International ESIA for an Integrated Renewable Energy Project

180MW Wind Power and Battery Energy Storage System, Tsogttsetsii soum, Mongolia.

Annex H: Livelihood Restoration Framework

PREPARED FOR

Net Zero Energy LLC
(MCS and URECA)

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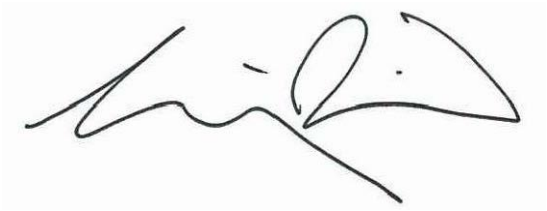
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Annex H: Livelihood Restoration Framework

0747189



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ACRONYMS AND ABBREVIATIONS

Acronym	Description
ADB	Asian Development Bank
AoI	Area of Influence
BESS	Battery Energy Storage System
CDF	Community Development Fund
CLO	Community Liaison Officer
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESS5	Environmental and Social Standard 5 (ADB)
EPC	Engineering, Procurement and Construction

Acronym	Description
EBRD	European Bank for Reconstruction and Development
ERM	ERM-Hong Kong, Limited
ESR	Environmental and Social Requirement (EBRD 2024)
FGD	Focus Group Discussion
GM	Grievance Mechanism
GIP	Good International Practice
HDV	Heavy Duty Vehicle
HH	Household
IFC	International Finance Corporation
IFI	International Financial Institution
LDV	Light Duty Vehicle
LFP	Lithium Iron Phosphate
LRF	Livelihood Restoration Framework
LRP	Livelihood Restoration Plan
MCS	MCS Group / [redacted]
MNT	Mongolian Tugrik
MRV	Monitoring, Reporting and Verification
NFPA	National Fire Protection Association
NZE	Net Zero Energy LLC
O&M	Operation and Maintenance
OHL	Overhead Transmission Line
PAP	Project-Affected Person
PR5	Performance Requirement 5 (EBRD 2019)
PS5	Performance Standard 5 (IFC)
RoW	Right-of-Way
SCADA	Supervisory Control and Data Acquisition
SEP	Stakeholder Engagement Plan
SPV	Special Purpose Vehicle
SVC	Static Var Compensator
UL	Underwriters Laboratories
URECA	URECA Mongolia
WTG	Wind Turbine Generator

H1. INTRODUCTION

Net Zero Energy LLC is a joint venture between MCS Mongolia and URECA Mongolia. Established in 1993, MCS is one of the largest business conglomerates in Mongolia. MCS has created a special purpose vehicle (SPV), Net Zero Energy LLC, as the Project implementing entity. URECA is a climate technology provider company and provides Decarbonization as a Service (DaaS) for corporates including digital MRV (monitoring, verification and verification) technologies to measure and implement high quality carbon projects with a focus on Asia. NZE is developing the Bilgeh Wind Farm and taking advantage of Mongolia's abundant renewable energy resources to contribute to the national energy policy targets. The Bilgeh Wind Farm (up to 180 MW) will be the largest in the country and will be fully consistent with Mongolia's long-term development policy "Vision 2050" and the "New Revival Policy" specifically the "Energy Revival" sub-policy.

ERM-Hong Kong, Ltd. (ERM) was commissioned by NZE to undertake the Environmental and Social Impact Assessment (ESIA) for the Project. Subsequent to the ESIA, a Change Order was approved to address comments raised by international finance institutions (IFIs), including the preparation of a Livelihood Restoration Framework (LRF) ("LRF" or "Framework").

While NZE has prepared a Livelihood Restoration Plan (LRP) for the Project, the current level of information is insufficient to develop a detailed and implementable livelihood restoration programme. This Framework therefore establishes the overarching strategy, principles, and commitments for livelihood restoration consistent with the requirements of the International Finance Corporation (IFC), Asian Development Bank (ADB), and the European Bank for Reconstruction and Development (EBRD).

The document has been prepared as a Framework, rather than a full Livelihood Restoration Plan, because a number of foundational inputs remain outstanding. These include livelihood and socio-economic baseline data, a household and asset inventory, an entitlement register, detailed livelihood impact assessments, valuation studies, implementation cost estimates, and monitoring and evaluation arrangements. As these inputs become available, the Framework can be updated and expanded into a detailed Livelihood Restoration Plan.

H1.1 PRINCIPLES

This LRF has been prepared for the 180 MW Wind Power and Battery Energy Storage System Project being developed by Net Zero Energy LLC in Tsogttsetsii Soum, Umnugovi Province, Mongolia. The Project comprises 29 wind turbine generators, a 50 MW/100 MWh Battery Energy Storage System (BESS), an associated substation, approximately 65 km of overhead transmission line, access roads, internal roads, stockpile areas and ancillary facilities. The Project is located in Tsogttsetsii Soum, approximately 60 km from the Oyu Tolgoi Mine and approximately 130 km from the Mongolia-China border.

The LRF is founded on the principles of avoidance, minimisation, mitigation and restoration. Consistent with IFC Performance Standard 5 (PS5), ADB Environmental and Social Standard 5 (ESS5), and EBRD Performance Requirement 5 (PR5), the Project will seek to avoid economic displacement wherever practicable through design optimisation and route refinement. Where impacts cannot be avoided, affected persons will receive compensation at full replacement cost together with livelihood restoration assistance sufficient to restore, and where feasible improve, their pre-project livelihoods and standards of living. Particular attention will be given

to vulnerable households and to persons without formal legal rights who nevertheless depend upon Project-affected resources for their livelihoods.

H1.2 OBJECTIVES

The objectives of this LRF are to:

- Prevent impoverishment resulting from Project-related economic displacement;
- Restore affected livelihoods to at least pre-project levels;
- Improve outcomes for vulnerable households;
- Provide a framework for preparing a detailed LRP; and
- Establish monitoring and completion criteria.

H1.3 ASSUMPTIONS AND LIMITATIONS

This LRF has been prepared based on information available at the time of writing. The Framework is intended to guide future livelihood restoration planning and implementation should economic displacement occur. The following assumptions and limitations apply to this Framework:

1. No physical displacement is currently anticipated. Potential impacts are expected to relate primarily to temporary or permanent restrictions on access to grazing land, livestock movement routes, wells, and other livelihood resources used by herding households.
2. The final project footprint, access arrangements, and construction methods may continue to be refined. The scale and extent of livelihood impacts will therefore be confirmed through detailed design and pre-construction field verification.
3. A comprehensive livelihood census has not yet been completed. Consequently, the number of economically displaced households, the severity of impacts, and the full range of affected livelihood users cannot currently be quantified.
4. This framework does not replace the requirement for a project-specific Livelihood Restoration Plan (LRP). Should economic displacement be confirmed, a detailed LRP should be prepared in accordance with IFC PS5, ADB ESS5, EBRD PR5, and applicable Mongolian legislation.

H2. PROJECT DESCRIPTION

H2.1 PROJECT LOCATION AND COMPONENTS

The WTG Area and OHL of the Project are located in Umnugovi (also written Ömnögovi, and Mongolian: Өмнөговь) Province in southern Mongolia, relatively close (about 130 km) to the border with China. It is in the district (Mongolian: soum) of Tsogttsetsii (Mongolian: Цогтцэций) and is close (~60 km) to the Oyu Tolgoi Mine to which the transmission line will connect (***Figure H2-1***).

The components of the Project are as follow:

- 29 Wind Turbine Generators (WTG);
- Substation consisting of 2x120 MVA power transformers located near the WTG area and the substation will be equipped with a Control Room;
- A Battery Energy Storage System of 50 MWh (BESS);
- A ~65 km double-circuit 220 kV Overhead Transmission Line (OHL) connecting in a southeast direction from the Wind Farm Site to the Oyu Tolgoi Mine's central substation (Option 1) or Zes Oyu 220 kV switching station (Option 2);
- An ~30.9 km improved/unpaved road connecting the existing heavy duty coal transport Road to the WTG Area;
- About ~56 km of internal roads within the WTG Area connecting the different facilities;
- An OHL Access Road of total length about 62.2 km which will support construction and operation of OHL;
- Temporary facilities including workers' accommodation camp, offices, laydown (storage and stockpile) areas, concrete batching plant, onsite solar power generation area (Photo Voltaic array and BESS), and turbine installation areas for WTG assembly.

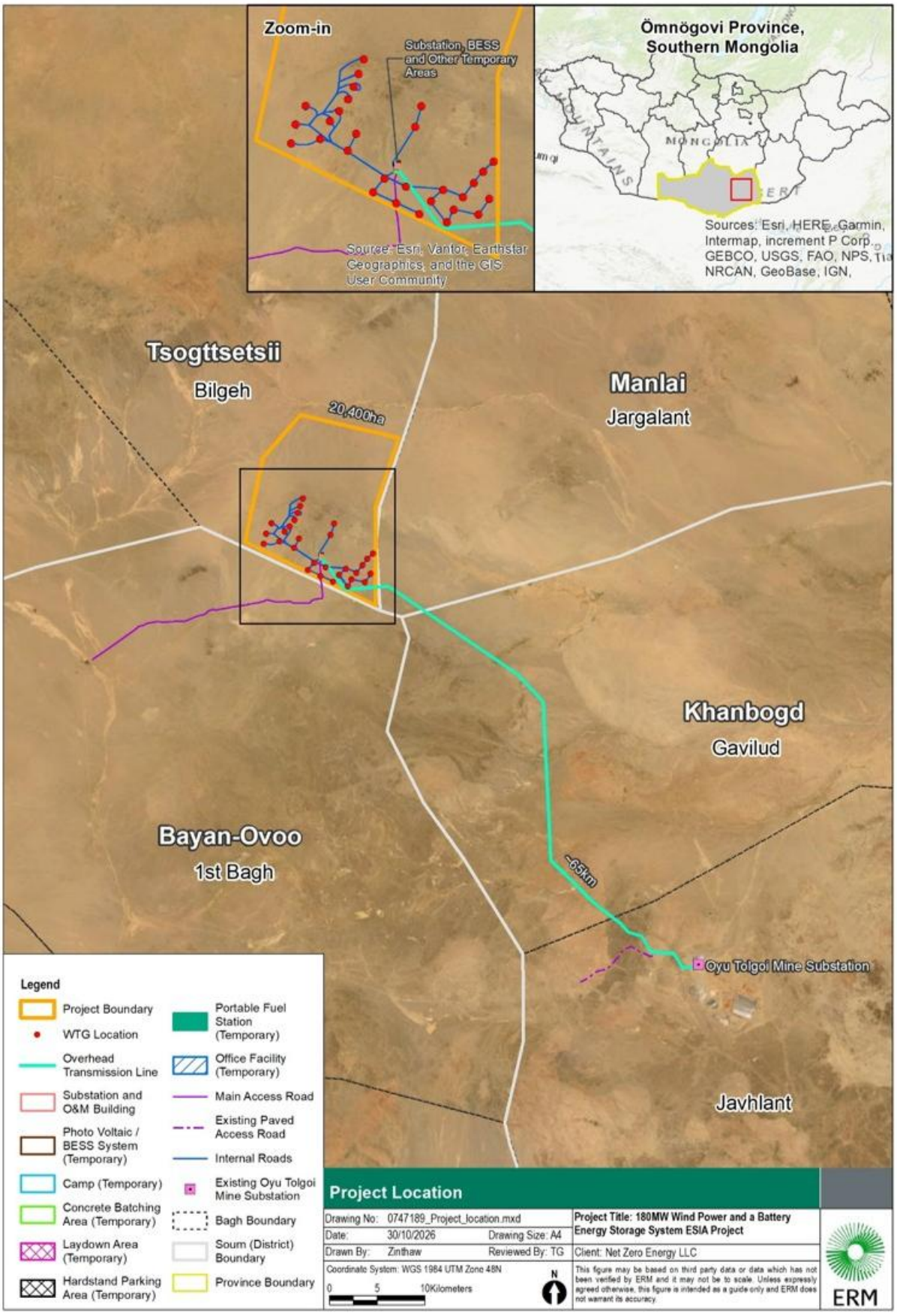


FIGURE H2-1: PROJECT LOCATION

H2.2 PROJECT ACTIVITIES

H2.2.1 PRE-CONSTRUCTION ACTIVITIES

The pre-construction phase of the Project will involve the following activities:

- Land acquisition: Land possession by coordinating with local authorities (local Governors) to complete land acquisition process;
- Design: preparation of the detailed design and layout of wind turbines within the Project Site and other infrastructure (substation, OHL, Control Building, auxiliary works, etc.);
- Project Area preparation: this is expected to include Engineering Procurement and Construction (EPC) contractor mobilisation, waste disposal area, construction of the worker's accommodation facilities, and storage areas; and
- Permitting process: obtainment of all necessary permits and authorizations prior to construction.

H2.2.2 CONSTRUCTION ACTIVITIES

The construction phase will take up to about 17 months depending on the agreed start date with Oyu Tolgoi (off-taker), and will involve the following activities:

- Workforce mobilization and presence: this will include Engineering Procurement and Construction (EPC) contractor mobilization, construction of the worker's accommodation facilities, and materials storage areas;
- Land preparation (site clearance, excavation, and ground levelling), fencing, and civil works;
- Construction of Access Road;
- Construction of internal roads;
- Construction of WTGs foundations, Substation, BESS and Control Building;
- Construction of the OHL;
- Transportation of WTGs, construction material and machines;
- Extension of the connecting substation (Option 1 and 2);
- Installation of WTGs and internal cabling;
- Installation of the communication system and Supervisory Control and Data Acquisition (SCADA) system;
- Construction and installation of water supply and drainage system, power supply system and fences; and
- Completion of internal electrical connections.

H2.2.3 OPERATION AND MAINTAINANCE ACTIVITIES

The Operation and Maintenance (O&M) of the WTGs is estimated at 20-25 years.

Activities that will be carried out during the operation phase include:

- Scheduled annual maintenance activities at each WTG location as per the supplier's specifications;
- Routine inspection of all WTGs as per supplier's specifications;

- Operation and maintenance of ancillary facilities such as Substation, BESS, storage areas, and other existing facilities;
- Inspection and maintenance of OHL; and
- Inspection and maintenance of internal roads and Access Road.

The WTGs will operate at all times, provided that wind speeds are suitable, with the exception of downtime required for maintenance activities. For the most part, day-to-day facility operations will be automated through the use of computerized networking systems.

2.2.3.1 PROJECT SCHEDULE

The preliminary Project plan is to start the construction works in Q4 of 2026, start Early Energy Generation in Q3 of 2028, and achieve the Commercial Operation Date in Q1 of 2029. Construction activities at the WTG Area will take about 26 months. For certain works, no construction activities are planned during the period from mid-November to early-March as weather conditions may affect some activities. Key Project Schedule is provided in ***Figure H2-1.***

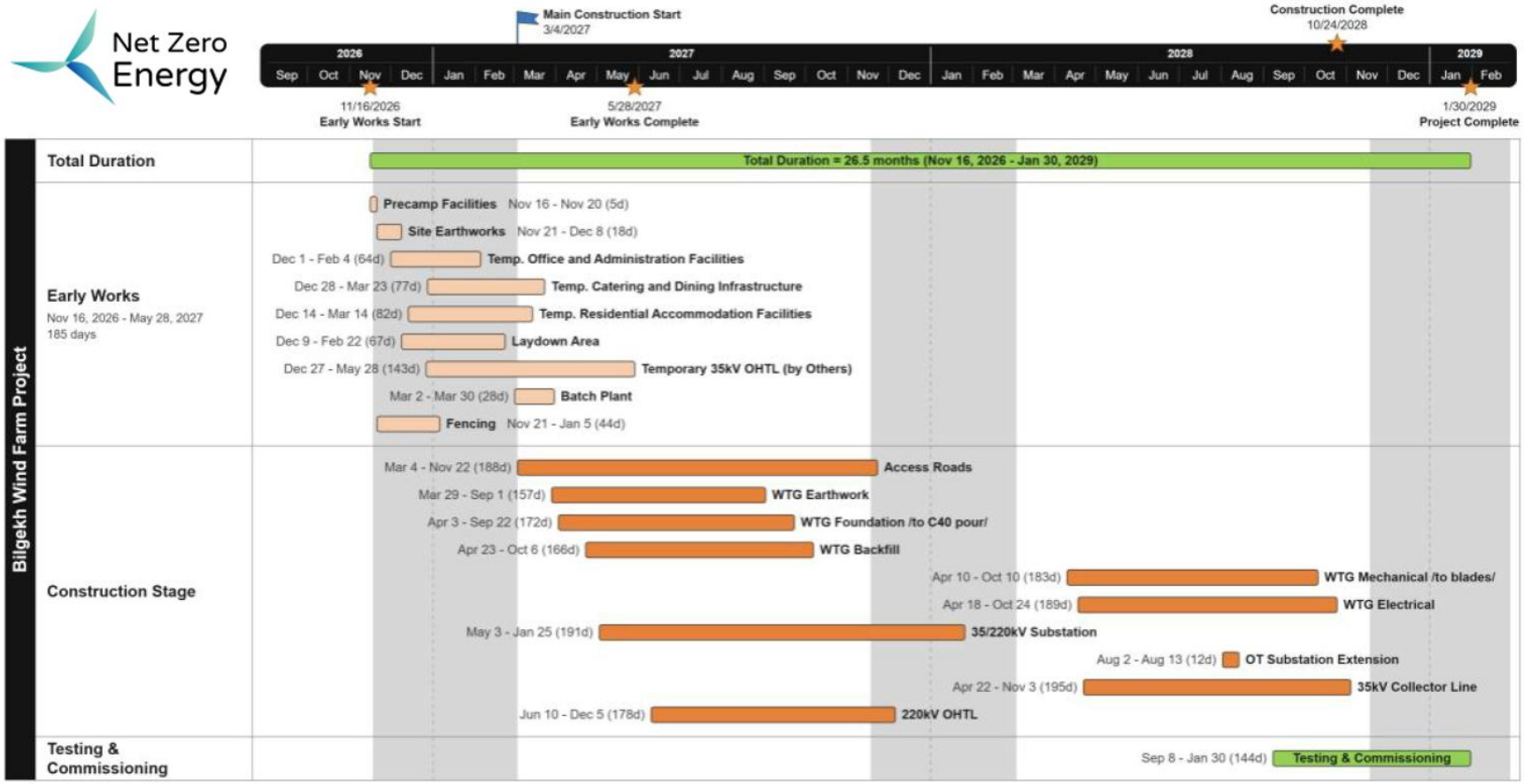


FIGURE H2-2: KEY PROJECT SCHEDULE

H2.3 PROJECT LAND USE

Land in Mongolia is state-owned, with approximately 80% consisting of rangelands used for pastoral livestock production. In Umnugobi aimag, around 72% of the land is used for livestock grazing, making access to communal pasture a fundamental component of local livelihoods.

While herders generally do not own pastureland, they may obtain possession certificates for winter and spring camp areas. Under Mongolian law, pastureland is designated for common use, with herders granted possession rights to land for winter and spring camps for terms of up to 15 years, subject to renewal upon expiry. In practice, herders may continue to apply for and use the same camp areas over successive years. Within these camp areas, herders may construct and maintain livestock shelters, dwellings, and other supporting infrastructure.

In contrast, summer pastures remain communal and are accessible to herders through customary use arrangements, regardless of their place of residence or winter or spring camp location. Herders typically migrate seasonally to rotate grazing areas, residing temporarily at summer and autumn camps while their livestock graze nearby. As these campsites are used on a temporary basis and form part of the communal pasture system, no land possession permits or certificates are issued for summer and autumn camps. Hence, pastoral livelihoods in the Project area depend primarily on seasonal mobility and customary access to shared grazing resources rather than private land ownership.

Accordingly, both possession certificate holders and customary users may be eligible for livelihood restoration assistance where Project activities result in restrictions on access to grazing land, livestock movement routes, water sources, or other livelihood resources.

The Project will temporarily utilize approximately 130.3 ha of land during the 18-month construction period (March 2027 to October 2028, excluding the winter shutdown period) for WTGs, internal roads, substations, storage areas, overhead lines (OHL), and associated access roads. During operations, approximately 105.2 ha of land will be permanently occupied for the Project's anticipated 20-25 year operational life.

Based on these baseline grazing areas, the Project's temporary construction footprint represents approximately 0.04% to 0.19% of available grazing resources, while the permanent operational footprint represents approximately 0.03% to 0.15%. Although the proportion of grazing land affected is small, pastoral livelihoods depend on continued access to communal grazing resources, seasonal movement routes, and water sources, which should be considered in assessing potential economic displacement and livelihood restoration requirements.

H2.4 PROJECT MANAGEMENT

Some key parties involved in the project management, include the following:

- Project Proponent: NZE
- Equipment Supplier: [redacted]
- Construction contractor: [redacted]
- O&M contractor: [redacted] / [redacted]

H3. APPLICABLE REGULATORY AND INTERNATIONAL FRAMEWORK

H3.1 RELEVANT MONGOLIAN LEGISLATION

H3.1.1 CONSTITUTION, 1992

The Constitution of Mongolia (1992) stipulates that the land, subsoil, forests, water, wildlife, plants, and other natural resources of Mongolia shall be under the exclusive control of the people and the protection of the state. Mongolia's civil rights and freedoms are proclaimed, including the right to "live in a healthy and safe environment and to be protected from environmental pollution and disturbance".

H3.1.2 LAW ON LAND[1], 2002

The purpose of this law is to regulate the land possession, use and other related relations by citizens, business entities and organizations. A land possessor shall have the following obligations in accordance with this law. These include:

- Business entities and organizations possessing land shall pay land fees in accordance with relevant laws and agreements;
- Responsible for maintaining the condition and quality of land at its own expense;
- Rehabilitate and landscape disturbed land due to excavation activities at its own expenses;
- The condition and quality of the land possessed shall be inspected by a licensed organization once every five years at the Project Proponent’s own expense and a conclusion shall be issued;
- Comply with the terms of the Land Possession Agreement;
- Comply with the requirements of the legislation on efficient and rational use and protection of land, environmental protection and the general requirements set by the state authorities in connection with land use; and
- Land fees shall be paid within the timeframe imposed by the relevant land office.

Relevant regulations:

- Regulation on granting land possession and land possession certificate (Annex to Order No. 83 issued by the Director of Administration of Land Affairs, Geodesy and Cartography in 2008).

This regulation establishes the processes for receiving, registering, reviewing land use and possession application by citizen and economic entity, as well as developing decision on land use and possession, its approval and granting of land, possession certificate, signing land possession agreement and registration to the national land use database.

In accordance with the regulation, the following process will be followed by the applicant when obtaining land possession certificate:

- Land possession application will be submitted to relevant authority for review;
- Based on this review, the soum governor will produce decision draft and inform the applicant; and

- Once the decision is made, land perimeter will be signed, and coordinates will be determined after which the land possession will be signed, and a certificate will be granted. In addition, the state of the land and quality assurance conclusion will be produced (Article 2 of the regulation).
- Regulation on conducting assessment of state of the land and quality assurance (Annex 1 to Government Decree No. 28 issued in 2003).

The regulation is applied when conducting a land quality and state of the land assessment in: a land to be owned by a Mongolian citizen; land to be used by a foreign country, international organization, foreign economic entity and foreign invested organization, foreign citizen and person with no citizenship; and a land which is already under the use of the applicant; and rest of the state-owned land under nobody's ownership, possession or use.

In accordance with this regulation, scheduled land quality assurance assessment shall be done once every five years in all types of land (Article 1.2) and at the expiration of the land use permit (Article 1.3). When conducting the land quality assurance assessment, the land possessor or the requester of such service must be present (Article 5.27). The cost for conducting the land quality assurance assessment for the land used by an economic entity shall be covered by the land user (Article 8.38.2).

H3.2 INTERNATIONAL STANDARDS

H3.2.1 INTERNATIONAL FINANCE CORPORATION (IFC) PERFORMANCE STANDARDS (PS)

In April 2006, the IFC, a member of the World Bank Group, released a set of Performance Standards (PS) based upon the original World Bank Group Safeguard Policies, which recognised further the specific issues associated with private sector projects. The IFC PS have been broadened to include issues such as greenhouse gases, human rights, community health, and safety and security. A revised set of PS came into force on 9 January 2012.

Specifically, this assignment is intended to cover IFC PS5 requirements, which require projects to avoid or minimise involuntary resettlement, compensate affected people at full replacement cost, undertake meaningful consultation, establish grievance mechanisms, conduct socio-economic surveys and implement measures to restore or improve livelihoods. The standard applies to both physical and economic displacement and extends eligibility to affected persons without legally recognisable land rights.

H3.2.2 ASIAN DEVELOPMENT BANK (ADB) ENVIRONMENTAL AND SOCIAL FRAMEWORK (ESF)

ADB Environmental and Social Standard (ESS) 5 addresses risks associated with land acquisition and land-use restrictions and requires avoidance of displacement wherever possible. Where economic displacement is unavoidable, affected persons must receive compensation at replacement cost and assistance to improve or restore their livelihoods. The standard applies not only to landowners but also to informal users, herders, tenants, and persons relying on common property resources. ESS5 further emphasises meaningful consultation, stakeholder engagement, monitoring, and support for disadvantaged and vulnerable groups.

H3.2.3 EUROPEAN BANK FOR RECONSTRUCTION AND DEVELOPMENT (EBRD) ENVIRONMENTAL AND SOCIAL POLICY (ESP)

In October 2024, the European Bank of Reconstruction and Development (EBRD), released its current EBRD Environmental and Social Policy (ESP), which then came into force on 1 January 2025 for new projects, replacing the previous EBRD Environmental and Social Policy 2019 and its associated Performance Requirements. Under ESP 2024, the former Performance Requirements (PRs) have been renamed Environmental and Social Requirements (ESRs) with the update introducing stronger requirements. Under the ESP 2024, The EBRD has adopted a comprehensive set of ESRs that projects are required to meet with regard to specific areas of environmental and social sustainability. Central to the ESRs is the application of the mitigation hierarchy and Good Industry Practice (GIP).

EBRD PR5 requires projects to avoid displacement where feasible and to provide compensation, livelihood restoration and meaningful consultation where impacts cannot be avoided. PR5 places particular emphasis on vulnerability screening, gender considerations, restoration of livelihoods associated with natural resource use, and independent monitoring of livelihood outcomes. Livelihood restoration is considered a distinct obligation from compensation and must continue until affected persons have demonstrably regained or improved their pre-project livelihood conditions.

H4. LIVELIHOOD CONTEXT

H4.1 SUMMARY OF BASELINE LIVELIHOOD CONDITIONS

The Project is located within the desert-steppe environment of Tsogttsetsii soum, Umnugobi aimag, where livelihoods are predominantly based on extensive pastoral livestock production. The socioeconomic baseline confirms that herder households are highly dependent on access to grazing land, seasonal migration routes, water sources, winter and spring camps, and customary pasture management systems. Livestock production serves not only as the principal source of household income but also as a primary livelihood asset and key coping mechanism in an environment characterized by climatic variability, drought, and periodic *dzud* events. While the regional economy is strongly influenced by mining activities, particularly the Oyu Tolgoi and Tavan Tolgoi mining operations, livestock husbandry remains the dominant livelihood activity for households residing within and adjacent to the Project Area of Influence (AoI). The livelihood system in the Project area is inherently mobile and dependent on access to extensive communal grazing resources

Baseline surveys and stakeholder consultations indicate that small ruminants, particularly sheep and goats, generally graze within relatively shorter distances from seasonal camps, while larger livestock, including horses, cattle, and camels, utilize considerably larger grazing ranges. Grazing patterns vary throughout the year, with herders moving between seasonal camps and pasture areas depending on forage availability, water access, weather conditions, and livestock requirements. During periods of drought or pasture degradation, households may travel between 50 km and 200 km beyond their customary grazing areas in search of suitable pasture. Access to grazing resources is facilitated through customary arrangements among herders and coordination with local soum and bagh authorities, allowing flexible use of pasture resources across administrative boundaries when required.

The Project area forms part of a much larger interconnected grazing landscape that supports seasonal livestock movements. Consequently, livelihood sustainability depends not only on access to individual camp locations but also on continued access to wider grazing areas, reserve pastures, livestock movement corridors, watering points, wells, springs, and other natural resources that support pastoral production systems.

The socioeconomic baseline and stakeholder consultations indicate that local pastoral systems demonstrate a high degree of resilience and adaptability. However, household capacity to absorb livelihood disruptions varies significantly depending on herd size, livestock productivity, access to alternative grazing resources, livelihood diversification opportunities, and household vulnerability factors. Consequently, particular consideration will be given to vulnerable households, seasonal herders, customary resource users, and non-title users during implementation of this Livelihood Restoration Framework (LRF) to ensure that all affected persons are appropriately identified, consulted, and supported in accordance with applicable lender requirements.

H4.1.1 LIVELIHOOD ACTIVITIES

Livestock husbandry remains the dominant livelihood activity within the Project area while herding is a crucial livelihood in Mongolia. In 2022, approximately 25% of Mongolia's workforce

is engaged in agriculture, forestry, fishing and hunting[1], while livestock assets account for approximately 63% of rural households' assets[2]. At the regional level, livestock production represents the backbone of the economy in Umnugobi aimag, employing approximately 63.1% of the workforce. Other sectors include wholesale and retail sale (8.9%), public administration/ government (8.2%), education (4.7%) and mining (4.2%)[3]. Umnugobi aimag's employment rate is 67.5%, higher than the national rate of 56.3%. Male employment is 78.8%, while female employment is 57.6%.

Within the Project-affected baghs, herding remains the predominant livelihood activity. Herders comprise approximately 9.3%, 11.2%, 6.4%, and 29.4% of the populations of Bilgeh, Gaviluud, Javkhlant, and Jargalant baghs, respectively. Focus Group Discussions (FGDs) conducted during the ESIA confirmed that livestock husbandry constitutes the primary source of household income and subsistence. Households typically maintain mixed herds consisting of sheep, goats, horses, camels, and cattle, with sheep and goats representing the largest proportion of livestock holdings.

Agricultural activities are limited in Umnugobi aimag[4], and a large part of the region's agricultural efforts revolves around cultivating fodder crops to support the livestock sector. No cultivated agricultural land was identified within the project-affected baghs. Consequently, household livelihoods are substantially more dependent on grazing resources than on crop production.

In addition to livestock production, household increasingly diversitfy their income through wage employment associated with the mining sectors. Large-scale mining development, such as Oyu Tolgoi copper-gold mine and the Tavan Tolgoi coal mine, provide considerable level of employment opportunities within the region. Stakeholder consultations indicated that many households have at least one family member employed directly or indirectly in mining-related activities. Nevertheless, pastoral livestock production continues to function as the principal livelihood activity and an important safety net against economic and climatic shocks.

H4.1.2 SEASONAL MOBILITY AND GRAZING PRACTICES

Livestock production in the Project area depends upon seasonal mobility and access to extensive customary grazing lands. Household surveys indicate that small ruminants (sheep and goat) generally graze within 3.7 to 5.5 km of seasonal camps, while larger livestock species including horses, cattle and camels typically utilize grazing areas located between 10 and 16.6 km from camps and may range up to 40 km under normal pasture conditions. During drought periods, pasture degradation, or severe climatic events, herders may migrate livestock between 50 km to 200 km beyond their customary grazing areas in search of suitable pasture, including movement into neighbouring soums and aimags.

Stakeholder consultations during the ESIA confirmed that access to grazing lands is coordinated through customary arrangements and local administrative processes. Herders regularly negotiate seasonal access to pasture across administrative boundaries, supported by long-standing traditions of shared resource use. Stakeholders indicated that conflicts related to

[1] Mongolia Statistical Yearbook 2022. Available at: https://downloads.1212.mn/XAwDOK2kREX51d_fl68Uw-r1_ye--nOFrsKek_OF.pdf#pdfjs.action=download
[2] World Bank. Available at: https://blogs.worldbank.org/en/eastasiapacific/dzud-a-slow-natural-disaster-kills-livestock-and-livelihoods-in-mongolia
[3] Oyu Tolgoi Project - ESIA
[4] Mongolia: A Country Study: Agriculture. Available at: https://countrystudies.us/mongolia/53.htm

grazing access are relatively uncommon due to these established systems of communal resource management.

Analysis of seasonal grazing patterns indicates that approximately 47,742 ha of pastureland are utilized by sheep and goats, while approximately 189,395 ha are used by larger livestock, including cattle, horses, and camels. Based on the current Project footprint, it is estimated that a maximum of approximately 0.5% of the grazing land utilized by affected herders would be directly occupied or restricted during construction. While the proportion of land physically affected is limited, the significance of impacts must be assessed in relation to the location, quality, and seasonal function of affected grazing areas, livestock movement corridors, and associated water resources.

Figure H4-1 and ***Figure H4-2*** illustrates the seasonal movements of herders and their patterns of pasture usage by small ruminants and large herbivores in the vicinity of the project area based on the information provided by herders during the ESIA engagement. These figures demonstrate that grazing activities extend well beyond individual camp locations and form part of a broader communal grazing system characterized by seasonal mobility and flexible resource use. Consequently, assessment of Project-related livelihood impacts must consider both the direct loss of grazing land and any potential effects on seasonal grazing patterns, livestock mobility, and access to key pastoral resources.



Source: EcoTrend (from ESIA)

FIGURE H4-1: THE SEASONAL PASTURE USAGE BY SMALL RUMINANTS



Source: EcoTrend (from ESIA)

FIGURE H4-2: THE SEASONAL PASTURE USAGE BY LARGE HERBIVORES

H4.1.3 NON-TITLE USERS AND CUSTOMARY RESOURCE USERS

The Project AoI includes a substantial proportion of "non-title users" and customary resource users whose livelihoods are dependent on communal land and natural resources but who may not possess formal ownership, lease or other legally registered land rights. These users include seasonal herders, customary grazing users, households using communal pasture, users of wells and water sources, and herders relying on traditional movement corridors. Although such users may lack formal tenure rights, their economic dependence on these resources establishes their eligibility for livelihood restoration assistance where Project-related impacts result in economic displacement.

H4.2 SUMMARY OF POTENTIAL IMPACTS ON LIVELIHOOD

H4.2.1 TEMPORARY DISTURBANCE OF GRAZING LAND DURING CONSTRUCTION

Construction activities are expected to result in temporary occupation and disturbance of approximately 130.3 ha of pastureland over the estimated 18-month construction period. This temporary land take may affect grazing activities and result in short-term economic displacement for herder households that seasonally utilize the affected areas for livestock grazing. However, relative to the overall grazing areas identified through the baseline studies, comprising approximately 70,428 ha for small ruminants and 305,612 ha for larger livestock, the temporary land occupation represents only about 0.04% to 0.19% of the available grazing resource. Furthermore, active construction activities will be implemented in a phased manner, with the maximum area under simultaneous disturbance estimated at approximately 17.75 ha

during peak construction periods, equivalent to approximately 0.0094% to 0.0372% of the grazing area used by local livestock. During any given construction period, the majority of grazing land within the Project area will remain accessible.

Local herders maintain highly mobile grazing systems and routinely adapt grazing patterns in response to climatic conditions, forage availability, and seasonal requirements. During drought periods, herders do not depend on fixed or predetermined alternative grazing areas; rather, some households may travel between 50 km and 200 km to access suitable pasture. Such movements are generally coordinated through communication with neighbouring herders and local soum authorities based on customary arrangements and established pasture management practices. Stakeholder engagement undertaken during the ESIA found that conflicts associated with grazing competition are uncommon, reflecting the adaptive and cooperative nature of the local pastoral system.

Considering the small proportion of pasture temporarily affected, the phased nature of construction, the availability of alternative grazing land adjacent to construction areas, and the demonstrated ability of herders to modify grazing routes in response to changing conditions, the Project is not expected to materially constrain livestock mobility or access to grazing resources during construction. Access corridors will be maintained wherever practicable, and traffic management measures will be implemented to accommodate livestock movement across the Project area. Given the temporary nature of the disturbance and the very small proportion of grazing resources affected at any one time, the magnitude of construction-related livelihood impacts is considered low. However, because livestock production represents the principal livelihood activity for affected households, receptor sensitivity is considered medium.

The significance of temporary impacts related to grazing land disturbance would depend on the importance of the affected resources, households reliance on such resources, the availability of suitable alternatives (e.g., alternative grazing land), as well as the duration and timing of any Project-related access restrictions. Households experiencing demonstrable temporary restrictions on access to grazing land may experience short-term economic impacts and should, therefore, be eligible for livelihood restoration measures. Consequently, the overall significance of temporary livelihood impacts during construction is assessed as Minor, subject to continued monitoring of actual impacts and implementation of appropriate livelihood restoration measures through a Livelihood Restoration Plan (LRP).

H4.2.2 PERMANENT GRAZING LAND LOSS DURING OPERATIONS

Permanent livelihood impacts are expected to commence upon commissioning of the Project and continue throughout the Project's operational life, estimated at approximately 20 to 25 years. Permanent land occupation associated with wind turbine generators (WTGs), internal roads, access roads, OHL infrastructure, the substation, and associated facilities will result in the permanent loss of approximately 105.2 ha of pastureland. Of this total, approximately 7.83 ha will be occupied by WTGs, 33.66ha by internal roads, 34ha by access roads and OHL tower footprints, 24.72 ha by access road to the WTG area, and 4.99 ha by the substation. These areas will no longer be available for livestock grazing during Project operations.

Based on Project mapping, household surveys, and stakeholder consultations undertaken during the ESIA, all 19 identified herder households currently utilize portions of the Project area as seasonal grazing land, primarily during the spring and summer grazing periods. Given that the Project footprint is located within open communal pastureland, the permanent loss of

grazing resources will be distributed across multiple grazing users rather than resulting in the complete loss of grazing land for any individual household. The Project will therefore result in a reduction in available grazing area, but not in the loss of an entire grazing system or livelihood resource for any single household.

Importantly, no Project facilities will be located within residential camps, winter camps, livestock shelters, or other fixed household assets. No physical displacement, relocation of households, or relocation of livestock facilities will be required. Site verification confirmed that only one unoccupied household structure is located within approximately 90 metres of an internal access road, while all occupied household structures and seasonal camps are situated more than 1 km from permanent Project infrastructure.

Relative to the overall grazing resource available to local herders, the permanent Project footprint represents a very small proportion of available pastureland. Baseline assessments indicate that livestock grazing occurs across extensive pasture areas, and the permanent loss of grazing land is estimated to represent approximately 0.03% to 0.15% of the total grazing area used by local livestock. Herders and livestock will continue to have access to the vast majority of grazing resources surrounding the Project area, and livestock movement through the wider landscape will remain possible during operations. As such, the Project is not expected to materially affect seasonal migration patterns, livestock mobility, access to reserve pasture areas, or the long-term viability of local pastoral production systems. However – ultimately, the significance of permanent impacts cannot be determined solely on the basis of the proportion of the land affected, but rather, would also depend on the importance of the affected grazing resources to individual households, the seasonal function of the affected areas, the extent to which affected users rely on those resources, the availability of suitable alternatives, and other such conditions.

Therefore, the permanent occupation of grazing land constitutes a form of economic displacement where households experience reduced access to livelihood resources. Accordingly, households and resource users who can demonstrate use of permanently affected grazing areas prior to the establishment of the cut-off date will be considered eligible for assessment under this Livelihood Restoration Framework and for assistance where measurable livelihood impacts are identified.

H4.2.3 IMPACTS ON NON-TITLE USERS AND CUSTOMARY RESOURCE USERS

The Project area comprises predominantly state-owned pastureland that is accessed through customary use arrangements rather than formal ownership. As a result, some affected herders may qualify as non-title users whose livelihoods depend on access to grazing land, water sources, seasonal camps, and livestock movement corridors rather than legal ownership of affected land. Potential livelihood impacts therefore extend beyond households holding recognized land-use agreements and include customary users, seasonal herders, and other resource users who rely on the Project area for grazing activities.

H4.2.4 SUMMARY OF POTENTIAL IMPACTS ON SURVEYED HOUSEHOLDS IN PROJECT AREA

At the time of the household surveys undertaken as part of the ESIA, a total of 32 structures were identified within the Project area, comprising 25 structures within the WTG area and seven structures located within 1 km of the proposed OHL corridor. These structures were

assessed to understand existing land use, seasonal occupation patterns, and potential dependence on grazing resources that may be affected by the Project.

Within the WTG area, a total of 25 structures were identified. Three structures [redacted] and [redacted] had no confirmed owners at the time of the survey, while the remaining 22 structures were associated with 15 identified owners. Of these 15 owners, 14 participated in the household survey and one owner declined to participate.

Within the OHL study area, seven structures located within 1 km of the proposed alignment were identified and associated with seven owners. Five owners representing five structures were successfully interviewed, while the owners of the remaining two structures could not be contacted during the survey period.

Based on the ESIA household survey findings, a high-level assessment of potential livelihood impacts has been undertaken to inform this Livelihood Restoration Framework (LRF). For the purposes of this assessment, all inhabited winter, spring, autumn, and summer camps located within the WTG Area or within 1 km of the OHL corridor have been assumed to represent active livestock-herding households that make use of surrounding grazing resources as part of their livelihood system. In addition, community-used summer camps for which no individual owner has been identified have been treated as potential customary or communal resource users.

The assessment further assumes that the household representatives interviewed during the ESIA household surveys are the primary users of the associated grazing resources and therefore represent the most likely Project-Affected Persons (PAPs) for the purposes of the initial livelihood impact screening. In the absence of a detailed PAP census and resource-use verification process, grazing and resource-use patterns were inferred from information recorded during the household survey, including structure type, occupancy status, seasonal use, and household livelihood characteristics.

Accordingly, winter camps, spring camps, summer camps, livestock shelters, animal enclosures, fences, wells, and other herding-related structures have been used as proxy indicators of livelihood dependence on grazing land and associated natural resources. These indicators have informed the preliminary identification of potentially affected livelihood users and the assessment of potential economic displacement risks.

The findings presented in this LRF should be regarded as **preliminary** and intended solely to establish a framework for future livelihood restoration planning. In particular, the potential livelihood impacts described in this section are based on the current Project footprint, available baseline information, household survey findings, and stakeholder engagement undertaken as part of the ESIA. Ultimately, the significance of potential impacts on livelihoods would depend on a range of factors, including the extent of use of affected livelihood resources, the availability and suitability of alternative resources (e.g., alternative grazing lands), and the duration, timing of any Project-related access restrictions, among others.

Prior to the commencement of construction activities, the Project is recommended to undertake a detailed PAP census, socio-economic survey, resource-use verification exercise, and stakeholder consultations to confirm affected households, identify seasonal and customary resource users, validate grazing patterns, and determine eligibility for livelihood restoration

assistance. The results of this process will form the basis for preparation of the Livelihood Restoration Plan (LRP) and the final determination of entitlements.

The results of the assessment from ESIA household surveys are presented in ***Table H4-1*** below.

TABLE H4-1: POTENTIAL LIVELIHOOD IMPACTS ON SURVEYED HOUSEHOLDS IN PROJECT AREA

HH Number	Structure Type	Usage Status	Interview	Nearest Project facility	Distance	Vulnerability	Likely Impact
WTG Area							
[redacted]	Temporary summer camp without owner	Shared usage among the community	No (no owner)	[redacted]	[redacted]	[redacted]	Temporary restriction of seasonal grazing access
[redacted]	Temporary summer camp without owner	Shared usage among the community	No (no owner)	[redacted]	[redacted]	[redacted]	Temporary restriction of seasonal grazing access
[redacted]	Autumn-spring camp	Inhabited	Yes	[redacted]	[redacted]	[redacted]	Temporary grazing access disruption; [redacted]
[redacted]	Livestock fence	Uninhabited and usage pattern not identified due to unavailability of owner	No (owner declined to participate in the survey)	[redacted]	[redacted]	[redacted]	Monitor during implementation
[redacted]	Winter camp with livestock shelter, small stone house and big container	Inhabited	Yes	[redacted]	[redacted]	[redacted]	Temporary grazing access disruption; [redacted]
[redacted] (same owner as [redacted] and [redacted]	Winter camp with ger, kiosk, livestock fence and livestock winter shelter	Inhabited	Yes	[redacted]	[redacted]	[redacted]	Temporary grazing access disruption

HH Number	Structure Type	Usage Status	Interview	Nearest Project facility	Distance	Vulnerability	Likely Impact
[redacted] (same owner as [redacted]	Winter camp with ger, kiosk, livestock fence and livestock winter shelter summer house with wheels	Inhabited	Yes	[redacted]	[redacted]	[redacted]	Temporary grazing access disruption; [redacted]
[redacted]	Winter camp with two livestock winter shelter, broken vehicles, and two kiosks	Inhabited	Yes	[redacted]	[redacted]	[redacted]	Temporary grazing access disruption; [redacted]
[redacted] (same owner as [redacted]	Winter camp with ger, kiosk and livestock winter shelter	Inhabited	Yes (interviewed through phone)	[redacted]	[redacted]	[redacted]	Temporary grazing access disruption
[redacted]	Autumn camp with livestock fence	Inhabited	Yes (interviewed through phone)	[redacted]	[redacted]	[redacted]	Temporary grazing access disruption
[redacted]	Winter camp with ger, kiosk, and livestock winter shelter	Inhabited	Yes	[redacted]	[redacted]	[redacted]	Temporary grazing access disruption; [redacted]
[redacted]	Winter camp with two kiosks and livestock winter shelter	Inhabited	Yes (interviewed through phone)	[redacted]	[redacted]	[redacted]	Temporary seasonal grazing displacement
[redacted]	Temporary summer camp without owner	Shared usage among the community	No (no owner)	[redacted]	[redacted]	[redacted]	Temporary grazing access disruption

HH Number	Structure Type	Usage Status	Interview	Nearest Project facility	Distance	Vulnerability	Likely Impact
[redacted]	Spring camp with livestock fence made of machine wheels	Inhabited	Yes	[redacted]	[redacted]	[redacted]	T Temporary grazing access disruption
[redacted]	Summer camp with few machines wheels	Uninhabited	Yes	[redacted]	[redacted]	[redacted]	Temporary seasonal grazing displacement
[redacted] (same owner as [redacted]	Winter camp with 2 gers, kiosk, and livestock winter shelter	Inhabited	Yes	[redacted]	[redacted]	[redacted]	Temporary grazing access disruption; [redacted]
[redacted]	Winter camp with ger and livestock winter shelter	Inhabited	Yes	[redacted]	[redacted]	[redacted]	Temporary grazing access disruption; [redacted]
[redacted]	Winter camp with ger, kiosk, and livestock winter shelter	Inhabited	Yes	[redacted]	[redacted]	[redacted]	Temporary grazing access disruption
[redacted]	Winter camp with two kiosks and livestock broken fence	Uninhabited and usage pattern not identified due to unavailability of owner	Yes	[redacted]	[redacted]	[redacted]	Potential grazing access disruption
[redacted] (same owner as [redacted]	Winter camp with ger and livestock winter shelter	Uninhabited	Yes	[redacted]	[redacted]	[redacted]	Potential access restrictions near storage area

HH Number	Structure Type	Usage Status	Interview	Nearest Project facility	Distance	Vulnerability	Likely Impact
[redacted]	Winter camp with livestock fence made with machine wheels and barn made with stone	Uninhabited	Yes	[redacted]	[redacted]	[redacted]	Temporary disruption and mobility impacts
[redacted]	Broken fence	Uninhabited	Yes	[redacted]	[redacted]	[redacted]	Temporary seasonal access disruption
[redacted]	Winter camp with kiosk, remnants of vehicles and broken fence	Uninhabited	Yes	[redacted]	[redacted]	[redacted]	Potential grazing access disruption
[redacted]	Abandoned stove	Uninhabited	Yes	[redacted]	[redacted]	[redacted]	Potential seasonal grazing restriction
[redacted]	A piece of rounded stone	Uninhabited	Yes	[redacted]	[redacted]	[redacted]	(No evidence of livelihood-related use)
Structures located within 1km from OHL							
[redacted]	Winter camp with ger, two kiosks, and livestock winter shelter	Inhabited	Yes	[redacted]	[redacted]	[redacted]	Temporary grazing access disruption during OHL construction
[redacted]	Winter camp with ger, kiosk, fence, broken vehicle, and two livestock winter shelter	Inhabited	Yes	[redacted]	[redacted]	[redacted]	Temporary grazing access disruption; [redacted]
[redacted]	Broken livestock fence	Uninhabited and usage	No	[redacted]	[redacted]	[redacted]	(Monitor during implementation)

HH Number	Structure Type	Usage Status	Interview	Nearest Project facility	Distance	Vulnerability	Likely Impact
	and broken kiosk	pattern not identified due to unavailability of owner					
[redacted]	Bagh centre building, with four house, three gers, livestock winter shelter, livestock stone fence, and water well	Inhabited	Yes	[redacted]	[redacted]	[redacted]	Temporary livelihood disruption; [redacted]
[redacted]	House with two garage, livestock winter shelter, summer house with wheels	Inhabited	Yes	[redacted]	[redacted]	[redacted]	Temporary grazing access disruption
[redacted]	Livestock winter shelter, broken vehicles, livestock fence	Inhabited	Yes	[redacted]	[redacted]	[redacted]	Temporary grazing access disruption
[redacted]	Summer house with wheels, ger, kiosk, livestock winter shelter, livestock fence made with machine wheels	Uninhabited and usage pattern not identified due to unavailability of owner	No	[redacted]	[redacted]	[redacted]	Potential temporary seasonal grazing restriction

H5. LIVELIHOOD RESTORATION FRAMEWORK

H5.1 ELIGIBILITY

H5.1.1 KEY PRINCIPLES

Eligibility for compensation and livelihood restoration assistance will apply to all households and individuals who experience economic displacement as a result of Project activities, irrespective of their land tenure status and ownership rights in affected land and natural resources. The Project recognizes that pastoral livelihoods within the Project Area of Influence (AoI) depend largely on communal grazing resources, seasonal mobility, livestock movement corridors, water sources, and customary land-use arrangements. As such, both title holders and non-title users will be eligible for assistance where Project activities result in livelihood impacts.

Eligibility for assistance will apply to all persons who can demonstrate use of Project-affected grazing resources, livestock movement routes, camps, wells, springs, or other livelihood resources prior to the established cut-off date and whose livelihoods are adversely affected by Project activities.

H5.1.2 ELIGIBLE PROJECT-AFFECTED PERSONS

For the purposes of this Livelihood Restoration Framework (LRF), eligible persons are referred to as Project-Affected Persons (PAPs) which include individuals, households, and groups whose livelihoods are adversely affected by Project-related land acquisition, restrictions on land use, or limitations on access to natural resources. PAPs may include:

- Persons with formal legal rights to land, including possession certificates, leases, or other legally recognized tenure arrangements;
- Persons with customary, traditional, or communal use rights recognized under local practice;
- Seasonal herder households utilizing grazing areas within the Project Area of Influence;
- Users of communal pastureland, livestock migration routes, seasonal camps, reserve grazing areas, and water points;
- Users of wells, springs, and other natural resources supporting livestock production; and
- Informal or non-title resource users who can demonstrate use of affected land or livelihood resources prior to the established cut-off date.

Eligibility will be determined based on the nature and extent of livelihood dependence on affected resources. Accordingly, economic displacement affecting access to grazing land, livestock movement routes, water sources, or other livelihood resources will be addressed regardless of whether affected persons hold formal title. Where temporary access restrictions are required, negotiated agreements will be developed with affected users and will document informed consultation and agreement on access arrangements and mitigation measures.

Livelihood impacts associated with temporary or permanent restrictions on access to grazing land, livestock movement corridors, reserve pastures, water points, or seasonal camps will be assessed and addressed through appropriate mitigation and livelihood restoration measures.

Where temporary access restrictions are required during construction or operation, the Project will seek to avoid or minimize disruption through advance planning, stakeholder engagement, and negotiated access arrangements. Agreements with affected users will document the outcomes of informed consultation, including agreed access protocols, schedules, alternative routes where necessary, and any mitigation or compensation measures required to address livelihood impacts.

The entitlement framework presented in this LRF provides for livelihood restoration assistance associated with:

- Temporary or permanent loss of access to grazing land;
- Restrictions on livestock movement and seasonal migration routes;
- Reduced access to wells, springs, and other water resources;
- Increased grazing pressure and competition in alternative pasture areas;
- Loss of access to customary resource areas; and
- Other livelihood losses identified and verified to result from Project activities.

It is important to note that non-title holder status does not constitute a separate PAP category, but rather describes the tenure status of affected persons within a category of impact. For example, a herder household may fall within the same livelihood impact category as a household holding formal land rights but may be classified as a non-title user where access to grazing land, wells, seasonal camps, or livestock movement routes is based on customary, communal, or traditional use rather than formally registered tenure.

Accordingly, eligibility for livelihood restoration assistance under this Framework will be based on the existence of livelihood impacts identified and verified to be attributed to Project restrictions, and resource use prior to the cut-off date, rather than on ownership status alone. This approach is intended to ensure that all affected persons, including vulnerable households and customary resource users, are treated in accordance with the objectives of ADB ESS5, EBRD PR5, and IFC PS5, which require the restoration, and where feasible improvement, of livelihoods and living standards for persons economically displaced by Project activities.

Table H5-1 presents the proposed eligibility categories and associated entitlement criteria.

TABLE H5-1: ELIGIBILITY CRITERIA

Project Phase	PAP Description	Likelihood of Including Non-Title Users	Potential Impacts
Construction	Resident herder households using grazing areas temporarily affected by construction activities	*Households may hold possession certificates for winter or spring camps; however, grazing activities are typically undertaken on state-owned pastureland accessed through customary use arrangements.*	Temporary loss of grazing access due to construction of WTGs, internal roads, access roads, substation, BESS, OHL and associated work areas
	Seasonal herder households using affected grazing areas during part of the year	*Seasonal herders generally rely on customary access to summer pastures and may not possess formal rights to the grazing land they use.*	Temporary loss of seasonal grazing access and displacement from customary grazing areas
	Mobile herders using livestock movement routes that intersect Project	*Livestock movement corridors are generally used under customary arrangements and are rarely subject to formal tenure rights.*	Disruption of livestock mobility and increased travel distance to alternative grazing areas
	Vulnerable herder households (female-headed, elderly-headed, disabled, poor, highly livestock-dependent households)	*May include both title holders and non-title holders*	Disproportionate difficulty adapting to temporary livelihood disruptions
Operations	Herder households using grazing areas permanently occupied by WTGs, substation, BESS, access roads and associated infrastructure	*While some households may possess camp certificates, access to the wider grazing resource is typically based on customary use of state-owned pastureland.*	Long-term reduction in available grazing resources
	Customary or communal pasture users affected by permanent infrastructure footprint	*This category is specifically intended to capture customary users, communal pasture users, seasonal users and other non-title holders.*	Long-term restrictions on access to portions of grazing land
	Vulnerable households affected by permanent livelihood impacts	*May include both title holders and non-title holders*	Reduced adaptive capacity and higher livelihood risk from long-term impacts

H5.2 CENSUS TAKING APPROACH

Given the limited extent of anticipated grazing impacts, currently estimated at approximately 0.05% of the grazing resource used by affected herders and expected to be temporary in nature during the construction period, a full household census may not be required at this stage. The Project may build upon the household survey data, stakeholder engagement findings, participatory mapping exercises, and livelihood information already collected as part of the ESIA process. These datasets may serve as the foundation for developing the preliminary PAP register and identifying potentially affected stakeholder groups. However, prior to implementation of any livelihood restoration measures, the Project will undertake a targeted census and verification exercise to confirm affected persons, validate resource-use patterns, assess the magnitude of livelihood impacts, and update the PAP register as necessary. The final PAP register will form the basis for preparation of the Livelihood Restoration Plan(s) and determination of eligibility for livelihood restoration assistance.

Should verification activities identify households experiencing material livelihood impacts, loss of access to critical grazing resources, disruption of livestock movement routes, or disproportionate impacts on vulnerable households, the Project will undertake additional household-level surveys and prepare livelihood restoration measures proportionate to the nature and magnitude of impacts in accordance with the lender's requirement.

The census is recommended to be undertaken through a combination of:

- Structured household surveys;
- Key informant interviews with local governors, bagh leaders, and community representatives;
- Focus group discussions with herder groups and seasonal resource users;
- Direct field verification and observation;
- Participatory mapping of grazing areas, wells, camps, and movement corridors; and
- Review of available local administrative records where appropriate.

Given the highly mobile nature of pastoral livelihoods in the Project area, the census will adopt a targeted and adaptive approach to ensure that nomadic herders, seasonal herders, and other customary resource users are adequately identified and included. The census will not be limited to households physically present within the Project footprint at the time of data collection. Instead, it will seek to identify all households that customarily use affected grazing land, wells, springs, seasonal camps, and livestock movement corridors throughout the year. This will be achieved through a combination of household interviews, participatory mapping, focus group discussions with herder groups, consultations with bagh leaders and local authorities, and verification of seasonal grazing patterns. Particular attention will be given to documenting seasonal and rotational use of pastureland, including winter, spring, summer, and autumn grazing areas, to capture users who may be temporarily absent during the survey period. The census will record the nature, duration, and frequency of resource use, rather than relying solely on residential location or formal land tenure status, thereby ensuring that seasonal herders, communal pasture users, and other non-title holders are appropriately recognised as potentially eligible for livelihood restoration assistance where Project activities result in loss of grazing access, disruption of livestock mobility, restricted access to water resources, or increased competition for alternative grazing areas. The census findings will be

validated through community consultations before finalisation to minimise the risk of excluding mobile or vulnerable households.

The census could build upon the household survey and stakeholder engagement data already collected as part of the ESIA, which could serve as the foundation for the preparation of the PAP register.

Table H5-2 below shows a proposed step-by-step approach for census taking:

TABLE H5-2: APPROACH FOR CENSUS TAKING

Step	Description
Step 1: Define the Area of Influence	• Overlay the final construction and operational footprint with grazing areas, livestock movement routes, wells, springs, camps, access roads and other livelihood resources. • Review and utilise ESIA baseline maps, household survey data and grazing-use information to identify the initial population of potentially affected households. • Identify households potentially affected by temporary and permanent land-use restrictions.
Step 2: Identify Potentially Affected Persons (PAPs)	• Use the existing household survey database as a preliminary PAP register. • Update the list through consultation with bagh governors, soum authorities, and affected communities to identify households that may not have been surveyed during the ESIA, including seasonal herders and newly arrived users. • Ensure non-title users are included irrespective of formal land ownership.
Step 3: Update Household Census	• Verify and update information previously collected, including household demographics, household composition, contact information and residency status. • Confirm current livestock holdings, herd composition and livelihood sources. • Record any material changes since completion of the ESIA baseline surveys.
Step 4: Verify Resource Use	• Use ESIA survey results as the initial record of grazing use, seasonal movements, camps and water resources. • Conduct field verification with households to confirm current seasonal grazing areas, migration routes, winter camps, spring/autumn camps, wells and watering points. • Record frequency, duration and seasonality of resource use.
Step 5: Assess Project Impacts	• Overlay verified household resource-use information against the final Project footprint. • Determine whether each household falls within Categories 1-12 of the eligibility framework. • Assess temporary construction impacts and permanent operational impacts separately. • Use ESIA impact assessment findings as the starting basis for impact screening and validation.
Step 6: Screen for Vulnerability	• Review vulnerability indicators already identified through the household surveys. • Update information where required and assess female-headed households, elderly-headed households, persons with disabilities, low-income households, highly livestock-dependent households and households with limited mobility or transport access. • Flag vulnerable households for enhanced assistance and monitoring.

Step	Description
Step 7: Participatory Mapping and Validation	• Validate grazing areas, movement corridors, camps and water sources through participatory mapping with affected herders and local authorities. • Confirm customary use rights and communal resource use patterns.
Step 8: Establish Eligibility and Cut-Off Date	• Confirm eligibility based on verified use of affected resources prior to the census cut-off date. • Apply eligibility equally to title holders, customary users, seasonal herders and other non-title users. • Use the existing stakeholder engagement/ survey records as supporting evidence of pre-existing resource use where required.
Step 9: Prepare PAP Register	• Develop a final verified PAP database combining ESIA household survey data, census updates and impact verification results. • Record household details, vulnerability status, impact category, affected resources and entitlement eligibility. • Use the register as the basis for compensation determination, livelihood restoration planning, monitoring and completion audits.

H5.3 CUT-OFF DATE

Traditionally, a cut-off date is used to determine the eligibility for entitlements of PAPs and protects the Project from opportunistic encroachment, which can result in the Project not going ahead or significantly delay compensation of the legitimately entitled affected parties.

A formal cut-off date has not yet been established under this Framework. However, given the nature of the Project and the predominantly communal and customary use of grazing resources within the Project Area of Influence, it is proposed that the cut-off date be linked to the commencement of Project activities that result in restrictions on access to grazing land or other livelihood resources.

Unlike projects involving privately owned agricultural land, pastoral livelihoods in the Project area are based on seasonal and mobile use of extensive grazing resources. As such, it may not be possible to determine with certainty whether a particular grazing area is being actively used by a household on a specific date. Accordingly, for impacts associated with the WTG area, substation, BESS, storage area, access roads, internal roads and other construction areas, the proposed cut-off date is the date on which construction activities commence and access to the affected grazing area is physically restricted or no longer available for customary use. Households and resource users who can demonstrate use of the affected area prior to that date will be considered eligible for assessment under the entitlement framework. The same approach will apply for OHL corridor and associated access roads.

H5.4 VULNERABLE HOUSEHOLD CONSIDERATIONS

It is recognised that certain groups may face additional barriers in responding to such impacts, due to vulnerabilities that may be linked to social, economic, or physical factors, amongst others.

The ADB's ESF defines disadvantaged or vulnerable (D/V) groups as *"those individuals or groups who, by virtue of, for example, their age, gender, ethnicity, religion, disability, social, civic or health status or information, sexual orientation, gender identity, economic disadvantages or indigenous status, and/or dependence on unique natural resources, may be more likely to be at risk of being adversely affected by project impacts, and/or more limited*

than others in their ability to take advantage of a project's benefits, and/or excluded from/unable to participate fully in consultation processes and benefit sharing in a project." The EBRD, through its Environmental and Social Policy (2024), similarly defines vulnerable people as *"Persons or groups of people who: (i) may be disproportionately affected by project impacts or more limited than others in their ability to access project benefits, due to being discriminated against, marginalised and/or excluded on the basis of characteristics such as, but not limited to, their sex or gender, sexual orientation, gender identity, gender expression and/or sex characteristics, religion, national origin, race, ethnicity, indigenous status, age (including children, youths and older persons), physical or mental disability, literacy, political views and affiliations, or socioeconomic status and (ii) people in situations of vulnerability, such as people living below the poverty line, the landless, single-headed households, natural resource-dependent communities, migrant workers, refugees or internally displaced people, as well as people affected by conflict or natural disasters."* The IFC recognises that the disadvantaged or vulnerable status of a group/ individual *"may stem from an individual's or group's race, color, sex, language, religion, political or other opinion, national or social origin, property, birth, or other status. The client should also consider factors such as gender, age, ethnicity, culture, literacy, sickness, physical or mental disability, poverty or economic disadvantage, and dependence on unique natural resources."*

Given the pastoral livelihood context of the Project area, resilience to potential livelihood impacts may vary considerably. For example, the Mongolia Dzud Response Plan identifies increased vulnerability among households experiencing significant livestock losses, maintaining relatively small herd sizes (of approximately 400), or having limited capacity to absorb livelihood disruptions. Particular attention is often given to single-headed households, households with persons with disabilities, elderly-headed households, households with dependent children, and households with limited access to social welfare support.

To ensure that vulnerable households are appropriately identified and supported, a vulnerability screening assessment will be undertaken as part of the census and socio-economic survey. The screening will evaluate household circumstances against a defined set of indicators, including:

- Female-headed households;
- Elderly-headed households (household head aged over 65 years);
- Households with a high dependency ratio, including households with multiple dependent children;
- Households containing persons with disabilities;
- Households living below the applicable poverty threshold;
- Households with a high degree of dependence on Project-affected grazing land, wells, springs, or livestock movement corridors;
- Households experiencing significant debt or financial stress; and
- Households with limited mobility or access to transport.

Households identified as vulnerable through the screening process may be eligible for enhanced assistance measures, which may include additional consultation and engagement support, targeted support for accessing livelihood restoration programmes, more frequent follow-up monitoring, etc. Vulnerable households will also be prioritised within the LRF

monitoring programme to ensure that livelihood restoration objectives are achieved and that they are not disproportionately affected by Project-related economic displacement.

H5.5 ENTITLEMENTS

All eligible PAPs will be entitled to livelihood restoration measures proportionate to the nature and magnitude of Project impacts.

The entitlement framework will be guided by the following principles:

- Avoid or minimize economic displacement wherever feasible;
- Ensure that non-title users are not excluded from assistance;
- Restore livelihoods to pre-project levels or better;
- Provide compensation and assistance prior to impacts wherever possible;
- Give particular attention to vulnerable households;
- Implement measures through meaningful consultation with PAPs;
- Monitor livelihood restoration outcomes and provide corrective measures where necessary.

Eligibility for assistance under this LRF will therefore be based on livelihood dependence and Project-induced impacts rather than ownership status, which would be identified and verified as part of the subsequent LRP process, ensuring compliance with IFC PS5, ADB ESS5, and EBRD PR5 requirements for economic displacement and livelihood restoration. The subsequent LRP will also consider proportionate approaches for resource users within clearly defined impact areas, particularly where customary or seasonal resource use and Project-related access restrictions can be reasonably verified. In such cases, eligibility for appropriate livelihood restoration measures or assistance may be established without requiring affected persons to quantify or provide proof of individual monetary losses. Supporting information may include grazing calendars and seasonal pasture use patterns, livestock inventories, records of winter, spring, summer, or autumn camp locations, grievance records (where available), and other such information that reasonably shows use of affected livelihood resources and the nature of Project-related disruptions prior to and during Project activities.

An entitlement matrix sets out the entitlements for different types of losses, entitled PAPs, eligibility and corresponding entitlements. Entitlements are a range of measures comprising compensation, livelihood restoration assistance, etc., depending on the type and severity of their losses. These measures are designed to improve or at least restore PAP's living conditions to pre-project levels.

This LRF proposes an entitlement matrix (***Table H5-3***) based on the Eligibility Criteria outlined in ***Section H5.1***. It should be noted that a PAP may fall into more than one entitlement category, in which case all entitlements listed will apply.

In the event of PAPs coming forward after the cut-off date and claiming to have been omitted from the census, the Grievance Mechanism described in ***Section H7*** will be applied to manage such claims. The Project will review these situations on a case-by-case basis to assess eligibility for entitlements.

TABLE H5-3: ENTITLEMENT MATRIX

Impact Category	Eligible PAPs*	Entitlement Unit	Entitlements
Construction phase			
Temporary loss of access to grazing land due to construction activities	Resident herders, seasonal herders, customary pasture users, communal pasture users, non-title users	Affected household	• Advance notification of construction activities • Assistance for additional herding costs identified and verified through the subsequent LRP assessment process where Project activities result in temporary restrictions on access to livelihood resources • Maintenance of/ temporary access arrangements to grazing areas (or alternative), livestock movement routes, wells/ water points, and other livelihood resources wherever safe and practicable • Rehabilitation of temporarily disturbed grazing land following construction • Participation in livelihood restoration programmes. • Inclusion in livelihood monitoring programme. • Access to grievance mechanism.
Temporary occupation of seasonal grazing areas	Households using affected spring, summer, autumn, or winter grazing areas	Affected household	• Advance notification of construction activities • Equal eligibility regardless of title status. • Prior notification before seasonal grazing periods. • Assistance to identify alternative seasonal grazing areas and suitable water sources, where required. • Compensation, as appropriate, where household-level assessment verifies losses directly attributable to Project-related restrictions. • Participation in livelihood restoration programmes. • Inclusion in livelihood monitoring programme. • Access to grievance mechanism.
Temporary disruption of livestock movement routes and herding pattern	Mobile and seasonal herders	Affected household	• Advance notification of construction activities • Assistance for additional herding costs identified through verification of Project-related restrictions • Maintenance of livestock crossings and safe passage routes and wells/ water points wherever technically feasible. • Clearly marked temporary corridors and traffic management measures. • Consultation on route selection and scheduling of construction activities. • Participation in livelihood restoration programmes. • Inclusion in livelihood monitoring programme. • Access to grievance mechanism.

Impact Category	Eligible PAPs*	Entitlement Unit	Entitlements
Vulnerable herder households (female-headed, elderly-headed, disabled, poor, highly livestock-dependent households)**	*May include both title holders and non-title holders*		• All applicable entitlements mentioned above. • Priority access to applicable livelihood restoration programmes, subject to household needs and preferences identified through the LRP process. • Additional assistance where restoration outcomes are not being achieved. • Extended monitoring until restoration objectives are met. • Referrals to government and community support programmes where appropriate. • Inclusion in livelihood monitoring programme. • Access to grievance mechanism.
Operation Phase			
Permanent loss of grazing resources due to permanent infrastructure footprint**	Resident herders, seasonal herders, customary pasture users, communal pasture users, non-title users	Affected household	• Assistance in securing sustainable alternative grazing arrangements, and, where necessary, continued access to water sources. • Support for livestock productivity enhancement measures (e.g., fodder support, pasture improvement, veterinary services, water access improvements, herd management assistance). • Long-term livelihood monitoring. • Priority for livelihood restoration programmes. • Access to grievance mechanism. •
Permanent restriction on access to communal or customary pasture resources**		Affected household	• Assistance to maintain access to alternative pasture resources and livestock routes, as well as wells/ water points, where required. • Priority for livelihood restoration programmes. • Access to grievance mechanism.
Permanent livelihood impacts affecting vulnerable households**	Vulnerable Households	Affected household	• All applicable entitlements mentioned above. • Additional assistance where restoration outcomes are not being achieved. • Extended monitoring until restoration objectives are met. • Referrals to government and community support programmes where appropriate. • Priority for livelihood restoration programmes. • Access to grievance mechanism.

**In this context, resident herder households are those that live within or near the Project area and regularly use local grazing resources throughout the year, including seasonal camps, grazing areas, water sources, and livestock movement routes. Seasonal herder households are*

those that access the Project area only during particular times of the year, such as for seasonal grazing, reserve pasture use, or during periods of drought, but who nevertheless rely on these resources as part of their livelihood activities.

***PAPs experiencing long-term Project-related livelihood impacts, as well as vulnerable PAPs, may be prioritised for relevant livelihood restoration programmes described in Section H5.6.*

H5.6 PROPOSED LIVELIHOOD PROGRAMMES

At this stage, given that permanent land occupation represents only a very small proportion of the available grazing resource (approximately 0.03% to 0.15% of total grazing area) and construction disturbance affects only a limited area at any one time, the primary emphasis of the LRF is on temporary access management, compensation for losses identified and verified to result from Project-related activities, support for vulnerable households, and monitoring of unforeseen impacts.

The livelihood restoration programmes described below (***Table H5-4)*** are intended to supplement, and not replace, any compensation and assistance entitlements provided under this Framework. Consistent with the requirements of IFC PS5, ADB ESS5, and EBRD PR5, the final design, eligibility, and implementation arrangements of the livelihood restoration programmes will be determined following the PAP census, socio-economic survey, detailed livelihood impact assessment, and meaningful consultation with potentially affected Project-Affected Persons (PAPs). The programmes presented at this stage are therefore indicative and may be refined to reflect the specific livelihood needs, preferences, and priorities identified through stakeholder engagement and further assessment. The final Livelihood Restoration Plan(s) will be proportionate to the magnitude of impacts and will be prepared prior to the occurrence of economic displacement, in accordance with IFC PS5, ADB ESS5, and EBRD PR5 requirements.

Importantly, programmes that provide direct support to individuals will prioritise PAPs. Depending on NZE's community development or corporate social responsibility (CSR) goals and objectives, NZE may also extend eligibility to broader community members.

TABLE H5-4: SUMMARY OF PROPOSED LIVELIHOOD PROGRAMMES

Livelihood Programmes	Description	Potential Contribution to Livelihood Restoration	Implementation Responsibility	Indicative Timeline	Budget Basis	Potential Monitoring Indicators to Assess Sustainable Livelihood Outcomes*
Construction Phase						
Local Employment Programme	Target a minimum of 35% of the construction workforce from affected baghs and soums, where feasible. Vacancies to be advertised locally through bagh offices, community noticeboards, social media, local recruitment offices and educational institutions.	Provides temporary wage income to PAP households experiencing Project-related economic displacement or temporary restrictions on access to grazing resources during construction. Additional income can help offset livelihood disruptions, including costs associated with adjusting grazing patterns, accessing alternative pasture areas, purchasing supplementary fodder, or maintaining livestock productivity during periods of restricted access.	NZE and EPC Contractor	Throughout construction	Included in EPC labour budget	Number and percentage of PAP households with at least one member employed by the Project; duration of employment; wages earned; proportion of PAP households reporting employment-related income contributing to livelihood restoration.
Local Procurement Programme	Prioritise local suppliers and service providers for catering, transport, accommodation, cleaning, equipment rental and other construction-related services, where commercially feasible.	Provides income-generating opportunities for PAP households and PAP-affiliated enterprises through the supply of goods and services to the Project. Additional income may assist affected households in managing Project-related livelihood impacts, including reduced access to	NZE and EPC Contractor	Throughout construction	Included in EPC procurement budget	Number and value of contracts awarded to PAP-owned or PAP-affiliated businesses (where applicable); income

Livelihood Programmes	Description	Potential Contribution to Livelihood Restoration	Implementation Responsibility	Indicative Timeline	Budget Basis	Potential Monitoring Indicators to Assess Sustainable Livelihood Outcomes*
		grazing resources or increased livestock management costs.				generated through Project procurement opportunities
Operation Phase						
Permanent Employment Opportunities	Approximately 34 permanent jobs associated with operation and maintenance of the wind farm, with preference given to residents of affected baghs and soums.	Supports long-term livelihood restoration by providing eligible PAP household members with stable income sources that can offset any residual impacts associated with permanent loss of access to grazing resources. Diversified household income may reduce dependence on affected pasture resources and improve household resilience while maintaining livestock-based livelihoods as a primary or complementary income source.	NZE	Throughout operations	Included in operational workforce budget	Number of PAPs securing operational-phase employment; employment retention rates after 6, 12 and 24 months; contribution of employment income to household livelihoods.
Technical Skills and Vocational Training	On-the-job technical training in wind farm operations and maintenance, with equal access for men and women.	Supports PAP households whose livelihoods are affected by the Project by enhancing access to alternative or supplementary income sources. Where household-level assessments identify the need for livelihood diversification, training may assist affected household members in securing employment or establishing new income-generating activities to	NZE	During operations	Based on training provider costs, materials, and number of participants	Number of PAPs completing training; percentage obtaining employment, self-employment, or additional income-generating opportunities

Livelihood Programmes	Description	Potential Contribution to Livelihood Restoration	Implementation Responsibility	Indicative Timeline	Budget Basis	Potential Monitoring Indicators to Assess Sustainable Livelihood Outcomes*
		compensate for Project-related livelihood impacts.				following training; income changes attributable to acquired skills; participant feedback on relevance and usefulness of training.
Internship Programme	Internship opportunities for graduates from local vocational and technical institutions to develop renewable energy skills.	Provides members of PAP households, particularly younger household members, with practical skills, work experience, and pathways to future employment. This may help affected households diversify income sources and strengthen long-term economic resilience where Project-related impacts reduce access to traditional livelihood resources.	NZE	During operations	Based on annual intake of interns and supervision requirements	Number of PAP household members participating; internship completion rates; transition of participants into employment, apprenticeships, or further vocational opportunities.
Community Development Fund (CDF)	Establish a CDF governed jointly with communities to support locally identified priorities such as education, healthcare, livestock	CDF-funded initiatives that support pastoral livelihoods (e.g., livestock watering infrastructure, pasture management improvements, veterinary services, hay storage facilities, or livestock productivity programmes) may indirectly help	NZE, Community Representatives, Local Authorities	Throughout operations	Annual allocation to be agreed through stakeholder engagement and Project	Community-level indicators relevant to funded projects. As this is a community development initiative,

Livelihood Programmes	Description	Potential Contribution to Livelihood Restoration	Implementation Responsibility	Indicative Timeline	Budget Basis	Potential Monitoring Indicators to Assess Sustainable Livelihood Outcomes*
	support services and water infrastructure.	reduce pressures on affected households and support broader community resilience.			budgeting processes	monitoring would focus on community benefits rather than demonstrating livelihood restoration outcomes for individual PAPs.

**The proposed livelihood restoration programmes should not be evaluated solely based on participation or delivery metrics. A monitoring framework shall therefore be developed as part of the LRP to assess the extent to which such measures contribute to livelihood restoration objectives. Depending on the programme, monitoring may include indicators such as employment uptake and retention, income generation, business performance, and the contribution of programme participation to restoring affected livelihoods. Detailed indicators, targets, and monitoring arrangements will be developed during LRP preparation once affected households, livelihood impacts, and restoration measures have been fully defined.*

H6. STAKEHOLDER ENGAGEMENT

Stakeholder engagement provides the basis for understanding and shaping the potential impacts of the Project. Stakeholder engagement should be an ongoing process, through the scoping, implementation, and monitoring stages of a project.

Stakeholders are defined as persons or groups that are affected directly or indirectly by a project, or those have an interest in the project and could have influence over its results. For this LRF, the following relevant stakeholder groups are identified:

- Government Authorities:
  - Umnugobi Aimag government representatives (e.g., Governor of Umnugobi aimag, Deputy Governor of Umnugobi aimag, Chairman of Governor's office, Chairman of Umnugobi aimag citizens representatives' meeting, Chairman of Social Policy Department, Chairman of Land Affairs, Construction, and Urban Development Department, Chairman of Investment, and Development Policy and Planning Department);
  - Soum government representatives in Tsogttsetsii soum, Manlai soum and Khanbogd soum (e.g., Soum Governor, Deputy Governor Chairman of soum citizens representatives' meeting, Chairman of Governor Office, Environmental Officer, Land Officer, Social Officer, Labor and Welfare Officer);
  - Bagh government representatives (e.g., Governor from Bilgeh bagh, Governor from Gavilud bagh, Governor from Javhlant bagh, Governor from Jargalant bagh)
- Local Communities: Herders, women, youth, vulnerable groups

Recognising that some potential PAPs may not be permanently present in the Project area, engagement activities will be adapted to accommodate nomadic and seasonal herder households. This may include scheduling consultations during periods of peak seasonal occupancy, conducting repeat visits where households are temporarily absent, consulting neighbouring herders and bagh authorities to identify seasonal users, and maintaining multiple channels of communication throughout Project implementation. Particular attention will be given to ensuring that non-title users, customary resource users, and seasonal herders are informed of their eligibility for livelihood restoration assistance and have adequate opportunities to participate in decision-making processes.

Table H6-1 outlines the proposed stakeholder engagement activities relevant to the LRF, across the construction and operations phases of the Project.

TABLE H6-1: PROPOSED STAKEHOLDER ENGAGEMENT

Project Stage	Activity	Purpose	Key Stakeholders	Timing / Frequency	Responsibility
Pre-LRP Preparation	Initial consultations with soum and bagh authorities	Introduce the LRP process, explain economic displacement risks, and obtain information on affected herders and resource users	Soum Governor, Bagh Governors, concerned local authorities	Prior to census	Project Social Team
	Community information meetings	Inform communities about the Project, anticipated livelihood impacts, eligibility principles, census process, and grievance mechanism	Herder households, seasonal users, community members	Prior to census	Project Social Team
Census and Socio-Economic Survey	Household interviews and census surveys	Identify PAPs, assess livelihood dependence, collect baseline socio-economic information, and identify vulnerable households	Affected households and resource users	Once, with follow-up verification as needed	Project Social Team
	Participatory resource mapping	Map grazing areas, wells, seasonal camps, livestock routes, and customary resource use areas	Herder households, seasonal herders, local leaders	During census	Project Social Team
	Focus group discussions	Validate livelihood information, identify seasonal users, understand grazing patterns and mobility routes	Male and female herders, vulnerable groups	During census	Project Social Team
LRP Preparation	Disclosure of census and eligibility results	Present preliminary findings and provide opportunity for verification and correction	Affected households and communities	After census completion	Project Social Team
	Consultation on compensation and livelihood restoration options	Discuss proposed entitlements, restoration measures, valuation methodologies, and implementation arrangements	Eligible PAPs	Prior to finalisation of LRP	Project Social Team

Project Stage	Activity	Purpose	Key Stakeholders	Timing / Frequency	Responsibility
	Negotiated access agreements	Document temporary access arrangements, mitigation commitments, and agreed livelihood measures	Directly affected resource users	Prior to construction activities	Project Proponent and Affected PAPs
Construction Phase	Construction planning consultations	Communicate upcoming works, temporary access restrictions, construction schedules, and mitigation measures	Affected herders and resource users	Prior to commencement of works in each area	Contractor and Project Team
	Bi-monthly community meetings	Provide construction updates, discuss emerging livelihood issues, and review grievances	Community members and affected households	Bi-Monthly or as required	Project Team
	Vulnerable household follow-up visits	Confirm vulnerable households are receiving agreed assistance and identify emerging needs	Vulnerable households	Quarterly or as required	Project Social Team
	Grievance mechanism awareness sessions	Ensure affected persons understand how to raise concerns and seek resolution	All stakeholders	Ongoing	Project Team
	Monitoring consultations	Verify implementation of livelihood restoration measures and assess effectiveness	Affected PAPs	Semi-annually	Project Monitoring Team
Operations Phase	Livelihood restoration monitoring surveys	Assess restoration outcomes against baseline conditions	PAPs receiving assistance	Annually	Project Monitoring Team
	Stakeholder feedback meetings	Discuss monitoring findings and agree on corrective actions if required	PAPs, community representatives, local authorities	Annually	Project Team
	Vulnerable household monitoring	Track livelihood restoration outcomes among vulnerable households	Vulnerable households	At least annually	Project Monitoring Team

Project Stage	Activity	Purpose	Key Stakeholders	Timing / Frequency	Responsibility
	Completion audit consultations	Verify whether livelihood restoration objectives have been achieved and identify any outstanding issues	PAPs, local authorities, community representatives	Prior to LRF closure	Independent Monitor and Project Team
	Stakeholder feedback meetings	Discuss monitoring findings and agree on corrective actions if required	PAPs, community representatives, local authorities	Annually	Project Team
	Vulnerable household monitoring	Track livelihood restoration outcomes among vulnerable households	Vulnerable households	At least annually	Project Monitoring Team

H7. GRIEVANCE MECHANISM

All grievances related to livelihood impacts, including disputes over compensation amounts, non-receipt of agreed compensation, livestock injury claims, access disruption complaints, and employment-related complaints, shall be managed through the Project's Grievance Mechanism (GM), which is outlined in the Project's Stakeholder Engagement Plan (SEP). The GM provides the primary formal channel through which PAPs may raise concerns, submit claims, and seek resolution without prejudice to their rights under Mongolian law.

IFC, ADB, and EBRD require projects to establish accessible and effective procedures for receiving and addressing stakeholder's grievances. Stakeholders should be able to raise grievances without fear of retaliation, incur no cost for using the mechanism, and retain access to judicial and administrative remedies at all times. The GM will therefore complement, and not replace, existing legal and administrative processes available under Mongolian law.

The Project is required to communicate and disclose the mechanism via formal and informal meetings and discussions as well as via the non-technical summary. It will also prepare promotional materials, such as an informative flyer, that can be presented on public information boards and around the Project site.

The following information can be communicated and disclosed by the Project:

- Who can raise complaints (focusing on affected communities);
- Where, when, and how community members can log complaints;
- Who is responsible for receiving and responding to complaints, and if any external parties can receive complaints from communities;
- What type of responses complainants can expect from the Project including timing of responses; and
- The benefits that complainants can receive from using the grievance mechanism.

It is essential that the local government in Bilgeh bagh, Gavilud bagh, Javhlant bagh and Jargalant bagh (and all contractors and employees) fully understand the grievance mechanism, to enable them to communicate the step-by-step process to the affected people, particularly in the case where the grievances are submitted directly to them for resolution.

Eligibility for assistance will apply to all persons who can demonstrate use of Project-affected grazing resources, livestock movement routes, camps, wells, springs, or other livelihood resources prior to the established cut-off date and whose livelihoods are adversely affected by Project activities.

H8. ROLES AND RESPONSIBILITIES

Responsibility will be shared among NZE, the EPC Contractor, local authorities, and affected stakeholders. The allocation of responsibilities described in ***Table H8-1*** below is intended to ensure that commitments are implemented consistently throughout the construction and operation phases of the Project.

TABLE H8-1: SUMMARY OF ROLES AND RESPONSIBILITIES

Role	Party	Key Responsibilities
Overall LRF and future LRP ownership	NZE	Overall responsibility for implementation of the LRF; oversee preparation of the subsequent LRP; fund all compensation and restoration measures; ensure EPC contractor compliance; report to lenders
Social Officer (SO)	NZE (dedicated staff)	LRP day-to-day implementation oversight; PAP database management; compensation agreement tracking; quarterly and annual reporting
Community Liaison Officer (CLO)	NZE (dedicated staff; ideally from local community)	Individual household consultations; monthly PAP household visits; GRM operation; livestock claim intake and tracking; local recruitment liaison
Land Officer (LO)	NZE (designated or contracted)	Compensation valuation; liaison with soum administration on land certificates and grazing rights; coordinate on alternative route provision
EPC Contractor	[redacted]	Implement vehicle route restrictions per TMP; report livestock strikes to CLO within 24 hours; ensure all workers aware of no-harm-to-livestock protocol; support LRP monitoring
Bagh Governors	Tsogttsetsii, Manlai, Khanbogd soum bagh administrations	Facilitate PAP census access; co-host community consultations; receive and co-manage grievances; provide land certificate and livestock registration data
Independent Social Specialist	Contracted by NZE	Conduct annual livelihood restoration assessment; report independently to NZE and lenders

H9. BUDGET AND RESOURCES

A dedicated LRP budget shall be prepared following completion of the PAP census, socio-economic survey update, impact verification process, entitlement assessment, and compensation valuation exercise. The detailed LRP budget shall be reviewed periodically and updated as necessary to reflect confirmed impacts, actual implementation requirements, and monitoring outcomes.

At a minimum, the LRP budget should include provisions for:

- Census, socio-economic survey, and PAP verification activities;
- Stakeholder engagement and consultation activities;
- Compensation payments and livelihood restoration assistance;
- Vulnerable household support measures;
- Grievance management and dispute resolution activities;
- Community Development Fund contributions and community livelihood enhancement initiatives;
- Community Liaison Officer (CLO), Social Officer (SO), and other implementation personnel;
- Independent monitoring, evaluation, and completion audit activities;
- Livelihood restoration monitoring and reporting; and
- Contingency provisions for unforeseen livelihood impacts identified during implementation.

NZE shall maintain sufficient financial resources to meet all livelihood restoration obligations arising from the Project. A preliminary LRP budget shall be developed following completion of the PAP census and submitted to applicable lenders for review prior to commencement of construction activities. Thereafter, the budget shall be reviewed and updated annually, or more frequently if required, to ensure that adequate resources remain available throughout implementation of the LRP.

The Project should also ensure that adequate human resources are available to implement the LRF and subsequent LRP, including suitably qualified social personnel, community engagement staff, land and livelihood specialists, and independent monitoring support as required. Resource requirements should be reviewed periodically throughout Project implementation and adjusted as necessary to reflect the scale and complexity of livelihood restoration activities.

H10. MONITORING, EVALUATION, AND REPORTING

The LRP monitoring programme shall assess: (i) whether all PAPs have been identified and received their entitlements in full and on time; (ii) whether livelihoods of affected households have been restored to at least pre-Project levels; and (iii) whether any unanticipated livelihood impacts have emerged that require additional mitigation.

H10.1 INTERNAL MONITORING

Internal monitoring shall be conducted by the NZE Social Officer and CLO throughout the construction and operation phases.

TABLE H10-1: INTERNAL MONITORING PROGRAM FOR CONSTRUCTION AND OPERATION

Activity	Frequency	Responsible Party	Record
PAP census completion and database update	Before construction; update if new impacts identified	Social Officer	PAP database
Individual household consultations (pre-construction)	Before affected zone commences	CLO	Consultation record
Compensation agreement sign-off tracking	Rolling; before each zone commences	Social Officer	Agreement register
Monthly herder household visits	Monthly during construction	CLO	Visit log
Livestock compensation claim register update	Ongoing	CLO	Claims register
Access disruption register update	Ongoing	CLO	Disruption register
Local employment share tracking	Monthly	HR/Social Officer	Employment statistics
GRM register review	Monthly	Social Officer	GRM register
Quarterly LRP progress report	Quarterly	Social Officer	Quarterly report
Annual livelihood restoration assessment	Annual	Social Officer and independent reviewer	Annual report

H10.2 ANNUAL LIVELIHOOD RESTORATION ASSESSMENT

An annual independent livelihood restoration assessment shall be conducted during the construction phase, and for the first three years of the operation phase, by a qualified social specialist independent of the day-to-day NZE project team. The assessment shall:

- Verify that all PAPs in the census have received their agreed entitlements;
- Compare household income, livestock numbers, and access to seasonal camps and water against pre-construction baseline levels established in the PAP census;
- Identify any PAPs whose livelihoods remain below pre-Project levels, and recommend corrective actions;
- Assess the effectiveness of employment, training, and community development measures; and
- Report findings to NZE management and submit to lenders alongside the annual ESMP report.

H10.3 LIVELIHOOD RESTORATION SUCCESS INDICATORS

The effectiveness of the LRF and subsequent LRP will be assessed through a combination of implementation, outcome, and livelihood restoration indicators. These indicators are intended

to demonstrate that affected households, including non-title users and customary resource users, have received their agreed entitlements and that Project-related livelihood impacts have been adequately mitigated, restored, or compensated.

- All eligible PAPs have been identified through the census and verification process and have received their agreed compensation and livelihood restoration entitlements in accordance with the approved LRP.
- All households experiencing temporary restrictions on grazing access have received agreed compensation, in-kind support, or access facilitation measures prior to or during the impact period.
- All households experiencing permanent loss of grazing access have received agreed compensation and livelihood restoration assistance prior to commencement of operations affecting those resources.
- All verified livestock injury or mortality claims attributable to Project activities have been investigated, resolved, and compensated in accordance with the approved compensation valuation methodology.
- All verified disruptions to grazing access, livestock movement routes, wells, springs, or livestock watering points have been addressed through agreed mitigation measures, alternative access arrangements, or equivalent assistance.
- Vulnerable households have received any additional assistance identified through the vulnerability assessment process and have been subject to enhanced monitoring throughout implementation of the LRP.
- Monitoring demonstrates that affected households have maintained or restored their livelihood conditions relative to the baseline established through the census and socio-economic survey. Where feasible, livelihood conditions should demonstrate measurable improvement relative to pre-project conditions.
- Livelihood enhancement commitments identified in the LRF, including local employment, local procurement, vocational training, and community development initiatives, have been implemented in accordance with Project commitments. Progress towards the Project target of recruiting at least 35% of the construction workforce from affected soums and baghs should be monitored and reported.
- No outstanding livelihood-related grievance remains unresolved beyond the timeframe established under the Project Grievance Mechanism, unless agreed otherwise with the complainant and appropriately documented.
- Independent monitoring, where required, confirms that livelihood restoration measures have been implemented in accordance with the LRP and that no significant outstanding livelihood restoration obligations remain.

H10.4 REPORTING TO LENDERS

Once the LRP has been prepared, periodic reports shall be submitted to lenders describing implementation progress, livelihood restoration performance, emerging issues, and corrective actions. Reporting should continue until livelihood restoration objectives have been achieved and closure of the LRP has been agreed with the relevant lenders.

At a minimum, lender reports should include:

- Progress on completion of the PAP census, socio-economic survey updates, eligibility verification, and establishment of the PAP register;
- Number and categories of PAPs identified, including title holders, non-title users, customary resource users, seasonal herders, and vulnerable households;
- Status of compensation delivery and livelihood restoration assistance;
- Progress in implementing livelihood enhancement programmes, including local employment, procurement, training, and community development initiatives;
- Results of stakeholder engagement activities undertaken during the reporting period;
- Summary of grievances received, resolved, and outstanding, including any livelihood-related disputes;
- Monitoring results relating to grazing access, livestock mobility, water access, vulnerable households, and livelihood restoration outcomes;
- Details of any unanticipated livelihood impacts and actions taken to address them;
- Progress against the livelihood restoration success indicators established under the LRP; and
- Any corrective actions required to achieve livelihood restoration objectives.

During construction, reporting should be undertaken at least quarterly. Following commencement of operations, reporting may transition to annual livelihood restoration monitoring reports (within 90 days of the end of each monitoring year) unless otherwise required by lenders or monitoring findings indicate the need for more frequent reporting. Any significant LRP non-compliance event — including failure to pay agreed compensation before construction commences on an affected area, or a Pattern of unresolved livestock loss claims — shall be reported to lenders within 5 working days of identification.

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