IUCN Conservation Outlook Assessment 2017 **(archived)**
Finalised on 09 November 2017

Please note: this is an archived Conservation Outlook Assessment for Lena Pillars Nature Park. To access the most up-to-date Conservation Outlook Assessment for this site, please visit https://www.worldheritageoutlook.iucn.org.

Lena Pillars Nature Park

SITE INFORMATION

Country:
Russian Federation
Inscribed in: 2012
Criteria:
(viii)

Site description:
Lena Pillars Nature Park is marked by spectacular rock pillars that reach a height of approximately 100 m along the banks of the Lena River in the central part of the Sakha Republic (Yakutia). They were produced by the region’s extreme continental climate with an annual temperature range of almost 100 degrees Celsius (from –60 °C in winter to +40 °C in summer). The pillars form rocky buttresses isolated from each other by deep and steep gullies developed by frost shattering directed along intervening joints. Penetration of water from the surface has facilitated cryogenic processes (freeze-thaw action), which have widened gullies between pillars leading to their isolation. Fluvial processes are also critical to the pillars. The site also contains a wealth of Cambrian fossil remains of numerous species, some of them unique. © UNESCO

SUMMARY

2017 Conservation Outlook

Good

Because of the relatively robust nature of the values contributing to the OUV of Lena Pillars Nature Park, the remoteness and lack of inhabitants of the site, and the existing protection and management regime, which is effective overall in spite of some low concern, the overall conservation outlook of Lena Pillars Nature Park is assessed as good. The approved extension of the property to include the Sinsky plot area has further strengthened the integrity of the property and has addressed the requests of the World Heritage Committee with regards to the boundaries of the property. However, a number of other requests remain to be addressed, including inclusion of geologists among the specialist staff members and developing focused educational and awareness raising programmes around the property's geological values. The process of designating the area as a federal national park, which would strengthen its protection regime, is underway, but could be expedited.

Current state and trend of VALUES

Good
Trend: Stable

The current state of the World Heritage values of the property is good overall, and its trend stable.

Overall THREATS

Low Threat

The extremely remote location and robust character of the property combine to reduce threats to its integrity and values to a very low level. Forest fires represent the biggest threat to the property and their severity might increase, as is already happening with the most serious recorded forest fires occurred in

2016.

Overall PROTECTION and MANAGEMENT

Mostly Effective

The management and protection system of the property appears to be sufficient to address the limited current threats to its integrity, but may need to be upgraded in several ways to deal with projected and possible future threats. Necessary steps are already being undertaken to declare the area as a federal national park which would increase its protection regime; however, this process is still underway. The approved extension of the property to include the Sinsky plot area has further strengthened the integrity of the property and has addressed the requests of the World Heritage Committee with regards to the boundaries of the property. However, a number of other requests remain to be addressed, including inclusion of geologists among the specialist staff members and developing focused educational and awareness raising programmes around the property's geological values.

FULL ASSESSMENT

Description of values

Values

World Heritage values

▶ **Spectacular rock pillars**
Criterion:(viii)

The cryogenic pillars (up to ca. 200 m high) that line the banks of the Lena River are rocky buttresses isolated from each other by deep and steep gullies developed by frost shattering directed along intervening joints. These pillars are the most notable pillar landscape of their kind known (SoOUV, 2013). The areas added to the property in 2015 include the most impressive area of carbonate pillars in the Lena Pillars region and the surrounding karstic area (IUCN, 2015).

▶ **Cambrian fossil remains**
Criterion:(viii)

The internationally renowned and important exposures of Cambrian rocks tell us key stories about our planet and the early evolution of life during the entire Cambrian Explosion. Due to a platform type of carbonate sedimentation within the tropical belt of the Cambrian Period, without subsequent metamorphic and tectonic reworking, and magnificent impressive outcrops, the property preserves an exceptionally continuous, fully documented, and rich record of the diversification of skeletal animals and other bio-mineralized organisms from their first appearance until the first mass extinction event of that period (SoOUV, 2013), including the first metazoan reefs (IUCN, 2012). The Sinsky plot, added to the property in 2015 through a minor boundary modification process, includes the Sinsk

Formation, famous for its early Cambrian fossil fauna of an extraordinary preservation (State Party of the Russian Federation, 2015).

▶ **Other evidence of thermokarst processes**
Criterion:(viii)

Thermokarst processes that are documented (e.g. by sinkholes, karst-erosioni valleys, thermokarst lakes, interrupted surface courses of rivers and streams, karst springs) at the property have developed in an area of a great permafrost thickness (up to 400-500 m) (North-eastern Federal University Yakutsk et al., 2010).

Other important biodiversity values

▶ **Eastern Siberian ecosystems (steppe, forest, tukulan, rock) with associated flora, fauna and landscapes**

Mainly low larch taiga with some pine forests, meadow and steppe vegetation in river valleys. Valleys of the Buotama River, small taiga rivers and creeks are covered with dwarf birch and occasional forb meadows. Fragments of steppe vegetation are spread on well warmed bedrock slopes of the Lena and specially Buotama riverbanks. Overall, the ecosystem and relief of the area make up interesting landscapes with significant aesthetic appeal and touristic potential (North-eastern Federal University Yakutsk et al., 2010). 42 mammal species have been recorded in the area, mainly representing the typical fauna of middle-taiga subzone (State Party of the Russian Federation, 2015).

Assessment information

Threats

Current Threats

Low Threat

Because of the remoteness, lack of transport infrastructure and non-existent population, as well as the robustness of the OUV of the property, its values are currently only under very low threat. Fires represent the biggest threat to the property.

► Livestock Farming / Grazing

Very Low Threat
Inside site
Outside site

Three traditional Evenki farms on site, one engaged in deer farming, two in horse breeding. Also some haymaking. 300 ha of agricultural areas. Reportedly also some small-scale unauthorised cattle farming and meadow burning (North-eastern Federal University Yakutsk et al., 2010).

► Shipping Lanes

Very Low Threat
Outside site

Lena river is a main transport artery of the wider area; potential for accidental discharges of chemicals in immediate vicinity but outside of property, with potential to harm some of the biota of property. Some emergency plan apparently exists (North-eastern Federal University Yakutsk et al., 2010).

► Other Biological Resource Use

Very Low Threat
Inside site
Outside site

Traditional natural resource use inside property very limited and stable. 60% of land of site assigned to six traditional resoure use areas. 600-800 sable skins bagged annually. No permanent Evenki settlements inside property (North-eastern Federal University Yakutsk et al., 2010).

► Fire/ Fire Suppression

High Threat
Inside site, scattered(5-15%)
Outside site

Forest fires represent the biggest threat to the property; however, its geological values are mainly robust against this threat. 11 forest fires affecting a total of 18,000 ha were recorded in 2001, another fire affecting 130 ha in 2006. Cooperation agreement to control fire risk in place (North-eastern Federal University Yakutsk et al., 2010). The biggest fires occurred in summer 2016 (https://ria.ru/incidents/20160706/1459493371.html) and affected large areas due to a combination of weather conditions and difficult terrain which made fire-fighting response difficult and less efficient.

Potential Threats

Low Threat

Increased visitation and climate change might lead to increased threats to the property's values (including geological values associated with cold thermokarst processes, as well as additional biological values) in the future.

► Tourism/ visitors/ recreation

Low Threat
Inside site, localised(<5%)
Outside site

Visitor numbers have been increasing but are reported to be below carrying capacity (State Party of the Russian Federation, 2016). A new visitor centre and associated infrastructure are being planned (State Party of the Russian Federation, 2016), which might further increase visitors numbers. However, geological values of property are very robust against impacts from visitation (North-eastern Federal University Yakutsk et al., 2010).

► Habitat Shifting/ Alteration

Low Threat
Inside site
Outside site

Climate change has lead to increase in mean annual temperatures on site by

1.1 °C from 1951 to 1991. If continued, this could affect thermokarst phenomena, extent of permafrost and associated ecosystems and landscape elements (North-eastern Federal University Yakutsk et al., 2010).

Protection and management

Assessing Protection and Management

► Relationships with local people

Mostly Effective

There are some areas traditionally used by Evenki indigenous people. The validity of the boundaries of these areas is respected by the park administration. Traditional use of the land includes hay-making and hunting. Co-existence of traditional rights and use, and legal land ownership appears to be appropriately considered (IUCN, 2012). It is planned to create a Nature Park Committee consisting of representatives of each Evenki ancestral community and Nature Park administration. The committee will be responsible for dealing with any disputes around hunting, licenses, transportation routes, natural resources use and matters of traditional natural territory management (State Party of the Russian Federation, 2015). This could help resolve remaining issues surrounding the use of the traditional use zones.

► Legal framework

Mostly Effective

The property is legally designated as a Nature Park of the Republic of Sakha. Necessary steps are being undertaken to declare the area a federal national park which would increase its protection regime; however, this process remains to be completed (State Party of the Russian Federation, 2015). Concerns also exist regarding parts of the property located on the lands belonging to the State Forest Fund and the need to formalize the use of these lands by the Nature Park. This issue can most likely be solved through the process of declaring the area a federal national park mentioned above.

► Enforcement

Mostly Effective

Enforcement of existing protection regime is overseen by the “special inspection” team which currently consists of 11 staff members: 6 government district police officers, 4 senior government inspectors and the head of inspection (State Party of the Russian Federation, 2015). Surveillance activities include patrolling by water in summer and patrolling on snow-mobiles in winter. In 2016, 110 control patrols were conducted (State Party of the Russian Federation, 2016).

► Integration into regional and national planning systems

Data Deficient

The “Statute of the State Enterprise Lena Pillars Nature Park” 2006 in the Annex B5 of the nomination document, confirmed by the Government of the Sakha Republic, defines legal instruments for the protection of the property (IUCN, 2012). An integration into further regional or national planning systems is not documented.

► Management system

Highly Effective

Lena Pillars Nature Park is an institution of the Republic of Sakha (Yakutia) under the jurisdiction of the Ministry of Nature Conservation of the Republic of Sakha (Yakutia). Management of the area is being carried out based on two main legally binding documents – the Statute of the State Enterprise Nature Park “Lena Pillars” of the Republic of Sakha (Yakutia) (2006) and the Management plan of the Lena Pillars Nature Park (State Party of the Russian Federation, 2015). A new management plan for 2017-2021 has been developed (State Party of the Russian Federation, 2016).

► Management effectiveness

Highly Effective

No formal management effectiveness assessment of the property has been documented although management appears to be adequate to deal with the

current threats to the property's integrity (IUCN, 2012).

▶ Implementation of Committee decisions and recommendations

Data Deficient

The State Party will only report about the three requests of the World Heritage Committee expressed in Decision 36COM 8B.11 (inscription) on possible inclusion of Sinyaya part of Nature Park, provision of evidence on effectiveness of legal status of property and long-term management plan in February 2015 (WHC, 2012).

▶ Boundaries

Mostly Effective

The boundaries of the property are clearly defined. In 2015, a proposal for a minor boundary modification was submitted by the State Party of the Russian Federation and was subsequently approved by the World Heritage Committee (Decision 39COM 8B.40). Through this process the Sinsky plot of the Nature Park, located within the Sinyaya River catchment, was added to the property and its total area was increased by ca. 9% to 1,387,000 ha (State Party of the Russian Federation, 2015; IUCN, 2015). This addressed the requests previously made by the World Heritage Committee with regards to the boundaries of the property.

▶ Sustainable finance

Mostly Effective

Funding for the management of the nature park is provided from the budget of the Republic of Sakha (Yakutia). The total annual budget at the time of inscription was considered adequate for basic conservation functions of property. However, need for increased budget for tourism management and infrastructure noted, particularly if tourism numbers continue to increase (IUCN, 2012). More recent figures are not available, however, if the upgrading of the conservation status of the area to a federal level national park is successful, more resources can be expected (State Party of the Russian Federation, 2015).

▶ Staff training and development

Mostly Effective

In 2012, ca. 40 staff were considered adequate, but need for more expert staff (i.e. at least one geologist and at least one geomorphologist) to be engaged in protection and management of geological values of the property was noted by IUCN (2012). The most recent figures (2015) note 33 staff members in the Nature Park, including the director, 2 deputy directors, 5 specialists, 11 members of the inspection team and 13 technical service staff (State Party of the Russian Federation, 2015). It is unclear if the expert staff include any experts with geological background.

► Sustainable use

Highly Effective

Small scale traditional natural resource use by Evenki inhabitants of property is well-managed and sustainable (North-eastern Federal University Yakutsk et al., 2010).

► Education and interpretation programs

Mostly Effective

There is both a visitor centre on the territory of the property and cooperation with local schools aimed at education and interpretation activities (IUCN, 2012). While the 2012-2016 management plan for the property foresees a number of environmental education programmes, it is still lacking a strong programme for awareness raising, focused on the geomorphological and geological features of the property (UNESCO, 2015).

► Tourism and visitation management

Mostly Effective

Tourism management and interpretation facilities are currently sufficient as tourism numbers are still considerably below carrying capacity. However, the need for a more systematic sustainable and equitable tourism development strategy and the corresponding investments in the property's infrastructure and capacity was noted by IUCN (2012). A new visitor centre is being planned (State Party of the Russian Federation, 2016).

► Monitoring

Some Concern

Lack of geological monitoring in line with inscription under Word Heritage criterion viii as part of overall monitoring programme of Nature Park was noted in 2012 (IUCN, 2012).

► Research

Highly Effective

The property has been visited by a wide range of geological expeditions in the past, such as by the Siberian Research Studies Institute for Geology, Geophysics and Mineral Resources (SNIIGGiMS, Novosibirsk) and the Moscow Paleontological Institute RAS. The nomination file includes a list of more than 100 relevant references of articles based on research at or around the property (North-eastern Federal University Yakutsk et al., 2010). It is planned to create a Science and Engineering Board under the supervision of the Nature Park directorate (State Party of the Russian Federation, 2015).

Overall assessment of protection and management

Mostly Effective

The management and protection system of the property appears to be sufficient to address the limited current threats to its integrity, but may need to be upgraded in several ways to deal with projected and possible future threats. Necessary steps are already being undertaken to declare the area as a federal national park which would increase its protection regime; however, this process is still underway. The approved extension of the property to include the Sinsky plot area has further strengthened the integrity of the property and has addressed the requests of the World Heritage Committee with regards to the boundaries of the property. However, a number of other requests remain to be addressed, including inclusion of geologists among the specialist staff members and developing focused educational and awareness raising programmes around the property's geological values.

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

Highly Effective

There are only limited threats arising outside the property and affecting it

directly, because of its remoteness. Upstream pollution of the Lena river has a potential to affect the immediate vicinity but not the site itself. Therefore, existing precautions appear sufficient.

▶ **Best practice examples**

The cooperation of the Nature Park's administration with the indigenous Evenki inhabitats of the property and the arrangements for its small-scale sustainable use by them are an example of a positive relationship between natural World Heritage properties and local indigenous populations which could be replicated in other, similar properties.

State and trend of values

Assessing the current state and trend of values

World Heritage values

▶ **Spectacular rock pillars**
Good
Trend:Stable

The rock pillars that form the core of this property are in a good conservation status and are relatively robust against anthropogenic impacts (North-eastern Federal University Yakutsk et al., 2010).

▶ **Cambrian fossil remains**
Good
Trend:Stable

The cambrian fossil remains that contribute to the OUV of the property are in a good conservation status and are relatively robust against anthropogenic impacts (North-eastern Federal University Yakutsk et al., 2010).

▶ **Other evidence of thermokarst processes**
Good
Trend:Stable

Other karst forms at the property are also in a good conservation status and

are relatively robust against anthropogenic impacts (North-eastern Federal University Yakutsk et al., 2010).

Summary of the Values

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

Good

Trend: Stable

The current state of the World Heritage values of the property is good overall, and its trend stable.

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

Good

Trend: Stable

Because of the remoteness and lack of permanent population of the property, the current state of its other important biodiversity values is good and stable (North-eastern Federal University Yakutsk et al., 2010).

Additional information

Benefits

Understanding Benefits

▶ **Collection of wild plants and mushrooms, Fishing areas and conservation of fish stocks**

The natural resources derived from the property by the indigenous Evenki people are an important contribution to the livelihoods and culture of this group (North-eastern Federal University Yakutsk et al., 2010).

► Wilderness and iconic features

The vast eastern Siberian landscapes at and around the property are one of the last great wildernesses on Earth, and capture the imagination of people worldwide and inspires appreciation of natural values and beauty.

► Importance for research

In addition to the rich local and traditional knowledge and the hundreds of scientific articles that have been written already about lake Baikal and its biota, the property offers unique insights into the interplay of karstic and river-driven erosion processes in landscape formation, and into the Cambrian explosion of faunal taxa (North-eastern Federal University Yakutsk et al., 2010).

► Contribution to education

The site also plays an important role in education of local youth, as evidenced by the cooperation between the Nature Park administration and a number of local schools (North-eastern Federal University Yakutsk et al., 2010).

Summary of benefits

While there are no people who live on the property permanently, it offers considerable benefits (in terms of nature conservation, jobs, natural resources, education and knowledge) to the citizens of Yakutia and particularly the local Evenki inhabitants. In addition, the property provides limited but significant benefits to all those interested in wilderness, geology and the history of life.

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	.	Development of a more in-depth monitoring system for the geological values of the property.	
2	.	Development of an ecotourism strategy in line with previous IUCN and WHC recommendations.	

REFERENCES

№	References
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3	North-Eastern Federal University, Yakutsk Institute for Geology of Diamonds and Noble Metals RAS Siberian Branch Institute of Geography of Russian Academy of Sciences, et al. (2010). Nomination "Lena Pillars Nature Park" for inscription on the UNESCO World Cultural and Natural Heritage List. Moscow: Natural Heritage Protection Fund. [Electronic reference] < http://whc.unesco.org/uploads/nominations/1299.pdf>;. Accessed 2 February 2014.
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