Tajik National Park (Mountains of the Pamirs)

2020 Conservation Outlook Assessment

SITE INFORMATION

Country: Tajikistan
Inscribed in: 2013
Criteria: (vii) (viii)

Tajikistan National Park covers more than 2.5 million hectares in the east of the country, at the centre of the so-called “Pamir Knot”, a meeting point of the highest mountain ranges on the Eurasian continent. It consists of high plateaux in the east and, to the west, rugged peaks, some of them over 7,000 meters high, and features extreme seasonal variations of temperature. The longest valley glacier outside the Polar region is located among the 1,085 glaciers inventoried in the site, which also numbers 170 rivers and more than 400 lakes. Rich flora species of both the south-western and central Asian floristic regions grow in the Park which shelters nationally rare and threatened birds and mammals (Marco Polo Argali sheep, Snow Leopards and Siberian Ibex and more). Subject to frequent strong earthquakes, the Park is sparsely inhabited, and virtually unaffected by agriculture and permanent human settlements. It offers a unique opportunity for the study of plate tectonics and subduction phenomena. © UNESCO

SUMMARY

2020 Conservation Outlook

Finalised on 02 Dec 2020

GOOD WITH SOME CONCERNS

The greatest protection for the World Heritage site stems from its remoteness and impenetrable mountain wilderness character. This is coupled with legal protection and the dedication of a small management staff. The World Heritage values are currently in a good and stable state but management effectiveness is hampered by inadequate budget for staff, training, and equipment. The long-term outlook for the Pamir glaciers through accelerated global warming is of concern.
FULL ASSESSMENT

Description of values

Values

World Heritage values

► Alpine wilderness of high glaciated mountains  
**Criterion:** (vii)

The Pamir Mountains are the third highest mountain ecosystem in the world after the Himalaya and Karakorum Ranges and include the world’s longest valley glacier outside of the Polar Regions. The Tajik National Park property, which encompasses virtually all of the Pamir Mountain ranges, represents one of the largest high mountain protected areas in the Palearctic Realm. Among the many, often large, glaciers of Inner Asia, the Fedchenko Glacier is the longest glacier in the world outside of the Polar Regions. The visual combination of some of the deepest gorges in the world, surrounded by rugged glaciated peaks, as well as the alpine desert and lakes of the Pamir high plateaux adds up to an alpine wilderness of exceptional natural beauty and the extreme aridity of the climate has kept the area virtually free of impacts from agriculture and permanent human settlement. (TNPa, 2012; IUCN, 2013)

► High altitude lakes  
**Criterion:** (vii)

Lake Sarez and Karakul Lake are superlative natural phenomena. The Pamir highlands are subject to frequent and strong earthquakes and the highly active tectonics have produced a geologically dynamic terrain. The most impressive result of this tectonic activity, Lake Sarez, was created by an earthquake-generated landslide of an estimated six billion tonnes of material, is impounded behind the highest natural dam in the world, and is possibly the youngest deep water alpine lake in the world. Lake Karakul is likely to be the highest large lake of meteoric origin. (TNPa, 2012; IUCN, 2013).

► Landform juxtaposition of heavily-glaciated high peaks, high plateaux with an alpine desert character, and deep gorges  
**Criterion:** (viii)

The juxtaposition in one protected area of so many high mountains, valley glaciers, and deep river gorges alongside the cold continental desert environment of the high plateau landforms provides for a unique geomorphic environment. A wide range of glacial and periglacial landforms and processes are apparent including rock glaciers of different kinds, areas of extensive permafrost and patterned ground. An outstanding landform feature of the property’s geologically dynamic terrain is Lake Sarez. It is of international scientific and geomorphological hazard significance because of the on-going geological processes influencing its stability, and the sort of lacustrine ecosystem which will develop over time. Tajik National Park furthermore offers a unique opportunity for the study of plate tectonics and continental subduction phenomena thereby contributing to our fundamental understanding of earth building processes (World Heritage Committee, 2013).

Other important biodiversity values

► Significant habitat for wild crop plants and fruit trees, snow leopard, and Marco Polo argali.

Only 10% of Tajik NP is covered by biogenic landscapes (i.e. landscapes formed under the influence of living organisms), the rest is largely barren rock or ice. The lower western valleys do contain areas of wild varieties of crop plants in the Central Asian ‘Vavilov Centre of Diversity’ (TNPa, 2012). Tajik NP is large enough to be the habitat for a significant population Snow Leopard and Marco Polo Argali, a subspecies of the globally threatened Argali Sheep.
Assessment information

Threats

Current Threats  

The large size, alpine wilderness character, and low resident population of the property ensure that overall threats from human activities are minor and localized. The influence of accelerated global warming on the melting of the Pamir glaciers is a significant threat in the medium- to longer-term.

- **Hunting and trapping**
  - **(Illegal hunting)**
  - Low Threat
    - Inside site, extent of threat not known
    - Outside site

  Illegal hunting remains an issue. Traditionally, shooting of argali trophy heads has been seen as a ‘rite of passage’ into adulthood for young men. Apart from this, commercial poaching and illegal trophy hunting also occur. Recent improvements in enforcement have, however, addressed this issue to some extent (IUCN Consultation, 2020).

- **Utility / Service Lines**
  - **(Semi-natural water level control of Lake Yashikul for hydroelectricity generation outside property)**
  - High Threat
    - Inside site, extent of threat not known

  Summer water storage by small dam at outlet of Lake Yashikul (and release in winter) has local affect in lacustrine ecology (TNPb, 2012), with four species of fish reported to have disappeared from the lake while one species is close to disappearing (IUCN Consultation, 2020).

- **Housing/ Urban Areas**
  - **(Disturbances from settlements inside the site)**
  - Low Threat
    - Inside site, localised(<5%)

  There are five small villages in the upper reaches of the Bartang River; all other settlements are outside boundary. (TNPb, 2012). These villages are thought to have a cumulative population of around 3,500 people, which brings disturbance in the form of livestock grazing, poaching and collection of shrubs (teresken), which may cause localised soil erosion and reduce fodder for wild ungulates if not harvested sustainably.

- **Livestock Farming / Grazing**
  - **(Summer grazing at low levels on narrow riparian grassland strips)**
  - Very High Threat
    - Inside site, localised(<5%)

  There is summer grazing on narrow riparian grassland strips, and some hay-making close to the small villages in the Traditional Use Zone (TNPb, 2012). The wider region of Tajik National Park is part of – Gorno-Badakhshan autonomous region – registered 122,441 heads of cattle and 411,482 heads of small cattle as of 2018, with significant part of this cattle recorded in the Murgab district, where the main territory of Tajik National Park is located. It is noteworthy that the number of cattle in the region increased by 57% compared with the Soviet time, and there are state programs for cattle breeding, so the numbers of cattle are expected to further increase. Cattle breeding is the main income source for local people living in or near the protected area. Overgrazing leads to degradation and potential desertification (IUCN Consultation, 2020).

- **Tourism/ visitors/ recreation**
  - **(Impact of tourism)**
  - Very Low Threat
    - Inside site, extent of threat not known
    - Outside site

  There are currently only about 1200 visitors/year to the vast site. These are accommodated in villages just outside the boundary and their on-site impact is miniscule. If this number is increased to 3000/yr (as planned) it could start to impact on the natural resource of teresken plants, if the authorities do not
substitute imported fuel for household use. (IUCN, 2013)

**Hunting and trapping**

*(Trophy hunting of Marco Polo argali but mostly outside boundary of property)*

Currently the population of Marco Polo argali within the park is estimated at 5400 and Siberian ibex at around 4200. Efforts are being made to bring trophy hunting under strict control and ensure it is sustainable. Within the park this will most likely be around Karakul Lake, but efforts will be made to locate most of it outside the park (to the SE) (TNPb, 2012).

**Droughts, Temperature extremes, Storms/Flooding**

*(More rapid melting of Pamir glaciers and associated damage from river flooding)*

Global warming is a potential threat already leading to higher meltwater levels in summer. The associated disruption to the mountain valley 4WD roads was experienced by the IUCN field evaluators in 2013 and was raised as an access concern by the villagers in meetings with the field evaluators (IUCN, 2013).

On 16-20 July 2015 the village of Barsem of Jamoat Suchan of the Gorno Badakhshan region was banished by the mud streams which had blocked the bed of the Gund River. 11 households were directly affected by the mud stream. The event also affected the highway connecting Tajikistan with China and Kyrgyzstan, 5 bridges, a medical point, a school, as well as agricultural lands and the main high-voltage (Chernomoret et.al., 2015, Shafiev G. V., 2016).

Another impact of climate change is the immigration of fauna and flora which previously has not occurred in the site. Many species new to Tajikistani fauna, such as brahmina starling (Sturnia pagodarum), Tickell's thrush (Turdus unicolor) and Mongolian wolf (Canis lupus chanco) are reported to have moved to the territory of Pamir from the South, from Tiber, Ladaka and Penjab into orographically isolated Pamir.

**Potential Threats**

The breaching of Lake Sarez through a major earthquake or other natural event is a potential threat of exceptional concern and international interest. Unsustainable levels of teresken collection could reduce the population of wild animals with a potential for trophy hunting – a recreational activity which needs to be closely regulated to ensure it is sustainable.

**Roads/ Railroads**

*(Small number of 4WD roads/tracks)*

Of very minor significance, only on fragile alpine desert plateau ecosystems if driving off-road.

**War, Civil Unrest/ Military Exercises**

*(Border security issues)*

Civil war and border security are very real issues in southern and western Gorno-Badakhshan. However, they are remote from the core areas of the property.

**Fishing / Harvesting Aquatic Resources**

*(Harvesting of slow-growing teresken for household fuel)*

It is difficult to solve this threat in the short-term. The socio-economic situation of the towns and villages on the Pamir Plateau needs to be lifted and alternative sources of fuel, such as coal and gas) supplied (as was the case in Soviet times).
Earthquakes/ Tsunamis

The threat of a major earthquake breaching the Uzoi Dam and releasing the huge volume of water in Lake Sarez into the Bartang/Panj/Amu Darya river system is taken very seriously by the Tajik authorities and the governments of adjoining countries which may be affected (TNPa, 2012; IUCN, 2013).

Overall assessment of threats

The large size, alpine wilderness character, and low resident population of the property ensure that overall threats from human activities are minor and localized. The influence of accelerated global warming on the melting of the Pamir glaciers is a significant threat in the medium- to longer-term. The breaching of Lake Sarez through a major earthquake or other natural event is a potential threat of exceptional concern and international interest. Unsustainable levels of teresken collection, if this occurs, could reduce the population of wild animals with a potential for trophy hunting – a recreational activity which needs to be closely regulated to ensure it is sustainable.

Protection and management

Assessing Protection and Management

Management system

Management responsibility is clearly that of the State Agency of Natural Protected Areas (SANPA). There are three regional offices but only 54 staff. The TNP management team includes 3 directors and 3 chiefs of regional offices. The majority of staff, especially rangers, are selected from local people. (TNPa, 2012)

Effectiveness of management system

The park authority acknowledges that due to its vast territory the current number of staff is quite insufficient to ensure adequate control of the park. The current situation is one of doing the best with the limited staff and equipment available. Most of the equipment is from Soviet times and should be written off. (TNPa, 2012; TNPb, 2012; IUCN, 2013). Limited Staff increases are proposed but any significant lift in management effectiveness is very dependent on budgetary increases, including overseas donors. Moreover the dependence on external funding and projects in the site has led to disjointed efforts towards conservation of the site’s OUV, with duplication of effort and redundancy occurring in places (IUCN Consultation, 2020).

Boundaries

The boundaries of the property (and the management zones allowing a degree of sustainable human use) are mostly effective. However, if pressure for increased illegal hunting and collection of teresken for fuel (currently mostly outside the property) impinges into the TNP, management will have to respond to increase surveillance of the boundaries.

Integration into regional and national planning systems

Data deficient

Relationships with local people

Very few people live within the property but the village communities on the periphery seem to recognize the protected status of TNP and had a working relationship with the TNP management. Many of the park
rangers lived within these villages and used villagers as temporary wardens. (IUCN, 2013)

► **Legal framework**

Various protected area legislation since 1992 (up to 2005) has established the property as a protected legal entity (TNPb, 2012)

► **Law enforcement**

Recent information on the effectiveness of law enforcement is not available.

► **Implementation of Committee decisions and recommendations**

Most of the 2010 WHC decisions regarding the deferral of the 2009 Tajik NP nomination (34COM 8B.3) were implemented (IUCN, 2013). However, in its 2013 decision to list, the committee again emphasized (37COM 8B.14) the need for “the State Party to marshal the necessary human and financial resources to ensure effective long term protection and management in accordance with the property’s management plan and to explore options to secure additional international financial assistance for capacity building” and encouraged “the State Party to cooperate with the neighbouring State Party of Kyrgyzstán to develop improved and sustainable tourism programmes which enhance visitor services, income and which foster community-based tourism development”.

► **Sustainable use**

Due to the current low human pressure on the core of TNP, most pressure on the effectiveness of sustainable use measures is confined to the ‘traditional use’ and ‘limited economic use’ zones. Harvesting unsustainable levels of teresken is the largest threat and if this happens it will have a detrimental effect on the population of Marco Polo argali. Alternative options to provide energy are available, and they are actively promoted in under international projects.

► **Sustainable finance**

This is the most serious management issue facing the property. The Tajik management authorities openly acknowledge this problem and are actively seeking increased budgets from their government, some income from trophy hunting and eco-tourism, and assistance from outside donor agencies (TNPa, 2012; TNPb, 2012; IUCN, 2013; IUCN Consultation, 2020).

► **Staff capacity, training, and development**

Current staff morale and commitment seems high (IUCN, 2013) but staff levels and training need to be increased. Again, this is limited by the low budget allocated to TNP.

► **Education and interpretation programs**

Data deficient.

► **Tourism and visitation management**

Most eco-tourism is accommodated in the peripheral town of Murghab and the small villages. The relationship between the management agency and tourism guides seems effective at these low numbers (c.1200/yr). However, this would need to be re-assessed if the numbers increase to c.3000/yr as hoped for (TNPa, 2012).

► **Monitoring**

Monitoring of the site's values is currently severely limited by lack of budget (TNPb, 2012; IUCN Consultation, 2020)

► **Research**

Very limited detailed information on focus and effectiveness for management.
Overall assessment of protection and management

Some Concern

The greatest protection for the World Heritage site stems from its remoteness and impenetrable mountain wilderness character. A satisfactory legal framework for protection and a management system is in place but effective management is severely hampered by an inadequate budget and deficiencies in staff training and operational equipment.

Assessment of the effectiveness of protection and management in addressing threats outside the site

Data Deficient

State and trend of values

Assessing the current state and trend of values

World Heritage values

Alpine wilderness of high glaciated mountains

Good

Trend: Stable

The scenic and aesthetic values are essentially intact throughout the World Heritage site. Apart from limited recreation facilities in the small recreation zones, and traditional seasonal grazing, hay-making and regulated trophy hunting in the peripheral ‘use zones’, the site is free from excessive or inappropriate human development.

High altitude lakes

Good

Trend: Stable

The water quality of the high altitude lakes is very high with no potential threats from human activity. The Uzoi natural dam impounding Lake Sarez is currently stable and its values intact. However, it is impossible to comment on the likelihood of a catastrophic earthquake which could have a major impact on its values. A complex network of sensors is in place and electronic signals indicating any failure of the Uzoi Dam would be relayed by satellite to a co-ordination centre tasked with broadcasting warnings to downstream populations.

Landform juxtaposition of heavily-glaciated high peaks, high plateaux with an alpine desert character, and deep gorges

Low Concern

Trend: Stable

The major Pamir glaciers, such as the Fedchenko do not appear to be melting at as rapid a rate as other northern hemisphere mountain ranges like the Caucasus or European Alps (TNPa, 2011). However, the trend is for global warming to continue and this has serious implications in the longer term for the supply of freshwater to the lowlands of Central Asia, given the critical regional importance of the ‘water-towers’ within the glaciers of the property (TNPa, 2012).

Summary of the Values

Assessment of the current state and trend of World Heritage values

Good

Trend: Stable

The outstanding universal value and natural attributes of the World Heritage site are assessed as currently being in a good and stable state. Their protection and management, which includes active engagement with the local communities, presents no current or foreseeable major problems or
concerns. The scenic and aesthetic values are essentially intact throughout the site. The outstanding geological features are protected and on-going natural processes in the development of landforms and other significant geomorphic features, including the influences of global warming, are unhindered.

Assessment of the current state and trend of other important biodiversity values

The populations of iconic wild animals like snow leopard, Marco Polo argali, and Siberian ibex appear to be stable (TNPa, 2012) and benefit from the very large area of the protected World Heritage site. The ‘Vavilov centres’ in the western lowlands of the property are identified and protected, with close involvement of local communities.

Additional information

Benefits

Understanding Benefits

Outdoor recreation and tourism

The property is of great significance for outdoor recreation, especially mountaineering and trophy hunting. It has a long history of mountaineering, especially during the period when the Pamir peaks were the highest in the USSR.

Outdoor recreation and tourism

Vast wilderness landscapes like Tajik National Park are becoming rare with the increasing pace of international development (including that for mass tourism). The remoteness, spectacular mountain scenery, wildlife, discrete archaeological sites, and seasonal nomadic pastoral lifestyles can provide benefits to visitors and locals alike.

Summary of benefits
## REFERENCES

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