

World Heritage Sites

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Areas and
World
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VIRGIN KOMI FORESTS RUSSIAN FEDERATION

These forests, mountains, wetlands and river valleys contain the continent's largest unfragmented old-growth forests, with a wide variety of ecosystems from boreal forests in the south to sub-arctic tundra in the north. They are a haven for rare species and contain one of Europe's most valuable stores of genetic and biological diversity.

Threat to the site: A large open-cast gold mine is to be developed within the World Heritage site.

COUNTRY

Russian Federation

NAME

Virgin Komi Forests

NATURAL WORLD HERITAGE SERIAL SITE

1995: Inscribed on the World Heritage List under Natural Criteria vii and ix.

STATEMENT OF OUTSTANDING UNIVERSAL VALUE [pending]

INTERNATIONAL DESIGNATION

1984: Pechoro-Ilychsky Reserve designated a Biosphere Reserve under the UNESCO Man & Biosphere Programme (1,253,753 ha).

IUCN MANAGEMENT CATEGORY

Pechoro-Ilychsky Reserve:	Ia Strict Nature Reserve
Yugyd Va National Park:	II National Park
Pechoro-Ilychskogo Buffer zone and Forestry Farms:	Unassigned

BIOGEOGRAPHICAL PROVINCE

West Eurasian Taiga (2.3.3)

GEOGRAPHICAL LOCATION

On the western slopes of the Northern Ural Mountains in northwest Republic of Komi, 1,700km northeast of Moscow and 60km east of Pechora city, at 61°25' to 65°45'N and 57°27' to 61°20'E.

DATES AND HISTORY OF ESTABLISHMENT

- 1930: Pechoro-Ilychsky *zapovednik* (National Park) established by decree of the Soviet of People's Commissars (1,735,000ha);
- 1984: Designated a UNESCO MAB Biosphere; by Reserve Russian Federation; Sablya and Vangeriusky *zazazniks* (Nature Reserve) established by decree of the Komi Council of Ministers;
- 1989: The *zazazniks* of Bolshesyninsky, Kharota-Yagineisky, Kozhimskiy, Maldynsky, Nyart-Siuiu, Podchermsky, Shchugorsky, Syninsky and Vodae-Shor all established by decree of the same Council;

- 1994: Yugyd Va National Park established by decree 377 under the Federal Forestry Service in the Komi Republic;
- 2010: Land excised from Yugyd Va National Park for a large open-cast gold mine to be developed within the property.

LAND TENURE

The Biosphere Reserve is under the authority of the federal Ministry of Environment & Natural Resources. The rest of the site is owned by the Republic of Komi and is managed by its Ministry of Nature Use & Nature Resources. The state forest farms are owned by the federal Forestry Service and are of potential commercial use.

AREA

3,273,023ha: (UNESCO gives 3,280,000 ha)

Pechoro-Ilychsky Reserve and Biosphere Reserve:	721,322 ha
Yugyd Va National Park:	1,891,791 ha
Pechoro-Ilychskogo Buffer zone:	660,000 ha

Seventeen *zazaniks* overlap the area: Bolshesyninsky, Kharota-Yagineisky, Kozhimskiy, Maldynsky, Nyart-Siuiu, Podchermsky, Sablya, Schugorsky, Syninsky, Vangeriusky and Vodae-Shor. The area also includes 33 nature monuments and three state forestry farms.

ALTITUDE

98m to 1,895m (Gory Narodnaya)

PHYSICAL FEATURES

This is a vast region of conifers, aspens, birches, peat bogs, rivers and lakes which runs down 320 kilometres of the western slopes of the Polar and Northern Ural mountains. The eastern half lies in the mountains, the western half in foothills and marshy lowlands. The Yugyd Va National Park forms the northern two-thirds of the designated site, the Pechoro-Ilychsky Reserve the southern third. The mountains are characterised by flattened summits and mountain-glacier formations, the southernmost of which occurs in the Telposky massif in the south of the Park. The dissolution of limestone bedrock in the foothills has resulted in a karst landscape with subterranean caves, craters and seasonally flooded river beds (Krever *et al.*, 1994). Weathering in the Ilych, Podcherema, Schugora and Bolshaya Syn river basins has produced columns and residual mountain structures now protected as natural monuments. Many of these features are remnant reef structures, the oldest dating back to the Ordovician Period. The rolling terrain to the west is made up of marshes, lowlands and low hills. The mountains and lowlands are linked in the basins of the Uniya and upper Ilych rivers. The south central part of the Pechoro-Ilychsky Reserve lies on the Pripechova lowlands, a plain of sand and morainic loam at the foot of the Northern Urals and which is crossed by the Pechora River and its tributary the Ilych.

CLIMATE

The Northern Urals at this point has a continental though variable climate of cold winters and warm summers. The mean January temperature is -17°C; July temperatures range between 10°C-12°C in the mountains and 14.5°C-20.5°C in the foothills. The estimated mean annual rainfall is 525mm in the foothills, 7-800mm in the mountains. Snow cover to a depth of 100cm is present for a period of seven months (Bannikov, 1974). The western slopes of the mountains are more humid than the eastern.

VEGETATION

The mountains, wetlands and river valleys of the site encompass the continent's largest unfragmented and undegraded old-growth forests, which cover 51% of the designated area (1,672,800ha) (WHC, 2006). They comprise a wide variety of ecosystems, from virgin boreal forests in the south to sub-alpine scrub woodlands, meadows and sub-arctic tundra in the north. They are on the border between European species which grow on the more humid western slopes, and Siberian species on the drier east side. Low altitude wetter land such as peat bogs support *Sphagnum* spp. moss with cranberry *Vaccinium oxycoccus*, bilberry *V. myrtillus* and cloudberry *V. vitis-idaea*. The area to the west is marshy

with flood plain islands where island terraces are dominated by willow *Salix* spp., rowan *Sorbus aucuparia*, blackcurrant *Ribes nigrum* and bird cherry *Prunus padus*.

Boreal forest extends from the marshes into the Ural foothills and are predominantly scots pine *Pinus sylvestris*, Norway spruce *Picea abies* and Siberian larch *Larix sibirica*, the latter growing at higher elevations, with a ground cover of cowberry, bilberry and reindeer mosses *Cladonia* spp. Extensive Norway spruce, Siberian fir *Abies sibirica* and scots pine forests blanket the valleys. These forests are the only place in Europe where the rare Siberian pine *Pinus sibirica* grows. Boreal forest is succeeded by subalpine scrub woodlands of downy birch *Betula pubescens*, willow and bird cherry, meadows of *Anemone* sp., *Paeonia* sp., *Myosotis* spp. and the umbellifer *Pleurospermum uralensis*. Also found are Arctic sorrel *Oxyria digyna*, *Woodsia* spp. ferns, Arctic cowslip *Caltha palustris*, sulphur buttercup *Ranunculus sulphureus*, fragile fern *Cystopteris fragilis*, northern ground cone *Boschniakia rossica*, *Erysimum pallasii*, *Astragalus* sp. and *Nemachius* sp. (Greenpeace, 1995). On the tundra, ottertail saxifrage *Saxifraga tenuis*, *Dryas* sp. and *Thymus* sp. with *Carex* sp., *Eriophorum* sp. and *Vaccinium* spp. all grow (Borodin *et al.*, 1983).

FAUNA

The biosphere reserve comprises important winter feeding sites of elk *Alces alces* and reindeer *Rangifer tarandus* as well as spawning, breeding and fattening grounds of Atlantic salmon *Salmo salar*. The fauna includes both European and Asiatic species and some 43 mammals have been recorded including mountain hare *Lepus timidus*, European red squirrel *Sciurus vulgaris*, flying squirrel *Pteromys volans*, introduced muskrats *Andatra zibethicus*, reintroduced Eurasian beaver *Castor fiber*, grey wolf *Canis lupus*, Arctic fox *Alopex lagopus*, red fox *Vulpes vulpes*, brown bear *Ursus arctos*, introduced racoon *Nyctereutes procyonides*, ermine *Mustela erminea*, European least weasel *Mustela nivalis*, European mink *Mustela lutreola* (EN), polecat *Mustela putorius*, and the introduced American mink *Neovison vison*; also sable *Martes zibellina*, pine marten *Martes martes*, badger *Meles meles*, European otter *Lutra lutra*, wolverine *Gulo gulo*, lynx *Lynx lynx*, wild boar *Sus scrofa*, elk and reindeer.

The 204 bird species include Steller's sea-eagle *Haliaeetus pelagicus* (VU), gyrfalcon *Falco rusticolus*, peregrine falcon *F. peregrinus*, capercaillie *Tetrao urogallus*, black grouse *Lyrurus tetrix*, willow grouse *Lagopus lagopus*, hazel grouse *Tetrastes bonasia*, black woodpecker *Dryocopus martius*, Eurasian three-toed woodpecker *Picoides tridactylus*, spotted nutcracker *Nucifraga caryocatactes* and red-flanked bluetail *Tarsiger cyanurus*. A number of waterfowl species breed in the area including goldeneye *Bucephala clangula*, goosander *Mergus merganser*, wigeon *Anas penelope*, teal *Anas crecca* and bean goose *Anser fabalis* (Borodin *et al.*, 1983). The 16 fish species include the Atlantic salmon which spawns in nearly all the rivers of the site, Siberian grayling *Thymallus arcticus* and whitefish *Coregonus* spp. (Anon, 1994).

CONSERVATION VALUE

The site covers a vast expanse of virgin boreal forest bordering arctic tundra which provides habitat for threatened flora and fauna, and also contains numerous natural monuments and mountain-glacier formations which illustrate on-going geological processes. It lies within a WWF Global 200 Eco-region and overlaps a UNESCO Biosphere Reserve.

CULTURAL HERITAGE

Before the Russians settled the area during the 17th century, the inhabitants included the Pechera and Zyriane groups of the Komi people, the Ostiaki group of the Khanty people and the Voguly group of the Mansi people, of which the latter were driven east out of the Urals. The 10th and 11th century chronicles named the Chiud, Merya, Ves and Pechera people as the main inhabitants. The hills of the region have traces of Paleolithic camp sites and fossil remains; an ancient sanctuary of the Mansi people has also been found (Greenpeace, 1994). An abandoned traders trail crossed the site but it has been largely unaffected by human activity.

LOCAL HUMAN POPULATION

In 1998 some 130 people lived permanently in the area. These were either rangers or commercial hunters, fishers and loggers. The settlement of Yaksha (1,500 inhabitants in 1998) is located close the core area. A logging company and the forestry service are the main employers. Reindeer breeding, hunting, fishing and the gathering of berries, mushrooms and pine seed are traditionally carried out in the Biosphere Reserve. Present settlements in the Uniya basin include those of the Komi people and

the Old Believers, a religious sect who were proscribed by Russian authorities in the 17th century. Kozhim a settlement in the Intinsky district, has a population of 733 and the Podcherie settlement in the Vuktylsky district has a population of 2,329. There are four settlements within the Troitsko-Pechorsky district: Yaksha, Ust-Uniya (156), Svetly Rodnik (11) and Ust-Berdysh (13) (Greenpeace, 1994).

VISITORS AND VISITOR FACILITIES

About 2,000 people visit the large waterfalls, islands, rapids, and 'gates', the name given to the river-breaches in the rocks in Yugyd Va National Park. Cabins are available at Ozernaya (J. Thorsell, pers. comm., 1995). Tourism otherwise plays a minor role in local economic activities with some 700 national and 20 to 40 foreign visitors a year (1998).

SCIENTIFIC RESEARCH AND FACILITIES

This vast region remained unstudied until the late 1800's because of its inaccessibility. Field studies were carried out along the Ilych and Paliu rivers in 1907, and in 1915, a forester working in the region, published an article on the necessity of creating a nature reserve. In 1928, a commission was set up to survey the area in preparation for a reserve, since when the area has been monitored and studied continually, providing valuable evidence of the natural processes affecting biodiversity in the taiga. The area also provides a natural benchmark for monitoring climate change and the impacts of industrial logging on the boreal forest. An experimental farm was set up in 1949 to study the breeding of domesticated elk. A number of research stations and permanent plots have been set up in the Biosphere Reserve where long-term research is conducted in association with the Komi Branch of the USSR Academy of Sciences (Greenpeace, 1994).

MANAGEMENT

In 1994 conservation had been neglected nationally in the economic crisis of the time and these forests came under threat from foreign logging companies: the local authorities proposed to open the southern buffer zone of the Reserve to logging and one company began to clear cut along the Pechora and Ilych Rivers. At the same time, one of the world's largest oil spills destroyed the Pechora River and villages downstream. These events spurred Greenpeace Russia into preparing a nomination for World Natural Heritage status and pressing, successfully, for protection of the area. This had the result of warning off the logging companies who were seeking concessions, but pressures to amend the boundaries of the site remain. The surrounding area is subject to oil and gas exploration and the buffer zone was not considered to be well protected by Greenpeace. The Biosphere Reserve is managed by the federal Ministry of Environment & Natural Resources. The state forest farms are managed by the federal Forestry Service and are potentially of commercial use. The National Park and buffer site are owned by the Republic of Komi and managed by its Ministry of Nature Use & Nature Resources. The headquarters of Yugyd Va National Park and the Pechoro-Ilychsky Reserve are in Pechora and Yaksha, respectively.

The Reserve has a management plan and a very strict management regime with access restricted only to research activities. The National Park also has many areas of restricted access but is open to tourism and some extractive uses by local people (Greenpeace, 1994). A three year project in Pechoro-Ilychsky Reserve during 1995-8 provided necessary equipment, the administrative base and training to support effective management and protection (Krever *et al.*, 1994). In 2005 a major UNDP project, the Conservation of Virgin Forest Biodiversity in the Pechora River Headwaters Region, was initiated with the cooperation of the Komi Ministry of Natural Resources, the federal Ministry of Natural Resources, the Park and Reserve authorities, the Institute of Biology of the Komi Scientific Centre of the Ural Division of the Russian Academy of Science, Komi Committee for Natural Resources, the Scientific and Technical Centre of the RK Automated Geographic Information Cadastral System, IUCN, WWF, local NGOs and community groups, and local private sector companies.

MANAGEMENT CONSTRAINTS

After World Heritage designation, proposals for industrial logging were halted though it remained a threat to the Uniya basin in the south of the site. The Ministry of Nature Resources and Environment of the Komi Republic drafted a decree amending the Yugyd Va National Park boundaries to excise the Kozhim basin in the far north of the property which comprises about one third of the Park, although the decree was suspended (IUCN/WCMC, 1994). The Supreme Court of the Komi Republic ruled alteration of the National Park boundaries contrary to the law and illegal gold mining in the World Heritage site stopped in 1998. However, the local authorities supported gold mining and the attempts to change the

park's boundaries to allow such developments continued despite Environmental Protection Committee resolutions to stop it. A report from the State Party in 2010 stated that mining and other projects said to be exist long before the establishment of the park were not within it (or could be excised by alteration of the park's boundaries) and were therefore legal. These comprised three sand fields, a gold mine, and two pipelines. In 2009 a 20-year license to exploit 20km² for the Chudnoye gold mine in Yugyd Va National Park by open-cast mining was granted. Changes to the boundaries of the park and thus the World Heritage site were adopted in 2010 legalising this development, and licences and major investment were immediately sought. This was done despite objections from the World Heritage Committee and the policy of the International Council on Mining and Metals not to countenance mining in World Heritage properties (UNESCO, 2010).

Populations of large mammals, in particular bear, elk and deer have declined as a result of poaching. Residents violate park rules due to the lack of adequate protective enforcement and the low level of local ecological awareness. Only the polar region of the Urals has escaped extensive habitat loss and degradation from centuries of resource exploitation (Krever *et al.*, 1994).

STAFF

In 1995, the Pechoro-Ilychsky Reserve had 60 staff, including 10 researchers and 30 workers. The Yugyd Va National Park employs 100 staff, most of whom are needed for fire control (J. Thorsell, pers. comm., 1995).

BUDGET

The Pechoro-Ilychsky Reserve 1983 budget was 334,700 roubles (Borodin *et al.*, 1983) and the 1994 three year assistance project cost US\$223,475 (Krever *et al.*, 1994). In 1995 the site received grants of Sfr5 million (US\$3 million) from the Government of Switzerland for a boreal forest conservation project initiated by the WWF to strengthen management of the area. In 2005 a UNDP project for the Conservation of Virgin Forest Biodiversity in the Pechora River Headwaters Region, was granted US\$4 million; the first tranche of US\$325,000 being released in early 2006.

LOCAL ADDRESSES

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