IUCN Conservation Outlook Assessment 2014 **(archived)**
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Please note: this is an archived Conservation Outlook Assessment for Putorana Plateau. To access the most up-to-date Conservation Outlook Assessment for this site, please visit https://www.worldheritageoutlook.iucn.org.

Putorana Plateau

SITE INFORMATION

Country:
Russian Federation
Inscribed in: 2010
Criteria:
(vii) (ix)

Site description:
This site coincides with the area of the Putoransky State Nature Reserve, and is located in the central part of the Putorana Plateau in northern Central Siberia. It is situated about 100 km north of the Arctic Circle. The part of the plateau inscribed on the World Heritage List harbours a complete set of subarctic and arctic ecosystems in an isolated mountain range, including pristine taiga, forest tundra, tundra and arctic desert systems, as well as untouched cold-water lake and river systems. A major reindeer migration route crosses the property, which represents an exceptional, large-scale and increasingly rare natural phenomenon. © UNESCO

SUMMARY

2014 Conservation Outlook

Good

Because of its remoteness, inaccessibility, low population density and low level of infrastructure development (with resulting limited anthropogenic threats), as well as its overall effective protection and management regime, this property has one of the best conservation outlooks of all natural World Heritage sites in the Russian Federation. However, the site’s conservation outlook could alter rapidly in the future if mining and large scale tourism developments are permitted within the site.

Current state and trend of VALUES

Good
Trend: Stable

The arctic ecosystems and boreal landscapes of outstanding natural beauty are in an exceptionally intact and stable state. The conservation status of the site’s fauna is considered good and stable. However, hunting and fishing may have a negative impact on some species and needs to be controlled. As for the important migration routes, in spite of effective conservation inside the site, migratory reindeer and birds are subject to additional threats elsewhere and need to be conserved at the scale of the entire migratory route or flyway. This requires careful consideration, particularly in relation to further tourism development in the buffer zone of the site.

Overall THREATS

Very Low Threat

The remoteness, inaccessibility, lack of infrastructure and effective protection regime combine to effectively protect the values of the site against most of the current threats. Certain recent changes in the legal regime on protected areas in the Russian Federation might induce additional potential threats, such as large-

scale tourism development, however none of these activities has been planned so far. Overall, the property is well-protected against threats by a combination of factors, and its integrity is exceptional as a consequence.

Overall PROTECTION and MANAGEMENT

Mostly Effective

Although there are some weak points such as funding and staffing of Putorana State Nature Reserve and absence of integrated strategy for sustainable tourism development, as well as potential issues in relation to the involvement of local indigenous people in the management and use of the area, overall the protection and management of the reserve is mostly effective.

FULL ASSESSMENT

Description of values

Values

World Heritage values

► Rich mosaic of arctic ecosystems

Criterion:(ix)

Comprehensive set of ecological and biological processes associated with a dense mosaic of diverse arctic and subarctic ecosystems, including tundra, taiga and freshwater ecosystems. The bio-geographical location of the site on the border of the tundra and taiga biomes and at the transition between Western and Eastern Siberian floras, makes it one of only a few centres of plant species richness in the Arctic (SoOUV, 2010). The plant communities that make up the property’s ecosystems count 569 species of vascular plants, plus many species of fungi, lichens, and mosses (UNEP-WCMC, 2011).

► Complete spectrum of Arctic wildlife

Criterion:(ix)

The ecosystems of the site comprise rich arctic/subarctic fauna (38 mammal, 140 bird 36 fish and 1 amphibian species), including the endemic subspecies of Bighorn Sheep Ovis nivicola borealis, the largest seasonal population of reindeer Rangifer tarandus, as well as endemic and globally threatened avifauna including Red-breasted Goose Branta ruficollis (EN), Lesser White-fronted Goose Anser erythropus (VU), and potentially Hooded Crane Grus monacha (VU). There is also a rich ichthyofauna, including endemic and globally threatened species such as Lake Yesei Char Salvelinus tolmachoffi (EN), and the Humpback Whitefish Coregonus lavaretus pidschian (VU)

(IUCN, 2012, UNEP-WCMC, 2011).

▶ **Key part of continental migration routes of birds and mammals**
Criterion:(ix)

Twice a year between 150,000 and 250,000 wild reindeers from Taymir Peninsula migrate along the valleys of the plateau to their winter habitats in the south (IUCN, 2010).This reindeer migration represents an exceptional, large-scale and increasingly rare natural phenomenon (SoOUV, 2010).The site is also a key summering, resting and staging area for bird migration between the Arctic and wintering areas, including many numerous species of shorebirds and waterbirds (UNEP-WCMC, 2011).

▶ **A vast and diverse landscape of striking natural beauty**
Criterion:(vii)

A vast, diverse and pristine landscape of striking natural beauty, the Putorana Plateau is pristine and not affected by human infrastructure. Its superlative natural features include an extensive area of layered basalt traps that has been dissected by dozens of deep canyons; countless cold water rivers and creeks with thousands of waterfalls; more than 25,000 lakes characterized by a fjord-like formation that is associated with a large variation in the relief. The immense arctic and boreal landscapes remain intact with carpets of lichens and forest that are unusual at such northern latitudes (SoOUV, 2010).

Assessment information

Threats

Current Threats

Very Low Threat

The remoteness, inaccessibility, lack of infrastructure and effective protection regime combine to effectively protect the values of the site against most of the

current threats. Climate change will continue to influence ecosystems functioning, but is not expected to lead to dramatic impacts in the short or medium term.

▶ Air Pollution

Very Low Threat
Inside site
Outside site

Air-borne pollution from smelting of the Norilsk Nickel Company (almost 200 km away from the property) may have had a negative impact on parts of the vegetation of the site, particularly along its northwestern boundary and in the buffer zone (IUCN, 2010).

▶ Tourism/ visitors/ recreation

Low Threat
Outside site

Visitation to the nature reserve is very limited and strictly controlled (437 people in 2005), while the buffer zone is visited by a few thousand tourists annually, and their number is rapidly growing (IUCN, 2010). Uncontrolled and unplanned development of tourism infrastructure has occurred in the buffer zone. Impacts inside the property are likely to be minimal while tourism development outside the property is likely to indirectly affect its values, such as the reindeer migratory population (IUCN, 2010).

▶ Avalanches/ Landslides

Very Low Threat
Inside site

Although avalanches, floods and storms pose a threat to some components of the site’s biota (UNEP-WCMC, 2011), they are part of the natural ecosystem dynamics, and hence of the site’s protected values.

▶ Fishing / Harvesting Aquatic Resources

Very Low Threat
Outside site

Extensive recreational and subsistence fishing for Arctic Grayling and other species occur in the lakes and streams of the buffer zone, some fishing also

occurs within the Putorana State Nature Reserve. However, due to the remoteness of the site, lack of transport infrastructure and protection regime these activities pose a low threat to the values of the site (IUCN, 2010).

▶ Commercial hunting, Subsistence hunting

Very Low Threat
Outside site

Unsustainable hunting reduced the population of Snow Sheep in the 1960s to 1980s and is inferred to have affected other species as well. Hunting is now prohibited within Putorana State Nature Reserve (IUCN, 2010), but given the vastness of the territory occasional incidents of helicopter-based hunting with minimal impact cannot be excluded.

▶ Temperature changes

Data Deficient
Outside site

Climate change has already affected the ecosystems of the property, with the larch tree-line ascending ca. 30-50 m over the last century, and changes in forest stand structure and productivity (Kirdyanov et al., 2012). The extent and impact of climate change on the site's values need to be further studied.

Potential Threats

Low Threat

The recent weakening of the legal conservation regime of Strict Nature Reserves in the Russian Federation in relation to large-scale tourism development (Federal Law No. 365-FZ on "special economic zones in the Russian Federation"), makes the development of large scale tourism facilities at Putorana State Nature Reserve a potential threat, though not developments are currently being planned.

▶ Mining/ Quarrying

Low Threat
Inside site

The area is rich in nickel and potentially rare-earth elements (Nesterenko et al., 1988). No prospecting or exploitation for minerals is currently allowed or

planned within the property (IUCN, 2010), but the precedent-setting legal amendments aimed at the establishment of mining operations in other natural World Heritage sites in the Russian Federation suggests that mining remains a potential threat.

► Tourism/ Recreation Areas

Low Threat
Outside site

The recent weakening of the legal conservation regime of Strict Nature Reserves in the Russian Federation in relation to large-scale tourism development (Federal Law No. 365-FZ on “special economic zones in the Russian Federation”), makes the development of large scale tourism facilities at Putorana State Nature Reserve a potential threat, though not developments are currently being planned.

Protection and management

Assessing Protection and Management

► Relationships with local people

Mostly Effective

Most of the indigenous Evenk and Dolgan people had left the property by 1982 (Montaigne, 2000). The only remaining village on the plateau i - Khantaisky - is located outside the site’s boundaries and has 500 inhabitants who practice reindeer herding and other traditional natural resource use (IUCN, 2010). The management plan does not indicate how their interests are considered in the management of the Putorana State Nature Reserve (Natural Heritage Protection Fund et al., 2008).

► Legal framework and enforcement

Mostly Effective

Protection and management of the site is based on the “Special Law of the Russian Federation on Specially Protected Areas dated March 14, 1995” in general, and on the “Regulations on Putoranskiy State Nature Reserve, in redaction of the Order of the Ministry of Natural Recourses of the Russian

Federation No. 66 dated 17 March 2005" (Natural Heritage Protection Fund et al., 2008). The legal framework is effective to protect the site and appears to be effectively implemented (IUCN, 2010). However, the recent Federal Law No. 365-FZ on "special economic zones in the Russian Federation" weakens the legal basis for effective conservation of protected areas, though it is currently not applied to this particular site.

► Integration into regional and national planning systems

Data Deficient

The regional government appears to support the preservation of the values of the site (Natural Heritage Protection Fund et al., 2008), but no detailed information about its integration into regional and national planning systems is available.

► Management system

Mostly Effective

The management plan which was developed for the re-nomination of the property in 2008 (Natural Heritage Protection Fund et al., 2008) is considered adequate (IUCN, 2010). Management of the site benefits from the fact that it consists of only one protected area with one central management authority.

► Management effectiveness

Mostly Effective

No formal management effectiveness assessment has been carried out, but the overall management of the site is considered effective (IUCN, 2010).

► Implementation of Committee decisions and recommendations

Data Deficient

The only decision on this property so far was Decision 34 COM 8B.8 on its inscription. This decision also requested the State Party to further develop and implement more detailed management schemes for sustainable recreational use and environmentally friendly tourism within the buffer zone (including monitoring), urged the State Party and to ensure protection of migrating reindeer inside and outside the property, and recommended setting up long-term monitoring of climate change impacts on the

ecosystems of the property. It is not clear to what extent these requests and recommendations have been met.

▶ Boundaries

Mostly Effective

The boundaries of the site and its buffer zone are considered adequate although there are high-value natural areas currently outside the Putorana State Nature Reserve. Inclusion of these areas would considerably upgrade the values contained within the site (IUCN, 2010).

▶ Sustainable finance

Mostly Effective

The 2005 annual budget of the property was about 172,300 USD, mainly from the State Budget with additional contributions from local/regional budgets, donations and fines (UNEP-WCMC, 2011). This appears minimal considering the size of the site, but was considered marginally sufficient given the relatively limited effort needed to manage this remote site (IUCN, 2010). The site would benefit from an increase in funding, which would enable more effective management.

▶ Staff training and development

Some Concern

The staff number of Putorana State Nature Reserve in 2008 was 33, including 6 scientists and 12 rangers. This was considered insufficient to patrol the vast property, particularly in light of increasing tourism numbers. There were plans to increase staff by 50% (IUCN, 2010). It is unclear if these have been implemented.

▶ Sustainable use

Mostly Effective

The site provides various natural resources, particularly fish and wild plants (UNEP-WCMC, 2011). No assessment of maximum sustainable yields has been carried out. Resource use does not significantly threaten the sites' values.

► Education and interpretation programs

Highly Effective

There is a dedicated educational and awareness raising programme at the reserve. The reserve's educational and awareness raising programme includes development of booklets and brochures, as well as various communication, education and awareness raising activities have been carried out (MoNRE of RF, 2012a). The activities of the reserve in this field have been considered highly effective (IUCN, 2010).

► Tourism and interpretation

Mostly Effective

Although visitation of the reserve itself was very low at the time of inscription, the reserve offers several thematic helicopter excursions and can be visited by groups subject to a special permit. The number of visitors is limited (MoNRE of RF, 2012b). Tourism in the buffer zone of the site is increasing, but it is poorly planned and lacks interpretation elements. In general, sustainable development of tourism in and around the site would benefit from an integrated strategy (IUCN, 2010).

► Monitoring

Mostly Effective

The lake waters are monitored biennially, vegetation communities and animal populations annually, and meteorological and hydrological conditions daily at two scientific stations inside the reserve (UNEP-WCMC, 20101). Regular monitoring has been carried out since 1997 (MoNRE of RF, 2012c). There is scope for extended monitoring, particularly regarding climate change impacts (IUCN, 2010).

► Research

Highly Effective

Putorana State Nature Reserve conducts a wide range of research activities on Bighorn Sheep, limnology, meteorology, and botany, partly in cooperation with the Russian Academy of Sciences, Moscow State University and the Technical University of Dresden (Germany) (UNEP-WCMC, 2011). The

research results have been published in a number of monographs and scientific articles (MoNRE of RF, 2012d; List of publications provided by the site management).

Overall assessment of protection and management

Mostly Effective

Although there are some weak points such as funding and staffing of Putorana State Nature Reserve and absence of integrated strategy for sustainable tourism development, as well as potential issues in relation to the involvement of local indigenous people in the management and use of the area, overall the protection and management of the reserve is mostly effective.

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

Some Concern

Wild reindeer migration through the property is disturbed by infrastructure outside the property, including pipelines etc. Therefore, development in the property's buffer zone requires careful planning and should be conducted in a way that minimizes disturbances to the wild reindeer migration (IUCN, 2010). Current approaches to the infrastructure development do not appear to take the migration into consideration.

► Best practice examples

The institutional setup of the property, which consists of one State Nature Reserve with one management plan and one management authority, is a best practice example for Russian natural World Heritage sites.

State and trend of values

Assessing the current state and trend of values

World Heritage values

▶ Rich mosaic of arctic ecosystems

Good
Trend:Stable

No significant deteriorations of key arctic ecosystem values of the property are known. The ecosystems of the property are considered to be in a pristine or near-pristine state (IUCN, 2010).

▶ Complete spectrum of Arctic wildlife

Low Concern
Trend:Stable

The conservation status of the fauna of the reserve is considered excellent, with about 5,500 Snow Sheep reported in 1995 (MoNRE of RF, 2012c), and stable populations of other animals. However, hunting and fishing may have a negative impact on some species and needs to be controlled.

▶ Key part of continental migration routes of birds and mammals

Low Concern
Trend:Stable

In spite of effective conservation inside the site, migratory reindeer and birds are subject to additional threats elsewhere and need to be conserved at the scale of the entire migratory route or flyway. This applies particularly to the large migrating population of reindeer, the migration routes of which have been obstructed by infrastructure. This requires careful consideration, particularly in relation to further tourism development in the buffer zone of the site.

▶ A vast and diverse landscape of striking natural beauty

Good
Trend:Stable

The immense arctic and boreal landscapes of the property remain intact (Decision 34 COM 8B.8). The landscapes of the property are considered to be in a pristine or near-pristine state (IUCN, 2010).

Summary of the Values

▶ **Assessment of the current state and trend of World Heritage values**

Good

Trend: Stable

The arctic ecosystems and boreal landscapes of outstanding natural beauty are in an exceptionally intact and stable state. The conservation status of the site's fauna is considered good and stable. However, hunting and fishing may have a negative impact on some species and needs to be controlled. As for the important migration routes, in spite of effective conservation inside the site, migratory reindeer and birds are subject to additional threats elsewhere and need to be conserved at the scale of the entire migratory route or flyway. This requires careful consideration, particularly in relation to further tourism development in the buffer zone of the site.

Additional information

Key conservation issues

▶ **Participation of local and indigenous people**

National

The recognition of sustainable traditional herding and resource use by indigenous communities is an important factor and should be supported in the buffer zone of the site. Broader involvement of indigenous communities in the further development of the management system for the area is also recommended (IUCN, 2010).

▶ **Pollution from Norilsk smelting operations**

National

Vast areas east and south-east of Norilsk suffer from forest dieback caused by acid emissions from the metallurgical process. According to the current data, the closest areas affected by air pollution are more than 100 km away from the

site; however air pollution is already affecting the western part of its buffer zone. Reportedly, Norilsk Nickel intends to reduce sulfur emissions, but the technology is still under development (IUCN, 2010).

▶ Sustainable financing

Local

The property is understaffed (IUCN, 2010) and underfunded. Aside from seeking additional funds from federal and regional/local budgets, an additional manner of addressing this issue may be a diversification of financial sources, including raising funds from tourism and sustainable natural resources use, donations, businesses, and international organizations.

Benefits

Understanding Benefits

▶ Importance for research

It is usually difficult to measure climate change impacts on ecosystems because these overlap with multiple other anthropogenic impacts (Kirdyanov, 2012). The property offers a near-pristine natural laboratory to study the effects of climate change, as a reference for other more impacted ecosystems (IUCN; 2010).

▶ Is the protected area valued for its nature conservation?

The considerable nature conservation values are reflected by the site's designation as a Nature Reserve and its inscription as a World Heritage site.

▶ Does management of the site provide jobs (e.g. for managers or rangers)?

Putoranskiy State Nature Reserve offered 33 jobs in 2008, a number that could probably be increased if the staff number would be set to a level adequate for the size of the property (IUCN, 2010). In addition, a significant number of jobs (possibly tens to hundreds of jobs in tourism, natural resource use etc.) could be created in the course of tourism development and the development of sustainable natural resource use schemes within the site and

its buffer zone.

► **Sacred natural sites or landscapes**

The landscapes of the Putorana Plateau are ones of the most unusual, remote and pristine wilderness areas in Eurasia

► **Wilderness and iconic features**

The area of Putorana Plateau has high cultural, spiritual and livelihood importance to the Evenk and Dolgan indigenous peoples of the area, and could be managed more effectively for the enhancement of these benefits, as pointed out in the comments of ICOMOS on the nomination (IUCN, 2010).

► **Collection of wild plants and mushrooms**

A large variety of wild plant and animal resources had been used in the property by the indigenous Evenk and Dolgan peoples until the 1980s (Montaigne, 2000). If managed in a sustainable and equitable way, wild resources from the site and/or its buffer zone could contribute to the local budget, support livelihoods of local people and create new incentives for the local community support of the site.

Summary of benefits

The property provides significant conservation and scientific benefits to the national and international conservation and scientific communities. The area of Putorana Plateau also has high cultural, spiritual and livelihood importance to the Evenk and Dolgan indigenous peoples of the area, and could be managed more effectively for the enhancement of these benefits.

Projects

Compilation of active conservation projects

№	Organization/ individuals	Project duration	Brief description of Active Projects
1	.		.

Compilation of potential site needs

№	Site need title	Brief description of potential site needs	Support needed for following years
1	.	A monitoring system should be developed in order to better understand to what extent the acid emissions from Norilsk metallurgical industry affect the site. State incentives for further development and use of emissions-reducing technology would also contribute to prevention of potential negative impacts.	
2	.	Development of comprehensive and detailed sustainable tourism strategy for the property including its buffer zone, with particular regard to wild reindeer migration corridors.	
3	.	Development of a long-term monitoring programme for climate change impacts at the property and its ecosystems.	
4	.	Development of a sustainable financing strategy and business plan.	

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