



United Nations Development Programme
Country: Kyrgyzstan
Project Document



Project Title:	Conservation of globally important biodiversity and associated land and forest resources of Western Tian Shan mountain ecosystems to support sustainable livelihoods
Country Programme Outcome(s) and Output(s):	Outcome 6: <i>By the end of 2016 sustainable management of energy, environment and natural resources practices operationalized</i> Output 6.1: <i>Environmental sustainability/eco system approach and adaptation to and mitigation of climate change consequences is reflected and integrated into national, sectoral and local development plans</i>
Executing Entity/Implementing Partner:	UNDP
Implementing Entity / Responsible Partners:	State Agency for Environment Protection and Forestry (SAEPF)

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GEF	USD	3,988,575
National Government	USD	14,864,800
Local Government	USD	3,200,000
UNDP	USD	5,527,383
Bilateral Partners	USD	627,000
NGOs	USD	300,000

Agreed by (UNDP):

Mr. Alexander Avanesov
Resident Representative

17 MAR 2017

Date/Month/Year

Brief Description

The Western Tian Shan is one of the world's 200 priority ecoregions and one of 34 global biodiversity hotspots, and has been designated as a natural World Heritage Site. The Tian Shan act as a bridge connecting fauna and flora of Himalayas and Hindu Kush across Pamir with biota of Siberia, and across Dzungar Ala-Tau and Altay with biota of Mongolia, which results in a unique combination of fauna and flora elements. In the Western Tian Shan, fauna and flora are characterized by high diversity and concentration in a relatively small area. In terms of flora, higher plants number more than 2,500 species, and endemism of the flora is 12%; vertebrates number well over 400 species. However, many of the Western Tian Shan's species and unique ecosystems are threatened by poor forest and land management; the region is home to 54 Red List plant species, and 27 Red List species of fauna, including the snow leopard. The forests of Western Tian Shan have juniper, spruce, maple, nut, fruit, and tugai forest communities, including fruit and nut wild relatives, but the regions forest resources are shrinking. These forests suffer from inadequate forest management and enforcement, and are degraded by intensive land use, such as overgrazing of forest pastures. The rate of natural regeneration and reforestation is unable to keep pace with the rate of forest degradation. The grassland areas of the Western Tian Shan are subject to extensive, uncontrolled agro-pastoral land use. Growing livestock numbers lead to extensive unregulated use of mountainous grasslands for grazing and causes high disturbance to wild ungulates such as argali and ibex, key snow leopard prey species. The rangelands of Western Tian Shan are susceptible to overgrazing, droughts, and inadequate natural regeneration in the face of these pressures. Today, over 60% of pastures in Western Tian are eroded and the quality of pastures has declined by four times compared to 1980s levels.

The proposed project draws on a landscape conservation and management approach, understanding that not only Key Biodiversity Areas (KBA), but also buffer zones, corridors and sustainable forest and pasture management in wider landscape are the key to the conservation of biodiversity, and the sustainable use of forest and land resources. This includes the survival of snow leopard and its prey species, as well as sustainable local community development. The project is organized into three components.

Component I is focused on key biodiversity areas: PAs and HCVFs. This includes operationalizing two new PAs (87,323 ha) for underrepresented globally significant species that were formally established in anticipation of this project. In addition, the management capacity for four previously established PAs (total of 198,776 ha) in the Western Tian Shan will be strengthened. HCVF areas (40,839 ha) will be formally recognized and conserved, and enhanced forest management capacity will be developed.

Component II will ensure continuity and congruence between KBAs and use of land and forest resources in wider productive landscapes. There are two administrative districts adjoining to the PAs in question: Toktogul and Toguz-Toro. The project will assist in integration of SFM and SLM approaches to improve land use practice reducing degradation and erosion. For the two new protected areas buffer zones and corridors (50,000 ha) will be established and integrated in spatial planning (with total indirect coverage of 944,317 ha), with modified resource use in these areas focused on sustainable economic activities, such as managed hunting areas, regulated grazing, and ecotourism. The project aims to institute SLM in pasturelands (147,268 ha) used by four target communities neighboring PAs, which will lead to restoration of least 65,361 ha of degraded pastures in Toktogul and Toguz-Toro districts. Targeted restoration of degraded forest ecosystems will be undertaken of approximately 4,886 ha.

Component III links activities supporting snow leopard conservation under Components I and II with relevant activities at the national level. This includes building the capacity of Kyrgyzstan stakeholders with respect to implementation of the National Strategy for Snow Leopard Conservation (NSSLSC) for 2013-2023. Support will be provided to deploy unified international snow leopard monitoring standards, with support targeted to priority national snow leopard conservation landscapes. It will also support application of international standards in wildlife trafficking enforcement, and provide opportunities for appropriate trainings and exchange with other countries in the snow leopard range.

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ACRONYMS

ADB	Asian Development Bank
A/A	Aiyl Aimak, Rural District
A/O	Aiyl Okmotu, Local Self-Government
APO	Annual Plan of Operation
APR	Annual Progress Report
ARIS	Agency for Development and Investment of Communities (Rus)
ATLAS	UN operations information system
AWP	Annual Work Plan
BC	Before Christ
BD	Biodiversity
BD TT	(GEF) Biodiversity Tracking Tool
BioFin	UNDP Project to support sustainable financing for biodiversity conservation
CAMP	Central Asia Mountain Partnership
CBD	Convention on Biological Diversity
CBO	Community Based Organization
CCD	Convention to Combat Desertification
CITES	Convention on International Trade in Endangered Species
CMS	Convention on Migratory Species
CO	(UNDP) Country Office
COP	Conference of Parties
CPD	Country Programme Document
CPAP	Country Programme Action Plan
DC	Dimension Chief
DIM	Direct Implementation Mode
DNA	Deoxyribonucleic acid
DP	Department of Pastures under the Ministry of Agriculture, Processing Industry and Melioration
DRM	Disaster Risk Management
DSA	Daily Subsistence Allowance
EX-ACT	Ex-Ante Carbon-balance Tool Developed by FAO
EBRD	European Bank for Reconstruction and Development Bank
EEU	Eurasian Economic Union
E-PMC	Electronic Pasture Committee Information System
ERC	(UNDP) Evaluation Resource Centre
EURECA	Environmental Program of the European Union for Central Asia
FAO	Food and Agriculture Organization of UN
(UN)FCCC	UN Framework Convention on Climate Change
FFI	Flora and Fauna International (INGO)
FLERMONECA	Forest and Biodiversity Governance Including Environmental Monitoring
FLEG	Forest Law Enforcement and Governance in Central Asia
FMP	Forest Management Plan
FSC	Forest Stewardship Council, international organization promoting SFM certification

GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Global Environment Facility
GIS	Geographical Information System
GIZ	German federal enterprise for international cooperation
GPS	Global Positioning System
GSLEP	Global Snow Leopard & Ecosystems Protection Programme
HCVF	High Conservation Value Forest
HDI	Human Development Index
HR	Human Resources
IBA	Important Bird Area
IDA	International Development Assistance
IFAD	International Fund for Agricultural Development
INGO	International Non Governmental Organizations
INRM	Integrated Natural Resource Management
INTERPOL	International Police Organization
IRRF	(UNDP) Integrated Results and Resources Framework
IT	Information Technology
IUCN	International Union for the Conservation of Nature
JFM	Joint Forest Management
KAFLU	Kyrgyzstan Association of Forest and Land Users
KCBTA	Kyrgyz Community Based Tourism Association
<u>LU</u>	Livestock Unit (= 1 cow)
<u>LD</u>	Land Degradation
<u>LD PMAT TT</u>	(GEF) Land Degradation Portfolio Monitoring and Tracking Tool
MAPIM	Ministry of Agriculture, Processing Industry and Melioration
METT	(Protected Areas Management) Monitoring Effectiveness Tracking Tool
M&E	Monitoring and Evaluation
MONECA	Environmental monitoring in Central Asia
MOU	Memorandum of Understanding
MSC	Marine Stewardship Council, INGO promoting sustainable fishery
MSP	(GEF) Medium-Size Project
MTR	Mid-Term Review
MSME	Micro, Small and Medium-sized Enterprise
NABU	Nature And Biodiversity Conservation Union (German INGO)
NBSAP	National Biodiversity Strategy and Action Plan
NEAP	National Environmental Action Plan
NGO	Non-Government Organization
NSSD	National Strategy for Sustainable Development
NSSLC	National Strategy on Snow Leopard Conservation
NTFP	Non Timber Forest Products
PAA	Project Administrative Assistant
PA	Protected Area
PB	Project Board

PC	Project Coordinator
PIR	Project Implementation Report
PIMS	Project Information Management Systems
PMC	Pasture Management Committee
PMP	Pasture Management Plan
PMU	Project Management Unit
PPA	Program and Policy Analyst
PPCR	Pilot Program on Climate Resilience
PPG	Project Preparation Grant
PPR	Project Progress Report
PTSD	Program of Transition to Sustainable Development
PUA	Pasture Users Association
QPR	Quarterly Progress Report
RDF	Rural Development Fund
RFNP	Republic Fund for Nature Protection
RSC	Regional Service Centre
RTA	Regional Technical Adviser
SAEPF	State Agency for Environment Protection and Forestry
SALAGIR	State Agency on Local Self-Governance and Interethnic Relations
SC	Steering Committee
SFF	State Forest Fund (woodlands managed by the state forest management units)
SFM	Sustainable Forest Management
SFM TT	(GEF) SFM Tracking Tool
SMART	Specific, Measurable, Achievable, Relevant, Time-bound
SLM	Sustainable Land Management
SLT	Snow Leopard Trust
SLF	Snow Leopard Fund
SIGI	Social Institutions and Gender Index
SNP	State Nature Park
SPNA	Special Protected Nature Area
SRS	State (real estate) Registration Service
ToR	Terms of Reference
UN	United Nations
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNDAF	UN Development Assistance Framework
UNESCO	United Nations Education, Science and Culture Organization
UNV	UN Volunteers
WB	World Bank
WHS	World Heritage Site
WWF	World Wide Fund for Nature

SECTION I: ELABORATION OF THE NARRATIVE

PART I: Situation Analysis

Context and Global Significance

Geographical Context

1. Kyrgyzstan (officially known as the Kyrgyz Republic) is a landlocked country in the center of Eurasia spanning an area of 199,900 square kilometers. It is bordered by Kazakhstan to the north, China to the east and southeast, Tajikistan to the southwest and Uzbekistan to the west (see Figure 1). Kyrgyzstan acts as a natural crossroads between flora and fauna of Kazakhstan, Uzbekistan and China, which are different biogeographic provinces. The Tian Shan and Alay ranges act as a bridge connecting fauna and flora of Himalayas and Hindu Kush across Pamir with biota of Siberia, and across Dzhungar Ala-Tau and Altay with biota of Mongolia. This geographic positioning result in a unique combination of different fauna and flora elements, and underpins the significance of the biodiversity of Kyrgyzstan and the need for its conservation in the regional context.

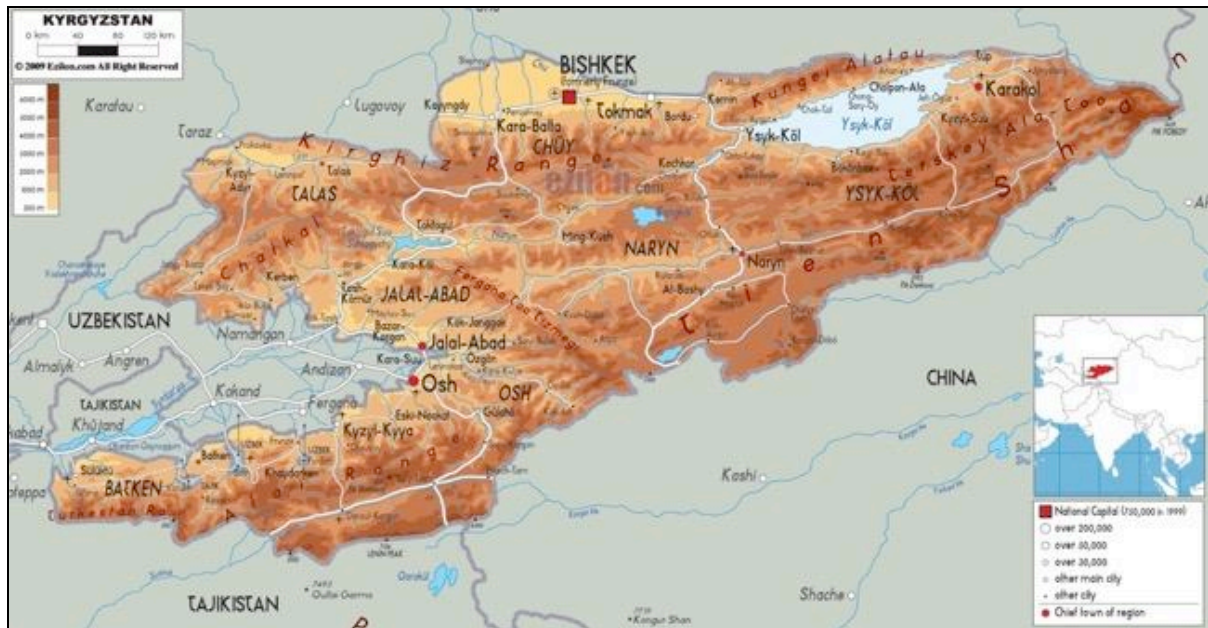
2. Altitudes in Kyrgyzstan range from 132 to 7,439 meters above sea level, with the mountain system of the Tian Shan (merging into the Pamir-Alay in the south-west) accounting for approximately 90% of the country's area. The Tian Shan Mountains in Kyrgyzstan are generally described in several segments as follows: Northern Tian Shan (Chui valley and Kungei Alatau), Central Tian Shan (mostly Issyk Kul province), Inner Tian Shan (Naryn province), Western Tian Shan (Talas and Jalal-Abad provinces) and Southwest Tian Shan (Osh and Batken provinces). In terms of administrative boundaries, the Western Tian Shan falls primarily within Jalal-Abad and Talas provinces.

3. The Western Tian Shan is located between 67 - 76° eastern longitudes and 40 - 45° northern latitudes. The main axis of the Kyrgyz part of the Western Tian Shan is oriented from northwest to southeast, and is formed by the Talas and Fergana ridges. The axis of the Chatkal ridge goes from the Talas ridge to southwest. The Western Tian Shan are embedded between the Kyzyl-Kum and Moyun-Kum deserts, and borders the Northern and Inner Tian Shan. From the north, northwest, and east it surrounds the Fergana Valley, the edges of which form a portion of Kyrgyzstan's western border with Uzbekistan. It differs from other parts of Tian Shan with relatively weak glaciation, lesser altitudes, and relatively mild climate (average atmospheric temperature in January is 5-10° C, and 10-15° C in July) with a fair quantity of precipitation (800 and more millimeters in mid-mountainous areas). The irregular topography of the Western Tian Shan has created numerous microclimates, depending on altitude terrain, topography of the site and exposure.

4. The Western Tian Shan does not have many lakes. The most well-known lake is Sary-Chelek, which is encompassed within a biosphere reserve. Smaller moraine or dammed origin lakes are located in the gorges of the tributaries of the main rivers of the area. All the rivers of the Western Tian Shan belong to the Syr Darya River watershed, with multiple tributaries to the Syr Darya River. The largest river in Kyrgyzstan, the Naryn River, runs through the territory of the Western Tian Shan, drawing 31% of the total surface runoff of the country. The Kara-Darya, Kugart, Kara Unkur, Chatkal are also important rivers within the Fergana Valley, irrigating large tracts of land. The main source of the rivers is the glacial and snowmelt from the extensive alpine territory. Within Jalal-Abad province there are a number of artificial reservoirs on the Naryn River, including Toktogul reservoir, which is the largest reservoir not only in the south of the Kyrgyz Republic, but also in Central Asia. Toktogul reservoir has a capacity of 19.5 km³ of water.

5. Although the Tian Shan range lies in an arid part of Central Asia, the Tian Shan Mountains are high enough to block moist arctic air from the northwest, especially during winter. At the higher elevations, annual precipitation of 400 to 800 mm is enough to support subalpine conifer forests in some locations and a variety of steppe and meadow communities, stratified by elevation, over extensive areas throughout the range. At the lower elevations, annual precipitation totals of 100 to 200 mm support steppe grassland vegetation.

Figure 1 Map of the Kyrgyz Republic



6. The compound high altitude relief of Kyrgyzstan situated in the southern part of the temperate zone creates favorable conditions for existence of many types of natural ecosystems, ranging from deserts to high altitude mountainous tundra. There are 20 classes of ecosystems. The diversity of ecosystems, however, is unevenly distributed within the country, being more richly represented in the Western Tian Shan and Central Tian Shan bio-geographical regions, each having 16 out of 20 classes of ecosystems, or 72.7% of their whole diversity. The rich diversity of plant and animal wealth can be attributed to the high mountainous systems of Tian Shan and Pamir-Alay that reach up to 7,000 kilometers above sea level and accumulate moisture from the upper reaches of the atmosphere. High mountains are islands of biological diversity among monotonous plains.

7. According to studies conducted by national academia and foresters in the framework of the Kyrgyz-Swiss Forestry Sector Support Program KIRFOR in 2006-2008, there are eight forest zones in the Kyrgyz Republic¹: (see also the map in Annex 1).

- 1) Turkestan-Alai area, with mostly juniper and shrubs; some broad-leaved species along floodplains; conifers.
- 2) Fergana-Alai area, with mostly shrubs and juniper forests; conifers and broad-leaved species.
- 3) Fergana-Chatkal, where all forest types are present with most part of walnut trees; pistachios; broadleaved forests.
- 4) Chatkal area, with mostly shrubs and juniper forests.
- 5) Talas area, with mostly shrubs and juniper forests; coniferous (spruce / fir); broad-leaved (floodplain) species.
- 6) Chui-Kemin area, with mostly shrubs, juniper and conifer forests (eastern part) and broad-leaved species along floodplains
- 7) Issyk-Kul area, dominated by conifers and shrubs with some juniper; broad-leaved along floodplains.
- 8) Inner Tian Shan area, mostly also dominated by conifers and shrubs with some juniper and broad-leaved (floodplains).

Biodiversity Context

8. Kyrgyzstan lies squarely within the Mountains of Central Asia biodiversity hotspot, one of Conservation International's 34 global biodiversity hotspots and one of WWF's Global 200 priority ecoregions for global conservation. Considering the high conservation value of the Western Tian Shan transboundary ecoregion, in 2010 Kyrgyzstan, Kazakhstan and Uzbekistan applied to have the ecoregion inscribed on the UNESCO World Heritage List, as a natural site possessing outstanding natural characteristics. On July 17th 2016, during the 40th session of the World Heritage Committee in Istanbul, the

¹ The Typology of Forests of the Kyrgyz Republic. Ennio Grisa, Bronislav Venglovsky, Zakir Sarymsakov, Gabriele Carraro. SAEPP, Swiss Foundation Intercooperation in Kyrgyzstan. Bishkek, 2008.

Western Tian Shan was approved as a World Heritage site. There are three wetlands of designated global significance in Kyrgyzstan under the Ramsar Convention: Issyk-Kul, Song-Kul and Chatyr-Kul. There are 11 identified Important Bird Areas (IBAs) and two international biosphere reserves, Issyk-Kul and Sary-Chelek.

9. There are a rich diversity of resources – species, ecosystems and landforms concentrated in the Kyrgyz Republic. Despite the fact that the Kyrgyz Republic is a small country in terms its total area (0.13% of the world's land), it includes one of two hundred priority ecoregions on the planet. This is due to a high concentration of species diversity; about 2% of the world's known flora and 3% of the world's known fauna can be found in the country.² Kyrgyzstan's territory differs by its high level of biodiversity concentration not only on ecosystem, but on species level too. About 26,500 types of plants, animals, fungi, viruses, and bacteria have been recorded in the diverse ecosystems in the Kyrgyz Republic. The most extensive group in the fauna of the Kyrgyz Republic is insects, represented by approximately 15,910 species. The list of vertebrate animals now includes 593 species: 70 species of fish, 4 amphibians, 39 types of reptile, 396 bird species, and 84 species of mammals. Additional detailed information about the national biodiversity context is included in Annex 2.

10. In the Western Tian Shan, flora and fauna are characterized by high diversity and concentration in a relatively small area. In terms of flora, currently, there are about 300 species of fungi (of which about 20-30% have been studied), several hundred species of algae, and 100+ species of lichens and mosses (of which not more than 50% have been studied). Of higher plants there are more than 2,500 species, covering 673 geneses and 109 families. Endemism of the flora is 12%.³ Kyrgyzstan is a sparsely wooded country. The unique forests of Kyrgyzstan represent a great value in the Western Tian Shan, including: nuciferous (nut bearing), wild fruit trees, juniper, fir, deciduous, and tugai forests. Forests are mainly represented in mountain forest ecosystems, and about 90% of the forests are located at an altitude of 700 to 3,200 meters above sea level. Due to their great ecological value, the unique forests of the Kyrgyz Republic play an important role in the global processes of environmental control including water regulation and prevention of the adverse effects of climate change. Kyrgyzstan's Red List of species that occur in the Western Tian Shan includes 54 higher plants, such as the Tian Shan Fir (*Abies Semenovii*), *Eminium regelii*, *Eremurus zenaidae*, Water Lily Tulip (*Tulipa kaufmanniana*), *Vitis usunachmatica* - VU, *Sorbus persica* - VU, *Styphnolobium korolkowii* - CR, *Otostegia schennikovii* - VU, *Crataegus knorringiana* - EN, and *Spiraeanthus schrenkianus* - EN.

11. Vertebrate fauna in the Western Tian Shan is represented by 61 species of mammals, 316 species of birds, 17 reptiles, 3 amphibians, and 31 species of fish. Currently there are about 10,000 observed insect species belonging to 25 orders. In many groups of invertebrates there is a high level of endemism in the species, genera, and higher systemic levels. Different groups of invertebrate fauna have only been studied 15-80%. Among the mammals are a variety of mountain ungulates, which are key prey species for snow leopard, including argali mountain sheep (*Ovis ammon*), and Siberian ibex (*Capra sibirica*). The presence of argali in the region has not been reconfirmed recently, but there is anecdotal evidence that populations of argali use high altitude corridors of the Western Tian Shan for migration.

12. Among the Red List of fauna occurring in the Western Tian Shan are 27 species of birds and mammals, including: snow leopard (*Panthera uncia*), Turkestan lynx (*Lynx lynx isabellinus*), Marco Polo argali (*Ovis ammon polii*), Tian Shan white clawed bear (*Ursus arctos isabellinus*), cinereous vulture (*Aegypius monachus*), and the golden eagle (*Aquila chrysaetos*).⁴ The region is home to the endemic marmot species (*Marmota menzbieri* - VU), which occurs only in the Western Tian Shan. The region is the former range of the Dhole (*Cuon alpinus* - EN), although this species is most probably extinct in Kyrgyzstan. The Tian Shan subspecies of argali (*Ovis ammon karelini*) is also found here. Further to those mentioned above, Western Tian Shan Red List species include a butterfly (*Papilio (s. str.) alexanor*) - VU, and 11 nesting and stop-over bird species such as eastern imperial eagle (*Aquila heliaca* - VU), yellow-eyed pigeon (*Columba eversmanni* - VU), Saker falcon (*Falco cherrug* - EN), lesser kestrel (*Falco naumanni* - VU), and Egyptian vulture (*Neophron percnopterus* - EN). The impressive total species diversity of the Western Tian Shan, together with abundance of endemics and high altitudinal variations, defines the high rate of species distribution across habitats (high β -diversity).

² Government of Kyrgyzstan, 2014. "The National report on the State of the Environment of the Kyrgyz republic for 2006-2011." – B.: 2012. – 126 p. ISBN 978-9967-26-859-3.

³ E.J. Shukurov, O.V. Mitropolsky, V.N. Talsky, Zholdubaeva L.Y., Shevchenko V.V., 2005. "Atlas of the biodiversity of the Western Tian Shan." - Bishkek 2005, 103pp, 62 cards.

⁴ Ibid.

13. To verify the biodiversity significance of the project sites a joint expedition of two institutes of National Academy of Sciences (Institute for Biology and Soils and Forest Research Institute) and SAEPP was conducted during the PPG phase, which confirmed the species list within the targeted region.

Snow Leopard and Prey Profile⁵

14. The snow leopard (*Panthera uncia*) is an apex predator that ranges across high alpine ecosystems of twelve countries in central and southern Asia. The snow leopard's total estimated range covers an area of about 1.8 million km², and the global population is estimated to be between 3,920 and 6,390 individuals.⁶ Snow leopards inhabit elevations of 2,500–4,500 m, but are found at lower elevations (900–1,500 m) in northern parts of the range and in the Gobi Desert, and may exist up to 5,800m in the Himalaya and Qinghai-Tibetan Plateau region. Snow leopards are highly adapted to life in the high altitude ecosystems of Central Asia's mountains. The snow leopard is rarely seen by humans, and primarily enjoys a solitary existence among the cold rocky slopes. Home ranges vary from 12-39 km² in productive habitats, to over 500 km² in areas of low prey density. Individual snow leopards move between 1 and 25 km per day on average, depending on prey density and terrain. In most of their range, snow leopards favor steep, rugged terrain, broken by cliffs, ridges, gullies, and rocky outcrops. They show a strong preference for steep irregular slopes (in excess of 40°) and well-defined landform edges, such as ridgelines, bluffs and ravines, along which to travel about their home range. In certain regions snow leopards may occupy relatively flat or rolling terrain as long as there is sufficient hiding cover. In other areas, including the Tian Shan range, they can be found in open coniferous forest, but usually avoid dense forest. They may move to lower elevations during the winter to avoid deep snow and follow movements of their primary prey species.

15. The snow leopard is listed as globally Endangered according to the IUCN Red List, and the species is listed under Appendix I (i.e. species threatened with extinction) of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). It is also listed under Appendix I of the Convention on Migratory Species of Wild Animals (CMS), and was later elevated to 'requiring Concerted Action' in 2002 (Resolution 7.1). Snow leopards are suspected to have declined by at least 20% over the two generations (16 years) from 1992-2008 due to habitat and prey base loss, and poaching and persecution. Losses to poaching were most severe in the former Soviet Republics in the 1990s.

16. In Kyrgyzstan the snow leopard population was estimated in 2001 at between 150-500 individuals, across an approximate suitable range of 89,000 km² - 105,000 km² in the country. Recent estimates put the number of snow leopards in Kyrgyzstan between 300-400, but currently there is no fully validated data on Kyrgyzstan's snow leopard population. Researchers give the approximate number of snow leopards as 300; the distribution of snow leopard needs to be further studied.⁷ The only reliable data on the numbers or density of snow leopards is for the Sary-Ertash and Naryn nature reserves on the border of Inner and Central Tian Shan, which was derived from long-term monitoring and confirmed by the laboratory analysis of the genetic material. According to these data it is assumed that the density of the snow leopard within Sarychat Ertash reserve reaches about 0.02 individuals per 1 sq.km. This is a relatively high density, which is found in the specially protected conservation area. According to monitoring data, the population of the species on the Kyrgyz ridge also has good status. It seems that the population of the snow leopard Kyrgyz ridge has a connection with the Western Tian Shan population through the Talas Alatau mountain ridge. Data from several of the current Western Tian Shan PAs – Sary-Chelek and Padysch-Ata reserves, and Kara-Buura Nature Park – indicate the existence of a viable population of leopards in the Western Tian Shan.⁸ No reliable monitoring data is available currently for all the other parts of the snow leopard habitat in the country, and only anecdotal data exists; for example, during the project development phase the rangers at the Kara Suu lake unit of Alatau Nature Park stated that a local had reported seeing a mother snow leopard and cubs on the other side of a high-altitude ridge to the southwest of the PA.

17. Two biological factors that increase the snow leopard's vulnerability to extinction are their low densities (relative to other mammals, including their prey species) and relatively low recruitment rates

⁵ Sources: Jackson, R., Mallon, D., McCarthy, T., Chundaway, R.A. & Habib, B. 2008. *Panthera uncia*. *The IUCN Red List of Threatened Species 2008*: e.T22732A9381126, at <http://www.iucnredlist.org/details/22732/0>, as accessed March 25, 2016. GSLEP, 2013. "Global Snow Leopard & Ecosystem Protection Program: A New International Effort to Save the Snow Leopard and Conserve High Mountain Ecosystems," October 2013. WWF, 2015. "Fragile Connections: Snow Leopards, People, Water and the Global Climate."

⁶ GSLEP, 2013. "Global Snow Leopard & Ecosystem Protection Program: A New International Effort to Save the Snow Leopard and Conserve High Mountain Ecosystems," October 2013.

⁷ National Strategy on Snow Leopard Conservation, 2012

⁸ National Strategy on Snow Leopard Conservation, 2012

(where few animals raise offspring which survive to join the breeding population, which has been documented in a number of felid populations). Low densities means that relatively large areas are required for conservation of viable populations; it has long been recognized that many protected areas are by themselves too small to conserve viable snow leopard populations. Low recruitment rates also require larger populations and larger areas to conserve viable populations, as well as mortality reduction in non-protected areas to maintain population size through connectivity.

18. The snow leopard's principal natural prey species are alpine ungulate species, such as the various species of central Asian mountain sheep (in Kyrgyzstan, principally argali (*Ovis ammon*) including sub-species) and ibex (*Capra sibirica*). Annual prey requirements are estimated at 20 to 30 adult sheep, with radio-tracking data indicating such a kill every 10 to 15 days. A solitary leopard may remain on a kill for up to a week. Currently in the Western Tian Shan, populations of argali are not clearly documented, and at present snow leopard populations are suspected to rely heavily on ibex, as well as small mammals. Snow leopards also prey on marmot (*Marmota spp.*), pika (*Ochotona spp.*), hares (*Lepus spp.*), small rodents, and game birds. In countries where there is high human use of snow leopard habitat, considerable predation is reported on domestic livestock, though this is not currently considered a significant issue in Kyrgyzstan and in the target region of this project, in the Western Tian Shan. Snow leopard habitat undergoes extensive agro-pastoral land use, both within and outside protected areas. The inherently low wild ungulate density in the snow leopard's range, owing to relatively low primary productivity, is further exacerbated by prey declines due to hunting for meat and competition with livestock. A declining prey base reduces habitat quality for snow leopards and increases the chances for livestock depredation, an increasing likelihood in Kyrgyzstan. Over or under-grazing of livestock leading to sub-optimum forage levels is one widespread cause of prey base decline; reduction of the wild prey base from hunting is also significant in Kyrgyzstan.

Socio-Economic Context

19. Kyrgyzstan's population in 2015 was 6,019,480 people, an increase of 124,438 people over 2014. The female population is the majority, with 3,038,586 women, representing 50.48% of the total, compared to 2,980,894 or 49.52% men. Kyrgyzstan has 199,900 km² of land (86th rank in the world). Kyrgyzstan has a moderate population density, with 29.5 people per sq km (187th). There are about 31 cities and towns, home to 35% of the total population, with the remaining 65% living in approximately 1,800 villages clustered into 453 aiyyl aimaks⁹ spread in lowland and mountainous valleys along rivers and streams. The largest ethnic group, the Kyrgyz, account for 72% of the population. Other ethnic groups in Kyrgyzstan include Uzbeks (14.5%), Russians (9.0%), Dungans (1.9%), Uyghurs (1.1%), Tajiks (1.1%), Kazakhs (0.7%), and Ukrainians (0.5%). There are more than 80 different ethnic groups in total in Kyrgyzstan.

20. The country's economically active population is 2.5 million people with 91.6 % employed. The number of unemployed has reached 210,400 of which 46.5 % are women. The overall unemployment rate in 2015 was 8.0%. Kyrgyzstan's HDI value for 2014 is 0.655, which put the country in the medium human development category—positioning it at 120 out of 188 countries and territories. As of 2015, 32.1 % of population lives below the poverty line, and the poverty level has declined 5.9 points since 2012, while the poverty depth has remained almost the same reaching 5.9%. The largest part of poor population lives in rural areas. Thus, while 1.93 million people lived below the poverty line in 2015 in the country, 67.7 % of them were rural citizens. Livelihoods and the income of poor families in rural areas substantially depend on natural resources and environment; therefore the population's living standards largely depend on safe and productive environment. Significant regional imbalances remains in relation to poverty levels. The highest poverty level has been noted in Jalal-Abad oblast (45.1%), Batken (41.2%) and Naryn oblast (38.0%).¹⁰

21. Kyrgyzstan's economy is highly dependent on the exports of gold and other precious metals and stones (34% of total exports). Other exports include: oil, gas and other mineral products (15% of total exports), textiles (12%), vegetables (9%) and transport equipment (8%). The Gross Domestic Product (GDP) of the country was \$7.46 billion USD in 2014, with a GDP per capita of \$1,279 USD. Economic growth has slowed to 3.5% in 2015 (from 4% in 2014) as activity slowed in almost all sectors.¹¹ Thus, growth in industry slowed to 1.4% in 2015 from 5.7% in 2014 as gold production halved and output fell in textiles and electricity. Expansion in construction halved to 13.9% from 27.1% in 2014 with less growth in investment, and growth in services declined to 3.7% from 4.6%, reflecting slowdowns in transport and retail trade.

⁹ The site of the State Agency for Local Self-Governance and Interethnic Relations under the Government of the Kyrgyz Republic – <http://gamsumo.gov.kg>

¹⁰ National Statistics Committee, 2015.

¹¹ <http://databank.worldbank.org>

22. Official government statistics estimated the size of the informal economy in the Kyrgyz Republic, excluding agriculture, at 19.9% of the GDP in 2012, i.e. more than double the estimate of 8.4% in 1995.¹² However, this may not capture the full size and importance of the informal economy, as others estimate it as 25%–80% of GDP. In a recent survey of 1,200 businesses, 44% of the respondents said that this shadow economy accounted for more than 50% of the Kyrgyz Republic's economy.¹³ The reasons for the informal economy's high share of output include the difficulties of registering and measuring economic activity and the intentional evasion of taxes and laws that confirmed by the low confidence to state bodies' index. Private consumption, trade, including re-export, as well as remittances, investments and, to a lesser extent, foreign assistance are the main drivers of the national economy growth. It should be also noted that more than half of the growth came from the expansion of the services sector. In the services sector, transport and communications is the fastest-growing subsector partly because of the country's rising volumes of trade, as well as the expansion of mobile telecommunications during 2006–2013. The rapid growth of mobile telephones ended in 2013 when the subscriptions were estimated at 6.7 million or 121.5 per 100 inhabitants.¹⁴

23. Agriculture is still one of leading sectors of the national economy in terms of added value and employment. About 3.2 million people (65% of the total population) live in rural areas. In 2014, about 727,400 people or 31.6% of the total economically active population has been engaged in agriculture and forestry.¹⁵ Thus, the agricultural sector has crucial social significance and remains important for livelihoods of a majority of the Kyrgyz people. However the average gross added value growth in agriculture is comparatively slower than of the national indicators: 2.1% in 2012, against 3.2 % in 2001-2012, which is considerable lower than 4.3% GDP growth in the same period. The average salary in agriculture is the lowest in comparison with other sectors; in 2011 the average salary was 4,784 soms or 51.4% of the average salary in the country.¹⁶

24. Accession to the Eurasian Economic Union (EEU) is expected to boost trade and transportation of agriculture commodities and products, though demand in the EEU is weakening and the need to raise tariffs to EEU levels may shrink trade with economies outside the union. Nevertheless, those expectations facilitated the growth of agricultural production in 2015 by 6.2% after a 0.5% decline in 2014. However, regaining an upward-growth trajectory will require greater investment in production and processing technologies; better management of common resources (especially irrigation water and pastures); and focused efforts to increase the competitiveness of Kyrgyz products and their access to the markets of neighboring countries.

Land Tenure

25. In its first two decades of existence, the Government of Kyrgyzstan transformed the core sector of its economy – agriculture – by abolishing state-owned and collectively operated production enterprises in favor of privately owned and operated smallholder, peasant farms and house garden plots. This transformation was accompanied by rapid rates of growth in agricultural output. These reforms, which were strongly supported by international donors, defined Kyrgyzstan as a market-oriented economy and enabled it to be reasonably successful in giving all Kyrgyz citizens a stake in the country's future. While the post-Soviet period was ushered in by a short period of economic collapse, after the more privatized agricultural operations were established, average rates of growth were among the best in Central Asia.

26. Growth in Kyrgyzstan faltered during the 2008–2009 global economic downturn, and an outbreak of political instability in 2010 raised uncertainties about the future. While water and land use issues had reportedly fueled earlier conflicts between Uzbek and Kyrgyz populations, the cause of the 2010 conflict was in the view of some reporters more complex, reflecting broader concerns related to political power and economic opportunity. However, the national government has made efforts to restore order and is likely to continue to respond to what seems to be a strong consensus that new initiatives are needed to boost agriculture-based economic growth to levels high enough to further reduce poverty. For this to happen, greater attention to issues of both property rights and land resource governance will be required.

¹² National Statistics Committee data.

¹³ Centre for International Private Enterprise. 2011. Priorities and Need for Reform in the Kyrgyz Republic.

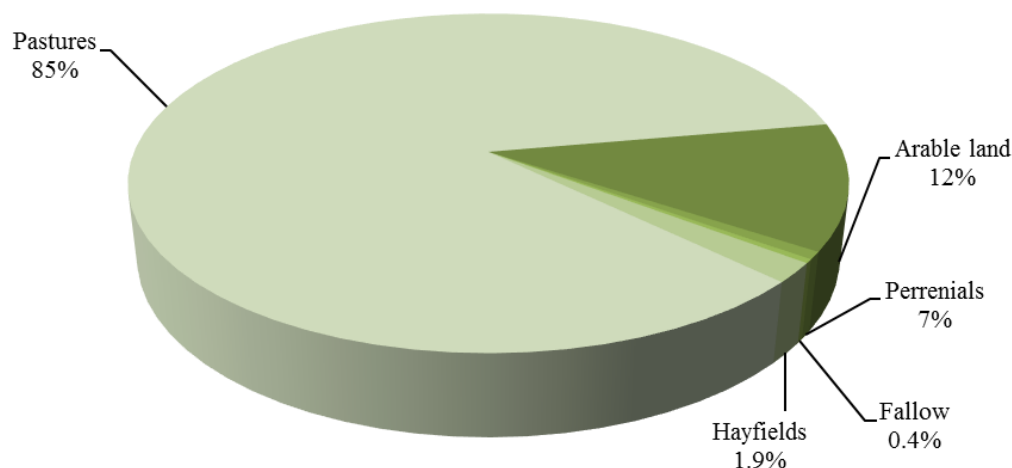
¹⁴ National Statistics Committee.

¹⁵ National Statistics Committee. Kyrgyzstan in Figures. Bishkek 2015. (Кыргызстан в цифрах. НСК КР, -Б., 2015 г.)

¹⁶ National Strategy of Sustainable Development for 2013-2017. (Национальная стратегия устойчивого развития на 2013-2017 гг.)

27. Agriculture lands comprise 32.8 % of the national territory, including 12% or 1,276,600 ha of arable lands and 89% or 9,040,200 ha of pasturelands, perennials made up 75,000 ha or 0.7 %, 168,400 ha of hayfields – 1.9%, and 38,600 ha of fallow lands – 0.4%.¹⁷ The composition of agriculture lands is presented in Figure 2.

Figure 2 Composition of Agricultural Lands (2014)



28. In 2014, 384,871 agriculture producers were registered in Kyrgyzstan, including 384,318 (98%) individual farmers¹⁸ with the average arable land plot of 2.7 ha, including 1.9 ha of irrigated land. The principle of social justice that was observed during the land reform (1998-present) resulted in excessive fragmentation of land parcels, which led to de-industrialization of the sector, loss of agricultural technologies that hindered overall agriculture sector development. However, it should be noted that today about 98% of agriculture commodities are produced by the private sector.¹⁹

Forests and Livelihoods

29. As of January 1, 2013, the State Forest Fund²⁰ lands occupies 2,619,675.5 ha, including 870,882.8 ha of PA forests and 1,135,526.8 ha of managed forestlands; this equates to 5.68% of the total area of the country.²¹ Forestlands are dominated by spruce in the northeast, and fir, juniper and various shrubs in the Western Tian Shan. In the dryer and warmer region in the south, forests are composed of a mix of walnut, maple, apple, cherry, plum, and almond trees. Figure 3 below shows the three major forest belts in Kyrgyzstan. In addition, tugai forests made up of willows, poplars and various shrubs can be found in valleys along major rivers. (See Figure 3). About 90% of forests in Kyrgyzstan grow at altitudes ranging from 700 to 3,600m.

30. Recognizing their great ecological value, according to the Forest Code all the forests of the Kyrgyz Republic are classified as performing environmental, sanitation, health and other environmental functions, and bans commercial harvesting. The high priority for conserving the values of Kyrgyz forests is clearly reflected in the current national forest policy and legislation, which put in place the Law on prohibition of felling, transportation, trade and processing of high (conservation) value tree species (walnut, juniper, etc.).²² Thus, silvicultural activities at present are reduced to sanitary and maintenance felling to support natural regeneration in those forests. Though forest management units perform felling of other forest species aligned with the Forest Code provisions. The volume of annual stock growth has never been considered as decisive in this country forestry.

31. To maintain forest ecosystems resilience and responding to that growing demand SAEPF is undertaking considerable efforts on forest restoration, implementing reforestation and afforestation activities every year on the area of about 1,000 ha.

¹⁷ National Statistics Committee. Statistics Reference-book Environment of the Kyrgyz Republic in 2009-2013, Bishkek, 2014.

¹⁸ Ibid.

¹⁹ National Strategy of Sustainable Development for 2013-2017.

²⁰ Woodlands under state governance.

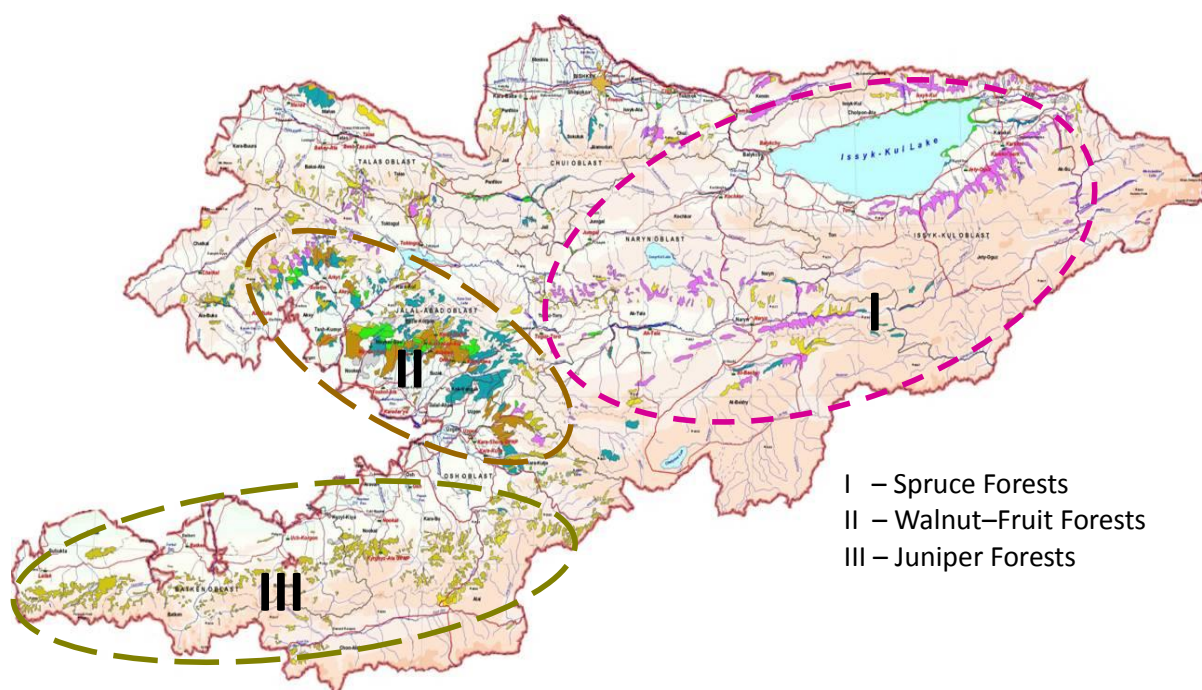
²¹ Inventory data of the Forest Fund, 2013.

²² Adopted by the Parliament on February 12, 2007 # 15.

32. About 935,000 ha, or one-third of the State Forest Fund (SFF), is sub-alpine and alpine meadows and steppe grasslands. Being within protected forest areas, they are noticeably less deteriorated and degraded than rangelands of the municipal lands. In addition, these pastures are often located at the average altitude between winter and summer pastures. In some localities it is impossible to reach summer alpine pastures avoiding SFF lands. Grasslands within SFF are also leased out for making hay for winter fodder. With the increasing dependency of the rural population on agriculture, especially on livestock, the intensity and expansion of use of grasslands also will increase.

33. About 277,000 ha of forests located on municipal lands of local communities. These open stands playing a huge environmental role are under pressure from communities for timber and firewood. Indeed they are to be managed by local State Administrations or rural communities Self-Governments.²³ However, with the weak legal framework, absence of inventory data of these lands and limited capacities as well as lack of awareness, those actors don't feel as responsible for management of these forest resources. This results in a rapid depletion of these resources.

Figure 3 Main Forest Belts of Kyrgyzstan²⁴



Pastures and Husbandry

34. Livestock output makes up almost half of the total agricultural output, while forestry output accounts for less than 1%. A recent baseline survey for IFAD's Livestock and Market Development Project noted that about 90% of the rural population owns livestock.²⁵ Livestock is used for various traditional ceremonies and events as well as function as rural savings accounts where animals can be sold to cope with sudden financial needs. The overall number of livestock is steadily growing. Animal husbandry is especially prevalent in all the mountainous regions of the Kyrgyz Republic, where other economic opportunities are limited. The number of livestock has been increasing rapidly during the last decade. According to official data, there were about 5.6 million sheep and goats in Kyrgyzstan in 2013, but anecdotal evidence suggests that this number is significantly underestimated, with the real number of sheep and goats likely approaching 8 million.

35. Natural pastures are the principal source of forage and fodder for livestock. A very small area, only about 330,000 ha²⁶ of arable land and hayfields in Kyrgyzstan, is used for fodder crops (compared to about 9 million ha of natural pasture land). Although this cultivated fodder area expands every year to respond to the

²³ Kyrgyz Government Resolution #407 on Approval of the Results of the National Forest Inventory in the Kyrgyz Republic, July 26, 2011.

²⁴ Kyrgyz-Swiss Forestry Support Programme, Intercooperation, Bishkek, 2006.

²⁵ Kyrgyz Republic. Communities, Forest and Pastures. World Bank, 2015

²⁶ National Statistics Committee.

growing livestock number, it is still far from sufficient to feed even the officially declared livestock population over the winter. Thus, natural pastures remain the primary source of fodder and forage year round, with the meadows in the sub-alpine and alpine zones used for summer grazing, and foothills providing grazing areas in spring, autumn and winter. In Kyrgyzstan on the whole, mountainous pastures cover 40% of the territory, providing livelihoods for 65% of people.

36. Land categories defined by the country's Land Code according to their designated use create confusion resulting from there being several types of overlapping uses and users on the same area of land, making land use trends difficult to monitor. The management of rangelands is divided between several institutions: rangelands within the State Forestry Fund or lands under Specially Protected Areas are managed by the SAEPF. The rangelands classified as major part of state-owned agriculture lands are managed by the local Self-Governments and the Pasture Users' Associations (PUA) according to the Law on Pastures (2009). However, low awareness about different and not coordinated management objectives of SAEPF and local communities Self-Governments, as well as sometimes-unclear administrative boundaries between these two types of pastures, create numerous conflicts.

Protected Areas

37. Developing networks of specially protected nature areas (SPNA) is one of the means to provide long-term conservation of biological and landscape diversity of national, regional, and global importance. Kyrgyzstan has been carrying out sequential actions towards the ecological network establishment inside the country as well as regionally. The national SPNA system is established and developing based on national legislations and international agreements ratified by the Kyrgyz Republic.

38. The Law on Special Protected Nature Areas (2011) brought about a radical redefinition of its components in conformity with IUCN recommended PA categories and management priorities. The Law on SPNA provides the legal basis for planning and management of a network of SPNAs. The law establishes the different categories of SPNAs according to their management objectives. There are seven types of SPNAs established in Kyrgyzstan with the corresponding IUCN PA categories:

1. State Nature Reserves (IUCN Category I);
2. State Nature Parks (IUCN Category II);
3. State Natural Monuments (IUCN Category III);
4. State nature habitat/species management areas/ Sanctuaries, Zakaznik (IUCN Category IV);
5. State Botanical gardens, Dendrological and Zoological parks;
6. Biosphere Territories and/or Reserves;
7. Transboundary Protected Areas.

39. The system of Specially Protected Nature Areas (SPNA) consists of 89 PAs covering an estimated 7.6% of the country, all of which are under the direct or indirect responsibility of the State Agency for Environment Protection and Forestry; this is an increase from 3.9% at independence. Today, 11 state nature reserves and 12 state nature parks are under the management of SAEPF. Conservation of biodiversity and ecosystems through extension of SPNA up to 7% of the national territory was one of the strategic targets of Kyrgyzstan in transitioning to sustainable development set up by the government of the Kyrgyz Republic.²⁷ This indicator was successfully achieved and exceeded in 2016 also with the support of the GEF and UNDP's contribution to the development of SPNA system in Kyrgyzstan. A map of the main protected areas of Kyrgyzstan is shown in Figure 4 below. Three state nature parks - Alatau, Kan-Achuu and Khan-Tengri have been established in 2015-2016 (and are not included in the map). An additional older map of Kyrgyzstan's PAs is included in Annex 1, showing landforms as well.

40. There are 19 state natural monuments representing IUCN Category III, usually also called geological sights or zakazniks. They include picturesque waterfalls, caves, rock formations, springs, etc. The state nature habitat/species management areas, including botanical, forest, game and complex reserves, which could be also called sanctuaries, are designated to assure conservation of some specific components of ecosystems, i.e. species and their habitat by, introducing special regime of use. This category includes four types of SPNAs or zakazniks, which are botanical, forest, game or zoological and complex reserves.

²⁷ Programme and Action plan on Transition to Sustainable Development for 2013-2017, approved by Governmental Resolution as of 30.04.2013 # 218.

Figure 4 Protected Areas of Kyrgyzstan (2015)



The State of the Environment in Central Asia: Illustrations of Selected Environmental Themes and Indicators

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41. The snow leopard as an indicator of high mountains ecosystems health was always on focus of the biodiversity conservation in Kyrgyzstan. However, due to difficult monitoring conditions, only one PA has been specifically established in Kyrgyzstan for snow leopard and prey habitat conservation – the State Nature Reserve Sarychat-Ertash in the Central Tian Shan region, in 1995. Growing attention to snow leopard conservation efforts undertaken by Kyrgyzstan in recent years, including the Global Summit of the snow leopard range countries, and the corresponding 2013 Bishkek Declaration adopted there, resulted in development of the National Strategy of the Kyrgyz Republic on Snow Leopard Conservation adopted by the Government in 2012. It promotes snow leopard and prey conservation aspects for all other PAs of the country, facilitating the establishment of new PAs targeting snow leopards and prey. Kyrgyzstan is applying to the GEF for the current project to strengthen PAs and foster the focus on snow leopard for further implementation of its national snow leopard strategy. Contributing to the project's justification, the Government of Kyrgyzstan established the two new protected areas of Alatai and Kan-Achuu, which expands the area of snow leopard and prey habitat covered by the PA system.

42. The National Academy of Sciences, together with FFI,²⁸ identified the SPNAs with snow leopard habitats in Kyrgyzstan (see Table 1 below), excluding the three newly established PAs. The total area of suitable snow leopard habitat is estimated at 89,000 – 105,000 km², and the area of snow leopard habitat covered by protected areas is more than 11,000 km², or about 11% of the total snow leopard habitat in the country.

Table 1 Protected Areas with Snow Leopard Habitat

Protected Area	IUCN Category	Area (km ²)
Ala-Archa State National Nature Park	II	194
Besh-Aral State Reserve	Ia	632
Chon-Kemin State National Nature Park	II	1236

²⁸ Aspects of Transboundary Snow Leopard Conservation in Central Asia. Report of the FFI/CMS Workshop, Bishkek, Kyrgyzstan, 1-2 December, 2014

Protected Area	IUCN Category	Area (km ²)
Kara-Kol State National Nature Park	II	160
Kara-Buura State Reserve	Ia	114
Kara-Shoro State National Nature Park	II	1220
Karatal-Japyryk State Reserve	Ia	364
Khan-Tengri State National Nature Park	II	3257
Kulun-Ata State National Nature Park	II	277
Naryn State Reserve	Ia / IV	183 / 400
Padysha-Ata State Reserve	Ia	305
Sarychat-Ertash State Reserve	Ia / IV	720 / 1341
Sary-Chelek Biosphere State Reserve	Ia	232
Jany-Oguz State Sanctuary (zakaznik)	IV	300
Kensyy State Sanctuary (zakaznik)	IV	?
Tyup State Sanctuary (zakaznik)	IV	150

Source: Mallon, Kulikov (FFI), 2015

Institutional Context

43. The national policy of biodiversity conservation and sustainable forest management is pursued by the **State Agency on Environment Protection and Forestry (SAEPF)** under the Government of the Kyrgyz Republic, comprising several departments dealing with the PAs, forestry and hunting systems operations and development. Along with the Ministry of Foreign Affairs, SAEPF is a focal point for two project-relevant UN Conventions: CBD and FCCC, as well as an operational focal point for GEF and GCF.

44. Established by the Governmental resolution in 2009,²⁹ as per organizational regulations, the SAEPF has the goal to assure conservation of the unique ecosystems of the Kyrgyz Republic and environmental protection for the present and future generations,³⁰ which is clearly referring to sustainable development focus of SAEPF.

45. Three objectives are defined under overall goal:

- Implementation of the policy on regulation of environment protection and natural resources management as well as accounting, assessment of the conditions of nature components and resources, including game inventory and management;
- Prevention of negative impacts of planned governance, economic and other activities on environment by conducting the state ecological expertise;
- Establishment and development of the international cooperation in the sphere of environment protection and security and natural resource management.

46. The *Central Office of SAEPF* implements the main functions of a) sectoral policy development and implementation; b) environment protection regulation, including state ecological expertise, licensing, accounting and assessing natural complexes and objects including endangered ones, as well as polluting, fixing the hunting seasons date and quota of game and fish; c) coordination of flora and fauna cadastres, natural resource use, forestry, implementation of 12 signed international conventions for which SAEPF is responsible, etc.; d) service provision as per approved list of state services; e) supporting nature protection activities from the funds accumulated by the Republic Nature Protection and Forestry Development Fund.

47. The SAEPF staff number is defined by the Government, and in 2014 comprised 2,052 persons, including 59 in the Central Office, 1,893 in subordinated bodies and 100 in the territorial departments. The SAEPF organogram is presented in Annex 4 of this project document.

48. SAEPF *Department of Forest Ecosystems and SPNA* is operating as an independent judicial entity, following up corresponding regulations by the Government.³¹ Among its main objectives defined in the regulations are the following:

- a. Assure stability of forest ecosystem, increase of forest cover and deployment of the innovative forest management methods;
- b. Provide forest resources accounting and assessment and regulation of forest use;
- c. Prevent negative impacts of planned economic activity of forest ecosystems and SPNA;
- d. Support to forest users aimed to implement forest management activities, pest control, anti fire actions, biodiversity conservation and rational use of timber and non-timber forest products;

²⁹ Governmental Resolution "On The Structure of the Government" as of October 26, 2009, № 425.

³⁰ As per redaction of Governmental Resolution as of May 31, 2013 N 308

³¹ Governmental Resolution as of March 13, 2014, № 173.

- e. Assure biodiversity conservation by providing ecological, economic, and scientific arguments for SPNA network expansion;
 - f. Assure access to information and decision making process for all the stakeholders.
49. At the local level, this department has 50 field state forest management units, i.e. leskhozes and 23 PAs operating as independent judicial entities under the SAEPF.
50. *Department of Forest and Hunting Inventory and Management Planning* is also operating as an independent judicial entity under SAEPF, following up corresponding regulations adopted by the Governmental Resolution.³² Its main functions include forest, SPNA and hunting lands inventory, establishment, upgrading and management of the forest lands data bases, forest cadaster management, cartography materials development for forest management units, SPNA and hunting service providers.
51. *Department of the Rational Use of the Natural Resources* is also operating as an independent judicial entity under SAEPF, as per the regulations adopted by the Government.³³ Its main functions include regulation of the hunting activities, licensing hunters, monitoring hunting grounds conditions, game inventory, establishment, upgrading and management of the game- wildlife data bases, game resources cadaster management, monitoring of the hunting seasons and quota follow-up, patrolling and anti-poaching activities implementation on the hunting grounds lands.
52. Additionally, SAEPF hosts the *Working Secretariat of the GSLEP*, which is currently operating as a Programme Implementation Unit.
53. The **Ministry of Agriculture, Processing Industry and Melioration (MAPIM)**, which is alongside with the Ministry of Foreign Affairs, the operational focal point of the UN Convention to Combat Desertification (CCD). According to its regulations one the main functions of MAM is identification of land use priorities. Thus, MAPIM is a main authorized body to develop land management policy and legislation including sectoral development programs and plans. The MAPIM organogram is included in Annex 4 of this project document.
54. As per MAPIM regulations,³⁴ it is the main state executive body implementing state policy in agriculture, land and water resources, and irrigation and melioration infrastructure, as well as agriculture commodity processing industry. The main goal of the MAPIM is assuring food security and agriculture production and processing development. It is responsible for development of the national policy on agriculture, water, fishery and aquaculture, and processing industry development as well as assuring veterinary and phyto-sanitary security, and safe use of pesticides and agri-chemicals. In addition, MAPIM is responsible for water use management including transboundary water sharing and cooperation. MAPIM is also responsible to implement activities on land and soils protection from degradation and land use borders demarcation.³⁵
55. *The Department of Pastures (DP)* is an independent judicial entity operating under MAPIM according to corresponding regulations approved by the Government of the Kyrgyz Republic.³⁶ The conservation and improvement of pasture ecosystems and pasture infrastructure to assure food security is the main goal of DP. For this three objectives were defined: 1) implementation of the state policy in the domain of state owned pasture management, use and improvement; 2) organization an implementation of pasture use and conditions monitoring as well as related assets; and 3) organization of sustainable management and effective use of pastures based on active engagement of local communities. It is also responsible for development of the pasture management related legal acts, community based pasture management control and consulting pasture related issues.
56. *The State Design Institute for Land Management “Kyrgyzgiprozem”* acts as a state owned service provider. Among its main services are the following:
- Inventory of agricultural lands, lands of urban and rural settlements, State Agricultural Lands Fund with specification of their boundaries, areas and forms of property;
 - Identification of boundary for rural communities, cities and rural settlements;
 - Soil survey of arable and pasture land with soil mapping and agrochemical research of soils, identification of soils fertility necessary for determining rates of land tax and price of land;

³² Governmental Resolution as of June 29, 2012, # 463

³³ Governmental Resolution as of February 6? 2015, # 40

³⁴ Governmental Resolutions as of February 18 2015 # 72; that as of March 30, 2015 # 168 and as of March 24, 2016 #142.

³⁵ Ibid

³⁶ Governmental Resolution as of February 20, 2012 #140.

- Monitoring of arable and pasture land for their timely control and reduction of negative factors adversely affecting soil fertility and pasture condition;
 - Carrying out a salt survey, indicating contours at specific types of salinization and the preparation of soil reclamation maps;
 - Development of normative (cadastral) price of land, which is the starting price for the sale of agricultural land;
 - Laboratory analysis of soil (humus, nitrogen, phosphorus, potassium, texture, pH, CO₂, water extractor - for salinity, water absorption capacity and absorbed sodium in the alkalinity) and plants (nitrogen, phosphorus, potassium, protein, calcium, ash, starch, cellulose, fats, etc.) Samples;
 - Topographic survey of the area;
 - Development of digital maps using GIS technology;
 - Development of justifications for the transformation of agricultural land into other land category/
57. The **State Registration Service of the Kyrgyz Republic (SRS)** is responsible for registration of population and civil status, movable and immovable property, and conducting the state land cadaster. The SRS coordinates and controls the registration of land property rights in the vicinity of the project sites. Within its mandate, it is responsible for 1) regulating of land relations (state registration deed, land cadaster); and 2) topography survey and mapping of the state registration deed for land users.
58. **State Agency on Local Self-Governance and Interethnic Relations (SALSGIR)** is aimed to establish conditions for sustainable development of the local self-governance system for economic growth, welfare of population and strengthening of interethnic consent.³⁷ Supporting local communes in strategic planning SALSGIR also regulates sustainable development planning of the local communities.
59. The **Province (Oblast) and District State Administrations**, which represent the Government on the corresponding governance level, are responsible for the territorial development planning and implementation as well as implementation of the national sustainable development policies on the local level.
60. The **Local Self Governance Bodies**, i.e. municipal bodies of the settlements and rural districts at the level of local communities are responsible for the elaboration and implementation of local communities' development strategies including local environment issues. They are also responsible to develop and maintain operational local social infrastructure and public security.
61. The **Associations of Pasture and Water Users** as the main users of ecosystem services regulate access of local communities to natural resources and sustainable use of biodiversity and as such provide inputs to the development of the landscape level management plans.
62. Two institutes of the National Science Academy of the Kyrgyz Republic - the **Biology and Soils Institute**, and the **Forest Research Institute** - elaborate the scientific grounds for biodiversity and forest monitoring, biodiversity and forest sustainable use and restoration norms and methodology, identification of the areas under strong pressure, as well as new PA organization justification research.
63. **National and international non-governmental organizations are operational in Kyrgyzstan** in line with their profiles and capacities. INGOs like Snow Leopard Trust, NABU, WWF, FFI and Panthera are implementing snow leopard conservation activities in the northern, southern and central Tian Shan aimed at habitat range monitoring, promoting anti-poaching and livelihoods for local communities. National NGOs like the Kyrgyz Association of Forest and Land Users (KAFLU), CAMP Alatau, and Rural Development Foundation work to support Joint Forest Management, High Conservation Values promotion, sustainable pasture management and use, as well as resilient rural development and livelihoods.
64. The Kyrgyz Community Based Tourism Association (KCBTA) is an institution uniting fast growing sector of local tour service providers to communicate and to protect their rights in the government and on the regional and local levels.
65. Additionally, the Union of the Hunters and Fishers representing the interests of hundreds of hunters and fishers along the country, as well as hunting service providers is regularly involved by SAEPF in anti-poaching campaigns, joint patrolling and awareness raising activities on the grounds.
66. Several **banks and micro-credit companies** are focused on providing credits to rural residents also within the Governmental Program "Support to Agriculture – 4" crediting crop farming, husbandry and agriculture products processing, thus, playing an important role for sustainable livelihoods and local development of the local communities.

³⁷ Regulation of SALSGIR approved by Governmental Resolution as of May 8, 2013 # 258

Legislative and Policy Context

67. Kyrgyzstan has got rather developed environmental legislation, which enable operations of the biodiversity conservation as well as sustainable land and forest management. The key laws relevant to this project are briefly summarized in Table 2 below. Additional details highlighting the specific relevance of the legislation and the national program to this particular project are provided in Annex 5.

Table 2 Relevant Legislation of Kyrgyzstan

Law	Date of Adoption	Description
Land Code	02.06.1999 # 46	Makes provision the ownership, tenure, administration, sustainable use and rehabilitation of land and the natural resources associated with that land.
Forest Code	08.07.1999 # 66	Regulates the protection, rehabilitation and sustainable use of forests, forest species and forest products.
Water code	12.01.2005 # 8	Provides the legal framework to support the development and use of water, and the protection of the national water resources.
Law on Environmental Protection	16.07.1999 # 53	Establishes basic principles of environmental protection and ensures associated relevant legal powers.
Law on Wildlife (Fauna)	17.06.1999 # 59	Regulates protection and reproduction as well as rational use of fauna as important asset of Kyrgyzstan, regulating and stabilizing biosphere.
Law on the Protection and Use of Flora	20.06.2001 # 53	Regulates relations on the domain of protection, and reproduction of flora aimed at rational use of flora species.
Law on Rates of Payment for Flora and Fauna Species Use	11.08.2008 # 200	Establishes legal basis for flora and fauna use defined in national legislative documents.
Law on Special Protected Nature Areas	03.05.2011 # 18	Provides the legal basis for the planning and management of a network of special protected nature areas (SPNAs).
Law on Biosphere Territories (BT)	09.07.1999 # 48	Defines the concept of Biosphere Territories as plots of terrestrial of aquatic ecological systems or their combinations, which ensure sustainable balance of biodiversity, economic development and protection of correlated cultural values.
Law on Hunting	13.03.2014, # 41	Provides the legal basis for the regulation and control of hunting activities and the protection of game species.
Law on Environmental Expertise	16.06.1999 # 54	Provides legal basis for environmental assessment aimed to prevent adverse impacts of projected economic activities.
Law on Agriculture Development	26.05.2009 #166	Identifies 18 main directions for state support from the national and local budgets.
Law on Agricultural Land Administration	11.01.2001 # 4	Regulates legal relations on agricultural lands administration to assure effective and secure land use.
Law on Pastures	26.01.2009 # 30	Provides the legal framework for the conservation, sustainable use, tenure rights and administration of pasturelands.
Law on Agriculture Lands Soil Fertility Protection	10.08.2012 # 165	Establishes the basic legal and institutional framework for the sustainable use of soils; soil conservation; the improvement of soil fertility; and the prevention of soil degradation.
Law on Peasant Farms (PF)	03.06.1999 # 47	Makes provision for the establishment individual or family peasant farms.
Law on Local Self-Governance	15.07.2011 # 101	Establishes principles for organization of local government on the level of administrative and territorial units of Kyrgyzstan.
Law on Mountainous Territories	01.11.2002 # 151	Sets the task to establish socio-economic and judicial basis for sustainable development of mountainous territories of Kyrgyzstan, conservation and rational use of natural resources, historical, cultural and architecture heritage.

68. Biodiversity conservation and sustainable use, as well as sustainable land and forest management policy objectives are set up in the main national development documents, including the following in Table4 below:

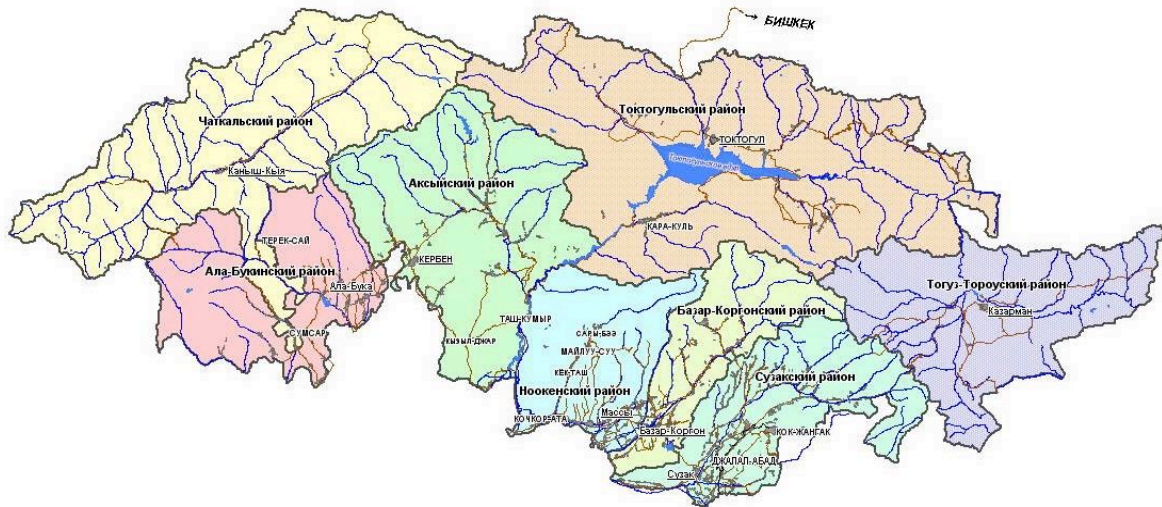
Table4. Relevant State Programs in Kyrgyzstan

State Program	Implementation Period	Description of environmental aspects
National Strategy for Sustainable Development (NSSD)	2013-2017	NSSD Chapter 5 is about Environment Protection for Sustainable Development.
Program of Transition to Sustainable Development (PTSD)	2013-2017	PTSD Chapter 5 is devoted to Environmental Protection. Priority 3 of PTSD – Strengthening of protected areas and restoration of natural ecosystems in the context of climate change – is to provide regular support for the existing system of protected areas.
Priority Directions for Biodiversity Conservation	2014-2024	Aimed at conservation and sustainable use of biodiversity for sustainable socio-economic development.
National Strategy and Action Plan for the Conservation of Snow Leopard	2013 – 2023	The main goal is to prevent the decline of the snow leopard population in Kyrgyzstan.
National Forest Program	2005 - 2015	The purpose of the program is a gradual increase of forest cover through reforestation and afforestation, as well as creating sustainable forest management.
Priority Directions for Climate Change Adaptation	2014-2017	Defines as goal support of specific activities aimed at mitigation of climate change negative consequences.
Climate Change Adaptation Program and Action Plan for the Forest and Biodiversity Sector	2015-2017	Elaborates nationally adopted Adaptation priorities for the forest and biodiversity sector.
Priorities of the Kyrgyz Republic on wetlands conservation till 2023 and Action plan on their implementation for 2013-2017.	2013-2023	Refers to Ramsar Convention. Defines wetlands conservation and waterfowl population increase as the main goal.

Local Context

69. Additional details on the local context of the two main target districts are included in Annex 4. Toktogul and Toguz-Toro are two of Jalal-Abad province's eight districts, but encompass 37.4% of the area of Jalal-Abad province. Figure 5 below shows Toktogul district (orange) and Toguz-Toro district (purple) within Jalal-Abad Province. Toktogul and Toguz-Toro districts cover a significant portion of the Western Tian Shan in Jalal-Abad province, and are the two districts where Kyrgyzstan's newest national parks have been established: Alatau Natural Park (in Toktogul) and Kan-Achuu Natural Park (in Toguz-Toro). The plans for establishment of these two national parks has in part catalyzed the development of the current project, as they represent coverage of critical biodiversity areas in Kyrgyzstan, including significant landscapes of key snow leopard habitat in the Western Tian Shan.

Figure 5 Map of Jalal-Abad Province



70. The local commitment to the establishment of the new PAs is quite impressive, since it draws from the grass roots level of Cholpon-Ata local community (in Toktogul) and Kok-Irim local community (in Toguz-Toro), which allocated about 48,000 ha of their pasturelands for the establishment of the new PAs in the region. According to the national legal provisions on compensation of agriculture lands withdrawal, the communities could apply for compensation of more than \$200 million USD; however, both self-governments consider it to be their local contribution to national PA system expansion in the Western Tian Shan, further supported by the GEF.

71. **Toktogul District** has an area of 821,937 ha, including 414,212 ha of pasturelands. The area of arable lands is 16,990 ha including 8,202 ha of irrigated land and 8,788 ha of rain-fed land. There is one city, Toktogul, and 10 rural districts with 44 villages in the district. The total population of the district in 2014 was 96,215 people, including 49.8% of women, 44% of children and 47% of working age people. The poverty level is estimated as 55.7% of poor population. In 2014, there were 4,532 poor families, who received social aid. The official unemployment rate was 2.7%, 424 persons being registered as unemployed. Agriculture is the main economic activity.

72. According to the special Law “On compensation of loss from hydropower plant construction to Toktogul District, Jazy-Kechuu village and Karakul city of Jalal-Abad Province” about 43 million soms are transferred annually to the Special Fund of Toktogul District by the Joint Stock Company “National Electric Stations”. The fund is managed by the Ministry of Agriculture, Processing Industry and Melioration to finance different irrigation and melioration systems reconstruction and well as for social infrastructure development.

73. Forest cover of the district is quite mosaic, unevenly distributed as per landscapes and mainly located along inaccessible mountainous ridges. The forest cover of the district is 114,371 ha or 14.4% of whole territory. Only 35% of forests are managed by the Toktogul leskhoz; the other part is under management of District authority (6%) and the rest is located on the so called other lands, including local communes (59%). The Toktogul State Forest Management Unit (leskhoz) was founded in 1947, and manages a territory of 104,860 ha, which is distributed on six forest ranges, with forest-covered area of 30,612.8 ha. The total wood stock of the leskhoz forests was estimated as 1,323,062.7 m³ of wood, and the average stock per hectare was 43.2 m³. Additionally, the leskhoz manages about 21 ha of hayfields and 39,365.3 ha of pasturelands. Practically all of these lands are leased to local resource users.

74. Among the main forest species, the following are described as in Toktogul Forest Management Plan: Spruce (*Picea tianschanica* rupr.); Semenov fir (*Abies semenovii* fedtsch.); Zarafshan Juniper (*Juniperus serafvshanica*), Juniper hemispherical (*Juniperus semiglobosa*), Turkestan Juniper (*Juniperus turkestanica*); Walnut (*Juglans regia*); Pistachio (*Pistacia spec.*); three species of apple: *Malus kirgisorum*; *Malus sieversii*; and *Malus niedzwetckiana*; three maple trees: *Acer turkestanicum*, *Acer regelii* and *Acer semenovi*; Ash tree (*Fraxinus sogdiana*); Birch (*Betula turkestanica*); Willow (*Salix* sp.); White Poplar (*Populus alba*); Honeysuckle (*Lonicera* L.); Rosehip cinnamon (*R. cinnamomea* L.); Spirea (*Spiraea* L.); Cherry shrub (*C. fruticosa* (Pall.) G.Woron).

75. As far as forest ecosystems degradation rate is concerned, the sanitary conditions the forest of the leskhoz are described as: healthy on the area of 4,980.4 ha; average – 21,138.6 ha; and bad – 4,493.8 ha. As per Forest Code (Article 29 and 30) protection category, there are two types of forest in Toktogul leskhoz: 1) protective forests on the area of 89,858 ha or 87% of the leskhoz area and 2) forests of PA covering 14,901 ha or 14.3% of the leskhoz. PA forests mainly consist of the fir stands of Uzun-Akmat Forest Sanctuary comprising 5,040 ha of the Uzun-Akmat forest range, 6,667 ha of Alatai forest range and 3,194 ha of Usta-Sa forest range.

76. Formally, two protected areas already existed in Toktogul District prior to establishment of Alatai Natural Park. They are Chichkan Zoological Sanctuary (65,551 ha), and Uzun-Akmat Forest Sanctuary (14,771 ha). Both exist on the lands of Toktogul leskhoz. The newly established Alatai State Nature Park has included the lands of Uzun-Akmat Sanctuary.

77. Chichkan Zoological (game) Sanctuary, established in 1975,³⁸ is located in Chychkan river basin, to ensure conservation and sustainable use of the fauna and riparian forests species: willow, juniper, wild rose, hawthorn, ephedra, sea buckthorn, raspberries, black currants and others. These form the habitat of the diverse fauna species: wolf, white-clawed bear, roe deer, ibex, rabbit, squirrel, snow cock, pheasant, partridge and others. In the upper mountain ridges area snow leopard was also observed.

78. Uzun-Akmat Forest Sanctuary, also established in 1975 by the same document, has the objective to ensure conservation of natural Semenov fir stands. Beside the fir some other tree and shrub species occur there: birch, spruce, poplar, juniper tree, elm, apple, apricot, sea buckthorn, pistachio, barberry, wild rose, raspberry, black currant, juniper shrub. Typical representatives of fauna there are snow leopard, ibex, bear, deer, lynx, badger, porcupine, fox, hare, wild boar and others.

79. **Toguz-Toro District** was established in 1935. It is located in Jalal-Abad Province in the south-western part of the country, its area is 396,238 ha, with an average altitude of about 2,000 m. The area is bordering in the north with Jumgal district, in the east to Aktalaa district of Naryn Province, in the south – with Suzak district of Jalal-Abad Province and Uzgen district of Osh Province and in the west with Bazar-Korgon and Toktogul districts of Jalal-Abad Province. The relief of the Toguz-Toro District is intermountain valleys, low-mountains, middle and high types of terrain. The valley has an overall bias in the north- west and looks like a huge bowl whose walls are surrounding mountain ridges. Most valleys are quite narrow and deep with slopes of 70-120°. Erosion has played a major role in the modeling of the current relief. As a result, the terrain is highly intersected not only with the river valleys, but also with numerous gorges, dry hollows and small ravines. Steep slopes characterize the upstream areas of most river valleys and steep, rugged, rising steeply hollows filled with large boulders and rocks. In the intermountain basin at the altitudes of 1300 - 1500 m light brown soils are prevalent. Large areas area occupied by chestnut soils, above which there are mountain black soils. In general, the soil cover of the area is characterized by good water regime, high humus content and nutrients.

80. The district is divided into five administrative-territorial units (rural districts): Atay, Kargalyk, Kara-Suu, Kok-Irim, and Toguz-Toro. There are 14 settlements in total. Only three settlements have clean drinking water supply systems. The village of Kazarman is the administrative center of the district. The population of the district is 22,389 people, including 10,990 women (49%) and 11,889 men (51%). There are 918 poor families who received social aid. The official unemployment rate was 2%, 211 persons being registered as unemployed. Agriculture is the principle sector of the Toguz-Toro district economy. The total area of the district agriculture land is 263,712 ha, including 11,257 ha of arable lands (2,685 ha irrigated and 8,572 rain-fed), 1,835 ha of hayfields and 249,219 ha of pastures. The main crop species is wheat and barley, potatoes and vegetables are also among cultivated agri-species. The district industrial output in 2015 was mainly from the gold mining enterprise located in the district, which generated 643,494,500 soms.

81. The forest cover of the district is of island character. Forest stands are unevenly distributed as per landscapes and mainly located along mountainous rivers and on the slopes of the mountain ridges. The forest cover of the district is 46,533 ha or 11.7% of whole territory. Only 18 % of forest cover is managed by the leskhoz, and nearly 7% by the Saimaluu-Tash State Natural Park. The rest 75% of forest cover is located on the lands of land reserve and so called other lands. The Toguz-Toro State Forest Management Unit (leskhoz) was founded in 1997, and is spread across two administrative districts: Toguz-Toro of Jalal-Abad Province and Aktala district of Naryn Province. It manages territory of 57,964.0 ha, including 57,356.0 ha of forest lands in Toguz-Toro Districts and 608 ha of forest lands in Aktala District. The leskhoz forests have wood stocks of about 263,000 m³. The office of the leskhoz is located in Kazarman, which is 150 km from the

³⁸ Resolution of the Minister Council of the KSSR as of November 6, 1975 # 567.

provincial center of Jajal-Abad. The territory of the leskhoz is administratively divided into three forest ranges: Beshkol (18,037.1 ha), Kok-Irim (18,103 ha) and Makmal (21,824.6 ha).

82. Beside forests, the leskhoz has 61 ha of non-irrigated arable land, 147.9 ha of hayfields and 21,219.5 ha of pastures. The soil protection role of the forests is mainly in the prevention of erosion, which is high in intensive cattle grazing on some pasture management areas (mainly in Kok-Irim Forest Range). Due to the critical ecosystem services provided, all forests of Toguz-Toro leskhoz are assigned to the protective category. Tree species include, spruce (*Picea tianschanica*), juniper (*Juniperus semiglobosa, turkestanica*), poplar (*Populus alba*), birch (*Betula turkestanica*) and other tree and shrub species.

83. In 2001, in Toguz-Toro District, the State Nature Park “Saimaluu-Tash” was established along the upper stream of the Kok-Art River, with the area of about 32,000 ha. Its conservation objective is aimed to protect unique natural complexes of the Kok-Art tracts and numerous petroglyphs of high cultural and historic value. It contains one of the biggest collections of rock pictures not only in Kyrgyzstan and Central Asia but also in the whole world. About 10,000 stones with pictures have been identified, the earliest dating back to the third to early second millennia BC, that is to the Eneolithic and Bronze Ages. In 2001, Kyrgyzstan applied to UNESCO for nomination of Saimaluu-Tash Petroglyphs to World Heritage List, which is included in UNESCO’s list of candidate sites. The park has three zones of specific conservation regimes: protected area of 9,221.8 ha; recreation zone of 4,540.9 ha; and reproduction zone of 18,244.5 ha. In 2015, as per governmental road infrastructure expansion project on the second alternative highway “North-South”, about 80 ha was withdrawn from Saimaluu-Tash SNP for the road construction.

Threats, Root Causes, and Impacts

84. There are a variety of threats to the globally significant biodiversity of the Western Tian Shan, including threats that affect key ecosystem indicator species such as snow leopard. The most critical threats that will be addressed by the project are summarized below, while additional threats to biodiversity, forests, and sustainable land management are further described in Annex 6.

85. Pasture Degradation from Poor Grazing Management: The grassland pastures of Western Tian Shan are subject to intensive agro-pastoral land use, with limited effective control and management currently in place. The main cause of degradation of grassland mountain ecosystems is overgrazing. However, new field studies assessing the causes, effects, characteristics, and implications of grazing and pasture degradation in Central Asian mountains question the previous assumptions of simple causal relationships between overgrazing and land degradation. Carrying capacity in grassland ecosystems varies over time depending on the natural conditions of the pasture, which are in-turn linked to fluctuating annual factors such as rainfall and drought. Therefore static livestock management, and unregulated and increasing livestock populations results in overgrazing (or, less frequently, undergrazing) and degradation of sensitive pasture ecosystems.

86. Overgrazing and degraded alpine pastures leads to reduced populations of wild ungulates (e.g. argali and ibex) and small mammals (e.g. hares, ground squirrels, and marmots) that are key prey species of snow leopard and birds of prey, leading to population declines. The health of the grassland and pasture ecosystems is critical for snow leopard and its prey, as well as for soil and vegetation qualities. Due to overgrazing for extended periods, the grasslands of the Western Tian Shan are susceptible to inadequate natural regeneration, and encroachment or invasion by plant species not suitable for livestock or wild ungulates. In overgrazed pastures where undesirable plant species (used to assess degradation) have permeated to 20% of grass stands, pastures can require a rest of three to four years.

87. Overgrazing is leading to further degradation of the land as a result of intensified pressure on pastures from the decline in the practice of moving livestock between summer and winter pastures, and increased livestock density. As of 2012, it was estimated that 49% of pastures in Kyrgyzstan were degraded (see Table 3 below).

Table 3 Pasture Degradation Rates³⁹

Pasture type	Pasture area (thousand ha)	% of Total	Degraded area in ha	Degraded areas in %
Summer	3,951	43	1,432	36
Spring-autumn	2,756	30	1,378	50
Winter	2,440	27	1,718	70
Total	9,147	100	4,528	49

³⁹ Pasture Department Annual Report for 2012.

88. Despite their low productivity, the extensive lowland winter pasturelands are increasingly being used for sheep and cattle grazing. Pasturelands are usually on sloping terrain, and degradation can be seen in terms of reduction of vegetative cover, displacement of grasses by weeds, soil erosion, landslides and mudflows, and more catastrophic water runoff, leading to flooding. About half of the grazing areas are classified as degraded, both in terms of vegetation and soil condition. The combined impact generates erosion, depleted soil carbon stocks, and disturbance to biodiversity, ultimately leading to competition for resources between communities and wildlife.

89. While overgrazing is the primary threat faced by pasture ecosystems in the Western Tian Shan, in some cases the most remote alpine summer pastures are actually undergrazed. Undergrazing can result in a lower than optimum production of forage biomass, or even the loss of pastures altogether as woody vegetation overgrows unused pastures. For example, in Kyrgyzstan many pastures have been overgrown with the hard and thorny caragana (*Caragana sp.*), and other bushes and grasses (e.g. wormwood (*Artemisia sp.*), desert candle (*Eremurus sp.*), giant fennel (*Ferula sp.*)) that are not suitable for livestock. In areas overgrown by caragana bushes, only about 35% of the area is useful for livestock grazing. In the nearby Suusamyr valley, it was assessed that between 1990-2005 the area of caragana bushes (which grow mainly in lowlands, along rivers and creeks) increased by 38% (5,000 ha). Studies have indicated that, under certain conditions, appropriate livestock grazing is necessary to optimize forage production (similar to conditions in Europe, where a decline of traditional shepherding has led to a loss of mountain grasslands). Optimizing grazing levels for natural forage productivity can also therefore benefit wild ungulates. Maintaining optimum ecosystem productivity requires careful attention to avoid over or undergrazing.

90. Under Soviet management, from the 1950's the number of cattle increased to 10-12 million head in Kyrgyzstan, and traditional grazing practices were broken. Degradation of pastures in Kyrgyzstan began in at least the 1980s. From 1960 to 1990, the average productivity of the summer pastures declined from 640 kg/ha to 410 kg/ha (36%) and the spring and autumn average pasture yield went from 470 kg/ha to 270 kg/ha (43%). The productivity of winter (lowland) pastures declined even more dramatically or from an average of 300 kg/ha to less than 100 kg/ha (67%). In total approximately 50,000 km² have been affected by encroachment of woody and unpalatable species, making over 5,400 km² of pasturelands useless for grazing. Following the collapse of the Soviet Union in 1991, land use in the Kyrgyz Republic remained uncontrolled until 2009, as the previously existing Soviet natural resource management practices collapsed. During this period herders had a tendency to overuse those pastures closest to villages and settlements – the exact example of the well-known “tragedy of the commons”. After a sharp decline in the number of livestock in the early 1990s, the numbers of livestock in Kyrgyzstan began to grow again. During the 14 years from 1997 – 2011 the number of livestock units⁴⁰ (LU) rose from 9.5 million LU to 13.8 million LU, an increase of 45.3%. From 2012-2015 livestock numbers increased a further 8.9% (see Table 5. below).

Table 5. Livestock in Thousand Heads⁴¹

	2012	2013	2014	2015	% increase from 2012
Livestock Units	1,338.6	1,367.5	1,404.2	1,458.4	108.9
<i>Including</i>					
Cows	684.2	699.3	718.5	744.3	108.8
Pigs	59.2	55.4	51.8	50.8	85.8
Sheep and Goats	5,288.1	5,423.9	5,641.2	5,829.0	110.2
Horses	389.0	398.8	407.4	433.0	111.3
Poultry	4,815.3	5,076.6	5,385.7	5,420.0	112.6

91. Current livestock numbers exceed the estimated land carrying capacity by 1.5-2 times. According to the Kyrgyz State Project Institute of Land Management, 29% of all pastures show signs of or are severely degraded and 25% of all pastures are deteriorating.⁴² It is estimated that over 60% of pastures are eroded in some areas of the Western Tian Shan, and the quality of pastures has declined by four times compared to the 1980s levels. In some areas stocking levels exceed grazing standards by 3-8 times in the summer pastures

⁴⁰ A standard livestock unit (LU) is not used in the Kyrgyz Republic. As per Kyrgyzgiprozem, conventional sheep heads are used, recalculating the cattle as one cow is equal to four sheep and one horse to five sheep.

⁴¹ <http://www.stat.kg>.

⁴² Isakov Azamat, Dr. Johann Thorsson. Assessment of the land condition in the Kyrgyz Republic with respect to grazing and a possible development of a quoting system on the local governmental level.- B.: V.R.S. Company Ltd, 2015 - 48 p.

and by 13 times on winter pastures. Currently the average productivity of winter pastures is 40% below normal, and has decreased 10-20% for the middle pastures. In the four targeted communities targeted by the project land degradation ranges between an estimated 25% degraded land to more than 50% degraded land. The average productivity of non-degraded pastureland is 0.57 t/ha of biomass, and the average productivity of degraded pasturelands is 0.13 t/ha of biomass.

92. Human-Wildlife Conflicts: Overgrazing and degradation of pastures due to growth in the number of livestock also leads to growth in conflicts between humans and wildlife. Overgrazing reduces suitable habitat areas for wild ungulates, thus potentially bringing them into increased contact with humans. The location of herders' camps close to the high altitude pastures and their frequent poaching of wildlife significantly influences the behavior of animals, with consequences on habitat use and availability for wild ungulates. The avoidance and reduction of available habitat and time to graze in pastures affects the survival and reproduction of individual animals and the size and trends in population. Herding dogs are another factor that directly causes the mortality of wild animals and causes reduction of available habitats. In many cases herding dogs are not properly fed, and are left to hunt small animals, such as marmots, small carnivores and ungulates. The co-existence of wild game and domestic livestock has conflict potential that needs to be addressed in advance, and addressed in a timely manner. Ibex and Tian Shan or Marco Polo argali are unlikely to present any noticeable problem for the use of pastures, hayfields, and crops in Kyrgyzstan due to their habitat requirements that largely exclude interference in more intensively used agricultural areas. Roe deer and maral have a high potential of using, and thus damaging, hayfields and crops like alfalfa, but can also damage trees, e.g. in fruit plantations. Wild boar can cause damage in grain, vegetable and potato fields. There are a few cases where bears destroyed the bee keeping facilities. Predators, in particular wolf, cause serious conflict with livestock breeders. Most livestock losses can be attributed to free ranging of livestock in the mountains, poor herding practices and insufficiently enforced corrals. The lack of trained herd protection and herding dogs is a part of this problem. Contrary to the perception of many livestock breeders, government officials, and even scientists in Kyrgyzstan, the killing of wolves does not reduce livestock losses in a significant scale, and as research has shown can even increase livestock depredation. Fortunately, currently the cases of the snow leopard predation of livestock are very rare, there are no registered cases in the Western Tian Shan last decade.

93. Overgrazing in Forests: The problems of overgrazing highlighted above in relation to grassland ecosystems also affect vulnerable forest ecosystems, some of which are also used as "forest pastures" where domestic livestock are grazed. Forestry enterprise pastures cover 1.1 million hectares in Kyrgyzstan. These pastures are some of the country's most environmentally vulnerable pastures, as they are often located closest to forests and protected areas. One-third of "forest lands" are actually are sub-alpine and alpine meadows and steppe grasslands. Since these pastures are within the specifically managed forest areas, they are usually in better condition than municipal pastures. In addition, these pastures are often located at the average altitude between winter and summer pastures. With the limited commercial forestry in Kyrgyzstan, leasing fees from forest pastures can make up the largest source of a forest enterprise's income.⁴³ Forest enterprise pastures are also leased for hay making for winter fodder. Unregulated livestock grazing presents a pressure on high conservation value juniper and fir forests, which are key components in the ecosystem mosaic comprising the globally significant biodiversity of the Western Tian Shan. Such forest stands are also important elements of habitat corridors for wild ungulates, and for snow leopard dispersal between alpine grasslands as a single snow leopard's home range is typically large enough to encompass several mountain ridges and the valleys in between.

94. Unsustainable Use of Forests: Dependence on imported timber is high in Kyrgyzstan, since commercial forestry is prohibited, and relatively low volumes of wood (approximately 25,000 cubic meters annually) are drawn from maintenance/sanitary cutting. During the Soviet period, Kyrgyzstan imported 400,000-500,000 cubic meters of industrial roundwood and 2 million cubic meters of fuelwood annually, which is estimated as the minimal annual demand for timber and fuelwood for the country. Currently only 67,500 cubic meters of timber is imported, and an estimated 40-50,000 cubic meters is cut illegally, equating to only 20-25% of the estimated minimum annual demand. Consequently, the price of timber in local markets of US \$160-250/m³ is beyond the means of most rural households, indicating that illegal pressure on forests for fuelwood and local construction is high.⁴⁴ Although forests cover only 5.6% of the country, almost 20% of the Kyrgyz population lives in or near forests, and more than one third of houses in Kyrgyzstan rely

⁴³ World Bank, 2015. "Kyrgyz Republic: Communities Forests and Pastures," Report No: ACS13613, April 30, 2015.

⁴⁴ Ibid.

only on coal and fuelwood for heating and cooking.⁴⁵ Recent economic shifts have led to rising costs of electricity and gas, leading many public institutions, such as schools and hospitals, to switch to charcoal and wood-based heating systems.

95. Inadequate forest management facilitates multiple threats. Harvesting of over-mature trees, which is legally permitted in unprotected areas, removes ecologically important trees, destroys surrounding vegetation as a result of extensive construction of drive-up roads, reduces biological diversity, impairs its resilience to anthropogenic and natural stress. The rate of natural regeneration and reforestation is unable to keep pace with the rate of forest degradation. The area of wild fruit forests such as those of IUCN Red List critically endangered Knorring's Hawthorn (*Crataegus knorringiana*), the vulnerable wild Siever's apple (*Malus sieversii*) and endangered Niedzwiedzky apple (*Malus niedzwetzkyana*) is shrinking.

96. The unique wild nut-fruit forest currently covering 630,900 ha in Jalal-Abad province and other parts of southwestern Kyrgyzstan shrinks by 3% annually as a result of unsustainable logging. In addition, these forests suffer from uncontrolled harvesting of NTFPs and wood for fuel and local construction. An indication of the NTFPs collected from Kyrgyzstan forests is highlighted in Table 4 below.

Table 4 Kyrgyzstan Timber and Non-timber Forest Product Ecosystem Services

Physical unit, Provisioning services	2008	2010	2012	2014
Timber	4.3	4.1	5.6	7.7
Firewood, thousand m3	12.6	12.7	14.7	
Grazing, thousand ha	94.9	96.0	103.7	103.7
Grazing (actual), thousand ha	759.5	768.4	829.9	829.9
<i>Non-timber forest products</i>				
<i>Forage collection</i>				
Nuts, tons	950.2	1329	835.4	2856.5
Walnuts	924	1320	825	2805
Almonds	7	4.2	5.6	3.5
Pistachio	19.2	4.8	4.8	48
Honey	35	35	35	39.5
Apples	1615.4	1307.7	1615.4	1538.5
Herbs etc.	n/a	n/a	n/a	n/a
Other forest products (mushrooms)	300	300	300	300

97. In spite of the adopted Law on valuable species felling, few cases of illegal logging are officially reported from time to time presenting quite positive figures (see Table 5 below).

Table 5 Illegal Logging in Jalal-Abad Province⁴⁶

Years	Type of forest	Total volume of logging, m3
2008	Deciduous and coniferous	156.55
2009	Deciduous and coniferous	76.16
2010	Deciduous and coniferous	64.27
2011	Deciduous and coniferous	82.88
2012	Deciduous and coniferous	76.50
2013	Deciduous and coniferous	112.70
2014	Deciduous and coniferous	24.70
2015	Deciduous and coniferous	35.10
2008-2015	Total	628.86

98. *Legal and Illegal Hunting of Ungulates:* In the Western Tian Shan, trophy hunting by internationals is not currently a significant source of pressure (though it may represent one opportunity for future biodiversity conservation efforts). Currently in Kyrgyzstan international trophy hunting is mainly concentrated in the Central Tian Shan (in the east and southeast of the country), along the border with China.

99. In the Western Tian Shan the primary source of hunting pressure is from legal and illegal hunting of ungulates by local Kyrgyz populations. According to the Department of the Rational Use of Natural Resources (the department that regulates hunting), approximately 75% of Kyrgyz territory is open to hunting – essentially all national territory other than population settlements; in general, land is not leased for hunting. Hunting by Kyrgyz nationals is mainly considered sport hunting (rather than subsistence), with hunters

⁴⁵Environment of the Kyrgyz Republic National Statistics Committee, 2013.

⁴⁶ Department of Forest Planning and Inventory, 2015.

participating (during the regulated hunting seasons) for enjoyment, or to obtain game meat as a delicacy. The local sport-hunting sector is regulated in Kyrgyzstan by the Department of the Rational Use of Natural Resources, which monitors game species' populations, enforces hunting regulations, and determines targets for the number of individuals to be harvested.

100. Management of hunting species, particularly alpine ungulate species, is not necessarily managed in a holistic manner considering broad ecosystem requirements. For example, the population of ibex in a certain region may be able to sustain a certain level of hunting pressure, but it is unknown what level of hunting pressure is appropriate to allow ibex to play their necessary ecological role as a prey species for snow leopard, or for other ecosystem functions, such as grazing of alpine meadows.

101. In addition, the enforcement capacity of the Department of Rational use of Natural Resources is limited, with four hunting enforcement officers for all of Toktogul district, and only two hunting enforcement officers for Toguz-Toro district – equating to one enforcement officer per almost 200,000 ha. Therefore illegal hunting (mainly of ungulates, e.g. ibex) remains a significant issue. There were 706 cases of poaching documented in Kyrgyzstan in 2015 (a 34% increase from 2014), and the number of unreported cases is certainly much higher. In one high profile case in July 2015, seven poachers were arrested in Toktogul district with illegal rifles, near to the area of the Kan-Achuu National Park, with evidence of two ibex killed; one of the poachers had ties to a local government official.⁴⁷ The number of reported cases of poaching of snow leopard is not high in Kyrgyzstan, but is still an issue of concern. There was one identified incidence in January 2016. In 2015 one snow leopard skin was confiscated in Bishkek (from Talas region) and one snow leopard skin was confiscated in 2016 in Issyk-kul region.

102. It is likely that illegal hunting of game animals may increase in the future as well, as hunting regulations introduced in 2015 increased prices for hunting licenses; for example, the price that Kyrgyz citizens must pay to hunt an ibex increased from 600 soms to 10,000 soms. Also, there is currently a national debate about the issue of whether species listed in the Kyrgyz Red List, such as Marco Polo sheep and other Argali sub-species should be available for hunting (which also affects the international trophy hunting sector).

Long-Term Solution and Barriers to Achieving the Solution

103. The long-term solution for biodiversity conservation and sustainable land and forest in the Western Tian Shan entails a comprehensive integrated landscape management approach, with protected areas as anchors of conservation within a productive semi-forested pastoral alpine landscape. This approach is particularly critical to ensure the conservation of wide-ranging apex predator mammals, such as snow leopards. Current research in ecology has demonstrated that functioning ecosystems are typically defined at the “landscape” scale rather at the scale of an individual protected area, with snow leopards and many other species using seasonal territories much larger than the average protected areas. Such a large-scale integrated landscape management approach must clearly take into account the livelihood needs of local populations, while applying international good practices in land-use planning and natural resource management. Implementing such an approach requires secure and effectively managed core areas (e.g. protected areas and other key biodiversity areas), implementation of sustainable forest and land management in the wider landscape, and well-developed planning and land-use management approaches to manage key corridors and the interfaces (i.e. buffer zones) between key biodiversity areas and productive landscapes. In addition, the conservation of rare and data-deficient species such as the snow leopard requires the use of cutting-edge international best practices. Thus, key alpine landscapes in the Western Tian Shan must be brought under effective management with well-managed core conservation areas surrounded by buffer zones and connected by ecological corridors where land use is regulated in ways that balance conservation and socio-economic needs. The solution necessitates three key elements: a). Effective management of existing PAs and other key biodiversity areas (e.g. HCVFs); b.) a high degree of integration of these protected areas with buffer zones, wildlife corridors and other areas of the broader landscape; and c.) Adoption of international good practices for conservation of key components of biodiversity, such as the snow leopard.

104. While this project is not focused solely on snow leopard conservation, the snow leopard serves as a conceptual symbol for the overall objective of biodiversity conservation; as a wide-ranging apex predator, snow leopards are an important indicator species, since they require large-scale high quality ecosystems with good connectivity between prime habitat patches. In addition, since their pelts are a desirable commodity, effective snow leopard conservation also requires effective protected area and natural resource management – with well-enforced laws and regulations – a standard that also has significant benefits for biodiversity

⁴⁷ See <http://www.turmush.kg/ru/news:144491>.

conservation as a whole. The Global Snow Leopard and Ecosystem Protection Program (GSLEP) – a collaborative program between the governments of 12 snow leopard range countries and other partner organizations – provides the overarching implementation framework for improving the conservation status of snow leopards, wild prey, and their ecosystems across the entire snow leopard range. The long-term solution sought by the GSLEP (and the individual participating countries) is characterized by *inter alia*: (i) the maintenance or increase in snow leopard numbers to form viable populations; (ii) the maintenance or increase of prey numbers to support viable snow leopard populations; (iii) a reduction in the predation and mortality of livestock, and decreased killing of snow leopard and prey; (iv) the maintenance or restoration of habitat quality and connectivity to ensure the gene flow between snow leopard and prey populations; (v) a reduction in the rate of degradation of snow leopard and prey landscapes; (vi) reduced poaching and smuggling of snow leopard and prey, and their products; (vii) baselines that are established to track progress and effectiveness of conservation programs, enable adaptive management and enable identification of priority areas for protection; (viii) an enabling policy environment, and capacitated institutions, to deter wildlife crime and enact incentives for local communities to protect and conserve; (ix) a general public, resource users and decision-makers who are informed and educated about snow leopard ecosystems and the values associated with them; and (x) an increased capacity for better trans-boundary coordination between national and local institutions across the snow leopard and prey range. Although the *National Strategy and Action Plan for Snow Leopard Conservation* (NSSLC) is in place and identifies a suite of national and local actions that would be required to effectively conserve snow leopard, wild prey and their ecosystems in Kyrgyzstan, there are also significant barriers to the country's ability to contribute to achieving the long-term solution described above.

105. The key barriers to the long-term solution for biodiversity conservation (including snow leopard conservation) and sustainable land and forest management in the Western Tian Shan are described below.

106. *Barrier 1: Weak management of Key Biodiversity Areas*: As of early 2016, the system of SPNAs consists of 89 PAs covering 7.6% of the country.⁴⁸ This includes three categories of PAs (strict reserves, national parks and sanctuaries), all of which are under the direct or indirect responsibility of the State Agency for Environment Protection and Forestry. Of these three categories, the most important for nature conservation are the first two, which have administrative offices within or near the PAs, as well as rangers ('inspectors') patrolling within the PAs. The system does not provide adequate coverage for the spatial range of threatened species, most notably the snow leopard and prey. In Central Tian Shan the Government is currently supported with a \$1 million USD UNDP-GEF project that is aiming to increase protection of the biodiversity in that part of the Tian Shan. In Western Tian Shan, the Kyrgyz Government established 10 protected areas. However, the coverage of the snow leopard range in Western Tian Shan remains less than 50%. The protected area system suffers from underfunding, and suboptimal management. Most PAs have no legally backed buffer zones and no corridors that are needed for effective conservation of such species as snow leopard.

107. During the preparation phase of this project the government has succeeded in establishing two new national parks in the Western Tian Shan to support increased coverage for conservation of key species. These two PAs are Alatau National Park (56,826 ha in Toktogul District) and Kan-Achuu National Park (30,497 ha in Toguz-Toro District). Although they have been recently formally gazetted and approved, there is virtually no existing management of these PAs: the baseline analysis conducted for this project indicated METT scores of just 17 - 18 (14 - 15%) for both PAs. Significant investment and capacity development is required to turn these "newborn" national parks into effective mechanisms for biodiversity conservation. Management effectiveness of other previously existing PAs in the Western Tian Shan is also relatively weak. Although the region's PAs have benefits from some donor investment in the past, key PAs are still not fully secured or effectively managed. The baseline analysis of the other four previously established PAs that will be supported by this project produced an average METT score of 43 (37.7%) for these PAs. This is in fact symbolic of the overall state of protected area management in Kyrgyzstan broadly speaking, considering that the country is still in the process of building good institutional capacity for nature conservation and natural resource management; however, the METT has not yet been instituted at the national level, so a full comparison of the situation of the PAs in Western Tian Shan relative to the national level is not possible.

108. Although PAs are core-tenants of biodiversity conservation, they are not the only key biodiversity areas in the landscape. HCVFs are also critically important anchors in the landscape, particularly in Kyrgyzstan, which has less than 6% of its national territory covered by forests. The formal HCVF concept has actually not yet been introduced in Kyrgyzstan and integrated in forest management regulations and

⁴⁸ State Agency on Environment Protection and Forestry

guidelines. Certain elements of Kyrgyzstan's forest management regime can be considered as relevant to the implementation of HC VF conservation and management, such as the current ban on the cutting of economically productive nut and fruit species, although this is poorly enforced. However, on the whole there is a lack of individual, institutional and systemic capacity to protect and conserve HC VFs as key biodiversity areas. In the Western Tian Shan less than 20% of the endemic Shrenk's spruce forest is currently protected and much less of wild fruit and nut forest. The protection of high conservation value forests (such as wild apple trees) suffers from lack of local capacity, no enforcement, and constant abuse of these forests by local communities (uncontrolled logging, grazing).

109. *Barrier 2: Unsustainable management of land and forest in wider landscape:* Current forest and land-use plans do not take into account the ecological requirements of wildlife, including rare and threatened species such as snow leopard. Corridors providing for wildlife passage to key habitats outside the protected area are not identified or designated, and there is no legal mechanism for identifying or managing such corridors. Juniper and other forest types in many of these areas have degraded beyond natural regeneration rates, and buffer zones are not effectively managed to restrict biodiversity-incompatible uses. The status of locally migrating mammals depends on a landscape-level approach to conservation, combining strict conservation in the breeding / nesting areas with sustainable use in the wildlife passage / forage areas. The snow leopard requires a large home range as it moves widely with the changing seasons, movements of prey species such as argali and ibex, and during the mating season. In a highly fragmented landscape such as current Western Tian Shan, conservation of snow leopard and associated threatened migrating ungulates will be ineffective, both from PA cost-effectiveness perspective, as well as from the perspective of ungulate population sustainability.

110. Many small scattered Juniper and wild fruit and nut forest patches of up to 200 ha each continue to be used with no control over livestock entry, sanitary felling, wood fuel collection and harvest of over-mature trees. Most of the wild apple forests have not been classified as protected forest, and their national area of over 16,000 ha is shrinking every year. Forestry methods applied here are the same forestry management techniques applicable to any economic forest in the country, which does not take into account their high ecological value. Land and natural resource use in such small forest parcels located in the buffer areas need to be restricted and degraded pastures and forests rehabilitated. In the state forest lands estate, not all territory is covered by forest, and pasture areas within the forest estate are leased to local communities for grazing livestock, but this is done without any assessment of carrying capacity, or sustainable management approaches that would allow degraded forest areas to naturally regenerate. Practically speaking, the district-level forest management enterprises ("leskhozoes") employ foresters, who have little interest or capacity to ensure sustainable land management of pastures within their territories. In addition, although there is no commercial harvest of timber in the Western Tian Shan, because forest resources are so limited there is high illegal logging pressure, and the forest management enterprises have insufficient enforcement capacity to deter illegal activities. Finally, existing forest management plans developed and implemented by the leskhozoes do not adequately incorporate international good practices for sustainable forest management, including sustainable management of NTFPs.

111. There is also low existing capacity for sustainable land management in non-forest areas of the wider landscape, which are mainly pasture areas. Pasturelands outside of the State Forest Fund lands are managed by local Pasture Users Associations (PUAs), designated for each local governance unit under the 2009 Law on Pastures. The law authorizes PUAs to develop pasture management and grazing plans, aimed at sustainable use, conservation and improvement of pastoral resources use. Pasture use tickets are issued by the PUA executive body Pasture Management Committees (PMCs), with all revenues to be used for sustainable management of pastures. Although PUAs are tasked with sustainable management of pastures, practically speaking they have little capacity to do so in many regions of Kyrgyzstan, including the two target districts for this project – Toktogul and Toguz-Toro. Pastures are not accurately identified and mapped, there is no validated data on the number of livestock or pasture users, and the dynamic condition of pastures is not documented or tracked, and thus the carrying capacity appropriate for sustainable land management is not defined. Therefore PMCs are not able to develop and implement pasture management plans that reflect sustainable land management practices. In addition, there is no data identifying areas of pasture lands that may be particularly important for wildlife as migratory or dispersal corridors, or as seasonal fodder areas, so appropriate pasture management measures to safeguard wildlife are also not implemented.

112. *Barrier 3: Low uptake of and capacity to implement international best practices for snow leopard conservation and management of its habitat* The international community, summoned by the leadership of the President of Kyrgyz Republic, through the signing of the Snow Leopard Declaration in Bishkek, has

committed to preserve the snow leopard, and implement concrete activities in this respect. A Working Secretariat of the Global Snow Leopard and Ecosystem Conservation Program was established in Bishkek. It is important that capacities of countries to participate in this program are duly established, and in particular with respect to: poaching, addressing the issue of killing the snow leopard by farmers, better control over border movement to stop illegal wildlife trafficking; transboundary knowledge sharing about biodiversity resources and exchange of skills and experience, including cooperative research and information management; and a unified snow leopard monitoring system. Recently the GEF approved a global Medium-Size project for conservation of snow leopard. The current proposed project will complement this global snow leopard coordination support mechanism through enabling full participation of Kyrgyzstan stakeholders in these important activities.

113. At present Kyrgyzstan has not adopted international best practices for conservation of snow leopards, including necessary monitoring, and law enforcement. There is no national snow leopard-related monitoring strategy or database, and existing monitoring approaches are fragmented, uncoordinated, and undertaken by a variety of different stakeholders (i.e. PA staff, National Academy of Sciences, Department of Rational Use of Natural Resources, NGOs) using different methods at different time intervals across fractured spatial territories. As such, data on Kyrgyzstan's snow leopard population does not have high confidence levels, and is outdated. This is reflected by the fact that according to snow leopard population data reported in the GSLEP, among snow leopard range states Kyrgyzstan has the lowest confidence level in its reported population numbers (30% confidence, while the average among range states is 60% confidence), and is in the lower half in terms of recency of its data (2001). Undertaking reasonable quality snow leopard range mapping, research and monitoring programs require common international protocols, and national staff capable of their application. Kyrgyzstan also requires sufficient law enforcement capacity and coordination to effectively control illegal wildlife trade across its borders. Current wildlife law enforcement is not well-coordinated between relevant parties, such as customs, border control, and police.

Stakeholder Analysis

114. During the project preparation stage, a stakeholder analysis was undertaken in order to identify key stakeholders and assess their prospective roles and responsibilities in the context of the proposed project (see also the profile of institutions in description of the *Institutional Context* above). Table 6 below lists the key stakeholder organizations; provides a brief summary of the responsibilities of each of these stakeholder organizations (specifically as it applies to the conservation of snow leopard and snow leopard habitats); and broadly describes the anticipated role of each of the stakeholder organizations in supporting or facilitating the implementation of project activities:

Table 6 Stakeholders and Roles in Project

Stakeholder	Role
Government Agencies	
State Agency on Environment Protection and Forestry (SAEPF) and WS GSLECP	Main implementation partner hosting the Department on Protected Areas, the key stakeholder for the elaboration of the National PA planning framework, WS GSLECP, ensuring organization of new PA; as well as managerial and financial sustainability of the national PA system.
Ministry of Agriculture, Processing Industry and Melioration	Key partner in the development and implementation of the pasture management plans at target areas. (Output 2.3.)
State Registration Service of the Kyrgyz Republic (SRS)	SRS will coordinate and control the registration of land property rights in the vicinity of the project sites. Within its mandate, it is responsible for the following: 1) regulating of land relations (state registration deed, land cadastre) in the new PA, corridors and buffer zone (Output 2.1); and 2) topography survey and mapping of the PA to prepare state registration deed for land users (ibid)
State Agency on Local Self-Governance and Interethnic Relations	Integration of SLM and biodiversity conservation and sustainable land management issues into local development plans and their further implementation (Output 2.1., 2.2.)
Province and District administrations	Support to the establishment of the new PAs and integration of biodiversity conservation into corresponding administrative level development strategies and plans (Output 2.2.)
Local Communities	
Local Self Governance Bodies	These bodies are responsible for the elaboration and implementation of local communities' development strategies including local environment

Stakeholder	Role
	issues. They will be among the main project implementing partners at the local level in integrated land use planning, buffer zones and corridors (Outputs 2.1.1 and 2.1.3)
Associations of Pasture and Water Users	They are the users of ecosystem services regulating access of local communities to natural resources and sustainable use of biodiversity and they will provide inputs to the development of the landscape level management plan for Tian Shan that defines buffer zones and conservation-friendly uses in sensitive areas, as well as play a role in the development and implementation of alternative sustainable livelihoods (Outputs 2.3.)
Communities of the PA buffer zones	Active users of ecosystem services and to be involved in PA management and sustainable use practices to be promoted by the project. (Output 1.4., Outputs 2.1., 2.2., 2.3.)
Non-government Organizations	
Snow Leopard Trust	Foundation implementing snow leopard conservation project in Central Tian Shan aimed at habitat range monitoring, promoting anti-poaching and livelihoods for local communities, will be a partner in the project for relevant activities
Kyrgyzstan Association of Forest and Land Users, CAMP Alatau, and RDF	These NGOs will be involved to advocate for sustainable biodiversity conservation and use and to promote Joint Forest Management practice and HCVF concept and SFM certification piloting, as well as joint patrolling (Outputs 1.11, 1.2, 1.4.). They will be also involved into development of the pasture management plans and land use plans in buffer zones and corridors jointly with local communities and state administrations (Outputs 2.1., 2.2., 2.3.).
Research and Expertise	
Two institutes of the National Science Academy of the Kyrgyz Republic: Biology and Soils Institute; Forest Research Institute	Based on their experience and expertise, these institutes will play a role in elaboration of the scientific grounds for biodiversity monitoring, improving participation in biodiversity inventory, development of biodiversity sustainable use norms, identification of the areas under strong pressure, PA management effectiveness assessment (Outputs 1.1., 1.2., 1.3.). Additionally they will be also involved into fostering Kyrgyzstan participation in GSLEP activities on snow leopard monitoring and research (Component 3 all Outputs).
Private Sector	
Kyrgyz community based tourism association (KCBTA)	To be involved in training of local communities to develop ecological tourism facilities and infrastructure for PAs financial sustainability as well as marketing of such community-based tours (Output 1.2 and 2.5).
Ayil Bank and micro-credit companies	The bank has experience in supporting agriculture and rural development and is considered one of the key potential partners of the implementation of the Micro Credit Alternative Livelihoods Facility (Output 2.5).

Baseline Analysis

115. Without the GEF investment in the proposed project, the ‘business-as-usual scenario’ for the conservation biodiversity (including snow leopards and their prey species), and the sustainable management of forest and land resources is one where:

- (i) The Western Tian Shan alpine forest and pasture landscape will not be managed as an integrated whole, as management approaches will remain uncoordinated and un-cohesive, without buffer zones, wildlife migration corridors, HCVFs and other high-biodiversity value landscape elements identified and managed appropriately;
- (ii) Newly established protected areas in the Western Tian Shan remain mostly as “paper parks”, as authorities have low capacity to effectively manage established protected areas, with little ability to monitor biodiversity or monitor and enforce regulations, leading to ongoing declines in threatened species;
- (iii) Tens of thousands of forest resources in the Western Tian Shan, including HCVF, are not sustainably managed for biodiversity benefits or other ecosystem services, are continuously degraded by livestock intrusion and unmanaged domestic use, with little expansion in forest coverage as

livestock hampers natural regeneration and forest managers have low capacity to carry out reforestation;

- (iv) Hundreds of thousands of pasturelands in Toktogul and Toguz-Toro districts, including alpine pasturelands, continue to degrade from over- or under-grazing, as PMCs do not have capacity or data to effectively implement SLM measures in accordance with the Law on Pastures; and
- (v) Kyrgyzstan is only able to implement its national snow leopard and ecosystem conservation plan at a basic level, without comprehensive national monitoring of snow leopards or their prey species, and without effective wildlife trade monitoring and enforcement.

116. Although the country's resources and capacity remains extremely limited, Kyrgyzstan has made impressive policy advances and commitments to the sustainable management of forest and land resources, the establishment of protected areas, and the conservation of snow leopards. In addition to committing notable national resources, Kyrgyzstan is leveraging the support of development partners and other stakeholder organizations to partially tackle some of the barriers to sustainable forest and land management, and the conservation of biodiversity in the West Tian Shan. It is conservatively estimated that the current annual baseline funding (from all sources) for sustainable forest and land management and conservation of biodiversity in the Western Tian Shan amounts to approximately \$7.8 million USD per year during the life of the project. The breakdown of this baseline funding is briefly summarized below:

117. The baseline program funding from the SAEPF related to *biodiversity conservation and nature protected areas development* is approximately \$4.42 million USD per year from 2016-2018, and would be expected to only increase marginally during the remaining years of proposed project; this represents the national investment in the PA system as a whole. Thus the total national investment in protected areas over the life of the project is anticipated at \$22-\$23 million USD. This financing for PAs comes from the state budget, special Republican Fund for Nature Protection (RFNP), and Local Funds for Nature Protection (LFNP). Over 80% of the funding is allocated to support protected area staff (including forest guard and patrolling); the remainder supports basic PA infrastructure, and limited research activities. The baseline funding for protected areas in Western Tian Shan amounts to approximately \$1.2 million USD over the five-year duration of the project, which covers salaries, basic infrastructure, as well as limited nature tourism. Financing of the awareness raising and public relations at PAs in Western Tian Shan will amount to approximately \$0.6 million USD over the project duration. In addition, the State Inspectorate on Ecological and Technical Safety will spend an average of \$1.00 million USD per year nationally from 2016-2018 on *monitoring and control of ecological security*, increasing an average of 1-2% per year for the remainder of the project period.

118. A key baseline element for this project is Kyrgyzstan's ten-year *National Strategy and Action Plan for Snow Leopard Conservation, 2013 – 2023* (current budget approximately \$1 million USD). The main goal is to prevent the decline of the Snow Leopard population in Kyrgyzstan. The plan defines the following critical areas for intervention: (1) Protected Area expansion; (2) Conservation of snow leopard range in productive landscapes outside PAs; and (3) International cooperation. While the priorities have been clearly defined, the funding for the strategy has remained short and the Government of Kyrgyzstan appeals to the international community for the support in its implementation, which this project responds.

119. The *Global Snow Leopard and Ecosystem Conservation Program* (GSLEP) is an important international baseline program, which this project directly builds upon. Although this is not a financing project, rather a conventional framework, it unites governments, UN agencies, NGOs and researchers of the snow leopard range in the effort to conserve this species, as postulated by the International Agreement on snow leopard signed in Bishkek in 2013. The Working Secretariat of the GSLEP is based in Bishkek, and currently requires support in human and technical capacities. The Working Secretariat receives in-kind support from the government of Kyrgyzstan (via SAEPF) in terms of office space. GSLEP and the Working Secretariat are also supported by the international NGO Snow Leopard Trust.

120. Kyrgyzstan is currently piloting reform of the forest sector, with the involvement of multiple multilateral and bilateral partners, including the World Bank, FAO, and GIZ. The SAEPF currently plans annual budget expenditures for "*Forest Ecosystem Development*" of approximately \$6.79 million USD per year for 2016-2018, and a similar level of expenditure can be anticipated beyond this. GIZ is providing support of approximately \$627,000 in various forms to the forest sector reform pilot process, through approximately 2018. In addition, the GEF funded FAO implemented project "*Sustainable Management of Mountainous Forest and Land Resources under the Climate Change conditions*" is contributing to the forest sector reform process, by supporting two of the six pilot leskhozoes. The project includes \$5.45 million in GEF funding, as well as more than \$19 million in in-kind co-financing, though the project includes many activities not related to forest sector reform. The project is currently scheduled for completion at the end of

2018. The World Bank project “*Integrated Forest Ecosystems Management*” is starting up in Kyrgyzstan in the 2nd half of 2016. The project aims to support (i) Forest Sector Institutional Reform, (ii) Strategic Investments and Piloting of Sustainable Management Approaches in 12 pilot leskhozoes and (iii) the National Forest Inventory and Forest Management Informational System operationalization. The project is funded with \$16.1 million USD (\$6.6 million IDA credit; \$5.4 million IDA grant, and \$4.1 million GEF grant), and is scheduled to be completed in September 2021.

121. Kyrgyzstan’s Law on Pastures was passed in 2009, but implementation remains uneven across the country. The law authorized the establishment of Pasture User Associations, with designated Pasture Management Committees responsible for oversight of management of their PUA’s pasture allocation. Kyrgyzstan continues to work to effectively implement the law throughout all national pasturelands, with some external support. The Ministry of Agriculture, Processing Industry and Melioration has budgeted a total of \$71.1 million USD over the period 2016-2018 for *Support to Husbandry*, though not all of this relates specifically to implementation of SLM through implementation of the Law on Pastures. Other partner organizations are also working in this realm, with a key initiative being the IFAD-funded “*Livestock and markets development Programme II*” project, which is assisting with the development of pasture management plans incorporating SLM principles, among other things, in Jalal-Abad, Batken, and Osh provinces. The project has \$32 million USD in funding from IFAD, and is being implemented from 2013-2018. In addition, the World Bank is supporting a \$15 million “Pasture and Livestock Improvement Project”, currently implemented from 2015-2019. From the project \$11.44 million is supporting Community-based Pasture Management

122. In terms of socio-economic development programs, *The Regional Development Fund* jointly with the National Project on *Agricultural Financing-4* have set aside about \$78.4 million USD in the next two years for credit (10% annual interest rate) to farmers for crop improvement, husbandry, and food processing. Micro-crediting institutions play an important role in rural development of Kyrgyzstan. Many of these companies and banks have experience in collaboration with UNDP for new products, including those oriented to environmental issues and sustainable development. There are over 110 branches of microcredit institutions in the country, which creates an important foundation for the sustainable livelihoods component of this project.

123. These initiatives in the baseline scenario are significant insofar as they provide basic support to Western Tian Shan and a framework for socio-economic development for local communities. However, the territorial coverage of protected areas and buffer zones remains inadequate from a conservation perspective and local communities continue to pursue biodiversity-incompatible livelihoods that undermine conservation efforts. The summary of the scenarios with and without the GEF investment is provided in later Table 10 in the section on benefits of the GEF Alternative.

124. Kyrgyzstan has approached the World Bank’s Climate Investment Funds for participation in the Pilot Program on Climate Resilience (PPCR), though it is in the early stages of the discussion for funding. The first Joint Multilateral Development Bank (MDB) mission to Kyrgyzstan was carried out by the World Bank, the European Bank for Reconstruction and Development, and the Asian Development Bank from April 18-22, 2016. In 2015, Kyrgyzstan was approved for an initial grant of \$1.5 million USD to support development of its Strategic Program on Climate Resilience.

125. Within the overarching framework of the regional programme, GIZ in partnership with the Forestry Agency, is implementing the \$3.1 million USD project “*Adaptation to climate change through sustainable forest management*” until 2018. The project is facilitating the negotiation and conclusion of Joint Forest Management (JFM) contracts with local communities. The project will also strengthen the capacities of the SAEPF and the forest enterprises and their staff to improve the planning, implementation and monitoring of forestry climate resilient activities (including JFM). It will seek to facilitate the development and implementation of vocational training for foresters. Finally, it will enable the establishment of seed management and seedling production systems for climate-resistant tree species and varieties.

126. Panthera, an international NGO, is actively supporting a range of snow leopard conservation initiatives in Kyrgyzstan. Its activities include: conducting broad snow leopard population surveys and threat assessments in the Central Tian Shan; piloting community-based conservancies to reduce farmer-snow leopard conflict; field training for conservation biologists; and assessing the conservation status of snow leopards and their prey in selected areas. The collective financial commitment to these activities is conservatively estimated at US\$100,000 per year.

127. NABU, an international NGO, is also working on snow leopard conservation in Kyrgyzstan. NABU established an initiative on wildlife law enforcement called “Gruppa Bars”, and is carrying out a regional project on snow leopard conservation in the Northern Tian Shan, including Kazakhstan, since January 2013.

Information on annual funding of NABU's activities in Kyrgyzstan was not available, but is assumed to be relatively small (<\$100,000 USD/year).

128. FFI, an international NGO, has been working in the Central Tian Shan on snow leopard conservation since 2005, helping the staff at Sarychat-Ertash Reserve to combat poaching, monitor snow leopards, and engage communities. FFI has expanded its focus to include working with the Naryn Reserve, another snow leopard stronghold in the Central Tian Shan, to strengthen its technical capacity. FFI aims to enable both reserves to deliver more effective management, as well as enhancing ecological connectivity between the reserves, and improving community outreach in support of snow leopard conservation. Information on the annual funding of FFI's work in Kyrgyzstan was not available, but is assumed to be relatively small (<\$100,000 USD/year), and FFI does not currently have activities in the Western Tian Shan, although FFI is contributing to Kyrgyzstan's snow leopard conservation efforts at the national level.

129. WWF, an international NGO, does not have a country office in Kyrgyzstan, but is supporting some snow leopard conservation activities through various projects, primarily focused in Sarychat-Ertash Reserve, in the Central Tian Shan. Information on funding of WWF's work in Kyrgyzstan was not available, but is assumed to be relatively small (<\$100,000 USD/year).

Part II. Strategy

Project Rationale and Policy Conformity

Fit with the GEF Focal Area Strategies and Strategic Programs

130. The project is consistent with the objectives of, as well as contributing to the outcomes and outputs of GEF's Biodiversity, Land Degradation and Sustainable Forest Management Focal Area Strategies for the GEF-6 period.

131. For the **Biodiversity Focal Area (BD)**, the project will contribute to the expected outcomes and indicators of BD -1 Program 2 and BD 4 Program 9 as outlined in Table 7 below:

Table 7 Project Compliance with GEF Biodiversity Results Framework

GEF-6 Biodiversity Results Framework			
Objective	Program	Outcome	Indicator (and project contribution to indicator)
BD-1 Improve sustainability of protected area systems	Program 1: Improving Financial Sustainability and Effective Management of the National Ecological Infrastructure Program 2: Nature's Last Stand: Expanding the reach of the global protected area estate	Outcome 1.2: Improve management effectiveness of protected areas	Indicator 1.2: Protected area management effectiveness score. <u>Project contribution to indicator:</u> The project strengthens management effectiveness in four key previously existing PAs in the Western Tian Shan landscape, with a total area of 198,777 ha, from a METT baseline of an average of 44 to an average of greater than 51, an increase of more than 16%.
		Outcome 2.1: Increase in area of terrestrial and marine ecosystems of global significance in new protected areas and increase in threatened species of global significance protected in new protected areas.	Indicator 2.1: Area of terrestrial and marine ecosystems and number of threatened species. <u>Project contribution to indicator:</u> The project supports establishment of two new PAs with a total area of 87,323 ha. The project also creates wildlife corridors and buffer zones at a total area of >50,000 ha, but it is anticipated these will overlap with the forest and pastureland management area (indicator 9.1 below).
		Outcome 2.2: Improved management effectiveness of new protected areas	Indicator 2.2: Protected area management effectiveness score. <u>Project contribution to indicator:</u> The project strengthens the management of two newly established protected areas (Alatai SNP and Kan-Achuu SNP), from METT baseline values of 17 and 16, respectively, to a target of >50 for both PAs.

BD-4 Mainstream biodiversity conservation and sustainable use into production landscapes and seascapes and production sectors	Program 9: Managing the Human-Biodiversity Interface	Outcome 9.1 Increased area of production landscapes and seascapes that integrate conservation and sustainable use of biodiversity into management.	Indicator 9.1 Production landscapes and seascapes that integrate biodiversity conservation and sustainable use into their management. <u>Project contribution to indicator:</u> The project secures HCVF in 34,383 ha, and implements biodiversity considerations in management of alpine pasturelands covering 147,268 ha, for a total <u>direct</u> contribution of 181,650 ha. The project also includes indirect contribution covering 944,317 ha, which is the area of the two pilot districts, less the other areas of direct contribution, since the project will work with the districts' administrations to integrate biodiversity considerations into districts' development plans.
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132. For the **Land Degradation Focal Area (LD)**, the project will contribute to the expected outcomes and indicators of LD-3 Program 4 out indicated in Table 8 below:

Table 8 Project Compliance with GEF Land Degradation Results Framework

GEF-6 Land Degradation Results Framework			
Objective	Program	Outcome	Indicator (and project contribution to indicator)
LD-3 <i>Integrated Landscapes</i> : Reduce pressures on natural resources from competing land uses in the wider landscape	Program 4: Scaling-up sustainable land management through the landscape approach	Outcome 3.2: Integrated landscape management practices adopted by local communities based on gender sensitive needs	Indicator 3.2: Application of integrated natural resource management (INRM) practices in wider landscapes. <u>Project contribution to indicator:</u> As a <u>direct</u> impact, the project will integrate and implement SLM practices in pasture management plans for 147,268 ha of pasturelands bordering PAs (including 65,361 ha of degraded pasturelands) in four target communities. As an <u>indirect</u> impact, the project will ensure adoption of ecologically sound land and natural resource management practices in territorial development of two districts with a total area of 1.22 million ha.

133. For the **Sustainable Forest Management Focal Area (SFM)**, the project will contribute to the expected outcomes and indicators of SFM-1, SFM-2 and SFM-3 as indicated in Table 9 below:

Table 9 Project Compliance with GEF SFM Results Framework

GEF-6 Sustainable Forest Management Results Framework			
Objective	Program	Outcome	Indicator (and project contribution to indicator)
SFM-1 <i>Maintained</i>	Program 2:	Outcome 1: Cross-	Indicator 1: Area of high conser-

<i>Forest Resources:</i> Reduce the pressures on high conservation value forests by addressing the drivers of deforestation.	Identification and maintenance of high conservation value forests.	sector policy and planning approaches at appropriate governance scales, avoid loss of high conservation value forests	vation value forest identified and maintained. <i>Project contribution to indicator:</i> 40,839 ha of HCVF are identified and maintained.
SFM-2: Enhanced Forest Management: Maintain flows of forest ecosystem services and improve resilience to climate change through SFM.	Program 5: Capacity development for SFM within local communities.	Outcome 3: Increased application of good management practices in all forests by relevant government, local community (both women and men) and private sector actors.	Indicator 3: Area of sustainably managed forest, stratified by forest management actors. <i>Project contribution to indicator:</i> 34,383 ha of two leskhozoes' forests are under SFM and joint forest management arrangements.
SFM-3 Restored Forest Ecosystems: Reverse the loss of ecosystem services within degraded forest landscapes	Program 7: Building technical and institutional capacities to identify degraded forest landscapes and monitor forest restoration.	Outcome 5: Integrated landscape restoration plans to maintain forest ecosystem services are implemented at appropriate scales by government, private sector and local community actors, both women and men.	Indicator 5: Area of forest resources restored in the landscape, stratified by forest management actors. <i>Project contribution to indicator:</i> At least 4,886 ha of degraded mountain forests are restored.

Rationale and Summary of GEF Alternative

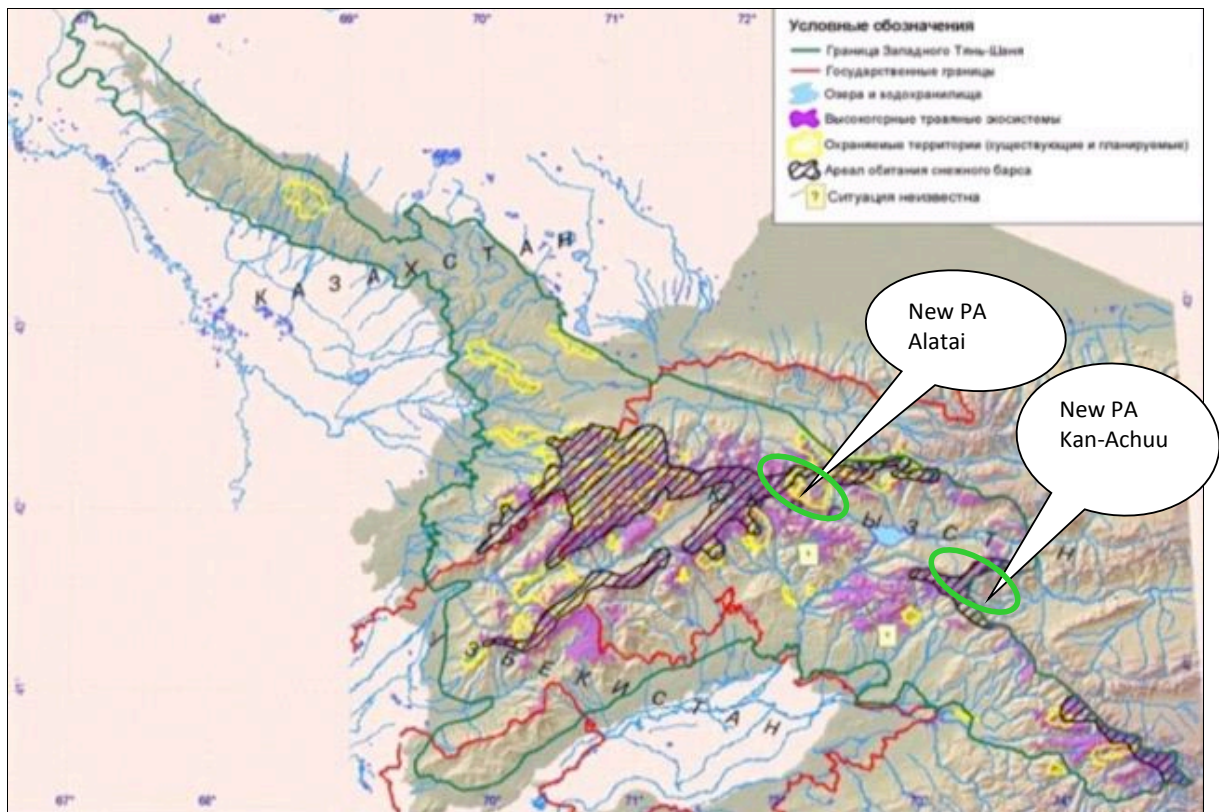
134. The strategic context for this GEF-funded project is provided by multiple ongoing policy initiatives and priorities in Kyrgyzstan: (i) the expansion of the national protected area system to increase PA coverage to the stated international target objective of at least 10% of national territory; (ii) the national forest sector reform process, currently underway until at least the end of 2018; (iii) ongoing national enhancement of local resource user groups' capacities to effectively implement the Law on Pastures, including SLM elements; and Kyrgyzstan's strong support for the Global Snow Leopard and Ecosystem Protection Program, including Kyrgyzstan's own National Strategy for Snow Leopard Conservation.

135. The 'alternative scenario' that the project seeks to contribute to is characterized by: (i) preventing the further fragmentation of key biodiversity landscapes and degradation of forest and land resources in Kyrgyzstan that provide critical ecosystem services; (ii) ensuring habitat connectivity across the Western Tian Shan landscape for key species, including snow leopard and prey; (iii) improving the conservation status, and sustainability of pasture and forest use in mountain ecosystems; (iv) implementation of snow leopard and prey monitoring and conservation measures, and reduction of direct threats, in the Western Tian Shan and other Kyrgyzstan priority snow leopard conservation landscapes.

136. Project outputs and activities will be spatially targeted in the project's 'planning domain'. The selection of the projects target sites and regions was premised on the following criteria: (i) coverage of a significant proportion of snow leopard and other key species' range in Kyrgyzstan; (ii) inclusion of newly established SPNAs with weak management capacities in the globally significant Western Tian Shan ecosystem; (iii) inclusion of natural dispersal and migration routes for snow leopard and their prey, with specific consideration of linkages to the within the habitat in the Western Tian Shan region; (iv) forest areas used by threatened and endemic species, including snow leopard and/or their prey; (v) inclusion of relatively intact habitats and ecosystems; and (vi) inclusion of sufficiently large and intact landscapes that will contribute to achieving wider landscape scale conservation, as well as trans-boundary conservation objectives for snow leopards, their prey and associated ecosystems in the Western Tian Shan.

137. The project planning domain selected for the project during the PPG phase, comprises two primary focus areas – Toktogul district and Toguz-Toro district, within which the newly established PAs are located, as shown in Figure 6 below.

Figure 6 Snow Leopard and Prey Habitat and National PAs in the Western Tian Shan⁴⁹



138. The planning domain extends from the center of Kyrgyzstan to the western border with Kazakhstan and Uzbekistan, filling the gaps in the PA network and thus establishing an integrated and cohesive landscape conservation approach, as well as ensuring vital linkages to the Central and Inner Tian Shan ecoregions.

139. **The project strategy** is focused on four strategic areas of intervention as follows:

140. **Conservation areas:** Improving the conservation tenure and conservation security of national parks and other protected areas by developing systemic, institutional and individual capacities to implement effective PA management.

141. **Forest areas:** improving the ecological integrity of forests in the Western Tian Shan by: (i) identifying and enhancing the status of HC VF, including ensuring ecologically sensitive approaches to wood harvesting, ensuring the sustainability of NTFP use, and establishing joint forest management mechanisms; and (ii) rehabilitating degraded forests. Forest zones between snow leopard habitats can help provide cover for snow leopards transiting from one part of their home range to another. However, the more relevant linkage is to the conservation of wild ungulates as snow leopard prey species. HC VF zones are part of a heterogeneous ecosystem complex that support various species, including snow leopard prey species. Snow leopard prey species do migrate between different habitat areas seasonally (e.g. from high altitude summer habitats to lower altitude winter habitats), and forest belts contribute to the integrity and ecological utility of wildlife corridors and buffer zones. Sustainable management of HC VF areas is therefore critical for the conservation of biodiversity and integrity of the Western Tian Shan ecosystem.

142. **Livestock pasture areas:** (i) improving sustainable pasturelands management across the targeted critical Western Tian Shan key biodiversity areas, by development of the institutional and individual capacities of the community-based Pasture Management Committees, catalyzing changes to unsustainable practices by means of participatory development of pasture management and grazing plans; and (ii) reducing the risk of conflicts between pastoralists and wildlife, including snow leopard and their prey, by inclusion of wildlife ecological considerations into pasture management plans, as well as involvement of Pasture Management Committees into SPNA public boards.

⁴⁹ GEF-World Bank Western Tian Shan Ecosystem Development Project, 2008.

143. *Development of national scientific monitoring and law enforcement capacities for snow leopard conservation*: Expanding the reach of research, monitoring and planning efforts about snow leopard, its prey, and their habitats by building institutional capacities, resources and partnerships between the PAs, academia, law enforcement bodies, hunting service providers and local communities on the national and local levels. Targeted support will be directly aimed to develop national capacities and set the scene for international cooperation on snow leopard to contribute to implementation of Kyrgyzstan's NSSLC. Cross-sectoral and multi-level awareness raising campaigns targeting different focus groups, which range from parliament to local communities dwellers will contribute to the behavioral change and social mobilization as well as lobbying enabling frames improvement.

144. The project is structured into three components, with each component comprised of two outcomes with four to five outputs, which will jointly contribute to the achievement the targeted outcomes for the components.

145. **Component 1** will be focused on conservation and sustainable management of Key Biodiversity Areas within landscapes supporting the national PA network for increased representation of vulnerable species habitat, including snow leopards, in the PA system habitat, and avoided loss of *High Conservation Value Forests* through official recognition (Outcome 1). For this the work will focus around four areas of support: Output 1.1: Expanded operational SPNA network in the Western Tian Shan Region through the support to operationalize the two new State Nature Parks of Alatau and Kan-Achuu; Output 1.2: Upgraded status of HCVF, and sustainable forest management involving local communities; Output 1.3: Enhanced management and conservation capacities of Western Tian Shan PAs in Jalal-Abad Province, and strengthened HCVF management; Output 1.4 Strengthened participatory patrolling, enforcement and surveillance systems of new and existing PAs through the Local PA Management Board and joint patrol groups to enforce anti-poaching.

146. **Component 2** will focus on ecosystem resilience and habitat connectivity in Western Tian Shan enhancement by regulating land and forest use in buffer zones and corridors and supporting sustainable livelihoods (Outcome 2). For this, the project will work in five areas: Output 2.1 Identified and designated buffer zones for new SPNAs and wildlife corridors between relevant SPNAs, and species management plans drafted and implemented; Output 2.2: Territorial development plans of Toktogul and Toguz-Toro districts and communities aligned with biodiversity conservation, SFM and SLM objectives with needed modifications; Output 2.3: Degraded rangelands important both for livelihoods and wildlife, including snow leopard prey species, in the target districts rehabilitated through improved local pasture management plans; Output 2.4: Restoration of degraded forests important for wildlife, including snow leopard prey, and livelihoods of local communities; and Output 2.5: Alternative livelihoods program for local communities designed jointly with the local micro-crediting institutions, and launched to support target communities.

147. **Component 3** will aim to strengthen national capacities for snow leopard conservation, promoting Kyrgyz regional and global cooperation, and setting the scene for up-scaling (Outcome 3). The work on this component will be concentrated of four areas: Output 3.1: Law enforcement capacities of relevant stakeholders enhanced through trainings on wildlife protection aimed at identification and prosecution of wildlife crime; Output 3.2: Capacities for deployment of international standards for long-term monitoring of parameters critical for snow leopard conservation in national priority landscapes developed, based on international GSLEP monitoring framework; Output 3.3: Kyrgyzstan participation in the Global Snow Leopard and Ecosystem Protection Programs supported, aimed at synergies and coordination of national, transboundary and regional level activities; and Output 3.4 Implementation of Kyrgyzstan's National Strategy on Snow Leopard Conservation supported in nationally identified priority landscapes provided, in alignment and coordination with GSLEP and other relevant initiatives.

148. The total cost of investment in the project is estimated at \$28,507,758 USD of which \$3,988,575 USD constitutes grant funding from GEF and \$24,519,183 USD comprises co-financing from national government (SAEPF), local governments (Toktogul and Toguz-Toro districts), the National Nature Protection and Forestry Development Fund, UNDP, NGOs (Panthera) and other development partners (GIZ). Please see a table in Annex 13 explaining how co-financing is related to various outcomes of the project.

149. The anticipated long-term benefits of the GEF investment are summarized in the following Table 10:

Table 10 Long-term Benefits of the GEF Investment

Baseline	GEF Alternative	Benefits
<i>Biodiversity</i>		
• With current funding priorities under the	• PA system in Western Tian Shan offers improved representation for	• Strengthened Kyrgyzstan PA system with improved management

Baseline	GEF Alternative	Benefits
<p>baseline Governmental Program and Action Plan on Transition to Sustainable Development for 2013-2017, funding will be sufficient to cover only basic support to existing PAs, but insufficient to implement management of newly established PA. There will be no integration of PAs in the wider landscape in Western Tian Shan. There will be no financial support for communities living near the PAs in Western Tian Shan to establish biodiversity-friendly businesses and land management practices.</p> <ul style="list-style-type: none"> About 17% of the currently unprotected alpine grassland ecosystems and 25% of the relict spruce forest ecosystems and walnut and fruit forests in the Western Tian Shan are predicted to degrade in the next 10 years, due to excessive grazing by livestock, unmanaged arable farming, and unregulated wood cutting. Populations of threatened species are likely to decrease in the Western Tian Shan landscape, including snow leopard (<i>Panthera uncia</i>), Tian Shan argali (<i>Ovis ammon karelini</i>), Tian Shan Maral (<i>Cervus elaphus</i>), Turkestan lynx (<i>Lynx lynx isabellinus</i>), Tian Shan white clawed bear (<i>Ursus arctos isabellinus</i>), Menzbier's marmot (<i>Marmota menzbieri</i>) Tian Shan Fir (<i>Abies Semenovii</i>), Siever's Apple (<i>Malus sieversii</i>), Niedzvedzky's apple (<i>Malus niedzwetzkyana</i>), Knorring Hawthorn (<i>Crataegus knorringiana</i>), cinereous vulture (<i>Aegypius monachus</i>), and Saker falcon (<i>Falco cherrug</i>). 	<p>threatened species notably by improving habitat coverage of snow leopard and other threatened species. Effective management for at least 286,099 ha habitat of under-represented globally threatened species and globally significant ecosystems under protection by 2021, with strengthened PA management units, and developed management plans.</p> <ul style="list-style-type: none"> Improved monitoring and enforcement of hunting regulations in game reserves and other hunting areas beyond PA borders in two target districts. Recognition in local development and resource-use planning of the establishment of a landscape-level approach to biodiversity conservation for the Western Tian Shan with established connectivity to PAs through buffer zones, corridors, and other Key Biodiversity Areas (i.e. HCVF stands). Key biodiversity areas in forest and pasturelands outside PAs are identified, recognized in management documents, and resource use is managed in accordance with biodiversity requirements. Under-represented biodiversity is studied and monitored on a systematic basis. 	<p>for 286,099 ha of PAs in the Western Tian Shan, including 87,323 ha in two recently established PAs, and 198,776 ha in four previously established PAs in the Western Tian Shan.</p> <ul style="list-style-type: none"> Increased PA coverage of the range of snow leopards in Western Tian Shan. Management effectiveness of the existing (198,776 ha) and newly established (87,323 ha) PAs in Western Tian Shan is increased by an average of 45% over the baseline (measured by METT). Migration corridors and buffer zones covering >50,000 ha. Biodiversity conservation principles integrated in territorial plans of two administrative districts (1,218,175 ha), including the State Forest Fund territory managed by leskhozoes and municipal pastureland territory in the two districts. Removal of threats (15% reduction in illegal wood cutting; 100% reduction in poaching) through increased protection of globally threatened species listed in IUCN Red Data List and associated prey species - snow leopard (<i>Panthera uncia</i>), ibex (<i>Capra sibirica</i>), argali (<i>Ovis ammon karelini</i>), Turkestan lynx (<i>Lynx lynx isabellinus</i>), Tian Shan white clawed bear (<i>Ursus arctos isabellinus</i>), Tian Shan fir, and wild apple and hawthorn forest stands. The project results contribute to CBD PoWPA (expansion of PAs, integration of PAs in wider landscapes, and community engagement schemes) and Aichi targets.

Sustainable Land Management

Baseline	GEF Alternative	Benefits
<ul style="list-style-type: none"> Pasture Management Committees do not have capacity or data to implement sustainable grazing and land management practices in their respective pasturelands Overgrazed pastures: exceeding carrying capacity by 1.5-2 times resulting in reduced provision of ecosystem services, leading to reduced economic and ecological productivity, and diminished livelihoods; Livestock numbers continue to increase beyond ecological carrying capacity; Increased extent of less palatable grass and plant species, indicating degradation of pasturelands; Pasturelands in forest territory are not managed in a coordinated and cohesive manner; Poor agricultural land management near protected areas; Wildlife is negatively impacted by livestock presence in key biodiversity areas at critical times of year. 	<ul style="list-style-type: none"> Ecosystem services valued and incorporated in territorial planning based on multi-stakeholders engagement; Dynamic pasture quality inventory integrated annually into grazing plans; Sustainable pasture management practices implemented: rotational grazing to maintain soil upper layer; stimulate grasses for vigorous growth and healthy root systems through pasture watering and setting additional watering places and wells; increased investments in repair and maintenance of key pasture infrastructure (bridges) allows greater flock mobility; using the grazing process to feed livestock through maintaining soil cover and managing plant species composition to maintain feed quality; hay farming in support of intensive pastures established on appropriate lands to remove loads on natural meadows and fodders during the winter period; regeneration of the natural pasture covers using natural pasture seeds. SLM best practices are applied across sectors and integrated management approaches are applied across different land use sectors in wider Tian Shan as result of replication. Micro grants are offered to establish alternative livelihoods, serving as a lasting financial support mechanism for funding alternative livelihoods and could benefit over 1,000 recipients in the 7-10 years immediately after the project. 	<ul style="list-style-type: none"> Competitive pressures between land uses in mountain pasture and forest landscapes reduced in productive lands of two administrative districts (1,218,175 ha, including 663,431 ha of alpine pasturelands, and 34,383 ha of forested state forest fund land); Improved vegetation cover, fodder productivity and pasture regeneration throughout 147,268 ha of pastureland of four target communities; Decrease in grazing pressure and improved condition of mountain grassland ecosystems over 65,361 ha; Well-functioning ecosystem services, such as forage productivity at mountain pastures, stable water flows, and reduced erosion; Enhanced security of agricultural livelihoods for 23,939 rural inhabitants, including 5,138 rural poor; Increased incidence of SLM approaches applied by small-scale holders leading to soil and vegetation quality improvements; Avoided loss and increased sequestration of organic carbon content in forest soils by 729,246 tCO₂; increased sequestration of organic carbon content in pastureland soils by 2,732,090 tCO₂ (based on Tier-1 FAO EX-ACT model).
Sustainable Forest Management		
<ul style="list-style-type: none"> Continued degradation of endemic fir, ecologically important juniper, and genetically important walnut-fruit forests in Western Tian Shan resulting from: <ul style="list-style-type: none"> Illegal logging in forests in valuable ecosystems for fuel wood and local construction; Poorly managed grazing in forests causing low natural regeneration of forests; Forest lands encroachment for agriculture, settlements 	<ul style="list-style-type: none"> Sustainable use principles integrated in forest management plans for 40,839 ha of forests designated as <i>High Conservation Value Forests</i>; Adjustment of volume, timing and mode of sanitary cutting to ensure ecological principles, and harvesting of non-timber resources in Juniper and wild nut forests, in line with ecosystem carrying capacity principles and wildlife migration corridors; Reforestation of degraded forests; Sustainable management of grazing in forest pastures to 	<ul style="list-style-type: none"> 40,839 ha of HCVF designated and put under SFM insuring stability of ecosystem functions, such as genetic reserves, habitat for biodiversity and avoided GHG emissions of 1,171,205 tCO₂. 4,886 ha of degraded forests regenerated, sequestering 1,079,098 tCO₂ (based on Tier-1 FAO EX-ACT model). Key biodiversity areas in forest zones identified, demarcated, and managed appropriately as corridors and buffer zones to ensure ecosystem cohesiveness and good habitat quality for threatened and

Baseline	GEF Alternative	Benefits
and mining; – Unsustainable harvesting of non-timber forest products.	support natural regeneration; • National codification of the applied HCVF approach in Kyrgyzstan; • Training of foresters and communities in forest management planning and enforcement of HCVF standards.	globally significant wildlife, including snow leopard and prey.
<i>Capacity Development and Knowledge Management</i>		
<ul style="list-style-type: none"> • Pasture Management Committees do not have capacity to implement sustainable land management in Toktogul and Toguz-Toro districts; • Forest managers in Toktogul and Toguz-Toro do not have knowledge and capacity to apply HCVF approach to forest management in State Forest Fund lands; • Protected area managers in the Western Tian Shan do not have capacity for effective PA management; • Baseline information on the distribution, abundance, seasonality and recruitment rates of snow leopards and prey remains incomplete; • No national mechanism in place to coordinate the monitoring of snow leopard and prey; • National Strategy and Action Plan on the Conservation of Snow Leopard in place, but underfunded and not fully under implementation. 	<ul style="list-style-type: none"> • Provide data and knowledge management tools to support implementation of SLM; • Provide equipment and training for PA managers in Western Tian Shan to improve management of PAs; • Raise awareness of HCVF approach, and train foresters on implementation; • Develop, implement and maintain a consolidated national snow leopard monitoring, reporting and information management system; • Host training sessions for researchers, scientists, academics, volunteers, students, NGO staff, government field staff, etc. on biodiversity, including snow leopard monitoring and reporting and the relevant biodiversity information management system; • Increase the coverage of camera traps, aerial surveys and aerial photography for monitoring and reporting on snow leopard and/or medium-sized ungulate populations; • Facilitate the opportunistic fitting of radio collars to individual cats and evaluate the cost-effectiveness of fecal DNA analysis for species identification; and • Facilitate the participation and involvement of national scientists, researchers, managers and academics in regional/international snow leopard conservation initiatives. 	<ul style="list-style-type: none"> • Increase capacity for effective PA management for six Western Tian Shan PAs, involving more than 150 PA staff; • Four Pasture Management Committees responsible for management of 147,268 ha of pasturelands have capacity to implement SLM in pasture management plans; • A strong scientific base for the conservation of snow leopard and their prey is established; • A national snow leopard monitoring and reporting system, and a national snow leopard information management system, is established and operational, improving timeliness and quality of snow leopard population estimation to an annual estimate with greater than 50% certainty; • The national coverage (as a % of the total snow leopard range) of snow leopard and prey monitoring activities increases from a baseline of less than 10% for snow leopard, and 5% for snow leopard prey, to more than 25% and 20 % respectively; and • At least 15 managers, scientists, researchers or academics participate in regional snow leopard conservation initiatives, and at least 10 attend and participate in regional monitoring and report-back meetings of the GSLEP.

Project Goal, Objective, Outcomes and Outputs/Activities

150. The project **objective** is: *To promote a landscape approach to protection of internationally important biodiversity, and land and forest resources in the Western Tian Shan mountains in Kyrgyzstan.*

151. In order to achieve the project objective, and address the barriers, the project's intervention has been organized into three components (this is in line with the components presented at the PIF stage):

- *Component I.* Conservation and sustainable management of Key Biodiversity Areas within the Western Tian Shan landscape.
- *Component II.* Ecosystem resilience and habitat connectivity in Western Tian Shan are enhanced by regulating land and forest use in buffer zones and corridors and support to sustainable livelihoods.

- *Component III.* Strengthening national capacities for Kyrgyz regional and global cooperation and setting the scene for scaling-up snow leopard conservation.

152. The project activities will be implemented across a scaled planning domain, reaching from local to national levels. A summary of the targeted planning domain is indicated in Table 11 below.

Table 11 Target Planning Domain Levels and Stakeholders of Project

Local	District	Provincial/Regional	National
		<ul style="list-style-type: none"> – Western Tian Shan mountain ecosystems within Jalal-Abad Province: 3,111,300 ha – Jalal-Abad Provincial natural resource management authorities 	<ul style="list-style-type: none"> - National stakeholders related to snow leopard conservation, biodiversity conservation, wildlife law enforcement, sustainable forest management, and sustainable land management - Gissar-Alai national priority snow leopard conservation landscape (for some monitoring and enforcement activities 3) <p><i>Note: National level activities are primarily targeted under Component 3</i></p>
<p>Cholpon-Ata A/A: Population 7,364; nearest community to main Alatau SNP territory</p> <p>Cholpon-Ata Pasture Management Committee: Responsible for management of 43,499 ha of pasturelands</p> <p>Kyzyl-Ozgorush A/A: Population 10,943; near to Kan-Achuu SNP territory, but on Toktogul district side</p> <p>Kyzyl-Ozgorush Pasture Management Committee: Responsible for management of 45,768 ha of pasturelands</p>	<p>Toktogul District Administration: Responsible for management of 821,937 ha of district territory</p> <p>Toktogul leskhoz: Responsible for management of 25,387 ha of forest lands</p>	<p>Alatau SNP: 56,826.4 ha; est. 2016</p>	
<p>Kok-Irim A/A: Population 2,929; near to Kan-Achuu SNP territory</p> <p>Kok-Irim Pasture Management Committee: Responsible for 34,962 ha of pasture</p> <p>Atai A/A: Population 2,310; near to Kan-Achuu SNP territory</p> <p>Atai Pasture Management Committee: Responsible for 23,039 ha of pasture</p>	<p>Toguz-Toro District Administration: Responsible for management of 396,238 ha of district territory</p> <p>Toguz-Toro leskhoz: Responsible for management of 8,995 ha of forest lands</p>	<p>Kan-Achuu SNP: 30,496.5 ha; est. 2015</p> <p>Saimaluu-Tash SNP: 31,925 ha; est. 2001; World Heritage natural/cultural candidate site</p>	
		<p>Other key Western Tian Shan PAs:</p> <ul style="list-style-type: none"> – Besh Aral SNP: 112,463 ha; est. 1979, World Heritage Site – Padysh-Ata SNP: 30,556 ha; est. 2003; World Heritage Site 	

Local	District	Provincial/Regional	National
		– Sary-Chelek Biosphere Reserve: 23,832 ha; est. 1959; World Heritage Site / Biosphere Reserve	

153. The project target area includes six specific protected areas, all of which are considered Key Biodiversity Areas, as indicated in Table XX below.

Protected Area	National Designation	IUCN Category	International Designation	Other Global Designation	KBA Criteria
Alatai	State Nature Park	II	Newly established within the boundaries of the Kyrgyzstan portion of Western Tian Shan World Heritage Site	Within “Mountains of Central Asia” hotspot (one of 36 globally); part of the Global 200 Ecoregion Middle Asian Montane Steppe & Woodlands (one of 238 globally)	A1, B2, B3, C
Kan-Achuu	State Nature Park	II	Newly established within the boundaries of the Kyrgyzstan portion of Western Tian Shan World Heritage Site		A1, B2, B3, C
Sary-Chelek	State Biosphere Reserve	I	Biosphere Reserve, Part of the Kyrgyzstan portion of the Western Tian Shan World Heritage Site		A1, B2, B3, C
Padysh-Ata	State Nature Reserve	I	Part of the Kyrgyzstan portion of the Western Tian Shan World Heritage Site		A1, B2, B3, C
Besh-Aral	State Nature Reserve	I	Part of the Kyrgyzstan portion of the Western Tian Shan World Heritage Site		A1, B2, B3, C, D1
Saimaluu-Tash	State Nature Park	II	Saimaluu-Tash World Heritage Site		A1, B2, B3, C

154. The outputs and activities under each of the three components are described in detail below.

Component 1: Conservation and Sustainable Management of Key Biodiversity Areas Within the Western Tian Shan Landscape

155. The work under this component will be spatially focused in two key conservation areas: the State Nature Park “Alatai” and the State Nature Park “Kan-Achuu” located in two administrative districts, Toktogul and Toguz-Toro respectively, of Jalal-Abad Province. The characteristics of these two SPNAs are briefly summarized in Table 12 below.

Table 12 Primary Targeted SPNAs Main Characteristics

Characteristics	“Alatai” State Nature Park	“Kan-Achuu” State Nature Park
Location	Located in the western part of the Western Tian Shan region, in Toktogul District of Jalal-Abad Province.	Located in the central part of the Western Tian Shan, in Toguz-Toro District of Jalal-Abad Province.
Date of establishment	Established in 2016 by Governmental Resolution as of 26.01, # 27	Established in 2015 by Governmental Resolution as of 11.09, #132
Area	The area of the park 56,826.4 ha	The nature area of the park is 30,496.5 ha
Tentative staff number	17	14
Snow leopard population estimate	In 2015, the estimates of game rangers 6-8 cats.	In 2015, the local estimates of game rangers 4-6 cats
Snow leopard prey ungulates	In 2015, the ibex population in Toktogul district was estimated at up to 85 heads.	In 2015, the ibex population in Toguz-Toro was 120 heads.
Conservation challenges	The weak staffing, lack of equipment and infrastructure, harsh mountainous topography and extreme weather conditions, as well as low awareness of local	

	communities about the SPNA establishment constrains the effectiveness of the monitoring and enforcement capabilities of both SPNAs. As a result, poaching, cutting of forests, overgrazing by livestock is commonplace.
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Source: Department of Forest Ecosystems and SPNA.

156. The outputs and activities of this component will focus around four areas of support: Output 1.1: Expanded operational SPNA network in the Western Tian Shan Region through the support to operationalize the two new State Nature Parks of Alatai and Kan-Achuu; Output 1.2: Upgraded status of HCVF, and sustainable forest management involving local communities; Output 1.3: Enhanced management and conservation capacities of Western Tian Shan PAs in Jalal-Abad Province, and strengthened HCVF management; Output 1.4 Strengthened participatory patrolling, enforcement and surveillance systems of new and existing PAs through the Local PA Management Board and joint patrol groups to enforce anti-poaching. The proposed suite of activities, and broad implementation arrangements, for each of the four outputs are described in more detail below.

Output 1.1. Expanded operational SPNA network in the Western Tian Shan region through support to operationalize the two new State Nature Parks of Alatai and Kan-Achuu

157. Work under this output will focus on: (i) supporting operationalization of two nature parks Alatai and Kan-Achuu; (ii) establishing appropriate infrastructure for biodiversity conservation and monitoring in new PAs and developing corresponding capacities; (iii) involving local communities to biodiversity conservation.

158. The specific activities to be undertaken in this output will include the following:

- a) Develop new management plans for Alatai (56,826 ha) and Kan-Achuu (30,497 ha) SNPs, taking into account METT, updated biodiversity inventory data, and development of a zoning approach
- b) Develop appropriate SNP management tools (maps with zoning, forms of data collection and reporting, database management systems, methodology for a chronicle of nature, informational system - E-PMC)
- c) Support development of infrastructure and equipment procurement for Alatai and Kan-Achuu SNPs (including a transportation vehicle for each) (specifications, cost estimates and tendering, organization of procurement, training)
- d) Develop a training program and provide training for staff of Alatai and Kan-Achuu SNPs
- e) Develop and implement a biodiversity research and monitoring plan in new SNPs
- f) Develop and start implementing a strategy for increasing the financial income (business plans) of the SNPs, including feasibility assessment of re-introduction of argali
- g) Develop and implement new SNPs communications strategies (information products on local biodiversity, awareness raising campaigns, including the publication about poaching and violation of legislation).

159. The UNDP Project Management Unit (PMU) will - in close consultation with the Department for Forest Ecosystems and SPNA of SAEPF - coordinate the implementation of this output. The PMU will contract the services of a team of local experts from the SAEPF, Academy of Sciences, Land Management Institute "Kyrgyzgiprozem" and NGOs to provide the requisite professional, technical and scientific support to activities under this output. The PMU will contract a company or institution to survey the cadastral boundaries of the Alatai and Kan-Achuu SPNA, physically locate and demarcate the boundaries of the target SPNAs and prepare needed documentation for the state land cadaster and land use register. The PMU will also contract two UN Volunteers to monitor and coordinate project support in the target PAs. Additionally, the PMU will procure the materials required, to put in place internal infrastructure in PAs, i.e. cordons, vehicles, office, office equipment, radio stations, optics, collars, camera traps, GPS, etc. Local building contractors may be contracted to install boom gates and check points and to design, produce and construct the signboards. The management staff of the Alatai and Kan-Achuu parks will be directly responsible for supervising all the on-ground works and labor deployed in the park.

Output 1.2. Upgraded status of HCVF, and sustainable forest management involving local communities

160. The work under this output will focus on: (i) integration of the HCVF concept into the national forestry enabling framework; (ii) identification HCVF in Western Tian Shan; (iii) corresponding management regimes developed and implemented involving local communities.

161. The specific activities to be undertaken in this output will include the following:

- a) Review forest policy and legislation framework to propose integration of SFM principles and HCVF concept in existing forest management regulations and policies;
- b) Develop recommendations on needed changes and amendments to Kyrgyz legislation related to HCVF, and the Voluntary Sustainable Forest Management (SFM) Certification
- c) Implement the model of Joint Forest Management (JFM) and support the work of the JFM Boards in Toktogul and Toguz-Toro leskhozoes (in line with national forest sector reform process)
- d) Develop special HCVF regimes for SNPs, involving relevant local communities in the planning process, and taking into account local development plans of districts and aimaks
- e) Pilot SFM certification in the targeted leskhozoes
- f) Integrate HCVF management principles into the Forest Management Plans of Toktogul (forest cover of 25,387 ha) and Toguz-Toro (forest cover of 8,995 ha) leskhozoes, making proposals to improve FMP development methodology, taking into account latest HCVF inventory data and biodiversity data;
- g) Undertake inventory and registration of existing nature sanctuaries (zakazniks) in the Western Tian Shan region

162. The Project Management Unit (PMU) will - in close consultation with the Department for Forest Ecosystems and SPNA of SAEPPF - coordinate the implementation of this output and render support in: (a) engagement of expertise to develop amendments to national forestry enabling framework on HCVF; b) engagement of national expertise to promote JFM in the targeted Leskhozoes; c) engage relevant expertise to pilot SFM certification for the targeted Leskhozoes and integration of SFM into their Forest Management Plans and d) engagement of a relevant service provider to conduct inventory of the existing sanctuaries.

Output 1.3. Enhanced management and conservation capacities of Western Tian Shan PAs in Jalal-Abad Province, and strengthened HCVF management

163. The work under this output will focus on: (i) strengthening capacities (budget management, financial controls; financial performance management; and financial governance and accountability) of key Western Tian Shan PAs (Sary-Chelek Biosphere Reserve, Padysh-Ata State Nature Park, Besh Aral State Nature Park, and Saimaluu-Tash State Nature Park) and the Protected Area Department of the SAEPPF; (ii) training of foresters in HCVF regime application and environmental inspectors in corresponding law enforcement; (iii) revision of management and business plans of existing key Protected Areas of Western Tian Shan, and training of staff; and (iv) developing and implementing the plans of conservation management for the flagship species.

164. The specific activities to be undertaken in this output will include the following:

- a) Develop a program and provide training for PA and SAEPPF staff in Western Tian Shan to implement the National Priorities on Biodiversity Conservation Action Plan, National Strategy of Snow Leopard Conservation, including the topics of conflict management and communities' involvement
- b) Develop capacities of four key PAs of the Western Tian Shan on financial planning, budget management, financial monitoring, controlling and reporting to increase the revenue of PAs (BioFin) and knowledge management.
- c) Develop and pilot the mechanisms of effective cooperation with tour operators based on appropriate agreements and services in the PAs of the region (link to BioFin) taking into account their social corporate responsibility
- d) Develop capacities of the Department on Forest Ecosystems and SPNA under SAEPPF to manage the data of a unified national information system on Protected Areas (link to UNDP Rio Conventions project)
- e) Develop capacities of key PAs in Western Tian Shan to collect, process and manage field data and to provide unified data to the national information system on PAs (link to UNDP Rio Conventions project)
- f) Develop the program and provide training on HCVF, management plans and special management regimes, to amend the current Forest Management Plans of other Western Tian Shan leskhozoes.
- g) Conduct training for all Western Tian Shan Leskhozoes to strengthen law enforcement on HCVF, involving all the stakeholders.
- h) Elaborate and conduct awareness-raising campaigns at the national and local levels about the importance of SFM and HCVF, certification of SFM and opportunities of JFM
- i) Present management plans of the new SNP to relevant interest groups of the target and neighboring of Toktogul, Toguz-Toro, Aksy, Bakay-Ata districts

- j) Conduct two provincial workshops to improve key Western Tian Shan PAs management plans based on METT, application of participatory planning approaches and community inclusion to PAs management
 - k) Analyze key Western Tian Shan PAs' business activities and debate the business planning improvement on a Kyrgyzstan Western Tian Shan workshop
 - l) Develop key Western Tian Shan PAs capacities to improve the public relations (information products, web pages, information in social networks, etc.).
 - m) Provide training and integrate a separate section on snow leopard and its prey conservation in key Western Tian Shan PAs management plans, including the buffer-quiet zones and corridors, as well as changes in their pasture management practices.
 - n) Develop key Western Tian Shan PAs capacities to integrate wild ungulates considerations into the pasture management plans of adjacent communities
 - o) Provide training and revise the management plans of hunting service providers in Western Tian Shan taking into account protected areas and land use in buffer zones and corridors.
165. UNDP PMU will coordinate the implementation of this output in close consultation with the Department for Forest Ecosystems and SPNA of SAEPF. The PMU will contract the services of training consultants to develop and implement a package of training modules to enhance capacities of the PAs and leskhozoes of WTS region based on capacity needs assessments.

Output 1.4. Strengthened participatory patrolling, enforcement and surveillance systems of new and existing PAs through the Local PA Management Board and joint patrol groups to enforce anti-poaching

166. The work under this output will focus on: (i) participatory patrolling, enforcement and surveillance systems of new and existing PAs strengthened through Local PA Management Board (joint with local communities) and joint patrol groups to enforce anti-poaching.
167. The specific activities to be undertaken in this output will include the following.
- a) Organize and support the work of new parks' Public Management Boards with the inclusion of all local stakeholders to develop and implement their working plans
 - b) Establish joint patrolling groups, develop their working plans and organize the joint patrol raids
 - c) Present the best patrol practices, law enforcement, surveillance, publicity of violations and community involvement on the national workshop
 - d) Conduct workshops in Western Tian Shan PAs to improve the system of patrolling, law enforcement and surveillance systems through the establishment of PAs' Public Management Boards, including all stakeholders, and regularly information sharing with communities
 - e) Equip Joint Patrol Groups of the pilot PAs: communication, optics, camera traps, expedition equipment
 - f) Formalize cooperation of PAs with owners of hunting grounds for joint patrolling, monitoring and the exchange of data on biodiversity
 - g) Conduct joint anti-poaching raids in the targeted PAs
 - h) Incentivize rangers and other field staff to identify poaching and illegal use of natural resources cases.

168. UNDP PMU will coordinate the implementation of this output in close consultation with the Department for Forest Ecosystems and SPNA and Department of Rational Use of Natural Resources of SAEPF. Locally established joint patrolling groups also involving representatives of local law enforcement bodies, self-governance bodies, state administration, Association of Hunters and Fishermen, as well as hunting grounds managers will be supported with equipment and field expedition inventory to conduct random field inspection raids. For this PMU will procure needed materials and provide logistical support.

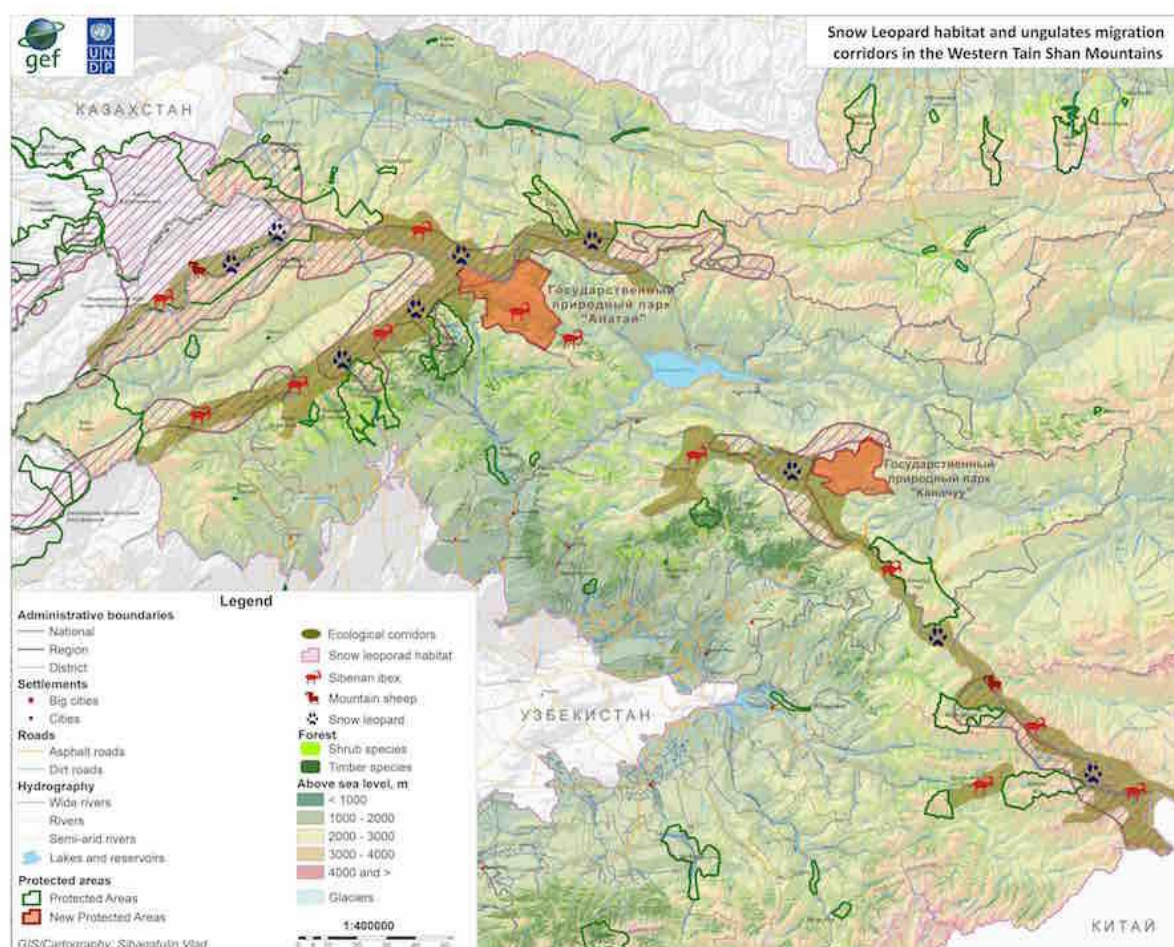
Component II. Ecosystem resilience and habitat connectivity in Western Tian Shan are enhanced by regulating land and forest use in buffer zones and corridors, with support for sustainable livelihoods.

169. The work under this component will be spatially focused on the high altitude forests and pastures located in the Toktogul and Toguz-Toro districts. The outputs and activities under this component are directed at improving the planning and management of the mountain pastures and forest stands located along, or immediately adjacent to, the new Alatai and Kan-Achuu PAs. All the activities under this component will seek to improve the ecological integrity and productivity through establishment of buffer zones and corridors by: Output 2.1: Identified and designated buffer zones for new SPNAs and wildlife corridors between relevant SPNAs; Output 2.2: Territorial development plans of Toktogul and Toguz-Toro

districts and communities aligned with biodiversity conservation, SFM and SLM objectives with needed modifications; Output 2.3: SLM and restoration of degraded pasturelands in the target districts important both for livelihoods and wildlife, including snow leopard prey species, through improved pasture management plans; Output 2.4: Restoration of degraded forests important for wildlife, including snow leopard prey, and livelihoods of local communities; and Output 2.5: Alternative livelihoods program for local communities designed jointly with the local micro-crediting institutions, and launched to support target communities.

170. The estimated wildlife corridors between key PAs in the Western Tian Shan are indicated in Figure 7 below, with the two newly established PAs, Alatau SNP and Kan-Achuu SNP, indicated in orange. Other previously established PAs are indicated in green outline.

Figure 7 Estimated Wildlife Corridors between PAs and Snow Leopard Range in Western Tian Shan



171. The proposed suite of activities, and broad implementation arrangements, for each of the five outputs are described in more detail below.

Output 2.1 Identified and designated buffer zones for new SPNAs and wildlife corridors between relevant SPNAs

172. The work under this output will focus on: (i) identification and designating of the buffer zones for Alatau and Kan-Achuu, and wildlife corridors between relevant PAs, and land use regimes being drafted and implemented. The identification and implementation of buffer zones will build on the successful legal model developed in neighboring Kazakhstan, also as part of UNDP-GEF projects. Local and national stakeholders have been consulted during the PPG phase on the potential identification and implementation of buffer zones and corridors. The implementation of SFM approaches in forest management plans will contribute to this, as

well as the implementation of SLM practices in pasture management plans in the targeted pasturelands bordering the PAs.

173. The specific activities to be undertaken in this output will include the following.

- a) Integrate the concepts "buffer-quiet zones" and "ecological corridors" in the land, forestry, hunting and biodiversity conservation legislation
- b) Identify and agree on at least 50,000 hectares of "buffer-quiet" zones and corridors for Alatau SNP and Kan-Achuu SNP and other nearby PAs in Western Tian Shan (maps and buffer zones' management regimes and agreement on borders with Cholpon-Ata A/O and Kyzyl-Ozgorush A/O (in Toktogul), Kok-Irim A/O and Atai A/O (in Toguz-Toro), leskhoz and hunting grounds owners and users, State Registration Service).
- c) Conduct inventory assessment of the biodiversity of the buffer-quiet zones and corridors in the areas outside the PAs with the potential of sustainable non-timber forest products use.
- d) Conduct hunting grounds inventory and management planning in the targeted districts.
- e) Develop and implement special hunting regimes for the buffer-quiet areas and wildlife corridors outside PAs in cooperation with local hunting ground users and hunters
- f) Create and maintain an electronic database of hunters with tracking of violators.
- g) Raise awareness of stakeholders about the special land use regimes of the buffer zones and corridors.
- h) Conclude agreements with the relevant stakeholders on the buffer zones and corridors regimes compliance.
- i) Support training of the relevant stakeholders and provide equipment to ensure buffer zones and corridor land use regimes.
- j) Carry out joint raids to monitor the compliance of the buffer zones and corridors regimes.
- k) Analyze the compliance of the new regimes with hunting licensing practice regarding ungulates to assure the sufficient population of the snow leopard prey and propose to improve this practice.

174. UNDP PMU will - in close consultation with the Department for Forest Ecosystems and SPNA of SAEPF - coordinate the implementation of this output. To identify on the grounds the relevant buffer zones and corridors PMU will engage relevant land use and management expertise as well as provide support o to organize participatory biodiversity friendly land use regimes development there, corresponding capacities being developed as appropriate. To communicate the results a series of PR actions will be supported. PMU will also engaged needed national consultancy to analyze hunting licensing practice for improvement.

Output 2.2. Territorial development plans of Toktogul and Toguz-Toro districts and communities aligned with biodiversity conservation, SFM and SLM objectives

175. The work under this output will focus on: (i) incorporating biodiversity conservation SLM and SFM objectives into the development plans of Toktogul and Toguz-Toro districts and target communities; (ii) promoting infrastructure and development planning in the areas of the wildlife corridors between protected areas and key biodiversity areas according to biodiversity conservation objectives of PAs.

176. The specific activities to be undertaken in this output will include the following.

- a) Analyze the resource management and spatial development plans of the pilot districts, communities and leskhoz management plans to integrate biodiversity conservation, and SLM and SFM issues.
- b) Develop program and train the representatives of the District State Administration, self-governing authorities, pasture committees, leskhoz, and NGOs in the target areas on SFM, SLM, and biodiversity conservation issues.
- c) Create the working groups for the integration of these issues into development plans.
- d) Examine the infrastructure development and mining plans for identifying potential conflicts with protected areas in the pilot districts. Ensure integration of the mitigation measures in the plans of infrastructure development.
- e) Organize and conduct workshops on sustainable development planning with all the above aspects for all target project partners.
- f) Support the organization of the coordination meetings on the pasture-related projects under the Pasture Department, Ministry of Agriculture, Processing Industry and Melioration, for the presentation of the GEF project's results
- g) Conduct assessment of economic value of ecosystem services of PAs, forests, and pasturelands in Toktogul and Toguz-Toro Districts, including feasibility assessment for implementing PES scheme for regulation of water resources and erosion vis-a-vis hydropower plants

177. UNDP PMU will - in close consultation with the Department for Forest Ecosystems and SPNA of SAEPF and Department of Pasture under the Ministry of Agriculture, Processing Industry and Melioration -

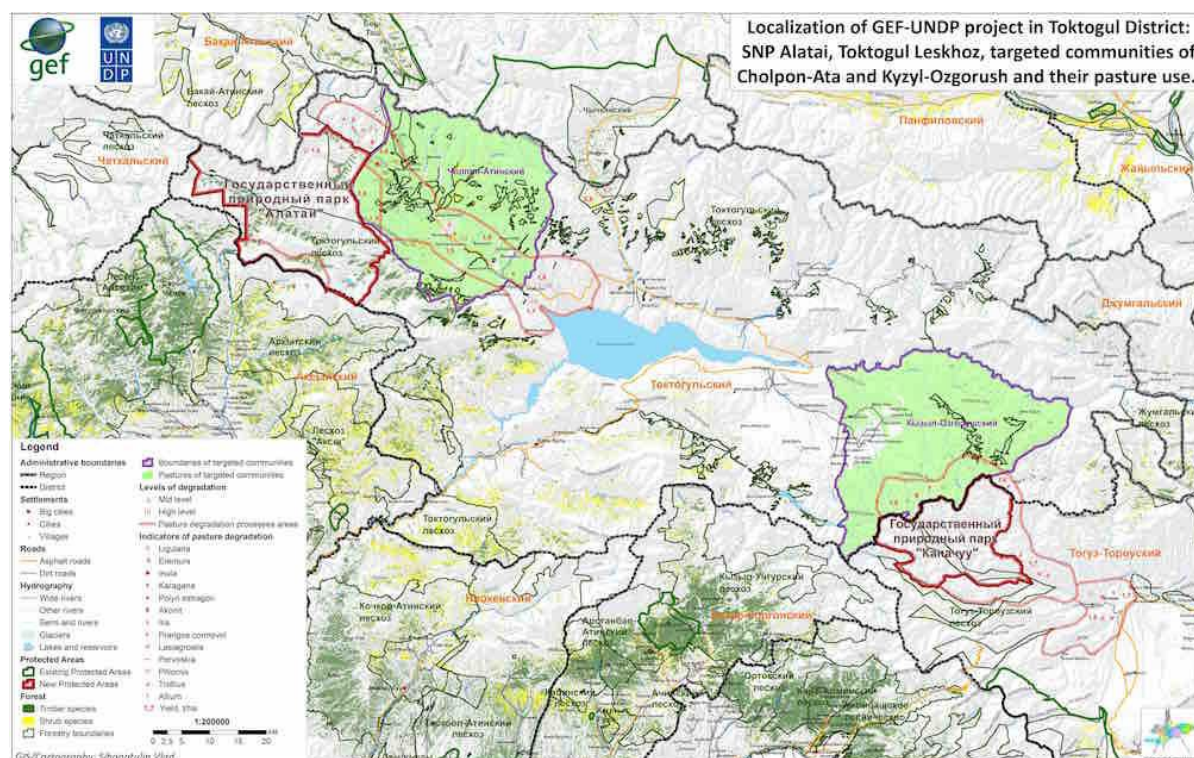
coordinate the implementation of this output, providing relevant expertise and organizational support to facilitate participatory planning process.

Output 2.3. Degraded rangelands important both for livelihoods and wildlife, including snow leopard prey species in the target districts, rehabilitated through improved local pasture management plans

178. The work under this output will focus on implementation of SLM practices in 147,268 ha of pasturelands bordering PAs, including rehabilitation of degraded rangelands (65,361 ha) in Toktogul and Toguz-Toro districts through improved local pasture management and grazing plans based on geo-botanic studies, economic and ecosystem service assessment. Pasture management plans will be designed and implemented jointly with the local communities using GIS technologies, and mapping of the feeding grounds and migrating routes (and timing) of snow leopard prey.

179. A map of the specific project target area for this activity in Toktogul district is shown as Figure 8 below. The same map for the project interventions in Toguz-Toro district is shown as Figure 9.

Figure 8 Pasturelands of Target Communities in Toktogul District



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UNDP

Localization of GEF-UNDP project in Toguz-Toro District: Kan-Achuu, Toktogul Leskhoz, targeted communities of Kok-Irmin and Atai and their pasture use.

Legend

Administrative boundaries

- Region
- District

Settlements

- Big cities
- Other
- Villages

Roads

- Asphalt roads
- Dirt roads

Hydrography

- Wide rivers
- Other rivers
- Belt and bays
- Glaciers
- Lakes and reservoirs

Protected Areas

- Existing Protected Areas
- New Protected Areas

Forest

- Timber forests
- Shrub forests
- Foresty boundaries

Boundaries of targeted communities

- Pasture of targeted communities

Levels of degradation

- High level
- Pasture degradation processes areas

Indicators of pasture degradation

- Ligulate
- Scumure
- Ruile
- Kargaid
- Polyin estragol
- Akemi
- Pin
- Plangor cotovoids
- Lavagrade
- Regulyata
- Pasture
- Tolluk
- Atum
- Yast, Uta

0 2.5 5 10 15 20 km

1:200000

GIS/Cartography: Shigatulin Vlad

180. The specific activities to be undertaken in this output will include the following:
- Finalize in collaboration with target communities (Cholpon-Ata and Kyzyl-Ozgorush in Toktogul, and Kok-Irim and Atai in Toguz-Toro) the field areas of eroded pastures to be restored near the new Alatau SNP and Kan-Achuu SNP.
 - Study the condition of pastures, conduct the assessment of carrying capacity and create new maps to support improved grazing plans.
 - Conduct the research on the interrelation between grazing and biodiversity and the impact factors of various grazing regimes on biodiversity.
 - Train pilot pasture committees for the implementation of modern pasture management tools.
 - Support the development / improvement of pasture management plans in Pasture Management Committees (*in coordination with IFAD-ARIS pastures project*).
 - Implement in Pasture Management Committees modern information system - Electronic Zhayyt Committee (Electronic Pasture Committee).
 - Conduct the demonstration of degraded pastures rehabilitation measures
 - Conduct a study on the impact of climate change on pasturelands in Western Tian Shan, to be presented at a national workshop
 - Conduct an inventory of forest pastures and develop management plans for forest pastures and grazing in the pilot leskhoz, and present the results at the national workshop - implementing outsourcing of leskhoz forest pasture management to PMCs using pastures (*replication of approach piloted by GIZ*)
181. UNDP PMU will - in close consultation with the Department for Forest Ecosystems and SPNA of SAEPF and Department of Pastures under the Ministry of Agriculture, Processing Industry and Melioration - coordinate the implementation of this output.

Output 2.4: Restoration of degraded forests important for wildlife, including snow leopard prey, and livelihoods of local communities

182. The work under this output will focus on restoration of 4,886 hectares of degraded forests important for wildlife, including the snow leopard prey.
183. The specific activities to be undertaken in this output will include the following.
- Carry out geo-botanic and economic analysis and analysis of ecosystem services and opportunities of reforestation in the Western Tian Shan.
 - Finalize the decision in collaboration with communities the 4,886 hectares of degraded forests in the buffer zones and corridors of the protected areas and areas for silviculture and support the natural regeneration of the HCVF
 - Organize and conduct silvicultural reforestation work in the area of 500 hectares
 - Support the work of the target partners on natural regeneration of the area of 4000 - 4500 hectares, including sustainable financing fencing approach (piloted by GIZ)
184. UNDP PMU will - in close consultation with the Department for Forest Ecosystems and SPNA of SAEPF - coordinate the implementation of this output.

Output 2.5. Alternative livelihoods program for local communities designed jointly with the local micro-crediting institutions, and launched to support target communities.

185. The work under this output will focus on designing and launching the alternative livelihoods program for local communities jointly with the local micro-crediting institutions to support biodiversity friendly livelihoods (e.g. native tree nurseries, fruit and nut tree planting, small-scale reforestation, support to natural pasture regeneration, organic farming, medicinal plant processing, value-added secondary processing for agricultural products, and development of community-based ecotourism). The strategy of this approach is not necessarily to increase income from alternative sources, but to demonstrate, pilot and implement livelihood practices that are biodiversity friendly and support SFM/SLM approaches.
186. The specific activities to be undertaken in this output will include the following.
- Conduct consultations and identify mechanisms of the Micro-Grant Support Program
 - Create local micro-grant committees, develop and approve the rules of operation, selection criteria, application forms, rules for reporting, rules of monitoring and control (or enter into contracts with the local financial institution(s) to implement micro-grant activities);

- c) Conduct an information campaign in the field about the possibility of supporting sustainable livelihoods (creation of nurseries, gardens, plantations of fast-growing, organic farming, restoration of pasture - reseeded, medicinal plants, ecotourism, micro greenhouses, apiary, etc.)
 - d) Provide micro-grants – years 2, 3, 4
 - e) Conduct the systematic controlling and monitoring of projects
 - f) Make an assessment and publish best practices
187. UNDP PMU will - in close consultation with the Department for Forest Ecosystems and SPNA of SAEPF - coordinate the implementation of this output. Local micro financing institutions (experts) will be engaged to support target communities with operationalization of the Micro Grant Facilities on the local levels in the targeted districts. Relevant expertise will be engaged to develop local capacities and to communicate the existing opportunities for sustainable livelihoods in communes.

Component III. Strengthening national capacities for snow leopard conservation, promoting Kyrgyz regional and global cooperation, and setting the scene for up-scaling

188. The outputs and activities under this component are directed at improving the ability of Kyrgyzstan to conserve snow leopards and associated key species through implementation of the NSSLC, and to strengthen Kyrgyzstan's ability to engage in regional and global coordinated snow leopard conservation efforts. The activities under this component include: Output 3.1: Law enforcement capacities of relevant stakeholders enhanced through trainings on wildlife protection aimed at identification and prosecution of wildlife crime; Output 3.2: Capacities for deployment of international standards for long-term monitoring of parameters critical for snow leopard conservation in national priority landscapes developed, based on international GSLEP monitoring framework; Output 3.3: Kyrgyzstan participation in the Global Snow Leopard and Ecosystem Conservation Programs supported, aimed at synergies and coordination of national, transboundary and regional level activities; and Output 3.4 Implementation of Kyrgyzstan's national snow leopard and ecosystem protection plan supported in nationally identified priority landscapes, in alignment and coordination with GSLEP and other relevant initiatives.

189. The proposed suite of activities, and broad implementation arrangements, for each of the four outputs are described in more detail below. The UNDP PMU will coordinate the implementation of this component in close consultation with the Department for Forest Ecosystems and SPNA of SAEPF, and SLT and other relevant national partners.

Output 3.1. Law enforcement capacities of relevant stakeholders enhanced through trainings on wildlife protection aimed at identification and prosecution of wildlife crime

190. The work under this output will focus on enhancing of enforcement capacities of environmental inspectors, police, border guards and customs officers through trainings on wildlife protection aimed at identification and prosecution of wildlife crime.

191. The specific activities to be undertaken in this output will include the following.

- a) Develop and implement advanced wildlife related law enforcement training to strengthen national capacities for identification and prosecution of wildlife crime and controlling trade in snow leopard and other illegal wildlife goods, based on review of existing initiatives and remaining capacity gaps (*building on previous preliminary partner efforts*)
- b) Train identified target groups on wildlife protection and identification and prosecution of wildlife crime
- c) Enhance national wildlife law enforcement capacity from scaling-up initiative on canine-assisted wildlife crime monitoring (*initiative led by Panthera*)
- d) Support institutionalization of capacity development modules (training modules, etc.) into law enforcement agency action plans to ensure sustainability
- e) Support the fully operational and institutionalized inter-agency cross-sectoral cooperation mechanism / agreements / MOUs among the relevant agencies for snow leopard-related law enforcement and joint actions on illegal snow leopard trade. Preparation and modification of the regulations for the sustainable cooperation between agencies.
- f) Support establishment of cross-sectoral coordination mechanism put in place on the provincial and district levels
- g) Assess the needs of field-based technical capacity for wildlife law enforcement. Enhancement of field law enforcement capacity - potential equipment, etc. to support enforcement
- h) Set up the unified reporting system on wildlife crime

- i) Conduct feasibility study for field toolkits for species identification with field-based DNA analysis
- j) Conduct feasibility study for possibilities and relevance for micro chipping of trophies.

Output 3.2. Capacities for deployment of international standards for long-term monitoring of parameters critical for snow leopard conservation in national priority landscapes developed, based on international GSLEP monitoring framework

192. The work under this output will focus on creating capacities for deployment of international standards for long-term regular monitoring of parameters (ecological, biological, etc.) critical for snow leopard conservation in national priority landscapes, based on international GSLEP monitoring framework

193. The specific activities to be undertaken in this output will include the following.

- a) For national stakeholders responsible for snow leopard monitoring - establishment of monitoring protocols, provision of field kits, camera traps, other monitoring tools and approaches, etc. – for monitoring activities in national priority snow leopard landscapes. Develop capacities and equip research institutions to provide adequate snow leopard monitoring support - focused on Western Tian Shan PAs and Gissar-Alai priority landscape.
- b) Provide training for protected area staff (strategically selected, among sites other than Alatau and Kan-Achuu PAs) on snow leopard and prey monitoring - focused on key Western Tian Shan PAs and Gissar-Alai priority landscape.
- c) Develop snow leopard monitoring database and adequate database management capacities
- d) Provide training for hunting department, and National Academy of Sciences on snow leopard and prey international standards of monitoring - focused on Western Tian Shan PAs and Gissar-Alai priority landscape
- e) Develop and sign special MOUs on monitoring between protected areas, National Academy of Sciences, and hunting department, relating to snow leopard and prey species, with collaboration with relevant international partner organizations
- f) Conduct joint expeditions for monitoring and training with hunting department, protected areas, and National Academy of Sciences staff - reporting of results to national databases, etc. - publishing of results - focused on Western Tian Shan PAs and Gissar-Alai priority landscape.
- g) Sign an international MOU with a genetic laboratory that has experience and technical capacity to identify snow leopard samples from scats, hair follicles and blood, located in one of the snow leopard range countries, to have compatible and high quality results of analysis for basic (species-level) genetic monitoring of populations and wildlife crime.

Output 3.3 Kyrgyzstan participation in the Global Snow Leopard and Ecosystem Protection Programs supported, aimed at synergies and coordination of national, transboundary and regional level activities

194. The work under this output will focus on providing targeted support to participation of Kyrgyzstan in the Global Snow Leopard and Ecosystem Conservation Programs aimed at synergies and coordination of national, transboundary and regional level activities.

195. The specific activities to be undertaken in this output will include the following.

- a) Support for Kyrgyzstan's participation in international snow leopard events: SAEPP, academia and PA field staff. International best practice sharing for replication and up-scaling. Support for travel to conferences, etc.
- b) Conduct one regional conference (with three countries) on challenges for conservation of snow leopards and biodiversity in Western Tian Shan - Organization of a regional conference between Western Tian Shan countries for cross-border cooperation on sharing data for snow leopard monitoring in Western Tian Shan – resolution between countries. Discussion of threats to biodiversity related to border control activities and presence.
- c) Support for participation in 2nd Global Snow Leopard summit
- d) Develop information material on conservation issues of snow leopard and biodiversity in Kyrgyzstan and distribute in the countries of Central Asia – as necessary and relevant to support Kyrgyzstan contributions to global snow leopard conservation efforts.

Output 3.4. Implementation of Kyrgyzstan's NSSLC supported in nationally identified priority landscapes provided, in alignment and coordination with GSLEP and other relevant initiatives.

196. The work under this output will focus on supporting implementation of Kyrgyzstan's national snow leopard and ecosystem protection plan in nationally identified priority landscapes, in alignment and

coordination with Global Snow Leopard and Ecosystem Protection Program (GSLEP) and other relevant initiatives

197. The specific activities to be undertaken in this output will include the following.

- a) Support dissemination of GSLEP best practices in Western Tian Shan and Gissar-Alai regions
- b) Contribute to national Kyrgyzstan SSLC awareness raising and knowledge management activities - national education and awareness campaigns as appropriate, etc.
- c) Convert accumulated snow leopard monitoring and research data into addendums to education programs for universities and secondary schools
- d) Updated mapping of snow leopard range and other factors at national level, based on a digital map of snow leopard habitat in Kyrgyzstan, with annotated recommendations for land use regimes in key areas of importance for snow leopard
- e) Work on hunting policies of prey at national level – linked with previous activities in Component 2 about influencing hunting lease policies, policies on hunting of Red List species, etc.
- f) Support implementation of recommendations from Kyrgyzstan NSSLIC in Western Tian Shan and Gissar-Alai that are not otherwise covered by project activities under Components 1 and 2.

Risk Assessment and Management

198. Project risks and risk mitigation measures are described below in Table 13.

Table 13 Risk Management

Identified Risks and Category	Impact	Likelihood	Risk Assessment	Mitigation Measures
State and municipal institutions responsible for the administration of protected areas, pastures and forests do not have adequate capacity to support, maintain and enforce working agreements with communities, pasture users' groups, forest users' groups living adjacent to SPNAs	High	Moderately likely	High	The project will seek to significantly strengthen and expand the current capabilities of the key institutions, ⁵⁰ that are directly responsible for the planning and management of protected areas, natural habitats, pastures and forests across the snow leopard range in the Western Tian Shan region of Kyrgyzstan. More specifically, it will assist in development of a well-trained and properly equipped management, monitoring, enforcement, community liaison and pastoral and forest groups staff in the targeted SPNAs, leskhozoes, local state administrations and self-governance bodies of the communities. UNDP PMU will iteratively develop an institutional sustainability plan to ensure that the different project investments in building the capacity of the targeted institutions are maintained (and scaled-up, if feasible and affordable) beyond the project. The project will also support the implementation of SPNA 'business planning' on income-generating opportunities (e.g. income from tourist fees, pasture tax, forest use and leasing fees, income from fines, etc.) to further augment the current budgets of the responsible institutions.
Low levels of compliance with environmental legislation, and a reluctance to adopt more sustainable natural resource use practices, leads to the further degradation of, and loss of productivity in, snow leopard and prey habitats.	High	Moderately likely	Medium	The project has adopted the following approaches to addressing this risk. The project will seek for <u>compliance</u> with environment enabling frames to expand the area of biodiversity and snow leopard and prey protection, as well as to improve the monitoring and enforcement capabilities across the snow leopard range in the Western Tian Shan. The project will specifically: support operationalization of two targeted PA; upgrading HCVF and SFM (Output 1.1., and 1.2 enabling framework); enhance PA staff capacities on PA and HCVF effective management (Output 1.3.); and implementation of a joint patrol system in (Output 1.4); as well as strengthen wildlife monitoring and enforcement capacities (knowledge, training, skills, equipment and staff) in the responsible state agencies (Output 3.2);

⁵⁰ State Agency on Environment Protection and Forestry and its branches on the national and local levels, Department of Pasture under the Ministry of Agriculture, Processing Industry and Melioration, Ministry of Internal Affairs, State Customs Service, Public Prosecutor Office, Border Guard Service, judges, local State administrations of the Jalal-Abad Province and moreover of the Toktogul and Toguz –Toro Districts, Local Self-Governance Bodies, etc.

Identified Risks and Category	Impact	Likelihood	Risk Assessment	Mitigation Measures
				<p>build the capacity of border and customs officials to improve the detection of illegal wildlife trade (Output 3.1); and facilitate the establishment of a coordination mechanism of different state institutions in combatting wildlife crime (Output 3.1-3.2). To address <u>reluctance</u>, the project will seek to incentivize an incremental shift to more sustainable land use (focused on grazing and forest use) practices. The project will specifically: align target districts' and communities' development plans with biodiversity conservation, SLM and SFM provisions (Output 2.2.); facilitate the economic beneficiation of communities living around target parks in return for a reduction in illegal activities by rehabilitating degraded pastures and restoration of degraded forests promoting participatory SLM and SFM provisions (Output 2.3 and 2.4); and conduct an ecosystem services valuation of target PAs (Output 1.1); as well as provide small grants to assist rural communities and local governments to shift to environmentally sustainable livelihoods (Output 2.5). Additionally, to address the risk, the project will seek to improve the <u>awareness</u> of rural communities living in the snow leopard range on the importance of conserving snow leopard, their prey and their habitats. The project will specifically: support new PAs to develop and implement communication strategy (Output 1.1); strengthen the knowledge and awareness of sustainable pasture management in the Pasture Management Committees (Output 2.3); strengthen the knowledge and awareness of sustainable forest management in JFM Boards of the targeted leskhozoes (Output 1.2);</p>
Low levels of coordination and cooperation between public institutions, tenure holders, rights holders, land owners, NGOs/CBOs and natural resources users leads to conflicts over any changes in use rights in SPNAs and high altitude pastures and forests	Moderate	Moderately likely	Medium	<p>The project is building on the lessons learnt from the previous UNDP experience on cooperation with communities and local and regional authorities in the implementation of project interventions on democratic governance, poverty reduction, disaster risks reduction and environment. It suggests that a high level of engagement and local ownership among local stakeholders will be maintained in this project, with careful attention given to stakeholder consultation, participation and conflict resolution. The project will work closely with the administration of the targeted SPNAs, leskhozoes, local state administrations, local self-governance bodies, Pasture Management Committees, JFM Boards and other CBOs in ensuring the effective involvement of all affected stakeholders in the implementation of project activities. The</p>

Identified Risks and Category	Impact	Likelihood	Risk Assessment	Mitigation Measures
				project will specifically work through (and assist in establishing) the coordinating structures of Park Public Councils, Pasture Committees and JFM Boards as an institutional mechanism to improve the communication, collaboration and cooperation between tenure holders, rights holders, natural resource users and the relevant state, regional and local administrations. The project will also strengthen the knowledge and skills of protected area staff, pasture and forest users and managers in order to facilitate a more collaborative approach in the planning, implementation and enforcement of sustainable forest and pasture management practices. A stakeholder participation plan will be prepared as the project is further developed.
The increasing aridization of mountainous habitats, as a result of the adverse effects of climate change, leads to more intensive and extensive grazing pressures on pastures, and potentially leading to forest vertical boundaries shift and species change as well as the local extirpation of snow leopard and medium-sized prey.	Moderate	Unlikely	Low	<p>The effects of climate change are likely to exacerbate the effects of the existing threats to snow leopard, their prey and their habitats. They are however not likely (under current climate change scenarios) to result in the emergence of new, potentially catastrophic threats. The project has thus been developed to improve the capacity of the country to proactively and more effectively address the current threats in anticipation of a future increase in the extent and intensity of the threats as a result of changing climate.</p> <p>Snow leopards and their prey have large home ranges and should – assuming safe access to available habitats - be able to move in response to the projected effects and impacts of climate-change. The project has thus adopted a landscape-scale approach, with a strong emphasis on maintaining viable and secure movement corridors between formal protected areas. However, the project will contribute to implementation of the sectoral adaptation program adopted by SAEPF according to the Governmental Climate Change Adaptation Priorities. A study on the impact of climate change on the key species of the Western Tian Shan biodiversity will be conducted (Output 1.3) with the involvement of PAs, leskhozoes, scientists, researchers in more rigorously monitoring the effects of climate change, especially on snow leopard and prey and collaborating in regional initiatives to develop strategies to mitigate and manage these effects.</p>

Cost-Effectiveness

199. The project's cost-effectiveness has been carefully planned and assured through detailed discussions with the key national partners. The overarching principle for cost-effectiveness of the project is the coordinated landscape management approach to secure biodiversity and land degradation benefits, including sustainable forest management. By engaging all key stakeholders in land use at the local level the project will ensure that benefits can be generated and sustained across the landscape in the most cost-effective manner possible. Kyrgyzstan's protected areas (including the newly established Alatau and Kan-Achuu that are supported through this project), with few exceptions, are not large enough adequately conserve most species and ecosystems on their own; it is necessary to take a full landscape-scale approach to biodiversity conservation and sustainable land use, be engaging forest management and pasture management stakeholders as well. Through this coordinated multi-stakeholder approach, the project will ensure that the results achieved for biodiversity conservation and sustainable land use will be sustained, securing the cost-effectiveness of the project's strategy.

200. In addition, via the project's third component, the project will integrate with the national and global efforts for snow leopard conservation, which is great national priority for Kyrgyzstan, with direct support from the President. The project will support the implementation of Kyrgyzstan's NSSL, which links directly with the collective efforts of the snow leopard range states to coordinate an efficient international and transboundary effort to conserve snow leopards, their habitats, prey, and associated landscapes. The project directly addresses critical capacity limitations of key national institutions, including SAEPF, and the National Academy of Sciences. These efforts will directly contribute to more cost-effective efforts for snow leopard conservation in the future.

201. The role of SAEPF as the main national executing partner is critical to the project's cost-effectiveness. SAEPF is the national institution with the mandate covering key aspects of the project, and therefore is critically situated to coordinate the activities of the project with other relevant partner and donor initiatives and projects, to ensure complementarity, and avoid any duplication of efforts. The project is building on and coordinating with key relevant initiatives in the country. These include: partner efforts to strengthen wildlife crime law enforcement, forest sector reform (including capacity development for SFM, and proper functioning of Joint Forest Management committees), reform for full national implementation of the 2009 Law on Pastures (e.g. capacity development of Pasture Management Committees), the national biodiversity conservation strategy and action plan, and the coordinated national efforts on snow leopard conservation.

202. In addition, the project will be building on, replicating, and scaling up some approaches that have already been tested and validated within Kyrgyzstan through other projects and initiatives. These include the E-Pasture Management System, methods for native fish stock conservation, multi-stakeholder coordinated sustainable forest pasture management, and support for natural forest regeneration.

203. At the local level, costs incurred in project implementation will focus primarily on those additional actions required to provide key incremental assistance to the government, forest users, pastoralists, rural communities and partner institutions in undertaking strategic interventions to: improve the conservation tenure and conservation security of SPNAs; improve the sustainable management of, and restore degraded, high altitude pastures; improve and restore the ecological integrity of high altitude forests; and improve the state of knowledge of snow leopards, their prey and their habitats.

204. Wherever possible the project will draw on national and local expertise and technical skills within partner national institutions (e.g. SAEPF, National Academy of Sciences, Kyrgyzgiprozem), international and national NGOs (e.g. WWF, Panthera, NABU, FFI, Association of Forest and Land Users, CAMP Alatau, RDF), and local partners (leskhozes, PMCs, district administrations).

205. The project draws on multiple international best practices for biodiversity conservation and sustainable land use. These include integrated ecosystem management, implementation of internationally recognized PA management good practices, coordinated technical approach such as geo-referenced databases available to multiple stakeholders via centralized online systems, the latest in wildlife monitoring technology and innovation, and international good practices and lessons learned in wildlife management. Project resources will thus primarily be used to improve current efforts by the state and other partner institutions to plan and effectively manage SPNAs, pastures, forests and knowledge systems, rather than incur the high costs of developing completely new tools, mechanisms and approaches.

206. In some specific activities the project will be piloting activities at the local level that are being newly introduced in Kyrgyzstan nationally. This primarily relates to the HCVF concept, and the project will be working with the relevant national authorities to scale the HCVF approach to the national level within the scope of the project, although the project has a more limited sub-national geographic focus. Other

approaches and concepts have been previously introduced in Kyrgyzstan, but have been implemented at a very basic level. These include the re-introduction of large mammal species (e.g. deer, argali), and approaches for Valuation of Ecosystem Services and SFM certification based of FSC principles.

207. Other indicators of cost-effectiveness include the project's management costs, which are within GEF requirements at 5.0%, and the project's confirmed co-financing, which is also in-line with GEF standards, at a greater than 6:1 co-financing ratio. In addition, UNDP has a well-established track record of effectively working with national and local partners and stakeholders in Kyrgyzstan, which reduces costly risks during project implementation.

Country Ownership: Country Eligibility and Country Drivenness

208. The Government of Kyrgyzstan acceded to the *United Nations Convention on Biological Diversity* (CBD) on the November 4th, 1996. As a party to the CBD, Kyrgyzstan is committed to the implementation of the Strategic Plan for Biodiversity 2011-2020. This project will specifically contribute to meeting Aichi Target 12 of the CBD Strategic Plan ('By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained'). It will also contribute to meeting the following complementary Aichi targets: Target 3 (positive incentives for the conservation and sustainable use of biodiversity); Target 5 (the rate of loss, degradation and fragmentation of natural habitats is reduced); Target 11 (areas of particular importance for biodiversity are effectively conserved); and Target 19 (the knowledge of biodiversity is improved and shared).

209. The country's *Fifth National Report to the Convention on Biological Diversity* (2013) was prepared in accordance with Article 26 of the Convention and COP decision X/10 of the Convention. The report considers the fragmentation of ecosystems, and degradation of species' habitats, as the most serious threat to all wild species of flora and fauna of Kyrgyzstan. It specifically emphasizes the need to prevent the further degradation and loss of natural habitats in the high altitude mountain ecosystems of the country in order to protect threatened species, including the snow leopard and key prey species (e.g. argali, ibex, marmot). The country has, in conformance with COP decision X/2 of the Convention, revised its *National Biodiversity Strategy and Action Plan* (NBSAP, 2014). The revised NBSAP, covering the period 2014-2024, identifies a suite of activities that are to be implemented in order to improve the management effectiveness of SPNAs, restore degraded mountain pastures and forests and enhance the sustainability of pasture and forest management use in high altitude mountain ecosystems. The project will specifically contribute to the all four of Kyrgyzstan's NBSAP Strategic Targets:

1. Strategic Target 1: Integrate biodiversity conservation issue in the activities of state bodies and public organizations, as the basis of the human being and sustainable economic development of the Kyrgyz Republic
2. Strategic Target 2: Reduce the impact on biodiversity and promote its sustainable use
3. Strategic Target 3: Improve the protection and monitoring of ecosystems and species diversity
4. Strategic Target 4: Improve the social importance of biodiversity and ecosystem services, increase the benefits of sustainable ecosystem services and traditional technologies

210. The Government of Kyrgyzstan ratified the *United Nations Convention on Combating Desertification* (UNCCD) on September 19, 1997. As a party to the UNCCD, Kyrgyzstan is committed to the implementation of the *Ten-year Strategic plan and Framework to Enhance the Implementation of the Convention* (2008–2018). The project will specifically contribute to the indicators for Strategic Objectives 1, 2 and 3 (enhancing productivity and reducing vulnerability to climate change, climate vulnerability and drought) of the UNCCD Strategic Plan by: improving and diversifying livelihoods in rural communities through sustainable land management; improving land productivity and restoring ecosystem goods and services in mountain ecosystems; and building institutional and individual capacities for sustainable forest and pasture management. The project is in line with the UNCCD's *National Programming Framework on Land Management*. Mountain landscape degradation through unregulated grazing, poor work to improve the quality of soil, and unsustainable forest felling are mentioned there as key threats. Integration of ecosystem values into land use planning, improvement of pasture and forest management is listed among key priorities in this program, where Kyrgyzstan is seeking international support.

211. The Government of Kyrgyzstan ratified the *United Nations Framework Convention on Climate Change* (UNFCCC) on May 15th, 2000. The country's *Second National Communication to the UNFCCC* (2009) highlights the country's long-term goal to increase forest cover to 6% of the national territory (an increase of 289,000 ha relative to 2003), which will contribute to expanding the annual carbon sink in forest reservoirs up to 341 Gg in CO₂ equivalent.

212. The Government of Kyrgyzstan is a party to *The Bishkek Declaration on the Conservation of Snow Leopards* (2012). Within the framework of the ‘Bishkek Declaration’, the *Global Snow Leopard & Ecosystem Protection Program* (GSLEP, 2013) seeks to bring together governments of snow leopard range countries to collectively recognize the threats to snow leopards, and commit to coordinated national and international action. The GSLEP’s goal is to identify and secure 20 snow leopard landscapes by the year 2020. The foundation of the process is a set of 12 *National Snow Leopard and Ecosystem Priorities* (NSLEP) developed by each range country government. This project will directly support the implementation of the priority actions contained in the NSLEP for Kyrgyzstan.

213. *The National Strategy on Snow Leopard Conservation* (NSSLC, 2013) has been developed prior and is complementary to, the GSLEP. While the GSLEP is organized around a policy-level and government-focused agenda, the NSLSC is a more technical document targeting researchers, conservationists and wildlife or protected area managers in the government and public sectors. The project has adopted and fully integrated the technical approaches and best practices described in the SLSS into the design and development of project outputs and activities.

Project Consistency with National Priorities / Plans

214. In addition to being in-line with and supportive of the relevant legislation and national programs indicated in the previous section of this project document on policy context, the project supports one of the key elements of the *2013-2017 Kyrgyzstan National Sustainable Development Strategy and Action Plan* which stipulates that restoration and conservation of natural resources must become one of the priorities of the country, as natural resources guarantee the future of next generations. Support of the Sustainable Forest Management activities under this project contribute to the implementation of yet another Sustainable Development Goal, which aims at reaching 5.62% forest cover of the country by 2017.

215. The project is an extension of the *Recommendations on Preservation of Snow Leopards and Their High Mountain Ecosystems* that were adopted at the international meeting on conservation of snow leopards held in Bishkek on December 3, 2012. Overall, the project proposal is consistent with the recommendations of the Global Snow Leopard Survival Strategy and has been a direct response to the request of the Government of Kyrgyzstan for assistance in the implementation of this Strategy. The entire set of recommendations has been reflected in the project document, and they all have been adapted to the situation in Kyrgyzstan. It is obvious that, by implementing these activities it is possible to create conditions for preservation and increase of snow leopard population in Western Tian Shan. The project is closely linked to the Action Plan on implementation of the “*National Strategy for Snow Leopard Conservation in the Kyrgyz Republic for 2013-2023*”, specifically on the following items under the National Strategy: II) Improving the institutional base; III) Study of snow leopards, its habitat and the food bases; IV) Training employees of public bodies and PAs; and V) Environmental education and increasing of awareness among local population.

216. The project is consistent with the *National Forestry Sector Development Concept (2004 – 2025)*, which classifies mountainous forests (including wild fruit and relict coniferous forests) as highly valuable and requires appropriate management, conservation, and rehabilitation. The *National Forest Program 2005 - 2015* further stipulates activities with respect to appropriate monitoring and improvement of high value forests. The *National Programme on Walnut-Fruit Plantations till 2025*, which is currently implemented in the southern Kyrgyzstan, envisages wide engagement of local communities forest management units in the walnut and fruit forest management.

217. The project focuses on the highland areas of the Western Tian Shan, and thus conforms to the *National State of Environment Report* (approved by the Government Resolution effective as of 07.08.2012), which confirms that the high mountains are islands of biological wealth amid relatively poor plains and that protected areas play a key role in maintaining biodiversity. It is in line with Kyrgyzstan’s *National Mid-Term Development Plan* that emphasizes the importance of protected areas, especially in mountain regions.

218. Recently, the Kyrgyz Republic has adopted the NBSAP (entitled *Priorities on Biodiversity Conservation in the Kyrgyz Republic*) for 2014-2023. Creation of PAs in snow leopard habitat is one of the key activities envisioned by the process. Furthermore, the experts who participated in elaboration of this project document were also involved in NBSAP development. Thus, this GEF project will contribute at the policy level to formulation of PA policies and standards that would be subsequently shared with the team working on the NBSAP so that these can be duly incorporated into national legislation.

Sustainability and Replicability

219. The critical aspect of **sustainability** for any project is the sustainability of the project's results, not of the project itself. Sustainability is dependent on many factors, and is a dynamic state that can never be guaranteed in perpetuity, as the likelihood of sustainability at any given time can increase or decrease depending on individual events or changing conditions over time. Experience has shown in UNDP-GEF projects that sustainability is critically dependent on stakeholder ownership of the process and project results. This project in the Western Tian Shan has effectively cultivated the ownership of – and been driven by – stakeholders at the local, district and national levels. Throughout implementation the project will continue to work closely with all stakeholders to ensure the strong engagement and ownership by stakeholders is carried on past the life of the project. The GEF has identified four key elements to sustainability, which are discussed in further detail below.

220. **Financial Sustainability:** There are a number of key aspects of the project where financial sustainability of results is a consideration. First is the financial sustainability of the newly established protected areas. These protected areas were established without significant additional national budget allocations from the government, and the staff for these protected areas are being drawn from existing government bodies, including the rest of the protected area system. Some staff are also being shifted from the relevant leskhozoes, whose forest lands were allocated for the PAs. In this way the core function of the PAs will be sustained through current on-going government budget allocations, in combination of the capacity strengthening investments to be made by the project. Global practice has shown that few individual PAs are able to be financially self-sustaining, and it is the financial sustainability of Kyrgyzstan's entire national PA system that must be considered and assessed, rather than the specific PAs targeted in this project. The project is partially addressing this at the level of the individual PAs, and the financial sustainability of the PA system is also being more broadly addressed through initiatives of other partners and initiatives. At the national systemic level, the UNDP Biodiversity Finance Initiative (BioFin) is kicking off in 2016, and will be working closely with the national government partners to strengthen the financial sustainability of Kyrgyzstan's PA system. At the individual PA level, as part of the project's PA capacity development activities the project will work with the newly established Alatau and Kan-Achuu SNPs to develop their long-term financial planning, and draft business plans to be integrated with the PA management plans that will be developed. This will include SWOT financial analysis for the PAs, and consideration of opportunities such as ecotourism, and the feasibility of trophy hunting in surrounding hunting reserves (not within the PAs themselves). Similar financial management and planning capacity strengthening will also be carried out for the other targeted Western Tian Shan PAs in Jalal-Abad province. In relation to sustainable forest and pasture management, the project will strengthen the financial health of the relevant bodies (leskhozoes, PMCs) through the introduction of more cost-effective and accretive management approaches, such as the E-Pasture Management system, which allows the efficient and transparent collection of revenues from pasture users. Other financially sustainable approaches will also be piloted, including the financially self-sustaining forest restoration fencing approach developed by GIZ.

221. **Institutional Sustainability** will be promoted in the project by strengthening and expanding the current capabilities of the key institutions that are directly responsible for the planning and management of protected areas, natural habitats, pastures and forests in Kyrgyzstan's Western Tian Shan ecosystem. It will assist in building a professional corps of well-trained, adequately resourced and properly equipped management, monitoring, enforcement, community liaison and pastoral extension service personnel in targeted PAs, leskhozoes, PMCs, and district administrations. In particular, the project will strengthen the PA management capacities of the six key alpine PAs in the Western Tian Shan, as well as the planning and management capacity of the departments relating to PA management within SAEPP. The project will also work with local development and spatial planners in Toktogul and Toguz-Toro districts to ensure biodiversity conservation, SFM, and SLM practices are mainstreamed into the long-term land-use plans for the targeted districts. The project will also contribute to national efforts to establish, operationalize, and develop key national databases relating to ecosystem management, including biodiversity databases (and including the national snow leopard monitoring database), and pasture management databases. The project will also build the capacity of state agencies for wildlife monitoring and regulatory enforcement, and strengthen border and customs controls to address illegal wildlife trade. At the end of the project an exit strategy will also be developed that will specifically articulate the means by which institutional sustainability will be assured for key project results.

222. **Socio-economic sustainability** is already expected to be strong for the project in Toktogul and Toguz-Toro districts, as the local communities have proactively supported the establishment of the two new SNPs in this region by contributed and forfeiting land under their own local control. Local community

representatives have also actively participated in project development, including the district government heads, and local community heads (e.g. the head of Cholpon-Ata community, the nearest and largest community to Alatau SNP). During project implementation socio-economic sustainability will be enhanced in the project by improving the living conditions of rural communities. This will be achieved through strengthening local capacity to implement sustainable pasture management, and support biodiversity conservation objectives in areas surrounding PAs. The project will specifically: (i) facilitate the economic benefits to communities living around targeted SPNAs (from direct employment, contractual work, provision of services, income from hunting concessions, etc.) which will contribute to a reduction in illegal activities in the SPNAs; (ii) provide small grants to help rural communities pilot diversified livelihood activities with net positive economic and environmental benefits; and (iii) provide technical and financial grant support to pastoralists to support shifting to more sustainable pasture management practices. The project will primarily work through (and assist in establishing, where these have not yet been constituted) local governance structures, including local district administrations and local community governance units, PA Management Boards, Pasture User Associations and Participatory Forest Management committees. Through this collaborative approach the project will improve the communication, collaboration and cooperation between tenure holders, rights holders, natural resource users and the relevant state, regional and local administrations. The project will also support the identification and implementation of viable income-generating opportunities (e.g. income from hunting fees, income from pasture tax, specialist tourism services, income from fines, etc.) to further augment the current budgets of the responsible institutions.

223. Environmental sustainability will be enhanced by the strengthening of the ecological network of the Western Tian Shan, with improved management of the core zone PAs, and sustainable resource management in buffer zones and identified corridors. The project will result in reduced degradation of forests and pasturelands, which will also contribute to improved water quality in the region. In addition, the conservation of biodiversity will be secured as a result of increased enforcement of regulations. This will include improving the status of snow leopard and prey habitats, and reducing direct threats to snow leopards and their prey in the Western Tian Shan. The project will also work to increase the environmental awareness and understanding of local communities.

224. Each project output will include the documentation of lessons learnt from implementation of activities under the output, and a collation of the tools and templates (and any other materials) developed during implementation. The Project Coordinator will ensure the collation of all the project experiences and information. This knowledge database will then be made accessible to different stakeholder groups in order to support better future decision-making processes in snow leopard conservation and more consistent adoption of best practice.

225. **Replication** of good practices developed by the project will be achieved through the direct replication of selected project elements and practices and methods, as well as the scaling up of experiences. The following activities have preliminarily been identified as suitable for replication and/or scaling up: (i) implementation of the Protected Areas Management Effectiveness Tracking Tool to track PA performance and identify areas for strengthening; (ii) development of geo-referenced digital online databases for multi-stakeholder access; (iii) formalizing and implementing co-management agreements for PAs and forests; (iv) implementation of sustainable pasture management via the e-Pasture Management System; (v) development of coordinated wildlife law enforcement mechanisms; and (vi) new snow leopard and prey population monitoring technologies (e.g. aerial drones, fecal DNA analysis and radio collars). The sharing of best practices and lessons learned in project implementation with other member countries of the GSLEP will be facilitated through regional GSLEP meetings and regular communications through the GSLEP Secretariat.

Coordination with Other Related Initiatives

226. Implementation of the proposed project will be fully coordinated with a number of on-going relevant GEF-financed initiatives, in order to avoid duplication and increase synergies and effectiveness. At regional level, strong coordination will be sought with the regional (Kazakhstan, Kyrgyz Republic, Tajikistan and Uzbekistan) UNDP-GEF medium-sized project “*Transboundary Cooperation for Snow Leopard and Ecosystem Conservation*.” The implementation phase of the regional project (2015-2018) will overlap with the implementation phase of this project (2017-2021). This project will, thus, seek to adopt and operationalize, at the national level, the relevant tools and guidelines that will be developed under the regional project particularly concerning snow leopard monitoring techniques and law enforcement bodies training on wildlife crime. The implementation of this project will, in particular, benefit significantly from the effective coordination of efforts, and sharing of knowledge between the projects using existing on-line

platforms created under initiatives such as NBSAP Forum and BES-Net led by UNDP. The coordination will be established with SLT implementing the regional project

227. There are two new GEF financed biodiversity conservation projects in snow leopard landscapes and ecosystems, implemented by UNDP in Central Asia: in Tajikistan UNDP/GEF Project “*Conservation and sustainable use of Pamir-Alay and Tian Shan ecosystems for Snow Leopard protection and sustainable community livelihoods*” and Uzbekistan UNDP/GEF Project “*Sustainable natural resource and forest management in key biodiversity areas important for Snow Leopard*”. The proposed project will work closely with each of these projects seeking opportunities to establish synergies and experience sharing between them. Kazakhstan, Kyrgyzstan and Uzbekistan submitted an application for inclusion of the mountains of the Western Tian Shan to the UNESCO World Heritage List, and the nomination was approved July 17, 2016. In this regards, this snow leopard-related project would contribute to the promotion of transboundary cooperation in Western Tian Shan.

228. On the national level the project will use the lessons from implemented UNDP/GEF Project “*Improving the coverage and management effectiveness of PAs in the Central Tian Shan Mountains*” in improving organization of work of joint anti-poaching group to protect snow leopard and other endangered species in Sarychat-Ertash national snow leopard priority landscape, and capacity building for PA staff protecting snow leopard habitat in the Tian Shan Ridge.

229. In order to strengthen an Environmental Information Monitoring and Management System and policy frameworks for implementation of CBD, including protection of snow leopard, the proposed project will collaborate with UNDP/GEF project “*Strengthening of institutional and legal capacities to enable improvement of the national monitoring system and management of environmental information*”. An Environmental Information Monitoring and Management System will be the basis for adoption of a standard Snow Leopard Ecosystem Monitoring System. This project will contribute the system with the monitoring data compiled from the research and biodiversity inventory, as well as further monitoring updates from the newly established Alatau and Kan-Achuu PAs and targeted communities, thus contributing for the regular country reporting to three Rio Conventions.

230. The UNDP Biodiversity Finance Initiative (BioFin) will conceptually contribute to the long-term financial sustainability of this GEF project targeted PAs, through the support to drafting PA business plans complementary to PA management plans, as well as to valuation of ecosystem services in targeted PAs.

231. The Coordination and Consultative Council on piloting of institutional reform in the forest sector led by SAEPF brings together the donors and national and international stakeholders implementing the forest related projects. The key actors there are the World Bank, FAO and GIZ, which together with, SAEPF has initiated the piloting the sector reform in six leskhozoes. During the course of reform, the pilot leskhozoes will test different approaches to sustainable forest management involving local communities. These approaches will form the basis of a new forestry sector reform concept. The GEF-UNDP project will join the Coordination and Consultative Council in order to identify and develop opportunities for collaboration with other relevant development agencies. The plans and experiences on promotion of HCVF, Joint Forest Management and restoration of degraded forests and pastures will be duly shared and coordinated on this dialogue platform.

232. The World Bank \$16 million USD project “*Integrated Forest Ecosystems Management*” is starting up in Kyrgyzstan in the 2nd half of 2016. The project aims to support (i) Forest Sector Institutional Reform, (ii) Strategic Investments and Piloting of Sustainable Management Approaches in 12 pilot leskhozoes and (iii) the National Forest Inventory and Forest Management Informational System operationalization. The UNDP GEF supported project will seek to collaborate with this project on promotion of participatory forest management approaches, rehabilitation of degraded forests, as well as in elaboration of sectoral enabling framework on HCVF.

233. The project team will communicate and coordinate activities within Components 1 and 2 with the GIZ project “*Biodiversity Conservation and Poverty Reduction through Community-based Management of Walnut Forests and Pastures in Southern Kyrgyzstan*”, which is financed out of the German Energy and Climate Fund and implemented by GIZ/UNIQUE Forest and Landuse GmbH in Jalal-Abad province, supporting the conservation of biodiversity in walnut-fruit forests in five leskhozoes, two of which are considered as contributing to the national process of piloting in forest reform.

234. The GEF funded FAO implemented project “*Sustainable Management of Mountainous Forest and Land Resources under the Climate Change conditions*” has accumulated considerable experiences on forest rehabilitation as well as land degradation improvement, also in terms of climate change mitigation research in forestry sector. The new GEF-UNDP project will build on the FAO experiences with degraded forests restoration and national forest policy improvement.

235. On pasture management the project team will cooperate with the IFAD-funded project “*Livestock and markets development*” under the Ministry of Agriculture, Processing Industry and Melioration implemented by Agency for Rural Investments Support (ARIS) to improve local pasture management plans and practices. A particular focus of this alignment of efforts will be on harmonizing the financial and technical support provided to rural communities in implementing more sustainable pasture management practices in high altitude grasslands.

236. The project will also seek to develop collaborative agreements with key international NGO partners (SLT, Panthera, NABU, SLF, WWF) and national and international research institutions to support the implementation of selected project activities (e.g. snow leopard and prey surveys and monitoring, specialized training, public awareness-raising, forest and grassland restoration planning, smart patrol system development, etc.). The project will, within the framework of these collaborative agreement/s, then assist in reimbursing the costs of NGOs and academic institutions in the direct implementation of activities that fall directly within the ambit of the project outputs.

237. The project will specifically seek to build on the substantial foundational work already undertaken by Panthera and other partners in setting up community-based conservancies in the country. The Panthera project in Kyrgyz Republic and Tajikistan “*Study of snow leopard spatial ecology and monitoring of snow leopard populations and its prey species*” for 2015-2018 supports training of local communities in snow leopard monitoring and a snow leopard telemetry study.

238. While implementing this project UNDP will continue collaboration with UN Volunteers engage into various community mobilization projects. Two UN Volunteers will be engaged to mobilize targeted communities in Toktogul and Toguz-Toro districts.

Gender Considerations

239. In 2015, the total population of Kyrgyz Republic of 5,895,000 persons included 2,978,000 women and 2,917,000 men. The population gender distribution across the country differs. In urban areas the share of women is higher than men and makes up 52.6 %, and in rural areas, where the birth rate is higher, the ratio of men is a majority at 50.6%.⁵¹

240. In the 2014 edition of the Social Institutions and Gender Index (SIGI), Kyrgyzstan reportedly has medium levels of discrimination against women in social institutions (SIGI score of 0.1598). It has low category of discrimination in family code, medium - in restricted civil liberties and physical integrity and high – in son bias and access to resources and assets. In 2014, the, the ratio of female to male primary education enrolment was 96%. The ratio of female to male secondary school enrolment was 97%. The share of women, who graduated higher educational institutions in 2015, was 54.7%. In the same year, women constituted 40.8% of the total employed population of Kyrgyzstan.

241. In general, statutory law provides a foundation for equal rights and protections for women and men and for women’s rights to land and property. However, traditional strict stereotypes of men and women’s roles in society and in household remain. It is believed that men should play the role of breadwinner and household leader, while women should confine themselves to domestic and children care work within the home. The Kyrgyz Constitution prohibits discrimination on the basis of sex. It provides that everyone is equal before the law and that men and women are accorded equal opportunities and freedoms. The constitution of the Kyrgyz Republic incorporates into its legal system international treaties that the Kyrgyz Republic is party to.⁵² In 1997, Kyrgyzstan has ratified Convention on Elimination of Discrimination Against Women (CEDAW),⁵³ which puts an affirmative obligation on State Parties to take appropriate measures to eliminate discrimination against women and ensure, among other things, the same rights for both spouses in respect of the ownership, acquisition, management, administration, enjoyment and disposition of property (CEDAW).

242. The Kyrgyz National Strategy for Gender Equality by 2020 and National Action Plan for Achieving Gender Equality for 2012-2014 were adopted in June 2012. The law “On the Basics of the State Guarantees for Ensuring Gender Equality”⁵⁴ prohibits explicit and implicit gender discrimination and does not support norms of common law, tradition and culture that discriminate against gender. It guarantees equal rights to ownership of property, provides for equal use rights to land, where rights are granted in this way, and provides equal protection of rights to land for men and women.

⁵¹ <http://www.stat.kg/media/publicationarchive/534f0c98-fb76-4922-b8c1-6b8b8f44ba27.pdf>

⁵² Put into force by the Law of the Kyrgyz Republic as on June 27, 2010.

⁵³ Adopted by the Law of the Kyrgyz Republic as on 10 Feb 1997

⁵⁴ Adopted on March 12, 2003, № 60

243. The Family Code of the Kyrgyz Republic governs family relations. It provides that the family is the basic social unit in Kyrgyzstan, only registered marriages are recognized, and family relations are regulated in accordance with principles of equality of the spouses⁵⁵. Under the Family Code, a marriage can end in two ways, (a) by the death of one spouse, or (b) by petition for termination (divorce) of one spouse; in each case the end of the marriage must be registered.

244. The Family Code also provides that all property acquired by the spouses during their marriage is considered joint property, and joint property is managed with the consent of both spouses. Any property that belonged to a spouse before the marriage or gifts or inheritance received by one spouse during the marriage is considered personal property of the spouse. At divorce, joint property of the spouses is divided equally among them, unless otherwise stated in a marital agreement. Inheritance. Kyrgyz formal law governing succession permits both sons and daughters the right to inherit.

245. The Family Code and the inheritance legal provisions apply to private land, and do not apply to pastures, which are categorized as state land, with their responsibility and management devolved to the Pasture Users Associations. Instead, women's and men's rights to pastures are based on being resident in a locality and thereby member of a pasture users association. In practice, women's use of pastures and role in pastures management are governed by customs.

246. Women in Kyrgyzstan experience rather limited access to economic opportunities. Women's independent economic activity has decreased almost two times within the decades since the country's independence. Women are highly represented in the informal labor market and in certain service and trade sectors, which are high risk and lack social guarantees. Women in Kyrgyzstan spend three times more time on housework than men (18.8 and 6.5 hours, respectively). This number is higher in rural areas where women perform an additional 2 hours of housework⁵⁶. In 2012, women headed 27 per cent of households nationwide.

247. During PPG stage, UNDP employed an inclusive approach for local communities' consultations (e.g. focus group discussions with different social groups, including women, to capture their views and aspirations) and this has contributed to broad community consultations and better sense of inclusion, including women. Through inclusive community-based institutions for pasture management, small holding farmers owners will benefit from improved access to pastures, as pasture committees will be assisted in grouping and organizing herding of animals of small-scale animal owners, including women, by herders who are issued pasture tickets. While it was reported by IFAD that women's participation in decision-making bodies for community-based pasture management is rather limited and there may be maximum 2-3 female members in a pasture committee which normally has the membership of about 15-18⁵⁷. The UNDP-GEF project will try to improve women representation in all community-based bodies in the targeted communities up to 25%.

248. The issue of gender and women's empowerment, including issues such as their participation and role in community based natural resource management bodies and workload balance will be in focus of UNDP project gender equality promoting strategy. The inclusive social mobilization approach to enhanced women's participation in consultation process and access to land, pasture and forest resources of rural communities, including women, as well as project activities on alternative livelihoods support that directly contributing to women's economic empowerment will be duly addressed by the project.

249. Under the Land Code, women and men have equal rights to access and manage land with no specific gender related provisions. Likewise the Civil Code does not elaborate separately on women's rights to have access to property other than land and to enter into contracts in their own names. However, property is routinely registered in the name of husbands or male relatives, as property ownership is seen as a male prerogative. In addition, most married couples live in property belonging to the husband's parents, meaning that the wife often has no legal claim on the property at all. Many women are still unaware of their rights and the opportunities available to them as a result of the land reform processes that began in the 1990s. Even when they do know their rights, registering a farm is a complex administrative process. When women are allocated land in their own right, it is often of poor quality for farming, and they are often denied access to land belonging to their husbands in the event of divorce or widowhood.⁵⁸

250. Woman lack education, access to productive resources, and technical training that would enable them to increase productivity above subsistence levels, and increase wealth. Under the Family Code and the

⁵⁵ Family Code of the Kyrgyz republic as of August 30, 2003, № 201

⁵⁶ National Statistics Committee, Women and Men of the Kyrgyz Republic, 2015.

⁵⁷ IFAD, Kyrgyz Republic Agricultural Investments and Services Project Performance Assessment, 2016.

⁵⁸ Land Code of the Kyrgyz Republic as of June 1999, № 45 (last amendments as of 28.07.2015)

Civil Code, within registered marriages, spouses have equal property rights, but this does not apply to unregistered, religious marriages, leaving many women unable to claim their property rights when the relationship breaks down. Women and men have the same rights to access bank loans and credit. Many women apply for loans; however, many of them not fully understand their rights and the procedures involved. The fact that most property is registered to men rather than women makes it difficult for women to secure credit, as they cannot provide collateral for loans. High bank charges and rates of interest also hamper women's access to credit. However, conducted interviews with local financial institutions findings proved that women are more responsible in paying back credits and interests.

251. The project activities have been designed to address some of these gender-related issues, as follows:

252. The project will facilitate the employment, training and equipping of woman as targeted PAs staff (Output 1.1), joint patrol trainers and community rangers (Output 1.4), community mobilizing officers (Output 1.4), and leskhoz forest enforcement staff (Output 2.3). The project will actively encourage the equitable use of women labor and supervisors from local rural villages in: identifying and designating wildlife corridors near the targeted PAs (Output 2.1), the planning and implementation of pasture management plans and restoration of degraded pastures (Output 2.3); and the planning and restoration of high conservational value forests (Output 2.4).

253. The project will ensure that women-owned and/or managed businesses participate equitably in the procurement of project-funded equipment and infrastructure (all outputs). In some instances, the project may adopt a preferential procurement approach to the provision of minor services and supplies (e.g. supply of rations for park rangers, accommodation) from local women-led businesses.

254. The project will ensure that the reach of project-funded education/awareness-raising programs, and skills training in the targeted communes of Cholpon-Ata, Kyzyl-Ozgorush, Kok-Irim and Atai close to Alatai and Kan-Achuu SNPs will include both male- and female-headed households from the targeted villages (all outputs).

255. The project will ensure that the interests of women and women-headed households are adequately represented on SNP Steering Committees (Output 1.4), Pasture Committees (Output 2.3) and JFM Boards (Output 2.4); and are actively involved in the planning of protected areas, pastures and forests in the project planning domain. The project will ensure that the reach of project-funded sustainable livelihood development support in will equitably include both male- and female-headed households from the targeted villages the targeted communes of Cholpon-Ata, Kyzyl-Ozgorush, Kok-Irim and Atai close to Alatai and Kan-Achuu SNPs (all outputs). The project will actively assist women-headed households living in the targeted communes of Cholpon-Ata Kyzyl-Ozgorush, Kok-Irim and Atai close to Alatai and Kan-Achuu SNPs to access: (i) micro-financing for sustainable livelihoods; and (ii) technical and financial support from project for more sustainable pasture management practices and agriculture (Output 2.5).

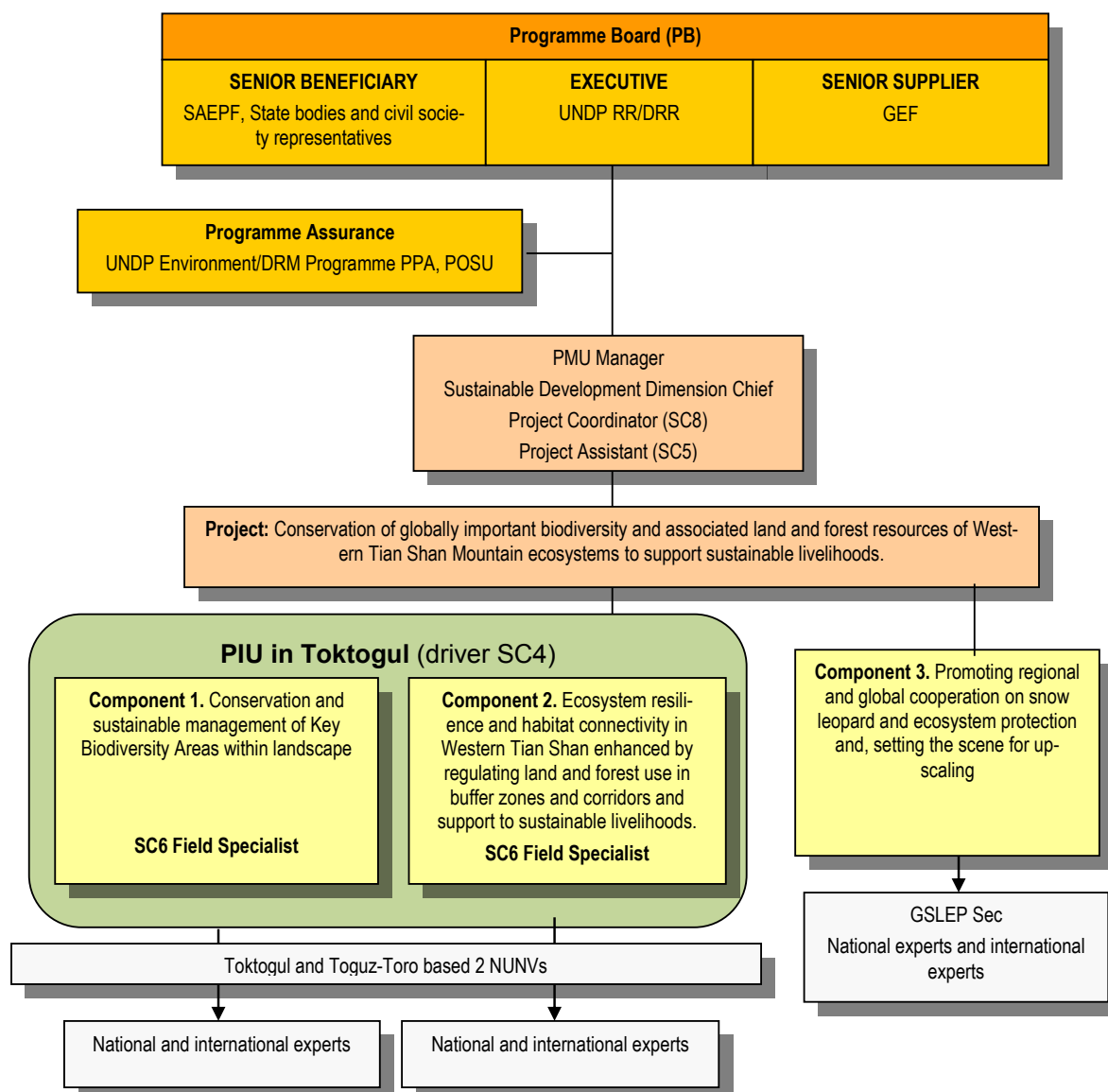
256. The project will commit dedicated financial and technical support to addressing the significant knowledge constraints in pasture users from women-headed households. The project will ensure that the National Strategy on Snow Leopard Conservation includes strategies, activities and budgets that will enable and finance the equitable involvement of women in the implementation of the action plan. The project will advocate for an increase in the number of women involved in research and monitoring of snow leopard and prey populations. The project will collaborate with the project-contracted businesses and international experts to continually develop and implement mechanisms that may further strengthen the capacities of local women and women-headed households across the project's planning domain. The project has targeted the involvement of at least 30% of women participation in all the project activities and events, and direct benefits for women of at least 30% project micro-financing of sustainable livelihoods program.

PART III. MANAGEMENT ARRANGEMENTS

257. This project will be implemented within the context of the UN programming frameworks driven by the Government, particularly the UN Development Assistance Framework for 2011-2016 (UNDAF) and the UNDP Country Programme Action Plan for 2011-2016 (CPAP). In turn, these frameworks are congruent with the Government priorities outlined in the National Strategy of Sustainable Development for 2013-2017 recently approved by the President of the Kyrgyz Republic, and the country's Programme on Transition to Sustainable Development for 2013-2017.

258. According to the DIM Authorization for the Kyrgyzstan Country Programme for the period 2012-2016, granted by Ms. Kori Udovichki, UNDP RBEC Regional Director on January 11th, 2012, the project will be executed by UNDP. The project organization structure (summarized in Figure 10 below) will consist of a Project Board, Project Assurance, Project Management and Implementation Units (PMU and PIU) and at the national level, will be part of UNDP's National Project Management Unit in the Kyrgyz Republic. Roles and responsibilities are described below.

Figure 10 Coordination and Management Structure



259. **Project Board:** The Project Board (PB) will be responsible for making management decisions for the project, in particular when guidance is required by the Project Coordinator. It will play a critical role in project monitoring and evaluations by assuring the quality of these processes and associated products, and by using evaluations for improving performance, accountability and learning. The PB will ensure that required resources are committed. It will also arbitrate on any conflicts within the project and negotiate

solutions to any problems with external bodies. Based on the approved Annual Work Plan (AWP), the PB can also consider and approve the quarterly plans and approve any essential deviations from the original plans. The project will be subject to PB meetings at least twice every year. The first such meeting will be held within the first six months of the start of full implementation. At the initial stage of project implementation, the PB may, if deemed advantageous, wish to meet more frequently to build common understanding and to ensure that the project is initiated properly.

260. To ensure UNDP's ultimate accountability for project results, PB decisions will be made in accordance with standards that shall ensure management for development results, best value for money, fairness, integrity, transparency, and effective international competition. In case consensus cannot be reached within the PB, the final decision will rest with the UNDP.

261. Members of the PB will consist of key national government and non-government agencies, and appropriate local level representatives. UNDP will also be represented on the PB, which will have appropriate representation in terms of gender. Potential members of the PB will be reviewed and recommended for approval during the Local Project Appraisal Committee (LPAC) meeting. In addition, PB meetings will be open to observer organizations, which can comment and provide input on project activities, and potential decisions, although only PB members will have decision-making powers. The PB will contain three distinct roles:

- *Executive Role:* This individual will represent the project "owners" and will chair the group. It is expected that SAEPF will appoint a senior official to this role who will ensure full government support of the project.
- *Senior Supplier Role:* This requires the representation of the interests of the funding parties for specific cost sharing projects and/or technical expertise to the project. The Senior Supplier's primary function within the PB will be to provide guidance regarding the technical feasibility of the project. This role will rest with UNDP-Kyrgyzstan represented by the Resident Representative.
- *Senior Beneficiary Role:* This role requires representing the interests of those who will ultimately benefit from the project. The Senior Beneficiary's primary function within the PB will be to ensure the realization of project results from the perspective of project beneficiaries. This role will rest with the other institutions (key national governmental and non-governmental agencies, and appropriate local level representatives) represented on the PB, who are stakeholders in the project.

262. **Project Assurance:** The Project Assurance role supports the PB Executive role by carrying out objective and independent project oversight and monitoring functions. The Project Quality Assurance role will rest with the Programme and Policy Analyst in charge of Environment/Energy and Disaster Risk Management of UNDP Kyrgyzstan, and its Programme Oversight and Support Unit (POSU.)

263. **National Project Management (PMU) Unit:** This project will be part of the National Project Management Unit of UNDP stationed in capital Bishkek in the Kyrgyz Republic, whose main function is to provide everyday technical level implementation support to projects of which is it comprised. The project Coordinator (SC-8) will be based in Bishkek and hosted by the PMU, and will be in charge of the overall project implementation with an implementation function of the Component III of the project at the national level aimed at improving national biodiversity legal framework, promoting regional and global cooperation on snow leopard and ecosystem protection, and working closely with the GSLEP Secretariat which is based in Bishkek and other Snow Leopard network partners. The PC will also be directly overseeing implementation of project components I and II, which will be implemented by the Project Implementation Unit (PIU) in the Toktogul area of Jalal-Abad province. The Project Coordinator will have the authority to run the project on a day-to-day basis on behalf of the Implementing Partner within the constraints laid down by the PB. The Project Coordinator's prime responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost. The PC will be recruited in accordance with UNDP regulations and will have a direct reporting line to UNDP Dimension Chief on Sustainable Development and the PMU Manager, with overall thematic and quality assurance guidance from the UNDP CO Environment/Energy and DRM Programme and Policy Analyst. The PC will be responsible for overall project coordination and implementation, consolidation of work plans and project papers, preparation of quarterly progress reports, reporting to the project supervisory bodies, and supervising the work of the project experts and other project staff. Under direct supervision of the PC, the Project Assistant will be responsible for administrative and financial issues, and will get support from the UNDP CO and National PMU Operations units as appropriate. The PMU will assist SAEPF in performing its role as Responsible Partner. In this role SAEPF will (i) directly responsible for creating the enabling conditions for implementation of all project activities, (ii) facilitating monitoring and reporting to ensure the delivery of agreed outcomes and (iii) will also play a coordinating role to maximize efficiency of UNDP-GEF interventions and avoid possible duplication, in line compliance with country development priorities, global environment trends and UNDP's corporate policy.

264. **Project Implementation Unit (PIU):** A PIU will be established in the Toktogul district of Jalal-Abad province comprising two regular Field Specialists (SC6) and the Project Driver (SC3.) The Project Driver will provide transportation and other logistical services to the project staff to achieve project's goals and objectives. The project will purchase a vehicle for use by the PIU during project implementation, which will be transferred at project completion to SAEPPF for use by the SNPs. The PIU, with the programmatic support and guidance from the Bishkek based PMU, following UNDP procedures on implementation of DIM projects, will identify national experts and consultants, and international experts as appropriate to undertake technical work. The national and international companies may also be involved in project implementation. These consultants and companies will be hired under standard prevailing UNDP procedures on implementation of DIM projects. Project field specialists and related staff will spend a large portion of their time in the field, and will be directly guided by the PC, with thematic guidance from the DC and CO PPA on Environment, Energy and DRM. National UNV's (United Nations Volunteers) will be based in both project localities (Toktogul and Toguz-Toro), and will aid the project with community mobilization, public information and education activities and other outreach activities.

265. In addition and as mentioned above, the UNDP Country Office and National PMU in capital Bishkek will provide specific support services for project realization through its "Programme Oversight and Support" and "Operations" Units as required.

266. To mainstream UNDP Kyrgyzstan publicity at the local and national level, the project will provide information and communication support to all projects and initiatives implemented in Kyrgyzstan through its support staff, which will include Project Communication/PR Specialist and ICT specialists. When required, operational and project related support to the project will be carried out by the Project Assistant of the Environment for Sustainable Development Programme (ESDP), and will benefit from the UNDP PMU transportation services. The project, based upon the need, will also hire long and short-term local and international experts. In-depth ToR's for the project posts will be drafted by UNDP to outline duties and functions of project personnel in more detail, and hires for both the principal staff and project experts will be conducted in line with UNDP rules and procedures.

267. UNDP, as International Agency for this project, will provide project management cycle services for the project as defined by the GEF Council. In addition, it will provide Direct Project Services (DPS), according to its policies and convenience. DPS costs are those incurred by UNDP for the provision of services that are execution driven and can be traced in full to the delivery of project inputs. They relate to operational and administrative support activities carried out by UNDP offices on behalf of the Direct Implementation Modality (DIM) and include the provision of the following estimated services: i) Payments, disbursements and other financial transactions; ii) Recruitment of staff, project personnel, and consultants; iii) Procurement of services and equipment, including disposal; iv) Organization of training activities, conferences, and workshops, including fellowships; v) Travel authorization, visa requests, ticketing, and travel arrangements; vi) Shipment, custom clearance, vehicle registration, and accreditation. As is determined by the GEF Council requirements, these service costs are assigned as Project Management Cost, identified in the project budget as Direct Project Costs.

Part IV. Monitoring and Evaluation Framework

Monitoring and Reporting

268. The project will be monitored through the following Monitoring and Evaluation (M&E) activities.

Project Start-up

269. A Project Inception Workshop will be held within the first four months of project start with those with assigned roles in the project organization structure, the UNDP Country Office (CO) and, where appropriate/feasible, regional technical policy and program advisors as well as other stakeholders. The Inception Workshop is crucial to building ownership for the project results and to plan the first year annual work plan.

270. The Inception Workshop should address a number of key issues including:

- a) Assist all partners to fully understand and take ownership of the project. Detail the roles, support services and complementary responsibilities of UNDP CO, SAEPF and the UNDP-GEF Regional Service Centre (RSC) vis-à-vis the project team. Discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff will be discussed again, as needed.
- b) Based on the Project Results Framework and the relevant GEF Tracking Tool, if appropriate, finalize the first Annual Work Plan (AWP). Review and agree on the indicators, targets and their means of verification, and re-check assumptions and risks.
- c) Provide a detailed overview of reporting, monitoring and evaluation requirements. The Monitoring and Evaluation (M&E) work plan and budget should be agreed and scheduled.
- d) Discuss financial reporting procedures and obligations, and arrangements for annual audit.
- e) Plan and schedule project Steering Committee (SC) meetings. Roles and responsibilities of all project organization structures should be clarified and meetings planned. The first SC meeting should be held within the first six months following the inception workshop, if it is not held jointly with the inception workshop.

271. An Inception Workshop Report is a key reference document and must be prepared within 3 months of the Inception Workshop, and shared with participants to formalize various agreements and plans decided during the meeting.

Quarterly

- Progress made shall be monitored in the UNDP Enhanced Results Based Management Platform.
- Based on the initial risk analysis submitted, the risk log shall be regularly updated in ATLAS. Risks become critical when the impact and probability are high.
- Based on the information recorded in ATLAS, a Project Progress Report (PPR) can be generated in the Executive Snapshot.
- Other ATLAS logs can be used to monitor issues, lessons learned etc. The use of these functions is a key indicator in the UNDP Executive Balanced Scorecard.

Annually

272. Annual Project Review/Project Implementation Reports (APR/PIR): This key report is prepared to monitor progress made since project start and in particular for the previous reporting period. The APR/PIR combines both UNDP and GEF reporting requirements.

273. The APR/PIR includes, but is not limited to, reporting on the following:

- Progress made toward project objective and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative)
- Project outputs delivered per project outcome (annual)
- Lesson learned/good practice
- AWP and other expenditure reports
- Risk and adaptive management
- ATLAS Quarterly Progress Reports (QPR)
- Portfolio level indicators (i.e. GEF focal area tracking tools) are used by most focal areas on an annual basis as well.

Periodic Monitoring through Site Visits

274. UNDP CO and the UNDP-GEF RSC will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Other members of the Steering Committee may also join these visits. A Field Visit Report/BTOR will be prepared by the UNDP CO and UNDP-GEF RSC and will be circulated no less than one month after the visit to the project team and Steering Committee members.

Mid-term of Project Cycle

275. The project will undergo an independent Mid-Term Review (MTR) at the mid-point of project implementation. The MTR will determine progress being made toward the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the MTR will be decided after consultation between the parties to the project document. The Terms of Reference for this MTR will be prepared by the UNDP CO, based on guidance from the UNDP-GEF RSC. The management response and the evaluation will be uploaded to UNDP corporate systems, in particular the UNDP Evaluation Resource Center (ERC).

276. The relevant GEF Focal Area Tracking Tools will also be completed during the mid-term review cycle.

End of Project

277. An independent Terminal Evaluation will take place three months prior to the final Steering Committee meeting and will be undertaken in accordance with UNDP and GEF guidance. The terminal evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the MTR, if any such correction took place). The terminal evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. The Terms of Reference for this evaluation will be prepared by the UNDP CO, based on guidance from the UNDP-GEF RSC.

278. The terminal evaluation should also provide recommendations for follow-up activities and requires a management response which should be uploaded to PIMS and to the UNDP ERC.

279. The relevant GEF Focal Area Tracking Tools will also be completed during the terminal evaluation.

280. During the last three months, the project team will prepare the Project Terminal Report. This comprehensive report will summarize the results achieved (objectives, outcomes, outputs), lessons learned, problems met and areas where results may not have been achieved. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project's results.

Learning and Knowledge Sharing

281. Results from the project will be disseminated within and beyond the project through existing information sharing networks and forums.

282. The project will identify and participate - as relevant and appropriate - in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned. The project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects.

283. Finally, there will be a two-way flow of information between this project and other projects of a similar focus.

Communications and Visibility Requirements

284. Full compliance is required with UNDP's Branding Guidelines. These can be accessed at <http://intra.undp.org/coa/branding.shtml>, and specific guidelines on UNDP logo use can be accessed at: <http://intra.undp.org/branding/useOfLogo.html>. Amongst other things, these guidelines describe when and how the UNDP logo needs to be used, as well as how the logos of donors to UNDP projects needs to be used. For the avoidance of any doubt, when logo use is required, the UNDP logo needs to be used alongside the GEF logo. The GEF logo can be accessed at: http://www.thegef.org/gef/GEF_logo. The UNDP logo can be accessed at <http://intra.undp.org/coa/branding.shtml>.

285. Full compliance is required with the GEF's Communication and Visibility Guidelines (the "GEF Guidelines"). The GEF Guidelines can be accessed at: <http://www.thegef.org/gef/sites/thegef.org/files/>

[documents/C.40.08 Branding the GEF%20final 0.pdf](#). Amongst other things, the GEF Guidelines describe when and how the GEF logo needs to be used in project publications, vehicles, supplies and other project equipment. The GEF Guidelines also describe other GEF promotional requirements regarding press releases, press conferences, press visits, visits by Government officials, productions and other promotional items.

Costed M&E Work Plan, with Roles, Responsibilities and Timing

Type of M&E activity	Responsible Parties	Budget US\$ <i>Excluding project team staff time</i>	Timeframe
Inception Workshop and Report	PM UNDP CO UNDP-GEF RSC	Indicative cost: \$10,000	Within first four months of project start up
Measurement of Means of Verification of project results.	PM will, with support from the UNDP-GEF RSC, oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members.	To be finalized in Inception Phase and Workshop.	Start, mid and end of project (during evaluation cycle) and annually when required.
Measurement of Means of Verification for Project Progress on <i>output and implementation</i>	PM	To be determined as part of the Annual Work Plan preparation.	Annually prior to ARR/PIR and to the definition of annual work plans
Project Steering Committee Meetings	PM UNDP CO	Indicative cost: \$10,000 (\$2,000 annually)	Annually, at the end of the calendar year for approval of following year's workplan and budget
ARR/PIR	PM UNDP CO UNDP RTA UNDP ERC	None	Annually
Quarterly implementation reports, including risk monitoring and lesson logging	PM	None	Quarterly
Completion of relevant GEF Tracking Tools	PM UNDP CO	None	At mid-term (in conjunction with MTR), and at completion (in conjunction with TE)
Independent External Mid-term Review (MTR)	PM UNDP CO UNDP RSC External Consultants (i.e. evaluation team)	Indicative cost: 25,000	At the mid-point of project implementation, prior to completion of the 2 nd PIR.
Independent External Terminal Evaluation (TE)	PM UNDP CO UNDP RSC External Consultants (i.e. evaluation team)	Indicative cost: 25,000	Within the last three months of project implementation.
Project Terminal Report, including Lessons Learned	PM UNDP CO local consultant	None	At least three months before the end of the project
Audit	UNDP CO Project manager and team	Indicative cost: 10,000	Twice – at midterm and project completion
Visits to field sites	UNDP CO UNDP RSC (as appropriate) Government representatives	For GEF-supported projects, paid from IA fees and operational budget.	Annually
TOTAL indicative COST <i>Excluding project staff time and UNDP staff and travel expenses</i>		US\$ 80,000	

Note: Costs included in this table are part and parcel of the UNDP Total Budget and Work Plan (TBW) in the PRODOC, and not additional to it.

Part V. Legal Context

286. This project document exists in English and Russian languages. In case of conflict, the English version takes precedence.

287. This Project Document shall - together with the *United Nations Development Assistance Framework* (UNDAF) for Kyrgyzstan (2012-2016) and the UNDP *Country Programme Document* (CPD, 2012-2016) - be the instrument referred to as such in Article I of the *Standard Basic Assistance Agreement* between the Government of Kyrgyzstan and the United Nations Development Program (signed by the parties on 14 September 1992).

288. Consistent with the Article III of the Standard Basic Assistance Agreement, the responsibility for the safety and security of the implementing partner and its personnel and property, and of UNDP's property in the implementing partner's custody, rests with the implementing partner

289. The implementing partner shall:

- a. Put in place an appropriate security plan, and maintain the security plan, taking into account the security situation in the country where the project is being carried out; and
- b. Assume all risks and liabilities related to the implementing partner's security, and the full implementation of the security plan.

290. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.

291. The implementing partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via <http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm>. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

292. The UNDP authorized official can effect in writing the following types of revision to this Project Document, provided that he/she has verified the agreement thereto by the UNDP-GEF RSC and is assured that the other signatories to the Project Document have no objection to the proposed changes:

- a. Revision of, or addition to, any of the annexes to the Project Document;
- b. Revisions which do not involve significant changes in the immediate objectives, outputs or activities of the project, but are caused by the rearrangement of the inputs already agreed to or by cost increases due to inflation;
- c. Mandatory annual revisions which re-phrase the delivery of agreed project inputs or increased expert or other costs due to inflation or take into account agency expenditure flexibility; and
- d. Inclusion of additional annexes and attachments only as set out here in this Project Document.

AUDIT CLAUSE

The Project audits will be conducted according to UNDP Financial Regulations and Rules and applicable Audit policies.

SECTION II. STRATEGIC RESULTS FRAMEWORK

This project will contribute to achieving the following Country Program Outcome as defined in CPAP or CPD:	UNDAF Pillar C, Outcome 2: By end of 2016 sustainable management of energy, environment and natural resources practices operationalized. UNDAF Pillar C, Outcome 2 Indicators: % of people living in ecosystems resilient to climate change; % increase in agricultural production for markets and households; Country Program Outcome A.2.9: Environment and climate change integrated into pro poor (socio-economic) development policies and programs
Country Program Outcome Indicators:	% of people who have equitable access to ecosystem services by province; % of water use efficiency for agricultural and energy production; % of population benefiting from non-carbon energy sources
Applicable GEF-6 Biodiversity Strategic Objectives, Programs, Outcomes, Indicators:	BD-1, Program 1, Outcome 1.2, Indicator 1.2 BD-1, Program 2, Outcome 2.2, Indicator 2.2 BD-4, Program 9, Outcome 9.1, Indicator 9.1
Applicable GEF-6 Land Degradation Strategic Objectives, Programs, Outcomes, Indicators:	LD – 3, Program 4, Outcome 3.2, Indicator 3.2
Applicable GEF-6 Sustainable Forest Management Strategic Objectives, Programs, Outcomes, Indicators:	SFM – 1, Program 2, Outcome 1, Indicator 1 SFM – 2, Program 5, Outcome 3, Indicator 3 SFM – 3, Program 7, Outcome 5, Indicator 5
Project Goal:	Improve the status of globally significant biodiversity, and improve the provision of ecosystem services from forest and land resources in Kyrgyzstan's Western Tian Shan mountains, supporting sustainable livelihoods.

Component	Indicator	Baseline (2016)	End of Project Target	Sources of Verification	Risks and Assumptions
Objective: <i>To promote a landscape approach to protection of internationally important biodiversity, and land and forest resources in the Western Tian Shan mountains in Kyrgyzstan</i>	1. Trend in population levels of globally significant fauna (Red List, ecosystem indicator or keystone species) in Jalal-Abad province: - Snow leopard (<i>Panthera uncia</i>) - Ibex (<i>Capra sibirica</i>) - Golden eagle (<i>Aquila chrysaetos</i>) - Tian Shan white clawed bear (<i>Ursus</i>	Negative trend over the past 25 years of individuals that are present at least sometime during the year in Jalal-Abad province. Number of individuals and annual rate of change: - Snow leopard (<i>Panthera uncia</i>): 49; <0% - Ibex (<i>Capra sibirica</i>): 4116; <3% - Golden eagle (<i>Aquila chrysaetos</i>): 31; <1% - Tian Shan white clawed bear (<i>Ursus arctos isabellinus</i>): 197; <4%	Population trend is at least stable over a rolling five-year period. Number of individuals and annual rate of change: - Snow leopard (<i>Panthera uncia</i>): 49; >0% - Ibex (<i>Capra sibirica</i>): 4839; >3% - Golden eagle (<i>Aquila chrysaetos</i>): 40; >1% - Tian Shan white clawed bear (<i>Ursus arctos isabellinus</i>): 256; >5%	Consensus of annual monitoring data from: - Department of Rational Use of Natural Resources (SAEPF) - National Academy of Sciences - Department of Protected Areas (SAEPF) - Non-government sources	Assumptions: - Economic and political stability allows local resource users to invest in long-term planning and conservation of resources - Populations of key species are still at self-sustaining levels, or can be sufficiently augmented by colonization from other regions - Wildlife and biodiversity requirements in

Component	Indicator	Baseline (2016)	End of Project Target	Sources of Verification	Risks and Assumptions
	<i>arctos isabellinus</i>)				landscape buffer zones and corridors are not fully incompatible with local economic land uses
	2. Status of globally significant flora in Toktogul and Toguz-Toro districts: - Semenov's fir (<i>Abies Semenovii</i>) - Juniper (<i>Juniperus sp.</i>) - Relict spruce (<i>Picea schrenkiana</i>)	Index of area and forest quality of globally significant flora in Toktogul and Toguz-Toro districts (ha): - Semenov's fir (<i>Abies Semenovii</i>) – Total = 4,281.8 ha: Ha - Category 1: 2,025.1 (47%) Ha – Category 2: 1,728.3 (40%) Ha – Category 3: 528.4 (12%) Ha – Category 4: 0 (0%) - Juniper (<i>Juniperus sp.</i>) – Total = 6,847.3 ha: Ha - Category 1: 694.4 (10%) Ha – Category 2: 4,254.9 (62%) Ha – Category 3: 1,898 (28%) Ha – Category 4: 0 (0%) - Relict spruce (<i>Picea schrenkiana</i>) – Total = 2,125.5 ha: Ha - Category 1: 850.6 (40%) Ha – Category 2: 1,048.8 (49%) Ha – Category 3: 226.1 (11%) Ha – Category 4: 0 (0%)	Index of area and forest quality of globally significant flora in Toktogul and Toguz-Toro districts: - Semenov's fir (<i>Abies Semenovii</i>) – Total = 4,281.8 ha: Ha - Category 1: 2,225.1 Ha – Category 2: 1,956.3 Ha – Category 3: 100.4 Ha – Category 4: 0 - Juniper (<i>Juniperus sp.</i>) – Total = 7,171.8 ha: Ha - Category 1: 1289.1 Ha – Category 2: 4,701.7 Ha – Category 3: 1,181.0 Ha – Category 4: 0 - Relict spruce (<i>Picea schrenkiana</i>) – Total = 4,202.6 ha: Ha - Category 1: 1,745.7 Ha – Category 2: 2,456.9 Ha – Category 3: 0 Ha – Category 4: 0	Consensus of annual monitoring data from: - Forest Department (SAEPF) - Toktogul and Toguz-Toro leskhozes - National Academy of Sciences - Department of Protected Areas (SAEPF) - Non-government sources	Risks: - State institutions responsible for the administration of protected areas, pastures and forests do not have adequate capacity; - Low levels of compliance with environmental legislation, and a reluctance to adopt more sustainable natural resource use practices; - Low levels of coordination and cooperation between public institutions, tenure holders, rights holders, land owners, NGOs/CBOs and natural resources users; - Increasing aridisation of high altitude habitats, as a result of the effects of climate change.
	3. Area of degraded pastureland in four target A/As in Toktogul and Toguz-Toro districts - Cholpon-Ata - Kyzyl-Ozgorush - Kok-Irim - Atai	65,361 ha (estimated based on relevant available data)	0 ha (decrease of 65,361 ha)	Assessment at end of project via e-Pasture Management System and rapid assessment of change in degraded area by national experts => GEF-6 PMAT LD TT (sheet 2, cell C17) GEF Global RF	Assumptions: - Implementation of SLM via e-Pasture Management System can be achieved in lifetime of project - Implementation of SLM via dynamic annual grazing plans based on ecological conditions

Component	Indicator	Baseline (2016)	End of Project Target	Sources of Verification	Risks and Assumptions
				<p><u>Linkage:</u> GEF-6 LD Global Indicators: Outcome 3.1: Support mechanisms for SLM in wider landscapes established Indicator 3.1: Demonstration results strengthening cross-sector integration of SLM Outcome 3.2: Integrated landscape management practices adopted by local communities based on gender sensitive needs. Indicator 3.2: Application of integrated natural resource management (INRM) practices in wider landscapes</p> <p><u>UNDP IRRF Indicator Linkage:</u> IRRF Indicator 1.1.3: Number of new schemes which expand and diversify the productive base, based on the use of sustainable production technologies</p>	<p>leads to reduced degradation of pastureland</p> <ul style="list-style-type: none"> - PMCs are able to enforce grazing plans - Key driver of degradation is non-alignment of dynamic annual land carrying capacity with annual stocking levels - Key barriers are insufficient data on pasture conditions, insufficient data management to align annual dynamic carrying capacity with stocking levels, and capacity of PMCs to implement SLM measures based on available information <p>Risks:</p> <ul style="list-style-type: none"> - PMCs cannot self-sustain the use of the e-Pasture Management System after project completion - Communities continue to increase livestock numbers beyond sustainable levels
	4. Landscape area under directly improved conservation management	Area of Jalal-Abad province for which improved biodiversity, forest, and land management measures will be <u>directly</u> influenced by project results: - 0 ha	Area of Jalal-Abad province for which improved biodiversity, forest, and land management measures will be <u>directly</u> influenced by project results: - 472,635 ha (SFM in 34,382	<p>GEF-6 BD TT for Program 9 (cell C31)</p> <p><u>GEF Global RF Linkage:</u> GEF 6 Global</p>	<p>Assumptions:</p> <ul style="list-style-type: none"> - Community and local government stakeholders maintain commitment to mainstream biodiversity considerations in

Component	Indicator	Baseline (2016)	End of Project Target	Sources of Verification	Risks and Assumptions
			ha of forest (the forested area under management by Toktogul and Toguz-Toro leskhozes), restoration of degraded forest in 4,886 ha, implementation of SLM in 147,268 ha of pasturelands (65,361 ha of which is degraded pasturelands). In addition, 286,099 ha of protected areas, of which 87,322 ha are the two new PAs in the primary target districts.)	<p>Indicators: Outcome 9.1 Increased area of production landscapes and seascapes that integrate conservation and sustainable use of biodiversity into management. Indicator 9.1 Production landscapes and seascapes that integrate biodiversity conservation and sustainable use into their management preferably demonstrated by meeting national or international third-party certification that incorporates biodiversity considerations (e.g. FSC, MSC) or supported by other objective data.</p> <p><u>UNDP IRRF Indicator Linkage:</u> IRRF Indicator 1.5. Hectares of land that are managed sustainably under <i>in-situ</i> conservation, sustainable use, and/or an Access and Benefits Sharing (ABS) regime</p>	<p>economic activities in the wider landscape</p> <p>Risks:</p> <ul style="list-style-type: none"> - Land use and natural resource management approaches necessary for biodiversity and ecosystem-integrity considerations are not compatible with local economic land use needs and priorities - Land tenure and usufruct tenure disputes delay implementation of project activities such that management measures are not fully adopted by the end of the project
	5. Landscape area under indirectly improved conservation	Area of Jalal-Abad province for which improved biodiversity, forest, and land management	Area of Jalal-Abad province for which improved biodiversity, forest, and land management	GEF-6 BD TT for Program 9 (cell C32)	<p>Assumptions:</p> <ul style="list-style-type: none"> - Community and local government stakeholders

Component	Indicator	Baseline (2016)	End of Project Target	Sources of Verification	Risks and Assumptions
	management	measures will be <u>indirectly</u> influenced by project results: - 0 ha	measures will be <u>indirectly</u> influenced by project results: - 944,317 ha (Area of two target districts, less the area of the PAs (87,322 ha), SFM land (34,382 ha), afforested area (4,886 ha), and SLM land (147,268 ha) covered in these districts under direct coverage above.)	GEF Global RF <u>Linkage:</u> GEF-6 Global Indicators: Outcome 9.1 Increased area of production landscapes and seascapes that integrate conservation and sustainable use of biodiversity into management. Indicator 9.1 Production landscapes and seascapes that integrate biodiversity conservation and sustainable use into their management preferably demonstrated by meeting national or international third-party certification that incorporates biodiversity considerations (e.g. FSC, MSC) or supported by other objective data.	maintain commitment to mainstream biodiversity considerations in economic activities in the wider landscape Risks: - Insufficient data on key biodiversity areas and key species in time to adequately develop and integrate biodiversity considerations in district development plans before the end of the project
	6. Population of Toktogul and Toguz-Toro districts that have derived indirect livelihood benefits from project results (disaggregated by gender)	Toktogul District - 0 women - 0 men Toguz-Toro District - 0 women - 0 men Baseline: 2015	Toktogul District communities of Cholpon-Ata and Kyzyl-Ozgorush - 8,979 women - 9,328 men Toguz-Toro District communities of Kok-Irim and Atai - 2,723 women - 2,909 men	Population in directly targeted project areas, with assessment of livelihood benefits by 3 rd party source (i.e. not government, not project team). Source for population figures www.stat.kg . <u>UNDP IRRF Indicator</u>	Assumptions: - The project will have diffuse economic benefits for communities living closest to new PAs - The economic/livelihood benefits resulting from the project can be identified Risks:

Component	Indicator	Baseline (2016)	End of Project Target	Sources of Verification	Risks and Assumptions
				<p><u>Linkage:</u> IRRF Indicator 1.3.2: Number of new jobs and livelihoods created through management of natural resources, ecosystem services, chemicals and waste, disaggregated by sex</p> <p>1.3.2.A: Number of additional people benefitting from strengthened livelihoods through solutions for management of natural resources, ecosystem services, chemicals and waste</p>	<ul style="list-style-type: none"> - Alignment of land and natural resource uses with biodiversity and other ecological considerations results in short-term negative livelihood impacts - Total economic / livelihood benefits may be felt unevenly within the local population
<p><i>Outcome 1: Conservation and sustainable management of Key Biodiversity Areas within landscape</i></p>	<p>7. Management effectiveness of key alpine protected areas in Jalal-Abad province covering 286,099 ha</p>	<p>METT Score:</p> <ul style="list-style-type: none"> - Alatai SNP (new PA): 17 - Kan-Achuu SNP (new PA): 16 - Sary-Chelek SBR: 59 - Padysh-Ata SNR: 45 - Besh Aral SNR: 43 - Saimaluu-Tash SNP: 29 	<p>METT Score:</p> <ul style="list-style-type: none"> - Alatai NP (new PA): >50 - Kan-Achuu NP (new PA): >50 - Sary-Chelek SNR: >65 - Padysh-Ata SNR: >50 - Besh Aral SNR: >50 - Saimaluu-Tash SNP: >40 	<p>GEF-6 BD TT for Programs 1 and 2 (individual PA sheets, cell C147)</p> <p><u>GEF Global RF Linkage:</u> GEF-6 Global Indicator: Outcome 1.2: Improved management effectiveness of protected areas. Indicator 1.2: Protected area management effectiveness score.</p> <p>Outcome 2.2: Improved management effectiveness of new protected areas. Indicator 2.2: Protected area management</p>	<p>Assumptions:</p> <ul style="list-style-type: none"> - Project activities result in improved management of PAs - No new significant threats to targeted PAs emerge <p>Risks:</p> <ul style="list-style-type: none"> - Limited capacity of national institutions responsible for PA management - No additional financial means identified to sustain improved PA management after project completion - Inadequate capacity to collect and manage biodiversity and other environmental

Component	Indicator	Baseline (2016)	End of Project Target	Sources of Verification	Risks and Assumptions
				effectiveness score.	<p>monitoring data to support improved management</p> <ul style="list-style-type: none"> - Development and adoption of PA management plans for new PAs requires more time than the project implementation period
	8. Status of HCVF management approach legal and regulatory framework	HCVF management approach not legally recognized, and consequently not regulated	HCVF management approach has legal basis, and relevant regulations are produced,	<p>Legal documents demonstrating adoption of HCVF in regulatory or other legal documents at national level.</p> <p><u>GEF Global RF Linkage:</u> GEF-6 Global Indicators: Outcome 9.2 Sector policies and regulatory frameworks incorporate biodiversity considerations. Indicator 9.2 The degree to which sector policies and regulatory frameworks incorporate biodiversity considerations and implement the regulations.</p>	<p>Assumptions:</p> <ul style="list-style-type: none"> - National stakeholders willingness to adopt internationally recognized HCVF approach for implementation in Kyrgyzstan - HCVF can be adequately adapted to Kyrgyzstan's unique national forest situation <p>Risks:</p> <ul style="list-style-type: none"> - Limited capacity of national institutions responsible for forest management - Time required for formal legal adoption of HCVF approach at national level may take longer than lifetime of project
	9. Existence of HCVF management measures in FMPs and level of implementation in Toktogul and Toguz-Toro districts	<p>HCVF management measures not incorporated in FMPs in Toktogul and Toguz-Toro districts</p> <p>0/6 on GEF TT scale: No existence or mention of biodiversity (e.g.</p>	<p>Implementation is initiated (defined as incorporation of HCVF management practices in approved FMPs) in Toktogul and Toguz-Toro districts</p> <p>4/6 on GEF TT scale: "Step 4: The regulations are under</p>	<p>Approval of FMPs for leskhoz in Toktogul and Toguz-Toro districts that include HCVF management measures in revised FMPs</p> <p><u>GEF Global RF</u></p>	

Component	Indicator	Baseline (2016)	End of Project Target	Sources of Verification	Risks and Assumptions
		HCVF) considerations in sector policy	implementation”	<p>Linkage: GEF-6 Global Indicators: Outcome 9.2 Sector policies and regulatory frameworks incorporate biodiversity considerations. Indicator 9.2 The degree to which sector policies and regulatory frameworks incorporate biodiversity considerations and implement the regulations.</p>	
	10. Average number of hectares covered per week by anti-poaching patrols (PA rangers, forest rangers, and game wardens) in Alatai SNP (56,826 ha) and Kan-Achuu SNP (30,497 ha), Toktogul (104,860 ha) and Toguz-Toro (57,356 ha) leskhoz territories, and Chychkan Zoological (game) reserve (65,551) territories in Toktogul and Toguz-Toro districts, out of the 315,090 ha total SNP, leskhoz, and game reserve)	250 hectares patrolled per week in 2016 (10 km covered per day by ranger teams (2+ individuals) for each of five management areas for 5 of 7 days)	1000 hectares patrolled per week in 2021 (baseline * four times the number of anti-poaching ranger team patrols for each location. Assessed as the minimum coverage necessary to ensure effective management, regulatory monitoring, and deterrence of illegal activities)	Patrol records of PAs, leskhoz, and of Department of Rational Use of Natural Resources	<p>Assumptions:</p> <ul style="list-style-type: none"> - Strengthened capacity for PA management in new PAs results in increased patrol coverage - Financial commitment by department of rational use of natural resources to increase patrol coverage in hunting areas outside of PAs - Increased patrol coverage is considered a PA management priority - Increased patrolling is desirable as a means leading to decreased violations (recorded or unrecorded) of hunting and other conservation regulations - Local community members are also

Component	Indicator	Baseline (2016)	End of Project Target	Sources of Verification	Risks and Assumptions
					<p>educated and made aware of regulations, as a result of project activities or other education and awareness initiatives by management authorities</p> <p>Risks:</p> <ul style="list-style-type: none"> - Financial requirements for increased patrolling are too great for responsible PA, leskhoz, and game reserve management authorities - Local community members unwilling to participate in joint patrols due to time demands or other economic commitments
<i>Outcome 2: Ecosystem resilience and habitat connectivity in Western Tian Shan are enhanced by regulating land and forest use in buffer zones and corridors and support to sustainable livelihoods</i>	11. Area of sustainably managed forest in Toktogul and Toguz-Toro districts (broken down by HCVF in PAs, HCVF in leskhoz, and all other forest)	<p>Total 0 ha out of 40,839 ha of HCVF</p> <p>Toktogul HCVF: 31,045 ha (5,658 ha within Alatai PA, 25,387 ha in leskhoz);</p> <p>Toguz-Toro HCVF: 9,794 (799 within Kan-Achuu PA, 8,995 ha in leskhoz);</p>	>40,000 ha	GEF-6 SFM TT (cell E15 + cell E18)	<p>Assumptions:</p> <ul style="list-style-type: none"> - Toktogul and Toguz-Toro leskhoz remain willing to implement SFM measures, incorporating HCVF approaches in Forest Management Plans - Target PMCs remain willing to implement e-Pasture Management System - Local and national stakeholders are willing to adopt regulations codifying HCVF approach in Kyrgyzstan
	12. Area of forest resources restored in the landscape (broken down by reforested/afforested area, vs. area under natural regeneration support)	0 ha	4,886 ha (500 ha reforestation/afforestation, 4,500 ha supported for natural regeneration)	GEF-6 SFM TT (cell E21)	
	13. Lifetime indirect GHG emissions avoided	0 tons CO ₂ equivalent	2,979,548 tons CO ₂ equivalent	GEF-6 SFM TT (cell C27)	Risks:

Component	Indicator	Baseline (2016)	End of Project Target	Sources of Verification	Risks and Assumptions
	14. Implementation of e-Pasture Management System (as an SLM mechanism supporting implementation of the Pastures Law) in Toguz-Toro and Toktogul districts	Pasture Management Committees (PMCs) do not have support mechanisms to implement SLM	e-Pasture Management System implemented by 4 PMCs in Toktogul and Toguz-Toro districts	Signed letter by PMCs validating implementation of e-Pasture Management System in Toktogul and Toguz-Toro districts	<ul style="list-style-type: none"> Delays in project activities result in missed field seasons for planting and regenerating forest area Fencing is too costly and time-consuming to procure and install to meet project target objectives for assisted regeneration
	15. Hectares of alpine grassland and forest ecosystems under improved conservation management	0 ha	186,536 ha - SFM in 34,382 ha of HC VF, restore degraded forest in 4,886 ha, and implement SLM in 147,268 ha of pasturelands	<p>GEF-6 BD TT for Program 9 (cell C31 minus sum of cells D47:D52)</p> <p><u>GEF Global RF Linkage:</u></p> <p>GEF-6 Global Indicators:</p> <p>Outcome 9.1 Increased area of production landscapes and seascapes that integrate conservation and sustainable use of biodiversity into management.</p> <p>Indicator 9.1 Production landscapes and seascapes that integrate biodiversity conservation and sustainable use into their management preferably demonstrated by meeting national or international third-party certification that incorporates biodiversity considerations (e.g. FSC, MSC) or</p>	<ul style="list-style-type: none"> Forest pasture users are not willing to implement grazing regimes supportive of natural regeneration Implementing HC VF approach and meeting project forest restoration targets leads to significant drop in leskhoz revenue State institutions responsible for the administration of protected areas, pastures and forests do not have adequate capacity; Low levels of compliance with environmental legislation, and a reluctance to adopt more sustainable natural resource use practices; Low levels of coordination and cooperation between public institutions, tenure holders, rights holders, land owners,

Component	Indicator	Baseline (2016)	End of Project Target	Sources of Verification	Risks and Assumptions
				supported by other objective data.	NGOs/CBOs and natural resources users; and
	16. Hectares of pastureland under SLM in Toktogul and Toguz-Toro districts	0 ha	147,268 ha	GEF-6 LD PMAT TT (sheet 2, cell C17, plus balance of non-degraded community pastureland used targeted for SLM (81,907 ha))	<ul style="list-style-type: none"> - The increasing aridisation of high altitude habitats, as a result of the effects of climate change.
	17. Number of people whose livelihoods are affected by land degradation in Toktogul and Toguz-Toro districts (with a population number index value fixed set at 100 for 2016 (in case of total population increases or decreases))	<ul style="list-style-type: none"> - Women: 11,702 - Men: 12,237 - Total: 23,939 - Index = 100% <p>Toktogul District Cholpon-Ata Village</p> <ul style="list-style-type: none"> - 3,562 women - 3,802 men <p>Kyzyl-Ozgorush Village</p> <ul style="list-style-type: none"> - 5,417 women - 5,526 men <p>Toguz-Toro District Kok-Irim Village</p> <ul style="list-style-type: none"> - 1,703 women - 1,782 men <p>Atai Village</p> <ul style="list-style-type: none"> - 1,020 women - 1,127 men 	<ul style="list-style-type: none"> - Women: <11,702 - Men: <12,237 - Total: <23,939 - Index: <100% of total population <p>Toktogul District Cholpon-Ata Village</p> <ul style="list-style-type: none"> - 3,562 women - 3,802 men <p>Kyzyl-Ozgorush Village</p> <ul style="list-style-type: none"> - 5,417 women - 5,526 men <p>Toguz-Toro District Kok-Irim Village</p> <ul style="list-style-type: none"> - 1,703 women - 1,782 men <p>Atai village</p> <ul style="list-style-type: none"> - 1,020 women - 1,127 men 	End of project survey on percentage of the local population whose livelihoods are affected by land degradation (populations of four communities with PMCs that the project will be working with)	<p>Assumptions:</p> <ul style="list-style-type: none"> - At current levels of land degradation, the livelihoods of all community members are affected, based on the assumption that all households have livestock, and all household livestock use degraded lands at some time during the year - Degradation will be reduced by implementation of SLM measures - Target PMCs remain willing to implement e-Pasture Management System - PUA members abide by PMC grazing plans - Primary driver of pasture degradation is over or undergrazing at any given point in time <p>Risks:</p> <ul style="list-style-type: none"> - Land degradation does not proceed quickly enough to show demonstrable benefits

Component	Indicator	Baseline (2016)	End of Project Target	Sources of Verification	Risks and Assumptions
					<p>before the end of the project</p> <ul style="list-style-type: none"> - Community members continue to increase livestock numbers beyond carrying capacity of pastureland
	18. Herder/farmer income change based on benefits from micro-finance/grant program for individuals participating in the program.	<ul style="list-style-type: none"> - Women: N/A - Men: N/A 	<ul style="list-style-type: none"> - Women: 10% increase - Men: 10% increase 	<p>Data to be provided by participants in the program (Note: average per capita income/month in Jalal-Abad province: 3,624 soms (source: www.stat.kg), so 10% on an average micro-loan/grant of \$1000 = 6.4% annual ROI).</p> <p><i>Notes: As per national statistical committee methodology: "labor income," "proceeds from sale of agricultural products, fodder, cattle", and "Property income". Excluding "Social transfers".</i></p> <p><i>Note: Income generally reported by household, not distinguished within household between men and women – to disaggregate by gender, household income is divided by 50% in households with both men and women.</i></p>	<p>Assumptions:</p> <ul style="list-style-type: none"> - Individuals see income changes within lifetime of project - Negligible default rate on micro-finance agreements <p>Risks:</p> <ul style="list-style-type: none"> - Insufficient local absorption capacity to adequately implement micro-finance/grant activity - Implementation of micro-finance /grant program delayed such that benefits are not seen before end of project - Micro-finance /grant institutional partners not suited to support implementation of program objectives - Alternative livelihoods do not have foreseen environmental benefits

Component	Indicator	Baseline (2016)	End of Project Target	Sources of Verification	Risks and Assumptions
				GEF Global RF <u>Linkage:</u> GEF-6 LD Global Indicator: (b) Improved livelihoods in rural areas (Farmer income – disaggregated by gender)	
Outcome 3: Strengthened national capacities for snow leopard conservation, promoting Kyrgyz regional and global cooperation, and setting the scene for up-scaling	19. Level of illegal wildlife trade activity, as indicated by number of snow leopard, snow leopard prey, and other illegal wildlife seizures at border crossings and at Manas international airport, as well as number of arrests related to wildlife trafficking	Annual number of seizures: - 2015 - On the Tajik-Kyrgyz border - attempted transfer from Tajikistan to Kyrgyzstan of two snow leopard skins and one snow leopard cub - 2015 - one snow leopard skin confiscated in Bishkek (from Talas region) - 2016 - one snow leopard skin confiscated in Issyk-Kul - Zero seizures assisted by specially trained dogs - 4 arrests related to wildlife trafficking - <50% of prosecutions resulting from wildlife trafficking arrests	Annual number of seizures: - Snow leopard: <Baseline (at least one seizure assisted by specially trained dogs) - Snow leopard prey: <Baseline (at least one seizure assisted by specially trained dogs) - Other illegal wildlife: <Baseline (at least one seizure by specially trained dogs) - Number of arrests = >baseline - >50% of arrests result in prosecutions	National customs, border control, and law enforcement data on annual illegal wildlife trade seizures <i>Note: baseline breakdown of number assisted by specially trained dogs is not available as program with dogs is beginning only at the time of the finalization of this project document. However, the figure should be broken out in future reporting.</i> GEF Global RF <u>Linkage:</u> GEF-6 BD Global Indicator: Outcome 3.1: Reduction in rates of poaching of rhinos and elephants and other threatened species and increase in arrests and convictions (baseline established per participating country) Indicator 3.1: Rates of	Assumption: - An increasing trend in seizures indicates improved enforcement. However, there is expected to be a negative feedback loop as well: As enforcement improves, illegal wildlife trafficking activity may decrease, leading to a decreasing trend in seizures. It is assumed that this negative feedback loop will not yet set-in before the end of the project. - An improvement in enforcement will lead to a reduction in actual poaching Risks: - A reduction in the number of seizures resulting from improved secrecy and methods by poachers and traffickers in order to defy improved enforcement - Political interference - Poor coordination and

Component	Indicator	Baseline (2016)	End of Project Target	Sources of Verification	Risks and Assumptions
				poaching incidents and arrests and convictions.	cooperation by various law enforcement bodies - Limited prosecution for detected illegal activities
	20. Level of international cooperation and coordination with Kyrgyzstan border countries regarding illegal wildlife trade, biodiversity management in borderland protected areas, and snow leopard monitoring	No formal international agreement between Kyrgyzstan and neighboring countries related to snow leopard conservation	International agreement between Kyrgyzstan 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	Existence/absence of agreement	Assumptions: - Political will exists between Kyrgyzstan and at least one bordering country to cooperate on snow leopard conservation - An agreement can be negotiated and adopted within the life of the project - Cooperation on snow leopard conservation presents the opportunity for a non-politically threatening issue for international cooperation Risks: - International relations between countries preclude possibility of agreement on sharing of monitoring data, and on cooperation relating to wildlife law enforcement at border points - Countries are unwilling to enforce hunting regulations for border guards
	21. Quality and coverage of snow leopard monitoring data in Kyrgyzstan as indicated by estimated	Latest population estimate 15 years prior (2001) with a 30% confidence level (lowest possible estimated population / highest possible estimated population, i.e.	Publishing of annual estimates with a 60% confidence level (the average confidence level among other snow leopard range states in GSLEP population estimate)	Annual national snow leopard monitoring database	Assumptions: - Accurately estimating snow leopard population can be done in a single year

Component	Indicator	Baseline (2016)	End of Project Target	Sources of Verification	Risks and Assumptions
	accuracy and timeliness of national snow leopard population estimate	150/500 = 30%)			<ul style="list-style-type: none"> - It is in the national interest to report an accurate level of snow leopard population on an annual basis - The project, along with other partner initiatives, can provide full national coverage for snow leopard monitoring <p>Risks:</p> <ul style="list-style-type: none"> - Limited technical capacity of national institutions responsible for wildlife monitoring, including snow leopard monitoring - Potential lack of coordination and cooperation between institutions responsible for snow leopard monitoring - Application of non-comparable data collection techniques and records from different parts of the country

SECTION III. TOTAL BUDGET AND WORK PLAN

ATLAS Award ID:	00097902	Project ID(s):	00101450
Award Title:	Conservation of globally important biodiversity and associated land and forest resources of Western Tian Shan mountain ecosystems to support sustainable livelihoods		
Business Unit:	UNDP Kyrgyzstan Country Office (KGZ10)		
Project Title:	Conservation of globally important biodiversity and associated land and forest resources of Western Tian Shan mountain ecosystems to support sustainable livelihoods		
PIMS no.	5411		
Implementing Partner (Executing Agency)	UNDP		

GEF Outcome / Atlas Activity	Responsible Party	Fund ID	Donor Name	Atlas Budgetary Code	Atlas Budget Description	Year 2017	Year 2018	Year 2019	Year 2020	Year 2021	Total (USD)	Ref #
Outcome 1	UNDP	62000	GEF	71200	International Consultants	0.00	0.00	10,000.00	15,000.00	10,000.00	35,000.00	1
				71300	Local Consultants	61,277.00	81,677.00	62,077.00	38,877.00	6,277.00	250,185.00	2
				71400	Contractual Services - Individuals	16,840.00	16,840.00	16,840.00	16,840.00	16,840.00	84,200.00	3
				71600	Travel	3,000.00	5,800.00	3,000.00	3,000.00	3,000.00	17,800.00	4
				72100	Contractual Services-Companies	23,800.00	19,000.00	14,000.00	10,000.00	0.00	66,800.00	5
				72200	Equipment and Furniture	112,500.00	180,000.00	132,000.00	90,000.00	0.00	514,500.00	6
				72600	Grants	4,000.00	4,000.00	4,000.00	4,000.00	4,000.00	20,000.00	7
				72800	Information Technology Equipment	0.00	14,200.00	6,000.00	0.00	0.00	20,200.00	8
				72300	Materials & Goods	37,500.00	50,000.00	0.00	0.00	0.00	87,500.00	9
				74200	Audio Visual&Print Prod Costs	4,000.00	17,000.00	22,000.00	11,000.00	2,000.00	56,000.00	10
	75700	Training, Workshops and Conferences	31,400.00	120,800.00	160,900.00	101,836.00	32,879.00	447,815.00	11			
	Sub-Total Component 1 (GEF)					294,317.00	509,317.00	430,817.00	290,553.00	74,996.00	1,600,000.00	
	UNDP	04000	UNDP TRAC	72200	Equipment and Furniture	20,000.00	20,000.00	20,000.00	20,000.00	20,000.00	100,000.00	12
Sub-Total Component 1 (UNDP TRAC)					20,000.00	20,000.00	20,000.00	20,000.00	20,000.00	100,000.00		
Total Outcome 1					314,317.00	529,317.00	450,817.00	310,553.00	94,996.00	1,700,000.00		
Outcome 2	UNDP	62000	GEF	71200	International Consultants	0.00	0.00	15,000.00	0.00	10,000.00	25,000.00	13

				71300	Local Consultants	129,077.00	128,477.00	92,077.00	37,077.00	7,477.00	394,185.00	14
				71400	Contractual Services - Individuals	16,840.00	16,840.00	16,840.00	16,840.00	16,840.00	84,200.00	15
				71600	Travel	4,000.00	18,000.00	14,400.00	6,000.00	4,000.00	46,400.00	16
				72100	Contractual Services-Companies	0.00	123,300.00	101,800.00	30,000.00	0.00	255,100.00	17
				72200	Equipment and Furniture	0.00	88,000.00	88,000.00	40,000.00	0.00	216,000.00	18
				72600	Grants	0.00	60,000.00	84,000.00	84,000.00	0.00	228,000.00	19
				72800	Information Technology Equipment	600.00	7,000.00	14,600.00	5,000.00	0.00	27,200.00	20
				74200	Audio Visual&Print Prod Costs	0.00	0.00	8,497.75	0.00	6,500.00	14,997.75	21
				75700	Training, Workshops and Conferences	27,614.25	97,700.00	79,600.00	95,579.00	17,000.00	317,493.25	22
					Total Outcome 2	178,131.25	539,317.00	514,814.75	314,496.00	61,817.00	1,608,576.00	
Outcome 3	UNDP	62000	GEF	71200	International Consultants	0.00	0.00	5,000.00	0.00	5,000.00	10,000.00	23
				71300	Local Consultants	64,100.00	67,300.00	23,600.00	2,200.00	0.00	157,200.00	24
				71600	Travel	45,000.00	22,000.00	37,000.00	10,000.00	10,000.00	124,000.00	25
				72800	Information Technology Equipment	14,800.00	0.00	0.00	0.00	0.00	14,800.00	26
				74200	Audio Visual&Print Prod Costs	19,600.00	11,600.00	9,368.00	0.00	0.00	40,568.00	27
				75700	Training, Workshops and Conferences	60,800.00	72,300.00	65,600.00	36,800.00	8,000.00	243,500.00	28
					Total Outcome 3	204,300.00	173,200.00	140,568.00	49,000.00	23,000.00	590,068.00	
				71400	Contractual Services - Individuals	13,120.67	13,776.70	14,465.54	15,188.82	15,948.27	72,500.00	29
				71600	Travel	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	25,000.00	30
				73100	Rent and office maintenance	12,000.00	12,000.00	12,000.00	12,000.00	12,000.00	60,000.00	31
				74100	Professional Services - Audit			5,000.00		5,000.00	10,000.00	32
				74598	Direct Project Costs	4,500.00	4,500.00	4,500.00	4,500.00	4,431.00	22,431.00	33
					Total Project Management	34,620.67	35,276.70	40,965.54	36,688.82	42,379.27	189,931.00	
				Total GEF	711,368.92	1,257,110.70	1,127,165.29	690,737.82	202,192.27	3,988,575.00		
				Total UNDP TRAC	20,000.00	20,000.00	20,000.00	20,000.00	20,000.00	100,000.00		
				GRAND Total	731,368.92	1,287,110.70	1,147,165.29	710,737.82	222,192.27	4,088,575.00		

Summary of Funds:

	Year 1	Year 2	Year 3	Year 4	Year 5	TOTAL
GEF	711,369	1,257,111	1,127,165	690,738	202,192	3,988,575
Other:	4,375,202	7,716,387	6,920,824	4,248,892	1,257,878	24,519,183
TOTAL	5,096,571	8,973,498	8,047,989	4,939,630	1,460,070	28,507,758

NOTE: As requested by the GEF Secretariat following initial submission, an Annex 14 has been added to this Prodoc to supplement the budget notes below, and provide further clarification of how the funds budgeted under the various ATLAS categories correspond to the planned activities and expected results. In addition, as requested, Annex 15 has been added to this Prodoc summarizing the total planned budget expenditure for each ATLAS budget category and the share of the total budget for that category. Included in Annex 15 is an explanation of the usage of the budget under each category.

Budget reference #	Budget Notes
1	Pro rata (43%) cost of contracting the services of an international mid-term evaluation consultant under Output 1.1 (8 weeks @ US\$3235/wk) (M&E). Pro rata (43%) costs of contracting the services of an international final evaluation consultant under Output 1.1 (9 weeks @ US\$3235/wk) (M&E).
2	National professional, technical and scientific expertise for: Output 1.1. activities on PA zoning and biodiversity inventory, appropriate management tools development and staff training (112 local consultant weeks @\$550/week; 2 trainers for 12 training workshops @\$500 per trainer/workshop); Output 1.2 on HCVF status upgrading, on-the-ground HCVF identification and management plans development, as well as leskhoz staff training (164 local consultant weeks @\$US550/week); Output 1.3 on capacity development of other PAs and leskhoz in the region, including PA Steering Boards and leskhoz JFM Board establishment and capacitating for operation (104 local consultant weeks @US\$500/week, 76 local consultant weeks @\$US550/week); Output 1.4. local capacity building for joint patrolling of PAs, buffer zones and corridors (12 local consultant weeks @US\$550, 4 local consultant weeks @US\$500/week). Pro rata (33%) costs of contracting the services of a local mid-term evaluation consultant (6 weeks @ US\$550/wk) (M&E). Pro rata (33%) costs of contracting the services of a local final evaluation consultant (6 weeks @ US\$550/wk) (M&E).
3	Pro rata (35%) costs of Project Coordinator (240 weeks @ US\$550/wk) (Component 1). Project coordinator technical functions and outputs include: <ul style="list-style-type: none"> • Supervise and coordinate the production of project outputs, as per the project document; • Mobilize all project inputs in accordance with procedures for nationally implemented projects; • Coordinate the recruitment and selection of project personnel; • Supervise and coordinate the work of all project staff, consultants and sub-contractors; • Prepare and revise project work and financial plans; • Liaise with UNDP, relevant government agencies, and all project partners, including donor organizations and NGOs for effective coordination of all project activities; • Oversee and ensure timely submission of the Inception Report, Combined Project Implementation Review/Annual Project Report (PIR/APR), Technical reports, quarterly financial reports, and other reports as may be required by UNDP, GEF, TFS and other oversight agencies; • Disseminate project reports and respond to queries from concerned stakeholders; • Report progress of project to the SC, and ensure the fulfillment of SC directives; • Oversee the exchange and sharing of experiences and lessons learned with relevant community based integrated conservation and development projects nationally and internationally; • Ensure the timely and effective implementation of all components of the project; • Assist SAEPF and other relevant government agencies and project partners - including donor organizations and NGOs - with development of essential skills through training workshops and on the job training thereby upgrading their institutional capabilities; • Carry out regular, announced and unannounced inspections of all sites and project-funded activities.
4	Travel costs (flights, vehicle rental, fuel, daily allowances, accommodation, etc.) associated to supervise or/and monitor all the on-ground works and labor (Output 1.1). Travel costs (rental, maintenance and fuel costs) associated with the zoning, management tools and infrastructure development in Alatai and Kan-Achuu PAs and leskhoz participatory boards operations (Output 1.1, Output 1.2., Outputs 1.3. In3 1.4)
5	Institution to facilitate PA and leskhoz and local communities' partnership mechanisms building and awareness raising (Output 1.1) (Budgeted at a total of \$29,800). Institution to upgrade the status of HCVF and upgrade enabling frames on SFM and HCVF (Output 1.2) (Budgeted at a total of \$37,000).
6	Procurement of essential office furniture, equipment, software, road maintenance machinery, surveillance and monitoring equipment (Output 1.1 and Output 1.4). Procurement (and installation) of communications technology (i.e. cellphones, satellite phone or VHF/FM radio communications) for Alatai and Kan-Achuu SNPs (Output 1.1.) Purchase of supplies for key

Budget reference #	Budget Notes
	PA infrastructure, such as entry gates, storage facilities, boundary markers, and enforcement structures.
7	Grant fund for incentives for wildlife anti-poaching activities (Output 1.4). The grant in this budget will follow UNDP Micro-Capital Grants' policy.
8	Procurement of essential office equipment and software to operationalize new PAs and leskhoz participatory management boards, as well as other targeted PA Steering Boards (Output 1.2, 1.3 and Output 1.4).
9	Procurement of materials to construct Alatai and Kan-Achuu SNPs' offices, guard huts, and boom gates for access checkpoints, and sign placement (Output 1.1).
10	Procurement of special services to develop and publish different information products in national, regional and local media and social network on new and existing PA objectives and functioning as well as about HCVF (Output 1.1. and Output 1.2.).
11	Advanced training courses for managers, rangers and community liaison staff in Alatai and Kan-Achuu SNPs, and Toktogul and Toguz-Toro leskhozoes, as well as for other PA and leskhozoes of the Jalal-Abad region (Output 1.1, Output 1.2 and Output 1.3). Participatory Management Board meetings in target SNP and leskhozoes. Pro rata (33%) costs of translation and meeting costs for inception workshop (M&E).
12	Cost of one vehicle for each of the two new SNPs, necessary due to the long distances and difficult terrain between SNP offices and PA locations. Costs of the procurement of office furniture, vehicle and equipment for the PMU (Output 1.1.). Vehicle will initially be used by PMU for project implementation responsibilities due to the long distances between project field sites, difficult terrain, and non-existent public transportation between sites. At project completion the vehicle will be transferred to SAEPF for use by the SNPs.
13	Pro rata (43%) costs of contracting the services of an international mid-term evaluation consultant under Output 2.1 (8 weeks @ US\$3235/wk). Pro rata (43%) costs of contracting the services of an international final evaluation consultant under Output 2.1 (9 weeks @ US\$3235/wk).
14	Local professional, technical and scientific expertise for activities: Under Output 2.1 on buffer zones and corridors conceptualization in enabling frameworks; to identify buffer zones and corridors on the project sites and assess their biodiversity potential; and on hunting grounds inventory, management upgrades and develop corresponding database (total for Output 2.1 of 248 local consultant weeks @US\$550/week, and 22 local consultant weeks @US\$500/week). Under Output 2.2. for integrating BD, SLM and SFM objectives into local development plans; to examine the infrastructure development and mining plans for identifying potential conflicts with protected areas (total for Output 2.2 of 52 local consultant weeks @US\$550/week, and 4 local consultant weeks @US\$500/week). Under Output 2.3. for activities on assessment of degraded pastures and pasture management plans and other tools improvement; for valuation of pasture ecosystems services and research of climate change impact on pastures; for forest pasture inventory and management planning (total for Output 2.3 of 184 local consultant weeks @US\$550/week, and 36 local consultant weeks @US\$500/week). Under Output 2.4. for activities on assessment of degraded forests and forest restoration planning (total for Output 2.4 of 72 local consultant weeks @US\$550/week, and 140 local consultant weeks @US\$500/week). Pro rata (34%) costs of contracting the services of a local mid-term evaluation consultant (6 weeks @ US\$550/wk) (M&E). Pro rata (33%) costs of contracting the services of a local final evaluation consultant (6 weeks @ US\$550/wk) (M&E).
15	Pro rata (35%) costs of Project Coordinator (240 weeks @ US\$550/wk) (Component 2) (see Budget Note 4 above for summary of technical functions and outputs).
16	Travel costs (flights, vehicle rental, fuel, daily allowances, accommodation, etc.) associated with: selection and profiling of buffer zones and corridors and their management plans development under Output 2.1. Travel costs (flights, vehicle rental, fuel, daily allowances, accommodation, etc.) associated with the integration of BD, SLM and SFM objectives into local development planning under Output 2.2. Travel costs (flights, vehicle rental, fuel, daily allowances, accommodation, etc.) associated with the: selection and profiling of degraded pastures; preparation of pasture management plans; and restoration and rehabilitation of degraded pastures (Output 2.3). Travel costs (flights, vehicle rental, fuel, daily allowances, accommodation, etc.) associated with the: selection and profiling of degraded forests and their restoration and rehabilitation (Output 2.4). Travel costs (flights, vehicle rental, fuel, daily allowances, rations, etc.) of the project and partners staff to monitor micro grant activities implementation (Output 2.5). Pro rata (33%) costs of travel and DSA for local partners to inception workshop (M&E).
17	Institution to identify the boundaries of buffers zones and corridors and to map them as well as develop appropriate management regimes jointly with local stakeholders under Output 2.1 (budgeted @US\$13,600). Institution to finalize mapping and description of the targeted pastures providing data for management planning (Output 2.3.) (budgeted @US\$19,500). Institution to conduct support to reforestation and natural forest regeneration activities (Output 2.4.) (budgeted @US\$222,000).
18	Procurement of planting material (including seeds and sapling) and growth stimulators for forest restoration works (Output 2.4.). Procure fencing material and tools to conducts reforestation works (Output 2.4.).
19	Micro grants fund for pasture rehabilitation projects under Output 2.3. Micro grants funds for Sustainable Livelihoods support program under Output 2.5. The grant in this budget will follow UNDP Micro-Capital Grants' policy.

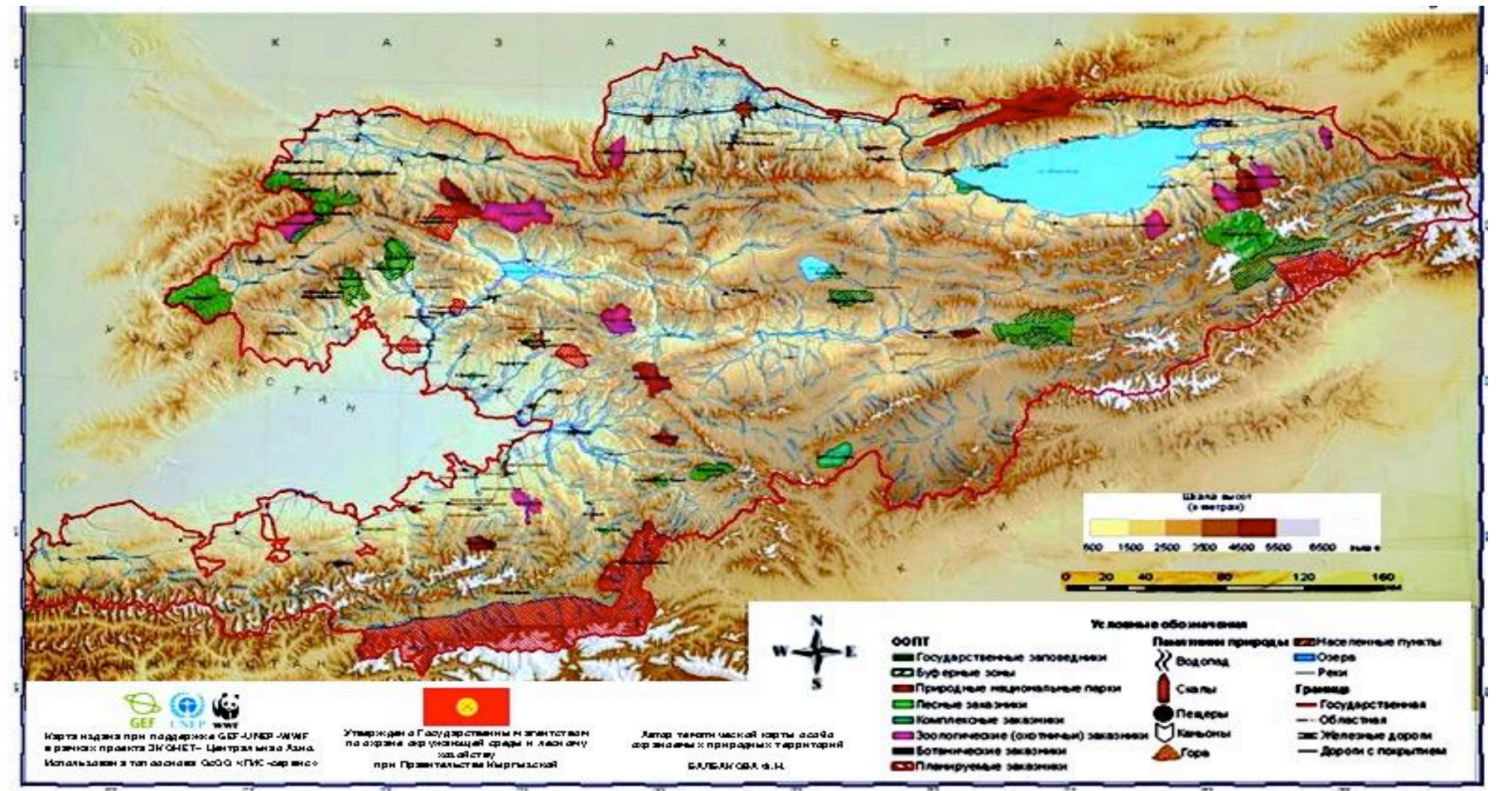
Budget reference #	Budget Notes
20	Procurement of office equipment for game managers in target areas (Output 2.1.). Procurement of office equipment to assure buffer zones and corridors special land use regime implementation monitoring (Output 2.1). Procurement of the office hardware for targeted Pasture Committees to deploy E-Pasture Committees Information System (Outputs 2.3.)
21	Procurement of special services to develop and publish different information products in national, regional and local media and social network on buffer zones and corridors special land use regimes (Output 2.1.). Procurement of special services to develop and publish of different information products in national, regional and local media and social network on integration of BD conservation, SLM and SFM objectives to local development planning (Output 2.3). Procurement of special services to develop and publish of different information products in national, regional and local media and social network on rehabilitation of degraded pastures and forests in target areas.(Output 2.3 and 2.4). .
22	Basic training and advanced training on buffer zones and corridors their biodiversity and special land use regimes in Toktogul and Toguz-Toro districts (Output 2.1). Basic training on hunting grounds inventory, management planning in Toktogul and Toguz-Toro districts and hunting licensing improvement in Bishkek (Output 2.1). Basic training on hunting grounds inventory, management planning in Toktogul and Toguz-Toro districts and hunting licensing improvement in Bishkek (Output 2.1). Training workshops in target districts and communities to integrate BD / SLM / SFM objectives to local development planning (Output 2.2.) Regular coordination meetings of pasture management devoted projects (Output 2.2). Training workshops in target districts and communities to communicate pasture inventory outputs and to develop pasture management plans and other modern pasture management tools (Output 2.3.). Training workshops in target districts and communities to communicate forest pasture inventory outputs and to develop forest pasture management plans (Output 2.3.). Workshops in target districts and communities to communicate forest restoration plans and results (Output 2.4.). Training workshops in target districts and communities to communicate Micro grant fund operational procedures as well as micro granting publicity events (Output 2.5.). Pro rata (33%) costs of translation and meeting costs for inception workshop (M&E) Component 2.
23	Pro rata (14%) costs of contracting the services of an international mid-term evaluation consultant under Output 3.3. (8 weeks @ US\$3235/wk)/ Pro rata (14%) costs of contracting the services of an international final evaluation consultant under Output 3.3. (9 weeks @ US\$3235/wk)
24	Local professional, technical and scientific expertise for activities under Output 3.1 to develop and implement advanced wildlife related law enforcement training (including scaling-up initiative on canine-assisted wildlife crime monitoring); to assess the needs and to enhance field-based technical capacity for wildlife law enforcement; to conduct feasibility study for field toolkits for species identification with field-based DNA analysis and relevance for micro chipping of trophies (total for Output 3.1 of 57 local consultant weeks @US\$550/week, and 4 local consultant weeks @US\$500/week). Under Output 3.2 to deploy snow leopard monitoring international standards including practical field monitoring expeditions; to develop snow leopard monitoring database and adequate database management capacities (total for Output 3.2 of 46 local consultant weeks @US\$550/week, and 12 local consultant weeks @US\$500/week). Under Output 3.4 to implement NSLEP activities in priority landscapes; to convert snow leopard monitoring research and monitoring data into educational programs; to update mapping of snow leopard and prey habitats as well as improvement of ungulates hunting licensing practice (total for Output 3.4 of 32 local consultant weeks @US\$550/week, and 40 local consultant weeks @US\$500/week). Pro rata (33%) costs of contracting the services of a local mid-term evaluation consultant (6 weeks @ US\$550/wk) (M&E). Pro rata (33%) costs of contracting the services of a local final evaluation consultant (6 weeks @ US\$550/wk) (M&E).
25	Travel costs (flights, vehicle rental, fuel, daily allowances, accommodation, etc.) associated with the: training with hunting department, protected areas, and National Academy of Sciences staff on snow leopard monitoring reporting of results to national databases (Output 3.2). Travel costs (flights, visas, daily allowances, accommodation, etc.) associated with participation of Kyrgyzstan representatives in GSLEP events. (Output 3.3)/ Travel costs (Flights vehicle rental, fuel, daily allowances, accommodation, etc.) associated with the implementation of NSSLC: (Output 3.4.).
26	Procurement of office equipment for snow leopard monitoring database (Output 3.2.).
27	Procurement of special services to develop and publish different information products in national, regional and local media and social network on wildlife protection legal enforcement, snow leopard monitoring data results, Kyrgyzstan participation in GSLEP events as well as NSLEP implementation progress (Output 3.1., 3.2., 3.3., 3.4.)
28	Training workshop for identified target groups on wildlife protection and identification and prosecution of wildlife crime (Output 3.1.). Workshop to support institutionalization of capacity development modules into law enforcement agency action plans (Output 3.1.). Workshops to support establishment of cross-sectoral coordination mechanism on the provincial and district levels (Output 3.1.). Workshop to develop capacities of agencies and research institutions to provide adequate snow leopard monitoring support (Output 3.2). Trainings for protected area staff (strategically selected, among sites other than Alatai and Kan-Achuu PAs) on snow leopard and prey monitoring. (Output 3.2.). Training for hunting dept., and National Academy of Sciences on snow leopard and prey international standards of monitoring (Output 3.2.). Workshop to sign special MOUs on monitoring between protected areas, National Academy of Sciences, and hunting department, relating to snow leopard and prey species, with collaboration with relevant international partner organizations (Output 3.2). Event to sign an international MOU with a genetic laboratory that has experience and technical capacity to identify snow leopard samples from scats, hair follicles and blood, located in one of the snow leopard range countries, to have compatible and high quality results of analysis for basic (species-level) genetic monitoring of populations and wildlife crime (Output 3.2.). Snow leopard range countries Summit (Output 3.3.). Regional sharing conference on snow leopard monitoring (Output 3.3.). Workshops for dissemination of GSLEP best practices in Western Tian Shan region (Output

Budget reference #	Budget Notes
	3.4.) Workshops / events within NSLEP implementation (3.4.).
29	Pro rata (30%) costs of Project Coordinator (240 weeks @ \$550/wk) (Component 4) (see Budget Note 3 above for summary of technical functions and outputs).
30	Travel costs (flights, vehicle rental, fuel, daily allowances, accommodation, etc.) associated with project monitoring trips to project sites.
31	Costs of the PMU office rent.
32	Professional costs of interim and final financial audits.
33	Human resources activities, procurement activities, and financial transactions and administrative and logistical support.

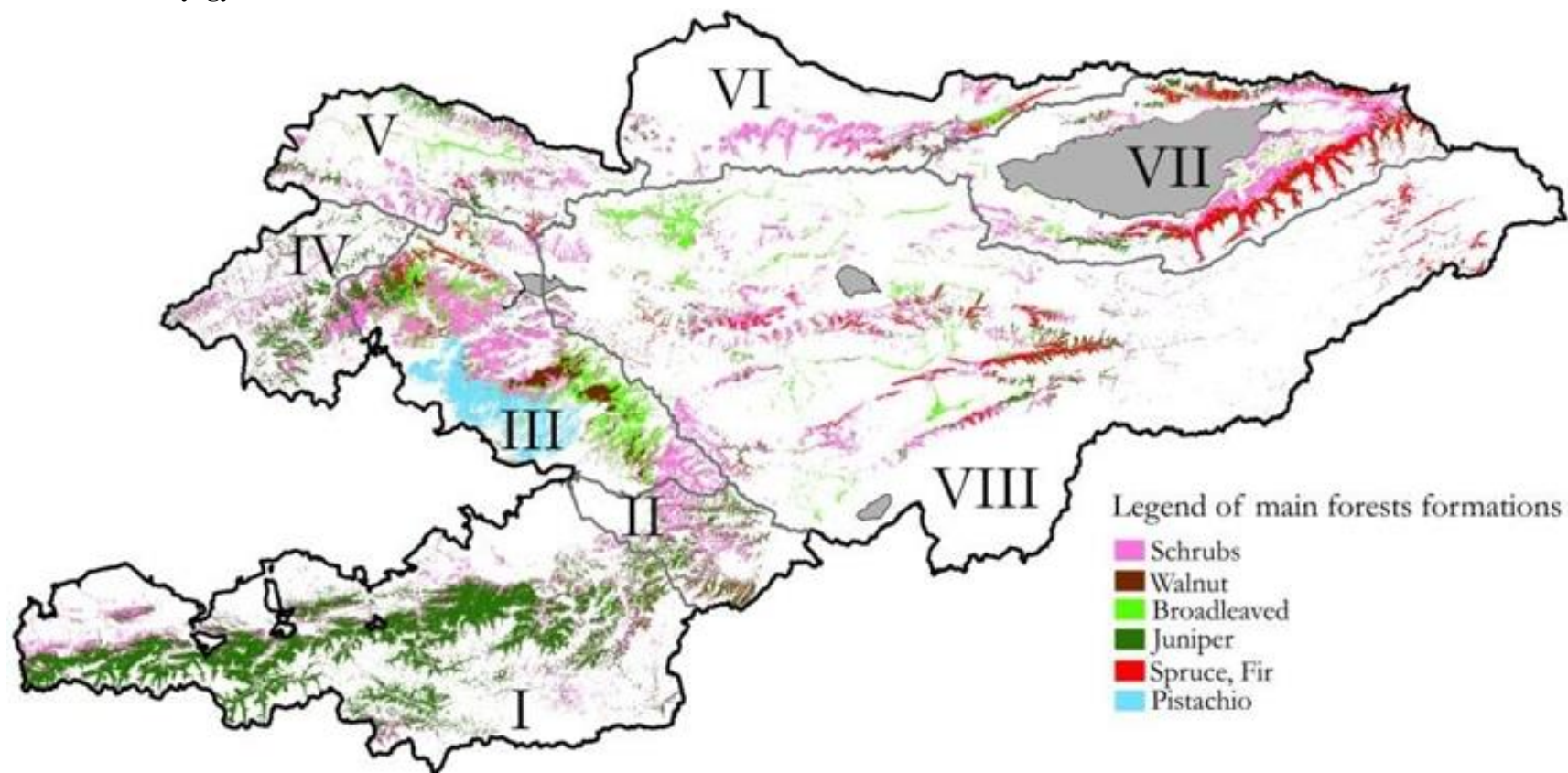
ANNEXES

Annex 1: Additional Maps

A. Protected Areas of Kyrgyzstan



B. Forests of Kyrgyzstan



Forest Areas

I	Turkestan-Alai
II	Fergana-Alai
III	Fergana-Chatkal
IV	Chatkal

V	Talas
VI	Chui-Kemin
VII	Issyk-Kul
VIII	Inner Tian Shan

Annex 2: Detailed National Context

293. *Detailed National Biodiversity Context:*

294. The country exhibits a rich diversity of natural resources – species, ecosystems, and landforms. Covering only 0.13% of the globe’s surface, Kyrgyzstan is home to about 1% of all known species. Several rare and endangered species of flora and fauna have been included in the Red Book of the Kyrgyz Republic – 53 species of birds, 26 mammals, 2 amphibians, 8 reptiles, 7 species of fish, 18 arthropods, and 89 higher plant species. Some species such as dhole (*Cuon alpinus*), otter (*Lutra lutra*), goitered gazelle (*Gazella subgutturosa*), great bustard (*Otis tarda* L.), and imperial eagle (*Aquila heliaca*) are virtually unknown in the country anymore. The wild pomegranate (*Punica granatum*) is critically endangered. Rare species such as the grey monitor lizard (*Varanus griseus*), ibisbill (*Ibidorhyncha struthersii*), marbled polecat (*Vormella peregusna negans*), snow leopard (*Uncia uncia*), and the Tian Shan brown bear (*Ursus arctos isabellinus*) remain in an extremely precarious situation. Species such as the snow leopard (*Uncia uncia*), Menzbir marmot (*Marmota menzbieri*), and bar-headed goose (*Anser indicus*) are recorded in the national Red Book.

295. The composition of forests, and species variety, are to a great extent determined by climate and relief. The forests of Kyrgyzstan are predominantly mountain forests. They represent fragile ecosystems, the management of which requires, apart from the availability of relevant experience and knowledge, the application of both reasonable and cautious methods. The country is a sparsely wooded area, and forests are mainly represented by mountain forest ecosystems; about 90% of the forests are located at 700 to 3,200 meters above sea level. As of January 1, 2013, the State Forest Fund had 2,619,675.5 ha of land, including 870,882.8 ha of forest in protected areas (PAs), and 1,135,526.8 ha of other forested areas, or 5.68% of the total area of the country.⁵⁹ The forest estate is dominated by spruce and juniper, the latter reaching elevations of up to 3,200 m. In the dryer and warmer region in the south, forests are composed of a mix of walnut, maple, apple, cherry, plum, and almond trees. In addition, forests made up of willows, poplars and various shrubs can be found in valleys along major rivers. Due to their great ecological value, the unique forests of the Kyrgyz Republic play an important role in the global processes of environmental control including water regulation and prevention of the adverse effects of climate change.

296. The vegetation of Kyrgyzstan has an extremely complex nature, and its classification continues to be the subject of discussion. More than 30 vegetation types have been characterized, including: mountain taiga; lowland forest (Belolesye); meadows and meadow steppe; mesophilic mountain grasses; deciduous forests and shrublands; tall herbaceous vegetation; habitats with a high and permanent water table in arid regions (saz); junipers; steppes; xerophilous deciduous eastern Mediterranean forests, woodlands and shrublands (tugai); semi-savannas; semi-shrubland deserts; vegetation on multicoloured gypseous denutations; petrophylic vegetation.⁶⁰ According to recognized authoritative sources, the local flora contains at least 4,100 species, comprising approximately 850 genera from 140 families, and is considered one of the richest floras in Central Asia. It includes no less than 70% of the genera and 90% of the families occurring in Central Asia as a whole.⁶¹

297. Kyrgyzstan’s territory differs by its high level of biodiversity concentration not only on ecosystem but on species level too (see Table 14 below).

Table 14 Species Diversity and Biodiversity Concentration⁶²

Biological Classes	Total in the World		Kyrgyz Republic		
	Number of species	Number of species per 1,000 km ²	Number of species	% to the total number in the world	Number of species per 1,000 km ²
Mushrooms	100,000	0.67	2,179	2.10	10.58
Lower plants	~50,000	0.33	1,196	2.00	2.01
Higher plants	248,428	1.66	3,969	1.65	20.50
Arthropods	2,300,000	13.40	15,910	0.69	80.30
Clams	200,000	0.40	172	0.09	0.80

⁵⁹ Inventory data of the Forest Fund, 2013.

⁶⁰ Kamelin, R.V., 2002. “Brief survey of the vegetation of Kirghizia. Phytogeographical regions of Kirghizia.” In: Pimenov MG, Kluykov EV, The Umbelliferae of Kirghizia. KMK Scientific Press, Moscow, 3–18.

⁶¹ FAO, 2015. Atlas of Endemic and Rare Plants of Kyrgyzstan. Bishkek, 2015. ISBN 978-92-5-008866-2.

⁶² National Statistics Committee, Bishkek, 2014.

Fish	33,000	0.06	70	0.21	0.38
Amphibians	6,700	0.04	4	0.06	0.20
Reptiles	9,400	0.06	39	0.41	0.2
Birds	10,530	0.10	396	3.76	1.87
Mammals	5,500	0.02	84	1.53	0.40

298. Adverse impacts of anthropogenic pressure on ecosystems in Kyrgyz Republic have already resulted in biodiversity loss. The Red List Book of the Kyrgyz Republic bears testament to this (see Table 15).

Table 15 Rare and Endangered Biological Classes of Kyrgyzstan⁶³

Classes	Red List of 1985	Red List of 2007
Mammals	13	23
Birds	20	57
Reptiles	3	10
Fish	2	7
Insects	5	5
Mushrooms	-	4
Higher plants	65	83

299. National biologists define 20 classes of ecosystems in the Kyrgyz Republic, including the anthropogenic one. The complex high altitude mountain terrain of Kyrgyzstan in the southern part of the temperate zone establishes favorable conditions for existence of all main types of natural ecosystems, starting from deserts and finishing with high altitude mountainous tundra (Table 16).

300. The concentration of diverse ecosystems and landscapes on Kyrgyzstan's territory, and their contrast heterogeneity of terrain determine relatively small area of each ecosystem class and separation into small isolated areas as well as extreme life conditions. All these peculiarities of the mountainous ecosystems increase their vulnerability. Out of 20 natural ecosystems defined by national researchers only three can be referred as low disturbed, eight are middle disturbed, two are between middle and strongly disturbed, and seven are strongly disturbed. Especially strongly disturbed ecosystems are in foot-hill valleys, middle upland and lower mountain belts, situated on an altitude of up to 1500 – 2000 meters above sea level. Significant parts of natural ecosystems here are replaced by anthropogenic ecosystems (arable lands, population settlements, industrial zones, power lines, etc.).

301. Remaining natural ecosystems are exposed to high anthropogenic pressure. Pasture ecosystems are still not recovered from intensive overgrazing in the second half of 20th century, when grazing limits here were 5-10 times above carrying capacity. In spite of different levels of disturbance, the major part of the national territory is occupied by naturally regenerating ecosystems.

Table 16 Ecosystems in Kyrgyzstan and Level of Disturbance of Their Natural Condition⁶⁴

Classes of Ecosystems	Area, km	Disturbance		
		Strong	Middle	Weak
Spruce and spruce-pine forests	3,017.00		X	X
Juniper forests and light forests	2,548.32		X	
Small-leaved forests	1,040.64	X	X	
Nut-forests	928.75		X	
Broad-leaved forest	83.67		X	X
Pistachio and almond forests	458.47	X		
Mid-mountain deciduous shrubland	3,871.96			X
Cryophyte (high altitude) deserts	1,953.44	X		
Cryophyte (Alpine) meadows	17,263.49		X	
Cryophyte (high altitude) steppes	22,474.57		X	
Sub-Alpine meadows	13,207.99		X	
Mid-mountain deserts	1,384.34	X		
Mid-mountain steppes	24,803.53		X	

⁶³ Red Data List of the Kyrgyz Republic, Bishkek, SAEPF, 2007.

⁶⁴ Fourth National Report on Conservation of Biodiversity of the Kyrgyz Republic, SEPF, UNDP, Bishkek, 2008.

Classes of Ecosystems	Area, km	Disturbance		
		Strong	Middle	Weak
Mid-mountain meadows	8,898.19		X	
Mid-mountain savannah	2,361.89		X	
Sparse growth of trees of mid-mountains	231.51	X		
Low upland and foot-hill steppes	192.70	X		
Low upland deserts	5,571.61	X		
Water-paludal**	8,086.02	X	X	
Anthropogenic *	32,111.71			
Glaciers and snowfields	5,773.74			
Nival-subnival	13,909.04			
Rocks, slide-rocks and placers	9,150.67			
Total	178,313.38			

* Anthropogenic ecosystems are not evaluated as well as based on detection they are 100% under affected as natural.

** All kind of comparable areas have different level preservation.

302. Distribution of the Red List species among the ecosystems type is presented below in Table 17.

Table 17 Distribution of Red List Species by Ecosystem⁶⁵

Ecosystems	Number of species						
	Plants and Fungi	Arthropods	Fish	Amphibians and reptiles	Birds	Mammals	Total
Forest	20	10			9	3	42
Dumetousous	14			2	2	4	22
Meadow	14	4		1	6	5	40
Steppe	13	10		7	14	7	51
Savanna	22				2	5	27
Desert	30	6		8	6	5	55
Aquatic		2	6	3	23	2	35

* Some of the species inhabit more than one ecosystem and this is why sums in columns may not match with total amount of species in group.

303. The Western Tian Shan is one of the world's 200 Priority Ecoregions, and one of 34 recognized global biodiversity hotspots. The forests of Western Tian Shan have juniper, spruce, maple, nut, fruit, and tugai forest communities, including fruit and nut wild relatives including the Red Listed critically endangered Knorring's Hawthorn (*Crataegus knorringiana*), the vulnerable wild Siever's apple (*Malus sieversii*) and the endangered Niedzwiedzky apple (*Malus niedzwetskyana*). The watersheds of the Western Tian Shan forests supply water for 1/3 of the country and for millions of hectares in the neighboring states.

304. The Tian Shan Mountains provide ideal habitat for the endangered snow leopard. Snow leopards are usually found between 3,000 and 5,400 meters above sea level where the environment is harsh and forbidding, the climate is cold and dry, and the mountain slopes sparsely vegetated with grasses and small shrubs, providing good cover and clear views to help them sneak up on their prey. These biotopes are located near grassland and pasture ecosystems used by local communities, which are important elements defining the overall health of the ecosystems and level of disturbance for the snow leopard. In the Toktogul and Toguz-Toro districts alone (the key focus of this project), there are over 0.6 million hectares of pastures. In Kyrgyzstan on the whole, mountainous pastures cover 40% of the territory, providing livelihoods for 65% of people.⁶⁶ Thus, the effectiveness of sustainable pasture management has a significant effect on poverty levels and sustainable development of rural areas.

305. Social Development: The Kyrgyz Republic's entire contemporary history has been developing under the mark of reforms that seem a response to the challenge of modern times. The advancement of such reforms is inevitable since everything is changing around including economy acquiring its global

⁶⁵ Fourth National Report on Conservation of Biodiversity of the Kyrgyz Republic, SEPF, UNDP, Bishkek, 2008.

⁶⁶ National report on the state of the environment in the Kyrgyz Republic for 2006-2011, approved by the Decree of the Government of the Kyrgyz Republic of August 7, 2012, No. 553.

nature, living quality standards more and more based on the human rights aspect, and environment requiring countries to make its development sustainable.

306. In its independent development history, Kyrgyzstan succeeded to overcome multiple deep shocks, prevent deeper economy collapse, and save its natural capital and base positions in economy in order to declare its intent to move to the sustainable development principles.

307. Human being or social development is the center and ultimate goal of such development. Therefore, the human capital development will remain the Kyrgyzstan's absolute national priority both at present and in the long term. It suggests that all the country citizens have an opportunity to obtain good quality education, maintain their health, buy a home, have decent earnings and live in health friendly environment using their knowledge and skills. This is the first time that the priority of human development and human capital is declared as the absolute national priority in development, with each Kyrgyzstan citizen equally empowered to develop.

308. Meanwhile, the Kyrgyz Republic's current development background includes global financial shocks, debt issues, signs of global recession and economic growth slowdown. The capital inflow to developing countries has dramatically reduced. Many countries' ratings have been revised towards decrease. Global trends show growing risks and challenges including global climate changes leading to food deficit in the population growth context.

309. There was a stable growth trend in government social services financing. In 2008-2012, the specific weight of government spending grew from 5.2% to 7.1% of GDP for education services, from 2.4% to 3.7% of GDP for health, and from 2.5% to 5.7% of GDP for social welfare and insurance.⁶⁷

310. Notwithstanding the measures taken by the Kyrgyz Republic government in 2010 and 2011 to increase social benefits, financing and income level remains low for the beneficiary category. Average amount of monthly benefit in 2012 was 565 soms or 13% of the living wage. At the same time, as result of reforming the compensation system for education and health institutions employees, their average monthly salary increased two times as average and reached 184.3% and 220.3% of living wage in 2012.

311. During the last five years, the Kyrgyz Republic government was consistently taking steps to increase pensions. As a result, average pension amount reached 4,208 soms by the end of 2012 and increased three times comparing to 2008. The ratio of average pension amount to pensioner living wage increased from 45.7% to 110%. While in 2009, the number of persons of pension age receiving pension below the pensioner living wage was 452,9 thousand (86.6% of the total number), this figure was only 344 thousand by the end of 2012 (62.2% of the total number).⁶⁸

312. At the same time, the negative impact of the world financial crisis and socio-political tension inside the country led to the worsening living quality in general.

313. As of 2012, 38 % of population lives beyond the poverty line, and the poverty level has grown by 6.3 points since 2008, while the poverty depth has remained almost the same reaching 7.7 %. The largest part of poor population lives in rural areas. Thus, while 2,153 million people lived beyond the poverty line in 2012 in the country 66 % of them were rural citizens. Livelihood and income of poor families in rural areas substantially depend on natural resources and environment; therefore the population's living standards largely depend on safe and productive environment. Poverty level in mountainous areas is more than in flat country (51 % against 37.4 % in 2012). Significant regional imbalance remains in poverty level. The highest poverty level has been noted in Jalal-Abad oblast (55.7%), Osh oblast (51.4%) and Naryn oblast (39.9%).⁶⁹

314. Poverty alleviation is directly linked to issues of population's living quality. One of urgent issues associated with living quality is that of qualitatively and quantitatively balanced nutrition. The analysis of staple food consumption per capita in years 1990 through 2011 showed the fall in quality of nutrition. Thus, while meat and meat products monthly consumption was 3.5 kg per capita in 1990, this figure decreased to 1.7 kg per month by 2012. Consumption of milk and milk products also significantly decreased from 20.1 kg per month in 1990 to 6.1 kg by 2012.⁷⁰

315. 68% of economically active population is young people. The youth unemployment rate varies 8% to 21% in various age groups. The country's average monthly wage is \$228.2 that is 3-4 times less than in Russia and Kazakhstan. 500,000 people leave the country each year as labor migrants. According to informal expert estimates, the figure reaches one million. About 500,000 Kyrgyzstan citizens left the

⁶⁷ The Kyrgyz Republic Transition to Sustainable Development Program for 2013-2017, approved by Decree of the Kyrgyz Republic Jogorku Kenesh No. 3694-V of December 18, 2013

⁶⁸ Ibid.

⁶⁹ Ibid.

⁷⁰ Ibid.

country for permanent residence and became Russia nationals during the independence period. The informal economy sector, with its worst working conditions, poor legal and social protection, low productivity and limited opportunities for working skills development and training, is a serious challenge. Of the total number of employed, only 25% or 571,600 people are employed in the formal sector while 76% of economically active population are self-employed, including farmers and working migrants.⁷¹

316. There is no agency responsible for government regulation of labor protection. This leads to growing number of workplaces with poor working conditions, injury and occupational rate increase, and aggravation of employment issues for certain groups such as youth, persons with disabilities (persons with disabilities), women, etc. At the same time each country's district has employment services which directly provide services in the area of labor relationships, unemployed registration and records, unemployment benefit payment services, professional training for unemployed, as well as services to applying for international employment. Employment services cooperate with their respective community employers and update the vacancy bank that offers 50,000 to 70,000 jobs per year. Professional training for industries staff is provided through the basic vocational education and training system (VET) that includes 110 vocational schools in all regions. The VET system institutions train 30-32,000 young people each year.

317. Development of policies, administration in the **education** sphere and government supervision of its accessibility are the responsibilities of the Kyrgyz Republic Ministry of Education and Science (MoES) that works directly with more than 3,000 education organizations, kindergartens to universities. However, administration of basic professional education has been only recently transferred to MoES, which is still challenging development and implementation of an integral education policy.

318. The Kyrgyzstan's education system has a developed infrastructure, trained teaching staff (more than 80% with university degree), and significant education and training traditions. However, all education levels are facing a number of issues: only 15% percent of children enjoy support of preschool education institutions. With insufficient attention to children's early development, it impedes their socialization and further progress in schooling and life. The key issues of the school level include those related to education accessibility and quality. Schools location and infrastructure (although in 40 sufficient total number) do not meet in full population needs. According to surveys of international organizations, the number of school age children permanently or temporarily missing school has reached approximately 50,000. The education system employs 75,502 teachers, more than 5,000 secondary vocational education teachers (VET teachers), and 12,000 of university faculty staff.

319. In 2008-2012, the **health** achievements of Kyrgyzstan were below the expected level. The health services quality was affected by political instability and frequent change of government that impeded consistent reform implementation. Population health was also impacted by insufficient attention to prevention, overall socioeconomic situation in the country, and poverty growth. Other problems included high staff outflow from the Kyrgyz Republic Ministry of Health system to other organizations and decreasing attractiveness of public service for qualified specialists due to low stimuli and lack of motivation. The issue of medical staff outflow and uneven distribution conditioned by their high concentration in town and deficit in rural areas affected the accessibility and quality of medical assistance, particularly for vulnerable groups in remote rural communities. Furthermore, the specialist training system fails to meet health practice needs and up-to-date international standards.

320. The country has improved its infant and child mortality rates and retained their further decrease trends. Thus, the infant mortality rate decreased 27.1 to 21.1 cases per 1,000 live births within the period 2008 through 2011, and the child mortality rate from 31.5 to 24.5 cases per 1,000 live births⁷² within the same period. The country has a well-established immunization system with timely child immunization against all major vaccine administered diseases.

321. The Kyrgyz Republic Ministry of Labor and Social Development employs about 1,500 people including 70% in local divisions. During the last few years, the ministry implemented various structural reforms contributing to the human resource capacity instability. Currently, there is a serious challenge of establishing a modern **social protection** system including system of staff professional development and retraining, introduction of performance indicators, and material incentives and motivation for workers.

322. In 2011, the number of children under 16 living in poverty reached 13.2% of the country's total population. One of the social protection instruments designed for reducing the gap in incomes of poorest

⁷¹ Ibid.

⁷² The Kyrgyz Republic Transition to Sustainable Development Program for 2013-2017, approved by Decree of the Kyrgyz Republic Jogorku Kenesh No. 3694-V of December 18, 2013.

families with children to the minimum living wage level is the monthly benefit for low-income families with children. Currently, this benefit is provided for more than 340,000 children. Notwithstanding annual increase of the benefit amount (minimum wage was raised to 580 soms in November 2012), the benefit growth rate remains low only covering the inflation rate, with the benefit amount reaching 16 % of child's minimum living wage and 43.3% of extreme poverty line.⁷³

323. About 11,000 children are placed in 117 government, municipal, and private residential institutions, where 80% of such children have one or both parents. Due to significant economic problems, the country has 55 restricted family support social services. Family substitution services that foster families are almost absent.

324. Positive outcomes of the implemented national **culture** policy include preservation of the country's network of cultural institutions and prevention of cultural facilities privatization. The country has 20 professional theatres, 3 philharmonics, 1,055 libraries, 700 fixed club institutions, 72 children music schools, 3 schools of painting, 11 schools of art, 58 museums, 7 recreation parks, 2 higher education institutions and 8 secondary special schools. However, almost completely cessation of museums and libraries funding resulted in extremely difficult situation in main areas of their activities, particularly in stocking, security and user access. None of the country's museums has a restoration lab and appropriate staff. Deficit of professional arts experts and museum specialists leads to lack of research, and the forms of collection management are outdated.

325. The country has 583 registered monuments of national significance, and the UNESCO World Heritage List includes one of them, the sacred mountain of Sulaiman-Too. Files of three monuments in Chui valley were accepted in 2013 for consideration within the Silk Road transnational world heritage nomination, in cooperation with Kazakhstan and China.

326. Policy makers chose to base the country's development strategies on a market economy within a democratic political system. The Kyrgyz Republic quickly became a model country in the eyes of the international community, embarking on a transition toward democracy, with free market orientation and economic liberalization as its stated policy objectives. The government carried out a number of reforms in the early 1990s, including plenty of laws and decrees, new institutions, and an ambitious privatization program. By 1994, nearly all services—82% of the assets of trading companies, 40% of assets in industry, and 68% of construction business assets—were registered to private owners.⁷⁴ These reforms were not, however, followed by a badly needed restructuring of former state enterprises, because of the rigidity of the financial system, among other factors. There were further shortcomings in the reforms, in part because of the relatively limited capacity of local government officials. In the face of these immense challenges, the disappointing results of some of the reforms, particularly in agriculture, may have discouraged policy makers from following them up with a second wave of reform measures, which were needed to ensure sustainability.

327. Following the breakup of the Soviet Union, the economy of the Kyrgyz Republic collapsed, with output almost halved. The first sign of recovery occurred in 1996, when the GDP grew by 7.0%. The GDP grew again in 1997, when the Kumtor gold mine (i.e., the largest gold mine in the Kyrgyz Republic) began operations. The Kyrgyz Republic ended its first decade of independence with just two-thirds of its 1991 GDP. Growth during the next decade was highly variable, affected by the global financial crisis and by the political uprisings of 2005 and 2010. During 2001–2013, the average GDP growth was 4.4%.⁷⁵

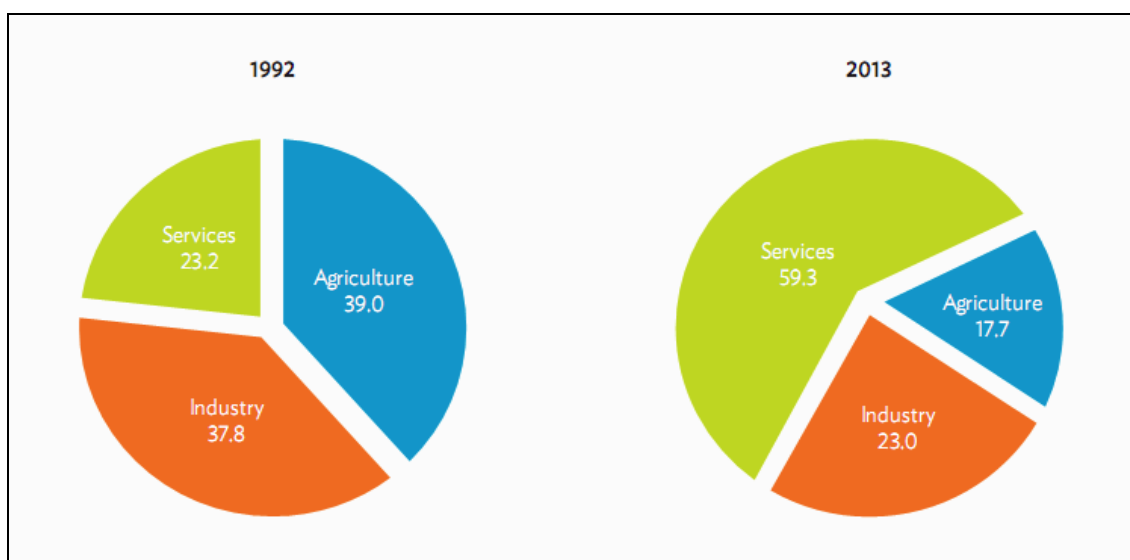
328. Independence from the former Soviet Union also triggered a significant restructuring of the economy. Between 1992 and 2013, the manufacturing sector shrank, but the services sector more than doubled its share of the GDP.

⁷³ Ibid.

⁷⁴ Asian Development Bank. The Kyrgyz Republic: Strategic assessment of the economy—Promoting inclusive growth. Mandaluyong City, Philippines: Asian Development Bank, 2014.

⁷⁵ Ibid.

Figure 11 Main Sectors' Share of GDP (%)⁷⁶



329. What had been a predominantly rural economy in the early 1990s, with some specialized mining and manufacturing, had become an economy specializing in re-exporting consumer goods from China to Central Asia and the Russian Federation.

330. Commercial gold mining, which started in 1997, is concentrated in one large mine, Kumtor, in Issyk-Kul Oblast. It contributed an average of 7% (at factor cost) of GDP between 2001 and 2012. Gold is more important for external trade than for domestic growth, accounting for an average of 34.6% of exports during 2001–2012, and as much as 43.0% in 2011 because of high gold prices.⁷⁷

331. Private consumption, trade, including re-export, as well as remittances, investments and, to a lesser extent, foreign assistance were the main drivers of the national economy growth. It should be also noted that more than half of the growth came from the expansion of the services sector.

332. In the services sector, transport and communications was the fastest-growing subsector partly because of the country's rising volumes of trade, as well as the expansion of mobile telecommunications during 2006–2013. The rapid growth of mobile telephones ended in 2013 when the subscriptions were estimated at 6.7 million or 121.5 per 100 inhabitants.⁷⁸

333. In 2013, growth returned robustly at 10.5%, thanks to the recovery of gold production.

334. Throughout the 2000s, the informal sector played an important role in the Kyrgyz Republic's economy; evidence showed that it also grew significantly. And this was partly because of the rapid increase in border trade with China, certain part of which took place outside official channels.

335. Official government statistics estimated the size of the informal economy in the Kyrgyz Republic, excluding agriculture, at 19.9% of the GDP in 2012, i.e. more than double the estimate of 8.4% in 1995.⁷⁹ However, this may not capture the full size and importance of the informal economy, as others estimate it as 25%–80% of GDP. In a recent survey of 1,200 businesses, 44% of the respondents said that this shadow economy accounted for more than 50% of the Kyrgyz Republic's economy.⁸⁰

336. The reasons for the informal economy's high share of output include the difficulties of registering and measuring economic activity and the intentional evasion of taxes and laws that confirmed by the low confidence to state bodies' index.

337. Economic growth in the Kyrgyz Republic declined to 3.5% in 2015 from 4.0% in 2014 as slower expansion in industry offset gains in agriculture and services. Growth is projected to plunge to 1.0% in 2016 as the external environment weakens before recovering to 2.0% in 2017 with some improvement in the Russian Federation and other trade partners. Currency depreciation is fueling inflation and exacerbating a debt problem that needs urgent attention.

⁷⁶ Source: National Statistics Committee.

⁷⁷ Ibid.

⁷⁸ Ibid.

⁷⁹ National Statistics Committee data.

⁸⁰ Centre for International Private Enterprise. 2011. Priorities and Need for Reform in the Kyrgyz Republic.

Table 18 Economic Growth in the Kyrgyz Republic⁸¹

Selected economic indicators (%)	2015	2016 Forecast	2017 Forecast
GDP Growth	3.5	1.0	2.0
Inflation	6.5	10.0	8.0
Current Account Balance (share of GDP)	-17.0	-17.0	-15.0

338. *Economic Performance:* Continued recession in the Russian Federation and a slowdown in neighboring Kazakhstan weighed heavily on the economy. Growth slowed to 3.5% from 4.0% in 2014, reflecting strong performance in agriculture and services. Outside the troubled gold sector, growth was 4.5%.

339. On the supply side, growth in industry slowed to 1.4% in 2015 from 5.7% in 2014 as gold production halved and output fell in textiles and electricity. Expansion in construction halved to 13.9% from 27.1% in 2014 with less growth in investment, and growth in services declined to 3.7% from 4.6%, reflecting slowdowns in transport and retail trade. Agriculture grew by 6.2% after a 0.5% decline in 2014.

340. On the demand side, private consumption is estimated to have grown by 6.9%, down from 7.7% in 2014, as currency depreciation and lower remittances hurt retail trade. The same factors slashed capital investment growth to 8.0% from 24.9%.

341. *Economic Prospects:* Growth is expected to slow to 1.0% in 2016, with continued weakness in the external environment, and recover slightly to 2.0% in 2017, assuming some improvement in the Russian Federation and other trade partners. However, the economy remains vulnerable to shocks from its largest enterprise, the Kumtor gold mine, where a drop in output cut 1% from growth in 2015 and disputed mine ownership could disrupt production in 2016.

342. On the supply side, processing, light industry, and to some extent construction should lift the economy. In addition, accession to the Eurasian Economic Union (EEU) may boost trade and transportation, though demand in the EEU is weakening and the need to raise tariffs to EEU levels may shrink trade with economies outside the union.

343. On the demand side, lower remittances may further reduce household incomes and private consumption in 2016, though remittances should eventually rise with recovery in the Russian Federation and other trade partners.

344. Growth during the 2000s was not employment friendly. The average rate of employment growth, at about 2%, was slower than the growth rate of the GDP, and the elasticity of employment vis-à-vis GDP was estimated at 0.57 for 2001–2012. The cost of creating a job, with regard to investment, increased from 497,000 som during 2001–2005 to 1.8 million som during 2006–2010 (in constant 2010 prices), indicating a pattern of investment that became less labor-intensive in the latter half of the 2000s. During 2011–2013, investment per job declined to about 1 million som.

345. Despite the slow employment growth, the unemployment rate was steady, at about 8%, from 2000 to 2013. In addition to unemployment, however, underemployment and hidden unemployment have been widespread, and they drive poverty.

346. The period immediately after the country's independence saw a significant return migration of non-Kyrgyz ethnic workers out of the Kyrgyz Republic. By 2000, 618,000 people had left the country, 378,000 of them nationals of the Russian Federation, reducing the Kyrgyz Republic's human capital.

347. Since 2000, labor migration—which is often temporary—has been associated mainly with economic incentives, and has involved the ethnic Kyrgyz population and other groups. The most popular destinations for workers from the Kyrgyz Republic are Kazakhstan, the Russian Federation, Turkey, and the United Arab Emirates.

348. There are no accurate and accepted data on external migration. Estimates of the number of Kyrgyz Republic nationals working abroad vary widely, between 0.5 million and 1.2 million, and even the highest figure may be an underestimate. The fact that most migrant workers are employed in the gray economies of their host countries makes monitoring difficult.

349. Kyrgyz Republic nationals working abroad significantly contribute to the country's economy through the remittances that they send to their families and friends. Workers' remittances rose steadily between 2001 and 2013, except in 2009, both in absolute terms and as a share of GDP. Although some portion of the remittance is likely saved, remittances boost domestic consumption and investment, thereby contributing to economic growth. One study estimated that, between 1995 and 2005, \$1.00 of

⁸¹ Source: Asian Development Outlook 2016.

remittances led to an increase of \$2.30 in GDP.⁸² Remittances have also contributed to the rapid decrease in poverty since 2001, and have mitigated rises in poverty when the domestic economy was unstable.

350. However, migration and remittances can also have negative effects. Dependence on remittances makes households, and the economy as a whole, vulnerable to fluctuations in the economies of countries where migrants from the Kyrgyz Republic work. High rates of migration, particularly of skilled workers, are depleting the human capital of the country.

351. Poverty rose precipitously immediately after the country's independence, and per capita income dropped, as the economy collapsed and transfers from the Soviet Union ended. When the Kyrgyz Republic became independent, its mean per capita income (\$1,570) was 54% of that of the former Soviet Union, with one-third of its population living in poverty (32.9% of population below 75 roubles [\$125 at the 1990 exchange rate] per capita monthly income compared with 11% for the entire former Soviet Union) with about the same Gini coefficient (0.287) as the rest of the former Soviet Union.⁸³

352. The poverty rate continued rising until 2000, when it reached a peak of 62.6%, despite the revival of GDP growth from 1997 onward.⁸⁴

353. Since 2001, economic growth in the Kyrgyz Republic has been inclusive: poor households have participated in and benefited from new economic opportunities. As a result, growth was accompanied by rapid poverty reduction: the portion of the population living at or below the national poverty line dropped from 56.4% in 2001 to 31.7% in 2008,⁸⁵ and the poor households' share of national cash income remained more or less constant. The rate of poverty reduction during 2001–2008 was above 9% every year.

354. In 2009, however, the impact of the global financial crisis, particularly on remittances, and the harsh winter of 2008–2009 stalled progress, staying the poverty rate at 31.7%. In 2010, the poverty rate increased with the political and ethnic uprising, and the impact of these events, such as the continued border closures, were still being felt in 2011. The poverty rate, particularly in urban areas, continued to increase, reaching 36.8% in 2011. Combined with high food prices, the poverty rate further went up to 38.0% in 2012. According to preliminary data, it declined slightly to 37.0%, following 10.5% GDP growth in 2013.

355. Marked differences in living conditions between urban and rural areas existed before and during the Soviet era, and persisted until the late 2000s. In 2001, rural poverty stood at 62.3%, compared with 45.4% in urban areas. In the period up to 2008, poverty fell faster in urban areas, although rural areas also rapidly improved.

356. In 2012, the Kyrgyz Republic had a larger proportion of households below the national poverty line. In fact, the extreme poverty rate declined very rapidly from 34.0% in 2002 to 5.3% in 2010, further falling to 2.8% in 2013. About 160,000 people lived in extreme poverty, of which 80% were in rural areas.⁸⁶

357. Inequality rose during the first years of the country's independence, as the more well-off were able to shield themselves from the worst impacts of the economic collapse. Inequality has continued to decline since 2001, when the share of the bottom 20% began to rise, albeit slowly. The overall improvement in the share of the bottom 20% is quite remarkable, considering that it is more common in developing and transition economies for the richer groups to increase their shares.

358. Gini coefficients, a commonly accepted measure of inequality, indicate that inequality in the Kyrgyz Republic rose to very high levels immediately after the country's independence but fell back to a more normal level by 1998 (0.36). Inequality generally declined after 2005, dropping from 0.27 in 2007 to 0.22 in 2012 when measured by the consumption Gini coefficient. Income distribution measured by the Gini coefficient based on income improved from 0.446 in 2006 to 0.363 in 2008, but deteriorated again from 0.371 in 2010 to 0.422 in 2012.

359. Despite relatively high levels of poverty, the Kyrgyz Republic has managed to provide its population with access to basic services and infrastructure. As a result, the Kyrgyz Republic's achievements regarding non-income poverty indicators compare favorably with those of most developing countries, despite the severe financial and capacity constraints that the country faces. However, a decline

⁸² S. Aitymbetov. 2006. *Emigrant Remittances: Impact on Economic Development of Kyrgyzstan*. Working Paper No. 31. Bishkek: Economic Policy Institutes Network.

⁸³ R. Pomfret. 1999. *Living Standards in Central Asia*. Paper prepared for the Special Issue of MOCT-MOST Economic Policy in Transitional Economies. p. 20.

⁸⁴ National Statistics Committee data.

⁸⁵ Ibid.

⁸⁶ Ibid.

is evident in some aspects, for example, a lower average years of schooling for youth compared with that of adults in 2010. In addition, many of these indicators fail to capture the quality of basic services.

Forest Context

360. Forests of Kyrgyzstan furnish important environmental services and serve a critical environment protection functions, including water and climate regulation, wildlife habitat provision, and disaster risk reduction. Kyrgyzstan's forest landscapes encompass a wide range of values, goods and services and have multiple uses and purposes, which are valuable in different ways for different stakeholders. Forest landscapes are rich ecosystems, and support livelihoods of local communities in many ways. They include arable lands suitable for cropping and gardening, grasslands attractive for livestock grazing and hay making, nut and fruit trees for commercial harvesting, beekeeping, collection of berries, medicinal plants, and mushrooms. Some picturesque landscapes also attract local and international tourists for recreation and skiing in winter.

361. More than 200,000 people live directly in the State Forest Fund territory (mainly in the walnut-fruit belt in the southwest), and more than 2 million people live near forests, and rely on forest resources to varying degrees for their livelihoods. Non-timber forest product (NTFP) producing forests cover less than 100,000 ha, but play a crucial role in the life and livelihood of their nearby communities, either for subsistence products or as a source of additional income. While nut and fruit collection is mainly undertaken in the south of the country, berries and medicinal herbs are collected everywhere. The poorest households have little or no livestock and disproportionately depend on NTFPs for subsistence and additional income. Specifically, in the walnut and kernel value chain, 3,000-6,000 poor people are estimated to be employed as walnut crackers only in Jalal-Abad Province; 20 small and medium sized enterprises employ teams of women in processing and grading kernels destined for export; 400-500 collectors and traders sell walnuts during the high season; and 8,000-10,000 individuals are estimated to be employed in further value addition.⁸⁷ All forests in Kyrgyzstan are traditionally divided into four major forest belts.

362. About 109,372 households with a population of 546,862 live near the spruce forests primarily situated in the western and central parts of the country, mostly in Issyk-Kul, Naryn Provinces and in Kemin District of Chui Province, as well as in the high areas of the Fergana Valley outskirts. Meanwhile, 1,279,081 individuals (255,816 households) live within or adjacent to walnut-fruit forests in the south, which occupy the lower mountain slopes at an altitude of roughly 1,300 to 1,800 m. These forests are made up of naturally growing and human-planted varieties of walnut (*Juglans regia*), apple (*Malus species*), plums (*Prunus species*), as well as other fruit-bearing tree species. Significant numbers of people live within and near juniper forests in the southern Kyrgyzstan, but also in other parts of the country: 109,372 households with a population of 546,862 people. Open juniper stands with rich pasturelands provide local communes with good opportunities for husbandry development. And finally, more than 30,000 households of 150,000 individuals live adjacent to riparian forests around the country.⁸⁸

Table 19 Area of Major Fruit Bearing Forest Species⁸⁹

NTFP	Area (ha)
Walnut trees	35,000
Pistachio trees	33,000
Almond trees	1,600
Apple trees	16,700
Apricot trees	1,000
Cherry / plum trees	400
Hawthorn	2,500
Sea buckthorn bushes	3,600

363. The demand for timber in the country, and especially near forest communities far outstrips supply and is steadily increasing. During the Soviet period, Kyrgyzstan imported 400-500 thousand m of industrial roundwood and 2 million m of firewood annually. This is estimated as the minimal annual demand for timber and firewood for the country. Currently, timber continues to be primarily imported

⁸⁷ Kyrgyz Republic. Communities Forests and Pastures. WB, 2015.

⁸⁸ Kyrgyz Republic. Communities Forests and Pastures. WB, 2015.

⁸⁹ Department of Forest Ecosystems and Protected Areas of SAEPP.

from Russia, at a total official volume of around 67,500 cubic meters annually.⁹⁰ The dependency on timber is high, while felling is prohibited and only low volumes of wood (on average 25,000m³, harvested annually) derived from maintenance/sanitary felling. Occasional evidence of illegal smuggling of timber into the country suggests an additional 40-50,000m³ of timber is imported each year. This is still five times less than the estimated annual demand. At the same time, the cost of construction timber at the local market is high at 10,000-15,000 KGS per m³ (US\$ 149-225/m³), which is not affordable for most rural households. These figures of limited wood supply in combination with the much higher demand, and the prevalence of wood used in construction and for energy, indicates that illegal logging is quite frequent in the country. With roughly half the rural population or approximately 1.6 million people under the age of 19, it is evident that the demand for timber, especially for housing construction will only increase.

364. There is a high and growing dependency of the rural population on firewood due to a shortage of natural gas and the rising cost of electricity. More than one third of houses in Kyrgyzstan rely only on coal and firewood for heating and cooking.⁹¹ However, there are many households, which use more than one source of heating or cooking, such as electricity in combination with coal/firewood, or gas with coal/firewood. With the rising cost, as well as a shortage of electricity and gas (especially in the South), many public institutions such as schools and hospitals have been switching to charcoal/firewood-based stoves and heating systems.

⁹⁰ Social and Economic Situation of the Kyrgyz Republic. National Statistics Committee, January – May, 2013.

⁹¹ Environment of the Kyrgyzstan 2009-2013. National Statistics Committee. 2014.

Annex 3: Local Context

365. Toktogul and Toguz-Toro are two of Jalal-Abad province's eight districts, but encompass 37.4% of the area of Jalal-Abad province. Toktogul and Toguz-Toro districts cover a significant portion of the Western Tian Shan in Jalal-Abad province, and are the two districts where Kyrgyzstan's newest national parks have been established: Alatau Natural Park and Kan-Achuu Natural Park. The plans for establishment of these two national parks has in part catalyzed the development of the current project, as they represent coverage of critical biodiversity areas in Kyrgyzstan, including significant landscapes of key snow leopard habitat in the Western Tian Shan.

366. While the majority of project field activities related to biodiversity conservation, SLM and SFM will be focused in these two districts and the two new PAs, the remaining network of PAs in Jalal-Abad province are critical for securing the biodiversity of the Western Tian Shan. The full network of PAs in the Western Tian Shan and their buffer zones – and the habitat corridors between them – are particularly important considering, for example, that the home range of any individual snow leopard is larger than all but the largest individual PA.

367. Toktogul District (Rayon) was founded in 1926. Geographically the district is located in Ketmen-Tyube valley on the area of 781,500 ha surrounded by the mountains of Chatkal, Atoinok, Suusamyr, and Fergana ridges. The territory is mountainous with elevations of 725 m to 4,129 m. Four geomorphic zones are defined in Ketmen-Tyube mountain soil area: 1) sloping plain; 2) foothill plumes and low mountains 1500-2000m; 3) middle mountains – 2000-3000m; 4) high altitude -2500-4000m. The dominant soils are conglomerates, limestone, sandstone, pebbles, gravel, alluvial terrace stones and loam. A characteristic feature of the district climate is drought in the second half of the summer. The basic pattern of distribution of vegetation, soils and wildlife is characterized by vertical zones. The boundaries of vegetation zones coincide with the boundaries of soil areas:

- Foothill-low mountain steppe belt. The steppe zone covers the whole territory of foothills and low mountains within the absolute altitudes from 900-1300 m above sea level. Steppe vegetation covers the slopes of foothills and low mountains of various exposures, as well as the bottom and the dry inter-mountain valleys of the foothills. Dominant vegetation is steppe fescue-forb and sagebrush-grass community. They are dominated by fescue striated, found in large quantities sedge lignocaine, Kochia, Artemisia, etc. The vegetation of these barrens is low and only in spring it has bright green color, which is already the middle of summer, becoming yellow-grey. Stony-gravelly slopes of low mountains are covered with sparse vegetation of sagebrush-grass and fescue-sagebrush type. These are dry steppe with a predominance of Artemisia, teresken, Kohei, feather grass, fescue, etc. The characteristic feature of this zone is the extensive development of bushes, which are ubiquitous, almost completely covering the entire system of hills, with the exception of ravines. Shrubs are represented mainly by the following species: dog rose, honeysuckle, Spiraea, cotoneaster, ash tree, and barberry. The soils of this zone vary. At the top of the belt and within the lowlands of the mountain there is common, brown soil, and in the lower part – light brown soil. The soil is mostly thin, often stony and gravelly. The structure is lumpy-granular. By the mechanical composition soils there are stony and clayey.
- Mid-mountain forest-meadow-steppe zone. This belt occupies a large area in the range of absolute height from 1100-1300 to 2000-2200 m. Forest dominant tree species here are walnut and juniper. The densest forests with a small number of shrubs, well-developed moss and sparse herbaceous cover grow on steep northern slopes. Juniper forests are unique and have ecological, sanitary-hygienic, health, and soil conservation value. These forests represent a natural "Botanical garden" with a large set of tree and shrub species diversity. On the floodplains the stands of ash, birch, poplar and willow grow, and on terraces and mountain slopes hawthorn. Shrubs are found everywhere – on the slopes of mountains and among forests. Characteristic species are – cherry shrub, cotoneaster, spiraea, honeysuckle, wild rose, barberry, aflatunia, abelia, etc. The soils of the forest zone here are mountain forest black and dark-colored soils. These soils are spread mainly on the slopes of northern exposition. Forming on steep slopes, mountain-forest soils are usually gravelly and stony.
- Subalpine zone. The subalpine belt is located above the forest belt, within altitudes from 2000 to 2500m, sometimes 3000m. With the change of the altitude the forest-meadow-steppe zone gradually passes into the subalpine zone, characterized by diverse natural conditions. The climate is temperate-cold and less humid than in the forest belt. The subalpine meadows have rich herbaceous species composition. The predominant types are: Jerusalem sage, globe-flower, geranium Collina, cuff fluffy,

blue forget-me-not, Highlander and a number of other medium grass species with large and colorful flowers. The herbaceous layer is typically dense with the coverage of 80-100%. Soil profiles become fairly powerful compared to the previous belt. They are better differentiated into horizons and contain more humus, which is associated with increased activity of microorganisms. The fir and spruce forests grow here. Depending on the degree of moisture these soils under fir and spruce forests can have two subtypes: a) dark-colored peaty ordinary in and dry fir and spruce stands; b) dark peaty leached in more humid fir and spruce stands.

- Alpine zone. This belt occupies the most elevated part of the lands with absolute heights of 2500-3500m. The Alpine zone is widespread, but is not a continuous strip, as in many places covered with rocks, talus or destroyed by mudflows. Vegetation on Alpine meadows is short-grass. Due to high altitude and low temperature, the vegetation does not have time to complete a full life cycle within a short summer season. All the plants are short, and their root system is shallow. Under humid conditions between hills and floodplains there is a dense continuous cover of sedge, bluegrass purple, viviparous knotweed, Albert buttercup. Here we have the characteristic of the alpine zone forb -grass alpine meadows, and in the conditions of high humidity - meadows with predominance of sedges with a dash of herbs. Large areas of the Alpine zone are cliffs, talus, uncovered by vegetation. Soils of the Alpine belt are poorly developed. Severe natural (climatic) conditions of this belt are the reason that the soil formation processes proceed very slowly. Alpine soils are generally thin, weakly differentiated into horizons, mostly of low humus and gravelly. Low temperatures inhibit the decomposition of organic residues to humus, resulting in Alpine mountain-meadow semi- peaty soils.

368. There is one city, Toktogul, and 10 rural districts with 44 villages in the district. There are about 443,250 ha of agriculture lands in the district, including 413,600 ha of pasturelands. The area of arable lands is 17,703 ha including 7,470 ha of irrigated land. The total population of the district in 2014 was 96,215 people, including 49.8% of women, 44% of children and 47% of working age people. Regardless of growing demography, migration trend is rather disturbing. Up to 71 % of people of working age leave the district in search for jobs. There are 788 people with disabilities registered in the district. Due to deficit of arable lands about 40% of population did not receive land parcels during the land reform conducted in Kyrgyzstan. It determines high poverty level of about 55.7% of poor population. In 2014, there were 4,532 poor families, who received social aid.

369. In 2014, there were 4,558 people with formal jobs, with the average salary of 8,909 soms (\$132), which marked the jobs growth of 1.74% to the previous year. The official unemployment rate was 2.7%, 424 persons being registered as unemployed.

370. The medical services are provided by one Toktogul district hospital (135 beds) and 3 territorial hospitals (51 bed in total), district center of family medicine and 16 groups of family doctors, 16 medical obstetric units, TB dispensary, and district dental clinic.

371. There are 42 schools and 12 kindergartens in the district. About 18,506 pupils study in schools and 1382 children in kindergartens.

372. Centralized drinking water supply systems cover only 20% of population in the result of 1992 earthquake, which destroy 90% of the water supply systems in the district. People of 43 settlement use water from open sources.

373. Agriculture is the main sector of the Toktogul district economy. Thus, in 2013 the output of agriculture production made up 3.8 billion soms, which was 14.7% growth to the previous year. The main agricultural crops are corn, seeds under the sunflower, potatoes, honey, meat, milk, and grains and cereals.

374. District industry is represented by flour, salt and brick manufacturing. Thus, in 2013 the volume of industrial production of the Toktogul district was 19.95 million soms, or in relation to the previous year increased by 15%. In 2013, the service sector provided services for 141.18 million soms, which is 12 million 176 thousand soms more than in 2012. In 2012, 64 individual houses of about 40 million soms value were constructed in district, which is 19.6% more than in 2012.

375. According to the special Law “On compensation of loss from hydropower plant construction to Toktogul District, Jazy-kechuu village and Karakul city of Jalal-Abad Province” about 43 million soms are transferred annually to the Special Fund of Toktogul District by the Joint Stock Company “National Electric Stations”, The fund is managed by the Ministry of Agriculture, Processing Industry and Melioration to finance different irrigation and melioration systems reconstruction and well as for social infrastructure development.

376. Forest cover of the district is quite mosaic, unevenly distributed as per landscapes and mainly located along inaccessible mountainous ridges. The forest cover of the district is 114,371 ha or 14.4% of whole territory. Only 35% of it are managed by the leskhoz, the other part is under management of District authority (6%) and the rest is located on the so called other lands, including local communes (59%).

377. **The Toktogul State Forest Management Unit (Leskhoz)** was founded in 1947. Today, it has the territory of 104,860 ha with and is distributed on six forest ranges. The main office of the leskhoz is in Toktogul city. The leskhoz administrative structure is summarized in Table 20 below.

Table 20 Administrative Structure of Toktogul Leskhoz⁹²

Forest Range	Area		Office Location	Distance to the main Leskhoz Office
	Total Area	% of the Leskhoz		
	ha	%		km
Uzun-Akmat	20,330.6	19.4	Kara Kungoi village	70
Alatai	41,243.0	39.3	Akbulak village	55
Usta-Sai	12,316.4	11.7	Chonaryk village	40
Chychkan	22,379.1	21.3	Toktogul city	0
Toktogul	4,712.9	4.5	Toktogul city	0
Ozgorush	3,878.0	3.7	Ogorush village	90
Total	104,860	100		

378. During the last documented forest inventory in 2006, the total forest covered area of the leskhoz was 30,612.8 hectares, or 29% of the Leskhoz territory. The leskhoz had 23 ha of arable land, including 17.5 ha of irrigated arable land. Additionally, it had about 21 ha of hayfields and 39,365.3 ha of pasturelands. Practically all those lands are leased to local communities dwellers.

379. The total wood stock of the leskhoz forests was estimated as 1,323,062.7 m of wood. The average stock per hectare was 43,2 m. The largest tree species stock was in Alatai Forest Range - 468,888.4 m.; the stock of stands in Uzun-Akmat range was 161,491.6 m; Chychkan – 226,145.7 m; Usta Sai – 168,549.8 m; Ozgorush- 162,936.9 m; and Toktogul Forest Range – 124,976.9 m.

380. Among the main forest species, the following are described as in Toktogul Forest Management Plan: Spruce (*Picea tianschanica* rupr.); Semenov fir (*Abies semenovii* fedtsch.); Zarafshan Juniper (*Juniperus serafvshanica*), Juniper hemispherical (*Juniperus semiglobosa*), Turkestan Juniper (*Juniperus turkestanica*); Walnut (*Juglans regia*); Pistachio (*Pistacia spec.*); three species of apple: *Malus kirgisorum*; *Malus. sieversii*; and *Malus niedzwetckiana*; three maple trees: *Acer turkestanicum*, *Acer regelii* and *Acer semenovi*; Ash tree (*Fraxinus sogdiana*); Birch (*Betula turkestanica*); Willow (*Salix sp.*); White Poplar (*Populus alba*); Honeysuckle (*Lonicera L.*); Rosehip cinnamon (*R. cinnamomea L.*); Spirea (*Spiraea L.*); Cherry shrub (*C. fruticosa* (Pall.) G. Woron).

381. As per forest ecosystems sanitary conditions the forest of the leskhoz are described as: healthy – 4,980.4 ha; average – 21,138.6 ha; and bad – 4,493.8 ha.

382. As per Forest Code (Article 29 and 30) protection category, there are two types of forest in Toktogul Leskhoz: 1) protective forests on the area of 89,858 ha or 87% of the leskhoz area and 2) forests of PA covering 14,901 ha or 14.3% of the Leskhoz. PA forests mainly consist of fir stands of Uzun-Akmat Forest Sanctuary comprising 5,040 ha of the Uzun-Akmat forest range, 6,667 ha of Alatai forest range and 3,194 ha of Usta-Sa forest range.

383. Formally, two protected areas already existed in Toktogul District prior to establishment of Alatai Nature Park. They are Chychkan Zoological (65,551 ha) and Uzun-Akmat (14,771 ha) Forest Sanctuaries (Zakazniks). Indeed both exist on the land of Toktogul Leskhoz.

384. Chychkan Zoological (game) Sanctuary established in 1975⁹³ is located in Chychkan river basin, on the territory of the SFF to assure conservation and sustainable use of the fauna and riparian forests species: willow, juniper, wild rose, hawthorn, ephedra, sea buckthorn, raspberries, black currants and others. These form the habitat of the diverse fauna species: wolf, white-clawed bear, roe deer, ibex,

⁹² Toktogul Leskhoz Forest Management Plan, 2006.

⁹³ Resolution of the Minister Council of the KSSR as of November 6, 1975 # 567.

rabbit, squirrel, snow cock, pheasant, partridge and others. In the upper mountain ridges area snow leopard was also observed.

385. Uzun-Akmat Forest Sanctuary, also established in 1975 by the same document, has the objective to assure conservation of natural Semenov fir stands. Beside the fir some other tree and shrub species occur there: birch, spruce, poplar, juniper tree, elm, apple, apricot, sea buckthorn, pistachio, barberry, wild rose, raspberry, black currant, juniper shrub. Typical representatives of fauna there are snow leopard, ibex, bear, deer, lynx, badger, porcupine, fox, hare, wild boar and others. In 1992, it was increased at the stake of the Leskhoz forest rages territories.

386. The newly established Alatai State Nature Park has included the lands of Uzun-Akmat Sanctuary.

387. **Toguz-Toro District** was formed in 1935 and was re-formed in 1966. It is located in Jalal-Abad Province in the south-western part of the country, its area is 3,965.8 km² and the average altitude is about 2,000 m asl. The area is bordering in the north with Jumgal district, in the east to Aktalaa district of Naryn Province, in the south – with Suzak district of Jalal-Abad Province and Uzgen district of Osh Province and in the west with Bazar-Korgon and Toktogul districts of Jalal-Abad Province, too.

388. The relief of the Toguz-Toro District is presented by intermountain valleys, low-mountain, middle and high types of terrain. It is formed by the impact of tectonic movements, and then under the influence of the activities of the rivers and glaciers, which also modified the relief of the district. In the areas between the lateral tributaries of the Naryn River there are small nameless mountains separating those river valleys. The valley has an overall bias in the north- west and looks like a huge bowl whose walls are surrounding mountain ridges. Most valleys are quite narrow and deep with slopes of 70-120°. Erosion has played a major role in the modeling of the current relief. As a result, the terrain is highly dissected not only with the river valleys, but also with numerous gorges, dry hollows and small ravines. The upstream areas of most river valleys are characterized by steep slopes and steep, rugged, rising steeply hollows filled with large boulders and rocks.

389. Toguz-Toro soil area covers the same name basin, bordering in the north with Kok-Irim Too, Kavak Too and Moldo Too ridges, in the south with Akshiyarak Too, in the south - west and west with the Fergana Range. The area is located at the junction of the Southern and Central Kyrgyz Tian - Shan soil provinces and occupies an intermediate position between them. Here you can meet steppes with umbrella plants: bearded, prangos, ferrulae, mountain meadows with a alpine buckwheat. The area receives significantly more moisture and is characterized by positive temperatures of above 10 ° C (3000m).

390. In the intermountain basin at the altitudes of 1300 - 1500 m light - brown soil prevail. In their profiles, there are some signs typical of southern gray soils: soil fauna forms many cameras and strokes. The scaly - plastic structure of the uppermost (0 - 3 cm) layer and the foliated – tile structure of - 3 - 10 cm layer - goes then into cloddy - lumpy structure in the subsurface. Large areas area occupied by chestnut soils, above which there are mountain black soils. In general, the soil cover of the area is characterized by good water regime, high humus content and nutrients.

391. The district is divided into five administrative-territorial units (rural districts): Atay, Kargalyk, Kara-Suu, Kok-Irim, and Toguz-Toro. There are 14 settlements in total. Only 3 settlements have clean drinking water supply systems. The village of Kazarman is the administrative center of the district. The population of the district is 22,389 people, including 10,990 women (49%) and 11,889 men (51%). There are 450 people with disabilities, including 184 children registered in the district. There are 918 poor families, who received social aid.

392. In 2015, there were 10,313 people with formal jobs. The official unemployment rate was 2%, 211 persons being registered as unemployed.

393. There are 14 schools and 12 kindergartens in the district. About 4,368 pupils study in schools and 715 children in kindergartens. There is also one vocational school with 252 students.

394. The medical services are provided by one Toguz-Toro district hospital, four centers of family medicine and eight medical obstetric units with total capacity of 70 beds. 32 doctors and 293 nurseries provide medicinal services on the district.

395. Agriculture is the principle sector of the Toguz-Toro district economy. In 2015, the gross regional product of the district was 2,428,166.7 thousand soms. In the structure of GRP agriculture amounted to 42.7 %, industry - 26.7 %, services - 3.4%, and trade - 27.2 %.

396. The total area of the district agriculture land is 263,056 ha, including 11,258 ha of arable lands (2,981 ha irrigated), 1,835 ha of hayfields and 249,219 ha of pastures.

397. The main crop species is wheat and barley, potatoes and vegetable are also among cultivated agri-species. As per district's statistics, in 2015, among the main agriculture commodities production were:

4,600 t of grain, 4,200 t of potatoes, and 3,400 t of vegetables. Livestock breeding production in 2015, included: 2,600 t of meat, 12,600 t of milk.

398. The output of district industrial production in 2015 was mainly delivered by the gold mining enterprise located in the district, which produced 643,494,500 soms worth production. There are also two small clothing enterprises in the district with the annual production output of 240,000 soms.

399. The forest cover of the district is of island character. Forest stands are unevenly distributed as per landscapes and mainly located along mountainous rivers and on the slopes of the mountain ridges. The forest cover of the district is 46,533 ha or 11.7% of whole territory. Only 18 % of forest cover is managed by the leskhoz, nearly 7% by the Saimaluu-Tash State Natural Park. The rest 75% of forest cover is located on the lands of land reserve and so called other lands.

400. **Toguz-Toro State Forest Management Unit (Leskhoz)** was founded in 1997. It is located in two administrative districts: Toguz-Toro of Jalal-Abad Province and Aktala district of Naryn Province. It has the territory of 57,964.0 ha, including 57,356.0 ha of forest lands in Toguz-Toro Districts and 608 ha of forest lands in Aktala District. The office of the leskhoz is located in Kazarman, which is 150 km from the provincial center of Jalal-Abad. The territory of the leskhoz is administratively divided into 3 forest ranges: Beshkol (18,037.1 ha), Kok-Irim (18,103 ha) and Makmal (21,824.6 ha). As per data of 2008 forest inventory, beside forests, the leskhoz has 61 ha of non-irrigated arable land, 147.9 ha of hayfields and 21,2194.5 ha of pastures. All the forests of the leskhoz play important soil and water protection and regulation roles. This, soil-protective role of those forests is mainly in the prevention of erosion, which is high in intensive cattle grazing on some pasture management areas (mainly in Kok-Irim Forest Range). Water protection and regulating functions of forest vegetation are determined by their ability to regulate the flow of melt water and rain, turning the surface into the ground flow, which helps to maintain the level in streams and rivers, prevents flash floods, mudslides and other the disaster risks. As a result all forests of Toguz-Toro Leskhoz are assigned to protective category. The main specie composition and wood stock is presented in the Table 21 below.

Table 21 Forest Species, Area, and Stock of Toguz-Toro Leskhoz⁹⁴

Species	Area, ha	Stock, m
Spruce (<i>Picea tianschanica</i>)	2077.1	15,1700.8
Juniper (<i>Juniperus semiglobosa, turkestanica</i>)	287.8	16,116.8
Poplar (<i>Populus alba</i>)	374.2	23,007.7
Birch (<i>Betula turkestanica</i>)	377.5	24,127.9
Other tree species	14	899.6
Shrubs	6320	47,155.9
Total:	9450.6	263,008.7

401. In 2001, in Toguz-Toro District, the State Nature Park “Saimaluu-Tash” was established along the upstream of the Kok-Art River with the area of about 32,000 ha. Its conservation objective is aimed to protect unique natural complexes of the Kok-Art Tract and numerous petroglyphs of high cultural and historic value. It contains one of the biggest collections of rock pictures not only in Kyrgyzstan and Central Asia but also in the whole world. About 10,000 stones with pictures have been identified, the earliest dating back to the third to early second millennia BC, that is to the Eneolithic and Bronze Ages.

402. Saimaluu-Tash is remarkable in that it has been in continuous use as a sacred site by the populations of Tian Shan and Pre-Ferghana from the third millennium BC until the middle ages, and even until the present day. It is thus a rich source of knowledge about the everyday life, mentality, history and culture of the ancient tribes of hunters, cattle breeders and first peasants in Central Asia, about the development of their spiritual culture, their religious beliefs and their worship of mountains, nature, totems and solar-cosmic images.

403. The park has three zones of specific conservation regimes: protected area of 9,221.8 ha; recreation zone of 4,540.9 ha; and reproduction zone of 18,244.5 ha.

⁹⁴ Toguz-Toro Leskhoz Forest Management Plan, 2008.

Annex 4: Profile of the Project Planning Domain

404. The project anticipates working at four administrative and geographic levels:

- 1) At the national level, supporting development of the enabling framework for biodiversity conservation and sustainable use, promoting the status of High Conservation Value Forests, and adoption of international standards for snow leopard monitoring, research and law enforcement. However, it should be noted here, that the national level planning paradigm has two levels a) national including national programs and strategies for which development the Government represented by the Ministry of Economics is responsible and the Parliament is responsible for approving them, with the President as a final review and signatory official. And the sectoral level, which is also addressing all-national development agenda aimed at a particular sector. Such kind of programs are developed by line ministries of agencies review by the Government and then approved by the Parliament with the Prime Minister as a final signatory official. This patten will be followed-up by the project to improve enabling frames for HCVF as well as for wild life corridors with in PA network.
- 2) At the provincial level, supporting key protected areas in Jalal-Abad Province, the primary province covering the Western Tian Shan. Those PA and biodiversity conservation objectives will be duly presented to the authorities to be integrated into the province development strategy. Forest management units and PAs of the region will be supported through capacity development activities on HCVF and PA management and monitoring. Provincial level development strategies are elaborated by the office of the Government Resident Representative in a province and the local branch of the Ministry of Economy, involving all the districts' state administrations and local self governments, development agents and approved by the collegiums of the Province State Administration. This level will be observed as appropriate and follow-up to incorporate provisions on BD conservation and SLM and SFM deployment in Jalal-Abad province also strengthening the status of HCVF and wildlife corridors. The province level department of SAEPP will be supporting to implement the project activities on this level.
- 3) At the district level, targeting Toktogul and Toguz-Toro Districts in Jalal-Abad Province. The planning practice on this level, involve mainly state administration and heads of the self-government to develop district development plans. Then draft documents are debated and approved on joint sessions of the District Council of local deputies. The biodiversity conservation, SLM and SFM objectives will be duly integrated into the districts development plans. Buffer zones and wildlife corridors will be identified and corresponding regimes will be developed and also incorporated into the districts development plans. Projected capacity development activities to address the issues of pasturelands degradation will involve also District Department of Agriculture Development and the District State administrations, as well as deputies of the District Council.
- 4) At the local level, targeting local communities of the adjacent to supported PA territories. Local Self-Governance bodies, i.e. elected (Rural Council) and executive bodies (Self-Government) take a lead in the local development planning, including land use, involving several community based organizations (CBO) with formal designation to manage local natural resource. These are:
 - Water Users Associations (WUA), including practically all the farmers as well as local dwellers dependent of irrigation water for livelihoods. WUA are responsible to manage on-farm irrigation systems on the level of communes assuring timely and fair distribution of local water resources and mandatory payment for water transportation to the communes. They are also responsible to maintain and renovate local irrigation infrastructure. At the beginning of each irrigation season, WUAs organize a general assembly of members to develop a seasonal irrigation plan as well as to define the schedule and payment rate for irrigation services. Weak capacities of the WUA are well known, and addressed by several international projects.
 - Associations of Pasture Users (APA) elect local Pasture committees (PC), which are responsible for local pastures management assuring equally access to pastures and maintenance of pasture infrastructure. For this PC debate and fix corresponding pasture use fee, which in principle cover running costs of PC, land tax and needed investment into pasture infrastructure (water points, bridges, etc.). Pasture management plans are still not in place due to low capacities of PCs, which leaders do not have adequate

agronomical and management knowledge. They will be targeted by the project to deploy sustainable pasture management with SFM and biodiversity considerations. They are also involved to develop regimes for land use in PA wild life corridors and HC VF.

- Other CBOs include Rural Associations of Drinking Water Consumers, Aksakals Councils, Women Committees, Rural Health Groups, Youth groups, etc. All active CBOs will be involved into the process of elaboration of the new local development plans integrating biodiversity, SLM, and SFM objectives.

405. Local Self-Governments and Council of the target communities will be partnered to organize a participatory planning process involving all the local stakeholders for this. Projected capacity development activities to address the issues of pasturelands degradation and sustainable HC VF management will involve local Self-Governments and Council deputies as well as Pasture committees, farmers and communes as appropriate.

Annex 5: Detailed Description of Relevant Legislation and State Programs in Kyrgyzstan

Relevant Legislation in Kyrgyzstan

Law	Date of Adoption	Description
Land Code	02.06.1999 # 46	Makes provision the ownership, tenure, administration, sustainable use and rehabilitation of land and the natural resources associated with that land.
Forest Code	08.07.1999 # 66	Regulates the protection, rehabilitation and sustainable use of forests, forest species and forest products. Sets legal frames for rational forest use, protection, conservation and reproduction, improvement of ecological and resource capacities and land tenure on the State Forest Fund areas.
Water code	12.01.2005 # 8	Provides the legal framework to support the development and use of water, and the protection of the national water resources. Promotes the principles of Integrated Water Resource Management
Law on Environmental Protection	16.07.1999 # 53	Establishes basic principles of environmental protection and ensures legal powers in relation to the establishment of environmental quality, marking of preferentially protected territories, publicity of rules and procedures of the natural resources use, establishment of the system of environmental monitoring and control, and fixing the procedures of disaster management.
Law on Wildlife (Fauna)	17.06.1999 # 59	Regulates protection and reproduction as well as rational use of fauna as important asset of Kyrgyzstan, regulating and stabilizing biosphere. Defines what are fauna items and the rights of the state and private ownership on them, assuring sustainability of populations and habitat.
Law on the Protection and Use of Flora	20.06.2001 # 53	Regulates relations on the domain of protection, and reproduction of flora aimed at rational use of flora species. Describes flora as a basis for life and activity of Kyrgyz people, which is under special protection of the state.
Law on Rates of Payment for Flora and Fauna Species Use	11.08.2008 # 200	Establishes legal basis for flora and fauna use defined in national legislative documents. Presents rates for wildlife use applying baseline payment rates in Annex 1 of the Law. Describes payment rates for flora use in Annex 2. Authorizes Government to define payment procedures. Sets revision period for the payment rates as once in three years
Law on Special Protected Nature Areas	03.05.2011 # 18	Provides the legal basis for the planning and management of a network of special protected nature areas (SPNAs). It makes provision for different categories of SPNAs in accordance with their management objectives.
Law on Biosphere Territories (BT)	09.07.1999 # 48	Defines the concept of BT as plots of terrestrial of aquatic ecological systems or their combinations, which ensure sustainable balance of biodiversity, economic development and protection of correlated cultural values. States that BT has the statute of SPNA with a special regime of protection and use. Defines objectives for BT establishment.
Law on Hunting	13.03.2014, # 41	Provides the legal basis for the regulation and control of hunting activities and the protection of game species. Regulates conservation, reproduction, and use of hunting resources and their habitat based on the following pursued principles of sustainable use of hunting resources following transparency of information, equal access, and involvement of stakeholders to decision making.
Law on Environmental Expertise	16.06.1999 # 54	Provides legal basis for environmental assessment aimed to prevent adverse impacts of projected economic activities on human health and environment and to ensure compliance of those activities with

Law	Date of Adoption	Description
		the environmental requirements of the country. This law is used extensively in the 'development projects' that could make certain environmental impacts, including: feasibility study and designs for construction, reconstruction, development, retrofitting and other projects irrespective of their estimated cost, origin or type of ownership, which implementation can make environmental impacts.
Law on Agriculture Development	26.05.2009 #166	Identifies 18 main directions for state support from the national and local budgets, including establishment of finance and credit infrastructure assuring access to financial and material and technical resources for agriculture producers; development of production risks insurance systems; main crops seed breeding; measures to protection of soil fertility and reduction of degradation; agriculture production for food security; funding of research on plant and animal selection; improvement of production, processing, storage and rational use of food products technologies; education for agriculture staffing, etc.
Law on Agricultural Land Administration	11.01.2001 # 4	Regulates legal relations on agricultural lands administration to assure effective and secure land use. Defines legal status of agricultural lands. Establishes conditions and procedure for agricultural land transactions (leasing, exchange, sale and purchase, mortgage, inheritance and gift). Restricts those who can enjoy the right of agriculture land ownership to Kyrgyz state, citizens, cooperatives and legal entities occupied in agribusiness. Prohibits sublease of state agricultural lands.
Law on Pastures	26.01.2009 # 30	Provides the legal framework for the conservation, sustainable use, tenure rights and administration of pasture lands. Proclaims state ownership on pasturelands. Makes provision for the establishment of Pasture User Association (PUAs) to institutionalize communal grazing, pasture management and rehabilitation. Decentralizes pastureland management to the community-based level, authorizing PUAs to develop pasture management and grazing plans, aimed to sustainable use, conservation and improvement of pastoral resources use. Considers pasturelands as pastoral ecosystems.
Law on Agriculture Lands Soil Fertility Protection	10.08.2012 # 165	Establishes the basic legal and institutional framework for the sustainable use of soils; soil conservation; the improvement of soil fertility; and the prevention of soil degradation. Regulates relations in the domain of soils protection, fertility, quality keeping and protection from degradation related to agricultural land tenure, ownership and disposal. Defines 12 main directions for national Soil Management Policy:
Law on Peasant Farms (PF)	03.06.1999 # 47	Makes provision for the establishment individual or family peasant farms. Sets forth the right of land-shareholders to transfer their land parcels to others, and to use their land-shares as collateral. Describes the contents of peasant farms Chart, its rights and obligations, roles of a peasant farms Head and General Assembly. Make provisions on available on peasant farms land natural resource use. Describes peasant farms property rights, taxation, as well as procedures for reorganization, liquidation and division of peasant farms.
Law on Local Self-Governance	15.07.2011 # 101	Establishes principles for organization of local government on the level of administrative and territorial units of Kyrgyzstan. Defines the role of local self-governance (LSG) in implementation of the public authority. Fixes institutional and legal basis for local self-governance bodies operations. Defines 22 objectives of local importance for LSG, including environment and agriculture development matters.
Law on Mountainous Territories	01.11.2002 # 151	Sets the task to establish socio-economic and judicial basis for sustainable development of mountainous territories of Kyrgyzstan, conservation and rational use of natural resources, historical,

Law	Date of Adoption	Description
		cultural and architecture heritage. Provides mountainous population some privileges and incentives.

Relevant State Programs in Kyrgyzstan

State Program	Implementation Period	Description of environmental aspects
National Strategy for Sustainable Development (NSSD)	2013-2017	NSSD Chapter 5 is about Environment Protection for Sustainable Development. It speaks about “new state environmental policy” with the following objectives: <ul style="list-style-type: none"> - Improvement of environmental legislation and economic mechanisms for nature use - Providing environment impact assessment on planned economic and other development projects; - Improving the system of accounting and reporting on environmental pollution; - Establishing a sustainable system of control and monitoring of environment protection and rational nature management to make informed governance decisions; - Application of new financial tools to promote green technologies via green taxes, customs duties, green procurements, and green investments; - Rational use of renewable natural resources, precluding their degradation through the introduction of monitoring and evaluation indicators of the environment and ecological safety in the practice of industry management - Improving energy efficiency and reduction of losses especially heat and electrical energy and promotion of renewable energy sources; - State support of sectors of economy aimed at creating "green" jobs.
Programme of Transition to Sustainable Development (PTSD)	2013-2017	PTSD Chapter 5 is also devoted to Environmental Protection. Priority 3 of PTSD – Strengthening of protected areas and restoration of natural ecosystems in the context of climate change – is to provide regular support for the existing system of protected areas. Two objectives are set under this priority: (i) to expand the PA system in under-represented habitats by increasing the coverage of protected areas up to 7% of the national territory; and (ii) to assure forest resource conservation on the territory of 5.62% of the national territory.
Priority Directions for Biodiversity Conservation	2014-2024	Aimed at conservation and sustainable use of biodiversity for sustainable socio-economic development. Defines 4 goals: 1) To incorporate biodiversity conservation into activities of all state bodies and public organizations by 2020; 2) To reduce pressure on biodiversity and to stipulate its sustainable use; 3) To improve guarding and control over ecosystem and species diversity conditions; 4) To increase social significance of biodiversity and ecosystems services and to increase the benefits received from them and those from traditional technologies. 13 objectives are defined to achieve these goals within the period.
National Strategy and Action Plan for the Conservation of Snow Leopard	2013 – 2023	The main goal is to prevent the decline of the snow leopard population in Kyrgyzstan. The Action plan sets up the activities on snow leopard research and monitoring, increase of the protected areas for snow leopard and prey and inclusion of communities to

		snow leopard and prey conservation process.
National Forest Program	2005 - 2015	The purpose of the program is a gradual increase of forest cover through reforestation and afforestation, as well as creating sustainable forest management and ensuring the transition from forest use to effectively managing forests in order to preserve and increase this national wealth. The State strategy for the development of the forest sector has the following three goals: (1) Sustainability of forestry sector; (2) Involving people and communities in joint forest management; and (3) Improvement of the role of the state in the forest sector.
Priority Directions for Climate Change Adaptation	2014-2017	Defines as goal Support of specific activities aimed at mitigation of climate change negative consequences for population, country and economy sectors. Identifies forest and biodiversity as a vulnerable sector and puts two adaptation objectives for it: 1) Conservation of Diversity of Flora and Fauna Species and 2) Increasing forest area
Climate Change Adaptation Programme and Action Plan for the Forest and Biodiversity Sector	2015-2017	Elaborates nationally adopted Adaptation priorities for the forest and biodiversity sector. Describes climate change impact of ecosystems. Identify 3 goals for adaptation for the period: 1) To incorporate the climate change impacts into protected areas and forest enterprises management plans and practices and involve forest communities into activities to strengthen the resilience of ecosystems and communities; 2) To promote the conservation and restoration of damaged natural ecosystems to strengthen their resilience to climate change; 3) To increase the capacity and awareness of stakeholders of the Forest and Biodiversity sector on adaptation to climate change. The Action plan sets up the needed adaptation activities, with corresponding budget, timeframes and responsible parties.
Priorities of the Kyrgyz Republic on wetlands conservation till 2023 and Action plan on their implementation for 2013-2017.	2013-2023	Refers to Ramsar Convention. Defines wetlands conservation and waterfowl population increase as the main goal. Identifies the following priorities for this: 1) intensify research and monitoring of wetlands; 2) improve legal frames, institutional set up and economic base for wetland conservation; 3) expansion of PA network to assure wetlands and water fowl conservation as well as establishment of ecological corridors for their migration; 4) regulation of mountainous pasture use to reduce its adverse impact on wetlands; and 5) disseminated information on wetlands and water fowl of international importance.

Annex 6: Additional Information on Environmental Threats in the Western Tian Shan

406. *Land Degradation from Poor Agricultural Practices:* Land degradation influences the livelihoods of rural population while reducing the productivity of agriculture lands, as well as increasing the threat of natural disasters. It is estimated that 88% of arable land in the country is degraded and prone to desertification, and more than half of arable land is prone to wind and water erosion. The relatively recent increase in smallholder farming by formerly nomadic mountain peoples (see Table 7 below) also often leads to soil degradation and loss of soil fertility, due to inappropriate agricultural practices and technologies. Good agricultural practices supporting sustainable land management (e.g. crop rotation, fallow periods, anti-erosion methods) are often difficult to implement in conditions where a great majority of households manage less than one hectare of land. In addition, the irrigation and drainage systems from Soviet times are deteriorating, leading to an increase in water logged soils in arable lands with insufficient natural drainage. This further leads to increases in soil salinity.

Table 7. Agriculture Commodity Producers in Kyrgyzstan (number of entities)⁹⁵

	2010	2011	2012	2013	2014
Total	331,632	345,113	357,227	383,436	384,871
Including:					
State owned enterprises	64	65	60	56	40
Cooperatives	509	556	525	497	513
Including:					
Joint-Stock companies	42	44	42	40	38
Collective –peasant farms	93	95	99	100	102
Agriculture cooperatives	374	417	384	357	373
Farmers (privates)	331,059	344,492	356,642	382,883	384,318

407. The complex environmental and economic activity conditions in Kyrgyzstan lead to a complex situation with soils. According to the data of the State Design Institute on Land Management “Kyrgyzgiprozem” as of 2011, about 4,272,000 ha were classified as stony soils, saline soils made up 1,332,900 ha and another 650,600 ha were subjected to salinization. Soils water erosion spread out on 5,699,800 ha and 5,789,300 ha were subjected to wind erosion.⁹⁶ Fertile soils wash out on sloping lands – which in Kyrgyzstan are more than 90% of the territory. The area of lands with unsatisfactory ameliorative conditions has increased compared to 1990 by about 20,000 ha. The main reason is the increase of groundwater level in irrigated lands, which occurred due to progressive failure of the drainage network associated with a lack of adequate funding for its proper maintenance and operation.⁹⁷

408. Another issue is soil compaction as a result of repeated passage of heavy machinery during tillage on arable lands and growing number of cattle instead of traditional sheep on pastures. The density of the soil in many cases reaches 1.5 – 1.7 g/cm³, which is an unfavorable condition for normal growth and development of cultivated plants and natural grass. Modern soil conservation techniques such as minimum or zero tillage are not widely used in Kyrgyzstan. As a result of non-compliance with the timing of tillage, tillage without taking into account physical maturity leads to the destruction of soil structure. The loss of agronomic valuable structure is observed everywhere on all soil types in the zone of intensive agriculture. These data shows that the degradation covers more than half of highly valuable agricultural lands of Kyrgyzstan.

409. *Livestock-Wildlife Disease Transmission:* Disease transmission between domestic and wild animals is another potential problem. Among the known epizootic diseases are foot and mouth disease, ovine rinderpest, sarcoptic mange, contagious caprinae pleuropneumonia, and others. In Kyrgyzstan so far major die-offs caused by disease transmission between domestic and wild animals are not known, but health of wildlife and domestic animals needs to be continuously monitored, especially where wildlife habitats overlap with pastures used by livestock. Wild animals are sometimes reservoirs or vectors of diseases in situations with complementary use of pasturelands by livestock and wild animals. Because of the higher selection pressure wild animals are exposed to, and their lower population densities, cases of disease transmission from wild to domestic animals under the circumstances of Kyrgyzstan are less likely

⁹⁵ National Statistics Committee, 2015.

⁹⁶ Draft Programme of Soils Fertility Conservation and Improvement for 2012-2015.

⁹⁷ Ibid.

than transmissions between domestic animals which are kept in high densities and sometimes transported over long distances. Presence of wild animals in a landscape used by humans can also pose the risk of transmission of diseases between wild animals and humans. In Kyrgyzstan this potentially can concerns rabies (sometimes with domestic animals as vector or caused by handling of killed carnivores) and plague (from reservoirs in marmot colonies).⁹⁸

410. *Mining Industry Development:* Kyrgyzstan is rich in mineral resources and has a developed mining industry. Most of the resources are located at a relatively high altitude (including copper and gold mines) and pose a direct threat to vulnerable mountain ecosystems, destroying the habitats of animals and plants, polluting streams and groundwater. Open mining destroys the vegetation cover and blasting operations are a significant factor of concern for wildlife, particularly during vulnerable times such as nesting periods. The increasing economic importance of the mining sector is a potential threat to the ecosystems of the Western Tian Shan, including potentially impacting the habitats of snow leopard and their prey. In some cases mining is considered a threat to the integrity of protected areas. For potential future development of the mining industry there are indications that the government has begun making decisions affecting protected area management and establishment in relation to mining considerations. An amendment (Law number 159, August 9th, 2012) to the national Land Code included a new category of “land for the use of mineral resources”. This includes lands of protected areas, where there are previously explored mineral deposits. The appearance of this new category of land is not conducive to the preservation of ecosystems of the snow leopard, but rather creates great conditions for their destruction.

411. As of December 31, 2014 the total number of operational licenses in Kyrgyzstan was 1,347, including:

- As per minerals: gold: 174; metals: 74; non-metallic minerals: 576; coal: 240; oil and gas: 57; underground water: 226.
- As per subsoil's use activities: Development/extraction: 794; Exploration: 357; Search: 196.⁹⁹

412. Mineral resources base of the country are present as deposits of precious, nonferrous and rare metals, non-metallic raw materials, fuel and energy resources of fresh groundwater and thermal mineral waters. Gold mining is a priority of the mining sector. On the state balance of the Kyrgyz Republic as of January 1, 2013, 42 gold and complex deposits include the following proven reserves: ore - 166.4 million tons, and gold - 616.4 tons. In the territory of Western Tian Shan the gold deposits are presented in gold-bearing sands which are located directly in the beds of rivers, the development of which are cut floodplain forests, which leads to an imbalance in the environment, land degradation, water-regulating functions are broken, destroyed river banks.¹⁰⁰

413. There about 171 licenses were awarded to private companies for different purposes in Jalal-Abad Province, including: 103 for development, 35 for exploration and 33 for search. Rock salt deposits are located in Shamshykal and Toguz-Toro fields. Common salt stock is more than 100 million tons. Production is carried out by open pit method. In Chatkal rayon there are large deposits of wollastonite with estimated reserves of 40 million tons, which is a raw material for the production of high-quality sanitary ware and ceramic products.

414. *Transport infrastructure development:* Kyrgyzstan has begun construction of the Alternative North-South Road (see Figure 12 below). It will connect the north and south of Kyrgyzstan in addition to the existing Bishkek-Osh road. The 433-kilometer alternative road will be built in three phases. Phase 1 (154 km) will connect the villages of Kyzyl Jyldyz and Aral, and the village of Kazarman and the city of Jalal-Abad in the south. The cost of Phase 1 is \$400 million USD. Phase 2 (96 km) will connect Aral and Kazarman, and will build a 3,700-meter tunnel. The cost of Phase 2 is \$284 million USD. Phase 3 (183 km) will connect the city of Balykchy at Lake Issyk-Kul and Kyzyl Jyldyz village. The cost of Phase 3 is \$166 million USD.

415. The China Road and Bridge Corporation is the general contractor of the project. In September 2013, at the meeting of the Council of Heads of Member States of the Shanghai Cooperation Organization, the Export-Import Bank of China signed the \$400 million loan agreement on Alternative North-South Road Project in Kyrgyzstan with the Kyrgyz Finance Ministry.

416. Beside improved transport access and better integration of remote now districts of Kochkor, Jumgal and Toguz-Toro to national economic development, the construction of this Alternative Road will greatly improve the transport capacity of China exporting goods and materials to Uzbekistan, Tajikistan,

⁹⁸ Michel, 2015.

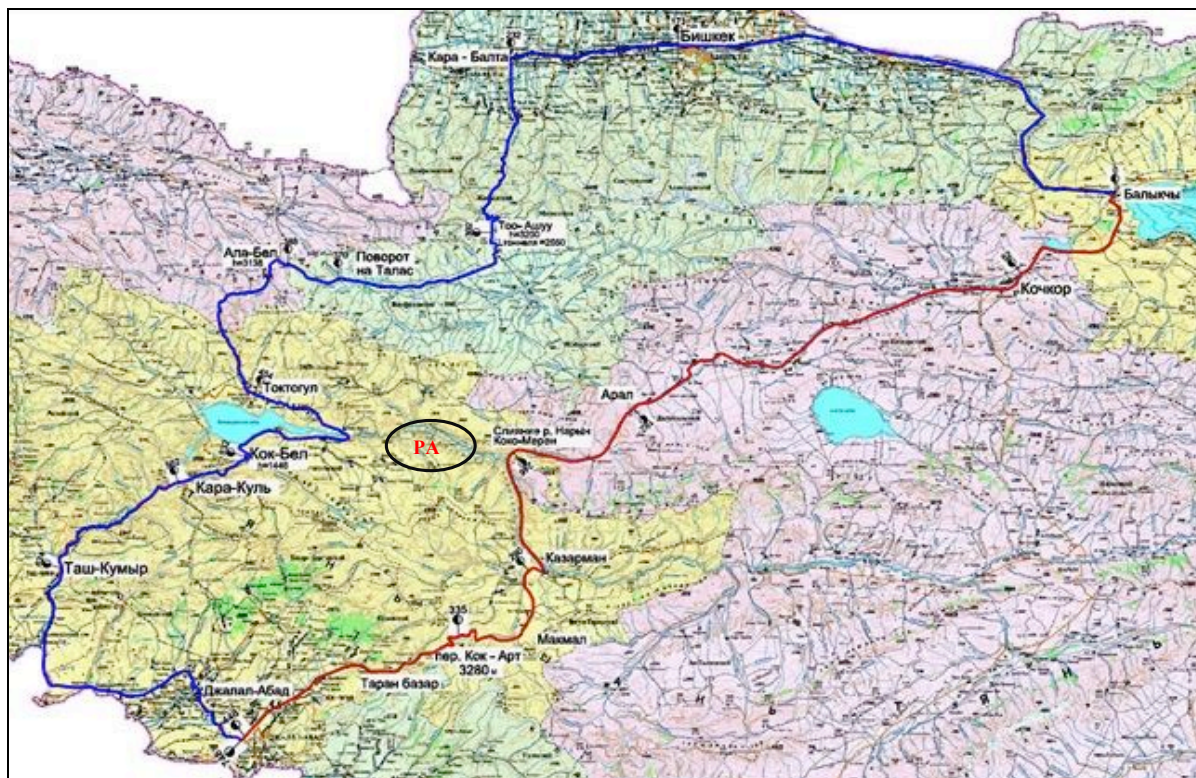
⁹⁹ www.geology.kg, Report of the State Agency on Geology and Mineral Resources on 2014.

¹⁰⁰ Environment management plan of Jalalabat oblast, 2011.

Kazakhstan and other surrounding countries and even Europe through the land access in Kyrgyzstan, and have a great and profound significance to further promote the trade contacts between China and Kyrgyzstan and drive the rapid growth of regional economy.

417. For this construction, which in the first turn is considered to enhance the national transport security of Kyrgyzstan, about 80 ha from the Kyrgyzstan PA network was sacrificed by designating lands from the Saimaluu-Tash State Nature Park in the Western Tian Shan. As per evidence of local residents and PA rangers, the wildlife disturbed by the conducted blast works on the road construction site started migrating to the more remote quite places, including the new Kan-Achuu Park.

Figure 12 Map of the New Alternative North-South Road (in red) in the Kyrgyz Republic



418. *Climate Change:* According to climate change experts' projections, by 2100 in Kyrgyzstan there is expected an increase of annual temperature in the range 2.5-3.0°C, and an increase in annual precipitation by 10-15% in comparison with the baseline period 1961-1990. The length of the growing period is expected to increase by 37 days. At the same time, the lower boundary of forest zones at 600-1,400 m will shift upward by 150-200 m, and at 1,600-2,600 m will remain the same. In the southwestern climatic region, zone borders located at altitudes of 1,600-2,400 m will shift upward by 150-200 m, and at altitudes of 2,400-2,800 m they will not change. The growing season will increase by 18-38 days. 101 Climate change modeling for forest ecosystems indicates that a 1.5°C change in temperature will lead to a partial change in the distribution of ecologically and economically significant species such as juniper, spruce and walnut, and a 4°C change will result in a complete displacement of those forests types, meaning the loss of ecosystem service environmental functions. Average annual temperatures across the region have already increased since the mid-20th century by 0.5°C in the south to 1.6°C in the north. Climate change impacts have already been identified, such as melting glaciers in high elevation zones. Climate change models further predict a loss of between 31-78% of glacier volume in Central Asia, which will affect the sensitive mountain ecosystems of the Western Tian Shan. The flora and fauna most vulnerable to global climate change are those that have small ranges and fragile populations, i.e. those

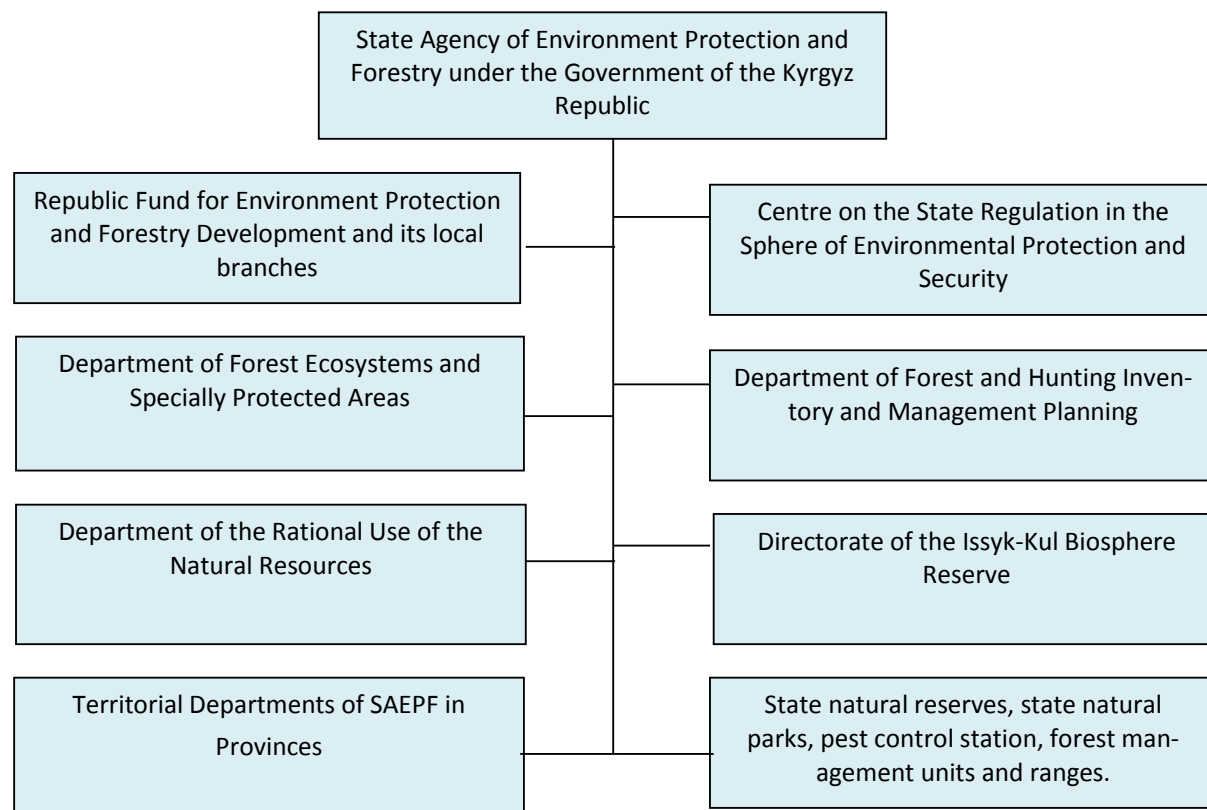
⁷ O.V. Kolov. Climate change and its impact on the forest ecosystems of the Kyrgyz Republic, KRSU Bulletin No.6, 2003.

⁸ Priorities for Adaptation to Climate Change in the Kyrgyz Republic until 2017

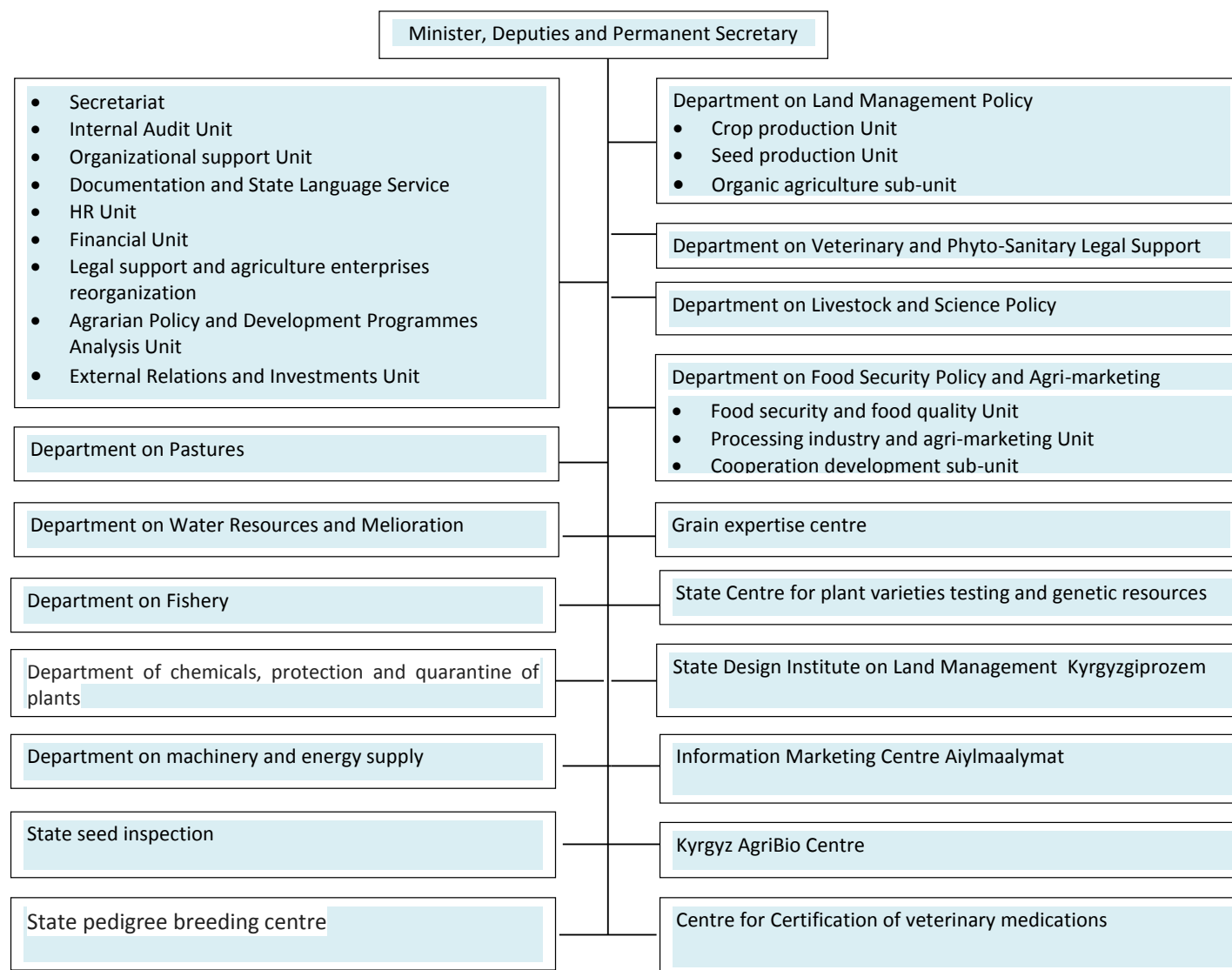
species included into the Red Book, and rare or endemic species with shrinking habitats. According to the scenario assessments of climate change for Kyrgyzstan developed by L.I. Titova (2002), there will be a significant shift of the boundaries of natural vegetation belts due to expansion of desert and steppe ecosystems, including steppe meadow ecosystems. Therefore significant changes in species composition of the biota are expected. In addition, changes in precipitation patterns are likely to have negative effects on agriculture, including pastures and agricultural crops that require irrigation.

419. Border Control Activities: The Western Tian Shan is a complex border region involving the countries of Kazakhstan, Kyrgyzstan, and Uzbekistan. The governments of these countries maintain a strong border presence along their national borders in the Western Tian Shan, which in many cases go in high-altitude areas, covering snow leopard habitat. This increases the number of border posts and the number of employees at the borders, who are also involved in illegal hunting. In some cases the strengthening of borders is achieved by installing barbed wire, which prevents the migration of wild animals.

Annex 7: SAEPF Organogram



Annex 8: Ministry of Agriculture, Processing Industry and Melioration Organogram



Annex 9: Feasibility of the Alternative Livelihoods Program Supported through Microcredits

Socio-Economic Overview

1. The project plans to implement an alternative livelihoods support scheme under Output 2.5, utilizing a micro-credit and micro-grant approach. The strategy behind this output is multi-fold. The project aims to 1. Demonstrate opportunities to reduce pressure on ecosystems by providing opportunities for local communities to increase incomes without increasing livestock; 2. Demonstrate sustainable land management and sustainable forest management techniques in arable, pasture, and forest land; 3. Increase local community awareness and understanding of critical land and natural resource sustainability issues; and 4. Enhance local stakeholder buy-in and support for the establishment of protected areas, demonstrating that protected areas can leverage economic and sustainable development opportunities.
2. The communities targeted are the same as the four aiyl aimaks (a rural district is a municipal unit with local self-governments (Aiyl Okmotu - AO) consisting of several villages) targeted for support to the Pasture Management Committees to improve SLM: Cholpon-Ata and Kyzyl-Ozgorush in Toktogul District, and Kok-Irim and Atai in Toguz-Toro District. These four communities have been identified based on their proximity to the newly established SNPs of Alatai and Kan-Achuu. These four AOs are shown in the main project document in Figures 8 and Figure 9 (p. 49). Detailed information on the characteristics of these regions is also included in Annex 3 on Local Context.

AO	Area (ha)	Rural Settlements	Women	Men	Approximate Location
Cholpon-Ata	141,777	8	3,562	3,802	41°55'40.9"N 72°35'30.6"E
Kyzyl-Ozgorush	67,694	10	5,417	5,526	41°39'02.1"N 73°24'38.5"E
Kok-Irim	54,361	2	1,703	1,782	41°27'19.8"N 73°51'48.4"E
Atai	27,735	3	1,020	1,127	41°20'38.6"N 73°51'23.2"E

3. In Toktogul District approximately 55.7% of the population is considered at the poverty level. In 2014 the average monthly salary in the district was 8,909 soms (\$132 dollars). Only approximately 20% of the population is linked to centralized water supply systems, significantly as a result of the 1992 earthquake, which destroyed 90% of the water system of the district. Agriculture is by far the main economic activity in the region, particularly in Cholpon-Ata and Kyzyl Ozgorush AAs, since industrial activities in the district are concentrated in the main town of Toktogul. Cholpon-Ata is approximately 45 minutes to the town of Toktogul, while Kyzyl-Ozgorush is more than an hour from Toktogul town. The village of Cholpon-Ata is approximately 34 km, or 35 minutes by car, from the main road, which also happens to be the main highway to Bishkek from Jalal-Abad city. The village of Kyzyl Ozgorush is approximately 25km, or 40 minutes by car to the same main highway.
4. In Toguz-Toro District only 3 of the 14 settlements have centralized water supply systems. 918 poor families in the district received social aid, out of the total population of 22,398 people. Agriculture also plays the major role in economic life in the region, though a higher share of the region's economic output (approximately 25% of the regional economic production) can be considered industrial, as there is a gold mining enterprise in the region. The village of Atai is

approximately 3 km, or 5 min by car, from the currently under-construction Osh-Bishkek Alternative Highway. Atai is also approximately 35 minutes from the largest town in the district, Kazarman. There is not a village of Kok-Irim in Kok-Irim AO, as the two main villages are Birdik and Aral. The village of Aral is directly along the main highway, and the village of Birdik is just across the river; both are approximately 15 km (25 min by car) from the town of Kazarman.

5. Although all of the targeted AOs are relatively close to major national highways, the general location of the districts they're in is still generally in the central southwestern part of the country, and is it approximately 4-7 hours by car in any direction to reach the major urban areas of Bishkek, Jalal-Abad, and Osh.

Micro-credit and micro-grant experience in Kyrgyzstan

6. Kyrgyzstan has good national experience implementing micro-credit and micro-finance schemes, and there are a number of national or sub-national institutions that specialize in providing this type of finance. Micro-crediting institutions plan an important role in rural development of Kyrgyzstan. Many of these companies and banks have experience in collaboration with UNDP for new products, including those oriented to environmental issues and sustainable development; the currently implemented UNDP-GEF MSP in the Central Tian Shan includes a micro-credit activity. There are over 110 branches of microcredit institutions in the country, which creates an important foundation for the sustainable livelihoods component of this project. Micro-credit institutions in Kyrgyzstan have typically reported good success, with low default rates, especially among women. Typical micro-credit investments include new farm equipment, etc. However, there has been some negative attention on micro-credit institutions in the media in Kyrgyzstan in recent years due to increasing default rates.
7. In addition, the GEF Small Grants Program has been successfully operating in the country for 15 years, since 2001, with almost 300 projects implemented.

Alternative sustainable livelihood options assessed during the PPG phase

Ecotourism and Recreation				
A/O	Strengths	Weaknesses	Opportunities	Threats
Cholpon-Ata	Excellent location and local topography for active adventure tourism – town sits below picturesque cliffs along a river, a short drive from mountains and Alatau SNP. Good opportunities for hiking, mountain biking, horse-riding, river rafting or kayaking, bird-watching, etc.	Local infrastructure remains underdeveloped, little local experience with establishing and managing tourism businesses, marketing, location is 5+ hours from Bishkek and other areas of the country are better known for tourism; tourism is a seasonal activity; currently limited opportunities for trophy-hunting tourism due to absence of argali population	Excellent opportunities to develop multiple types of adventure or eco-tourism; not far from the main road and from Toktogul Town; likely future location of Alatau SNP headquarters office; location near Toktogul reservoir also provides the opportunity for potential marketing of multiple types of water-based tourism, such as boating, wind-surfing, kite-surfing, kayaking, canoeing, fishing, etc.; Kyrgyz	Poor roads and other infrastructure; lack of capacity for effective marketing due to limited access to internet, media, etc.

Ecotourism and Recreation				
A/O	Strengths	Weaknesses	Opportunities	Threats
			Community-based Tourism Association not active in the region yet - Members of KCBTA typically earn about \$3-5,000 USD per season. However, for new destinations, this can be less.	
Kyzyl-Ozgorush	Accessible to Kan-Achuu SNP from Toktogul district side, which may be more logistically suitable for visitors rather than traveling to the more-remote Toguz-Toro district side; some potential for trophy hunting tourism for ibex	Limited attractiveness for tourism	Limited natural opportunities for tourism	Poor roads and other infrastructure, limited local capacity for effective tourism development and management
Kok-Irim	Closest AO to Kan-Achuu SNP, location on river, proximity to new national highway, nearby domestic airport in Kazarman; already-established Kazarman local Community-based Tourism group relating to Saimaluu-Tash; some potential for trophy hunting tourism for argali or ibex in Fergana ridge	Long distance from major urban areas (5-7 hours); region not known for tourism	Location along new national highway is expected to increase accessibility and number of travelers through the region; closest AO to new Kan-Achuu SNP, therefore any tourists who want to visit the SNP will pass through the community	Poor roads and other infrastructure, limited local capacity for effective tourism development and management
Atai	Proximity to new national highway; closest AO to Saimaluu-Tash SNP, which is a cultural and natural World Heritage Site, nearby domestic airport in Kazarman; already-established Kazarman local Community-based Tourism group relating to Saimaluu-	Long distance from major urban areas; region not known for tourism	Potential to leverage Saimaluu-Tash SNP for opportunities related to archeological, historical, cultural, and religious tourism, along with aspects such as trekking	Poor roads and other infrastructure

Ecotourism and Recreation				
A/O	Strengths	Weaknesses	Opportunities	Threats
	Tash; some potential for trophy hunting tourism for argali or ibex in Fergana ridge			

Collection of Medicinal Plants and NTFPs (mushrooms, berries, etc.)				
A/O	Strengths	Weaknesses	Opportunities	Threats
Cholpon-Ata	Good potential for collection of these resources, as region includes a good amount of forest areas	Potential for expansion of local market for these products may be limited; time required for collection and processing may not be available to residents whose main livelihoods are highly dependent on agriculture	The district administrative center of Toktogul is not far, and products could be easily transported for sale in the larger inhabited area	Access to mountain forests is dependent on infrastructure, including bridges across streams and rivers that flood in the spring
Kyzyl-Ozgorush	Alpine pasture-based collection potential is good	Limited access to forest areas; potential for expansion of local market for these products may be limited; time required for collection and processing may not be available to residents whose main livelihoods are highly dependent on agriculture	Larger local population provides the opportunity to access and expand the local market	Access to raw materials in alpine pastures is dependent on infrastructure, including bridges across streams and rivers that flood in the spring
Kok-Irim	Alpine pasture-based collection potential is good	Limited access to forest areas; potential for expansion of local market for these products may be limited; time required for collection and processing may not be available to residents whose main livelihoods are highly dependent on agriculture	Construction of new national highway through the region is expected to provide the opportunity to expand local markets	Access to raw materials in alpine pastures is dependent on infrastructure, including bridges across streams and rivers that flood in the spring
Atai	Alpine pasture-based collection potential	Limited access to forest areas;	Construction of new national highway	Access to raw materials in alpine

Collection of Medicinal Plants and NTFPs (mushrooms, berries, etc.)				
A/O	Strengths	Weaknesses	Opportunities	Threats
	is good	potential for expansion of local market for these products may be limited; time required for collection and processing may not be available to residents whose main livelihoods are highly dependent on agriculture	through the region is expected to provide the opportunity to expand local markets	pastures is dependent on infrastructure, including bridges across streams and rivers that flood in the spring

Beekeeping, plus secondary processing of honey and beeswax products				
A/O	Strengths	Weaknesses	Opportunities	Threats
Cholpon-Ata	Beekeeping is a common local activity and residents are generally familiar with this as an economic activity	Local market for raw honey is likely mostly saturated; limited potential additional or alternative income generated	Growing tourism market for processed honey and beeswax products, particularly in larger urban areas	Climate change and disease can impact bee colonies
Kyzyl-Ozgorush	Beekeeping is a common local activity and residents are generally familiar with this as an economic activity	Local market for raw honey is likely mostly saturated; limited potential additional or alternative income generated	Growing tourism market for processed honey and beeswax products, particularly in larger urban areas	Climate change and disease can impact bee colonies
Kok-Irim	Beekeeping is a common local activity and residents are generally familiar with this as an economic activity	Local market for raw honey is likely mostly saturated; limited potential additional or alternative income generated	Growing tourism market for processed honey and beeswax products, particularly in larger urban areas	Climate change and disease can impact bee colonies
Atai	Beekeeping is a common local activity and residents are generally familiar with this as an economic activity	Local market for raw honey is likely mostly saturated; limited potential additional or alternative income generated	Growing tourism market for processed honey and beeswax products, particularly in larger urban areas	Climate change and disease can impact bee colonies

Secondary Processing of Agricultural Products				
A/O	Strengths	Weaknesses	Opportunities	Threats
Cholpon-Ata	Close to main highway for transport to larger markets	May require larger investments; limited availability of some important infrastructure and facilities, such as	There is currently limited secondary processing of agricultural products (e.g. meat and dairy) in the region, and	Potential regulatory and bureaucratic delays in establishing small-scale processing facilities; local

Secondary Processing of Agricultural Products				
A/O	Strengths	Weaknesses	Opportunities	Threats
		large-scale refrigeration;	therefore there are a variety of opportunities to enhance the local value-chain, increasing incomes while limiting the increase in livestock in pastures	cultural attitudes and experience may be resistant to shifting to approaches that are not well-known, or that deviate from traditional agricultural practices
Kyzyl-Ozgorush	Close to main highway for transport to larger markets	May require larger investments; limited availability of some important infrastructure and facilities, such as large-scale refrigeration;	There is currently limited secondary processing of agricultural products (e.g. meat and dairy) in the region, and therefore there are a variety of opportunities to enhance the local value-chain, increasing incomes while limiting the increase in livestock in pastures	Potential regulatory and bureaucratic delays in establishing small-scale processing facilities; local cultural attitudes and experience may be resistant to shifting to approaches that are not well-known, or that deviate from traditional agricultural practices
Kok-Irim	Close to main highway for transport to larger markets	May require larger investments; limited availability of some important infrastructure and facilities, such as large-scale refrigeration; not fully-reliable power availability	There is currently limited secondary processing of agricultural products (e.g. meat and dairy) in the region, and therefore there are a variety of opportunities to enhance the local value-chain, increasing incomes while limiting the increase in livestock in pastures	Potential regulatory and bureaucratic delays in establishing small-scale processing facilities; local cultural attitudes and experience may be resistant to shifting to approaches that are not well-known, or that deviate from traditional agricultural practices
Atai	Close to main highway for transport to larger markets	May require larger investments; limited availability of some important infrastructure and facilities, such as large-scale refrigeration; not fully-reliable power availability	There is currently limited secondary processing of agricultural products (e.g. meat and dairy) in the region, and therefore there are a variety of opportunities to enhance the local value-chain, increasing incomes while limiting the increase in livestock in pastures	Potential regulatory and bureaucratic delays in establishing small-scale processing facilities; local cultural attitudes and experience may be resistant to shifting to approaches that are not well-known, or that deviate from traditional agricultural practices

Shifting to More High-Value and Sustainable Forms of Agriculture				
A/O	Strengths	Weaknesses	Opportunities	Threats
Cholpon-Ata	Close to main highway for transport to larger markets	Operational approach with clear linkages to environmental benefits will need to be clearly established	Numerous investment opportunities for higher efficiency farm equipment, and other agricultural capital investments, such as high quality seeds, etc.	Introducing new agricultural approaches often carries higher risk than established practices; local cultural attitudes and experience may be resistant to shifting to approaches that are not well-known, or that deviate from traditional agricultural practices
Kyzyl-Ozgorush	Close to main highway for transport to larger markets	Operational approach with clear linkages to environmental benefits will need to be clearly established	Numerous investment opportunities for higher efficiency farm equipment, and other agricultural capital investments, such as high quality seeds, etc.	Introducing new agricultural approaches often carries higher risk than established practices; local cultural attitudes and experience may be resistant to shifting to approaches that are not well-known, or that deviate from traditional agricultural practices
Kok-Irim	Close to main highway for transport to larger markets	Operational approach with clear linkages to environmental benefits will need to be clearly established	Numerous investment opportunities for higher efficiency farm equipment, and other agricultural capital investments, such as high quality seeds, etc.	Introducing new agricultural approaches often carries higher risk than established practices; local cultural attitudes and experience may be resistant to shifting to approaches that are not well-known, or that deviate from traditional agricultural practices
Atai	Close to main highway for transport to larger markets	Operational approach with clear linkages to environmental benefits will need to be clearly established	Numerous investment opportunities for higher efficiency farm equipment, and other agricultural capital investments, such as high quality seeds, etc.	Introducing new agricultural approaches often carries higher risk than established practices; local cultural attitudes and experience may be resistant to shifting to approaches that

Shifting to More High-Value and Sustainable Forms of Agriculture				
A/O	Strengths	Weaknesses	Opportunities	Threats
				are not well-known, or that deviate from traditional agricultural practices

Operational Approach

8. The project will work in partnership with the AOs to solicit proposals from the community members for promising micro-credit / micro-grant proposals that have the opportunity to provide economic and biodiversity or SLM/SFM benefits. Upon start-up the project will immediately develop an information and application package, drawing on best practices of the GEF SGP, other UNDP-GEF projects, and based on lessons and experience from other micro-crediting initiatives in the country. The project's local coordinator will make at least one presentation in each AO to the community about the criteria for the scheme, and will follow-up with all interested individuals to ensure sufficient number and quality of applications. The project will establish a selection committee, with appropriately representative membership; review of applications for a particular AO will not include representatives from that AO, to avoid any conflict of interest.
9. Administration of the scheme will be part of the normal project management undertaken by project staff, and will not require additional salaries or expenses (other than minor accounting or bookkeeping expenses). In Toktogul the project has the opportunity to cooperate with the already existing local development fund, tied to the hydropower reimbursements.
10. Loans or grants will be given in the range of \$1,000 - \$5,000 USD. The project currently budgets \$50,000 per AO, implying approximately 10-30 micro-projects per A/O, depending on the average size awarded.
11. The alternative livelihoods development fund is seen as a sinking fund, and is not anticipated to be self-sustaining, though if a partial micro-credit approach is taken the life of the fund may be extended.

Risks and Challenges to the Micro-Credit / Micro-Grant Activity

12. Working with existing micro-credit institutions will have some risks. Typically these types of schemes in many GEF projects have faced some challenges with absorption capacity of the local stakeholders within the timeframe of the project. Depending on the exact funding modality chosen, micro-credit institutions may require a fee of 10% for their services in administration of grants. Alternatively, current interest rates for micro-finance schemes in the country are high, at 10-30+%.
13. Based on further discussions with the micro-credit institutions the project will determine the lowest-risk financial model to be used.

Annex 10: Capacity Needs Assessment Summary

420. The capacity needs have been assessed to identify performance requirements and the knowledge, skills, and abilities needed by protected areas in pilot districts and Jalal-Abad province and other actors workforce to achieve the overall goal of conservation of globally significant biodiversity and promotion of the sustainable livelihood.

421. Analysis of the reports, management effectiveness of protected areas and interviews with protected areas staff, game managers, foresters, land users and other stakeholders, including law enforcement bodies and academia has determined the certain level of gaps between performance required and current performance in terms of biodiversity conservation.

422. A range of existing capacity development interventions have been undertaken within Kyrgyzstan aiming to build institutions and human capacity which offer both lessons and opportunities for the conservation sector. Substantial capacity development commitments have already been made by the UNDP in relation to the biodiversity conservation and a range of other commitments for capacity development continue to be provided by other development partners. Despite these initiatives, the capacity development needs for the sector are still significant and multi-faceted and significant resources will need to meet these needs.

423. A capacity needs assessment was undertaken within the PPG stage of the project “Conservation of globally important biodiversity and associated land and forest resources of Western Tian Shan mountain ecosystems to support sustainable livelihoods.” Capacity development has been considered from the perspective of human capital, institutional capacity and the enabling environment (Table below).

424. The findings from the capacity development needs assessment will be used to develop training programs during the implementation stage.

Capacity assets and challenges / gaps

425. This assessment identifies a number of examples of existing capacity assets of the conservation/forest/pasture/wildlife law enforcement sectors:

- Human resources in the government and local authorities, NGOs and scientific institutions and in the private sector - often working with limited resources and in difficult and logistically challenging circumstances;
- Increasing support for the proposed project within governmental institutions (examples being the budget allocated by the SAEPF to the new PAs infrastructure;
- Using modern wildlife monitoring techniques at national level;
- Increasing focus on developing training programs with courses relevant to the conservation sector for different range of stakeholders (WWF, Panthera, FFI, NABU);
- The range of sector stakeholders interested to collaborate to improve the biodiversity and livelihood across country including NGOs (local and international), the private sector and donors;
- Examples of some partners having committed to support BD/SFM/SLM (such as IFAD, GIZ, WB, FAO and NGOs community).

426. This assessment also finds examples of capacity challenges and gaps including:

- Inadequate staff numbers at national level, posing challenges for supervision and support of sub-national staff and challenges to succession of staff.
- Inadequate numbers of staff at local level, with limited office and logistic facilities.
- Low capacity for PAs management and information systems on PAs.
- Low salaries, weak HR systems and lack of monitoring job performance of within the state institutions posing challenges for motivation.

- Decrease in number of scientific staff of PAs at province level;
- Challenges for PAs and leskhozoes staff to access computers and the internet;
- Limited knowledge on financial planning and sustainability of PAs and limited attention and resources allocated for PAs promotion.
- There has been no clear strategic approach to the building of a strong capacity for PAs management.
- Lack of knowledge on forest certification system;
- Limited knowledge of sustainable practice of pasture management on the local level and impact on wildlife;
- Lack of coordination of wildlife conservancy-related initiatives in country and using incompatible methods of monitoring.
- Weak inter-sectoral communication on wildlife crime.
- Poor understanding the concept of Ecosystem services and their contribution to the local development.
- Tertiary and vocational education and training institutions facing difficulties in recruiting and retaining qualified faculty and instructors.
- Environmental sciences is much undervalued as a profession, leading to limited priority for budget allocation and the difficulty to attract the best students on to its courses.

Target groups

427. The key groups to be included into the capacity building program are the following:

1. Two newly established nature parks “Alatai” and Kan-Achuu” staff
2. Protected areas staff of Jalal-Abad province
3. Forest enterprises (leskhozoes) of two pilot districts Toktogul and Toguz-Toro
4. Forest enterprises (leskhozoes) of Jalal-Abad province
5. Department of Forest Ecosystems and PA of State Agency of Environment Protection and Forestry
6. Department of Rational Use of Natural Resources of districts and its local representatives in Toktogul and Toguz-Toro
7. District State Administration and self-governing authorities
8. Representatives of private, public and community-based hunting organizations of two districts
9. Local communities of pilot ayl aimaks involved into joint patrolling
10. Pasture committees
11. Wildlife conservancy NGOs
12. Law enforcement bodies (custom and border services, prosecution)
13. Institute of Biology and Soil of the National Academy of Sciences
14. Universities and schools

Capacity Development Needs

Target group	Capacity development priorities	Notes
Two PAs Alatai and Kan-Achuu staff	<p><u>Human</u></p> <p>Training on following thematic aspects:</p> <ol style="list-style-type: none"> 1) Protected areas management The training program on protected areas management based on IUCN principles will focus on aspects: strategic planning, organization development, management plan; principles of the organization of the planning process; stakeholder participation in the planning process; formulating goals and objectives of protected areas based on the criteria SMART; preparation of operational plans for the targeted programs; monitoring and evaluation of the work on the implementation of the management plan; communication strategy and others topics. 2) Financial planning and implementing a strategy for increasing the financial income (business plans) of the PAs 3) Biodiversity monitoring. Together with Academy of sciences the training programme for the PAs staff will be developed on the indicators of biodiversity development, the chronicles of nature, the survey of wildlife using the modern devices and wildlife and PAs database management 4) Law enforcement (legislation, law enforcement techniques, wildlife crime investigation, judicial systems, prosecution, and application of equipment for the registration of crimes) <p><u>Institutional</u></p> <ol style="list-style-type: none"> 1) Development of Management plans, including business plan 2) Development of biodiversity monitoring plan, initiation of Chronicles of Nature 3) Provision of inventory of BD and mapping 4) Development of information PAs database 5) Technical infrastructure development 6) PR communication strategy 7) Annual plan of joint patrolling 8) Analyze the regional management plans of the pilot districts, communities and forestries plans to implement Biodiversity Conservation, Sustainable Land Management and Sustainable Forest Management issues 9) Revised hunting policies of prey at national level. 	4 training during 4 years

Target group	Capacity development priorities	Notes
	<u>Enabling environment</u> <ol style="list-style-type: none"> 1) Establishment of Public Management Boards 2) Agreements on joint patrolling, 3) Agreements on pasture regimes and ecological corridors 4) Amendment on ecological corridors to be included to the Law on Protected Areas 	
Leskhozes of pilot districts Toktogul and Toguz-Toro and whole Western Tian Shan	<u>Human</u> Training on following: <ol style="list-style-type: none"> 1) Joint Forest Management (JFM) and Voluntary Sustainable Forest Management (SFM) 2) FSC - HCVF concept and regimes 3) Law enforcement in HCVF (including the involvement of all interest groups). <u>Institutional</u> <ol style="list-style-type: none"> 1) HCVF special regimes to be developed 2) Analyzed regional management plans of the pilot districts, communities and forestries plans to implement Biodiversity Conservation, Sustainable Land Management and Sustainable Forest Management issues 3) Training on SFM, SLM, and BD conservation issues <u>Enabling environment</u> <ol style="list-style-type: none"> 1) JFM Boards in Leskhozes of pilot districts Toktogul and Toguz-Toro 2) Revised legislation frameworks for HCVF integration 3) HCVF integrated into Forest management plans 	
Western Tian Shan PAs in Jalal-Abad Province	<u>Human</u> <ol style="list-style-type: none"> 1) Workshop on implementation the National Priorities on Biodiversity Conservation Action Plan, National Strategy of Snow Leopard Conservation, including the topics of conflict management and communities' involvement 2) Upgrade the experience in Financial planning, budget management, financial monitoring, controlling and reporting to increase the revenue of PAs (BioFin) and knowledge management 3) Training on management plans based on METT, application of participatory planning approaches and community inclusion to PAs management 4) Technical training on collecting, processing 	

Target group	Capacity development priorities	Notes
	<p>and managing the field data and providing the unified data to the national information system on PAs</p> <ol style="list-style-type: none"> 5) Training on communication strategy development, public relations, informational campaigning, public outreach 6) Workshop on Integration a separate section on snow leopard and its prey conservation in other WTS PAs management plans, including the buffer-quiet zones and corridors, as well as changes in their pasture management practices. 7) Workshops in WTS PAs to improve the system of patrolling, law enforcement and surveillance systems through the establishment of PAs' Public Management Boards, including all the stakeholders, and regularly information sharing with communities 8) Exchange visits of WTS PAs staff to another regions <p><u>Institutional</u></p> <ol style="list-style-type: none"> 1) Establishment of informational system on PAs 2) Provision of manuals, guidelines for the management plans development 3) Revised management plans including the business plans and single species conservation plans (snow leopard and prey) 4) Established the pool of internal trainers on PA management 5) Revised hunting policies of prey at national level. <p><u>Enabling environment</u></p> <ol style="list-style-type: none"> 1) Improve enabling framework for the biodiversity conservation and sustainable use, including PA system management. 2) Advocacy for fund allocation for PAs and development of financing mechanism for the PAs sustainability 	
Department of Forest Ecosystem and SPAs	<p><u>Human</u></p> <ol style="list-style-type: none"> 1) Develop capacities of the Department on Forest Ecosystems to manage the data of a unified national information system on Protected Areas 2) Workshop on impact of climate change on key species of biodiversity in Western Tian-Shan 3) All training referred to leskhozoes: <ol style="list-style-type: none"> a. Joint Forest Management (JFM) and 	Link to UNDP Rio Conventions project and National Academy of Sciences

Target group	Capacity development priorities	Notes
	<p>Voluntary Sustainable Forest Management (SFM)</p> <ul style="list-style-type: none"> b. FSC - HCVF concept and regimes c. Law enforcement in HCVF <p><u>Institutional</u></p> <ul style="list-style-type: none"> 1) Informational system on Protected areas to be established 2) HCVF special regimes to be developed 3) Updated mapping of snow leopard range and other factors at national level, based on a digital map of snow leopard habitat in Kyrgyzstan, with annotated recommendations for land use regimes in key areas of importance for snow leopard <p><u>Enabling environment</u></p> <ul style="list-style-type: none"> 1) Revised legislation frameworks for HCVF integration 2) HCVF integrated into Forest management plans 	
<p>Department of Rational Use of Natural Resources and representatives at local level</p>	<p><u>Human</u></p> <ul style="list-style-type: none"> 1) Provide training on snow leopard and prey international standards of monitoring 2) Provide training on sustainable hunting and conservancy and revise the management plans of hunting service providers in Western Tian Shan taking into account protected areas and land use in buffer zones and corridors. 3) Training on the best patrol practices, law enforcement, publicity of violations and community involvement on the national workshop <p><u>Institutional</u></p> <ul style="list-style-type: none"> 1) Updated mapping of snow leopard range and other factors at national level, based on a digital map of snow leopard habitat in Kyrgyzstan, with annotated recommendations for land use regimes in key areas of importance for snow leopard 2) Establish joint patrolling groups, develop their working plans and organize the joint patrol raids 3) Conduct the hunting grounds inventory and management planning in the targeted districts. 4) Develop and implement special hunting regimes for the buffer-quiet areas and wildlife corridors outside PAs in cooperation 	

Target group	Capacity development priorities	Notes
	<p>with local hunting grounds users and hunters</p> <ol style="list-style-type: none"> 5) Create and maintain an electronic database of hunters with tracking of violators. 6) Analyze the compliance of the new regimes with hunting licensing practice regarding ungulates to assure the sufficient population of the Snow Leopard prey and propose to improve this practice. 7) Updated mapping of snow leopard range and other factors at national level, based on a digital map of snow leopard habitat in Kyrgyzstan, with annotated recommendations for land use regimes in key areas of importance for snow leopard <p><u>Enabling environment</u></p> <ol style="list-style-type: none"> 1) Work on hunting policies of prey at national level – linked with previous activities in component 2 about influencing hunting lease policies, policies on hunting of Red List species, etc. 2) Clarification on roles and responsibilities of different actors at local level plus co-ordination mechanisms 3) Formalize cooperation of PAs with owners of hunting grounds for joint patrolling, monitoring and the exchange of data on biodiversity 4) Stimulate rangers and other field staff to identify poaching and illegal use of natural resources cases. 5) Integrate the concepts “buffer-quiet zones” and “ecological corridors” in the land, forestry, hunting and biodiversity conservation legislation 6) Conclude agreements with the relevant stakeholders on the buffer zones and corridors regimes compliance. 	
Local self-governments	<p><u>Human</u></p> <ol style="list-style-type: none"> 1) Workshops on sustainable development planning with consideration of BD, SLM, SFM aspects 2) Training on Buffer zones and corridors land use regimes. 3) Training on value of ecosystem services for the local development <p><u>Institutional</u></p> <ol style="list-style-type: none"> 1) Organize and support the work of new parks' Public Management Boards with the 	

Target group	Capacity development priorities	Notes
	<p>inclusion of all local stakeholders to develop and implement their working plans</p> <ol style="list-style-type: none"> 2) Analyze the regional management plans of the pilot districts, communities and forestries plans to implement Biodiversity Conservation, Sustainable Land Management and Sustainable Forest Management issues. 3) Develop the program and train on SFM, SLM, and BD Conservation issues the representatives of the District State Administration, self-governing authorities, pasture committees, forestries of the private sector and NGOs in the target areas. 4) Create the working groups for the integration of these issues into development plans. 5) Updated mapping of snow leopard range and other factors at national level, based on a digital map of snow leopard habitat in Kyrgyzstan, with annotated recommendations for land use regimes in key areas of importance for snow leopard <p><u>Enabling environment</u></p> <ol style="list-style-type: none"> 1) Clarification on roles and responsibilities of different actors at district and local levels plus co-ordination mechanisms 2) Support for establishing a formal agreement on the collaboration between the PAs, foresters, and pasture users including roles and responsibilities as well as the establishment of co-ordination mechanisms at local level. 3) Support for integrating biodiversity into development planning 	
Pasture committees of Toktogul and Toguz-Toro districts	<p><u>Human</u></p> <ol style="list-style-type: none"> 1) Develop WTS PAs capacities to integrate wild ungulates considerations into the pasture management plans of adjacent communities 2) Raise awareness of all the stakeholders the special land use regimes of the buffer zones and corridors. 3) Technical training on using informational tool for pasture management (Electronic Pasture Committee). <p><u>Institutional</u></p> <ol style="list-style-type: none"> 1) Identification of "buffer-quiet" zones and corridors for the pilot and other protected areas in Western Tian-Shan (maps and buffer zones' management regimes and agreement 	

Target group	Capacity development priorities	Notes
	<p>on borders with relevant self-governments, leskhozoes and hunting grounds owners and users, State Registration Service).</p> <ol style="list-style-type: none"> 2) Conduct inventory assessment of the biodiversity of the buffer- quiet zones and corridors in the areas outside the PAs with the potential sustainable non-timber forest products use. 3) Carry out joint raids to monitor the compliance of the buffer zones and corridors regimes. 4) Analyze the regional management plans of the pilot districts, communities and forestries plans to implement Biodiversity Conservation, Sustainable Land Management and Sustainable Forest Management issues. 5) Create the working groups for the integration of these issues into development plans. 6) Implement in Pasture Committees modern information system - Electronic Zhayyt Committee (Electronic Pasture Committee). 7) Conduct an inventory of forest pastures and develop management plans for forest pastures and grazing in the pilot leskhozoes and present the results at the national workshop 8) Carry out geo-botanic and economic analysis and analysis of ecosystem services and opportunities of reforestation in the Western Tian Shan. 9) Updated mapping of snow leopard range and other factors at national level, based on a digital map of snow leopard habitat in Kyrgyzstan, with annotated recommendations for land use regimes in key areas of importance for snow leopard <p><u>Enabling environment</u></p> <ol style="list-style-type: none"> 1) Integrate the concepts “buffer-quiet zones” and “ecological corridors” in the land, forestry, hunting and biodiversity conservation legislation 2) Conclude agreements with the relevant stakeholders on the buffer zones and corridors regimes compliance. 3) Support the development / improvement of pasture management plans in Pasture Committees. 	
Public and private hunting and wildlife conservancy	<p><u>Human</u></p> <ol style="list-style-type: none"> 1) Provide training on sustainable hunting and conservancy and revise the management plans of hunting service providers in Western 	The training package should be developed with inclusion of PAs staff, rangers of the Department of Rational Use of

Target group	Capacity development priorities	Notes
organizations of Toktogul and Toguz-Toro districts	<p>Tian Shan taking into account protected areas and land use in buffer zones and corridors.</p> <ol style="list-style-type: none"> 2) Training on the best patrol practices, law enforcement, publicity of violations and community involvement on the national workshop 3) Training on BD conservation issues the representatives of the District State Administration, self-governing authorities, pasture committees, forestries of the private sector and NGOs in the target areas. <p><u>Institutional</u></p> <ol style="list-style-type: none"> 1) Establish joint patrolling groups, develop their working plans and organize the joint patrol raids 2) Develop a package of equipment and logistics for anti-poaching groups – to consider: Equipment for two target SNP groups: equipment, GPS, radio, optics, camera traps, uniforms (equipment to be kept by PAs) 3) Conduct the hunting grounds inventory and management planning in the targeted districts. 4) Develop and implement special hunting regimes for the buffer-quiet areas and wildlife corridors outside PAs in cooperation with local hunting grounds users and hunters 5) Create and maintain an electronic database of hunters with tracking of violators. 6) Analyze the compliance of the new regimes with hunting licensing practice regarding ungulates to assure the sufficient population of the Snow Leopard prey and propose to improve this practice. 7) Create the working groups for the integration of these issues into development plans. 8) Updated mapping of snow leopard range and other factors at national level, based on a digital map of snow leopard habitat in Kyrgyzstan, with annotated recommendations for land use regimes in key areas of importance for snow leopard <p><u>Enabling environment</u></p> <ol style="list-style-type: none"> 1) Clarification on roles and responsibilities of different actors at local level plus co-ordination mechanisms 2) Formalize cooperation of PAs with owners of hunting grounds for joint patrolling, monitoring and the exchange of data on 	Natural Resources at the local level

Target group	Capacity development priorities	Notes
	biodiversity 3) Stimulate rangers and other field staff to identify poaching and illegal use of natural resources cases. 4) Integrate the concepts “buffer-quiet zones” and “ecological corridors” in the land, forestry, hunting and biodiversity conservation legislation 5) Conclude agreements with the relevant stakeholders on the buffer zones and corridors regimes compliance.	
Tourist operators	<u>Human</u> 1) Workshop on biodiversity conservation and value in tourist development. Opportunities to be identified for the strengthening of cooperation between nature protected areas system and tourists operators 2) Study tour for tourist operators managers <u>Institutional</u> 1) Agreements with PAs, SAEPF <u>Enabling environment</u> 1) Improve the co-ordination and information sharing with the private tourist sector 2) Make more opportunities for research and development for innovative touristic products	
Law enforcement bodies at the national, province and district levels	<u>Human</u> 1) Training on advanced wildlife related law enforcement for identification and prosecution of wildlife crime and controlling trade in snow leopard and other illegal wildlife goods, based on review of existing initiatives and best international practices 2) Training on canine-assisted wildlife crime monitoring <u>Institutional</u> 1) Support institutionalization of capacity development modules (training modules, etc.) into law enforcement agency action plans to ensure sustainability 2) Regulations and working plans for the sustainable cooperation between agencies. 3) Field-based technical capacity for wildlife law enforcement. Enhancement of field law enforcement capacity - potential equipment,	

Target group	Capacity development priorities	Notes
	<p>etc. to support enforcement</p> <p>4) Set up the unified reporting system on wildlife crime</p> <p><u>Enabling environment</u></p> <p>1) Operational and institutionalized inter-agency cross-sectoral cooperation mechanism / agreements / MOUs among the relevant agencies for snow leopard-related law enforcement and joint actions on illegal snow leopard trade.</p>	
Local communities	Create local micro-grant committees, develop and approve the rules of operation, selection criteria, application forms, rules for reporting, rules of monitoring and control (or enter into contracts with the local financial institution(s) to implement micro-grant activities);	
National Academy of Sciences, Institute of Biology and Soil	<p><u>Human</u></p> <p>1) Provide training for protected area staff (strategically selected, among sites other than Alatai and Kan-Achuu PAs) on snow leopard and prey monitoring.</p> <p>2) Provide training for National Academy of Sciences on snow leopard and prey international standards of monitoring</p> <p><u>Institutional</u></p> <p>1) For national stakeholders responsible for snow leopard monitoring - establishment of monitoring protocols, provision of field kits, camera traps, other monitoring tools and approaches, etc. – for monitoring activities in national priority snow leopard landscapes. Develop capacities and equip research institutions to provide adequate snow leopard monitoring support.</p> <p>2) Develop snow leopard monitoring database and adequate database management capacities</p> <p>3) Develop and sign special MOUs on monitoring between protected areas, National Academy of Sciences, and hunting department, relating to snow leopard and prey species, with collaboration with relevant international partner organizations</p> <p>4) Conduct joint expeditions for monitoring and training with hunting department, protected areas, and National Academy of Sciences staff - reporting of results to national databases, etc. - publishing of results</p>	

Target group	Capacity development priorities	Notes
	<p>5) Updated mapping of snow leopard range and other factors at national level, based on a digital map of snow leopard habitat in Kyrgyzstan, with annotated recommendations for land use regimes in key areas of importance for snow leopard.</p> <p><u>Enabling environment</u></p> <p>1) Sign an international MOU with a genetic laboratory that has experience and technical capacity to identify snow leopard samples from scats, hair follicles and blood, located in one of the snow leopard range countries, to have compatible and high quality results of analysis for basic (species-level) genetic monitoring of populations and wildlife crime.</p>	
Universities, secondary schools	<p><u>Human</u></p> <p>1) Awareness raising and knowledge management activities - national education and awareness campaigns as appropriate, etc.</p> <p><u>Institutional</u></p> <p>1) Convert accumulated snow leopard monitoring and research data into addendums to education programs for universities and secondary schools</p>	

Annex 11: Social and Environmental Screening Template

The completed template, which constitutes the Social and Environmental Screening Report, must be included as an annex to the Project Document. Please refer to the [Social and Environmental Screening Procedure](#) and [Toolkit](#) for guidance on how to answer the 6 questions.

Project Information

Project Information	
1. Project Title	Conservation of globally important biodiversity and associated land and forest resources of Western Tian Shan mountain ecosystems to support sustainable livelihoods
2. Project Number	00095205
3. Location (Global/Region/Country)	Kyrgyz Republic

Part A. Integrating Overarching Principles to Strengthen Social and Environmental Sustainability

QUESTION 1: How Does the Project Integrate the Overarching Principles in order to Strengthen Social and Environmental Sustainability?

Briefly describe in the space below how the project mainstreams the human-rights based approach

This GEF funded project has been developed in full compliance with a human-rights based approach to development, which is among the main approaches applied to improve the practice of conservation of globally important biodiversity, land and forest resources of Western Tian Shan and support to sustainable livelihoods. Improved access to decision making on Protected Areas (PA) development planning as well as inclusion of local communities into enforcement of biodiversity monitoring and flagship species patrolling will be achieved through the establishment of Public Steering Committees in two targeted State Nature Parks of Alatau and Kan-Achuu, as well as by organization of a joint patrol groups including local communities self-governments, PA rangers and local activists. High conservation value forests management will be improved by establishment of the Joint Forest Management Boards in two target Leskhozes of Toktogul and Toguz-Toro increasing opportunities of the communities to participate in making decisions of forest use rights titling. Both PA Steering Committees and Leskhoz JFM Boards will duly address and try to prevent possible conflicts of interests by creating an operational grievance mechanisms assuring search of consensus and mutually beneficial solutions.

All the governmental partners at the national and also at the local districts' and communities levels will be involved in a wide capacity development program, including duty-bearer's obligations on Sustainable Forest and Land Management, as well as wildlife conservation. For this, the project will render support to the target Toktogul and Toguz-Toro Districts Administrations to revise corresponding territorial socio-economic development strategies, involving all the stakeholders. On the local communities levels, the participatory elaboration of local development plans involving all right-holders as well as duty-bearers will be organized, involving all interest groups, particularly in the Cholpon-Ata community in the Toktogul District and Kok-Irim community in the Toguz-Toro District.

Additionally, the enabling framework on biodiversity conservation will be duly amended to systemically support capacity development of the national level PA network duty-bearers (but not limited to this only) to assure biodiversity conservation through special management regimes on wildlife corridors, also promoting rights-holders rights for sustainable use of this wildlife corridors territory.

All the above mentioned human-rights based activities will be supported by the wide national and local levels advocacy and awareness raising campaigns promoting human rights including the universal basic right for a clean and sustainable environment for this and future generations.

Briefly describe in the space below how the project is likely to improve gender equality and women's empowerment

This project document has been developed in compliance with the corresponding "Guide to Gender Mainstreaming in UNDP Supported GEF Financed Projects". Thus, gender aspects will be considered as appropriate while developing capacities on the systemic, institutional and individual level. For this, a gender mainstreaming strategy will be developed and annually updated within the project implementation period. Particularly, on the national level, women will be duly involved into enabling framework improvement on biodiversity conservation and sustainable forest and land management and supported to incorporate gender smart solutions.

On the local level, gender balance will be duly observed while forming target Protected Areas Public Steering Committees and Joint Forest Management Boards; appropriate women's membership and participation will be adequately secured. Women's membership and participation will be also promoted in joint anti-poaching patrol groups, which will be additionally established in the State Nature Parks of Alatau and Kan-Achuu in Toktogul and Toguz-Toro Districts of Jalal-Abad Province.

Support to sustainable livelihoods activities will be specifically aimed to equally benefit women and men. For this, a multi-stakeholder transparent micro-credit facility will be established with active participation of women. Moreover, gender aspects of biodiversity conservation and sustainable forest and land use will be duly incorporated as a separate topic into all training programs of the project. About 30% of all project activity and event participants will be women, which implies a proactive engagement of women in the sector, relative to the current norm.

Briefly describe in the space below how the project mainstreams environmental sustainability

This GEF funded and UNDP implemented project is aimed to address three main environmental challenges of the Kyrgyz Republic: biodiversity conservation and sustainable use in the landscape surrounding protected areas, sustainable land management reducing land degradation, and sustainable forest management. In tackling these three issues the project will contribute both to global and national environmental benefits. In addition, the project will support alternative environmentally sustainable livelihoods at the community level.

To mainstream environmental sustainability the project will work to duly incorporate biodiversity conservation, sustainable forest and land management provisions into national, and more significantly into local development planning in cooperation with the State District Administrations in Toktogul and Toguz-Toro, as well as at local the community level in the key target rural aimaks of Cholpon-Ata and Kok Irim.

Additionally, wildlife corridors will be established around the target PAs, corresponding land management regimes will be developed considering biodiversity conservation and sustainable use aspects. Sustainable Forest Management measures, including biodiversity conservation measures and ecological sensitive management approaches for HCVF forests, will be integrated in Forest Management Plans for Toktogul and Toguz-Toro leskhozoes. Targeted Pasture Management Committees in the four communities of Cholpon-Ata, Kyzyl-Ozgorush, Kok-Irim, and Atai will be also supported to develop environmentally friendly pasture management and grazing plans.

The substantive development aspects of biodiversity conservation, sustainable land and forest use involving local communities will also constitute the core of the project communication strategy and a series of awareness raising activities of the project.

Part B. Identifying and Managing Social and Environmental Risks

<p>QUESTION 2: What are the Potential Social and Environmental Risks?</p> <p><i>Note: Describe briefly potential social and environmental risks identified in Attachment 1 – Risk Screening Checklist (based on any “Yes” responses). If no risks have been identified in Attachment 1 then note “No Risks Identified” and skip to Question 4 and Select “Low Risk”. Questions 5 and 6 not required for Low Risk Projects.</i></p>	<p>QUESTION 3: What is the level of significance of the potential social and environmental risks?</p> <p><i>Note: Respond to Questions 4 and 5 below before proceeding to Question 6</i></p>			<p>QUESTION 6: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks (for Risks with Moderate and High Significance)?</p>
Risk Description	Impact and Probability (1-5)	Significance (Low, Moderate, High)	Comments	Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.
<p>Risk 1: “Standard 1.1 Would the Project potentially cause adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services? – YES”</p> <p>The project activities include the likely improvement of two – four existing dirt roads, including the possible construction of small bridges across streams or rivers. These are short dead-end access roads into PA territories that will be used mainly by PA management staff, or potential tourists. During the minor construction activity there could be minor modifications to the landscape in the immediate vicinity, minor changes to stream flow, and increased erosion or sedimentation during the construction process.</p>	<p>I = 1 (negligible) P = 4 (moderately likely)</p>	<p>Low</p>	<p>During any such minor construction activities the project team will ensure that contractors conform to current relevant Kyrgyz environmental regulations, including the completion of Environmental Impact Assessments (if required), and good practice construction erosion control measures. In addition, based on the projected activities, the populations of any threatened or endangered species would not be impacted in any significant way, the area of potential habitat impact is extremely small relative to the overall area (e.g. potential impacts of a few hundred meters of stream bed at most), and any impact on ecosystem services would be negligible and short-</p>	<p>NOT REQUIRED FOR LOW RISK PROJECTS</p>

			term. There may actually be some environmental benefits, as building small bridges over stream crossings would reduce the impact of vehicular traffic constantly driving through the streams. In addition, access via these roads into the PA territories will be easily controlled by PA management authorities as the roads dead-end (i.e. have only a single entry point), there are no other nearby access roads into the PAs, and the surrounding landscape is too extreme to allow vehicular circumnavigation of access checkpoints. In other words, improvement of this transportation infrastructure is expected to benefit the effectiveness of PA management, and is not expected to increase unauthorized access to the PAs.	
<p>Risk 2: <i>“Standard 1.2 Are any Project activities proposed within or adjacent to critical habitats and/or environmentally sensitive areas, including legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities? – YES”</i></p> <p>The project specifically targets the conservation and sustainable management of critical habitats, environmentally sensitive areas, and legally protected areas in the Western Tian Shan.</p>	<p>I = 1 (negligible) P = 5 (expected)</p>	Low	The conservation, protection, and sustainable use of these areas is the objective of the project.	NOT REQUIRED FOR LOW RISK PROJECTS
Risk 3: <i>“Standard 1.6 Does the Project involve harvesting of natural forests, planta-</i>	I = 1 (negligible)	Low	The project team will work with the partner leskhozos (local	NOT REQUIRED FOR LOW RISK PROJECTS

<p><i>tion development, or reforestation? – YES”</i></p> <p>The project activities currently plan for the reforestation / afforestation of up to 500 hectares.</p>	<p>P = 5 (expected)</p>		<p>forestry services) to ensure ecologically appropriate locations for planting trees, and will use native species. The relatively small area of tree planting means that any ecological impact will be minimal, and the overall environmental impact – considering the benefits of the planted trees – is expected to be positive. Kyrgyzstan’s national forest cover currently stands below its historical average, and it is part of the national forest policy to increase forest cover.</p>	
<p>Risk 4: <i>“Standard 2.1 Will the proposed Project result in significant (more than 25,000 tons CO² eq/year) greenhouse gas emissions or may exacerbate climate change? – YES”</i></p> <p>The project aims to implement sustainable land management to improve management of approximately 110,000 ha of pasturelands. The improved management of this amount of pasturelands implies that it may be possible to increase the number of livestock using the pasturelands while reducing land degradation and improving the sustainability of the land use. However, considering that one cow produces approximately 2.3 tons CO² eq emissions per year, it would take an increase of more than 10,000 cows in the targeted project area to meet the threshold of an increase of 25,000 tons CO² eq/year.</p>	<p>I = 2 (minor)</p> <p>P = 1 (slight)</p>	<p>Low</p>	<p>The project team will monitor the number of livestock in the targeted project area in collaboration with the PMCs. If any increase in numbers approaching the threshold occurs or is likely in the near term after project completion the team will ensure mitigation measures are in place at the end of the project. In addition, the project’s sustainable forest management and sustainable land management activities are estimated to result in a carbon sink of more than 5 million tons CO₂ eq over the 25 year calculation period (5 years of implementation + 20 years after project) (as per FAO EX-ACT approach).</p>	<p>NOT REQUIRED FOR LOW RISK PROJECTS</p>
<p>Risk 5: <i>“Standard 2.2 Would the potential outcomes of the Project be sensitive or vulnerable to potential impacts of climate change? - YES”</i></p>	<p>I = 1 (negligible)</p> <p>P = 3 (moderately likely)</p>	<p>Low</p>	<p>The project team will work with all partners and stakeholders to apply the best available climate change impact prediction data for the Western Tian Shan, and</p>	<p>NOT REQUIRED FOR LOW RISK PROJECTS</p>

The project impacts include the conservation of endangered and threatened species, and the improved management of protected areas. These results could be sensitive to changing climatic conditions in the future.			will ensure that all project activities and plans take potential future climate impacts into consideration. For example, the project will ensure that planted trees are in locations that will continue to have suitable climate conditions in the future, and will work with protected area management authorities to develop PA management plans for the two new PAs that consider potential future climate impacts.	
	QUESTION 4: What is the overall Project risk categorization?			
	Select one (see SESP for guidance)		Comments	
	Low Risk	X	All identified potential SESP risks are considered “low” significance. The overall project is considered low risk with respect to SESP issues. The objective of the project specifically includes improvement of environmental and social conditions in the target area, including improved gender mainstreaming.	
	Moderate Risk			
	High Risk			
	QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are relevant?			
	Check all that apply		Comments	
	Principle 1: Human Rights		NOT REQUIRED FOR LOW RISK PROJECTS	
	Principle 2: Gender Equality and Women’s Empowerment		NOT REQUIRED FOR LOW RISK PROJECTS	
	1. Biodiversity Conservation and Natural Resource Management		NOT REQUIRED FOR LOW RISK PROJECTS	
	2. Climate Change Mitigation and Adaptation		NOT REQUIRED FOR LOW RISK PROJECTS	
	3. Community Health, Safety and Working Conditions		NOT REQUIRED FOR LOW RISK PROJECTS	
	4. Cultural Heritage		NOT REQUIRED FOR LOW RISK PROJECTS	
	5. Displacement and Resettlement		NOT REQUIRED FOR LOW RISK PROJECTS	

	6. Indigenous Peoples	<input type="checkbox"/>	NOT REQUIRED FOR LOW RISK PROJECTS
	7. Pollution Prevention and Resource Efficiency	<input type="checkbox"/>	NOT REQUIRED FOR LOW RISK PROJECTS

Final Sign Off

Signature	Date	Description
QA Assessor	Daniar Ibragimov, Team Leader Environment and Disaster Risk Management, UNDP Kyrgyzstan Country Office	UNDP staff member responsible for the Project, typically a UNDP Programme Officer. Final signature confirms they have “checked” to ensure that the SESP is adequately conducted.
QA Approver	Ms. Aliona Niculita, UNDP Deputy Resident Representative, UNDP Kyrgyzstan Country Office	UNDP senior manager, typically the UNDP Deputy Country Director (DCD), Country Director (CD), Deputy Resident Representative (DRR), or Resident Representative (RR). The QA Approver cannot also be the QA Assessor. Final signature confirms they have “cleared” the SESP prior to submittal to the PAC.
PAC Chair		UNDP chair of the PAC. In some cases PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC.

SESP Attachment 1. Social and Environmental Risk Screening Checklist

Checklist Potential Social and Environmental <u>Risks</u>	
Principles 1: Human Rights	Answer (Yes/No)
1. Could the Project lead to adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups?	No
2. Is there a likelihood that the Project would have inequitable or discriminatory adverse impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups? ¹⁰²	No
3. Could the Project potentially restrict availability, quality of and access to resources or basic services, in particular to marginalized individuals or groups?	No
4. Is there a likelihood that the Project would exclude any potentially affected stakeholders, in particular marginalized groups, from fully participating in decisions that may affect them?	No
5. Is there a risk that duty-bearers do not have the capacity to meet their obligations in the Project?	No
6. Is there a risk that rights-holders do not have the capacity to claim their rights?	No
7. Have local communities or individuals, given the opportunity, raised human rights concerns regarding the Project during the stakeholder engagement process?	No
8. Is there a risk that the Project would exacerbate conflicts among and/or the risk of violence to project-affected communities and individuals?	No
Principle 2: Gender Equality and Women's Empowerment	
1. Is there a likelihood that the proposed Project would have adverse impacts on gender equality and/or the situation of women and girls?	No
2. Would the Project potentially reproduce discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	No
3. Have women's groups/leaders raised gender equality concerns regarding the Project during the stakeholder engagement process and has this been included in the overall Project proposal and in the risk assessment?	No
4. Would the Project potentially limit women's ability to use, develop and protect natural resources, taking	No

¹⁰² Prohibited grounds of discrimination include race, ethnicity, gender, age, language, disability, sexual orientation, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to "women and men" or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender people and transsexuals.

<p>into account different roles and positions of women and men in accessing environmental goods and services?</p> <p><i>For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being</i></p>	
<p>Principle 3: Environmental Sustainability: Screening questions regarding environmental risks are encompassed by the specific Standard-related questions below</p>	
<p>Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management</p>	
<p>1.1 Would the Project potentially cause adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services?</p> <p><i>For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes</i></p>	Yes
<p>1.2 Are any Project activities proposed within or adjacent to critical habitats and/or environmentally sensitive areas, including legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities?</p>	Yes
<p>1.3 Does the Project involve changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of access to lands would apply, refer to Standard 5)</p>	No
<p>1.4 Would Project activities pose risks to endangered species?</p>	No
<p>1.5 Would the Project pose a risk of introducing invasive alien species?</p>	No
<p>1.6 Does the Project involve harvesting of natural forests, plantation development, or reforestation?</p>	Yes
<p>1.7 Does the Project involve the production and/or harvesting of fish populations or other aquatic species?</p>	No
<p>1.8 Does the Project involve significant extraction, diversion or containment of surface or ground water?</p> <p><i>For example, construction of dams, reservoirs, river basin developments, groundwater extraction</i></p>	No
<p>1.9 Does the Project involve utilization of genetic resources? (e.g. collection and/or harvesting, commercial development)</p>	No
<p>1.10 Would the Project generate potential adverse transboundary or global environmental concerns?</p>	No
<p>1.11 Would the Project result in secondary or consequential development activities which could lead to adverse social and environmental effects, or would it generate cumulative impacts with other known existing or planned activities in the area?</p> <p><i>For example, a new road through forested lands will generate direct environmental and social impacts (e.g. felling of trees, earthworks, potential relocation of inhabitants). The new road may also facilitate encroachment on lands by illegal settlers or generate unplanned commercial development along the route,</i></p>	No

<i>potentially in sensitive areas. These are indirect, secondary, or induced impacts that need to be considered. Also, if similar developments in the same forested area are planned, then cumulative impacts of multiple activities (even if not part of the same Project) need to be considered.</i>	
Standard 2: Climate Change Mitigation and Adaptation	
2.1 Will the proposed Project result in significant ¹⁰³ greenhouse gas emissions or may exacerbate climate change?	Yes
2.2 Would the potential outcomes of the Project be sensitive or vulnerable to potential impacts of climate change?	Yes
2.3 Is the proposed Project likely to directly or indirectly increase social and environmental vulnerability to climate change now or in the future (also known as maladaptive practices)? <i>For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding</i>	No
Standard 3: Community Health, Safety and Working Conditions	
3.1 Would elements of Project construction, operation, or decommissioning pose potential safety risks to local communities?	No
3.2 Would the Project pose potential risks to community health and safety due to the transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)?	No
3.3 Does the Project involve large-scale infrastructure development (e.g. dams, roads, buildings)?	No
3.4 Would failure of structural elements of the Project pose risks to communities? (e.g. collapse of buildings or infrastructure)	No
3.5 Would the proposed Project be susceptible to or lead to increased vulnerability to earthquakes, subsidence, landslides, erosion, flooding or extreme climatic conditions?	No
3.6 Would the Project result in potential increased health risks (e.g. from water-borne or other vector-borne diseases or communicable infections such as HIV/AIDS)?	No
3.7 Does the Project pose potential risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during Project construction, operation, or decommissioning?	No
3.8 Does the Project involve support for employment or livelihoods that may fail to comply with national and	No

¹⁰³ In regards to CO₂, 'significant emissions' corresponds generally to more than 25,000 tons per year (from both direct and indirect sources). [The Guidance Note on Climate Change Mitigation and Adaptation provides additional information on GHG emissions.]

	international labor standards (i.e. principles and standards of ILO fundamental conventions)?	
3.9	Does the Project engage security personnel that may pose a potential risk to health and safety of communities and/or individuals (e.g. due to a lack of adequate training or accountability)?	No
Standard 4: Cultural Heritage		
4.1	Will the proposed Project result in interventions that would potentially adversely impact sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices)? (Note: Projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts)	No
4.2	Does the Project propose utilizing tangible and/or intangible forms of cultural heritage for commercial or other purposes?	No
Standard 5: Displacement and Resettlement		
5.1	Would the Project potentially involve temporary or permanent and full or partial physical displacement?	No
5.2	Would the Project possibly result in economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)?	No
5.3	Is there a risk that the Project would lead to forced evictions? ¹⁰⁴	No
5.4	Would the proposed Project possibly affect land tenure arrangements and/or community based property rights/customary rights to land, territories and/or resources?	No
Standard 6: Indigenous Peoples		
6.1	Are indigenous peoples present in the Project area (including Project area of influence)?	No
6.2	Is it likely that the Project or portions of the Project will be located on lands and territories claimed by indigenous peoples?	No
6.3	Would the proposed Project potentially affect the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples (regardless of whether indigenous peoples possess the legal titles to such areas, whether the Project is located within or outside of the lands and territories inhabited by the affected peoples, or whether the indigenous peoples are recognized as indigenous peoples by the country in question)? <i>If the answer to the screening question 6.3 is “yes” the potential risk impacts are considered potentially se-</i>	No

¹⁰⁴ Forced evictions include acts and/or omissions involving the coerced or involuntary displacement of individuals, groups, or communities from homes and/or lands and common property resources that were occupied or depended upon, thus eliminating the ability of an individual, group, or community to reside or work in a particular dwelling, residence, or location without the provision of, and access to, appropriate forms of legal or other protections.

	<i>vere and/or critical and the Project would be categorized as either Moderate or High Risk.</i>	
6.4	Has there been an absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned?	No
6.5	Does the proposed Project involve the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	No
6.6	Is there a potential for forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources?	No
6.7	Would the Project adversely affect the development priorities of indigenous peoples as defined by them?	No
6.8	Would the Project potentially affect the physical and cultural survival of indigenous peoples?	No
6.9	Would the Project potentially affect the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices?	No
Standard 7: Pollution Prevention and Resource Efficiency		
7.1	Would the Project potentially result in the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts?	No
7.2	Would the proposed Project potentially result in the generation of waste (both hazardous and non-hazardous)?	No
7.3	Will the proposed Project potentially involve the manufacture, trade, release, and/or use of hazardous chemicals and/or materials? Does the Project propose use of chemicals or materials subject to international bans or phase-outs? <i>For example, DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Conventions on Persistent Organic Pollutants or the Montreal Protocol</i>	No
7.4	Will the proposed Project involve the application of pesticides that may have a negative effect on the environment or human health?	No
7.5	Does the Project include activities that require significant consumption of raw materials, energy, and/or water?	No

Annex 12: Project TORs for Key Positions

PROJECT COORDINATOR

Background

The Project Coordinator will be locally recruited, based on an open competitive process. Generally, he/she will be responsible for meeting government obligations under the project, under the direct implementation modality (DIM). He/she will be responsible for the overall management of the project, including the mobilization of all project inputs, supervision over project staff, consultants and sub-contractors. The Project Coordinator will report to the UNDP Sustainable Development Programme Dimension Chief for all of the project's substantive operational issues. The Project Coordinator will report on a periodic basis to the Project Board (PB) on the overall project progress and future project planning. The incumbent will perform a liaison role with the Government, UNDP, implementing partners, NGOs and other stakeholders, and maintain close collaboration with any donor agencies supporting project activities.

Duties and Responsibilities

- Supervise and coordinate the production of project outputs, as per the project document;
- Mobilize all project inputs in accordance with procedures for nationally implemented projects;
- Coordinate the recruitment and selection of project personnel;
- Supervise and coordinate the work of all project staff, consultants and sub-contractors;
- Prepare and revise project work and financial plans;
- Liaise with UNDP, relevant government agencies, and all project partners, including donor organizations and NGOs for effective coordination of all project activities;
- Oversee and ensure timely submission of the Inception Report, Combined Project Implementation Review/Annual Project Report (PIR/APR), Technical reports, quarterly financial reports, and other reports as may be required by UNDP, GEF, TFS and other oversight agencies;
- Disseminate project reports and respond to queries from concerned stakeholders;
- Report progress of project to the SC, and ensure the fulfilment of SC directives;
- Oversee the exchange and sharing of experiences and lessons learned with relevant community based integrated conservation and development projects nationally and internationally;
- Ensure the timely and effective implementation of all components of the project;
- Assist SAEPF and other relevant government agencies and project partners - including donor organizations and NGOs - with development of essential skills through training workshops and on the job training thereby upgrading their institutional capabilities;
- Carry out regular, announced and unannounced inspections of all sites and project-funded activities.

Qualifications and experience

- A post-graduate university degree in natural resource management (or equivalent) and/or business or public administration;
- At least 10 years of relevant experience in conservation, forestry, wildlife and/or pasture planning and management;
- At least 5 years of project management experience;

- Working experience in international projects, or within international organisations, is highly desirable;
- Working experience with the project stakeholder institutions and agencies is desired;
- Ability to effectively coordinate a large, multi-stakeholder project;
- Ability to administer budgets, train and work effectively with counterpart staff at all levels and with all groups involved in the project;
- Strong writing, presentation and reporting skills;
- Strong computer skills;
- Excellent written communication skills; and
- A good working knowledge of Kyrgyz (and/or Russian) and English is a requirement.

PROJECT FINANCIAL ASSISTANT

Background

The Project Financial Assistant will be locally recruited based on an open competitive process. He/she will be responsible for the overall financial management of the project. The Project Financial Assistant will report to the Project Coordinator. Generally, the Project Financial Assistant will be responsible for supporting the Project Coordinator in meeting UNPD operations procedures, under the direct implementation modality (DIM).

Duties and Responsibilities

- Monitor project budgets and financial expenditures;
- Assist in all procurement and recruitment processes;
- Advise all project counterparts on applicable financial procedures and ensures their proper implementation;
- Contribute to the preparation and implementation of progress and financial reports;
- Support the preparations of project work-plans, budgets and operational and financial planning processes;
- Assist in the preparation of payments requests for operational expenses, salaries, insurance, etc. against project budgets and work plans;
- Work closely with financial counterparts in the UNDP PMU and CO on payment requests;
- Follow-up on timely disbursements by the UNDP PMU and CO;
- Maintain data on co-financing commitments to the project;
- Coordinate the annual financial audit of the project; and
- Perform other duties as required.

Qualifications and experience

- A university degree (diploma, or equivalent), preferably in finance, economics, bookkeeping (or equivalent);
- At least 5 years of relevant financial management experience;
- Work experience in UNDP and/or GEF projects is highly desirable;
- Demonstrable ability to administer project budgets, and track financial expenditure;
- Excellent computer skills, in particular mastery of all applications of the MS Office package;
- Excellent written communication skills; and
- A good working knowledge of Kyrgyz (and/or Russian) and English is a requirement,

PROJECT ADMINISTRATIVE ASSISTANT

Background

The Project Administrative Assistant (PAA) will be locally recruited based on an open competitive process. He/she will be responsible for the overall administration of the project. The Project Assistant will report to the Project Coordinator. Generally, the Project Administrative Assistant will be responsible for supporting the Project Coordinator in meeting UNDP operational procedures under the direct implementation modality (DIM).

Duties and Responsibilities

- Collect, register and maintain all information on project activities;
- Contribute to the preparation and implementation of progress reports;
- Advise all project counterparts on applicable administrative procedures and ensures their proper implementation;
- Maintain project correspondence and communication;
- Assist in procurement and recruitment processes;
- Receive, screen and distribute correspondence and attach necessary background information;
- Prepare routine correspondence and memoranda for Project Coordinator's signature;
- Assist in logistical organization of meetings, training and workshops;
- Prepare agendas and arrange field visits, appointments and meetings both internal and external related to the project activities and write minutes from the meetings;
- Maintain a project filing system;
- Maintain records over project equipment inventory; and
- Perform other duties as required.

Qualifications and experience

- A post-school qualification (diploma, or equivalent), preferably in administration (or equivalent);
- At least 5 years of relevant administrative experience;
- Work experience in UNDP and/or GEF projects or within international organisations is highly desirable;
- Demonstrable ability to maintain effective communications with different stakeholders, and arrange stakeholder meetings and/or workshops;
- Excellent computer skills, in particular mastery of all applications of the MS Office package;
- Excellent written communication skills; and
- A good working knowledge of Kyrgyz (and/or Russian) and English is a requirement.

FIELD COMMUNITY MOBILIZERS (2 UNV)

Background

A Field Community Mobilizer for each of the two project components (Component 1 – SNP support and HC VF status upgrade, PAs capacity development and joint patrolling; Component 2 – buffer zones and corridors land use planning, integration of biodiversity conservation and SLM and SFM objectives to territorial development planning, rehabilitation of pastures and forests and support to livelihoods) will be locally recruited, based on an open competitive process. The Field Community Mobilizers will be responsible for coordinating the direct implementation of all field-based project activities in the targeted areas of the planning domain, including the supervision over any field-based project staff, contracted consultants'/service providers and sub-contractors. The two Field Community Mobilizers will report to the Project Coordinator (PC) for all of the project's substantive and administrative issues. Generally, the Field Coordinators will be responsible for assisting the field staff of the responsible state institutions in meeting their field-based obligations under each component. The incumbents will perform a liaison role with the relevant local authorities, forest and pasture user groups, tenure holders, NGOs, research institutions, academic institutions and all other key stakeholders, and maintain close collaboration with any complementary local initiatives and programs. The Field Community Mobilizer will assist the Project Coordinator in reporting, on a periodic basis, to the Project Board (PB).

Duties and Responsibilities

- Supervise and coordinate the work of all field-based project staff, consultants and sub-contractors;
- Prepare and revise project work and financial plans;
- Liaise with all relevant field-based government agencies, and all project partners, including donor organizations and NGOs for effective coordination of all project activities;
- Facilitate technical backstopping to field-based subcontractors and training activities supported by the Project;
- Provide inputs into the Combined Project Implementation Review/Annual Project Report (PIR/APR), Technical reports, quarterly financial reports, and other reports as may be required by the PM;
- Report progress of project to the PC;
- Document all field-based experiences and lessons learned;
- Ensure the timely and cost-effective implementation of all outputs under the components;
- Assist relevant government agencies and project partners - including donor organizations and NGOs - with development of essential skills through training workshops and on the job training thereby upgrading their institutional capabilities;
- Coordinate and assist expert teams and academic institutions with the initiation and implementation of any field studies and monitoring components of the component; and
- Carry out regular and random monitoring visits of all project sites.

Qualifications

- A post-school education or university degree in conservation management, or equivalent; forestry and/or agricultural management, or equivalent; and wildlife management or equivalent; business or public administration;
- Working experience with the project local stakeholder institutions and agencies is highly desired;
- Ability to effectively coordinate a diverse range of local stakeholders;

- Demonstrable ability to maintain effective communications with different stakeholders, and arrange stakeholder meetings and/or workshops;
- Ability to prepare budgets, train and work effectively with counterpart staff at all levels and with all local groups involved in the project;
- Strong drafting, presentation and reporting skills;
- Strong computer skills, in particular mastery of all applications of the MS Office package
- Excellent written and oral communication skills; and
- A good working knowledge of Kyrgyz is a requirement, while knowledge of English and Russian will be an advantage.

Annex 13: Co-financing Letters

(ATTACHED SEPARATELY. TABLE BELOW SUMMARIZES RELATIONSHIP CONTRIBUTION OF CO-FINANCING TO PROJECT RESULTS).

Component	Outcomes	Outputs	Co-financing Source	Co-financing Amount	Notes
Component 1. Conservation and sustainable management of Key Biodiversity Areas within landscape	<ul style="list-style-type: none"> - The extent of the functional IUCN Category I and II PA network operational in the Western Tian Shan increases from a baseline of 198,777 ha to 298,099 ha. - The conservation values of 87,323 ha of globally important biodiversity, including snow leopard and prey habitats, are secured, monitored and enforced in the two newly established PAs of Alatau and Kan-Achuu. - The average METT scores for the Alatau and Kan-Achuu SNP increases from an average score of 17 to >50; - HCVF forest management approach legally recognized in Kyrgyzstan - HCVF management measures incorporated in forest management plans of two forest management authorities covering 34,382 ha; - Average number of hectares covered per week by anti-poaching patrols reaches 1000 hectares per week; - Rural communities adjacent to the Alatau and Kan-Achuu SNP are increasingly involved in (from a baseline of less than 100 individuals to 	<p>Output 1.1. Expanded operational SPNA network in the Western Tian Shan region through support to operationalize the two new State Nature Parks of Alatau and Kan-Achuu, including: development of new management plans, new maps, database management systems, new infrastructure and equipment for PA management, training programs for PA staff, biodiversity research and monitoring program, business plan, communications program, and education and awareness program.</p> <p>Output 1.2. Upgraded status of HCVF, and sustainable forest management involving local communities, including: proposal and recommendations for integration of HCVF principles into existing policies and legislation, implementation of JFM Boards, revised and updated forest and SNP management plans incorporating HCVF principles, updated and revised local development plans incorporating HCVF principles, certification pilot activities, and assessment of existing forest zakazniks in Western</p>	UNDP TRAC	\$100,000	For equipment and furniture specifically under Output 1.1.
			UNDP other grants (not transferred through this project)	\$225,000	Multiple contributions to strengthening management of PAs and instituting HCVF forest management approach from sources indicated in co-financing letter.
			SAEPF Grant	\$9,459,457	Multiple contributions to strengthening management of PAs and instituting HCVF forest management approach, as per co-financing letter: "to finance the activities for the conservation of biodiversity and protected areas system and the development of forestry in Kyrgyzstan."
			SAEPF In-kind	\$250,000	Multiple contributions to strengthening management of PAs and instituting HCVF forest management approach as per co-financing letter: "imma-

Component	Outcomes	Outputs	Co-financing Source	Co-financing Amount	Notes
	more than 2,000 individuals, of whom at least 600 are women), and financially benefit from (from a baseline of less than 10 individuals to more than 150, of whom at least 50 are women) the planning and management of Alatau and Kan-Achuu SNP.	Tian Shan			terial contribution of SAEPF staff in support of the project implementation in the Western Tien Shan”
		Output 1.3. Enhanced management and conservation capacities of Western Tian Shan PAs in Jalal-Abad Province, and strengthened HCVP management, including: training program and activities for staff of existing Western Tian Shan PAs, PA financial management and planning training, piloting of private sector partnerships for tourism, capacity strengthening for unified national information system on PAs, capacity strengthening on PA monitoring data collection and reporting to national unified information system, training for Western Tian Shan leskhozos on HCVP implementation, awareness raising activities on HCVP and SFM, workshops to improve existing Western Tian Shan PA management plans and business plans, strengthened PA public relations programs, training of hunting service providers, updated and revised game management plans for hunting concessions in Western Tian Shan.	Kyrgyz Republic Fund for Nature Protection and Forestry Development	\$200,000	Multiple contributions to strengthening management of PAs and instituting HCVP forest management approach as per co-financing letter: “allocated for financing the newly established Protected Areas Alatau and Kan-Achuu, biodiversity conservation and sustainable forest management in the Western Tien-Shan.”
			State Inspectorate for Environmental and Technical Safety – In-kind	\$121,600	Multiple contributions to strengthening management of PAs and instituting HCVP forest management approach as indicated in co-financing letter.
			Toktogul District Government - Grant	\$0	Full contribution relevant to Component II.
			Toguz-toro District Government - Grant	\$0	Full contribution relevant to Component II.
		Output 1.4. Strengthened participatory patrolling, enforcement and surveillance systems of new and existing PAs through	GIZ	\$0	Full contribution relevant to Component II.

Component	Outcomes	Outputs	Co-financing Source	Co-financing Amount	Notes
		the Local PA Management Board and joint patrol groups to enforce anti-poaching, including: organization of PA public management boards, establishment of joint patrolling groups, dissemination of best practices on community involvement in patrolling and wildlife law enforcement, workshops to improve system of patrolling and law enforcement, equipping of joint patrol groups in pilot PAs, agreements on cooperation between PAs and hunting concessions, financial incentives program for reporting poaching and other illegal uses of natural resources.	Panthera	\$0	Full contribution relevant to Component III.
Component I Sub-total				\$10,356,057	
Component II. Ecosystem resilience and habitat connectivity in Western Tian Shan are enhanced by regulating land and forest use in buffer zones and corridors and support to sustainable livelihoods	<ul style="list-style-type: none"> About 50,000 ha of buffer zones and wildlife corridors connecting PAs of the Western Tian Shan identified, corresponding land use regimes and plans developed and implemented involving all the stakeholders. The territorial development plans covering the area of 1,218,175 ha of two target districts of Toktogul and Toguz-Toro, including those of target local communities of Cholpon-Ata, Kyzyl-Ozgorush, Kok-Irim, and Atai aligned with the biodiversity conservation, SLM and SFM objectives. A total of 147,268 	Output 2.1 Identified and designated buffer zones for new SPNAs and wildlife corridors between relevant SPNAs, including: regulations and legislation fully reflecting requirements for buffer zones and corridors, agreements on buffer zones and corridors between all relevant local stakeholders, assessments for sustainable use of resources in buffer zones and corridors, revised and updated resource use management plans for buffer zone and corridor areas, electronic database of hunting violations, awareness raising activities about buffer zones and corridors, joint raids for	UNDP TRAC	\$0	Full contribution relevant to Component I.
			UNDP Parallel	\$4,752,383	Multiple contributions to outcomes from sources indicated in co-financing letter
			SAEPF Grant	\$1,427,666	Multiple contributions to outcomes, as per co-financing letter: "to finance the activities for the conservation of biodiversity and protected areas system and the development of forestry in Kyrgyzstan."
			SAEPF In-kind	\$250,000	Multiple contributions to outcomes as

Component	Outcomes	Outputs	Co-financing Source	Co-financing Amount	Notes
	<p>ha of pastureland under SLM, including 65,361 ha of degraded pastures put under better management regimes for rehabilitation.</p> <p>- Productivity of pastures improved from baseline 0.13 t of dry fodder mass to 0.57 t.</p> <p>- At least four modern pasture management plans are implemented by targeted Pasture Management Committees.</p> <p>- 4,886 ha of degraded forests are under active restoration and/or rehabilitation;</p> <p>- Almost 3 million tons of CO₂ equivalent emissions are avoided or sequestered as project lifetime benefits from SFM and SLM;</p> <p>- At least 2 Joint Forest Management Boards, including all local stakeholders are actively involved in the ongoing planning, management, rehabilitation and monitoring of HCVF;</p> <p>- A total of more than 23,939 people, including more than 11,702 women, benefit indirectly from reduced land degradation; and</p> <p>- At least 50 local households benefit from technical and grant funding support for sustainable livelihoods program, leading to at least a 10% increase in income.</p>	<p>enforcement of buffer zones and corridors, and analysis of hunting licensing to ensure alignment with conservation goals.</p> <p>Output 2.2. Territorial development plans of Toktogul and Toguz-Toro districts and communities aligned with biodiversity conservation, SFM and SLM objectives, including: analysis of resource management and spatial plans, training for local government and resource users on SFM and SLM, establishment of working groups for integration of good resource management practices into spatial and development plans, assessment of infrastructure development and mining plans for potential biodiversity conflicts, identification and incorporation of mitigation measures in infrastructure and mining development, workshops on sustainable development planning, coordination workshops on pasture management, assessment of valuation of ecosystem services including feasibility of development of PES schemes.</p> <p>Output 2.3. Degraded rangelands important both for livelihoods and wildlife, including snow leopard prey species in the target districts, rehabilitated through improved local pasture management</p>			per co-financing letter: “immaterial contribution of SAEPP staff in support of the project implementation in the Western Tien Shan”
			Kyrgyz Republic Fund for Nature Protection and Forestry Development	\$0	Full contribution relevant to Component I.
			State Inspectorate for Environmental and Technical Safety - Grant	\$121,600	Multiple contributions to outcomes as indicated in co-financing letter.
			Toktogul District Government - Grant	\$3,100,000	Multiple contributions to outcomes, as per co-financing letter: “focused on the activities on the rational use of natural resources (irrigation water, pasture, waste management, etc.), climate change issues, conservation of biodiversity and preventing land degradation.”
			Toguz-toro District Government - Grant	\$100,000	Multiple contributions to outcomes, as per co-financing letter: “allocated for the rational use of natural resources (irrigation, pas-

Component	Outcomes	Outputs	Co-financing Source	Co-financing Amount	Notes
		plans, including: detailed assessment of pastures to be rehabilitated, creation of relevant maps to support grazing management plans, research on interaction between live-stock grazing and biodiversity conditions, training on implementation of best practice pasture management tools, implementation of e-Pasture Management System in targeted pilot communities, research on impacts of climate change on pasturelands, revised and updated forest pasture management plans in neighboring leskhazes.			tures, waste management, etc.) and for the improvement of social infrastructure, biodiversity conservation and prevention of land degradation.”
			GIZ	\$627,000	Multiple contributions to outcomes from multiple initiatives, as indicated in co-financing letter.
		<p>Output 2.4: Restoration of degraded forests important for wildlife, including snow leopard prey, and livelihoods of local communities, including: geo-botanic and economic analysis for reforestation in Western Tian Shan, analysis of ecosystem services opportunities in relation to reforestation and rehabilitation, reforestation and rehabilitation management plans for agreed 4,886 ha in buffer zones and corridors of PAs, reforestation activities for 500 ha, assisted natural regeneration in 4,000-4,500 ha.</p> <p>Output 2.5. Alternative livelihoods program for local communities designed jointly with the local micro-crediting institutions, and launched to support</p>	Panthera	\$0	Full contribution relevant to Component III.

Component	Outcomes	Outputs	Co-financing Source	Co-financing Amount	Notes
		target communities, including: establishment of micro-grant support program with local committees and all procedures and rules, informational campaign about qualifying activities, provision of micro-grants, systematic monitoring and controlling of projects, assessment and reporting on results, publishing of best practices.			
Component II Sub-total				\$10,378,649	
Component III. Strengthened national capacities for snow leopard conservation, promoting Kyrgyz regional and global cooperation, and setting the scene for up-scaling	<p>The capacity for collaboration and coordination between international, national and local institutions in the conservation of snow leopard, their prey and their ecosystems is significantly improved:</p> <ul style="list-style-type: none"> - The number of illegal snow leopard trafficking incidents is reduced - the National Strategy and Action Plan for Snow Leopard Conservation is under implementation; - At least one international regional agreement adopted on key issues of border control / law enforcement or monitoring data sharing; <p>A strong scientific base for the conservation of snow leopard and their prey is established:</p> <ul style="list-style-type: none"> - a national snow leopard monitoring and reporting information management system is established 	<p>Output 3.1. Law enforcement capacities of relevant stakeholders enhanced through trainings on wildlife protection aimed at identification and prosecution of wildlife crime, including: advanced training on wildlife related law enforcement including identification and prosecution, training on canine-assisted wildlife crime monitoring, integration of training modules into law enforcement agency action plans, inter-agency cross-sectoral cooperation mechanism or MOUs at national and sub-national levels, capacity strengthening of field-based wildlife law enforcement, unified reporting system on wildlife crime, feasibility studies on field-based DNA analysis and trophy micro-chipping</p> <p>Output 3.2. Capacities for deployment of international standards for long-term monitoring of parameters criti-</p>	UNDP TRAC	\$0	Full contribution relevant to Component I.
			UNDP Parallel	\$450,000	Multiple contributions to outcomes from sources indicated in co-financing letter
			SAEPF Grant	\$2,912,877	Multiple contributions to outcomes, as per co-financing letter: "to finance the activities for the conservation of biodiversity and protected areas system and the development of forestry in Kyrgyzstan."
			SAEPF In-kind	\$0	Full contribution relevant to Components I and II.
			Kyrgyz Republic Fund for Nature Protection and Forestry Development	\$0	Full contribution relevant to Component I.
			State Inspectorate for	\$121,600	Multiple contributions to

Component	Outcomes	Outputs	Co-financing Source	Co-financing Amount	Notes
	<p>and operational, drawing on data collected via application of the GSLEP snow leopard and prey monitoring framework;</p> <ul style="list-style-type: none"> - the national estimate for snow leopard population has a confidence level of 60% or greater, and is produced annually; and - Kyrgyzstan's participation in the Global Snow Leopard and Ecosystem Conservation Program events is assured, also involving field staff. - the Second Summit of the Snow Leopard Range Countries conducted in Bishkek. - at least 20 managers, scientists, researchers participate in regional snow leopard conservation initiatives, and at least 10 attend and participate in regional monitoring and report-back meetings of the GLSEP. 	<p>cal for snow leopard conservation in national priority landscapes developed, based on international GSLEP monitoring framework, including: development and implementation of a national snow leopard monitoring program in accordance with international standards, training for relevant national institutions on snow leopard and prey monitoring in accordance with international standards, PA staff training on snow leopard and prey monitoring, snow leopard monitoring database, MOUs on snow leopard and prey monitoring between relevant institutions and PAs, joint expeditions for monitoring and training, MOU with a genetics laboratory in a snow leopard range state for species-level identification from physical samples.</p> <p>Output 3.3 Kyrgyzstan participation in the Global Snow Leopard and Ecosystem Protection Programs supported, aimed at synergies and coordination of national, transboundary and regional level activities, including: presentations and papers on best practice approaches for snow leopard conservation for international meetings and workshops, regional conference (with three countries) on cross-border monitoring data sharing, 2nd Global Snow Leopard</p>	<p>Environmental and Technical Safety - Grant</p> <p>Toktogul District Government - Grant</p> <p>Toguz-toro District Government - Grant</p> <p>GIZ</p> <p>Panthera</p>	<p></p> <p>\$0</p> <p>\$0</p> <p>\$0</p> <p>\$300,000</p>	<p>outcomes as indicated in co-financing letter.</p> <p>Full contribution relevant to Component II.</p> <p>Full contribution relevant to Component II.</p> <p>Full contribution relevant to Component II.</p> <p>Multiple contributions to outcomes as indicated in co-financing letter: "support [to] output III, specifically as it relates to addressing wildlife trafficking and supporting community-based conservancies in the Alai Valley."</p>

Component	Outcomes	Outputs	Co-financing Source	Co-financing Amount	Notes
		<p>summit, information materials on snow leopard conservation in Kyrgyzstan.</p> <p>Output 3.4. Implementation of Kyrgyzstan's NSSLC supported in nationally identified priority landscapes provided, in alignment and coordination with GSLEP and other relevant initiatives, including: presentations and workshops on global snow leopard conservation best practices in Western Tian Shan and Gissar-Alai priority landscapes, national education and awareness raising activities on snow leopard conservation, publications using snow leopard monitoring data, updated maps on snow leopard range and habitat, recommendations for revisions to national hunting policies for snow leopard prey species, contributions to implementation of Kyrgyzstan NSSLC.</p>			
Component III Sub-total				\$3,784,477	
Co-financing Grand Total				\$24,519,183	

Annex 14: Justification for Expenditure Under Each ATLAS Budget Category and Alignment with Local Benefits

	ATLAS Budget Code	ATLAS Budget Description	Budget reference #	Original Budget notes	Amount	Justification of Contribution to Component 1 Outcomes and Outputs	Benefit to Local Communities
Component 1	71200	International Consultants	1	Pro rata (43%) cost of contracting the services of an international mid-term evaluation consultant under Output 1.1 (8 weeks @ US\$3235/wk) (M&E). Pro rata (43%) costs of contracting the services of an international final evaluation consultant under Output 1.1 (9 weeks @ US\$3235/wk) (M&E).	35,000.00	N/A – The required M&E costs are prorated across the three main project components, instead of being separated into another component. This is standard practice for UNDP-GEF projects' ATLAS budget organization. The cost of an international consultant for the mid-term review and terminal evaluation are currently the only planned contracting of international consultants related to any aspect of the project.	The mid-term review and evaluation process provides an additional opportunity for local stakeholders to provide their concerns and inputs to the project implementation.
	71300	Local Consultants	2	National professional, technical and scientific expertise for: Output 1.1. Activities on PA zoning and biodiversity inventory, appropriate management tools development and staff training (112 local consultant weeks @ \$550/week; 2 trainers for 12 training workshops @ \$500 per trainer/workshop); Output 1.2 on HCVF status upgrading, on-the-ground HCVF identification and management plans development, as well as leskhoz staff training (164 local consultant weeks @ \$550/week); Output 1.3 on capacity development of other PAs and leskhoz in the region, including PA Steering Boards and leskhoz JFM Board establishment and capacitating for operation (104 local consultant weeks @ US\$500/week, 76 local consultant weeks @ US\$550/week); Output 1.4. local capacity building for joint patrolling of PAs, buffer zones and corridors (12 local consultant weeks @ US\$550, 4 local consultant weeks @ US\$500/week). Pro rata (33%)	250,185.00	<p>The specific activities to be undertaken under each of the outputs are summarized in the project document. The input and guidance of national experts on PA management planning and PA capacity development is required to complete these outputs. The SAEPF does not have the human resources or technical capacity to undertake these activities on their own. With the project's support, the two newly established PAs will be operationalized.</p> <p>Along similar lines, the inputs and guidance of national experts is required for activities in relation to HCVF, as SAEPF (and the local leskhoz stakeholders) do not have the capacity to elaborate and operationalize the HCVF approach on their own. HCVF is a new concept in Kyrgyzstan that is not yet implemented in practice, and thus the input of technical experts is required to develop the HCVF approach and operationalize it in the Kyrgyz context.</p> <p>This budget line also includes the pro-rate costs for a national consultant to</p>	The use of local consultants will directly contribute to and is necessary for the establishment and operationalization of the two new PAs. The local communities have directly supported the creation and establishment of the PAs, and are eagerly anticipating the various benefits that the PAs will bring them, including: opportunities for employment directly with the PA, opportunities for employment with business or services associated with the PAs, opportunities to start businesses associated with the PAs (e.g. tourism,

	ATLAS Budget Code	ATLAS Budget Description	Budget reference #	Original Budget notes	Amount	Justification of Contribution to Component 1 Outcomes and Outputs	Benefit to Local Communities
				costs of contracting the services of a local mid-term evaluation consultant (6 weeks @ US\$550/wk) (M&E). Pro rata (33%) costs of contracting the services of a local final evaluation consultant (6 weeks @ US\$550/wk) (M&E).		support the mid-term review and terminal evaluation (required M&E activities). The M&E costs are prorated across the three project components, instead of being separated into another component. This is standard practice for UNDP-GEF projects' ATLAS budget organization.	handcrafts, etc.), enhanced environmental education and awareness in their communities, improved infrastructure in their communities, reduced environmental degradation in their region and communities, including reduced erosion, reduced poaching of wildlife, and reduced illegal collection of wood and forest products.
	71400	Contractual Services - Individuals	3	<p>Pro rata (35%) costs of Project Coordinator (240 weeks @ US\$550/wk) (Component 1). Project coordinator technical functions and outputs include:</p> <ul style="list-style-type: none"> • Supervise and coordinate the production of project outputs, as per the project document; • Mobilize all project inputs in accordance with procedures for nationally implemented projects; • Coordinate the recruitment and selection of project personnel; • Supervise and coordinate the work of all project staff, consultants and sub-contractors; • Prepare and revise project work and financial plans; 	84,200.00	This budget line covers the share of PMU staff time (over the 5 year implementation period) that will be dedicated to technical aspects of the project (not project management activities).	This supports successful implementation of the project, which will lead to the various local benefits expected from achievement of the planned project outcomes and outputs.

	ATLAS Budget Code	ATLAS Budget Description	Budget reference #	Original Budget notes	Amount	Justification of Contribution to Component 1 Outcomes and Outputs	Benefit to Local Communities
				<ul style="list-style-type: none"> • Liaise with UNDP, relevant government agencies, and all project partners, including donor organizations and NGOs for effective coordination of all project activities; • Oversee and ensure timely submission of the Inception Report, Combined Project Implementation Review/Annual Project Report (PIR/APR), Technical reports, quarterly financial reports, and other reports as may be required by UNDP, GEF, TFS and other oversight agencies; • Disseminate project reports and respond to queries from concerned stakeholders; • Report progress of project to the SC, and ensure the fulfillment of SC directives; • Oversee the exchange and sharing of experiences and lessons learned with relevant community based integrated conservation and development projects nationally and internationally; • Ensure the timely and effective implementation of all components of the project; • Assist SAEPF and other relevant government agencies and project 			

	ATLAS Budget Code	ATLAS Budget Description	Budget reference #	Original Budget notes	Amount	Justification of Contribution to Component 1 Outcomes and Outputs	Benefit to Local Communities
				<p>partners - including donor organizations and NGOs - with development of essential skills through training workshops and on the job training thereby upgrading their institutional capabilities;</p> <ul style="list-style-type: none"> Carry out regular, announced and unannounced inspections of all sites and project-funded activities. 			
	71600	Travel	4	<p>Travel costs (flights, vehicle rental, fuel, daily allowances, accommodation, etc.) associated to supervise or/and monitor all the on-ground works and labor (Output 1.1). Travel costs (rental, maintenance and fuel costs) associated with the zoning, management tools and infrastructure development in Alatai and Kan-Achuu PAs and leskhoz participatory boards operations (Output 1.1, Output 1.2, Output 1.3. and Output 1.4)</p>	17,800.00	<p>The main project regions for Component 1 (Toktogul District, and Toguz-toro District) are located approximately 5-8 hours by car from Bishkek, where SAEPF headquarters (and all other technical institutions and experts) are located. In addition, the actual PA sites are an additional 1-2 hours travel from the nearest large town. The primary site for Alatai SNP is ~1 hour from Toktogul city, while the secondary site, Kara-suu lake, is ~2+ hours. Kan-Achuu SNP is ~1 hour from Kazarman. Furthermore, the project includes other targeted existing PAs that are located in other districts in Jalal-Abad province, multiple hours drive from Toktogul or Jalal-Abad city. While it is expected that SAEPF will be able to provide some transport, additional transportation will be required for certain project activities, such as PA zoning, development of PA infrastructure, development of HCVF management measures for integration into leskhoz management plans, and start-up of joint community management boards for both the PAs and the leskhoz territories.</p>	<p>Travel to and within the project region allows project staff and contracted experts to collect input directly from local communities and stakeholders on various aspects of PA and forest management, and to directly view and understand local environmental conditions and considerations that relate to the establishment of various PA and forest regimes.</p>
	72100	Contractual Services-	5	<p>Institution to facilitate PA and leskhoz and local communities' partnership mechanisms building</p>	66,800.00	<p>External third party companies or organizations are often best placed to support community partnership building</p>	<p>The establishment of community partnerships and</p>

	ATLAS Budget Code	ATLAS Budget Description	Budget reference #	Original Budget notes	Amount	Justification of Contribution to Component 1 Outcomes and Outputs	Benefit to Local Communities
		Companies		and awareness raising (Output 1.1) (Budgeted at a total of \$29,800). Institution to upgrade the status of HCVF and upgrade enabling frames on SFM and HCVF (Output 1.2) (Budgeted at a total of \$37,000).		between government institutions and local communities. This may include the employment of national NGOs or other technical institutions.	consultation mechanisms is critical to the successful implementation of PA and forest management regimes.
	72200	Equipment and Furniture	6	Procurement of essential office furniture, equipment, software, road maintenance machinery, surveillance and monitoring equipment (Output 1.1 and Output 1.4). Procurement (and installation) of communications technology (i.e. cellphones, satellite phone or VHF/FM radio communications) for Alatai and Kan-Achuu SNPs (Output 1.1.) Purchase of supplies for key PA infrastructure, such as entry gates, storage facilities, boundary markers, and enforcement structures.	514,500.00	<p>The project technical approach has been reviewed, analyzed, and determined to be the most cost-effective approach for the operationalization of the two new PAs. This budget line supports the full operationalization of the two newly established PAs that are targeted by the project, Alatai SNP and Kan-Achuu SNP. Split between the two PAs and spread over the five year implementation period of the project, this equates to only approximately \$50,000/year per PA.</p> <p>SAEPF has currently tentatively assigned 17 staff to Alatai SNP and 14 staff to Kan-Achuu SNP. The “Equipment and Furniture” budget line does not cover staff costs, but addresses the equipment and furniture needs to fully support these staff to operationalize the two PAs. This includes items such as regulatory monitoring equipment (e.g. binoculars, cameras, trail monitoring cameras, ranger field gear) and scientific equipment (e.g. lab equipment, biodiversity monitoring equipment). In addition, offices will be established for each PA with all necessary furniture and associated equipment. Of particular importance is road maintenance machinery, which is necessary for PA staff to maintain access to the PA territory. The two PAs are in mountainous terrain, and spring snowmelt flooding often washes out the unmaintained dirt access roads to the</p>	<p>The operationalization of the two new PAs, and development and implementation of their management plans, requires a variety of equipment commonly used for effective PA management. As described in budget note reference line #2 above, the local communities have strongly supported the establishment of the two new PAs, and are anticipating a variety of benefits from their full operationalization.</p>

	ATLAS Budget Code	ATLAS Budget Description	Budget reference #	Original Budget notes	Amount	Justification of Contribution to Component 1 Outcomes and Outputs	Benefit to Local Communities
						PAs. A fully detailed procurement plan will be developed in collaboration with SAEPF in the early stages of the project.	
	72600	Grants	7	Grant fund for incentives for wildlife anti-poaching activities (Output 1.4). The grant in this budget will follow UNDP Micro-Capital Grants' policy.	20,000.00	The project is implementing an innovative approach in Kyrgyzstan to support community-based management and enforcement of wildlife regulations. This includes the use of incentive-based mechanisms (e.g. rewards for information related to poaching violations, etc.) to deter poaching and regulatory violations. This approach is common in western countries, but is not in widespread use in Kyrgyzstan.	This budget line contributes to the improved management and enforcement of wildlife regulations, which supports a variety of community benefits, including reduced poaching.
	72800	Information Technology Equipment	8	Procurement of essential office equipment and software to operationalize new PAs and leskhoz participatory management boards, as well as other targeted PA Steering Boards (Output 1.2, 1.3 and Output 1.4).	20,200.00	This budget line will also support the IT needs for establishment of the two new PAs. The use of modern information technology equipment is essential for effective PA management. The establishment of community-based consultation mechanisms is essential for the project's strategy of community-based PA and forest management.	The implementation of community-based management mechanisms provides the opportunity for local communities voices and input to be received and integrated in the development of PA and forest management regimes.
	72300	Materials & Goods	9	Procurement of materials to construct Alatai and Kan-Achuu SNPs' offices, guard huts, and boom gates for access checkpoints, and sign placement (Output 1.1).	87,500.00	This budget line directly supports the operationalization of the two newly established PAs, Alatai SNP and Kan-Achuu SNP. The establishment of boundary markers, access control points, and enforcement infrastructure such as guard huts, is essential for the effective management of the PAs.	As previously mentioned in budget note reference line 2, the local communities strongly supported the establishment of the PAs, and are eager to have them fully operational, so that they may begin to see the variety and full range of expected benefits.
	74200	Audio Visual&Print	10	Procurement of special services to develop and publish different	56,000.00	Printing and publication of various materials is essential for effective	Among other local

	ATLAS Budget Code	ATLAS Budget Description	Budget reference #	Original Budget notes	Amount	Justification of Contribution to Component 1 Outcomes and Outputs	Benefit to Local Communities
		Prod Costs		information products in national, regional and local media and social network on new and existing PA objectives and functioning as well as about HCVF (Output 1.1. and Output 1.2.).		stakeholder communication.	communities' understand and awareness about PA and forest management regimes and regulations will be enhanced through printed materials. In addition, environmental education and awareness will also be enhanced, which is important for the project's success.
	75700	Training, Workshops and Conferences	11	Advanced training courses for managers, rangers and community liaison staff in Alatai and Kan-Achuu SNPs, and Toktogul and Toguz-Toro leskhozoes, as well as for other PA and leskhozoes of the Jalal-Abad region (Output 1.1, Output 1.2 and Output 1.3). Participatory Management Board meetings in target SNP and leskhozoes. Pro rata (33%) costs of translation and meeting costs for inception workshop (M&E).	447,815.00	The project's strategy includes a wide range of capacity development approaches, development of technical documents through stakeholder consultation, and the implementation of community-based management approaches for PAs and forests. Trainings, workshops and conferences are essential activities for strengthening PA management capacity, effective forest management capacity, and for implementing community-based consultative approaches.	Trainings, workshops and conferences will include community participation, as relevant. In particular, the establishment and implementation of community-based management approaches (e.g. Participatory Management Board meetings) will allow local communities to provide their input to the development and implementation of PA and forest management regimes.
	72200	Equipment and Furniture	12	Cost of one vehicle for each of the two new SNPs, necessary due to the long distances and difficult terrain between SNP offices and PA locations. Costs of the procurement of office furniture, vehicle and equipment for the PMU (Output 1.1.). Vehicle will initially be used	100,000.00	To be covered to UNDP TRAC co-financing. Considering the large distances between the project offices and various project field sites, regular transportation is essential for both PMU staff and PA staff. The full-time availability of a vehicle for the PMU and PA staff is essential for the successful	The budget line contributes directly to the successful implementation of the project, and the effective management of the PAs. As described in

	ATLAS Budget Code	ATLAS Budget Description	Budget reference #	Original Budget notes	Amount	Justification of Contribution to Component 1 Outcomes and Outputs	Benefit to Local Communities
				by PMU for project implementation responsibilities due to the long distances between project field sites, difficult terrain, and non-existent public transportation between sites. At project completion the vehicle will be transferred to SAEPF for use by the SNPs.		implementation of the project, and for the effective management of the PAs.	budget note reference 2 above, there are a variety of local community benefits anticipated from the effective establishment and operationalization of the two new PAs.

Annex 15: Share of Budget by ATLAS Cost Category Over 5-year Planned Implementation Period for All Components

ATLAS Budget Code	Cost Category Description	Budget Planned	Share of Total	Explanation
71200	International Consultants	\$70,000.00	1.71%	International consultant required for mid-term review and terminal evaluation.
71300	Local Consultants	\$801,570.00	19.61%	All professional and technical personnel inputs from national experts (not project staff) related to PA management, sustainable forest management, sustainable land management, snow leopard monitoring, and wildlife law enforcement.
71400	Contractual Services - Individuals	\$240,900.00	5.89%	Includes both A.) The technical inputs provided by project staff in support of achievement of the planned outcomes and outputs for each of the three components of the project (70% of costs); and B.) Project management inputs provided by the project staff (30% of costs).
71600	Travel	\$213,200.00	5.21%	The main project office will be in Toktogul District, which is one of the two primary districts in which the project is working. Toktogul District is adjacent to the other district, Toguz-toro District, although there is no quick route between the largest towns in each of the respective districts (Toktogul city in Toktogul District, and Kazarman in Toguz-toro District). Toktogul city is approximately 5-7 hours by car from Bishkek, depending on the time of year and road conditions. The UNDP Country Office, Project Implementation Unit, SAEPF main offices, and all other national technical institutions and organizations are based in Bishkek. Therefore it is anticipated that successful implementation of the project will require transport of project staff, SAEPF staff, UNDP staff, and contracted experts between Bishkek and the project field sites.
72100	Contractual Services-Companies	\$321,900.00	7.87%	<p>As per Budget Note 5: "Institution to facilitate PA and leskhoz and local communities' partnership mechanisms building and awareness raising (Output 1.1) (Budgeted at a total of \$29,800). Institution to upgrade the status of HCVF and upgrade enabling frames on SFM and HCVF (Output 1.2) (Budgeted at a total of \$37,000)."</p> <p>And Budget Note 17: "Institution to identify the boundaries of buffers zones and corridors and to map them as well as develop appropriate management regimes jointly with local stakeholders under Output 2.1 (budgeted @US\$13,600). Institution to finalize mapping and description of the targeted pastures providing data for management planning (Output 2.3.) (budgeted @US\$19,500). Institution to conduct support to re-</p>

ATLAS Budget Code	Cost Category Description	Budget Planned	Share of Total	Explanation
				forestation and natural forest regeneration activities (Output 2.4.) (budgeted @US\$222,000).”
72200	Equipment and Furniture	\$830,500.00	20.31%	<p>Under Component 1 (approximately 74% of the total) this reflects mainly the full operationalization of the two newly established PAs, Alatai SNP and Kan-Achuu SNP. At present these two new PAs exist functionally only on paper, and have no infrastructure, no equipment, and no furniture that is necessary for effective PA management. SAEPF, the main national execution partner that is responsible for PA management, is providing direct and in-kind co-financing to support operationalization of these PAs, through staff costs and other direct investment. However, the project’s funding is required for a significant portion of the capital investment required to get the PAs up and running, as the national government does not have cash resources to make these investments in a comprehensive way anytime in the near future.</p> <p>The UNDP TRAC co-financing is being used to finance \$100,000 USD of this budget line, leaving the GEF funding at 83% of the total.</p> <p>Under Component 2 (approximately 26% of the total), this reflects mainly the project’s investment in reforestation activities, including the purchase of saplings and relevant hand tools, equipment to plant them, and fencing to secure their long-term survival.</p> <p>Additional details are provided in the respective budget notes for this cost category (budget notes 6 and 18).</p>
72300	Materials & Goods	\$87,500.00	2.14%	As per Budget Note 9: “Procurement of materials to construct Alatai and Kan-Achuu SNPs’ offices, guard huts, and boom gates for access checkpoints, and sign placement (Output 1.1).”
72600	Grants	\$248,000.00	6.07%	<p>For two activities: 1.) Incentive program for community-based management related to hunting regulations and other natural resource management regulations; and 2.) Direct micro-grant program for pilot alternative livelihoods activities in local communities supporting integrated approaches to biodiversity conservation / sustainable forest management / sustainable land management.</p> <p>The micro-grant program under Component 2 is budgeted at a total of</p>

ATLAS Budget Code	Cost Category Description	Budget Planned	Share of Total	Explanation
				\$200,000, targeting \$50,000 per each of the two participating communities in the two target districts (total of four communities). Based on UNDP experience from other similar programs in and analysis during the project development phase, this is considered the maximum expected absorption capacity for these communities in relation to the scope of qualifying activities the micro-grants program. If it is determined in the early phases of the program that the target communities may have a higher absorption capacity (i.e. if there is a large number of thematically and technically well-qualified applications to the micro-grant program) then the budget line for this activity will be revised and increased as appropriate.
72800	Information Technology Equipment	\$62,200.00	1.52%	Various computer hardware and software purchases necessary for successful implementation of the project, including support for operationalization of Joint Forest Management boards, Joint PA Management Boards, and implementation of modern approaches to sustainable land management by Pasture Management Committees.
73100	Rent and office maintenance	\$60,000.00	1.47%	\$1,000 / month over 5-year implementation period. Includes offices premises in Toktogul District, and PMU staff presence in Bishkek at premises of UNDP Project Implementation Unit.
74100	Professional Services - Audit	\$10,000.00	0.24%	Required M&E activity.
74200	Audio Visual&Print Prod Costs	\$111,565.75	2.73%	Various printing and other related costs necessary for effective project implementation.
74598	Direct Project Costs	\$22,431.00	0.55%	Related to UNDP Direct Implementation modality.
75700	Training, Workshops and Conferences	\$1,008,808.25	24.67%	<p>This budget line represents the largest planned ATLAS cost category for the project. This reflects the project's highly participatory and stakeholder-driven strategic approach. This budget line covers a wide range of different planned participatory activities at the local, regional, and national level that are essential for achievement of the expected project results.</p> <p>The various trainings, workshops, and conferences involved will result in direct tangible outputs, outcomes, and benefits foreseen for the project. For example, under Component 1, trainings for PA staff will be conducted on aspects of PA management where critical capacity needs have been assessed. In addition, for example, workshops will be held to facilitate a participatory consultation process for the development of the</p>

ATLAS Budget Code	Cost Category Description	Budget Planned	Share of Total	Explanation
				<p>PA management plans. Such trainings and workshops will directly result in strengthening of the METT score for the two newly established PAs, which is a key target of the project, and indeed a key target for the GEF biodiversity focal area globally.</p> <p>Under Component 2, a significant participatory process will be required to facilitate stakeholder consensus on the exact boundaries of PA buffer zones and corridors, and to ensure local community agreement and buy-in on the specific management measures to be put in place in these zones. Additional consultations and workshops will then be necessary to work with local management and local government authorities to ensure the integration of biodiversity conservation, SFM, and SLM measures into their local resource management plans and local development plans. It is only through this consultative process that the project can effectively reach stakeholder agreement for the achievement of the planned outputs and outcomes related to this activity.</p> <p>As per the Budget Notes:</p> <p><u>Budget Note 11:</u> “Advanced training courses for managers, rangers and community liaison staff in Alatai and Kan-Achuu SNPs, and Toktogul and Toguz-Toro leskhozoes, as well as for other PA and leskhozoes of the Jalal-Abad region (Output 1.1, Output 1.2 and Output 1.3). Participatory Management Board meetings in target SNP and leskhozoes. Pro rata (33%) costs of translation and meeting costs for inception workshop (M&E).”</p> <p><u>Budget Note 22:</u> “Basic training and advanced training on buffer zones and corridors their biodiversity and special land use regimes in Toktogul and Toguz-Toro districts (Output 2.1). Basic training on hunting grounds inventory, management planning in Toktogul and Toguz-Toro districts and hunting licensing improvement in Bishkek (Output 2.1). Basic training on hunting grounds inventory, management planning in Toktogul and Toguz-Toro districts and hunting licensing improvement in Bishkek (Output 2.1). Training workshops in target districts and communities to integrate BD / SLM / SFM objectives to local development planning (Output 2.2.) Regular coordination meetings of pasture management devoted projects (Output 2.2). Training workshops in tar-</p>

ATLAS Budget Code	Cost Category Description	Budget Planned	Share of Total	Explanation
				<p>get districts and communities to communicate pasture inventory outputs and to develop pasture management plans and other modern pasture management tools (Output 2.3.). Training workshops in target districts and communities to communicate forest pasture inventory outputs and to develop forest pasture management plans (Output 2.3.). Workshops in target districts and communities to communicate forest restoration plans and results (Output 2.4.). Training workshops in target districts and communities to communicate Micro grant fund operational procedures as well as micro granting publicity events (Output 2.5.). Pro rata (33%) costs of translation and meeting costs for inception workshop (M&E) Component 2.”</p> <p><u>Budget Note 28:</u> “Training workshop for identified target groups on wildlife protection and identification and prosecution of wildlife crime (Output 3.1.). Workshop to support institutionalization of capacity development modules into law enforcement agency action plans (Output 3.1.). Workshops to support establishment of cross-sectoral coordination mechanism on the provincial and district levels (Output 3.1.). Workshop to develop capacities of agencies and research institutions to provide adequate snow leopard monitoring support (Output 3.2). Trainings for protected area staff (strategically selected, among sites other than Alatai and Kan-Achuu PAs) on snow leopard and prey monitoring. (Output 3.2.). Training for hunting dept., and National Academy of Sciences on snow leopard and prey international standards of monitoring (Output 3.2.). Workshop to sign special MOUs on monitoring between protected areas, National Academy of Sciences, and hunting department, relating to snow leopard and prey species, with collaboration with relevant international partner organizations (Output 3.2). Event to sign an international MOU with a genetic laboratory that has experience and technical capacity to identify snow leopard samples from scats, hair follicles and blood, located in one of the snow leopard range countries, to have compatible and high quality results of analysis for basic (species-level) genetic monitoring of populations and wildlife crime (Output 3.2.). Snow leopard range countries Summit (Output 3.3.). Regional sharing conference on snow leopard monitoring (Output 3.3.). Workshops for dissemination of GSLEP best practices in Western Tian Shan region (Output 3.4.) Workshops / events within NSLEP implementation (3.4.).”</p>
	Total	\$4,088,575.00	100.00%	