

Third Sustainable Livelihoods Project

World Bank

P-173126

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

2020

Abbreviations and Acronyms

ADET	Aimag department for Environment and Tourism
AF	Additional Financing
ALAGAC	Agency for Land Affairs and Geodesy and Cartography
ALST	Aimag Level Support Team
APA	Annual Performance Assessment
APL	Adaptable Program Loan
ASIA	Aimag Specialized Inspection Agency
AU	Agriculture Unit
BL	Budget Law
BZ	Buffer Zone
CRKh	Citizen's representative Khural
DEIA	Detailed Environmental Impact Assessment
DET	Department of Environment and Tourism
EI	Environmental Inspector
EIA	Environmental Impact Assessment
EHS	Environmental, Health and Safety
EMP	Environmental Management Plan
ESMP	Environmental and Social Management Plan
EM	Ethnic Minority
FAD	Food and Agriculture Department
FM	Financial Management
GEIA	General Environmental Impact Assessment
GIIP	Good International Industry Practice
GHG	Greenhouse Gas
GRS	Grievance Redress System
IBA	International Bird Area
IBL	Integrated Budget Law
IDA	International Development Agency
IPP	Indigenous People's Plan
LBVU	Livestock Breeding and Veterinary Unit
LDF	Local Development Fund
LPO	Local Project Office
M&E	Monitoring and Evaluation
MEA	Multilateral Environmental Agreements
MIS	Management Information System

MNS	Mongolian National Standard
MoET	Ministry of Environment and Tourism
MoF	Ministry of Finance
MoFALI	Ministry of Food, Agriculture and Light Industry
NA	Not Applicable
NAMHEM	National Agency for Meteorology, Hydrology and Environmental Monitoring
NM	Natural Monument
NR	Nature Reserve
NGO	Non-governmental Organization
NP	National Park
ODS	Ozon Depleting Substances
OHS	Occupational Health and Safety
PA	Protected Area
PBF	Performance-based Financing
PDO	Project Development Objective
PRM	Pastoral Risk Management
PRMP	Pastoral Risk Management Plan
PPE	Personal Protective Equipment
RIAH	research Institute of Animal Husbandry
SAU	Soum Agricultural Unit
SDC	Swiss Agency for Development and Cooperation
SME	Small and medium enterprise
SLP	Sustainable Livelihoods Project
SPA	Strictly Protected Areas
SST	Soum Support Team
SAU	Soum Agricultural Unit
TA	Technical Assistance
TOR	Terms of References
UNESCO	United Nations Education Science and Culture Organization
USA	United States of America
VOC	Volatile Organic Compound
WB	World Bank

Table of Contents

A.	Introduction.....	1
A.1	Project Description.....	1
A.1.1	Project Development Objective	1
A.1.2	Project Components.....	1
	Component 1: Capacity Building for Local Governance and Livelihoods.....	1
	Component 2: Good Governance Performance-Based Support Program.....	1
	Component 2.1: Performance-based Financing (PBF)	1
	Component 2.2: Annual Performance Assessments	2
	Component 3: Project Management and Monitoring and Evaluation	2
A.2	Purpose and Scope of ESMP.....	2
B.	Legal, Policy Framework and Regulatory Requirements	2
B.1	World Bank's Environmental and Social Policy	2
B.2	Mongolian Laws, Regulations and Standards.....	2
B.2.1	Mongolian Environmental Regulatory and Policy Framework	2
B.2.2	National Requirement for Environmental Impact Assessment.....	4
B.2.3	National Requirement for Environmental Monitoring	6
C.	Environmental and Social Baselines	7
C.1	Environmental Baseline.....	7
C.2	Current Environmental Conditions and Major Problems.....	10
C.3	Social Baseline.....	12
D.	Environmental and Social Management Plan	13
D.1	Potential Activities and Sub-projects to be Implemented within AF Project	14
D.2	Potential Environmental and Social Impacts	14
D.3	Mitigation Measures Against Environmental and Social Impacts.....	16
D.4	Monitoring Plan	23
D.5	Capacity Building	26
D.6	Institutional Arrangements and Budget for implementing ESMP	29
D.7	Reporting Requirements	31
D.8	The Grievance Redress Mechanism	31
E.	Information Disclosure and Consultation	32
E.1	Public Consultation during AF Project Preparation	32
E.1.1	Public Consultation held in Murun city of Khuvsgul province	32
E.1.2	Public Consultation held in Ulaanbaatar	37
E.2	Information Disclosure	41
Annex 1.	Environmental Impact Assessment Requirements for Subprojects under the Local Development Fund	42
Annex 2.	Mongolia Local Development Fund (LDF) Environmental Assessment Screening Checklist.....	Error! Bookmark not defined.
Annex 3.	Annual Environmental Audit Terms of Reference	54
Annex 4.	Environmental Management of Construction Activities.....	57

A. Introduction

A.1 Project Description

In 2002, the World Bank Board approved the first phase of a three-phase Adaptable Program Loan (APL) focusing on three major interventions: pastoral risk management, micro-finance outreach to deepen access to finance, including for livestock insurance, and community driven infrastructure and basic services development. This project is the third and final phase of this initiative.

A.1.1 Project Development Objective

The Project Development Objective of Third Sustainable Livelihoods Project (SLP3) is to improve governance and community participation for the planning and delivery of priority investments in rural areas of Mongolia.

A.1.2 Project Components

Component 1: Capacity Building for Local Governance and Livelihoods

The objective of this component would be to build the capacity at local and national levels for the implementation and further development of the Government's programs and mechanisms for supporting rural development.

At the local level, Soum governments will be challenged to effectively manage the significant increases in governance responsibilities and investment planning and execution delegated through the Budget Law (BL) and Soum Program. The project would provide to local authorities and communities, training and technical assistance related to the implementation of the Local Development Fund (LDF) and Soum Program, in the areas of medium term planning, community participation, budget preparation and adoption, budget execution including procurement and supervision, reporting, monitoring and evaluation and pastureland planning and management.

This training and technical assistance would primarily be delivered through Aimag Level Support Teams (ALSTs), based in each Aimag (province). These teams would be provided with technical backstopping from national Technical Assistance providers, which would support the development of training curricula and materials and training of trainers. This system should enable close and frequent contact between the ALSTs and the Soum authorities and citizens.

At the national level, the project would provide technical support to central public administration organizations in charge of economic and finance issues related to the development and implementation of the LDF.

Component 2: Good Governance Performance-Based Support Program

Component 2.1: Performance-based Financing (PBF)

As an incentive for good governance, the project would support the provision of Good Governance Performance-Based Financing (PBF) to Soums for the financing of activities under the LDF. The objective of the PBF would be to enhance good governance in the entire budgeting process starting with financial and policy planning, including budget preparation and adoption, budget execution, accounting, reporting, internal and external control and public scrutiny. Financing and execution of public capital investments at Soum level and below is an important part of the budgeting process. Particular importance would be given to citizen participation, alignment of Soum budgets with Bagh citizen priorities and citizen satisfaction with the LDF process and outcomes. Based on a Soum performance monitoring system, all Soums will be rated annually by independent assessors against a set of agreed performance indicators. Those Soums meeting or exceeding agreed targets would receive a percentage of the prior year's LDF allocation as budget support in the following financial

year. Currently it is proposed that this top-up would represent 25-40 percent of the previous year's allocation, though this would be reviewed during the project and revised if necessary. PBF will be disbursed to qualifying Soums through Treasury systems along with LDF allocations.

Component 2.2: Annual Performance Assessments

The project would carry out Annual Performance Assessments (APAs) of Soums for the purposes of determining the allocation of Good Governance Performance-Based Financing. The assessment and ranking of Soun performance would be outsourced to a politically neutral third party (Good Governance Performance Assessment Teams). The project would finance the training of these APA teams. This sub-component would be supported by SDC co-financing.

Component 3: Project Management and Monitoring and Evaluation

A Project Implementation Unit (PIU) for SLP3 is set within MoF and this component would support the implementation structure, financing the costs of staff, related expenditures and the M&E, procurement and FM functions. M&E support would be supported by IDA and include developing a Management Information System (MIS) for the LDF, and conducting a baseline, mid-term and end of project impact assessment.

A.2 Purpose and Scope of ESMP

The ESMP was developed to provide guidance for the identification and management of environmental and social risks and potential impacts that may be associated with the development and implementation of project activities and/or with any sub-projects or activities implemented under the project. The ESMP sets out procedures to enable screening of sub-projects for potential adverse environmental or social impacts 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. This ESMP has been consulted with project stakeholders prior to disclosure and disclosed to the public through Aimags' libraries and citizen halls, the project website of the PIU and the World Bank.

B. Legal, Policy Framework and Regulatory Requirements

B.1 World Bank's Environmental and Social Policy

The project will comply with the World Bank's Safeguard Policies which among others include: Environmental Assessment (OP4.01), Natural Habitats (OP 4.04), and Indigenous People (OP4.10). Therefore, ESMP and IPP have been prepared in accordance with the Bank's safeguards policies. More information on these policies can be found in the respective sections of websites of the World Bank.

The World Bank Environmental, Health, and Safety (EHS) Guidelines are technical reference documents with general and industry -specific examples of Good International Industry Practice (GIIP). The General EHS Guidelines together with the relevant Industry Sector EHS Guidelines provide guidance on EHS issues in specific industry sectors.

B.2 Mongolian Laws, Regulations and Standards

B.2.1 Mongolian Environmental Regulatory and Policy Framework

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. The hierarchy of policies and legislative provisions for environmental

management in Mongolia comprises five layers ranging from the Constitution to international treaties, and to environment and resources protection laws¹.

The main policy documents are the National Environmental Action Plan of 1995, the State Environmental Policy of 1997, the National Plan of Action to Combat Desertification, the Biodiversity Conservation Action Plan, and the National Plan of Action for Protected Areas, all developed under the Ministry of Environment and Tourism (MoET) auspices, as well as the Mongolian Action Program for the 21st Century. The National Environmental Action Plan was updated in 2000 and the National Action Plan for Climate Change was added in the same year. Several program documents (e.g. National Water Program, National Forestry Program, Program of Protection of Air, Environmental Education, Special Protected Areas, and Protection of Ozone Layer) were also completed at the turn of the decade. State policy on Environmental Impact Assessment was in place in 1998. In addition, other guidance documents with important environmental repercussions were developed under the auspices of other ministries and these include the Roads Master Plan, the Power Sector Master Plan, the Tourism Master Plan, and the Renewable Energy Master Plan. Other documents, such as the annual Human Development Reports have increasingly incorporated environmental aspects.

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.

The Government of Mongolia undertook a major environmental law reform in 1990 and 2012 including the law of land, protected areas, water, forest, wildlife, and native flora resources. The legislation base is extensive as evidenced by the following table of key environmental legislation as shown in **Table B.1**.

Table B.1: Key environmental legislation.

No.	Name of the Law	Year adopted and amended	Associated regulations
1	Law on Environmental Protection	1995 revised in 2006, 2008, 2012, 2013, 2015, 2016, 2017	4
2	Law on Land	June, 2002	n.a
3	Law on Land Cadaster and Mapping	Dec, 1999	n.a
4	Law on Land Fees	Apr, 1997	n.a
5	Law on Land Possession	June, 2002	n.a
6	Law on Implementation of Regulations Related to Land Possession Law	June, 2002	n.a
7	Law on Geodesy and Cartography	Oct, 1997	n.a
8	Law on Special Protected Areas	Nov, 1994 revised in 2002, 2003, 2004, 2006, 2008, 2014, 2015, 2017	16
9	Law on Buffer Zones	Oct, 1997	n.a
10	Law on Water	Apr, 2004	n.a
11	Law on Water and Mineral Water Resource Fee	May, 1995, revised in 2008, 2011	21
12	Law on Forests	2012	38

UNDP. 2008. *Institutional Structures for Environmental Management in Mongolia*. Ulaanbaatar and Wellington.

¹¹ World Bank databank.

No.	Name of the Law	Year adopted and amended	Associated regulations
13	Law on Fees for Timber and Fuel-wood Harvesting	May, 1995	n.a
14	Law on Prevention of Steppe and Forest Fires	May,1996	n.a
15	Law on Reinvestment of Natural Resource Use Fees for Conservation	Jan, 2000	n.a
16	Law on Natural Plants	Apr,1995	3
17	Law on Natural Plant Use Fees	May, 1995	n.a
18	Law on Protection of Plants	Mar,1996	n.a
19	Law on Fauna	2000	n.a
20	Law on Air	Mar.,1995	n.a.
21	Law on Protection for Toxic Chemicals	Apr.,1995	18
22	Law on Environmental Impact Assessment	1998, revised in 2002	n.a
23	Law on Solid Waste	Nov.2003	n.a
24	Law on prohibiting export and transportation of Hazardous Waste	Nov.2000	n.a
25	Law on Soil Protection and Desertification Prevention	2012	n.a

Other Mongolian orders, regulations and guidelines related to water and wastewater are listed in the **Table B.2.**

Table B.2: Key orders, regulations and guidelines related to water and wastewater treatment

Name of Guideline, Order or Regulation	Year Adopted
Regulation of Fees on Water Pollution	1992
Regulation of River and Water Source Protection Zone	1992
Regulation of Lining Septic Tanks for Wastewater	1995
Regulation for Registering Water Resource Pollution, Water Scarcity, Rehabilitation	1996
Regulation on Water Resource Protection from Pollution	1997
Regulation of Water Spring and Its Protection	1998
Regulation of Establishing Wells and Water Points and Repair	2005

B.2.2 National Requirement for Environmental Impact Assessment

The environmental impact assessment (EIA) requirements of Mongolia are regulated by the Law on Environmental Impact Assessment (1998, amended in 2012). The terms of the law apply to all new projects, as well as rehabilitation and expansion of existing industrial, service or construction activities and projects that related to use land and natural resources. 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. **Table B.3** lists the classification of projects that require General EIA.

Table B.3: Classification of projects obligatory to General EIA

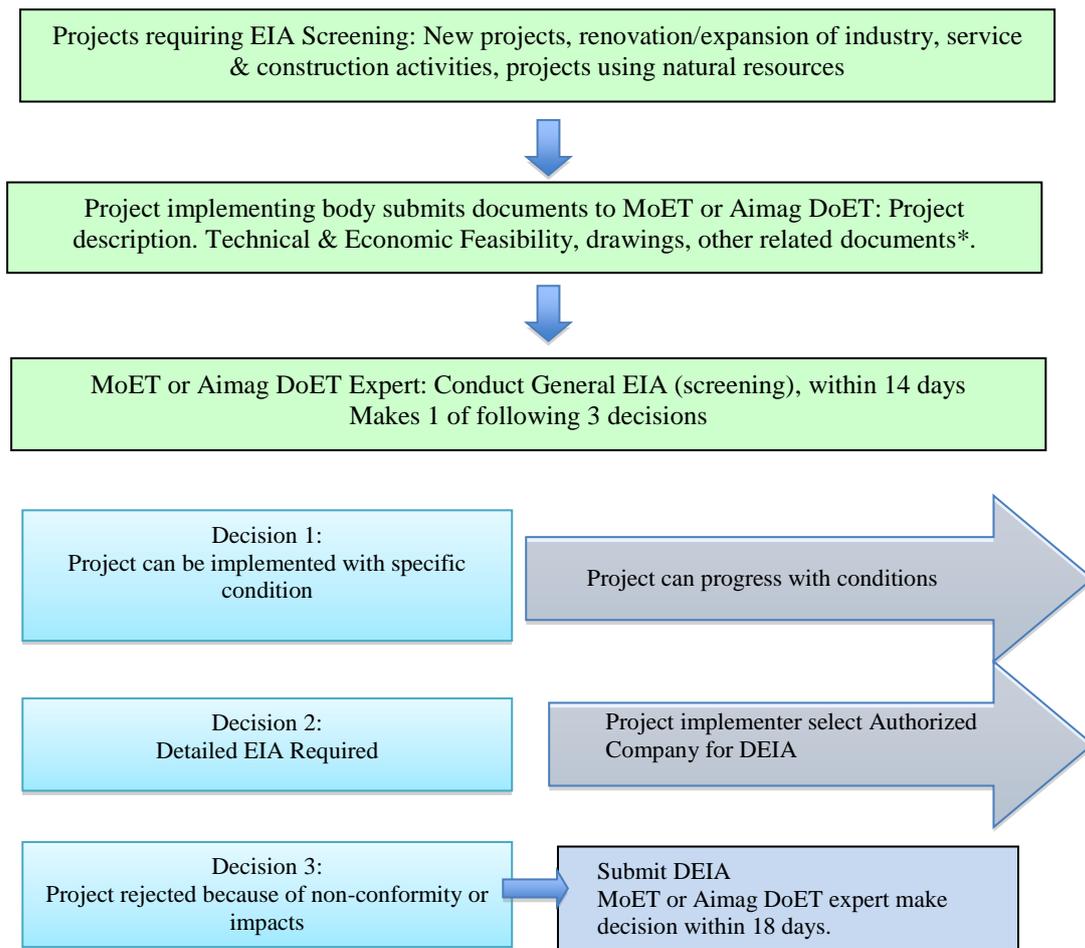
No.	Project type	Executor	
		Central Government Authority for Nature and Environment	The Governors offices of Provinces and the Capital city
1.	Mining	Exploration of all kind of minerals	Exploration of common

			minerals to be used within local area
2.	Heavy industry	All types	-
3.	Light and Food industry	Big industries owned by Government	Local small and medium enterprises (SMEs)
4.	Agriculture	Water reservoir Irrigation system Plantation of fallow	Other industries and services
5.	Infrastructure	Energy production more than 1 MW capacity Electricity transmission line more than 35 kV voltage Heat distribution pipes Hydro station Railway Airport Road international and inter cities Communication international and inter cities	Energy production up to 1 MW capacity Electricity transmission line up to 35 KV voltage Heat distribution pipes local Road and communication local
6.	Service	Hotel, resort, sanatorium and other service organizations with capacity more than 50 bed day	Hotel, resort, sanatorium and other service organizations with capacity up to 50 bed day
7.	Other projects: Town planning Defensive and civil protection Water supply system Water treatment plant Solid waste disposal	Water supply, water treatment and solid waste disposal in urban areas with more than 10000 inhabitants State owned facilities for defense and civil protection	Water supply, water treatment solid waste disposal in urban areas with up to 10,000 inhabitants Local facilities for defense and civil protection
8.	Bio diversity	Fisheries (big size) Population, use and other activities relative to animal and plants,	Hunting and forestry, tribe Fishery for local market
9.	Chemicals, radioactive substances and hazardous wastes	Treatment, use, storage, transport and disposal of chemicals, radioactive substances and hazardous wastes	
10.	Activities conducted in protected areas	Activities to be conducted in boundaries of special protected areas	Activities to be conducted at locally protected areas.

There are two types of EIAs defined in the Law on EIA:

- 1) General EIA (screening) - to initiate a General EIA, the project implementer submits to MoET (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 three conclusions: (i) the project may be completed pursuant to specific conditions, (ii) a detailed EIA is necessary, or (iii) project cancellation. The General EIA is free and usually takes up to 14 days with possible extension of additional 14 days.
- 2) Detailed EIA – the scope is defined by the General EIA. The Detailed EIA report must be produced by a Mongolian EIA company which is authorized by the MoET by means of a special procedure. The developer of the Detailed EIA should submit it to the MoET (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 MoET (or Aimag government). Based on the conclusion of the expert, the MoET (or Aimag government) takes a decision about approval or disapproval of the project. **Figure B.1** show the procedure of GEIA and DEIA.

Figure B.1 General and Detailed EIA procedure according to Mongolian Law on EIA.



Source: Adapted from Vol. 1 (2001) Compendium of Laws: A Mongolian Citizens Reference Book

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

B.2.3 National Requirement for Environmental Monitoring

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. **Table B.4** shows the types and responsibility of NAMHEM and its Aimag level Departments of Hydrology, Meteorology and Environmental Monitoring for environmental monitoring.

Table B.4: Responsibilities of NAMHEM for Environmental Monitoring in Mongolia.

Monitoring types	Site
Air quality in urban area /SO ₂ , NO _x , CO, O ₃ , HC, PM ₁₀ , PM _{2.5} /	35 points
Acid rain /NH ₄ , SO ₂ , HCl, HNO ₃ , NH ₃ /	2 points
Greenhouse gas monitoring	1 laboratory
Sand /yellow/ dust storm observation /To define dust PM ₁₀ , PM _{2.5} dispersion in horizontal and vertical direction/	9 stations
Water quality	
Water quality /91 rivers, 16 lakes pH, EC, O ₂ , etc./	188 points
Gray water monitoring /5 in Ulaanbaatar city and 28 in the countryside/	33 water cleaning facility
Soil quality in urban areas	340 points
Environmental radiation monitoring	35 points

Source: Introduction on National Agency for Meteorology and Environmental Monitoring, MET, 2016

C. Environmental and Social Baselines

C.1 Environmental Baseline

Mongolia is a landlocked country in Northern Asia with a surface area of 1.56 million square kilometres and about three million inhabitants, of whom 2.2 million live in urban areas.¹ Population density in rural areas thus averages 0.5 inhabitants per square kilometre, which reflects also the dominance of mobile pastoralism as the main rural livelihood throughout the country. Administratively, Mongolia is divided into Ulaanbaatar and 21 Aimags (provinces). Aimags are further divided into Soums (counties) and Baghs (villages).

Topography: 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 1,580 metres. 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 (4,375 metres). 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:² 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 temperature 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

¹ World Bank databank.

² Dagvadorj et al. (2010) Mongolia: assessment report on climate change 2009. Ministry of Nature, Environment and Tourism.

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.

Biodiversity was an integral feature of Mongolia’s intact ecosystems until the middle of the 20th century. Pasture-based livestock husbandry was a subsistence economic activity functioning in a semi-natural ecosystem integrated with the seasonal climate regime and distinct landscape patterns. In fact, it was a reference point or basic line for biodiversity, which could be sustained across this geographic domain in accordance with the associated climate variability (Batjargal, Z and Shiirevdamba. Ts 2016).

Mongolia contains 16 ecosystem types within its borders, which have been consolidated into four eco-regions, namely the Daurian steppe (28.2% of total area), Khangai (16.4% of total area), Central Asian Gobi Desert (16.4% of total area), and the Altai-Sayan (23.1% of total area) (Figure 6.3), in order to increase integration between national conservation and development policies and plans (Chimed-Ochir B. 2010). These eco-regions with their unique assemblage of ecosystems comprise a variety of fauna and flora species, which consist of 138 species of mammal, 79 species of fish including subspecies (Mendsaikhan B. 2017), 22 species of reptile, 6 species of amphibian, 476 species of bird, over 13 thousand species of insect and 516 species of mollusk, 3127 species of vascular plants, 1574 species of algae, 495 species of moss, 838 species of fungus (Government of Mongolia, 2015). Totally 110 species of fauna and 192 species of flora were deemed to be nationally endangered and registered into the Mongolian Red Book as either critically endangered.

However, due to climate change and negative human activities, 72.3 percent of the total territory has deteriorated; soil nutrients have been lost; desertification has become an increasing threat; over 70 percent of pastureland has been overgrazed; plant growing rates and compositions have been reduced; hundreds of rivers, streams, natural springs, lakes, and ponds have dried up; the forest resource has decreased by 2 million ha; and about 300 species of fauna and flora are threatened with extinction. Therefore, the need to upgrade conservation management to international standards has become a priority. Additionally, the human right to live in healthy and safe environments must be ensured; untouched environmental conditions and ecological balance must be preserved for future generations; and sustainable development through maintaining balance between social and economic progress and environment must be pursued.

Ecologically sensitive areas: Mongolia’s Protected Area (PA) network and ecologically important areas are included in ecologically sensitive areas. The Protected Area network consists of 99 protected areas covering 17.4% (27.2 million ha) of the country’s territory. The number of protected areas has increased since the Parliament adopted the National Programme on Protected Areas (1998) that set the goal of establishing a protected area system covering 30% of the national territory. In 2015, the protected areas included 20 Strictly Protected Areas (12.4 million ha), 32 National Parks (11.7 million ha), 34 Nature Reserves (2.9 million ha), 13 National Cultural and Historical Monuments (0.13 million ha).

In addition, there are 911 locally protected areas covering 16.3 million ha and 10.4% of the total territory of Mongolia. The total size of the state and local protected areas has reached 44.3 million ha, which is 28.3% of the total territory (Government of Mongolia 2015). However, capacities and resources for protected area management have not kept pace with the expansion of PAs, and most protected areas suffer from inadequate resources to conserve important species and habitats they are supposed to protect.

In accordance with the Law on Protected Areas, all Specially Protected Areas (SPAs) and National Parks (NPs) may have a Buffer Zone (BZ). A separate Law on Buffer Zones regulates the establishment and management of Buffer Zones. It aims to reduce, mitigate and prevent the actual and/or potential adverse impacts experienced in their respective PA by way of (i) increasing local communities' participation in the conservation of protected sites, by (ii) providing livelihood means to local communities and (iii) by ensuring the appropriate use of natural resources. Currently the Government actively advocates the establishment of Buffer Zones around SPAs and NPs. If properly managed the LPAs will in principal offer a good protection and they will also provide for an expansion zone of the Protected Areas.

Table C.1 Protected Areas of Mongolia.

No.	Names of PA	Name of Provinces where PA locates	Classification	Size (ha)
1	Great Gobi /B/	Baynkhongor	SPA	927111.8222
2	Alag Khaikhan	Gobi-Altai	NP	36723.16831
3	Great Gobi /A/	Gobi-Altai, Baynkhongor	SPA	4633299.775
4	Eej Khaikhan	Gobi-Altai	NM	23095.9647
5	Khukh Serkhi Nuruu	Bayan-Ulgii, Khovd	SPA	75749.75203
6	ChiGertein river valley	Bayan-Ulgii	NP	167190.6466
7	Bogdkhan mountain	Tuv	SPA	41322.27316
8	Khasagt Khaikhan	Gobi-Altai	SPA	26760.57436
9	Mongol Els	Gobi-Altai	NP	271313.4184
10	Numrug	Dornod	SPA	320982.1815
11	Dornod Mongol	Dornod	SPA	589905.6506
12	Mongol Daguur /A/		SPA	92880.45414
13	Mongol Daguur /B/		SPA	15273.1854
14	Yahi Lake		NR	251217.9575
15	Ugtam		NR	46022.85092
16	Toson Khulstai	Dornod, Khentii	NR	458509.7875
17	Uvs lake	Uvs	SPA	441223.2166
18	Tsagaan Shuuuut		SPA	25537.7004
19	Turgen mountain		SPA	130473.9754
20	Tes river		NR	
21	Khan Khukhii	Uvs	NP	221598.2789
22	Hyargas lake		NP	341301.7869
23	Altan els		SPA	150244.2014
24	OtgontenGer mountain	Zankhan	SPA	90498.66441
25	Ulaagchin Khar lake	Zankhan	NP	259403.3884
26	Tsambagharav	Bayan-Ulgii	NP	113749.2134
27	Altai Tavan Bogd		NP	656106.3865
28	Siilhem Nuruu /A/		NP	69935.4433
29	Siilhem Nuruu /B/		NP	77942.5287
30	Devel aral		NR	10618.72285
31	Khangain nuruu	Arkhangai and	NP	906604.5447

		Baynkhongor		
32	Khorgo-Terkh Tsagaan lake	Arkhangai	NP	76893.00337
33	Noyon Khangai		NP	56657.98638
34	Onon-Balj /A/	Khentii	NP	294079.7835
35	Onon-Balj /B/		NP	106386.9926
36	Khugnu Tarna	Bulgan and Uvurkhangai	NP	84143.05686
37	Dariganga	Sukhbaatar	NP	64547.60536
38	Shiliin Bogd		NM	18136.91995
39	Khorgiin khundii		NM	6104.313042
40	Khustain nuruu	Tuv	NP	48400.56794
41	Gobi Gurvan Saikhan	Umnugobi	NP	2697170.845
42	Khan Khentii	Tuv, Selenge and Khentii	SPA	1748103.891
43	Undurkhaan uul	Khentii	NP	8820.0
44	Binderya uul		NM	5736.92
45	Khangal nuur		NM	3913.0
46	Gorhi-Terelj	Tuv	NP	291838.556
47	Nagalkhaan mountain		NR	1860.721221
48	Khar us lake	Khovd	NP	852997.2452
49	Mankhan		NR	82807.37429
50	Tarvagatain nuruu	Zankhan	NP	547629.8987
51	Little Gobi /A/	Umnugobi	SPA	1147812.066
52	Little Gobi /B/	Dornogobi and Umnugobi	SPA	682617.3514
53	Ikh bogd mountain	Baynkhongor	NP	262855.8119
54	Zag Baidgar river		NP	116308.5428
55	Tujiin nars	Selenge	NP	70804.71976
56	Orkhon river valley	Arkhangai and Uvurkhangai	NP	92717.98585
57	Khuisiin naiman lake	Arkhangai	NM	11149.06413
58	Ikh gazar chuluu	Dundgobi	NR	175906.1387
59	Khuvsgul	Khuvsgul	NP	1175602.174
60	Dayan deerkhi cave		NM	31277.20524
61	Ulaan taiga	Khuvsgul	SPA	431694.4634
62	Khoridol Saridag		SPA	226672.0417
63	Tengis-Shishged		NP	875711.2729
64	Zed-Khantai-Buteeliin-nuruu	Bulgan	SPA	604265.563
65	Myangan Ugalzat	Khovd	NP	303775.0681
66	Bulgan river- Ikh Ongog	Khovd	NP	92743.66388
67	Munkhkhairkhan mountain		NP	506096.7014
68	Ikh Nart	Dornogobi	NR	66752.0
69	Khar Ymaat	Dornod	NR	50691.0

C.2 Current Environmental Conditions and Major Problems

Air quality is a significant environmental problem in big cities and Aimag centers of Mongolia. Primary sources of air pollution thermal power plants, small and medium sized heating boilers, traditional Gers and wooden houses, and over 40,000 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.

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. Of 102 centralized wastewater treatment plants built only 35 were in operation in 2002.

The pollution problem is due not just to domestic waste effluent, but also to the high levels of chromium used in the tannery process.

Even there are 5,500 rivers, 9,600 streams, 300 hot springs, 4,000 lakes and 30,000 wells registered in Mongolia, 3,000 rivers and streams had dried up by year 2000 and 1,200 wells are no longer in use because of depletion, deterioration of facilities or abandonment after the nomad's migration to the city. As a consequence, the use of water resources is limited, causing water shortage.

Land Degradation: Pasture or land degradation directly and severely affects the rural population as herders depend heavily on pasturelands, deriving their food sustenance and cash income almost entirely from their livestock. 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, specially around settlement areas and water points.

Solid Waste: 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. Moreover, it doesn't have the good city planning project. There is much household garbage (33.8%), paper (18.9%), and plastics (15.2%) in summer. Ashes occupy no less than 60.2% in winter.

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. Now, the proprietary company of public establishment private management and civilian enterprises which were entrusted from the municipal government prefecture are carrying out drawing in and disposal of the wastes of cities.

Solid wastes generated from factories, commercial establishment, and construction sites are collected by third party agencies. However, the solid wastes generated so much is over a wastes collection trader's interested collection capacity.

Loss of biodiversity: Growing population coupled with urbanization, economic development, and an increasing per capita demand for natural resources, have put enormous pressure on land and natural resources. At the same time, the recent transition from a centrally controlled economy to a free market economy has opened the country's natural resources to free enterprise and market forces. Increasing economic activity such as mining, land cultivation and crop farming, and the production of wild and domestic animal products for internal consumption and export, have resulted in the disturbance hitherto undisturbed natural areas and the loss of wildlife habitat. Inadequately controlled or illegal hunting, and predator eradication programs also contribute to pressures on wildlife and on the natural balance in many areas.

C.3 Social Baseline

Population: Mongolia is one of the most sparsely populated countries in the world, as of 2017 with a population of 3,177,899 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. Last years, the migration from rural area to urban is increasing, the average number of population migrated in the past 10 years is estimated at around 20,000 per year which cause the expansion of population of Ulaanbaatar. At present Ulaanbaatar accounts for 40% of the total population of Mongolia. The projected urban population of 2030 is 1.87 million or 1.7 times larger than the population in 2008.

Indigenous People: The rights of indigenous peoples are assured by the Constitution of Mongolia which states: "No person may be discriminated [against] on the basis of ethnic origin, language, race, age, sex social origin or status, property, occupation or post, religion, opinion, or education" (Constitution of Mongolia, 1992, Article 14, Chapter 2).

There are more than 30 ethnic groups in Mongolia. All groups are either the descendants of Mongolian nomadic tribes or are groups of Turkic origin who have become Mongolised over time. The Khalkh make up the majority and comprise over 84.5% of the population and Kazakh 3.9%, Dordov 2.4%, Bayad 1.7% and 1.3% is Buryat. Except for the Kazakh minority group residing in western Mongolia, all ethnic groups speak Mongolian dialects which are comprehensible to speakers of Khalkha and to each other. The Kazakhs also are the only ethnic group that relies primarily upon a distinct native spoken and written language- Kazakh language.

Most Mongolia's ethnic minority groups share similar customs, traditions and systems of production as the Khalkh. With the exception of the predominantly Muslim and linguistically differentiated Kazakhs in western Mongolia, and traditionally nomadic reindeer-herding Tsaatan peoples in the north, Mongolia's ethnic groups are not considered to be economically, socially or legally marginalized or otherwise disadvantaged in a manner which would restrict their ability to participate in the project. This IPP is therefore applicable only to Tsaatans and Kazakhs. Consultations undertaken as part of the social assessment process indicate that potentially affected peoples do not anticipate that AF of SLP3 will generate any adverse impacts. However, there are concerns that the Tsaatans and Kazakhs have characteristics that may restrict their ability to participate in, and benefit from project.

Tsaatans Community:

Traditionally, the Tsaatan live in the taiga (boreal) forest in Tsagaannuur Soum, in the far north of Khuvsgul Aimag. The population of Tsagaannuur Soum in 2019 totaled 1995 of whom 901 people live in center bagh³, while 1077 live in remote bagh. Tsaatan minority compose 16.8% out of total residents in center bagh, while in remote bagh the Tsaatans compose 34.7% of the bagh residents.

³ Bagh is smallest rural administrative unit in Mongolia.

There are around 335 tsaatan people divided into 85 households (to compare with 80 HHs as reported in the 2013) maintain their traditional alpine lifestyle based on reindeer breeding based in the Taiga forest. Total 2159 reindeer was counted in 2017 livestock census. The Tsaatan communities are divided into two tribes, called 'otog', by their location, as Western and Eastern tribes. Other Tsaatans or Tsaatan descendants in the Soum center and lower areas generally live among, and much the same as, neighboring darkhad.

Their traditional livelihoods are based on reindeer breeding. Tsaatan's reindeer forage on plentiful lichen in the forests. The Tsaatan travel by reindeer, consume their milk, use the hides for clothing and shelter, and consume the meat of the older animals that are no longer suitable for transport or milk production. The Tsaatan are particularly vulnerable owing to their low population, decline in traditional livelihoods, high incidence of poverty and geographic and economic marginalization, and a reduction in reindeer breeding ability, reduced reindeer birth weights and other health issues.

During the SLP3, the project team members visited⁴ to Tsaatan community to inform and educate about LDF and SLP3 project activity and consult on their needs in regard health, education, livelihood support. Several elder people mentioned about shortage of medicines that are sold at subsidized prices. Tsaatan expressed a desire for veterinary assistance in stopping the decline of reindeer herds, through measures such as improved disease treatment and introduction of improved breeding stock. Communication system with Soum center was another issue. The community members unable to articulate their needs due to lack knowledge and skills to define their challenges they face daily that can be considered as sub-project to be financed by LDF. Provisions of the IPP refer, then, primarily to the remote Tsaatan living in Eastern and Western Taiga forests.

Kazakh Communities:

Comprising 3.9% of the population of Mongolia, the Kazakh are the largest ethnic minority group. While language differences and their Islamic beliefs may make ethnic distinctions appear to be more marked between the Kazakh and the Mongol subgroups, Kazakh livelihoods are not significantly different from those of the Mongol subgroups. Local statistics (Bayan-Ulgii Aimag, 2012) suggest that approximately 75.6% of Mongolia's roughly live in Bayan Olgii Aimag while around 8.9% live in Khovd Aimag, 2.4% in Darkhan –Uul Aimag, 0.9% in Tuv Aimag, 0.6% in Orkhon Aimag, 0.5% in Khentii Aimag. Because there are no significant concentrations of Kazakhs elsewhere, the IPP is applicable only in these two Aimags.

As most Kazakhs living in the westernmost Aimags of Bayan Olgii and Khovd do not speak or read Mongolian to a level of proficiency that would allow them to participate in project activities in Khalkha, it is necessary to ensure that Kazakh community members are adequately informed about LDF and its process of participation; improving the awareness/understanding of the Soum local government officials and community members about results of annual performance assessment (APA) under SLP3 project and that both written and verbal project information is available in both Mongolian and Kazakh languages.

D. Environmental and Social Management Plan

The PIU of MOF is responsible for managing environmental and social risks during the implementation of the AF project of SLP3. Specially, for monitoring and making sure that the subproject complies with the ESMP, Mongolian and World Bank safeguards policies and the permitting and other regulatory requirements of the Government of Mongolia.

Based on the previous projects, the SLP3 project would overall have positive environmental impact. But owing to the broader geographical scope of the project and its significance in relation to policies and institutional development, the project carries risks of impacts on environmentally-sensitive areas, and water resources. More specifically, the project has the potential to degrade land, biodiversity and

⁴ June 2019

watersheds as well as surface water and groundwater resources through the effects of land degradation, over-extraction from rehabilitated or newly-created wells, surface water capture facilities and localized pollution from concentration of livestock and households around the wells and water sources. Although the impact of increased extraction of groundwater from the relatively shallow wells is probably negligible, there may be a cumulative effect of wells on groundwater recharge. Despite the focus of the project on a sustainable distribution of livestock, there is a risk that herders will seek to increase their numbers of stock. In itself, an increasing number of livestock is not a problem for the environment, but more livestock in combination with an adverse distribution of livestock would have implications for land degradation, biodiversity and watershed integrity.

Consultations undertaken as part of the social assessment process during project preparation, indicated that potentially affected people do not anticipate that SLP3 will generate any adverse impacts. However, there are concerns that the Tsaatans and Kazakhs have characteristics that may restrict their ability to participate in and benefit from SLP3. The Project social management, therefore focuses on the Tsaatans and the Kazakhs and identifies special measures targeting these groups. The details of measures are included in the IPP.

D.1 Potential Activities and Sub-projects to be Implemented within AF Project

More than 20,800 subprojects were implemented and supported by LDF within SLP3 between 2013 and 2019. Out of these sub-projects, 583 subprojects (3%) were necessarily to be assessed by GEIA. Among these, the following types of sub-projects were implemented, which include:

- 4 projects to establish SME,
- 181 projects to establish green facility and public garden,
- 83 projects to improve waste dumping sites,
- 29 projects to improve wastewater treatment plants,
- 198 projects to construct electricity transmission gridline and sub-stations.

D.2 Potential Environmental and Social Impacts

According to the results of reviewing project documents and interviewing with local Government officials, herders and representatives of main stakeholders/ beneficiaries of the project, the subproject activities will overall generate positive impacts on the biophysical environment, but negative impacts may arise from construction and renovation of facilities. The following impacts identification matrix in **Table D.1** shows the positive and negative impacts arising from those activities.

Table D.1. Positive and Negative Impacts from Potential Activities

Components	Sub-projects or activities might be implemented within AF project of SLP	Biophysical environment				Socio-economic conditions			Labor conditions / occupational health and safety	
		Wildlife	Hydrology	Vegetation & soils	Climate resilience	Livelihood	Access to natural resources	Indigenous peoples	Labor conditions	Occupational health and safety
PRM	1.1 Fencing around pasture or haymaking area	-	+	+	+	+	-	+/-		
	1.2 Construct and operate livestock feeding facilities.		-	-	-	+		+		

	1.3 Establish and operate new wells	-	-	-	+	+	+	+/-		
	1.4 Revitalization and operation of existing wells	-	-	-	+	+	+	+/-		
	1.5 Fencing and protecting of water sources	-	+	+	+	+	-	+/-		
	1.6 Establish fencing area for livestock breeding	-		-	+/-	+	-			
	1.7 Introduce improved breed of livestock and provide herders with bulls, rams and improve artificial insemination.	+			+/-	+	+/-	+		
Activities financed by IDF	2.1 Renovation and improvement of public buildings (such as school, hospital, bagh center, dormitory, cultural center etc)					+		+	+	+
	2.2 Repair and improvement of dirt roads on mountain passes and bridges.	-	+/-	+	+	+	+	+/-	+/-	
	2.3 Establishing and operation of SME or micro-scale processing units.		+/-	+/-	+	+	+	+/-	+	+/-
	2.4 Constructing of electric transmission gridline and substation.	+/-		+/-	+/-	+	+	+	+	+/-
	2.5 Renovation or construction of heating system and heat only boilers in Soum center.				+/-	+			+	+
	2.6 Renovation of wastewater treatment plant in Soum center.		+/-	+	+	+			+	+/-
	2.7 Establishing, landscaping and furnishing public area	+	+	+	+					+
	2.8 Improve solid waste dumping sites.	-	+/-	+/-	+/-				+	
			-	-	-					

Remark: (+) : Positive impact, (-) : Negative impact

The project activities during construction phase will involve construction and rehabilitating of public buildings and small processing factory buildings, establishing livestock feeding facility, pastureland and hay making area fencing, establishing electricity transmission gridline, green facility and public garden park, which will involve excavation for building and equipment foundations, concreting, civil works and erection of equipment, clearing of area including transplanting trees wherever required, and restoring top soil in surrounding areas within the project object premises. During the operation phase, most of the construction phase impacts will get stabilized and the impacts will be restricted only to the operation and maintenance of the buildings and facilities.

During the operational phase of sub-projects, the following key impacts would arise from improper operation and maintenance of established facilities and management of services:

- There are no specific storages for keeping fertilizers and abstergent, and the delivering place was just open area and no separation from ground. In the result of this, it can negatively impact the environment, generating air, soil and water pollution.
- Negative effects on soil and increasing of erosion in the case of improper management of newly established or revitalized wells for livestock watering.
- Decreasing of pasture land and loosing of hay making area, changing the native or natural features of the environment
- Increasing garbage related to animal excreta/dung, and manure around the wells, increasing methane gas emission.
- Pollution of soil and surface water from the wastewater generated by SME or small processing units
- Changing of micro-climate due to improper usage of water resources
- Impact on water resources from improvement of water supply (e.g. the digging of shallow/drilling wells for irrigation of vegetable plots and livestock watering);

- Pasture degradation, soil and environmental pollution around the wells due to unorganized usage of the well and over flocking of livestock around the well.
- Raise conflict between well users and other neighboring herders
- Increase of soil and surface water pollution from improper use of aseptic for livestock feeding facility
- Increase in solid waste
- Raising of conflict between sub-project implementing herders and non project herders if improperly organize pasture management and fencing of hay making areas

D.3 Mitigation Measures Against Environmental and Social Impacts

Most potentially adverse operational impacts will be mitigated through sound facility design: (i) all facilities/buildings to be constructed or renovated with support of LDF will be designed in compliance with relevant GoM's design standards and codes for energy-efficient, safe buildings, including but not limited to: Mongolian National Standards (MNS) 3838: 2008 and Construction standard package # 91.040; (ii) only low or no volatile organic compound (VOC)-emitting materials will be used (including paints, coatings, adhesives, carpet and furniture's) to ensure high indoor air quality. Water-based nontoxic, no allergenic paint for drywall or plaster surfaces will be preferred to latex or oil-based paints; (iii) heat-only boilers will be installed that satisfy the relevant national standards on general technical requirements of air pollution emissions (MNS 5457:2005).

Table D.2 Mitigation Measures against Environmental and Social Impacts during construction and operation phase of projects

Project Activity	Potential Impacts	Mitigation Measures	Institutional Responsibility	Implementation Schedule
1.1, 1.5 and 1.6, Fencing around pasture or haymaking area, water spring etc	Block and restrict wildlife movement	<ul style="list-style-type: none"> Prohibit fencing with width more than 100 m and use of barbwire. Official agreement of Bagh Meeting about the location of site. 	Community groups, Bagh Governor under supervision of EI	Construction period
1.2 Construct and operate livestock feeding facilities.	Increase of soil and surface water pollution from improper use of facility and aseptic.	<ul style="list-style-type: none"> Advance notice to the public about the time, schedule and the duration of the operation of feeding facility to avoid over flocking of livestock. Use of well trained and experienced veterinarians for operating the facility to reduce accidental damage to the facility and surrounding area. Clean and restore the spoiled area immediately to overcome pollution and public inconvenience. Ensure that solid waste is gathered regularly and is not permitted to lie on the ground for long periods of time. 	Soum Agricultural Unit and veterinary Service, Bagh Governors	Operation period
1.3,1.4 Establish and operate new wells, and revitalization and operation of existing wells	Negative effects on soil and increasing of erosion in the case of improper management of wells	<ul style="list-style-type: none"> Establish well users group to manage and maintain the well and develop specific plan for proper use. Advance notice to the public about the time, schedule of the operation of wells to avoid over flocking of livestock. 	Contract provisions signed by Soum Government and Well user group	Operation period
2.1 Renovation and construction of public buildings (such as school, hospital, bagh center, dormitory, cultural center etc) Surplus earthwork/soil	<ul style="list-style-type: none"> noise, dust, wastewater and solid waste soil erosion and land degradation disturbance to local residential area 	<ul style="list-style-type: none"> Storage of excess soil near drainage and settlement areas stored in restricted area and construction work should be carefully designed to minimize obstruction or destruction to natural drainage. Excess soil from foundation excavation to be reused on site or disposed of in accordance to construction site management plan by contractor. Marking of vegetation to be removed prior to clearance, and strict control on clearing activities to ensure minimal clearance. Construction Company will replant or transplant trees to be cut within the constructed building. Refer to Annex 4 for more detailed mitigation measures during construction. 	Contractor through contract provisions under supervision of Soum Governor, EI	Construction period
2.2 Repair and improvement of dirt roads on mountain passes and bridges.	<ul style="list-style-type: none"> Dust, noise, waste and traffic disturbance during construction work 	<ul style="list-style-type: none"> Existing separate roads used for access to the sites wherever possible. Refer to Annex 4 for more detailed mitigation measures during construction. 	Contractor through contract provisions under supervision of Soum Governor.	Construction period
2.6 Renovation of wastewater treatment plant in Soum center.	<ul style="list-style-type: none"> noise, dust, air emission, wastewater and solid waste soil erosion and land degradation disturbance to local residential area 	<ul style="list-style-type: none"> Construction contractor to have proper sanitation, water supply and waste disposal facilities at work site. Refer to Annex 4 for more detailed mitigation measures during construction. Implement good housekeeping and monitoring procedures for operational noise, emission, occupational health and safety, and to achieve effluent water and sludge quality consistent with applicable national or local requirements. Sludge from wastewater treatment systems should be 	Contractor through contract provisions under supervision of Soum Governor	Construction and operation period

disposed in compliance with national or local regulatory requirements, in the absence of which disposal should protect public health and safety, and conserve water and land resources.

2.8 Improve and establish solid waste dumping sites.	Contamination of receptors (land, water, air).	<ul style="list-style-type: none"> • Construction contractor to have proper sanitation, water supply and waste disposal facilities at work site. • When siting, consider the proximity to water supply wells, irrigation canals, surface water bodies and other sensitive targets, as well as the site’s geology and hydrogeology condition; • Use impermeable materials for roads, waste processing and storage areas, and vehicle washing areas, and install curbs to prevent runoff to permeable areas; • Collect runoff and leachate and treat runoff to meet applicable environmental standards before discharge to surface water or the municipal sewage system; • Provide adequate storage for waste not immediately disposed of; • Pre-treat wastes as needed to reduce dust; • Refer to Annex 4 for more detailed mitigation measures during construction; • Implement good housekeeping and monitoring procedures for operational noise, dust, emission, occupational health and safety. 	Contractor through contract provisions under supervision of Environmental and Hygiene Inspector	Construction and operation period
--	--	--	---	-----------------------------------

Table D.3 Occupational Health and Safety Risks and Mitigation Measures

Production sectors	Occupational health/safety hazards	Mitigation Measures
PRM sector (Operation of livestock feeding facility, water wells etc)	Physical hazards	Mitigation measures related to equipment and vehicle operation and repair as described in the World Bank General EHS Guidelines.
	Confined space entry	Occupational health and safety hazards associated with confined spaces on farms (e.g. manure pits, silos, grain bins, water tanks, or inadequately ventilated buildings) include the risk of asphyxiation, primarily due to the accumulation of methane. Entry to all confined spaces should be restricted and should be subject to permitted supervision by properly trained persons as described in the General EHS Guidelines.
	Chemical hazards	<ul style="list-style-type: none"> • Train personnel to apply chemicals/abstergent and ensure that personnel have received the necessary certifications, or equivalent training where such certifications are not required; • Ensure hygiene practices are followed to avoid exposure of herders to abstergent residues. • Equip pump houses with a ventilator and proper heating appliances;
Livestock Husbandry	Exposure to physical hazards	<p>The following management measures specific to livestock production may reduce the risk of accidents and injuries:</p> <ul style="list-style-type: none"> • Ensure that all 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	<ul style="list-style-type: none"> • Train personnel to apply medicines and abstergent, and ensure that personnel have received the necessary certifications, or equivalent training where such certifications are not required; • Ensure hygiene practices are followed to avoid exposure of family members to abstergent residues.
	Exposure to biological agents	<p>Management measures that can be taken to avoid the negative consequences of worker exposure to biological agents include the following:</p> <ul style="list-style-type: none"> • Inform herders 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	Entry to all confined spaces should be restricted and should be subject to permitted supervision by properly trained persons as described in the General EHS Guidelines.
SME and small processing units	Physical hazards	<ul style="list-style-type: none"> • 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 / livestock yards so that the animals can be calmly moved into the facility, and which allows for

		<p>escape routes for the workers;</p> <ul style="list-style-type: none"> • Conducting stunning of cattle in a controlled setting (e.g. stun-box).
	Biological hazards	<ul style="list-style-type: none"> • 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 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	<ul style="list-style-type: none"> • Take precautions 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 lair age 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.
Milk processing	Physical hazards	<ul style="list-style-type: none"> • Maintain walking and working surfaces clean and dry and provide workers with anti-slip 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Exposure to chemicals (including gases and vapors) typically involves chemical-handling activities related to cleaning operations and disinfection of process areas, in addition to the maintenance of heating (thermal oils) and cooling systems (ammonia). Recommended measures to prevent and control exposure to chemicals are discussed in the General EHS Guidelines.
	Exposure to	Workers at dairy processing facilities may be exposed to heat from process activities and to cold in refrigeration areas and rooms.

	heat, cold, and radiation	Recommendations for the management of exposure to heat and cold are presented in the General EHS Guidelines.
--	---------------------------	--

Table D.4 Generic Guideline for Implementing the Mitigation Measures

Environmental/Social Impacts	Generic Guidelines for implementing Mitigation Measures	Responsibility of Implementation
Environmental Impacts		
Pastoral Risk Management may cause risk of increased land degradation owing to increasing numbers or adverse distribution of livestock, and effects of land degradation on surface water quality	<ul style="list-style-type: none"> - EIA of PRM plans to be carried out; - Soum rangers to be closely involved in PRM planning; - The environmental screening checklist (Annex 2) to be followed for each of project activities; - Land management (including pastureland) plan updated annually; - Soum governmental agency, local community and environmental officer have prepared a PRM plan for each Soum, taking into account the carrying capacity of pastoral land; - Activities under LDF will be in compliance with the PRM plans; - Land officer, veterinary and pastureland officer, environmental officers in each Soum improved knowledge and skills on the pastureland degradation monitoring; - Monitor plant, bio-diversity, pastureland degradation on a regular basis; 	<ul style="list-style-type: none"> - Soum environmental inspector and Aimag based environmental expert - Environmental specialist in EIA at Aimag level - Soum governor office - Consultant hired - Soum governor inspector - Training consultant - Professional organizations - Technical consultant
Effects of Wells on Surface Water Flows	<ul style="list-style-type: none"> - Soums will follow the environmental screening checklist (Annex 2) ; - EIA of rehabilitation and construction of wells by Aimag level environmental inspectors; - Diversifying the range of investments such as surface water capture facilities or wells in order to minimize the impacts on water resources; - Environmental (Soum) rangers are involved in the development of the PRM plans; 	Soum environmental inspector
Effects of Wells on Groundwater	<ul style="list-style-type: none"> - Soums will follow the prepared environmental screening checklist (Annex 2); - EIA of rehabilitation and construction of wells by Aimag level environmental inspectors. - Greater support to Soum governors in directing the location of well construction /rehabilitation 	Soum environmental inspector Environmental officer in charge of EIA at Aimag level
Effects of Sheep / Goat Dips on Surface	<ul style="list-style-type: none"> - Soums will follow the prepared environmental screening checklist (Annex 	Soum environmental inspector

Water Quality	2); - State standards followed by the veterinary officers - Deactivation of the toxic wastes and land	Soum veterinary officer
Frequency and Intensity of Flooding	- Place greater emphasis on need to reduce land degradation in PRM plans; - Involvement of Soum rangers in PRM planning; - EIA of surface water capture facilities to enhance flood mitigation effects	Soum governor office Environmental officer in charge of EIA at Aimag level
Impacts on Environmentally Sensitive Areas	- Each Soum has prepared its maps of the location of environmentally-sensitive areas (such as degraded areas, areas of importance for threatened wildlife, and watersheds of critical importance for downstream drinking water supplies). The project will continue using these maps. - Build on the mapping activities of the PRM component by including the location of environmentally sensitive areas, and providing greater support to Soum governors in directing herder movements and the location of well construction /rehabilitation. - EIA of PRM plans to be carried out by Aimag environmental inspectors. - Soum rangers to be closely involved in PRM planning - Responsibilities clarified for each related agencies and accountability improved - Soums will follow the prepared environmental screening checklist (Annex 2) that subprojects which can affect critical natural habitats, water sources, cultural heritage or relics, protected areas, National Park, Strictly Protected Areas, natural reserves and other ecological sensitive sites should be excluded.	Soum governor office Soum environmental inspector Government of Mongolia, Ministry of Environment and Tourism, Ministry of Food, Agriculture and Light Industry
Revitalization of existing wells, renovation works on different facilities may cause general construction impacts	Follow the construction activities environmental management guidelines in Annex 4.	Soum governor office Civil works contractors
Worker safety during construction	To prevent accidents during constructions, the civil works contractors should regularly provide training to workers and need to follow Mongolian national OHS standards, which require basic protections such as necessary protective equipment. The OHS related requirements in the World Bank Group's Environmental, Health, and Safety (EHS) Guidelines shall be transposed into construction ESMPs.	Civil works contractors
Social Impacts		
Marginalization of an ethnic group, the Tsaatan due to their low number and	- Specific measures are recommended, in the Indigenous Peoples' Plan (IPP) to enable Tsaatan to participate and benefit from SLP/LDF activities.	ALST members LPO, PIU

distant location from bagh center	- Improved information dissemination on the LDF activities and veterinary services for reindeer	Governor of the Tsagaannuur Soum
Participation of Kazakh people who do not speak or read Mongolian	- SLP3 will make project information available in the Kazakh language including results of APA est. - Improve ALST members understanding on LDF/SLP3 activities in particularly on APA process and result.	PIU ALST LPO

D.4 Monitoring Plan

No.	Indicators of Monitoring	Types of Monitoring/ Method of Monitoring	Monitoring Frequency	Responsibility	Budget/Source of budget
1	Safe transportation of construction material through neighborhood and roads	Visual Inspection	Regular during construction	Civil works contractors	Contractor's budget
2	Stockpiling of excavated materials and appropriate disposal	Visual Inspection	Regular during construction	Soum/Civil works contractors	Contractor's budget
3	Occupational health and safety (OHS) management	Inspection and testing of personal protective equipment(PPE) and other safety features and hazard control measures; Record of OHS trainings; Record of work-related injuries, accidents and disease; Record of workers' health surveillance; Record of emergency exercises; Record of OHS management plan implementation and compliance.	Regular during construction and operation	Civil works contractors/operators	Contractor's/operator's budget
4	Safety of local communities	Record of injuries,	Regular during	Soum government	Local budget

		accidents and disease; Record of complaints.	construction and operation		
5	Solid waste segregation disposal	Visual Inspection	Regular during construction	Civil works contractors	Contractor's budget
6	Wastewater treatment efficiency	Record of influent and effluent quantity and quality	Regular during operation	Operator	Operator's budget
7	Landfill environmental performance	Inspection of facility damage and operability; Record of waste type and quantity; Record of emissions and effluent quantity and quality.	Regular during operation	Operator	Operator's budget
8	Water wells environmental performance	Record of raw water quality; Inspection of sanitary zones established around the wells; Inspection of groundwater extraction; Inspection of groundwater and surface water quality around the well.	Regular during construction and operation	Soum government	Local budget
9	Livestock feeding facilities emissions and effluent	Record of emissions and effluent quantity and quality.	Regular during operation	Operator	Operator's budget
10	General EIA should be done on LDF sub- projects obligatory to GEIA by EIA Expert of Aimags. (refer to Table B.3)	Records of EIA	Regular during project implementation	PIU	N/A
11	Environmental Management Plan (EMP) for LDF sub-projects should be developed and implemented by sub-project proponents and supervised by Soum Governor's Office	Records of EMP	Regular during project implementation	Soum environmental inspector and Aimag Environmental Department	Sub-project proponents

12	Monitoring visits to Soum where EM resides to evaluate level of participation in LDF and access to benefits	Visit and Focus group discussion	Twice in each year	PIU ALST/LPO	USD35'000 per year/Project management cost
----	---	----------------------------------	--------------------	-----------------	--

D.5 Capacity Building

All local member of ALST of the project must be adequately trained prior to implementing the LDF sub-projects on site. The Project Coordinator and Environment Specialist (ES) should review the staffs' skill sets against their roles or responsibilities needed for following-up the ESMP. Each staff should explain where additional training might be needed to have the necessary skills to ensure and execute the ESMP for project Aimag/Soums.

Project will build the capacity of relevant staff of Aimag DFA and Soum Government officials, particularly, Agricultural officer, EIs, staff of SAU, relevant inspectors of ASIA for improving their involvement in the SLP activities and monitoring of ESMP performance.

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

- Background and Current Status of the SLP3 Project.
- Overview of the project Soums' social and Environmental conditions.
- SLP's PDO and planned activities, potential activities could be supported by LDF including planned investment, coordination, supervision, assistance needed etc.
- Introduction to the Staff and Consultants, and their role and responsibilities.
- Introduction on important standards and their use and control.
- Specific Job Duties and Expectations relevant to ESMP.
- Introduction on supervising and monitoring process
- Result of reviewing of ESMP and IPP.
- Introduction to monitoring schedules and other information.

Each of training should last at least 1-2 days with specific program and should include interactive problem-solving tasks. The training program will be developed by a consultant who will be contracted with PIU during project implementation.

Table D.5 Training necessary for capacity building for ESMP

Training topic:	Summary of training purpose and content	Recipients/ Participants	Frequency or target date	Estimated cost for training (USD)
Introduction to ESMP	Overview of ESMP including site information, pollution risks and controls, and programmes.	All staff of SLPO / member of ALST, staff of ADFA, ADET	Once, at the beginning of AF project	10,000
Training on LDF regulation and LDF guideline modules	Procedure of Environmental Assessment for LDF project selection and to train Bagh Governors and citizens in application of the EIA guidelines for environmental assessment and to get environmental safeguard requirement incorporated into LDF project proposal development.	Soum Officials, Bagh Governors, Representatives of Bagh Citizens and local NGOs	Once, at the beginning of AF project	5,000
Monitoring and controlling impacts and risks	Methods and approaches, principles on M&E, Use of Participatory Approaches and tools.	All staff of SLPO / Soums' EI, Land manager, staff of Soum Government and ADET	Once, at the beginning of AF project	10,000
Training on specific pollution risks and controls				

Air Quality Monitoring	Ambient Air Quality, General Approach, Projects Located in Degraded or Ecologically Sensitive Areas, Point Sources, Stack Height, Small Combustion Facilities Emissions Guidelines, Fugitive Sources, Volatile Organic Compounds (VOCs), Particulate Matter (PM), Ozone Depleting Substances (ODS) , Mobile Sources – Land-based Greenhouse Gases (GHGs), Monitoring of Small Combustion Plants Emissions	Staff of ADET, ASIA, Soum Government officials, EI, Rangers	Once, at the beginning of AF project	5,000
Water Conservation	Applicability and Approach Water Monitoring and Management, Process Water Reuse and Recycling, Building Facility Operations Cooling Systems, Heating Systems	Staff of ADNET, ASIA, Soum Government officials, EI, Rangers	Once, at the beginning of AF project	6,000
Waste water and Ambient Water Quality	Applicability and Approach, General Liquid Effluent Quality, Discharge to Surface Water, Discharge to Sanitary Sewer Systems, Land Application of Treated Effluent, Septic Systems, Wastewater Management, Industrial Wastewater, Sanitary Wastewater Emissions from Wastewater Treatment Operations, Residuals from Wastewater Treatment Operations, Occupational Health and Safety Issues in Wastewater Treatment Operations, Monitoring	Staff of ADET, ASIA, Soum Government officials, EI, Rangers	Once, at the beginning of AF project	5,000
Hazardous Materials Management	Applicability and Approach, General Hazardous Materials Management, Hazard Assessment, Management Actions, Occupational Health and Safety, Process Knowledge and Documentation, Preventive Measures, Hazardous Materials Transfer, Overfill Protection, Reaction, Fire, and Explosion Prevention, Control Measures, Secondary Containment (Liquids), Management of Major Hazards, Management Actions, Preventive Measures, Emergency Preparedness and Response. Community Involvement and Awareness.	Staff of ADNET, ASIA, Soum Government, EI, Land managers, SAU staff	Once, at the beginning of AF project	3,000

Waste Management	General Waste Management, Waste Management Planning, Waste Recycling and Reuse, Treatment and Disposal. Hazardous Waste Management, Waste Storage, Transportation, Treatment and Disposal Commercial or Government Waste Contractors Small Quantities of Hazardous Waste Monitoring	All stakeholders	Once, at the beginning of AF project	5,000
Contaminated Land	Risk Screening, Interim Risk Management, Detailed Risk Assessment, Permanent Risk Reduction Measures, Occupational Health and Safety Considerations	Herders and local residents	Once, at the beginning of AF project	4,000
Specialized training for herders				
Participatory M&E of impacts.	Simple methods for recognizing adverse impacts on environment Methodology of monitoring and evaluation on the water quality	Herders and local residents	Once, at the beginning of AF project	6,000
Project management and implementation	What is a project? Project proposal writing, planning and implementing, control and project M&E, assessment the program. Principle of donor organizations' support to local beneficiaries.	Project target groups/herders	Once, at the beginning of AF project	5,000
	Total			64,000

D.6 Institutional Arrangements and Budget for implementing ESMP

No.	Stakeholders	Types of activities	Responsibilities and duties	Budget (USD)
1.	Ministry of Finance	Soum LDF fund formulation and disbursement	<ul style="list-style-type: none"> - Budgeting - Disbursement - Financial supervision 	N/A
2.	SLPO	Support an implementation of the Environmental Management Plan of EIA of LDF investments	<ul style="list-style-type: none"> - Monitor environmental screening of the LDF activities - Capacity building in the environment and social management plan - Supervision of the implementation of environment and social management plan - Send to the World Bank the progress report for the ESMP implementation once every year 	150,000 (including the budget for training USD 64,000\$)
3.	ALST	Support an implementation of the environmental EIA of LDF investments	<ul style="list-style-type: none"> - Monitoring the utilization of guidelines on the EIA of LDF - Report to SLPO on the implementation of EIA of LDF investments at Soum level 	21,000
4.	Consultant (Environmental audit, APAs)	Assessments, training, technical assistance	<ul style="list-style-type: none"> - Assess to what extend environmental laws have been implemented - Advice on the performance improvement - Conduct annual environmental audit 	4,000
5.	Soum governor's office	Maintenance of LDF disbursement	<ul style="list-style-type: none"> - Information dissemination - Management of the LDF - Monitoring the utilization of guidelines on the EIA of LDF - Implement Management Plan for LDF sub-projects 	10,000
6.	Citizen Representative Khurals in Soums	Supervision of LDF disbursement and implementation	<ul style="list-style-type: none"> - Community supervision and evaluation - Bagh meeting organization and decision making - LDF approval and discussion 	10,000
7.	Civil work contractors	Contractors	<ul style="list-style-type: none"> - Implement the law - Provide Soum governor office information on the lessons learnt - Implement Annex 4-Construction Activities Environmental Management Guidelines 	3,000

8.	Soum level environmental inspectors;	Environmental screening of LDF activities	<ul style="list-style-type: none"> - Fill the environmental checklist for all activities that is subject to EIA - Monitor environmental impact of activities in cooperation with environmental rangers 	N/A
9.	Soum rangers	Information dissemination on the environmentally sensitive areas	<ul style="list-style-type: none"> - Participate in the environmental screening of LDF activities - Disseminate information on the environmentally sensitive areas in the Soum - Supervise environmental impact of LDF activities 	N/A
10.	Aimag level environmental officer/inspectors	GEIA of any LDF activities that is subject to environmental screening and GEIA	<ul style="list-style-type: none"> - GEIA of all activities that is subject to environmental screening - Supervision of environmental impact of big construction and rehabilitation activities such as mining 	N/A
	TOTAL			198,000

D.7 Reporting Requirements

The progress report for the ESMP implementation will be sent to the Bank each year by SLPO. SLPO receives information on the plan implementation in two ways:

- 1) Participation information will be maintained through MIS
- 2) Annual Project Assessment reports will be provided

D.8 The Grievance Redress Mechanism

The GRM addresses affected persons' 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. People will be able to access the GRM using their preferred/most accessible modality (see below) and their preferred language.

This Grievance Redress Mechanism (GRM) would provide an effective approach for resolution of complaints and issues of the affected person/community. Project Implementing Unit (PIU) has a procedures for implementing the GRM. The PIU's will be produce information material which includes procedures of taking/recording complaints, handling, and provisions of responses..

Any grievances will first be brought to the attention of the communication consultant in the Project Implementation Unit. Complaints may submitted following channels:

Phone: 70009828

Email: info@slp3.mn

Website: <http://tusuv-oronnutag.mof.gov.mn>

Facebook: [facebook.com@LDFMongolia](https://www.facebook.com/LDFMongolia)

Twitter: <https://twitter.com/MongoliaSlp3>

Letter: SLP3 project office, Ulaanbaatar-15160, Chingeltei district, Khoroo 4, Ankara street -23, Tod tower, 8th floor.

Direct visit to Local project officer based in each Aimag.

If the complainer(s) is not satisfied with the response from PIU, they can raise concerns with state central administration, the Ministry of Finance as implementing agency or, directly with the World Bank's GRS via following address and contacts:

Ministry of Finance	WB's Grievance Redress System (GRS)
<p>Address: S Danzan Str, Government building II, Ulaanbaatar-15160, Mongolia Tel: 51-267468 Twitter: https://twitter.com/MOFMongolia/ Facebook: https://www.facebook.com/MOFMongolia/ Website: https://mof.gov.mn/feedback</p>	<p>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.</p> <p>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</p>

	(GRS) MSN MC 10-1018 1818 H St NW Washington, DC 20433, USA
--	--

Reporting: The PIU will record the complaint(s) received and registered, investigated, subsequent actions and results. The produces report will be published at project website in every six months.

E. Information Disclosure and Consultation

E.1 Public Consultation during AF Project Preparation

During the project formulation stage, SLPO has hired an ESMF consultant and conducted a project scoping exercise and Public Consultation. Accordingly, during public consultation sessions, considerable dialogue had been held between representatives of stakeholders, individuals, and groups from the local governments, community to make them aware of the proposed ESMP and IPP of AF project of SLP3.

Public consultations were held on January 8, 2020 in the city of Murun, Khuvsgul Aimag and on January 15, 2020 in Ulaanbaatar to discuss ESMP and IPP in the preparatory stage of the additional funding of the project. The consultations were held with various stakeholders including relevant local arms of the GoM, herders (women and men), civil society organizations and private sector.

The consultations were organized according to the following program:

- Opening speeches given by Kh.Gan-Ochir, Chairman of Governor's Office of Khuvsgul Province, and Enkhbat, Senior Specialists of SLPIU.
- Introduction of the consultation's goals and expected outcomes, (presented by G. Gansukh, National Project Consultant).
- Introduction of goals and objectives of the SLP3 project, its progress, outcomes and activities to be implemented within the framework of additional funding of the SLP3, " (presented by M. Enkhbat, PIU Senior Specialist)
- The ESMP policies, plans and IPP to be followed within the framework of the project's additional funding, as well as the role, objectives and participation of local government authorities in their implementation. (Presented by G. Gansukh, National Project Consultant.)
- Q&A and interviews related to the presentation. (Led by Gansukh, National Project Consultant.)

E.1.1 Public Consultation held in Murun city of Khuvsgul province

- **Date:** January 8th 2020
- **Location:** Governor's Office Conference Hall, Murun city, Khuvsgul province.
- **Participants:** Totally 28 participants, representing the community of Murun, Khatgal village, Alag-Erdene, Arbulag and Tsagaannuur Soums. The list of participants is attached in Table E.2.
- **Proposals and suggestions made by the consultation participants:**

Regarding the presentations presented during the discussion, the participants made the following suggestions, including:

H.Gan-Ochir, Chairman of Governor's Office of Khuvsgul Province, has thanked the discussion participants, summarized the SLP 3 achievements and outcomes and emphasized that further implementation of the

SLP 3 would have a greater impact on the Aimag and Soum. He asked the participants to contribute to the ESMP with suggestions and propose specific activities to reduce and mitigate the potential adverse impacts on their lives and the environment, after precisely determining them.

Ts.Marmalmaa, Head of the Finance Department, Khatgal village.

Agree with the issues covered by the ESMP and IPP. All required issues have been addressed.

The LDF is a transparent and lucrative fund, and many projects have been implemented since 2013. There is no adverse impact on ES from implemented projects in the past.

1. Residents' proposals are taken and ranked and discussed in bagh meeting, however only a few participate in bagh meeting so they reject the proposals. Therefore, it is wrong to discuss proposals at bagh meeting.

2. Proposals are made at bagh level and they ranked at Soum level. The reason why Khatgal village lags behind in training and promotions is because all the project related matters go through Alag-Erdene Soum, as well as the project reports go through Alag-Erdene Soum which in result the Khatgal rank decreases.

3. Improving waste management is a pressing environmental issue in Khatgal village and around the shores of Khuvsgul Lake.

D. Yalalt, Chairman of Governor's Office of Tsagaannuur Soum

Since more than 90% of the Soum territory is included in PA, the article on "no support shall be given to activities that impact on ecologically vulnerable areas" should be changed, therefore please address the matter of implementing SLP activities in PA from an environmental aspect.

It's very difficult to go to the taigas during summer, so it's hard to organize trainings and promotions and for up to 4 months during winter men go on 'otor' movement leaving women to stay, which makes it difficult to take proposals. Therefore, it is best to make a schedule to organize training with the LDF specialist, EI and project staff.

Proposals by the reindeer herders are often postponed when LDF activities discussed at bagh meeting. So please support the possibility of specifically prioritizing the proposals from reindeer herders.

Including reindeer herders into veterinary service is needed. Please support the reindeer vaccination within the project framework. The number of reindeer is expected to increase and the current reindeer headcount is 2600. The previous SLP project has been very successful in improving the health and quality of the reindeer and therefore these measures should be continued. Reindeer herders need Tuva language training, therefore please provide book materials.

Ya. Erdenejav, Tsagaannuur Soum EI

There is a great need for research and determination of reindeer pasture resources in PRMP. In the West and East taigas, pasture degradation tends to increase.

Carry out activities in the area of waste management and toilet issues arising from private entities. Implement measures aimed towards increasing the revenues from tourists arriving in tourism region.

Since the main pastureland of the reindeer are in PA, collaboratively discuss and plan together with the PA's administration, Soum and bagh to increase the reindeer herders' potential to migrate in accordance with the PA's protection zones. Renovation and improvement of waste sites. The ESMP and the IPP covers the key issues.

Enkhbayar, Alag-Erdene Soum

Cease the way of making reindeer appear as an entertainment tool, be aware that the people who are using reindeer as an entertainment tool do not provide animal welfare, but for business purposes only.

Byambasuren, Arbular, Chairman of Governor's Office

With the development of tourism in the local area, the income opportunities for the locals have increased. Consequently, major tourist roads are being flooded and damaged, leaving people unable to drive. Therefore, please support the redevelopment and creation of wells as an improvement of water supply, as well as repair of tourist roads.

Batdorj, Alag-Erdene, Chairman of Governor's Office

The LDF is the only fund that provides financial opportunities in the local area and this fund enhances the effectiveness of the SLP. No activities funded by the LDF have any adverse effects on the environment and society. Consequently, ESMP and IPP are supported.

Please be aware that the fund investment is decreasing, therefore please increase the amount. There is a great need of support from LDF for the Governor's office, however, it is prohibited by the regulation.

More training needed for capacity building for Soum officials, specialists, bagh governor, herders, and locals. Provide methodology training for citizens on how to prepare project proposals and initiate project activities funded by LDF.

Battulga, Director of FAD in Khuvsgul Aimag

The name of the Livestock Breeding and Veterinary Unit (LBVU) of the Soum was renamed as Agriculture Unit (AU). The AU has been established with three positions: Specialist for Livestock Production Planning, Management, Breeding and Registration, specialist for Food, SMEs and Cooperative, and specialist for Pastureland, Agriculture and Water Supply. Therefore, it is needed to change the name of these positions when addressing in ESMP.

The AU specialist for pastureland, agriculture and water supply will be responsible for the implementation of PRMP within the project framework.

When organizing training for professionals, the trained staff need to be trained so that they can provide training and counseling to herders and locals.

S. Ganbat, Tsaqaannuur Soum, tsaatan

Due to the inaccurate study of the territory and lifestyle of the reindeer herders, when establishing the PA, reindeer herders are having difficulties to migrate. Poor information and introduction are given to the reindeer herders about ecologically vulnerable, protected areas and its protection zones and regulations. Without taking the traditions of life into account, there has been a great deal of fine and prohibition on the reindeer herders. Reindeer herders have been well conserving and adapting with the ways of the nature. However, the Red Taiga PA Administration claims that reindeer herders are harming nature; they do not collaborate with the reindeer herders, where they are not allowed to migrate deep into the PA during summer and fall and don't allow them to carry a gun. As the number of reindeer grows, there is a need for expanding pastureland. This needs to be taken into account and supported.

From all the suggestions made by the participants the most relevant to the ESMP and IPP have been compiled as follows in **Table E.1**

Table E.1 Suggestions by the Participants

Date of the Discussion	Venue of the Discussion	Participants	Proposals and conclusions by the discussion participated stakeholder and representatives	Project planning of the additional funding of SLP 3 and the proposals on how to settle the issues during implementation process
January 8, 2020	Murun city, Khuvsgul province	Totally 28 participants, including Chairman of Governor's Office and	<ul style="list-style-type: none">No activities funded by the LDF have any adverse effects on the environment and society. Consequently, ESMP and IPP are supported.	<ul style="list-style-type: none">ESMP implemented in the previous phase can be implemented

		<p>community representatives of Murun, Khatgal village, Alag-Erdene, Arbulag and Tsagaannuur Souns</p>	<ul style="list-style-type: none"> • Support and implement infrastructure improvement measures to increase revenue for incoming tourists in the tourism region • Carry out activities in the area of waste management and toilet issues from tourism • Renovate and improve waste disposal sites. • Improving waste management is a threatening environmental issue in Khatgal and around the shores of Khuvsgul Lake. 	<ul style="list-style-type: none"> • When funding tourism infrastructure from the LDF within the framework of the SLP, more support is needed for the standardized improvement of waste management and sanitation facilities • Environmental Inspector (EI) is responsible for overseeing the waste management in towns and villages near rivers and lakes in accordance with applicable laws, regulations and standards • No support is given for any project activities in the Water Source Protection and Sanitary Zone
			<ul style="list-style-type: none"> • There is an urgent need for reasoned identification and study of reindeer pasture resource in PRMP. • The growing number of reindeer requires in need for expanding pastures, in which pasture degradation is likely to increase in the West and East taiga. 	<ul style="list-style-type: none"> • Add organization issues of the management and study reindeer pastureland resource capacity in PRMP of the Soum.
			<ul style="list-style-type: none"> • The name of the Livestock Breeding and Veterinary Unit (LBVU) of the Soum was renamed as Agriculture Unit (AU). The AU has been established with three positions: Specialist for Livestock Production Planning, Management, Breeding and Registration, specialist for Food, SMEs and Cooperative, and specialist for Pastureland, Agriculture and Water Supply. 	<ul style="list-style-type: none"> • Therefore, it is needed to change the name of these positions when addressing in ESMP. • The AU specialist for pastureland, agriculture and water supply will be responsible for the implementation of PRMP within the project framework.

			<ul style="list-style-type: none"> • More training needed for capacity building for Soum officials, specialists, bagh governor, herders, and locals. Provide methodology training for citizens on how to prepare project proposals and initiate project activities funded by LDF. • There is a great need to organize methodology training for herders on how to regulate pastureland resource capacity and prevention methods.. 	<ul style="list-style-type: none"> • When organizing training for professionals, the trained staff need to be trained so that they can provide training and counseling to herders and locals.
			<ul style="list-style-type: none"> • The proposals of the reindeer herders are deferred when LDF activities discussed in Baghs. Therefore support the possibility of the procedure to specifically prioritize the proposals of the reindeer herders. 	<ul style="list-style-type: none"> • Research and implement issues for adding procedures that supports the activities regarding interests of the ethnic minority

Table E. 2 The participants of public consultation organized in Murun city, Khuvsgul province

№	Name	Soum name	Position	Phone
1	Kh. Gan-Ochir	Khuvsgul Aimag	Chairman of Governor's Office	99996838
2	Ch. Batdorj	Khuvsgul Aimag	SLP 3 coordinator	99049922
3	G. Battulga	Khuvsgul Aimag	Director of FAD	88103568
4	B. Narantuya	Khuvsgul Aimag	FAD, specialist	95402616
5	B. Dogsomjav	Khuvsgul Aimag	ADET, specialist	86927972
6	B. Ariunsumya	Khuvsgul Aimag	Specialist of Governor's Office	88094537
7	Z. Batdorj	Alag-Erdene	Chairman of Governor's Office	92116855
8	G. Tumenbayar	Alag-Erdene	Businessman	98383553
9	Ch. Khishigdelger	Alag-Erdene	EI	98389696
10	D. Mainnegen	Alag-Erdene	Social Policy staff of Governor's Office	98388060
11	L. Enkhbayar	Alag-Erdene	Chairman Bagh Khural =	93372333
12	Ts. Maralmaa	Khatgal	Village accountant	88021144
13	B. Bayarmaa	Arbulag	Tax inspector	80086322
14	S. Ayushjav	Arbulag	Bagh governor	88017677
15	T. Tsolmon-Erdene	Arbulag	Staff of Governor's Office	91333369
16	Ts. Gankhuyag	Arbulag	EI	99978087
17	L. Byambasuren	Arbulag	Chairman of Governor's Office	95384180
18	P. Purevdulam	Arbulag	Local resident	95386323
19	B. Ichinkhorloo	Davaadulam	Staff of Governor's Office	89966695

20	Ya. Erdenejav	Tsagaannuur	EI	88519048
21	D. Yalalt	Tsagaannuur	Chairman of Governor's Office	95729913
22	S. Ganbat	Tsagaannuur	Tsaatan	86774605
23	B. Sayanaa	Tsagaannuur	Tsaatan	80662554
24	T. Ganbat	Tsagaannuur	Tsaatan	80621141
25	G. Unursaikhan	Tsagaannuur	Tsaatan	98181645
26	B. Ganbaatar	Khatgal	Mayor	99796030
27	S. Bat-Erdene	Tsagaannuur	Local resident	99227337
28	N. Lkhagvasuren	Tsagaannuur	Local resident	89922321

E.1.2 Public Consultation held in Ulaanbaatar

- **Date:** January 15, 2020
- **Location:** Conference hall, "Corporate and Convention" Center.
- **Participants:** A total of 25 participants, including staffs of Governor's Office and representatives of Soum officials and locals of Bayan-Ulgii, Dundgobi, Tuv, Selenge Aimags and staffs of SLPIU. The list of participants is attached in Table E.4.
- **Proposals and suggestions made by the discussion participants:**

Regarding the presentations presented during the discussion, the participants made the following suggestions. Including:

1. Potential environmental impact within the SLP framework

Proposals by the representatives of Selenge Aimag.

- During spring and fall dry seasons, a bushfire in the pasture and haylands causes damage to the environment and pastureland
- Adverse impacts rise due to violation of the procedures of chemical fertilizer and pesticide storage and usage for vegetable growing
- Increased waste due to no waste recycling and reusing
- Pollution can occur due to lack of sanitation and toilet facilities along the tourist sites and along the central road
- Potential loss of wildlife habitats migration due to increased area of fenced hayfields
- Increased land erosion due to lack of flood protection dams in Soum centers

Proposals by the representatives of Bayan-Ulgii Aimag

- Soil pollution occurs due to pasture overgrazing
- Air, soil and water pollution occurs due to inadequate waste disposal site in Soum and village
- Contamination of soil and drinking water sources due to inadequate toilet and sanitation facilities
- Land erosion increases due to procedure violation of flood dam usage and poor monitoring
- Land degradation and loss of plant cover around the areas of livestock feeding facility

Proposals by the representatives of Dundgobi Aimag

- Direct the SLP 3's additional funding project to integrate with previous phase projects to implement as a complex project in order to improve the sustainability of previously created capacity
- Provide locals with project information and create correct understanding

- With the introduction of new breeds of animals from abroad to increase livestock productivity, new diseases and parasites may increase.
- Require to classify and recycle waste for LDF funded projects within SLP framework
- Protection, renovation of springs and water source have been done without precise planning, therefore it is resulting in adverse impact of springs and water sources to dry out.
- Required retraining of relevant provincial and Soum Governor's Office specialists in Environmental Assessment and Monitoring

Proposals by the representatives of Tuv Aimag

- The precise location and disposal of livestock manure and construction waste are urgently needed. Water and air pollution often occurs as a result of indefinite or incorrectly located waste sites.
- There is a high risk that the Soum's cultural heritage will be adversely impacted if not identified and displayed in the map.
- Adverse impact on environment and population health occurs due to weak requirements on quality control for construction materials used in LDF funded construction activities within the SLP framework.
- Consider how the activities of the new project will have an impact on the activities of the previous phase, on stabilization and continuation of the outcomes.

Proposals by the representatives of Dundgobi Aimag

- Need to organize training for herders on improving livestock breeds.
- Environmental contamination occurs due to poor waste management
- Provide promotion, training and information for locals
- Educate staff of Governor's Office in environmental and social impact assessment methodologies
- Well reflect environment, natural resources and infrastructure of the Soum in the mapping
- The Aimag and Soum budget should be clearly planned to cover the cost of implementing the ESMP and IPP to mitigate and prevent adverse impacts
- Employ environmental consultant in ALST

Proposals by the representatives of Selenge Aimag

- Establish and operate an ALCT-like team in each Soum
- It is necessary to improve the understanding and methodology about SLP by training the newly appointed Governors, Chairman of Bagh Khural and Bagh Governors as all CRKh of all Soums will be newlyelected this year
- Enhance awareness of people with disabilities about the project and consider involving them in project activities
- Disseminate best practices for improving environmental and social protection within the SLP 3 framework
- Print and distribute a list of required ESIA materials to the community
- Provide training and promotion to improve public awareness about the proposal and development of LDF funded activities

Proposals by the representatives of Bayan-Ulgii Aimag

- Conduct research to determine the current status of land, soil and water pollution
- Conduct crisis and disaster management training among locals
- Monitor all activities implemented by the LDF and require rehabilitation the land where commonly used minerals (sand and gravel) are used for construction purposes
- The matter of reprocessing the waste from meat and leather processing units must be attended with importance.
- Train members of Sustainable Development Department

- Train and build capacity for Bagh Governors and Chairman Bagh Khural
- Provide locals with information through tribe leaders
- Train and build capacity for CRKh representatives

Proposals by the representatives of Tuv Aimag

- Improve understanding and knowledge of local residents about ESMP and IPP
- Inform locals and local communities about the mitigation measures of potential adverse impacts that can occur within project framework
- Require landscaping the surroundings of any building funded by the the LDF
- Conduct environmental assessment in prior and post stages of subprojects
- Conduct further sustainability assessment of the sub-project
- Conduct pastureland capacity research prior to developing PRMP
- Report outcomes and results of the sub-projects to local residents
- Train Soum EI to build capacity to conduct monitoring for ESMP implementation

From all the suggestions made by the participants the most relevant to the ESMP and IPP have been listed as follows. (Table E.3)

Table E. 3 Suggestions by the Participants

Date of the Discussion	Venue of the Discussion	Participants	Proposals and conclusions by the discussion participated stakeholder and representatives	Project planning of the additional funding of SLP 3 and the proposals on how to settle the issues during implementation process
January 15 th , 2020	Corporate and Convention Center, Ulaanbaatar	A total of 25 participants, including staffs of Governor’s Office and representatives of Soum officials and locals of Bayan-Ulgii, Dundgobi, Tuv, Selenge Aimags and staffs of SLPIU	<ul style="list-style-type: none"> • During spring and fall dry seasons, a bushfire in the pasture and haylands causes damage to the environment and pastureland • Pollution can occur due to lack of sanitation and toilet facilities along the tourist sites and along the central road • Increased waste due to no waste recycling and reusing • Air, soil and water pollution occurs due to inadequate waste disposal site • The precise location and disposal of livestock manure and construction waste are urgently needed. Water and air pollution often occurs as a result of indefinite or incorrectly located waste sites. 	<ul style="list-style-type: none"> • Address pastureland fire prevention measures in PRMP • When funding tourism infrastructure from the LDF within the framework of the SLP, more support is needed for the standardized improvement of waste management and sanitation facilities • Environmental Inspector (EI) is responsible for overseeing the waste management in towns and villages near rivers and lakes in accordance with applicable laws, regulations and standards • Require to classify and recycle waste for LDF funded projects within SLP framework

		<ul style="list-style-type: none"> Potential loss of wildlife habitats migration due to increased area of fenced hayfields 	<ul style="list-style-type: none"> Add organization issues of protection measures into PRMP instead specifying definite area to build fence as a hayfield.
		<ul style="list-style-type: none"> Contamination of soil and drinking water sources due to inadequate toilet and sanitation facilities 	<ul style="list-style-type: none"> Implement and address the matter of establishing toilet and sanitation facilities near any establishment funded by the LDF.
		<ul style="list-style-type: none"> Protection, renovation of springs and water source have been done without precise planning, therefore it is resulting in adverse impact of springs and water sources to dry out. 	<ul style="list-style-type: none"> Conduct ESIA and make planning for protection and renovation activities of springs and water sources.
		<ul style="list-style-type: none"> Required retraining of relevant provincial and Soum Governor's Office specialists in Environmental Assessment and Monitoring Educate staff of Governor's Office in environmental and social impact assessment methodologies It is necessary to improve the understanding and methodology about SLP by training the newly appointed Governors, Chairman of Bagh Khural and Bagh Governors as all CRKh of all Soums will be newlyelected this year. Disseminate best practices for improving environmental and social protection within the SLP 3 framework 	<ul style="list-style-type: none"> Add additional training curriculum plans to ESIA and IPP When organizing training for professionals, the trained staff need to be trained so that they can provide training and counseling to herders and locals.

Table E. 4 The participants of public consultation organized in Ulaanbaatar

№	Name	Soum/city	Position	Contact
1	Mr. Enkhbat. M	Ulaanbaatar	SLPO, Senior specialist	99996838
2	Ms. Odsuren. G	Ulaanbaatar	SLPO, specialist	88098020
3	Mr. Munkhbayar.	Ulaanbaatar	SLPO, specialist	88058877
4	Mrs. Urjinkhand.B	Dundgobi aimag	AGO, chairman of CTSU	88593230
5	Mrs. Khulan.S	Dundgobi aimag	AGO, Social Policy officer	99059830
6	Mrs. Tumendelger.J	Dundgobi aimag	Secretary, CRKh	99049453
7	Mrs.Uyanga.E	Dundgobi aimag	Specialist of ADET	88138901

8	Mrs. Enkhtuya. B	Dundgobi aimag	SLP3 coordinator	99038493
9	Mrs. Munkhsaruul. J	Dundgobi aimag	Vice Governor	88090107
10	Mr. Erdenetsogt. S	Tuv aimag aimag	Specialist of ADET	88044188
11	Mrs. Tungalag. B	Tuv aimag	Officer of SGO	96007737
12	Mr. Boldbaatar. G	Tuv aimag	Bag Governor of Altanbulag	88076792
13	Mr. Erdenebaatar. L	Tuv aimag	Governor of Erdene soum	99258698
14	Mrs. Batmunkh. N	Tuv aimag	Speaker of soum CRKh	96620375
15	Mr. Otgontulga. Ts	Selenge aimag	Officer of SGO	99172704
16	Mrs. Purevsuren. T	Selenge aimag	Secretary, CRKh	99499682
17	Mr. Erdenesuren. N	Selenge aimag	Specialist of ADET	99156434
18	Mr. Zakhiralbaatar. N	Selenge aimag	Chairman of SGO	99074351
19	Mr. Ganzorig. B	Selenge aimag	Citizen	91631099
20	Mr. Munkh-Od. E	Selenge aimag	Citizen	89131320
21	Mrs. Maira. D	Bayn-Ulgii aimag	Social Policy officer	99425109
22	Mrs. Ariuntsetseg. T	Bayn-Ulgii aimag	Specialist of ADET	99425600
23	Mr. Serikbold. A	Bayn-Ulgii aimag	Secretary, CRKh	99422455
24	Mr. Yrbolat. A	Bayn-Ulgii aimag	Officer of SGO	94981727
25	Mr. Gansukh. G	Ulaanbaatar	National Consultant	99159694

E.2 Information Disclosure

The ESMP was disclosed in the following approaches:

1. Copies of this ESMP have been placed in the offices of Local Coordinators of SLP3 in each Aimag;
2. Copies of this ESMP have been placed in Public libraries and Public Meeting Halls of Aimags, by 28 January 2020.
3. The ESMP was posted on the www.slp.mn on 20 January 2020.

Annex 1. Environmental Impact Assessment Requirements for Subprojects under the Local Development Fund

I. Environmental impact assessment

Where national law requires that a general EIA is conducted, the subproject proponent shall prepare:

- a brief description of the subproject;
- the feasibility study;
- the engineering design and drawings (if applicable);
- baseline description of the proposed subproject environment;
- a written opinion of the relevant Soum governor and other related documents (e.g. protected area or buffer zone management plan).

These documents will be reviewed by PIU's environmental specialist and submitted to MoET for review and determination in accordance with national procedures for general EIA.

Where national law or the determination by MoET/ADET requires a detailed EIA, the PIU's environmental specialist will draft ToR for detailed EIA, specifying the tasks that are required to be conducted, including those required by national law and regulations, and those required under this ESMP. The ToR should be adjusted to the specific characteristics of the subproject, and the tasks required should be proportionate to the potential impacts of the subproject. Project-affected people shall be involved in identifying the subproject's potential impacts and mitigation measures. At minimum, stakeholder engagement must be scheduled for the scoping phase of the EIA and for the presentation of the draft report, to consult with the affected people and/or their community representatives, cooperatives or non-governmental organizations (NGOs). In conformity with national regulations, all detailed EIAs completed in response to a request from MoET shall at minimum be made available to the general public at the local Bagh office and discussed during a consultation period of 15 days. If the EIA relates to more than one Bagh or Soum, separate EIA findings and EMPs shall be presented at separate public meetings involving the Soum Citizen Representative Khurals and Bagh citizen's meetings, and comments received shall be taken into account in the final draft.

II. Analysis of alternatives

Alternatives analysis covers the below tasks:

- Systematically compares feasible alternatives to the proposed subproject site, technology, design, and operation—including the “without project” situation—in terms of their potential environmental and social impacts;
- Assesses the alternatives' feasibility of mitigating the environmental and social impacts; the capital and recurrent costs of alternative mitigation measures, and their suitability under local conditions; and the institutional, training, and monitoring requirements for the alternative mitigation measures;
- For each of the alternatives, quantifies the environmental and social impacts to the extent possible, and attaches economic values where feasible.

The following points are taken into consideration when comparing and assessing the feasible alternatives:

- Site selection will consider requirements of environmental parameters, seismicity and geography of the local area (the area should not be prone to landslide or be unstable), availability of logistic support during construction, operation and maintenance of sub-projects and specific feasible locations that were identified based on the relevant site maps and walkover surveys.
- The location of subprojects does not affect any public utility services like power, heating and gas lines, sewage and drainage pipes other underground structures such as pipelines and unstable ground feature (permafrost etc.). etc.
- The location of subprojects does not affect any monument of cultural or historical importance.

- No resettlement of households by the sub-projects site, no loss of livelihoods, siting of building away from sensitive receptors with due consultation with the community and local government units concerned.
- Construction activities do not adversely affect the population living near the proposed subprojects and does not create any threat to the survival of any community with special reference to herder community etc.
- Construction techniques and machinery selection shall be made with a view to minimize ground disturbance.
- While planning for sub-projects, all underground infrastructure – drainage, sewage heating etc. shall be marked and to avoid seepage/leakages and pollution of water sources.
- Construction Company to ensure that noise will not be a nuisance to neighboring properties. Provision of noise barriers near sub-projects sites will be made if required.
- Security fences will be erected around sub-projects construction sites. Warning signs shall be displayed at site and road signs to be installed at appropriate locations.
- Local governments shall incorporate the best technical practices to deal with environmental issues in its working.
- Design of subprojects shall be made so as to include modern fire control systems/firewalls. Provision of fire-fighting equipment would be made at locations easily accessible etc.
- Minimum cutting of trees and safety of people and property and favorable ground profile.
- Avoidance of reserved forest, archaeological and other sensitive areas, animal/bird protection areas.
- Avoidance of rocky stretches and areas reserved for planned and future development, marshy low-laying areas, riverbeds and earth slip zones.
- The blue print of design to ensure no shadow of the proposed new buildings should fall onto adjoining buildings in compliance with Construction law of the Mongolia.
- Good construction practices will be adopted to ensure minimal disturbance to affected persons from construction related nuisance, such as noise, dust and pollutant emissions.

III. Environmental Management Plan

If the potential environmental impacts are significant based on the results of EIA and subproject is considered to fall into environmental category B⁵, the subproject proponent shall develop an Environmental Management Plan (EMP).

EMP must be specific in their description of the individual mitigation and monitoring measures and its assignment of institutional responsibilities, and implementation of EMP must be integrated into the subproject's overall planning, design, budget, and implementation. Such integration is achieved by establishing the EMP within the project/contract documents so that the EMP will receive funding and supervision along with the other components. In addition, where contractors of construction works may subcontract to other firms, contracts will specify that contractors are obliged to ensure that labor and OHS requirements are fully met by their sub-contractors.

The EMP need to define the roles and responsibilities of the institutions involved in EMP 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 EMP include:

- Implementing Organizations and Their Responsibilities
- Mitigation Measures
- Monitoring Plan
- Reporting
- Training, capacity building and awareness

⁵ Category A subprojects are excluded.

- EMP Costs
- Mechanism for Feedback and Adjustment

The contractor will prepare site-specific management plans for the key activities, which will also require the contractor to develop appropriate maps to ensure all stakeholders are clear on where activities will take place. These specific activities are:

- A. Spoil and Borrow Site Management;
- B. Solid and Liquid Waste Management;
- C. Community and Occupational Health and Safety, and Emergency Response; and
- D. Construction Workers Camp Management (if required).

Annex 2. Mongolia Local Development Fund (LDF) Environmental Assessment Screening Checklist

This environmental assessment screening checklist is required to be completed for all projects seeking finance under the LDF. The checklist is required in accordance with Procedure 244 under the *Integrated Budget Law* and will determine if the project is subject to the provisions of the *Law of Mongolia on Environmental Impact Assessments*. The screening checklist is in two parts: Screening Form A will determine if the project has potential environmental risks; and Screening Form B should be completed where potential environmental risks are identified. It is anticipated that the great majority of projects at the Soum level will not require further environmental assessment beyond Screening Form A.

Where projects require the completion of Screening Form B these should be submitted to the Ministry of Finance Project Implementation Unit (PIU) Environment Officer Mr Erdenebileg Badmunkh via email at for review and advice on next steps under the Law on EIA. Mr Badmunkh will also be available to Soum Environmental Officers where questions arise when completing the screening form.

Subproject Details	
Subproject reference no.	
Subproject name	
Subproject proponent (Soum Governor)	
Soum Environmental officer name and contact details	
Project location and Aimag (including latitude/longitude coordinates)	
Type and purpose of project (brief description – include construction activities and operational activities. Attach drawings as necessary):	

Exclusion Criteria

1. Any subproject which can affect critical natural habitats, water sources, cultural heritage or relics, protected areas, National Park, Strictly Protected Areas, natural reserves and other ecological sensitive sites should be excluded.
2. Any subproject which involves new reservoirs construction, relies on the performance of an existing dam/reservoir or a dam/reservoir under construction should be excluded.
3. Any subproject which will procure, supply, or increase the use of pesticides should be excluded.
4. Any activity prohibited by Mongolian law.

Screening Form A

This screening form should be completed for all projects seeking LDF funding.

<i>Questions to be answered (consider construction and operation phases?)</i>	<i>YES/NO</i>
A.1 Does the project involve the significant consumption of water, energy or natural resources?	
A.2 Does the project involve earthworks or development of undisturbed land?	
A.3 Is the project situated near a sensitive ecological, historical, cultural or community site or facility?	
A.4 Is the project (or any part of the project) situated on private land?	
A.5 Does the project have the potential to cause pollution to land, waterways or atmosphere?	
A.6 Does the project have the potential to generate noise or dust that may cause disturbance or nuisance to residents?	
A.7 Will the project involve crop or livestock production?	
A.8 Does the project have the potential to cause disruption to human activities?	
A.9 Does the project have the potential to impact on the water cycle (eg. runoff, infiltration, groundwater, surface water)	
A.10 Does the project restrict community access to any public facilities?	
A.11 Does the project have the potential to cause negative economic impacts or adversely affect livelihoods?	
A.12 Does the project involve the use of hazardous or polluting materials (eg. chemicals, hydrocarbons, pesticides etc.)?	

Note: If the answer to any of the above questions is “YES” please complete Screening Form B. If all answers are “NO” the project does not require further environmental assessment.

Screening Form B

This screening form must be completed for those projects that answer “YES” for any question on Screening Form A. The screening process under Form B is similar to that required when completing an “Environmental Baseline Assessment” under the Law on EIA and considers the existing environmental conditions of the project area of influence and whether there are any risks to the environment resulting from the construction and/or operational phases of the project. The results of this screening will determine if the project requires a General Environmental Impact Assessment by the Ministry of Environment and Tourism (MET).

The screening form must be completed by the Soum Environmental Officer and approved by the Soum Governor. When considering environmental risks and potential impacts the Environmental Officer should consider the following impact criteria:

- Magnitude - nil, low, moderate, high severity of adverse or beneficial impact
- Extent - spatial footprint. Site specific, local, regional
- Duration - temporal footprint. Short-term (up to 3 to 4 years of construction), medium term (5 to 10 years), long term (>10 years)
- Direction - improve, worsen (extent to which project action will affect the environment - adverse, beneficial or neutral)
- Probability - low, medium, high probability impact will occur
- Resiliency / Recovery - low, medium, high / reversible, irreversible

Section 1 – Size and scale of the proposed project			
<i>Questions to be considered</i>	<i>Yes/no/N.A./brief description</i>	<i>Is this likely to result in a significant impact – yes/no?</i>	<i>Further investigation or management?</i>
1.1 What area of land will be developed? (indicate size in square metres or hectares). List the various components (such as access roads, infrastructure, site footprint etc.)			
1.2 Will a large amount of energy, water or other natural resources be required for project construction or operation?			
1.3 Will a large workforce be needed for construction and/or operation? Is a local and/or external workforce required?			
1.4 What is the expected timeframe for the project? (including construction, operation, closure and decommissioning)			

Section 2 – Character of the proposed project			
<i>Questions to be considered</i>	<i>Yes/no/N.A./brief description</i>	<i>Is this likely to result in a significant impact – yes/no?</i>	<i>Further investigation or management?</i>
2.1 What type of construction activities will be undertaken by the project?			
2.2 Are the project activities novel (new) or have they been undertaken before within the country?			
2.3 Does the project involve development / redevelopment of a historic building, historic site, culturally significant site, or have any other links to cultural heritage?			
2.4 Does the project involve the use or exploitation of the natural environment (nature tourism, ecotourism, hiking, sanctuaries, fishing tours, etc.)?			
2.5 Does the project involve new or renovated public infrastructure, such as sewerage, water, roads, bridges, paths, parks, streetscapes, etc.?			
2.6 Does the project involve tourism?			
2.7 Does the project involve food processing, plant processing or other types of manufacturing or processing?			
2.8 Does the project involve the harvesting, farming, hunting or gathering of natural resources (fish, plants, etc.).			
2.9 Does the project involve large civil works, requiring heavy machinery or the extraction/quarrying of aggregates?			
2.10 Does the project involve one or more land owners or is located in an area of potential conflict that may require specific attention? Will it specifically benefit or marginalize women or men?			

Section 3 – Project Location			
<i>This includes all aspects of the project that are required to support construction and operation</i>			
<i>Questions to be considered</i>	<i>Yes/no/N.A./brief description</i>	<i>Is this likely to result in a significant impact – yes/no?</i>	<i>Further investigation or management required?</i>
3.1 Is the project to be located within or adjacent to an area vulnerable to natural hazards (e.g. waterways, floodplain, wetland, steep sloping land)?			
3.2 Is the project to be located adjacent to a sensitive site or facility (e.g. village, historical or archaeological or culturally significant site, conservation reserve, school, hospital/ medical facility)?			
3.3 Is the project likely to impact on existing land or water uses/activities?			
3.4 Will the project be located in or near natural habitats (conservation areas, protected areas, forests etc.)			
3.5 Is the proposed project site on private land? Are all private land/ resource owners aware of the project proposal? Have they been consulted/meaningfully engaged?			
3.6 Are there special land zoning considerations that need to be considered (e.g. will the project be within a conservation reserve, rural, urban or industrial area)?			

Section 4 – Environmental and social impacts

<i>Aspect of the environment</i>	<i>Questions to be considered</i>	<i>Yes/no/N.A./brief description</i>	<i>Is this likely to result in a significant impact – yes/no?</i>	<i>Further investigation or management required?</i>
4.1 Topography, geology and soils	4.1.1 Destruction, covering or modification of any unique geological or landscape feature?			
	4.1.2 Soil contamination or disturbance of previously contaminated soils?			
	4.1.3 Disturbance of soils that are fragile, or susceptible to erosion or compaction?			
	4.1.4 Creation of steep slopes or other unstable land conditions?			
	4.1.5 Changes in the channel of a stream, a floodplain, or the bed of a lake?			
4.2 Water	4.2.1 Extraction or use of ground, surface or tank water resources, leading to reduction in the volume and quality of water available for the public water supply?			
	4.2.2 Pollution of ground, or surface via direct or indirect discharges or seepages; or through interception of an aquifer by drilling, cuts or excavations?			
	4.2.3 Changes in the course or direction fresh water movement?			
	4.2.4 Changes in runoff, drainage patterns or absorption rates?			
	4.2.5 Stream or river flooding?			
4.3 Air	4.3.1 Release of dust?			
	4.3.2 Release of hazardous, toxic or noxious air pollutants/emissions?			
	4.3.3 A significant increase or decrease in local or regional greenhouse gas emissions?			
4.4 Noise	4.4.1 A significant increase in existing (baseline) noise levels that will adversely affect people or animals?			
4.5 Plant life	4.5.1 Damage to or clearing of vegetation communities (e.g. upland forest or pasture)?			

<i>Aspect of the environment</i>	<i>Questions to be considered</i>	<i>Yes/no/N.A./brief description</i>	<i>Is this likely to result in a significant impact – yes/no?</i>	<i>Further investigation or management required?</i>
	4.5.2 Damage to or destruction of important plant communities (e.g. plants with medicinal, cultural or commercial value; unique, threatened or endangered plant species)?			
	4.5.3 A reduction in agricultural crop production?			
	4.5.4 The farming or production of an exotic plant species?			
	4.5.5 The spread or introduction of an invasive plant			
4.6 Animal Life	4.6.1 Reductions in the numbers of unique, rare or endangered animal species?			
	4.6.2 Reductions in animal populations harvested regularly for human consumption (e.g. fish, livestock)?			
	4.6.3 Damage to or destruction of habitat for animal communities on land or in rivers?			
	4.6.4 Barriers to the migration or movement of animals?			
	4.6.5 The farming or production of an exotic animal species?			
	4.6.6 The spread or introduction of an invasive animal species or spread of infectious diseases?			
4.7 Natural resources	4.7.1 The extraction, harvest or consumption of natural resources (e.g. timber, minerals, water)?			
	4.7.2 A noticeable increase in the rate of use of any natural resource?			
	4.7.3 Substantial depletion of non-renewable resources?			
4.8 Human communities	4.8.1 Encroachment into settlement areas or private lands?			
	4.8.2 Influx of an external workforce or in-migration to the project area?			
	4.8.3 Demand for additional housing to accommodate an external workforce?			
	4.8.4 Increased traffic or increased use of roads; and an increase in associated health risks (dust, noise)?			
	4.8.5 Increased demand for and disruption to social services and infrastructure (e.g. water and energy supply, communications, sewage and waste disposal, police, schools, medical care)?			

<i>Aspect of the environment</i>	<i>Questions to be considered</i>	<i>Yes/no/N.A./brief description</i>	<i>Is this likely to result in a significant impact – yes/no?</i>	<i>Further investigation or management required?</i>
4.9 Involuntary Resettlement	4.9.1 Have all sites for physical works under the project been specified?			
	4.9.2. Does the project involve physical works that will require any change in land use?			
	4.9.3. If any physical works are sited on public land, do any persons use or occupy this land?			
	4.9.4. Are any physical works sited on private land? If so, does the project plan to acquire the land through means other than market-based lease or purchase, or through voluntary donation?			
	4.9.5. Will any physical works otherwise restrict access to, or use of, land or natural resources?			
	4.9.6. Will any physical works require acquisition of more than 10 percent of a private land plot?			
	4.9.7. Will any physical works require demolition of any residential or commercial structure?			
4.10 Cultural Heritage	4.10.1 Will the cultural heritage buildings, sites or attractions be improved or enhanced as a result of the project?			
	4.10.2 Will the carrying capacity of the site/building/attraction be evaluated and considered in planning, design and operation?			
	4.10.3 Will there be impacts on the intangible values or intellectual property from the project?			
4.11 Indigenous Peoples	4.11.1 Indigenous Peoples are residing in or using resources within the project area. They are the majority of beneficiaries? They are the minority or will not benefit from the project?			
	4.11.2 Indigenous Peoples are land owners in the project footprint.			
	4.11.3 Cultural heritage, intellectual property or self identification of Indigenous People are vulnerable to the project?			

Section 5: Assessment			
<input type="checkbox"/> No Environmental Impact Assessment Required			
<input type="checkbox"/> Project to be Submitted to MoET for General Environmental Impact Assessment			
<input type="checkbox"/> Further investigation required or advice from MoF PIU Environment Officer needed.			
Soum name:			
Name of Environment Officer:			
Telephone number:			
E-Mail address:			
Signature:		Date:	
Approved (Soum Governor)	Name:	Signature:	Date:

Annex 3. Annual Environmental Audit Terms of Reference

Objectives of this assignment

The purpose of this assignment is to carry out an environmental audit of the SLP3. This should meet the requirements of the Government of Mongolia for an environmental audit. Specifically it will address:

- Adherence of the implementation of the LDF to the provisions and measures set out in the guideline and the issues identified in the Environment Assessment;
- Indications of impact of the Pastoral Risk management LDF activities on improved, or degrading, pastureland in Mongolia;
- Environmental management activities of the Aimag and Soum environmental inspectors in relation to the LDF.

Scope of Work

The activities that will need to be carried out to meet the above objectives include, but are not limited to, the following:

- Interview a representative sample of environmental experts and inspectors at Aimag and Soum levels and Soum LDF working group members to ascertain their level of involvement in SLP3 activity planning, and their concerns (if any) regarding the implementation of the project. In addition, compile and analyze information from Aimag environmental inspectors' reports on the LDF.
- Ascertain whether all measures have been taken by Soum governor office in order to adequately fulfill the requirements of Mongolian environmental impact assessment legislation.
- Interview stakeholders at a national level, particularly Ministry of Environment and Tourism (MoET), Environment officers and LDF officers to determine what their involvement in LDF activities has been, especially in relation to the activities of the inter-ministerial group pastureland management. Identify their concerns, if any, regarding the implementation of the project.
- Based on information provided by Aimag environmental inspectors, identify the individual and cumulative negative and positive environmental impacts of LDF investments, and identify the mitigation measures that are being used to manage them. Particular attention should be given to the impacts of any well developments on pasture lands, and assess these in the context of 'natural habitats' defined in the Bank's OP4.04 on Natural Habitats.
- Identify any constraints to the implementation of the measures and procedures set out in the Environmental and Social Management Plan. These constraints may be financial or related to capacity or skills.
- Identify practical measures that can be taken to relieve these constraints, in discussion with SLP3 managers and MoET and draw up an action plan for agreement by SLPO and MoET, with World Bank approval, to implement these measures.
- Assess the annual implementation performance of ESMP and propose improvement action plan for the next year.
- Propose options for the amendment of environmental screening and reporting measures based on ongoing experience of SLP3.

Expected Outputs and Deliverables

The output of the consultancy will be an environmental audit report that presents the findings and outlines recommended proposals for each of the issues identified in the above scope of work. The report may draw upon, but not be restricted to, the guidelines provided by MoET for the content of environmental audit reports. All such reports are required in English and Mongolian.

Timetable and Reporting

The assignment timeline:

Methodology and assessment tools agreed with SLPO bydate

- Progress report submitted bydate
- Final report by the consultant submitted bydate
- Final report agreed by SLPO and translated into English language bydate

Reporting

The consultant will report to SLPO Director.

Methodology

This assignment will be carried out as follows: (1) desk review in Ulaanbaatar of the relevant project documents and collection of relevant international and domestic experience; (2) four-weeks field visits with interviews of beneficiaries and in-depth stakeholder consultations in a sample of representative project areas as agreed with SLPO; (3) interviews in Ulaanbaatar of government officials, project managers, members of the advisory group, SLPO officers, and World Bank staff; (4) office-based analysis and report writing; and (5) solicitation of feedback from various stakeholders; and (6) finalization of reports.

Background materials

The consultant will be expected to familiarize him/herself with all the relevant project documentation, including but not restricted to:

- The Environmental and Social Management Plan for SLP3
- Guidance Manual on environmental assessment issued by the MoET;
- Environmental auditing reports for SLP2

All these materials will be provided by SLPO.

Qualifications

The assessment will be carried out by a national consultant with extensive prior experience in the fields of environmental and natural resources management, or environmental impact assessment, be familiar with Mongolia's EIA policy and regulations, processes and available technology relevant to environmental management. Prior experience in conducting EA in connection with World Bank financed projects is desirable.

The consultant (s) should have technical skills and training in EIA and hold at least a master's degree in environmental science, geography or land use planning, natural resource management, rangeland ecology, pasture agronomy, livestock production, hydrology or water resources management and/or other relevant field. The team leader should no less than 10 years' experience in relevant field. The consultant should possess good commands in English and be able to travel to countryside on a regular basis during the contracted period.

Annex 4. Environmental Management of Construction Activities

General

1. 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.
2. 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):
 - (a) All affected areas should be landscaped and any necessary remedial works should be undertaken without delay, including grassing and reforestation;
 - (b) water courses should be cleared of debris and drains and culverts checked for clear flow paths; and
 - (c) All sites should be cleaned of debris and all excess materials properly disposed;
 - (d) 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:

1. Cutting of trees for any reason outside the approved construction area;
2. Hunting, fishing, wildlife capture, or plant collection;
3. Use of unapproved toxic materials, including lead-based paints, asbestos, etc.;
4. Disturbance to anything with architectural or historical value;
5. Building of fires;
6. Use of firearms (except authorized security guards);
7. 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 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:

1. Minimize the production of waste that must be treated or eliminated.
2. 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.
3. Identify and demarcate disposal areas clearly indicating the specific materials that can be deposited in each.
4. 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 river banks.

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:

1. 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
2. Limit extraction of material to approved and demarcated borrow pits.
3. 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.
4. 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.
5. Existing drainage channels in areas affected by the operation should be kept free of overburden.
6. 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:

1. Carefully and clearly mark pedestrian-safe access routes;
2. If school children are in the vicinity, include traffic safety personnel to direct traffic during school hours;
3. Maintain supply of supplies for traffic signs (including paint, easel, sign material, etc.), road marking, and guard rails to maintain pedestrian safety during construction;
4. Conduct safety training for construction workers prior to beginning work;
5. 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;
6. Post Material Safety Data Sheets for each chemical present on the worksite;
7. 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;
8. Ensure that the removal of asbestos-containing materials or other toxic substances be performed and disposed of by specially trained workers;
9. During heavy rains or emergencies of any kind, suspend all work.
10. Brace electrical and mechanical equipment to withstand seismic events during the construction.

Nuisance and Dust Control

To control nuisance and dust the Contractor should:

1. Maintain all construction-related traffic at or below 15 mph on streets within 200 m of the site;
2. Maintain all on-site vehicle speeds at or below 10 mph.
3. To the extent possible, maintain noise levels associated with all machinery and equipment at or below 90 db.
4. In sensitive areas (including residential neighborhoods, hospitals, rest homes, etc.) more strict measures may need to be implemented to prevent undesirable noise levels.
5. 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).
6. Phase removal of vegetation to prevent large areas from becoming exposed to wind.
7. Place dust screens around construction areas, paying particular attention to areas close to housing, commercial areas, and recreational areas.
8. Spray water as needed on dirt roads, cut areas and soil stockpiles or fill material.
9. Apply proper measures to minimize disruptions from vibration or noise coming from construction activities.

Community Relations

To enhance adequate community relations the Contractor shall:

1. Inform the population about construction and work schedules, interruption of services, traffic detour routes and provisional bus routes, as appropriate.

2. 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.
3. 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:

- (a) Stop the construction activities in the area of the chance find;
- (b) Delineate the discovered site or area;
- (c) 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 state central administrative body take over;
- (d) Notify the supervisory Engineer who in turn will notify the responsible local authorities and the state central administrative body immediately (within 24 hours or less);
- (e) Responsible local authorities and the state central administrative body 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 state central administrative body. 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;
- (f) Decisions on how to handle the finding shall be taken by the responsible authorities and state central administrative body. This could include changes in the layout (such as when finding an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage;
- (g) Implementation for the authority decision concerning the management of the finding shall be communicated in writing by relevant local authorities; and
- (h) Construction work could resume only after permission is given from the responsible local authorities or state central administrative body concerning safeguard of the heritage.

HIV/AIDS Education

The Contractor shall ensure that detection screening of sexually transmitted diseases, especially with regard to HIV/AIDS, amongst laborers is actually carried out and will submit a certificate of compliance to the Head Construction Engineer.

Environmental Supervision during Construction

The Project Engineer will supervise compliance with these specifications. Major non-compliance by the Contractor will be cause for suspension of works and other penalties until the non-compliance has been resolved to the satisfaction of the Project Engineer. Contractors are also required to comply with national and municipal regulations governing the environment, public health and safety.