

National Snow Leopard Ecosystem Protection Priorities (NSLEP)

Tajikistan(2014 – 2020)

Dushanbe 2013



Executive Summary

Snow leopards (*Panthera uncia*) are one of the world's most enigmatic wild cats. They live and travel in solitude over vast distances of isolated and rugged mountain range in central Asia, and are supremely adapted to thrive in some of the harshest conditions on the planet. Seldom observed in the wild, snow leopards have appropriately earned the title "Ghost of the mountains."

Despite having protected status in the 12 countries where they occur, snow leopard numbers continue to decline throughout their range. Tajikistan contains approximately 250-280 snow leopards primarily within the Pamir Mountain range. Illegal trade, conflict with humans, lack of conservation capacity, and loss of prey have been identified as threats to this endangered species within Tajikistan. Loss of key prey species, in particular Marco Polo sheep, markhor, urial and ibex, is thought to be responsible for increasing instances of depredation by snow leopards on domestic animals, leading to an alarming increase in retaliatory killing of snow leopards. Those animals killed due to such conflict often enter the illegal trade for their bones, pelts and other body parts.

The goal of conserving the snow leopard in Tajikistan is to maintain its current range and restore its population across its historical range wherever possible. To accomplish that, Tajikistan plans to implement a series of activities to address the threats identified in this document. They include:

- Conserve the snow leopard and its prey by engaging in wildlife management traditional hunters and the local communities they live in
- Address degradation and fragmentation of habitats by developing sound management plans for protected areas which mainstream snow leopard conservation concerns
- Regulate livestock grazing and pasture use to increase prey availability
- Implement effective measures to reduce the reliance on teresken plant especially for fuel wood
- Use Environmental Impact Assessments (EIAs) to understand impacts of potential future exploration and mining activities
- Combat illegal trade in snow leopards and their parts, through international cooperation and training of border and customs officers to better detect the size of the illegal trade and prevent it
- Reduce conflicts between farmers and snow leopards through the use of measures such as predator-proof corrals and livestock guard dogs
- Address the inadequate implementation of legislative provisions for the conservation of the snow leopard, its prey and ecosystem through capacity-building trainings and establishing community-based wildlife management and hunting conservancies
- Promote greater awareness among decision-makers on the importance of the snow leopard by presenting good practices from Tajikistan and abroad
- Address climate change impacts, through a combination of mitigation and adaptation measures
- Use transboundary cooperation and collaboration to curb poaching and combat illegal trade, as well as boost joint monitoring of migratory populations of mountain ungulates, including Marco Polo sheep.

Priority policy actions include: Approval of the National Action Plan for the conservation of the snow leopard (*Panthera uncia*) in Tajikistan for the period 2013-2018; development and implementation of laws and regulation for the conservation of the snow leopard; and appointment of a national focal point and establishment of a working group on snow leopard conservation.

Priority conservation actions include: Reducing human-snow leopard conflicts, through the use of predator-proof corrals, livestock guard dogs and improved husbandry practices; addressing the threats to the key snow leopard prey (Marco Polo sheep, ibex and markhor) caused by habitat degradation (especially the loss of teresken for Marco Polo sheep and more generally competition with livestock) and poaching; strengthen the capacity of protected areas in the conservation of the snow leopard; developing incentives for local communities to conserve snow leopards and their prey; strengthening research and monitoring of snow leopards in Tajikistan; promoting

public awareness through the media and educational programs drawing on local knowledge; strengthening the capacity of key ministries (security and customs) and their staff in tracking and combating illegal trade in snow leopards and their parts; and providing technical support on tracking illegal trade through trainings to border and customs agents.

Priority transboundary actions include: Support of cross-border cooperation with Kyrgyzstan, Afghanistan and China.

Valuing the snow leopard ecosystem and its economic, biodiversity, and spiritual/cultural services, quantified as much as possible

The mountain ecosystem in Tajikistan is of great importance for the survival of the snow leopard (*Panthera uncia*). The presence of snow leopards and their wild prey are indicators of a healthy mountain ecosystem of unique ecological, economic, aesthetic and spiritual significance. The snow leopard and the mountain ecosystems it occupies has environmental, economic, and cultural values for the country and the world. This ecosystem is vulnerable to human disturbance and climate change. Thus, conserving the snow leopard can ensure into the future the protection of all the functions of the ecosystem, for the benefit of local people, the region and the world.

Tajikistan is located in the center of the snow leopard range. Tajikistan's mountains are a key part of the snow leopard range in Central Asia. The total habitat of the snow leopard in Tajikistan is about 85,700 km², which represents 60% of the total territory of the country and about 2.8% of the current global range of the species. According to local experts, there are currently 250-280 snow leopards in Tajikistan. The Pamir and Pamir-Alai are the main link between the south-eastern part of the global range of the species (particularly the Hindu Kush mountain range, the Karakoram, Tibet and Gimilaeu) and the northern part of its range (including the Tien Shan, Altai and Sayan systems).

In Tajikistan, the snow leopard can be found in the following ranges: Turkestan, Zeravshanskiy, Hissar, Karateghin, Hazratishoh, Vakhsh, Darvaz, Academy of Sciences, Peter the Great, Vanj, Yazgulem, Rushan, Shakhdarinsky, Pshart, Muzkulsogo, Sarykol, South Alichur, North Alichur, Wakhan and the Trans-Alay. Of great importance for the snow leopard is the territory of the Pamirs and Badakhshan (GBO), where almost 70% of the distribution of snow leopards in Tajikistan occurs.

The optimal habitat of the snow leopard in almost all parts of the area is located at an altitude of 2000-4000 meters above sea level. However, in some areas the terrain and the availability of prey drives snow leopards to lower elevations, as far down as 1000 meter above sea level. The snow leopard inhabits alpine and subalpine zones, characterized by a rough relief with steep slopes and deep gorges. The snow leopard usually prefers rugged slopes with an elevation angle greater than 40°. In the Eastern Pamirs, where the terrain is more leveled, the snow leopard has a preference for alpine meadows with rocky formations.

As a top predator, the snow leopard is at the top of the food chain and is a good indicator for health of the high-mountain ecosystem of Central Asia. The high mountain ecosystem inhabited by snow leopards is one of the most fragile and vulnerable ecosystems on earth. The well-being snow leopards reflects the well-being and proper functioning of the alpine ecosystem in general. The mountain ecosystem is home to a variety of other animal species, including the main prey of the snow leopard; the Siberian ibex (*Capra sibirica*), Marco Polo sheep (*Ovis ammon polii*), markhor (*Capra falconeri*), urial (*Ovis vignei*), marmot (*Marmota caudata*), tolai hare (*Lepus tolai*), pika (*Ochotona roylei*), chukar partridge (*Alectoris kakelik*) and Himalayan snow cock (*Tetraogallus himalayensis*).

Of these species, ibex and Marco Polo sheep are hunted, and the markhor and urial may be hunted in the future. Sustainable use, through hunting tourism, can be an incentive to conserve these species, thus ensuring the availability of prey for the snow leopard and the integrity of the ecosystem and promoting socio-economic development of local communities living in the snow leopard range. Sustainable management of trophy hunting of Marco Polo in the snow leopard ecosystem brings more than USD 2 million/year in revenues for the government as well as in the form of employment and benefits for hunting concessions and local communities involved.

Mountain landscapes also have ecotourism potential, as long as they are properly protected. Opportunities to observe and photograph wildlife can generate income for local communities providing services for tourists (through

guiding, homestays, etc.). Currently, revenues from ecotourism are in the range of USD 2 million but there is a great potential to increase such revenues. Tajik National Park, which is home to a large percentage of the snow leopard population in Tajikistan, was recognized on June 21, 2013 as a UNESCO World Heritage site. This recognition is considered to bring greater attention to the region and thus help boost its ecotourism untapped potential. The snow leopard ecosystem is also important to local communities as it provides pastures for livestock, provides water and protects against erosion and landslides. Wood and plants are also collected.

The goal of conserving the snow leopard in Tajikistan is by 2020: to stabilize the population or increase it wherever possible across its current and historic range; and reduce or eliminate threats to the snow leopards, its prey and habitat.

Disseminating information on the value of the snow leopard ecosystem and generating support for conservation

The key legislation on environmental education, information management and public participation in the Republic of Tajikistan consists of: the Articles of the Constitution of the Republic of Tajikistan on environmental education and protection.

The main legislation on environmental education, information management and public participation include:

- The Law of the Republic of Tajikistan "On Environmental Protection" from August 2, 2011, №760;
- The Law of the Republic of Tajikistan "On special Natural Protected Areas" from December 26, 2011, №788;
- The Law of the Republic of Tajikistan "On the wild Animals", from January 5, 2008, №534;
- The Law of the Republic of Tajikistan "On Environmental Impact Assessments", from 2010, №12;
- The Law of the Republic of Tajikistan "On biological security", from March 1, 2005, №88; and
- The Law of the Republic of Tajikistan "On ecological monitoring", from March 25, 2011, №707.

In 1996, the Government developed and approved the "State Programme on Environmental Education of the Republic of Tajikistan until 2000 and until 2010» (№ 93 February 23, 1996). This program is the foundation of the state policy in the field of environmental education, aimed at creating an environmental conscience among citizens and promoting environmental stewardship among them. The State Programme on Environmental Education provides the basis for long-term and comprehensive environmental education in Tajikistan. It calls for environmental education, including education in preschools and schools, training on environmental issues in secondary and higher education institutions, training courses for officials and awareness campaigns among the media and the general public.

In the wake of the completion of the State programme, the Government adopted the new Law of the Republic of Tajikistan "On environmental awareness" on December 29, 2010 (№ 673). This law defines the legal, financial and economic policy of the Republic of Tajikistan in the field of environmental awareness.

On February 27, 2009, the Government also approved the "National Environmental Programme of the Republic of Tajikistan for 2009-2019"(№ 123). This programme provides the mandate to determine how to develop a stable society, maintain a balance between natural resource use and conservation, the organization and coordination between use of natural resources and the healthy development of society. It also promotes sustainable use of natural resources, and ways to restore damaged ecological resources.

Currently Tajikistan does not have a separate program to raise awareness on the value of snow leopard ecosystem to mobilize all stakeholders including local communities. In the future we plan to address this gap by developing a sound communication strategy which would provide for the following:

- An information campaign on the role of communities in Tajikistan in the conservation of snow leopards
- Community outreach to help local people understand that snow leopards are not a threat to their livelihoods
- Targeted campaigns (depending on the social group and region) to help promote the snow leopard as a flagship species

- Information on the importance of protected areas for the conservation of biodiversity, including snow leopards
- Capacity-building for experts, managers of protected areas as well as hunting areas staff
- Outreach on measures to reduce poaching and illegal trade in snow leopard parts

Assessing threats, both traditional and the new ones from infrastructure development, market demand, tourism, and climate change

Threat	Area	Intensity	Urgency	Overall result
Category 1: Habitat & Prey Related				
Habitat Degradation	2	2	2	6
Habitat Fragmentation	2	1	1	4
Prey Reduction due to Illegal Hunting	5	4	5	14
Prey Reduction due to Competition with Livestock	4	4	4	12
Prey Reduction due to Legal Hunting	0	0	0	0
Prey Reduction due to Disease	3	2	2	7
Fencing that Disrupts Movements / Natural Migration	2	2	2	6
Decrease in the prey base because of collection of teresken plant for fuel wood	4	4	4	12
Decrease in the prey base because of grazing of livestock on teresken plant	4	4	3	11
Category 2: Direct Killing or Removal of Snow Leopards				
In Retribution for Livestock Depredation	3	2	3	8
Poaching for Trade in Hides or Bones	4	3	4	11
Zoo and Museum Collection of Live Animals	1	1	1	3
Traditional Hunting of Snow Leopards	1	1	1	3
Secondary Poisoning and Trapping of Snow Leopards	1	1	2	4
Diseases of Snow Leopards	1	1	0	2
Potential threat from legal hunting of snow leopards	0	0	0	0
Illegal trophy hunting on snow leopards	1	0	0	1
Trade in live snow leopard cubs	2	2	2	6
Category 3: Policy and awareness issues affecting conservation of snow leopards, prey and habitat				
Lack of Appropriate Policy	4	4	4	12
Lack of Effective Enforcement	4	4	4	12
Lack of Trans-boundary Cooperation	4	4	4	12
Lack of Institutional Capacity	4	4	4	12
Lack of Awareness Among Local People	4	4	4	12
Lack of Awareness Among Policy Makers	4	4	4	12
Perception that snow leopards are a threat	2	2	2	6
Category 4: Other Issues				
War and Related Military Activities	0	0	1	1

Threat	Area	Intensity	Urgency	Overall result
Human Population Growth (rapid) / Poverty (indirect threat)	3	3	4	10
Feral dogs attacking snow leopards and prey	0	0	1	1
General Poaching and Wildlife trade by migrant workers	0	1	1	2
General poaching by military personnel (incl. police, border guards)	3	3	3	9
Herding dogs acting as a disturbance for the ungulate prey of the snow leopard	1	1	0	2
Category 5: Emerging Threats				
Climate Change	5	5	5	15
Growing Livestock Populations & Intensifying Human-Wildlife Conflict	5	5	5	15
Large-scale Development Projects -	3	2	2	7
Direct & indirect impacts due to mineral exploration & mining (local)	2	2	2	6
Impacts due to hydroelectric projects	1	1	1	3
Threats from road development	1	1	1	3
On Ranking Threat Values: 0 or 1 = no or low threat; 2 or 3 = intermediate threat level; 4 or 5 = high threat level				
AREA: Rank each threat according to how wide-spread it is (where 5 indicates it occurs across most or all snow leopard range within country; and where 1 indicates it is extremely limited in areal extent)				
INTENSITY: Threats ranked from 5 = the most destructive impact to 1 = the least negative impact				
URGENCY: Rank each threat identifying if it needs immediate & urgent attention (very time sensitive) (value = 5) to being of least concern or urgency (value = 1)				
OVERALL RESULT: 11-15 = HIGH THREAT LEVEL; 5-10 = INTERMEDIATE THREAT LEVEL; 0-4 = NO OR LOW THREAT				

Decline in snow leopard prey

This occurs mainly because of poaching, which is the main limiting factor in the number of snow leopards. According to research in Tajikistan from the mid 80's, a single snow leopard requires at least 75 mountain ungulates to survive per year. Therefore, the reduction in populations of mountain ungulates in many parts of the range in the country has dramatically affected the population of snow leopards. Already during Soviet Union times, in the 60s the population of Marco Polo sheep decreased to 70,000 animals, and to 25,000 animals in the early 80's, due to intensive hunting and poaching, including from members of geological expeditions working each year in the Pamirs. This was followed by a sharp decline in the population of mountain ungulates (ibex, markhor, urial, Marco Polo sheep) during the civil war (1992-1997), given the general availability of weapons. In 2002, a study estimated the Marco Polo sheep to be around 10.8- 12,000. In recent years, poaching has decreased in some places thanks to protected areas and hunting concessions actively interested in the conservation and sustainable use of Marco Polo sheep and ibex. This has led to a partial recovery in the populations of argali and ibex. According to a survey conducted in 2009, 23,700 Marco Polo sheep were counted, which has translated into positive effects on the snow leopard.

However, still in many places poaching prevents the recovery of mountain ungulates, leading to a further reduction in the number, range and distribution of the different ungulate species. The urial sheep, after the death of the last known specimen in 2013, has likely disappeared from the Tajik Wakhan and Badakhshan; populations in other parts of the country continue to decline and thus have little nutritional value for the snow leopard. Ibex have also witnessed a decline in many parts of Badakhshan, but in some parts of the Pamir far away from human settlements the population is stable. Markhor are found in the south-westernmost part of the Pamir range, in Darvaz and across the Hazratishoh range along the border with Afghanistan.

Degradation and fragmentation of habitats

The last 20 years have witnessed increasing human pressure on mountain ecosystems and biodiversity in Tajikistan. Overgrazing, intensive use of mountain land for farming, construction of new settlements and growth of existing mountain villages, construction of roads and new power lines, increased erosion of mountain slopes create the preconditions for the degradation and fragmentation of snow leopard habitat, including that of its prey.

Reduction in the prey base as a result of competition with livestock

The reduction in the prey is also due to competition with livestock, as the number of domestic herds and lands allocated to pasture use increase. This is particularly the case for Marco Polo sheep and urial. Over-grazing and haying on the alpine meadows deprive Marco Polo sheep and ibex from access to grazing grounds, especially in the winter and significantly reduce their survival and reproduction.

Decrease in prey availability for the snow leopard as a result of collection of wild plants for fuel

The main natural resource used by local people in the Pamirs is teresken (*Ceratoides papposa*). It is widely used as fuelwood. Intensive uprooting of teresken year after year degrades the high steppe ecosystem and pastures, and has a direct negative impact on the status of Marco Polo sheep. It causes shortage of winter forage and general land degradation. The most affected areas seem to be those where argali are already absent due to poaching and grazing, but as easy accessible teresken stands are already overused the pressure increases in areas that overlap with argali and ibex habitats.

Direct and indirect effects of exploration and mining

Currently only local mining represents a threat, however because of the potential for exploitation of mineral reserves in Tajikistan and interest in from International companies, large-scale mining might be expected in future a negative impacts. In this connection, the construction of new roads across the mountains in Tajikistan, year by year, represents a possible disturbance for the snow leopard.

Poaching in connection with illegal trade in snow leopard skins, bones and derivatives in Tajikistan

Snow leopard skin is a valuable commodity and in great demand. Specialized local poachers use traps and rifles to kill snow leopards for their skin and derivatives. Often attacks on livestock are used as excuse for illegally selling snow leopard parts. According to survey data, each year 4 to 5 snow leopards are killed for their skin and other parts. Demand for snow leopard bones is coming in particular from abroad countries and with increasing trade relationships between foreign countries and Tajikistan, border patrols have no necessary capacity to address the illegal trade of snow leopard parts going from Tajikistan to abroad countries. Retaliatory killing as a result of attacks on livestock: Attacks and retaliatory killings are more frequently observed in Badakhshan and the Pamirs. Almost 80% of the snow leopard attacks occur in winter, especially when snowy. In most cases, the attacking snow leopard enters the corral from an opening in the roof and cannot get out. The snow leopard then kills all the animals in the corral and in response the farmer kills the cat and tries to sell the skins. Snow leopard attacks on livestock are also related to a decrease in availability of wild ungulate prey.

Poor implementation of legislative provisions for the protection of the snow leopard, its prey and ecosystem

The huge size of the snow leopard range and inaccessibility coupled with the lack of staff, of technical equipment and financial resources, including low wages and absence of effective incentives significantly complicate the implementation of environmental legislation.

Lack of sufficient awareness among decision makers on why it is important to conserve snow leopards

There is a general lack of awareness on the importance of conserving high mountain ecosystems and the need to regulate livestock numbers and pasture use. Generally, the importance of wildlife is underestimated and knowledge of successful international approaches to wildlife management and management of natural resources is unknown.

Lack of sufficient awareness among the local population there

Despite the protected status under the Tajikistan Red Book and the long-term engagement of government and non-governmental organizations, many local people still consider snow leopards as a pest, are not aware of their conservation status, the possibility of reducing conflict, and the need for their conservation.

Growing number of livestock in snow leopard habitat and intensified conflicts between pastoralists and snow leopards

This represents one of the highest threats to the survival of snow leopards, and other large carnivores, in Tajikistan. After a temporary contraction in the number of livestock during the first years of independence, since there has been a gradual increase in the number of domestic animals, with resulting pressure on the pastures and the development of new or temporarily unused pastures. Populations of wild mountain ungulates have as a result declined because of poaching and habitat degradation. The increase in livestock leads to increased conflicts with snow leopards.

Climate Change

The World Bank considers Tajikistan as the country in Central Asia which will be most impacted by climate change. The glaciers in the Pamir have since 1930 decreased by 30%. The glaciers present in the snow leopard habitat below 4400 m above sea level are at particular risk if the expected increase in mean annual temperature by 3 degrees by 2050, and by 5 degrees to 2080 becomes true. Melting glaciers are likely to affect water availability by quickly melting water reservoirs and increasing the risk of drought. Changes in water availability and temperature can affect pasture production and impact the diet and reproduction of wild mountain ungulates and thus affect the snow leopard. The availability of pastures for domestic livestock would also be impaired.

Dealing with the above threats

Halting the decline in the availability of snow leopard prey as a result of poaching through prohibitions and anti-poaching work of state bodies is difficult given the current financial constraints. Enforcement of laws and measures is impossible. A complementary and successful approach is to engage in wildlife management traditional hunters and the local communities they live in. This approach has been successfully implemented in neighboring Pakistan since the 1980s, and since 2008 a GIZ funded project is testing this approach in pilot areas across Tajikistan with notable success. In two pilot conservancies, "Parcham" in Bartang valley and "Yokuti Darshay" in Wakhan valley, the number of ibex has doubled in four years (currently both conservancies have more than 400 animals each), thanks to the buy in of traditional hunters from within the local communities. The population of snow leopards has also benefited indirectly from this approach.

In the early 60's, the number of markhor in Tajikistan was estimated at 700 individuals, and through the efforts of local people, NGO "Saiod", NGO "Markhor" and protected areas now there are more than 1,000 individuals. In the case of Marco Polo sheep, the trophy hunting concessions play a special role in their conservation. Only few trophy sized males are shot each by international hunters without impacts to the population, but with tangible financial benefits in return for their conservation. The state receives significant amounts of money from the sale of permits: it is necessary to ensure that a significant portion of these funds are used for the socio-economic development of local communities, and that local residents are informed of the sources and uses of these funds, as an incentive for them to help in the conservation of argali and other mountain ungulates, including their habitat.

Degradation and fragmentation of habitats have different causes. In Tajikistan, there is a network of specially protected areas (PAs), which provides a certain degree of protection for natural ecosystems and biodiversity. There are 4 strict protected areas, 13 nature reserves, one national park and two nature parks, which are located in different parts of the country and cover the main types of natural ecosystems. The total area of protected areas is 3.1 million hectares, accounting for about 22% of the total territory of Tajikistan. Tajik National Park is home to about 140 snow leopards, accounting for 64% of the total number in Tajikistan. PAs must develop a management plan that ensures the integrity of the protected ecosystem and mainstreams snow leopard conservation concerns in land use planning, as well as infrastructure projects.

To address the reduction in prey availability due to competition with livestock, it is necessary to determine pasture use at the community level and create incentives for reducing the number of livestock. Grazing regulation should be implemented in PAs or temporal and quantitative restrictions, depending on the zoning in the PA. Of note is that herders use as summer pastures for their livestock, areas that are of particular importance as winter habitat for mountain ungulates. It is also important to consider prohibiting or severely restricting hay making in subalpine and alpine meadows used as winter pastures by wild ungulates.

The ban on the use of teresken has been in place for 20 years but has not stopped illegal use. More effective measures are needed, which include supporting the increase of energy efficiency programs (promoting insulation of buildings, use of efficient stoves) and use of alternative fuel material by local households to reduce the collection of fuel wood, which contributes to pasture degradation.

Direct and indirect effects of exploration and mining must be mitigated through environmental impact assessments (EIA) in accordance with the strict requirements of the Law on EIAs.

Poaching for the sale of snow leopard skin, bones and other parts must be addressed by tracking all stages of the illegal activity and people involved. This latter requires international cooperation. A total ban on the use of hunting traps helps in the fight against "accidental" captures of snow leopards. When information is available on the illegal killing of snow leopards, skin and bones have to be confiscated promptly, so they do not fall into the black market.

If snow leopards are killed in retaliation for attacks on livestock it is necessary to prevent conflicts through the widespread use of measures to reduce such conflicts (predator-proof corrals and livestock guard dogs). If the number of livestock losses reaches a critical level, it may be necessary to consider establishing insurance funds at the community level.

To address the inadequate implementation of legislative provisions for the conservation of the snow leopard, its prey and ecosystem, there is a need to motivate staff and enforcement personnel through capacity-building trainings. Establishing community-based wildlife management and hunting conservancies can also be an effective tool to reduce wildlife crime.

Promoting awareness among decision-makers on the importance of the snow leopard, its ecosystem and prey, can be achieved by presenting good practices from Tajikistan and abroad. Awareness of the local population through the use of modern means of communication (the Internet, documentaries), and raising the profile of the snow leopard as a symbol, such as "national animal of Tajikistan".

Addressing climate change impacts, since they cannot be prevented, requires a combination of mitigation and adaptation measures to ensure the stability of the mountain ecosystem as much as possible as well as some degree of flexibility.

Transboundary cooperation and collaboration is an important approach to curb poaching and combat illegal trade, as well as to boost joint monitoring of migratory populations of mountain ungulates, including Marco Polo sheep. Several proposals have been introduced on the establishment of transboundary protected areas. One is the Pamir-Alai transboundary protected area between Kyrgyzstan and Tajikistan, for the protection of the unique mountain ecosystem and biodiversity of the Pamir-Alai. This area includes the 77% of TNP. The second is focused on the conservation of the snow leopard and Marco Polo sheep between Tajikistan, Afghanistan, Pakistan and China.

Organization, empowerment, and support

National institutions for snow leopard conservation: strengths and weaknesses to be remedied. Many snow leopards inhabit the territory of TNP, three strict protected areas (Zorkul, Romit and Dashtidzhum), two natural parks (Shirkent, Sarikhosor), eight reserves (Muzkulsogo, Sangvorskogo, Kamarob, Dashtidzhum, Almasinsk, Nurek, and Iskandarkul Kusavlisaysk). All protected areas fall under the jurisdiction of the Committee on Environmental Protection under the Government of the Republic of Tajikistan. Strict protected areas are under control of the State Agency on Protected Areas, and the reserves are under the control of the State Agency for Forestry and Hunting.

Many snow leopards also occur outside of protected areas, in areas currently protected and managed by local conservancies. Many others occur in areas where there is no form of protection.

To ensure the conservation of snow leopards it is critical that government agencies responsible for the management of protected areas work closely and collaboratively with local conservancies and communities and as needed draw on the support of local and international NGOs.

Below is a table describing the organizations involved, their strengths as well as weaknesses.

Organization	Strengths	Weaknesses
Committee on Environmental Protection	Supervise and control policies for the protection of the environment	Lack of research capacity
Academy of Sciences of Tajikistan	Strong research experience	Lack of fund for conducting of research
International Organizations	Provide capacity-building trainings and funding for monitoring and conflict mitigation interventions	Projects are often short-term as continuity in funding is not obtained; lack of coordination; replication of approaches
National Conservation NGOs		
Local Communities		

Legal framework for protecting the snow leopard and its habitat: strengths and weaknesses to be overcome

Much of the current legal framework was developed on the basis of laws and regulations adopted during the Soviet times. Some of the legislation has since been amended in compliance with new obligations under relevant UN conventions and regional agreements that Tajikistan has signed.

The conservation and use of rare and endangered species of flora and fauna included in the Red Book is regulated under the laws on “Environmental Protection” (1993), “Animal World” (2007), “Protected Areas” (2012) and relevant regulations. According to the law on “State control over environmental protection and use of natural resources” (1994), the Committee on Environmental Protection is designated as the state authority in charge of environmental protection and sustainable use of natural resources. According to law on “the procedure of obtaining permission on the taking of migrating, rare and endangered species” (2003), permissions for hunting of species, included in the Red book are issued only for research and other designated purposes. Illegal hunting of snow leopard is punished with a penalty of at least 4000 somoni (approximately 1,000 USD) up to 240,000 somoni (approximately 50,000 USD).

In 1997, Tajikistan ratified the UN Convention on Biological Diversity (CBD). A National Strategy and Action plan on the conservation and rational use of biological diversity (2003) was developed as a result. In 2000 Tajikistan also ratified the Conventions on the Conservation of Migratory Species of Wild Animals and on Wetlands of International Importance.

Currently Tajikistan is not yet a member of the Convention on International Trade in endangered species of fauna and flora (CITES) till present date, but the process of accession is ongoing. The ratification of CITES will allow Tajikistan to become part of the decision-making mechanism of the Convention.

Snow Leopards have been included in the Red Book of Tajikistan as “a rare species, decreasing in number” but the assessment requires updating and its reconciliation with the global assessment of the species under The IUCN Red List.

Wildlife law enforcement and combating crime: current practice and areas for improvement

Effective implementation of anti-poaching initiatives often requires inter-institutional cooperation including the local, regional, and international levels; governments and nongovernmental organizations; and individual stakeholders. However, in Tajikistan, like in many other countries, there are severe constraints in efficiently ensuring

effective cooperative compliance and enforcement initiatives. Enforcement challenges include: limited financial and technical resources; failure to engage key stakeholders; and social and political factors.

Wildlife crime is highly associated with corruption at local, regional, and international levels

Limited budgetary provisions to address illegal trafficking, in addition to poor staffing and training of relevant personnel make it difficult to detect illegal trade. Customs services often play a key role in facilitating the illegal trade. Engaging and providing training for customs officers is thus important. Likewise there is a need to improve institutional capacity to mobilize and link activities effectively within and between sectors through coordination between national law enforcement and wildlife law enforcement agencies.

Legal framework for empowerment of community for co-management of wildlife and habitat: current practice and areas for improvement

Local communities are key partners in the conservation of snow leopards. Poor socio-economic conditions are some of the drivers of poaching of markhor, ibex and Marco Polo sheep, key snow leopard prey. Illegal subsistence and trophy hunting have in some areas significantly reduced the availability of some of these species. This as a result is likely to have had negative impacts on the status of snow leopards. The demand for snow leopard skin and bones as well as conflict with livestock is also another incentive for local people to kill snow leopards. Therefore creating counter incentives for local people to protect and sustainably use markhor, ibex and Marco Polo sheep is very important. This can be achieved by supporting local communities in their desire to form local conservancies for the conservation and sustainable use of ungulate species like ibex, Marco Polo sheep and markhor. Drawing on the successful examples from the markhor conservancies in Pakistan, local conservancies in Tajikistan could use the proceeds from international trophy hunting for the monitoring and conservation of snow leopards and they prey as well as invest resources in the socio-economic development in the villages where the conservancies are set up.

Support mechanism for building community organizations: current practice and needed strengthening

The overarching vision behind creating a community-based organization that has the opportunity to sustainably use of the key snow leopard's preys is to give benefits and create jobs through consumptive and non-consumptive uses of wildlife, like hunting and tourism. It is important that the people involved in the setting up of a conservancy have a sense of ownership of the process and that they can rely on a legal framework that is clear and stable. Therefore is critical that the necessary legal reforms are carried out to enable a transparent method for the assignment of the conservancy/hunting grounds as well as allocation of hunting quota and clear definition of what percentage of the price of the permit is supposed to go back to the communities. Local conservancies should also have clear management plans that provide for monitoring of the prey base as well as snow leopards.

Research and training

Development of effective measures to protect the snow leopard requires constant monitoring to assess the status of its population and to identify the main threats. Monitoring should involve trained staff of the Committee on Environmental Protection under the Government of the Republic of Tajikistan and its subordinate agencies on the ground and other stakeholders such as Tajik Academy of Science. In PAs and hunting concessions, rangers should conduct observations daily. However, given the current level of knowledge of the personnel and the limited logistical support available to in the strict protected areas, wildlife cannot be monitored appropriately. Hence, it is necessary to hold trainings, seminars and short-courses, including through exchanges of experiences with other countries with support from international environmental organizations, to improve the skills of PA staff and rangers.

Development and implementation of programs for scientific and technical education and training for identification, conservation and sustainable use of ecosystems, their components and support for education and training to meet the specific needs of the habitat of the snow leopard. This can be achieved by developing a documentary film on

snow leopards in Tajikistan as well as increasing cooperation in the application of scientific results obtained during the research.

Time-phased implementation program

The following stakeholders will be involved in different steps in the implementation of the programme for the conservation of snow leopards in Tajikistan:

- The Committee for Environmental Protection under the Government of Tajikistan and its affiliated agencies.
- The Academy of Sciences (Institute of Zoology and Parasitology and Pamir Biological Institute).
- Ministry of Agriculture of the Republic of Tajikistan.
- Ministry of Energy and Industry.
- Ministry of Security of the Republic of Tajikistan.
- Ministry of internal affair of the Republic of Tajikistan.
- Ministry foreign affair of the Republic of Tajikistan.
- Committee on Youth, Sports and Tourism of the Government of the Republic of Tajikistan.
- State Committee for Land Management, Geodesy and Cartography.
- Customs Committee.
- Non-governmental environmental organizations.
- Hunting concessions and community-based organizations involved in wildlife management.
- Local government agencies.
- International environmental organizations.
- The Secretariats of international conventions (CBD, CMS, CCD, CITES) and their working groups.

The State Agency for Protected Areas will be acting as the coordinating body for the NSLEP. In order to monitor the implementation of the planned activities, the Coordinating Council, which includes representatives of the Committee for Environmental Protection under the Government of the Republic of Tajikistan, the scientists of the Academy of Sciences, and representatives of public organizations, will assess progress at its annual meeting.

In Tajikistan, there are more than three hundred NGOs with an environmental focus, most of which are located in Dushanbe and in regional centers. However, many of them work in isolation from local communities. Involvement of NGOs in the implementation of the Snow Leopard National Action Plan for the conservation of the snow leopard is key for involving local people and other marginalized groups in raising public awareness, addressing conflict and sensitizing young people. This may lead to greater support for snow leopard conservation at the community level and promote the sustainable use of natural resources, especially in the mountain regions of the country.

Priority **policy** actions include:

- Approval of the National Action Plan for the conservation of the snow leopard (*Panthera uncia*) in Tajikistan for the period 2014-2020
- Development and implementation of laws and regulations for the conservation of the snow leopard
- Appointment of a national focal point and establishment of a working group on snow leopard conservation.

Priority **conservation actions** include:

- Reduce human-snow leopard conflicts, through the use of predator-proof corrals, livestock guard dogs and improved husbandry practices
- Address the threats to the key snow leopard prey (marco polo sheep, ibex and markhor) caused by habitat degradation (especially the loss of teresken for marco polo sheep and more generally competition with livestock) and poaching
- Strengthen the capacity of protected areas in the conservation of the snow leopard
- Develop incentives for local communities to conserve snow leopards and their prey
- Strengthen research and monitoring of snow leopards in Tajikistan
- Promote public awareness through the media and educational programs drawing on local knowledge

- Strengthen the capacity of key ministries (security and customs) and their staff in tracking and combating illegal trade in snow leopards and their parts
- Provide technical support on tracking illegal trade through trainings to border and customs agents

Priority **transboundary** actions include:

- Support of cross-border cooperation with Kyrgyzstan, Afghanistan and China.

Tracking implementation progress and monitoring results

The proposed indicators for the successful implementation of the priorities include:

- Project management and the role of government: The Coordination Committee has the necessary tools to monitor the implementation of the actions under the NSLEP
- The adoption of laws, including: adoption of the Law "On hunting and farming", accession of Tajikistan to CITES and the adoption of appropriate management plans for PAs
- Increased public awareness on the conservation of the snow leopard and its ecosystems are estimated from survey data
- The involvement of local communities documented by reducing conflicts and increasing the number of the prey of the snow leopard
- New scientific findings are published: snow leopard habitat characteristics, home range and movements are documented serving as a basis for improving the effectiveness of conservation of snow leopards and the PA system
- Distribution map of the snow leopard in Tajikistan
- Electronic database on the distribution and abundance of snow leopards in Tajikistan
- Active implementation of measures against poaching, including the activities of at least two mobile anti-poaching brigades
- Improved interaction with hunting companies
- Completed projects enhancing cross-border cooperation and identifying ecological corridors in the framework of the national action plans of Tajikistan, Kyrgyzstan, Afghanistan and China
- Capacity of security and customs ministries strengthened as evidenced by greater number of seizures
- Trainings of border and customs agents provided in collaboration with OSCE, CITES and TRAFFIC.

Summary of costs and financing possibilities

For the successful implementation of the National Action Plan for the conservation of the snow leopard in the period 2014-2020, Tajikistan estimates the need for at least USD 1,200,000 (for detail project outlines please see the attached NSLEP Portfolio in the excel sheet). This will support:

- The development and approval of a new Hunting Law and acts, and regulations (USD 15,000)
- Strengthening the existing network of Protected Areas for Snow Leopards (USD 200,000)
- Conservation of snow leopards by understanding linkages in illegal trade and building capacity of Border and Customs officials (USD 300,000)
- Development of incentives for local communities to conserve snow leopards and their prey (USD 220,000)
- Improvement of transboundary conservation and collaboration (USD 110,000)
- Use of the Snow Leopard Coordination Committee as a vehicle to strengthen the institutional capacity to address snow leopard conservation issues (USD 100,000)
- Identification of practices to reduce consumption of teresken plant for fuel wood (USD 115,000)
- Monitoring of snow leopards and their prey (USD 140,000)

The Committee on Environmental Protection will contribute 20% to the aforementioned activities. We welcome the support from the remaining 80% from donors such as the Global Environment Facility (GEF), USAID, World Bank, Asian Development Bank (ADB), NABU, WWF, Panthera and others (see attached Table for further details).