World Heritage Sites

Protected Areas and World Heritage

LAPONIAN AREA
SWEDEN

Northern Sweden above the Arctic Circle is the home of the Saami, or Lapp people and one of the world's last, largest and best preserved areas to retain the ancient lifestyle of summer livestock transhumance into the mountains. These sites also preserve a wide range of glacial, hydrological, biological and ecological processes in a landscape of forest and mountains of great beauty.

COUNTRY
Sweden

NAME
Laponian Area

MIXED NATURAL & CULTURAL WORLD HERITAGE SERIAL SITE
1996: Inscribed on the World Heritage List under Cultural Criteria iii & v and Natural Criteria vii, viii, ix.

STATEMENT OF OUTSTANDING UNIVERSAL VALUE
The UNESCO World Heritage Committee issued the following statement at the time of inscription:

Justification for Inscription
The Committee decided to inscribe the nominated property on the basis of natural criteria (vii), (viii) and (ix) and cultural criteria (iii) and (v). The Committee considered that the site is of outstanding universal value as it contains examples of ongoing geological, biological and ecological processes, a great variety of natural phenomena of exceptional beauty and significant biological diversity including a population of brown bear and alpine flora. It was noted that the site meets all conditions of integrity. The site has been occupied continuously by the Saami people since prehistoric times, is one of the last and unquestionably largest and best preserved examples of an area of transhumance, involving summer grazing by large reindeer herds, a practice that was widespread at one time and which dates back to an early stage in human economic and social development.

INTERNATIONAL DESIGNATIONS
1974 : Sjaunja Mire and Laidaure (the Rapa Valley delta) designated Wetlands of International Importance under the Ramsar Convention (188,600 ha + 4,150 ha).

IUCN MANAGEMENT CATEGORY

Sjaunja Nature Reserve	Ia Strict Nature Reserve/Scientific Reserve
Padjelanta National Park	II National Park
Sarek National Park	II National Park
Stora-Sjöfallet National Park	II National Park
Muddus National Park	II National Park
Stubba Nature Reserve	IV Managed Nature Reserve
Sulitelma Glacier area	in Sareks National Park
Tjuolta Valley area	in Padjelanta National Park
Rapa Valley Delta area	in Sareks National Park

BIOGEOGRAPHICAL PROVINCE
Subarctic Birchwoods (2.6.5) / West Eurasian Taiga (2.3.3)

GEOGRAPHICAL LOCATION

Situated in the circumpolar zone of northern Sweden, 40 km southwest of Kiruna, the protected areas reach west from the centre of Norrbotten county into the mountains to the Norwegian border, between 66°50'N to 67°48'N and 16°05'E to 20°25'E.

DATES AND HISTORY OF ESTABLISHMENT

1909: Sarek and Stora Sjöfallet National Parks established under the provisions of the 1909 Nature Protection Act;

1941: Muddus National Park established and management plan completed;

1943: A bird sanctuary in Sjaunja declared under Nature Conservancy Act No.14;

1962: Padjelanta National Park established and management plan completed;

1967: Sarek, Padjelanta and Muddus National Parks awarded the Council of Europe European Diploma, Category A, subsequently renewed every five years;

1974: Two Ramsar wetlands, Sjaunja and Laitaure, designated;

1987: The Sulitema Glacier area, the Rapa Valley Delta (Laitaure) and the Tjuolta Valley protected under the 1987 Natural Resources Act;

1988: Sjaunja and Stubba Nature Reserves established under the provisions of the 1964 Nature Conservation Act.

LAND TENURE

99% State-owned: 95% is protected as national park or nature reserve, 4% is protected under the Nature Reserve Act and 1% is owned by Lapp collectives. The present field management is by the Mountain Branch of the Norrbotten County Administration.

AREA

940,000 ha. The sub-areas quoted below are as given in the World Database on Protected Areas.

Sjaunja Nature Reserve	285,000 ha
Padjelanta National Park	198,400 ha
Sareks National Park	197,000 ha
Stora-Sjöfallets National Park	127,800 ha
Muddus National Park	49,340 ha
Stubba Nature Reserve	24,090 ha
Sulitelma Glacier area (within Sareks National Park)	23,000 ha
Tjuolta Valley area (within Padjelanta National Park)	20,000 ha
Rapa Valley Delta area (within Sareks National Park)	2,000 ha

ALTITUDE

165m - 2,089m (Sarektjåkka in Sarek National Park).

PHYSICAL FEATURES

The area contains two landscapes: the eastern third is a lowland plain of Archaean origin 4,600-2,500 million years old; the western two-thirds is part of the more recent Scandinavian orogeny, a mountain range formed in the early Palaeozoic era between 543 and 360 million years ago. The high alpine landscape of Sarek and Stora Sjöfallet National Parks has steep mountains, deep valleys and powerful rivers, contains more than 200 peaks over 1,800m and about a 100 glaciers which have had a major part in shaping the landscape. Glacial features include deep meltwater canyons *(kursu)* with nearly vertical walls over 100m high, glacial cirques and channels, U-shaped valleys, outwash plains *(sandurs),* tundra polygons, boulder hollows, erratics, moraine ridges, drumlins, talus mounds and palsa bogs (frozen peat mounds). The area is known as a textbook example of glacier-related geomorphology. Padjelanta is mostly a high plateau surrounding the very large lakes Vastenjaure and Virihaure, the latter known as Sweden's most beautiful lake. In the east the Sjaunja and Muddus lowlands are a wide wilderness plain, 60% wetland studded with low isolated flat-topped hills (monadnocks) and covered by taiga, wetlands and heath. These protected areas contain entire river systems, marshes and innumerable lakes. They include the Rapa River Delta on Lake Laitaure, which has lagoons and levees, and the 188,600 ha Sjaunja mire (peat-based wetland), which is the largest and in summer the most

impenetrable in Western Europe. The nominated area is split into two by a narrow strip dating from a 1919 decision to excise a river and lake system from the Stora Sjöfallet National Park for hydro-electric development, creating the Stora Lule reservoir.

CLIMATE

This is a sub-arctic climate, maritime in the west, with high precipitation in the mountains exposed to western winds. The high-snowfall winters are severe with temperatures dropping to –40°C at height, contributing to the formation of glaciers. The weather can be unstable, dominated by wind, rain and frost with occasional violent storms. In the east the climate is more continental. There is less precipitation but snow may lie on the ground for 3 to 4 months. Temperatures there during the short summers average 15°C but can be very warm in sheltered valleys. It is a land of continuous summer sun and winter darkness.

VEGETATION

The site is described as the largest block of unspoiled wild landscape in the north of Sweden. It contains a wide range of habitats from alpine to forest, valleys, mountain slopes, and a 100,000 hectares of open swamps and mires, colonised since the last glacial retreat 9,000 years ago. The dominant vegetation is open woodland of white birch *Betula pubescens* with a ground cover mostly of mountain crowberry *Empetrum hermaphroditum* and bilberry *Vaccinium myrtillus* and meadows with globeflower *Trollius europaeus, Aconitum septentrionale* and blue sowthistle *Lactuca alpina.* The eastern lowland is taiga interspersed with large open heaths. Forests of Norway spruce *Picea abies* and Scots pine *Pinus sylvestris* in drier areas form the largest single block of virgin forest in Sweden (44,000 ha). The oldest trees of the pine forests of Muddus are about 700 years old. Botanically the west, containing a rich alpine flora, is one of the most interesting mountain regions in the country The Padjelanta alpine meadows and particularly Jeknaffo mountain support scarce species such as Arctic cinquefoil *Potentilla hypartica* and creeping sandwort *Arenaria humifusa*.

FAUNA

The sites have a greater number of vertebrate species than any other mountain region in Sweden. The native reindeer *Rangifer tarandus* are all semi-domesticated, but there are 25 other species of mammal, some of which are persecuted to safeguard the herds. These include brown bear *Ursus arctos* (100 in 1996) wolverine *Gulo gulo*, European otter *Lutra lutra*, Arctic fox *Alopes lagopus,* Eurasian lynx *Lynx lynx*, and a large population of moose *Alces alces* in the Rapa valley. Wolves have been extirpated. Moose (for the Saami only), pine marten *Martes martes*, red fox *Vulpes vulpes*, arctic hare *Lepus arcticus* willow ptarmigan, *Lagopus lagopus,* rock ptarmigan *L.muta* and capercaillie *Tetrao urigallus* are permitted game.

Resident large birds include white-tailed eagle *Haliaeetus albicilla* (50-100 pairs in 1996), golden eagle *Aquila chrysaetos* (10 pairs), gyrfalcon *Falco rusticulus* (3-4 pairs), peregrine falcon *F. peregrinus* and merlin *F. columbarius*. In the Sjaunja mires and the bog surrounding L Muddusjaure, more than 150 species have been seen, at least 100 of which have been confirmed as breeding, some 50 being dependent on wetland habitat. Among them are whooper swan *Cygnus Cygnus* (50-60 pairs), lesser whitefronted goose *Anser erythropus* (VU), Eurasian wigeon *Anas penelope,* northern pintail *A. acuta,* common teal *A. crecca,* tufted duck *Aythya fuligula,* greater scaup *A. marila,* goldeneye *Bucephala clangula,* smew *Mergellus albellus,* wood sandpiper *Tringa glareola,* spotted redshank *T.erythropus*, broad-billed sandpiper *Limicola falcinellus,* red-necked phalarope *Phalaropus lobatus,* great snipe *Gallinago media* and jack snipe *Lymnocryptes minimus.* The Rapa delta and Lake Laiture are also important breeding grounds for ducks and waders. Other birds include northern hawk owl *Surnia ulula,* great grey owl *Strix nebulosa*, short-eared owl *Asio flammeus*, pine grosbeak *Pinicola enucleator*, red-throated pipit *Anthus cervin*us, Arctic warbler *Phylloscopus borealis*, rustic bunting *Emberiza rustica* and little bunting *E. pusilla.*

CONSERVATION VALUE

The site contains areas of exceptional natural beauty and extensive and well preserved uninhabited taiga and mountains. It is also one of the last, largest and best preserved examples of a nomadic herding culture, which dates back to an early stage in human economic and social development. The Park lies within a Conservation International-designated Conservation Hotspot, a WWF Global 200 Freshwater Eco-region and contains two Ramsar wetlands.

CULTURAL HERITAGE

This is the homeland of the Saami who arrived 4,000 to 5,000 years ago in the area which stretches from northern Norway across Finland and Sweden to the Kola Peninsula in Russia. The earliest written record of the Saami dates back to Tacitus. Today more than 17,000 live in Sweden, mostly no longer nomadic. But for thousands of years, they have lived mainly by hunting wild reindeer for fur and food and the landscape has been shaped by their culture and herding of reindeer. Herders followed the annual grazing cycles between summer in the mountains and winter in the eastern forests and in the 16th century if not before, the reindeer became semi-domesticated. Communities were organised into *siidas*, extended family groups which were both territorial and socio-cultural units and some of the old Lapp settlements are still used in summer. It is one of the last, largest and best preserved examples of a transhumant culture, a once widespread practice which dates back to an early stage in human economic and social development.

The area was intermittently colonised and evangelised for many centuries before settlers from outside began arriving in the 17th and 18th centuries when Christian missionizing began in earnest, largely extinguishing the original shamanic religion. But at Staluluokta in Padjelanta National Park is a sacred place where reindeer were sacrificed, and a large cave in the Laitaure Delta, a symmetrical peak, Slugga, a promontory, Passåive, and the Akka massif are all still sites of cultural or religious significance. The Finno-Ugric languages are an important part of the culture. There are three distinct languages, East Central and South Saami but their use is declining. Several traditional Saami song forms exist, accompanied by bullroarers and flute, and are being revived (Swedish Institute, 1990). The language, traditional clothing, handicraft, and music, are distinctively different from those of other Scandinavian ethnic groups. However, it is their strong reliance on reindeer husbandry and, in some cases, nomadic lifestyle, which remain central to their identity in the outside world and it is these aspects that are incorporated into Swedish law. (Swedish Environmental Protection Agency, 1995). A Saami parliament, the *Saamiting* of representatives from each of the Nordic countries was created in 1993 to provide stronger representation of Saami interests, but it is chiefly an administrative body. Existing rights focus on regulating reindeer husbandry rather than maintaining the cultural and community identity of the Saami people (Swedish Institute, 1990).

LOCAL HUMAN POPULATION.

Today only 200–250 Saami live within the nominated area with herds of 30–35,000 reindeer. Some families still summer in cabins in the mountains but most live in villages, and work out of them. The herding is organised into seven reindeer husbandry districts, or villages, six located in the mountains - Mellanbyn, Sirkas, Sörkaitum, Jåkkåkaska, Tuorpon and Luokta-Mavas, and one, Gällivare, in the forest. The herders are nomadic so the property has no permanent inhabitants. The taiga is also uninhabited, although reindeer owners live in the villages around it. Fishing is important during summer months and there is commercial fishing in the large lakes in Padjelanta. Fresh fish are transported by air to be sold in the east.

The Saami are legally permitted to herd reindeer and to hunt and fish over 16,000,000 ha of private and state land in the northern mountains. However, since the mid-20th century, reindeer husbandry has been transformed from small-scale systems to larger and less closely-supervised herds. The use of reindeer as draught animals and providers of milk has declined. Herdsmen now travel by motorised transport. Modern forestry, agriculture and industries have also eaten into traditional winter grazing lands (Swedish Environmental Protection Agency, 1995). The area is in the municipalities of Gällivare, Jokkmokk and Arjeplog. The nearest towns are Malmberget-Gällivare and Kiruna,

VISITORS AND VISITOR FACILITIES

The first tourists came to the area at the end of the 19th century. The Stora Sjöfallet area which is easier to reach and has more tourist facilities, receives about 70,000 visitors a year. Otherwise visitor numbers remain very low: about 2,000 a year each in Sarek and Muddus, 4,000 in Padjelanta and a few hundred in Sjaunja. The facilities and services for visitors are very limited as the aim is to preserve the wilderness character of the area. They consist of some tracks, a tower hide, four overnight cabins in Muddus and seven cabins along a 90-km trail through Stora-Sjöfallet, Sarek and Padjelanta National Parks. One public cabin is provided at Tuvva. Activities include hiking, canoeing, and fishing. Approximately 1,500 people on snowmobiles use the area in February/March each year primarily for ice fishing. Some recreational hunting is licensed in the Nature Reserves. There is limited use by local fishermen in summer (J. Thorsell, pers. comm., 1990). There is a museum of Saami culture at Jokkmokk. A public road which bisects the World Heritage site runs via Sjaunja Reserve through Stora-Sjöfallet Park, which has hotels at Saltoluokta, Ritjemjåmkk and Vietas. Mountain stations and youth hostels are also

available. Kiruna is well connected by air, railway and road. Only the one road exists in the nominated area but there are air links to Gällivare, and to Staloluokta in the centre of Padjelanta National Park.

SCIENTIFIC RESEARCH AND FACILITIES

There appear to be no scientific facilities. However, following the example of Linnaeus' 1732 expedition to Lapland, a great amount of scientific research has been done during the last 100 years on the geology, hydrology, botany and zoology of the area. Present research is centred on occasional ornithological studies, especially counts of white-tailed eagle. Lynx, wolverine and brown bear are monitored using radio collars. Also investigated are the effects of acid rain on forests and of trampling and overgrazing by reindeer on the vegetation and key fauna. Research initiatives are often undertaken in partnership with indigenous peoples. In 1999, a workshop was arranged on the human role in reindeer/caribou systems, where a large number of reindeer herding representatives met with natural and social scientists to discuss research needs, Arctic policy and scientific methodology (Lusty, 2000).

MANAGEMENT

The County Administration of Norrbotten provides general administration and supervision, and implements the management plans. Field management is handled by its Mountain Branch at Jokkmokk, the county capital. The national body responsible for national parks is the Swedish Environmental Protection Agency, which funds, supervises and compiles management plans and regulations for each park with the aim of conserving representative areas of untouched landscape together with access for outdoor recreation. Nature reserves are a more flexible form of protection which can vary in character, size and purpose, and which can be on either private or public land. Management plans or measures for all the areas have been approved by the Swedish Environmental Protection Agency. However, there is no agreement yet between the Saamis and government on the overall management of the sites. The nominated area is primarily preserved and managed as a wilderness, so very little is done to make access easy, Sarek in particular being extremely inaccessible.

The Saami people's general rights to land and water for reindeer husbandry, and for hunting and fishing in appropriate seasons within reindeer husbandry areas, are regulated by law. The first law dates from 1886 and the present Reindeer Husbandry Act from 1971 updated in 1993. This grants the use of motor vehicles only to those Saami who breed reindeer, of which there are 2,000 out of the population of 17,000. All reindeer-breeders belong to a Saami village, and members decide how herds are to be managed within the confines of the Act. Reindeer numbers are regulated by both villagers and the national Board of Agriculture. Government subsidies to the herdsman are based on kilograms of meat rather than numbers of animals, which benefits owners of well-nourished animals rather than those of large but under-nourished herds. High priority is given to the protection of some large carnivores and eagles through anti-poaching measures unless animals are attacking the reindeer (Swedish Environmental Protection Agency, 1995).

Sjaunja Nature Reserve is divided into three zones, a core, a second zone in the hilly north-west and a third zone in the mires of the northeast and southeast. A reindeer fence roughly bisects the reserve. Hunting and fishing are allowed to the public in zones II and III of the Reserve under permit. Apart from this, hunting, fishing and use of motor vehicles are strictly regulated. Forestry, new road building, hydroelectric power developments and mines are forbidden. A 1993 ruling of the Reindeer Management Act provides for effective monitoring of reindeer and their effects on vegetation. The regional habitat-monitoring program in Norrbotten county is part of the Swedish Environmental Protection Agency's national monitoring program. Important elements of this include global climate change, acid rain, the impact of reindeer grazing and trampling on vegetation, and changes in the status of carnivores such as brown bear, wolverine and lynx; also motor vehicle use and the impacts of tourism. A transboundary extension of ~100,000 hectares in Norway is under consideration.

MANAGEMENT CONSTRAINTS

Reindeer herding is the main livelihood throughout the area and the Saami are aggrieved over incursions into their customary rights. Some of the most prominent conflicts are between Saami herders and the owners of traditional grazing areas outside state lands now private forest or farmland, who demand compensation for the damage caused by browsing reindeer; also the granting of small game hunting licences to non-Saami, and the situation of non-herding Saami (Swedish Institute, 1990). Grazing and trampling by reindeer, the use of motorcycle herding and motor vehicles, the building of cabins and fences, hunting and fishing all have an impact on the landscape and biodiversity, especially the effect of overgrazing on lichen, the reindeers' winter forage. Wolverine and lynx are also persecuted by the herdsmen (J. Thorsell, pers. comm., 1990). There are no longer problems relating to prospecting

for mineral resources as mining is now forbidden, but the area is exposed to the effects of acid rain and some disturbance is caused by snowmobiles in spring.

STAFF

The County Administration has established a Mountain Branch responsible for all national parks and nature reserves in the County of Norrbotten. In 2006 there were only 8 members of staff but there was good access to professional advice on conservation, education and promotion. Education in social awareness and training of local guides was done in Jokkmokk municipality (UNESCO, 2006).

BUDGET

In 1996 the annual budget for the mountain unit was approximately US$ 1.5 million. The present annual budget comes from three organisations: present funding from government and EU sources is adequate (UNESCO, 2006).

LOCAL ADDRESSES

The County Administration Board of Norrbotten S-951 86 Luleå, Norrbotten, Sweden.

The Mountain Unit, Asgatan 20, P.O. Box 105, S-962 23 Jokkmokk. Norrbotten.

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DATE

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