Terminal Evaluation Report

Sustainable natural resource use & forest management in key mountainous areas important for globally significant biodiversity

UNDP PIMS ID: 5438   GEF Project ID: 8031

Country:	Uzbekistan
Region:	Central Asia
GEF Focal Areas:	Land Degradation, Biodiversity, Sustainable Forest Management
Implementing Agency:	United Nations Development Programme
Executive:	State Committee for Ecology & Environmental Protection
Implementation:	UNDP-Supported NIM (Project Implementation Unit)
Project Timeframe:	May 2017 – December 2022

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Disclaimer

The TE views were discussed with UNDP, the Implementing Partner – State Committee for Ecology & Environmental Protection (SCEEP), the State Committee for Forestry (SCF), Project Board members, local government partners and other key stakeholders. There was a debriefing held to present views and refine findings. UNDP, the Project Implementation Unit (PIU), the State Committee for Forestry, and the Institute of Zoology provided comment on the draft report before finalization.

The views held within this report are those of the TE team.

Acknowledgement

The Terminal Evaluation Team would like to acknowledge all UNDP and project staff and partners who supported this evaluation of the project.

Abbreviations and Acronyms

ATLAS	UNDP tracking system
AWPB	Annual Work Plan & Budget
BCIMS	Biodiversity Conservation Information Management System
CBD	UN Convention on Biological Diversity
CBNR	Chatkal Biosphere Nature Reserve (within UCNP)
EA	Executing Agency (SCEEP)
GEF	Global Environment Facility
GNR	Gissar Nature Reserve
GSLEP	Global Snow Leopard Ecosystem Protection Program (headquartered in Kyrgyzstan)
IA	GEF Implementing Agency (UNDP)
IGAs	Income Generating Activities (mostly equivalent to the TAPs)
IUCN	International Union for the Conservation of Nature
KBA	Key Biodiversity Area
MAB	UNESCO Man & Biosphere Reserve
M&E	Monitoring and Evaluation
MoU	Memorandum of Understanding (relating to SL conservation between Uzbekistan, Tajikistan & Kyrgyzstan)
METT	GEF PA Management Effectiveness Tracking Tool
MTR	Mid-term review (of the project)
NBSAP	National Biodiversity Strategy & Action Plan
NIM	National Implementation Modality (which was UNDP-supported for this project)
NP	National Park (a PA under varying levels of nature conservation)
NR	Nature Reserve (a PA under strict nature conservation)
PA	Protected Area (for biodiversity conservation – includes NPs and NRs)
PB	Project Board (a.k.a. Project Steering Committee)
PIF	GEF Project Identification Form (concept note application / approval)
PIMS	UNDP Project Information Management System
PIR	Project Implementation Report (UNDP reporting method to GEF)
PIU	Project Implementation Unit (UNDP managed)
PMP	Pasture Management Plan
PPG	GEF Project Preparation Grant to prepare the prodoc
prodoc	Project Document (for this project)
PUA	Pasture User Association (mainly referred to as pasture cooperatives within this report)
SCEEP	State Committee for Ecology & Environmental Protection
SCF	State Committee for Forestry
SFU	State Forestry Unit
SLCAP	Snow Leopard Conservation Action Plan
SLRMP	Snow Leopard Research & Monitoring Protocol / Plan
SLLs	Snow Leopard Landscapes (of the project in Western Tien Shan & Pamir Alay Mountains)
SLPRI	State Land Projection Research Institute (as a key project partner)
SMART	Specific, Measurable, Achievable, Relevant and Time-bound (for logframe indicators)
Smart	Spatial Monitoring & Reporting Tool (wildlife / crime monitoring method used by the project)
Smart	Internet-connected telemetric data transfer (i.e. any device with a SIM card connected to a cell tower)
TE	Terminal Evaluation (of the project)
UNDP	United Nations Development Programme (GEF Implementing Agency, member of PB)
UNFCCC	UN Framework Convention on Climate Change
UCNP	Ugam Chatkal National Park
UCBNR	Ugam Chatkal Biosphere Nature Reserve (within UCNP)
VCC	Village Citizens Council (a.k.a. Mahalla)

UNITS	m - million or meters; ha - hectare (100 m x 100 metres)

Executive Summary

The executive summary is a 12-page summary of the Terminal Evaluation (TE) report.

Project Title:	Sustainable natural resource use and forest management in key mountainous areas important for globally significant biodiversity		
Project ID:	90383	PIF Approval	April 28, 2015
Atlas Award	80814	CEO Endorsement	August 29, 2016
Country	Uzbekistan	Project Document (ProDoc) Signature	May 12, 2017
Region	Central Asia	Project manager hired	August 1, 2017
Focal Area	Multi focal area	Inception Workshop	September 21, 2017
Strategic Programs	BD-1 Program 2 LD-3 Program 4 SFM-1; SFM-2	Terminal Evaluation	April - September 2022
Trust Fund	GEF	Closing Date	December 31, 2022
Modality	UNDP-Supported NIM		
Executive	SCEEP		
Project Financing:	at CEO endorsement (US$)		at Terminal Evaluation (US$)*
[1] TF financing:	6,209,863		5,175,289
[2] UNDP contribution:	300,000		300,816.67
[3] Government:	25,000,000		14,180,329
[4] Other partners:	3,158,878		3,158,878
[5] Co-financing [2 + 3+ 4]:	28,458,878		17,640,024
Total Cost [1 + 5]	34,668,741		22,815,312

*Expenditures through to 27th June 2022

Project Description

Issues that the project was designed to address

The mid-hills are ploughed for arable cropping leaving only the higher steppe grassland and alpine meadows as pastures for livestock. Livestock (mainly sheep / goat and cattle) numbers have increased far beyond carrying capacity in these natural pasture areas. As a result, the pasture productivity has been reduced by 50% over the last 20 years. The traditional practice of moving livestock between summer and winter pastures has been abandoned.

These factors have led to soil erosion and loss of grassland productivity. Over 60% of the pastures in the Western Tian Shan and Pamir Alay mountain systems are considered heavily eroded. Due to over-grazing, the mid-hill sub-alpine pastures have changed species compositions, with more unpalatable species now present. The high altitude (alpine) natural pastures and the steppe grassland pastures in the mid-hills are both moving towards respective ecosystems collapse[1]. This situation has become acute in the Western Tian Shan and Pamir Alay mountains.

In the next few decades, the annual temperature is expected to increase by 2.5°C. Compared with the 1970s, the number of winter days below minus 20°C has fallen by 50%. In 2005, the country water deficit was 2,000 m^3. This is predicted to be 13,000 m^3 in less than 30 years time.

Project Description

The project was designed to address the preservation of snow leopard and their mountain ecosystems. The project was closely aligned to the national action plan for snow leopard 2014-20. Moreover, the project was designed to address priorities within the national action program to combat desertification (2002), which foresaw the restoration of degraded grasslands and hayfields, restoring forests and developing mechanisms for sustainable use of natural resources.

The project development goal was to contribute to the conservation & sustainable use of globally significant biodiversity. The objective was to strengthen the terrestrial system of protected areas (PAs) for biodiversity conservation through enhanced representation, management effectiveness, and monitoring.

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[1] Loss of ecosystem function in inability to hold water on the degraded soils, and the change in natural habitat of grassland / meadow plant species to a modified habitat with a composition of weed / unpalatable species, due to livestock over-grazing

Project Location

The project was located in the two mountain ranges of Western Tian Shan (including the Ugam, Chatkal and Pskem PAs) and Pamir Alay (including Gissar Nature Reserve and Tupalang National Park), and in the adjacent mid to high altitude grassland pastures.

The project worked with four PAs - Ugam Chatkal National Park (UCNP), Ugam Chatkal Biosphere Nature Reserve (UCBNR), Chatkal Biosphere Nature Reserve (CBNR), and Gissar Nature Reserve (GNR), and eight adjacent State Forestry Units (SFUs) who manage the pastures in and adjacent to the PAs. All these areas are snow leopard territory.

Project Management

The project was under UNDP-supported National Implementation Modality. The project established a Project Implementation Unit (PIU) which was managed by UNDP. The project was steered by a Project Board (PB), chaired by a national project coordinator from the State Committee for Ecology & Environmental Protection (SCEEP). SCEEP was the executing partner and major beneficiary.

Purpose and Methodology

The objective of the Terminal Evaluation (TE) was to gain an independent analysis of the achievement of the project at completion, as well as to assess its sustainability and impact. The report focused on assessing outcomes and project management. The TE additionally considered accountability and transparency, and provided lessons-learned for future UNDP-supported GEF-financed projects, in terms of selection, design and implementation.

The overall approach and methodology of the evaluation followed the guidelines outlined in the UNDP Guidance for Conducting Terminal Evaluations of UNDP-supported GEF-financed Projects (2020). The TE was an evidence-based assessment and relied on feedback from persons who were involved in the design, implementation, and supervision of the project.

Evaluation Ratings Summary

GEF UNDP projects of this type require the TE to evaluate the implementation according to set parameters and ratings. The summary ratings of this evaluation are presented:[2]

Exhibit 2: TE Ratings Summary Table

1. Monitoring & Evaluation (M&E)	Rating	2. Implementing Agency (UNDP) & Executing Entity (SCEEP / PIU) Execution	Rating
Overall quality of M&E	**MS**	**Overall quality of Implementation / Execution**	**S**
M&E Design at entry	MS	Quality of UNDP Implementation	S
M&E Implementation	MS	Quality of Execution – SCEEP / PIU	S
3. Assessment of Outcomes	Rating	4. Sustainability	Rating
Overall Project Outcome *(Objective)*	**MS**	**Overall Likelihood of Sustainability**	**MU**
Effectiveness of Outcome 1	MS	Financial resources	MU
Effectiveness of Outcome 2	MU	Socio-economic	MU
Effectiveness of Outcome 3	MS	Institutional framework & governance	ML
Effectiveness of Outcome 4	S	Environmental	MU
Efficiency	MU		
Relevance	MS		

Ratings Highly Satisfactory (HS); Satisfactory (S); Moderately Satisfactory (MS); Moderately Unsatisfactory (MU); Highly Unsatisfactory (HU); For Sustainability: Likely (L); Moderately Likely (ML); Moderately Unlikely (MU); Unlikely (U)

A detailed summary of the project is presented below.

Exhibit 3: TE Ratings and Achievement Summary Table

Project: **UNDP GEF** Sustainable natural resource use and forest management in key mountainous areas important for globally significant biodiversity (GEF ID: 8031; PIMS ID: 5438)
Achievement Description & TE Rating

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[2] The GEF methodology for the ratings in presented in Annex 9

Outcomes/ Results

Overall Project Objective Achievement - The overall grading is **Moderately Satisfactory**

Objective: Conservation and sustainable natural resources use in high altitude mountain ecosystems (6 indicators)

The project achieved most of its objectives, but only to a certain degree, and with significant shortcomings. The project was expected to create four wildlife corridors: between CBNR and UCBNR; between CBNR and the proposed Pskem River NR; between CBNR and the Akbulak sub-watershed; and between GNR, and Tupulang NP. It only partially achieved the first of these, through buffer zone delineation. Also, the expected area of land to be gazetted for conservation, to support these corridors was not achieved, with only 27,851 ha of new national park designated as Tupalang NP. This was short of the expected 120,990 ha new PA estate. The land in these corridors remained under SCF / SFU jurisdiction with the continued over-permitting of high numbers of livestock causing land degradation. These high altitude pastures remained as over-exploited production landscapes, without sufficient attention to the poor state of these ecosystems, and their ecosystem services, with their functioning and viability severely damaged. This was increasingly so with obvious climate change, accelerating the process. Whilst the project produced outline plans for SL conservation and research as well as limited plans for pasture management, they were only produced by the end of the project and not implemented.

There were six indicators attached to the objective level which were all rated as: satisfactory; moderately satisfactory (2); and moderately unsatisfactory (3). The 'satisfactory' indicator concerned SL population numbers; the MS ratings were for hectarage of Protected Areas (PAs) and for the conservation of forests. The three MU ratings were for: not effectively getting 55,000 ha of alpine pasture under sustainable management; for not increasing SL prey numbers; and for not employing more women directly in conservation.

PAs within Ugam Chatkal and Gissar under effective management (Indicator 1)

The project worked in the Ugam Chatkal region in the Western Tien Shan mountain range (which includes the Pskem River); and Gissar western region in the Pamir Alay mountain range (which includes Tupalang NP). Two new PAs were either approved or planned, namely Tupalang National Park and Pskem Nature Reserve, respectively. Four updated Management Plans (MPs) were produced, with GNR buffer zone designated. A Smart patrol system for Protected Area rangers to monitor wildlife and illegal hunting monitoring was piloted[3]. Eight State Forestry Units (SFUs) were drawn more towards conservation concerns for their pasture areas, after support in alternative income generation (tree production nurseries).

Reduced degradation in high altitude mountain pastures (Indicator 2)

In 2022, it was reported that high altitude pastures (86,700 ha) were put under stronger management to reduce habitat degradation, of which in 2021, Pasture Management Plans (PMPs) were developed for the eight SFUs (39,800 ha). However these plans were only agreed in the last year of the project with little or no time left for field adoption or assessment. Also, the PMPs didn't clearly link the levels of degradation to reduced livestock numbers, but instead used traditional formulas for maximum livestock carrying capacity. Furthermore, the project SFU PMPs were not fully integrated with the state system for livestock permitting for grazing in the mountain pastures which are under SFU jurisdiction.

Improved conservation status of forests within targeted PAs (Indicator 3)

Two new PAs were either designated or proposed. Buffer zones were designated for one project PA and delineated for a second project PA.

Snow leopard prey populations (Indicator 4)

Ibex numbers did not significantly increase in 5 years; Roe deer numbers increased, but somewhat old data was presented (2019); Boar numbers were down by 50% which could indicate habitat loss, hunting or deficient data collection; Menzbier's marmot numbers had not increased in 5 years; and Long-tailed marmot numbers had fallen by half. Together, the significant fall in SL prey species numbers was disappointing. Some of the data presented was 2-3 years old, despite a new conservation monitoring database and Smart patrolling system having been introduced from 2018, which suggested that data transfer and analysis was not optimal.

Snow leopard population (Indicator 5)

In 2016, the estimated number of snow leopard (SL) in the two snow leopard landscapes (SLLs) was 75. In 2022, with better monitoring (and conservation), the figure was 112, which in itself is encouraging, but it is only an increase of six cats per year. The number is also tempered by the fall in prey species, and the continued degradation of habitat (especially the mountain pastures), and the change in climate (less snow, hotter, less water) and the drying out of the pastures.

Number of women benefiting from the project (Indicator 6)

There were 12,547 direct beneficiaries of the project of which 6,858 were women. Most of the beneficiaries were supported through the Technical Assistance Projects (TAPs) which were aimed at alternative income generation.

Effectiveness – Outcome 1 Achievement - **Moderately Satisfactory**

Outcome 1 - Landscape planning and management decision-making

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[3] Smart is an acronym for Spatial Monitoring & Reporting Tool

The aim of Outcome 1 was to provide data on ecosystems, habitats and species for improved land use planning. The two outputs were to: provide data to the state cadastral office; and to improve knowledge of SL and its prey populations. The two indicators were rated as moderately satisfactory. The two indicators were to provide data on SL to support its conservation.

Natural resources and land use data (Indicator 1.1)

A mini atlas (2021) was produced with data relating to biodiversity, pastures and forests. The project also produced a compendium of endangered and rare plant species (2021).

Snow leopard monitoring data (Indicator 1.2)

The project created a SL database called Biodiversity Conservation Information Management System (BCIMS), which was housed within SCEEP. Data was provided by the PAs under their new Smart patrol systems, however the provision of data to the BCIMS appeared not always up to date. In addition DNA analysis of SL faecal matter (scats) was undertaken. The accuracy of population estimates was improved.

Effectiveness - Outcome 2 Achievement - **Moderately Unsatisfactory**

Outcome 2 - **Strengthening key biodiversity areas**

The Outcome was designed to build management capacity of the PAs. The three outputs were directed at securing wildlife corridors. These were to: Strengthen the land tenure of core conservation zones in UCNP; Extend, and improve the conservation security of GNR; and Increase community involvement / benefit in the PAs. The three outputs were also expected to: expand the core conservation zones of UCNP and GNR to include forest and grasslands and stop their degradation; enhance the monitoring / enforcement capacity; and build mutually beneficial relationships between PAs and local communities. The method to improve monitoring and enforcement was via the Smart patrol system.

There were three indicators attached to the Outcome 2 level which were rated as: satisfactory (1); moderately unsatisfactory (1), and unsatisfactory (1). The unsatisfactory indicator was to increase the coverage of PAs, by 120,990 ha which was not achieved. The MU indicator was to increase women's participation in training courses to 60%. It was less than 20% for PA conservation courses, which was disappointing for a GEN-2 project. The S rating was for the self-marked METT scores by the PA staff.

Increase in PA coverage (Indicator 2.1)

In Western Tien Shan range, in terms of SL wildlife corridors, UCBNR / CBNR complex was not joined up with either Pskem NR or the Akbulak sub-watershed, which was a project design objective, but rather Akhangaran and Burchmulla SFUs maintained their jurisdictional control of the land despite poor management. In the Pamir Alay range, as another SL wildlife corridor, Gissar was not joined up with Tupalang NP.

The designation of new PA estate of 27,851 ha (Tupalang NP) fell short of the target of 120,990 ha to come under new PA gazettement. Furthermore, the designation of Pskem NR, which was proposed in 2015, was not fully achieved under the project. A five kilometer wide conservation buffer zone was designated for GNR, and was delineated for CBNR. For the latter, it meant that UCBNR was in the process of being re-united with CBNR in conservation terms. The Tupalang NP remained under SCF / SFU jurisdiction.

Tracking Tool Scores (Indicator 2.2)

PA management effectiveness increased according to the self-marked GEF METT tracking tool.

Training courses (Indicator 2.3)

Under Outcome 2, there were 23 training courses, with 378 participants, of which 20% were women. For a project with gender equality as significant objective, this low figure of only 1 in 5 persons being a woman attending a training course was not good.

Effectiveness - Outcome 3 Achievement - **Moderately Satisfactory**

Outcome 3 - **Sustainable development incentives for communities**

The Outcome was designed to enable sustainable use of the high altitude pastures. Activities included: improving the ecological integrity and productivity of the grassland habitats; provide incentives to create sustainable pasture management; and stop the degradation of forested areas.

There were five indicators attached to the Outcome 3 level which were rated as: highly satisfactory (2); satisfactory (1) and moderately satisfactory (1); and moderately unsatisfactory (1). The two indicators rated HS were for the same activity which was for the TAPs. The pasture law which was passed during the project period was rated as satisfactory. The engagement with the SFUs was rated as MS, although the targets for rehabilitation of forest land were too low. The establishment of pasture cooperatives with PMPs was rated as MU, because the scale of the intervention was too small, and of limited quality on paper at least. The field situation was better.

Pasture Cooperatives and PMPs in the mountain pastures (Indicators 3.1 & 3.2)

The target was to create two pasture cooperatives with plans covering ~50,000 ha. The coverage of the PMPs of the two cooperatives was limited in area and located in the mid to low hills on land already tenured to the farmers. The target was only two pasture cooperatives, with the plans covering 504 ha, thus the scale of the intervention was very limited. The quality

of the cooperative PMPs was considered low. The high altitude pastures are under the jurisdiction of SFUs, not villagers, thus the indicator was poorly designed. However the project adapted and worked with eight SFUs to produce PMPs for part of their areas.

Degraded mountain forests under rehabilitation (Indicator 3.4)

The SFUs were supported to establish tree nurseries, within which they produced mostly commercial species – either fruit & nut trees for their low altitude orchards, or species for sale for city landscaping contracts. The management of mountain forests did not significantly change. However supporting the SFUs to generate their own alternative income stream, could be expected to reduce the pressure on the SCF / SFUs to issue so many grazing permits for their mountain pastures from which they gain a significant income, and is a major cause of pasture land degradation. The MS rating is also given, because the SFUs were enthusiastic project promoters and beneficiaries, and were eventually also supported by the project with PMPs.

Technical Assistance Projects (Indicator 3.3 & 3.5)

There were 69 TAPs against a target of 60. These alternative income-generating activities (IGAs) included: health of free-ranging livestock (2); intensive livestock farms (3); fruit & nut orchards (14); woodlots (11); alternative energy / fuel technologies (6); other IGAs (33). There were 14,628 households (66,407 persons, of which 60% were women) involved.

Effectiveness - Outcome 4 Achievement - **Satisfactory**	

Outcome 4 - Promoting cooperation & collaboration

The Outcome was designed to improve collaboration of SL conservation. Activities included: inter-agency coordination in conservation, monitoring and enforcement; and trans-boundary planning & management. The expected results were: a snow leopard conservation action plan (SLCAP); institutional coordination on implementing the action plan; and funding the plan.

There were four indicators attached to the Outcome 4 level which were rated as satisfactory (4). The indicators were to: produce a SLCAP; conduct border guard training; attend international SL events; and to create an international SL conservation MoU.

Snow Leopard Conservation Action Plan (Indicator 4.1)

A SLCAP was developed and approved by government in 2021. It is the first single-species action plan, and the first transboundary species plan adopted by Uzbekistan. In once sense, it can act as a project handover document, however the plan lacks detail on its measures, or a governance structure, or budget, or confirmation of funding.

Border guard training to stop wildlife crime (Indicator 4.2)

One hundred and thirty-six law enforcement officers received training on stopping the illegal wildlife trade. The project produced a guide on the identification of restricted items under CITES for customs & border guards (2021).

International snow leopard events (Indicator 4.3)

The were 11 international events participated in, including in Uzbekistan, China, Russia, Tajikistan, Kazakhstan, Kyrgyzstan, United Kingdom, and Sweden.

Transboundary coordination (Indicator 4.4)

An International MoU was signed by 3 countries, with Kazakhstan expected to sign at a later date. The MoU concerned cooperation on law enforcement regarding illegal wildlife trade, and stopping wildlife crime.

Efficiency	

Efficiency Rating – Moderately Unsatisfactory

There was a reasonable budget for the project, however there were a large number of consultants hired, and not enough consultant activities / reports which translated into tangible actions on a sufficient scale to make a clear impact during the project.

The issue of SFU having jurisdiction of the high-altitude land was not addressed until too late on in the project. Thus, the expectation of reducing degradation of these pasture on any scale, without tackling the over issuance of grazing permits, was unrealistic. Why it was assumed that / or written into the prodoc that communities would better manage these pastures was difficult to fathom. Thus, the (cost) efficiency was rated as moderately unsatisfactory.

Relevance	

Relevance Rating – Moderately Satisfactory

The measures were required under international agreements (CBD, UNFCCC). The expected outcomes were directly linked to three GEF-6 focal areas: Biodiversity - Sustainability of PA systems; Land Degradation - Pressures on natural resources from competing land uses; and Sustainable Forest Management - Pressure on high conservation-value forests. The project was in-line with the NBSAP and UNDP country programming. The project design remained highly relevant. However, during implementation, the project really needed to target the high-altitude pastures, which were mentioned around 35 times in the project document, and target the institutional and profit-motivated barriers driving their degradation. This was considered as a moderate shortcoming.

The level of 'project activity' ownership by the SFUs and pasture cooperatives was high as was the ownership of the 69 TAPs.

The level of support to SCEEP, and UCBNR and GNR in particular was appreciated. However, the level of SFU ownership in taking responsibility, or requesting support to reduce livestock numbers was low and an issue that the project did not address.

Implementation - Execution

Implementation – The overall rating is **Satisfactory**.

Project Implementation: According to the given five categories - coordination & operational matters, partnership arrangements & stakeholder engagement, finance & co-finance, M&E systems (see next), and adaptive management (work planning, reporting & communications)

The implementing agencies (UNDP and SCEEP / PIU) had only minor shortcomings in terms of the quality of implementation or execution. Implementation of most of the five management categories led to an efficient and effective project. The quality of UNDP implementation and PIU execution were both rated as Satisfactory.

UNDP were the GEF Implementing Agency (IA). The SCEEP were the Executive and Implementing Partner (IP), with a UNDP-hired PIU as the *de facto* implementing unit. SCEEP designated a national project coordinator to formally collaborate with the PIU, and chair the project board (PB) meetings.

Coordination & Operational Management

Coordination & Operational Management by Implementing Agency (UNDP)

The Project Preparation Grant (PPG) document, noted that the PIF was weak in its link between common use and tenure / management use of the pastures. However the PPG was similarly weak in not understanding that the high altitude pastures were legally under the jurisdiction (ownership and tenure) of the SFUs, and that livestock herders (private groups, state entities) pay to graze their sheep, goats and cattle. The project was too slow to recognize this difference.

UNDP hired PIU staff including: Project manager (PM); Admin & finance assistant; a procurement manager; and a TAP small-grants manager (under Component 3); Coordinators were hired for: Landscape planning & knowledge (Outcomes 1 & 4); PAs (Outcome 2); and Pastures & forest land (Outcome 3). After covid, The PM covered the field role for Outcomes 1 & 4.

Coordination & Operational Management by the Implementing Partner (SCEEP / PIU)

The project was under UNDP-supported NIM, but effectively a UNDP-managed project. The project was signed in May 2017, with the first PB meeting held seven months later in December 2017. Meetings were held in Quarter 4 in 2017-20; and three meetings in Q3 and Q4, 2021. In most cases the annual workplans & budgets (AWPBs) were approved for the following year. Of note, during the 1st meeting, the strategic results framework (SRF) indicators were reduced from 30 to 22, however the indicators removed were mostly higher level outcome / impact indicators, which would have been good measures of project success. At the 6th meeting in 2021, the project was extended by eight months until end December 2022 due to covid. This was useful, as it allowed the project time to work with the SFUs on PMPs, which would not have occurred otherwise. However it was too late in the project cycle to integrate the project-generated SFU PMPs with state pasture management plans, which included the annual livestock grazing quotas.

The PB meetings were well attended. Taking the example from the 4th meeting, the attendance was: SCEEP; SCF; State committee for land resources & cadastry; Border army / State security service; Institute of Zoology (IoZ); GNR; UCNP; UCBNR (Uzbekistan Railways); CBNR; GNR; Uzhydomet; UNDP (4); and project staff (7)

PIU *Modus Operandi* – Contracting-out

Requesting state institutions to undertake new or extra work on behalf of a project, when their staff are already fully employed, (and with the project not under their financial control) is a known challenge for development cooperation projects, such as this one. Thus, the PIU's working method was to contract out services to individual and company contractors. There were 111 consultant contracts which was too many to manage effectively. A significant number of these consultants also prepared phase / mission reports, in addition to specific deliverable reports. The issue was how could this volume of work be effectively utilised to build institutional capacity. For example, only two small pasture cooperatives were established.

Partnership Arrangements & Stakeholder Engagement

SCEEP provided the national project coordinator, chaired the PB meetings, and were a major beneficiary of the project's training program and conservation equipment. The SCF and eight of their SFUs were engaged to support pasture conservation and were a major beneficiary of equipment, which was used to generate income.

The State Land Projection Research Institute (SLPRI) emerged as a key project partner, once the State committee for land resources was dissolved in 2021. SLPRI were important for two reasons. Firstly, SLPRI undertook design work for the PAs. Using their GIS map-making skills, they produced the maps for the four management plans (MPs) and new maps for the buffer zones of CBNR and GNR. They also produced the maps for the new PAs – Tupalang NP and Pskem NR.

Secondly, they undertook botanical surveys in selected mountain pastures to determine pasture health and resilience (of lack of) to sustained livestock grazing pressure. Such surveys were deemed valuable, as plant surveys had not been undertaken for ~40 years, and the changed species composition / cover in pastures could be reported.

The Institute of Zoology (IoZ) was the project's leading scientific partner, as well as being a recipient of training and equipment. The Global Snow Leopard Ecosystem Protection Program (GSLEP) supported the SLCAP. Communities were engaged through the development of pasture cooperatives and the TAPs.

Women's Empowerment

Gender equality was a significant project objective (UNDP Atlas Marker – GEN-2). The prodoc only marginally discussed women. Thereafter women's empowerment and equal access to project activities was not addressed within the inception report. There were no stipulations on equal representation on project structures (staffing, committees, PB, pasture cooperative's committees, TAP selection board). The gender analysis and plan was only 2.5 pages long, with 1.5 pages as the analysis section. The 1-page plan itself was perfectly acceptable, but it wasn't adhered to, and it was updated too late in the project cycle to be taken notice of. Tellingly, the PIR to June 2021 indicated – 'the plan outlined many actions, which, had they been implemented, would have justified the GEN-2 rating'. The 13-point plan lacked any mechanism as to who or how the measures would be enacted, monitored or enforced. There was little / no evidence that the plan was achieved, apart from the point on TAPs (Assist women technically / financially with alternative IGAs).

Financial management & finance

The project spend to end June 2022 was at 83%. The prodoc budget breakdown timewise appeared to be somewhat front-loaded, which was unrealistic. The 17% remaining funds amounts to US$ 1,034,574 to be spent in the last six months of the project. This appears somewhat unrealistic, as equipment for project activities has already been purchased. The co-financing by UNDP was $300,816 against the $300,000 promised amounts. There were two government in-kind contributions, estimated at SCEEP $25 million as promised within the prodoc; and SCF $3 m as recurrent funding but as new funding in terms of not being in the prodoc budget calculation.

Adaptive management

As the project started in May 2017, the PIU missed the first field (and farming) season from April until September, due to staff hire, project set-up, workplan preparation, and all other inception activities that needed to be undertaken. The project was impacted by covid. Summary to this, a project extension of seven months was agreed until end December 2022, making the project just over 5.5 years long. There were five annual AWPBs produced, which were signed by UNDP and endorsed by SCEEP. Five Project Implementation Reviews (UNDP GEF PIRs) were prepared.

Monitoring & Evaluation

M&E Systems – The M&E system design and the implementation of the M&E system was rated as **Moderately Satisfactory**.

M&E at Design

UNDP GEF projects have a particular M&E system that is report-based, and is centred around an annual PIR that runs mid to mid-year. The M&E system is based on a mixture UNDP's contractual compliance with GEF and its own systems, and checking the IP in terms of its contractual compliance of deliverables. These include AWPBs, PIRs, mid-term review and Terminal Evaluation (this report).

M&E Implementation

The primary internal method of M&E was via project / UNDP staff and consultants 'back to office' and mission / deliverable reports. The PIU was not encouraged to develop any spreadsheet tracking system, that ran annually and cumulatively with all the project numbers, as inputs and outputs. For example, indicators (and their baselines and targets) are often number-based, whereas PIR reporting is primarily text-based, with a few numbers 'put-in', but often not dated. There was no M&E specialist employed for this project.

The PIU produced an exit strategy (in draft), but it is clear now that a handover document between UNDP and each of the main institutional partners is required, especially the SFUs regarding incorporating the sustainable PMPs into state grazing permit plans demonstrating reduced livestock numbers.

Sustainability

Sustainability: According to the four GEF risk categories (financial, socio-economic, institutional & governance and environmental), present status, and towards the future is assessed.

Overall Rating: Moderately Unlikely

Financial Risks to Sustainability

The rating is 'Financial Sustainability is **Moderately Unlikely**'

Of most concern, was the fact that detailed proposals are still needed for implementing the SLCAP and the snow leopard research & monitoring protocol (SLRMP), before budgets can be prepared and funds requested from Ministry of Finance. Both of these plans could / should have been taken to a much more advanced stage during the project. The institutional willpower to detail such actions / proposals is unknown.

SCEEP and SCF are now involved in administering and implementing the national green program in planting many millions of trees. This program might draw expertise, time and funds away from these agencies' primary work on conservation of wildlife habitats, and high ecosystem-value mountain pastures and forest – all of which need expansion, rehabilitation, and protection.

Socio-Economic Risks to Sustainability

The rating is 'Socio-economic Sustainability is **Moderately Unlikely**'

The project's primary target group for the high altitude pastures was wrong. The entities that graze the livestock are the state, privates businesses, or groups of wealthy individuals. The owners of the high altitude pastures in the SLLs are the state. Villagers, farmers, smallholders and households are generally not part of this system. The permitting of over grazing by the state for economic gain, is in part causing the socio-economic hardship of the village farmers, who are restricted from using the high altitude pastures, and are having to adapt to climate change, including less water from these degraded pastures. The project undertook 69 alternative IGAs for mainly for villagers, as a way to support livelihoods without addressing the pastures issue.

Institutional Framework & Governance Risks to Sustainability

The rating is 'Institutional & Governance Sustainability is **Moderately Unlikely'**

The project worked quite well with the main wildlife conservation institutions (SCEEP, PA administrations, IoZ). However, change in institutional behaviour and governance was not really apparent, or at least difficult to measure. This was true for SCF / SFUs, who were pleased to receive support for creating tree nurseries and nut plantations to generate income, but were not sufficiently engaged institutionally in restoring high altitude pastures. In hindsight, this was a failing in the project design, and in the project management in not directly tackling the over-issuance of state grazing permits, which are approved at regional government level.

Thus the control of grazing in pastures was left to the forest rangers, without the technical methods or equipment to undertake this very large task. In contrast, the PA rangers were provided with field equipment, infrastructure and a smart patrol system, that was endorsed by the state.

Environmental Risks to Sustainability

The rating is 'Environmental Sustainability is **Moderately Unlikely'**

In terms of CBD's Aichi targets (5, 11 and 15), the project was not very successful: Degradation and fragmentation of natural habitats was not significantly reduced; the area and connectivity of PAs in regions with high biodiversity / ecosystem services was not significantly increased; and the ecosystem contribution to carbon stocks was not significantly enhanced, thereby not significantly contributing to climate change mitigation.

The SFU PMPs were prepared too late in the project to evaluate their quality and suitability, and more importantly how they were going to be integrated into the state system of issuing livestock grazing permits, which is based on profit. The economic decisions are taken by high-level administrators (SCF, Tax and Finance) in the city offices in the regional governments of Kashkadarya, Surkhandarya and Tashkent. There was very little evidence that the project had created the critical mass to cause this reduction in permitting quotas in the future.

Impact

Impact: The impact of the project was not considered significant for the wider viewpoint. Capacity and tools for conservation management inside four PAs was improved.

Reduction in stress on ecological systems

Whilst some capacity and tools for biodiversity conservation were developed at the central and local level, the numbers of SL and its prey indicated that the trend wasn't so positive. If the PAs and SLLs had undergone much improved natural resources management, then the numbers of SL probably would have increased by more than six per year, and just as importantly, their prey populations would have expanded.

Through farmer and forestry staff discussions it was also clear that there was a 'tragedy of the commons' situation. The high-altitude pastures, despite being a public resource, they were being managed by persons / offices in regional government as a free resource to be used in the interests of generating income for state and private companies, and in doing so, ultimately depleting the resource. The state can't expect to make and collect such profits and taxes and not cause severe ecosystem damage.

It was difficult to determine what level of evidence the project was providing to regional SCF decision-makers in terms of the botanical / pasture degradation reports, and what level of promotion and joint-monitoring support the project was offering in implementing the project PMPs.

Regulatory & policy change

The project supported the development of a number of pieces of legislation, including for the establishment of PA buffer zones.

Catalytic Effect

The TE prepared a Theory of Change chart – see text of full report.

Scaling-up & Replication
- Buffer zones are now being established for eight PAs. The buffer zones restrict activities to conservation-oriented actions
- SMART patrol system as a conservation law enforcement tool was adopted by government for scaling-up
- Cooperative PMP in Akhangaran District, was replicated to cover an additional 5,400 ha
- Fodder seed multiplication for fodder production fields - the model was replicated in Muminobad Village (Tashkent region) on 200 ha; in the villages of Vardon and Amagan (Kashkadarya region) on 218 ha.

Demonstration
- Smart patrol system (grid patrols, camera trap deployment, DNA analysis of SL scats)
- PA management plans and the establishment of PA buffer zones
- Unmanned Aerial Vehicle (UAV) use for conservation

New techniques / approaches
- Development of PMPs for the pasture cooperatives
- Development of pilot PMPs for parts of SFU land under their jurisdiction
- Technical and financial support to SFUs to create tree nurseries in order to generate alternative income streams

Analysis & Conclusions

Project Design

The general project design was acceptable with a sufficient number of interventions, although technically and geographically the project was rather dispersed. It needed earlier and greater emphasis in addressing SFUs' management of pastures. This was a known root cause of land degradation (and SL habitat) and presented in the prodoc as such, but the solutions were poorly followed through in the logframe actions. For example, the indicator for degraded high-altitude pasture to be rehabilitated, had a low target with communities as the stakeholder, when these pastures were under the jurisdiction of the government SFUs, and covered a significant area of ~270,000 ha. Furthermore, the wasn't a corresponding output to match this indicator.

This lack of appropriate institutional design at project preparation stages in not matching root causes through to solution (e.g. a problem tree to logframe analysis), was a major shortcoming. The prodoc included a chart of major drivers of biodiversity loss (threats & root causes). This chart indicated that for degradation, fragmentation, loss of habitat and ecosystem services, the root cause was in 'production landscapes' with an unsustainable system of livestock & pasture management, and with ineffective forestry management. More than 50% of the project area was high altitude degraded pastures (which were mentioned many times in the prodoc) and these areas were under such 'forestry management', namely the State Forestry Units (SFUs), but the SFUs were not sufficiently integrated into the project design, in terms of being a primary stakeholder or expected prominence at the output level.

There were various descriptions of the high altitude pastures including: mountain or alpine meadows, though they differ from the grasslands (and steppe area) in the mid hills. Both are traditional grazing areas, however at higher altitudes, the pastures used to be seasonally grazed, but are now with sheep mostly year round, and the mid-hills are either over-grazed or have become intensified for field production of fodder (alfalfa, cereal – barley or wheatgrass, grass / hay) for livestock.

Pasture Monitoring & Permitting Responsibility

Whilst SCF / SFUs issue the permits for grazing, it is SCEEP inspectors who monitor pasture health, so there is a disconnect, which is further compounded, by the fact that SCEEP inspectors should inform SLPRI if there is a need for a survey / investigation, who then have to survey and should advise on appropriate livestock stocking rates. SCEEP need more skills to assess pasture land (steppe and mountain) degradation, as they currently only check the grazing sheep numbers against the permits issued.

A simple pasture self-monitoring system for SFU forest rangers could include a *pro forma* check-sheet – date; location; type of pasture; percentage plant cover; health of pasture / level of degradation (scale 1-5); primary cause of degradation; weather in the region for the last month; numbers of livestock observed in the area (breakdown by sheep / goats and cattle); SFU grazing permit number, date, and number of livestock permitted. This would need to be a compulsory record keeping system with recorded data submitted to SCF / SCEEP / SLPRI regional offices on a monthly basis.

On behalf of the project, SLPRI also undertook their first botanical survey (of the high pastures) in many years. Administratively if SCEEP inspectors can officially recommend on needed livestock reductions to SLPRI, who can now report based on their surveys, then actions can be taken. This should be seen as a critical intervention, due to extensive climate change impacts having already occurred. This includes reduced snowfall, therefore less water, and with excessive grazing, the pastures are degrading (drying out and losing topsoil) at an accelerating rate. This means far less water is available downstream, with major environmental and economic consequence.

SFU Management of High Altitude Pastures

Mountain pasture management was not adequately addressed, in part due to the PA / TAP project focus, but probably also because the project executive was SCEEP and not SCF. This meant that the project was not sufficiently inclusive of needed pasture actions by SCF / SFU. The equipment provided to SFUs almost seemed to

be provided for tree planting, which was only a minor objective of the project, when natural pasture regeneration and its monitoring was needed, but not fully understood. But of much higher importance, was the problem of SFU issuance of too many grazing permits, which was controlled at a regional government level. This was not addressed by the project at this level.

However, the project did support SCF / SFUs with the preparation of PMPs which covered ~18% of the SFU pastures, although the adoption of these plans could not be verified as they were only produced towards the end of the project (2022), and were not integrated with the SFU state grazing permit quotas. Anecdotally one SFU indicated ~75% adoption, however its suitability, and how it could be applied was unclear.

Livestock grazing quotas for high pasture management is a sensitive subject for a number of reasons. The pastures are used to generate income by both SCF (issuing the permits) and by commercial / state livestock grazers who wish to fatten their livestock at minimal cost. The process to assess sustainable carrying capacity for livestock permitting is overly complicated. Local SCEEP inspectors need to report land degradation to district to regional SCEEP offices who need to officially request SLPRI to survey areas to inform SCF / SFU if maximum carrying capacities need to be reduced. In terms of self-sustaining the SFU entities themselves and providing a source of income / tax revenue to government, the SCF / SFUs are effectively under pressure by regional government to not reduce grazing numbers. In turn, this would mean that the political willpower of local government officials to go through this process is consequently low. A radical change in thinking is needed.

<u>PA system management planning and Key Biodiversity Areas</u>

Not all the PAs / nature reserves or wildlife corridors proposed were adopted, despite quite some years in planning, such as for the Pskem NR. However Tupalang NP in the Gissar range, did become a PA, but with land significantly remaining under SFU jurisdiction. Despite UCBNR and CBNR both being within UCNP, with the creation of UCBNR, the areas had become fragmented. The project solution was to create a 5 km buffer zone to re-connect these two areas. This meant that the corridor in between could become managed under conservation objectives by SCEEP / PAs. This showed that the project could be adaptive, however despite this buffer zone being delineated on new maps, and new legislation to adopt PA buffer zones, the actual buffer zone between UCBNR and CBNR was not officially designated, due to issues over land jurisdiction.

Furthermore, corridor linkage of the UCBNR – CBNR complex to the proposed Pskem NR, and the Akbulak catchment was not achieved (in Western Tian mountains), nor the wildlife corridor connection from GNR to Tupalang NR (in Pamir Alay mountains). Whilst wildlife corridors didn't seem an option without legislation, neither did any further conservation management for SL / wildlife in these migration routes, under SFU jurisdiction. The linkage was needed because predators, such as SL and wolf, follow the ibex / deer grazing into the pastures in the winter / spring, however now livestock remain there, this was an issue for wildlife habitat and the connectivity of SL breeding populations, which was not addressed by the project.

<u>SFU Tree Nursery Production & Fodder Demonstration Plots</u>

The SFU tree nurseries were operational, with a multi-purpose income-generating objective to supply tree / shrub seedlings to themselves, and to sell to district and local government, and the private sector. The supply for themselves was mainly for nut tree plantations on their lower hills, and to local government for landscaping / re-greening contracts. The SFUs were also leasing out some small areas of land for fruit & nut tree planting.

Forestry extension in terms of protecting Village Council Committee (VCC) land from over-grazing is a difficult task, as the SFU doesn't have control of this land. However, with project support and having the ability to provide tree seedlings, as well as set-up 'no-graze fenced field plots' which were ploughed and seeded with palatable plant species as a demonstration, the SFUs maintained their sense of well-being and value to rural society which was important. The project supplied agriculture / forestry equipment to the SFUs (tractors, trailers, farming implements, and water bowsers).

<u>TAP discussion</u>

The project supported 69 TAPs spending ~ 10% of project funds. Villages adjacent to the PAs were selected. As a method to support and stabilize livelihoods, it was successful. The TAPs with the most impact were the water supply and veterinary schemes, as they collectively reached the most households.

Lessons Learned

<u>Snow Leopard Conservation</u>

The project PIF (GEF approved design prior to full prodoc preparation) indicated that a viable snow leopard population range (with core area, buffer and corridors) would be be ~200,000 ha (2,000 km^2 or 44.7 km x 44.7 km) in area. In the Pamir Alay mountains, the Gissar snow leopard range under nature reserve protection is 80,986 ha

(Gissar Nature Reserve), with the Zaamin NR protecting an added 26,840 ha. Under the project, Tupalang National Park core area of 18,000 ha was added. Combined, this area covers 125,826 ha. In the Western Tian Shan, the Ugam Chatkal snow leopard range under nature reserve protection comprises of Ugam Chatkal Biosphere Nature Reserve (44,136 ha) and Chatkal Biosphere Nature Reserve (24,668 ha), with Pskem Nature Reserve (under proposal) to cover 51,300 ha. This equates to 120,104 ha.

Thus, at present, the viable range for the two populations of snow leopard equates to 63% (Gissar SSL) and an expected 60% (Ugam Chatkal SLL) coverage. This is accepting that neither the 5 km wide buffer zone strips designated under the project (as the area has not been calculated), nor national park areas, due to land use for economic production, are included here, as they don't match well with snow leopard and its prey habitat requirements. Furthermore, In the Pamir Alay and Western Tian Shan mountains as a whole, these nature reserves cover only ~20% of the snow leopard range.

In the prodoc, the GEF incremental benefit was to increase these two areas to 200,000 ha each to become viable for two snow leopard populations. The benefit was stated as 'the conservation values of at least 200,000 ha of snow leopard and prey habitats are secured, and effectively monitored in the core conservation areas of Ugam Chatkal NP - Chatkal Biosphere NR and its wildlife corridor, Pskem and Akbulak, and Gissar NR'.

The PIF mentioned that a key focus for the project was that wildlife corridors were needed for effective protection of snow leopard, and that the Ugam Chatkal and Gissar PAs and SLLs, were continually losing land to the infringement of livestock, resulting in high rates of vegetation loss. As a mitigation measure, the prodoc indicated that the project would support a matrix of land uses, including the ecological corridors to connect PAs.

The main conservation approaches to achieve such snow leopard population viability in the two landscapes were:
- Create 237,700 ha of new protected area estate [IUCN Category Ia – Nature Reserve, and II – National Park]
- Secure 105,900 ha of high altitude forest outside nature reserves to be designated as under 'High Conservation Value (HCV)' status. Basically such areas would be designated for the purpose of snow leopard conservation corridors, and would be outside nature reserve (core) areas, but within the national park or other areas.
- To develop buffer zone areas and designate, for the purposes of wildlife conservation corridors
- Develop 50,000 ha of high altitude pasture under sustainable management, to allow for better ecological functioning / snow leopard and ungulate habitat corridor use

The main methods to achieve this included:
- To prepare an integrated management plan for Ugam Chatkal NP with:
  o Wildlife corridors established through designating / zoning areas as 'high conservation value'. Such corridors would include areas between UCBNR and CBNR, and between this complex and the areas of Pskem and Akbulak watershed systems
  o Align the management of CBNR with the 10-year forest plans for the two SFUs (Akhangaran & Burchmulla) so that the forests are managed in line with HCV principles
- To prepare the feasibility to expand Gissar NR (and then delineate the buffer zone) into the upper Tupulang river watershed, to create a wildlife corridor for snow leopard
- To align SFU pasture management plans with SFU 10-year management plans, to reduce the pressure from high numbers of livestock grazing quotas being issued

Thus, the approach was to create two viable areas (with connected migration corridors within) for two snow leopard populations, using a mixture of conservation spatial land-use tools which included to designate natural land resources as new PA estate (national park and / or nature reserve), new 'high conservation value' and / or new designated buffer zone.

<u>High altitude pastures</u>

Management of the mountain pastures now needs a new approach. For example, there needs to be a Green Climate Fund (GCF) project to be primarily focused on the SCF / SFU management of mountain pastures and ecosystems in terms of climate change mitigation (carbon capture), and in the result area of ecosystems and ecosystem services. These pastures of the eight SFUs probably need to be IUCN Ecosystem Red Book listed, which again is an added approach to raise their environmental and climate importance above economic self-interest of the regional governments and their tax offices. A remote-sensing and ground-truthing monitoring & enforcement methodology is also required.

The value of using (applied) research needed to be appreciated more, and be summarised and presented at a high level. The ecological research of mountain pastures was not being built upon, which if change to livestock grazing patterns are not undertaken, then the future will move more towards 'disaster relief projects', and not wildlife or development projects. The project covered a wide sphere of ecological work, but didn't get to grips with regional government administrators and politicians concerning mountain pasture management. There were many training events, but not high level workshops to present the SLRPI-identified mountain pasture issues. The PMPs for the SFUs were too little too late to address the scale of the problem.

There is a need for a pasture monitoring system, that can be undertaken by forest rangers (with a *pro forma* check sheet), but reported up (uploaded) onto a system for analysis and presentation to appropriate government ministries. Furthermore, the monitoring system needs government approval and trust in it. The analysis part of the monitoring needs to link the data to an ecological risk assessment methodology with direct short method outcomes on the actions to be taken. For example concerning: period of grazing closure (if needed); annual grazing opening / closing dates; number of livestock (sheep /goats and /or cattle / horses). There is a need for supervising this system and for an annual report based on the visits / data / analysis over the year.

There is a need to assess the timing of opening / closing of the pasture grazing permits, as well as the permitted number of livestock as it affects many aspects of the ecological integrity (functioning) of the alpine meadow pastures. It is also due to the seasonal plant growth and flowering / seed-set cycle at differing altitudes.

The process to assess pasture carrying capacity for livestock permitting needs an overhaul. SCEEP directors / administrators / engineers at regional level need to be enabled and obligated to: receive SFU / SCEEP ranger field reports; commission and expect SLPRI investigation reports; and instruct SCF / SFU on new maximum carrying capacities, and permissible livestock numbers for each SFU pasture region.

The liaison methods between SCEEP and SCF / SFUs need a formal channel at regional, district and level to coordinate pasture use, monitoring, and livestock permitting.

A new approach to enforcement of reduced livestock permits in the high altitude pastures is needed. The suggestion here is that the border army (who were trained in conservation by the project) are engaged to work with SFU / SCEEP rangers on joint patrols in the spring season on the mountain ridges for example and on regional borders such as Tashkent / Namangan – and to coordinate with monitoring / evidence gathering by using the UAV.

The high level importance of reversing pasture degradation due to over-grazing warrants a part re-purposing the use of the UAV drone to monitor pasture condition and livestock numbers.

There is a need to fund the protection of these mountain pastures, their enforcement monitoring, and their technical health monitoring. This can be achieved through a government levy of a ecosystem services and conservation tax on all meat sales. A government TV campaign to reduce meat consumption to stop ecosystem collapse in the mountains could accompany this tax.

Protected Areas and wildlife monitoring

There is a need to look again at the SCEEP and their Smart patrol / BCIMS data management system in terms of their capacity to manage the system and its data usage for annual SL data analysis; and the access of data for research. Part of the BCIMS role was to use its data / information to report on the SLCAP and the SLRMP actions.

Recommendations

Exhibit 4: Key Recommendations Table [with responsible entity]
1. Under the SLRMP protocol, to identify the research for 2023, prepare the concept proposals and put in the budget for Ministry of Finance [PIU with SCEEP & IoZ representatives] 2. To identify actions within the draft GSLEP plan, for inclusion in the SCEEP / IoZ workplan for 2023 [UNDP / PIU SCEEP and IoZ] 3. To prepare and deliver a SLPRI 20-page report to regional and national government decision-makers on the state of high altitude pasture degradation (summarized geo-botanical reports), with projections on ecosystem habitat collapse, that will occur without significant intervention on reducing livestock numbers [UNDP with SLPRI – report and workshop]

4. The SLPRI to provide new permissible livestock grazing numbers charts for each of the eight SFUs for sustainable high-altitude pasture degradation control, that the eight SFUs need to be in compliance with [UNDP with SLPRI]

5. To prepare a short guideline with pro-forma checklist for joint (or either) SFU ranger / SCEEP ecology inspector patrol on how to assess levels of pasture health / degradation and with the reporting system steps to regional government [SLPRI with UNDP support, to present by November 2022 to regional government / SCF / SFUs for endorsement and approval by end December 2022]

6. Establish a joint research & monitoring group to check implementation and adaptation of project SFU PMPs against state SFU livestock permitted number plans, and against pasture health over the next five years [UNDP to prepare an MoU for Ministry of Finance to lead on funding, with technical lead by SLPRI, and field support from SCF / SFUs, with SCEEP checking]

7. To prepare handover agreements with the SFU concerning implementation of the PMPs and integration on reducing livestock permit numbers [UNDP with SCF to meet Tashkent and Kashkadarya regional government for agreement & signature]

8. Handover agreements with the VCCs / pasture cooperatives on equitable sharing use of the tractor and its maintenance costs [UNDP]

Full report

1. INTRODUCTION

1.1. The project

This UNDP-supported GEF-financed project 'Sustainable natural resource use & forest management in key mountainous areas important for globally significant biodiversity (PIMS 5438)' was implemented by the State Committee for Ecology & Environmental Protection (SCEEP) and the State Committee for Forestry (SCF) under the guidance of a UNDP Project Implementation Unit (PIU). The project was located in the two mountain ranges of Western Tian Shan and Pamir Alay, which are snow leopard landscapes (SLLs). Administratively, the project was in the regions of Kashkadarya, Surkhandarya and Tashkent.

The project started in May 2017 and ended in December 2022. The 5-year project was under UNDP-supported National Implementation Modality (NIM) with SCEEP as the Executing Agency (EA), and the PIU as the implementation management office on behalf of both SCEEP and UNDP[4]. The project was supported by a National Project Director (from SCEEP) and a Project Board (PB).

1.2. Purpose of the evaluation and report structure

Purpose & Structure

The objective of the Terminal Evaluation (TE) was to gain an independent analysis of the achievement of the project at completion, as well as to assess its sustainability and impact. The report focuses on assessing outcomes and project management. The TE additionally considered accountability and transparency, and provided lessons-learned for future projects, in terms of selection, design and implementation. The report is in six sections - introduction, description, findings, sustainability, impact and conclusions / recommendations. The findings (Section 3) are additionally divided into strategy and design, implementation and management, and results.

1.3. Scope and Methodology

Approach

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[4] The official wording of this arrangement was 'The project will be nationally implemented by SCEEP in line with Standard Basic Assistance Agreement between the Government of Uzbekistan and UNDP, signed by the parties on 10 June 1993.' (prodoc p72 on Project Implementation Arrangement)

The overall approach and methodology of the evaluation followed the guidelines outlined in UNDP Guidance for Conducting Terminal Evaluations of UNDP-supported GEF-financed Projects (2020). The TE was an evidence-based assessment and relied on feedback from persons who were involved in the design, implementation, and supervision of the project. The TE team reviewed available documents **(Annex 7)**, conducted field visits and held interviews. The international TE consultant was the evaluation team leader and responsible for quality assurance and consolidation of the findings, and provided the TE report.

The field mission took place from 6th July – 22nd July 2022, according to the itinerary compiled in **Annex 10**. The agreed upon agenda included a UNDP briefing on 7th July and a debriefing meeting on 21st July. There were no distinct security issues which affected the TE[5]. Usual precautions were undertaken, with two 4WD vehicles provided for the field travel.

Methods

The TE determined if the project's building blocks (technical, financial, management, legal) were put in place and then, if together these were catalysed sufficiently to make the project successful. The TE method was to utilise a 'multi-level mixed evaluation', which is useful when evaluating delivery of a new service or approach, being piloted through state institutions. The method allows for cross-referencing and is suitable for finding insights which are sensitive and informative. The rating scales are provided in **Annex 9.** Pro-forma questions on key themes such as those provided by the UNDP GEF guideline were updated by the TE (**Annex 12**).

Main partners and Stakeholder feedback

The TE interacted with the PIU project staff, the UNDP Country Office as well as with the project executive (SCEEP) and other stakeholders such as PA staff, SCF and their State Forestry Units (SFUs), regional and local government and community leaders and farmers. The TE visited the project area to interact with local administrators, technical staff and beneficiaries. Gaining a representative view from local stakeholders was not limited, although gaining access to the PAs and high altitude pastures was not really possible for such a short mission. **Annex 6** provides a list of persons met and **Annex 10** is the mission schedule.

Ethics

The review was conducted in accordance with the UN Ethical Guidelines for Evaluators, and the reviewer signed the Evaluation Consultant Code of Conduct Agreement (**Annex 13**). In particular, the TE team ensures the anonymity and confidentiality of individuals who were interviewed and surveyed. In respect to the UN Declaration of Human Rights, results are presented in a manner that clearly respects stakeholders' dignity and self-worth.

2. PROJECT DESCRIPTION

2.1. Development Context

GEF-6 Focal Area linkage
 - Biodiversity Objective: BD-1 – Improve sustainability of protected area systems
 - Land Degradation Objective: LD-3 – Reduce pressures on natural resources from competing land uses in the landscape
 - Sustainable Forest Management Objective: SFM-1 – Reduce the pressures on high conservation value forests by addressing the drivers of deforestation; and SFM-2 – Maintain flows of forest ecosystem services and improve resilience to climate change

Sector-wide linkage with the International Community
 - UN Convention on Biological Diversity (CBD, 1992) – Uzbekistan became a party to CBD in 1995, which in Article 8, obliges member states to: Establish a system of PAs; Develop guidelines for the creation and management of PAs; Promote the protection of ecosystems, natural habitats and the maintenance of viable populations of species in natural surroundings
 - CBD Program of Work on Protected Areas (expansion of PAs, integration of PAs in wider landscapes, and community engagement schemes) - The project results contribute to PoWPA
 - CMS and CITES conventions - Uzbekistan is a party to both, which cover snow leopard
 - CBD Aichi Targets: Target 5 - by 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced; Target 11 - significantly increase the area & connectivity of PAs in regions with high biodiversity and ecosystem services, and increase

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[5] One military checkpoint was crossed in the Surkhandarya region, during which the official letters of invitation from SCEEP for the project TE team proved valuable.

management effectiveness of PAs through integration into the wider landscape. Target 11 has a goal of 17% PAs by 2020[6]; Target 15 - by 2020, ecosystem contribution to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15% of degraded ecosystems, to contribute to climate change mitigation

- Project contributes towards the 2016 Sustainable Development Goals (SDGs) and their targets in particular Goal 12. SDG target 12.2 is 'by 2030, achieve the sustainable management and efficient use of natural resources'
- UNDAF Outcome 6 - By 2020, rural population benefit from sustainable management of natural resources and resilience to disasters and climate change; UNDP CPD (2021-25) Output 3 - Sustainable natural resource / forest management supported in key areas important for globally significant biodiversity

Project linkage to National Planning (Policy & Regulatory)

- National Biodiversity Strategy & Action Plan 2019-28 (NBSAP) – includes a master plan for the PA System
- Creation of PAs in snow leopard habitat (2019) Cabinet Regulation #484
- Creation of PAs under forest fund lands (2022) Cabinet of Ministers, #93
- System of state management of PAs, (2019) President Decree
- Program and Action Plan for Snow Leopard Conservation 2020-30 (2021) Cabinet of Ministers #05[7]
- Measures to improve the administration of natural PAs (2019) President Decree #4247
- Creation of SCEEP (2017) President Resolution #PP-2915
- Creation of State Committee for Forestry (SCF) (2017) Presidential Decree #UP5041
- Creation of the Ugam Chatkal State Biosphere Reserve (2018) Cabinet Resolution #367
- Use of natural areas and objects of the Ugam Chatkal National park (2019) Cabinet Ministers Resolution
- Governance of natural resources & environmental protection (2017) President Decree #UP5024
- Specialized SFUs in Shumanai, Kanlykol, Shakhrisabz & Fozilmon (2018) Cabinet Resolution #471
- Land law (2021) Presidential decree #6243 - Before there were five types of land, now only ownership and tenancy. The right to allocate land no longer resides with local government, but now with regional government. Before due to the risk of farmers' land being taken, then there was little or no investment in their land.
- Pasture Law (2019) ZRU-538 – legal framework to allocate pasture land - Cooperative establishment with land ownership / tenure certification
- Regulations for maximum rates for livestock grazing and pasture management (2019) Cabinet Resolution #689
- Measures to improve the efficiency of forest use (2019) Presidential Decree #PP4424
- Monitoring of the environment (2019) Cabinet Ministers Resolution #737
- Strategy of agricultural development 2020-30, (2020) President Decree
- Fight on land degradation, (2022) President Decree
- Modern management in the activities of government agencies and organizations (2020) President Decree
- Green Nation Program (2021) – 5 billion trees to be planted, with SCEEP as the lead monitoring agency

Linkage to donor-projects

- Global Snow Leopard Ecosystem Protection Program (GSLEP)
- UNDP - GEF Transboundary cooperation for snow leopard & ecosystem conservation

2.2. Problems that the Project Sought to Address

Threats, Root causes, & Impacts (prodoc)

- The mountain foothills and mid hills are ploughed for arable cropping leaving only the higher steppe and alpine meadows as pastures for livestock[8]. This is also the case, and now becoming more acute in the Western Tian Shan and Pamir Alay mountains.
- Livestock (mainly sheep / goat) numbers are increasing and are beyond carrying capacity in these lower and higher pastures. The productivity in these areas has been reduced by 50% over the last 20 years. The traditional practice of moving livestock between summer and winter pastures has been abandoned.[9]
- Villagers allow cattle grazing close to home throughout the year, which puts more pressure on keeping small livestock

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[6] The figure was 8.7% (2016) and once the Pskem River NR is approved, the new figure will be 14% (2022). The 14% figure is partly due to some new very large PAs in Karakalpakstan

[7] included creation of core zone (51,300 ha) of Ugam-Chatkal National Park

[8] It was evident to the TE that mid-hills are also now being cultivated for cereal or other cut & carry fodder crops

[9] The TE noted that climate change also facilitated longer accessible periods at higher altitudes

(sheep / goats) out on pastures. As villagers often do not have pasture rights, they use land illegally to graze livestock. Fodder production and management practices are sub-optimal

- These factors have led to soil erosion and loss of grassland productivity. Over 60% of the pastures in the Western Tian-Shan and Pamir Alay mountain systems are considered heavily eroded[10]. Mid-level sub-alpine pastures have changed species compositions due to over-grazing, with more unpalatable species

- Grazing has arrested natural regeneration (especially slow-growing Juniper forests[11]) and disturbed wildlife.

- The degradation of the Juniper and nut forests is due to communities allowing their cattle to graze in montane forests, without control. This has been detrimental to the forage for wild ungulates, and other wildlife[12].

- Legal hunting is not sufficiently monitored in these fragile wildlife habitats; illegal hunting also occurs; human-wildlife conflicts are increasing

- Uzbekistan is highly vulnerable to the impacts of climate change. Average annual temperature has increased by 0.3°C since 1951 and in the next 50 years, average temperature is expected to increase by ~2.5°C. Based on two 30-year comparisons (1950-80; 1978-2007), the number of winter days with lower than minus 20°C has declined by more than 50%.

- Uzbekistan is vulnerable to extreme temperatures, drought, heavy rainfall, landslides and floods in increasing frequency. Water shortage, and soil erosion are serious issues. In 2005, the country water deficit was 2,000 m^3. This is predicted to be 7,000 m^3 by 2030 and 13,000 m^3 by 2050.

- Socially, there is insecure land tenure, and a low capacity to conserve mountainous ecosystems. Livelihood improvement is needed for communities adjacent to these areas, whom currently have a high dependency (and propensity to use) on natural resources to meet food and fuel requirements. Livestock shelters are traditionally made of wood

2.3. Description and Strategy

Background

The project was partly based on the recommendations adopted at the international meeting on conservation of snow leopard (SL) held in Kyrgyzstan in 2012. The project was consistent with the global SL survival strategy and was in response the government request for assistance in the implementation of this strategy. The recommendations were reflected in the project document (prodoc). The project was closely linked to national strategy for snow leopard (2014-20).

Moreover, the project was to address priorities of the National Action Program to Combat Desertification (NAPCD, 2002). The NAPCD envisioned improvement of land planning, restoration of degraded rangelands and hayfields, restoring forests and developing mechanisms for sustainable use of natural resources. The project was originally designed to be implemented within the framework of the 'Central Asian Countries Initiative for Land Management', which supported the implementation of UNCCD in Central Asia. (Source PIF)

The project development goal was to 'contribute to the conservation and sustainable use of globally significant biodiversity.' The objective was to 'strengthen the terrestrial system of national PAs for biodiversity conservation through enhanced representation, management effectiveness, monitoring, enforcement and financing.'

Project Location

The project was located in the two mountain ranges of Western Tian Shan (including the Ugam, Chatkal and Pskem PAs) and Pamir Alay (including Gissar Nature Reserve and Tupalang National Park), and in the adjacent mid-high altitude grassland pastures. The project worked in four PAs: Ugam Chatkal National Park (UCNP); Ugam Chatkal Biosphere Nature Reserve (UCBNR); Chatkal Biosphere Nature Reserve (CBNR), and Gissar Nature Reserve (GNR).

Protected Area (PA)	Area (ha)	Ecoregion
Ugam Chatkal National Park (UCNP)	574,600	Western Tian Shan
Ugam Chatkal Biosphere Nature Reserve (UCBNR)	44,136	
Chatkal Biosphere Nature Reserve (CBNR)	24,668	
Pskem Nature Reserve (PNR) [Proposed]	51,300	
Gissar Nature Reserve (GNR)	80,986	Pamir Alay

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[10] The TE noted also that degraded pastures, with topsoil erosion can't hold water, which exacerbates the degradation cycle

[11] There was evidence of juniper natural regeneration and re-planting in one area visited, but juniper (as it grows so slowly) could grow for 10-15 years during pasture closure, and then be wiped out again without strict grazing control – this is one of the issues – closing high altitude pastures for a few seasons, or reducing livestock numbers by 25%, will not solve the problem now.

[12] Data from the forests along the Pskem ridge in Western Tian Shan indicate the presence of (a cattle corridor) at least 106,000 head of cattle. This is just one area, and does not include sheep / goat numbers, which are also extensive

Zaamin National Park	24,110	
Zaamin Nature Reserve	26,840	
Tupalang National Park	27,851	

The project also worked with eight adjacent State Forestry Units (SFUs) who manage the adjoining high altitude meadows and pastures, and with pasture cooperatives and village council committees (VCCs) in the mid hills.

The project location included five main types of mountain pasture:

- High altitude mountain meadows (short-grass alpine meadow; bunchgrass alpine pasture)
- High hills (sub-alpine meadow-steppe pasture; herb-grass pasture with juniper trees)
- Mid hills (tall grass herbaceous pasture)

For a series of maps, which the project produced - see **Annex 11.**

Project Timing & Milestones

The project timing was from May 2017 until end December 2022. The prodoc doesn't mention milestones or benchmarks, although responsibility for fund disbursement and attainment of the project outcomes was with SCEEP.[13] An inception workshop was held in September 2017, with most PIU staff, including the project manager (PM) contracted by then.

Comparative Advantage

UNDP had a comparative advantage of capacity building, provision of technical support in the design and implementation of the project. UNDP also had an advantage working with government especially in strengthening institutional, policy and legislative mechanisms, in undertaking risk assessments, in mainstreaming biodiversity conservation into development planning and harnessing best practices across the thematic area.

2.4. Implementation Arrangements

Project Management Structure

The project was steered by a Project Board (PB), chaired by SCEEP. The project established a Project Implementation Unit (PIU) which was managed by UNDP, with oversight from SCEEP and a national project director. The PIU staffing included a PM (who also covered components 1 and 4), leads for Components 2 and 3 and a micro-grants (TAP) manager. Two further key staff were added in 2018 - A Technical Assistance Project (TAP) manager and a procurement specialist.

2.5 Key Partners & Stakeholders

The prodoc (p28) outlined its stakeholder analysis (p28), and its stakeholder engagement plan (p119-121), which is presented here for government and international partners:

- SCEEP - Is the focal point for CBD. - Identified as the executing agency and will take responsibility for coordinating, monitoring and reporting on the project. SCEEP will chair the PB

- SCF - Will be represented on the PB to ensure the alignment of activities with national pasture & forest legislation. To play a leading role in the implementation of project activities

- Committee for Land resources, geodesy & cadastry – To provide guidance on land use planning [dissolved 2021]

- Institute of Zoology (IoZ) - Will provide scientific advisory services and be represented on the PB.

- Regional government – Will sit in the PB and mediate between national policy and local project activities

- District government – To support project implementation. They may be direct beneficiaries of training

- Village Council Committees (VCCs) - The mahallas will work on behalf of their villagers in the project area

- Secretariat of GSLEP in Bishkek, Kyrgyzstan - Will participate in technology transfer, data sharing, and planning

- Panthera NGO – To support research on SL and prey populations

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A description of the set of Terminal Evaluation stakeholders – those who were responsible for implementation of the project and those associated with the project – is provided as **Annex 8.**

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[13] 'Following the programming guidelines for national implementation of UNDP-supported projects, the SCEEP will sign the prodoc with UNDP and will be accountable to UNDP for the disbursement of funds and the achievement of the project objective and outcomes, according to the approved work plan'. (source prodoc). In reality, UNDP were responsible for fund control

3. FINDINGS

3.1. Project Strategy

3.1.1 Barriers to Sustainable Natural Resource Use

Barrier 1 – Lack of appropriate use of ecological data and no management regimes for degraded land

- Flora / fauna information is outdated. There is no assessment of the soil degradation to support land use planning

- The land use and sector planning is driven by short-term economic goals, with little consideration to the ecological integrity and sustainability of natural resources. Areas of high conservation value are not being adequately identified

- Weak monitoring and enforcement against illegal livestock grazing in high conservation value forests, and low levels of conformance with the conditions of pasture lease and use rights. Thus pastures and forest continue to be degraded and natural ecosystem functioning lost.

- Monitoring and enforcement of land use agreements requires dialogue between state institutions involved in land use planning, permitting and environmental inspections. While government institutions and SFUs are responsible for the administration of their pasture use, in practice there are no officers within these institutions to fulfil this mandate

Barrier 2 - Limited capability for the expansion, planning and management of PAs in the mountain ecosystems

- Many of the NRs in mountain ecosystems are becoming biologically isolated as a consequence of the conversion of forests, overgrazing and agriculture effecting wildlife corridors, reducing dispersal areas of wildlife, compromising water yields from catchment areas, increasing soil erosion, and reducing the viability of wildlife population sizes.

Barrier 3 - Unsustainable pasture management practices in mountainous areas

- There are no successful grassland rehabilitation projects in the region that could serve as a demonstration for scaling up efforts to rehabilitate degraded grasslands

- There is no clear public institution directly responsible for the strategic planning and operational oversight of pastoral farming. There is also limited cooperation between the SFUs, the regional / district administrations, and the pasture users (with or without grazing permits or tenure rights) in improving the management of mountain pastures

Barrier 4 - Incomplete knowledge management systems for trans-boundary cooperation in mountain ecosystems

- The snow leopard's range is adjacent to to Kyrgyzstan, Kazakhstan and Tajikistan. There is a need for cooperative research and information management on conservation

3.1.2 Project Design, Objective & Approach

Uzbekistan is home to the far western outliers of the western Tian Shan (Chatkal, Pskem, Ugam and Kuramin ranges) and Pamir-Alay (Gissar, Turkestan and Zeravshan ranges) mountain systems. These mountains are home to the endangered SL, and provide important habitat for its key prey species. The project objective was 'To enhance the conservation, and sustainable use, of natural resources in the biodiverse high altitude mountain ecosystems of Uzbekistan'.

The SL distribution range comprises three separate 'snow leopard landscapes' (SLL): the Ugam Chatkal SLL in the western Tien Shan; and the Gissar and Zaamin SLLs in the Pamir-Alay. Most of the project outputs and activities were focused in: (i) the Ugam Chatkal SLL, located on the western spurs of the Chatkal, Pskem and Ugam Ranges in the Western Tien Shan; and (ii) the Gissar SLL on the western slopes of the Gissar ridge in the Pamir Alay.

The four component outcomes were:

1. Landscape level planning and management decision-making
2. Strengthening key biodiversity areas
3. Sustainable development for communities
4. Promoting cooperation and collaboration

Output Activities under the four Outcome / Component structure

1.1	Improve the quality of environmental information for state cadastry
1.2	Enhance the state of knowledge on snow leopard and prey populations
2.1	Strengthen the management effectiveness of the core conservation zones in UCNP
2.2	Extend, and improve the conservation security of GNR
2.3	Enhance community involvement in, and benefit from PAs
3.1	Incentivize sustainable pasture management practices

3.2	Encourage more sustainable levels of forest use
4.1	Improve inter-agency coordination in conservation, monitoring and enforcement
4.2	Strengthen the capacity for trans-boundary planning and management

3.1.3   Design Assumptions & Risks

There were four risks with mitigation measures, outlined in the risk section of the prodoc (p65). With a TE focus on the high altitude meadow habitats, those that proved to be correct / incorrect:

Assumption / Risk with Mitigation	TE comment
The SFUs lack capacity to enforce sustainable natural resource use in the SL range - The project will strengthen the institutions via building a professional corps of pastoral extension staff to monitor and enforce measures an work with local government and community groups	- The TE was unable to obtain evidence of reduced numbers of grazing permits being issued for the SFU high altitude degraded pastures - A target should have been the SCF / SFU regional government administrators who over-issue the pasture permits for economic reasons, which would not be in line with policy and commitments on climate and biodiversity - The project did not provide a monitoring mechanism for forest rangers for assessing pasture degradation
Communities don't adopt natural resources legislation, which leads to exacerbated land degradation in SL areas - The project will provide technical support and grants to livestock farmers in return for a shift to more sustainable pasture grazing practices	- There was evidence of improved pasture management by two pasture cooperatives, especially on their own tenured fields in the low / mid hills - The issue for the high hills is more one of how the SFUs monitor pasture degradation within their SFU alpine area and report it meaningfully, so that livestock numbers can be reduced - The pastures are drying out due to less rain / snow and need greater action research and decision-making - Communities don't graze their sheep in the high pastures so much. It is large private and state livestock producers who can afford the SFU permits to graze large numbers of livestock
A lack of cooperation between state institutions (as land holders), tenure holders, and user-right holders, (and private business) leads to conflict over changes in use rights in the high altitude pastures and forests - The project will work closely with the forest business units, and local government	- There was no evidence of any large-scale reductions in SFU issuance of grazing permits - However, eight SFU pasture management plans (PMPs) were prepared for a portion of SFU areas to test methods, but it relies on the SFUs doing this themselves after the project has finished - The project did not understand that it needed to work much more closely with regional government decision-makers on controlling livestock numbers
The aridification of high altitude pastures is occurring due to human pressure (over-grazing) and due to climate change (less water / snow). - The project will support managers and scientists, in rigorously monitoring the effects of climate change within SL areas	- Aridification has not been arrested by the project - Coordinated research into high altitude grassland habitat health was undertaken, but the research results needed to be better promoted and presented by the project to government - The spoken evidence by farmers regarding the reduced snowfall is stark. Now often in their sixties, comparing when they were young, the snow has gone from 1.5 m to only 0.5 meters depth now, and doesn't last half as long - The risk was stated as 'low' but should have been high

The UNDP Atlas Risk & Management Response was not made available to the TE. The project also managed risk via the UNDP Social & Environmental Screening Procedure, which was updated in September 2021[14].

3.1.4   Results Framework Indicators & Targets

The project objective is to 'Enhance the conservation, and sustainable use, of natural resources in the biodiverse high altitude mountain ecosystems of Uzbekistan'. Within the Strategic Results Framework (SRF / logframe), at the objective level there were six indicators. There were four outcomes in a four component structure, with 24 respective outcome level indicators. A significant number of these indicators also had sub-parts.   During

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[14] It contains six risks, however it takes 1,479 words to describe these six risks, and another 707 words to comment on these risks, and another 701 words to describe the management response with the project design.

inception, the number of indicators was revised down from 30 to 20 indicators. Indicators removed included:

- Indicator 2.2 - Budget for the PAs (baseline US$ 0.5 m / year; target US$ 1 m / year)
- Indicator 2.4 - Number of patrol rangers in the core areas of CBNR and GNR (74 to 95)
- Indicator 2.5 – Recorded cases for (i) illegal hunting (289 down to 40 / year); (ii) illegal grazing (1,450 down to 155 / year) from the core areas of CBNR and GNR
- Indicator 3.2 - Productivity of high altitude pastures administered by pasture cooperatives (dry fodder from 400 kg/ha to 700 kg/ha)
- Indicator 3.3 - Percentage of unpalatable species (due to over-grazing & erosion) within the high altitude pastures in the areas administered by pasture cooperatives (cover per hectare from 40 down to 30%)
- Indicator 3.6 - Degraded high altitude pastures and forests under rehabilitation (Pastures – from 0 to 5,000 ha; Forest under restoration - from 100 to 1,000 ha; and 15,000 ha under sustainable community management)
- Indicator 3.8 - High altitude pastures and forests (excluding CBNR and GNR) considered 'significantly degraded' (target – down to 40%)

Collectively, these indicators would have helped determine if the project interventions were successful. In particular, removing these indicators from Outcome 3, somewhat changed the nature of the project, in making it more about PAs under SCEEP jurisdiction, and less about over-grazed and degraded pastures under SCF / SFU jurisdiction[15]. These removed indicators were also all of a higher level in logframe terms, whereas many, of the remaining indicators left in the design were of an 'input' or 'output' type.

However, the results for these indicators were identified by the PIU for the TE report. They are now mostly restored and reported in the relevant results section.

3.1.5   Gender Design

The words 'gender' and 'women' were only mentioned twice and six times respectively within the prodoc:

- The project would contribute to: GEF-6 Land Degradation Results Framework - Outcome 3.2 – Integrated landscape management practices adopted by local communities based on gender sensitive needs
- Under threats, root causes and impacts – increasing population is causing natural resources degradation, which particularly affects women
- The project would contribute to: GEF-6 Sustainable Forest Management Results Framework - Outcome 3 – Increased application of good management practices in all forests by government, local community (both women and men) and the private sector
- SRF – Objective level indicator - Number of women benefiting from project investments in the conservation and sustainable use of high altitude habitats within the Ugam Chatkal and Gissar SLLs (Direct beneficiaries – 450, of which 60% women (Indirect / involved – 1,500, of which 60% women)
- Financial benefit of the GEF Alternative - from the management of the PAs (UC and Gissar) increases from 25 persons / year to 150 persons / year, of whom at least 80 are women
- SRF Component 2 – Key Biodiversity Areas - Total number (of which are women) of individuals from targeted villages who have completed project funded skills training courses (Target 100, of which 60 women)
- Stakeholder participation - A participatory approach will be adopted including marginalized members of the community (including women) and local institutions in the implementation of activities within the targeted villages
- SRF Component 2 – Key Biodiversity Areas - Number of persons (gender disaggregated) from villages in UCNP and around GNR involved in the project's outreach program (Target 1,000 / year, of which 640 women) [Removed during Inception]

3.2.   Project Implementation

3.2.1   IA and EA Coordination & Operational Management

The overall quality of implementation / execution was rated as **Satisfactory,** with both the quality of UNDP Implementation and PIU Execution rated as Satisfactory.

UNDP were the GEF Implementing Agency (IA). The SCEEP were the Executive and Implementing Partner (IP), with

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[15] The indicators regarding pasture cooperatives managing high-altitude pastures (which they don't), were not so 'SMART' and demonstrated a lack of basic understanding, which probably 'allowed' the project / partners to avoid tackling this very important aspect of the project

a UNDP-hired PIU as the *de-facto* implementing unit. SCEEP designated a national project coordinator to formally collaborate with the PIU, and chair the PB meetings. The project was supported by a Project Board (PB), with the PIU acting as the secretary.

Coordination & Operational Management by Implementing Agency (UNDP)

Project Appraisal Committee

A project appraisal committee (PAC) meeting was held in October 2016. It was noted that Component 3 included local community involvement in pasture management. However, the prodoc design and approach taken during implementation was not sufficiently appropriate or timely to reach a critical mass in reducing livestock numbers in the alpine pastures. It was also noted that the project had a Gender 2 marker, meaning that gender equality was to be promoted in a significant way. However, this was not the case.

The Project Preparation Grant (PPG) document, noted that the PIF was weak in its link between pasture use and the tenure / management of the pastures. However the PPG was similarly weak in not understanding that the high altitude pastures were legally under the ownership (and therefore tenure as well) of the SFUs, and that livestock herders (state / private companies, and village groups) pay to graze their livestock. Thus financially the SFU were under pressure to receive the income from permitting as many sheep as possible, and not 'worry' about the habitat degradation and climate change. The project and its PB didn't recognize this difference or have the political willpower to address this major issue[16]. A stronger understanding was also needed from within the prodoc design and from the start.

Coordination & Operational Management by the Executing Agency / Implementing Partner (SCEEP / PIU)

The project was under UNDP-supported NIM, as the Executive (SCEEP), was not approved by the UN Country Office to have financial control of project funds. Thus the project was managed by UNDP via a Project Implementation Unit (PIU).

Project Steering Committee (PSC)

The project was signed in May 2017, with the first PB meeting held seven months later in December 2017. Meetings were held in Quarter 4, 2017; Q4, 2018, Q4, 2019; Q4, 2020; and three meetings in Q3 and Q4, 2021. In most cases the AWPBs were approved for the following year. The PB meetings were well attended[17]. Of note:

PSC notes	TE comment
- 1st meeting (2017) - the strategic results framework (SRF) indicators were reduced from 30 to 22, and the project risks increased from 4 to 12	- The indicators removed were mostly higher level impact indicators, which would have been good measures of project success. Some of the remaining indicators were of an input level, such as the number of training courses
- 5th meeting (2021) – The panel for selection of the TAPs (formerly micro-grants) was approved	- The TAPs greatly increased the project's overall workload and drew the focus away from the other more important aspects of the project such as to directly tackle pasture degradation
- 6th meeting (2021) – Agreed on the project extension by ~8 months until 31st December 2022 due to covid	- It was useful to extend the project, as it allowed more time to work with the SFUs which was started late.
- 7th meeting (2021) - Concerning component 3, the following activities were described: Implementation of the pasture rotation plan and its monitoring in SFUs and pasture cooperatives	- This was too late in the project cycle to implement, and have time to adjust these SFU plans or integrate them with their annual state pasture livestock permitted numbers. The PMPs were more of a recommended system only

The leadership at SCEEP changed five times during the project, which was not ideal, especially in providing a vision of where the project expected to get to by project end. The limited area of new PAs, or new conservation areas (e.g. on SFUs mountain pasture land) directed towards wildlife conservation would have been an example where stronger continuity of leadership would have helped. Another issue, was that the SCEEP representative unit for the project was their PA unit, and not one of a higher level that could and should have looked at the wider picture, as described in the project root causes and barriers, especially institutional barriers.

PIU Project Staffing

UNDP hired the PIU staff including: Project manager; Admin / Finance assistant; and a TAP small-grants project

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[16] The MTR recommended a re-focus on pastures, but it was too largely late by then.

[17] Taking the example from the 4th meeting, (which was partly on-line due to covid), the attendance was: SCEEP; SCF; State committee for land resources, cartography & cadastry; State border / security service; IoZ, UCNP; CBNR; UCBNR (Uzbekistan Railways); GNR; Uzhydromet; UNDP (4); and project staff (7).

manager (under Component 3); Field coordinators were hired for: Components 1 and 4 – Landscape planning & knowledge management; Component 2 – PAs; and Component 3 – Pastures and forest land. After covid, The PM covered the Field role for components 1 & 4. In 2018, a procurement specialist was hired to procure all the equipment for the project activities as well as for the TAPs, and to procure all the consultants (individuals and firms). M&E was not separately covered by the PIU, but under general UNDP reporting.

<u>PIU Modus Operandi – Contracting-out</u>

Whilst, the PIU was staffed, the PIUs' *modus operandi*, to achieve a significant number of outputs under a limited timeframe was to contract out services to individual and company sub-contractors[18]. (see **Annex 5** for a list). There were 111 consultant contracts which was too many to manage effectively. A significant number of these consultants also prepared phase / mission reports, in addition to specific deliverable reports. The issue was how could this volume of work mostly from external consultants, be effectively utilised to build institutional capacity, and for national partners to develop sufficient ownership in the project. For example, only two pasture cooperatives were established and the SFUs were only engaged with 3-4 years into the project.. Thus whilst a number of consultant reports were converted to outputs such as guidelines and manuals, the time left for implementing them on any scale within the project duration was limited. This was particularly the case for the SLCAP and the SLRMP, where delivery of the plans, themselves were seen as 'project work done', with the governance systems yet to be put in place. Thus, the PIU approach meant that tangible outcomes, which needed implementation, were limited. Examples were the lack of of significant connectivity of SL habitats and a lack of a pasture monitoring system. Thus outputs were achieved for equipping wildlife rangers inside the PAs, and equipping farmers / villagers with income generating activities (IGAs) in the mid and low hills. But these outputs were not linked up, according to the strategic results framework, with tangible actions needed in equipping the SFU forest rangers with monitoring tools, for work inside their high altitude pastures.

3.2.2   Institutional Mechanisms & Stakeholder Engagement

Project-level partnership arrangements are briefly described in the previous section, whereas this section describes state institutions and capacity which are the backbone for delivering new policies and services.

<u>State Committee for Ecology & Environmental Protection</u> (SCEEP)

SCEEP was established in 2017 and reports directly to the Cabinet of Ministers. SCEEP was the executive agency and a major beneficiary of the project, but very much allowed the PIU to implement the project. For example, there appeared a lack of national level SCEEP / partner / PIU annual workshops to provide discussion and direction for the project. Such meetings would have been useful in also presenting consultant guidelines and reports, especially in the absence of a project technical working group.

<u>State Committee for Forestry</u> (SCF)

SCF was established in 2017 and reports directly to the Cabinet of Ministers. The role of SCF, including under the project was: support to SFU nurseries and nut tree plantation works; solving any SFU / tenancy agreement issues; and monitoring of the project PMPs. The SCFs at regional level should have been a key project partner in directing the reduction of high altitude pasture grazing quotas.

<u>State Land Projection Research Institute</u> (SLPRI) – Kashkadarya and Tashkent Regional Offices

In place of the state cadastral office[19], the State Land Projection Research Institute (SLPRI) emerged as a key project partner for two reasons. The SLPRI is the appointed government institute to advise on land use, thus they were the appropriate project partner to undertake mountain pasture botanical surveys[20]

Firstly they undertook botanical surveys in selected high-altitude pastures to determine plant habitat health and resilience (of lack of) to sustained livestock grazing pressure. Such surveys were deemed valuable, as botanical surveys had not been undertaken for nearby 40 years (since 1980), thus the changed species composition / cover in pastures was reported. The primary reason for pasture land degradation is over-grazing.

Secondly, SLPRI undertook design work for new PAs. Using their GIS map-making skills, they produced the maps for the four MPs and new maps for the buffer zones of GNR and CBNR. They also produced the maps for the new

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[18] Requesting state institutions to undertake new or extra work on behalf of a complex project design, when financially the project was not under their control is a perennial problem for these development cooperation projects.

[19] The expected project partner concerning land use was the state cadastral office, however they were dissolved in 2021. This meant that land ownership changes on a strategic level (e.g. change to NR) became unlikely, with state offices such as SCF and their SFUs as land owners, consolidating their control over the land.

[20] In terms of tenured farmland, they also monitor the quality of farm grazing land and report to the Ministry of Agriculture.

PAs – Tupalang NP and Pskem NR.

Protected Areas (PA) Administrations

The project worked with a number of PAs to strengthen PA conservation management.   Management responsibility for the PAs was:

- Ugam Chatkal National Park (UCNP) is managed by the UCNP Authority, SCF, SCEEP, and regional government
  - within which, lies Chatkal Biosphere Nature Reserve (CBNR)[21] (Maidantal core zone) - managed by SCEEP
  - within which, lies Ugam Chatkal Biosphere Nature Reserve (UCBNR) (Bashkyzilsay core zone) - managed by National Railways
- Gissar Nature Reserve (GNR) – managed by SCEEP

The division of the core zones, with part being allocated to National Railways in 2017 changed the institutional set-up. To note also, National Parks (NPs) are multi-use, whereas Nature Reserves (NR) are protected solely for wildlife conservation.

Gissar Nature Reserve (GNR)

GNR has 30 rangers, who are based on rotation at four range posts, cover 3,000 ha each. One of the functions of GNR is to protect SL. In 2013-19, numbers were recorded as quite low; 21 SL were recorded (2020-21), with the latest figures at 42 individual SLs. Seventy-five camera traps were installed, linked to a network of antennas[22]. The data is provided to SCEEP, but also shared with recognized international research institutes. The project supported SL scat (faeces) collection and DNA analysis. From 12 scats, seven individual SLs were identified.

There are 13 villages (~20,000 households) within 3-5 km of the reserve. In terms of illegal (commercial) grazing, there was a recent case of 1,500 cattle causing damage to GNR, which was prosecuted ending in a $200,000 fine. After this case, illegal grazing on a large scale stopped. Illegal hunting is uncommon.

SCF Kashkadarya Regional

For the region, the tree nursery production work has increased in the last few years from 2-3 million / year to ~30 million seedlings / year in ten nurseries, of which ~15% is for SFU own planting programs. The rest of the seedlings are sold to public and private entities. Out of 10 SFU pasture areas, 3 out of 10 are now under active grazing 'rotational' control, partly as a result of the project, and have now become part of state forestry plans[23].

State Forestry Unit (SFU)

The SFUs are the major land holder of the mountain pastures which are heavily degraded and are habitat to SL prey (wild ungulates – ibex and deer), however amazingly, they were not considered as part of the project design. In fact they were arguably the most important stakeholder. From ~2020, the project supported eight SFUs, each with: establishing a tree production nursery; creation of a fodder seed multiplication plot (2 ha each); and supply of agriculture / forestry equipment (for creating livestock fodder fields and nut tree plantations).

In Uzun SFU for example, in the high altitude pastures, each forest ranger monitors livestock grazing quotas on 3,000 ha (10 rangers cover 30,000 ha). The grazing period is 1st May – 31st August. Their overall area is divided into four divisions each with a responsible forest engineer.

Institute of Zoology (IoZ, Academy of Science)

The IoZ developed the SLRMP protocol, which included sharing SL information sensitively[24]. The IoZ themselves need to apply officially to obtain the data for research. IoZ receive funds SCEEP for applied research. The IoZ was a member of the PB, and was a key recipient of project training and provision of equipment.

Global Snow Leopard Ecosystem Protection Program (GSLEP)

The global SL partnership with the project included technical support in SL conservation management; and in peer-review of the SLCAP (2021-30).

The list of key stakeholders is described in **Annex 8**.

3.2.3   Gender Analysis – Women's Empowerment

During design, the project was UNDP-rated as having 'gender equality as a significant objective' (Atlas Marker –

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[21] Chatkal Nature Reserve is a UNESCO Man & Biosphere Reserve, in the Western Tien-Shan Mountains

[22] The project also provided new software to sift the thousands of wildlife images, but it ran too slowly on the GNR computers, so sorting by eye by a team of six was quicker.

[23] The TE was unable to verify this

[24] Dr Elena Bykova is the lead scientist in IoZ on SL, and was also the project knowledge management consultant

GEN-2), however the prodoc only marginally discussed women, as mentioned. Thereafter women's empowerment and equal access to project activities was not addressed within the inception report. There were no stipulations on equal representation on project structures (staffing, committees, including the PB, pasture cooperative committees, TAP selection board). The UNDP social & environmental safeguards plan (SESP, as updated in 2021) mentioned gender / women[25].

The Gender Analysis & Plan

The Gender Analysis & Plan was attached to the PIR to June 2020[26]. It was 2.5 pages long, with 1.5 pages as the analysis. The 1-page plan itself was acceptable, but it wasn't adhered to (see **Annex 5** for the plan)[27]. The 13-point plan lacked any mechanism as to who or how the measures would be enacted, monitored or enforced. There was little / no evidence that the plan was achieved, apart from the point on TAPs (Assist women technically / financially with alternative income-generating enterprises, and production of fruit).

For other parts of the gender plan, there was just a disconnect with the project design in general, such as concerning providing land lease / tenure to women-headed households. There was no land lease undertaken by the project. The gender plan seemed almost wildly ambitious[28], which would have been fine, but the project would have to have been designed very differently, and probably also led by a woman project manager, and have had a national project coordinator as a woman.

The PIR to June 2022 reported that gender / women's empowerment was considered in all activities, but it was mostly addressed through the TAPs. Thus it appeared that the MTR's concern about mainstreaming women's empowerment across the project was not understood or taken on-board. The weak 'gender design' within the prodoc did not help.

3.2.4   Finance & Co-finance

UNDP Financial management and Finance

The UNDP Environment & Climate Change Cluster is managing projects with a budget of ~$12 m, thus this mountain ecosystems project at ~$6 m accounts for ~50% of the cluster's financial support.

Project spend by year against the prodoc plan

Year / US$	2017	2018	2019	2020	2021	2022	Cumulative to 27th June 2022
Prodoc	1,178,858	1,746,250	1,541,000	1,063,055	680,700	n/a	6,209,863
Spent	173,865	836,536	1,476,804	900,378	1,444,977	342,728	5,175,289
%	15	48	96	85	212	n/a	**83**

The prodoc budget breakdown timewise appeared to be somewhat front-loaded, which was unrealistic. The 17% remaining funds amounts to US$ 1,034,574 to be spent in the last six months of the project. This also appears somewhat unrealistic, as equipment for project activities has already been purchased.

Project spend by component against the prodoc plan

Component / $	Total to June 2022	% of project	Prodoc projection
1	1,070,884	20	992,200
2	1,789,702	34	2,445,000
3	1,983,267	37	2,014,600
4	202,152	4	462,355
PM	248,267	5	295,708

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[25] SESP on gender: A gender analysis was completed at project start, and a gender action plan will be developed to ensure a comprehensive and consistent approach to gender mainstreaming in all project outputs; The objective of the project includes improvement of environmental & social conditions, including improved gender mainstreaming

[26] The MTR recommended 'to strengthen gender mainstreaming in project activities, as women were only really being considered under the TAPs, and to update the gender plan from the inception period. The UNDP Management Response was written as to 'update the gender analysis / action plan by June 2020 with the responsible parties being the PM, UNDP CO and the gender task force team. It was not evident to the TE that this action had been undertaken.

[27] Tellingly, the PIR to June 2021 indicated – 'the plan outlined many actions, which had they been implemented, would have justified the GEN-2 rating'.

[28] Facilitate the employment, training and equipping of woman as park rangers (Output 2.1 and 2.2), smart patrol trainers (Output 2.1 and 2.2), community liaison officers (Output 2.3), SFU enforcement staff (Output 3.1 and 3.2), local environmental inspectors (Output 2.3) and nursery maintenance staff (Output 3.2); Strengthen such institutions via building a professional corps of pastoral extension staff to monitor and enforce measures an work with local government and community groups

	5,294,272	100	

The figures indicate 71% of project funds were spent on components 2 and 3[29]. The spend against prodoc projection is closely matched. The breakdown of planned and actual expenditures by year is provided in **Annex 4**.

Audits

There was one UNDP country office audit undertaken in August 2020 by UNDP Office of Audit, with two comments:

- UNDP CO should continue to pursue rental cost recovery from government as it is a cash cost
- UNDP CO needed to create a VAT refund mechanism

Co-financing

Co-financing contributions, either as direct support funds (grant or in-kind) or as complementary funds (e.g. linking up with similar project in a nearby area), are not often formally accounted for under GEF methods, with only the GEF and any UNDP funds accounted / audited. With this level of oversight, the actual extent of co-financing is estimated[30]

UNDP co-financing was $300,816 against the $300,000 promised. There were two government in-kind contributions, estimated at:

- SCEEP $25 million as promised within the prodoc, and considered as recurrent funding
- SCF $3 million as recurrent funding, but as new funding in terms of not being part of the prodoc budget calculation

Letters of co-financing were provided. A breakdown of co-financing was provided as **Annex 3**.

3.2.5   M&E Systems – Design & Implementation

The M&E system design and the implementation of the M&E system was rated as **Moderately Satisfactory**.

UNDP GEF projects have a particular M&E system that is report-based, centred around an annual PIR that runs mid to mid-year. The M&E system is based on a mixture UNDP's contractual compliance with GEF and its own systems, and checking the IP in terms of its contractual compliance of deliverables. These include annual workplans with budgets (AWPBs), PIRs, and audits, with an MTR and Terminal Evaluation (this report).

Apart from this, the project's primary method of M&E was *ad hoc* PIU, UNDP staff and consultants 'back to office' mission / deliverable reports. There was no M&E specialist employed for this project.

It would have been useful for UNDP to have encouraged a spreadsheet tracking system, that ran annually and cumulatively with all the project numbers - inputs and outputs. For example, indicators (and their baselines and targets) are often number-based, whereas reporting is primarily text-based, with a few numbers 'put-in', but often not dated.

MTR & UNDP Management Response

An MTR was undertaken in November 2019 (113pp), with the ratings given as: Objective – MS; Outcomes 1 to 4 - MS; UNDP / PIU Implementation – MS; Sustainability – ML.   [The TE ratings are similar]. The MTR recommendations included:

> - To review and define more systematically the objective of the the pasture management program[31]
> - To review the gender plan and mainstream across the project, not just the TAPs
> - To extend the project

The Management Response accepted these and the other recommendations of the MTR.

Exit Strategy

The PIU produced a 'Project Completion Exit Strategy (draft June 2022, pp13), which is directly based on the project's 20 indicators. In summary:

Subject	Handover requirement by project end
Protected Areas	SCEEP to indicate PA budgeting for next 3 years, especially covering the SMART patrol system

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[29] The figures are slightly different from the preceding table, but don't materially affect the indication of funds spent by component, or comparison against the prodoc projection

[30] Excluding here concomitant physical inputs of stakeholders under the TAPs – which is reporting in **Annex 5**

[31] The MTR also understood that the state managed much larger areas of high altitude pasture (which is SLL) and for the project to have any impact, that it needed to work with these entities

Subject	Handover requirement by project end
High altitude mountain pasture areas	Written agreement from Akhangaran SFU on how they will continue implementing sustainable pasture management post-project
	Statement from the two cooperatives in Akhangaran and Shakhrisabz districts on how they will continue implementing rotational grazing plans post-project
SL habitat, population monitoring; & SL MoU	To delineate appropriate government responsibilities / lead agency in relation to SLCAP
	GSLEP Secretariat to facilitate regional cooperation to ensure implementation of the MOU
TAPs	To rate each TAP on sustainability (unlikely, moderately unlikely, moderately likely, likely)

It was perhaps useful to start with the 20 indicators, but once distilled down, it's clear that a handover document between UNDP and each of the main institutional partners is required. These are likely to include: the lead agency for the the various SL plans (MoU, SLCAP and SLRMP); and each of the eight SFUs and two cooperatives regarding PMPs and equipment maintenance. It is apparent from the Akhangaran SFU requirement, that the PIU had partially understood about the importance of the pasture management, habitat and connectivity between the PAs in the Western Tian mountains, but not that the responsible party for issuing grazing quotas is at a higher level in regional government.

Assets & Equipment

There were 32 procurement contracts for equipment including (in US$ unless stated as €)[32]:

SCEEP Equipment
-   Toyota Land Cruiser Prado   (47,500)
-   LADA Niva x 3   (46,658)
-   UAZ Jeep x 2   (34,727)
-   Chevrolet Niva   (12,120)
-   Unmanned Aerial Vehicle (UAV) – Delta Quad Pro UAV #View[33]   (€65,524)
-   Modified Ford Transit van for the UAV   (95,000)

Eight SFUs and Two cooperatives
-   Tractor (80 hp) x 6   (112,380)
-   Mini tractor Shifeng x 2   (20,426)
-   Mini-tractor (35 hp), Model: SF-354) x 2   (19,824)
-   Tractor implements (tine, plough, disc harrow, seed driller, trailers, mover, trailer)   (~59,000)
-   Tractor trailer water bowser (80 HP) x 6   (37,318)
-   Forest nursery & tree planting equipment   (~119,000)
-   Biological disease control x 2   (~52,000)

Protected Areas
-   HF radio x 5   (15,616)
-   VHF radio x 12   (3,993)
-   Radio repeater tower x 4 & equipment ~ 30,000
-   Wildlife camera trap x 150   (37,403)
-   Wildlife camera trap x 90 + equipment   (36,382)
-   Wildlife camera trap equipment   (~39,000)
-   GPS x 24 & cameras   (~14,000)
-   Wind-solar power station 5.5 kW x 5   (41,764)
-   Solar station x 6   (13,358)
-   Weather Station WS-GP1 x 6   (26,250)[34]
-   Smartphones x 64   (15,842)

TAPs
-   Green houses x 3   (14,322)
-   Beekeeping equipment x 22 hives   (3,934)

An impressive array of equipment was procured for project activities, however at times it appeared that the purpose was for it to be an output in itself for beneficiaries, and not as an input, for project activities. There were also delays in using / installing some of the equipment due to covid. An example would be the UAV (procured 2021), where training will have only just finished by the end of the project. This was not the case for the agriculture

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[32] The equipment is roughly grouped by beneficiary

[33] UAV for surveillance & reconnaissance (Thermal / Infra Red & RGB, 110 minutes flight time; Autonomous object following, 360° gimbal & 80 x zoom, live HD video up to 50 km)

[34] The station at CBNR was not installed and the data logger / SIM card system missing

equipment (tractors etc) supplied to the VCCs / cooperatives, which were procured in 2018, however it took until 2020 to supply the larger tractors to the SFUs. This suggests, that the project design on support / beneficiaries was not clear earlier in the project. The understanding of the role and importance of the SFUs in high altitude pasture management was certainly missed in the prodoc, but in addition by providing the SFUs with equipment, they were able to both generate income (nurseries and nuts), and support village communities.

3.2.6   Adaptive Management (Work planning, Reporting & Communications)

Work planning

Project duration,

The expected project start was January 2017, but it was delayed until May 2017 due to a change in the president and government. The project's (and farming) active season was from April until September[35], thus the project missed this in 2017 due to the delayed start. This was because staff needed to be hired, project set-up, workplans prepared, and all other inception activities needed to be undertaken. The project was also impacted by covid. Summary to this, a project extension of seven months was agreed by the RTA for the project to continue until end December 2022, making the duration just over 5.5 years long.

Inception Workshop

The inception workshop with ~50 participants was held in September 2017, four months after project start. The initial plan included expected visits to the project areas in Quarter 4, 2017 to launch the project locally.

AWPBs

There were five annual workplans & budgets (AWPBs, 'workplans') produced, which were signed by UNDP and endorsed by SCEEP.

Reporting

Logframe indicators

The number of indicators was reduced during inception and presented during the inception workshop, and endorsed during the first PB meeting.

Project Implementation Reviews (UNDP GEF PIRs)

Five PIRs were produced: To end-June 2018, end-June 2019, end-June 2020, end-June 2021, and end-June 2022 Pertinent information is presented in the relevant sections of this TE report. E.g. gender, risk, disbursement, social & environmental standards.

Back to Office Reports

One of the main reporting methods was via 'back to office' reports on field trips, but the purpose of these was unclear, except as a method for UNDP to 'check' on field activities. There were no annual reports, thus the only formal presentation of all achievements was via the somewhat restrictive mid-year PIR reporting system.

Communications & Visibility

The GEF and UNDP logos were present on project outputs, such as the PMPs. The project was visible on social media. (see also Training & Awareness section)

3.3.   Project Results

The TE assessed the three levels of the project results framework - Objective, Outcome and Output. This was guided by the indicators and targets set at each level. Project success is also built upon achievement of the outputs, according to 'framework logic.' The Objective and Outcome levels include a rating according to UNDP GEF guidance as described in **Annex 9**. UNDP / PIU were provided with two tables:

-   Progress towards Objective and Outcomes (Indicator-based) which is described in **Annex 1**, and
-   Progress towards Outputs which is described in **Annex 2**

According to TE guidance, these tables were rated and commented on. A detailed result-level analysis follows firstly of the Objective, Outcomes with their Indicators, and then the corresponding Outputs.

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[35] In terms of field seasonal work, the spring – summer season was mainly from May – August before the rain / snow period in September

3.3.1 Overall Result – Achievement of the Objective Indicators

<u>Objective Level Indicators (Overall Result)</u>

Conservation / sustainable use of natural resources in the high altitude mountain ecosystems (6 indicators)

The overall grading is **Moderately Satisfactory**. There were six indicators attached to the objective level which were all rated as: satisfactory; moderately satisfactory (2); and moderately unsatisfactory (3) (see **Annex 1**)

The Satisfactory indicator concerned SL population numbers; the MS ratings were for hectarage of PAs increasing and for conservation of forests. The three MU ratings were for: not effectively getting 55,000 ha of alpine pasture under sustainable management; for not increasing SL prey numbers; and for not employing more women directly in conservation.

PAs within Ugam Chatkal & Gissar SLLs under effective management, monitoring and enforcement (Indicator 1)

(Baseline – 116,710 ha; Target - >549,000 ha)

Result against Indicator

The project worked in Ugam Chatkal region in the Western Tien Shan mountain range; and Gissar western region in the Pamir-Alay mountain range[36]. The total area of PAs was increased by 27,851 ha to 653,481 ha, with the creation of the Upper Tupalang National Park (NP) in the Gissar range[37].

Analysis

Whilst one new PA was gazetted (Tupalang NP), another remained in the planning stage (Pskem NR in the UCNP in the Western Tien Shan area). Both had been planned for gazettement since 2015 and were part of the prodoc design. Also, the expectation was that the extensive area between UCBNR / CBNR and the proposed Pskem NR would come under improved conservation status. This area within UCNP belongs to Akhangaran and Burchmulla SFUs, and largely remained under existing management with high numbers of livestock grazing in the areas.

Four new / updated Management Plans (MPs) were produced, with added buffer zone maps, although only GNR buffer zone was designated. A smart patrol system for rangers' wildlife conservation monitoring was initiated. Eight SFUs were drawn more towards conservation of their pasture areas, although much more needed to be achieved in this respect.

High altitude mountain pastures within the SL range under management to reduce degradation (Indicator 2)

(Baseline <5,000 ha; Target 55,000 ha (18% of ~307,412 ha of degraded alpine pastureland)

Result against Indicator

The area of high-altitude pastures put under stronger management to reduce vegetation (habitat) degradation was 40,281 ha, which comprised of pasture management plans (PMPs) which were prepared for the eight SFUs.

Analysis

The mountain pastures remain heavily degraded and continue to move towards ecosystem collapse. The SFU (and cooperative) PMPs were only agreed in mid-2022 after 5 years of the project with little / no time left for assessment of implementation of these plans. The SFU plans only cover 18% of their pasture area (40,281 ha out of 270,056 ha). The plans don't clearly link the levels of degradation to appropriate livestock numbers, but rather use traditional formulas of maximum carrying capacity. The two cooperative PMPs only covered 504 ha of small farmed areas in the mid hills.

Improved conservation status of forests within the PAs (Indicator 3)

(Baseline – 0 ha; Target 105,900 ha)

Result against Indicator

The area of forests under state protection is 235,781 ha (SFU 126,793 ha; IUCN Category II 71,919 ha; IUCN Category I 36,069 ha):

- In the Ugam Chatkal SLL, protected natural forest covers 84,934 ha (inc. IUCN category I – 6,586 ha, IUCN Category II - 62,068 ha, SFUs 16,280 ha)

- In the Gissar SLL, protected natural forest covers 150,787 ha (inc. IUCN Category I – 29,483 ha, IUCN Category II -9851

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[36] There is a third SLL in Zaamin in Pamir-Alay mountains

[37] Re. Tupalang - PKM No. 93 of March 4, 2022

ha, SFUs 111,453 ha)

Analysis

The indicator was from GEF-6 Sustainable Forest Management: 105,900 ha of biodiversity important forests within three biodiversity areas managed sustainably. (Under baseline scenario 5% of these would have been lost). It was difficult to understand what the indicator was trying to demonstrate, as the forest within PAs was already under protection and there was no change in status.

Number of primary snow leopard prey populations within Ugam Chatkal and Gissar SLLs (Indicator 4)

(Baseline & Target – see table)

Result against Indicator

Species	Baseline	Target	Result (Date)	Data Source
Siberian Ibex	3,800	4,000	4002 (2022)	GNR, CBNR, UCBNR
Siberian roe deer	250	250	871 (2019)	PAs, SFUs, licensed hunting groups
Boar	1,838	1,838	1035 (2022)	GNR, CBNR
Menzbier's marmot	4,300	4,300	4,500 (2020)	CBNR
Long-tailed marmot	7,994	7,994	4320 (2022)	GNR

Source BCIMS

Analysis

Ibex numbers had not significantly increased in 5 years; Roe deer numbers had increased, but somewhat old data (2019); Boar numbers were down by 50% which could have meant: habitat loss, hunting or deficient data collection; Menzbier's Marmot numbers had not increased in 5 years; and Long-tailed Marmot numbers had fallen by half. Together, the significant fall in SL prey species numbers was disappointing. Some of the data presented was 2-3 years old, despite the BCIMS being a new system and smart patrolling having been introduced in 2018, it appears that data transfer to SCEEP was not optimal.

Snow leopard population (Indicator 5)

(Baseline 50; Target >50)[38] number

Result against Indicator

Snow Leopard (2022)	Result
UCNP (2021)	67
UCBNR	5
CBNR	3
GNR	37
Total	**112**

Source BCIMS

Analysis

Whilst, the estimated number of SL during project design was ~75, better monitoring (and conservation) has provided a 2022 figure of 112, which in itself is encouraging, but tempered by the fall in prey species, and the continued degradation of habitat (especially the high altitude pastures), the change in climate (less snow, hotter, less water) and the drying out of the pastures[39]. GSLEP's annual report (2021) indicated 105 SL in country.

Number of women benefiting from project investment in conservation (Indicator 6)

(Baseline – n/a; Target – Involvement: 1,500 (>60%) Direct benefits: 450 (60%)

Result against Indicator

There were 12,547 direct beneficiaries of the project, of which 6,858 were women.

Analysis

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[38] The prodoc (p38) actually gives the number at ~75 (Ugam-Chatkal in Western Tien-Shan 20-25; and Gissar in Pamir Alay as 50-60), so the baseline here is far below the actual estimated number.

[39] 'The PIU indicated that the initial figure of 75 in the prodoc was an estimate, with a limited accuracy.

Most of the beneficiaries were supported through the TAPs. The numbers of new women hired for conservation purposes was very low and not targeted by the project as it should have been. Women's empowerment was a significant objective of the project design, but not adopted in practice.

3.3.2   Effectiveness – Achievement of the Outcome Indicators and Outputs

<u>Effectiveness – Outcome 1 at the Indicator and Output Level</u>

Outcome 1 - Landscape level planning and management decision-making (2 indicators)

The overall grading is **Moderately Satisfactory.** There were two indicators attached to the Outcome 1 level which were both rated as: moderately satisfactory (see **Annex 1**). The two indicators were to provide data on SL to support its conservation. The aim of Outcome 1 was to provide better data on ecosystem, habitats and species in the project area. The data was to support land use planning. The two outputs were to: provide the data to the state cadastral office; and to improve knowledge of SL and its prey populations.

Baseline environmental and land use data for the SL distribution range (Indicator 1.1)

(Baseline – Limited availability; Target - Mini-atlas with maps related to biodiversity, pastures, and HCVFs)

Result against Indicator

A Mini Atlas (2021, pp36, Russian) was produced covering the Ugam Chatkal and Gissar SLLs, with environmental data relating to biodiversity, pastures and forests. The project also produced: Rare and endangered flora species (2021, 138pp, Russian); and Wild medicinal, food & scenic species (2021, 130pp, Uzbek)

Analysis

The maps for Ugam Chatkal and Gissar SLLs included:

- Location maps & Administrative boundary maps
- Soil cover; Pasture types; Plant composition
- Land cover degradation; Land productivity; State of livestock
- Remote-sensed images

The atlas which was produced by SLRPI was impressive, although from an international viewpoint, it would have been good if the maps could have also been prepared in English language. See **Annex 5** for a full list, and **Annex 11** for a copy of the first four of these maps.

Snow leopard monitoring data and use in SL population estimates (Indicator 1.2)

(Baseline – in 2003, the SL population was estimated at between 20 and 50 individual cats. This is a 40% accuracy or confidence level in the estimate (lower estimate of 20 divided by the higher estimate of 50 = 40%); Target - to create a population estimate with a 75% confidence level

Result against Indicator

A SL monitoring program has been developed and is operational. It utilizes a smart patrol system, with wildlife rangers recording information on grid cover patrol and via the now quite extensive number of camera traps. The project provided 240 camera traps, 24 GPS cameras, and 64 smart cell phones. The rangers were also collecting carnivore scats for DNA analysis.

Analysis

The accuracy of population estimates has improved. Figures under the project were being reported as actual known numbers, and not as an estimated number within a range[40].

Output 1.1 - Environmental information for the State Cadastral Office

Result

<u>Environmental / land use data mapping</u>

A number of environmental parameters were mapped, and used within the BCIMS and presented within the project's mini-atlas.

<u>Ecosystem Services Valuation</u>

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[40] However a Status of Snow Leopard report has not been published and it may revert to an estimated number within a range

An ecosystem services valuation was conducted. A number of reports were produced, in particular: 'Emerton, L., Mukhtorov, A. *et al* (2020) The value of ecosystem services in UCNP. The case for investing in snow leopard habitat.'

Analysis (Land tenure & Land Use)

Two of the most important key maps for managing natural resources were not produced. These were the land tenure and land use maps, which were held by the State Cadastral Office, who despite being part of the project design and a member of the PB, were not engaged either as a provider or recipient of project data. This was disappointing, and furthermore this state office was dissolved in 2021. This meant that cross-referencing land degradation with land ownership / tenure was not directly possible.

The design of this Output was not just to collect and present data, but for the data to be used to implement the project design – including to arrest environmental degradation in the high altitude meadows. This pasture land was mostly owned by the SFUs, so providing the data to State Cadastral Offices, somehow assumed that a change in land ownership, tenure, or management could be facilitated.

However, there was a poor understanding project design-wise of state land ownership of mountain pastures and management agreements on this land to graze livestock, which were both under SFU and SCF regional government control. As this was the first output (1.1) of the project, getting the design wrong here, with the lack of understanding of the institutional responsibility and institutional change needed was not good enough.

There was $100,000 in the budget (just for consultants) to map land tenure and assess the state of pastures. Early on in the project, the PM / PIU (with UNDP and PB support) should have targeted 1-2 SFUs adjacent to PAs with known degradation issues and within key wildlife / SL corridor areas, and then mapped the numbers of livestock (sheep / goats / cattle) in these SFU pastures over the last five years (based on the SFU grazing permits issued). Then the consultants should have visited these target areas and reported back with a plan. The research institute employed partly covered such work, but only in Kashkadarya and only from 2020 which was too late in the project cycle[41].

Analysis (Ecosystem services)

The Emerton report is a useful contribution to the understanding of land degradation. It has been presented to government, however it needs a digest for relevant decision-makers, for example those responsible for issuing grazing permits within the UCNP.

Output 1.2 - Knowledge on snow leopard and prey populations

Result

Biodiversity Conservation Information Management System (BCIMS)

A Biodiversity Conservation Information Management System (BCIMS) was designed and installed within SCEEP. BCIMS was designed to house fauna and flora information, and the data from Smart patrolling in particular. This was to support decision-making on SL and prey population protection. The on-line system was a GIS-based platform which was integrated with the state geo-portal system (map.geoportal.uz). It was designed to include seven parameters[42]. Provision of data (and access) to the system was expected from: SCEEP, SCF, Ministry of Agriculture, Academy of Science (Institutes of Botany and Zoology); and the State Tax Office. Integration of the system with other agencies was in progress.

Data from the Smart patrol cameras was maintained by the CBNR and GNR, with a copy sent to SCEEP's Flora & Fauna Unit. The data management system was not clear, apart from data mainly siting on a hard drive, although data from Smart patrolling / BCIMS had been used by GSLEP to update their SL range map. It was also expected to be used to produce a SL status report.

Snow Leopard Research & Monitoring Protocol (SLRMP)

In 2020, the project decided to handover the SL monitoring methodology, and end further direct financial support for the SL monitoring research. This was a development cooperation decision, supported by UNDP, as capacity

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[41] SLRPI publications: Geobotanical research in pastures and hayfields of Mubarak Karakol Breeding Limited Company in Mubarak District, Kashkadarya Region (2020); and Geobotanical research in pastures and hayfields of Mubarak district, Kashkadarya region (2021)

[42] Administrative data (borders, settlements, roads), geographic data (hydrology, relief), biodiversity data (flora and fauna), land use (protected areas, forestry units, hunting concessions), ecosystems, key biodiversity areas (IBA, KBA), threats

had been built, and the embedded system needed to be managed by the national partners – SCEEP and IoZ[43]. However, with covid and the break in finance, the IoZ data collection and analysis work stopped, despite being part of the SLCAP and the SLRMP[44]. At present, SCEEP collect / receive the data, but it is not really being used to any great degree, or as part of any scientific research as was expected. However, the research and monitoring methods were agreed by SCEEP and IoZ via the SLRMP protocol in March 2022.

Snow Leopard DNA Analysis Services

SL scat DNA analysis services were provided by the Institute of Innovation.

Analysis (BCIMS)

Two original purposes of the BCIMS were to: track implementation of the SLCAP; and to meet the objectives of the GLSEP program. The BCIMS has become part of a more general environmental data repository, that is going to be used to generate reports, and less so as a dynamic management system for SL conservation.

The transfer of wildlife data from Smart patrol system in the PAs appeared *ad hoc* and not regular (so data could become 'lost' before it reaches the BCIMS)[45]. Secondly, data that is input is not coming out again for the IoZ for scientific research. This suggests that the design of the BCIMS needs a more inclusive ownership, in the PAs being able to upload and access the data themselves; and that the IoZ for example, given access to the wildlife data. It also appears that SCEEP have under estimated the capacity needed to manage the SL data, and how to direct it towards its intended research purpose.

Analysis (SLRMP)

The SLRMP was part of this Output, to use the BCIMS data in research. IoZ need to request permission to SCEEP for use of SL data. At present further SL face / hind quarter recognition and scat analysis for population dynamics has stopped. Considering the handover of the research monitoring methods was in 2020, but a protocol not agreed until March 2022, suggested a slight disconnect. Furthermore, the signing missed the Ministry of Finance funding cycle for 2022. The priorities for 2023 need to be agreed and a budget submitted.

Analysis (DNA Services)

Collection of scats and DNA analysis was a useful demonstration, but adoption and long-term research work using DNA analysis was less clear. At present the Institute of Innovation maintain the scat sample collection. It was also noted, that the scat collection process needed to be improved to stop cross-contamination.

There is decision needed concerning the long-term storage of the SL scats and DNA sequenced data. At present, the project is paying the Institute of Innovation to cold-store the scats and maintain the SL DNA sequenced data files. This is because this institute is the only in-country facility for gene sequencing. The ownership of the samples and DNA data belongs to the project and therefore UNDP. The IoZ, as the country's responsible scientific institute have requested a cold-store fridge to house the samples once the project ends[46]. This has been agreed, but but needs to be formalized through a handover document, indicating also the security of the samples. Future sharing of the samples for international research also needs to be formalized by the IoZ with endorsement by SCEEP. The IoZ with SCEEP would decide according to agreed research protocols in the SLRMP.

Effectiveness - Outcome 2 Indicators and Outputs

Outcome 2 - Strengthening key biodiversity areas (3 indicators)

The overall grading is **Moderately Unsatisfactory.** There were three indicators attached to the Outcome 2 level which were rated as: satisfactory (1); and moderately unsatisfactory (1), unsatisfactory (1). (see **Annex 1**)

The unsatisfactory indicator was to: increase core conservation (IUCN Category I) areas by ~121,000 ha which was not achieved. The MU indicator was to increase women's participation in training courses to 60%. It was less than 20% for PA conservation courses, which was disappointing for a GEN-2 project. The S rating was for the self-marked METT scores by the PA staff.

The Outcome was designed to build management capacity of the PAs. The three outputs were directed at securing

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[43] This handover was also recommended by the MTR

[44] The SLRMP is part of the SLCAP

[45] One comment from the BCIMS controller was that 'we have SL location data, but it is not uploaded yet'

[46] The IoZ (and its international researchers) would then be able to request & pay for particular sample analysis at the Institute of Innovation for DNA gene mapping / SL identification.

wildlife (SL and prey) migration corridors within the two SLLs. In detail, these were to: Strengthen the land tenure of core conservation zones in UCNP (Output 2.1); Extend, and improve the conservation security of GNR (Output 2.2); and Increase community involvement / benefit in the PAs (Output 2.3). The three outputs were also expected to: expand the core zones of UCNP and GNR to include areas of high conservation value forest (HCVF) and grasslands and stop their degradation; enhance the monitoring / enforcement capacity in these core zones; and build mutually beneficial relationships between PAs and local communities.

From the project point of view, the design of Outcome 2 was slightly different and with a much narrower focus: to: increase PA area; design PA territory with delineated & demarcated boundaries; improve PA ranger conditions, infrastructure and capacity to undertake conservation work; and introduce a smart patrol system. For this reason the results quite didn't match the outcome and output objectives.

Core conservation areas managed as IUCN Category I or Category II PAs (Indicator 2.1)

(Baseline –116,710 ha; Target - 237,700 ha)

Result against Indicator

The PA increased with the creation of Tupalang NP (27,851 ha, of which 18,000 ha was Category I nature reserve). Pskem NR (51,300 ha) was not gazetted and remained in preparation[47]. Buffer zones with conservation objectives were also delineated for CBNR and demarcated for GNR.

Analysis

Much of the Tupalang NP area remained under SCF / SFU jurisdiction, and did not change to SCEEP conservation designation as a IUCN Category 1a nature reserve. This is one of the consequences of not having an independent cadastral land authority, and with SCF appointed to map the area. This was also the case for CBNR, where the land jurisdiction in the buffer zone remains with SCF / SFUs. However, some of the SFU areas in this location have been closed to livestock due to degradation from over-grazing.

In terms of conservation and wildlife corridors, the UCBNR / CBNR complex was not joined up with the Pskem NR, which was a project design objective, but rather Akhangaran and Burchmulla SFUs maintained their jurisdictional control of the land despite mismanagement. Furthermore, the designation of Pskem NR, which was originally proposed in 2015, was not fully achieved. Lastly, the designation of new PA of 27,851 fell short of the target of 120,990 ha to come under new PA management[48].

METT Tracking Tool Scores under GEF-6 (Indicator 2.2)

(Baseline & Target – see table)

Result against Indicator

PA	Baseline	Target	Result
UCNP National Park (UCNP)	24	45	46
Ugam Chatkal Biosphere Nature Reserve (UCBNR)	n/a	57	61
Chatkal Biosphere Nature Reserve (CBNR)	42	57	55
Gissar Nature Reserve (GNR)	43	56	64

Analysis

Management Effectiveness increased according to the self-marked METT tracking tool.

Training courses (Indicator 2.3)

(Baseline 0; Target 100 (60)

Result against Indicator & Analysis

Under Outcome 2, there were 23 training courses, with 378 participants, of which 20% were women

Output 2.1 - Strengthen the conservation of core zones in Ugam Chatkal National Park (UCNP)

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[47] However, the government has instructed SCEEP and the regional Tashkent government to 'create' the reserve.

[48] In fact in the PIF, the GEF increment was for the PA estate to increase by 237,700 ha (This was not how it was written in the prodoc or standard practice to calculate target minus baseline to get the result), and not 120,990 ha which is the TE's calculated figure. The PIF PA area included are: Tupalang reserve 195,000 ha, Akbulak site 30,000 ha, and Chatkal reserve corridor 13,000 ha

Output 2.2 – Extend and improve the conservation of Gissar Nature Reserve (GNR)

There were a number of expected activities under the two outputs, many of which replicated each other. In brief:

- Review / rationalize the governance and administrative arrangements in UCNP to improve conservation management[49]
- To prepare a MP for UCNP, CBNR, and GNR
- To create three wildlife corridors between: CBNR / UCBNR and Pskem River NR; CBNR Maidantal and UCBNR Bashkyzilsay zones; and with the Akbulak catchment[50].
- Formalize the boundary and buffer zone of GNR, and of Tupulang river area to create a wildlife corridor
- Infrastructure, including utility supply, road access, boundary markers and signage (including 2 ranger posts in CBNR)
- To equip the PAs with vehicles, smart patrol items, VHF radio for GNR; and to train staff

Result

Protected Areas - Management Plans & Buffer Zones

Management plans were prepared for four PAs: Ugam Chatkal National Park (UCNP); Ugam Chatkal Biosphere Nature Reserve (UCBNR)[51]; Chatkal Biosphere Nature Reserve (CBNR); and Gissar Nature Reserve (GNR). The MPs were approved documents. The State Land Projection Research Institute (SLPRI) prepared the maps for the MPs, including for the new buffer zones for GNR and CBNR.

The project prepared the mapped delineation and documentation for a buffer zone for CBNR, which was undertaken so that CBNR (Maidantal site) and UCBNR (Bashkyzilsay site) could be 'joined-up' to form an ecological corridor for wildlife to move between the two[52]. In order to create a buffer zone for CBNR, new legislation was required which was supported by the project. The legislation required all PAs to create buffer zones. Importantly, the legislation re-directed the land development objectives towards conservation, with the oversight of buffer zone land returning to the PA conservation management. However, the two sites had not had their buffer zone adopted by government.

The project prepared documents to establish a new PA core zone in UCNP in the upper reaches of the Pskem river (51,300 ha), however the Pskem PA has yet to be gazetted[53].

In the Gissar range, Tupalang NP was established (27,851 ha)[54]. The project prepared the documents for this new PA. Tupalang PA is at the formation stage with staffing and offices being created. It requires a MP. Tupalang NP was also already proposed by 2015, thus the period to establishment was very slow.

Wildlife Ranger Patrol Methods

Conservation equipment, such as smart patrol camera traps and GPS units were provided (see asset list)[55]. PA staff were trained on the installation of the camera traps & data collection; and on collection of SL scats (faeces) for DNA analysis. The project produced a manual for 'Smart data collection' (2020, 33pp, Russian). A cell-grid patrol route and GPS waypoint marking system was introduced. This was all part of the Smart patrol system which was established at CBNR and GNR. VHF radio communication system was also provided for GNR. Smart patrol methods have become a state approved methodology. The PAs in UCBNR, CBNR and GNR now have dedicated staff for the management of smart patrol data. PA staff were provided with SL face / hind quarter recognition software to scan and sort the photos.

Unmanned Aerial Vehicle

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[49] There is currently limited coordination between CBNR, UCNP, state security service, the two SFUs and the Bostanlyk, Parkent and Akhangaran districts in the planning and management of the park.

[50] For land under SFU jurisdiction, the classification could be equivalent to high conservation value forest (Forest Stewardship Council)

[51] The project also supported the change in the legal status of Ugam Chatkal Nature Reserve to become Ugam Chatkal Biosphere Nature Reserve, under MAB UNESCO. UCBNR (44,136 ha of which Core zone - IUCN Category I at 11,018 ha; buffer zone - IUCN Category II at 5,198 ha; and Transition zone - IUCN Category VI at 27,921 ha)

[52] The two PAs had originally been one PA, but had been fragmented for 'economic' reasons

[53] The creation of Pskem PA is within the SLCAP as an activity, but final agreement on its IUCN category I or II, is still needed.

[54] of which Core zone - IUCN Category I at 18,000 ha; Recreation zone - IUCN Category II at 6,851 ha; and Transition zone - IUCN Category VI at 3,000 ha

[55] Ten camera traps have been destroyed or lost in three years in CBNR, which is not consider so many, but part of the problem is that bears (and very occasionally SL) will damage the cameras

A 'state of the art' Unmanned Aerial Vehicle (UAV), and specially-adapted tracking transit van was purchased for SCEEP. Training of SCEEP staff in the Netherlands is on-going. Its thermal imaging capability will both be useful for spotting SL and illegal hunting. The project produced a guideline for ecological use of the UAV, particularly for SL and wolf monitoring.

Analysis (PA Wildlife Corridors)

Despite buffer zone land remaining under existing ownership, changing the management objectives and oversight to PA conservation was a positive for biodiversity and demonstrated foresight by the project. However neither creating wildlife corridors nor a change in the management between UCBNR / CBNR and Pskem NR were achieved. In the Western Tian Shan, this extensive area remained under the control of Akhangaran and Burchmulla SFUs, with no real change in the permitted grazing numbers.

CBNR indicted that they have requested SCF / SFUs at the regional level to reduce livestock numbers, with the result being that the entry permits to the SFU pastures have moved from mid-May to mid-June, although the extent (area coverage) of this change was not clear[56]. However, the purpose was clear. It was to allow: the grass to grow more; ibex / deer (as SL prey) to feed down / off from the mountains earlier where there is less snow / easier access to the forage plants; the wild ungulates to build strength before and early in their breeding seasons; and for a less disturbed breeding season. During the grazing season, wildlife are constrained to the reserve. With the full proposal for a buffer zone between UCBNR and CBNR, there should be state control (SCEEP) to reduce livestock to a level that is conducive for a working wildlife corridor. However, this buffer zone has not yet been adopted or tested in practice.

In the Pamir Alay mountains, the extension of Gissar NR to join-up with Tupalang NP was not achieved, nor the designation of this ecological corridor for biodiversity conservation.

Analysis (Training & Equipment)

A Smart patrol system was foreseen in the project design, although its design and implementation were all new at the start of the project. A consultant was engaged who was familiar with the equipment (Smart camera traps with data loggers and / or SIM cards), software / data management, and ranger smart geo-coordinated patrolling systems. This consultant worked with SCEEP, PA staff and the IoZ in training. Spatial-cell monitoring was introduced (with 500 cells at 5 x 5 km) and the system established from 2018-20. The camera traps allow year-round monitoring, and also provide seasonal weather data, such as snowfall.

Approximately $160,000 was spent on the UAV and its transit van. The TE would suggest, that the equipment is also used to monitor livestock numbers and pasture degradation. This would mean that SCF and SLPRI join the training teams in the Netherlands, and that an agreement on sharing is prepared.

Output 2.3- Enhance community involvement in, and benefit from PAs

The output was designed to include: contracting and training four community liaison officers; recruiting 10 environmental inspectors to support the PA staff; and to develop a tourism facility. The output also included support for awareness activities. (see later under training & awareness section)

Result

A tourism site is being constructed in buffer zone of GNR. Training on ecotourism, business and gardening was conducted for local communities

Analysis

The tourism site was not evaluated by the TE, and its support from the project was not presented to the TE. It needs assessment to understand the following: its legally binding status that ensures an appropriate percentage of its profits go directly to support biodiversity conservation in that area; that its activities are of a direct net gain nature for biodiversity; and that its involvement with local village communities empowers them culturally, socially and economically.

Effectiveness - Outcome 3 Indicators and Outputs

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[56] However, Akhangaran SFU indicated that timing of opening of the pasture grazing permits was mid-May to 31st September (4.5 months). Also the TE believes that the cattle corridors running on the north-west border of UCBNR remain

Outcome 3 - Sustainable economic development incentives for communities (5 indicators)[57]

The overall grading is **Moderately Satisfactory.** There were five indicators attached to the Outcome 3 level which were rated as: highly satisfactory (2); satisfactory (1) and moderately satisfactory (1); and moderately unsatisfactory (1) (see **Annex 1**)

The two indicators rated HS were for the same activity which was for the Technical Assistance Projects (TAPs). The pasture law which was passed during the project was rated as satisfactory. The engagement with the SFUs was rated as MS, although the targets for rehabilitation of forest land were too low. MS rating here was given, because the SFUs were enthusiastic project promoters and beneficiaries, and were eventually supported by the project with PMPs. The establishment of pasture cooperatives with PMPs was rated as MU, because the scale of the intervention was small, too late, and of limited quality on paper at least. The field situation was better.

The Outcome was designed to create sustainable use of the high altitude pastures. Activities included improving the ecological integrity and productivity of grassland habitats: Provide incentives to create sustainable pasture management (Output 3.1); and stop the degradation of forested areas (Output 3.2).

Regulatory mechanism for Pasture Cooperatives (Indicator 3.1)

Cooperative pasture management plans (PMPs) in the high altitude pastures (Indicator 3.2)

(Baseline – no mechanism; Target – a mechanism to create two pasture cooperatives with plans covering ~50,000 ha)[58]

Result against Indicator

Under the pasture law (2019), two pasture cooperatives were created and supported with the preparation of PMPs. They were Muminobad Chorva Cooperative in Akhangaran District and Khisor Yaylovlari Cooperative in Shakhrisabz District. Additionally, as the high altitude pastures were under state ownership by the SFUs, the project later supported eight SFUs to produce demonstration PMPs.

Analysis

The pasture law (2019) and the pasture user association (PUA ~ pasture cooperatives) regulation as building blocks were put in place. The target was only two pasture cooperatives, with one of the plans only covering 200 ha and the other 304 ha, thus the scale of the intervention was limited. The quality of the cooperative PMPs was also low. The PUAs are cooperatives that have pasture land in the lower mid hills under agriculture tenure. The high altitude pastures are under the jurisdiction of SFUs, thus the indicator was poorly designed, however the project adapted and worked with eight SFUs to produce PMPs.[59]

Original Indicator 3.2 - Productivity of SFU high-altitude pastures

(Baseline - dry fodder from 400 kg / ha to Target - 700 kg / ha)

Result against Indicator

SFU Pasture Yield (dry weight) 2021

SFU	kg/ ha	kg / ha
Akhangaran	436 - 476	456
Burchmulla	360 – 880	620
Kitab	640	640
Kamashi	503	503
Shakhrisabz	190 - 280	235
Yakkabag	580 - 660	620
Dekhkanabad	210 -510	360
Uzun	210 - 310	260
Average	n/a	**462**

Source - Pasture Management Planning for SFUs – Consultant Report

Analysis

The result indicates that the pastures have only moved just above the baseline from 400 to 462 kg / ha. This

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[57] A number of restored indicators from the original logframe are presented, but not graded

[58] Prodoc p56

[59] The MTR as mentioned recommended to re-focus on these SFUs.

concurs with the number of sheep being grazed, not having been significantly reduced.

Original Indicator 3.3 - Unpalatable plant species in the SFU high-altitude pastures *(from 40 down to 30%)*

Result

Due to over-grazing and soil erosion, the percentage of unpalatable species ranged from 10-40% cover, with an average of 25% cover (Source SLPRI Geo-botanical survey)

Analysis

The baseline figure of 40% cover by unpalatable species (in 2015) was very high and signified the dire situation of these pastures. The broad range figures of between 10-40% is 'too broad' to have a strong confidence in the statistic, however the average of this would be 25% cover of unpalatable species. The figure of 25% of species in the pasture being unpalatable is still very worrying. Unpalatable species presence is an indicator of pasture degradation from over-grazing, hence the design of this indicator[60].

Original Indicator 3.6 (a) - SFU high-altitude degraded Pastures under rehabilitation *(from 0 to 5,000 ha)*

SFU	SFU Pasture (ha)	PMP (2020) ha	%
Akhangaran	52,923	3,000	6
Burchmulla	101,825	4,500	4
Kitab	33,348	14,447	43
Kamashi	12,307	11,300	92
Shakhrisabz	15,912	10,000	63
Yakkabag	12,681	1,800	14
Dekhkanabad	14,061	1,234	9
Uzun	26,999	3,000	11
Total	**270,056**	**40,281**	**18% (Av)**

Source – Project records

Analysis

The target was less than 2% of the SFUs' pasture areas. The project supported PMPs which covered a more reasonable 18%, however the plans were new and their adoption / future somewhat uncertain. The project plans also did not directly address livestock permit numbers (e.g. projecting allowable quotas over five years for example), which are part of annually agreed state PMPs. Thus they were not integrated, and of limited use.

Furthermore, note the low coverage of the project PMPs for Akhangaran and Burchmulla SFU, which did not include the large areas where large numbers of livestock (legal / illegal) enter Western Tian Shan from the Namangan Region, with impunity[61].

Original Indicator 3.8 – SFU high altitude Pastures 'significantly degraded' *(target – down to 40%)*

SFU	Pasture plant species diversity (# of species)	Area (ha)	Vegetation lost / topsoil exposed due to livestock - ha (%)	Area under Erosion - ha (%)
Akhangaran	39	52,923	1,487 (2,81)	523 (0,98)
Burchmulla	41	101,825	898 (0,88)	590 (0,58)
Kitab	40	33,348	218 (0,65)	383 (1,15)
Kamashi	30	12,307	95 (0,77)	179 (1,45)
Shakhrisabz	46	15,912	216 (1,36)	20 (0,13)
Yakkabag	35	12,681	309 (2,4)	297 (2,34)
Dehkanabad	27	14,061	68 (0,48)	41 (0,29)
Uzun	39	26,999	68 (0,25)	150 (0,56)
Total	n/a	**270,056**	**3,359**	**2,183**
Average %			**1.2**	**0.8**

Source – Project Records – Geo-botanical survey

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[60] Nettles and thistles for example for example have a high tolerance to excess nitrogen from livestock urine, and once established, and then not grazed, are able to spread

[61] SCF indicated that in 2021, the transfer of livestock from the Ferghana Valley was prohibited, which significantly reduced the numbers of livestock. However, the TE was unable to verify this or assess the situation in enforcing this in 2022

Analysis

The figures indicate only a small area of pasture lost and a small area of land lost to soil erosion, but together they add up to 5,542 ha of pasture land lost. This is 2.1% of this ecosystem effectively collapsed. The pasture 'permanently' lost is mainly from livestock corrals and their main drive corridors.

What the indicator did not do, was measure / present levels of degradation by area. This was really what the project needed to do – to create a simple and robust monitoring system of pasture degradation levels, that the field practitioners – i.e. the forest rangers could use, and the forest engineers rely on technically, to reduce permitted grazing numbers. The indicator target of reducing the degraded area by 40% and the fact that the measurement was ~2% indicated a mis-match in SMART design, especially in not being 'specific' or 'realistic'. It did however, provide the starting point in 'area of habitat lost / ecosystem collapsed'.

For example, it has been indicated that there are 106,000 head of cattle along the Pskem ridge in the Ugam Chatkal SLL[62]. Separately the project's ecosystem services survey report indicated 173,000 sheep / goats in the Akhangaran / Burchmulla SFUs. Akhangaran confirmed for their part, they had issued permits for 100,000 sheep in 2022. There was no evidence presented to the TE that this situation in precarious livestock numbers had changed. The SFUs had recently closed some areas, but the project was unable to provide overall SFU permitted numbers over time, which would also have shown if livestock numbers were actually increasing in some areas as a result of other areas being closed.

Degraded SFU high altitude Forests under active rehabilitation (Indicator 3.4 a)

(Forests under restoration from Baseline 100 ha to Target - 1,000 ha)

Result against Indicator

SFU restored forest area covered 3,082 ha. (Reported figure). All SFU forests in mountains are 'administratively' under protection. Some areas were additionally closed, and there was some limited juniper planting in the high-altitude areas. The management of high altitude forests did not significantly change. The TE was unable to source further information, apart from the area of juniper planted which was 154 ha.

Analysis

It is extremely difficult to re-afforest the mountain forested areas as juniper grows so slowly, and is susceptible to desiccation when planted as a seedling, hence only 154 ha planted. The best method to restore the degraded open juniper woodland is to close the areas from livestock and allow natural regeneration. However, as juniper grows slowly, and due to soil desiccation, predation from livestock and from low snow / rain years (due to climate change), natural regeneration is also very slow and will take ~20 years before the new trees are established. Even then, such regenerated areas would still be susceptible to destruction by (large) livestock, if grazed again.

Output 3.1 – Incentives for sustainable pasture management practices

The output was designed to: prepare pasture management plans (PMPs) [for pasture cooperatives] covering ~50,000 ha; and rehabilitate 5,000 ha of degraded pasture land as a demonstration, with livestock control, within the PMP areas. What the project did was:

- - (a) Establish and support two pasture cooperatives to prepare PMPs, to rotate livestock on their fields
- - (b) Support the two cooperatives to develop fodder seed multiplication plots and then restore degraded agriculture fields to grow fodder for a 'cut and carry' system
- - (c) Support eight SFUs to prepare pasture management plans (PMPs). These plans covered 18% of the SFU's high altitude pastures as a demonstration
- - (d) Support eight SFU to develop fodder seed multiplication plots and then restore their land with enrichment planting and / or restore degraded fields to grow fodder for a 'cut and carry' system[63]

(a) Pasture cooperatives to prepare PMPs to rotate livestock on their fields

Two pasture cooperatives were created. The project prepared guidelines for creating pasture cooperatives. Guidelines were developed for pasture management, including assessing livestock carrying capacity, and rotation measures.

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[62] Data from GEF/UNDP 2016. Location would be Akhangaran and Burchmulla SFUs
[63] As the SFUs also farm their own sheep

Case Study of Cooperative Land Management

Hisor Yaylovlari Pasture Cooperative (Shakhrisabz District, Kashkadarya Region)

The pasture cooperative was created in 2019, covering 304 ha in two villages Vardon & Amagan with 37 members. The numbers of sheep was reduced and almond planted, which also reduced labour. Before 2019, the members had 500 sheep, 200 cows, which by 2022 was reduced to 200 sheep and 120 cows, which were all stall-fed or locally grazed on three pasture areas that were rotated. One area has been fenced for five years now. Before 2019, the cooperative needed to purchase fodder / barley cakes, whereas now, they produced sufficient fodder to sell a portion outside the membership. They recently planted alfalfa (4.5 ha) and barley (3 ha). Some of cooperative land (all under individual farmer tenure), is rented out for alfalfa / wheatgrass / barley production for livestock. This agriculture land needs restoration, so the renters are improving the cut and carry fodder fields[64].

Case Study of a Cooperative and their Pasture Management Plan

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Muminobad Chorva Pasture Cooperative (Akangaran District, Tashkent Region)

The pasture cooperative was registered (2020) with 15 members, and now has 30. The farmers share responsibility for a government milk supply contract. All members have their own land tenured (49 years)

The project supported a PMP, and the cooperative has now set-up a rotational grazing system with some areas now closed as part of this. Generally, after closure for two years, and with with enrichment seeding of fodder plants, the status of the fields was quite good. In one case, the head of the cooperative / member of the VCC,[65] had closed areas through fencing for 1, 2, 3 and 4 years, with good results plainly visible. Plots are still partly grazed, after the main fodder species seed has set. The livestock are also providing some manure, at this time, and the grazing reduces unwanted weed species.

In 2022, the cooperative started to rent out land between the members. The cooperative requested local government (VCC) to allocate land for a number of nearby landless households, so that they could join the cooperative, but the VCC said no land was available.

Muminobad Chorva Pasture Cooperative – Pasture Management Plan (PMP)

The plan (7 pages) was only signed in mid-2022, and although there were productivity calculations undertaken in 2020, they were missing for 2021. The plan appears based on a formula for maximum carrying capacity from the Karakal State Sheep Farm, however the conversion to sustainable numbers for the cooperative's 200 ha was not clear. The calculation of how many sheep should graze in each area for how long was not clear. The rotation aspect of the plan also appears missing. Lastly the plan is written as both a plan and a report which was not ideal.

Analysis

The closure of pasture fields to livestock has had an impact. The Hisor Yaylovlari cooperative in Vardon, indicated that their pasture plan was in operation, but also mentioned that after design, it took ~1.5 years of fine-tuning before being suitable for sustainable purposes. A rotational system is now in place. The results of pasture field closure for Muminobad cooperative was also good. However the field experience did not match the PMP produced by the project, which together with the experience of Hisor cooperative's plan, suggests that the PMPs were not as good as they should have been. The fact that the PMPs were only signed at the end of the project and not agreed by 2019, and updated annually, also suggests that the project's working method here was not optimal.

(b) Fodder seed multiplication plots to restore agriculture fields to grow fodder under a 'cut & carry' system

Muminobod Chorva Cooperative - With project support, the cooperative created a seed multiplication plot. Ploughing and re-seeding old agriculture fields for fodder production (using project equipment) for livestock was undertaken collectively[66]. In 2020: 125 kg of fodder plant seed (species Kochia, Teresken, Atriplex, Wormwood, Sainfoin and Wheatgrass) was harvested from the two-hectare seed plot. Fodder production was then undertaken on 30 ha. The system uses old agriculture fields to plant fodder species for cut and carry for livestock feed – either

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[64] Brush cutter to cut out the a reed plant that can be chopped for fodder, and in winter pull-up unpalatable thorny weed species. Then plough, till and re-seed with alfalfa.

[65] Note the TE visited the ranch of this farmer, who lived in a very large mansion house, and was obviously very wealthy. This farmer was also 'looking after' the project provided tractor.

[66] It was expected that from 5 kg seed planted, it could be multiplied to 50 kg which would cover 80 ha of new cut & carry fodder fields

as fresh or as dry matter depending on the crop and number of cuts having been taken.[67]

<u>Hissor Yaylovlari Cooperative</u>: The two-hectare seed plot was ploughed and broadcast seeded. 75 kg of fodder plant seed was harvested from the plot (species - Izen, Teresken, Atriplex, Wormwood). The seed was used for restoring old fields for fodder production[68].

Analysis

The demonstration was very successful and expanded around the cooperative villages to begin with, then replicated further a field. (see Impact – catalytic effect section)

(c) SFU Pasture Management Plans (PMPs)

In the project area, the SFUs have jurisdictional control of the high altitude pastures. i.e. the SFUs own and manage state forest land which contains pasture and is part of the SLLs. As a demonstration, the project developed PMPs for eight such SFUs, which were adopted to varying degrees. The plans covered 18% of the SFU's high altitude pastures as a demonstration. See **Annex 5a** for a list of SFUs and cooperatives supported in pasture management.

<u>Case Study of SFU pasture management</u>

<u>Shakhrisabz SFU Pasture Management – State Plan</u>

The state PMP for Shakrisabz includes 18 grazing contracts x 800 sheep / goats (14,400 sheep / goats), grazing on 12,000 ha of pasture [69]. Thus the density of sheep grazing is 1.2 sheep / ha

<u>Shakhrisabz SFU Pasture Management Plan</u> – (June 2022), pp6

The six-page project-produced PMP was signed in June 2022 and covers 10,000 ha. The goal is to improve the efficiency of pasture use by introducing rotational grazing. The objective is to: determine the plant species composition, their productivity and the pasture carrying capacity; to introduce rotational grazing practices; and to engage in problem-solving. Shakhrisabz SFU indicated that they were starting to implement the project's PMP.

Analysis

The plan itself is somewhat inaccessible in being full of formulas calculating dry vegetation mass to determine carrying capacities. How the dry weight is calculated for a natural pasture here is unclear, especially as these are natural pastures are in high altitude areas and are degraded. The plan does not appear to recommend any reduction in the SFU 'official plan' of livestock numbers (which extraordinarily is increasing from 2020 to 2022), but rather provides for a system of rotating livestock. The plan also lacks any description of who will be supervising and enforcing implementation of the plan. A map should also have been included, as forest rangers and shepherds are unlikely to know the geo-coordinates that were presented.

<u>Case Study - SFU State Grazing Permit Plan</u>

<u>Yakkabag SFU</u> – <u>State grazing permits</u>

Yakkabag SFU have jurisdiction over 44,000 ha of high altitude land of which 17,000 ha is forest or has tree cover and 12,000 ha is pasture. On this pasture, they have 75 high altitude grazing permit agreements for 14,000 sheep (~187 sheep / permit), which is a density of 1.17 sheep / ha. The old maximum permitted density / carrying capacity is 3 sheep / ha. They also own 900 sheep on three farms, which are also grazed.

The project PMP covered 1,800 ha of their pasture, or 15% only, against their state plan covering the whole 12,000 for grazing permits.

Analysis

The fact that 'three sheep / ha' carrying capacity in the high altitude pastures is still readily recollected, and the actual figure (1.2 sheep / ha) presented as a success indicated that the real carrying capacity of these mountain pastures has not been calculated or been worked into state environmental planning, and certainly not into the SFU permitting system. Without this, the permitted sheep numbers are guess work.

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[67] The project reports describe 'restoring degraded pasture', however the areas are mostly old and degraded agriculture fields, which are re-ploughed, tilled, fertilized and then re-seeded with fodder seed. The fodder fields are then cut by machine or hand. No livestock graze on these fields, except perhaps after the last cut, to graze the crop residues and manure for the following season.

[68] It was indicated that the 125 kg of seed would be sufficient to create re-seeding on ~60 ha, however the TE believes that it is more common for a sowing rate of 10 kg / ha, which would equate 12.5 ha of land to be returned to fodder production the following year.

[69] Out of 30,000 ha, of which 17,000 is open juniper woodland

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<u>Akhangaran SFU</u>

Akhangaran SFU owns 132,000 ha, of which 44,000 ha is pasture, of which 40,000 ha is used for grazing. The SFU has issued 330 grazing permits (management agreements) for 100,000 sheep, which is a density of 2.5 sheep / ha. The permits run from mid-May to mid-September. The SFU also owns 4,000 extra sheep which also need to be grazed. The grazing contracts bring in ~30% of the SFU's annual income. The project-supported PMP covers 3,000 ha of pasture, which is only 7.5% of the pasture area which is permitted at 2.5 sheep / ha. The project PMP was said to be 75% adopted. The SFU has 110 forest rangers (inspectors), which means if all worked in the field, they would be covering 1,200 ha each.

<u>Kamachi SFU</u>

In terms of SFU pasture control it was noted that Kamachi SFU provided free grazing for the Karakul Sheep Breeding & Silk Production State Unit at the maximum carrying capacity of 3 sheep / ha. Such an arrangement, would not seem to be in the best interests of arresting pasture degradation, managing climate change, or in the interests of the SFU

(d) SFU fodder seed multiplication plots to restore SFU land with enrichment planting and / or restore their degraded fields for fodder production

For each SFU, the project created fodder seed production plots (2 ha each, fenced), in order to demonstrate improved fodder seed selection and multiplication for future fodder field sowing. Some of the multiplication plots were partly used to multiply medicinal plants for enrichment planting in closed SFU areas.

Analysis

In most cases, the SFUs followed the on-farm fodder production model to provide fodder for their own sheep.

Output 3.2 - Sustainable forest use

The output was designed to: establish tree nurseries; create fruit & nut orchards; and assist the regeneration of high-altitude forests.

Result

<u>SFU Tree Nurseries & Equipment</u>

Tree nurseries were established for the eight SFUs. The SFUs produced and planted trees within SFU land:

State Forest Unit / Tree Species	Akhangaran	Burchmulla	Kitab	Shakhrisabz	Yakkabag	Kamashi	Dekhkanabad	Uzun	Total (ha)
Production Nut Trees (Mid-hills)									
Pistachio			37	95	56	880	290		1,358
Walnut	23	266	553		23	10	16	72	963
Almond	355	335	77	6	73	5	13	29	893
Rural (Village) Shade / Wind-break									
Poplar		9	23			2	1	2	37
Elm	2				4				6
Pine	4	4							8
Ash	44						4		48
Hawthorn					9	1			10
Willow	1				4				5
Re-afforestation of Mountain Ecosystems									
Juniper	1		1		110	8	34		154
Upland / Mid-hills Enrichment Planting									
Dog rose shrub	9	5	19		5		9	24	71
Production Fruit trees (Lowland)									
Apple		19	8					9	36
Apricot		1			21	1	2		25
Cherry					5				5
Urban Landscaping Trees / Shrubs (City)									
Oleaster					7		1		8
Paulownia		2			2				4
Catalpa							2		2
Soapberry	6								6
Zhyida							3		3
Ailantus							2		2
Barberry						1			1
Total	445	641	718	101	319	908	377	136	3,645

Note – the figures only include areas of plantation where the status of trees was considered satisfactory

The SFUs were supported to establish tree nurseries, within which they produced mostly commercial species – either fruit & nut tree for mostly low altitude orchards, or species for sale for city landscaping contracts. In the example of Shakhrisabz SFU, the project provided equipment to upgrade their city nursery. Various tree species were being grown for the private market to boost SFU income, and possibly alleviate some of the pressure to earn income from issuing grazing permits[70]. SFU staff are government forestry officers and are tasked with environmental monitoring, and tree production for re-greening (as a new government initiative)[71].

Analysis

In order to assist the SFUs to establish tree nurseries, nut plantations, and the demonstration fodder seed plots, the project supplied a significant amount of needed equipment, including tractors and trailers. The support to Shakhrisabz SFU was especially welcome, as the SFU in was only established in 2018. It was clear that the project technical support and provision of agriculture equipment to the eight SFUs was welcome and timely, in enhancing SFU ability to be of value to, and to support rural society. Through the nurseries and demonstration fodder seed production plots, the project support allowed them to engage more effectively with the private and public sectors (selling tree seedlings to firms and other state organs), and with farmers and communities.

Sustainable management on private / cooperative land (15,000 ha) (Indicator 3.6 c)

Cooperative / Village / Private Tree Planting was undertaken covering 6,880 ha. They were mainly fruit and nut orchards, and poplar wind breaks around the margins of fields and villages.

District location	Private / cooperative land planted – fruit & nut etc (ha) (2020-21)
Akhangaran	832
Burchmulla	86

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[70] The Shakhrisabz SFU nursery was producing Paulownia and Catalpa Bean Trees for sale for example

[71] Shakhrisabz SFU had also created a mid-alpine nursery, but as juniper grow so slowly, and natural regeneration is by far a better method, it was somewhat difficult to understand the purpose of this nursery.

Kitab	257
Kamashi	1,595
Shakhrisabz	216
Yakkabag	257
Dekhanabad	3,605
Uzun	32
	6,880

Degraded areas around villages / old agriculture fields - 6,880 were planted against a target of 15,000 ha[72]

SFU land lease

In 2021, 1,370 ha of forest land was tenured to 15 tenants for a period of 49 years. The largest area was provided by Dekhanabad SFU for the cultivation of ferula[73] between pistachio rows (634 ha); Kamashi SFU (479 ha); and Shakhrisabz SFU (193 ha) for crop cultivation.

Analysis

The land conversion from pasture to nut and fruit tree planting in the mid hills by the SFUs and village land-holding farmers, has reduced the area of grazing land. Vardon village also grow walnut. It was suggested that as a cooperative or village, they could register a brand name for their walnut (e.g. Vardon Walnut).

Technical Assistance Projects (formerly called micro-grants)[74] (Indicator 3.3 & 3.5)

(Baseline – 0; Target – 30 TAPs: free-ranging livestock health; income-generating activities; intensive livestock farms) (Indicator 3.3); and *(Baseline – 0; Target – 30 - woodlots; fruit & nut orchards, & herb gardens; alternative energy & fuel technologies)* (Indicator 3.5)

Result against Indicator

There were 69 TAPs implemented by local communities and individuals:

- Health of free-ranging livestock in 22 villages (~2,600 households with 50,000 cattle) - 2 TAPs
- Intensive livestock farming. (220 persons with 2,235 cattle) – 3 TAPs[75]
- Creation of woodlots in 12 villages (2,241 households) - 11 TAPs
- Fruit & nut orchards (280 households) - 14 TAPs
- Alternative income-generating enterprises (9,187 households) - 33 TAPs
- Alternative energy systems (264 households) - 6 TAPs

There were 14,628 households (66,407 persons, of which 60% were women) involved. For the farmer tree planting – see previous indicator. See **Annex 5a** for a complete list of TAPs, with the activity and location.

Analysis

Three of the TAPs for on-farm livestock production, were designed to directly reduce pressure on pasture, albeit as comparatively small measure against overall livestock in the mountain pastures. However, despite being on-farm and / or stall-fed, the livestock still require fodder, which is being field produced, leaving less land for open grazing livestock. The intensification of farming in the mid hills to produce fodder was one of the project's main results.

Effectiveness - Outcome 4 Indicators and Outputs

Outcome 4 - Promoting cooperation and collaboration (4 indicators)

The overall grading is **Satisfactory.** There were four indicators attached to the Outcome 4 level which were rated as: satisfactory (4). (see **Annex 1**)

The indicators were to: produce a SLCAP; conduct border guard training; attend international SL events; and to

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[72] It was not clear if any of this farmer / village planting was included in the SFU planting results, partly because some farmers leased SFU land to produce orchards. Also this table is area planted, and not necessarily area that survived.

[73] *Ferula asafoetida* (Devil's Dung) – is a medicinal plant, also used in South & Central Asian curry dishes

[74] Re-named to TAP, as cash grants were not provided, only materials and technical support

[75] Number of persons includes farm labourers and workers as well as the livestock owners. The number of cattle is indicative, as at least one of the farms was raising goats

create an international SL conservation MoU.

The Outcome was designed to improve collaboration of SL conservation. Activities included: Inter-agency coordination in conservation, monitoring and enforcement (Output 4.1); and Trans-boundary planning and management (Output 4.2). The expected results were: a Snow Leopard Conservation Action Plan (SLCAP); coordinating institutions / organisations in implementing the action plan; and identifying funds to implement the plan.

Snow Leopard Conservation Action Plan (Indicator 4.1)

(Baseline – No; Target – SLCAP approved and under implementation[76])

Result against Indicator

A Snow Leopard Conservation Action Plan (2021-30) (SLCAP) was developed by the project and approved by the Cabinet of Ministers in 2021. The project began development of the plan in 2018 with a working meeting of 40 participants. It was the first single-species action plan. A 'State of the Snow Leopard' report is under preparation and is expected to be published in 2023.

Analysis

The SLCAP was approved in 2021 and can act as a project handover document, however the plan lacks detail on its measures, or a budget. Whilst responsible partners are designated in a rudimentary way, the leadership and motivation to implement the measures was not so apparent.

Border guards trained in stopping wildlife crime (Indicator 4.2)

(Baseline – 0; Target – 50% of those employed in Ugam Chatkal and Gissar SLLs)

Result against Indicator

One hundred and thirty-six law enforcement officers received training on CITES and stopping the illegal wildlife trade. Those trained included border guards and airport customs guards, internal affairs, and police. SCEEP is the lead for CITES and conducts regular training workshops on stopping crime against wildlife. The project produced 'Identification of restricted import / export items under CITES Annexes for Customs & Border Guards (2021)

Analysis

The project hired a national consultant to facilitate development of the training courses and training of trainers.

International snow leopard events (Indicator 4.3)

(Baseline – 1; Target – 2 annually with presentations on project activities)

Result against Indicator & Analysis

SCEEP has been represented / attended 11 international events:

- Global Snow Leopard Summit (August 2017)
- Transboundary Cooperation for Snow Leopard Conservation - Consultative Workshop, Uzbekistan (July 2018)
- International Conference for Snow Leopard Conservation, China (September 2018)
- CITES Standing Committee 70th session, Russia (October 2018)
- Transboundary conservation of snow leopard ecosystems - regional workshop, Tajikistan (April 2019)
- Snow Leopard Conservation: Population, Management & Trans-boundary Cooperation, Kazakhstan (July 2019)
- Snow Leopard Assessment Virtual Summit, Kyrgyzstan (October 2020)
- GSLEP Steering Committee Meeting, Kyrgyzstan (October 2020)
- UN COP-26 – signing of the transboundary MoU, United Kingdom (November 2021)
- Implementation of the MoU on transboundary cooperation, Tajikistan (May 2022)
- Uzbek delegation participated in Stockholm + 50 event, Sweden (June 2022)

Transboundary coordination on wildlife crime, biodiversity conservation / SL monitoring (Indicator 4.4)

(Baseline – No transboundary agreement on SL conservation; Target – Transboundary agreement on wildlife crime, including illegal hunting by border guards; and coordinated snow leopard monitoring)

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[76] *as defined by: one stakeholder governance meeting; one SL priority landscape plan; SL & prey monitoring program, with data analysed annually, one 'State of the Snow Leopard' report; and GIS map of SL habitat range*

Result against Indicator and Analysis

An International MoU was signed by 3 countries, with Kazakhstan hopefully to also sign (See **Annex 5**)

Output 4.1: Improve inter-agency coordination in conservation, monitoring and enforcement

The expected activities were: implementation of the SLCAP; establish the governance structure for the plan; and develop a fund-raising strategy for the the plan.

Result

Snow Leopard Conservation Action Plan 2021-30 (2021), pp15, Deputy Prime Minister, 05/1-220

The SLCAP contains 36 activities under nine components, with the signatory parties reporting to SCEEP who report to the Cabinet of Ministers quarterly[77]. The plan envisages strengthening the research and monitoring of snow leopard ecosystems through agreement on a joint methodology. It also calls for the improvement of state regulations on SL conservation and mountain ecosystems. The action plan aims to improve state nature protection agencies and prevent degradation and fragmentation of high mountain ecosystems outside PAs. The plan provides for prevention of infrastructure development in key biodiversity areas, capacity building of PA staff, community-based conservation, enforcing wildlife crime laws, and mitigation measures for human - wildlife conflict. The SLCAP promotes strengthening international and regional cooperation through creating transboundary working groups partnership with international conservation NGOs.

Analysis

The SLCAP is mainly a reiteration of this UNDP GEF project design, with many of the activities already undertaken, however, what the plan does do, is to act as an outline project handover document. The plan attempted in part to address the impact of climate change in the mountain ecosystems. A governance structure has yet to be created. Part of the project design was to identify funding for the plan. This has not been achieved, furthermore, the was no budget included in the plan which makes this more difficult.

Activity #22 is to mitigate the competition for pastures between livestock and wild ungulates[78], however the responsible parties listed are the Committee for Livestock Industry and the Ministry of Tourism. The TE understanding is that the high-altitude pastures are under SCF / SFU jurisdiction, and they issue too many grazing permits which is the primary reason for the extensive land degradation of the alpine pastures. Thus, there remains a blind spot, in identifying the right agency in control, and how to issue and enforce environmental protection orders in these high altitude degraded landscapes[79].

Output 4.2 - Transboundary planning and management

The expected results were to: secure trans-boundary migration routes for wildlife; build institutional capacity; and involve scientists and PA managers in international SL meetings, including with GSLEP.

Results

Transboundary MOU

A Memorandum of Understanding (MoU) concerning SL transboundary conservation was signed in November 2021 (at UNFCCC COP-26 in the UK), with support of the Ministry of Foreign Affairs. The project supported its development through meetings in Tashkent in 2017 and 2019, before handover and finalization by GSLEP. It covers cooperation on the conservation of SL, its prey base and its habitat in the Western Tien Shan and Pamir-Alay. It was signed by Uzbekistan, Tajikistan and Kyrgyzstan, with Kazakhstan expected to sign later[80].

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[77] Signatories - SCEEP, SFC, Academy of Sciences, Ministry of Economic Development, Ministry of Foreign Affairs, Ministry of Employment, Ministry of Tourism, Ministry of Internal Affairs, State Committee for Geology, State Customs Committee, State Tax Committee, Committee for Veterinary & Livestock, Chamber of Commerce, Uzbekistan Railways, Uzhydromet, Administrations of Surkhandarya and Tashkent regions

[78] With the method stated as: To introduce the best pasture grazing practical technologies (rotation and enriching pastures in traditionally used areas, creation of alternative forms of production for pasture use, creating intensive types of livestock and crop production, creation of alternative sources of income and services, developing tourism services and infrastructure).

[79] One of the problems is that large state / private enterprises are involved, and that regional governments lack political willpower, as they receive tax revenue for example.

[80] It was signed between: Kyrgyzstan Ministry of Natural Resources, Ecology & Technical Supervision; Tajikistan Committee for Environmental Protection; and Uzbekistan State Committee for Ecology and Environmental Protection. Kazakhstan Ministry of Ecology, Geology and Natural Resources is due to sign

GSLEP conducted its first meeting on transboundary cooperation in Central Asia (2022). A GSLEP draft regional action plan (2022, 6pp) was prepared and is being reviewed by member countries. It includes:

- Evaluate the practical possibilities of increasing the number of SL in the contracting countries; Develop recovery plans for different SL populations; Conduct surveys to identify changes SL habitats.

- Collect data on SL populations and its types of prey (wild ungulates, marmot) using unified methods, track their changes across time; and provide periodic recommendations for their management.

- Establish data determining SL age and sex ratio, reproduction success; Conduct field studies on the biology of reproduction ecology; Determine the factors that interfere with the achievement of a biologically optimal age and sex composition in different parts of its range.

Analysis

State agencies have been participating in global events on snow leopard conservation. The regional GSLEP Action Plan appears more scientifically-based than the Uzbekistan SLCAP. A copy of the MoU is presented in **Annex 5.**

3.3.3 Training, Awareness & Knowledge Products

Training and awareness figures

Component	No. of Courses	Participants	of which Women	% Women
1 & 4	15	382	64	17
2	23	378	74	20
3	54	1,488	308	21
TAP	56	1,338	549	41
Total	**148**	**3,586**	**995**	**28**

Training included one study tour - In June 2018, fifteen representatives of partner organizations visited Kyrgyzstan to understand community pasture management and sustainable pasture use practices[81]. For the training courses, women's participation was 28%, however, if the TAP training courses (with 41% women's participation) were taken out of the figures then women's attendance at project training courses was less than 20%, which was not good. A full list of training events is presented in **Annex 5.**

Knowledge Products & Awareness Materials

- Status of snow leopard landscapes & preventing their degradation, 14pp, Russian
- Economic & mathematical methods for pasture assessment - planning efficient use of pastures (2018) 19 pp, Uzbek
- Planning of pasture use - practical recommendations (2018), 19pp, Uzbek
- Regulatory & institutional frameworks for pasture management and their improvement (2018), 21pp, Uzbek
- Policy brief on sustainable management of high altitude pastures, 11pp, Russian
- Policy brief on sustainable management of high mountain forests & pastures, 5pp, English
- Fees to be paid for the use of pastures on calculation (2018), 14pp, Uzbek
- Economic valuation of pasture degradation - recommendations, (2018), 14pp, Uzbek
- Ecosystem services valuation in Ugam Chatkal National Park, Policy brief, 6pp, English
- Ecosystem services valuation GNR SLL: Making the case for investing in conservation, 60pp, English
- Analysis of lessons learned and the rationale for project activities in forest management, 21pp, Russian

List of technical materials

- Mini Atlas (2021), 36pp, Russian
- Smart patrol data collection manual (2020) 33pp, Russian
- Rare and endangered species of the flora of Uzbekistan (2021) 138pp, Russian
- Wild medicinal, food and scenic species of the flora of Uzbekistan (2021) 130pp, Uzbek
- Guidelines for the creation of collective forms of pasture use (2020) 33pp, Russian
- SCF Tree nursery management manual (publication)
- Forest land lease guidelines (2020), 21pp, Russian
- Creation of an insect-eater biolab for tree pest control (2018), 41pp, Russian
- Guidelines for ecosystem services valuation in PAs (2020) 79pp, Russian, Uzbek

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[81] From Ministry of Agriculture, SCF, SCEEP as well as representatives from the project regions such as Kashkadarya province administration, Akhangaran district administration, and others (farmers, community members, forestry experts)

- Import/export items CITES Annexes - for Customs and Border Guards (2021) 76pp, Russian

Awareness

Two interactive visitor centers were established in GNR and CBNR. A number of short films were produced on the themes of snow leopard, pasture and forest use. They have been broadcast nationally. Road-shows in UCNP were prepared and installed in select spots in coordination with UCNP. Education & outreach was conducted on environmental awareness. The project conducted training for teachers, with a focus on creating ecological clubs.

The PIR to June 2022 lists and includes an attachment concerning awareness / knowledge disseminated, including social media publicity articles. All such materials and posts were provided with a URL link for access.

3.3.4 Efficiency, Relevance and Ownership

Efficiency

There was a reasonable budget for the project, however there were a large number of consultants hired, and not enough consultant activities / reports which translated into directed and tangible actions to address the root causes of land degradation and loss of SL habitat and its prey species. The actions that were taken, that directly addressed root causes, were mostly only completed in 2022, and were not of a sufficient scale to make a clear impact, or have time to be properly embedded in state systems. The exception was the Smart patrol system within the PA boundaries themselves.

The issue of SFU having jurisdiction of the high-altitude pasture land was not addressed until too late on in the project. Thus, the expectation of reducing degradation of these pasture on any scale, without tackling the excessive issuance of grazing permits, was unrealistic. Why it was assumed that / or written into the prodoc that communities would better manage these pastures was difficult to fathom. Thus, the (cost) efficiency was rated as **moderately unsatisfactory**.

Relevance

The measures were required under international agreements (CBD, UNFCCC). The expected outcomes / outputs were directly linked to GEF-6 focal areas: - Biodiversity - 1 – Improve sustainability of PA systems; Land Degradation - 3 - Reduce pressures on natural resources from competing land uses in the wider landscape; Sustainable Forest Management -1 - Reduce the pressures on high conservation value forests by addressing the drivers of deforestation; and SFM -2 – Maintain forest ecosystem services and improve resilience to climate change. The project was in-line with the NBSAP and UNDP country programming. The project design remained highly relevant. (See Section 2.1 Development Context)

Ownership

The level of 'project activity' ownership by the SFUs and pasture cooperatives was high as was the ownership of the 69 TAPs. The level of support to SCEEP, and UCBNR and GNR in particular was appreciated. However, the level of SFU ownership in taking responsibility, or requesting support to reduce livestock numbers was low and was an issue that the project did not address.

Mainstreaming

Mainstreaming documents produced or supported by the project:

- Methodology for monitoring snow leopard (2022), 44pp, Russian
- Conducting scientific and research works in the state nature reserves (2019) 19pp, Russian
- Draft law - Amendments to the Law on Protected Areas, including the concept of 'Ecological Corridor', 35 pp, Russian
- Pastures, adopted by the legislative chamber, (2019), 8pp, English, Russian
- Forest management efficiency (2019) President Resolution, 9pp, Russian, English
- Creating natural areas on state forest land (2022), Resolution cabinet of ministers, 4pp, Uzbek
- Measures to create a system to combat land degradation (2022), President Decree, #277
- Mechanism to compensate for loss livestock due to wildlife, 10pp, Russian
- Leasing of state forestry fund land (2019), Cabinet of Ministers Resolution, 12pp, Uzbek, English
- MoU on SL conservation and its habitat in Western Tien Shan & Pamir-Alay mountains - between: Uzbekistan SCEEP; Kyrgyzstan Ministry of Natural Resources & Ecology; and Tajikistan Committee on Environment (4pp, Russian)
- Strategy for Conservation of biological diversity 2019-28, (2019) - Cabinet of Ministers Resolution, 29pp, English, Russian

3.3.5 GEF Additionality

GEF 'additionality' considers the added value of the GEF funding, above what it would have been without the investment. The concept is one where GEF finances the increment or additional costs associated with transforming a project with national benefit into one with added global environmental benefit. Such 'incremental cost funding' is a fundamental operating principle of the GEF. This 'additionally' can be broken down into six categories, and whilst they are covered within the report, they are summarised here against the project's 'incremental design'

Additionality	Design Increment	Result
Environmental (interventions / services to achieve the global environmental benefits (e.g. CO_2 reduction)	- Maintain / restore snow leopard landscapes (SLLs) - Improve the sustainability of pasture use in these habitats	- The importance of SLLs and the issues of land degradation from overgrazing increase on the political agenda - One example of starting the spring grazing season one month later, to allow for stronger health of high altitude pasture and wild ungulate grazing in these areas - Limited closure of some pasture areas, but there was no significant reduction in livestock grazing numbers
Legal / Regulatory (environmental improvement through legal change)	- Increase the PA estate - Improve the conservation status of pastures in the SLLs	- One new PA was gazetted (Tupalang NP), with another at the planning stage (Pskem NR) - The legal status of the high-altitude pastures remained the same
Institutional / Governance (improvement via change in institutional behaviour or operational methods)	- Prevent the fragmentation and degradation of SLLs through the creation of four wildlife corridors[82] - Reduce direct threats to snow leopard / prey populations - Improve trans-boundary linkage to the Tian Shan range the north / north-east, to the Pamir range in the east	- Only one wildlife corridor was proposed between CBNR and UCBNR via its delineation as buffer zone, however even in this case, its adoption by government remained incomplete - SMART patrol system in operation - Eight State Forestry Units (SFUs) within the SLLs, were supported with demonstration pasture management plans, which covered ~fifth of the high altitude pastures under their jurisdiction - Transboundary MoU signed by three neighbouring countries
Financial (incremental cost which allows country benefits into global environmental benefits)	- PA infrastructure - Natural resources management equipment - Appointment of new PA staff and environmental inspectors	- PA infrastructure was supported - Equipment supplied to PAs, SFUs, Cooperatives, and recipients of TAPs - Staffing / inspector numbers did not significantly change, but the capacity of existing staff to undertake conservation actions significantly improved
Socio-Economic (livelihoods & societal benefits)	- Villagers in the mid-hills were overgrazing livestock, to create income at the expense of the environment, but lacked alternative income generating activities	- The project provided the villagers with 'Livelihood Capital Assets'[83], in the form of TAPs, and the formation of demonstration pasture cooperatives with fodder production, and livestock rotation methods: - Natural – development of two demonstration pasture rotation plans - Human – provided skills in fodder seed multiplication and production for degraded fodder field restoration - Physical – TAP and cooperative beneficiaries were provided equipment and tools to develop

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[82] Between CBNR and UCBNR; between CBNR and Pskem NR; between CBNR and the Akbulak sub-watershed; and between GNR, and Tupulang NP.

[83] DfID – sustainable Livelihoods – 5 Capital Assets - www.glopp.ch/B7/en/multimedia/B7_1_pdf2.pdf

		their farming, horticulture and alternative income generating activities - <u>Social</u> – formed two demonstration pasture cooperative groups - <u>Financial</u> – provided pasture co-operatives with farming equipment to support fodder production
<u>Innovation</u> (sustainable technologies, & overcoming bad practices)	- SLCAP - SMART patrol system	- SLCAP and SLRMP developed - SMART patrol to be scaled up to other PAs

4. SUSTAINABILITY

The overall rating is that sustainability is **Moderately Unlikely[84]**

4.1.   Financial Risks to Sustainability

The rating is 'Financial Sustainability is Moderately Unlikely'

The SCF's Ministry of Finance budget for 2022 was US$12.4 m which already included state funds for the national greening (tree planting) program. SCEEP average funds received from the Ministry of Finance from 2020-22 was US$4.4 m / year. SCEEP also have their own annual income of US$18.2 m.

SCEEP and SCF are involved in administering and implementing the national green program in planting many millions of trees. There is a risk that this program may draw expertise, time and funds away from the work of theses agencies in conservation of protected areas, wildlife, habitats, high conservation value mountain pastures and forest – all of which need expansion, rehabilitation, and protection.

GSLEP's country report (2021) for Uzbekistan indicated that apart from this GEF UNDP project, there had been no additional resources mobilized since 2020. Of most concern, was the understanding of the detailed proposals needed for implementing the SLCAP / SLRMP, before funding amounts could be calculated, for SCEEP / SCF to request from Ministry of Finance. Both of these could / should have been taken to a much more advanced stage during the project. Furthermore, there wasn't a mechanism to fund the SLCAP / SLRMP, which could have been proposed through the development of an ecosystem services tax.

4.2   Socio-economic Risks to Sustainability

The rating is 'Socio-economic Sustainability is Moderately Unlikely'

The project's primary target group for the high-altitude pastures was wrong. The entities that graze the livestock are the state, privates businesses, or groups of wealthy individuals. The owners of the pastures are the state. Villagers, farmers, smallholders and households are generally not part of this system. The permitting of over grazing by the state for economic gain, is in part causing the socio-economic hardship of the village farmers, who are restricted from using the high altitude pastures, and are having to adapt to climate change, including less water from these degraded pastures, with which to irrigate crops.

The project undertook 69 alternative IGAs for mainly for villagers, as a way to support livelihoods without addressing the pastures issue.

4.3.   Institutional & Governance Risks to Sustainability

The rating is 'Institutional & Governance Sustainability is Moderately Unlikely'

The project worked quite well with the main wildlife conservation institutions (SCEEP, PA administrations, IoZ). The governance structure for implementing the SLCAP / SLRMP had not been established by the time of the TE. However, any change in institutional behaviour and governance methods was difficult to see or measure.

This was also true for SCF / SFUs, who were pleased to receive support for creating tree nurseries and nut

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[84] Sustainability is considered to be the likelihood of continued benefits post GEF funding. Under GEF criteria each sustainability dimension is critical, i.e. the overall ranking cannot be higher than the lowest one.

plantations to generate income on the one hand, but were not visibly or sufficiently engaged institutionally in the direct improvement of pasture management, by reducing livestock numbers. In hindsight, this was a failing of the project design, the two key members of the PB – SCEEP and SCF, and the PIU leading group in not directly tackling the over-issuance of state grazing permits, which are approved at regional government level.

Thus the control of grazing in pastures was left to the SFU forest rangers, without the tools (methods or equipment) to undertake this very large task. In contrast, the PA rangers were provided with field equipment, infrastructure and a smart patrol system. The SFU forest rangers didn't receive anything like this, but rather the SFU main offices, were provided equipment to establish tree nurseries in the lowlands next to their offices. In doing so, the project missed the direct target group. A system of pasture monitoring was required. The SLPRI undertook geobotanical surveys, but their work needed to go much further in designing a high-altitude pasture monitoring tool and training SFU staff. Such as system would also have needed government adoption / official approval, which again was received for the Smart patrol approach.

4.3. Environmental Risks to Sustainability

The rating is 'Environmental Sustainability is Moderately Unlikely'

The SFU PMPs were prepared too late in the project to evaluate their quality and suitability, and more importantly how they were going to be integrated into the state system of issuing livestock grazing permits, which is based solely on profit. The profit decisions are taken by high-level administrators (SCF, Tax and Finance) in the city offices in the regional governments of Kashkadarya (Karshi City); Surkhandarya (Termez City) and Tashkent (Tashkent City). There was very little evidence that the project had created the critical mass to cause this reduction in permitting numbers.

In terms of CBD's Aichi targets, the project was not successful:

- Degradation and fragmentation of natural habitats is significantly reduced (Target 5)
- Significantly increase the area and connectivity of PAs in regions with high biodiversity and significant ecosystem services (Target 11)
- Ecosystem contribution to carbon stocks enhanced, thereby contributing to climate change mitigation (Target 15)

5. IMPACT & CATALYTIC EFFECT

5.1. Impact

The impact of the project was not considered significant from the wider viewpoint.

Reduction in stress on ecological systems

Whilst some capacity and tools for biodiversity conservation were developed at the central and local level, the numbers of SL and its prey indicated that the trend wasn't so positive. If the PAs and SLLs that the project worked in for five years had undergone much improved protection, then surely the numbers of SL would have increased overall by more than six per year, and just as importantly, their prey populations would have expanded, and not fallen.

Through farmer and forestry staff discussions it was also clear that there was a 'tragedy of the commons' situation. The high-altitude pastures, despite being a public resource, they were being managed by regional governmemt / SCF / SFU responsible individuals, as having control of access to to this public resource, and acting with self interest to make money, and in doing so, ultimately deplete the resource. The state can't expect to collect excessive profits and taxes and not cause severe ecosystem damage.

It was difficult to determine what level of evidence the project was providing to regional government / SCF decision-makers in terms of the botanical / pasture degradation reports, and what level of promotion and joint-monitoring support the project was offering in implementing the project PMPs[85].

A second clear point was that with the intensification of the mid-hills being actively farmed for fodder production

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[85]One example of evidence was – One of the geobotanical surveys was provided to SCF, who used it as the basis for the preparation of Cabinet of Ministers Resolution No. 499 (2021) – 'Measures to prevent the reduction of vegetation cover in mountainous and foothill areas around Charvak reservoir'

(ploughed and re-seeded with alfalfa or a fodder cereal), that there was less 'common land' (under local government control) in the mid-hills for livestock herding by the landless pastoralists.

Policy and regulatory change at national / local level

The project supported the development of a number of pieces of legislation, including the establishment of PA buffer zones. See previous list under the Mainstreaming section.

5.2. Catalytic Effect

Under this section, the follow aspects of the project are presented: Theory of change; Scaling up & Replication; Demonstration; New Technologies / Approaches. The TE has constructed a new Theory of Change logic model[86].

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[86] UNDP GEF Guidelines for Terminal Evaluations require the TE to prepare a Theory of Change model if the was not one in the prodoc to comment on or update

Theory of Change

Parameter	Pathway - PAs & Biodiversity Conservation	Pathway – Pasture Management	Pathway - Technical Assistance Projects
Concept	Securing habitat for SL – by stopping fragmentation and expanding PA area	Alpine pastures can be partly rehabilitated to stop the collapse of these ecosystems	Reduce pressure on natural resource areas in the mid hill steppe pastures and farm land, by creating alternative income generating activities (IGAs)
Root causes & threats	Limited coverage of SL habitat. Its deer, ibex and marmot prey species are confined to the rocky mountains and forests when they also need alpine meadow habitat.	The high altitude meadows are production landscapes with inappropriate environmental management methods. The lack of understanding by state officials who over-issue livestock grazing permits to state and private livestock businesses	Too many livestock on common land (VCC control issue); Villagers largely restricted from the high altitude pastures due to the permitting system managed for state / large company livestock businesses
Solution (Input to Output)	Demarcation of expanded PAs; Targeted management & monitoring the threats to SL threat, with a view to addressing those threats.	The removal of significant numbers of livestock from the high-altitude pastures; The removal of permanent structures in these areas; a reduction in the duration of grazing permits; and the rotational closure of significant areas for a significant period (at least 5 years), in order to assess ecosystems and their services recovery.	Alternative IGAs including: fruit & nut orchards; intensification of livestock foodstuff fields (grasses, cereals, alfalfa); small business; and horticulture
Outcome required	According to the project design, ~120,990 ha of new PA designated; four wildlife corridors established	The measures become visible solutions demonstrating the rehabilitation of ecosystem functioning, with the return of alpine pastures that can hold water; and therefore start to restore their ecosystem service value; and start to mitigate the climate change impacts which have already occurred and are intensifying	The IGAs become sustainable sources of diversified income, reducing the need to keep so many livestock
Result	One new national park gazetted (27,851 ha); 5 km wide buffer zones became part of PA legislation allowing conservation management objectives to be applied in these areas	Eight SFUs provided with two new income sources (nurseries to sell trees for city landscaping; and commercial nut tree plantations on their state land); the issue of too many grazing permits was not adequately targeted by the project or addressed during implementation; Two pasture cooperatives created for farmland intensification (fodder production fields) in the mid hills	Some success in both IGAs and on-farm livestock fodder field intensification. (The smallhold farmers don't use the high-altitude pastures as licences go to commercial farmers / state livestock farms)
Impact	The additional area put under nature protection was very limited. Wildlife (threat) monitoring within PAs improved, but the issue of over-grazing in state pastures and wildlife corridor areas, which are SL habitat was not addressed	The alternative income should allow for a reduction in income from issuing less grazing permits. But this is unlikely without significant political willpower and leadership from regional government, and SCF. There was no significant impact on reducing the ecological degradation of the mountain pastures	Successful new sources of income and diversification away from traditional open-grazing of flocks of sheep has helped reduce the pasture degradation in the mid hills where the villages are located

Scaling-up and Replication

The prodoc presented a clear vision of the project's expected replication:

> The following activities have been identified as suitable for replication and/or scaling up: (i) implementation of smart patrol systems in PAs; (ii) demarcation of PA boundaries; (iii) formalizing co-management agreements with PA-adjacent village communities; (iv) rehabilitation of degraded high altitude pastures[87]; and (v) new snow leopard and prey population monitoring technologies (e.g. aerial drones, faecal DNA analysis and radio collars). The lessons learnt will be incorporated into the development of the SLCAP and work with GSLEP.

There were a few examples of scaling-up and replication:

- Buffer zone law and a demonstration of its implementation in two PAs. Buffer zones are now being established for eight PAs. The buffer zones indicate permitted conservation-oriented development activities, and monitoring under SCEEP
- SMART patrol system as a conservation law enforcement tool – SCEEP has been requested by government for the system to be replicated / upscaled across PAs[88]
- The Akhangaran cooperative's PMP has been replicated in the district to cover an additional 5,400 ha
- Fodder seed multiplication for fodder production fields - the model is being replicated on between 200 - 1,000 hectares around the village of Muminobad (Tashkent region); and on between 218 - 300 hectares around the villages of Vardon and Amagan (Kashkadarya region)[89].

Demonstration

- Smart patrol system (grid patrols, camera trap deployment, DNA analysis of SL scats)
- Establishment of PA buffer zones
- PA management plans
- The uses of a UAV for conservation (yet to be deployed)

New technologies / approaches

- Creation of pasture production cooperatives with pasture management plans (PMPs) in the mid hills.
- The development of PMPs for portions of SFU land
- The technical and financial support to state entities (SFUs) to create tree nurseries in order to generate alternative income streams

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 Analysis & Conclusions

Project Design

In summary: Component 1 covered landscape planning and legislation; Component 2 covered PAs and biodiversity; Component 3 covered pasture management, communities and micro-grants; and Component 4 covered transboundary cooperation, and the SL action plan. The general project design was acceptable with a sufficient number of interventions, although technically and geographically the project was rather dispersed. It needed earlier and greater emphasis in addressing SFUs' management of pastures. This was a known root cause of land degradation (and SL habitat) and presented in the prodoc as such, but the solutions were poorly followed through in the logframe actions. For example, the indicator for degraded high-altitude pasture to be rehabilitated, had a low target with communities as the stakeholder, when these pastures were owned by the government SFUs and covered a significant area of ~270,000 ha. Furthermore, there wasn't a corresponding or detailed output to match this indicator.

This lack of appropriate institutional design at project preparation stages and in not matching root causes through to solution (e.g. a problem tree to logframe analysis), was a major shortcoming. The prodoc included a chart of

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[87] The rehabilitation of high altitude pastures was not achieved.

[88] Smart patrol systems are also in use by GIZ in Lower Amudarya; in Kyrgyzstan (NGOs); and in Tajikistan & Kazakhstan

[89] The original cooperative producers have shared / sold some of their seed to other villagers so that they can also expand on-farm intensive fodder production

major drivers of biodiversity loss (threats & root causes, p19)[90]. This chart indicated that for degradation, fragmentation, loss of habitat and ecosystem services, the root cause in these 'production landscapes' was an unsustainable system of livestock & pasture management, and ineffective forestry management. More than 50% of the project area was high altitude degraded pastures (which were mentioned many times in the prodoc) and these areas were under such 'forestry management', namely the State Forestry Units (SFUs), but the SFUs were not sufficiently integrated into the project design, in terms of being a primary stakeholder or expected prominence at the output level.

There were various descriptions of the high altitude pastures including: mountain or alpine meadows, though they differ from the grasslands (and steppe area) in the mid hills. Both are traditional grazing areas, however at higher altitudes, the pastures used to be seasonally grazed, but are now with sheep mostly year round, and the mid hills are either over-grazed or have become intensified for field production of fodder (alfalfa, cereal – barley or wheatgrass, grass / hay) for livestock.

At issue is a 'Tragedy of the Commons' situation[91]. Around the villages and low lying areas, all fodder production is from a machine harvesting or a 'cut and carry' field system. All land is farmed for livestock fodder or agriculture crop or horticulture purposes. The mid hills above the villages are also mostly tenured and farmed. Thus any common land for grazing is easily over-grazed / degraded, because it is 'common land', and because the livestock are pushed towards these areas, and also because they were more marginal to begin with. Hence, the land becomes degraded. Whilst, the farmers are intensifying land use with increased fodder production, the landless pastoralists are marginalised in terms of available grazing land, and can't afford the large-flock permits for the higher pastures.

Pasture Monitoring & Permitting Responsibility

Whilst SCF / SFUs issue the permits for grazing, it is SCEEP inspectors who monitor pasture health, so there is a disconnect, which is further compounded, by the fact that SCEEP inspectors report to SLPRI, who have to advise on reducing livestock grazing numbers. SCEEP need more skills to assess pasture land (steppe and mountain) degradation, as they only check the grazing sheep numbers against the licences issued.

A simple pasture self-monitoring system for SFU forest rangers could include a *pro forma* check-sheet – date; location; type of pasture[92]; percentage plant cover; height of pasture; health of pasture / level of degradation (scale 1-5); primary cause of degradation; weather in the region; numbers of livestock observed in the area (breakdown by sheep / goats and cattle); SFU grazing permit number, date, and number of livestock permitted. This would need to be a compulsory record keeping system with recorded data submitted to SCF / SCEEP monthly.

On behalf of the project, SLPRI also undertook their first botanical survey (in many years), of the high pastures. Administratively if SCEEP inspectors can officially recommend on needed livestock reductions to SLPRI, who can now report based on their surveys, then actions can be taken. This should be seen as a critical intervention, due to the extensive climate change impacts having already occurred. This includes reduced snowfall, therefore less water, and with excessive grazing, the pastures are degrading (drying out and losing topsoil) at an accelerating rate. This means far less water is available downstream, with major environmental and economic consequences.

SFU Management of High Altitude Pastures

Mountain pasture management was not adequately addressed by the project, in part due to the PA / TAP project focus, but probably also because the project executive was SCEEP and not SCF. This meant that the project was not sufficiently inclusive of needed pasture actions by SCF / SFU. The equipment provided to SFUs almost seemed to be provided for tree planting, which was only a minor objective of the project, when natural pasture regeneration was needed, but not fully understood. But of higher importance, by far was the problem of SFU pasture management, and the issuance of too many grazing permits – which was controlled at a regional government level. This was not addressed by the project at this level.

However, the project did support SCF / SFUs with the preparation of PMPs which covered ~18% of their SFU pastures. Unfortunately, the adoption of these plans could not be verified as they were only produced in the last

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[90] 5th National Report of the Republic of Uzbekistan on Conservation of Biodiversity to the CBD

[91] The ecologist - Garrett Hardin (1968)

[92] The prodoc included ~ five types of mountain slope pasture on three altitudinal levels which was useful, High altitude mountain meadows (short-grass alpine meadow; bunchgrass alpine pasture); High hills (sub-alpine meadow-steppe pasture; herb-grass pasture with juniper trees); and Mid hills (tall grass herbaceous pasture). It also included the salt tolerant areas with saltwort & sagebrush which is more common in desert areas

year or so of the project (2021/22), and were not integrated with the SFU state plans, which contained the grazing quotas. Anecdotally one SFU indicated ~75% adoption, however its suitability, and how it could be applied was unclear.

Livestock grazing quotas for high pasture management is a sensitive subject for a number of reasons. The pastures are used to maximize profit by both SCF (issuing grazing permits) and by commercial / state livestock grazers who wish to fatten their livestock at minimal cost. The process to assess sustainable carrying capacity for livestock permitting is overly complicated. Local SCEEP inspectors need to report land degradation to district to regional SCEEP offices who need to officially request SLPRI to survey areas to inform SCF / SFU if maximum carrying capacities need to be reduced. The SCF / SFU pressure to not reduce grazing number is high, thus the political willpower of local government officials to go through this process is consequently very low. A radical change in thinking is needed.

PA system management planning and Key Biodiversity Areas

Not all the PAs / nature reserves or wildlife corridors proposed were adopted, despite quite some years in planning, such as for the Pskem NR. Tupalang NP in the Gissar range, did become a PA, but largely remained under SFU jurisdiction. Despite UCBNR and CBNR both being within UCNP, with the creation of UCBNR, the areas had become fragmented. The project solution was to create a 5 km buffer zone to re-connect the two areas. This meant that the area in between then came under conservation management objectives by SCEEP / PAs, and not for other purposes. This showed that the project could be adaptive, however despite delineated maps, and buffer zone legislation, this particular connection remained in a 'to be adopted' status. Further linkage of these two PAs to the proposed Pskem NR, and Akbulak sub-watershed in the Western Tian mountains, which was a project design objective to maintain the SLL, was not achieved[93]. Moreover, in the Pamir Alay mountains, the extension of Gissar NR to join-up with Tupalang NP was not achieved, nor the designation of this ecological corridor for biodiversity conservation. The linkage was needed because predators, such as SL and wolf, follow the ibex / deer grazing into the pastures in the winter / spring, however now livestock remain there[94], this was an issue for wildlife habitat and the connectivity of SL breeding populations, which was not addressed by the project.

The buffer zone legislation, which the project supported, introduced conservation objectives (with SCEEP inspector oversight) also onto limited SCF / SFU owned land, and was in the process of being replicated in eight other PAs. The project work with the SLPRI in mapping the buffer zones and providing maps for four updated management plans was an important factor in this.

The project supplied an extensive / impressive amount of conservation equipment to both SCEEP and the PAs, with training undertaken. However, the Smart patrol system (wildlife camera traps and ranger patrol monitoring information), generated too much data for SCEEP to handle. Furthermore, the transfer of this data was on an *ad hoc* basis, and the use of this data for research (by IoZ) was not being undertaken, despite a SLRMP protocol produced. The security of SL data is important, and was within the protocol, however improving access to official partners needed to be looked at. Furthermore, the program / protocol on SL research & monitoring (SLRMP) was only signed in March 2022, and missed the budget for financing, which was unfortunate.

Pasture & fodder field management in the Mid hills

The pasture management system is changing with mid hill areas becoming intensively farmed for fodder crops, which are harvested for dry cereal foodstuffs for winter feed, and alfalfa / grass cut in the summer for supplementing the livestock's summer diet with green fodder. The consequence is that pastoral farmers with no land, struggle to find grazing areas in the early season, and also can't afford to enter higher pastures (under SFU control). So the pressure on poor livelihoods and on the land is still there, but for farmers with land the situation is manageable.

Pasture cooperatives – Restoring fields for fodder production

The Muminobad cooperative (Akhangaran District) had closed three degraded fields for 1, 2 and 3 years respectively in order to to assess their regeneration potential. The degraded fields had also been over-seeded with plant species palatable to livestock. As would be expected, the vegetation cover in comparison to the open fields (of a neighbouring farmer) was impressive. The Hissor Yaylovlari cooperative (Vardon village, Shakrisabz District) had intensified its pasture field management system by ploughing and planting grasses or wheat cereal or the legume alfalfa for harvesting (mowing) for livestock fodder. The mechanism to achieve this for both

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[93] The area is controlled by Burchmulla and Akhangaran SFUs, with inspection oversight by UCNP Authority

[94] Climate less severe, no other places to graze, state / commercial herders have built corrals

cooperatives, was through the establishment of fodder seed multiplication plots. The system was being replicated and was successful.

The project supplied agriculture equipment to the cooperatives / VCCs (tractors, trailers & tractor-mounted farming implements (ploughs, harrows, ripper tines), which were for farm field rehabilitation - mainly for livestock feed production.

<u>Pasture cooperatives – Pasture Management Plans for Rotating Livestock</u>

In tandem with the field fodder production, the project supported the development of PMPs covering 504 ha for the two cooperatives. The closure of the farmer pasture fields to livestock has had an impact. The Hisor Yaylovlari pasture cooperative in Vardon, indicated that their pasture plan was in operation, but also mentioned that after design, it took ~1.5 years of fine-tuning before being suitable for sustainable purposes. A rotational system is now in place. The results of pasture field closure for Muminobad cooperative were also good.

<u>SFU Tree Nursery Production & Fodder Demonstration Plots</u>

The tree nurseries were operational, with a multi-purpose income-generating objective to supply (nut) tree seedlings to themselves, and to sell landscaping trees / shrubs to district government, and the private sector. The supply for themselves was mainly for pistachio nut tree plantations on their lower hills, and city governments for landscape / re-greening contracts. The SFUs were also leasing out some small areas of land for fruit & nut tree plantations.

Forestry extension in terms of protecting VCC land from over-grazing is a difficult task, as the SFU doesn't have direct jurisdiction of this land. However, with project support and having the ability to provide tree seedlings locally, as well as set-up themselves 'no-graze fenced field plots' ploughed and seeded with palatable plant species as a demonstration, the SFUs maintained their sense of well-being and value to rural society, which was important. The project supplied agriculture / forestry equipment to the SFUs (tractors, trailers, farming implements, and water bowsers), which was used for both the tree and seed nurseries.

<u>TAP discussion</u>

The project supported 69 TAPs, spending ~US$0.6 m (~ 10% of project funds). Villages adjacent to the PAs were selected. As a method to support and stabilise livelihoods, it was successful. The TAPs with the most impact were the water supply and veterinary schemes, as they collectively reached the most households.

6.2   Lessons Learned

<u>Snow Leopard Conservation</u>

The project identification form (PIF - GEF approved design prior to full prodoc preparation) indicated that a viable snow leopard population range (with core area, buffer and corridors) would be be ~200,000 ha (2,000 km^2 or 44.7 km x 44.7 km) in area. In the Pamir Alay mountains, the Gissar snow leopard range under nature reserve protection is 80,986 ha (Gissar Nature Reserve), with the Zaamin NR protecting an added 26,840 ha. Under the project, Tupalang National Park core area of 18,000 ha was added. Combined, this area covers 125,826 ha. In the Western Tian Shan, the Ugam Chatkal snow leopard range under nature reserve protection comprises of Ugam Chatkal Biosphere Nature Reserve (44,136 ha) and Chatkal Biosphere Nature Reserve (24,668 ha), with Pskem Nature Reserve (under proposal) to cover 51,300 ha. This equates to 120,104 ha.

Thus, at present, the viable range for the two populations of snow leopard equates to 63% (Gissar SSL) and an expected 60% (Ugam Chatkal SLL) coverage. This is accepting that neither the 5 km wide buffer zone strips designated under the project (as the area has not been calculated), nor national park areas, due to land use for economic production, are included here, as they don't match well with snow leopard and its prey habitat requirements. Furthermore, In the Pamir Alay and Western Tian Shan mountains as a whole, these nature reserves cover only ~20% of the snow leopard range.

In the prodoc, the GEF incremental benefit was to increase these two areas to 200,000 ha each to become viable for two snow leopard populations. The benefit was stated as 'the conservation values of at least 200,000 ha of snow leopard and prey habitats are secured, and effectively monitored in the core conservation areas of Ugam Chatkal NP - Chatkal Biosphere NR and its wildlife corridor, Pskem and Akbulak, and Gissar NR'.

The PIF mentioned that a key focus for the project was that wildlife corridors were needed for effective protection of snow leopard, and that the Ugam Chatkal and Gissar PAs and SLLs, were continually losing land to the infringement of livestock, resulting in high rates of vegetation loss. As a mitigation measure, the prodoc indicated

that the project would support a matrix of land uses, including the ecological corridors to connect PAs.

The main conservation approaches (with indicators and targets) to achieve such snow leopard population viability in the two landscapes were as follows:

- Create 237,700 ha of new protected area estate [IUCN Category Ia – Nature Reserve, and II – National Park][95]

- Secure 105,900 ha of high altitude forest outside nature reserves to be designated as under 'High Conservation Value' status. Basically such areas would be designated for the purpose of snow leopard conservation corridors, and would be outside nature reserve (core) areas, but within the national park or other areas.

- To develop buffer zone areas and designate, for the purposes of wildlife conservation corridors

- Develop 50,000 ha of high altitude pasture under sustainable management, to allow for better ecological functioning / snow leopard and ungulate habitat corridor use

The main methods (outputs) to achieve this included

- To prepare an integrated management plan for Ugam Chatkal NP with:

  o Wildlife corridors established through designating / zoning areas as 'high conservation value'. Such corridors would include areas between UCBNR and CBNR, and between this complex and the areas of Pskem and Akbulak watershed systems

  o Align the management of CBNR with the 10-year forest plans for the two SFUs (Akhangaran & Burchmulla) so that the forests are managed in line with HCV principles

- To prepare the feasibility to expand Gissar NR (and then delineate the buffer zone) into the upper Tupulang river watershed, to create a wildlife corridor for snow leopard

- To align SFU pasture management plans with SFU 10-year management plans, to reduce the pressure from high numbers of livestock grazing quotas being issued

Thus, the approach was to create two viable areas (with connected migration corridors within) for two snow leopard populations, using a mixture of conservation spatial land-use tools which included to designate natural land resources as new PA estate (national park and / or nature reserve), new 'high conservation value' and / or new designated buffer zone.

<u>High altitude pastures</u>

Management of the mountain pastures now need a new approach. For example, there should be a Green Climate Fund (GCF) project to be primarily focused on the SCF / SFU management of mountain pastures and ecosystems in terms of climate change mitigation (carbon capture), and in the result area of ecosystems and ecosystem services. These pastures of the eight SFUs probably need to be IUCN Ecosystem Red Book listed[96], which again is an added approach to raise their environmental and climate importance above economic self-interest of the regional governments and their tax offices. A remote-sensing and ground-truthing monitoring & enforcement methodology is also required.

The value of using (applied) research needed to be appreciated more, and be summarised and presented at a high level. The ecological research of mountain pastures was not being built upon, which if change to grazing patterns are not undertaken, then the future will move more towards 'disaster relief projects', and not wildlife or development projects. The project covered a wide sphere of ecological work, but didn't get to grips with regional government administrators and politicians concerning mountain pasture management. There were many training events, but not high level workshops to present the SLRPI-identified mountain pasture issues. The PMPs for the SFUs were too little too late to address the scale of the problem.

There is a need for a pasture monitoring system, that can be undertaken by forest rangers (with a *pro forma* check sheet), but reported up (uploaded) onto a system for analysis and presentation to appropriate government ministries. Furthermore, the monitoring system needs government approval and trust in it. The analysis part of the monitoring needs to link the data to an ecological risk assessment methodology with direct short method outcomes on the actions to be taken. For example concerning: period of grazing closure (if needed); annual grazing

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[95] PIF (195,000 ha for Tupalang National Park; 30,000 ha for Akbulak watershed; and 13,000 ha of wildlife corridor). However, as this was not clear in the prodoc, the TE using standard practice, subtracted the baseline of 116,710 = 120,990 ha of new PA
[96] Western Tien Shan and Pamir Alay alpine mountain meadows to be proposed for inclusion on the IUCN Red List of Ecosystems

opening / closing dates; number of livestock (sheep /goats and /or cattle / horses)[97]. The is a need for supervising this system and for an annual report based on the visits / data / analysis over the year.

There is a need to assess the timing of opening / closing of the pasture grazing permits, as well as the permitted number of livestock as it affects many aspects of the ecological integrity (functioning) of the alpine meadow pastures. It is also due to the seasonal plant growth and flowering / seeding cycle at differing altitudes.

The process to assess pasture carrying capacity for livestock permitting needs an overhaul. SCEEP directors / administrators / engineers at regional level need to be enabled and obligated to: receive SFU / SCEEP ranger field reports; commission and expect SLPRI investigation reports; and instruct SCF / SFU on new maximum carrying capacities, and permissible livestock numbers for each SFU pasture region.

The liaison methods between SCEEP and SCF / SFUs need a formal channel at regional, district and level to coordinate pasture use, monitoring, and livestock permitting.

The high level importance of reversing pasture degradation due to over-grazing warrants a part re-purposing the use of the UAV drone to monitor pasture condition and livestock numbers.

A new approach to enforcement of reduced livestock permits in the high altitude pastures is needed. The suggestion here is that the border army (who were trained in conservation by the project) are engaged to work with SFU / SCEEP rangers on joint patrols in the spring season on the mountain ridges for example and on regional borders such as Tashkent / Namangan – and to coordinate with monitoring / evidence gathering by using the UAV.

There is a need to fund the protection of these mountain pastures, their enforcement monitoring, and their technical health monitoring. This can be achieved through a government levy of a ecosystem services and conservation tax on all meat sales. A government TV campaign to reduce meat consumption to stop ecosystem collapse in the mountains could accompany this tax.

Protected Areas and wildlife monitoring

The Smart patrol / BCIMS data management system needs an assessment with recommendations on capacity to manage; data storage; basic annual data analysis requirement for SL; and data access for research. The assessment should compare these factors against the SLCAP and the SLRMP actions. Indeed part of the purpose of the BCIMS was to ensure that the SLCAP / SLRMP plans were being implemented. However it appears that the BCIMS system itself needs investigation to assess if it is working according to purpose.

6.3   Recommendations

The recommendations are listed [with the responsible party identified in brackets].

1. Under the SLRMP protocol, to identify the research for 2023, prepare the concept proposals and put in the budget for Ministry of Finance [PIU with SCEEP & IoZ representatives]

2. To identify actions within the draft GSLEP plan, for inclusion in the SCEEP / IoZ workplan for 2023 [UNDP / PIU SCEEP and IoZ]

3. To prepare and deliver a SLPRI 20-page report to regional and national government decision-makers on the state of high altitude pasture degradation (summarized geo-botanical reports), with projections on ecosystem habitat collapse, that will occur without significant intervention on reducing livestock numbers [UNDP with SLPRI – report and workshop]

4. The SLPRI to provide new permissible livestock grazing numbers charts for each of the eight SFUs for sustainable high-altitude pasture degradation control, that the eight SFUs need to be in compliance with [UNDP with SLPRI]

5. To prepare a short guideline with pro-forma checklist for joint (or either) SFU ranger / SCEEP ecology inspector patrol on how to assess levels of pasture health / degradation and with the reporting system steps to regional government [SLPRI with UNDP support, to present by November 2022 to regional government / SCF / SFUs for endorsement and approval by end December 2022]

6. Establish a joint research & monitoring group to check implementation and adaptation of project SFU PMPs against state SFU livestock permitted number plans, and against pasture health over the next five years [UNDP to prepare an MoU for Ministry of Finance to lead on funding, with technical lead by SLPRI,

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[97] Their hooves affect the topsoil differently

and field support from SCF / SFUs, with SCEEP checking]

7. To prepare handover agreements with the SFU concerning implementation of the PMPs and integration on reducing livestock permit numbers [UNDP with SCF to meet Tashkent and Kashkadarya regional government for agreement & signature]

8. Handover agreements with the VCCs / pasture cooperatives on equitable sharing use of the tractor and its maintenance costs [UNDP]

6. ANNEXES

Annex 1: Delivery of Project Objective and Outcomes against Performance Indicators

Assessment Key:

Green: Completed / Achieved	**Yellow:** On target to be completed / achieved	**Red:** Not on target to be completed / achieved

Extracted from Prodoc SRF			IP to fill out this column with detail text on achievement	TE team	TE team fills out
Indicator	**Baseline**	**End of Project target**	**2022 End term Level & Assessment**	**Achievement Rating**	**Justification for Rating**
Objective: Enhance the conservation, and sustainable use, of natural resources in the biodiverse high altitude mountain ecosystems of Uzbekistan					
Area (ha) of protected areas within the Ugam Chatkal and Gissar snow leopard landscapes under a more secure, and effectively managed, monitoring and enforcement regime	116,710ha	>549,000 ha	The area of protected areas within the Ugam Chatkal and Gissar snow leopard landscapes with a more secure, and effectively managed monitoring and enforcement regime is 653481 ha. The total area increased by 27,851 ha, as a new PA was created – the Upper Tupalang National Nature Park. (Decree of the Cabinet of Ministers of the Republic of Uzbekistan dated 4.03.2022 No. 93 "On additional measures related to the creation of Protected Areas on the lands of the forest fund. ») As part of the implementation of the "Action Plan for the conservation of the Snow Leopard in the Republic of Uzbekistan for 2021-2030" approved by the Cabinet of Ministers dated August 14, 2021, No. 05/1-220, it was instructed to create core zone of the Ugam Chatkal State National Park with an area of 51,300 ha.	MS	Two new PAs were either planned and approved or planned. Four new / updated Management plans were produced, one with a buffer zone delineated and another with a buffer zone designated. A Smart patrol system for rangers and wildlife /hunting monitoring was instigated. SFUs in the SLLs were drawn more towards conservation of their pasture areas
Area (ha) of high altitude mountain pasture areas within the Ugam Chatkal and Gissar snow leopard landscapes under sustainable management for reduced degradation	<5,000 ha	55,000 ha (a reduction of approximately 18% out of an estimated 307,412 ha of degraded alpine pastureland in the Ugam Chatkal and Gissar snow leopard landscapes)	86,700 hectares of high-altitude pastures are used more sustainably and vegetation degradation is reduced, as explained in more detail below. The developed pasture use plans for the conditions of the targeted forests were replicated in pilot forestry units (39,800 ha). Pasture management plan's introduction in pasture cooperatives made it possible to replicate this experience on an area of more than 5400 hectares in Akhangaran district.	MU	The SFU and Cooperative PMPs were only agreed in mid-2022 after 5 years of the project with no time left for assessment of implementation of these plans. The plans don't clearly link the levels of degradation to appropriate livestock numbers, but rather use old formulas of maximum carrying capacity

		Based on GEF-6 PMAT Tracking Tool			Red because little evidence of reduced grazing permits by the SFUs
Improved conservation status of biodiversity important forests within targeted Protected Areas	0 ha	105,900 ha Based on GEF-6 SFM Tracking Tool	The total area of forests under territorial protection is 235781 ha, including IUCN Category I-36,069 ha, IUCN Category II-71919 ha, state forestry enterprises-126793 ha. The total area of forests under territorial protection remained the same. The categories of protection have changed since a new PAs Upper Tupalang National Nature Park was formed – with a total area of 27,851 ha. This PAs includes a core zone (IUCN Category I) – with an area of 18,000 ha. The Western Tien Shan snow leopard landscape – a total of 84,934 ha covered with forests of natural origin have appropriate protection, including IUCN category I – 6,586 ha, IUCN Category II - 62,068 ha, state forestry 16,280 ha. In the case of the creation of the core zone of the Ugam Chatkal State National Natural Park with an area of 51300 ha (which is provided for by the Government's decision), the area of forests of the IUCN Category I will also be increased. The Gissar snow leopard landscape – a total of 150,787 ha covered with forests of natural origin have appropriate protection, including IUCN Category I -29483 ha, IUCN Category II -9851 ha, state forestry enterprises 111453 ha The total area of forests under territorial protection remained the same, since the new PA was created on the lands of the forest fund The categories of protection have changed, since a new PAs Upper Tupalang National Nature Park was formed – with a total area of 27,851 ha, of which 18,000 hectares belong to IUCN category I and IUCN Category II -9851 ha.	MS	Two new PAs were designated, with land jurisdiction partly changing from SFU or National Park to Nature Reserve status One buffer zone was created and one more buffer zone was in process to be adopted The status of forests within the PAs remained the same
Number of primary snow leopard prey populations[1] within the Ugam Chatkal and Gissar snow leopard landscapes: a. Siberian Ibex (LC) b. Siberian roe deer (LC) c. Boar (LC) d. Menzbier's marmot (VU) e. Long-tailed marmot (LC)	Siberian Ibex: 3,800-4,000 Siberian roe deer: 250-300 Boar: >1,838 Menzbier's marmot: 4,300 Long-tailed marmot: 7,994	Equal to or greater than baseline: Siberian Ibex: >3,800-4,000 Siberian roe deer: >250-300 Boar: >1,838 Menzbier's marmot: >4,300 Long-tailed marmot: >7,994	Siberian Ibex: 4002 as of 2022 data from Gissar, Chatkal Biosphere and Ugam Chatkal Biosphere reserves Siberian roe deer: 871 as of 2019 data from PAs, hunting concessions, and forestry units Boar: 1035 as of 2022 data from Gissar and Chatkal reserves Menzbier's marmot: 4,500 as of 2020 data from Chatkal Biosphere Reserve Long-tailed marmot: 4320 as of 2022 data from Gissar Reserve. The data source is BCIMS (Biodiversity Conservation Information Management System) administered by State Ecology Committee.	MU	Ibex numbers had not significantly increased in 5 years; Roe deer numbers had increased, but old data (2019); Boar numbers were down by 50% which means either they are losing habitat or are being shot; Menzbier's Marmot numbers had not increased in 5 years; and Long-tailed Marmot numbers had fallen by half.

[1] Population estimates collectively represent the species counts from Chatkal SNR, Ugam-Chatkal NNP and Gissar SNR in the Ugam-Chatkal and Gissar SLL

			Snow leopard and its prey monitoring methodology/programme developed, tested, beneficiaries trained and adopted by responsible agencies. The State Ecology Committee will pioneer the implementation of the methodology which will ensure data collection and provision under one unified methodology. Data input to BCIMS platform by other agencies has not yet been fully completed. Integration of the system with other agencies is in progress.		Together, the significant fall in SL prey species numbers was disappointing Yellow – because up to date data is required
Total snow leopard population within the snow leopard landscapes of Uzbekistan	~50	>50	According to the current BCIMS database, the snow leopard number is 112. The following is the breakdown of state agencies that provided respective data on the snow leopard (Panthera uncia/irbis): *Chatkal State Biosphere Reserve* – 3 as of 2022 data *Ugam Chatkal National Park* - 67 as of 2021 data *Gissar State Reserve* – 37 as of 2022 data *Ugam Chatkal Biosphere Reserve* – 5 as of 2022 data The data source is BCIMS (Biodiversity Conservation Information Management System) administered by State Ecology Committee. Snow leopard and its prey monitoring methodology/programme developed, tested, beneficiaries trained and adopted by responsible agencies. The State Ecology Committee will pioneer the implementation of the methodology which will ensure data collection and provision under one unified methodology. Data input to BCIMS platform by other agencies has not yet been fully completed. Integration of the system with other agencies is in progress.	S	Whilst, the estimated number of SL during project design was only 50, better monitoring (and conservation) has provided a 2022 figure of 112, which in itself is encouraging, but tempered by the fall in prey species, and the continued degradation of habitat (especially the high altitude pastures), and the change in climate (less snow, hotter, less water)
Number of women (as a proportion of the total) involved in, and directly benefiting from project investments in the conservation and sustainable use of high altitude montane habitats and species within the Ugam Chatkal and Gissar snow leopard landscapes	NA	Involvement: >1500 (>60%) Direct benefits: >450 (>60%)	**Involvement:** 66,407 (39,616) **Direct benefits:** 12,547 (6,858) Overall, 69 Technical Assistance Programme (TAP) projects have been implemented that cover both snow leopard landscapes. 2 micro grant projects on improving the health and well-being of free-ranging livestock; 33 projects on development of alternative local income-generating enterprises; 3 projects on establishment of intensive livestock farms; 11 projects on establishment and maintenance of small plantations/woodlots and correlates with fruit production and gardening projects; 14 projects on establishment of food-producing fruit and nut orchards and herb gardens; 6 project on electricity supply and alternative energy sources.	MU	There were 12,547 direct beneficiaries of the project, of which 6,858 were women. Most of the beneficiaries were supported through the TAPs. The numbers of new women hired for conservation purposes was very low and not targeted by the project as it should have been. Women's empowerment was a significant objective of the project design, but not adopted in practice.

			Thirty-eight (38) TAP projects implemented to support households (average of 38800/25300 individuals/ 11843 households in the Ugam Chatkal and Gissar snow leopard landscapes inter alia a) two (2) projects on improving the health and well-being of free-ranging livestock. (Involvement of 22 villages with the population of approximately 10000/5000 people/2600 households serving 50000 heads of cattle) b) thirty-three (33) projects on development of alternative local income-generating enterprises (involvement of 9187 households including 28580/20725 people). c) three (3) projects on establishment of intensive livestock farms. (Involvement of 220/75 people, and 2235 heads of cattle). Thirty (31) TAP projects implemented to support households (average of 27607/14316 individuals, 2785 households) in the Ugam Chatkal and Gissar snow leopard landscapes inter alia: a) eleven (11) projects on establishment and maintenance of small plantations/woodlots with the covering of 12 villages and 2241 households including 25124/13046 individuals. b) fourteen (14) projects establishment of food-producing fruit and nut orchards and herb gardens implemented for 280 households with the 261/130 individuals c) six (6) projects on installation and maintenance of alternative energy and fuel technologies and systems (including 264 households and 2222/1413 individuals) were supported.		
Outcome 1: Landscape level planning and management decision-making					
1.1 Coverage of comprehensive, up-to-date baseline environmental and land use information for the snow leopard distribution range	Limited availability of up-to-date environmental information	Mini-atlas produced with maps showing up to date environmental information related to biodiversity, pastures, and HCVFs in Ugam Chatkal and Gissar snow leopard landscapes	BCIMS (Biodiversity Conservation Information Management System) is installed and is operational within Goscomecology (State Ecology Committee), and it is integrated with the state geoportal system (map.geoportal.uz) that stores all types of GIS data (e.g. land type and use, administrative borders, etc.). **Mini-atlas** with maps showing up to date environmental information related to biodiversity, pastures, and forests in Ugam Chatkal and Gissar snow leopard landscapes was produced.	MS	A mini-atlas was produced
1.2 Quality and coverage of snow leopard monitoring data in Uzbekistan as indicated by	Latest population estimate 14 years prior (2003) with	Population estimated annually with a >75%	Population estimated annually with a >75% confidence level (lowest possible estimated population / highest possible estimated population, i.e. 20/50 = 40%).	MS	The provision of data to the BCIMS appeared ad hoc and not up to date. The BCIMS was not

estimated accuracy and timeliness of national snow leopard population estimate	a 40% confidence level (lowest possible estimated population / highest possible estimated population, i.e. 20/50 = 40%) (as published in GSLEP)	confidence level (lowest possible estimated population / highest possible estimated population, i.e. 20/50 = 40%)	This is explained by: 1. Snow leopard and its prey monitoring methodology/programme developed, tested, beneficiaries trained and adopted by responsible agencies. The State Ecology Committee will pioneer the implementation of the methodology which will ensure data collection and provision under one unified methodology. 2. Protected areas improved their animal individual identification and have been actively practicing the animal survey through the camera traps. 3. DNA workshops have been conducted on an annual basis for Zoology Institute experts to support the protected areas in animal identification.		really being used to monitor SL, apart from recording numbers and location. The BCIMS was morphing into a data bank for environmental information, which was not the original design purpose. Collection of scats and DNA analysis was a useful demonstration, but adoption and long-term research work using DNA analysis was less clear
Outcome 2: Strengthening key biodiversity areas					
2.1 Total extent (ha) of core conservation areas managed as IUCN Category I or Category II protected areas within the Ugam Chatkal and Gissar snow leopard landscapes	116,710 ha	237,700 ha	The total area increased by 27,851 ha due to the creation of a new protected area - the Upper Tupalang National Natural Park.	U	The result was some way short of the target

2.2 METT scores for:
  a. Chatkal SNR
  b. Ugam Chatkal State National Nature Park (excluding Chatkal SBR)
  c. Gissar SNR
  d. Ugam Chatkal State Biosphere Reserve (Ugam Chatkal SBR)
	Chatkal SBR: 42
	Ugam Chatkal State National Nature Park: 24
	Gissar SNR: 43
	Ugam Chatkal SBR: 0 (newly created reserve)
	Based on GEF-6 Tracking Tool METT scorecard.
		Chatkal SBR: 57
		Ugam Chatkal State National Nature Park: 45
		Gissar SNR: >56
		Ugam Chatkal SBR: 57
		Based on GEF-6 Tracking Tool METT scorecard.
			Chatkal SBR 55
			Ugam Chatkal State National Nature Park: 46
			Gissar SNR: 64
			Ugam Chatkal State Biosphere Reserve: 61
				S	Management Effectiveness increased according to the self-marked METT tracking tool

2.3 Total number (of which are women) of individuals from targeted villages who have	N/A	>100 (>60)	12 training workshops were held in three areas (business planning, tourism, and gardening) in which 219 people took part, of which 67 were women	MU	For the training courses, participation was 28%, however, if the TAP training courses (with 40% women's

completed project funded skills training[1] courses.					participation) were taken out of the figures then overall, women's attendance at project training courses was less than 20%, which was not good
Outcome 3: Sustainable economic development incentives for communities					
3.1 Legal or regulatory mechanism in place to pilot Pasture User Associations	No	Yes	The Pasture Law was adopted in 2019. The project supported strengthening the capacity of local communities to create community-based pasture organizations by adapting existing Laws and other regulations to ensure the sustainable functioning and development of community-based pasture organizations (pasture user associations, cooperatives, etc.) in snow leopard mountain landscapes.	S	This building block was put in place
3.2 Number of PUAs with approved pasture management plans under implementation in the high altitude pastures of the Ugam Chatkal and Gissar snow leopard landscapes	0	2	2 PUAs established. Within the framework of the project, monitoring of the established two (2) PUAs - "Muminobad Chorva" in Akhangaran and "Khisor Yaylovlari" in Shakhrisabz region, was continued, assistance is provided in disseminating project experience in creating pasture seed plots, as well as restoring degraded pasture areas by planting highly productive pasture plants on an area of more than 100 hectares. Training workshops were conducted on replication of this experience, including both sowing seeds of highly productive plants and pasture rotation which are replicated on an area of more than 1000 hectares around the village of Muminabad in the Tashkent region and 300 hectares around the villages of Vardon and Amagan in the Kashkadarya region	MU	The target was only two pasture cooperatives, with plans only covering ~500 ha, thus the scale of the intervention was very limited. The quality of the cooperative PMPs was also low
3.3 Number of micro-grant projects implemented to support households (average of ~6 individuals/household) in the Ugam Chatkal and Gissar snow leopard landscapes inter alia: (a) improving the health and well-being of free-ranging livestock;	N/A	30	In total thirty-eight (38) projects implemented to support households (average of 38800/25300 individuals/ 11843 households in the Ugam Chatkal and Gissar snow leopard landscapes inter alia a) two (2) projects on improving the health and well-being of free-ranging livestock. (Involvement of 22 villages with the population of approximately 10000/5000 people/2600 households serving 50000 heads of cattle) b) thirty-three (33) projects on development of alternative local income-generating enterprises (involvement of 9187 households including 28580/20725 people).	HS	The were 69 TAPs established

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[1] Including skills development training programmes in *inter alia*: monitoring and enforcement; business development; construction; plumbing; electrical work; equipment maintenance; catering services; etc.

(b) development of alternative local income-generating enterprises; and (c) establishment of intensive livestock farms			c) three (3) projects on establishment of intensive livestock farms. (Involvement of 220/75 people, and 2235 heads of cattle.		
3.4 Extent (ha) of degraded high altitude forests of the Ugam Chatkal and Gissar snow leopard landscapes under active rehabilitation or restoration	Forests: <100 ha Based on GEF-6 SFM Tracking Tool	Forests under restoration: 1,000 ha Forests under sustainable management with communities: 15,000 ha Based on GEF-6 SFM Tracking Tool	Restored forests: 3,082 ha. Forests managed sustainably with communities: 5,231 ha. Details are explained below. 1. Increasing the capacity of project forest areas through the creation of tree nurseries facilitated the planting of seedlings in autumn 2021 and spring 2022, including: (i) Almond seedlings were planted on an area of 225 ha in the Akhangaran forestry, pistachios on an area of more than 201 ha. (ii) Burchmulla forestry planted forest plantations of 112 ha of almonds and 128 ha of walnuts. (iii) Kitab forestry planted 98 ha of walnuts and 62 ha of almonds in the highlands, as well as 5 ha of pistachios. (iv) In the spring of 2020, in the Shakhrisabz forestry, pistachio seedlings planted on an area of 35 hectares. (v) 56 ha of pistachios, 55 ha of Zeravshan juniper and 7.5 ha of walnuts were planted in the mountainous areas of the Yakkabag forestry. (vi) Walnut plantations on a total area of hectares, as well as 8 hectares of Zarafshan juniper, were planted in the Kamashi forestry in the highlands. (vii) Dekhkanabad forestry sowed seeds and seedlings of pistachio on an area of 205 ha, juniper Zarafshan - 3 ha. Total 208 hectares. (viii) 8 ha of almonds were planted in the highlands of the Uzun forestry. 2. Assistance in the project forestries mechanization (tank trailers, motoblocks, tractors, hand auger, etc.) made it possible to optimize the planting time, carry out timely watering and care for high-mountain forests in the project area, which increased the seedlings survival rate by 10-15%. 3. The limiting factors of forestry management are associated with mountainous terrain, limited movement of agricultural machinery, as well as the lack of permanent watercourses allowing for guaranteed irrigation. The project conducted training workshops for tenants and employees of the pilot forestry units (146 people, 45 of them women) on the provision of state forest fund lands for long-term lease. During the reporting period, 1370 hectares of forest land in the project area were transferred to 15 tenants for a long-term period (up to 49 years). Local communities will manage these forest lands with the long term goal of generating local economic benefits. The largest areas are provided in the Dekhkanabad forestry enterprise for the cultivation of ferula between the rows of pistachio (634 ha), the same in the	MS	The SFUs were supported to establish tree nurseries, within which they produced mostly commercial species – either fruit & nut tree for mostly low altitude orchards, or species for sale for city landscaping contracts. The management of high altitude forests did not significantly change The MS rating is given, because the SFUs were enthusiastic project promoters and beneficiaries, and were eventually supported by the project with PMPs

			Kamashinsky forestry enterprise (479 hectares) and the Shakhrisabz forestry enterprise (193 hectares) for the cultivation of crops.		
3.5 Number of microgrant projects implemented to support households (average of ~6 individuals/household) in the Ugam Chatkal and Gissar snow leopard landscapes inter alia: (a) establishment and maintenance of small plantations/woodlots; (b) establishment of food-producing fruit and nut orchards and herb gardens; and (c) installation and maintenance of alternative energy and fuel technologies and systems	n/a	30	Thirty (31) projects implemented to support households (average of 27607/14316 individuals, 2785 households) in the Ugam Chatkal and Gissar snow leopard landscapes inter alia: a) eleven (11) projects on establishment and maintenance of small plantations/woodlots with the covering of 12 villages and 2241 households including 25124/13046 individuals. b) fourteen (14) projects on establishment of food-producing fruit and nut orchards and herb gardens implemented for 280 households with the 261/130 individuals c) six (6) projects on installation and maintenance of alternative energy and fuel technologies and systems (including 264 households and 2222/1413 individuals) were supported.	<mark>HS</mark>	This appears the same as Indicator 3.3. In total for the two indicators, there were 69 TAPs
Outcome 4: Promoting cooperation and collaboration					
Approved and implemented Programme and Action Plan for snow leopard conservation	No (outdated, not approved, not Implemented and not monitored)	Action plan approved and under implementation as defined by a). At least one stakeholder meeting (under cooperative governance structure) following approval to develop snow leopard priority landscape integrated landscape management plan b). Snow leopard and prey monitoring program established with	Snow Leopard Conservation Action Plan developed by the project was approved by the Cabinet of Ministers for 10 years (2021-2030). This document lays out all snow leopard conservation measures as well as natural resources management and protection in mountain areas in the country for the next 10 years. Primarily the action plan envisages strengthening the research on study and monitoring of the state of high mountain snow leopard ecosystems through the development and approval of a joint methodology. Also, the document calls for the amendments and additions in regulation and state documents on improvement of the snow leopard and mountain ecosystems. In addition, within the action plan, it is planned to improve territorial nature protection agencies and prevent degradation and fragmentation of high mountain ecosystems beyond protected areas borders. Namely, 2 new reserves are to be created: (i) 51,300 hectare reserve in the upper reaches of Pskem river in Western Tian Shan (Tashkent region), and (ii) a new nature park "Yukori Tupalang" in Pamir Alay mountain range (Surkhandarya region). Among others, the action plan provides for prevention of infrastructure development in mountain key biodiversity areas, capacity building/development of protected area staff, community-based conservation in partnership with local communities, prevention of illegal wildlife trade and poaching, environmental education and public awareness raising, etc. Notably, the action plan also addresses the economic benefits of local	<mark>S</mark>	The SLCAP was approved in 2021 and acts as a project handover document. The plan lacks detail on its measures

		data being collected and analyzed annually, and published at least once in a "State of the Snow Leopard" report c.) Scientifically validated detailed GIS map of snow leopard habitat range published d.) At least one field-based activity undertaken in accordance with action plan to reduce threats to snow leopards (e.g. predator-proof corral constructed in high risk area, snow leopard-related education and awareness activity carried out, etc.)	communities in terms of development of income-generating opportunities, mitigation of human-wildlife conflict, livestock loss compensation due to predator attacks, etc. The action plan also promotes strengthening international and regional cooperation through establishment of transboundary working groups on snow leopard conservation and partnership with international conservation NGOs. Most importantly, the action plan also addresses the impact of climate change on mountain ecosystems and snow leopard landscapes. It also will ensure funding and monitoring of snow leopard and high mountain ecosystems conservation programmes. Currently, the project is supporting the establishment of a governance structure amongst respective state agencies on implementation of the approved Action Plan.		
Percentage of border security officials receiving in-service wildlife monitoring and enforcement training and skills development among those employed in Ugam Chatkal and Gissar snow leopard landscapes	0	50%	136 law enforcement officers received training on illegal wildlife trade per CITES convention implementation standards in the country not only among those employed in Ugam Chatkal and Gissar Snow Leopard landscapes but also in other parts of the country to train more officers on the subject. The State Ecology Committee is pioneering the implementation of CITES convention in Uzbekistan and conducts regular training workshops for law enforcement officers.	S	A number of training course were undertaken
Number of annual international events related to snow leopard and mountain ecosystem conservation where Uzbekistan	1	2	Uzbekistan has been represented twice every year during the project period in international events related to snow leopard and mountain conservation. This year Uzbek delegation visited Tajikistan for implementation of the MOU on transboundary cooperation in May 2022. Also, the Uzbek delegation participated	S	There have been a number of SL events supported

is represented and presents information on project activities			in Stockholm + 50 event in June 2022 where project key outputs were presented.		
Level of international cooperation and coordination with Uzbekistan border countries regarding illegal wildlife trade, biodiversity management in borderland protected areas, and snow leopard monitoring	No formal international agreement between Uzbekistan and neighboring countries related to snow leopard conservation	International agreement between Uzbekistan and at least one bordering country under implementation regarding at least one of the below issues: - Cooperation on law enforcement at border points regarding illegal wildlife trade - Illegal hunting by border guards - Data sharing on snow leopard monitoring	The project initiated the transboundary dialogue in 2018 to kickstart the transboundary cooperation on snow leopard conservation among Kazakhstan, Kyrgyz Republic, Tajikistan and Uzbekistan. Since then, it was agreed with country representatives that an MOU will be developed and approved at country level to institutionalize the cooperation. The MOU was developed by the project and sent to other countries for review and approval. The MOU was approved by Kyrgyz Republic, Tajikistan and Uzbekistan and has become in force for implementation in 2021. The GSLEP will be the owner of this MOU and will take the leadership for its implementation as the MOU reads. Currently, Kazakhstan is to join the MOU and GSLEP has conducted its first meeting this year (2022) on transboundary cooperation in Central Asia. Draft regional action plan is developed and is being reviewed by member countries. Law enforcement agencies e.g. Customs, Border Security, Internal Affairs, Interpol and other partners have been trained on illegal wildlife trade, namely on implementation of CITES convention. The State Ecology Committee has been trained by the project experts on CITES and it has been conducting training workshops on CITES on a regular basis. Respective state agencies have been actively participating in global events on snow leopard conservation an annual basis.	S	An International MoU has been signed by 3 countries, with Kazakhstan hopefully to also sign

Annex 2: Delivery of Outputs

Outputs	Achievements Reported by IP	TE Comment
Project Objective: Enhance the conservation, and sustainable use, of natural resources in the biodiverse high altitude mountain ecosystems of Uzbekistan		
Component 1: Landscape level planning and management decision-making		
Output 1.1: Improve the quality of environmental information for state cadastre	Relevant data (cadastral, environmental, KBAs, land use and tenure, etc.) collected, collated and mapped. Environmental information management system, referred to as BCIMS (Biodiversity Conservation Information Management System), developed, training workshops conducted, installed and is being administered and operated by State Ecology Committee. The system is an online GIS-based platform that contains 7 types of environmental and other data (e.g. administrative data (borders, settlements, roads), geographic data (hydrology, relief), biodiversity data (flora and fauna), land use (protected areas, forestry units, hunting concessions), ecosystems, key biodiversity areas (IBA, KBA), threats etc.). The BCIMS is fully functioning and is being enriched with data on a regular basis. The platform is flexible and can be expanded to store other types of data. Moreover, economic valuation of economic services was conducted in Ugam Chatkal and Gissar snow leopard landscapes.	How the data in BCIMS is going to be used for research purposes need confirmation
Output 1.2: Enhance the state of knowledge on snow leopard and prey populations	Snow Leopard and prey populations methodology has been developed, tested, training workshops conducted and has been endorsed by implementing partners. The methodology ownership and championship belong to the State Ecology Committee who will mobilize resources and partners for its implementation as prescribed in the approved document. The training workshops were both on theory and practice. The protected areas were also trained on proper installation of camera traps and collection of snow leopard excrements for DNA analysis. Moreover, the protected areas were provided with a software on assortment of photos from camera traps to reduce the efforts and time it takes to do manually. Moreover, the SMART mobile application has been developed specifically for carrying out Snow Leopard and its preys research and monitoring activities. It has been tested in the field in 2021 by protected area staff.	Knowledge is improving, but its use for applied research / actions was not so clear
Component 2: Strengthening key biodiversity areas		
Output 2.1: Strengthen the management effectiveness of the core conservation zones in Ugam - Chatkal National Park	Management plans for Ugam Chatkal Nature Park, Chatkal State Biosphere Reserve and Ugam Chatkal State Biosphere Reserve were developed to integrate project interventions and solutions on strengthening the management effectiveness. The project also supported the change of the legal status of then Ugam Chatkal reserve to present Ugam Chatkal State Biosphere Reserve in order to comply with national and international legislation and commitments (e.g. MAB UNESCO). SMART patrolling system is being tested in Chatkal State Biosphere Reserve to increase the patrolling efficiency of rangers. Moreover, the project support on development of zonation maps and other documentation for creation of a buffer zone of Chatkal State Biosphere Reserve. One reason for the buffer zone creation derives from the need to connect the two isolated core zones belonging to two different protected areas, Ugam Chatkal State Biosphere Reserve (Bashkizilsay site) and Chatkal State Biosphere Reserve (Maydantal site) in order to form an ecological corridor for wildlife movement as the project document reads. Another reason is to support the implementation of the Resolution of the Cabinet Ministers that obligates establishment of buffer zones for all protected areas of the country. In addition, the national legislation does not provide for creation of 'ecological corridors' for wildlife, for which reason the project developed proposals to change in the legislation. The project also developed frameworks in order to establish a core zone in upper reaches of Pskem river in Ugam Chatkal Nature Park with an area of 51,300 hectares. All protected areas in both snow leopard landscapes were equipped with necessary equipment and goods to increase their capacity.	The project produced 4 PA management plans
Output 2.2: Extend, and improve the conservation	The management plan for Gissar Reserve was also developed and the similar project activities have been conducted as in output 2.1. For instance, SMART patrolling system has been tested in the Gissar Reserve. Its buffer zone was created with the support of the project in 2020 per Cabinet of Ministers Resolution. Moreover, the project supported the development and adoption of a Resolution of Cabinet of Ministers on increasing the efficiency of	Smart patrol systems were established

Outputs	Achievements Reported by IP	TE Comment
security of, Gissar Strict Nature Reserve	protected areas that obligates all protected areas to establish their buffer zones. In addition, the project prepared frameworks for creation of a new protected area in the upper reaches of Tupalang river to increase conservation efficiency of snow leopard habitats, which was adopted by the government. The new protected area, Tupalang Nature Park, will be created with an area of almost 29,000 hectares. The project also supported the installment of a radio communication network for the Gissar Reserve to improve patrolling activities.	
Output 2.3: Enhance community involvement in, and beneficiation from, protected areas	The project conducted skills development training workshops for select rural communities on ecotourism, business planning and gardening. Education and outreach programmes are developed on environmental awareness raising and will be provided for adoption at national level. In the meantime, training and awareness raising campaigns are in progress in select rural communities. The project has conducted a number of training workshops in rural communities, especially for teachers, with a purpose of establishing pilot ecological clubs this year. Moreover, a number of video and cartoon films have been produced by the project on various thematic areas (e.g. snow leopard conservation, pasture and forest use) and have been broadcast publicly by national TV companies. Road-shows in Ugam Chatkal Nature Park have been developed and installed in select spots in coordination with the park administration. Two interactive and modern visitor centers have been established in Gissar Reserve and Chatkal Biosphere Reserve. A tourism site is being established (construction works are in progress) in buffer area of Gissar Reserve.	Communities did not directly benefit from the PAs
Component 3: Sustainable economic development incentives for communities		
Output 3.1: Incentivize sustainable pasture management practices	Pasture Law was adopted in 2019. Two pilot pasture cooperatives were established in Ugam Chatkal and Gissar Snow Leopard Landscapes within communities with pasture management and restoration plans. Moreover, a number of guidelines were developed on pasture norms e.g. carrying capacity assessment, rotation schemes, etc. As most of the pasture areas in mountain areas belong to forestry business units, pasture management plans were developed for 8 mountain forestry units. All 8 forestry units adopted the pasture management plans developed by the project. In addition, forage nurseries (seed production sites) were installed by the project for each forestry unit with an of 2 hectares in order to facilitate the pasture restoration activities and to prevent the livestock from entering the critical, valuable and production sites. Upon adoption of the Pasture Law by the country, the project supported the development of short guidelines on 'how-to-form PUAs'. It has been presented to rural communities and farmers in project areas. Technical Assistance Programme (microgrants) has been implemented successfully in pilot rural mountain communities to assist in improving the health of livestock, establishment of intensive livestock farms and other projects.	Limited in terms of SFU and cooperatives. The plans were produced too late in the project cycle to evaluate TAPs were successful
Output 3.2: Encourage more sustainable levels of forest use	Tree nurseries were established for 8 mountain forestry units in project areas with 2 hectares of an area each to support forest restoration activities in degraded areas. The project also provided its expertise support on government resolution on PPP (public private partnership) that allows to lease forest land up to 49 years. Short guidelines were developed on leasing the forest land on a long term basis for rural communities and farmers by the project and was widely presented. Technical Assistance Programme (microgrants) has been implemented in rural communities on establishment of woodlots, fruit producing orchards, water supply, catering services and other projects.	Forest use remained the same The tree nurseries were to provide trees mainly to the city landscaping sector and for nut plantations – so as an additional source of income for the SFUs they were successful
Component 4: Promoting cooperation and collaboration		
Output 4.1: Improve inter-agency coordination in	Snow Leopard Conservation Action Plan developed by the project was approved by the Cabinet of Ministers for 10 years (2021-2030). This document lays out all snow leopard conservation measures as well as natural resources management and protection in mountain areas in the country for the next 10	The SLCAP lacked detail

Outputs	Achievements Reported by IP	TE Comment
conservation, monitoring and enforcement	years. Primarily the action plan envisages strengthening the research on study and monitoring of the state of high mountain snow leopard ecosystems through the development and approval of a joint methodology. Also, the document calls for the amendments and additions in regulation and state documents on improvement of the snow leopard and mountain ecosystems. In addition, within the action plan, it is planned to improve territorial nature protection agencies and prevent degradation and fragmentation of high mountain ecosystems beyond protected areas borders. Namely, 2 new reserves are to be created: (i) 51,300 hectare reserve in the upper reaches of Pskem river in Western Tian Shan (Tashkent region), and (ii) a new nature park "Yukori Tupalang" in Pamir Alay mountain range (Surkhandarya region). Among others, the action plan provides for prevention of infrastructure development in mountain key biodiversity areas, capacity building/development of protected area staff, community-based conservation in partnership with local communities, prevention of illegal wildlife trade and poaching, environmental education and public awareness raising, etc. Notably, the action plan also addresses the economic benefits of local communities in terms of development of income-generating opportunities, mitigation of human-wildlife conflict, livestock loss compensation due to predator attacks, etc. The action plan also promotes strengthening international and regional cooperation through establishment of transboundary working groups on snow leopard conservation and partnership with international conservation NGOs. Most importantly, the action plan also addresses the impact of climate change on mountain ecosystems and snow leopard landscapes. It also will ensure funding and monitoring of snow leopard and high mountain ecosystems conservation programmes. Currently, the project is supporting the establishment of a governance structure amongst respective state agencies on implementation of the approved Action Plan.	
Output 4.2: Strengthen the capacity for trans-boundary planning and management	The project initiated the transboundary dialogue in 2018 to kickstart the transboundary cooperation on snow leopard conservation among Kazakhstan, Kyrgyz Republic, Tajikistan and Uzbekistan. Since then, it was agreed with country representatives that an MOU will be developed and approved at country level to institutionalize the cooperation. The MOU was developed by the project and sent to other countries for review and approval. The MOU was approved by Kyrgyz Republic, Tajikistan and Uzbekistan and has become in force for implementation in 2021. The GSLEP will be the owner of this MOU and will take the leadership for its implementation as the MOU reads. Currently, Kazakhstan is to join the MOU and GSLEP has conducted its first meeting this year (2022) on transboundary cooperation in Central Asia. Draft regional action plan is developed and is being reviewed by member countries. Law enforcement agencies e.g. Customs, Border Security, Internal Affairs, Interpol and other partners have been trained on illegal wildlife trade, namely on implementation of CITES convention. The State Ecology Committee has been trained by the project experts on CITES and it has been conducting training workshops on CITES on a regular basis. Respective state agencies have been actively participating in global events on snow leopard conservation an annual basis.	The MoU was good

Annex 3: Co-financing Table

Sources of Co-financing[1]	Name of Co-financer	Description of Co-financing	Type of Co-financing[2]	Confirmed at CEO Endorsement (US$)	Contributed at Stage of MTR (USD)	Expected Amount by Project Closure USD	New or Recurrent Expenditure	Actual % of Expected Amount USD
UNDP, Co-signatories	UNDP		Grant	$300,000	$135,023.91	$300,816.67	New	100
		UNDP & Partner Sub-Total		$300,000	$135,024	$300,817		100
National Government	State Ecology Committee		In-kind	$25,000,000	$14,180,329	$25,000,000	Recurrent	100
	State Forestry Committee		In-kind	$0	$3,158,878	$3,158,878	New	
Other			Grant/In-kind					
		Government / Other Sub-Total		$25,000,000	$17,339,207	$28,158,878		113
		Total		$25,300,000	$17,474,231	$28,459,695		112

1. Sources of Co-financing may include: Bilateral Aid Agencies, Foundation, GEF Partner Agency, Local Government, National Government, Civil Society Organization, Multi-lateral agencies, Private Sector, Other
2. Type of Co-financing may include: Grant, Soft Loan, Hard Loan, Guarantee, In-Kind, Other
3. Government funding was not audited by the project
4. Excludes PPG

Annex 4: Planned Budget and Expenditures at End-term

Outcome	2017 USD	2018 USD	2019 USD	2020 USD	2021 USD	2022 USD	Total USD
Indicative Breakdown of Project Budget in Project Document:							
Outcome 1	252,750.00	310,250.00	221,000.00	124,000.00	84,200.00		**992,200.00**
Outcome 2	445,300.00	661,000.00	552,500.00	450,200.00	336,000.00		**2,445,000.00**
Outcome 3	329,400.00	571,000.00	599,500.00	356,200.00	158,500.00		**2,014,600.00**
Outcome 4	79,000.00	146,000.00	113,000.00	75,855.00	48,500.00		**462,355.00**
Project management. Outcome 5:	72,408.00	58,000.00	55,000.00	56,800.00	53,500.00		**295,708.00**
Total	**1,178,858.00**	**1,746,250.00**	**1,541,000.00**	**1,063,055.00**	**680,700.00**		**6,209,863.00**
Outcome	**2017 USD**	**2018 USD**	**2019 USD**	**2020 USD**	**2021 USD**	**2022 USD**	**Cumulative Totals at Endterm date - 27/6/22**
Annual Work Plan Budgets and Actual Expenditures Incurred through Endterm:							
Outcome 1:							
Annual Work Plan	30,040.00	312,552.00	362,255.00	441,700.34	375,593.32	163,971.59	**1,686,112.25**
Disbursed	25,314.62	197,091.77	342,454.89	157,686.26	316,983.86	33,671.85	**1,073,203.25**
Balance (AWP-Disbursed)	4,725.38	115,460.23	19,800.11	284,014.08	58,609.46	130,299.74	**612,909.00**
Outcome 2:							
Annual Work Plan	80,660.00	402,915.00	522,600.00	557,294.94	767,891.56	479,992.24	**2,811,353.74**
Disbursed	80,206.42	251,864.84	567,083.21	173,438.06	650,912.42	42,229.18	**1,765,734.13**
Balance (AWP-Disbursed)	453.58	151,050.16	-44,483.21	383,856.88	116,979.14	437,763.06	**1,045,619.61**
Outcome 3:							
Annual Work Plan	39,600.00	419,419.00	528,000.00	545,882.74	585,153.56	580,263.21	**2,698,318.51**
Disbursed	14,772.86	243,096.65	464,896.36	548,993.54	400,194.51	229,343.19	**1,901,297.11**
Balance (AWP-Disbursed)	24,827.14	176,322.35	63,103.64	-3,110.80	184,959.05	350,920.02	**797,021.40**
Outcome 4:							
Annual Work Plan	14,050.00	72,135.00	102,300.00	83,005.74	42,565.32	47,558.07	**361,614.13**
Disbursed	12,145.70	75,484.48	49,319.44	16,249.63	23,502.98	13,054.64	**189,756.87**
Balance (AWP-Disbursed)	1,904.30	-3,349.48	52,980.56	66,756.11	19,062.34	34,503.43	**171,857.26**
Project management Outcome 5:							
Annual Work Plan	35,650.00	64,305.00	55,500.00	50,819.39	50,214.80	60,286.70	**316,775.89**
Disbursed	41,425.82	68,998.24	53,050.12	4,010.74	53,383.59	24,428.64	**245,297.15**
Balance (AWP-Disbursed)	-5,775.82	-4,693.24	2,449.88	46,808.65	-3,168.79	35,858.06	**71,478.74**
Grand Totals:							
Annual Work Plan	200,000.00	1,271,326.00	1,570,655.00	1,678,703.15	1,821,418.56	1,332,071.81	**7,674,174.52**
Total Disbursed	**173,865.42**	**836,535.98**	**1,476,804.02**	**900,378.23**	**1,444,977.36**	**342,727.50**	**5,175,288.51**
Balance (AWP-Disbursed)	**26,134.58**	**434,790.02**	**93,850.98**	**778,324.92**	**376,441.20**	**989,344.31**	**1,034,574.49**

Annex 5: Brief review of Plans, Technical reports, Training materials, Misc.

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Snow Leopard MoU

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<u>Snow Leopard MoU</u>

MoU between the Ministry of Ecology, Geology and Natural Resources of the Republic of Kazakhstan, the Ministry of Natural Resources, Ecology and Technical Supervision of the Kyrgyz Republic, the Committee for Environmental Protection under the Government of the Republic of Tajikistan, the State Committee of the Republic of Uzbekistan for Ecology and Environmental Protection on the conservation of the snow leopard, its prey base and habitat in the Western Tien Shan and Pamir-Alay

The Ministry of Ecology, Geology and Natural Resources of the Republic of Kazakhstan, the Ministry of Natural Resources, Ecology and Technical Supervision of the Kyrgyz Republic, the Committee for Environmental Protection under the Government of the Republic of Tajikistan, the State Committee of the Republic of Uzbekistan for Ecology and Environmental Protection, hereinafter referred to as the Parties,

Keeping in mind the shared responsibility to future generations for the conservation, restoration and sustainable use of natural resources,

Guided by the commitments under the Convention on Biological Diversity dated June 5, 1992 (Rio de Janeiro),

Recognizing that the snow leopard abundance and range have significantly declined in recent decades and that its conservation status in some parts of its range is a matter of serious concern,

Noting that the Global Snow Leopard and Ecosystem Protection Program (GSLEP) provides a platform for transboundary and regional cooperation through joint learning, data sharing, development of joint action plans for the sustainable use/management of transboundary landscapes to strengthen conservation capacity,

Having a desire to strengthen cooperation on the conservation, restoration and sustainable use of natural resources in key mountain areas important for the snow leopard (Panthera uncia) and its prey base,

have hereby reached the following mutual understanding:

Article 1

Within the framework of this Memorandum, the Parties shall cooperate in the conservation of the snow leopard, its prey base, ecosystems and landscapes in the Western Tien Shan and Pamir-Alay in accordance with the Convention on Biological Diversity dated June 5, 1992 and the national legislation of the States of the Parties.

The Parties shall undertake joint efforts to explore and improve the protection of the snow leopard and its prey base within its range in their countries, and maintain populations in a stable state.

Article 2

In order to coordinate the work on the conservation of the snow leopard, its base and habitat in the Western Tien Shan and Pamir-Alay, the Parties recognize the need to set up a Regional Working Group (hereinafter referred to as the Working Group) consisting of representatives of responsible authorities and scientific organizations of the Parties, as well as the Working Secretariat of the Global Snow Leopard and Ecosystem Protection Program (hereinafter - the GSLEP Secretariat).

By mutual agreement of the Parties, experts from each Party may be additionally included in the Working Group. All decisions of the Working Group shall be made by consensus.

Article 3

In order to discuss the issues related to the effective protection of the snow leopard and its ecosystems within the States of the Parties, as well as to address emerging issues, the Working Group members shall meet by mutual agreement of the Parties.

The Parties shall independently implement measures to protect the snow leopard and its ecosystems on the territories of the States of the Parties, and exchange information on the progress of this Memorandum through the Working Group and the GSLEP Secretariat.

Article 4

Each Party shall independently develop and approve its own Action Plan for the implementation of this Memorandum, which is aimed at:

a) conservation of the snow leopard populations and maintenance of its abundance;

b) restoration of the abundance and range of its main prey species;

c) strengthening transboundary and international cooperation for the protection of the snow leopard and its ecosystem;

d) monitoring of habitats, populations of the snow leopard and its main prey species according to unified methods, taking into account the recommendations of the GSLEP and within the timeframe agreed by the Parties;

e) raising public awareness and involving the public in the Global Snow Leopard & Ecosystem Protection Program.

Article 5

The Parties shall facilitate the exchange of scientific, technical, and legal information necessary to coordinate measures for the conservation and restoration of the snow leopard, and engage with other countries, non-governmental organizations, and other bodies interested in the implementation of the Memorandum.

Article 6

The Parties shall annually exchange reports on the implementation of this Memorandum through the Working Group and the GSLEP Secretariat.

The structure of the report shall include: a) objectives and progress of implementation; b) monitoring the results of implementation of the Parties' Action Plans for the implementation of this Memorandum; c) results achieved.

Reports on the implementation of this Memorandum shall be posted by the Parties and the GSLEP Secretariat on their official websites.

Article 7

The Parties shall support transboundary and regional initiatives, joint activities, including regular actions on the occasion of the International Snow Leopard Day, preparation of joint regional publications and videos on various topics about the snow leopard, its habitat and main prey species.

The Parties shall raise the level of international exchange and cooperation through:

a) joint educational and conservation programs, exhibitions and scientific research.

b) annual regional seminars (to be organized by mutual agreement of the Parties) to determine the progress and coordinate the actions of the Parties on the key aspects of the study and conservation of the snow leopard and its ecosystems.

Article 8

Regional and transboundary projects for the conservation of the snow leopard and its ecosystems for the Parties shall be developed at the expense of international partners.

Article 9

By mutual agreement of the Parties, this Memorandum may be amended and supplemented by separate Protocols, which shall constitute an integral part of the Memorandum.

In the event of disagreements in the interpretation of the provisions of this Memorandum, the Parties shall address them through consultations and negotiations.

Article 10

The Memorandum shall be implemented in compliance with international law and the laws of the States of the Parties.

Article 11

The provisions of this Memorandum shall not affect the rights and obligations of the Parties arising from other international treaties, which the Parties or the States of the Parties affiliate themselves with.

This Memorandum shall enter into force from the date of signature and shall be valid for a period of five years. The term of this Memorandum shall be automatically extended for further five-year periods unless either Party notifies other Parties in writing through diplomatic channels of its intention to terminate this Memorandum at least six months prior to the expiration of this Memorandum.

This Memorandum has been executed on the margins of the 26th Conference of the Parties to the UN Framework Convention on Climate Change (UNFCCC COP26), Scottish Exhibition and Conference Centre, Glasgow, United Kingdom on November 10, 2021.

This Memorandum is drawn up in four original copies in Russian, having equal legal force, one copy for each Party. One copy of this Memorandum is made in English, which represents its unofficial translation, which shall be sent to the GSLEP Secretariat.

Ministry of Ecology, Geology and Natural Resources of the Republic of Kazakhstan [*Not signed to date*]

Ministry of Natural Resources, Ecology and Technical Supervision of the Kyrgyz Republic   *(signed)*

Committee for Environmental Protection under the Government of the Republic of Tajikistan *(signed)*

State Committee for Ecology and Environmental Protection of the Republic of Uzbekistan   *(signed)*

List of Consultancies

Component 1

Environmental information analysis (2018)

methodology and mountain pastures status (2018)

Snow Leopard Research and Monitoring in Gissar sub-region (2018-19)

Land use data analysis (2018)

Methodology on Forest Status Assessment (2018)

Snow Leopard Research and Monitoring in Chatkal sub-region (2018-19)

Research of highland forest status assessment (2018)

GIS mapping on land use and environmental information (2018)

GIS mapping (2018)

Snow Leopard Research and Monitoring Programme (2018-19)

Mountain pastures status and geobotanical analysis (2018-19)

Forest Status Assessment for Gissar snow leopard landscape (2018-19)

remote-sensing data analysis (2018)

mountain pasture status data collection (2018-19)

livestock status assessment for Gissar snow leopard landscape (2018)

Snow leopard research and monitoring in Pskem sub-region (2018-19)

technical parameters and methodological approaches for the use of drones (2019)

biodiversity conservation information management system (2019)

assessment of current status of highland forests (2019)

GIS mapping of snow leopard and protected areas (2019)

assessment of the current status of mountain pastures in Gissar snow leopard landscape (2019)

data analysis on socio economic surveys on snow leopard and human-wildlife conflict (2019)

socio-economic survey in Ugam Chatkal snow leopard landscape (2019)

economic valuation of mountain ecosystem services (2019)

livestock in Ugam Chatkal snow leopard landscape (2019)

biodiversity critical habitats assessment (2019)

IT programming (2019)

mountain pastures in Gissar snow leopard landscape (2019)

training on DNA analysis of snow leopard excrements (2019 – 20 – 21 – 22)

Economic valuation of ecosystem services of Gissar snow leopard landscape (2020)

IT programming and BCIMS (Biodiversity Conservation Information Management System) (2020)

GIS and Remote sensing (Mini Atlas) (2020)

IT programming and application development (2021)

Knowledge Management coordination (2021)

State of Snow Leopards Publication (2022)

Knowledge Management (2022)

Snow Leopard Research and Monitoring Programme (2022) (Int'l Consultant)

Economic Valuation of mountain ecosystem services (2019) (Int'l Consultant)

Training on conducting Economic Valuation of Ecosystem Services (2020) (Int'l Consultant)

GIS-based online biodiversity information management system (2019 – 20 -21) (firm)

Component 2

zoning of the Protected Areas and preparation of management plans (2018) (Int'l Consultant)

budget documentation and defective acts (2018)

tourism potential in two Snow Leopard landscapes (2018)

preparation of Management Plans for PAs (2018)

documents for the creation of the buffer zone of the Gissar State Reserve (2019) (firm)

preparation of Management Plans for PAs (2019)

legal matters for introduction of mandatory payments and insurance to inspectors (2019)

consultative commissions of PAs and support the work of the anti-poaching group "Bars" (2019)

Environmental Public Awareness Raising (2019) (Int'l)

Environmental Public Awareness Raising for Tashkent region (2019)

Environmental Public Awareness (2019) (Int'l)

Implementation of SMART patrol system (2019) (Int'l)

implementation of SMART patrol system (2019)

activities on Public Awareness Raising (2020)

socio-economic research in villages & recommendations for developing skills for alternative income generating (2020) (firm)

educational and outreach activities, training communities, and designing education materials and media products (2020) (firm)

lawyer (2020)

recommendations for creation of a new PA in Surkhandarya and for creation of a core zone in Ugam Chatkal National Park (2020)

information materials and design of the visitor center and for Gissar State Reserve (2020) (firm)

information materials and design of the visitor center and for the Chatkal State Biosphere Reserve (2020) (firm)

implementation of SMART patrol system (2021) (Leader)

implementation of SMART patrol system (2021)

proposals for the installation of hydroelectric power stations on the inspection cordons of PAs (2021)

video film - SLLs & PAs (2021) (firm)

implementation of SMART patrol system (2022) (Leader)

rules and guidelines for visitors of PAs (2022)

Public awareness of high mountain ecosystems, natural habitats, flora and fauna (2022) (firm)

trainings to develop the skills and abilities of representatives of local communities (2022) (firm)

Component 3

Highland Forestry Restoration (2018 – 19 – 20 – 21 - 22)

Legal Matters (2018)

Pasture Use Planning Issues (2018 – 19 – 20 – 21 - 22)

Geobotany Observation and fodder nursery (2018)

Improvement of Livestock Husbandry (2018)

Socio-economic Assessment (2018)

Establishment of Forest Nurseries (Shakhrisabz district) (2018);

Establishment of Forest Nurseries (Akhangaran district) (2018)

Assistant on the Ground (Shakhrisabz districts) (2018)

Livestock and Pasture Management (2019) Int'l

Land use Development by Forestry Entities (2019)

Social Mobilization for Forestry Activities (2019)

Establishment of Pasture Users Association (2019)

Social Survey (Sariosiyo district) (2018)

Social Survey (Shakhrisabz district) (2018)

Social-Economic Issues (2019)

Legal issues of Sustainable Natural Resource Management (2019)

Preparation of Animated Films (2019)

Sustainable Natural Resource Management (NRM) and Institutional Capacity Assessment (2021)

geobotanical study of high-mountain forestry pastures (2018 – 19 – 20) (firm)

briefing on the use of alternative energy sources in the field (2018) (firm)

Creation of biological laboratories for the production of woody entomophagy races (2020) (firm)

calculation methods and their implementation in the pasture use conditions analysis and monitoring (2018) (firm)

training seminars on tree care, local use and marketing of products produced in forest areas (2018) (firm)

practical implementation of the mechanism of forestry management in mountainous areas (2018) (firm)

TAPs

hydraulic engineer on preparation of proposals for creation of water supply system for VCC (2021)

Component 4

educational materials on CITES for border security officials (2018)

training modules for border security officials (2018-19)

Program and Action Plan for Snow Leopard Conservation (2017-18)

Program and Action Plan for Snow Leopard Conservation (2019)

transboundary cooperation (2018-19-20-21-22)

guidebook for border security officials on biodiversity conservation (2019)

coordination of Program and Action Plan for Snow Leopard Conservation (2020-21)

CITES training for security officials (2018-19-20-21)

feasibility assessment of Snow Leopard Programme and Action Plan (2020)

Snow Leopard Action Plan implementation (2022)

Project Management

PR Assistants (2018 -19 – 20 – 22)

Project Assistants (2018 – 20 -21 -22)

National consultant on MTR (2019)

National consultant on TE (2022)

International consultant on MTR (2019)

International consultant on TE (2022)

graphic design (promo materials, guidebooks, etc.) (2019)

International Technical Advisor (2018 -19 -20 – 21 - 2022)

Consultant Reports

Component 1

- **SL Monitoring**
- Development of a national snow leopard research and monitoring program and methodological guidelines for unifying the snow leopard monitoring system (- time period, transects, camera locations, data format, storage and analysis, (2018), 11 pp, Russian
- Assessment of the conditions of mountain forests in snow leopard landscapes (2019), 78pp, Russian
- Development of the snow leopard monitoring program (2019, 2020), 3pp, Russian
- Development of the Snow Leopard Monitoring Program 2018-2022, (2022), 5pp, Russian
- Report on Gissar Biodiversity, (2018), 132pp, Russian
- Snow Leopard Monitoring Program (2018) 36pp, Russian
- Monitoring of Snow leopard in Chatkal subregion (2019), 34pp, Russian
- Monitoring of snow leopard in the Gissar subregion (2019), 56pp, Russian
- Snow leopard monitoring in the Pskem sub-region (2018), 11pp, Russian
- Monitoring of snow leopard in the Pskem sub-region, (2019), 44pp, Russian
- Survey of peripheral cells in Western Tien Shan & Pamir Alay within the SL monitoring program (2019), 44pp, Russian
- Results of large scale and local surveys habitats of the snow leopard in the western Tien Shan, (2019), 88pp, Russian
- **BCIMS**
- Development and installation of a Biodiversity Conservation Information Management System (2018, 2019, 2020) 72pp, English
- Testing the BCIMS (2019) 11 pp, Russian
- **Remote sensing / GIS**
- Geoinformation systems (2018, 2019) 29pp, Russian
- Remote Sensing (2018, 2019), 21pp, Russian
- GIS mapping of pastures and forests, (2019), 9pp, Russian
- Comparative analysis of light aircraft vs UAV for monitoring wildlife in mountain ecosystems (2019), 31pp, Russian
- Use of Unmanned Aerial Vehicle (drone) in monitoring wildlife in Mountain ecosystems. Use of UAV in Uzbekistan and permits for use (2019), 29pp, Russian
- **DNA**
- Report on DNA training (2020), 29pp, Russian
- Training report - DNA analysis of samples for the study and conservation snow leopard (2021), 35pp, Russian
- **High Altitude Plant habitat and Pasture Surveys**
- Study of mountain rangelands and geobotanical analysis (2018) 18pp, Russian
- Data collection on the state of mountain pastures, (2018), 14pp, Russian
- Assessment of key habitats for biodiversity, (2019), 73pp, Russian
- Current state assessment of high mountain forests (2019), 29pp, Russian
- Current state assessment of high mountain forests, (2019), 59pp, Russian
- Analysis of high-mountain forests, causes and extent of their degradation (2018), 21pp, Russian
- Methodology for assessing the condition of forests and the methods of their restoration (2018) 19pp, Russian
- Cartographic data on land use and environmental information on the Gissar landscape, Report (2018), 24pp, Russian
- Assessment of the status of mountain pastures in the Gissar landscape of the snow leopard (2019), 36pp, Russian
- Methodology and status of mountain pastures (2019), 26pp, Russian
- Data collection on the condition of mountain pastures (2019) 12pp, Russian
- Assessment of the status of highland forests in snow leopard landscapes (2019) 19pp, Russian
- Winter locations of livestock herds in the mountains of Western Tien Shan and Gissar-Alay, (2019), 48 pp, Russian
- Identification of pilot communities to evaluate Livestock populations in Ugam – Chatkal SLL - livestock structure, ownership, seasonal movement routes, summer camps of herders) (2019), 28pp, Russian
- Summer / winter herders' pens and locations, number of herding dogs; Data on conflict between livestock / humans and wildlife (snow leopard, bear, lynx, wolves) (2019) 20pp, Russian
- **Ecosystem services valuation**

- Economic value of ecosystem services in Gissar State Nature Reserve Snow Leopard Landscape (2020), 9pp, English
- Review of current national capacity in the economic valuation of ecosystem services, (2020), 5pp, English
- International experience in ecosystem valuation: review of best practices (2019), 44pp, English
- Economic value of ecosystem services in Ugam Chatkal Snow Leopard Landscape (2020) 65pp, English, Russian

Component 2
- Protected Area Zoning & PA management plan preparation (2018) 85pp, English, Russian
- Ugam Chatkal National Park (UCNP) Management Plan 2020-24 (2019) 93pp, Russian
- Ugam Chatkal Biosphere Nature Reserve (UCBNR) Management Plan 2020-24, (2019) 55pp, Russian
- Chatkal Biosphere Nature Reserve (CBNR) Management plan 2020-24 (2019) 59pp, Russian
- Gissar Nature Reserve (GNR) Management plan 2020-24 (2019) 63pp, Russian
- CBNR - design of the visit center (2020) 46pp, Russian
- GNR - design of the visit center (2020), Russian
- Smart Patrol System application (2021), 4pp, Russian
- Smart patrol system implementation in GNR and CBNR (2022) 13pp, Russian
- Monitoring of snow leopard in Gissar sub region (2019), 56pp, Russian
- Snow leopard monitoring program - Final report 2018-22, (2022), 5pp, Russian
- Tourism potential of UCNP, UCBNR, and the buffer zone of GNR, (2018), 19pp, Russian
- Document to create a group to stop illegal hunting for SCEEP (2019) 6pp, Russian
- **Awareness Materials**
- Environmental awareness in Tashkent region – Annual Report (2019), 14pp, Russian
- International Day of Snow Leopard and of Biodiversity. (2021), 11pp, Russian
- Development of educational materials for the local population, (2018), 83pp, Russian
- Report on the coordination of knowledge management, (2021), 24pp, Russian

Component 3
- **Botanical survey**
- Geobotanical survey (2018, 2019, 2020), 26pp, Russian
- SFU geobotanic research descriptions for 8 SFUs (2020), 378 pp, Uzbek
- **Pastures**
- Guidelines for the creation of collective forms of pasture use (2020), 33pp, Russian
- Pasture User Association (PUA) establishment (2018) 67pp, Russian
- Rational use of pastures in Muminobod village of Ahangaron district (2020), 8 pp, Russian
- Action plan for pasture areas (2019), 9pp, Russian
- Pasture management (2018, 2019, 2020, 2021), 71pp, Russian
- Pasture Use Economics (2019), 12pp, Russian
- Livestock and Pasture Management, (2019), 81pp, English
- **Forestry**
- Forest nursery establishment (2019), 32pp, Russian
- Plan for Ohangaron SFU Pastures (2020), 58pp, Uzbek
- Basics of creation of forestry in the arid regions of Uzbekistan, (2020), 28pp, Uzbek
- Guidelines for the lease of forest lands, (2020), 21pp, Russian
- Forestry (2018, 2019, 2020, 2021), 30 pp, Russian
- Report on the mobilization of the population on forestry issues (2018), 18pp, Russian
- Organization of nurseries on the territory of SFUs (2019), 8pp, Russian
- Raising awareness on the cultivation and use of fruit and nut crops (2018), 85pp, Russian
- Creation a biolab for the production of entomophages to control tree and shrub pests, (2018), 77pp, Russian
- Report on the identifying tree plantation needs (2018), 26 pp, Russian
- Establishment of nurseries on high-yield pastures, & proposals to improve their performance, and the development of proposals for the enrichment of mountain pastures, (2021), 60pp, Uzbek
- **TAPs**
- Water supply proposal for Pskom Makhalya (2021), 11pp, Russian
- Water supply to the upstream part of Tamshush village, 14pp, (2021), Russian
- Methodology for assessing the institutional capacity of project partners, (2021), 48pp, Russian
- **Socio-economics**
- Socio-economic Report (2018), 90pp, Russian
- Social survey for Sariosiyo district (2018), 31pp, Russian

Component 4
- Program and action plan on the conservation of the snow leopard (2018), 3 pp, Russian
- Program and action plan on the conservation of the snow leopard (2018), 20 pp, Russian
- Development of training modules for customs and border guards, (2018), 6pp, Russian
- Developing a guidebook on biodiversity conservation (2018), 3pp, Russian
- Coordination of program and action plan on the conservation of the snow leopard (2019), 5 pp, Russian
- Cross border cooperation, (2019), 6pp, Russian
- Institutional analysis of ecological NGOs (2019), 7 pp, Russian
- Transboundary Cooperation, (2021), 17pp, Russian
- Endangered animals and CITES international convention (2021), 4pp, Uzbek
- Endangered plant species and CITES, (2019), 36pp, Russian
- Import/export under convention on CITES for customs and border services (2019), 69pp, Russian
- Preparatory documents of the snow leopard conservation action plan for government approval, (2021), 2pp, English

Gender Plan

Gender Plan – The project will…
- Facilitate the employment, training and equipping of woman as park rangers (Output 2.1 and 2.2), smart patrol trainers (Output 2.1 and 2.2), community liaison officers (Output 2.3), SFU enforcement staff (Output 3.1 and 3.2), local environmental inspectors (Output 2.3) and nursery maintenance staff (Output 3.2)
- Encourage the equitable use of women labour and supervisors from local villages in: the development of tourism facilities and services (Output 2.3); the planning and implementation of pasture management plans (Output 3.1); the planning and restoration of degraded high altitude pastures (Output 3.1); the management of tree nurseries (Output 3.2) and the planning and rehabilitation of high altitude forests (Output 3.2)
- Ensure that women-owned and/or managed businesses participate equitably in the procurement of project-funded equipment, technical services and infrastructure (all outputs).
- Ensure that the awareness-raising program, sustainable livelihood development support, and skills training in villages in Ugam Chatkal NP and around Gissar NR will include both men and women headed households (Output 2.3)
- Ensure that the interests of women and women-headed households are adequately represented on Park Management Committees (Output 2.3) and Pasture User Associations (Output 3.1); and are actively involved in the planning of PAs, pastures and forests in the two SLLs
- Ensure that the reach of project- grant funded financial and technical support in targeted villages in the Ugam Chatkal and Gissar SLLs will equitably include both male- and female-headed households from the targeted villages (Output 3.1 and 3.2).
- Actively assist women-headed households living in the targeted villages in the two SL landscapes to access: (i) micro-financing for sustainable livelihoods; and (ii) technical and financial support from project grants for improving the health of livestock, establishing intensive livestock farms, developing alternative income-generating enterprises, establishment of woodlots, installation and maintenance of alternative energy and fuel technologies, and production of fruit, nut and herbs.
- Commit dedicated financial and technical support to addressing the significant knowledge constraints in pasture users from women-headed households.
- Provide support to women-headed households in negotiating and securing longer-term (up to 10-year) resource use (to forest-derived natural resources) and land lease rights (to forests and pastures) from the SCF on forest fund land
- Ensure that the SL Conservation Action Plan (SLCAP) includes strategies, activities and budgets that will enable and finance the equitable involvement of women in the implementation of the action plan.
- Advocate for an increase in the number of women involved in the collection of baseline environmental data and the research and monitoring of snow leopard and prey populations.
- Seek to procure professional, technical and management services from suitably qualified and experienced female national consultants and women-owned businesses.
- Strengthen such institutions via building a professional corps of pastoral extension staff to monitor and enforce measures an work with local government and community groups

Mini Atlas (2021) pp36

There are a series of maps:
1. Location of the project
2. Location of the project area in Ugam - Chatkal Snow Leopard Landscape
3. Location of the project area in the Gissar Snow Leopard Landscape
4. Administrative - territorial division of Ugam - Chatkal Landscape of the Snow Leopard
5. Administrative - territorial division of the Gissar Landscape of the Snow Leopard
6. Soil cover of the Ugam Chatkal Snow Leopard Landscape

7. Soil cover of the Gissar Snow Leopard Landscape
8. Explication of the soil cover of snow leopard landscapes
9. Types of pastures in Ugam - Chatkal Snow Leopard Landscape
10. Pasture Views in the Gissar Snow Leopard Landscape
11. Plant formations in Ugam - Chatkal Snow Leopard Landscape
12. Plant formations in Ugam - Chatkal snow leopard landscape
13. Explication of plant formations in snow leopard landscapes
14. Remote sensing of snow leopard landscapes 1
5. Remote sensing of snow leopard landscapes
16. Classification of images of snow leopard landscapes
17. Classification of the Ugam Chatkal Snow Leopard Landscape
18. Classification of the Gissar Landscape of the Snow Leopard
19. Land cover degradation of Ugam - Chatkal Snow Leopard Landscape
20. Productivity of the Ugam land cover of the Chatkal landscape of the snow leopard
21. Productivity of the land cover of the Hissar landscape of the Snow Leopard
22. Degradation of the land cover of the Gissar landscape of the snow leopard
23. Location of camera traps on the territory of Ugam Chatkal snow leopard landscape
24. Photos from camera traps in the Ugam Chatkal snow leopard landscape
25. Photos from phototraps in the gissar landscape of the snow leopard
26. State of animal husbandry in the Ugam Chatkal Snow Leopard Landscape
27. Status of animal husbandry in the Gissar Landscape of the Snow Leopard

To quote the Emerton Report (2020) on the Economic value of ecosystem services in the Ugam Chatkal SLL:

Given the central role that livestock play in local livelihoods, pasture and fodder are some of the most economically-important ecosystem services provided by UCSLL. The GIS data generated by this study concur with earlier records of around a third of UCSLL being covered by pastures and meadows (Bekchanova et al. 2018, Chemonics 2001). These are widely used for grazing, hay production and the collection of wild fodder plants. Both Akhangaran and Burchmulla forest enterprises allow grazing under permit, and there are also large areas of common village pastures on state lands within the UCSLL, which are administered by local authorities.

While village pastures tend to be used almost exclusively by local community members, cattle and sheep are brought from much further afield to graze on forest enterprise land. These herds come from neighbouring districts, as well as from Andijan and the Fergana Valley[1], where shortages of pasture land have become particularly acute. Most livestock are brought in for the 6-7 month spring and summer seasons, from March/April until September/October. Well-established livestock transport routes cut through UCSLL, including cattle corridors running along (and inside) the north-western border of Ugam Chatkal Biosphere Reserve (ACBK et al. 2015).

In 2016, the permanent population of livestock in UCSLL was estimated at approximately 34,000 cattle, 42,000 smallstock and 2,500 horses, with numbers said to increase by an average of 30% during the summer months – or, in some areas, considerably more (GEF/UNDP 2016). Recent data from the forests along the Pskem ridge in Western Tian Shan for example indicate the presence of at least 106,000 head of cattle (GEF/UNDP 2016). The socioeconomic surveys for this study suggest an even higher figure of 103,000 cattle and 183,000 smallstock kept in UCSLL villages, plus more than 9,000 cattle and 173,000 smallstock on forest enterprise land. In addition, more than 51,000 cattle and 84,000 smallstock from the park-adjacent area are thought to graze and water in UCSLL.

As land pressure intensifies in nearby areas, so the importance of UCSLL as a source of grazing and fodder is rising. It is widely believed that carrying capacity has been exceeded. Grazing pressure has resulted in severe rangeland degradation in many parts of the National Park, including on forest enterprise land (ACBK et al. 2015, IUCN 2017, Kreuzberg-Mukhina et al. 2003, UNDP/GEF 2017). In particular, the pastures located around settlements tend to be over-utilised, whereas those in more remote areas face much lower pressures, and are frequently abandoned (Lemenkova 2014). In addition, the influx into UCSLL of livestock from other parts of the country has resulted in competition with the local community over pasture resources, sometimes verging on conflict.

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[1] The SCF indicated that in 2021, the transfer of livestock from the Ferghana Valley was not allowed, thus this significantly reduced the number of livestock.

Training Data

Component 1 & 4

No.	Training title	Date	Place	Participants	of which women
1	Snow Leopard Research and Monitoring Programme implementation field training	10-18 September 2018	Gissar Reserve, Kashkadarya region	20	3
2	Biodiversity Conservation Information Management System GIS-based online platform training	10-18 October 2019	Tashkent city	20	5
3	Snow Leopard Research and Monitoring Programme implementation field training	20 February - 6 March 2019	Ugam Chatkal Nature Park, Tashkent region	20	4
4	Snow Leopard Research and Monitoring Programme implementation field training and theory	25 september - 8 October 2019	Chatkal Reserve, Tashkent region	35	4
5	Snow Leopard Research and Monitoring Programme implementation training, theory	24-Sep-19	Tashkent city	17	6
6	Biodiversity Conservation Information Management System (BCIMS) GIS-based online platform training	26 February - 4 March 2020	Tashkent city	20	4
7	CITES training of customs and border security officials	06-May-21	Tashkent city	9	2
8	Training on "Megadetector" software on snow leopard/wildlife identification from the camera trap photos	10-Dec-21	Tashkent city through Zoom	15	2
9	Workshop on Snow Leopard DNA analysis	12-18 June and 8 July, 2019	Tashkent city	25	10
10	Workshop on Snow Leopard DNA analysis	13-17 December 2021	Tashkent city	5	1
11	Workshop on Snow Leopard DNA analysis	23-27 May 2022	Tashkent city	6	3
12	CITES training of customs and border security officials	17-18-20-22-24-26 November 2021	Khorezm, Bukhara, Kashkadarya, Samarkand, Ferghana, Tashkent city	127	2
13	Training on Economic Valuation of Ecosystem Services	14-16 December 2021	Tashkent city	25	10
14	Training on application of SMART application for Snow Leopard research and monitoring	15-19 October 2021	Gissar Reserve, Kashkadarya region	13	1
15	CITES training of customs and border security officials	27-Nov-21	Tashkent city	25	7
				382	**64**
			% Women		**17**

Component 2

#	Data	Venue	Course training	Number of participants	
				Total	of which Women
Implementation of the SMART patrol system					
1.	16.10.2019	Shakhrisyabz	Training on the SMART patrol system for inspectors of the Gissar State Reserve (1 shift)	30	
2.	17.10.2019	Shakhrisyabz	Training on the SMART patrol system for database operators of the Gissar State Reserve	5	1
3.	18.10.2019	Shakhrisyabz	Training on the SMART patrol system for inspectors of the Gissar State Reserve (2 shift)	14	

4.	21.10.2019	Parkent	Training on the SMART patrol system for inspectors of the Chatkal State Biosphere Reserve.	23	
5.	22.10.2019	Tashkent	Training on the SMART patrol system for employees of the Goscomecology (anti-poaching group «Bars»)	3	
6.	15.10.2021	Shakhrisyabz	Training on the SMART patrol system for inspectors of the Gissar State Reserve	30	
7.	16.10.2021	Shakhrisyabz	Training on the SMART patrol system for database operators of the Gissar State Reserve.	5	
8.	18.10.2022	Parkent	Training on the SMART patrol system for inspectors of the Chatkal State Biosphere Reserve.	23	
9.	19.10.2021	Tashkent	Training on the SMART patrol system for employees of the Goscomecology	6	2
Environmental education 2021					
1.	17.07. 2021	Parkent	Training for secondary school teachers on environmental education	13	3
2.	28.07. 2021	Pskom	Training for secondary school teachers on environmental education	8	1
Trainings to capacity building of the local community of pilot area					
Business planning					
	24.05.2022 – 25.05.2022	Palvonak/Uzun	Training for representatives of local communities "Planning basics. Business planning"	22	5
	27.05.2022 –28.05.2022	Sukok	Training for representatives of local communities "Planning basics. Business planning	22	1
	30.05.2022 – 31.05.2022	Hisorak	Training for representatives of local communities "Planning basics. Business planning	20	9
	02.06.2022 – 03.06.2022	Oybarak	Training for representatives of local communities "Planning basics. Business planning	18	0
Tourism					
	26.05.2022	Oybarak	Training for representatives of local communities: «Development of tourism business and service provision»	15	2
	28.05.2022	Hisorak	Training for representatives of local communities: «Development of tourism business and service provision »	17	9
	01.06.2022	**Polvonak**	Training for representatives of local communities: «Development of tourism business and service provision »	20	5
	02.06.2022	Kuksarai/ Ertosh.	Training for representatives of local communities: «Development of tourism business and service provision »	16	2
Garden					
	25.05.2022	Chet Suv.	Training for representatives of local communities: "Gardening. New standards of gardening."	21	18
	30.05.2022	Hisorak	Training for representatives of local communities: "Gardening. New standards of gardening."	21	11
	31.05.2022	Kamashi	Training for representatives of local communities: "Gardening. New standards of gardening."	10	5
	02.06.2022	Okmechet	Training for representatives of local communities: "Gardening. New standards of gardening."	16	0
				378	**74**
			% Women		**20**

Component 3

No.	Training title	Date	Place	Participants	of which Women
1	Raising awareness of the local population in the foothill-mountainous regions of Uzbekistan on fruit and nut trees cultivation with attention to integration with environmental issues	September 13, 2018	Tashkent region, Akhangaran district, Chinor vilage	38	10
2	Raising awareness of the local population in the foothill-mountainous regions of Uzbekistan on fruit and nut trees cultivation with attention to integration with environmental issues	September 20, 2018	Kashkadarya region, Shakhrisabz district, Kamar vilage	50	15
3	Seminar on the effectiveness of renewable energy sources for the energy supply of rural houses	August 25, 2018	Tashkent region, Akhangaran district, farm Alisher and Urok	52	14
4	Seminar on the effectiveness of renewable energy sources for the energy supply of rural houses	August 27, 2018	Kashkadarya region, Shakhrisabz district, Khitoi and Khisor village	43	14
5	Business plans preparation for the development of economic activities other than grazing and contributing to the conservation of forest areas	May 30, 2018	Kashkadarya region, Shakhrisabz district, Kamar vilage	39	14
6	Business plans preparation for the development of economic activities other than grazing and contributing to the conservation of forest areas	June 5, 2018	Tashkent region, Akhangaran district, Ozodlik vilage	31	18
7	Legislative Aspects of Pasture Rehabilitation/Restoration	July 28, 2018	Tashkent region, Akhangaran district, Alisher farm	38	4
8	Familiarization of representatives of the local population and farmers-members of pasture cooperatives with documents defining cooperative activities	August 15, 2018	Tashkent region, Akhangaran district, Alisher farm	62	8
9	Organization of pasture cooperatives	October 6, 2018	Tashkent region, Akhangaran district, Alisher farm	24	9
10	Organization of pasture cooperatives	October 30, 2018	Kashkadarya region, Shakhrisabz district, Khitoi and Khisor vilage	32	11
11	Creation demonstration fruit and nut garden and its cultivation	November 23, 2018	Tashkent region, Akhangaran district, Alisher farm	41	14
12	Creation demonstration fruit and nut garden and its cultivation	November 23, 2018	Kashkadarya region, Shakhrisabz district, Khisor vilage	39	5
13	Pasture cooperatives organization and restoration of pasture vegetation	September 19, 2018	Kashkadarya region, Shakhrisabz district, Khisor vilage	132	28
14	Issues of creating pasture users cooperatives, drawing up pasture management plan	October 30, 2018	Tashkent region, Akhangaran district, Alisher farm	40	6
15	Issues of creating pasture users cooperatives, drawing up pasture management plan	November 6, 2018	Kashkadarya region, Shakhrisabz district, Khisor vilage	40	8
16	Creation of cooperatives as an element of associated pasture use in the foothill regions of Uzbekistan	November 27, 2018	Tashkent city	23	4

17	Breeding and use of entomophages in the biolab	November 1-10, 2018	Tashkent city	5	3
18	Drawing up pasture management plan and improving the pasture condition	June 14, 2019	Tashkent region, Akhangaran district, Muminobod MFY	14	2
19	Actual tasks of science and practice of foothill and mountain pasture animal husbandry	September 19, 2019	Tashkent region, Akhangaran district, Muminobod MFY	21	3
20	Improving the pasture use efficiency, expanding their capabilities and promoting their activities through the development of organizational and economic cooperation among pasture users	November 2, 2019	Tashkent region, Akhangaran district, Muminobod MFY	16	2
21	Drawing up pasture management plan and improving the pasture condition	June 18, 2019	Kashkadarya region, Shakhrisabz district, Shurkhasan village	22	1
22	Organizing a fodder plant nursery	November 13, 2019	Kashkadarya region, Shakhrisabz district, Amagan village	5	
23	Mechanical equipment for breeding entomophages in a biological laboratory	November 16, 2020	Tashkent region, Gazalkent	8	
24	Seminar on establishing nurseries, as well as on the creation and maintenance of young juniper stands for the restoration of high-mountain degraded forests	September 3-4, 2020	online	92	7
25	Forage nurseries and pasture management plans	September 25-26, 2020	Tashkent region, Butanlyk district	8	
26	Forage nurseries and pasture management plans	September 28-30, 2020	Tashkent region, Akhangaran district	5	
27	Forage nurseries and pasture management plans	October 2-4, 2020	Kashkadarya region, Kitab district	5	
28	Forage nurseries and pasture management plans	October 5-7, 2020	Kashkadarya region, Shakhrisabz district	6	
29	Forage nurseries and pasture management plans	October 8-10, 2020	Kashkadarya region, Yakkabag district	6	
30	Forage nurseries and pasture management plans	October 11-13, 2020	Kashkadarya region, Kamashi district	5	
31	Forage nurseries and pasture management plans	October 14-16, 2020	Kashkadarya region, Dekhkanabad district	6	
32	Forage nurseries and pasture management plans	October 17-19, 2020	Surkhandarya region, Uzun district	6	
33	Seminar on the care of young juniper plantations for the restoration of high-altitude degraded juniper forests and the creation of joint (community) forest management	September 28, 2021	Kashkadarya region, Kitab district	21	8
34	Seminar on the care of young juniper plantations for the restoration of high-altitude degraded juniper forests and the creation of joint (community) forest management	September 28, 2021	Kashkadarya region, Shakhrisabz district	21	8
35	Seminar on the care of young juniper plantations for the restoration of high-altitude degraded juniper forests and the creation of joint (community) forest management	September 29, 2021	Kashkadarya region, Yakkabag district	31	8

36	Seminar on the care of young juniper plantations for the restoration of high-altitude degraded juniper forests and the creation of joint (community) forest management	September 29, 2021	Kashkadarya region, Kamashi district	22	8
37	Seminar on the care of young juniper plantations for the restoration of high-altitude degraded juniper forests and the creation of joint (community) forest management	September 30, 2021	Kashkadarya region, Dekhkanabad district	26	10
38	Seminar on the care of young juniper plantations for the restoration of high-altitude degraded juniper forests and the creation of joint (community) forest management	September 30, 2021	Surkhandarya region, Uzun district	25	3
39	Rules and procedures for leasing and public-private partnerships in the forestry sector	October 20, 2021	Tashkent city	98	9
40	Fodder plants nurseries management and its agrotechnics	April 7, 2021	Tashkent region, Akhangaran district	9	
41	Fodder plants nurseries management and its agrotechnics	April 15-16, 2021	Kashkadarya region, Kitab district	8	
42	Fodder plants nurseries management and its agrotechnics	April 13, 2021	Kashkadarya region, Shakhrisabz district	8	
43	Fodder plants nurseries management and its agrotechnics	April 14, 2021	Kashkadarya region, Yakkabag district	9	
44	Fodder plants nurseries management and its agrotechnics	April 22, 2021	Kashkadarya region, Kamashi district	12	
45	Fodder plants nurseries management and its agrotechnics	April 4, 2021	Kashkadarya region, Dekhkanabad district	8	
46	Fodder plants nurseries management and its agrotechnics	April 9-10, 2021	Surkhandarya region, Uzun district	11	
47	Organization of pasture user cooperatives and public-private partnership in foothill areas	May 7, 2022	Tashkent region, Butanlyk district	24	8
48	Organization of pasture user cooperatives and public-private partnership in foothill areas	May 16, 2022	Tashkent region, Akhangaran district	27	7
49	Organization of pasture user cooperatives and public-private partnership in foothill areas	May 13, 2022	Kashkadarya region, Kitab district	32	8
50	Organization of pasture user cooperatives and public-private partnership in foothill areas	May 14, 2022	Kashkadarya region, Shakhrisabz district	34	4
51	Organization of pasture user cooperatives and public-private partnership in foothill areas	May 22, 2022	Kashkadarya region, Yakkabag district	28	9
52	Organization of pasture user cooperatives and public-private partnership in foothill areas	May 4, 2022	Kashkadarya region, Kamashi district	28	5
53	Organization of pasture user cooperatives and public-private partnership in foothill areas	May 11, 2022	Kashkadarya region, Dekhkanabad district	33	10
54	Organization of pasture user cooperatives and public-private partnership in foothill areas	May 10, 2022	Surkhandarya region, Uzun district	19	3
				1488	**308**
			% Women		**21**

TAP Training

#	TAP Training	Location	Name of Trainer	Date	Participants	Male	Female
1	Seminar on "Designing of business plans for the development of economic activity, in contrast to the promotion of pasture and forestry"	Tashkent region, Okhangaran district, Ozodlik VCC	Z.Mamadalieva I.Rustamova	June5-6, 2018	70	38	32
2	Seminar on "Designing of business plans for the development of economic activity, in contrast to the promotion of pasture and forestry"	Kashkadarya region, Shakhrisabz district, Hisor VCC	Z.Mamadalieva I.Rustamova	May 29-30, 2018	81	64	17
3	Drafting of applications for micro-grant financing for the development of economic activities other than grazing and contributing to the conservation of forest areas	Tashkent region, Okhangaran district, Ertash village	Z.Mamadalieva	June 20,2018	15	3	12
4	Training workshops on the Project Small Grants Program as a method of stimulating the reduction of pressure on pastures and forests	Tashkent region, Okhangaran district, Markaziy Kurgon VCC	Z.Mamadalieva	July 17,2018	18	14	4
5	Training workshops on the Project Small Grants Program as a method of stimulating the reduction of pressure on pastures and forests	Tashkent region, Parkent district, Changi VCC	Z.Mamadalieva	August 25, 2018	17	11	6
6	Training workshops on the Project Small Grants Program as a method of stimulating the reduction of pressure on pastures and forests	Tashkent region, Bustanlik district, Abay VCC	Z.Mamadalieva	August 25, 2019	16	8	8
7	Training workshops on the Project Small Grants Program as a method of stimulating the reduction of pressure on pastures and forests	Tashkent region, Bustanlik district, T.Dadaboyev VCC	Z.Mamadalieva	August 26, 2020	21	13	8
8	Training workshops on the Project Small Grants Program as a method of stimulating the reduction of pressure on pastures and forests	Kashkadarya region, Shakhrisabz district, Xitoy VCC(Hisor VCC's included)	Z.Mamadalieva	July 18,2018	28	16	12
9	Training workshops on the Project Small Grants Program as a method of stimulating the reduction of pressure on pastures and forests	Kashkadarya region, Kamashi district, Changak VCC(Katta Ura VCC's included)	Z.Mamadalieva	July 19,2018	22	15	7
10	Training workshops on the Project Small Grants Program as a method of stimulating the reduction of pressure on pastures and forests	Kashkadarya region, Yakkabag district, Serob VCC(Samok VCC's included)	Z.Mamadalieva	July 20,2018	24	10	14
11	Familiarization of representatives of local communities living in pilot areas with the Microgrant Financing Program, identification of potential areas for identifying needs and problems in rural	Kashkadarya region, Shakhrisabz	A.Akhadov Z.Mamadalieva	April 17, 2019	50	40	10
12	Familiarization of representatives of local communities living in pilot areas with the Microgrant Financing Program, identification of potential areas for identifying needs and problems in rural gatherings	Tashkent region, Gazalkent city, administrative building of the Ugam-Chatkal State Natural Park	A.Akhadov Z.Mamadalieva	April 19, 2019	30	25	5
13	Familiarization of representatives of local communities living in pilot areas with the Microgrant Financing Program, identification of potential areas for identifying needs and problems in rural	VCC Nurobod, Akhangaran district, Tashkent region	Z.Mamadalieva	August 14, 2019	15	3	12
14	Familiarization of representatives of local communities living in pilot areas with the Microgrant Financing Program, identification of potential areas for identifying needs and problems in rural	VCC Chetsuv , Akhangaran district, Tashkent region	Z.Mamadalieva	August 14, 2019	23	13	10
15	Familiarization of representatives of local communities living in pilot areas with the Microgrant Financing Program, identification of potential areas for identifying needs and problems in rural	VCC Chinar , Akhangaran region, Tashkent region	Z.Mamadalieva	August 15, 2019	12	5	7
16	Familiarization of representatives of local communities living in pilot areas with the Microgrant Financing Program, identification of potential areas for identifying needs and problems in rural	VCC Nevich , Parkent district, Tashkent region	Z.Mamadalieva	August 16, 2019	14	8	6
17	Familiarization of representatives of local communities living in pilot areas with the Microgrant Financing Program, identification of potential areas for identifying needs and problems in rural	VCC Sukok , Parkent district, Tashkent region	Z.Mamadalieva	August 16, 2019	18	10	8
18	Familiarization of representatives of local communities living in pilot areas with the Microgrant Financing Program, identification of potential areas for identifying needs and problems in rural	VCC Kumyshkan , Parkent district, Tashkent region	Z.Mamadalieva	August 16, 2019	12	7	5
19	Familiarization of representatives of local communities living in pilot areas with the Microgrant Financing Program, identification of potential areas for identifying needs and problems in rural	VCC Pskem , Bostanlyk district, Tashkent region	Z.Mamadalieva	August 17, 2019	37	32	5
20	Familiarization of representatives of local communities living in pilot areas with the Microgrant Financing Program, identification of potential areas for identifying needs and problems in rural gatherings	VCC Uzun , Bostanlyk district, Tashkent region	Z.Mamadalieva	August 17, 2019	16	11	5

21	Familiarization of representatives of local communities living in pilot areas with the Microgrant Financing Program, identification of potential areas for identifying needs and problems in rural gatherings	VCC Nanai , Bostanlyk district, Tashkent region	Z.Mamadalieva	August 18, 2019	16	11	5
22	Familiarization of representatives of local communities living in pilot areas with the Microgrant Financing Program, identification of potential areas for identifying needs and problems in rural	VCC Bogustan , Bostanlyk district, Tashkent region	Z.Mamadalieva	August 18, 2019	15	11	4
23	Familiarization of representatives of local communities living in pilot areas with the Microgrant Financing Program, identification of potential areas for identifying needs and problems in rural	VCC Yakkatut , Bostanlyk district, Tashkent region	Z.Mamadalieva	August 18, 2019	8	6	2
24	Familiarization of representatives of local communities living in pilot areas with the Microgrant Financing Program, identification of potential areas for identifying needs and problems in rural	VCC Yangikurgan , Bostanlyk district, Tashkent region	Z.Mamadalieva	August 19, 2019	12	8	4
25	Familiarization of representatives of local communities living in pilot areas with the Microgrant Financing Program, identification of potential areas for identifying needs and problems in rural	VCC Chimgan , Bostanlyk district, Tashkent region	Z.Mamadalieva	August 19, 2019	18	6	12
26	Familiarization of representatives of local communities living in pilot areas with the Microgrant Financing Program, identification of potential areas for identifying needs and problems in rural gatherings	VCC Kul, Shakhrisabz district, Kashkadarya region	Z.Mamadalieva	August 22, 2019	15	14	1
27	Familiarization of representatives of local communities living in pilot areas with the Microgrant Financing Program, identification of potential areas for identifying needs and problems in rural	VCC Gelan , Shakhrisabz district, Kashkadarya region	Z.Mamadalieva	August 23, 2019	18	6	12
28	Familiarization of representatives of local communities living in pilot areas with the Microgrant Financing Program, identification of potential areas for identifying needs and problems in rural gatherings	VCC Sarchashma, Shakhrisabz district, Kashkadarya region	Z.Mamadalieva	August 23, 2019	16	15	1
29	Familiarization of representatives of local communities living in pilot areas with the Microgrant Financing Program, identification of potential areas for identifying needs and problems in rural	VCC Sayyod, Shakhrisabz district, Kashkadarya region	Z.Mamadalieva	August 24, 2019	26	11	15
30	Familiarization of representatives of local communities living in pilot areas with the Microgrant Financing Program, identification of potential areas for identifying needs and problems in rural	VCC Samok, Yakkabag district, Kashkadarya region	Z.Mamadalieva	August 24, 2019	28	9	19
31	Familiarization of representatives of local communities living in pilot areas with the Microgrant Financing Program, identification of potential areas for identifying needs and problems in rural	VCC Changak , Kamashi district, Kashkadarya region	Z.Mamadalieva	August 25, 2019	15	9	6
32	Familiarization of representatives of local communities living in pilot areas with the Microgrant Financing Program, identification of potential areas for identifying needs and problems in rural	VCC Oybek, Dekhkanabad district, Kashkadarya region	Z.Mamadalieva	August 26, 2019	15	11	4
33	Familiarization of representatives of local communities living in pilot areas with the Microgrant Financing Program, identification of potential areas for identifying needs and problems in rural	VCC Polvonsoy, Dekhkanabad district, Kashkadarya region	R.Muradov Z.Mamadalieva	August 26, 2019	12	11	1
34	Familiarization of representatives of local communities living in pilot areas with the Technical assistance Program, identification of potential areas for identifying needs and problems in rural gatherings	DuobaVCC, Baysun district, Surkhandarya region	R.Muradov Z.Mamadalieva	June 22,2021	28	15	13
35	Familiarization of representatives of local communities living in pilot areas with the Technical assistance Program, identification of potential areas for identifying needs and problems in rural gatherings	Khojaidod VCC, Baysun district, Surkhandarya region	R.Muradov Z.Mamadalieva	June 22,2021	18	18	0
36	Familiarization of representatives of local communities living in pilot areas with the Technical assistance Program, identification of potential areas for identifying needs and problems in rural gatherings	Urmonchi VCC, Baysun district, Surkhandarya region	R.Muradov Z.Mamadalieva	June 23, 2021	35	33	2
37	Familiarization of representatives of local communities living in pilot areas with the Technical assistance Program, identification of potential areas for identifying needs and problems in rural	Dekhibolo VCC, Baysun district, Surkhandarya region	R.Muradov Z.Mamadalieva	June 23, 2021	26	2	24
38	Familiarization of representatives of local communities living in pilot areas with the Technical assistance Program, identification of potential areas for identifying needs and problems in rural gatherings	InkabodVCC, Baysun district, Surkhandarya region	R.Muradov Z.Mamadalieva	June 24,2021	24	5	19
39	Familiarization of representatives of local communities living in pilot areas with the Technical assistance Program, identification of potential areas for identifying needs and problems in rural gatherings	Tuda VCC, Baysun district, Surkhandarya region	R.Muradov Z.Mamadalieva	June 24, 2021	35	30	5
40	Familiarization of representatives of local communities living in pilot areas with the Technical assistance Program, identification of potential areas for identifying needs and problems in rural gatherings	Urta MachayVCC, Baysun district, Surkhandarya region	R.Muradov Z.Mamadalieva	June 27, 2021	19	12	7

41	Familiarization of representatives of local communities living in pilot areas with the Technical assistance Program, identification of potential areas for identifying needs and problems in rural gatherings	Yukori MachayVCC, Baysun district, Surkhandarya region	R.Muradov Z.Mamadalieva	June 27, 2021	22	15	7
42	Familiarization of representatives of local communities living in pilot areas with the Technical assistance Program, identification of potential areas for identifying needs and problems in rural gatherings	Kizil Navr VCC, Baysun district, Surkhandarya region	R.Muradov Z.Mamadalieva	June 27, 2021	13	8	5
43	Familiarization of representatives of local communities living in pilot areas with the Technical assistance Program, identification of potential areas for identifying needs and problems in rural gatherings	Sakhovat -Tebat VCC, Kumkurgan district, Surkhandarya region	R.Muradov Z.Mamadalieva	June 28, 2021	31	16	15
44	Familiarization of representatives of local communities living in pilot areas with the Technical assistance Program, identification of potential areas for identifying needs and problems in rural gatherings	Vahshivor-1 VCC, Altinsay district, Surkhandarya region	R.Muradov Z.Mamadalieva	June 29, 2021	66	25	41
45	Familiarization of representatives of local communities living in pilot areas with the Technical assistance Program, identification of potential areas for identifying needs and problems in rural gatherings	Vahshivor-2 VCC, Altinsay district, Surkhandarya region	R.Muradov Z.Mamadalieva	June 29, 2021	27	11	16
46	Familiarization of representatives of local communities living in pilot areas with the Technical assistance Program, identification of potential areas for identifying needs and problems in rural gatherings	Khujaipok VCC, Altinsay district, Surkhandarya region	R.Muradov Z.Mamadalieva	June 30, 2021	17	13	4
47	Familiarization of representatives of local communities living in pilot areas with the Technical assistance Program, identification of potential areas for identifying needs and problems in rural gatherings	Okmachit VCC, Uzun district, Surkhandarya region	R.Muradov Z.Mamadalieva	July 1, 2021	50	28	22
48	Familiarization of representatives of local communities living in pilot areas with the Technical assistance Program, identification of potential areas for identifying needs and problems in rural gatherings	Yangiabad VCC, Uzun district, Surkhandarya region	R.Muradov Z.Mamadalieva	July 1, 2021	30	15	15
49	Familiarization of representatives of local communities living in pilot areas with the Technical assistance Program, identification of potential areas for identifying needs and problems in rural gatherings	Bobotog VCC, Uzun district, Surkhandarya region	R.Muradov Z.Mamadalieva	July 2, 2021	22	5	17
50	Familiarization of representatives of local communities living in pilot areas with the Technical assistance Program, identification of potential areas for identifying needs and problems in rural gatherings	Toltugay VCC, Uzun district, Surkhandarya region	R.Muradov Z.Mamadalieva	July 2, 2021	28	21	7
51	Familiarization of representatives of local communities living in pilot areas with the Technical assistance Program, identification of potential areas for identifying needs and problems in rural gatherings	Nilyu VCC, Sariosiyo district, Surkhandarya region	R.Muradov Z.Mamadalieva	July 4, 2021	21	11	10
52	Familiarization of representatives of local communities living in pilot areas with the Technical assistance Program, identification of potential areas for identifying needs and problems in rural gatherings	Sangardak VCC, Sariosiyo district, Surkhandarya region	R.Muradov Z.Mamadalieva	July 5, 2021	12	4	8
53	Familiarization of representatives of local communities living in pilot areas with the Technical assistance Program, identification of potential areas for identifying needs and problems in rural gatherings	Khonjiza VCC, Sariosiyo district, Surkhandarya region	R.Muradov Z.Mamadalieva	July 5, 2021	18	10	8
54	Familiarization of representatives of local communities living in pilot areas with the Technical assistance Program, identification of potential areas for identifying needs and problems in rural gatherings	Subkhidam VCC, Sariosiyo district, Surkhandarya region	R.Muradov Z.Mamadalieva	July 5, 2021	11	0	11
55	Familiarization of representatives of local communities living in pilot areas with the Technical assistance Program, identification of potential areas for identifying needs and problems in rural gatherings	Khumoyun VCC, Sariosiyo district, Surkhandarya region	R.Muradov Z.Mamadalieva	July 6, 2021	11	9	2
56	Training for local people in pilot regions on creation and organization of guest houses in and foothill areas	Samarkand-Jizzakh	Hotel PRO LLC, Z.Mamadalieva	October, 6-8 2021	21	9	12
	Total				1338	789	549
				% women			41

Annex 5a: Pasture & TAP Location Data & Geo-coordinates

PASTURE UNITS and COOPERATIVES

Region	District	Village	Item Name	Area (ha)	Geo-coordinates	Date Established	Responsible Office
Tashkent	Bustanlyk	Burchmulla	Burchmullo State forestry	353,577	41°35' NL 70°06' EL	2001	Burchmullo State forestry
Tashkent	Akhangaran	Angren	Ahangaran State forestry	146,406	41°01' NL 70°04' EL	2001	Ahangaran State forestry
Kashkadarya	Kitab	Buyuk Ipak yuli	Kitab State forestry	64,747	39°07' NL 66°53' EL	1964	Kitab State forestry
Kashkadarya	Shakhrisabz	Qorasuv	Shahrisabz State forestry	18,672	39°03' NL 66°49' EL	2018	Shahrisabz State forestry
Kashkadarya	Yakkabag	Kenguzar	Yakkabag State forestry	46,239	38°58' NL 66°41' EL	1938	Yakkabag State forestry
Kashkadarya	Kamashi	Kiziltepa	Kamashi State forestry	27,882	38°49' NL 66°27' EL	1936	Kamashi State forestry
Kashkadarya	Dekhkanabad	Qorashina	Dehkanabad State forestry	109,372	38°20' NL 66°33' EL	1924	Dehkanabad State forestry
Surkhandarya	Uzun	Afrosiyob	Uzun State forestry	134,166	38°21' NL 67°59' EL	1984	Uzun State forestry
Kashkadarya	Shakhrisabz	Hisor village	"Hisor yaylovlari" (Hisor pastures)	305	38°54' NL 67°12' EL	2018	Hisor yaylovlari pasture cooperative
Tashkent	Akhangaran	Muminobod village	"Muminoobod chorvasi"	702	40°56' NL 69°49' EL	2018	Muminobod chorva pasture cooperative

TAP LOCATIONS

#	Item	Region	District	Sub-district	Village	Item Name	Geo-coordinates	Date Established	Responsible Office
1	Fruit orchards and cultivation of high-quality feed in the village Vardon	Kashkadarya	Shakhrisabz	Hisor VCC	Vardon	Gulomov Bolta	38.901831123744174, 67.2029485347489	2018	Hisor VCC
2	Creation of a sewing workshop for women in makhalla	Kashkadarya	Shakhrisabz	Hisor VCC	Kamar	Iskandarova Mukhlisa	38.947264, 67.261675	2018	Hisor VCC
3	Creation of almond garden in the foothills	Kashkadarya	Kamashi	Changak	Oqdahana	Zhumaeva Maisara	38.74180198643573, 67.00123400395069	2018	Changak
4	Breeding goat farm in the mountain regions of Akhangaran district	Tashkent	Akhangaran	Markaziy Kurgon	Uvak	LLC "Baraka Kavsar"	41.064957, 70.155704	2018	LLC "Baraka Kavsar"
5	Development of stable animal husbandry in mountain regions	Tashkent	Akhangaran	Markaziy Kurgon	Korabogsoy VCC	Farm enterprise "Qodir Erkin ezgusi"	41.061299, 70.039505	2018	Farm enterprise "Qodir Erkin ezgusi"
6	Preparation and storage of fodder for stable animal husbandry in Maydantal	Tashkent	Bustanlik	Gulobod VCC	Abay	Farm enterprise Qanot	41.45469596455184, 70.05309809875341	2018	Farm enterprise Qanot
7	Refrigeration and drying complex for fruit and vegetable products	Tashkent	Parkent	Nurobod VCC	Changi	Ergashbaeva Dilorom	41.301739018904485, 69.78161413986577	2018	Nurobod VCC
8	Beekeeping in Bostanliq district as an alternative to animal husbandry	Tashkent	Bustanlik	T.Dadabaev VCC	Teke yangok	Birtaeva Arzigul	41.924122 70.372098	2018	T.Dadabaev VCC
9	Gardens on rainfed land that has been degraded	Kashakadarya	Yakkabog	Serob VCC	Minjir	LLC Qodir agro	38.91716693228685, 67.04982829387107	2018	Serob VCC
10	Opening of a veterinary point in Sarchashma village	Kashkadarya	Shakhrisabz	Sarchasma	Sarchasma	Yarov Asad	39.03461711853958, 67.37631767433167	2019	Sarchasma
11	Feed store and domestic services center	Tashkent	Akhangaran	Chinor VCC	Chinor	Khasanova Bazargul	41.06995839858006, 70.20191776643996	2019	Chinor VCC

12	Creation of nut orchard with drip irrigation system	Kashkadarya	Shakhrisabz	Toshbulok VCC	Shurji	Farm enterprise "Salomkhon ugli Odil"	38.977095194216304, 67.11727709673009	2019	Toshbulok VCC
13	Bakery shop	Tashkent	Bustanlik	T.Dadabaev VCC	Teke yangok	Zholdashbaev Chingiz	41.924122 70.372098	2019	T.Dadabaev VCC
14	Creation of an irrigation system in Nevich VCC	Tashkent	Parkent	Nevich	Lolazor	Village council of citizens Nevich	41.191145, 69.783794	2019	Nevich
15	Creation of a wool cleaning shop	Kashkadarya	Dekhkanabad	Kurgantash	Kurgantash	Village council of citizens Kurgantosh	38.76654335291051, 66.6492651716409	2019	Kurgantash
16	Creation of domestic service center	Tashkent	Bustanlik	T.Dadabaev VCC	Teke yangok	Zhorakulov Asadbek	41.924122 70.372098	2019	T.Dadabaev VCC
17	Construction of lightweight greenhouses for citrus crops	Kashkadarya	Yakkabog	Tatar VCC	Tatar	Abdurakhmonova Shokhsanam Nurali kizi	38.846073035534374, 67.08929998625764	2020-21	Tatar VCC
18	Creation of nut orchard in Pskom village	Tashkent	Bustanlik	Pskom	Pskom	Azmetov Shodier Usmonovich	41.923726770839245, 70.3723034545924	2020-21	Pskom
19	Beekeeping development	Tashkent	Bustanlik	T.Dadabaev VCC	Tepar	Amanbaev Bakitzhan Riskulbekovich	41.924122 70.372098	2020-21	T.Dadabaev VCC
20	beekeeping	Kashkadarya	Shakhrisabz	Kul VCC	Kul	Boboev Shernazar Zhumaevich	39.11571187573138, 67.51499934910196	2020-21	Kul VCC
21	Construction of lightweight greenhouses for lemon tree nursery	Kashkadarya	Yakkabog	Tatar VCC	Tatar	Bokieva Gavkhar Abdisamievna	38.846073035534374, 67.08929998625764	2020-21	Tatar VCC
22	Development of guesthouses	Kashkadarya	Shakhrisabz	Kul VCC	Kul	Boboev Ismoil	39.11571187573138, 67.51499934910196	2020-21	Kul VCC
23	Development of guesthouses	Kashkadarya	Shakhrisabz	Kul VCC	Kul	Rahmonov Abdurasul	39.11571187573138, 67.51499934910196	2020-21	Kul VCC
24	Creation of a bakery in Pskom village	Tashkent	Bustanlik	Pskom VCC	Pskom	Mirzoekubova Khilola Yuldoshvoevna	41.923726770839245, 70.3723034545924	2022	Pskom VCC
25	Opening of a public amenities center in Village assembly of citizens Tatar	Kashkadarya	Yakkabog	Tatar VCC	Tatar	Nafasova Mukaddas Aktam kizi	38.846073035534374, 67.08929998625764	2020-21	Tatar VCC
26	Creation of pear garden	Kashkadarya	Yakkabog	Tatar VCC	Tatar	Nuriddinova Gulnoza Akilbek kizi	38.846073035534374, 67.08929998625764	2020-21	Tatar VCC

27	Creation of cherry orchard on undeveloped lands	Kashkadarya	Yakkabog	Tatar VCC	Tatar	Nurmakhmatov Shakhobiddin Saidaslon ugli	38.846073035534374, 67.08929998625764	2020-21	Tatar VCC
28	Workshop for the production of beekeeping equipment	Tashkent	Bustanlik	Pskom VCC	Chakak	LLC «Pskom asali»	41.923726770839245, 70.3723034545924	2020-21	LLC «Pskom asali»
29	Creation of fruit orchards with drip irrigation	Tashkent	Parkent	Kumishkan VCC	Kumishkan	LLC «Sirot fayz plyus»	41.45469596455184, 70.05309809875341	2020-21	LLC «Sirot fayz plyus»
30	Increase and development of beekeeping	Tashkent	Parkent	Kumishkan	Kumishkan	Turaev Ali Yuldashevich	41.317045, 69.848692	2020-21	Kumishkan
31	Pomegranate garden on undeveloped lands	Kashkadarya	Yakkabog	Tatar VCC	Tatar	Khasanov Abdigani Akmal ugli	38.846073035534374, 67.08929998625764	2020-21	Tatar VCC
32	Beekeeping	Kashkadarya	Yakkabog	Tatar VCC	Tatar	Khurramov Shomansurkhon Bakhtiyor ugli	38.846073035534374, 67.08929998625764	2020-21	Tatar VCC
33	Creation of orchard to replace the old one	Tashkent	Bustanlik	T.Dadabaev VCC	Teke yangok	Shukuralieva Zamira Siyabekovna	41.924122 70.372098	2020-21	T.Dadabaev VCC
34	Creation of garden on the former site of landfill	Tashkent	Bustanlik	Pskom VCC	Pskom	Ergashov Shakhzod Murodkhon Ugli	41.923726770839245, 70.3723034545924	2020-21	Pskom VCC
35	Irrigation system in Sanganak VCC	Tashkent	Parkent	Sanganak VCC	Sanganak	Sanganak VCC	41.21576452324895, 69.79284868069352	2020-21	Sanganak VCC
36	Creation of an irrigation system in Pskom VCC	Tashkent	Bustanlik	Pskom VCC	Pskom, Chakak, Chukursoy	Pskom VCC	41.923726770839245, 70.3723034545924	2020-21	Pskom VCC
37	Creation of an irrigation system in Chukur Village	Kashkadarya	Shakhrisabz	Hisor VCC	Chukur	Hisor VCC	38.944705374596396, 67.26488810971506	2020-21	Hisor VCC
38	Creation of an irrigation system in Khisorak village	Kashkadarya	Shakhrisabz	Hisorak VCC	Hisorak	Hisorak VCC	39.016568, 67.269203	2020-21	Hisorak VCC
39	Creation of an irrigation system in Tamshush village	Kashkadarya	Shakhrisabz	Hisorak VCC	Tamshush	Hisorak VCC	39.00851045600394, 67.33235104011688	2020-21	Hisorak VCC
40	beekeeping	Surkhandarya	Sariasiya	VCC Khonzhiza	Khonzhiza	Karimov Abdurakhmon	38.76654335291051, 66.6492651716409	2022	VCC Khonzhiza

41	beekeeping	Surkhandarya	Uzun	VCC Okmachit	Okmachit	Rozikov Dzhura Gulmatovich,	38,0446640, 68,3084820	2022	VCC Okmachit
42	beekeeping	Surkhandarya	Denau	VCC Kukabulok	Kukabulok	Nasullaev Komiljon Asadovich,	38.35227962055987, 67.70208313718177	2022	VCC Kukabulok\
43	Beekeeping	Surkhandarya	Baysun	VCC Tuda	Tuda	Norsaidov Yokub	38.2245280 67.1419850	2022	VCC Tuda
44	Creation of a sewing cooperative in the SSG	Surkhandarya	Uzun	VCC Bobotog	Bobotog	Mustafakulova Makhsuda Abdunazarovna	38,0562370, 68,3291310	2022	VCC Bobotog
45	Creation of a sewing cooperative in the SSG	Surkhandarya	Uzun	VCC Yangiobod	Yangiobod	Kenzhayeva Sayyora Usmon kizi	38.041303, 68.303982	2022	VCC Yangiobod
46	Creation of a sewing cooperative in the SSG	Surkhandarya	Uzun	VCC Toltugay	Toltugay	Elbosheva Bibihon Chori kizi	38.182850, 68.386036	2022	VCC Toltugay
47	Creation of a sewing cooperative in the SSG	Surkhandarya	Denau	VCC Sina-1	Sina-1	Kodirova Zohida	38.363148, 67.693678	2022	VCC Sina-1
48	Creation of a sewing cooperative in the SSG	Surkhandarya	Baysun	VCC Tuda	Tuda	Kudratova Nargiza,	38.2245280 67.1419850	2022	VCC Tuda
49	Greenhouse development	Surkhandarya	Uzun	VCC Bobotog	Bobotog	Mustafakulov Kholbay Ortikovich	38,0562370, 68,3291310	2022	VCC Bobotog
50	Creating a lemon garden at home	Surkhandarya	Uzun	VCC Bobotog	Bobotog	Tagaev Khaitmurod Mamatalievich	38,0562370, 68,3291311	2022	VCC Bobotog
51	Greenhouse development	Surkhandarya	Uzun	VCC Okmachit	Okmachit	Gulomov Sherali Bekmurodovich	38,0446640, 68,3084820	2022	VCC Okmachit
52	Greenhouse development	Surkhandarya	Uzun	VCC Toltugay	Toltugay	Aliev Yigitali Burievich	38.182850, 68.386036	2022	VCC Toltugay
53	Greenhouse development	Surkhandarya	Denau	VCC Kukabulok	Kukabulok	Narziev Otabek Askarovich	38.35227962055987, 67.70208313718177	2022	VCC Kukabulok
54	Creation of a vineyard	Surkhandarya	Uzun	VCC Bobotog	Bobotog	Nurinov Abdusattor	38,0562370, 68,3291310	2022	VCC Bobotog
55	Garden fence 0.5 ha	Surkhandarya	Uzun	VCC Okmachit	Okmachit	Gulomov Tojiddin Saitovich	38,0446640, 68,3084820	2022	VCC Okmachit
56	Pistachio garden on a rainfed land	Surkhandarya	Denau	VCC Oybarak	Oybarak	Bekmurodov Abdurasul	38.3353156834148, 67.73006394235104	2022	VCC Oybarak
57	Building a garden	Surkhandarya	Baysun	VCC Tuda	Tuda	Daminov Mamasodik	38.2245280 67.1419850	2022	VCC Tuda

58	Garden fence 0.5 ha	Surkhandarya	Uzun	VCC Yangiobod	Yangiobod	Eshpulatov Ilyos	38.041303, 68.303982	2022	VCC Yangiobod
59	Creation of a guest house	Surkhandarya	Altinsay	VCC Vakhshivor-1	Vakhshivor-1	Kurbonova Oynisa Elmurodovna	38.331348532714635, 67.62951997430244	2022	VCC Vakhshivor-1
60	Creation of a guest house	Surkhandarya	Altinsay	VCC Vakhshivor-1	Vakhshivor-1	Khatamov Abror Narzullaevich	38.331348532714635, 67.62951997430244	2022	VCC Vakhshivor-1
61	Veterinary service in VCC	Surkhandarya	Sariasiya	VCC Khonzhiza	Khonzhiza	Khamroev Muhammadali	38.76654335291051, 66.6492651716409	2022	VCC Khonzhiza
62	Opening a beauty salon	Surkhandarya	Uzun	VCC Yangiobod	Yangiobod	Eshdavlatova Mamura	38.041303, 68.303982	2022	VCC Yangiobod
63	Roadside Cafe Expansion	Surkhandarya	Uzun	VCC Yangiobod	Yangiobod	Bobokhonova Nasiba	38.041303, 68.303982	2022	VCC Yangiobod
64	Power supply system support	Surkhandarya	Denau	VCC Oybarak	Oybarak	VCC Oybarak	38.3353156834148, 67.73006394235104	2022	VCC Oybarak
65	Farming support	Surkhandarya	Uzun	VCC Yangiobod	Yangiobod	Zhonkobilov Gulboy Yuzboevich on behalf of the VCC	38.041303, 68.303982	2022	VCC Yangiobod
66	Creation of an irrigation system	Surkhandarya	Baysun	VCC Urmonchi	Urmonchi	VCC Urmonchi	38.40026818369764, 67.45030036234333	2022	VCC Urmonchi
67	Providing water to the population	Surkhandarya	Altinsay	VCC Vakhshivor-1	Vakhshivor-1	VCC Vakhshivor-1	38.331348532714635, 67.62951997430244	2022	VCC Vakhshivor-1
68	Water to the population	Surkhandarya	Denau	VCC Sina	Sina	VCC Sina	38.363148, 67.693678	2022	VCC Sina
69	Irrigation system	Surkhandarya	Baysun	VCC Tuda	Tuda	VCC Tuda	38.2245280 67.1419850	2022	VCC Tuda

Annex 6: List of Persons Interviewed

Bahadur Paluaniyazov	UNDP
Liya Ergasheva	UNDP
Gauhar Kudaybergenova	UNDP
Abbos Ahadov	UNDP / PIU / PM
Zulfiya Mamadalieva	UNDP / PIU
Sergei Zagrebin	UNDP / PIU
Rustam Muradov	UNDP / PIU
Bahrom Ikramov	UNDP
Malika Abdusalyamova	UNDP
Josh Brann	UNDP / PIU
Khalilula Sherimbetov	State Ecology Committee
Farruh Khurammov	State Ecology Committee
Jahangir Talipov	SCEEP / International Relations / GEF Focal Point
Tulqin Mirzaev	Ministry of Finance
Golibjon Kurbanov	State Forestry Committee
Zafar Eshonkulov	State Forestry Committee
Hadjimurot Talipov	State Forestry Committee
Holmatov Bakhtiyor	Institute of Zoology
Gritsina Maria	Institute of Zoology
Ramziddin Nizamiddinov	Uzun Forestry Committee
Nodir Narzullaev	Uzun Forestry Committee
Ismat Xaliqnazarov	Uzun Forestry Committee
Dilshod Hujamqulov	Uzun Forestry Committee
Jo'ra Rozikov	Bee farmer
Ganisher Ibragimov	Kashkadarya Forestry Committee
Dilfuza Sattarova	Kashkadarya Forestry Committee
Anvar Jo'raev	Kashkadarya Forestry Committee
Obid Mamayusupov	Kashkadarya Uzdavrloyiha
Bakhtiyor Tursunov	Kashkadarya Uzdavrloyiha
Rajab Valiev	Kashkadarya Uzdavrloyiha
Maqsud Boboev	Kashkadarya Forestry Committee
Qahramon Normuradov	Gissar State Reserve
Bahtiyor Oromov	Gissar State Reserve
Ilhom Gulomov	Cooperative farmer in Qashqadarya
Bolta Gulomov	Farmer in Qashqadarya
Samad Hasanov	Shakhrisabz Mayor's office
Muhammadjon Abulhayrov	Shakhrisabz Mayor's office
Abdusalom Himmatov	Shakhrisabz Forestry Department
Obidjon Abduraimov	Shakhrisabz Forestry Department
Isomiddin Majidov	Kamashi Forestry Department
Hofiz Mamatov	Kamashi Forestry Department
Razzok Hurammov	Kamashi Forestry Department
Dilnoza Jumayeva	Farmer in Kamashi district
Turgun Shokirov	Yakkabog' Forestry Department
Asliddin Haitov	Yakkabog' Forestry Department
Valijon Gofurov	Yakkabog' Forestry Department
Bakhodir Latipv	Yakkabog' Forestry Department
Khikmatullo Gadoev	Household farmer
Gavhar Bokieva	Household farmer
Mirzakul Shodmonov	Farmer in Ahangaron
Alisher Shodmonov	Farmer's son
Rayhon Shodmonova	Farmer's daughter
Muhiddin Usarov	Ahangaron Forestry department
Isomiddin Sultanov	Ahangaron Forestry department
Oybek Holturaev	Cooperative farmer in Ohangaron
Yulduz Holturava	Farmer's wife
Jasur Dustov	Chatkal State Reserve
Aleksandr Esipov	Chatkal State Reserve
Nemat Voisov	Chatkal State Reserve
Abror Pirmatov	Chatkal State Reserve

Annex 7: List of Documents Reviewed

1. Project Identification Form (PIF) and GEF FA strategic program objectives

2. UNDP Initiation Plan and Implementing/Executing partner arrangements / contract

3. UNDP Project Document and Logframe revisions

4. CEO Endorsement Request

5. UNDP Environmental and Social Screening results

6. Project Inception Report

7. Project Implementation Reports (PIRs)

8. Annual Project Reports

9. Minutes of the Project Board Meetings and other meetings (i.e. Project Appraisal Committee meetings)

10. Atlas Risk Register

11. Quarterly progress reports and work plans of the various implementation task teams

12. Annual Work Plans

13. Mid Term Review (MTR) Report

14. MTR Management Response

15. M&E Data management system

16. Audit reports

17. Tracking Tools

18. Oversight mission reports by the project manager, RTA, and others

19. Monitoring reports prepared by the project

20. Financial and Administration guidelines used by Project Team

21. Co-financing realized, itemized according to template provided by TE team

22. Financial expenditures, itemized according to template provided by TE team

23. Project operational guidelines, manuals and systems

24. UNDP Development Assistance Framework (UNDAF/ICF) and Evaluation

25. UNDP Country Programme Document (CPD) and Country Programme Action Plan (CPAP)

26. Project site location maps

27. Project activity maps with management actions and intervention

28. Technical consultancy reports

29. Training materials (PPTs etc.)

30. News and Awareness materials / Photo library / Video films about the projects

31. Project Summary PowerPoint files for the TE

Annex 8: Stakeholder List

Region	City	Stakeholder/beneficiary
Tashkent	Tashkent	State Ecology Committee and its regional branches in Kashkadarya, Tashkent and Surkhandarya regions
Tashkent	Tashkent	State Forestry Committee its regional branches in Kashkadarya, Tashkent and Surkhandarya regions
Tashkent	Tashkent	Zoology Institute
Tashkent	Tashkent	National Railroad Company
Tashkent	Tashkent	Uzhydromet
Tashkent	Tashkent	"Uzdavrloyiha" land planning & administration state enterprise under the Ministry of Agriculture its regional branches in Kashkadarya, Tashkent and Surkhandarya regions
Tashkent	Tashkent	Border Security Service
Kashkadarya	Karshi	Kashkdarya regional khokimiyat
Surkhandarya	Termez	Surkhandarya regional khokimiyat
Tashkent	Bektemir	Tashkent regional khokimiyat
Kashkadarya	Kamashi	Kamashi district khokimiyat
Kashkadarya	Shakhrisabz	Shakhrisabz district khokimiyat
Kashkadarya	Yakkabog	Yakkabog district khokimiyat
Kashkadarya	Kitab	Kitab district khokimiyat
Kashkadarya	Dekhkonobod	Dekhkonobod district khokimiyat
Tashkent	Gazalkent	Bustanlik regional khokimiyat
Tashkent	Akhangaran	Akhnagaran district khokimiyat
Tashkent	Parkent	Parkent district khokimiyat
Surkhandarya	Baysun	Baysun district khokimiyat
Surkhandarya	Uzun	Uzun district khokimiyat
Surkhandarya	Denau	Denau district khokimiyat
Surkhandarya	Altinsay	Altinsay district khokimiyat
Surkhandarya	Sarasiya	Sarasiya distric khokimiyat
Tashkent	Tashkent	NGO Bird Protection Society
Tashkent	Tashkent	NGO Uzbekistan Zoological Society
Kyrgyz Republic	Bishkek	GSLEP
Tashkent	Akhangaran , Bostanlyk	Ugam ChatkalState National Natural Park
Tashkent	Parkent	Chatkal State Biosphere Nature Reserve
Tashkent	Parkent	Ugam Chatkal State Biosphere Reserve
Tashkent	Shakhrisabz, Yakkabag and Kamyshinsky	Gissar Strict Nature Reserve
Tashkent	Bustanlyk	Burchmullo State forestry
Tashkent	Akhangaran	Ahangaran State forestry
Kashkadarya	Kitab	Kitab State forestry
Kashkadarya	Shakhrisabz	Shahrisabz State forestry
Kashkadarya	Yakkabag	Yakkabag State forestry
Kashkadarya	Kamashi	Kamashi State forestry
Kashkadarya	Dekhkanabad	Dehkanabad State forestry
Surkhandarya	Uzun	Uzun State forestry
Kashkadarya	Shakhrisabz	"Hisor yaylovlari" (Hisor pastures)
Tashkent	Akhangaran	"Muminoobod chorvasi"

Annex 9: Rating Scales

The following UNDP-GEF grading scales were applied in the evaluation

Evaluation Criteria

Criteria	Definition
Effectiveness - Objective	- The extent to which an objective has been achieved or how likely it is to be achieved.
Effectiveness - Outcomes	- Results include direct project outputs, short to medium-term outcomes
Relevance	- The extent to which the activity is suited to local and national development priorities and organizational policies, including changes over time. - The extent to which the project is in line with the GEF Operational Programs or the strategic priorities under which the project was funded. (Retrospectively, relevance often becomes a question as to whether the objectives of an intervention or its design are still appropriate given changed circumstances.)
Efficiency	- The extent to which results have been delivered with the least costly resources possible; also called cost effectiveness or efficacy.
Sustainability	- The likely ability of an intervention to continue to deliver benefits for an extended period of time after completion - Projects need to be environmentally, as well as financially and socially sustainable
Impact	- The positive and negative, foreseen and unforeseen changes to and effects produced by a development intervention. - Longer term impact including global environmental benefits, replication effects and other local effects.

Rating Scale for Outcomes (Overall, Effectiveness & Efficiency)

Highly Satisfactory (HS)	The project had no shortcomings in the achievement of its objectives in terms of effectiveness (outcomes), or efficiency. The project is expected or has achieved its global environmental objectives. The project can be presented as 'good practice'.
Satisfactory (S)	There were only minor shortcomings The project is expected or has achieved most of its global environmental objectives.
Moderately Satisfactory (MS)	There were moderate shortcomings The project is expected or has achieved most of its relevant objectives but with moderate / significant shortcomings or modest overall relevance. The project isn't going to achieve some of its key global environmental objectives
Moderately Unsatisfactory (MU)	The project had significant shortcomings The project is expected to achieve its global environmental objectives with major shortcomings or is expected to achieve only some of its major global environmental objectives.
Unsatisfactory (U)	There were major shortcomings in the achievement of project objectives in terms of effectiveness, or efficiency The project is not expected to achieve most of its global environment objectives
Highly Unsatisfactory (HU)	The project had severe shortcomings The project has failed to achieve any of its major environment objectives

Or Not Applicable (N/A); Unable to Assess (U/A)

Note

Overall Outcome: Achievement of the project objective will be rated HS to U.

Effectiveness: Each of the project's three outcomes will be rated HS to U. The colour coding of the individual indicator targets in **Annex 1** will partially help determine the grade. Each of the outcome indicators will also each be given a grade (in the justification column), however the final rating for each of the three outcomes will be due to appropriate weighting in terms of attaining project objectives. This means that professional judgement of the TE team will also be a key consideration.

Efficiency: An overall rating for cost-effectiveness will be provided

Rating Scale for Outcome (Relevance)

Relevant (R)	Not relevant (NR)

Rating Scale for Implementing Agency (IA) and Executing Agency (EA) Execution

Highly Satisfactory (HS)	The agency had no shortcomings in the achievement of their objectives in terms of quality of implementation or execution. Implementation of all five given management categories – IA or EA coordination & operational matters, partnership arrangements & stakeholder engagement, finance & co-finance, M&E systems, and adaptive management (work planning, reporting & communications, including update to project design) – has led to an efficient and effective project implementation. The agency can be presented as providing 'good practice'
Satisfactory (S)	The agency had only minor shortcomings in terms of the quality of implementation or execution. Implementation of most of the five management categories has led to an efficient and effective project implementation
Moderately Satisfactory (MS)	The agency had moderate shortcomings Implementation of some of the five management categories has led to a moderately efficient and effective project implementation
Moderately Unsatisfactory (MU)	The agency had significant shortcomings Implementation of some of the five management categories has not led to efficient and effective project implementation
Unsatisfactory (U)	There agency had major shortcomings in the quality of implementation or execution Implementation of most of the five management categories had not led to efficient and effective project implementation
Highly Unsatisfactory (HU)	The agency had severe shortcomings with poor management leading to inefficient and ineffective project implementation

Rating Scale for Monitoring & Evaluation

Highly Satisfactory (HS)	The M&E system – its design and implementation had no shortcomings in the support of achieving project objectives. The M&E system was highly effective and efficient and supported the achievement of major global environmental benefits. The M&E system and its implementation can be presented as 'good practice'.
Satisfactory (S)	The M&E system – its design and implementation had minor shortcomings in the support of achieving project objectives. The M&E system was effective and efficient and supported the achievement of most of the major global environmental benefits, with only minor shortcomings
Moderately Satisfactory (MS)	The M&E system – its design and implementation had moderate shortcomings in the support of achieving project objectives. The M&E system supported the achievement of most of the major relevant objectives, but had significant shortcomings or modest overall relevance
Moderately Unsatisfactory (MU)	The M&E system – its design and implementation had major shortcomings in the support of achieving project objectives. The M&E system supported the achievement of most of the major environmental objectives, but with modest relevance
Unsatisfactory (U)	The M&E system – its design and implementation had major shortcomings and did not support the achievement of most project objectives. The M&E system was not effective or efficient
Highly Unsatisfactory (HU)	The M&E system failed in its design and implementation in terms of being effective, efficient or supporting project environmental objectives or benefits.

Rating Scale for Sustainability

Likely (L)	Negligible risks to sustainability with key Outcomes achieved by the project closure and expected to continue into the foreseeable future
Moderately Likely (ML)	Moderate risks, but expectations that at least some Outcomes will be sustained
Moderately Unlikely (MU)	Significant risk that key Outcomes will not carry on after project closure, although some outputs should carry on
Unlikely (U)	Severe risks that project Outcomes as well as key outputs will not be sustained

According to UNDP-GEF evaluation guidelines, all risk dimensions of sustainability are critical: i.e., the overall rating for sustainability is not higher than the lowest-rated dimension.

Ratings should take into account both the probability of a risk materializing and the anticipated magnitude of its effect on the continuance of project benefits.

Risk definitions:

      a)   Whether financial resources will be available to continue activities resulting in continued benefits

      b)   Whether sufficient stakeholder awareness and support is present for the continuation of activities providing benefit

      c)   Whether required systems for accountability / transparency & technical know-how are in place

      d)   Whether environmental risks are present that can undermine the future flow of the project benefits.

Rating Scale for Impact[1]

Significant (S)	Minimal (M)	Negligible (N)

Project Impact is rated as Significant; Minimal or Negligible, but also the positive or negative aspect of the impact will be stated.

Concerning impact, the TE will consider the extent of

      a)   Verifiable improvement in ecological status; and/or

      b)   Verifiable reductions in stress on ecological systems

      c)   Regulatory and policy changes at regional, national and/or local levels

Process indicators will be specified to demonstrate achievement of stress reduction and/or ecological improvement.

Part of the impact assessment, will concern catalytic effect. The TE will consider if the project exhibited

      a)   Scaling up (to regional and national levels)

      b)   Replication (outside of the project),

      c)   Demonstration, and/or

      d)   Production of a public good, such as new technologies /approaches)

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[1] The rating scale for Impact has been discontinued under the 2020 guideline

Annex 10: Mission Itinerary

Wednesday, 6 July 2022			
Time	Venue	Participants	Activity
5:00 PM		**Mr. Richard Sobey**, International Consultant on Terminal Evaluation	Arrival in Tashkent - Hotel Alpha Plaza, Tashkent
Thursday, 7 July 2022, Meetings in Tashkent city			
Time	Venue	Participants	Activity
10:00 – 12:00	UNDP Country Office	*UNDP CO:* - Matilda Dimovska, RR; Doina Munteanu, DRR - Bakhadur Paluaniyazov, Environment and Climate Action (ECA) Cluster Leader - Gaukhar Kudaybergenova, Programme Associate, ECA Cluster; Liya Ergasheva, SPIU Head *Project personnel:* - Abbos Akhadov, project manager	- Introduction - Terminal Evaluation purposes and expectations
12:00 – 14:00	Lunch		
14:00 – 18:00	Project office	*Project personnel:* - Mr. Abbos Akhadov, project manager - Ms. Zulfiya Mamadalieva, project grants manager - Mr. Sergey Zagrebin, field coordinator on protected areas - Mr. Rustam Murodov, field coordinator on pastures and forests - Mr. Bakhrom Ikramov, Admin-Finance Assistant; - Ms. Malika Abdusalyamova, senior procurement assistant - Elena Turaeva, PR Assistant	- Introduction - Terminal Evaluation purposes and expectations - Field trip discussion
Friday, 8 July 2022, Meetings in Tashkent city			
10:00 – 10:20	State Ecology Committee office	*State Ecology Committee personnel:* - Mr. Jusipbek Kazbekov, Deputy Chairman, National Project Coordinator *Project personnel:* - Mr. Abbos Akhadov, project manager - Mr. Sergey Zagrebin, field coordinator on protected area	Introduction and discussion of terminal evaluation objectives, interviews
10:20 – 10:40	State Ecology Committee office	*State Ecology Committee personnel:* - Mr. Jakhongir Talipov, Head of International Relations Department, GEF operational focal point *Project personnel:* - Mr. Abbos Akhadov, project manager - Mr. Sergey Zagrebin, field coordinator on protected area	Introduction and discussion of terminal evaluation objectives, interviews
10:40 – 11:30	State Ecology Committee office	*State Ecology Committee personnel:* - Mr. Khalilulla Sherimbetov, Head of Protected Areas Department - Mr. Farrukh Khurramov, expert of Wildlife Cadaster Department *Project personnel:* - Mr. Abbos Akhadov, project manager - Mr. Sergey Zagrebin, field coordinator on protected areas	Introduction and discussion of terminal evaluation objectives, interviews
12:00 – 13:00	Ministry of Finance office	*Agricultural production and environmental protection finance department of the Ministry of Finance*: - Mr. Tulqin Mirzaev, Head *Project personnel:* - Mr. Abbos Akhadov, project manager	Introduction and discussion of terminal evaluation objectives, interviews

		- Mr. Sergey Zagrebin, field coordinator on protected areas	
13:00 – 14:00	Lunch		
14:30 – 15:30	State Forestry Committee office	*State Forestry Committee personnel:* - Mr. Khajimurat Talipov, Deputy Head of Afforestation Department *Project personnel:* - Mr. Abbos Akhadov, project manager - Mr. Rustam Murodov, field coordinator on pastures and forests	Introduction and discussion of terminal evaluation objectives, interviews
16:00 – 17:00	Institute of Zoology office	*Institute of Zoology of Academy of Sciences*: - Ms. Elena Bykova, wildlife monitoring scientist *Project personnel:* - Mr. Abbos Akhadov, project manager	Introduction and discussion of terminal evaluation objectives, interviews
18:00	Hotel		
Saturday, 9 July 2022, Tashkent			
Time	**Venue**	**Participants**	**Activities**
09:00-18:00	Project office.	*Terminal Evaluation Team:* - Mr. Richard Sobey, International TE expert - Mr. Aziz Karimov, National TE expert	Terminal Evaluation team time
Sunday, 10 July 2022, trip to Surkhandarya region			
Time	**Venue**	**Participants**	**Activities**
08:00 – 18:00	Road trip	*Project personnel:* - Mr. Abbos Akhadov, project manager - Mr. Rustam Murodov, field coordinator on pastures and forests	Departure to and arrival in Denau district, hotel accommodation
Monday, 11 July 2022, meetings in Surkhandarya region			
Time	Venue	Participants	Activities
08:00 – 10:00	Road trip	*Project personnel:* - Mr. Abbos Akhadov, project manager - Mr. Rustam Murodov, field coordinator on pastures and forests	Departure to Uzun district, hotel accommodation
10:30 – 18:00	Meetings with Uzun state forestry unit: - Administration building - Pilot nursery sites - Pasture areas	*Project personnel:* - Mr. Abbos Akhadov, project manager - Mr. Rustam Murodov, field coordinator on pastures and forests	Introduction and exchange of information, TE interviews, lunch
18:00	Hotel		
Tuesday, 12 July 2022, meetings in Surkhandarya region			
Time	Venue	Participants	Activities
09:00 – 13:00	Visits to Technical Assistance Programme (TAP - microgrants) project sites in Uzun district: - Beekeeping project	*Project personnel:* - Mr. Abbos Akhadov, project manager - Mr. Rustam Murodov, field coordinator on pastures and forests	Introduction and exchange of information, TE interviews, lunch
14:00 – 19:00	Road trip	*Project personnel:* - Mr. Abbos Akhadov, project manager - Mr. Rustam Murodov, field coordinator on pastures and forests	Departure to and arrival in Karshi city, Kashkadarya region. Hotel accommodation – overnight in Karshi city
Wednesday, 13 July 2022, meetings in Kashkadarya region			
Time	Venue	Participants	Activities

9:00 – 10:00	Meeting with Kashkadarya regional State Ecology Committee department	*Project personnel:* - Mr. Abbos Akhadov, project manager - Mr. Rustam Murodov, field coordinator on pastures and forests	Introduction and exchange of information, TE interviews
10:30 – 11:30	Meeting with Kashkdarya regional State Land Research Institute "Uzdavrloyiha" (land projection)	*Project personnel:* - Mr. Abbos Akhadov, project manager - Mr. Rustam Murodov, field coordinator on pastures and forests	Introduction and exchange of information, TE interviews
11:30 – 12:30	Meeting with Kashkdarya regional State Forestry Committee department	*Project personnel:* - Mr. Abbos Akhadov, project manager - Mr. Rustam Murodov, field coordinator on pastures and forests	Introduction and exchange of information, TE interviews
12:30 – 13:30	Lunch		
13:30 – 15:00	Road trip	*Project personnel:* - Mr. Abbos Akhadov, project manager - Mr. Rustam Murodov, field coordinator on pastures and forests	Departure to and arrival in Shakhrisabz city, Kashkadarya region.
15:00 – 18:00	Meeting at Gissar State Nature Reserve administration building	*Project personnel:* - Mr. Abbos Akhadov, project manager - Mr. Rustam Murodov, field coordinator on pastures and forests	Introduction and exchange of information, TE interviews. Hotel accommodation - overnight in Shakhrisabz city

Thursday, 14 July 2022, meetings in Kashkadarya region			
Time	**Venue**	**Participants**	**Activities**
08:00 -15:00	1) Meeting with makhalla (local community) leaders 2) TAP project sites - Shakhrisabz district: - Water supply for rural communities project - Orchard creation project 3) Visit to Associated Pasture Use project site	*Project personnel:* - Mr. Abbos Akhadov, project manager - Ms. Zulfiya Mamadalieva, project grants manager - Mr. Sergey Zagrebin, field coordinator on protected areas - Mr. Rustam Murodov, field coordinator on pastures and forests	Introduction and exchange of information, TE interviews, lunch
15:00 – 17:00	Depart to and arrive in Shakhrisabz city		
17:00 – 18:00	Meeting with Shakhrisabz district khakimiyat (district administration)	*Project personnel:* - Mr. Abbos Akhadov, project manager - Mr. Rustam Murodov, field coordinator on pastures and forests	Introduction and exchange of information, TE interviews. Overnight in Shakhrisabz city

Friday, 15 July 2022, meetings in Kashkadarya region			
Time	**Venue**	**Participants**	**Activities**
08:00 – 14:00	Field visit to Shakhrisabz state forestry unit nursery: - Tree nursery - Pasture nursery and pasture areas	*Project personnel:* - Mr. Abbos Akhadov, project manager - Mr. Rustam Murodov, field coordinator on pastures and forests	Introduction and exchange of information, TE interviews, lunch
14:00 – 18:00	Field visit to Kamashi state forestry unit nursery: - Tree nursery - Pasture nursery and pasture areas	*Project personnel:* - Mr. Abbos Akhadov, project manager - Mr. Rustam Murodov, field coordinator on pastures and forests	Introduction and exchange of information, TE interviews. Hotel - overnight in Shakhrisabz city

Saturday, 16 July 2022, meetings in Kashkadarya region			
Time	**Venue**	**Participants**	**Activities**
8:00 – 12:00	Field visit to Yakkabag state forestry unit nursery: - Tree nursery	*Project personnel:* - Mr. Abbos Akhadov, project manager	Introduction and exchange of information, TE interviews

| Time	Venue	Participants	Activities
	- Pasture nursery and pasture areas	- Mr. Rustam Murodov, field coordinator on pastures and forests	
12:00 – 13:00	Lunch		
13:00 – 18:00	1) Meeting makhalla (community) leaders 2) Visits to TAP sites in Yakkabag district: - Orchard creation projects - Growing fruits / vegetables in greenhouse - Beekeeping project	*Project personnel:* - Mr. Abbos Akhadov, project manager - Mr. Rustam Murodov, field coordinator on pastures and forests	Introduction and exchange of information, TE interviews
18:00	Hotel – overnight in Shakhrisabz city		
Sunday, 17 July 2022, Meetings in Tashkent region			
Time	**Venue**	**Participants**	**Activities**
08:00 – 14:00	Road trip	*Project personnel:* - Mr. Abbos Akhadov, project manager - Mr. Rustam Murodov, field coordinator on pastures and forests - Josh Brann, project international technical advisor (ITA)	Depart to and arrive in Akhangaran district, Tashkent region, lunch and hotel accommodation
14:00 – 18:00	Visits to Technical Assistance Programme (TAP - microgrants) project sites in Akhangaran district: - Goat farm project	*Project personnel:* - Mr. Abbos Akhadov, project manager - Mr. Rustam Murodov, field coordinator on pastures and forests - Josh Brann, project international technical advisor (ITA)	Introduction and exchange of information, TE interviews. Hotel accommodation in Angren city
Monday, 18 July 2022, meetings in Tashkent region			
Time	**Venue**	**Participants**	**Activities**
8:00 – 14:00	Field visit to Akhangaran state forestry unit nursery: - Tree nursery - Pasture nursery and pasture areas	*Project personnel:* - Mr. Abbos Akhadov, project manager - Mr. Rustam Murodov, field coordinator on pastures and forests - Josh Brann, project international technical advisor (ITA)	Introduction and exchange of information, TE interviews, lunch
14:00 – 18:00	Visit to the Associated Pasture Use project site: - Mountain pastures	*Project personnel:* - Mr. Abbos Akhadov, project manager - Mr. Rustam Murodov, field coordinator on pastures and forests - Josh Brann, project international technical advisor (ITA)	Introduction and exchange of information, TE interviews. Hotel – overnight in Angren city
Tuesday, 19 July 2022, meetings in Tashkent region			
Time	**Venue**	**Participants**	**Activities**
09:00 – 10:00	Road trip	*Project personnel:* - Mr. Abbos Akhadov, project manager - Mr. Rustam Murodov, field coordinator on pastures and forests - Josh Brann, project international technical advisor (ITA)	Depart to and arrive in Parkent district
10:00 – 14:00	Meeting at Chatkal State Biosphere Reserve administration building in Parkent district	*Project personnel:* - Mr. Abbos Akhadov, project manager - Mr. Rustam Murodov, field coordinator on pastures and forests - Josh Brann, project international technical advisor (ITA)	Introduction and exchange of information, TE interviews, lunch
14:00	Depart to and arrive in Tashkent city		
Wednesday, 20 July 2022, meetings in Tashkent city			
Time	**Venue**	**Participants**	**Activities**
10:00 – 18:00	Project office	*Project personnel:*	TE field trip discussion, filling gaps

		Participants	
		- Mr. Abbos Akhadov, project manager	
		- Josh Brann, project international technical advisor (ITA)	
		- Ms. Zulfiya Mamadalieva, project grants manager	
		- Mr. Sergey Zagrebin, field coordinator on protected areas	
		- Mr. Rustam Murodov, field coordinator on pastures and forests	
		- Mr. Bakhrom Ikramov, Admin-Finance Assistant;	
		- Ms. Malika Abdusalyamova, senior procurement assistant	
		- Elena Turaeva, PR Assistant	

| Thursday, 21 July 2022, meetings in Tashkent city			
Time	**Venue**	**Participants**	**Activities**
10:00 – 14:00	UNDP Country Office	*UNDP CO staff:* - Bakhadur Paluaniyazov, Environment and Climate Action (ECA) Cluster Leader - Gaukhar Kudaybergenova, Programme Associate, ECA Cluster - Liya Ergasheva, SPIU Head *Project personnel:* - Mr. Abbos Akhadov, project manager - Josh Brann, project international technical advisor (ITA) - Ms. Zulfiya Mamadalieva, project grants manager - Mr. Sergey Zagrebin, field coordinator on protected areas - Mr. Rustam Murodov, field coordinator on pastures and forests - Mr. Bakhrom Ikramov, Admin-Finance Assistant; - Ms. Malika Abdusalyamova, senior procurement assistant - Elena Turaeva, PR Assistant *Project partners:* - State Ecology Committee; State Forestry Committee; Institute of Zoology	TE briefing seminar, lunch
14:00 – 16:00	UNDP CO	*UNDP CO:* - Matilda Dimovska, RR; Doina Munteanu, DRR *Project personnel:* Abbos Akhadov, project manager	UNDP Wrap-up meeting with senior management and Programme Unit

| Friday, 22 July 2022			
Time	**Venue**	**Participants**	**Activities**
9:05AM Flight Departure #TK369		**Mr. Richard Sobey**, International Consultant on Terminal Evaluation	Departure from Tashkent – Leave for airport 5:45 AM

Annex 11: Map

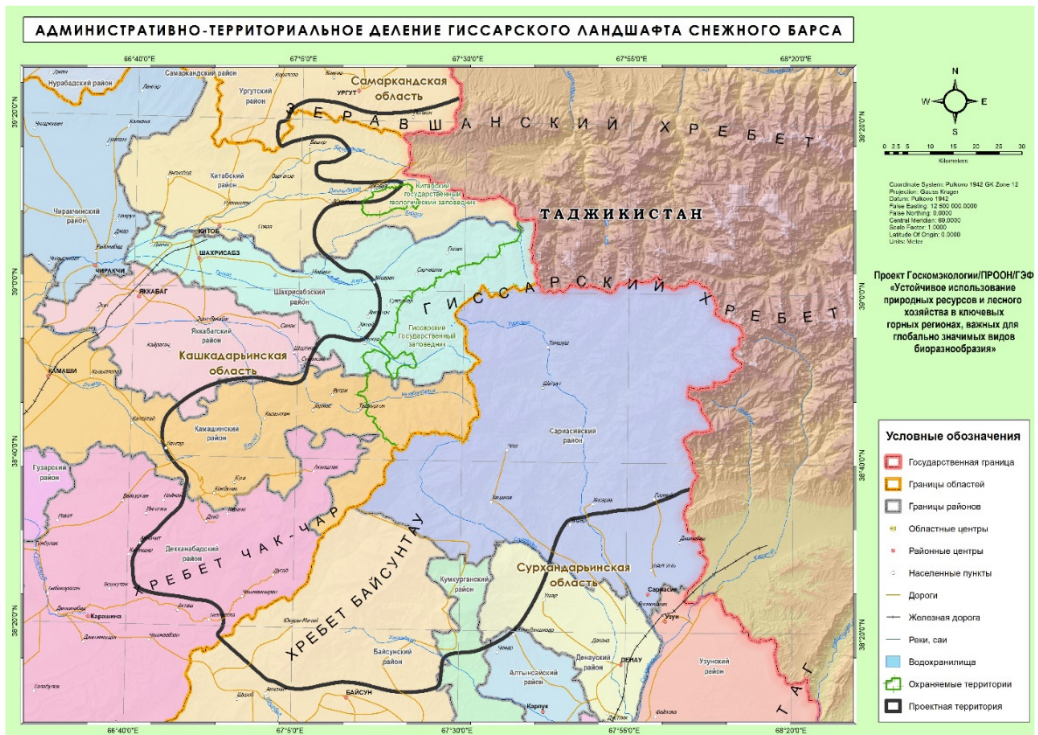Project location in Ugam Chatkal Snow Leopard Landscape
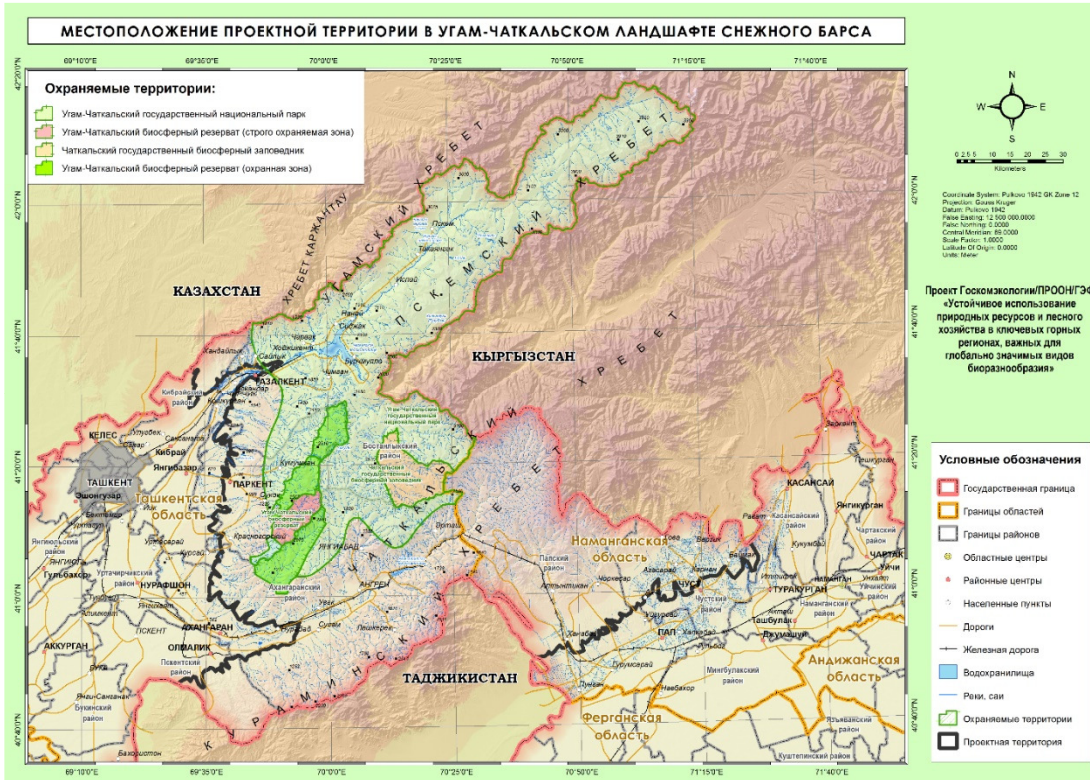
Project location in Gissar Snow Leopard Landscape
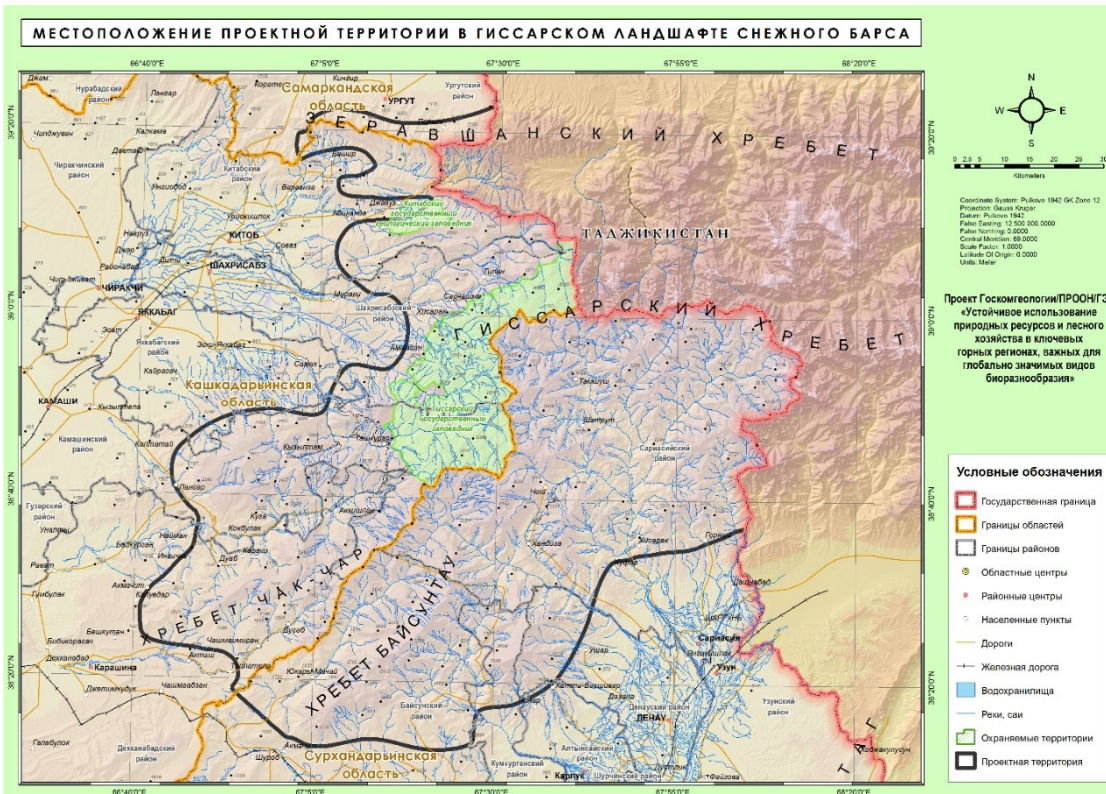
Administrative boundaries of Ugam Chatkal Snow Leopard Landscape
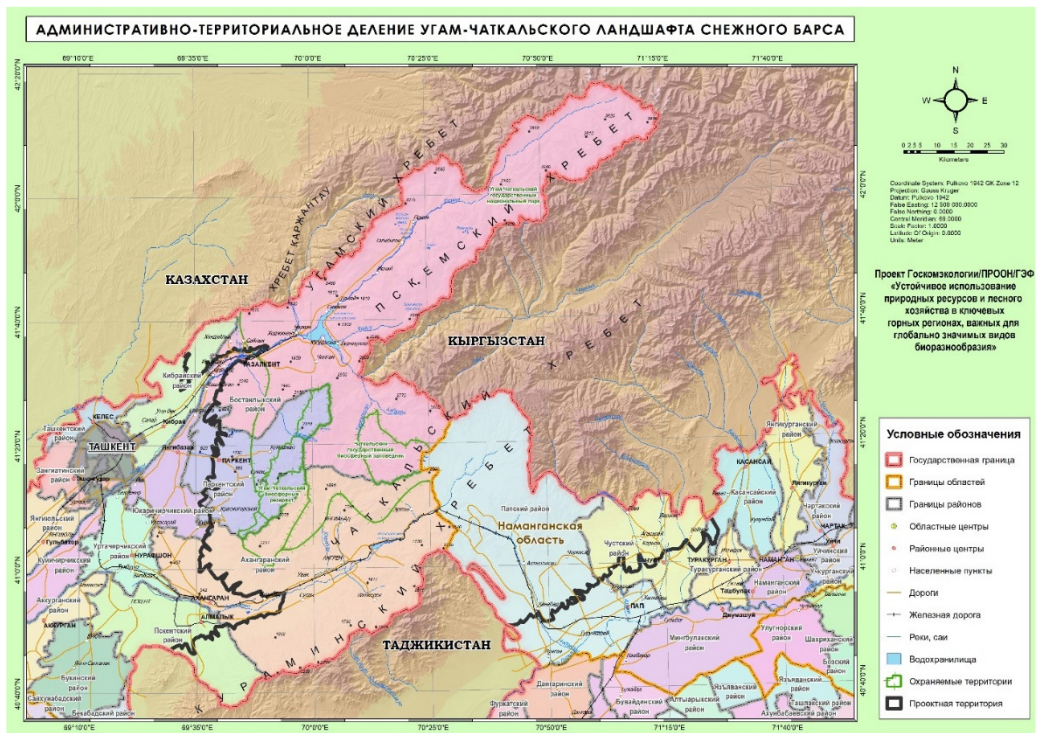
Administrative boundaries of Gissar Snow Leopard Landscape

Annex 12: Indicative TE Evaluation Matrix

This questionnaire was used as a general aid during the field visit with the results described in section 3. (Note there is no further information to be presented in the blank boxes.)

Evaluation Question	Response / Finding	Conclusion/ Recommend
Relevance: How does the project relate to the main objectives of the GEF FA, and to the environment and development priorities at the local, regional and national levels?		
Effectiveness: To what extent have the expected outcomes and objectives of the project been achieved?		
Efficiency: Was the project implemented efficiently, in-line with international and national norms and standards?		
Sustainability: To what extent are there financial, institutional, social-economic, and/or environmental risks to sustaining long-term project results?		
Impact: Are there indications that the project has contributed to, or enabled progress toward, reduced environmental stress and / or improved ecological status		
Findings discussion – 3 areas - Project formulation, project implementation, and project results.		
Project Strategy		
Project Design:		
To what extent is the project in line with national and local priorities?		
To what extent is the Project aligned to the main objectives of the GEF focal area?		
Have synergies with other projects and initiatives been incorporated in the design?		
Were lessons from other relevant projects properly incorporated into the project design?		
Decision-making processes: were perspectives of those who would be affected by project decisions, those who could affect the outcomes, and those who could contribute information or other resources to the process, taken into account during project design processes?		
Have issues materialized due to incorrect assumptions or changes to the context to achieving the project results as outlined in the Project Document?		
Results Framework:		
Are the project objective / outcomes clear, practicable, & feasible within its time frame?		
Were the project's logframe indicators and targets appropriate? How "SMART" were the midterm and end-of-project targets (Specific, Measurable, Attainable, Relevant, Time-bound)? Any amendments?		
Progress towards Results		
Progress towards Outcomes Analysis:		
Review the logframe indicators against delivery at end-of-project targets using the Results Matrix (see Annex).		
Compare and analyse the GEF Tracking Tool at the Baseline, MTR and End.		
Which barriers hindered achievement of the project objective		
PROJECT FORMULATION		
Were the project's objectives and components clear, practicable and feasible within its time frame? Were the capacities of the executing institution(s) and its counterparts properly considered when the project was designed? Were lessons from other relevant projects properly incorporated in the project design? Were the partnership arrangements properly identified and roles and responsibilities negotiated prior to project approval? Were counterpart resources (funding, staff, and facilities), enabling legislation, and adequate project management arrangements in place at project entry? Were the project assumptions and risks articulated in the PIF and project document? Whether the planned outcomes were SMART		
ASSUMPTIONS AND RISKS		
As per logframe - Logical and robust, and have helped to determine activities and planned outputs.		
Externalities (i.e. effects of climate change, global economic crisis, etc.) which are relevant to the findings.		
Project Implementation & Adaptive Management		
GEF Partner Agency / Implementing Entity – UNDP		
Has there been an appropriate focus on results?		
Has the UNDP support to the Executing Agency/Implementing Partner and Project Team been adequate?		
Has the quality and timeliness of technical support to the Executing Agency/ Implementing Partner and Project Team been adequate?		
How has the responsiveness of the managing parties to significant implementation problems (if any) been?		
Has overall risk management been proactive, participatory, and effective?		
Are there salient issues regarding project duration, for instance to note project delays? And, how have they affected project outcomes and sustainability?		
Candor and realism in annual reporting		
Executing Agency/ Implementing Partner Execution		
Were the capacities of the executing institution(s) and its counterparts properly considered when the Project was designed?		
Were partnership arrangements properly identified and roles and responsibilities negotiated prior to Project approval?		
Were counterpart resources, enabling legislation, and adequate project management arrangements in place at Project entry?		
Have management inputs and processes, including budgeting and procurement been adequate?		

Has there been adequate mitigation and management of environmental and social risks as identified through the UNDP Environmental and Social screening procedure?		
Whether there was an appropriate focus on results and timeliness? Quality of risk management? Candor and realism in reporting?		
Government ownership (when NEX) or level of support if 'in cooperation with' the IP.		
Work Planning / PROJECT IMPLEMENTATION		
Effective partnerships arrangements established for implementation of the project with relevant stakeholders involved in the country/region, including the formation of a Project Board. Lessons from other relevant projects incorporated into project implementation.		
Feedback from M&E activities used for adaptive management.		
Has the project experienced delays in start-up and/or implementation? What were the causes of the delays? And, have the issues been resolved?		
Were work-planning processes results-based?		
Did the project team use the results framework/ logframe as an M&E and a management tool?		
Were there any changes to the logframe since project start, and have these changes been documented and approved by the project board?		
FINANCE & CO-FINANCE		
Prodoc Did the prodoc identify potential sources of co-financing as well as leveraged and associated financing? Prodoc include strong financial controls that allowed the project management to make informed decisions regarding the budget, allow for the timely flow of funds and for the payment of project deliverables Did the prodoc demonstrate due diligence in the management of funds, including periodic audits.		
Sufficient clarity in the reported co-financing to substantiate in-kind and cash co-financing from all listed sources. The reasons for differences in the level of expected and actual co-financing. The extent to which project components supported by external funders were integrated into the overall project. Effect on project outcomes and/or sustainability from the extent of materialization of co-financing. Evidence of additional, leveraged resources that have been committed as a result of the project. (Leveraged resources can be financial or in-kind and may be from other donors, NGOs, foundations, governments, communities or the private sector)		
Cost-effective factors Compliance with the incremental cost criteria and securing co-funding and associated funding. Project completed the planned activities and met or exceeded the expected outcomes in terms of achievement of Global Environmental and Development Objectives according to schedule, and as cost-effective as initially planned. The project used either a benchmark approach or a comparison approach (did not exceed the costs levels of similar projects in similar contexts)?		
Standard Finance questions (see MTR) Have strong financial controls been established allow the project management to make informed decisions regarding the budget at any time, and allow for the timely flow of funds and the payment of satisfactory project deliverables?		
Are there variances between planned and actual expenditures? If yes, what are the reasons behind these variances?		
Has the project demonstrated due diligence in the management of funds, including annual audits?		
Have there been any changes made to the fund allocations as a result of budget revisions? Assess the appropriateness and relevance of such revisions.		
Has pledged cofinancing materialized? If not, what are the reasons behind the cofinancing not materializing or falling short of targets?		
Project-level Monitoring and Evaluation Systems		
The quality of the Monitoring and Evaluation (M&E) plan's design and implementation: An M&E plan should include a baseline (including data, methodology, etc.), SMART indicators and data analysis systems, MTR, TE, and adequate funding for M&E activities.		
M&E plan at project start up, considering whether baseline conditions, methodology and roles and responsibilities are well articulated. Is the M&E plan appreciated? Is it articulated sufficiently to monitor results and track progress toward achieving objectives?		
Were sufficient resources allocated effectively to M&E?		
Were there changes to project implementation / M&E as a result of the MTR recommendations?		
Are the M&E systems appropriate to the project's specific context? - effectiveness of monitoring indicators from the project document for measuring progress and performance		
Do the monitoring tools provide the necessary information? Do they involve key partners? Are they aligned or mainstreamed with national systems? Do they use existing information? Are they efficient? Are they cost-effective?		
To what extent has the Project Team been using inclusive, innovative, and participatory monitoring systems?		
To what extent have follow-up actions, and/or adaptive management measures, been taken in response to the PIRs? Check to see whether APR/PIR self-evaluation ratings were consistent with the MTR and TE findings. If not, were these discrepancies identified by the project steering committee and addressed?		
Compliance with the progress and financial reporting requirements/ schedule, including quality and timeliness of reports		
The value and effectiveness of the monitoring reports and evidence that these were discussed with stakeholders and project staff		
The extent to which development objectives are built into monitoring systems: How are perspectives of women and men involved and affected by the project monitored and assessed?		

How are relevant groups' (including women, indigenous peoples, children, elderly, disabled, and poor) involvement with the project and the impact on them monitored?		
Has there been adequate mitigation and management of environmental and social risks as identified through the UNDP Environmental and Social screening procedure?		
STAKEHOLDER ENGAGEMENT		
Are the interactions as per the prodoc? Stakeholder interactions include information dissemination, consultation, and active participation in the project.		
Project management: Has the project developed and leveraged the necessary and appropriate partnerships with direct and tangential stakeholders?		
Participation and country-driven processes: Do local and national government stakeholders support the objectives of the project? Do they continue to have an active role in project decision-making that supports efficient and effective project implementation?		
Participation and public awareness: How has stakeholder involvement and public awareness contributed to the progress towards achievement of project objectives?		
Are there any limitations to stakeholder awareness of project outcomes or to stakeholder participation in project activities? Is there invested interest of stakeholders in the project's long-term success and sustainability?		
Reporting:		
How have adaptive management changes been reported by the Project Team and shared with the Project Board?		
How well have the Project Team and partners undertaken and fulfil GEF reporting requirements (i.e. how have they addressed poorly-rated PIRs?), and suggest trainings etc. if needed?		
How have PIRs been shared with the Project Board and other key stakeholders?		
How have lessons derived from the adaptive management process been documented, shared with key partners and internalized by partners, and incorporated into project implementation?		
Communication:		
Internal project communication with stakeholders: Is communication regular and effective? Are there key stakeholders left out of communication? Are there feedback mechanisms when communication is received? Does this communication with stakeholders contribute to their awareness of project outcomes and activities and long-term investment in the sustainability of project results?		
External project communication: Are proper means of communication established or being established to express the project progress and intended impact to the public (is there a web presence, for example? Or did the project implement appropriate outreach and public awareness campaigns?)		
Are there possibilities for expansion of educational or awareness aspects of the project to solidify a communications program, with mention of proper funding for education and awareness activities? What aspects of the project might yield excellent communications material, if applicable?		
ADAPTIVE MANAGEMENT		
Changes in the environmental and development objectives of the project during implementation, why these changes were made and what was the approval process. Causes for adaptive management: a) original objectives were not sufficiently articulated; b) exogenous conditions changed, due to which a change in objectives was needed; c) project was restructured because original objectives were overambitious; d) project was restructured because of a lack of progress;		
How these changes were instigated and how these changes affected project results: - Did the project undergo significant changes as a result of recommendations from the MTR? Or as a result of other review procedures? Explain the process and implications. - If the changes were extensive, did they materially change the expected project outcomes? - Were the project changes articulated in writing and then considered and approved by the project steering committee?		
PROJECT RESULTS		
A 'result' is defined as a describable or measurable development change resulting from a cause-and-effect relationship. In GEF terms, results include direct project outputs, short- to medium-term outcomes, and longer-term impact including global environmental benefits, replication effects, and other local effects. Assess the results based management (RBM) chain, from inputs to activities, to outputs, outcomes and impacts.		
Assess the project results using indicators and relevant tracking tools		
BROADER ASPECTS OF PROJECT OUTCOMES		
Country Ownership		
Project concept had its origin within the national sectoral and development plans?		
Have Outcomes (or potential outcomes) from the project have been incorporated into the national sectoral and development plans? Has the government enacted legislation and/or developed policies and regulations in line with the project's objectives?		
Relevant country representatives (e.g., governmental official, civil society, etc.) were actively involved in project identification, planning and/or implementation, part of steering committee?		
Was an intergovernmental committee given responsibility to liaise with the project team, recognizing that more than one ministry should be involved?		
The recipient government has maintained financial commitment to the project?		
Mainstreaming (Broader Development and Gender)		
Whether broader development and gender issues had been taken into account in project design and implementation?		
In what way has the project contributed to greater consideration of gender aspects, (i.e. project team composition, gender-related aspects of environmental impacts, stakeholder outreach to women's groups, etc). If so, indicate how.		
Did the MTR recommend improvements to the logframe with SMART 'development' indicators, including sex-disaggregated indicators and indicators that capture development benefits? - Were these taken up?		
1. Whether it is possible to identify and define positive or negative effects of the project on local populations (e.g. income generation/ job creation, improved natural resource management arrangements with local groups, improvement in policy frameworks for resource allocation and distribution, regeneration of natural resources for long term sustainability).		

2. If the project objectives conform to agreed priorities in the UNDP country programme document (CPD) and country programme action plan (CPAP).		
3. Whether there is evidence that the project outcomes have contributed to better preparations to cope with natural disasters.		
The mainstreaming assessment should take note of the points of convergence between UNDP environment-related and other development programming.		
Sustainability		
Risk Management		
Are the risks identified in the Project Document, Annual Project Review/PIRs and the ATLAS Risk Management Module the most important? And, are the risk ratings applied appropriate and up to date? If not, explain why.		
Financial Risks to Sustainability (of the project outcomes)		
What is the likelihood of financial and economic resources not being available once the GEF assistance ends? (This might include funding through government - in the form of direct subsidies, or tax incentives, it may involve support from other donors, and also the private sector. The analysis could also point to macroeconomic factors.)		
What opportunities for financial sustainability exist?		
What additional factors are needed to create an enabling environment for continued financing?		
Has there been the establishment of financial and economic instruments and mechanisms to ensure the ongoing flow of benefits once the GEF assistance ends (i.e. from the public and private sectors, income generating activities, and market transformations to promote the project's objectives)?		
Socio-Economic Risks to Sustainability:		
Are there social or political risks that may threaten the sustainability of project outcomes?		
What is the risk that the level of stakeholder ownership (including ownership by governments and other key stakeholders) will be insufficient to allow for the project outcomes/benefits to be sustained? Do the various key stakeholders see that it is in their interest that the project benefits continue to flow?		
Is there sufficient public/ stakeholder awareness in support of the project's long-term objectives?		
Have lessons learned been documented by the Project Team on a continual basis?		
Are the project's successful aspects being transferred to appropriate parties, potential future beneficiaries, and others who could learn from the project and potentially replicate and/or scale it in the future?		
Institutional Framework and Governance Risks to Sustainability:		
Do the legal frameworks, policies, governance structures and processes pose risks that may jeopardize project benefits?		
Has the project put in place frameworks, policies, governance structures and processes that will create mechanisms for accountability, transparency, and technical knowledge transfer after the project's closure?		
How has the project developed appropriate institutional capacity (systems, structures, staff, expertise, etc.) that will be self-sufficient after the project closure date?		
How has the project identified and involved champions (i.e. individuals in government and civil society) who can promote sustainability of project outcomes?		
Has the project achieved stakeholders' (including government stakeholders') consensus regarding courses of action on project activities after the project's closure date?		
Does the project leadership have the ability to respond to future institutional and governance changes (i.e. foreseeable changes to local or national political leadership)? Can the project strategies effectively be incorporated/mainstreamed into future planning?		
Environmental Risks to Sustainability:		
Are there environmental factors that could undermine and reverse the project's outcomes and results, including factors that have been identified by project stakeholders? E.g. climate change risk to biodiversity		
Impact - Progress towards the achievement of impacts		
Verifiable improvements in ecological status (or via process indicators to show it is likely in the future)? Verifiable reductions in stress on ecological systems (via process indicators)? E.g. as a result of the project, there have been regulatory and policy changes at regional, national and/or local levels? (Use tracking tools and indications from baseline to target)		
Identify the mechanisms at work (i.e. the causal links to project outputs and outcomes);		
Assess the extent to which changes are taking place at scales commensurate to natural system boundaries; and		
Assess the likely permanence (long lasting nature) of the impacts.		
On the basis of the outcome and sustainability analyses, identify key missing elements as that are likely to obstruct further progress.		
Theory of Change – Identify project intended impacts – verify logic – analyse project outcome to impact pathway		
Based on the theory of change (building blocks, catalysts etc), has the progress towards impact has been significant, minimal or negligible.		
Catalytic role		
Scaling up - Approaches developed through the project are taken up on a regional / national scale, becoming widely accepted, and perhaps legally required		
Replication - Activities, demonstrations, and/or techniques are repeated within or outside the project, nationally or internationally		
Demonstration - Steps have been taken to catalyze the public good, for instance through the development of demonstration sites, successful information dissemination and training		

Producing a public good –
    (a)   The lowest level of catalytic result, including for instance development of new technologies and approaches.
    (b) No significant actions were taken to build on this achievement, so the catalytic effect is left to 'market forces'		

Annex 13: Signed UNEG Code of Conduct Agreement Form

Independence entails the ability to evaluate without undue influence or pressure by any party (including the hiring unit) and providing evaluators with free access to information on the evaluation subject. Independence provides legitimacy to and ensures an objective perspective on evaluations. An independent evaluation reduces the potential for conflicts of interest which might arise with self-reported ratings by those involved in the management of the project being evaluated. Independence is one of ten general principles for evaluations (together with internationally agreed principles, goals and targets: utility, credibility, impartiality, ethics, transparency, human rights and gender equality, national evaluation capacities, and professionalism).

Evaluators/Consultants:

1. Must present information that is complete and fair in its assessment of strengths and weaknesses so that decisions or actions taken are well founded.
2. Must disclose the full set of evaluation findings along with information on their limitations and have this accessible to all affected by the evaluation with expressed legal rights to receive results.
3. Should protect the anonymity and confidentiality of individual informants. They should provide maximum notice, minimize demands on time, and respect people's right not to engage. Evaluators must respect people's right to provide information in confidence, and must ensure that sensitive information cannot be traced to its source. Evaluators are not expected to evaluate individuals, and must balance an evaluation of management functions with this general principle.
4. Sometimes uncover evidence of wrongdoing while conducting evaluations. Such cases must be reported discreetly to the appropriate investigative body. Evaluators should consult with other relevant oversight entities when there is any doubt about if and how issues should be reported.
5. Should be sensitive to beliefs, manners and customs and act with integrity and honesty in their relations with all stakeholders. In line with the UN Universal Declaration of Human Rights, evaluators must be sensitive to and address issues of discrimination and gender equality. They should avoid offending the dignity and self-respect of those persons with whom they come in contact in the course of the evaluation. Knowing that evaluation might negatively affect the interests of some stakeholders, evaluators should conduct the evaluation and communicate its purpose and results in a way that clearly respects the stakeholders' dignity and self-worth.
6. Are responsible for their performance and their product(s). They are responsible for the clear, accurate and fair written and/or oral presentation of study imitations, findings and recommendations.
7. Should reflect sound accounting procedures and be prudent in using the resources of the evaluation.
8. Must ensure that independence of judgement is maintained, and that evaluation findings and recommendations are independently presented.
9. Must confirm that they have not been involved in designing, executing or advising on the project being evaluated and did not carry out the project's Mid-Term Review.

Evaluation Consultant Agreement Form

Agreement to abide by the Code of Conduct for Evaluation in the UN System:

Name of Evaluator: Mr R T Sobey

I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.

Signed at Worcester, UK on 1st July 2022

Signature: _____ _____

Annex 14: Signed TE Final Report Clearance Form

<table>
<tr><td colspan="2" align="center">Terminal Evaluation Report Reviewed and Cleared By:</td></tr>
<tr><td colspan="2">Commissioning Unit</td></tr>
<tr><td colspan="2">Name:</td></tr>
<tr><td>Signature:</td><td>Date:</td></tr>
<tr><td colspan="2">UNDP-GEF Regional Technical Advisor</td></tr>
<tr><td colspan="2">Name:</td></tr>
<tr><td>Signature:</td><td>Date:</td></tr>
</table>

Annex 15: Terms of Reference

As the presented on the UNDP ERC webpage