

World Heritage Sites

Protected Areas and World Heritage



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.

COUNTRY Russian Federation

NAME Virgin Komi Forests

NATURAL WORLD HERITAGE SITE

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

INTERNATIONAL DESIGNATION

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

IUCN MANAGEMENT CATEGORY

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|--|--------------------------|
| 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

Situated on the western slopes of the Northern Ural Mountains in northwest Republic of Komi, 1,700 km northeast of Moscow and 60 km east of the town of Pechora, 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 (1,735,000 ha);

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: Bolshesyninsky, Kharota-Yagineisky, Kozhimskiy, Maldynsky, Nyart-Siuiu, Podchermsky, Shchugorsky, Syninsky and Vodae-Shor *zazaniks* all established by decree of the same Council;

1994: Yugyd Va established by decree 377 under the Federal Forestry Service in the Komi Republic.

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:

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|---|-------------|
| Pechoro-Ilychsky Reserve and Biosphere Reserve: | 721,322 ha |
| Yugyd Va National Park: | 1,891,791ha |
| 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°-12°C in the mountains and 14.5°-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 (1,672,800 ha) (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 weasel *Mustela nivalis*, European mink *Mustela lutreola* (EN) and the introduced American mink *M. vison*, polecat *M. putorius*, Russian sable *M. zibellina*, pine marten *Martes martes*, badger *Meles meles*, European otter *Lutra lutra*, wolverine *Gulo gulo* (VU), lynx *Lynx lynx*, wild boar, *Sus scrofa*, elk and reindeer.

The 204 bird species include white-shouldered eagle *Haliaeetus pelagicus* (VU), gerfalcon *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*, three-toed woodpecker *Picoides tridactylus*, 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, grayling *Thymallus arcticus* and whitefish *Coregonus* spp. (Anon, 1994).

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).

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.

CONSERVATION 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. 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 which comprises about one third of the Park, although the decree was suspended (IUCN/WCMC, 1994). The local authorities recommended gold mining in the Park and in 1998 this was ongoing despite Environmental Protection Committee resolutions to stop it. 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, but attempts to change the Park boundaries to allow such developments continued. The buffer zone is not considered to be well protected (Greenpeace, n.d.).

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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