

RUSSIAN FEDERATION

Volcanoes of Kamchatka

Brief description

This is one of the most outstanding volcanic regions in the world, with a high density of active volcanoes, a variety of types, and a wide range of related features. The six sites included in the serial designation group together the majority of volcanic features of the Kamchatka peninsula. The interplay of active volcanoes and glaciers forms a dynamic landscape of great beauty. The sites contain great species diversity, including the world's largest known variety of salmonoid fish and exceptional concentrations of sea otter, brown bear and Stellar's sea eagle.

1. Introduction

Year(s) of Inscription 1996, 2001

Agencies responsible for site management

- Ministry of Natural Resources
4/6, Bolsaya Gruzinskaya,
123812 Moscow, Russian Federation
E-mail: mzlv@mnr.gov.ru
Website: www.mnr.gov.ru
- Kronotsky State Biosphere Nature Reserve
- Southern Kamchatka State Nature Reserve
- Nature Park Bystrinsky
- Nature Park Kluchevskoy
- Nature Park Southern Kamchatka
- Nature Park Nalychevo.

2. Statement of Significance

Inscription Criteria N (i), (ii), (iii), (iv)

Justification provided by the State Party

Modern tectonic and volcanic activity:

The territories are part of the Pacific Volcanic Ring and make up the most highly active volcanic zone in the world. Of the 29 active volcanoes on Kamchatka, 19 are situated within the boundaries of the territories proposed for World Heritage

inclusion. They represent all volcano types and are characterised by an extremely diverse set of volcanic phenomena: geysers, mineral and hot springs, etc. No other area of the world contains such a density of active volcanoes.

Modern ecological and biological processes of evolutionary development of land, sea and coastal ecosystems:

A great number of endemic species and subspecies of plants and animals inhabit the Kamchatka Peninsula. In all, ten percent of the 1168 plants of Kamchatka are endemic. As a result of its island-like environment the processes of species diversity of many species and subspecies, which are found only here, continue.

The continuing tectonic and volcanic is constantly in the process of creating new areas for initial (pioneer) settlement by animals and plants and as a result, a wide range of different successive stages of the development of biological communities can be observed existing side by side and are able to develop without influence from the outside.

The environmental reciprocity of many species of plants and animals as well as of entire ecosystems is under the influence of tectonic and volcanic changes. The only freshwater salmon species of Asia, which can be encountered in the Kronotskoye Lake, may be the result of these processes. Other examples of the effects of these processes are the various organisms which live in the hot springs.

A great part of Kamchatka is occupied by wetlands, which due to the specific climatic conditions and volcanic ash, an extremely nutritious material, stand out markedly from other wetlands in the world. The development of the wetlands on the proposed territories continues to this day without outside influence.

The proposed territory also contains hundreds of lakes and whole river systems, as well unaffected by human activity. The largest salmon spawning-grounds are located here. The presence of unique, rare and superlative natural phenomena and outstanding natural beauty and significant natural habitats of threatened and rare species:

The landscape, formed by volcanic activity and volcanic phenomena, is famous for its many areas of superlative natural beauty. Examples of outstanding natural phenomena and landscapes of superlative natural beauty:

- The snow-covered mountain regions and volcanoes represents an unparalleled area of natural beauty. The Kronotsky Volcano, second-

highest among the volcanoes of Kamchatka, is considered one of the most beautiful and regular volcanoes in the world, located on the shore of the Kronotskoye Lake, the largest lake on Kamchatka [...].

- On a twenty hectare section of the Kronotsky Nature Preserve can be found a unique area covered in a stand of the endemic *Picea gracilis*.

- The Uzona Caldera, with an area 10 by 12 kilometers, is fantastically rich in hydrothermal activity, including geysers, bubbling mudholes, miniature mud volcanoes, hot mineral springs, and sulphur lakes, among others. To this can be added the special, enchanting autumns.

- In the Valley of the Geysers spout innumerable diverse types of geysers, large and small. The period of time between eruption varies from the continuously erupting geysers to 4 to 5 hour breaks, The geysers and numerous miniature volcanoes along with the mountain panorama form a completely unique landscape.

- The hot mineral springs of the Nalychevo Nature Park represents a totally unique set of six different types on a small territory (40 square kilometers). The large Nalychevo spring belongs to an extremely rare type made up of carbonic acid, arsenic and boric water and is surrounded by large beautiful accumulated formations.

- Mutnovsky belongs to the group of the most active volcanoes, having erupted ten times in the last century. It is surrounded by a large field of hydrothermal activity. Gases, rising from fumaroles located in the crater, are visible even from Petropavlovsk, eighty kilometers away, in good weather.

- Frequent settling of volcanic ash has formed a unique and highly diverse wetland area in the Southwestern Tundra Nature Reserve, containing innumerable lakes, ponds and pools. Great numbers of waterfowl nest, molt and in migration periods rest here.

- Winter flocks of eagles (three types with a total population of one thousands birds) on Kuril Lake belong to the largest flock in the world. To this can be added the largest spawning- grounds for the salmon *Oncorhynchus*. For that very reason, in this area gather hundreds of Kamchatka's bears. Large, light-colored tuff rocks lie along the shores of the lakes whose crystal waters reflect the image of the Ilinsky Volcano.

- Separated stands of the endemic *Betula ermani* surrounded by lands of thick grass define the view of the Kamchatka landscape.

- The extremely diverse landscapes of the coastal areas of the South Kamchatka State Nature Reserve with its steep shores, needle-shaped rock faces, islands, deltas and wide swampy estuaries, can be found numerous bird colonies, the nesting place for many threatened and rare eagles and other birds as well as the breeding grounds for various sea mammals (seals, sea lions, sea otters and others).

As provided in IUCN evaluation

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 serial nomination collectively bring together the majority of the major volcanic features of the Peninsula and the nomination clearly meets criterion i as an outstanding example of geological processes and land-forms.

The site is also biologically analogous to an island and its particular geographic location between a large continental land-mass and the Pacific Ocean have given it unique characteristics. Natural processes continue with on-going volcanic activity and colonisation. Criterion ii thus is also met. The Kamchatka Volcanoes also qualify under criterion iii as 'a landscape of exceptional natural beauty with its 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 Kamchatka Volcanoes nomination is of sufficient size and contains all of the prime features of the Peninsula except for one volcano (Klyuchevskaya) which is not yet under protective status and which should eventually be added to the site. Mining proposals in the Bystrinsky Nature Park are not compatible with maintenance of World Heritage natural values and fortunately are unlikely to proceed. Similarly, the proposal for a mine in the Asachinskoe area should be very carefully considered and preferably cancelled. The wedge between the two parts of the Southern Kamchatka Nature Reserve should be added to the site.

The fact that a management presence in the three State Nature Parks is just being established and that the Federal Nature Reserves do not receive sufficient resources, hopefully, are short term concerns and not serious impediments to integrity. World Heritage status, in fact, will stimulate action to strengthen local management activity.

To conclude, IUCN agrees with the sentiment expressed by the Russian author Andrei Nechayev in his book on Kamchatka. "The power of the wild nature of Kamchatka to preserve itself and resist onslaughts should no longer be put to the test. For its protection, it needs the support of that world public which understands that treating nature with care is a central concern of our time. No one would ever forgive us for the loss of the unique world of Kamchatka."

6. **RECOMMENDATIONS:** The Kamchatka Volcanoes should be inscribed on the World Heritage List under criteria i, ii and iii. The Committee should express concern to the Russian authorities over the proposals for mining in or near the property. It should also suggest additions to the property be considered and encourage the Kamchatka Oblast in their efforts to compile management plans and to operationalise management in the three recently created nature Parks.

Committee Decision

Bureau (June 1996): The Bureau took note of the information provided by IUCN that a field inspection of the site is scheduled for September 1996 and that a report will be provided to the twentieth extraordinary session of the Bureau in November 1996.

Bureau (December 1996): The Bureau recommended the Committee to inscribe the Volcanoes of Kamchatka as one of the most outstanding examples of the volcanic regions in the world on the basis of criteria (i), (ii) and (iii). The site contains a high density of active volcanoes, a variety of different types and a wide range of volcanic features. The Peninsula location between a large continental landmass and the Pacific Ocean also exhibits unique characteristics with major concentrations of wildlife. The Bureau also discussed the possibilities of mining near the site and the need to strengthen site management capacity.

Session (1996): The Committee inscribed the Volcanoes of Kamchatka as one of the most outstanding examples of the volcanic regions in the world on the basis of natural criteria (i), (ii) and (iii).

The site contains a high density of active volcanoes, a variety of different types and a wide range of volcanic features. The Peninsula location between a large continental landmass and the Pacific Ocean also exhibits unique characteristics with major concentrations of wildlife. The discussions held at the twentieth extraordinary session of the Bureau on the possibilities of mining near the site and the need to strengthen site management capacity were noted.

Bureau (June 2001): The Bureau recommended 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).

Criterion (iv) The site contains an especially diverse range of palearctic flora, including a number of nationally threatened species and at least 16 endemics, and 33 mammal species, including internationally significant populations of sea lions and sea otter and a thriving population of brown bear, as well as 145 bird species. The rivers inside and adjacent contain the world's greatest known diversity of salmonid fish.

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.

Session (December 2001):

The Committee approved the extension of the Volcanoes of Kamchatka by the inclusion of the Kluchevskoy Nature Park as the sixth component. In addition to the 1996 inscription under criteria (i), (ii), and (iii), the Committee decided to inscribe the site also under criterion (iv).

Criterion (iv) The site contains an especially diverse range of palearctic flora, including a number of nationally threatened species and at least 16 endemics, and 33 mammal species, including internationally significant populations of sea lions and sea otter and a thriving population of brown bear, as well as 145 bird species. The rivers inside and adjacent contain the world's greatest known diversity of salmonid fish.

This serial inscription includes six protected areas:

Date inscribed	Name of Park	Area
1996	Kronotsky State Biosphere Preserve	1,007 ha
1996	Bystrinsky Nature Park	1,500 ha

1996	Nalychevo Nature Park	265 ha
1996	Southwestern Tundra Nature Reserve	123 ha
1996	Southern Kamchatka Nature Park and the Southern Kamchatka State Nature Reserve	1,025 ha
2001	Kluchevskoy Nature Park	376 ha

- Statement of Significance adequately defines the outstanding universal value of the site
- No change required by State Party

Boundaries and Buffer Zone

- Status of boundaries of the site: adequate
- No buffer zone has been defined. State Party reported that the buffer zone is not needed for the protection of the property

Status of Authenticity/Integrity

- World Heritage site values have not been maintained

3. Protection

Legislative and Administrative Arrangements

- Federal Law "On the Specially Protected Natural Areas"
- Regulations on the Kronotsky State Biosphere Nature Reserve, on the Southern Kamchatka State Nature Reserve, on the Nature Parks Bystrinsky, Kluchevskoy, Southern Kamchatka and Nalychevo
- The protection arrangements are considered sufficiently effective

Actions proposed:

- Increase of the number of security staff of the Nature Parks

4. Management

Use of site/property

- Visitor attraction, national parks, protected natural areas

Management /Administrative Body

- No steering group has been set up
- Several Nature Reserves are responsible for the management of different components of the property
- Levels of public authority who are primarily involved with the management of the site: national, regional, local
- The current management system is sufficiently effective

Actions proposed:

- Reforming of the Nature Parks
- Training of the Natural Areas staff

5. Management Plan

- Management plan is under preparation
- Responsibility for over-seeing the implementation of the management plan and monitoring its effectiveness: not provided

6. Financial Resources

Financial situation

- State Budget: not provided
- Bi-lateral: not provided
- Funding is insufficient

7. Staffing Levels

- Number of staff: 90

Rate of access to adequate professional staff across the following disciplines:

- Average: conservation, management, interpretation, education, visitor management
- Bad: promotion

8. Sources of Expertise and Training in Conservation and Management Techniques

- Scientific institutions: not provided
- Museum conservation facilities: not provided
- Training on site management available for stakeholders

9. Visitor Management

- Visitor statistics: not provided
- Visitor facilities: tourist camps, visitor centres, sightseeing trails, natural museum, guides, accommodation facilities
- Visitor needs: not provided

10. Scientific Studies

- Studies dedicated to the determination of the recreational capacities
- Studies used for the regulation of visitor attendance

11. Education, Information and Awareness Building

- Inadequate number of signs referring to World Heritage site
- World Heritage Convention Emblem used on some publications
- Adequate awareness of World Heritage among: visitors, local communities, local authorities
- Need for organisation of awareness-raising media campaigns
- No web site available
- Legal base has been created for the promotion of community-participation in the management of the site

conservation international project for four Protected Areas

- Weaknesses of management: weak management system, lack of funding, inadequate staffing, inadequate legal framework

Future actions:

- Training of the Natural Parks staff
- Reinforcement of the security services
- Creation of the mechanism for the integrated management of the overall property

12. Factors affecting the Property (State of Conservation)

Reactive monitoring reports

- World Heritage Bureau sessions: 21st (1997); 22nd (1998); 24th (2000); 25th (2001); 26th (2002)
- World Heritage Committee sessions: 21st (1997); 22nd (1998); 24th (2000); 25th (2001); 27th (2003); 28th (2004); 29th (2005); 30th (2006)

Conservation interventions

- Conservation, restoration works: not provided
- Present state of conservation: patchy

Threats and Risks to site

- Development pressure, environmental pressure, tourism pressure, forestry regime, mining
- Emergency measures taken: programme aimed at reduction of uncontrolled tourism has been prepared; security measures have been reinforced

13. Monitoring

- Formal monitoring programme has been established
- Measures taken/planned: not provided

14. Conclusions and Recommended Actions

- Main benefits of WH status: conservation, economic, fundraising, international cooperation
- Strengths of management: definition of the structural composition of the Natural Parks staff, implementation of the biodiversity