



Strasbourg, 28 October 1994
[S:\ZP95\DOCUMENT\ENG48]

PE-S-ZP (95) 48

**STEERING COMMITTEE FOR THE PROTECTION AND MANAGEMENT
OF THE ENVIRONMENT AND NATURAL HABITATS
(CDPE)**

**Group of specialists - Protected areas
(PE-S-ZP)**

**Berezinsky State Biosphere Reserve
(Belarus)**

Application for the European Diploma

On-the-spot appraisal

by

Mr Pierre HUNKELER

(Switzerland)

I. ON-THE-SPOT APPRAISAL

by

Pierre HUNKELER
(Switzerland)1. Introduction

The government of Belarus has presented the application of the Berezinsky State Biosphere Reserve for the award of the European Diploma.

At its meeting in March 1994, the Council of Europe's Group of specialists "Protected areas" accepted this application. It recognised the European interest of the reserve and decided to have an on-the-spot appraisal carried out.

The on-the-spot appraisal took place on 19-21 July 1994. The expert was accompanied by Mr Jean-Pierre Ribaut, representing the Secretariat.

This visit made it possible to meet, among others, the director of the reserve Mr Wladimir K. Gonchar, the deputy director of research Mr Dmitriy D. Stavrosky, and some of their staff.

At the end of the visit, a concluding discussion was held in Minsk with the Minister for Natural Resources and the Environment Mr Anatoly M. Dorofeev, the Head of the Principal Department of Production-Economic Services and Reserves Mr George Troyan, the Vice-Chairman of the State Committee for Ecology Mr Valery S. Medvedev, and several staff including Mr Alexander M. Maximovitch.

The interpreters, Mrs Tania Taklionok and Mr Alexander Doudo, greatly facilitated the mission thanks to their excellent knowledge of the languages, sites and species.

The visit was perfectly organised and enabled us to discover on the spot many facets of the protected area. We express our sincere thanks to the many people who made this mission most instructive and agreeable.

This report partly adopts the headings of the questionnaire used for European Diploma applications.

2. Body responsible for management

The reserve is managed by its director, who is directly responsible to the Council of Ministers of the Republic of Belarus.

A Scientific Council made up of scientists both from the reserve and from outside decides the research priorities and gives its opinion on the scientific aspects of the management of the reserve.

3. Type of area

Strict natural reserve and biosphere reserve.

4. Geographical situation

The reserve is located some 80 km north-east of Minsk, on the Berezina river, 54° 38' North, 28° 21' East. The climate is temperate humid continental, with a rainfall of 780 mm a year. There is snow cover for 100 to 120 days. The temperature can reach 33°C in summer and -36°C in winter, with averages of -7°C in January and 17.8°C in July.

5. Characteristics and scientific value

5.1 Geology and geomorphology

The reserve lies in the marginal zone of the former Viurmsk glacier. It has a young glacier relief with moraine buttes and ridges, slightly undulating areas of deep sands, numerous hollows and the low flood plain of the Berezina river.

5.2 Hydrology

The reserve includes the upper Berezina and several tributaries of this river. There are also a number of fairly large but very shallow lakes, notably the Plavno, in the buffer area, and the Domzheritskoye and Palik lakes, located on the edge of the central area.

The reserve lies exactly on the watershed of the Baltic and the Black Sea.

5.3 Vegetation and flora

The variety of the hydrological and soil conditions leads to a great diversity of vegetation: pine, alder, birch and oak forests, vegetation typical of marsh and bog wetlands and areas subject to flooding. There are almost 70 forest types. A 1:25 000 vegetation map has been produced. The flora comprises 780 species of vascular plants, 216 species of mosses and 198 of lichens. The reserve contains half of the species known in Belarus and several rare species such as *Carex irrigua*, *Iris sibirica*, *Gladiolus imbricatus*, *Cypripedium calceolus*, *Betula nana*, *Saxifraga hirculus*, *Linnea borealis*. The flora is very well studied and has been the subject of many publications, with distribution maps for many species.

The presence of extensively farmed crops permits the development of ruderal and cornfield species.

5.4 Fauna

The fauna includes 50 species of mammals (including *Ursus arctos*, *Canis lupus*, *Castor fiber*, *Lutra lutra*, *Lynx lynx*, *Alces alces*, *Bison bonasus*), 240 species of birds (including *Cicogna nigra*, *Pandion Halietus*, *Tetrao urogallus* and *Grus grus*), 34 species of fish, 9 species of batrachians and 5 species of reptiles.

The reserve and its environs are an important passage, rest and feeding area for migratory birds.

An atlas showing the distribution of the vertebrates in the reserve, with the text in three languages, is at an advanced stage of preparation.

5.5 Agriculture and forestry

In the core of the reserve all forestry ceased in 1925, when the area was first made a reserve. It still continues, on a localised and non-intensive basis, in the buffer area, where only dead trees can be felled.

Agricultural activity has also ceased in the strict reserve. In the buffer area there are permanent grasslands and also the non-intensive growing of cereals and potatoes on a small scale, without the use of synthetic fertilisers or plant health products, under the control of the reserve's management. There are problems with crop damage due to game animals, despite fencing and surveillance, but virtually no problems of livestock being attacked by large carnivores. Where there is damage, the owner is compensated by the state, but the payment is usually inadequate.

There are special rules for mowing in places where rare plants grow.

5.6 Human occupation and cultural heritage

Traces of ancient human occupation are present in the form of tombs and the remains of a settlement from the beginning of our era. Sections of the canal which linked the Black Sea to the Baltic, built in the 18th century, are well conserved; a sluice gate has been restored and is used to regulate the water level in certain marshes. There are several monuments to remind us that the region served as a refuge for many partisans during the second world war.

There are still a number of villages in the buffer area, with a total population of some 800 people. These villages tend to be in decline, as the possibilities of employment in the environs are extremely limited.

Only in the village of Domzheritsy, the headquarters where many people working in the reserve live, is the population tending to grow.

6. European interest justifying the application

The European and even international interest of the site stems from the following characteristics of the Berezinsky State Reserve:

- Diversity and quality of habitats
The diversity of topography and hydrology creates a mosaic of high quality habitats. These habitats, little disturbed by man in the past, have been protected for almost 70 years and are sheltered from virtually all pressures thanks to a large buffer area.
- Presence of numerous species
The reserve contains a complete sample of the vegetable and animal species of the region, and in particular viable populations of all the large carnivores of mid-latitude Europe.
- Research
The reserve has long been the subject of in-depth research programmes and thus constitutes a very important reference zone and standard of comparison for studying the evolution of natural environments and species.

7. Ownership

The entire reserve is the property of the state.

There are at present no privatisation measures in the vicinity. In any event, the reserve area would not be concerned by measures of this type.

8. System of protection

The reserve was established in 1925 by an Act of the Council of the People of the Belarus SSR and confirmed by regulations adopted by the Council of Ministers of the Republic of Belarus on 2 May 1992.

The status of biosphere reserve was conferred by UNESCO in February 1979.

The reserve comprises a central area of 22 161 ha, a buffer area of 58 050 ha and a transition area of 32 666 ha. A hydrological protection zone completes the picture. There is a hunting area of 90 665 ha adjacent to the reserve.

9. Management

9.1 Zoning

The following are to be distinguished:

- The strict reserve, where any kind of exploitation is prohibited and where access is limited to a few tracks and the Berezina river, always in the company of a warden or member of the reserve staff. To the north a second strictly protected area has recently been established, mainly in order to protect the only stand of *Betula nana*.
- The very large buffer area, where very limited forestry and farming activities are authorised, under the control of the reserve's management. This is where most of the scientific research takes place. The inhabitants of the local villages are allowed to gather berries and mushrooms here.
- A transition belt from 1 to 2 km wide, where other economic activities which do not harm the reserves may be authorised.
- A hydrological protection zone, extending 5 km from the boundary of the reserve, where any kind of drainage is prohibited.
- A hunting area, north-west of the reserve, outside the buffer area. This area is managed separately, on the basis of a lease granted by the reserve, conferring the right to hunt and cut wood.

9.2 Responsibilities

The director is responsible for the reserve. The Scientific Council meets four times a year to decide on and monitor the research programmes and give its opinion on the scientific aspects of the management of the site.

9.3 Personnel

The director is assisted by four deputy directors, responsible respectively for research, nature conservation, environmental education and administration. A large team of scientists is attached to the reserve. 120 wardens protect the site. They have vehicles and radio communications equipment, but its condition leaves something to be desired.

9.4. Budget

The resources made available by the state at present appear sufficient for the minimal functioning of the reserve. Additional income is derived from the hunting rights in the area reserved for this purpose in the buffer zone and from the few tourists now starting to appear.

9.5 Management of the reserve

The reserve is mainly left to evolve naturally. The central area is not intended to be visited by the general public.

The natural evolution is in fact relatively slow. For example, the clearings around the foresters' houses abandoned during the 20s in the central area are only just beginning to be recolonised by the forest.

To facilitate scientific research and surveillance, service tracks have been created wherever possible, forming a regular 1 km x 1 km grid. In the exposed areas certain of these tracks are regularly ploughed to eliminate some of the vegetation and serve as fire breaks. It might be useful to evaluate the effectiveness of these fire-breaks in relation to their impact.

9.5.2 Fauna

The primary aim of the reserve was to reconstitute populations of large mammals, notably carnivores and ungulates. This aim has now been largely achieved and it has been possible to capture some animals to colonise other regions, in Belarus and elsewhere.

The populations are regularly monitored, with regular counts on several test itineraries and a general census covering the whole country in February each year.

Limited numbers of animals are culled for the purposes of scientific study. This requires special authorisation from the Scientific Council and the Ministry of the Environment.

A few plots of land are sown to cereals as feeding grounds for bears and certain ungulates.

9.5.3 Agricultural activities

The farming activities carried out in the buffer area are under the control of the reserve management, who give advice, make the necessary machines available and ensure that only extensive methods are used.

9.5.4 Tourism

Tourism is relatively undeveloped in the Berezinsky reserve. A few agencies offer occasional guided visits from Minsk and hunters take advantage of the hunting area located in the buffer area. These activities are likely to develop with the creation of agencies specialised in these fields.

Plans for the development of an appropriate form of eco-tourism are being discussed. At the time of our visit a first group of 16 foreign tourists interested in the fauna and flora were spending 10 days in the reserve.

The Berezinsky reserve and its environs offer good opportunities for the development of quality eco-tourism. However, there are a number of factors which have to be carefully considered in this connection:

- certain work needs to be done to facilitate the observation of fauna while keeping disturbance of sensitive species to the absolute minimum;
- dealing with visitors should not become a significant burden on the staff and facilities of the reserve.

The training of naturalist guides in the reserve would be a good thing.

Improvement of accommodation for visitors is also necessary. On the basis of a private initiative a number of small houses are already being built for this purpose on the edge of the buffer area.

It is also obvious that the hunting activities in the buffer area and in the vicinity of the reserve need to be very strictly managed if they are to remain of interest in the long term.

The many local visitors are mentioned in the following paragraph.

9.5.5 Information and education

At the reserve headquarters there is a museum with exhibits showing the main species present. A good forest nature trail has just been established nearby. Other facilities of this type would be welcomed by both local visitors and those from further away.

The 10 to 15 000 visitors a year come in groups and are interested mainly in the museum and the small zoo which houses a few typical species.

We must also mention the "forest school" project aimed at secondary school pupils, which consists of a number of theoretical and practical lessons concerned with knowledge of the forest and its protection and exploitation. This thorough training course gives those who take it a good chance of finding work, notably as wardens in the reserve. A wood carving workshop gives pupils the opportunity to work directly with this material.

9.5.6 Scientific research

The Berezinsky reserve has been particularly well researched, work having begun in the 30s.

After an initial concentration on zoological inventories and the management of mammal populations, the main thrust of research was redirected in the 70s towards basic ecological studies, with the building of 100 hides for long-term observation.

Particular attention is paid to questions of forest dynamics, productivity, the biogeochemical cycle and pollution.

A sophisticated meteorological station permits the monitoring of basic parameters and air pollution. This station serves as a model for the entire Republic of Belarus. It should be

noted that there is no source of pollution in the vicinity of the reserve other than the road which traverses the buffer area from West to East. There are regular contacts with other institutions, notably the East European Monitoring Center.

All the observations, including the large volume of meteorological and hydrological data, are included in a very detailed annual report.

Attention should be drawn to the value of the research carried out over a long period in virtually intact areas. This research has resulted in very many scientific publications. However, the results of all the research done since the establishment of the reserve do not appear to be available in consolidated form.

10. Conclusions

On the basis of this initial appraisal we can confirm that the area is of European interest and value and is well protected.

We propose that the European Diploma be awarded to the Berezinsky reserve.

We propose that the Category A Diploma should be awarded for the central area.

This seems to us preferable to the award of a Category B Diploma to the entire biosphere reserve, in order not to risk any weakening of the status of the core of the reserve.

We propose the award of the Diploma with the following conditions and recommendations:

Conditions

1. Any privatisation measures must on no account negatively influence the protection status of the reserve.
2. The planned improvements in the buffer area must not negatively influence the central area.

Recommendations

1. Sufficient resources should be provided to ensure the proper functioning of the reserve and the continuation of scientific research.
2. The public education and information effort should be consolidated and increased, taking advantage of what the reserve has to offer and the wealth of scientific results available.
3. The expediency of applying a stricter protection regime to all or part of the peripheral area (biosphere reserve) should be examined.
4. Efforts should be made to ensure that the development of tourism is well controlled, and in particular does not cause serious disturbance to the fauna or place an excessive burden on the reserve management.

11. References

Dorofeev, A. et al. Red Data Book of Belarus. Minsk, 1993 (in Russian)

Kozlo, X. The Brown Bear in Belarus. Minsk, 1993.

Natarov, V.M. The Berezinskaya Water System. Minsk, 1993.

Parfenov, V.I., et al. Flora of Berezinsky Biosphere Reserve. Minsk, Urahzahy, 1992.

Stawroskaya, L.A. Composition of the vascular plants flora formations in the Berezinsky Biosphere Reserve. Minsk, 1993.

Valetov, V.V, et al. Phytodiversity and Pine Forest State in the Berezinsky Biosphere Reserve, Minsk 1993.

World Conservation Monitoring Centre. Site sheet for the Berezinsky Biosphere Reserve. September 1986.

Comments by the Secretariat

The Secretariat has no important additional points to make.

The nature reserve proper is of considerable ecological interest, especially from the standpoint of biological diversity, and there should be no reason to doubt its continued preservation in view of:

- present regulations and the political will to continue to protect this wild natural area;
- the characteristics of the most important and interesting habitats, which protect themselves since there are no access roads or other ways in (we are thinking, for example, of the remarkable primitive wetland forest).

The greatest danger undoubtedly lies in the desire to develop tourist activity in the buffer area. This desire is legitimate and the Council of Europe is particularly well placed to cooperate in this type of development; remember the conclusions of the Ministerial Conference in Lucerne (1993). Unfortunately, according to certain information received it would appear that the Council of Ministers (to which the reserve is attached) and the Ministry for the Environment have, or could have, different points of view. However, be that as it may, the peripheral region will develop and certain projects are at present being created or extended, for example:

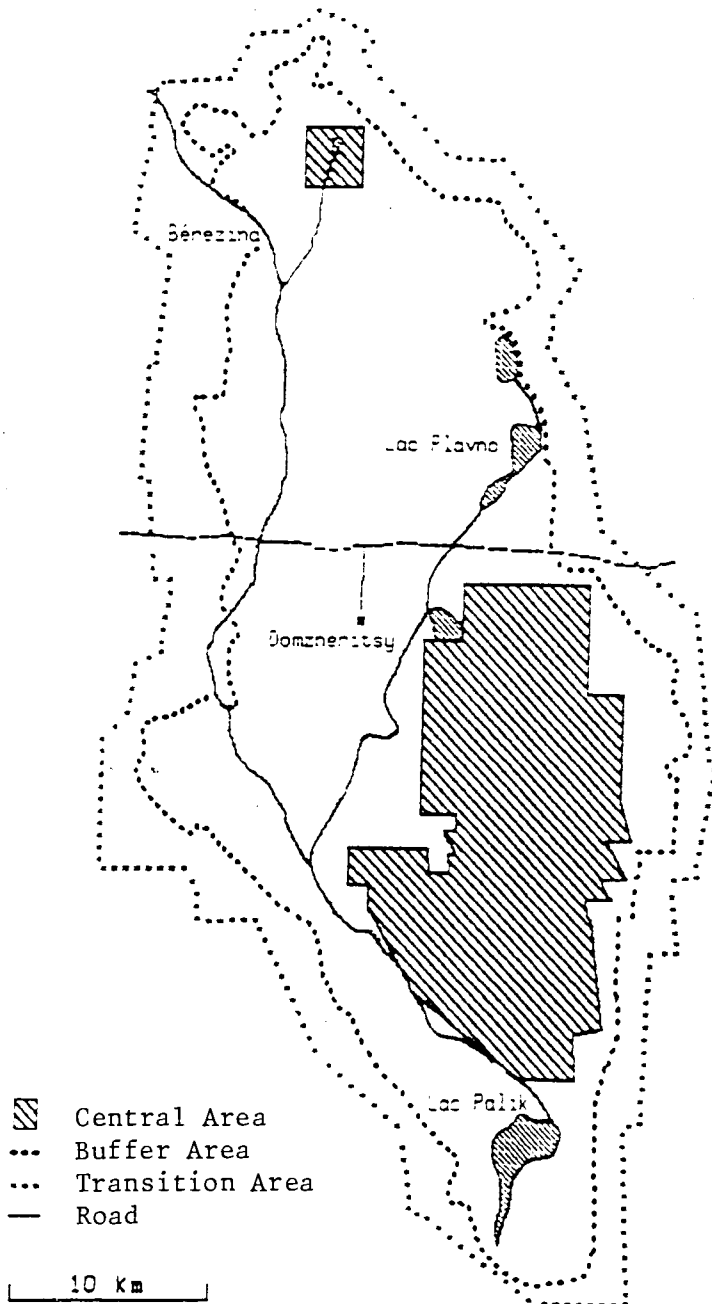
- the Mensk company is building bungalows to accommodate visitors in the buffer area, while at the same time financing video cassettes about the reserve;
- "Viata" specialises in ecological excursions and hunting trips, above all for elk, but also boar and wolf.

We should therefore try to help those responsible to ensure that the investment and other development projects are oriented towards sustainable development and our European conservation strategy.

We would mention the information and education efforts already being made; future projects should definitely fit into a context of ecological tourism and environment-friendly tourism in general.

The Council of Europe, in association with the North Vosges Natural Park, with which Berezinsky is twinned, is prepared to help so that this reserve may simultaneously:

- preserve its great natural riches and
- promote in the surrounding areas a form of tourist development which does not affect the reserve itself.



Appendix

Draft Resolution (95) ...

ON THE AWARD OF THE EUROPEAN DIPLOMA TO THE BEREZINSKY NATURAL BIOSPHERE RESERVE (BELARUS)

The Committee of Ministers, under the terms of Article 15.a of the Statute of the Council of Europe,

Having regard to Resolution (65) 6 instituting the European Diploma;

Having regard to the proposals of the Steering Committee for the Conservation and Management of the Environment and Natural Habitats (CDPE);

Having noted the agreement of the government of Belarus;

After deliberation;

Solemnly awards the European Diploma, Category A, to the Berezinsky Natural Biosphere Reserve, in accordance with the Regulations for the European Diploma (Resolution 91/16);

Places the aforesaid reserve under the patronage of the Council of Europe until ...
2000.

Attaches to the award the following conditions:

1. Any privatisation measures must on no account negatively influence the protection status of the reserve.
2. The planned improvements in the buffer area must not negatively influence the central area.

Together with the following recommendations:

1. Sufficient resources should be provided to ensure the proper functioning of the reserve and the continuation of scientific research.
2. The public education and information effort should be consolidated and increased, taking advantage of what the reserve has to offer and the wealth of scientific results available.
3. The expediency of applying a stricter protection regime to all or part of the peripheral area (biosphere reserve) should be examined.
4. Efforts should be made to ensure that the development of tourism is well controlled, and in particular does not cause serious disturbance to the fauna or place an excessive burden on the reserve management.