Darwin Initiative Main and Post Project Annual Report

To be completed with reference to the "Writing a Darwin Report" guidance: (http://www.darwininitiative.org.uk/resources-for-projects/reporting-forms). It is expected that this report will be a **maximum** of 20 pages in length, excluding annexes)

Submission Deadline: 30th April 2019

Darwin Project Information

Project reference	25-012
Project title	Steppe up: Community-led recovery of Mongolia's iconic species and forest- steppe ecosystem
Host country/ies	Mongolia
Lead organisation	Zoological Society of London
Partner institution(s)	Ministry of Environment and Tourism (MET), Governor Office of Arkhangai, Arkhangai Environmental Department (AED), Arkhangai Police Agency (APA), National University of Mongolia (NUM), Arig Bank, Spirit Mongolia NGO (Spirit), Independent Research Institute of Mongolia (IRIM), Arkhangai Province Forest Unit
Darwin grant value	£329,952
Start/end dates of project	2nd July 2018 – 31st March 2021
Reporting period	July 2018 – Mar 2019: Annual report 1
Project Leader name	Monica Wrobel (Head of Asia, Conservation and Policy)
Project website/blog/Twitter	https://www.zsl.org/conservation/regions/asia/mongolia
Report author(s) and date	Monica Wrobel, Tungalag Ulambayar, Erdenetsolmon Ganbaatar, Myagmarsuren Shagdarjav, Khaliun Tsog, Samuel Merson.

1. Project rationale

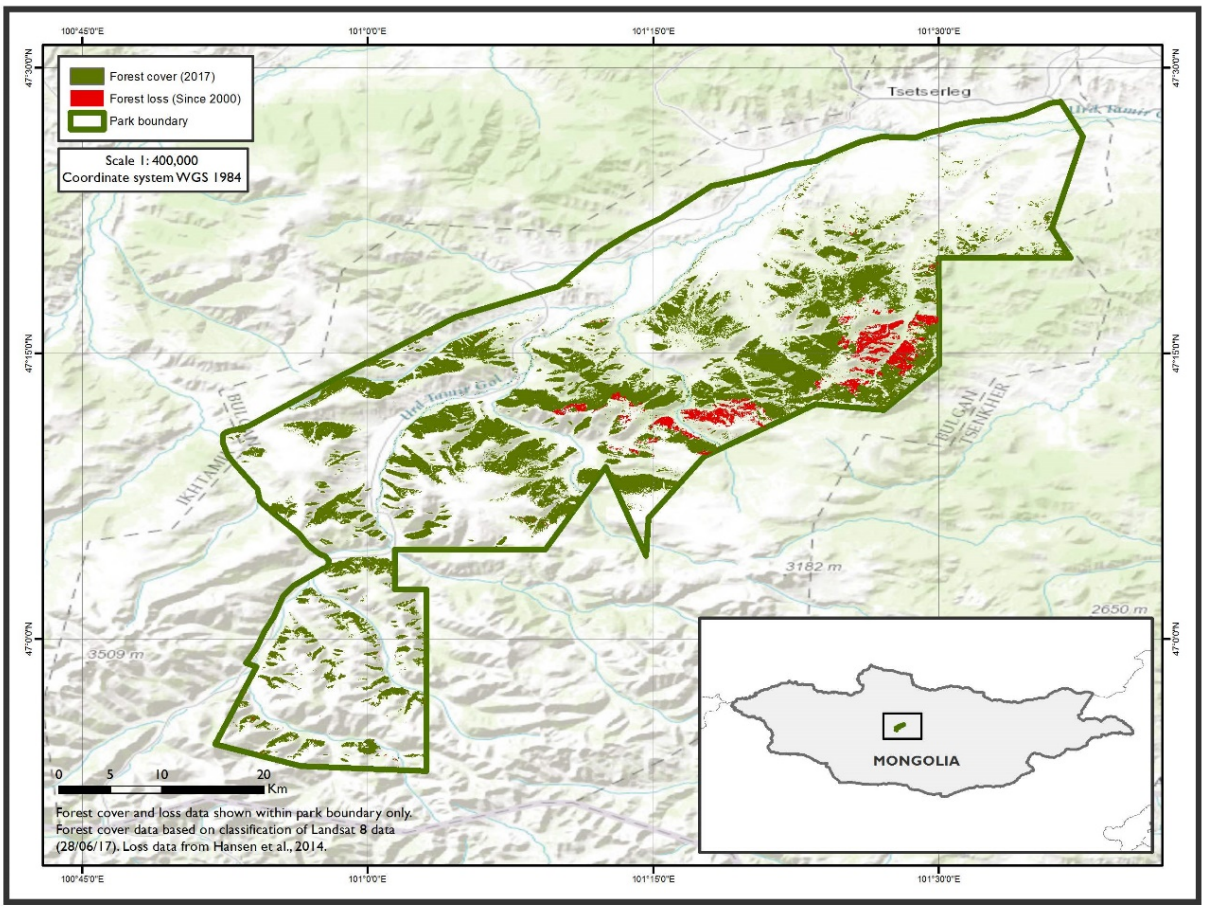
Biodiversity Challenges in Arkhangai: Illegal wildlife hunting, livestock overgrazing and resulting pastureland deterioration, and illegal deforestation in Central Mongolia's 1370 km^2 Khoid Mogoin Gol-Teel Local Protected Area (LPA) forest-steppe ecosystem imperils not only its iconic and globally-threatened species, but also the communities that depend upon this landscape. Species including the Saker falcon (Falco cherrug), Steppe eagle (Aquila nipalensis) Siberian marmot (Marmota sibirica) and Musk deer (Moschus moschiferus) have immense cultural significance for Mongolians: the falcon is the national bird; the eagle an enduring symbol of the nomadic way of life; and the marmot and deer are the source of many traditional household products. These species occupy one of the largest remaining intact temperate grassland ecosystems globally, but one that is critically threatened by uncontrolled economic overexploitation. Without robust interventions, the overexploitation of pastures and forests will drive fatal degradation and loss of Mongolia's critical forest-steppe ecosystem, a key threat to its globally-significant wildlife and dependent local communities.

Human development challenges: Healthy ecosystems in Arkhangai not only safeguard the future of its wildlife, but also underpin the livelihoods and socio-cultural identities of Mongolia's nomadic communities, and their resilience to climate change. These communities heavily depend upon the pastureland for raising livestock for subsistence and income, the forests for firewood collection and building materials, and wildlife for subsistence and cultural beliefs. As ecosystem-degradation of these resources escalates, this resilience is eroded, undermining livelihoods of livestock herders and driving communities into poverty. Furthermore, this drives gender inequality and a gender imbalance, with women experiencing the most severe impacts due to existing stereotypes and traditional belief systems.

Project problem identification: At project conception, the project partnership conducted an extensive pre-project threat assessment, site survey and stakeholder mapping and engagement exercise in the LPA. This identified the area as subject to high levels of over-exploitation and habitat loss and degradation, but also with the potential for positive transformation and a deeply committed and concerned local community keen to safeguard the forest-steppe ecosystem and traditional lifestyle. This highlighted the area as an ideal pilot site for a community-led LPA model to arrest degradation of this critical ecosystem and support recovery of culturally-significant species.

In year one of the project, ZSL held extensive workshops and meetings with the nine communities living with the LPA boundaries to revisit the project and its objectives. The overarching problems of deforestation, pasture degradation, and poaching were discussed, and corresponding project activities planned, and implemented in partnership with these communities. Communities have been proactive in their involvement and supportive of the project objectives and the problems they seek to address.

Project Map: The Khoid Mogoin Gol-Teel Local Protected Area and forest loss (2010 – 2017).



2. Project partnerships

Formal partnerships:

National University of Mongolia (NUM) supports the project's annual biodiversity monitoring surveys on target species, Musk deer, Steppe eagle, and Saker Falcon. Professor Gombobaatar Sundev supported the coordination of the project's workshop to develop a biodiversity monitoring plan and visited the project site in January 2019 to conduct year one surveys for Saker falcon, steppe eagle, musk deer and marmot. Professor Sundev is expected to visit the site again in June 2019 to conduct year two biodiversity surveys.

Independent Research Institute of Mongolia (IRIM) leads the development and implementation of socio-economic surveys of LPA communities. In Year one, socio-economic baseline surveys of approximately 35% of the LPA (150 households) were conducted by IRIM from September 2018 – February 2019, and a report produced (Annex 4.1). Project end surveys will be conducted in 2021 to measure project impact.

Spirit Mongolia joined a new umbrella organization (NGO) created by eight Forest User Groups (FUGs) in LPA including Mogoinhon FUG. As agreed at the Community Forum on March 26th, Spirit Mongolia obtained two seats in the Board of the umbrella organization thus participating in the development of community-level agreements, drafting of LPA-level management plans, and supporting of business model development and the implementation of Village Savings and Loan schemes (VSLAs).

Arig Bank facilitates the development of sustainable and economically viable business models, as well as providing training and technical support to build the capacity of the community to effectively manage their livestock assets and financial resources.

Union of LPA FUGs is a newly created umbrella organization uniting eight FUGs overseeing the LPA management. On March 26th, 75 representatives of various LPA stakeholders had a Community Forum, which established the Union with equal representation of FUGs in its Board. ZSL will cooperate with the Union Board to formulate the Constitution, and formal registration of the Union as a local NGO, and development of its management plan.

Ministry of Environment and Tourism, Mongolia (MET) is the principal government department responsible for environmental issues in Mongolia. They have assisted ZSL with general oversight of project implementation and have supported community group development (e.g. FUGs), improving environmental law, state registration, SMART implementation. In association with the recent appointment of a Focal point for Community-based conservation, MET is interested to learn from practical experiences of working with FUGs in the management of the LPA.

Local partnerships: We have developed several local partnerships with government agencies critical to implementing project activities with local communities.

The Arkhangai Forest Unit (AFU) is working closely with ZSL on all forest-related project activities, including: establishment of new LPA forest user groups; LPA forest mapping; forest user group management plan; forest management community workshops. This partnership has been a significant achievement as the AFU has provided expertise to local communities that was not previously accessible, including advice on forest cleaning, forest disease and fire.

Arkhangai Aimag Environmental Department (AED) has proved to be an important local partner, working closely with project staff on supporting aimag level conferences and capacity building trainings for local communities. They have also provided legal advice to ensure the effective development of FUGs.

Governor Office of Arkhangai has supported the project through facilitating and hosting state and local level conferences (e.g. forest and pasture conferences), including giving the opening presentations. The Governor's Officer have also supported the drafting of local legislation for the FUGs and pasture management.

Bulgan Soum Government has proactively supported the project as 44% of the LPA is within their soum. The governor has attended community meetings, capacity building trainings and supported the establishment and certification of FUGs. ZSL plans to have a Partnership agreement with the Soum Government to facilitate their oversight of LPA management and cooperation with the Union of FUGs.

Khangain Nuruu National Park (KNNP) was established in 1996 and borders the southern border of the LPA, encompassing a similar habitat of mountainous forest-steppe. KNNP management and rangers have been working closely on community based natural resource protection management, including forest and pasture management. Given the overlap in project objectives they have been supportive of project activities and are interested in potentially implementing SMART patrolling in their park.

Partnership achievements, lessons, strengths or challenges: In year one, the project has established positive working relationships with local government agencies including AED, AFU, and Bulgan soum through awareness raising and capacity building activities. Also, the project has gained trust and cooperation of the seven new FUGs who strongly support the Union leadership towards inclusive and democratic decision-making by the stakeholders. The first joint action of local stakeholders was the forest cleaning activity where each local stakeholder contributed and succeeded in gaining additional incomes for FUGs while undertaking measures to prevent forest fires, pests and supporting the natural regeneration of the forests. The vital strength ZSL has obtained in year one is the achievement of trust of the local partners. Regarding challenges, staff changes in project partners have resulted in the delay of project deliverables and expectations of services delivered. ZSL will take necessary measures to address this challenge by June 2019. Other challenges have been coordinating daily project activities, and participation of partners based outside of the LPA.

3. Project progress

3.1 Progress in carrying out project Activities

Activity 1.1 Conduct expert workshop (including Local ecological knowledge experts) on biodiversity monitoring techniques appropriate to site and target species

The expert workshop was conducted on 04 January 2018 involving six experts specialised on mammals, birds and insects. The experts had comprehensive discussions on appropriate methods for biodiversity monitoring and reached a consensus for using methods including 1) species identification, 2) distance sampling, 3) total count, 4) survey of indirect tracks and signs, 5) survey of breeding raptor species, and line-transit for musk deer (Annex 4.2).

Activity 1.2 Produce Biodiversity Monitoring Plan for LPAs in Central Mongolia's Forest-Steppe Ecosystems

Current status of the project target species and monitoring techniques appropriate to the species and area were discussed by the biodiversity experts. The subsequent Biodiversity Monitoring Plan for the LPA was completed in January 2019.

Activity 1.3 Train local community members in required biodiversity monitoring techniques; also provide refresher training as needed

The training was conducted for local community members to introduce biodiversity monitoring and SMART patrolling techniques on the 12th January 2019. 27 Forest User Group (FUG) members participated and 10 members were selected to act as Volunteer Rangers based on their interest (Annex 4.3). Each volunteer ranger obtained a certificate of participation, Blackview smartphone (compatible with SMART Cybertracker), GPS and headtorch as necessary for SMART patrolling and biodiversity surveys.

Activity 1.4 Conduct annual biodiversity monitoring, covering target species and species richness of birds and invertebrates

The year one biodiversity monitoring survey was conducted on 13-15th January 2019 and established the baselines for target species (Annex 4.2). Key results include: a) the Siberian marmot population estimate of 220 individuals, b) Musk deer population estimate of six individuals c) and Saker falcon estimate of 12 individuals and Steppe eagle estimate of eight individuals.

Activity 2.1 Conduct above-ground biomass surveys in LPA and control site

The forest expert contract was signed on 16th November 2018. The expert conducted biomass survey in four sites of LPA (Annex 4.4).

Activity 2.2 Define and map 3-4 suitable test plots within the LPA forest area.

The forest survey defined the test plots and control sites at four sites involving six community members (Annex 4.4). Areas of suitable plots were included in the LPA forest distribution map in the report.

Activity 2.3 Co-produce methods and management design for each test plot, based on existing options for boreal/taiga forest management, and introduce the forest management implementation and relevant practice

The forest expert defined forest management methods for each plot and provided recommendations on management design, including forest cleaning, fencing to support natural regeneration, thinning, reforestation/replanting.

Activity 2.4 Support community members to implement forest management activities defined for each test plot.

From 13-25th January 2019, ZSL facilitated forest cleaning in 10 hectares of forest area to prevent forest fire and pests, support natural regeneration, and provide additional income for 80 members from five FUGs. In total the FUGs collected 1130m^3 deadwood, earning 20 million MNT equivalent to 7600 USD. (Annex 4.5).

Activity 2.5 Run a SMART recruitment workshop with LPA members to inform community of SMART and establish CPU members.

On September 12-13th ZSL project staff attended a WCS-led SMART workshop in the Small Gobi B Strictly Protected Area (SPA). Consequently, ZSL Mongolia staff had the opportunity to develop a preliminary LPA SMART Protocol during the training for review by regional WCS SMART trainers.

The SMART approach was introduced to aimag and soum authorities, the Police department, the prosecutor's office, the environmental department, the forest unit, FUG members and other stakeholders at various training events and individual visits to LPA households.

Currently ten Volunteer Rangers have been equipped with uniforms and tools, including smartphone, GPS, binoculars and headtorches. Additional volunteer rangers will be recruited following the piloting of SMART patrols with the existing rangers.

Activity 2.6 Co-produce SMART protocol for the LPA, and provide relevant training, based on CPU member capacity

The LPA SMART Protocol was developed during the community training in January 2019. The SMART software was translated into Mongolian and tested in the field with community volunteer rangers. The Cybertracker application has been adjusted for local protection management and biodiversity monitoring for poaching and illegal logging. It was tested in February 2019 (Annex 4.6).

The ZSL team delivered field training on the SMART approach which included pilot SMART patrol. 10 community volunteer rangers (Community Patrol Unit members), one local rangers of the forest unit, and one forestry specialist of the aimag and soum's environmental department in the LPA.

Activity 2.7 Produce annual logging reports from analysis of collected SMART data

Data collection from volunteer rangers using SMART has not yet begun but it anticipated to begin in June 2019.

Activity 2.8 Improve signs and information boards along the LPA border and main roads

The content of information and design of the LPA board is pending discussion at the next meeting of the Union of LPA FUGs.

Activity 2.9 Conduct twice weekly SMART patrols

Three pilot SMART patrols were conducted with two community groups and four community rangers, one environmental inspector and forest unit specialist over February and March 2019. (annex 4.6). Community SMART patrols are expected to commence in June 2019.

Activity 2.10 Conduct annual community workshop in improved adaptive forest management techniques in an iterative process as results from the trials become available

The first conference of the Arkhangai Aimag on 'Sustainable Forest Management' took place on 7th March 2019 (annex 4.7, annex 4.13). 151 people attended the conference, including environmental rangers, and FUG members from 19 soums. Recommendations on 13 topics of forest management methods, including forest fund conservation, prevention from forest fire and pest, and forest cleaning. Topics on enforcement of Forest Law were declared at the end of the conference and disseminated to relevant parties.

Activity 2.11 Co-produce final scalable forest management plan which balances forest yield and biodiversity, using annual biodiversity data and above-ground biomass data from forest management trial plots

Forest pilot site surveys for year one was conducted, which will form the basis for this activity's completion in the final project year.

Activity 3.1 Conduct soil nutrient and compaction surveys in LPA and control site

The project recruited a rangeland expert in January 2019, who defined sites and control sites for vegetation survey. The rangeland expert will conduct vegetation surveys in 2019 in five defined sites and control sites in the LPA.

Activity 3.2 Define and map 3-4 suitable test plots within the LPA pasture area.

A rangeland expert from National Agricultural University has defined five experimental plots and control sites for surveys planned for August 2019. They have also created a vegetation map of the LPA for planning and M&E (annex 4.8).

Activity 3.3 Co-produce methods and management design for each test plot, based on existing options for steppe/pasture management, with communities and introduce the pasture management implementation and relevant practice

A draft Regulation on Rangeland Responsibility (RRR) supported by the Green Gold project was discussed among the LPA community members and Arkhangai aimag authorities on 24th December. Sustainable grassland management activities are pending due to the approval of RRR at the aimag level. Once approved, FUG herders will work on rangeland management plans facilitated by the project, agree and approve among the members and start the implementation.

Activity 3.4 Support community members to implement pasture management activities defined for each test plot.

The project has facilitated discussions of the draft pasture user agreement among all forest user groups in the LPA in December 2018. This agreement is pending the approval of aimag authorities.

Activity 3.5 Conduct annual community workshop in improved adaptive pasture management techniques in an iterative process as results from the trials become available

In December 24, 2018, ZSL organized the first conference in Arkhangai on "Responsible rangeland management" in cooperation with the Pasture User Association of Arkhangai aimag. The goal of the conference was to discuss a draft Regulation on Rangeland Responsibility which defines rangeland management design at Arkhangai aimag level. Participants included 80 community members, governors from 18 soums, and aimag officers responsible for small and medium enterprises, land managers, specialists of veterinary and livestock breeding of each soum. The draft Regulation on Rangeland Responsibility (RRR) was agreed by the participants and submitted to the Aimag Citizen Representatives Council (CRC). Upon CRC approval, the RRR will be effective at entire aimag level. FUGs of Mogoin Gol-Teel LPA agreed and supported to implement the pasture user agreement in their territories.

Activity 3.6 Co-produce final scalable forest management plan based on optimum biodiversity and grassland carrying capacity, using annual biodiversity data and above-ground biomass data from pasture management trial plots.

The establishment of FUGs and management plans, and drafted pasture user agreements in project year one will contribute to the completion of this activity in year three.

Activity 4.1 Co-produce new business models, in partnership with local communities, for eco-tourism and pasture related products, utilising Arig banks' business viability analysis techniques.

In year one, twenty-five participants enrolled in the “Business Opportunity” and “Sustainable Fibre” training held in Tsetserleg on 30th November 2018. A second training was held in February 2019 where 35 community members were trained.

Activity 4.2 Secure access to market for ecotourism and pasture related products from the LPA through working with international and in country buyers.

Development opportunities for ecotourism, dairy (artisanal cheese), and cashmere were presented and discussed with local community members during the 30th November training. A cashmere consultant specialist from the Sustainable Fibre Alliance was also in attendance.

Activity 4.3 Conduct workshop to establish community cooperative for small enterprises with legal support.

An introductory workshop to discuss legal support for small enterprises was held in November 2018 and February 2019. In total, 78 herders enrolled in the “Business Opportunity” and “Sustainable Fibre” training (annex 4.9). During these events, environmentally sustainable and economically viable cashmere, dairy and ecotourism business models were discussed with communities.

Activity 4.4 Provide small business training and support to LPA cooperative members

To support small business training to local communities the project has organised forest cleaning activity to support household incomes and sustainable forest management as a potential LPA business model. The community-based ecotourism camp establishment is planned for June 2019, which intends to create job opportunities for LPA community and diversify livelihoods.

Activity 4.5 Co-produce, with local communities, a locally appropriate VSLA protocol, and enrol initial participants

The VSLA protocol was designed and introduced to FUGs in February 2019. The VSLA concept was introduced to 122 community members (with multiple attendance by some community members) and three FUGs have established a VSLA and approved a protocol. These VSLAs are expected to be operational by May 2019.

Activity 4.6 Deliver ongoing training and support to VSLA members, and members of the LPA community wishing to participate

Training for three FUGs in the LPA, including 35 community members was conducted in February 2019. These three FUGs have commenced VSLA implementation.

Activity 4.7 Design socio-economic survey protocol for LPAs, using established wellbeing indices, including livelihood diversity and income

The Independent Research Institute of Mongolia (IRIM) designed a “Socio-Economic baseline study on locally protected area” and collected data from 150 households (35% of LPA) in Bulgan soum of Arkhangai province in September 2018.

Activity 4.8 Conduct socioeconomic surveys in LPA and control site to collect baseline data in year 1 and project end data in year 4

IRIM submitted the Baseline study report in March of 2019. The baseline study reported that 30% of the households were living below the national poverty line; meaning their monthly expenditure was less than MNT 146,150 (£42). More details can be found in annex 4.1

Activity 5.1 Establish an effective and democratic LPA management authority following GESI principles, to meet monthly for project coordination and including community members and representatives from key partners.

A series of eight events were organized to introduce the project to the local partners and beneficiaries between September and October 2018 reaching 94 community members in the LPA. Community discussions on the LPA management model were organised on March 26 where GESI principles were introduced to 75 participants. The forum included all project

stakeholders and facilitated democratic decision-making on the LPA management model while ensuring equal access to project information by all parties (Annex 4.10).

Activity 5.2 Hold annual workshops to feed monitoring results from output 1 and other outputs to into adaptive management planning and Mongolia's reporting against its NBSAP

The community forum on 26th of March presented the first workshop towards adaptive management of LPA aligning with NBSAP.

Activity 5.3 Run exchange visits for leaders from nearby community groups to observe the LPA and encourage them to establish LPAs in their own regions, also to include relevant government officials

The project plans to organise the attendance of several LPA community members to attend the Ulaanbaatar conference of community-based conservation groups in 2019. Future exchange visits to the LPA will be organised in year three and nine communities have shown interest in the potential exchange visit.

Activity 5.4 Share completed set of LPA protocols, plans and reports with Ministry of Environment and Tourism to produce framework for expansion of LPA model, and basis for LPA guidelines to be published post-project

The project had a meeting with the MET in April 2019 to discuss community-based conservation related issues, and they expressed an interest in visiting the LPA by year three.

3.2 Progress towards project Outputs

Output 1: Annual biodiversity monitoring programme within LPA in place providing data for informed conservation interventions, management plans and policy. Biodiversity monitoring will target key species and forest and grassland species richness. A biodiversity monitoring programme has been drafted for focal wildlife species (Indicator 1.1), and 27 community volunteers trained in biodiversity monitoring techniques. Pilot surveys have been conducted on the 12th – 15th January 2019 for Year 1 (Indicator 1.2). Guidebooks of Mongolian bird species have been given to SMART rangers to support regular biodiversity monitoring during SMART patrols (Output 2). Year 2 surveys are planned for June 2019. As part of Output 2 and Output 3, forest and grassland (pasture) monitoring plan have been drafted, and pilot surveys planned for August 2019. Despite some delays in field surveys due to early snow in September 2018, the project is on-track to complete this output at project end.

Baseline 1.1 and 1.2: No biodiversity monitoring programme; No biodiversity monitoring surveys. **Change 1.1 and 1.2:** Biodiversity monitoring programme developed; Year one annual biodiversity surveys (Annex 4.2).

Output 2: Model of community-led sustainable forest management in place in LPA safeguarding 275 km2 of vulnerable forest in Arkhangai. In contribution towards the project output of sustainable community led forest management, eight FUGs in the LPA have been established and received their FUG Certificates. The groups have developed their forest management plan, forest fund map and intervention plan (Indicator 2.2). To build capacity of the FUGs, 28 trainings have been organised to cover different forestry topics including: establishing an FUG, its goal, structure and benefits; law on Natural Resources; Law on Nature Conservation; and Law on Forest; Development of FUG activity plan; and adaptation to climate change (Indicator 2.2). Forest management techniques including forest cleaning were implemented on 10 hectares of forest area to prevent forest fire, insect and support natural regeneration. It also demonstrated the potential of additional income from sustainable natural resource use. Five FUGs and 80 members involving 40 trucks collected 1130 cubic meters of deadwood, earning 20 million MNT (7600 USD) (Indicator 2.2).

ZSL introduced SMART patrolling to rangers, local police department, local prosecutors, local environmental department, local forest unit and members of eight FUGs in the LPA on 7th March 2019. Field training on the SMART approach was also organised for three (Bayanbulag, Temeenchuluu, Tekhkharaikh) FUG communities and their volunteer rangers. The SMART patrolling application has been translated into Mongolian and tested in the field with community

voluntary rangers and updated to account for local protection management issues, biodiversity monitoring and local poaching and illegal logging issues (Indicator 2.3).

Baseline 2.1, 2.2 & 2.3: no above ground biomass surveys; no forest management interventions defined and piloted, no LPA forest management plan; zero community patrol units. **Change 2.1, 2.2, & 2.3:** Year one above ground biomass surveys conducted; first year forest management report completed outlining forest management interventions and results of pilot; ten volunteer SMART rangers (Annex 4.6).

Output 3: Model of community-led sustainable pasture management in place in LPA. In year one, the project's pasture expert defined the five LPA pilot sites and control sites. A vegetation map of the Mogoin Gol-Teel LPA was developed based on previous year's satellite monitoring data from the local meteorology agency of the Arkhangai aimag. Soil nutrient and compaction surveys at the five pilot sites will be completed in June 2019 (Indicator 3.1). This information will be critical for informing the efficacy of the sustainable pasture management interventions and ultimate model.

ZSL conducted Arkhangai aimag's first conference on the "Responsible Rangeland Management", in cooperation with Pasture User association of Arkhangai province on December 24th 2018 (Indicator 3.2). The goal of the conference was to approve a Regulation on Rangeland Responsibility which defines rangeland management design at the aimag level. In this conference 80 community members, soums governors, officers responsible for small and medium enterprises, land managers, veterinary specialists and livestock breeders of each soum participated. The regulation on Rangeland Responsibility was agreed by the participators of the conference and sent to Aimag Citizen Representatives Council (CRC). The regulation is approved by the CRC and will be effective by April 2019 at aimag level. FUGs agreed and expressed their interests to implement the regulation into their rangeland management plan. During the conference, best practices on pasture management was introduced to LPA herders (FUGs members) which was a significant contribution to changing attitudes and institutionalising activities to be completed in year two towards completing the output (Indicator 3.3).

Baseline 3.1, 3.2, & 3.3: no LPA soil nutrient and compaction surveys; no pasture management interventions defined and piloted; no LPA pasture management plan. **Change 2.1, 2.2, & 2.3:** 2018 pasture surveys completed by project consultant to be used as proxy preliminary results, and August 2019 pasture surveys planned for LPA; pasture intervention and pasture management report designed.

Output 4: Holistic inclusive livelihood model, including production and access to market, in place in LPA, resulting in improved income opportunities

To contribute towards a holistic livelihood model and understand the socio-economic condition of LPA herders and the impact of project livelihood development, IRIM conducted baseline surveys in year one. Arig Bank conducted several workshops, with ecotourism and sustainable cashmere consultants to discuss the development of additional income streams through the development of ecotourism, sustainable dairy and cashmere production. 78 community members enrolled in these workshops and trainings. Arig Bank conducted small business analysis to evaluate the potential success of these models and introduced VSLA as a method of providing long-term financial support in the LPA. 122 community members attended these VSLA workshops and three FUGs each established a VSLA and approved a protocol.

Baseline 4.1, 4.2, & 4.3: Current cashmere and dairy production is being managed, largely unsustainably and no ecotourism model exists; no VSLAs are established in the LPA; on average households have 2.0 occupations. **Change 4.1, 4.2, & 4.3:** Sustainable business models have been introduced to 78 community members in November 2018 and February 2019; three VSLAs have been established; change to be recorded by IRIM survey in project year three.

Output 5: Effective and equitable LPA governance model in place in LPA, enabling robust monitoring and evaluation incorporating the data from other outputs, and sustained engagement with nearby communities and local and national government. In contribution towards the completion of the project output, seventy-five representatives of LPA stakeholders including eight FUGs, Spirits Mongolia NGO, Arkhangai aimag Environmental Agency and Bulgan soum government participated in a Community Forum held on 26th of March 2019. The forum agreed on an LPA management model and decided to establish a Co-Management board

represented by each FUG, two seats of Spirit Mongolia and one seat from ZSL as an umbrella organisation governing the LPA management. The Board will be accountable to the General assembly of FUG members. This time the Community Forum served as the General Assembly.

The forum also approved the establishment of a Monitoring Committee independent from the LPA Co-management board, consisting of 11 people including eight representatives from each FUGs and two members from Spirits Mongolia (Indicator 5.2).

Each FUG is going to elect their representatives to the Co-management board in May 2019. Then, the Co-Management Board will appoint an Executive director for the newly established umbrella NGO and develop and approve the constitution and management plan. The procedures will follow GESI principle. It is expected that LPA monthly meetings can commence following this meeting (Indicator 5.1).

ZSL joined the support group for community-based conservation organisations facilitated by the Ministry of Environment and Tourism, and contributed to the drafting of LPA management regulation in April 2019. This working group participation will contribute towards getting long-term high level government support of the LPA (Indicator 5.3).

Baseline 5.1, 5.2, 5.3, 5.4: no representative LPA management authority exists; no LPA management KPIs exist and no LPA management monitoring occurs; LPA management have not organised national and/or local government meetings in LPA; no surround community leaders have visited the LPA and met with the LPA management authority. **Change 5.1, 5.2, 5.3, 5.4:** An LPA management model has been voted on by 75 FUG members and local stakeholders in March 2019; bi-monthly LPA management meetings planned for June 2019 onwards, and establishment of KPIs and monitoring agenda; nine potential communities identified for a potential year three visit to the LPA.

Please refer to the logframe for details of Output level indicator measurement.

3.3 Progress towards the project Outcome

In year one the project has made progress towards achieving the project outcome. An LPA management structure has been agreed upon, involving representation from all nine communities living within its boundaries. Baseline surveys (wildlife, forest, pasture, and community socio-economic) have been conducted with communities to measure the impact of natural resource activities implemented in year one (forest) or year two (pasture). ZSL and Arig Bank have led workshops with communities to develop and analyse small business models, and three VSLAs established (35 individuals signed up). These outputs collectively contribute to the development of the sustainable LPA management model.

Indicator 0.1: Key populations of indicator species representing steppe biodiversity within the LPA are stable or increasing compared to year 1 baselines by the project end. Particularly, a) the Siberian marmot (Marmotasibirica) population remains stable, b) the Musk deer population (Moschusmoschiferus) increases by 5% c) and the populations of Saker falcon (Falco cherrug) and Steppe eagle (Aquila nipalensis) increase by 10%.

Baseline: Survey counts of: Siberian marmot – 220 individuals; Musk deer - six individuals; Saker falcon: 12 individuals; Steppe eagle: eight individuals. **Change:** To be estimated in year two and three surveys.

Indicator 0.2: 1370 km^2 of forest-steppe habitat safeguarded by a functional CPU under an effective LPA which achieves zero-poaching and a 75% reduction in incidents of illegal logging from project baseline (= year 1) by project end.

Baseline: for 2018, AED reported zero poaching and 3 illegal logging incidents. However, this report included only those violations resolved at the Court and excluded intercepted cases not decided by the Court (Annex 4.11). **Change:** To be estimated in year two and three surveys.

Indicator 0.3 Women and ethnically marginalized groups within the LPA community have equal representation in LPA-management decisions (baseline = year 1) by project end.

Baseline: The baseline is not currently known, but it is estimated that two-three women are represented in the LPA management board out of 11 members (year one). **Change:** To be re-evaluated after FUG representatives elected in May 2019.

Indicator 0.4: At least 60% of (total = ca. 100) households within LPA show an increase in overall economic wellbeing index scores, with women and men benefiting equally within households (baseline = year 1) by project end.

Baseline: The mean multidimensional poverty index (MPI) is 0.115, with 30% of LPA households are currently estimated to live the below national poverty line. **Change:** To be estimated at project-end survey by IRIM.

Indicator 0.5: 275km2 (100%) of forest within LPA managed sustainably and showing no decline in above-ground woody biomass (baseline = year 1) by project end.

Baseline: the baseline survey defined 497km2 forest land of which, burnt (15km2), pest affected (0.4km2), 481,6 km2 (tree covered) (Annex 4.4). **Change:** To be estimated in year two and three surveys.

Indicator 0.6: Framework for the expansion of LPAs across Central Mongolia is in place, with buy-in from relevant government agencies, NGOs, and key target communities; and the process of producing official steppe-forest LPA guidelines has begun, by project end.

Baseline: No current framework exists for LPA-level management that is applicable for Central Mongolia expansion. **Change:** ZSL is currently progressing towards its objective of a sustainable LPA model, and has had discussions with the MET, and joined the community.

3.4 Monitoring of assumptions

Outcome Assumption 0.1: The recently reintroduced marmot population is assumed to be very vulnerable at present, and achieving a stable population will present a major success but is achievable. The other 3 key species are more established so the specified population growth rates are expected as the impact of the project's interventions are felt. **Comments:** During project year one it was revealed that in addition to the vulnerable, reintroduced marmot population in the Mogoikhon community area, there are several populations of marmot existing within the LPA.

Outcome Assumption 0.1: Disease outbreaks in wild populations do not occur, or occur at such a rate so as to not affect the trajectory of population recovery. **Comments:** There has been no reported disease outbreaks in year one and this is assumed to still be true.

Outcome Assumption 0.2: LPA community continues to have the undivided support of the local police agency and capacity to detect and respond to poaching and logging incidents, and make arrests. **Comments:** Discussions with communities throughout project year one has reiterated the uniformly strong community support to reduce poaching and logging in the LPA.

Outcome Assumption 0.3 – 0.4: Mongolian socio-economic climate remains stable and the community adheres to the self-imposed criteria for equal participation set to ensure balanced participation of men, women and ethnically marginalized people , e.g. set target numbers of women and men and marginalized people to equally benefit and participate in the proposed programmes and share in the decision-making process. **Comments:** Mongolia's socio-economic climate is relatively stable, and the IRIM baseline survey revealed that gender equity in the LPA is relatively progressive for Mongolia.

Outcome Assumption 0.5: No natural disasters, such as forest fires or disease impacting standing forest. **Comments:** In project year one there have been no natural disasters.

Outcome Assumption 0.6: Government support for community-based conservation remains strong. **Comments:** The project has had strong support from the local government and national government (MET) for its community led management approach.

Output Assumption 1.1 – 1.2: No natural disasters, such as forest fires, or particularly harsh winters (dzuds) significantly negatively impact wildlife populations. **Comments:** In project year one there have been no natural disasters.

Output Assumption 2.1 – 2.2: Local community members remain engaged with trialling a range of management techniques to pick those most effective and suitable to their needs. **Comments:** Local communities have been proactive in attending workshops and community representatives have been actively engaged in major year one project management techniques, including forest cleaning activities.

Output Assumption 2.3: Techniques to maintain community engagement and tackle the risk of corruption with CPUs work effectively in the LPA context. The inclusion of individuals from a large number of households helps embed and institutionalise the CPU in community life. **Comments:** The first LPA management workshop had a strong attendance (75 people) and a representative managed structure was agreed upon, which is vital in reducing corruption.

Output Assumption 3.1 – 3.2: Pasture management model developed in Arkhangai is appropriate to other forest-steppe ecosystems in Mongolia with similar socioeconomic and climatic features. **Comments:** The rangeland issues facing the LPA communities is representative of those facing similar communities across Mongolia so the model is still expected to be applicable elsewhere.

Output Assumption 3.3: No serious drought years heavily impact the region, reducing the availability of water sources and grazing. In this scenario the project would revise some elements of pasture management trials to place a greater emphasis on water use. This both ensures community buy-in, by being relevant to their needs, and community wellbeing in the short-term. **Comments:** There have been no droughts in year one of the project.

Output Assumption 3.4: Not all households are actively engaged in livestock grazing, and some of those that are engage at very low levels, for example elderly families whose children have moved to the city. Therefore, an 80% of households participating will cover the vast majority of livestock grazing. **Comments:** The IRIM survey revealed that 98% of households were involved in some kind of livestock management. Therefore, an 80% participation rate, will not cover all of the LPA households. However, given the increase in total number of households in the LPA from c. 100 to c. 400, an 80% participation rate will still cover a significant number of households.

Output Assumption 4.1: Local markets for cashmere and dairy, and local and global markets for ecotourism remain stable, and harsh unpredictable weather conditions don't impact goat survival or cashmere production. **Comments:** There have been no changes in local and global markets, and no extreme weather impacts on cashmere production in year one.

Output Assumption 4.1: Fair and equitable benefits sharing principles enshrined in LPA management under output 5, ensure that participation in project business enterprises is available to all community members (women, old, young etc.) and that this contributes to reducing inequity. **Comments:** The LPA management structure and protocols is still in development and still planned to ensure equitable representation and reduce inequality.

Output Assumption 4.2: Though marginalised in household decision making, women play a significant role in household budget management. This should support both achieving an equal gender balance, and enable a high rate of uptake - increasing as VSLAs become more cemented and the benefits become more apparent. **Comments:** The baseline IRIM surveys confirmed the women's role in household level business where over 90% of dairy processing and 70% of dairy sales is handled by women. In three VSLA established in year one, the women were appointed as bookkeepers.

Output Assumption 4.3: Livelihood diversification occurring during the project is a result of uptake of new sustainable livelihoods and represents an improvement in communities' wellbeing and resilience. **Comments:** New livelihood models aim to be not only sustainable, but voluntary participation of FUG members requires the collective commitment to reduce unsustainable, exploitative practices of natural resources.

Output Assumption 4.3: Livelihood model developed in Arkhangai is appropriate to other forest-steppe ecosystems in Mongolia with similar socioeconomic features. **Comments:** Given herder dependence upon livestock and associated livestock products (wool, dairy etc.) the livelihood model is expected to be applicable to similar forest-steppe communities.

Output Assumption 5.1: Traditional customs and equitable and democratic principles are reconcilable within an effective institution. **Comments:** FUGs have already been demonstrated to be an effective community institution that has encompassed traditional customs.

Output Assumption 5.2: Government support for, interest in, and desire to take lessons from this project remains strong. **Comments:** The national and local government have both been actively engaged in the project and it is still anticipated the interest in post-project principles uptake to be strong.

Output Assumption 5.3: An important element of effective governance is engagement with third parties. Moreover, a very important element of effective governance of this LPA, which is planned to provide a framework to scale up the LPA model across central Mongolia, is engagement with the nearby communities, local and national government which will establish this. **Comments:** Interest in the project at a national and local level has been significant, and has involved a variety of a government agencies and community stakeholders.

Output Assumption 5.4: Individuals carefully selected to take part in exchange visits on the knowledge exchange are suitably influential in their own communities to drive future LPA declaration and management decisions. **Comments:** The selection of leaders of FUGs and officials from partner organisations to participate in exchange visits will be done jointly with the Union of FUGs.

Output Assumption 5.4: Engaging government officials and community leaders with the LPA approach contributes to the end goal of increasing support from each for scaling up the LPA model. **Comments:** Given current interest at the local and national level of government, post project scaling of the LPA-model is promising.

3.5 Impact: achievement of positive impact on biodiversity and poverty alleviation

Higher impact on biodiversity conservation and poverty alleviation: The project's contribution to high-level biodiversity conservation and poverty alleviation will be delivered through the development of a community led model of sustainable natural resource management of a local protected area that will have the national and local support of Mongolian government to be applied to other LPAs in central Mongolia (potentially other similar bio-geographic regions too) (Indicator 0.6). Beyond the high-level contribution of scalable model of LPA management, the conservation of the LPA is in itself a high-level contribution given its important forest ecosystem in the context of Mongolia's small remaining forested area.

In addition to the project-end outcome, the project has already organised several high-level state (aimag) conferences on sustainable forest and pasture management (Section 12), that will contribute to improved biodiversity conservation beyond the project site through responsible management of forest and pastureland.

The project's direct impact on poverty alleviation in Mongolia and the project site has been discussed extensively in the proposal and in Section 6 and 7 of this report.

4. Contribution to the Global Goals for Sustainable Development (SDGs)

By the end of the project we expect it will have contributed to Mongolian and UK Government Commitments by contributing to the following SDG's:

SDG1: no poverty, and SDG8: decent work and economic growth through sustainable pasture management integrating marmot-friendly attitudes and traditional practices, and the development of additional income streams, targeted at marginalised groups such as women, all contributing to improved wellbeing; **SDG2:** zero hunger through sustainable forest and pasture management, and alternative livelihood sources providing greater food security;

Project year one has contributed to SDGs' 1, 8 and 2 through the implementation of sustainable forest management activities, including forest cleaning by 80 community members from five FUGs (Activity 2.4) generating approximately 7,600 USD. Arig Bank has begun the process of improving decent work and local economic growth through the development of small

business models (Activity 4.1), and three community VSLAs with 35 members have been established (Activity 4.5).

SDG5: gender equality through embedding GESI in the design, management and benefit-sharing of all components of the project, with interventions targeted at removing systemic barriers and empowering disadvantaged groups in the community;

Project year one has contributed to SDG 5 by undertaking socio-economic surveys of LPA communities to understand potential barriers to gender equality (Activity 4.8). During meetings to develop small business models (Activity 4.1) and an effective LPA management authority (Activity 5.1) GESI principles were incorporated, and the importance discussed with communities.

SDG13: climate action through sustainable forest management to ensure the carbon storage potential of forests is not lost and is enhanced where possible; and

Project year one has contributed to SDG 13 through the implementation of initial sustainable forest management activities (Activity 2.3 - 2.4) and pilot SMART patrols to monitor illegal logging (Activity 2.5 – 2.6).

SDG15: life on land through wildlife and ecosystem conservation and restoration, enhancement of biodiversity achieved via sustainable pasture and forest management, and positive attitudes to conservation cultivated through the LPA model.

Project year one has contributed to SDG 15 by undertaking biodiversity monitoring development, surveys and training to inform communities of wildlife conservation (Activity 1.2 – 1.4). Communities have been consistently informed of the importance of sustainable pasture and forest management in promoting ecosystem conservation and the provision of ecosystem services in the long-term, and this theory will be included in the LPA management model (Activity 5.1).

5. Project support to the Conventions, Treaties or Agreements

In support of Mongolia's Ministry of Environment and Tourism, the CBD and Mongolia's National Biodiversity Strategy and Action Plan (NBSAP) (2015-2025), this project will contribute to Mongolia's overall biodiversity conservation goals through developing a scalable model of community-led ecosystem management, which enables sustainable resource use to conserve and enhance biodiversity and ecosystem resilience.

Deploying the CBD's 'ecosystem approach' the project will empower key Mongolian stakeholders to achieve the CBD objectives of sustainable use and equitable benefits-sharing, through the establishment of LPA governance structures that adhere to the principles of gender equality and social inclusion (GESI). The framework for LPA expansion will ensure that lessons learnt are replicable to other key biodiversity sites across the Forest-steppe.

Additionally, the project's forest-steppe specialist Mr Gombobaatar Sundev, who is also the CBD National Focal Point for the Global Taxonomy Initiative, ensures the project contributes efficiently and appropriately towards the CBD provisions and Mongolia's NBSAP maintaining communication with the Ministry of Environment & Tourism. The project contributes to Mongolia's NBSAP through strengthening the PA network and improving the management and capacity of PAs (Goal 5: Objectives 10 & 11) and developing community-based forest management and biodiversity protection (Goal 11: Objective 16).

Specific contribution to the **Aichi Biodiversity Targets** in year one were as follows:

- **1: People are aware of the value of biodiversity and of steps they can take to conserve and maintain it.** Awareness of biodiversity value has been increased through series of training events, the local community has been empowered to protect local biodiversity creating the Union of FUGs, and LPA management will focus on biodiversity conservation.
- **2: Biodiversity values integrated into local development and poverty reduction strategies.** The LPA model integrates poverty reduction with biodiversity conservation by supporting communities to manage their ecosystem more sustainably and generate biodiversity-based revenue streams. The first action of forest cleaning involving FUG members contributed 7600 USD to local livelihoods.

- **5: Reduced habitat loss degradation and fragmentation.** Sustainable management of natural resources through the LPA model led by the Union of FUGs aims to reduce their over-exploitation, which is driving habitat loss and degradation within MGV.
- **7: Sustainable management of areas under agriculture and forestry.** The LPA management by the Union plans to test locally appropriate sustainable forest and pasture management models. Both management models will be adaptively managed utilising data from biodiversity, above-ground biomass and soil monitoring.
- **11: 17% of terrestrial areas are conserved through effectively and equitably managed protected areas (PAs).** Although Mongolia currently has 18% PA coverage, limited resources constrain their effectiveness. The framework for the expansion of an effective and equitable LPA model will therefore make a key contribution to this objective.
- **12: Improved conservation status of threatened species.** The project targets to increase the local populations of Saker Falcon (*Falco cherrug*) EN, Steppe Eagle (*Aquila nipalensis*) EN, and Musk deer (*Moschusmoschiferus*) VU; and stabilise the population of recently reintroduced Siberian Marmot (*Marmotasibirica*) EN.
- **14: Ecosystems providing essential services restored, accounting for needs of local communities and the vulnerable.** The LPA model prevents over-exploitation of critical ecosystems by educating and inspiring local resource users, so restoring vital ecosystem services. Equitable LPA governance aims to ensure the benefits are fairly shared.
- **17: Implementing Mongolia's National Biodiversity Strategy and Action Plan (NBSAP).** Biodiversity monitoring conducted under the LPA model will feed into reporting against Mongolia's NBSAP, through annual workshops, to support its implementation and wider lesson learning.
- **18: Traditional knowledge and practices of local communities respected and integrated into biodiversity conservation, with their full and effective participation.** The LPA model utilises traditional knowledge and practices under all outputs, from biological monitoring and forestry management to effective governance structures. Community members will have full ownership of all outputs.

6. Project support to poverty alleviation

What evidence is there that the project is working to alleviate poverty?: The project is working to develop a model of LPA management that sustainably manages its natural resources, including its pasture and forest that provide subsistence and income to its communities. By empowering communities to sustainably manage these natural resources, key environmental drivers of poverty can be alleviated in the short and long-term through improved income security, and food security through greater climate change resilience. An immediate example of this was ZSL's facilitation of community collection of deadwood (forest cleaning Activity 2.4) which involved 80 community members of five FUGs resulting in 7600 USD income. This sustainable method of forestry management provided an alternative source of income to community participants, and a demonstrable example of poverty alleviation from sustainable natural resource management. Please refer to Section 3.5 and 4 for other evidence of poverty alleviation.

Who are the expected beneficiaries of this work?: Each community in the LPA will establish a FUG (five currently established) and elect a representative for the LPA management authority to ensure each community has the opportunity to participate in project activities. The principal beneficiaries of this project's contribution towards poverty alleviation are therefore the herder households living within the LPA.

Other beneficiaries of this work that include residents of the nearby Aimag centre, Tsetserleg which will indirectly benefit from the sustainable management of the LPA and its provision of ecosystem services. A directly example of this was the forest cleaning activity which provided firewood cheaper than logged timber which has a higher tax.

Are there expected to be any direct impacts from this project?: As discussed in Section 3.4, and above, there are expected to be direct impacts of poverty alleviation from this project in the forms of improved economic wellbeing from increased income generation from sustainable forest

management and diversification of livelihood income streams, and greater income security from VSLA establishment.

If indirect only, what evidence is there that the project will contribute to poverty alleviation in the long-term?: In the long-term, LPA communities could expect improved livestock product output and resilience to climate change from sustainable, improved management of their natural resources (pasture and forest) providing greater livelihood subsistence, income generation and the preservation of their nomadic lifestyle.

Are there any notable achievements this year?: The successful integration of the newly established FUGs under a proposed new local NGO has been commended as a good community management model for aimag level adoption, empowering local communities to unite in the conservation of their land and sustainable use of their natural resources for future more generations. The project's strong collaboration and support by local authorities has been an achievement and greater than expected at this early stage. This is a significant contribution towards achieving the project's outcome.

7. Project support to gender equality issues

During year one the project made progress towards achieving its desired impact towards promoting gender balance in the LPA management structure and the resulting downward impact on gender equality within the communities. IRIM conducted baseline socio-economic surveys examining gender equality issues in the LPA with its results to inform ongoing activities throughout the remainder of the project. The importance of promoting gender equality and GESI principles have been discussed throughout community meetings, and the results of IRIM's report indicate that both men and women did not believe gender discrimination to be a major issue, although some women-headed households might struggle to maintain access rights to for example pasture. In May 2019, the communities will elect their representatives for the LPA management board, and it is expected there will be at least three female from a total of nine community representatives. Gender equality issues identified by IRIM such as female household head access to land will be discussed as priority areas to address and monitor in the LPA's management.

Please refer to the project proposal for detailed information on the project's proposed long-term direct and indirect contribution to gender equality.

8. Monitoring and evaluation

Monitoring and Evaluation Systems: After voting on the LPA management structure, the communities will elect their representatives for the LPA management authority in May 2019, which will mark the commencement of ongoing monthly meetings. These meetings will discuss not only issues around LPA management, but also monitor and evaluate LPA performance, using KPIs and project indicators, and adaptively manage work plans as needed.

Throughout the project period, the ZSL project officer (based in aimag centre Tsetserleg) has maintained regular communications with LPA communities and bi-weekly calls with ZSL HQ. Completion of milestones have been monitored through the project workplan, and monthly reports submitted using ZSL's web-based systems, including activity, indicator, and finance tracking. Specific monitoring and evaluation processes include:

- Year one baseline surveys were conducted to monitor the impact of project activities on: biodiversity through proxy target species (Output 1, Annex 4.2); forest plots (Output 2,Annex 4.4); pasture plots (Output 3, Annex 4.3); and socio-economic household conditions (Output 4 and 5, Annex 4.1). Furthermore, ongoing monitoring (Output 1, 2, and 3) will be conducted by community SMART patrols.
- Results from these activities will feed into the LPA management M&E plan through consultation with project experts: NUM/ZSL (biodiversity monitoring); forest and pasture consultants (forest and pasture management); Arig Bank (small business development and VSLAs); and ZSL Mongolia Country Director (LPA community management). No changes have been made to the M&E plan, so for further detailed information on the project's monitoring and evaluation plan please refer to the project proposal.

How can you demonstrate that the Outputs and Activities of the project actually contribute to the project Outcome?: Each output focuses upon the completion an important environmental (wildlife, forest habitat, pasture habitat) and human development issue (forest and pasture management, alternative livelihood development and financial support, robust governance) that are complementary in the support of a sustainable LPA management model.

Please refer to the project logframe for descriptions on the qualitative and quantitative measurement of outcome indicators.

9. Lessons learnt

What worked well, and what didn't work well, this past year? The major challenges of project year one were discussed in the half year report and technical change request submitted in December 2018. The establishment of eight FUGs and capacity building consumed a significant amount of time in not only discussing their benefits (legal, governance, environmental) but organising community meetings over the winter period (due to adverse weather and community distance). However, this was also one of the most successful work completed this year. We already see the changes in attitudes of the local community to nature conservation and their active participation in conservation work.

Forest cleaning jointly organised with local government agencies which involved six FUGs was the first successful partnership activity facilitated by the project. The aimag Environmental Department has been inspired to undertake a similar community-based activity aimag-wide involving all forest soums in Arkhangai.

If you had to do it again, what would you do differently? Given the substantial time required for community capacity building, the project will consider seasonality of training and other community activities (summer and fall time is more suitable) and mobilise local knowledge by recruiting experienced local experts in capacity-building work.

What recommendations would you make to others doing similar projects? 1) Partnership with the local stakeholders from the project design stage is crucial to provide further cooperation during the implementation and guarantees positive changes. 2) Working and building capacity of mobile pastoral communities in Mongolia is time-consuming thus project planning and implementation should well consider the adequate progress estimation.

How are you going to build this learning into the project and future plans? The project will continue maintaining strong partnerships with stakeholders through supporting the new Union of FUGs and biannual stakeholder forum. The project will plan more frequent capacity building activities during summer and autumn months rather than winter time. To ensure sustainability of LPA management, the project will increase the work for capacity building of soum government to cooperate with the Union and other LPA stakeholders.

10. Actions taken in response to previous reviews (if applicable)

In the project offer letter there were several comments we would like to address:

1) **justification for the capital costs, including £18k on ecotourism equipment, would be helpful, particularly since the ecotourism element of the application is currently vague:** Ecotourism development in LPA intends to support eco-friendly income sources for FUG members while reducing their dependence on livestock incomes, and provide incentives for biodiversity conservation. The capital costs for ecotourism comprise of £13,000 camp infrastructure development (5 ger accommodation, 2 eco-toilets and shower house) and £5,075 for solar energy system and furniture.

- **what is required to develop cashmere and dairy products? Is there a risk that this could lead to increased grazing? Any such risks and assumptions should be monitored and reported on:** When community members voluntarily join FUGs (which involve rangeland management) they agree to abide by Responsible Rangeland Regulation approved by local authorities to sustainably implement livestock management practices. RRR may include a quota to limit the total number of livestock held by individual households as per the pasture carrying capacity. If an individual breaks this agreement there will be a progressive sanction

system to limit their access to the project and other benefits. The similar scheme has been piloted by other donors under sustainable cashmere initiative to achieve “green” cashmere.

2) **it would be good to see more explanation of the mechanisms for biodiversity improvements, and how the short-term restoration achieved through the project could make a difference within two years:** Being aware of wildlife resilience unless disturbed by human activities, the project has confidence in increasing species number or at least maintaining the current population through education and empowerment of local pastoralists with strong attachment to their native lands, and introducing advanced technology such as SMART in biodiversity monitoring to be applied by Volunteer rangers under CPU.

3) **to strengthen sustainability, it may be worth tracking other dimensions of wellbeing alongside economic dimensions. Additionally, it is recommended that you monitor the counterfactual by, for example, comparing the socio-economic progress made within and outside the Protected Area (indicators 0.4 & 4.3):** In the development of the socio-economic baseline survey, additional dimensions of wellbeing were included such as access to education, health services, and infrastructure (electricity). The project acknowledges the importance of comparing socio-economic progress of LPA communities with those outside the LPA. However, due to the increase of LPA households from 100 to 400, the project had budget limitations to restricting sampling outside of the LPA for the baseline study.

11. Other comments on progress not covered elsewhere

In the half year report and technical change request difficulties and project implementation and steps taken to overcome these, including project design changes have been discussed.

12. Sustainability and legacy

Project profile: The project has gained significant local attention and has been instrumental in organising several province level conferences, including First Rangeland management conference of Arkhangai aimag (24th December 2018), First Sustainable forest management conference (7th March 2019) and a series of other awareness raising and capacity building events. In year one, five local TV channels aired information on ZSL project activities that contributed to the project profile in Arkhangai aimag. If successful, the Union of FUGs will carry the project legacy for shaping community-based LPA management in central Mongolia.

Evidence for increasing interest and capacity from project:

- Eight FUGs (Activity 2.3) established and united under the Union with community members actively participate in conservation and income generation activities and LPA management decisions.
- Introduction of SMART patrolling approach (Activity 2.5) attracted interest for cooperation with Khangai Mountain SPA (State protected area administration) and MET (Activity 2.6).
- Ikh Nart SPA managed by Denver Zoo contacted ZSL Mongolia to learn from project experiences.

Project exit strategy:

ZSL has a permanent presence in Mongolia. This provides a platform to implement the project and ensure its lasting legacy, providing ongoing technical advice and support when needed.

The pilot of the LPA “Mogoin gol-Teel” will have the self-sustaining basis by the project end. Outputs 2) Sustainable forest management; 3) Sustainable pasture management; 4) Cooperatives managing new sustainable business models and VSLAs; and 5) the LPA management authority will all be fully owned by, and co-produced with, local communities from the start of the project. As the project progresses management and operations will be steadily handed over to the communities and by project end they will be self-sustaining and no longer require project inputs. Output 1) biological monitoring will continue to require technical and resource inputs, and ZSL is committed to providing these and supporting the government in effective biological monitoring across central Mongolia.

Secondly, the framework for LPA expansion will be in place by project end, with buy in from key stakeholders, both government and communities, from potential expansion sites. The process of producing official LPA guidelines will be underway and this will enable this progressive work to continue post-project, with ZSL's ongoing commitment and technical support.

Project sustained legacy:

In year one, several mechanisms to sustain the project legacy have been established:

- The Union of FUGs responsible for the LPA (Activity 2.3) management was created in line with GESI principles, which will be contracted with the Soum government to manage the LPA and report to the Soum Citizen Representative Khural (soum parliament).
- Ten Volunteer rangers trained and equipped for 2019 operation. This will be expanded with 30 more rangers recruited under the Community Patrol Unit (CPU). The CPU will be the key institution for enforcement and biodiversity monitoring jointly with aimag, soum and AFU professionals.
- Baseline surveys for forest, rangelands, biodiversity monitoring and human wellbeing were defined to be used for further progress monitoring.

13. Darwin identity

Publicising DI and UK Government support: ZSL Mongolia has recognised the UK Government and DI grant as the funder of our project during all project communications. Our strong relationship with the British Embassy of Mongolia has also allowed us to present our work and promote DI with high-level government, private and non-profit organisations and institutions in Mongolia.

- The DI funding opportunity and project has been publicised during workshops and meetings (28 in total) with local communities, local authorities, and project stakeholders. (Annex 4.12).
- Presentations introducing the project at workshop and meetings, and discussed the DI grant as an important funding source.
- Project partners were invited to a reception organised by the British Embassy in Ulaanbaatar for Monica Wrobel on the 24th April 2019. The reception was an excellent opportunity to recognise the UK Government's contribution with high level officials and partners.

14. Project expenditure

Table 1: Project expenditure <u>during the reporting period</u> (1 April 2018 – 31 March 2019)

Project spend (indicative) in this financial year	**2018/19 D+ Grant (£)**	**2018/19 Total actual D+ Costs (£)**	**Variance %**	**Comments (please explain significant variances)**
Staff costs				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items				
Others (Please specify)				
TOTAL				

Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2018-2019

Project summary	Measurable Indicators	Progress and Achievements April 2018 - March 2019	Actions required/planned for next period
Impact **Central Mongolia's forest-steppe ecosystem safeguarded through a LPA network, with flourishing populations of globally-endangered species and local communities' wellbeing and socio-cultural traditions secured through equitable sustainable resource-use and diversified livelihoods.**		During the first year, the project has contributed towards a positive impact on biodiversity conservation through the coordination of aimag (state) level conferences on responsible forest and pasture management, encouraging communities to use their natural resources sustainably to the benefit of biodiversity and the long-term provision of ecosystem services, providing more sustainable sources of long-term income and livelihood support. At the project site, the foundation of the model of sustainable LPA management has begun, which ultimately is hoped to provide a model for expansion across Arkhangai and beyond. There has been national and state interest in the project, which support's the project progress towards achieving this objective and delivering broader impact.	[redacted]
Outcome 1660km^2 of Arkhangai's forest-steppe secured and sustainably managed as a LPA, supporting globally-endangered species' recovery, equitably safeguarding communities' culture and livelihoods, and providing a framework for replicating the LPA model.	0.1 Key populations of indicator species representing steppe biodiversity within the LPA are stable or increasing compared to year 1 baselines by the project end. Particularly, a) the Siberian marmot (Marmotasibirica) population remains stable, b) the Musk deer population (Moschusmoschiferus) increases by 5% c) and the populations of Saker falcon (Falco cherrug) and Steppe eagle (Aquila nipalensis) increase by 10%.	0.1 The project conducted the first year biodiversity monitoring survey within the LPA. Research results show: a) the Siberian marmot population is 220 individuals, b) the Musk deer population is six individuals c) and the populations of Saker falcon - 12 individuals, and Steppe eagle - eight individuals (Note: *given the short survey period due to weather difficulties in year one, these baseline population estimates may be subject to revision in year two*).	0.1 Project has planned to conduct the second biodiversity monitoring survey in June 2019. 0.2 Ten certified volunteer rangers will create a formal CPU with its Terms of Reference, Work plan and reporting scheme to the newly created umbrella organisation of the FUGs. The CPU will expand its membership to 40 in 2019. 0.3 Newly established FUGs were instructed to have an equal gender representation. Also, the new umbrella organisation that includes

	0.2 1660 km^2 of forest-steppe habitat safeguarded by a functional CPU under an effective LPA which achieves zero-poaching and a 75% reduction in incidents of illegal logging from project baseline (= year 1) by project end. 0.3 Women and ethnically marginalized groups within the LPA community have equal representation in LPA-management decisions (baseline = year 1) by project end 0.4 At least 60% of (total = ca. 400) households within LPA show an increase in overall economic wellbeing index scores, with women and men benefiting equally within households (baseline = year 1) by project end. 0.5 275km2 (100%) of forest within LPA managed sustainably and showing no decline in above-ground woody biomass (baseline = year 1) by project end. 0.6 Framework for the expansion of LPAs across Central Mongolia is in place, with buy-in from relevant government agencies, NGOs, and key target communities; and the process of producing official steppe-forest LPA guidelines has begun, by project end.	0.2 Project facilitated the creation of eight new Forest User Groups (FUG) and 10 certified volunteer rangers. These rangers conducted pilot patrols in the LPA to contribute towards zero-poaching in their territory. They also received training on SMART. 0.3 Seventy-five representatives of LPA stakeholders including eight FUGs, Spirits Mongolia NGO, Arkhangai aimag Environmental Agency and Bulgan soum government participated in a Community Forum held on 26th March 2019. The forum agreed on the LPA management model and decided to establish a Co-Management board represented by each FUG, two seats of Spirits Mongolia and one seat from ZSL as an umbrella organisation governing the LPA management. The Board will be accountable to the General assembly of FUG members. This time the Community Forum served as the General Assembly. The forum also approved the establishment of a Monitoring Committee independent from the LPA Co-management board, consisting of 11 people including eight representatives from each FUGs and two members from Spirit Mongolia. Each FUG is going to elect their representatives to the Co-management board in May. The Co-Management Board will then appoint an Executive director for the newly established umbrella NGO and develop and approve the Constitution and a	the eight FUGs is having a Board with a gender-balance and diverse age groups for representative LPA management. 0.4 End of project will be conducted baseline survey for project beneficiaries in the LPA (note economic wellbeing index may include additional sources to be reviewed for baseline and project-end calculation). 0.5 Year two surveys of forest and pasture will continue in the summer months of 2019. SMART patrols will monitor illegal logging, and GIS mapping will monitor large-scale forest changes. Forest intervention strategies will continue to be piloted by communities. 0.6 ZSL joined the support group for Community-based conservation organisation facilitated by the Ministry of Environment and Tourism, and contributed to the drafting of LPA management regulation in April 2019.

		Management plan. The procedures will follow GESI principle. 0.4 Project commissioned a socio-economic baseline study. The study estimated 30% of the LPA residents live the below national poverty line (mean Multi-dimensional Poverty Index (MPI) = 0.115). The recommendation included, diversification of income sources, provision of training on skills for processing livestock products and facilitation of market access. The project commenced the first income generation activity involving FUGs and forest cleaning, earning 7600 USD. 0.5 In year one, the project commissioned two pilot plot surveys in four forest sites and five rangeland sites to contribute towards M&E of forest and pasture interventions and long-term sustainable management. 0.6 Conducted meeting with MET on April 9th to discuss community-based conservation and the long-term scaling of LPA management approach. MET were interested in the project, and visiting the LPA during the latter years of the project.	
Output 1. Annual biodiversity monitoring programme within LPA in place providing data for informed conservation interventions, management plans and policy. Biodiversity monitoring will target key species: Saker Falcon (Falco cherrug) EN, Steppe Eagle (Aquila nipalensis) EN recently reintroduced Siberian	1.1 Biodiversity monitoring plans for all key species and wider ecosystem developed for use by the annual monitoring programme, utilising local ecological knowledge, by year 1 1.2 Biodiversity monitoring surveys completed in year 1, 2 and 3 of the project.	1.1. The project developed biodiversity monitoring plans for all four key species to be used for the annual monitoring with local community members in January 2019. 1.2. Biodiversity monitoring survey for year one was completed. Key results include: a) the Siberian marmot population is 220 individuals, b) the Musk deer population of six individuals c) and the Saker - 12 individuals and Steppe eagle - eight individuals (Note: *given the short survey period due to weather*	

Marmot (Marmotasibirica) EN, Musk deer (Moschusmoschiferus) VU; and forest and grassland species richness.		*difficulties in year one, these baseline population estimates may be subject to revision in year two*).	
Activity 1.1 Conduct expert workshop (including Local ecological knowledge experts) on biodiversity monitoring techniques appropriate to site and target species		The expert workshop was conducted on 4th January 2018 involving six experts specialised on mammals, birds and insects. The experts had comprehensive discussions on appropriate methods for biodiversity monitoring and reached a consensus for using methods including 1) species identification, 2) distance sampling, 3) total count, 4) survey of indirect tracks and signs, 5) survey of breeding raptor species, and line-transit for musk deer.	A follow-up expert workshop is planned to be conducted following year two biodiversity surveys to discuss the results, methods and any necessary methodological adjustments.
Activity 1.2 Produce Biodiversity Monitoring Plan for LPAs in Central Mongolia's Forest-Steppe Ecosystems		Current status of the project target species and monitoring techniques appropriate to the species and area were discussed by the biodiversity experts. The subsequent Biodiversity Monitoring Plan for the LPA was completed in January 2019.	The biodiversity monitoring plan will be discussed again following the establishment of the LPA management authority and year two surveys, post-July 2019.
Activity 1.3 Train local community members in required biodiversity monitoring techniques, also provide refresher training as needed		The training was conducted for local community members to introduce biodiversity monitoring and SMART patrolling techniques on the 12th January 2019. 27 Forest User Group (FUG) members participated and 10 members were selected to act as Volunteer Rangers based on their interest. Each volunteer ranger obtained a certificate of participation, Blackview smartphone (compatible with SMART Cybertracker), GPS and headtorch as necessary for SMART patrolling and biodiversity surveys.	Refresher practical training of community member and also SMART patrol rangers will be organised prior to year two annual biodiversity monitoring surveys in June 2019.
Activity 1.4 Conduct annual biodiversity monitoring, covering target species and species richness of birds and invertebrates		The year one biodiversity monitoring survey was conducted on 13-15th January 2019 and established the baselines for target species. Key results include: a) the Siberian marmot population estimate of 220 individuals,	Year two annual biodiversity monitoring surveys are preliminarily planned for June 2019.

		b) Musk deer population estimate of six individuals c) and Saker falcon estimate of 12 individuals and Steppe eagle estimate of eight individuals.	
Output 2. Model of community-led sustainable forest management in place in LPA safeguarding 275 km^2 of vulnerable forest in Arkhangai	2.1 National University of Mongolia and ZSL led annual above ground biomass surveys of 275 km^2 of sustainably managed forest in LPA, and comparable forest in the control site, in place by year 1. 2.2 Forest management interventions (including harvesting and thinning techniques) defined and piloted by year 2, and informing adaptive management of LPA's forests by year 2 2.3 One Community Patrol Unit (CPU) of 40 members, divided into local patrol teams, with women actively participating in coordination roles, conducting twice-weekly SMART patrols by year 2.	2.1 The project recruited a forest expert from the Institute of Geography & Geo-ecology who conducted the forest biomass survey in December 2019, defined the test plots and control sites at four pilot sites and established baselines. 2.2 The forest expert provided recommendations for forest management for each pilot sites and delivered training for 50 FUG members. A series of 28 training events were organised among local stakeholders and FUGs on community forest management. In January, the newly created FUGs made their first forest cleaning in 10 hectares for preventing forest fires, pests and supporting natural regeneration, and generating additional incomes. The activity involved 80 FUG members and 40 trucks and collected 1130 m^3 dead woods and earned 20 million MNT (equivalent to approx. 7600 USD). 2.3 The SMART application was translated into Mongolian, LPA Protocol for SMART application was developed, and tested in the field involving volunteer rangers, Cybertracker application was adjusted to consider local issues on protection management for biodiversity monitoring. The ten Volunteer Rangers were equipped with uniforms and tools including smartphone, GPS, binocular and head torches. Members from two FUGs, included four volunteer rangers, the soum environmental inspector and forest specialist, conducted three pilot SMART patrols during February and March.	
Activity 2.1 Conduct above-ground biomass surveys in LPA and control site		The forest expert contract was signed on 16th November 2018. The expert conducted biomass survey in four sites of LPA	Baseline surveys have been conducted for year one. Year two monitoring surveys will be conducted in summer 2019.
Activity 2.2 Define and map 3-4 suitable test plots within the LPA forest area.		The forest survey defined the test plots and control sites at four sites involving six community members. Areas of suitable plots were included in the LPA forest distribution map in the report.	This activity has been completed.
Activity 2.3 Co-produce methods and management design for each test plot, based on existing options for boreal/taiga forest management, and introduce the forest management implementation and relevant practice		The forest expert defined forest management methods for each plot and provided recommendations on management designs including forest cleaning, fencing to support natural regeneration, thinning,	The forest expert will assist two FUGs to design their forest management plans in September 2019.

	reforestation/replanting. As the Law on Forests of Mongolia encourages community management of local forests, ZSL builds capacity of FUGs for forest management through 28 workshops and training events raising awareness of legal framework for FUG management. Also the forest expert conducted training for 50 members from four different FUGs on 1-5 December 2018.	
Activity 2.4 Support community members to implement forest management activities defined for each test plot.	From 13-25th January 2019, ZSL facilitated forest cleaning in 10 hectares of forest area to prevent forest fire and insect, support natural regeneration, and provide additional income for 80 members from five FUGs. In total the FUGs collected 1130m^3 deadwood, earning 20 million MNT equivalent to 7600 USD.	Forest cleaning will be organised again in October 2019. The project plans to facilitate FUGs income generation by using non-timber forest products in the fall months.
Activity 2.5 Run a SMART recruitment workshop with LPA members to inform community of SMART and establish CPU members.	On September 12-13th ZSL project staff attended a WCS-led SMART workshop in the Small Gobi B Strictly Protected Area (SPA). Consequently, ZSL Mongolia staff had the opportunity to develop a preliminary LPA SMART Protocol during the training for review by regional WCS SMART trainers. The SMART approach was introduced to aimag and soum authorities, the Police department, the prosecutor's office, the environmental department, the forest unit, FUG members and other stakeholders at various training events and individual visits to LPA households (Annex 4.6). Currently ten Volunteer Rangers have been equipped with uniforms and tools, including smartphone, GPS, binoculars and headtorches. Additional volunteer rangers will be recruited following the	Ten certified volunteer rangers will create a formal CPU with its Terms of Reference, Work plan and reporting scheme to the newly created umbrella organisation of the FUGs. Following this, the CPU will expand its membership to 40 in 2019.

	piloting of SMART patrols with the existing rangers.	
Activity 2.6 Co-produce SMART protocol for the LPA, and provide relevant training, based on CPU member capacity	The LPA SMART Protocol was developed during the community training in January 2019. The SMART software was translated into Mongolian and tested in the field with community volunteer rangers. The Cybertracker application has been adjusted for local protection management and biodiversity monitoring for poaching and illegal logging. It was tested in February 2019 (Annex 4.6). The ZSL team delivered field training on the SMART approach which included pilot SMART patrol. 10 community volunteer rangers (Community Patrol Unit members), one local rangers of the forest unit, and one forestry specialist of the aimag and soum's environmental department in the LPA.	30 new CPU members will receive necessary training and tools in 2019.
Activity 2.7 Produce annual logging reports from analysis of collected SMART data	Data collection from volunteer rangers using SMART has not yet begun but it anticipated to begin in June 2019.	The SMART data collected by volunteer rangers is expected to start from June 2019.
Activity 2.8 Improve signs and information boards along the LPA border and main roads	The content of information and design of the LPA board is pending discussion at the next meeting of the Union of LPA FUGs.	Signs and boards will be installed in July 2019.
Activity 2.9 Conduct twice weekly SMART patrols	Three pilot SMART patrols were conducted with two community groups and four community rangers, one environmental inspector and forest unit specialist over February and March 2019. Community SMART patrols are expected to commence in June 2019.	SMART patrols are expected to be implemented regularly from June 2019.
Activity 2.10 Conduct annual community workshop in improved adaptive forest management techniques in an iterative process as results from the trials become available	The first conference of the Arkhangai Aimag on 'Sustainable Forest Management' took place on 7th March 2019 (Annex 4.7). 151 people attended the conference, including environmental	The Second conference will be conducted by November 2019.

		rangers, and FUG members from 19 soums. Recommendations on 13 topics of forest management methods, including forest fund conservation, prevention from forest fire and pest, and forest cleaning. Topics on enforcement of Forest Law were declared at the end of the conference and disseminated to relevant parties.	
Activity 2.11 Co-produce final scalable forest management plan which balances forest yield and biodiversity, using annual biodiversity data and above-ground biomass data from forest management trial plots		Forest pilot site surveys for year one was conducted, which will form the basis for this activity's completion in the final project year.	The forest expert will conduct second biomass survey in August 2019 which will be contribute towards the final management plan.
Output 3. Model of community-led sustainable pasture management in place in LPA,	3.1 National University of Mongolia and ZSL led annual soil nutrient and compaction monitoring in sustainably managed LPA pasture, and control pasture, in place by year 2. 3.2 Pasture management interventions (including reducing grazing pressure, marmot-friendly livestock management and leaving areas un-grazed to recover) defined and piloted across 5 experimental plots by year 2, and informing pasture management plan within LPA by year 2. 3.3 Sustainable grassland management system in place, utilising sustainable traditional knowledge and practices, with 80% of households (total = ca.400) participating (baseline = no grassland management system) by project end.	3.1. A rangeland expert from National Agricultural University defined five experimental plots and control sites previous pasture surveys conducted in 2018 approximately 20 km north of the LPA will be used as proxies for year one surveys. Pasture surveys will be conducted in the LPA in August 2019. 3.2. ZSL conducted Arkhangai aimag's first conference on the "Responsible Rangeland Management", in cooperation with Pasture User association of Arkhangai province on December 24th 2018 (Indicator 3.2). The goal of the conference was to approve a Regulation on Rangeland Responsibility which defines rangeland management design at the aimag level. In this conference 80 community members, soums governors, officers responsible for small and medium enterprises, land managers, veterinary specialists and livestock breeders of each soum participated. The regulation on Rangeland Responsibility was agreed by the participators of the conference and sent to Aimag Citizen Representatives Council (CRC). The regulation is approved by the CRC and will be effective by April 2019 at aimag level. FUGs agreed and expressed their interests to implement the regulation into their rangeland management plan. During the conference, best practices on pasture management was introduced to LPA herders (FUGs members) which was a significant contribution to changing attitudes and institutionalising activities to be completed in year two. 3.3. Sustainable grassland management activities are pending due to the approval of RRR at the aimag level. Once approved, FUG herders will work on rangeland management plans facilitated by the project, agree and approve among the members and start the implementation.	

Activity 3.1 Conduct soil nutrient and compaction surveys in LPA and control site	The project recruited a rangeland expert in January 2019, and previous pasture surveys conducted in 2018 approximately 20 km north of the LPA will be used as proxies for year one surveys. The rangeland expert will also conduct pasture surveys this year in five defined sites and control sites in the LPA.	The soil nutrients and compaction survey at five pilot sites will be commenced in August 2019.
Activity 3.2 Define and map 3-4 suitable test plots within the LPA pasture area.	A rangeland expert from National Agricultural University has defined five experimental plots and control sites for surveys planned for August 2019. They have also created a vegetation map of the LPA for planning and M&E.	This activity has been completed.
Activity 3.3 Co-produce methods and management design for each test plot, based on existing options for steppe/pasture management, with communities and introduce the pasture management implementation and relevant practice	A draft Regulation on Rangeland Responsibility (RRR) supported by the Green Gold project was discussed among the LPA community members and Arkhangai aimag authorities on 24th December. Sustainable grassland management activities are pending due to the approval of RRR at the aimag level. Once approved, FUG herders will work on rangeland management plans facilitated by the project, agree and approve among the members and start the implementation.	It is expected that the aimag authorities will approve the rangelands regulations so that it can be implemented by FUGs in the LPA starting from July 2019.
Activity 3.4 Support community members to implement pasture management activities defined for each test plot.	The project has facilitated discussions of the draft pasture user agreement among all forest user groups in the LPA. This agreement is pending the approval of aimag authorities.	Upon approval of the pasture regulation, development of pasture management plan of FUGs will be facilitated in July.
Activity 3.5 Conduct annual community workshop in improved adaptive pasture management techniques in an iterative process as results from the trials become available	In December 24, 2018, ZSL organized the first conference in Arkhangai on “Responsible rangeland management" in cooperation with the Pasture User Association of Arkhangai aimag. The goal of the conference was to discuss a draft Regulation on Rangeland Responsibility which defines rangeland management design at Arkhangai aimag level.	The second conference will be conducted by October 2019.

		Participants included 80 community members, governors from 18 soums, and aimag officers responsible for small and medium enterprises, land managers, specialists of veterinary and livestock breeding of each soum. The draft Regulation on Rangeland Responsibility (RRR) was agreed by the participants and submitted to the Aimag Citizen Representatives Council (CRC). Upon CRC approval, the RRR will be effective at entire aimag level. FUGs of Mogoin Gol-Teel LPA agreed and supported to implement the pasture user agreement in their territories.	
Activity 3.6 Co-produce final scalable forest management plan based on optimum biodiversity and grassland carrying capacity, using annual biodiversity data and above-ground biomass data from pasture management trial plots		The establishment of FUGs and management plans, and drafted pasture user agreements in project year one will contribute to the completion of this activity in year three.	This activity will be completed by January 2021 based on the prior years' results.
Output 4: Holistic inclusive livelihood model, including production and access to market, in place in LPA, resulting in improved income opportunities	4.1. Environmentally sustainable and economically viable cashmere, dairy and ecotourism business models and other livelihoods as identified by women developed in LPA by year 1. 4.2. At least 1 VSLA within LPA by year 1 consisting of ca. 20 members becoming business literate, with members representing 20% of households (total = ca. 400); 2 VSLAs representing 40% of households by year 2, and 3 VSLAs representing 60% of households, (with equal gender balance) by project end. 4.3. Livelihoods diversified from an average of 2.0 occupations per household within the LPA during the scoping survey to 2.5 by project end	4.1. In total, 78 herders were enrolled in the "Business Opportunity" and "Sustainable Fibre" training held in November 2018 and February 2019. During these events, environmentally sustainable and economically viable cashmere, dairy and ecotourism business models were discussed by communities. 4.2. The VSLA framework was introduced to 122 community members (with multiple attendance by some members). Three FUGs each established a VSLA and approved their protocol. Funds are currently being collected from different LPA activities (2018 forest cleaning being one) to support VSLA operation. 4.3 The project commissioned a household socio-economic baseline study which included 150 households in the LPA from four baghs (areas) of Bulgan soum. The baseline study estimated that 98% of respondents identified themselves as herders. The project is currently considering the best way of classifying livelihoods per household from the study, including using sources of income as a proxy. The project organised the forest cleaning activity in 2018 to support household incomes. The community-based ecotourism camp establishment is planned in June 2019 which intends to create job opportunities for LPA communities and diversify livelihoods.	

Activity 4.1 Co-produce new business models, in partnership with local communities, for eco-tourism and pasture related products, utilising Arig banks' business viability analysis techniques.	In year one, twenty-five participants enrolled in the “Business Opportunity” and “Sustainable Fibre” training held in Tsetserleg on 30th November 2018. A second training was held in February 2019 where 35 community members were trained.	This will be replicated in other FUGs and business models will be refined in year two.
Activity 4.2 Secure access to market for ecotourism and pasture related products from the LPA through working with international and in country buyers	Development opportunities for ecotourism, dairy (artisanal cheese), and cashmere were presented and discussed with local community members during the 30th November training. A cashmere consultant specialist from the Sustainable Fibre Alliance was also in attendance.	Further discussions and training on this topic are required, and it will be continued in 2019.
Activity 4.3 Conduct workshop to establish community cooperative for small enterprises with legal support.	An introductory workshop to discuss legal support for small enterprises was held in November 2018 and February 2019. In total, 78 herders enrolled in the “Business Opportunity” and “Sustainable Fibre” training. During these events, environmentally sustainable and economically viable cashmere, dairy and ecotourism business models were discussed with communities.	This activity is planned to be conducted on August/September of 2019 as per log frame timeline.
Activity 4.4 Provide small business training and support to LPA cooperative members	To support small business training to local communities the project has organised forest cleaning activity to support household incomes and sustainable forest management as a potential LPA business model. The community-based ecotourism camp establishment is planned for June 2019, which intends to create job opportunities for LPA community and diversify livelihoods.	This activity is planned to be conducted in August/September of 2019.
Activity 4.5 Co-produce, with local communities, a locally appropriate VSLA protocol, and enrol initial participants	The VSLA protocol was designed and introduced to FUGs in February 2019. The VSLA concept was introduced to 122 community members (with multiple attendance by some community members) and three FUGs have established a VSLA	This activity has been completed.

		and approved a protocol. These VSLAs are expected to be operational by May 2019.	
Activity 4.6 Deliver ongoing training and support to VSLA members, and members of the LPA community wishing to participate		Training for three FUGs in the LPA, including 35 community members was conducted in February 2019. These three FUGs have commenced VSLA implementation.	This activity will proceed on continual basis which is currently being defined.
Activity 4.7 Design socio-economic survey protocol for LPAs, using established wellbeing indices, including livelihood diversity and income		The Independent Research Institute of Mongolia (IRIM) designed a "Socio-Economic baseline study on locally protected area" and collected data from 150 households (35% of LPA) in Bulgan soum of Arkhangai province in September 2018.	The first-year baseline survey has been completed. Design for the final survey protocol will be discussed and approved in project year three.
Activity 4.8 Conduct socioeconomic surveys in LPA and control site to collect baseline data in year 1 and project end data in year 4		IRIM submitted the Baseline study report in March of 2019. The baseline study reported that 30% of the households were living below the national poverty line; meaning their monthly expenditure was less than MNT 146,150 (£42). More details can be found in Annex 4.1.	The final report is expected by year three.
Output 5: Effective and equitable LPA governance model in place in LPA, enabling robust monitoring and evaluation (incorporating the data from other outputs) and sustained engagement with nearby communities and local and national government	5.1: LPA management authority, composed of community members and representatives from project partners, meeting monthly and involved in coordination of all outputs, to enable their continuation post project, by year 1. 5.2: KPIs, specified under other outputs, are monitored by the LPA management authority and monitoring data is fed into the LPA management plan and Mongolia's NBSAP (2015-25) to enable lesson-learning from the LPA pilot. 5.3: five relevant national and local government officials, including CBD national focal point, have visited LPA and are supporting the production of	5.1: In contribution towards the completion of the project output, seventy-five representatives of LPA stakeholders including eight FUGs, Spirits Mongolia NGO, Arkhangai aimag Environmental Agency and Bulgan soum government participated in a Community Forum held on 26th of March 2019. The forum agreed on an LPA management model and decided to establish a Co-Management board represented by each FUG, two seats of Spirit Mongolia and one seat from ZSL as an umbrella organisation governing the LPA management. The Board will be accountable to the General assembly of FUG members. This time the Community Forum served as the General Assembly. 5.2: The forum also approved the establishment of a Monitoring Committee independent from the LPA Co-management board, consisting of 11 people including eight representatives from each FUGs and two members from Spirits Mongolia. 5.3: ZSL joined the support group for community-based conservation organisations facilitated by the Ministry of Environment and Tourism, and contributed to the drafting of LPA management regulation in April 2019. This working group participation will contribute towards getting long-term high level government support of the LPA.	

	steppe-forest LPA guidelines by project end. 5.4: 15 community leaders from identified nearby community groups, resident in vulnerable areas, which are suitable for replicating the LPA approach, have conducted knowledge exchange visits to the LPA and are supportive of the model by project end.	5.4: Nine communities from nearby areas have shown an interest in the LPA and visiting during year two or three. Discussions on the topic will continue in 2019.	
Activity 5.1 Establish an effective and democratic LPA management authority following GESI principles, to meet monthly for project coordination and including community members and representatives from key partners.		A series of eight events were organized to introduce the project to the local partners and beneficiaries between September and October 2018 reaching 94 community members in the LPA. Community discussions on the LPA management model were organised on March 26 where GESI principles were introduced to 75 participants. The forum included all project stakeholders and facilitated democratic decision-making on the LPA management model while ensuring equal access to project information by all parties.	ZSL will seek to facilitate a monthly meeting for LPA management coordination with NGO Board members from June 2019.
Activity 5.2 Hold annual workshops to feed monitoring results from output 1 and other outputs to into adaptive management planning and Mongolia's reporting against its NBSAP		The community forum on 26th of March presented the first workshop towards adaptive management of LPA aligning with NBSAP.	The next workshop will be conducted in March 2020.
Activity 5.3 Run exchange visits for leaders from nearby community groups to observe the LPA and encourage them to establish LPAs in their own regions, also to include relevant government officials		The project plans to organise the attendance of several LPA community members to attend the Ulaanbaatar conference of community-based conservation groups in 2019. Future exchange visits to the LPA will be organised in year three and nine communities have shown interest in the potential exchange visit.	This is planned to be organised in September 2019.
Activity 5.4 Share completed set of LPA protocols, plans and reports with Ministry of Environment and Tourism to produce framework for expansion of LPA model, and basis for LPA guidelines to be published post-project		The project had a meeting with the MET in April 2019 to discuss community-based conservation related issues, and they expressed an interest in visiting the LPA by year three.	This activity will be completed by year three.

Annex 2: Project's full current logframe as presented in the application form (unless changes have been agreed)

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Impact: Central Mongolia's forest-steppe ecosystem safeguarded through a LPA network, with flourishing populations of globally-endangered species and local communities' wellbeing and socio-cultural traditions secured through equitable sustainable resource-use and diversified livelihoods.			
Outcome: 1660km^2 of Arkhangai's forest-steppe secured and sustainably managed as a LPA, supporting globally-endangered species' recovery, equitably safeguarding communities' culture and livelihoods, and providing a framework for replicating the LPA model.	0.1 Key populations of indicator species representing steppe biodiversity within the LPA are stable or increasing compared to year 1 baselines by the project end. Particularly, a) the Siberian marmot (Marmotasibirica) population remains stable, b) the Musk deer population (Moschusmoschiferus) increases by 5% c) and the populations of Saker falcon (Falco cherrug) and Steppe eagle (Aquila nipalensis) increase by 10%.	0.1 Annual LPA biodiversity surveys feeding into LPA Management Plan and reporting against Mongolia's NBSAP (2015-2025)	The recently reintroduced marmot population is assumed to be very vulnerable at present, and achieving a stable population will present a major success but is achievable. The other 3 key species are more established so the specified population growth rates are expected as the impact of the project's interventions are felt. Disease outbreaks in wild populations do not occur, or occur at such a rate so as to not affect the trajectory of population recovery.
	0.2 1660 km^2 of forest-steppe habitat safeguarded by a functional CPU under an effective LPA which achieves zero-poaching and a 75% reduction in incidents of illegal logging from project baseline (= year 1) by project end.	LPA records; CPU SMART patrol logs; Illegal logging reports produced from SMART data; SMART reports showing evidence for patrol coverage and threats encountered; 'threat assessment'	LPA community continues to have the undivided support of the local police agency and capacity to detect and respond to poaching and logging incidents, and make arrests
	0.3 Women and ethnically marginalized groups within the LPA community have equal representation in LPA-management decisions (baseline = year 1) by project end	Socioeconomic survey (baseline & project end): self-reporting by women in the LPA, verifying that women and ethnically marginalized groups have equal share of decision making in the LPA	Mongolian socio-economic climate remains stable and the community adheres to the self-imposed criteria for equal participation set to ensure balanced participation of men, women and ethnically marginalized people , e.g. set target numbers of women and men and marginalized people to equally benefit and participate in the proposed programmes and share in the decision -making process.
	0.4 At least 60% of (total = ca. 400) households within LPA show an increase in overall economic wellbeing index scores, with women and men benefiting equally	Socioeconomic survey (baseline & project end): scores on overall economic wellbeing index, compiled from range of metrics identified in year 1	

	within households (baseline = year 1) by project end.		
	0.5 275km2 (100%) of forest within LPA managed sustainably and showing no decline in above-ground woody biomass (baseline = year 1) by project end.	Forest management records, woody biomass monitoring (baseline & project end), annual phenology and species richness forest plot results, GIS analysis	No natural disasters, such as forest fires or disease impacting standing forest.
	0.6 Framework for the expansion of LPAs across Central Mongolia is in place, with buy-in from relevant government agencies, NGOs, and key target communities; and the process of producing official steppe-forest LPA guidelines has begun, by project end.	All protocols and management plans produced under project; recommendations on LPA framework formally received by MET	Government support for community-based conservation remains strong.
Output 1: Annual biodiversity monitoring programme within LPA in place providing data for informed conservation interventions, management plans and policy. Biodiversity monitoring will target key species: Saker Falcon (Falco cherrug) EN, Steppe Eagle (Aquila nipalensis) EN recently reintroduced Siberian Marmot (Marmotasibirica) EN, Musk deer (Moschusmoschiferus) VU; and forest and grassland species richness.	1.1 Biodiversity monitoring plans for all key species and wider ecosystem developed for use by the annual monitoring programme, utilising local ecological knowledge, by year 1.	Annual biodiversity surveys, Local Ecological Knowledge	No natural disasters, such as forest fires, or particularly harsh winters (*dzuds*) significantly negatively impact wildlife populations.
	1.2 Biodiversity monitoring surveys completed in year 1, 2 and 3 of the project	Annual and final project reports of biodiversity monitoring surveys (species richness) feeding into reporting against Mongolia's NBSAP (2015-2025) and LPA management plan	
Output 2: Model of community-led sustainable forest management in place in LPA safeguarding 275 km^2 of vulnerable forest in Arkhangai	2.1 National University of Mongolia and ZSL led annual above ground biomass surveys of 275 km2 of sustainably managed forest in LPA, and comparable forest in the control site, in place by year 1	Annual and final project reports of above ground biomass feeding into reporting against Mongolia's NBSAP (2015-2025) and LPA management plan	Local community members remain engaged with trialling a range of management techniques to pick those most effective and suitable to their needs.

	2.2 Forest management interventions (including harvesting and thinning techniques) defined and piloted by year 2, and informing adaptive management of LPA's forests by year 2	Forest management intervention plan, forest management pilot records, forest management workshop records	
	2.3 One Community Patrol Unit (CPU) of 40 members, divided into local patrol teams, with women actively participating in coordination roles, conducting twice-weekly SMART patrols by year 2.	CPU agreements and contracts, SMART reports showing patrol frequency, coverage and composition	Techniques to maintain community engagement and tackle the risk of corruption with CPUs work effectively in the LPA context. The inclusion of individuals form a large number of households helps embed and institutionalise the CPU in community life.
Output 3: Model of community-led sustainable pasture management in place in LPA,	3.1 National University of Mongolia and ZSL led annual soil nutrient and compaction monitoring in sustainably managed LPA pasture, and control pasture, in place by year 2.	Annual and final project reports of grassland health monitoring feeding into reporting against Mongolia's National Biodiversity Program (2015-2025) and LPA management plan	Pasture management model developed in Arkhangai is appropriate to other forest-steppe ecosystems in Mongolia with similar socioeconomic and climatic features.
	3.2 Pasture management interventions (including reducing grazing pressure, marmot-friendly livestock management and leaving areas un-grazed to recover) defined and piloted across 5 experimental plots by year 2, and informing pasture management plan within LPA by year 2.	Pasture management intervention plan, marmot-friendly pasture-management recommendations, pasture management pilot records, pasture management workshop records	
	3.3 Sustainable grassland management system in place, utilising sustainable traditional knowledge and practices, with 80% of households (total = ca.400) participating (baseline = no grassland management system) by project end.	Pasture management records, grazing land use agreements	No serious drought years heavily impact the region, reducing the availability of water sources and grazing. In this scenario the project would revise some elements of pasture management trials to place a greater emphasis on water use. This both ensures community buy-in, by being relevant to their needs, and community wellbeing in the short-term.
			Not all households are actively engaged in livestock grazing, and some of those that are engage at very low levels, for example elderly families whose children have moved to the city. Therefore, an 80% of households participating will cover the vast majority of livestock grazing.

Output 4: Holistic inclusive livelihood model, including production and access to market, in place in LPA, resulting in improved income opportunities	4.1 Environmentally sustainable and economically viable cashmere, dairy and ecotourism business models and other livelihoods as identified by women developed in LPA by year 1.	Business viability indicator (this is a measure designed by Arigbank to assess companies attractiveness for investment), Post-LPA value chain analysis (conducted by Arig bank)	Local markets for cashmere and dairy, and local and global markets for ecotourism remain stable, and harsh unpredictable weather conditions don't impact goat survival or cashmere production.
			Fair and equitable benefits sharing principles enshrined in LPA management under output 5, ensure that participation in project business enterprises is available to all community members (women, old, young etc.) and that this contributes to reducing inequity.
	4.2 At least 1 VSLA within LPA by year 1 consisting of ca. 20 members becoming business literate, with members representing 20% of households (total = ca. 400); 2 VSLAs representing 40% of households by year 2, and 3 VSLAs representing 60% of households, (with equal gender balance) by project end.	VSLA records demonstrating consistent engagement and attendance at VSLA meetings designed to accommodate semi-nomadic communities, Socioeconomic survey (baseline & project end),	Though marginalised in household decision making, women play a significant role in household budget management. This should support both achieving an equal gender balance, and enable a high rate of uptake - increasing as VSLAs become more cemented and the benefits become more apparent.
	4.3 Livelihoods diversified from an average of 2.0 occupations per household within the LPA during the scoping survey to 2.5 by project end	Socioeconomic survey (baseline & project end).	Livelihood diversification occurring during the project is a result of uptake of new sustainable livelihoods and represents an improvement in communities' wellbeing and resilience.
			Livelihood model developed in Arkhangai is appropriate to other forest-steppe ecosystems in Mongolia with similar socioeconomic features
Output 5: Effective and equitable LPA governance model in place in LPA, enabling robust monitoring and evaluation (incorporating the data from other outputs) and sustained engagement with nearby communities and local and national government	5.1 LPA management authority, composed of community members and representatives from project partners, meeting monthly and involved in coordination of all outputs, to enable their continuation post project, by year 1	LPA constitution, LPA management authority registration records, LPA management authority meeting minutes	Traditional customs and equitable and democratic principles are reconcilable within an effective institution
	5.2 KPIs, specified under other outputs, are monitored by the LPA management authority and monitoring data is fed into the LPA management plan and Mongolia's	KPIs, LPA management plan, NBSAP reporting, meeting minutes	Government support for, interest in, and desire to take lessons from this project remains strong.

	NBSAP (2015-25) to enable lesson-learning from the LPA pilot.		
	5.3 5 relevant national and local government officials, including CBD national focal point, have visited LPA and are supporting the production of steppe-forest LPA guidelines by project end.	Government visit reports, minutes of national and local government meetings on LPA approach, project reports shared with officials	An important element of effective governance is engagement with third parties. Moreover a very important element of effective governance of this LPA, which is planned to provide a framework to scale up the LPA model across central Mongolia, is engagement with the nearby communities, local and national government which will establish this.
	5.4 15 community leaders from identified nearby community groups, resident in vulnerable areas, which are suitable for replicating the LPA approach, have conducted knowledge exchange visits to the LPA and are supportive of the model by project end.	Exchange visit reports,	Individuals carefully selected to take part in exchange visits on the knowledge exchange are suitably influential in their own communities to drive future LPA declaration and management decisions.
			Engaging government officials and community leaders with the LPA approach contributes to the end goal of increasing support from each for scaling up the LPA model

Annex 3: Standard Measures

Table 1 Project Standard Output Measures

Code No.	Description	Gender of people (if relevant)	Nationality of people (if relevant)	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
1A	Pasture data will contribute to a PhD project on pastureland in Arkhangai	M	Mongolian				1	1 (potentially but could be post-project)
2	MSc project using GIS mapping to investigate climate change and land use changes in LPA	F	British	1			1	1
6A	Training of community members and local government officers across Outputs 1 – 5.	M & F	Mongolian	50 (minimum, difficult to calculate as many community members attend multiple trainings)			50	TBC
7	Training materials on forest management (focus on forest fire prevention)			800			800	TBC
7	VSLA explanation manuals developed by Arig Bank for the project			50			50	
9	Management plan for four species and two habitats			6			6	6
10	Wildlife field guides				20		0	TBC
14A	State conferences on forest and pasture			2	2	2	2	6

Table 2 Publications

Title	**Type** (e.g. journals, manual, CDs)	**Detail** (authors, year)	**Gender of Lead Author**	**Nationality of Lead Author**	**Publishers** (name, city)	**Available from** (e.g.weblink or publisher if not available online)