
WORLD HERITAGE NOMINATION – IUCN TECHNICAL EVALUATION

VOLCANOES OF KAMCHATKA (RUSSIAN FEDERATION) EXTENSION TO INCLUDE KLUCHEVSKOY NATURE PARK

Background Note: The "Volcanoes of Kamchatka" (VK) were inscribed on the World Heritage List in 1996 under natural criteria (i) (ii) and (iii). Five separate protected areas make up a serial site, which extends over a distance of 600km along the Kamchatka Peninsula and amounts to 7% of the total land area of the Peninsula. In the 1996 IUCN technical evaluation, the Kluchevskoy area was identified as a major natural feature that would significantly contribute to the rationale for the site. The local government of Kamchatka Oblast has acted to establish a Nature Park in the area and has documented its values in the extension proposal. This evaluation also addresses the request by the State Committee for Environmental Protection to list the site under an additional natural criterion (iv).

1. DOCUMENTATION

- i) **IUCN/WCMC Data Sheet:** (3 references)
- ii) **Additional Literature Consulted:** Simkin T. et. al. 1981. **Volcanoes of the World**, Smithsonian; Decker R. and B. **Volcanoes** Freeman; Francis P. 1993. **Volcanoes: A Planetary Perspective**. OUP; Bullard, F.M. 1973. **Volcanoes**. University Texas; Decker R. and B. 1991. **Mountains of Fire**. CUP; Krever V. et. al. 1994. **Conserving Russia's Biodiversity**. WWF; Stewart J.M. 1992. **The Nature of Russia**. Boxtree; Kirby E.S. 1971. **The Soviet Far East**. Macmillan; Berg L.S. 1950. **Natural Regions of Russia**. Macmillan; Newell J. and E. Wilson. 1996. **The Russian Far East**. FoE-Japan; Nechayev A. 1995. **Kamchatka**. Disentis; Morrow P. and B. 1994. **Playing with Fire**. **Equinox**. February; State of the Russian Federation for Environmental Protection, Memorandum on **Proposed addenda to Volcanoes of Kamchatka World Heritage Site**, 24 May, 2000; Satellite Atlas of the World (1998) Russian Volcanoes 1994 SIR-C radar image Published by National Geographic Society.
- iii) **Consultations:** 8 external reviewers contacted. Regional Administration officials, Kamchatka Association of Greens, Institute of Volcanology, Institute of Ecology and Nature Management, Tourism and Park Development Project staff, WWF and GEF/UNDP officials.
- iv) **Field Visits:** September, 1996. Jim Thorsell, J. Cassils.

2. SUMMARY OF NATURAL VALUES

Kluchevskoy Nature Park (KNP) was established in 1999 to protect and give recognition to conservation values of the Kluchevskaya group of volcanoes. This cluster of 12 volcanoes is located on the east-central part of the Kamchatka peninsula between the Bystrinsky Nature Park and Kronotsky National Park. The area of KNP is 376,000ha and it extends from 300m to 4,813m, the highest point in eastern Eurasia. Diverse volcanic features occur with many craters, lava fields and steam vents. Kluchevskoy is a classic "strato-volcano" and is one of the most active in the region exuding a flow of magma of 60 million tons/year. Over the past 300 years it has erupted explosively 73 times, most recently in 1976.

The KNP is the main centre of glaciation in Kamchatka with 47 glaciers covering 269km². Despite global trends of glacial retreat, several of these glaciers are advancing and interactions between glacial and volcanic activity are of high scientific interest.

The proposed addition to the existing VK site also has typical flora and fauna of the region. Vegetation is primarily rock birch, alder and larch on the lower slopes with sub-alpine meadows extending above 1,000m. Faunal diversity is not high but brown bear, marmots, reindeer, snow buntings and crows all occur and are representative of the sub-arctic region.

With a rigorous climate, lack of road access, steep and unstable terrain, the landscape of KNP displays high scenic value and exists in an unmodified natural state. It is the dominant physical feature of the Peninsula.

Should the extension be approved, the total size of the site would increase by 10% to 3.67 mil.ha.

3. COMPARISONS WITH OTHER AREAS

The IUCN technical evaluation of VK in 1996 noted the eight World Heritage natural volcano sites that had been inscribed at that time and that over 1,300 active volcanoes existed on earth with a particular concentration around the "Pacific Rim of Fire". Since then an additional four sites have been added to the World Heritage List partially for their outstanding volcanic features (Aeolian Islands, Heard and MacDonald Islands, Morne Trois Pitons and Mount Kenya) which brings to 13 the total number of such sites.

The 1996 evaluation demonstrated that VK stand out more than any other existing World Heritage site as having the greatest variety of volcano types and set of associated volcanic phenomena. They also offered the most undisturbed and spectacular scenic features (lakes, coastline, wild rivers) and were some of the most thoroughly researched in the world. Additionally, the site contains a range of other biological values (see section 5 below). These combine to give this area a bio-geodiversity found in only a select few places in the world.

The proposal to add the KNP as the sixth unit in this serial nomination further strengthens and reinforces the outstanding universal value of this property by including the highest and most active volcanic and glacial features on the Peninsula. Its biological values are not as significant as several of the other components of the site as it does not contain salmon spawning rivers, lakes or coastline features. However, its geological features are more dramatic than those of the other five sites.

4. INTEGRITY

The 1996 technical evaluation of IUCN and subsequent monitoring reports on the site have outlined a number of threats facing different components of this serial site. These include the prospects of mining and road construction in the Bystrinsky park, a proposal for a geothermal facility near the Nalychevo park and poaching in the Southern Kamchatka reserves. Secondary issues of concern relating to the lack of management resources, staff and management plans were also outlined.

Although the threat of industrial developments and poaching still persists in parts of VK, the nominated KNP extension is not facing similar pressures. There are no settlements in the park and the regional population density is low. On the periphery of the park there has been some forest clearance and cutting of hay but these activities are very restricted in area and do not appear to affect its integrity. Tourism levels are very low (250 – 300 visitors/year).

The entire site is benefiting from several assistance projects through the European Union and the GEF. As KNP has only recently been created, it does not yet have a management plan nor any on-site visitor facilities. It does have a network of seismic stations and geological monitoring sites but because of its remoteness, inaccessibility and lack of any human pressure, it does not have resident park staff.

In summary, the proposed extension has several integrity problems in common with the other five units of the existing site. Nature conservation in the region is not a high priority for government at this point in time and management resources are very limited. On the positive side, there are no current threats to KNP and external assistance for conservation work is beginning to have effects.

5. ADDITIONAL COMMENTS

A parallel issue relating to the entire VK site is a request from the State Committee of the Russian Federation for Environmental Protection (memorandum of 24 May, 2000) for consideration of an additional criterion for the site (criterion iv). The request is accompanied by considerable documentation supporting the case. This is a separate issue to the KNP extension proposal but it is timely to consider it at the same time and this is covered in section 6 below.

The Bureau should also note that a 'state of conservation' report for VK, as requested from the Russian authorities by the December 2000 Committee, has not yet been received.

6. APPLICATION OF CRITERIA/STATEMENT OF SIGNIFICANCE

6.1 Extension of VK to include KNP

The Kamchatka Volcanoes are one of the most outstanding volcanic regions in the world with both a high density of active volcanoes, a variety of types (Strombolian, Hawaiian, Pelean, Vesuvian and Plinian) as well as a full diversity of related volcanic features (geysers, mud pools, hot springs, calderas, mineralisation). The five sites that make up the original serial nomination collectively bring together many of the major volcanic features of the Peninsula. With the proposed extension of VK to include KNP as the sixth unit in the site, the highest and most active volcano is incorporated.

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

The proposed addition of KNP as the sixth component of the site further adds to the overall coverage of the range of Kamchatka's natural features. The nominated addition to the site clearly meets criterion (i) in its own right as an outstanding example of geological processes and landforms and therefore contributes in a very significant way to the expanded site as a whole meeting criterion (i).

Criterion (ii): Ecological processes

The proposed expanded site is also biologically analogous to six islands and its geographic location between a large continental landmass and the Pacific Ocean has given it unique characteristics. Natural processes continue with on-going volcanic activity and colonisation. The proposed KNP addition contributes significantly to the expanded site as a whole meeting criterion (ii).

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

The Kamchatka Volcanoes is a landscape of exceptional natural beauty with its large symmetrical volcanoes, lakes, wild rivers and spectacular coastline. It also contains superlative natural phenomena in the form of salmon spawning areas and major concentrations of wildlife (e.g. seabird colonies) along the coastal zone of the Bering Sea. The proposed KNP addition contributes very significantly to the site as a whole meeting criterion (iii).

6.2 Request for inscription of the VK under natural criterion (iv)

Criterion (iv): Biodiversity and threatened species

VK was inscribed in 1996 under natural criteria (i), (ii) and (iii). The case for the site also meeting criterion (iv) was not presented at the time. Further information relating to justification under criterion (iv) are as follows:

- The VK contains an especially diverse range of palearctic flora (including a number of nationally threatened species and at least 16 endemics).
- Although VK records only 33 mammal species, in the context of the northern palearctic biogeographic realm, this is high. A number of these are notable on the global level for the remarkable size of their populations. For instance, all species of sea mammals in the northern Pacific Ocean are found in the marine coastal component of the site including internationally significant populations of sea lions and sea otter (estimated number: 3,500 – 4,000). Kamchatka has a thriving population of brown bear (5,000+) of which over one-fifth live within VK. There are also good numbers of snow ram, sable and wolverine.

- 145 bird species have been recorded in the site, nine of which are globally threatened. Included are major birds of prey species such as the Stellar's Sea Eagle (50% of world population), white-tailed eagle, gyrfalcon and peregrine falcon which are attracted to the availability of spawning salmon. Large seabird colonies exist along the coast including over half the world population of Aleutian tern. Parts of VK also function as major migration staging areas for eastern palearctic migrants.
- The rivers inside and adjacent to VK contain the world's greatest known diversity of salmonid fish. All 11 species of Pacific salmon coexist in several of Kamchatka's rivers. Indeed, Kamchatka is the world's most important stronghold for native salmonid fish. With wild salmon declining rapidly throughout the Pacific Rim, the salmon runs in Kamchatka's wild rivers become especially important. The role that salmon play in the health of terrestrial and aquatic ecosystems is particularly well illustrated in Kurilsky Lake in VK.

For all of the above reasons, VK with its six separate components totalling 3.67 mil.ha. also merits inscription under natural criterion (iv).

7. RECOMMENDATION

The Bureau recommend to the Committee that Kluchevskoy Nature Park be added as the sixth component of the Volcanoes of Kamchatka's World Heritage site. In addition to the 1996 inscription under criteria (i), (ii), and (iii), the expanded site also qualifies under criterion (iv).

The Bureau also recommended that authorities in Kamchatka be commended for their efforts to compile management plans and to implement them with assistance from donors. UNDP/GEF should also be recognised for providing material support to the site.