Darwin Initiative Main: Annual Report

To be completed with reference to the "Project Reporting Information Note": (https://www.darwininitiative.org.uk/resources-for-projects/information-notes-learning-notes-briefing-papers-and-reviews/).

It is expected that this report will be a **maximum of 20 pages** in length, excluding annexes)

Submission Deadline: 30th April 2023

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Darwin Initiative Project Information

Project reference	28-006
Project title	Protecting Mongolia's Gobi Desert for wild camels & herder communities
Country/ies	Mongolia
Lead Partner	Zoological Society of London, Outer Circle, NW1 4RY, UK
Project partner(s)	Ministry of Environment and Tourism Mongolia (MET) Gobi 'A' Strictly Protected Area (GGASPA) Administration Office (GGASPA) Collaborative Management Council (CMC) Secondary Schools of GGASPA buffer-zone soums Soum Buffer-zone Councils/Citizen Representatiev Khurals National University of Mongolia (NUM) UNDP/GEF ENSURE project
Darwin Initiative grant value	£ 497,046.00
Start/end dates	Start date: 01/06/2021 (actual started date is 1st of Oct, 21) End date: 31/03/2024
Reporting period	01/04/012022 to 31/03/2023 Annual report 2
Leader name	Dr. Tungalag Ulambayar, ZSL Mongolia Country Director [redacted]
website/blog/social media	www.zsl.org/mongolia; https://www.facebook.com/ZSL.org
Report author(s) and date	Tungalag Ulambayar (Mongolia Country Director) Bolor Radnaabazar (Conservation Programme Officer) 30 April, 2023.

1. PROJECT SUMMARY

The project's overall goal is to conserve globally important wildlife, including the wild camels in the Mongolian Altai-Gobi (Great Gobi) with the welfare and socio-cultural traditions of herder communities secured through sustainable use of the fragile desert ecosystem.

The project is aiming to help address the population decline of the last remaining Wild camel in the Great Gobi 'A' Strictly Protected Area (GGASPA). The GGASPA encompasses 44,630 km^2 of desert steppe and is protected due to its populations of rare species, including critically

endangered species such as wild camel (*Camelus ferus*), Asiatic wild ass (*Equus hemionus*), Argali sheep (*Ovis ammon*), and Gobi bear (*Ursus arctos*) (Clark et al., 2006). Much research conducted on Mongolia's mammal communities centres on population size estimates, which all indicate that these species are under serious threat of extinction. Plant communities comprise species resilient to extreme drought, and include species such as *Haloxylon ammodendron, Iljina regelii, Anabasis brevifolia* and *Ephedra przewalskii*.

The Great Gobi is not only home to wildlife but also pastoral communities that carry out nomadic traditions and cultural values which involve co-existing with nature. Therefore, the project aims to support local communities and GGASPA stakeholders in conserving precious species and Gobi ecosystems important to people's livelihoods in GGASPA buffer-zone soums – Altai, Erdene, Tsogt soums of Gobi-Altai aimag and, Bayan-Undur, Shinjinst soums of Bayankhongor aimag (Fig 1.).

Tackling the wild camel population decline requires addressing multiple other factors that contribute to this. These include the minimal biodiversity monitoring capacity to assess wildlife populations and the condition of their habitats, water scarcity, lack of coordination among buffer-zone stakeholders to undertake the integrated landscape management (ILM), competition with domestic livestock for forage, and overgrazing in buffer zone and limited use zone areas. These socio-ecological issues have been exacerbated by climate change. Unfortunately, the local government and communities lack mechanisms and resources to tackle these threats collaboratively. Thus, the project seeks to institutionalize robust evidence-based environmental management, implement scalable waterhole habitat management, strengthen collaborative governance, enable community-led awareness raising, and improve sustainable rangeland management and herder livelihoods.

Fig 1. The project site: GGASPA and its buffer zone

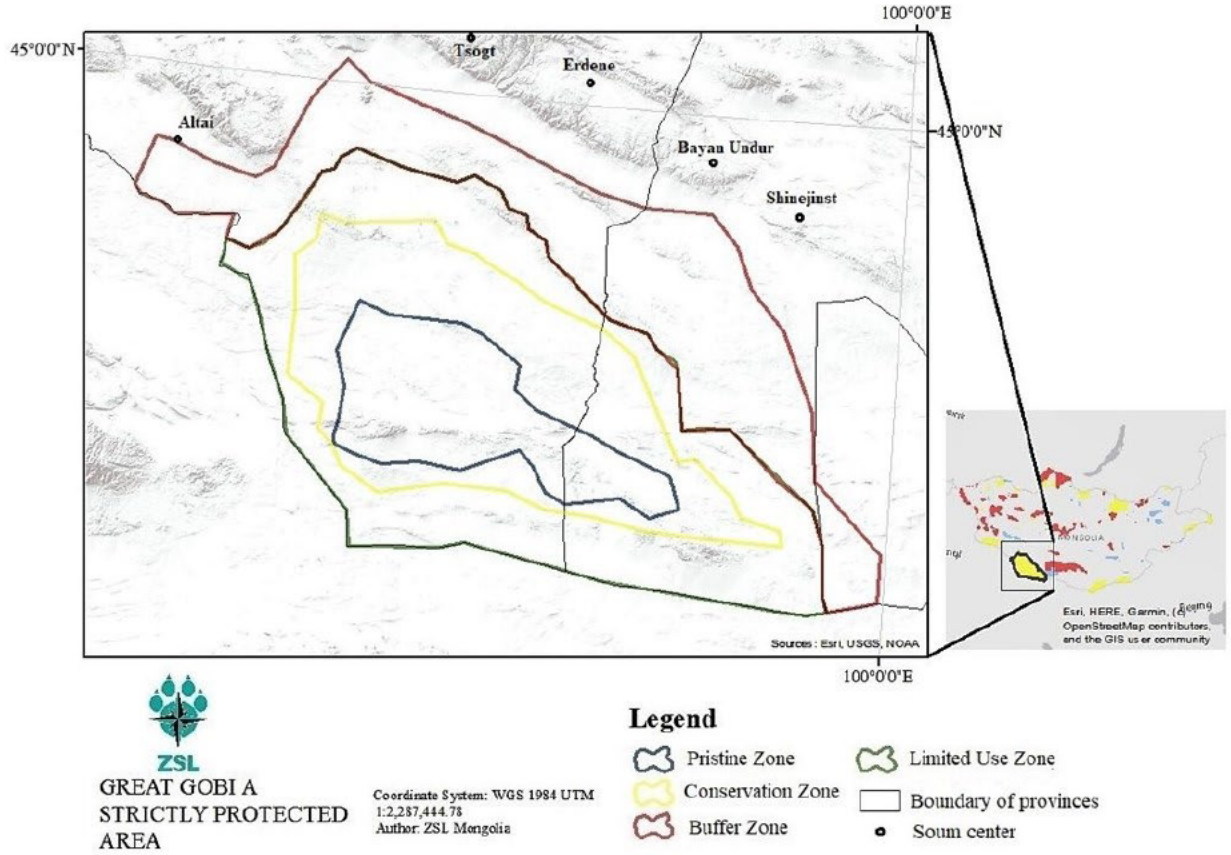
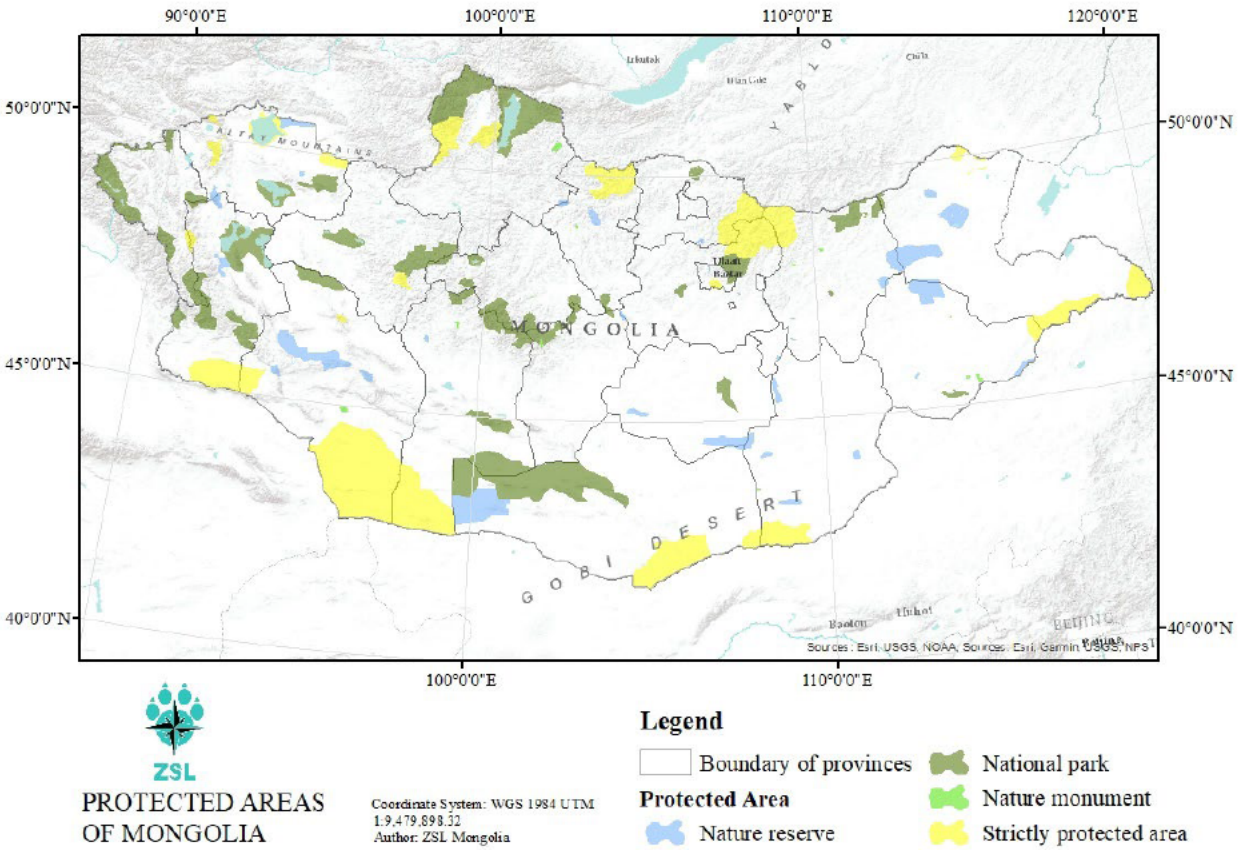


Fig 2. Protected area network of Mongolia



2. PROJECT STAKEHOLDERS/ PARTNERS

The ZSL Mongolia team are leading the overall project management, including financial management and liaison with partners via the GGASPA BZ CMC meeting twice a year. Closely cooperating formal partners are the Ministry of Environment and Tourism Mongolia (MET); National Focal Point of the Convention on Migratory Species (CMS) GGASPA Administration Office; Collaborative Management Council (CMC) overseeing its buffer zone (BZ) management; five soums' Buffer-zone Councils (BZC) represented by the Citizen Representative Khurals (CRKh); and the National University of Mongolia (NUM). The schools of each soum in the BZ participate as part of each soum BZC. The project collaborates with the UNDP/GEF ENSURE project to strengthen school eco-clubs.

GGASPA. The GGASPA was established in 1975 under the PA Department, MET. It was designated as a World Biosphere Reserve in 1991 by the UN. Encompassing 44,630 km^2, the Mongolia's largest contiguous PA, and preserves Mongolia's most intact 'true desert' ecoregion. In the last 12 months, the ZSL Mongolia tightly collaborate with the administration as in Y1 in all aspects of the project, in particular the activities related to the SMART introduction, habitat restoration, public awareness via eco-clubs, and CMC strengthening. End of the year, the PA administration was selected as a BEST in 2022 for habitat restoration/increase water supply for wild animals in the Great Gobi.

The Collaborative Management Council (CMC) is a new institution established in May 2019 to bring together stakeholders of the GGASPA BZ that includes representatives from the GGASPA Administration, the governors of each of the five soum (district)'s BZC, two Border Defense Units, the Environment Department of Bayankhongor and Gobi-Altai Aimag, and ZSL Mongolia. The CMC and its constituent BZCs oversee a population of 3,700 households, including 2,198 herder households across five soums (as of early 2021) adjacent to the GGASPA. Of these communities, 1272 households in seven bags (county) within the BZ boundaries participate in public awareness, Wild camel conservation and BZ management activities. In the last 12 months, the CMC chaired by Mrs. Ulziisaikhan Purevkhuu - only woman of the 18 Soum CRK Chairperson, Gobi-Altai aimag. By the way, 51 (14.1%) of the total 361 chairpersons of the CRK at all level (province, capital, soum, and district) are women. She used well new tools that she learned from the project, namely 'Participatory problem identification' and 'Nomadic Trunk' etc., to raise environmental awareness, plan and assess CMC annual and comprehensive plan for 3

years, and encourage herders with close cooperation of the ZSL Mongolia, PA Administration and Eco-clubs. Besides, the CMC meeting stabilized and held twice a year.

The National University of Mongolia (NUM), established in 1942, is the oldest university in Mongolia that played a fundamental role in creating, promoting and strengthening Mongolian capacity in contemporary scientific research. ZSL's collaboration with NUM include successful initiatives for the development of Mongolia's first comprehensive IUCN Regional Red List; extensive, ground-breaking biological monitoring, such as camera trapping at Gobi oasis; and Wild camel population surveys. In past 12 months, the NUM team conducted baseline survey of pasture condition and carrying capacity in the BZ; and jointly developed a methodological design for habitat restoration with the Institute of Geography and Geo-ecological Institute (GGI), Mongolia Academy of Science. A BA student (see activity 1.8) of NUM working in the data analysis sourced from 25+ camera-traps in the 13 water points under supervision of ZSL Mongolia Conservation Biologist and preliminary results of the analysis brought them prices 3rd and 2nd place of competitions among Mongolian young researchers. In Y2, we've cooperated with the **Mongolian University of Science and Technology** (MUST) which is branched from the NUM and developed a system dynamic model of five soums' socio-economy and environment until 2040 for mid and long-term planning of relevant institutions. End of Y2 another scientific organization **Mongolian University of Life Science** (MULS) joined to the project as an adviser to improve rangeland and herd management in the Great Gobi.

UNDP/GEF ENSURE project. UNDP Mongolia Representative Office is based in Ulaanbaatar and has an Environment, Energy and Disaster Risk Reduction portfolio with a focus on enhancing Mongolia's ability to conserve and protect its environment for resource-efficient development, and to empower local communities, and enhance institutional capacity for sustained environmental management, disaster risk reduction, and climate change adaptation and mitigation. Within this program, the UNDP implements a GEF-funded "Ensuring Sustainability and Resilience of Green Landscapes in Mongolia" or ENSURE project (USD 7.5 million), which targets Sayan, Khangai Gobi landscapes with overlaps in the ZSL proposed Gobi four soums. The ENSURE will run between 2019-2025 with the objectives of conserving rangeland, forest, and wildlife in the target sites by improving the legal environment, empowering local communities, increasing their awareness, and supporting livelihoods. The project agreed to coordinate relevant activities in the Gobi four soums with ENSURE through regular communication and exchanges. As a result, the ZSL Mongolia team cooperated with this project and co-funded certain activities. Here by: support the CMC; strength herders; and activate eco-clubs in past 12 months.

Eco-clubs. The project supports eco-clubs of 7 schools in the bufferzone, proven awareness-raising local institutions, currently limited by financial-shortages and educational materials. New outreach materials included the textbook 'Ekh nutag - Ikh Gobi miny' (The Great Gobi - My motherland) combined with traditional knowledge on sustainable resource management; and game based conservation training tool "Nomadic Trunk" with various toys and fun plays were a highlight of the past 12 months. In particularly, the trunk - comprehensive training package with 25 lessons localized well and became a flagship that made the team known to the project target groups in the Great Gobi as well in the Khangai. Eco-Clubs and teachers received training on public outreach and communication and peer-to-peer knowledge-sharing between clubs. The eco-clubs reached to 1871 people within their organized public awareness through plays, folk performances, and other engaging platforms.

3. PROJECT PROGRESS

3.1 PROGRESS IN CARRYING OUT PROJECT ACTIVITIES

ACTIVITIES contribute towards to **OUTPUT 1** "GGASPA monitoring programme is informing effective GGASPA and CMC management, and future-proofed by building the capacity of mongolia's future conservationists"

1.1 Procure field equipment for ongoing camera-trap surveys and SMART patrols, including necessary office equipment for research programme (year 1) ZSL: A high-capacity desktop computer for SMART data processing was procured and handed over to the GGASPA Administration in Sep, 2022. In Y1 (Oct 2021-March 2022), a package containing field equipment including camera-trap batteries, 18 smartphones (Doogee s58 pro) with installed the SMART app

were procured for PA rangers and border guards. The total cost was MNT43,188,800 (GBP12,520). This activity is complete.

1.2 Organize GGASPA and Border Defence Agency annual training on camera-trap and SMART monitoring and co-develop GGASPA monitoring plan. ZSL: Since Y1 until now (from Oct 1, 2021 to March 31, 2023), a total of 5 training courses on the utilization of SMART were organized by national and international experts and a user manual of SMART app software was distributed. There were 101 people (by duplicated number) of the project's target groups, namely GGASPA Administration, Border Defense Units and Eco-police Department that participated in this training. In FY1, 51 people were involved in the SMART basic training on two occasions at the project site with a lively practice session. In FY2, 50 were involved in the following 3 trainingcourses: (i) **Refreshing the SMART basics** for 14 trainees from the target organizations in Jun, 22. They studied SMART data collection, practical skills for collecting observation data during patrols, using smartphone apps; database management, crime data collection, data export and import from phone to computer, maps, summary of patrol query, and reporting tools. (ii) **ToT "SMART"** consisting of 30 hours of online lessons over 5 days delivered by the international instructor of the ARTIO Conservation for 27 officers of the 11 key SMART implementers in Mongolia including WWF, WCS, SLCF, ENSURE project, EPD, MET in Oct 24-28, 2022. After the training, there are 8 trainers certified as a SMART app trainer. (iii) **"Advanced training of the SMART"** was organized in the project site from Jan 26 to Feb 3, 2023 with 9 participants. These participants carried out a 6 day exercise using a SMART mobile in field and a 1 day SMART data management training based on the GGASPA example.

1.3 Conduct rangeland health survey (aboveground biomass, species richness, soil stability) inside SPA (5 plots) vs Bufferzone areas 5 plots (year 1 and 3) NUM: The NUM team led by Dr. Aruintsteseg.L conducted a field survey in the GGASPA from June 16 to July 3, 2022. The team sampled rangeland plant biomass with the objective of i) assessing carrying capacity; (ii) measuring plant community variables (species richness, abundance, gap between plants) collected for determining states of plant communities of the GGASPA buffer zone; (iii) establishing experimental plots for rehabilitating vegetation at Baruun Sharga oasis. The team used a combined method of metric and remote sensing/satellite images for the assessment, a method that has not previously been used in Mongolia. During the trip, they randomly selected a total of 30 sites around the BZ. According to the pastureland assessment metric, one site was assessed as 90% for pasture condition, 5 sites 80-90% condition, 3 sites are 70-80% condition, 3 sites are 60-70% condition, 4 sites are 50-60% condition, and the remaining 13 sites are 50% condition. This demonstrates that pasture conditions are not consistent throughout the BZ and that regions with medium to low pasture condition are heterogeneously located along the BZ. The majority of the chosen sites had ratings of less than 50, particularly in the eastern part of the BZ. Besides, the team developed a model to calculate the total number of livestock in the entire BZ in terms of fodder resources for pasture plants. The model has been calibrated with the plant biomass data from 70 sites of the national rangeland monitoring network. According to the model, in the eastern part of the BZ as well as in the southern part of the Idren Mountain Range, the grazing capacity is higher than in other parts while the Tsogt sum has the lowest value for livestock carrying capacity. In the BZ, the average carrying capacity for liivestock over the last 20 years is 264,803 head sheep unit. The livestock carrying capacity in Shinjinst is 55,381, 70,441 in Bayan-Andur sum, 47,532 in Erdene sum, 30,862 in Tsogt sum, and 60,984 in Altai sum.

1.4 Create and maintain a database interface for storing data collected by camera-trap surveys and SMART patrol reports integrated with rangeland survey results NUM: The first model of SMART database was created in 2021, and the NUM team led by Dr.Lkhagvasuren.D, has been collaborating with GGASPA Administration to improve the structure of the database to adjust the GGASPA specifics. The NUM selected a student to work on images using 3 packages of automat cameras in the project site in FY2. So far, he has sorted through 238 064 images from 26 cameras located at 12 water points. As a result, 46 278 images of 14 species underwent further processing

and analyzing. According to the 4 SMART patrols undertaken by 6 PA rangers in Y2, there was 1 incident of environmental crime detected and reported.

1.5 Conduct quarterly monitoring surveys through SMART patrol and feed into the integrated database (year 1 second half, 2 and 3, total 12 Qs) GGASPA: Following the the SMART training in Y1 for the GGASPA Administration Office and Border Defense Agency, PA rangers piloted the test data collection during patrols and a primary database was created for the primary analysis.

1.6 Deploy camera-traps and maintain camera-trap grid (SD cards and batteries), for a total of two field trips each year (6 times) ZSL + WCPF +GGASPA: The project methodology of the camera trap research in GGASPA was reviewed and updated in Y1. The project selected five water points (Bogts tsagaan ders, Khoshoot, Khotol us, Tsagaan burgas, Shar khuls, Tsagaan tohoi) to represent permanent water sources encompassing different habitat types and regions of the PA that may be affected by varying anthropogenic pressures and climate change. At each water point, five cameras (in total 25 camera traps +1 for video capture) were deployed with new batteries and SD cards during the field trip between 20-30 November 2021. The camera data will be collected twice yearly: November and April.

1.7 Feedback results of GGASPA SMART monitoring, rangeland survey and camera trapping into the development of the GGASPA Management Plan (year 2 and 3) NUM+ZSL: Bilguun Batkhuyag, a ZSL Mongolia Conservation Biologist introduced a progress report of the existing surveys including SMART monitoring, rangeland survey and camera trapping to the PA Administration and CMC and discussed how to include the preliminary results into the BD Monitoring Chapter of the GGASPA Management Plan and CMC Action Plan.

1.8 Two Mongolian MSc students will work on research of rangeland survey and wildlife camera trap study, and defend by the end of year 3 NUM: An MSc student from NUM started her research on a rangeland study and collected primary data during the field trip mentioned above. She successfully discussed the research preliminary results as a presentation “Research on the GGASPA buffer zone grazing capacity that using remote sensing method” to the Academic Conference attended by NUM MSc students. As noted above, another student was recruited to work on wildlife camera trap data and SMART patrol data. However, rather than appointing an MSc student (owing to no applicants), the NUM had to appoint graduating BA student. The student plans to proceed for MSc study with a focus on Wild camel daily use of water resource. A BA student won 2nd and 3rd places in a Student Research Work Competition. The students will defend by end of Y3.

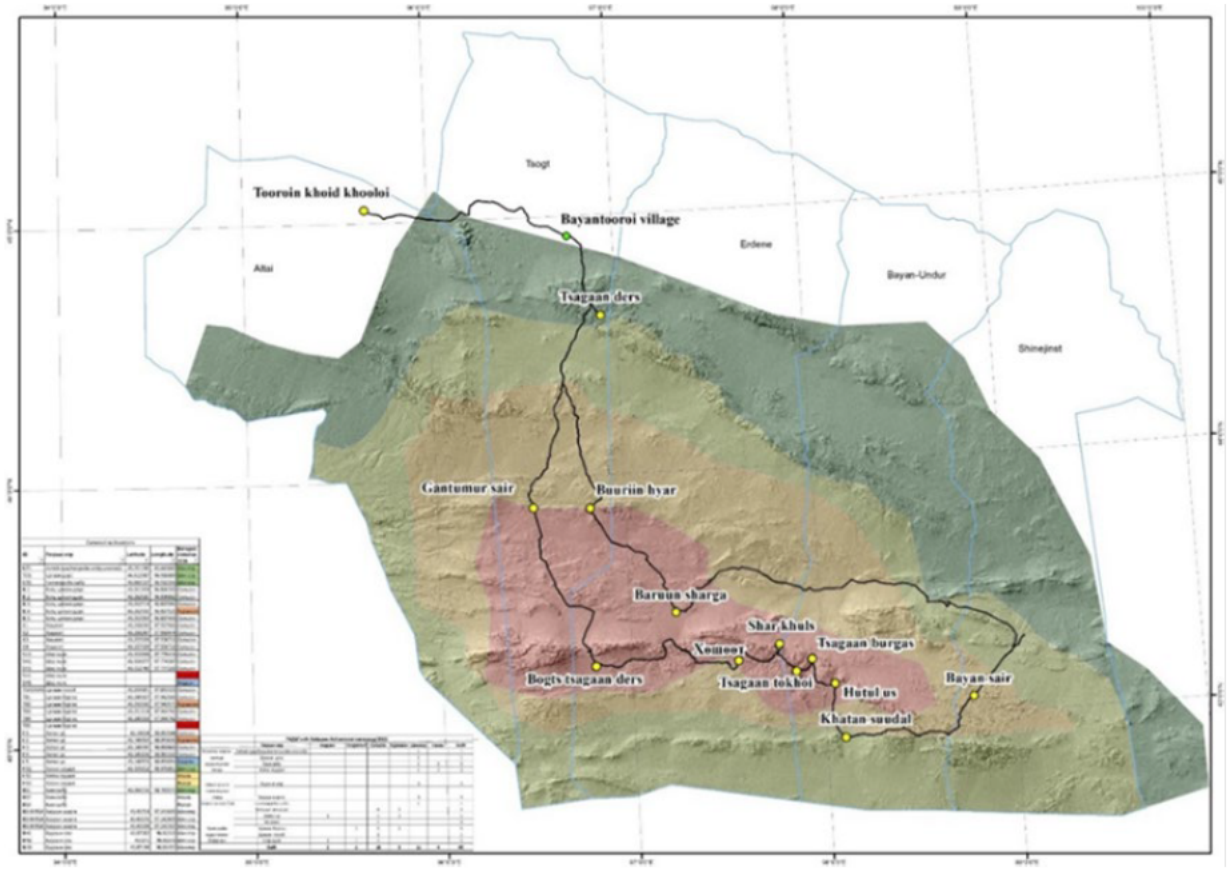
1.9 CMC receives Brief on Monitoring results and uses them for AWP: Preliminary results of the camera-trapping, SMART and rangeland survey were presented to the GGASPA Administration and its CMC. The project jointly with the PA Administration provided information and results of GGASPA BD Monitoring and their distribution at the water points to the CMC. Based on this, the CMC agreed on the water points to restore that mentioned in the activity 2.3.

1.10 Camera and SMART data analysis training online, data collection design and data analysis (IZ & ZSL UK): ZSL Mongolia organized online advanced SMART training for partners and SMART stakeholders in October 24-28, 2022 led by SMART expert from the ARTIO Conservation. Following this ToT, ZSL plans a follow-up training for GGASPA rangers (refer to 1.2).

ACTIVITIES contribute towards to **OUTPUT 2** “Scalable habitat management and waterhole restoration model areas are demonstrating effective conservation interventions to restore the GGASPA desert ecosystem, to support the recovery of Bactrian Camels and other BD”

2.1 Map GGASPA camel habitat, waterholes and oases and prioritise habitat management intervention sites ZSL: GGASPA maps have been developed during the reporting period, including GGASPA topographic map (scale of 100 000) and a waterhole location map.

Fig 3. Project research water points in the GGASPA



2.2 Restore two priority waterholes with a small reservoir for wildlife (through a bid): The project selected four boreholes to install solar-powered pumps to increase wildlife water access in the GGASPA and its bufferzone. At the two waterholes in the core zone, namely, Khatan Suudal and Bayan Sair as well as at the other two waterholes in the buffer zone, Tooroin Khoid Khooloi and Tsagaan Ders, the project installed the solar-powered pumps between 20-25 October. At Buuriin Khyar waterhole, where ZSL installed the solar-powered pump last year, the project constructed a 30 tonne water reservoir with 5:10:0.8 dimensions and 45m canal connecting the pump and the reservoir in October.

2.3. Support GGASPA Administration Office to implement habitat management interventions at least at three sites: fence poplar patches and natural springs preventing browsing of young trees and protecting water recharge points, and planting native grasses in oases GGASPA+NUM: Research to test the feasibility of rehabilitating and expanding a Gobi oasis is in progress at the selected oasis – Baruun Sharga. The research created a scalable restoration approach to contribute to addressing the water scarcity issue in the GGASPA as part of Mongolia's climate change adaptation agenda. It supports the GGASPA Administration Office to implement habitat management interventions, including fencing young poplar patches and natural springs to protect young trees and water recharge areas, and planting native grasses in oases surrounding.

2.4 GGASPA conduct annual, including pre and post-intervention surveys in each habitat intervention site to measure change and efficacy GGASPA and CMC informed on results of Habitat restoration and reflects it in its AWP: The selected 3 habitat intervention to support natural restoration process including Baruun Sharga oasis started in late Y2 and results will be brought up in Y3.

2.5 Ensure incorporation of intervention results in GGASPA Management Plan and CMC Plan for possible replication across other threatened camel habitat sites GGASPA+NUM: Result will be taken up in the report Y3.

ACTIVITIES contribute towards to **OUTPUT 3:** Collaborative and inclusive governance institutions are in place and making coordinated, landscape-level management decisions, employing adaptive management approaches informed by robust ecosystem monitoring

3.1 Support CMC during annual meetings to ensure smooth function of a democratic and representative buffer-zone management institution (6 workshops 3-year plan and 3 reports) to plan (GGASPA MP) and review the progress CMC+GGASPA: The project supported the CMC to organize its bi-annual and annual meeting in Y2. A bi-annual meeting held in Ulaanbaatar in spring (Apr 14, 22) consisted of an extended workshop bringing over 50 participants, including representatives from government and donor projects operating in the GGASPA and its buffer zone. The project also gave technical and logistic support to the CMC annual meeting with 50 participants in Jan, 23 that held in Altai soum, Gobi-Altai Province located in southwestern edge of Mongolia and 1500 km away from the capital city - Ulaanbaatar. The participants represented 5 soums' authority and herders in the BZ, donor funded project (ZSL and UNDP), PA Administration and Border Defense Unit. They discussed the performance of the CMC activities last year and approved the plan for this year. The head of the council was also elected for 2023-2024.

3.2 Oversee by CMC the formulation, approval, and implementation of Soum Buffer-zone management plans based on GGASPA BMP CMC+GGASPA: The CMC plan that clearly reflects roles and contributions of stakeholders, and serves as a tool for strengthening the partnerships between them and lays the foundations for effective cooperation was presented and approved by all parties during the bi-annual meeting in April, 2022. The performance of the plan was discussed and evaluated during the CMC annual meeting, and CMC Action Plan for the coming year was also approved in Jan, 2023. The Buffer Zone Council of each soum organized their meeting in parallel with the event *"Building a shared future for all life"* held from 17 to 22 of May, 2022. The chairwoman of the GGASPA Buffer Zone Co-Management Council led the event and evaluated the progress of the work plan of each BZC using participatory methods (the chairwoman acquired this skill during ZSL Mongolia training). The CMC chairwoman also participated in Gobi Region Ranger Forum in August and presented the work of the CMC to over 100 participants, including rangers and project officers. Also, a system dynamic model that mentioned in 3.3 provided good chance to the GGASPA, CMC and the 5 soums authority for smart planning.

3.3 Conduct social surveys using representative samples of buffer-zone communities across five buffer-zone soums to collect baseline data in Y1 and at project end in year 3 ZSL: The Independent Research Institute of Mongolia produced the baseline report in Y1. During the reporting period, the ZSL team developed a system dynamic model for social, economic, and environmental indexes of the 5 soums. The model is including (i) analysis of the 5 soums' social, economic and environmental indexes for future trends; (ii) analysis of the number of rare sp in the execution site; (iii) Correlation between the 5 soums' socio-economy and environment and rare species' change. Thus, CMC and the 5 soums authority have the opportunity to use models both for mid and long-term planning.

ACTIVITIES contribute towards **OUTPUT 4:** Ground-up awareness-raising about Great Gobi uniqueness by environmentally conscious GGASPA communities that are empowered with the skills and knowledge to improve livestock management and comply with the Responsible Rangeland Management Regulation (RRMR)

4.1 Develop Eco-Club capacity building programme through BZC to awareness-raising implementation plan (including training, exchange workshops, annual Eco-club forum, and development of Gobi biodiversity textbook as part of buffer-zone school curricula) BZC/CRK: The project has developed the eco-clubs' capacity of 7 schools as **(i)** Introduced a training package "Nomadic Trunk" with 25 lessons on wildlife conservation along with learning tools for each lesson end of Y1. Since then, this comprehensive training package is reached 10 teachers, 237 puplis, 225 herders and 10 civil servants across the 5 soums in the BZ through 5 events; **(ii)** Organized a study tour for the eco-club teachers who also participated in the CMC bi-annual meeting. Teachers visited the Conservation Center of Nature and Fresh Water Recourses under the MET and "Mother Nature" High School - Ecology and Nature Conservation Center under Mongolian National University. They received full information about flora and fauna of Mongolia at the museum of the centers, learned about plants and experiments in greenhouses of the high school, had useful networking; **(iii)** Two eco-club teachers participated in a study tour to the Gulzat LPA and shared best practices that they've learned during the trip to their soum citizens; **(iv)** Local coordinators helped to the eco-clubs to plan based on participatory approach; **(v)** A handbook for eco-clubs "Ekh nutag – Ikh Gobi miny (Great Gobi – our motherland) handed over to the

schools that contains science-based information about Great Gobi flora and fauna, geography, and climate. Eco-clubs of the schools are starting to use the handbook for public awareness; **(vi)** During the each trip (6 times) to the Great Gobi, the ZSL Mongolia team organized an enlightenment event for locals including eco-clubs such as a lecture on Environmental Protection and Eco-herdsman; A system dynamic model of socio-economic and environmental perspectives of the 5 soums until 2040; SMART patrolling and camera-trapping; infectious diseases from domestic animals to humans etc., **(vii)** Organized the closing ceremony of the eco-clubs' traditional conference combined with field trip in the GGASPA; **(viii)** Provided additional education materials such as books written by Anita Fahrni based on real story of Mongol youths and teenagers.

4.2 Oversee the design of a public awareness package and campaign by each soum Eco-Club to advocate GGASPA biodiversity conservation as part of GGASPA BMP Ecoclub/CRK+CMC: ZSL Project Local Coordinators supported the soum eco-clubs to develop their annual workplan and jointly agreed on ZSL Mongolia's input for the implementation. According to the plan, the eco-clubs organized 69 activities for 1871 soum citizens.

4.3 Implement Eco-Club public awareness campaign (i.e. field trips, festivals, SMS/MMS text campaign) to targeted households as part of GGASPA BMP Ecoclub BZC/CRK: The project supported a campaign to celebrate the International Day of Biological Diversity under the slogan: "Building a shared future for all life" from 17 to 22 of May, 2022 across GGASPA buffer zone soums. All partners, including the GGASPA Administration, Buffer Zone CMC, 5 soums' Citizens' Representative Khurals, and soum secondary schools, ENSURE project, and Border Defense Units actively cooperated in the campaign. The event attracted over 400 locals of different ages, who learned about biodiversity, conservation actions; visited an exhibition of children's drawings, wall newspaper, concert and drama performed by eco-clubs' members. The project introduced a ''Nomadic Trunk", a package of environmental training series to all participants jointly with the teachers and eco-club pupils at the GGASPA Eco-clubs' conference in September. ZSL provided modest rewards to the best performing teachers and students of the eco-clubs during the last and present school years.

4.4 Support CMC-level planning and enforcement strategy for RRMR and get approved Soum Pasture management plan by each CRK CMC+ZSL+CRK The summer and fall of 2022 was very dry with no precipitation, which caused intensive out-migration of Gobi herders to other areas with better pastures. This influenced planned work with herders, including VSLAs, rangeland training and planning. The Project local coordinators have been collecting necessary information and data of the herders in the target BZ bags.

4.5 Train BZCs and target herder households on sustainable rangeland management, including basics of ecosystem management, reduction of risks of zoonotic diseases and household financial management CRK+ZSL: Due to the drought, herders were mostly absent in the Gobi, thus this activity has delayed. When herders come back over winter, herder training will commence. Two representatives of the target bag herders participated in the conference 'Eco-Herder' in Ulaanbaatar at 26-28 October, 2022. Hired two consultants of Gobi Pasture Management and Herd Management for further action.

4.6 Support organization annual bufferzone Herder forum to enable exchange of best rangeland practices among five soum herders and inform on progress of RRMR CRK+ZSL: The Country Director of ZSL Mongolia and Local Coordinators participated in the Gobi Region Ranger Forum organized by the GGASPA Administration from 9-12 August, 2022. The conference was held in Bayantooroi Village and brought 130 people including representatives from the MET, 13 PAs across the Gobi region, environmental state inspectors, rangers, conservation societies, and international projects. Dr. Tungalag, ZSL Country Director made a presentation on "Rangers methods to collaborate with community members", talked about ZSL Conservation work. The ZSL team also organized game-based nature conservation sessions using the 'Nomadic Trunk' on the second day. Dr. Tungalag also made a presentation on 'Who is the eco-friendly herder' to over 70 herders at the conference of 'Eco-Herder'.

ACTIVITIES contribute towards **OUTPUT 5:** Remote rural herders have improved wellbeing and financial stability built through a successful and sustainable community banking model that supports sustainable resource use efforts e.g. through rangeland management actions and Eco Clubs.

5.1 Support CRKs to implement RRMR by assessing pasture conditions in buffer-zone bags and mapping grazing areas under RRMR and establishing pasture use contracts with herder households NUM+ZSL+CRK: The NUM, research partner of the ZSL Mongolia is producing the GGASPA rangeland map including BZ that defined the priority habitat management intervention sites to help in pasture management planning of the 5 soums. The ENSURE project agreed to share its photo monitoring data and remote sensing data for the mapping since the two projects have the same target area in the Gobi. According to the Integrated Legal Information System of the Government of Mongolia, only Shineshinst soum Citizen Representative Khural of Bayankhongor adopted Soum RRMR as of 12 Jan, 2020 (please visit this link). A list of the herder households in the GGASPA buffer zone (5 soums of 2 aimags) is ready for further action.

5.2 Facilitate formation of VSLAs among herders sharing seasonal pastures to increase herder access to financial services to support long-term livelihood development (i.e. livestock migration and fodder support, and accessing veterinary services) ZSL+BZC+CRK: For the objective of building a banking model for the well-being and financial stability of the remote Gobi herders, the project organized a study tour "Herder to Herder" in 12-17 of June, 2022 from Gobi to Khangai region jointly with the CMC. In total, 40 representatives of the project target herders in the BZ visited the LPA "Khoid Mongolia Gol-Teeliin" in Bulgan soum, Arkhangai aimag. They travelled 2500km in one way through Zahui Zarman Gobi and Ulaan Shall Valley where is a main migration habitat of the iconic species of the Great Gobi – Goitered gazelle, Wild ass, and Saiga antelope etc. They visited the steadily working community-based conservation oriented herder groups in the LPA and learned from their experience how to become a community to do joint BD monitoring for protecting natural resources', and protecting against poaching and illegal logging (that have been significantly decreasing in last 5 years). They also learned about the community created fund for savings/loans and social activity, and how each member of the community can contribute money to the fund, buy shares, take loans, repay loans, apply for loans, and solve loan applications. Thus, they've understood by working as community in this way, it can be save a lot of time while making the busy work of the herdsmen easier. After the study tour there are 7 herder household groups established in the BZ with 121 members of 84 HHs including 47 women and 74 men with two types of fund for saving/loanning and conservation actions.

5.3 Support construction of two wells in buffer zone areas to limit livestock entry into SPA in search of water: The project selected two waterholes in the buffer zone, Tooroin Khoid Khooloi and Tsagaan Ders jointly with the CMC, respective soum authorities and the GGASPA Administration to increase livestock water in the bufferzone and discourage livestock movement into the the park in search of water. During 20-25 October, the project installed the solar-powered pumps at the two selected wells and representatives CMC, Soum authorities (Altai and Tsogt) and the GGASPA made a side visit and accepted the wells to include into the soum asset register.

3.2 PROGRESS TOWARDS PROJECT OUTPUTS

OUTPUT 1: GGASPA monitoring programme is informing effective GGASPA and CMC management, and future-proofed by building the capacity of Mongolia's future conservationists (with 6 indicators)

Indicator 1.1: GGASPA monitoring programme established (baselines set by camera-trapping, rangeland health surveys and SMART by the end of Y1.

Baseline: The GGASPA Administration developed its Annual Monitoring Plan and got the approval to implement it from the MET. According to the plan, a total of 21 rangers (in pairs) will conduct monitoring patrols in 3 sections through a 650-850 km area twice a month. It usually takes 5 days to complete the inspection. A review of the plan is done twice yearly in June and December. Ranger performance is evaluated based on this review.

Progress: 1) There are data sets of camera-trapping at the 13 water points and these are are now being processed. 2) In the reporting period rangers conducted SMART patrolling four times across the GGASPA3) The NUM completed the baseline rangeland health survey and submitted the report. The year-end survey will be conducted in year three.

Indicator 1.2: 1.2 % of improved health status (current ecosystem health defined by NUM-led rangeland surveys) in 5 rangeland sites in GGASPA and 5 buffer-zone sites at end of Y3 (baseline to be set in Y1).

Baseline: . GGASPA BZ pasture condition was not consistent as from medium to low are heterogeneously located along. The majority of the chosen sites had ratings of less than 50, particularly in the eastern part of the BZ. In the buffer, which covers five sums, the average of the last 20 years, the livestock carrying capacity is -264,803 head sheep unit.

Progress: A baseline of the GGASPA ecosystem health has not been defined yet but pasture condition and carrying capacity has.

Indicator 1.3: GGASPA management actions are being informed by quarterly SMART patrols; six-month camera-trap surveys of priority waterholes and rangeland sites, by the end Y2

Baseline: Zero SMART patrolling in 2021.

Progress: The project supported several SMART training for the rangers, prepared a SMART platform adjusted to GGASPA and supplied with necessary smart phones to install the app. In the reporting year, SMART patroling commenced in the GGASPA and currently data are under processing.

Indicator 1.4: CMC are applying adaptive management through integration of GGASPA monitoring results (SMART, camera trap, rangeland health surveys) by end of Y2.

Baseline: CMC was established, has its approved Constitution, and the first-year plan for the conservation of Wild Camels as of 2021.

Progress: There are several projects and programmes conducting research and conservation work in the GGASPA. The project jointly with GGASPA Administration gathered these organizations for the research conference and enabled them to present their activity in the Great Gobi. ademic conference “Research and Conservation in the Great Gobi” that jointly organized with GGASPA Administration and NUM. There were 17 presentations introduced to 41 participants and they agreed as before to share available data and co-create the GGASPA biodiversity database that would be a base of adaptive management. A system dynamic model of the BZ soums based on the same socio-economy and environment indexes was developed and introduced to the CMC for furher action.

Indicator 1.5: NUM researchers are able to conduct primary analysis of camera-trap data and SMART patrolling data following series of online training by ZSL UK experts by end of Y2 and able to do independent analysis by end of Y3.

Basline: 0

Progress: Conducted a primary analysis of camera-trap data from 26 automatic cameras in 12 water points that was placed in the GGGASPA. According to the data, there are 238,064 images in total and identified 46,278 images of 14 species for further processing and analyzing.

Indicator 1.6: Two NUM postgraduate students achieve MSc after working closely with the GGASPA to generate data from rangeland health and camera trap surveys, to support effective management of GGASPA and CMC by Y4.

Baseline: 0

Progress: One of the research students - Mr. Munkhbayar, won 3rd and 2nd place of following competitions based on the generating data from camera trap survey in the GGASPA: (i) Bachelor Students’ Academic Conference (competition) organized by the Biological Department of the School of Arts and Sciences, National University of Mongolia; (ii) Mongolian Young Researchers’ II Research Conference (competition) "Natural Resources Use and Protection" organized by the Environmental Research and Analysis Center under the Ministry of Environment and Tourism. His presentation topic was “Biodiversity and Water Use of the Large Mammals in certain oasis and its surrounding area of the GGGASPA”.

OUTPUT 2: Scalable habitat management and waterhole restoration model areas are demonstrating effective conservation interventions to restore the GGASPA desert ecosystem, to support the recovery of Wild camels species and BD (with 3 indicators)

Indicator 2.1. GGASPA and its buffer-zone are delineating degraded and priority habitats, critical waterholes and oases identified by end of Y1.

Baseline: As part of the NGS-funded project, ZSL conducted a telephone survey in Nov, 2020 among 303 Gobi herders. The survey found that 31% of the herders reported that they know about wild camels, 98% think that wild camel has a negative impact on their livelihood. About 2% said that during the mating season, wild camels join domestic camel herds and attack and bite them and chase away females. Newborn hybrids are very wild, and difficult to tame (please visit this link).

Progress: Four boreholes have been selected for restoration with solar panel installation and its related construction for rangeland and wildlife water supply. Two of these boreholes were restored in the core zone with a combination of a solar panel well with pond for wildlife, and the remaining two boreholes in the BZ have been equipped with a solar panel well for target HHs.

Indicator 2.2. Two key waterholes' water supply restored

Baseline: There were seven boreholes in GGASPA that need a pump installed, of which ZSL installed two pumps with funds of NGS and Gaia Nature Fund (Gantumur valley and Buuriin khyar).

Progress: Solar panels were installed in the 4 wells and a 30 tonne water storage pond was established in the GGASPA. As a result, the water supply for wild animals in the core zone has increased, meanwhile herders' work became easier in the buffer zone, and their economic standing improved. For example, a total of 15-18 herder households live around the Tsagaan Ders well from Nov to Apr every year (fall and winter place), and they water 10,950 small and 550 large livestock for 6 months. Before, they used a hand-operated gasoline-powered motor to water the livestock and spent ₮ 90,000,000 (£ 28,311.05) in 1-2 years to renew the motor, and ₮ 58,320,000 (£ 18,345.56) in 6 months for gasoline. By installing solar panel in the well, this cost reduced to zero. In addition, land degradation around the well is reduced by drawing a canal and increasing water distribution for livestock. According to the automatic camera survey, there are 10 species of mammal (snow leopard, gray wolf, red fox, Gobi bear, Eurasian lynx, Argali sheep, Bactrian camel, wild ass, black-tailed gazelle, Tolai hare) and some birds watered in the wells.

Indicator 2.3. Three oases (identified in Y1) demonstrating recovery:

Baseline: no recovery work.

Progress: Experimental-research on natural restoration in the selected oasis – Baruun Sharga has shown that one of the best ways to restore the water point of the oasis is to improve its surrounding area, in particular plant cover, while making a precise contribution to creating a favorable drinking place for wild animals in the Great Gobi. It is planned to expand the experiment-research and conduct comparative experiments in 3 different places: Bayantoroi, Baruun Sharga oasis, and Zun Sharga from May, 2023.

OUTPUT 3: Collaborative and inclusive governance institutions are in place and making coordinated, landscape-level management decisions, employing adaptive management approaches informed by robust ecosystem monitoring.

Indicator 3.1 Three-year BZ Management Plan designed and agreed using participatory approaches are in place (baseline: One-year BM plan) by end of Y1 at:

Baseline: One-year BM plan was implemented from 2019-2020.

Progress: A three-year CMC Management Plan designed and agreed using participatory approaches are in place. A yearly action plan of the BZ 5 soums agreed, implemented and assessed during the CMC bi-annual and annual meeting in Y2.

Indicator: 3.2 Fully operational CMC meeting independently chaired by elected CRK representatives, meeting at least two times per year, with decision making and annual MP development being informed by environmental results from GGASPA and BZC by end of Y2.

Baseline: CMC structure and Constitution were discussed and approved in 2019.

Progress: A fully operational CMC meeting held twice a year (bi-annual and annual) chaired by elected the Altai soum's CRK representative – Mrs. Ulziisaikhan. The donor projects (ZSL, UNDP) jointly with the GGASPA Administration Office informed the results of implementing activities.

Indicator: 3.3% increase of confidence in transparent and equitable BZC governance report by women and men in herder HH by end of Y3 (baseline set in Y1).

Baseline: In regard to the question about "Supporting the participatory governance in the implementation of the management of the GGASPA", a third (34.8%) of respondents had heard about the management of the buffer zones, while 65.2% had not. This indicates that local people living in the Great Gobi Special Protected Area A had little knowledge about the management.

Progress: The Socio-economic Baseline Study of herders in GGASPA conducted and baseline of the indicator 3.3 set up.

Indicator 3.4: 50% of men and women in HHs (c.1272) report greater access to and understanding of environmental data to support sustainable NRM decisions by end of Y3 (baseline set in Y1).

Baseline: Half (56.5%) of the respondents said that they had 'good' knowledge of the local wildlife and plants, 29% said 'moderate' and 14.5% 'did not know'. In terms of location, respondents from Idren, Bayantooroi and Urt baghs, had higher levels of knowledge, while those from Ulziit and Urt baghs had lower levels of such knowledge (source: IRIM report).

Progress: The Socio-economic Baseline Study of herders in GGASPA is investigated herders knowledge and attitudes related to the natural resources of the area, degradation, conservation issues, and wildlife. A baseline of the indicator 3.4 set up.

OUTPUT 4: Ground-up awareness-raising about Great Gobi uniqueness by environmentally conscious GGASPA communities that are empowered with the skills and knowledge to improve livestock management and comply with the Responsible Rangeland Management Regulation (RRMR).

Indicator 4.1 Five Eco-Clubs (1/bufferzone soum) better resourced and re-activated with:

Baseline: According to the baseline study, there was a total of eight eco-clubs in the five target soums. During the data collection, it was observed that activities of the eco-club had been reduced due to the COVID-19 pandemic, and the members' number decreased.

Progress: There are 7 schools across the BZ actively participated to the events that organized by the project not only 7 eco-clubs as a target. The eco-clubs have 10 teachers, and 237 pupils in Y2. It was registered 8 eco-clubs of 7 secondary school with 13 teachers and 243 pupils in the buffer zone in Y1. The eco-cubs are equipped by a package for public awareness. 201 teachers and 2702 pupils trained and empowered via 69 Events that eco-clubs organized In total 7 groups established including 121 herders (47 women, 74 men) of 84 HHs with banking ₮ 30,597,000 (£ 14,344.81)

Indicator 4.2 Community-led public awareness campaign in target buffer zone bags in each soum (c. total 1,272 HHs) reaches:

Baseline: 0

Progress: A first public awareness campaign based on the learned tools during field trip/training was organized in May, 2022 across the BZ soums jointly with the eco-clubs/secondary schools, CMC, GGASPA Administration Office and ENSURE project. Since than 1871 citizens of the 5 soums involved to the events on nature conservation topics via eco-club.

Indicator 4.3 Pasture management improved through:

Baseline: 0

Progress: Two soums in the BZ have Pasture Management Plan including BZ area approved by the CRK in 2021. Implementation of the plan is 70%, reported by soum official. Rangeland condition and carrying capacity in the BZ was determined and discussing whether a need a separate plan of BZ Pasture. Management or a chapter of each soum's Pasture Management Plan with CMC and soum authority.

Indicator 4.4 Minimum 300 households (from c. 1272) representative of local demographics have RRMR capacity with:

Baseline: 0

Progress: There are 425 (272 men, 153 women) herders of 286 HHs belongs to 8 bags/5 soums in the BZ involved to the capacity building activities from the project.

OUTPUT 5: Remote rural herders have improved wellbeing and financial stability built through a successful and sustainable community banking model that supports sustainable resource use efforts e.g. through rangeland management actions and Eco Clubs.

Indicator 5.1 Five community banking funds mechanisms in place with the constitution and environmental fund:

Baseline: According to the socio-economic baseline study, the participation in the community savings fund was very poor, with only 2.9% of all households reported. In addition, only one in five households recorded income and expenditure and made economic calculations. Urtyn Gol bagh (Shinejinst soum, Bayankhongor aimag) had the highest rate (35.6%), while Ulziit bagh (Erdene soum, Gobi-Altai aimag) had the lowest rate (13.3%). A quarter (24.6%) of respondents reported being members of CBOs. These CBOs included Idren Zalan Jinst, Irves, Cashmere Cooperative, Khairkhan Iveel and Tsarmyn Tsagaan. The partnerships were usually working in the areas of environment, livestock production and small trade.

Progress: During the reporting period, there are 7 VSLA groups with 121 (74 men, 47 women) members of 84 HHs belongs to 8 bagh/5 soums in the BZ. These groups have a loan fund of ₮ 30,597,000 (£ 14,344.81). Thus, members could be easily borrowed from the loan fund when needed, and from the social fund to finance environmental protection and other group activities. In total, 54 BZC members trained on managing the community banking funds.

Indicator 5.2 Community banking GESI plan implemented with:

Baseline: 0

Progress: In total, there are 74 women members in the 7 VSLA groups and they participated to the community banking decision making.

Indicator 5.3 Community banking environmental funds supporting RRMR implementation, through:

Baseline: Boreholes without construction

Progress: Two wells – Tooroin Khoid Khooloin and Tsagaan Dersnii in the BZ constructed for the HHs. A selected oasis Baruun Sharga for habitat restoration (water source protection, fencing and planting native grass) done as an example for other two places for rangeland restoration.

3.3 PROGRESS TOWARDS THE PROJECT OUTCOME

Outcome: Conservation of wild camel and desert ecosystem enhanced in GGASPA through strengthened management and stakeholder collaboration, with communities empowered to improve rangeland management and herder well-being.

Indicator 0.1: Stable or increasing counts of representative populations of Wild camel species (*Camelus ferus*), and key indicator ungulate species e.g. Asiatic wild ass *Equus hemionus*, and Goitered gazelle *Gazella subgutturosa* by Y2 and Y3 at sample sites (baselines set in Y1)

Baseline: 0

Progress: According to the Bactrian camel population survey 1943-2015, future trends are estimated to be 475 individuals in 2020, 483 individuals in 2030, and 455 individuals in 2040. Based on results from the 2000-2021 survey, future trend of the Goitered gazelle is 1875 individuals in 2020, 1800 individuals in 2030, and 1625 individuals in 2040. A future trend of wild ass based on the the population survey, 730 individuals in 2020, 700 individuals in 2030, 600 individuals in 2040.

Indicator 0.2: At least 20% of poplar tree oases (c. 21) across key camel migratory routes are protected and demonstrating signs of rehabilitation by Y4.

Baseline: 0

Progress: Two waterholes (Bayansair, Khatan suudal) are restored across key wild camel migratory routes in core zone of the GGASPA. Supported natural restoration of poplar tree oasis – Baruun Sharga under a joint experimental research work with the NAP project.

Indicator 0.3: The collaborative participatory approach for buffer zone management by the GGASPA and CMC is supported and promoted by the MET as best practice for other PAs by Y4.

Baseline: 0

Progress: The GGASPA CMC meeting is stabilized (twice a year) and the council members learnt collaborative participatory approach. As a result they developed and adopted an integrated action plan for 3 years among 5 soums in the buffer zone.

Indicator 0.4: 20% increase in abundance of key plant species (indicators of rangeland health) in GGASPA buffer-zone by end of Y3 (baseline and indicator species set by NUM in Y1).

Baseline: 0

Progress: Baseline and indicator species set by the NUM team as BZ pasture conditions are not consistent in all areas that have medium to low pasture conditions. The majority of the chosen sites, particularly in the BZ eastern part had ratings less than 50%. However, the grazing capacity is higher in the BZ eastern part and southern part of the Idren Mountain Range than in other parts, while the Tsogt sum has the lowest value for livestock carrying capacity. In the BZ, the average of the last 20 years, the livestock carrying capacity is -264,803 head sheep unit. There are 55,381 livestock carrying capacity in the Shinjinst sum, 70,441 livestock in Bayan-Undur sum, 47,532 livestock in Erdene sum, 30,862 livestock in Tsogt sum, and 60,984 livestock in Altai sum.

Indicator 0.5: 40% of herder HHs (c.1272) report changing grazing practices to adopt and comply with the RRMR by end of Y3 (baseline set in Y1).

Baseline: According to the baseline survey, 31.3% of respondents said the number of water points and wells should be increased, 23.4% said reducing headcount and improving the quality of livestock, 14.1% suggested fencing and rotating pasture, 14.1% mentioned cloud seeding, 6.3% the stopping of mining activities, and 10.9% 'did not know'.

Progress: In total 1,969 (993 men, 976 women) persons of 572 HHs in the BZ (5 soums of 2 aimags) with 172,460 (camel 8,834, horse 3,186, cow 2,404, sheep 26,872, goat 126,620) livestock (Dec 2021). However, only 1 soum out of 5 in the BZ has officially approved RRMR.

Indicator 0.6: 10% improvement in wellbeing of c. 318 herder households (25% of 1272) including vulnerable groups, with women and men benefiting equally by end of Y3 (baseline to establish median household wellbeing index scores set in Y1).

Baseline: 0

Progress: A baseline set up as the multidimensional poverty index was 0.114, indicating that 28.2% of the HHs were impoverished in 2022. For well-being, 7 herder groups with 122 members (70 men and 52 women) of 122 HHs are established in accordance with the VSLA model from zero baseline. Now they have with minimum £471-1100 reserved at any given time.

3.4 MONITORING OF ASSUMPTIONS

Project Outcome and Output level assumptions still hold true. There have not been yet any changes in the assumptions.

3.5 IMPACT: ACHIEVEMENT OF POSITIVE IMPACT ON BIODIVERSITY AND POVERTY REDUCTION

IMPACT: *Globally important wildlife, including the wild camels, thrive in the Mongolian Altai-Gobi with the welfare and socio-cultural traditions of herder communities secured through sustainable use of the fragile desert ecosystem*.

The project is contributing inputs to conserve the unique and fragile ecosystem of the Gobi-desert in Mongolia home to a number of critically endangered species: wild camel (*Camelus ferus*), Asiatic wild ass (*Equus hemionus*), argali (*Ovis ammon*), and Gobi bear (*Ursus arctos*), as well as endemic plant species (based on rangeland health assessment).

In this reporting period, solar panels were installed in 4 wells and a 30 tonne water storage pond was established in the GGASPA. As a result, the water supply for wild animals in the core zone increased, meanwhile herders' work became easier in the buffer zone, and their economic standing improved. For example, a total of 15-18 herder households live around the Tsagaan

Ders well from Nov to Apr every year (fall and winter place), and they water 10,950 small and 550 large livestock for 6 months. Before, they used a hand-operated gasoline-powered motor to water the livestock and spent ₮ 90,000,000 (£ 28, 311.05) in 1-2 years to renew the motor, and ₮ 58,320,000 (£ 18,345.56) in 6 months for gasoline. By installing solar panels in the well, this cost reduced to zero. On other hand, land degradation around the well is reduced by drawing a canal and increasing water distribution for livestock. According to the automatic camera survey, there are 10 species of mammals (snow leopard, grey wolf, red fox, Gobi bear, Eurasian lynx, Argali sheep, bactrian camel, wild ass, black-tailed gazelle, tolai hare) and some birds watered in the wells.

The release of a simplified scientific book "Great Gobi – My Motherland" contained full information about Trans-Altai, and the "Nomadic Trunk" the comprehensive educational tool with 25 lessons on wildlife conservation was localized well at the Gobi eco-clubs. Combined, these resources have been a a breakthrough for the ZSL Mongolia team and local stakeholders in raising environmental awareness in an innovative way. In this reporting period, the Nomadic Trunk reached to 367 pupils, 15 teachers, 286 herders/citizens and 98 civil servants. In particular, 27 pupils and 15 teachers mastered the tool and 20 wildlife conservation events organized among locals so far.

4. PROJECT SUPPORT TO THE CONVENTIONS, TREATIES OR AGREEMENTS

ZSL collaborated closely with the NFP of the CMS - Ms. Dorjsuren Ariuntuya, Senior Officer, Department of Climate Change and International Cooperation, MET as the project covers essential habitat for Wild camel and other CMS species in GGASPA. The NFP fully supports this proposal and its significant CMS contributions in Mongolia.

The project supports the CBD and Mongolia's National Biodiversity Strategy and Action Plan (2015-2025) and contributes to certain conventions and agreements. Namely, Aichi Targets, CMS, UNFCCC, SDGs (1, 2, 4, 5, 8, 10, 13, 15, 17).

5. PROJECT SUPPORT TO POVERTY REDUCTION

Expected beneficiaries of the project are 1272 buffer-zone households of 7 bags and the project has been empowering them to have a stronger voice in conservation through five CRKs/ BZCs and CMC, with women and vulnerable groups achieving greater representation (20-40%) in BZCs and VSLAs.

According to the baseline survey among 69 buffer-zone households conducted in Jan-Mar, 2022, the multidimensional poverty index (MPI) was 0.114, indicating that 28.2% of the households were impoverished. Household property ownership and infant mortality rates were at a low rate, but households were deprived of other indicators of living standards due mainly to limited access to drinking water, poor sanitation, poor flooring materials in homes, and fuel for cooking. More than 90% of the households had limited access to adequate sanitation and fuel for cooking, while over 80% lacked reliable sources of drinking water and flooring in their homes.

To help address the limited access to financial services, the project had meetings combined with training for herders on the proven banking model – VSLA. During the reporting period, 7 herder groups with 122 members (70 men and 52 women) of 122 HHs are established in accordance with the VSLA model. Now they have with minimum £471-1100 reserved at any given time.

6. GENDER EQUALITY AND SOCIAL INCLUSION

The project has strategies for improved gender equality by facilitating increased participation of vulnerable social groups in VSLAs, and Eco-clubs and cooperating with local authorities to promote women's and girls' roles. Since the start, the project has promoted equal participation of children in Eco-Clubs and membership in each soum BZCs. ZSL follows Gender Equality and Social Inclusion Strategy (GESI) principles in the project implementation, that are relevant to local gender status within the CMC to provide entry points for greater female participation in BZCs, and rangeland management training, and awareness-raising events. The project made every effort to empower women in the leading position in local area including BZ CMC Director, School Principles and Eco-club teachers. For example, two eco-club teachers participated in the study tour to Gulzat LPA which is a national best practice of community-based conservation and introduced the LPA experiences such as management, community groups and eco-clubs. Now they share what they've learned during the trip with the BZ citizens. Also, equal access to

opportunities for them to increase their skills has improved and allows them to develop, plan and report. The eco-clubs' leader have been female-dominant thus the project is working to encourage male participation.

Please quantify the proportion of women on the Project Board[1].	42.8% (Country Director, Conservation Program Officer, Finance Officer)
Please quantify the proportion of project partners that are led by women, or which have a senior leadership team consisting of at least 50% women[2].	5 soums' BZC – 20% Eco-clubs – 100% NUM – 100%

7. MONITORING AND EVALUATION

ZSL Monitoring and Evaluation systems: Project monitoring and evaluation is a critical process to ensure the project is on track to deliver its outcome and contribute to its impact. ZSL employs several internal M&E tools to track and adapt the project as necessary. For this project, the ZSL team holds weekly meetings with ZSL Mongolia Country Director, and also with the project coordinator in ZSL HQ to discuss progress towards achieving weekly milestones. Completion of these milestones are monitored through the project workplan and logical framework, and monthly reports are submitted using ZSL's web-based systems, including activity, indicator, and finance tracking. The project provides half-year and annual reports and provides an important M&E benchmarking process. The monthly highlights are shared with the partners via facebook and the report at the GGASPA CMC meeting.

8. LESSONS LEARNT

Challenge 1: There were difficulties in working with the SCRK and Soum Governor Office, namely the newly elected leaders do not understand the work of the GGASPA CMC, they have limited knowledge of what to do, and they think that nature conservation costs should be budgeted in the project. Also, the status of the CMC is still unclear for them, and there were no specific provisions other than the Chair of the CMC being the Chair of the SCRK.

Solution:

- Provide more information and legal data to the representatives of the CRK and the employees of the soum Governor's Office.
- Submit proposals for the independent status of the CMC and provide them with full-time public administration employees, not a political official.

Challenge 2: There is a misunderstanding among herders about donor funded projects. Most of them think the government and donor funded projects should protect and rehabilitate pasture while they use. Also, herders in Bayan-Undur soum are psychologically stressed due to frustration with mining activities.

Solution: Clarify the responsibilities of herders and citizens to protect the environment, improve training and information on the proper use of pastures, restoration, grazing, and release, and work towards becoming a partnership for the collective management of pasture resources as stipulated in the Environmental Law.

Challenge 3: Less team work of the GGASPA Administration team

Solution: Work closely with the team. It is crucial to provide information to the administrative staff and the rangers timely. Cooperation will be more effective if project information is distributed uniformly to all employees and rangers, not just at the management level.

[1] A Project Board has overall authority for the project, is accountable for its success or failure, and supports the senior project manager to successfully deliver the project.

[2] Partners that have formal governance role in the project, and a formal relationship with the project that may involve staff costs and/or budget management responsibilities.

9. ACTIONS TAKEN IN RESPONSE TO PREVIOUS REVIEWS (IF APPLICABLE)

According to the comments and queries for Project Leader in the review, we provided information in this annual report on how the relationships between project partners are managed; corrected the Outcome statement in Annex 1; clarified the target numbers of VSLAs to be established; reported on baseline for indicator 2.2; used the list of MoV in the agreed project logframe to select the type of evidence and appended. We decided to leave as before the indicators that suggested to be 'SMARTened (1.1, 1.2, 2.3 and 3.3) since the project is a 3 year and/or short-term project. It was considered that there is not really need to change the indicators at project the mid-term.

10. Risk Management

The project has not had any risks arise in the last 12 months. However, a team will be developed a risk register as an existing project in accordance with the temple on the Darwin Initiative website.

11. OTHER COMMENTS ON PROGRESS NOT COVERED ELSEWHERE

The project design has not been enhanced; not encountered significant difficulties, and not faced any particular risks during the Y1 and Y2.

12. SUSTAINABILITY AND LEGACY

The project is committed to building the capacity of CMC and GGASPA Administration, Eco-clubs, and buffer-zone herder communities while equipping them with the necessary skills to work more effectively together and take better informed joint actions. For example, the stakeholders organized CMC meetings twice and discussed and approved its Annual Plan. Eco-clubs learned the novel tool for ecological education, "Nomadic Trunk," for maintaining awareness-raising activities. Herder households learned about the VSLA approach to have a community-banking win-win mechanism for more sustainable income generation and self-supported sources for nature conservation.

The GGASPA management is improving through training events under Output 1 for establishing its monitoring (camera-trapping and SMART patrol) capacity, which will be further strengthened by existing research results (rangeland survey/ SMART data analysis).

CMC is expected to become a platform to support more evidence-based and representative decision-making, benefitting communities and the GGASPA ecosystem to oversee the integrated landscape management across the GGASPA.

13. DARWIN INITIATIVE IDENTITY

The project has consistently highlighted its funding source from the Darwin Initiative of the UK Government at all the events to project stakeholders and other collaborators. We placed the donor logo on project materials, including presentation slides, posters, and publications. Recent examples are the book "Great Gobi – My Motherland" (see this link); poster for events across the GGASPA BZ soums (see this link); and newly restored wells signboard.

The Darwin Initiative funding was recognised as a distinct project with a clear identity among the project stakeholders at national and local levels. The Mongolian conservation community (government organizations, CSOs, and INGOs) has a good understanding of the Darwin Initiative, the largest UK government Fund that supports environmental conservation. A dedicated page on the ZSL website under the Mongolia projects section provides key information on the project and its funding source. ZSL Mongolia also runs a Facebook page, becoming increasingly popular among social media users. For those without access to digital media, the project provides hard copies of training materials, reports, and guidelines in the mother language, including local project partners, herder communities, and eco-clubs.

On 15 Feb 22, ZSL Mongolia cooperated with the UK Embassy organized a meeting with invitees from Government of Mongolia, NGOs that operating in this field, and Mongolian Airlines to join the "United for Wildlife" initiative supported by the William, Prince of Wales and William Hague (see this link). The Ambassador has strongly supported ZSL Mongolia's work since the first DI-funded project in Arkhangai Local Protected Area and the IWT CF project (2018-2021). He talked about the existing projects (MDI-2 and IWT-3) during his meetings with the Government of Mongolia.

The ZSL social media outlets reach 37.4k followers on Twitter, 17.7k Instagram followers and 47k followers on Facebook. ZSL Mongolia contributes project-related content monthly to ZSL's Press team, including Darwin Initiative-funded activities. The project activities were reported on the ZSL London web page (c.510,000 users per month in 2022) and ZSL Mongolia Facebook Page. The page has 1.1K followers so far had 869 likes. It had 450 followers and 354 likes end of Y1.

14. SAFEGUARDING

ZSL has a **"Global Safeguarding Policy"** and **"Global Code of Conduct"** policy with associated documents and training to guide and inform staff about safeguarding. These policies outline ZSL and its staff's responsibility to ensure sure their staff or other representatives, operations, and programmes do no harm children and adults at risk, nor expose them to abuse exploitation, bullying or harassment. It also covers how ZSL's safeguard its own staff and other representatives at all times, including protecting them from harm and inappropriate behaviour such as bullying and harassment including sexual harassment.

ZSL has a safeguarding policy in place titled **"Policy and Procedure to safeguard children and adults at risk"** and implements this document which provides guidance on how to establish local safeguarding links and how to deal with safeguarding concerns should they arise in overseas activities. Every employee of the ZSL has access to this policy and familiarized with this.

ZSL has an implemented risk assessment procedure and conducts risk assessment prior to the field trip and prepares an **Emergency Response Plan**. This is a vital part of safeguarding, minimising and evaluating risks by undertaking a risk assessment for each project or activity undertaken in project sites. ZSL staff are aware that if someone is at risk on the project site they report after responding appropriately.

ZSL has **Code of Conduct** in place and all staff were subject to training by HR and are familiar with the Code of Conduct.

Has your Safeguarding Policy been updated in the past 12 months?	**Yes**/No
Have any concerns been investigated in the past 12 months	Yes/**No**
Does your project have a Safeguarding focal point?	**Yes**/No [*If yes, please provide their name and email]* Mr. Amartaivan Ulambayar [redacted]
Has the focal point attended any formal training in the last 12 months?	Yes/**No** [*If yes, please provide date and details of training*]
What proportion (and number) of project staff have received formal training on Safeguarding?	Past: **100% [5]** Planned: **100% [5]**
Has there been any lessons learnt or challenges on Safeguarding in the past 12 months? Please ensure no sensitive data is included within responses. **None**	
Does the project have any developments or activities planned around Safeguarding in the coming 12 months? If so please specify. **No**	

15. PROJECT EXPENDITURE

Please expand and complete Table 1. If all receipts have not yet been received, please provide indicative figures and clearly mark them as Draft. The Actual claim form will be taken as the final accounting for funds.

Table 1: Project expenditure during the reporting period (1 April 2022 – 31 March 2023)

Project spend (indicative) since last Annual Report	2022/23 Grant (£)	2022/23 Total Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)	[redacted]			

Consultancy costs		[redacted]		
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items				
Others				
TOTAL	**167,326**	**166,649**	**0,40%**	

Table 2: Project mobilising of matched funding during the reporting period (1 April 2022 – 31 March 2023)

	Matched funding secured to date	Total matched funding expected by end of project
Matched funding leveraged by the partners to deliver the project.	[redacted]	
Total additional finance mobilised by new activities building on evidence, best practices and project (£)		

16. OPTIONAL: Outstanding achievements or progress of your project so far (300-400 words maximum). This section may be used for publicity purposes

I agree for the Biodiversity Challenge Funds Secretariat to publish the content of this section (please leave this line in to indicate your agreement to use any material you provide here).

Please see section 3.5 Impact: achievement of positive impact on biodiversity and poverty reduction

Annex 1: REPORT OF PROGRESS AND ACHIEVEMENTS AGAINST LOGFRAME FOR FINANCIAL YEAR 2022-2023

Project summary	SMART Indicators	Progress and Achievements April 2022 - March 2023	Actions required/planned for next period
Impact Globally important wildlife, including the **wild camels**, thrive in the Mongolian Altai-Gobi with the welfare and **socio-cultural traditions of herder communities** secured through **sustainable use of the fragile desert ecosystem**		The installation of solar panels in 4 wells and a 30-ton water storage pond in GGASPA has led to an increase in the water supply for wild animals in the core zone and an improvement in the economic standing of herders in the buffer zone. Before the installation of solar panels, herders spent a significant amount of money renewing a hand-operated gasoline-powered motor to water their livestock, but with the installation of solar panels, this cost has reduced to zero. The land degradation around the well is also reduced by drawing a canal and increasing water distribution for livestock. The automatic camera survey has shown that ten species of mammals and some birds are watered in the wells.	A research on groundwater use and water chemical composition at the water points in the GGASPA will be conducted. Results of the water composition research will help to clarify whether there are conditions for the wild animal diseases occurrence in the water points.
Outcome Conservation of wild camel and desert ecosystem enhanced in GGASPA through strengthened management and stakeholder collaboration, with communities empowered to improve **rangeland management** and **herder well-being**.	**0.1** Stable or increasing counts of representative populations of Wild camel species (***Camelus ferus***), and key indicator ungulate species e.g. Asiatic wild ass ***Equus hemionus***, and Goitered gazelle ***Gazella subgutturosa*** by Y2 and Y3 at sample sites (baselines set in Y1)	According to the Bactrian camel population survey 1943-2015, future trends are estimated to be 475 individuals in 2020, 483 individuals in 2030, and 455 individuals in 2040. Based on results from the 2000-2021 survey, future trend of the Goitered gazelle is 1875 individuals in 2020, 1800 individuals in 2030, and 1625 individuals in 2040. A future trend of Wild ass based on the the population survey, 730 individuals in 2020, 700 individuals in 2030, 600 individuals in 2040.	Continue research and monitoring based on the SMART patrolling and camera-trapping, and habitat/rangeland survey at the sample sites.

	0.2 At least 20% of poplar tree oases (c. 21) across key **camel migratory routes** are protected and demonstrating signs of rehabilitation by Y4.	Two waterholes (Bayansair, Khatan suudal) are restored across key wild camel migratory routes in core zone of the GGASPA. Supported natural restoration of poplar tree oasis – Baruun Sharga under a joint experimental research work with the NAP project.	A research on groundwater use and water chemical composition at the restored water points; An experiment of habitat restoration in 2-3 plots including poplar three oasis.
	0.3 The **collaborative participatory approach** for buffer zone management by the GGASPA and CMC is supported and promoted by the MET as best practice for other PAs by Y4.	The GGASPA CMC meeting is stabilized (twice a year) and the council members learnt collaborative participatory approach. As a result they developed and adopted an integrated action plan for 3 years among 5 soums in the buffer zone.	CMC meeting is planned in June, 23 and Jan, 24; Implementation assessment of the integrated action of the CMC for further action; Review on the CMC lessons learnt and best practices; and to introduce to the MET
	0.4 20% increase in abundance of **key plant species** (indicators of rangeland health) in GGASPA buffer-zone by end of Y3 (baseline and indicator species set by NUM in Y1).	Baseline and indicators species set by the NUM team as in below: The pasture conditions are not consistent via the BZ and that regions with medium to low pasture condition are heterogeneously located. The majority of the chosen sites, particularly in the BZ eastern part had ratings less than 50%. However, the grazing capacity is higher in the BZ eastern part and southern part of the Idren Mountain Range than in other parts, while the Tsogt sum has the lowest value for livestock carrying capacity. In the buffer zone, the average of the last 20 years, the livestock carrying capacity is -264,803 head sheep unit. There are 55,381 livestock carrying capacity in the Shinjinst sum, 70,441 livestock in Bayan-Undur sum, 47,532 livestock in Erdene sum, 30,862 livestock animals in Tsogt sum, and 60,984 livestock animals in Altai sum.	Field validation in summer/fall

	0.5 40% of herder HHs (c.1272) report changing grazing practices to adopt and comply with the **RRMR** by end of Y3 (baseline set in Y1).	Baseline set as in below: Totally 1'969 (993 men, 976 women) persons of 572 HHs in the BZ (5 soums of 2 aimags) with 172'460 (camel 8'834, horse 3'186, cow 2'404, sheep 26'872, goat 126'620) livestock (Dec 2021). However, only 1 soum out of 5 in the BZ has officially approved RRMR. According to the baseline survey among 69 HHs, 31.3% of respondents said the number of water points and wells should be increased, 23.4% said reducing headcount and improving the quality of livestock, 14.1% suggested fencing and rotating pasture, 14.1% mentioned cloud seeding, 6.3% the stopping of mining activities, and 10.9% 'did not know' in terms of the future activities in need to conserve the pastureland.	Science based experiment for grazing practices and livestock management in the Great Gobi to adopt and comply with the RRMR
	0.6 10% improvement in **wellbeing** of c. 318 herder households (25% of 1272) including vulnerable groups, with women and men benefiting equally by end of Y3 (baseline to establish median household wellbeing index scores set in Y1).	A baseline set up as in below in 2022: The multidimensional poverty index was 0.114, indicating that 28.2% of the HHs were impoverished. For well-being, 7 herder groups with 121 members (74 men and 47 women) of 84 HHs are established in accordance with the VSLA model from zero baseline. Now they have with ₮ 30,597,000 (£ 14,344.81) reserved at any given time.	VSLA groups will active their social/environmental fund not less ₮ 30,597,000 (£ 14,344.81) reserve at any given time. The members benefitted certain percent increase in shares annually.
Output 1 **GGASPA monitoring programme** is informing **effective GGASPA and CMC management**, and future-proofed by building the capacity of Mongolia's future conservationists.	**1.1** GGASPA **monitoring programme** established (baselines set by camera-trapping, rangeland health surveys and SMART by the end of Y1.	There are data set of camera-trapping at the 13 water points and 4 times SMART patrolling for the GGASPA monitoring programme improvement.	
	1.2 % of improved health status (current **ecosystem health** defined by NUM-led rangeland surveys) in 5 rangeland sites in GGASPA and 5 buffer-zone sites at end of Y3 (baseline to be set in Y1).	A baseline of the GGASPA ecosystem health have defined yet but, pasture condition and carrying capacity as in the activity 1.3	

	1.3 GGASPA management actions are being informed by quarterly SMART patrols; six-month camera-trap surveys of priority waterholes and rangeland sites, by the end Y2	A quarterly SMART patrol sustained by the GGASPA team; a recommendation for management action based on the camera trap survey and rangeland research developed for the team	
	1.4 CMC are **applying adaptive management** through integration of GGASPA monitoring results (SMART, camera trap, rangeland health surveys) by end of Y2.	There are several projects are implementing in the GGASPA. Most of them were gathered and presented their activity in the Great Gobi during the academic conference "Research and Conservation in the Great Gobi" that jointly organized with GGASPA Administration and NUM. There were 17 presentations introduced to 41 participants and they agreed as before to share available data and co-create the GGASPA biodiversity database that would be a base of adaptive management. A system dynamic model of the BZ soums based on the some socio-economy and environment indexes was developed and introduced to the CMC for furher action.	
	1.5 NUM researchers are able to conduct **primary analysis of camera-trap data and SMART patrolling data** following series of online training by ZSL UK experts by end of Y2 and able to do independent analysis by end of Y3.	Conducted a primary analysis of camera-trap data from 26 automatic cameras in 13 water points that was placed in the GGGASPA; According to the data, there are 238 064 images in total and sorted out 46 278 images of 14 species for further processing and analyzing.	
	1.6 Two NUM postgraduate students achieve MSc after working closely with the GGASPA to generate data from rangeland health and camera trap surveys, to support effective management of GGASPA and CMC by Y4.	One of the research students - Mr. Munkhbayar, won 3rd and 2nd place of following competitions based on the generating data from camera trap survey in the GGASPA: (i) Bachelor Students' Academic Conference (competition) organized by the Biological Department of the School of Arts and Sciences, National University of Mongolia; (ii) Mongolian Young Researchers' II Research Conference (competition) "Natural Resources Use and Protection" organized by the Environmental Research and Analysis Center under the Ministry of Environment and Tourism. His presentation topic was "Biodiversity and Water Use of the Large Mammals in certain oasis and its surrounding area of the GGGASPA".	
Activity 1.1 Procure field equipment for ongoing camera-trap surveys and SMART patrols, including necessary office equipment for research programme (year 1) ZSL		Within support of the project, the GGASPA Administration a package of the field equipment that including camera-trap batteries, 18 smartphones (Doogee s58 pro) with installed the SMART for PA rangers and border guards; and a high-capacity desktop computer for SMART data processing. It	GGASPA monitoring programme will be competed based on the camera-trapping, SMART patrolling and rangeland health survey

	was costs MNT 43,188,800 (GBP 12,520) in total.	
Activity 1.2 Organise GGASPA and Border Defence Agency annual training on camera-trap and SMART monitoring and co-develop GGASPA monitoring plan. ZSL	A total of 5 trainings for 2 years on the SMART enclosed with a user manual of its software for 101 people of the project target groups.	Planning advanced training on camera-trapping and SMART monitoring; Co-develop GGASPA monitoring plan
Activity 1.3 Conduct rangeland health survey (aboveground biomass, species richness, soil stability) inside SPA (5 plots) vs Bufferzone areas 5 plots (year 1 and 3) NUM	Pasture conditions in the GGASPA was not consistent throughout its buffer zone and that regions with medium to low pasture condition are heterogeneously located along the buffer zone. The majority of the chosen sites had ratings of less than 50, particularly in the eastern part of the buffer zone.	Develop a recommendation to modify the grazing management in the buffer zone based on the accurately determined carrying capacity.
Activity 1.4 Create and maintain a database interface for storing data collected by camera-trap surveys and SMART patrol reports integrated with rangeland survey results NUM+ZSL UK	A SMART database was created and collabored with the GGASPA Administration to improve its structure to adjust the GGASPA specifics. The NUM selected student (mentioned in the 1.8) worked on images on 3 packages of automat cameras in the project site in FY2. So far, he sorted out 238 064 images of 26 cameras from 12 water points. As a result, there were 46 278 images of 14 species further processing and analyzing.	Finalize the database interfaces based on existing data since FY1.
Activity 1.5 Conduct quarterly monitoring surveys through SMART patrol and feed into the integrated database (year 1 second half, 2 and 3, total 12 quarters) GGASPA	A quarterly monitoring survey combined with SMART app conducted 4 times in FY2. During the monitoring, there were 1 crimes detected.	Collected SMART data into the integrated database at the GGASPA/NUM
Activity 1.6 Deploy camera-traps and maintain camera-trap grid (SD cards and batteries), for a total of two field trips each year (6 times) ZSL + WCPF +GGASPA	In total 25 camera traps +1 for video capture deployed at the 5 water points with new batteries and SD cart are set (camera sensitivity was programmed to high with a time interval of 30 seconds). The camera data will be collected twice yearly: November and April (result is in the 1.4).	This activity will be continue at the 13 water points

Activity 1.7 Feedback results of GGASPA SMART monitoring, rangeland survey and camera trapping into the development of the GGASPA Management Plan (year 2 and 3) NUM+ZSL UK		Preliminary results of the surveys presented to the GGASPA Administration and its CMC in Jan, 23.	Joint review of the GGASPA MP with its administration and include the survey results to the related chapter of the MP as well as yearly action plan.
Activity 1.8 Two Mongolian MSc students will work on research of rangeland survey and wildlife camera trap study, and defend by the end of year 3 NUM		The NUM MSc and BA students work on rangeland survey and wildlife camera trap study. They introduced their research results to the CMC. A BA student won 2nd and 3rd place in a Student Research Work Competitions.	The students will defend by end of FY3: (i) Bactrian camel daily use of water based on the camera-trapping data; (ii) Research on the GGASPA buffer zone grazing capacity that using remote sensing method.
Acivity 1.9 CMC receives Brief on Monitoring results and uses them for AWP		Preliminary results of the camera-trapping, SMART and rangeland survey introduced to the GGASPA Administration and its CMC for further use them for CMC AWP.	Training for the GGASPA Administration team and its CMC members how to integrate monitoring results into the AWP and support to use monitoring data.
Activity 1.10 Camera and SMART data analysis training online, data collection design and data analysis (IZ & ZSL UK)		A planned online ToT on the advanced SMART for partners and national SMART stakeholders led by the ARTIO Conservation SMART Expert.	Following this ToT, ZSL plans a follow-up training for GGASPA rangers.
Output 2. Scalable **habitat management and waterhole restoration model** areas are demonstrating effective conservation interventions to restore the GGASPA desert ecosystem, to support the recovery of Wild Camels Species and other BD.	**2.1** GGASPA and its BZ are delineating **degraded and priority habitats, critical waterholes and oases** identified by end of Y1.	Creating a scalable habitat management and waterhole restoration model has been challenging work. Nevertheless, the project restored two waterholes by installing solar-powered pumps in the core zones of GGASPA (**2.2**). At one of them, Buuriin khyar, the project funded the creation of a large reservoir as the discharging capacity was very good (**2.2.1**). The restoration experiment at Baruun Sharga commenced in Y2, which involved fencing degraded areas and dispersing seeds to the fenced plots to see natural regeneration ability (**2.3**). Restoration experiments at two other oases will be conducted in Y3 (**2.3**).	
	2.2 Two key waterholes water supply restored (identified by 2.1): **2.2.1 Two small reservoir** are fully functional inside GGASPA by end of Y2; **2.2.2** Increased **wildlife presence** at key waterholes (i.e. wild camel, gazelle or Asiatic wild ass) by Y4 (baseline to be set in Y1); **2.2.3 Decreased or zero presence of domestic head of livestock** at key	Solar panels were installed in the two borehole wells and a 30-ton water storage reservoir was created in the GGASPA core zone increasing water access for wild animals. As shown in the automatic camera survey, over 10 species of mammals (Snow Leopard, Gray Wolf, Red Fox, Gobi Bear, Eurasian Lynx, Argali Sheep, Bactrian Camel, Wild Ass, Black-tailed Gazelle, Tolai Hare) and some birds watered in the wells. 2.2.2 and 2.2.3 will be evaluated and reported in Y3.	

	wildlife waterholes by Y4 (baseline to be set in Y1).		
	2.3 Three oases (identified in Y1) demonstrating recovery by: **2.3.1** Trialing assisted **rehabilitation interventions** (including reforestation, encouraging plant diversity) by Y4; **2.3.2 Vegetation coverage and erosion** surrounding waterholes shows recovery by Y4 (baseline = year 1)	An experimental-research on natural restoration in the selected oasis – Baruun Sharga shown that one of the best ways to restore the water point of the oasis is to improve its surrounding area, in particularly plant cover, while making a precise contribution to creating a favorable drinking place for wild animals in the Great Gobi. The experiment-research for restoration started in 3 different oases: Bayantooroi, Baruun Sharga oasis, and Zuun Sharga Marchy, 2023. 2.3.2 will be evaluated and reported in Y3	
	2.4 GGASPA institutionalise successful **habitat recovery models into their management plan**, for scaling to other areas and informing CMC on long-term utility of recovery interventions by end of Y3.	It will be evaluated and reported in Y3	
Activity 2.1. Map GGASPA camel habitat, waterholes and oases and prioritise habitat management intervention sites ZSL		GGASPA maps developed including topographic map (scale of 100 000) and a Waterhole location map.	To use the map as base to mark chnage
Activity 2.2. Restore two priority waterholes with a small reservoir for wildlife (through a bid)		4 wells and 30 ton water storage pond established in the GGASPA.	To conduct water related surveys in Sep, 2023
Activity 2.3 Support GGASPA Administration Office to implement habitat management interventions at least at three sites:, fence poplar patches and natural springs preventing browsing of young trees and protecting water recharge points, and planting native grasses in oases GGASPA+NUM		An experimental-research on natural restoration in the selected oasis – Baruun Sharga shown that one of the best ways to restore the water point of the oasis is to improve its surrounding area, in particularly plant cover, while making a precise contribution to creating a favorable drinking place for wild animals in the Great Gobi.	To expand the experiment-research and conduct comparative experiments in 3 different places: Bayantoroi, Baruun Sharga oasis, and Zun Sharga from May, 2023.
Activity 2.4 GGASPA conduct annual, including pre and post-intervention surveys in each habitat intervention site to measure change and efficacy GGASPA		The selected 3 habitat intervention to support natural restoration process including Baruun Sharga oasis is started in late Y2 and certain results will be brought up in Y3.	Pre and post-intervention surveys in each habitat intervention site to measure change by the GGASPA

Activity 2.5 Ensure incorporation of intervention results in GGASPA Management Plan and CMC Plan for possible replication across other threatened camel habitat sites GGASPA+NUM		Will be taken up in the report Y3	To incorporate the intervention results in GGASPA Management Plan and CMC Plan
Output 3. Collaborative and **inclusive governance institutions** are in place and making coordinated, **landscape-level management** decisions, employing **adaptive management approaches** informed by robust ecosystem monitoring.	**3.1** Three-year **BZ Management Plan** designed and agreed using participatory approaches are in place (baseline: One-year BM plan) by end of Y1 at: **3.1.1** GGASPA management level agreement of the plans together with a CMC, led by CRK (baseline: no formal agreement); **3.1.2** Five Soum-level (100%) plans agreed by each Buffer-Zone-Council (BZC) by the end of Y1 (baseline: no plans).	The CMC of GGASPA presents a multistakeholder platform engaging five district-level and two provincial-level governments, The GGASPA Administration, two Border Defence Units, seven Eco-Clubs and two donors overseeing landscape management of over 5 million ha areas. Given the complexity of managing such a vast area, the CMC set its structure and governance and management tools, including annual participatory planning and reporting feedback and exchanges/meetings (**3.2**) among the parties. CMC plan (**3.1**) for Y2 is the key tool for integrating the actions of the stakeholders and coordinating their efforts towards the agreed conservation goals. Three-year CMC Management Plan designed and agreed using participatory approaches are in place. Yearly action plan of the BZ 5 soums agreed, implemented and assessed during the CMC bi-annual and annual meeting in Y2.	
	3.2 Fully operational **CMC meeting** independently chaired by elected CRK representatives, meeting **at least two times per year**, with decision making and annual MP development being informed by environmental results from GGASPA and BZC by end of Y2.	A fully operational CMC meeting held twice a year (bi-annual and annual) chaired by elected the Altai soum's CRK representative – Mrs. Ulziisaikhan. The donor projects (ZSL, UNDP) jointly with the GGASPA Administration Office informed the results of implementing activities.	
	3.3 % increase of confidence in transparent and equitable BZC governance report by women and men in herder HH by end of Y3 (baseline set in Y1).	The Socio-economic Baseline Study of herders in GGASPA conducted and baseline of the indicator 3.3 set up. The endline survey in Y3 will identify the results	
	3.4 50% of men and women in HHs (c.1272) report greater access to and understanding of environmental data to support sustainable NRM decisions by end of Y3 (baseline set in Y1).	The Socio-economic Baseline Study of herders in GGASPA is investigated herders knowledge and attitudes related to the natural resources of the area, degradation, conservation issues, and wildlife. A baseline of the indicator 3.4 set up. The endline survey in Y3 will identify the results	
Activity 3.1 Support CMC during annual meetings to ensure smooth function of a democratic and representative buffer-zone management institution (6 workshops 3-year plan and 3 reports) to plan (GGASPA MP) and review the progress CMC+GGASPA		The project support CMC to organize its bi-annual and annual meeting in Y2. A bi-annual meeting held twice (Apr 14, 22 and Jan, 23) with 50 participants were represented 5 soums' authority and herders in the BZ, donor funded	The CMC bi-annual meeting planned in Jun, 2023 at Erdene soum center of GA aimag. An annual meeting will in Jan, 2023.

		projects, PA Administration and Border Defense Unit. The CMC plan introduced, discussed its performance and approved the plan for 2023-2024. The head of the council was also elected for new year.	
Activity 3.2 Oversee by CMC the formulation, approval, and implementation of Soum Buffer-zone management plans based on GGASPA BMP CMC+GGASPA		Besides in above mentioned in 3.1, the BZC of each soum organized their meeting in parallel with the event *"Building a shared future for all life"* held in May, 2022. The chairwoman of the CMC led the event and evaluated the progress of the work plan of each BZC using participatory methods. She also participated in Gobi Region Ranger Forum in Aug, 22 and presented the work of CMC to over 100 participants, including rangers and project officers. Also, a system dynamic model provided good chance to the GGASPA, CMC and the 5 sums authority for smart planning.	Performance of the CMC annual plan; Strength the CMC via each 5 soums BZC.
Activity 3.3 Conduct social surveys using representative samples of buffer-zone communities across five buffer-zone soums to collect baseline data in year 1 and at project end in year 3 ZSL		The ZSL team conducted a Baseline social survey (Please visit this link). A baseline social survey involving 69 HHs from the target soums to determine the socio-economic status of herders in the GGASPA done that combined with their KAP towards nature conservation and perceptions of rangeland degradation. Also, a system dynamic model for social, economic, and environmental indexes of the 5 soum in the BZ developed for mid and long-term planning.	The social survey is planned in spring of 2024.
Output 4. Ground-up **awareness-raising about Great Gobi uniqueness** by environmentally conscious GGASPA communities that are empowered with the skills and knowledge to improve	**4.1** Five **Eco-Clubs** (1/bufferzone soum) better resourced and re-activated with: **4.1.1** 100 children (representative of community demographics) trained and	The GGASPA BZ now has seven Eco-Clubs (against targeted 5) fully equipped with various educational tools (**4.1**), including 1) a science-based sourcebook on Great Gobi ecosystems and biodiversity, 2) a Nomadic trunk, game-based environmental education toolkit, and outreach equipment set (laptop, screen, projector, and speaker). These Eco-Clubs also strengthened their capacity through a series of training for teachers, and club member kids (237 against targeted 100) to run awareness campaigns (**4.1.1**). They have annual activity plans to raise environmental	

livestock management and comply with the Responsible Rangeland Management Regulation (**RRMR**)	empowered to participate in the annual public awareness campaign by end of Y1; **4.1.2** receiving supplementary sustainable financing from Community Banking Groups by Y4.	awareness for the targeted audience, including other school children, soum center inhabitants, and herders residing in BZ bags. In Y2, the Eco-Clubs reached 1871 people (approx. 37% of baseline HHs) (**4.2**) In Y3, when Soum Community Banking Groups strengthened Eco-Clubs potentially receive contributions for their funding (**4.1.2**). Due to the delay in the formation of herder CBOs caused by drought in 2021 through 2022, and mining protests, pasture management activities have been delayed (**4.3**). Nevertheless, the project conducted the first pasture training involving 120 CMC members in early April 2023. Main rangeland management activities supporting herders' initiatives will take place in Y3. There are 7 schools across the BZ actively participating in the events organized by the project. The eco-clubs have involved 10 teachers, and 237pupils in Y2. It was registered 8 eco-clubs of 7 secondary school with 13 teachers and 243 pupils in the buffer zone in Y1. The two eco-clubs got united thus the number reduced to 7 in Y2. The eco-cubs are equipped with a package for public awareness in Y1, which they used extensively in Y2 10 teachers and 237pupils trained and empowered. They organized 69awareness activities by themselves. In total 7 groups established including 121 herders (47 women, 74 men) of 84 HHs with banking ₮ 30,597,000 (£ 14,344.81)
	4.2 Community-**led public awareness campaign** in target BZ zone bahgs in each soum (c. total 1,272 HHs) reaches: **4.2.1** >40% of community HHs by end of Y2; **4.2.2** 60% community HHs by end of Y3.	A first public awareness campaign based on the learned tools during field trip/training was organized in May, 2022 across the BZ soums jointly with the eco-clubs/secondary schools, CMC, GGASPA Administration Office and ENSURE project. Since than 1871 Citizens (468 HH) of the 5 soums involved to the events on nature conservation topics via eco-club.
	4.3 Pasture management improved through: **4.3.1** CRK-approved Buffer-Zone pasture management plan implemented in 5 soums by end of Y2;	Two soums in the BZ have Pasture Management Plan including BZ area approved by the CRK in 2021. Implementation of the plan is 70%, reported by soum official. Rangeland condition and carrying capacity in the BZ was determined and discussing whether a need a separate plan of BZ Pasture. Management or a chapter of each soum's Pasture Management Plan with CMC and soum authority.

	4.3.2 plans are adaptively improved using feedback from annual soum herder forums by end of Y3.		
	4.4 Minimum 300 households (from c. 1272) representative of local demographics have RRMR capacity with: **4.4.1** HH identified from 7 target baghs (soum subdistricts) for RRMR, including financial management training, by end of Y2; **4.4.2** 30% of HH participating in rangeland management training report improved capacity to apply RRMR by end of Y3 and 60% by Y4.	There are 425 (272 men, 153 women) herders of 286 HHs belongs to 8 bagh/5 soums in the BZ involved to the capacity building activities from the project.	
	4.5 At least 40% of HHs on average (c. 1272) report improved awareness of environmental and rangeland management issues, with 40% reporting themselves more likely to make environmentally-led decisions, by end of the Y3.	This target will be measured by the Endline social survey in Y3.	
Activity 4.1 Develop Eco-Club capacity building programme through BZC to awareness raising implementation plan (including training, exchange workshops, annual Eco-club forum, and development of Gobi biodiversity textbook as part of buffer-zone school curricula) BZC/CRK		The eco-clubs have annual work plan including capacity building actions to support the CMC MP. According to this plan 69 events to 1871 citizens and an annual eco-club forum planned in Y2, The textbook ""Ekh nutag – Ikh Gobi miny" (Great Gobi – our motherland) published, delivered to the CMC and 7 schools in the BZ. They started to use it for public awareness.	
Activity 4.2 Oversee the design of a public awareness package and campaign by each soum Eco-Club to advocate GGASPA biodiversity conservation as part of GGASPA BMP Ecoclub/CRK+CMC		Project manager and Local coordinator attended to 3 days ToT '10 steps to organize nature conservation campaign' and brought up it to design a public awareness package and campaign by the eco-clubs.	To be continue to use knowledge and skill that learned from the training. Planning to attend another training 'how to use drama methods for public awareness campaign' in Jun, 23 and distribute it to the eco-clubs.

Activity 4.3 Implement Eco-Club public awareness campaign (i.e. field trips, festivals, SMS/MMS text campaign) to targeted households as part of GGASPA BMP Ecoclub BZC/CRK		The 7 eco-clubs implemented 69 events to 1871 BZ citizens.	
Activity 4.4 Support CMC-level planning and enforcement strategy for RRMR and get approved Soum Pasture management plan by each CRK CMC+ZSL+CRK		Planned in Y3.	
Activity 4.5 Train BZCs and target HHs on sustainable rangeland management, including basics of ecosystem management, reduction of risks of zoonotic diseases and household financial management CRK+ZSL		Hired two consultants of Gobi Pasture Management and Herd Management.	Training for newly established 7 VLSA groups is planned and small scale pilot work will be tested by them in summer/fall.
Activity 4.6 Support organization of annual buffer-zone Herder forum to enable exchange of best rangeland practices among five soum herders and inform on the progress of RRMR implementation CMC+ZSL+CRK		ZSL Country Director made a presentation on "Rangers method to collaborate with community members", talked about ZSL Conservation work to the Gobi Region Ranger Forum in Aug, 22 for 130 people including representatives from project main stakeholders. She also made a presentation on 'Who is the eco-friendly herder' to over 70 herders at the conference of 'Eco-Herder' in Nov, 22 and 268 herders of Altai soum in Jan, 23.	Planned an annual buffer-zone Herder forum to enable exchange of best rangeland practices among five soum herders in Y3.
Output 5. Remote rural herders have improved **wellbeing and financial stability** built through a successful and sustainable community banking model that supports sustainable resource use efforts e.g. through rangeland management actions and Eco Clubs	**5.1** Five community banking funds fund mechanisms in place with the constitution and environmental fund: **5.1.1** Developed and agreed by each of the 5 Buffer Zone Council (BZC) by the end of Y1; **5.1.2** 25 BZC members trained on managing five community banking funds by end of Q2 Y2; **5.1.3** 10 soft-loans are dispersed to men and women in vulnerable herder households (among target 318) by end of Y2.	For this output, the project delayed establishing herder groups due to the extended drought across the Gobi in 2021 and herders' protests against mining activities in the Bayankhongor section. Nevertheless, the project managed to support the creation of seven VSLA groups with 121 (74 men, 47 women) members of 84 HHs across 8 bagh/5 soums in the BZ (5.2). These groups have a VSLA governing structure as per the approved constitutions in place. VSLAs have a loan fund of ₮ 30,597,000 (£ 14,344.81). Thus, members have access to the loan fund when needed without collaterals with a modest interest rate. They usethe social fund to finance environmental protection and other group collective activities. In total, the project trained 54 BZC members on managing the community banking funds (**5.1.2**). When the VSLAs are strengthened with collective decision-making and collaborative actions, the project will assist BZ Councils to issue soft loans to VSLA's vulnerable members to improve their wellbeing in year three (**5.3.**),	

	5.2 Community banking GESI plan implemented with: **5.2.1** 40% female participation in community banking fund decision making by end of Y2; **5.2.2** 20% of soft-loans are issued to most marginalised households by end of Y3.	In total, there are 47 women members in the 7 VSLA groups and they participated to the community banking decision making.	
	5.3 Community banking environmental funds supporting RRMR implementation, through: **5.3.1** financing construction of two wells for herder HH by end of Y2; **5.3.2** 5 rangeland restoration projects relevant to 2 key waterhole sites (e.g. watersource protection, fencing key grazing areas, natural regeneration planting native trees) by end of Y3.	Two wells – Tooroin Khoid Khooloin and Tsagaan Dersnii in the BZ constructed for the HHs. A selected oasis Baruun Sharga for habitat restoration (watersource protection, fencing and planting native grass) done as an example for other two places for rangeland restoration.	
	5.4 40% Community banking fund member HHs report improved financial security by end of Y3.	*Activities against this indicator will be planned Y3.*	
5.1 Support CRKs to implement RRMR by assessing pasture conditions in bufferzone bags and mapping grazing areas under RRMR and establishing pasture use contract with herder households NUM+ZSL+CRK		Ground survey on rangeland condition and carrying capacity has done. A system dynamic model of the 5 soums rangeland condition and livestock number developed for further action.	Support CRKs to implement RRMR based on the survey and modelling. Training on Sustainable rangeland management (including RRMR) for 5 groups (VSLA); Develop a Pasture Management Plan by each group; Discuss the RRMR by the herders and get approval from each soum CRK; Contract with each Soum Governor.
5.2 Facilitate formation of VSLAs among herders sharing seasonal pastures to increase herder access to financial services to support long-term livelihood development (i.e. livestock migration and fodder support, and accessing veterinary services) ZSL+BZC+CRK		Facilitated formation of 7 VSLA groups among herders.	Support the 7 groups to share seasonal pastures to increase herder access to financial services to support long-term livelihood development

5.3 Support VSLAs for their initiatives for rangeland conservation (water source protection, fencing key grazing areas, supporting natural regeneration and planting of native trees, creating ponds harvesting rain water) through small grants ZSL+BZC+CRK	*Not applicable Y1, Y2*	To announce small grants
5.4. Support construction of two wells in bufferzone areas to limit livestock entry into SPA in search of water ZSL+BZC+CRR	Constructed 2 wells in the BZ to limit livestock entry into the PA	Survey on water use and saving.

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

Project summary	SMART Indicators	Means of verification	Important Assumptions
Impact: Globally important wildlife, including the wild camels, thrive in the Mongolian Altai-Gobi with the welfare and socio-cultural traditions of herder communities secured through sustainable use of the fragile desert ecosystem.			
Outcome: Conservation of wild camel and desert ecosystem enhanced in Great Gobi 'A' Strictly Protected Area (GGASPA) through strengthened management and stakeholder collaboration, with communities empowered to improve rangeland management and herder well-being.	0.1 Stable or increasing counts of representative populations of Wild camel species (*Camelus ferus*), and key indicator ungulate species e.g. Asiatic wild ass *Equus hemionus*, and Goitered gazelle *Gazella subgutturosa* by Q2Y3 at sample sites (baselines set in Y1) 0.2 At least 20% of poplar tree oases (c. 21) across key camel migratory routes are protected and demonstrating signs of rehabilitation by Y4. 0.3 The collaborative participatory approach for buffer zone management by the Great Gobi 'A' Strictly Protected Area (GGASPA) and Collaborative Management Council (CMC) is supported and promoted by the Ministry of Environment and Tourism as best practice for other PAs by Y4. 0.4 20% increase in abundance of key plant species (indicators of rangeland health) in GGASPA buffer-zone by end of Y3 (baseline and indicator species set by NUM in Y1). 0.5 40% of herder households (HH) (c.1272) report changing grazing practices to adopt and comply with the Responsible Rangeland Management Regulation (RRMR) by end of Y3 (baseline set in Y1).	**0.1 – 0.2** SMART patrol data, camera-trap data; GGASPA research programme reports; habitat/rangeland survey and waterhole restoration reports. **0.3** Recognition by the national government of GGASPA work as protected area best practice, and Soum Citizen Representative Khural (CRK) reports. **0.4** Rangeland health survey report; SMART patrol data; and camera-trap data and herders' observations from Socioeconomic survey **0.5** Socio-economic study report to identify baseline and changes in rangeland management practices, attitudes towards wildlife, and livelihoods in year 1, and 3; SMART patrol data, National University of Mongolia (NUM) rangeland study report	• There are no extreme climatic events (e.g. droughts, fire, dzuds) and/or disease outbreaks that destabilise flora and fauna populations. • Survey methods and location will be broadened in Y1 to set baselines for **0.1.** Current camera trap sampling (78 cameras) produced 221 wild camel detections, 50 Asiatic wild ass and 90 Goitered gazelle in the GGASPA. • Wild camels remain an ecologically suitable umbrella species for conservation efforts, with large home range requirements, and habitat interventions supporting other Gobi biodiversity. • The site remains free from interventions from corporate or political stakeholders, such as mining licences being issued. • The Mongolian government remains stable during the project; maintains supportive of environmental protection and community-based conservation under the RRMR regulations. • Local herder communities continue to support and be engaged in sustainable rangeland management and

	0.6 10% improvement in wellbeing of c. 318 herder households (25% of 1272) including vulnerable groups, with women and men benefiting equally by end of Y3 (baseline to establish median household wellbeing index scores) set in Y1).	**0.6** CMC statistics; Soum CRK reports, Socio-economic survey report	developing diversified livelihoods. • Demonstrable success from DI-funded Arkhangai project achieving impressive VSLA results; from a zero baseline, 9 VSLAs with 183 (48% women) members reaching £9500 loan fund with 100% repayment, and £2020 for social fund Members benefitted 22-45% increase in shares annually. We can have similar results for among remote Gobi herders as need for accessing financial services is even greater.
Output 1 GGASPA monitoring programme is informing effective GGASPA and CMC management, and future-proofed by building the capacity of Mongolia's future conservationists.	1.1 GGASPA monitoring programme established (baselines set by camera-trapping, rangeland health surveys and SMART by the end of Y1. 1.2 % of improved health status (current ecosystem health defined by NUM-led rangeland surveys) in 5 rangeland sites in GGASPA and 5 buffer-zone sites at end of Y3 (baseline to be set in Y1). 1.3 GGASPA management actions are being informed by quarterly SMART patrols; six-month camera-trap surveys of priority waterholes and rangeland sites, by the end Y2. 1.4 CMC are applying adaptive management through integration of GGASPA monitoring results (SMART, camera trap, rangeland health surveys) by end of Y2. 1.5 NUM researchers are able to conduct primary analysis of camera-trap data and SMART	1.1 Camera-trap protocol; SMART data model; rangeland health survey methodology; GGASPA monitoring programme plan. 1.2 Rangeland survey raw data and results. i.e. above-ground biomass, species richness, soil stability. 1.3 Camera-trap database; camera-trap raw photos; SMART patrol reports showing patrol frequency, coverage and composition. 1.4 CMC research reports; workshop meeting minutes; agenda; attendee list. 1.5 Agreed online training program, training reports, training records, research reports on camera-trap and SMART patrol data. 1.6 MSc project dissertations; GGASPA survey results.	• The Mongolian government remains stable and any turnover in GGASPA management does not impact GGASPA focus on conservation and research as strategic park priorities. • Risk of theft of cameratraps remains low; natural disasters (particularly drought) or wild animals such as Gobi bear do not damage or severely impede camera-traps and survey effort.

	patrolling data following series of online training by ZSL UK experts by end of Y2 and able to do independent analysis by end of Y3. 1.6 Two NUM postgraduate students achieve MSc after working closely with the GGASPA to generate data from rangeland health and camera trap surveys, to support effective management of GGASPA and CMC by Y4.		
Output 2 Scalable habitat management and waterhole restoration model areas are demonstrating effective conservation interventions to restore the Great Gobi 'A' Strictly Protected Area desert ecosystem, to support the recovery of Wild Camels Species and other biodiversity.	2.3 GGASPA and its buffer-zone are delineating degraded and priority habitats, critical waterholes and oases identified by end of Y1. 2.4 Two key waterholes water supply restored (identified by 2.1): **2.2.1** Two small reservoir are fully functional inside GGASPA by end of Y2; **2.2.2** Increased wildlife presence at key waterholes (i.e. wild camel, gazelle or asiatic wild ass) by Y4 (baseline to be set in Y1); **2.2.3** Decreased or zero presence of domestic head of livestock at key wildlife waterholes by Y4 (baseline to be set in Y1). 2.5 Three oases (identified in Y1) demonstrating recovery by: **2.3.1** Trialling assisted rehabilitation interventions (including reforestation, encouraging plant diversity) by Y4; **2.3.2** Vegetation coverage and erosion surrounding waterholes shows recovery by Y4 (baseline = year 1). **2.4** GGASPA institutionalise successful habitat recovery models into their	**2.1** GGASPA and its bufferzone waterholes and oases map. **2.2 - 2.3** Waterhole restoration and habitat management photographs; waterhole restoration survey results and report; camera-trap data; SMART patrol reports; annual GGASPA habitat monitoring reports and satellite imagery (i.e. vegetation coverage and gully erosion change over time). **2.4** GGASPA management plan; workshop; workshop attendees; report of GGASPA habitat restoration results.	• No severe natural disasters, including fire, drought, or dzud, impact GGASPA habitat and waterholes. • Reservoirs will be supported by solar-powered pump – technology, which will be able to managed and maintained by trained GGASPA staff • Hydrological assessment for existing water hole by government identified optimal sites to priority water holes for management intervention • GGASPA management budgets continue to be able to support habitat recovery efforts.

	management plan, for scaling to other areas and informing CMC on long-term utility of recovery interventions by end of Y3.		
Output 3 Collaborative and inclusive governance institutions are in place and making coordinated, landscape-level management decisions, employing adaptive management approaches informed by robust ecosystem monitoring.	**3.1** Three-year Buffer-zone Management Plans designed and agreed using participatory approaches are in place (baseline: One-year BM plan) by end of Y1 at: **3.1.1** GGASPA management level agreement of the plans together with a Collaborative Management Council (CMC), led by Citizen Representatives Khural (CRK) (baseline: no formal agreement); **3.1.2** Five Soum-level (100%) plans agreed by each Buffer-Zone-Council (BZC) by the end of Y1 (baseline: no plans). **3.2** Fully operational CMC meeting independently chaired by elected CRK representatives, meeting at least two times per year, with decision making and annual management plan development being informed by environmental results from GGASPA and BZC by end of Y2. **3.3** % increase of confidence in transparent and equitable BZC governance report by women and men in herder HH by end of Y3 (baseline set in Y1). **3.4** 50% of men and women in herder households (c.1272) report greater access to and understanding of environmental data to support sustainable natural resource management decisions by end of Y3 (baseline set in Y1).	**3.1** CMC constitution (CMC composition, function, management); upgrading and CMC management planning workshop; approved soum-level buffer-zone management plans; attendee list; Citizen Khural biannual community consultation meeting minutes. **3.2** CMC meeting minutes; CMC attendance records, BZC reports, Eco-club reports. **3.3 – 3.4** Baseline socio-economic study report; Survey instruments, and Final socio-economic study report; Citizen Khural bi-annual community consultation meeting minutes, survey results.	• Local government (aimag and soum) remains stable, and willing to participate in buffer-zone management. • Local government leadership continues contributing to conservation by allocating human resource and budget. • Local herder communities remain engaged and interested in managing rangeland more sustainably; with the CMC framework enabling impartial merit-based decisions for awarding small grants.

Output 4 Ground-up awareness-raising about Great Gobi uniqueness by environmentally conscious GGASPA communities that are empowered with the skills and knowledge to improve livestock management and comply with the Responsible Rangeland Management Regulation (RRMR).	**4.1** Five Eco-Clubs (1/bufferzone soum) better resourced and reactivated with: **4.1.1** 100 children (representative of community demographics) trained and empowered to participate in annual public awareness campaign by end of Y1; **4.1.2** receiving supplementary sustainable financing from Community Banking Groups by Y4. **4.2** Community-led public awareness campaign in target buffer zone bahgs in each soum (c. total 1,272 HHs) reaches: **4.2.1** >40% of community HHs by end of Y2; **4.2.2** 60% community HHs by end of Y3. **4.3** Pasture management improved through: **4.3.1** CRK-approved Buffer-Zone pasture management plan implemented in 5 soums by end of Y2; **4.3.2** plans are adaptively improved using feedback from annual soum herder forums by end of Y3. **4.4** Minimum 300 households (from c. 1272) representative of local demographics have RRMR capacity with: **4.4.1** HH identified from 7 target baghs (soum subdistricts) for RRMR, including financial management training, by end of Y2; **4.4.2** 30% of HH participating in rangeland management training report	**4.1** Printed Biodiversity textbook; approved teaching method; list of student pupils and their grades; Eco-Club public awareness campaign roadmap; community banking group meeting minutes and environmental fund reports. **4.2** Eco-Club reports; socioeconomic survey data; Telecom provider SMS-text message data. **4.3** CRK approved BZC management plan; herder forum meeting minutes; attendee lists. **4.4** RRMR training schedules and records, exchange visit records; socio-economic survey data; attendee lists. **4.5** Socio-economic survey data; CMC statistics.	• Soum Buffer-zone Councils and school management remain supportive of children's engagement in conservation awareness-raising activities. • Eco-Club members are supportive of their children's passion, and Soum Buffer-zone Council and school management take necessary measures for health and safety of children during the campaign. • Local government (aimag and soum) remains stable, and willing to participate in buffer-zone management efforts

	improved capacity to apply RRMR by end of Y3 and 60% by Y4. **4.5** At least 40% of households on average (c. 1272) report improved awareness of environmental and rangeland management issues, with 40% reporting themselves more likely to make environmentally-led decisions, by end of Y3.		
Output 5 Remote rural herders have improved wellbeing and financial stability built through a successful and sustainable community banking model that supports sustainable resource use efforts e.g. through rangeland management actions and Eco Clubs	**5.1** Five community banking funds fund mechanisms in place with constitution and environmental fund: **5.1.1** Developed and agreed by each of the 5 Buffer Zone Council (BZC) by the end of Y1; **5.1.2** 25 BZC members trained on managing five community banking funds by end of Q2 Y2; **5.1.3** 10 soft-loans are dispersed to men and women in vulnerable herder households (among target 318) by end of Y2. **5.2** Community banking GESI plan implemented with: **5.2.1** 40% female participation in community banking fund decision making by end of Y2; **5.2.2** 20% of soft-loans are issued to most marginalised households by end of Y3. **5.3** Community banking environmental funds supporting RRMR implementation, through: **5.3.1** financing construction of two wells for herder HH by end of Y2; **5.3.2** 5 rangeland restoration projects relevant to 2 key waterhole sites (e.g.	**5.1 - 5.2** BZC community banking constitution and agreement; GESI engagement plan for community banking funds; socio-economic survey data; ZSL Wellbeing Index; CMC statistics; community banking training curriculum. **5.3** Well construction photographs; rangeland restoration reports, photographs. **5.4** Socio-economic survey data; ZSL Wellbeing Index; Community banking repayment records, CMC statistics.	• Local government (aimag and soum) remains stable, and willing to participate in buffer-zone management. • No natural disasters, including drought and dzud severely affecting buffer-zone rangeland ecosystem. • BZC soft-loan scheme accumulate sufficient - interest to support action grants. DI-funded Arkhangai GBP 19500 loan fund with 100% repayment over two years. • DI-funded Arkhangai project achieved impressive VSLA results; from zero baseline, 9 VSLAs created with 183 (48% women) members • DI-funded Arkhangai has an active social/environmental fund with minimum £2000 reserve at any given time. DI-funded Arkhangai Members benefitted

	watersource protection, fencing key grazing areas, natural regeneration planting native trees) by end of Y3. **5.4** 40% Community banking fund member HHs report improved financial security by end of Y3 (baseline set in Y1).		22- 45% increase in shares annually

Activities (each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)

1.1 Procure field equipment for ongoing camera-trap surveys and SMART patrols, including necessary office equipment for research programme (year 1) ZSL

1.2 Organise GGASPA and Border Defence Agency annual training on camera-trap and SMART monitoring and co-develop GGASPA monitoring plan. ZSL

1.3 Conduct rangeland health survey (aboveground biomass, species richness, soil stability) inside SPA (5 plots) vs Bufferzone areas 5 plots (year 1 and 3) NUM

1.4 Create and maintain a database interface for storing data collected by camera-trap surveys and SMART patrol reports integrated with rangeland survey results NUM+ZSL UK

1.5 Conduct quarterly monitoring surveys through SMART patrol and feed into the integrated database (year 1 second half, 2 and 3, total 12 quarters) GGASPA

1.6 Deploy camera-traps and maintain camera-trap grid (SD cards and batteries), for a total of two field trips each year (6 times) ZSL + WCPF +GGASPA

1.7 Feedback results of GGASPA SMART monitoring, rangeland survey and camera trapping into the development of the GGASPA Management Plan (year 2 and 3) NUM+ZSL UK

1.8 Two Mongolian MSc students will work on research of rangeland survey and wildlife camera trap study, and defend by the end of year 3 NUM

1.9 CMC receives Brief on Monitoring results and uses them for AWP

1.10 Camera and SMART data analysis training online, data collection design and data analysis (IZ & ZSL UK)

2.1 Map GGASPA camel habitat, waterholes and oases and prioritise habitat management intervention sites ZSL

2.2 Restore two priority waterholes with a small reservoir for wildlife (through a bid)

2.3 Support GGASPA Administration Office to implement habitat management interventions at least at three sites:, fence poplar patches and natural springs preventing browsing of young trees and protecting water recharge points, and planting native grasses in oases GGASPA+NUM

2.4 GGASPA conduct annual, including pre and post-intervention surveys in each habitat intervention site to measure change and efficacy GGASPA

2.5 Ensure incorporation of intervention results in GGASPA Management Plan and CMC Plan for possible replication across other threatened camel habitat sites GGASPA+NUM

3.1 Support CMC during annual meetings to ensure smooth function of a democratic and representative buffer-zone management institution (6 workshops 3-year plan and 3 reports) to plan (GGASPA MP) and review the progress CMC+GGASPA

3.2 Oversee by CMC the formulation, approval, and implementation of Soum Buffer-zone management plans based on GGASPA BMP CMC+GGASPA

3.3 Conduct social surveys using representative samples of buffer-zone communities across five buffer-zone soums to collect baseline data in year 1 and at project end in year 3 ZSL

4.1 Develop Eco-Club capacity building programme through BZC to awareness raising implementation plan (including training, exchange workshops, annual Eco-club forum, and development of Gobi biodiversity textbook as part of buffer-zone school curricula) BZC/CRK

4.2 Oversee the design of a public awareness package and campaign by each soum Eco-Club to advocate GGASPA biodiversity conservation as part of GGASPA BMP Ecoclub/CRK+CMC

4.3 Implement Eco-Club public awareness campaign (i.e. field trips, festivals, SMS/MMS text campaign) to targeted households as part of GGASPA BMP Ecoclub BZC/CRK

4.4 Support CMC-level planning and enforcement strategy for RRMR and get approved Soum Pasture management plan by each CRK CMC+ZSL+CRK;

4.5 Train BZCs and target herder households on sustainable rangeland management, including basics of ecosystem management, reduction of risks of zoonotic diseases and household financial management CRK+ZSL;

4.6 Support organization of annual bufferzone Herder forum to enable exchange of best rangeland practices among five soum herders and inform on the progress of RRMR implementation CMC+ZSL+CRK

5.1 Support CRKs to implement RRMR by assessing pasture conditions in bufferzone bags and mapping grazing areas under RRMR and establishing pasture use contract with herder households NUM+ZSL+CRK

5.2 Facilitate formation of VSLAs among herders sharing seasonal pastures to increase herder access to financial services to support long-term livelihood development (i.e. livestock migration and fodder support, and accessing veterinary services) ZSL+BZC+CRK

5.3 Support VSLAs for their initiatives for rangeland conservation (water source protection, fencing key grazing areas, supporting natural regeneration and planting of native trees, creating ponds harvesting rain water) through small grants ZSL+BZC+CRK

5.4. Support construction of two wells in bufferzone areas to limit livestock entry into SPA in search of water ZSL+BZC+CRR

Annex 3: Standard Indicators

Table 1 Project Standard Indicators

DI Indicator number	Name of indicator using original wording	Name of Indicator after adjusting wording to align with DI Standard Indicators	Units	Disaggregation	Year 1 Total (2021-2022)	Year 2 Total (2022-2023)	Year 3 Total (2023-2024)	Total to date	Total planned during the project
DI-D04	**0.1** Stable or increasing counts of representative populations of Wild camel species (*Camelus ferus*), and key indicator ungulate species e.g. Asiatic wild ass *Equus hemionus*, and Goitered gazelle *Gazella subgutturosa* by Q2 Y3 at sample sites (baselines set in Y1)	Stabilised/ improved species population (relative abundance/ distribution) within the project area	Number at the water points	Wild camel Asiatic wild ass Goitered gazelle	0	9 8 9			
	0.2 At least 20% of poplar tree oases (c. 21) across key camel migratory routes are protected and demonstrating signs of rehabilitation by Y4	Stabilised/ improved Popular tree population	Number of tree at the oasis	Popular tree	5	5			
	0.4 20% increase in abundance of key plant species (indicators of rangeland health) in GGASPA BZ by end of Y3 (baseline and indicator species set by NUM in Y1).	Stabilised/ improved abundance of key plant species	% Increase; Area (ha or km2)	Key plant species	0				
DIA03	**0.3** The collaborative participatory approach for BZM by GGASPA and CMC is supported and promoted by the MET as best practice for other PAs by Y4.	Number of local/national organisations with improved capability and capacity as a result of project.	# of org.	State org	0	7			

DI Indicator number	Name of indicator using original wording	Name of Indicator after adjusting wording to align with DI Standard Indicators	Units	Disaggregation	Year 1 Total (2021-2022)	Year 2 Total (2022-2023)	Year 3 Total (2023-2024)	Total to date	Total planned during the project
DIA04	**0.3** The collaborative participatory approach for BZM by GGASPA and CMC is supported and promoted by the MET as best practice for other PAs by Y4.	Number of officials from the GGASPA BZ CMC who attended training on the planning and applying new skills Number of people reporting that they are applying new capabilities (skills and knowledge) 6 (or more) months after training.	People	Gender; Age Group; Stakeholder group; Training typology (BD, SD, finance, PM, safeguarding, gender etc.)	0				
DI-D10	**0.5** 40% of HHs (c.1272) report changing grazing practices to adopt and comply with the RRMR by end of Y3 (baseline set in Y1).	Area of improved sustainable pasture and herding practices benefitting people to be more resilient to weather shocks and climate trends**.**	Area (hectares)	Typology of sustainable agriculture practices.	0	0			
DI-D16	**0.6** 10% improvement in wellbeing of c. 318 HHs (25% of 1272) including vulnerable groups, with women and men benefiting equally by end of Y3 (baseline to establish median household wellbeing index scores) set in Y1).	Number of households that joined to the VSLA groups reporting improved livelihoods**.**	HHs	As measured through HH surveys, livelihood metric (income, education, health etc.).	0	84			

Table 2 Publications

Title	Type (e.g. journals, manual, CDs)	Detail (authors, year)	Gender of Lead Authors	Nationality of Lead Authors	Publishers (name, city)	Available from (e.g. weblink or publisher if not available online)
Ekh nutag – Ikh Gobi miny (The Great Gobi – My Motherland)	Textbook/Manual for eco-clubs in the GGASPA Buffer Zone	**B.Mijiddorj** **U.Tungalag**	Woman and Man	Mongolian	Munkhiin Useg LLC, Ulaanbaatar, Mongolia	[redacted]

Title	Type (e.g. journals, manual, CDs)	Detail (authors, year)	Gender of Lead Authors	Nationality of Lead Authors	Publishers (name, city)	Available from (e.g. weblink or publisher if not available online)
		B.Naminchimed R.Bolor B.Bilguun 2021-2022				

Checklist for submission

	Check
Different reporting templates have different questions, and it is important you use the correct one. Have you checked you have used the **correct template** (checking fund, type of report (i.e. Annual or Final), and year) and **deleted the blue guidance text** before submission?	Yes
Is the report less than 10MB? If so, please email to BCF-Reports@niras.com putting the project number in the Subject line.	Yes
Is your report more than 10MB? If so, please discuss with BCF-Reports@niras.com about the best way to deliver the report, putting the project number in the Subject line.	Yes
Have you included means of verification? You should not submit every project document, but the main outputs and a selection of the others would strengthen the report.	Yes
Do you have hard copies of material you need to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number. However, we would expect that most material will now be electronic.	No
If you are submitting photos for publicity purposes, do these meet the outlined requirements (see section 16)?	Yes
Have you involved your partners in preparation of the report and named the main contributors	Yes
Have you completed the Project Expenditure table fully?	Yes
Do not include claim forms or other communications with this report.	