

Old orthodox church on the shore of Lake Ladoga. The Lake Ladoga area, with its rather low population density, is noted for a variety of cultural and historical monuments as well as the absence of ethnic conflicts. Photo by Andrey Frenkel, St. Petersburg.



Lake Ladoga

– *the great lake of Europe*

by Vladimir Pogrebov, Roustam Sagitov and Alexei Zavarzin

Lake Ladoga is Europe's largest lake and home to a great number of animals and plants. If this rich diversity is to be sustained, it is essential that nature conservation occupies a key position in future economic and social development of the region.

A unique treasure of the lake is a population of about 5,000 Ladoga seals – survivors from the days when the lake was part of the sea. It appears this subspecies of the ringed seal (*Phoca hispida ladogensis Nordq.*) has been less affected by pollution than the Baltic and Saimaa subspecies. The lake also hosts other marine as well as glacial relicts. In addition, the lake is particularly renowned for its fish stocks, including such valuable species as Ladoga salmon (*Salmo salar sebago*), whitefish (*Coregonus lavaretus*) and grayling (*Thymallus thymallus*). A number of territories around the lake are also important bird stopping places along the East Atlantic Flyway.

Ladoga itself is part of the Republic of Karelia and Leningrad region, but its watershed also covers a large

part of north-west Russia. Through the river Neva, the watershed contributes a third of the total inflow to the Baltic Sea. The lake plays a key role in industrial and drinking water supply to St. Petersburg's five million inhabitants.

Resources of the watershed

The region is rich in natural resources such as minerals, forests, fish, game and birds, and it has the potential to develop agriculture and tourism. Compared to Russia in general, the Ladoga watershed has a high level of economic development. Many cities and towns in the area are industrial centres – with, for example, non-ferrous metallurgy, pulp-and-paper industry and machine building. ▶▶



The Ladoga seal is the smallest of the three subspecies of the ringed seal inhabiting the Baltic Sea Catchment area. The other two subspecies are the Baltic ringed seal and the Saimaa seal. The Ladoga seal normally lives 30–35 years and reaches sexual maturity at the age of six years. Photos by Anna Roos, Sweden.



Smoked whitefish. The Lake Ladoga is inhabited by 58 species and forms of fish. Several valuable fish species are at present over-exploited by fisheries, and stocks have decreased. Urgent measures are required to ensure sustainable management of the fish resources. Photo by Ola Jennersten, Sweden.



Economic activities in the area have influenced the environment. Before the 1960s, Lake Ladoga was an oligotrophic, or nutrient poor, water body. Intensive development of economic activities in the catchment area, combined with the lack of water protection measures in the following 25–30 years, meant the lake's status deteriorated. Early in the 1990s, it was classified as weakly mesotrophic in the central and northern parts with some eutrophic, or nutrient rich, features in the south.

Lately, as the overall industry in Russia has decreased and a number of enterprises have closed, the Ladoga has started to show signs of recovering its oligotrophic status. Prognoses are, however, uncertain due to the huge amount of water in the lake which responds slowly to changes in the environment. Furthermore, some of the fish stocks, as well as the Ladoga seal population, are still decreasing, and the stopping sites for migrating birds are deteriorating.

A project to promote nature conservation

The Baltic Fund for Nature of St. Petersburg Naturalists Society (BFN of SPNS, St. Petersburg), together with WWF-Denmark, carried out a project in 1999–2000 aimed at elaborating a nature conservation strategy for Lake Ladoga with a view to promoting sustainable development in the region. The project was financed by WWF-Denmark.

It became evident during analyses of the existing data that a co-ordinated monitoring programme was needed to enable conclusions to be drawn about the state of the environment. Some major problems affecting

the environmental management of the region were also described:

- Awareness both of environmental issues and of the region itself is low among the general population as well as among decision-makers.
- The percentage of protected and recreational areas is low, and approaches to nature protection and use of natural resources vary.
- The region's industry consumes large amounts of resources and water which has a negative effect on the environment. If the industrial sector continues to develop in future along the lines of the present scheme, this may further cause the environment to deteriorate.

Action needed

The analysis done in the project has demonstrated that the Lake Ladoga region plays an important role from a Baltic Sea perspective. An optimistic scenario of the region's future requires nature conservation to occupy a key position in economic and social development. However, today's Russia is facing many difficulties and nature protection is often a low priority. A number of recommendations for priority issues were formulated within the project involving activities along three interrelated lines: economic and political, conservation and monitoring, and social and educational.

We strongly feel that this is the time when involvement of regional and international organisations could contribute to the solution of various problems in the region and ensure positive future development. BFN of SPNS and WWF-Denmark invite all those who are interested in the Ladoga Lake to co-operate in this process.

References and further information

Read more about the project and the Ladoga Lake Conservation Strategy (in English and Russian) at <http://ladoga.krc.karelia.ru/info/index.shtml>

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All three authors have been involved in the BFN-WWF Ladoga project.

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Karelain village near Olonets. Photo by Ola Jennersten, Sweden.

Baltic Fund for Nature



The Baltic Fund for Nature (BFN) was founded in 1995 as a structural unit of the St. Petersburg Naturalists' Society (SPNS) – one of the oldest environmental non-governmental organisations in Russia. It has brought together experts, scholars and nature lovers of northwestern Russia for almost 150 years. It was essential to form the BFN to develop research and applied projects, as well as educational and public awareness programmes on nature protection. There was also a need to co-ordinate the activities of environmental NGOs working in the Baltic Sea region of the Russian Federation.

During the past five years, the BFN partnership network has significantly increased both within and outside Russia. BFN is now in Leningrad, Novgorod and Pskov regions and in the Republic of Karelia. Today we are working with protected areas, environmental education as

well as on a variety of other projects to obtain ecological information on Russia's Northwest.

One event we would like to highlight is the 'Geese capital of Spring' festival which will take place in mid-May 2001 in the town of Olonets in the Republic of Karelia. The festival aims to draw attention to the largest stopping site for migrating geese, and we also hope it will increase interest in preserving biodiversity in the Lake Ladoga area, while promoting development of ecotourism and sustainable agriculture.

We look forward to seeing you at the festival in Olonets. We also hope to work with each individual and every organisation that considers the nature that surrounds us be an invaluable treasure and endless source of inspiring discoveries.

For further information

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