, including lead-based paints, asbestos, etc.;
- Disturbance to anything with architectural or historical value;
- Building of fires;
- Use of firearms (except authorized security guards);
- Use of alcohol by workers.

Transport

The Contractor shall use selected routes to the project site, as agreed with the Project Engineer, and appropriately sized vehicles suitable to the class of roads in the area, and shall restrict loads to prevent damage to local roads and bridges used for transportation purposes. The Contractor shall be held responsible for any damage caused to local roads and bridges due to the transportation of excessive loads, and shall be required to repair such damage to the approval of the Project Engineer.
The Contractor shall not use any vehicles, either on or off road with grossly excessive, exhaust or noise emissions. In any built up areas, noise mufflers shall be installed and maintained in good condition on all motorized equipment under the control of the Contractor.
Adequate traffic control measures shall be maintained by the Contractor throughout the duration of the Contract and such measures shall be subject to prior approval of the Project Engineer.

Workforce and Camps

The Contractor should whenever possible locally recruit the majority of the workforce and shall provide appropriate training as necessary.
The Contractor shall provide adequate lavatory facilities (toilets and washing areas) should be provided for the number of people expected to work in the work site. Toilet facilities should also be provided with adequate supplies of hot and cold running water, soap, and hand drying devices.
The Contractor shall install and maintain a temporary septic tank system for any residential labor camp and without causing pollution of nearby watercourses.
The Contractor shall establish a method and system for storing and disposing of all solid wastes generated by the labor camp and/or base camp.
The Contractor shall not allow the use of fuel wood for cooking or heating in any labor camp or base camp and provide alternate facilities using other fuels.
The Contractor shall ensure that site offices, depots, asphalt plants and workshops are located in appropriate areas as approved by the Project Engineer and not within 500 meters of existing residential settlements and not within 1,000 meters for asphalt plants.
The Contractor shall ensure that site offices, depots and particularly storage areas for diesel fuel and bitumen and asphalt plants are not located within 500 meters of watercourses, and are operated so that no pollutants enter watercourses, either overland or through groundwater seepage, especially during periods of rain. This will require lubricants to be recycled and a ditch to be constructed around the area with an approved settling pond/oil trap at the outlet.
The contractor shall not use fuel wood as a means of heating during the processing or preparation of any materials forming part of the Works.

Waste Management and Erosion

Solid, sanitation, and, hazardous wastes must be properly controlled, through the implementation of the following measures:

Waste Management:
Minimize the production of waste that must be treated or eliminated.
Identify and classify the type of waste generated. If hazardous wastes are generated, proper procedures must be taken regarding their storage, collection, transportation and disposal.
Identify and demarcate disposal areas clearly indicating the specific materials that can be deposited in each.
Control placement of all construction waste (including earth cuts) to approved disposal sites (>300 m from rivers, streams, lakes, or wetlands). Dispose in authorized areas all of garbage, metals, used oils, and excess material generated during construction, incorporating recycling systems and the separation of materials.

Erosion Control:
Disturb as little ground area as possible, stabilize that area as quickly as possible, control drainage through the area, and trap sediment onsite. Erect erosion control barriers around perimeter of cuts, disposal pits, and roadways
Conserve topsoil with its leaf litter and organic matter, and reapply this material to local disturbed areas to promote the growth of local native vegetation.
Apply local, native grass seed and mulch to barren erosive soil areas or closed construction surfaces.
Apply erosion control measures before the rainy season begins preferably immediately following construction. Install erosion control measures as each construction site is completed.

In all construction sites, install sediment control structures where needed to slow or redirect runoff and trap sediment until vegetation is established. Sediment control structures include windrows of logging slash, rock berms, sediment catchment basins, straw bales, brush fences, and silt.
Control water flow through construction sites or disturbed areas with ditches, berms, check structures, live grass barriers, and rock
Maintain and reapply erosion control measures until vegetation is successfully established.
Spray water on dirt roads, cuts, fill material and stockpiled soil to reduce wind-induced erosion, as needed

Maintenance

Identify and demarcate equipment maintenance areas (>15m from rivers, streams, lakes or wetlands). Fuel storage shall be located in proper areas and approved by the Project Engineer.
Ensure that all equipment maintenance activities, including oil changes, are conducted within demarcated maintenance areas; never dispose spent oils on the ground, in water courses, drainage canals or in sewer systems.
All spills and collected petroleum products shall be disposed of in accordance with standard environmental procedures/guidelines. Fuel storage and refilling areas shall be located at least 300m from all cross drainage structures and important water bodies or as directed by the Engineer.

Earthworks, Cut and Fill Slopes

All earthworks shall be properly controlled, especially during the rainy season.
The Contractor shall maintain stable cut and fill slopes at all times and cause the least possible disturbance to areas outside the prescribed limits of the works.
The Contractor shall complete cut and fill operations to final cross-sections at any one location as soon as possible and preferably in one continuous operation to avoid partially completed earthworks, especially during the rainy season.
In order to protect any cut or fill slopes from erosion, in accordance with the drawings, cut off drains and toe-drains shall be provided at the top and bottom of slopes and be planted with grass or other plant cover. Cut off drains should be provided above high cuts to minimize water runoff and slope erosion.
Any excavated cut or unsuitable material shall be disposed of in designated disposal areas as agreed to by the Project Engineer.
Disposal sites should not be located where they can cause future slides, interfere with agricultural land or any other properties, or cause soil from the dump to be washed into any watercourse. Drains may need to be dug within and around the tips, as directed by the Engineer

Stockpiles and Borrow Pits

Operation of a new borrowing area, on land, in a river, or in an existing area, shall be subject to prior approval of the Project Engineer, and the operation shall cease if so instructed by the Project Engineer.
Borrow pits shall be prohibited where they might interfere with the natural or designed drainage patterns.
River locations shall be prohibited if they might undermine or damage the river banks, or carry too much fine material downstream.
The Contractor shall ensure that all borrow pits used are left in a trim and tidy condition with stable side slopes, and are drained ensuring that no stagnant water bodies are created which could breed mosquitoes.

Rock or gravel taken from a river shall be far enough removed to limit the depth of material removed to one-tenth of the width of the river at any one location, and not to disrupt the river flow, or damage or undermine the riverbanks.
The location of crushing plants shall be subject to the approval of the Engineer, and not be close to environmentally sensitive areas or to existing residential settlements, and shall be operated with approved fitted dust control devices.
In any borrow pit and disposal site, the Contractor shall:

- Identify and demarcate locations for stockpiles and borrow pits, ensuring that they are 15 meters away from critical areas such as steep slopes, erosion-prone soils, and areas that drain directly into sensitive water bodies
- Limit extraction of material to approved and demarcated borrows pits.
- Stockpile topsoil when first opening the borrow pit. After all usable borrow has been removed, the previously stockpiled topsoil should be spread back over the borrow area and graded to a smooth, uniform surface, sloped to drain. On steep slopes, benches or terraces may have to be specified to help control erosion.
- Excess overburden should be stabilized and revegetated. Where appropriate, organic debris and overburden should be spread over the disturbed site to promote revegetation. Natural revegetation is preferred to the extent practicable.
- Existing drainage channels in areas affected by the operation should be kept free of overburden.
- Once the job is completed, all construction -generated debris should be removed from the site.

Disposal of Construction and Vehicle Waste

The Contractor shall establish and enforce daily site clean-up procedures, including maintenance of adequate disposal facilities for construction debris
Debris generated due to the dismantling of the existing structures shall be suitably reused, to the extent feasible, in the proposed construction (e.g. as fill materials for embankments). The disposal of remaining debris shall be carried out only at sites identified and approved by the Project Engineer. The contractor should ensure that these sites (a) are not located within designated forest areas; (b) do not impact natural drainage courses; and (c) do not impact endangered/rare flora. Under no circumstances shall the contractor dispose of any material in environmentally sensitive areas.
In the event any debris or silt from the sites is deposited on adjacent land, the Contractor shall immediately remove such, debris or silt and restore the affected area to its original state to the satisfaction of the Project Engineer.
All arrangements for transportation during construction including provision, maintenance, dismantling and clearing debris, where necessary, will be considered incidental to the work and should be planned and implemented by the contractor as approved and directed by the Engineer.

Safety during Construction

The Contractor's responsibilities include the protection of every person and nearby property from construction accidents. The Contractor shall be responsible for complying with all national and local safety requirements and any other measures necessary to avoid accidents, including the following:

- Carefully and clearly mark pedestrian-safe access routes;
- If school children are in the vicinity, include traffic safety personnel to direct traffic during school hours;

- Maintain supply of supplies for traffic signs (including paint, easel, sign material, etc.), road marking, and guard rails to maintain pedestrian safety during construction;
- Conduct safety training for construction workers prior to beginning work;
- Provide personal protective equipment and clothing (goggles, gloves, respirators, dust masks, hard hats, steel-toed and –shanked boots, etc.,) for construction workers and enforce their use;
- Post Material Safety Data Sheets for each chemical present on the worksite;
- Require that all workers read, or are read, all Material Safety Data Sheets. Clearly explain the risks to them and their partners, especially when pregnant or planning to start a family. Encourage workers to share the information with their physicians, when relevant;
- Ensure that the removal of asbestos-containing materials or other toxic substances be performed and disposed of by specially trained workers;
- During heavy rains or emergencies of any kind, suspend all work.
- Brace electrical and mechanical equipment to withstand seismic events during the construction.

Nuisance and Dust Control

To control nuisance and dust the Contractor should:

- Maintain all construction-related traffic at or below 15 mph on streets within 200 m of the site;
- Maintain all on-site vehicle speeds at or below 10 mph.
- To the extent possible, maintain noise levels associated with all machinery and equipment at or below 90 db.
- In sensitive areas (including residential neighborhoods, hospitals, rest homes, etc.) stricter measures may need to be implemented to prevent undesirable noise levels.
- Minimize production of dust and particulate materials at all times, to avoid impacts on surrounding families and businesses, and especially to vulnerable people (children, elders).
- Phase removal of vegetation to prevent large areas from becoming exposed to wind.
- Place dust screens around construction areas, paying particular attention to areas close to housing, commercial areas, and recreational areas.
- Spray water as needed on dirt roads, cut areas and soil stockpiles or fill material.
- Apply proper measures to minimize disruptions from vibration or noise coming from construction activities.

Demolition of Existing Infrastructure

The Contractor shall implement adequate measures during demolition of existing infrastructure to protect workers and public from falling debris and flying objects. Among these measures, the Contractor shall:

- Set aside a designated and restricted waste drop or discharge zones, and/or a chute for safe movement of wastes from upper to lower levels
- Conduct sawing, cutting, grinding, sanding, chipping or chiseling with proper guards and anchoring as applicable
- Maintain clear traffic ways to avoid driving of heavy equipment over loose scrap
- Use of temporary fall protection measures in scaffolds andout edges of elevated work surfaces, such as hand rails and toe boards to prevent materials from being dislodged

- Evacuate all work areas during blasting operations, and use blast mats or other means of deflection to minimize fly rock or ejection of demolition debris if work is conducted in proximity to people or structures
- Provide all workers with safety glasses with side shields, face shields, hard hats, and safety shoes

Community Relations

To enhance adequate community relations, the Contractor shall:

- Inform the population about construction and work schedules, interruption of services, traffic detour routes and provisional bus routes, blasting and demolition, as appropriate.
- Limit construction activities at night. When necessary ensure that night work is carefully scheduled and the community is properly informed so they can take necessary measures.
- At least five days in advance of any service interruption (including water, electricity, telephone, bus routes) the community must be advised through postings at the project site, at bus stops, and in affected homes/businesses.

Physical Cultural Property Chance-finds Procedures

If the Contractor discovers archeological sites, historical sites, remains and objects, including graveyards and/or individual graves during excavation or construction, the Contractor shall:

- Stop the construction activities in the area of the chance find;
- Delineate the discovered site or area;
- Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be arranged until the responsible local authorities or the National Culture Administration take over;
- Notify the supervisory Engineer who in turn will notify the responsible local authorities and the National Culture Administration immediately (within 24 hours or less);
- Responsible local authorities and the National Culture Administration would be in charge of protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings to be performed by the archeologists of National Culture Administration. The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage; those include the aesthetic, historic, scientific or research, social and economic values;
- Decisions on how to handle the finding shall be taken by the responsible authorities and National Culture Administration. This could include changes in the layout (such as when finding an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage;
- Implementation for the authority decision concerning the management of the finding shall be communicated in writing by relevant local authorities; and
- Construction work could resume only after permission is given from the responsible local authorities or National Culture Administration concerning safeguard of the heritage.

Annex 3. Complaint form. World Bank grievance redress service

For this form, please refer to Annex 3 of the LCP ESMF.

Annex 4. WHO guideline on COVID-19

In times of COVID-19 pandemic, following measures recommended by the World Health Organization (WHO) will strictly be followed during the project implementation.

Public health and social measures contribute to stopping individual chains of transmission and preventing outbreaks, and are therefore critical in limiting further spread of COVID-19, particularly while vaccines and therapeutics are not yet available. These measures include the following:

- **Personal measures** aim to limit person-to-person spread, protect individuals and their contacts, and reduce contamination of frequently touched surfaces. Personal measures include frequent hand hygiene, physical distancing, respiratory etiquette, use of masks if ill or attending to someone who is ill, and environmental cleaning and disinfection at home.
- **Physical and social distancing measures** in public spaces prevent transmission between infected individuals and those who are not infected, and shield those at risk of developing serious illness. These measures include physical distancing, reduction or cancellation of mass gatherings, and avoiding crowded spaces in different settings (e.g. public transport, restaurants, bars, theatres), working from home, staying at home, and supporting adaptations for workplaces and educational institutions. For physical distancing, WHO recommends a minimum distance of at least one meter between people to limit the risk of interpersonal transmission.
- **Movement measures** aim to prevent introduction and limit movement of the virus from one area to another. Measures include limiting movement of persons locally or nationally, offering guidance regarding travel, arranging orderly travel in advance to avoid congestion at travel hubs, including train stations, bus terminals and airports, and considering a cordon sanitaire or other selected measures when justified by the local epidemiology of COVID-19.
- **Special protection measures** aim to protect special populations and vulnerable groups:
    - Persons at risk for more serious illness from COVID-19 (e.g. older people, persons with underlying medical conditions)
    - Persons or groups with social vulnerabilities (e.g. migrant workers, refugees, displaced populations, the homeless)
    - Persons or groups living in closed settings (e.g. long-term living facilities,11 places of detention, camps/camp-like settings)
    - Persons or groups with higher occupational risk of exposure to the virus (e.g. staff of institutional settings, health workers and frontline responders). Protecting health and care workers also prevents outbreaks in health facilities and residences for seniors.