

EUROPE / NORTH AMERICA

LENA PILLARS NATURE PARK

RUSSIAN FEDERATION



WORLD HERITAGE NOMINATION – IUCN TECHNICAL EVALUATION

LENA PILLARS NATURE PARK (Russian Federation) – ID No. 1299

IUCN RECOMMENDATION TO WORLD HERITAGE COMMITTEE: To defer the nomination of the property

Key paragraphs of Operational Guidelines:

Paragraph 77: A revised nomination has potential to meet one or more natural World Heritage criteria

Paragraph 78: Property as nominated does not meet integrity or protection and management requirements

Background note: Lena Pillars Nature Park was previously nominated for consideration at the 32nd Session of the World Heritage Committee, based on a differently configured nomination including two serial components, one of which had a designated buffer zone. IUCN evaluated the nomination and recommended to not inscribe the property on the World Heritage List. The State Party withdrew the nomination prior to discussion by the 32nd Session of the Committee, and thus it has not previously been considered by the Committee.

1. DOCUMENTATION

a) Date nomination received by IUCN: 11 March 2011

b) Additional information officially requested from and provided by the State Party: IUCN sent a letter to the State Party on 3 February 2012, which did not request supplementary information, but provided a statement on the evaluation process. The State Party subsequently provided a range of additional information on 28 February 2012.

c) Additional literature consulted (selected list): Amthor, J. E. et al., (2003) **Geology**. 31, 431–434; Brasier, M.D. et al., (1994) **Multiple $\delta^{13}\text{C}$ excursions spanning Cambrian Explosion to Botomian Crisis in Siberia**. *Geology* 22, 455-458; Ford, D. and Williams, P., (2007) **Karst Hydrogeology and Geomorphology**. Wiley, 562p.; Gunn, J., Ed., **Encyclopedea of Caves and Karst Science**. Fetzyroy Dearborn NY 537-538; **World Heritage Caves and Karsts – A Thematic Study** (by P. Williams). IUCN 2008 34p.; Kouchinstky, A. et al., (2001) **Geological Magazine**. 138, 387-396; Russian Federation, Republic of Sakha, **Mid-term Management plan of the Lena Pillars Nature Park 2008-2012** (in Russian); Russian Federation, Republic of Sakha, **Concept on the Development of Protected Area System in the Republic of Sakha**, Resolution of Government. 16 February 2011 (in Russian); Russian Federation, Republic of Sakha, **Law on Protected Areas of Republic of Sakha**. 1 March 2011 (in Russian); Russian Federation, Republic of Sakha, **Strategy for tourism development and Concept on the establishment of tourism and recreational zones in the Reoublic of Sakha**, Resolution of Government. 27 May 2009, (in Russian); Sandberg, P.A., (1983) **Nature**. 305, 19-22; Spector V.B. and Spector V.V., (2009) **Karst processes and Phenomena in the Perennially Frozen Carbonate Rocks of the Middle Lena River Basin, Permafrost and periglacial**

processes. 20, 71-78; Trofimova, E.V., (2007) **Particularites du developpement recent du karst calcaire de Siberie et d'Extreme-Orient (Russie)**. Karst and Cryokarst Sosnowiec-Wroclaw 203-209; Wells, R (1996) **Earth's geological history: a contextual framework for assessment of World Heritage fossil site nominations**. IUCN Gland Switzerland; Zhuravlev, A. and Wood, R.A., (2008) **Geology**. 36, 923-926; Zhuravlev, A. and Wood, R.A., (2009) **Geology**. 37, 1123-1126

d) Consultations: 14 external reviewers consulted. Extensive consultations were conducted during the IUCN field visit with a large number of key stakeholders including national and state legislative bodies and government institutions, site management authorities, scientists and researchers, as well as site based staff, community representatives and tourist guides.

e) Field Visit: Kyung Sik Woo and Sarangoo Radnaaragchaa, 22-31 August 2011.

f) Date of IUCN approval of this report: April 2012

2. SUMMARY OF NATURAL VALUES

The nominated property, the Lena Pillars Nature Park (LPNP) is located in the central part of the Sakha Republic (Yakutia) in the Russian Federation, around 200 km southwest from the provincial capital Yakutsk which is the capital city. The total area of the property is 1,272,150 ha.

LPNP extends along part of the Lena River and its Buotama tributary. It is located in an area with an extreme continental climate with an annual temperature range of almost 100° C, ranging from c.-60° C in winter to c.+40° C in summer.

The property is nominated in relation to criteria (vii) and (viii), and its key natural values relate to its geomorphology and geology.

The geomorphic environment of LPNP is dominated by cryogenic (ice-related) processes, and the ground is frozen to a depth of several hundred metres. Summer thawing only penetrates a few metres. Consequently, even though the area is underlain by hundreds of metres of carbonate rocks, karst development is embryonic. The nomination notes karst features such as dolines (caves, vadose vertical solution pipes, karren surfaces, karst lakes, dry valleys), and thermokarst features are abundant. The incision of the Lena and its tributaries has induced a hydraulic gradient that has enabled groundwater to flow from the upland surface towards neighbouring valleys.

The celebrated pillars (up to c.100m in height) 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. The pillars form a discontinuous belt that extends back from the river's edge along the incised valley sides of some rivers in a zone about 150 m wide. The joints that isolate individual pillars may have sometimes been widened by dissolution of the carbonate rock. 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. This is because cliff-foot ice-shattered debris (scree) slides downslope to the valley floor where it is transported away by the river. Pillars are only found along those stretches of valley sides where the river in flood can scour and undercut the banks. If it were not for this fluvial action the pillars would be buried in their own cryogenic debris. A series of evolutionary stages in pillar formation can be observed from massive cogged walls to separated individual pillars. Other complementary and dramatic pillar landforms are known in the immediate region at Sinyaya outside the nominated property's boundaries.

A further geomorphological feature emphasized in the nomination are the tukulans which are highly unusual high-latitude sand dune areas formed in reworked sandy terrace sediments on the top of Tertiary sediments along the Lena River and its tributary Vilyui River.

The nominated property and surrounding area also contains geological values that are internationally noted and which are described in detail in the nomination, and in supplementary information provided by the State Party. The Lena River and its tributaries provide within the property and adjoining areas natural sections of the uppermost Ediacaran (Precambrian) to middle Cambrian strata of a total thickness from 980-1370m in thickness. These strata were accumulated in platformal environments and were not subsequently subject to either strong tectonic or metamorphic alteration. As a result, sub-horizontal strata of a few centimetres

thickness are traceable for dozens of kilometres. The pillar relief itself provides excellent outcrops.

These strata cover the time interval which encompasses the "Cambrian Explosion", one of the major diversification events on the Earth where all the main modern and fossil animal body plans appeared. The Lena Pillars sections allow study of the early stages of multicellular animal evolution and its diversity and dynamics. Among approximately 2,000 known early Cambrian genera, about 350 have been described from this region. These genera include the first archaeocyaths (rigid aspiculate calcified sponges), radiocyaths, coralomorphs (skeletal primitive cnidarians), brachiopods, and some other groups of animals with mineralized skeletons. Additionally, a number of complete and intact specimens with very high quality preservation make up the so-called Sinsk Biota, which is one element within the overall geological succession, and contains a number of unique records of fossil species including with phosphatised soft tissues and cells as well as their embryos.

The most important geological values in the nominated territory are fossil reefs. Good preservation, high diversity, and multiple localities of reef fauna in the Lena Pillars allow detailed palaeoecological and population dynamics' studies of the earliest metazoan reef biota. The geology of the areas has also enabled detailed stratigraphic analysis to be achieved, including high precision statistical analyses of the distribution of different skeletal groups. This has also enabled the distinction of the earliest currently recorded mass-extinction events in the Earth history which are known as the Sinsk and Toyonian extinction events, both named after the Lena Pillar's area.

In addition, whilst not the basis for the proposal for inscription on the World Heritage List, the Quaternary sediments in LPNP bear rich skeletal remains of the mammoth fauna including bones that are well-preserved for a DNA analysis. It also protects nationally important biodiversity values, including the presence of Siberian salamander and Siberian frog, 105 species of nesting birds, and 38 species of mammals. An introduction programme of Wood Bison is also noted.

3. COMPARISONS WITH OTHER AREAS

The consideration of the values of LPNP has been greatly facilitated through the new nomination, as well as the process of discussion and advisory activities that have taken place since the previous submission (see section 5).

The previous IUCN evaluation (2008) pointed out that impressive rock pillar landscapes are found in many other parts of the world, and a number of such landscapes are already recognised on the World Heritage List. These include Wulingyuan (China), Tsingy de Bemaraha (Madagascar), South China Karst (Shilin,

China), the subsequently inscribed China Danxia (China) and other spectacular areas that are not on the World Heritage List such as Arches National Park and Bryce Canyon National Park (both in USA) and Nambung (Australia).

Reviewers have noted that the phenomenon of the major pillars in LPNP should not be considered as primarily karstic, but rather being formed by the combination of cryogenic erosion and the fluvial removal of the resulting debris. Any mechanically competent bedded and jointed rock, such as hard sandstone or quartzite, would also form pillars in such an environment. The effectiveness of these combined processes is especially evident in the previously nominated Sinyaya area, where pillars are only developed on the outside bends of incised meanders where undercutting by the river is at its most intense. The combination of cryogenic and fluvial processes that has led to the formation of the Lena Pillars is unusual, as is the disposition of pillars for many kilometres in a narrow belt along the Lena and some tributaries.

Although there are many examples of pillar and tower landforms in the world, most are in the tropical or temperate realm, tend to be rounded or smoothly sculpted, and owe little or nothing to cryogenic processes. The circumstances in Yakutia are thus a special combination of lithology, fluvial incision and continental cold climate processes. These factors have acted in concert to produce a visually spectacular and geomorphologically very unusual landscape that the majority or reviewers consider would be worthy of recognition as being of Outstanding Universal Value. However some of the best examples of this phenomenon in the LPNP region, on the Sinyaya River, are not included in the nomination, although they were part of the previous proposal.

IUCN, in its 2008 evaluation, noted that there are significant gaps in the geographical distribution of karst World Heritage sites, representation being particularly poor in areas such as North Asia. It also noted that there are significant gaps in the natural environmental distribution of karst World Heritage sites, there being relatively poor representation in arid, semi-arid, and periglacial environments.

Extensive outcrops of carbonate rocks with karst features are found across permafrost areas of the Russian Federation and Canada. Some of these areas were glaciated in the Pleistocene and others were not because conditions were too dry, even though they were cold enough. The Lena Pillars region of Siberia and the Nahanni National Park World Heritage Property in Canada are examples of permafrost areas that were unglaciated in the last major glaciation. Due to the embryonic development of karst, no features in the nominated property come close to the geomorphic importance of the karst found in the Nahanni National Park of Canada. Thus although the karst landforms described and illustrated in the nomination document are

interesting, their expression is at a very small scale and by no means unusual, and is not a feature of Outstanding Universal Value.

In relation to Cambrian fossil values, the nomination notes a range of comparator sites, including S.E. Newfoundland (Canada), Morocco, China, South Australia and parts of Europe. There are prominent exposures of Cambrian rocks in other World Heritage properties such as the Grand Canyon (USA). More significantly, the World Heritage List already includes the Burgess Shale fossil site (part of the the Canadian Rocky Mountain Parks World Heritage Site, Canada, and originally inscribed as a single World Heritage Site), which is widely known as an iconic global reference for the Cambrian Explosion.

Significant Cambrian reefs are known from locations including in Morocco, South Australia, eastern Canada, western United States, some European countries (Spain, France, Sardinia), and elsewhere. However, in all the relevant areas, the earliest Cambrian strata do not contain reefs and mostly are barren. Some other areas of the Siberian Platform also provide a rich record of skeletal fossils across entire lower Cambrian interval; however, their fossil assemblages are poorer than those of the area in and around LPNP.

IUCN notes that the consideration of sites nominated to the World Heritage List in relation to fossil values has been based on a consistent set of principles outlined in the established thematic study on fossil sites prepared in 1996. In this regard, IUCN considers there is not a compelling basis to consider the application of criterion (viii) in relation to the fossil values of the area alone.

IUCN notes the phenomenon of the Cambrian Explosion is already represented by the Burgess Shale, which is one of the most significant fossil areas of the world and provides a wealth of data to aid in the classification of enigmatic fossils. The most significant fossil organisms there are soft bodied, hence largely absent from the rest of the fossil record. Whilst the fossils of the LPNP region are an internationally significant record, they include many species that are found in other sites, even if not in the same concentrations or associations. The nomination emphasizes that the fossil values of the Sinsk Biota are c.10 million years older than those of the Burgess Shale.

A further key comparison is with the Chengjiang Fossil Site (CFS) in Yunnan Province, China, which is also nominated for consideration by the 36th Session of the World Heritage Committee. Like the Burgess Shale, CFS is a site with exceptional soft body preservation, as well as preserving skeletal animals and is now considered to be at least as important as the Burgess Shale. In this case CFS is slightly older than the Sinsk biota of LPNP (though younger than the oldest Cambrian strata in the present nomination). CFS is recognized as one of the richest Cambrian sites known and appears to IUCN to provide a much stronger claim for Outstanding Universal

Value in relation to fossil values than LPNP, and also to much better accord with the long established principles for listing fossil sites as of Outstanding Universal Value adopted by the World Heritage Committee.

The present nomination and supplementary information emphasises that the Burgess Shale and CFS do not provide significant skeletal fossil remains, and also emphasises the special preservation of the Sinsk biota. It notes the long time recorded in the strata of the LPNP region, and the continuous and fossil-rich carbonate record of the uppermost Ediacaran (Precambrian) to middle Cambrian strata of ca. 35 my interval, whilst the Chengjiang site and the Burgess Shale provide a more limited Cambrian record in terms of the total number of taxa and ecosystems, and time interval. However IUCN notes that, if the values noted in the nomination are extended as a basis for comparison, sites such as the exceptional preservation of the early Ediacaran fauna in Australia (and elsewhere), and the very earliest marine ecosystem in the late Precambrian noted from Mistaken Point (on the tentative list of Canada) would also rate more highly than the LPNP area in terms of the representation of the earliest phase of the evolution of complex life in the fossil record.

IUCN notes that the World Heritage List is “not intended to ensure the protection of all properties of great interest, importance or value, but only for a select list of the most outstanding of these from an international viewpoint” (Operational Guidelines, paragraph 52). IUCN concludes that the fossil values of the LPNP area do not reach the threshold required to be regarded as being of Outstanding Universal Value. As noted below, not all of the key fossil sites in the immediate region are included in the property, and the boundaries of the property also do not respond to the sites that are of geological significance; thus superimposed on this judgement is a question regarding integrity.

To summarise, IUCN notes that the information available to assess the nomination has been significantly enhanced in the present nomination, in relation to the earlier proposal. Nevertheless the application of the natural criteria remains complex and finely balanced. IUCN has taken into account the Committee’s previous application of criteria (vii) and (viii), including in the most recent inscriptions. On balance it does appear that the combination of internationally significant values for geomorphology (the exceptional representation of cryogenically generated pillars), which are supported by the geological values (the important Cambrian record, significantly complementing the most exceptional sites from that period) in the LPNP region provides the potential for a revised nomination to be considered under criterion (viii) and possibly criterion (vii). However, as noted below, integrity considerations undermine the present basis to consider inscription under either criterion.

4. INTEGRITY, PROTECTION AND MANAGEMENT

4.1 Protection

LPNP was established by the Resolution of the Government of the Republic of Sakha (Yakutia) in 1995. The nominated property has the status of a Nature Park of the Republic Sakha.

The highest level of protection for the property would correspond to a federally protected “zapovednik” or equivalent. The Lena Pillars property is not protected at this level currently. Nevertheless, the Ministry of the Natural Resources of the Russian Federation has already included LPNP in the list of the Special Protected Areas to be designated as State National Nature Park by 2015. Such designation will grant to LPNP the Federal level of protection. As this level of federal protection is not yet in place, there is a need to demonstrate that the State level of legal protection is sufficient to protect its values fully.

LPNP is owned by the Sakha Republic. There are some land parcels traditionally used by Evenki indigenous people. The boundaries of the land are well known and their validity is respected by the park administration. Limited 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.

LPNP possesses the status of a non-profit legal entity and established in the form of state-operated nature conservation institution and financed by the state budgetary funds from the Sakha Republic. Legal instruments for the protection of the property are determined by the regulations of the Nature Park (referred as 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. The territory of the nature park is zoned and includes areas termed reserved zone, sacred places, restricted and active recreational zones, traditional nature management zone and zone of breeding for rare and extinct animals.

IUCN considers the protection status of the nominated property could be strengthened, but appears to meet the requirements set out in the Operational Guidelines.

4.2 Boundaries

The boundaries of the nominated property are clearly defined. The nominated property has been put forward without a formal buffer zone and aligns with the boundary of LPNP, but excluding a component of LPNP at Sinyaya, which was part of the previous nomination and which contains an important range of pillar landforms.

IUCN has a range of concerns regarding the adopted boundaries of the property. Firstly in relation to the pillars

on the Lena River, it is noted that the main values are located relatively close to the river and the majority of the nominated property does not include these features. Importantly the process that defines the pillars certainly includes the Lena River. The integrity of the pillars depends on maintaining active fluvial scour at their base, active scree-producing cryogenic processes on slopes, and availability of carbonate rock for incision on the plateau immediately behind the pillars. From the point of view of the protection of the pillars, the existing National Park boundaries include a great deal of land behind the pillars, inland of the river, which is more than enough to conserve that element of the pillar process. However, it appears necessary to either include the key sections of the Lena River in a buffer zone, or within the site itself, to ensure that the key values of the pillars would be protected and managed. More fundamentally IUCN recalls that from the first evaluation, and also in the view of reviewers, some of the best pillar landforms of the region are those of the Sinyaya area. Since these have been excluded in the revised nomination, a major loss in the values put forward has resulted. The IUCN World Heritage Panel noted that whilst the science underpinning the nomination has been both improved and much better presented since the previous nomination, the values of the revised nomination are significantly less than the original proposal, in terms of what is actually being nominated.

Similarly in relation to the fossil sites, IUCN notes that several of the key localities are on the left bank of the Lena River outside of the property, and do not appear to have specific legislative or management protection. IUCN considers that they should be considered for inclusion in the property.

In relation to aesthetic values and the overall comprehension of the property, it is also noted that the key features of the Lena Pillars would primarily be appreciated and comprehended from the river, and thus the river is an intrinsic part of these values of the property. This also argues strongly for the inclusion of the adjoining river to the property within its boundary, or the establishment of buffer arrangements.

Finally IUCN notes that the nominated property includes large areas that neither display pillar landforms, nor key geological exposures, and these would not therefore appear to be appropriate for inclusion in the property.

IUCN considers that the boundaries of the nominated property do not meet the requirements set out in the Operational Guidelines.

4.3 Management

There is a management plan for the nominated property covering the period of 2008-2012. This plan was developed in accordance with the Direction of the Ministry of Natural Resources of the Russian Federation. It identifies primary goals of the park and proposes activities on protection, scientific research,

environmental education and recreation. The document is adequately guiding the management of the nominated property.

The plan defines the sources of financing, which are mainly from the regional budget with a minor contribution from self-generated revenue. The total annual budget of the park (c. USD524,000) appears to be adequate to conduct nature conservation, patrolling and monitoring activities. However, it was noted during the IUCN evaluation that the budget needs to be increased to manage tourism use and to improve associated tourism infrastructure. As noted below the tourism management framework of the property also is not yet adequate.

LPNP has a personnel of c.40 including state environmental inspectors, education and tourism specialists, and a range of administration and support staff. Detailed information on staffing was provided in supplementary information provided to IUCN. There is a specific need to provide suitably qualified and experienced staff to manage the earth science values that are the basis for the nomination, and it is recommended a geomorphologist and geological specialist be appointed.

Local schools are actively involved in environmental education programs. A modern visitor centre has been built in the territory of the park with financial assistance from the Regional Investment Fund.

Since LPNP has been nominated for its geological values it would be appropriate to develop geological monitoring indicators as currently all monitoring indicators as described in the management plan are focused on biodiversity.

IUCN considers the management of the nominated property does not fully meet the requirements set out in the Operational Guidelines, and requires strengthening in a number of areas.

4.4 Threats

Tourism

Tourism in LPNP has been gradually increasing over the past five years. LPNP is widely advertised as a tourism brand of the Sakha Republic and the Government is promoting tourism. At present an upper limit of 23,000 person visits per year has been established for the nominated property based on its carrying capacity. LPNP is collaborating with local traditional communities in the organization of tourism activities. Local people are working as tour guides and offering their service in providing transportation for tourists, selling traditional handicrafts and regional food products.

However, a long-term strategy needs to be developed that would balance the increasing trend in tourism in one hand whilst respecting the capacity of the area, and realizing benefits to local communities.

The previous IUCN technical evaluation had recommended that an ecotourism master plan be developed which “maintains low-key tourist operations”; provides direct and adequate financial contributions from tourism to the conservation activities; and involves relevant local authorities and other major stakeholders. Furthermore, it is essential to develop tourism concepts with participation of major stakeholders that include the LPNP administration, tour operators, local communities and others.

The State Party provided in its supplementary information “The Program of Environmental Tourism Development in the Lena Pillars NP for the period 2012 – 2016. Whilst outlining some useful principles, the document is extremely brief and contains no operational details including programme, staff or resources. Thus at the present time this aspect of the management framework does not appear to be adequate.

Agriculture and hunting

Traditional use activities are carried out within the area of the Park and include licensed sable hunting, horse breeding in the Buotama River mouth, deer farming and haymaking. 884,000 ha of land or about 60% of area of the Park are assigned to six Evenki ancestral farms that raise deers and horses and use the area for fishing and hunting. Such activities are carefully managed, and do not appear to create major environmental impacts.

Fire management

LPNP cooperates with the Yakut Territorial Committee for Environmental Protection and Special Poaching Inspection Unit in carrying out law enforcement measures. During the summer time the Yakutia Aircraft Fire Extinguishing Brigade executes fire management activities according to the agreement between the two organizations. In addition, LPNP is working with the Khangalassky Forestry Unit on forest fire prevention. The capacity of the park on fire control and suppression needs to be further strengthened.

Pollution threats

There is a major oil pipeline that crosses the Lena River 800 km upstream of the property. There are some risks of oil spillage and cracking of pipes in the winter. There is a need for the LPNP administration to regularly monitor the impact that might be caused by the pipeline operations.

In summary, IUCN considers the nominated property does not meet the conditions of integrity as outlined in the Operational Guidelines.

5. ADDITIONAL COMMENTS

5.1 Associated cultural values

IUCN notes the long standing associated cultural values and human use of the property as significant, and the ongoing commitment to conservation from the traditional

peoples of the area. The property preserves archaeological remains, and displays petroglyphs that testify to the long standing human association with the property.

5.2 “Upstream process” regarding early advice on potential nominations

IUCN engaged in providing advice and support to the State Party, at its request since the original nomination. An expert advisory mission was undertaken by a member of IUCN’s World Commission on Protected Areas to the site, and a visit by elected officials and staff of the Sakha Republic was hosted at IUCN Headquarters. IUCN considers that this process has enabled both a range of points to be addressed to strengthen the nomination, and a much better appreciation of the values of the nominated area to be obtained by IUCN leading to the recognition of potential in this area to demonstrate Outstanding Universal Value following consideration by the IUCN World Heritage Panel. Nevertheless there appear to have been a number of key requirements that have not yet been addressed, and thus the process undertaken has not yet achieved the desired result of a nomination that can be recommended for inscription. IUCN is keen to both reflect with the State Party on lessons learned, and is also willing, on the basis of the present revised evaluation to work closely with the State Party to seek to redefine a nomination that would meet the Operational Guidelines.

IUCN also notes that it took the step with the present nomination, on an experimental basis, to communicate its concerns on the viability of the nomination during the evaluation process, and to invite the State Party to engage in early dialogue regarding the nomination before the Committee takes place. This follows the specific requests of the 35th Session of the World Heritage Committee to strengthen communication in the evaluation process. The results of that process will be reported at the 36th Session Committee, for discussion.

6. APPLICATION OF CRITERIA

Lena Pillars Nature Park has been nominated under natural criteria (vii) and (viii).

Criterion (vii): Superlative natural phenomena or natural beauty and aesthetic importance

The pillar landforms along the Lena River within the nominated property are spectacular natural phenomena, but there are equally spectacular pillar areas elsewhere in the region of the property, notably at Sinyaya, and also elsewhere in the world. Comparative analysis does not yet provide a compelling argument for the application of this criterion to the features of the LPNP areas. The property’s boundaries also do not encompass the areas that allow the appreciation of the main pillar areas on the Lena River. Large areas of the nominated property do not include attributes relevant to the application of this

criterion. There may be potential for a revised nomination in the region to make this criterion, but this requires further evaluation.

IUCN considers that the nominated property does not meet this criterion, but a revised nomination in the region, that also met integrity requirements, might have potential to do so.

Criterion (viii): Earth's history and geological features

The region around LPNP displays two features of significant international interest in relation to the earth sciences. The large cryogenically formed pillars in the region are the most notable pillar landscape of their kind known, whilst the internationally renowned and important exposures of Cambrian rocks provide a second and important supporting set of value, although alone they are not of Outstanding Universal Value. However the site that has been nominated does not include all of the most important attributes in the region in relation to either of these values, since it excludes the significant pillar landscapes at Sinyaya, the river which is a key element of the pillar forming process, and a number of the associated key fossil localities. Nor does the nominated property have adequate buffer zone arrangements. Conversely, large parts of the nominated property do not contain attributes that are strongly relevant to these internationally significant values.

IUCN considers that the nominated property does not meet this criterion, but a revised nomination in the region, that would meet integrity requirements, has potential to do so.

7. RECOMMENDATIONS

IUCN recommends the World Heritage Committee adopt the following draft decision:

The World Heritage Committee,

1. Having examined Documents WHC-12/36.COM/8B and WHC-12/36.COM/INF.8B2;

2. Defers the nomination of the **Lena Pillars National Park (Russian Federation)**, taking note of the potential for a substantially revised nomination to meet criteria (vii) and (viii), in order to allow the State Party to:

a) revise the boundaries of the area to conform to the key attributes that relate to the pillar landforms and key geological features and exposures within

the region, including any key areas not within the Lena Pillars National Park (LPNP), and to also consider including the Sinyaya component of LPNP, and relevant areas of the Lena River that are necessary to assure integrity within the revised nomination, and also to exclude from the nomination areas of LPNP that do not contain attributes relevant to criteria (vii) and (viii);

b) establish appropriate buffer zones to the revised nominated property and wider protection measures that will ensure the protection of the river catchments, and the appropriate management of activities on the Lena River;

c) provide a clear demonstration that the legal regime supporting a revised property and buffer zones is effective;

d) specify a full and revised strategy, and an operational action plan, for the management of sustainable tourism within the capacity of the property, and to secure appropriate benefits to local people;

e) provide a revised long-term management plan for the revised nominated property which includes a strong programme of awareness devoted to the aesthetics, geomorphological and geological features, and ensures the necessary scientific skills required to protect and manage these values are in place.

3. Takes note of the willingness of IUCN to provide direct advice to the State Party regarding the preparation of a revised nomination, to meet the identified potential for a substantially revised proposal in this region to meet the requirements for inscription on the World Heritage List;

4. Expresses its appreciation to the State Party, and the State Government of the Sakha Republic, and stakeholders, regarding the work that has been done to research, present and protect the values within the Lena Pillars region;

5. Further welcomes the collaborative efforts of the State Party, stakeholders and IUCN during the evaluation of this nomination to increase dialogue and assess practical options toward an improved nomination, and requests that lessons learned are appropriately considered in the reflection on the Future of the Convention.

Map 1: Location in the Russian Federation



Map 2: Nominated property and buffer zone

