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**BEREZINSKY STATE BIOSPHERE RESERVE  
(Belarus)**

**RENEWAL**

Expert report by  
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*Document established by  
the Directorate of Culture and  
Cultural and Natural Heritage*

The European Diploma for protected areas was awarded to the Berezinsky State Biosphere Reserve (Belarus) for the first time in 1995.

The Secretariat did not accompany the expert on her visit to the reserve.

Appendix I reproduces Resolution (2000) 1 concerning the renewal of the European Diploma. In Appendix II the Secretariat presents a draft resolution for possible renewal.

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## 1. INTRODUCTION

The Berezinsky State Biosphere Reserve was awarded with the European Diploma (Category A) for its protected natural and semi-natural wilderness areas of exceptional European interest on 11 September 1995. The Diploma was first renewed in 2000 in consideration of results of the on-the-spot appraisal performed by Mr Pierre Hunkeler (Switzerland) in 1999.

My visit to the Reserve in connection with the second renewal of the European Diploma due in 2005 was organized by the Secretariat General of the Council of Europe with the cooperation of local authorities in Byelorussia. I visited the site without the representative of the Secretariat with the purpose to carry out an on-the-spot appraisal, consisting, in particular, in finding out whether the existing evidences make it possible to confirm the European interest, assess the efficacy of the existing conservation measures and to obtain any additional information needed for deciding whether to award the Diploma for further five years. I was also requested to assess the follow-up to recommendations resulting from the previous appraisal.

This on-the-spot appraisal was conducted between September 20-23 2004. The following persons were of great assistance for the fulfillment of my mission: Mr Ivan Sandrozd, Director of the Reserve and, in particular, Mr Valery Ivkovich, Deputy Director, Head of the Scientific Research Department, who was aiding with the organization throughout the whole visit and helped to explore many facets of the site. In addition, I am indebted to the staff working at the Reserve Management for their help in my mission, including: Mr Alexander Lukashuk, entomologist, Mr Alexander Kashtelyan, biologist, as well as to Mr Igor Medvedyev, mammal specialist and Mr Vassyli Arnolbik the manager responsible for forest monitoring (ICP-Forest) and nature protection, who guided the field trip to the Reserve.

During my visit I held conversations with other persons working at the Reserve including Mrs Lyudmila Voytielonok, Head of the Visitor Centre (Natural Museum), Mrs Klara Pauss, Director of the Ecological School, Mr Anatoly Srybrny, Head of the Integrated Monitoring Station at the Berezinsky Reserve and Mrs Maria Podabyed, Mayor of the local community council at Domjeritsy where the Reserve Management is situated. I have also had an opportunity to talk briefly to the foreign visitors (eco-tourists) of the Reserve.

A short meeting was organized with Mr Alexander Luchkov, Head of Nature Protected Territories and Natural Resources at the Department of Management of Presidential Affairs in Minsk to hear the official viewpoint on the financial situation of the Berezinsky Reserve. I also visited Mr Alexander Vintchewski, Director of the National Union A P B-Birdlife Belarus and Professor Mikhail Nikiforov of the Zoological Institute of Byelorussian Academy of Sciences who has been conducting study at the Berezinsky Reserve. I was also able to have a short interview with Ms Svetlana Ishtchenko, journalist representing the "Culture" newspaper in Minsk.

The visit was well organised and informative providing most materials necessary for the appraisal. The people I met were very helpful and I would like to extend my thanks to all who made this visit so instructive and agreeable.

The results of appraisal have been reported following the paragraphs given in the TOR [Appendix 3 to Resolution (98) 29].

## **2. SITUATION AND VALUE OF THE RESERVE – EUROPEAN INTEREST**

The “Berezinsky Biosphere Reserve” has acquired since 2001 a status of the State Nature Protection and Research Department (SNPSD) [Gosudarstvennoe...2004]. The Reserve participates in activities of international networks – a scientific one: MaB and in the Europarks. At present the SNPSD covers altogether 107,380 ha, and the strictly protected part of the Reserve has a surface of 85,149 ha which means that the core area has been considerably extended since the time of the previous appraisal, it covered then above 60 thous ha. In addition to the strictly protected Reserve, the SNPSD manages the adjoining experimental silvicultural-hunting ground “Barsuki” of a surface of 29.3 thus ha and another hunting site called “Berezina” extended on about 16 thous ha of leased land [Gosudarstvennoe ...2004]. The Reserve is intersected just above its middle axis by the M3 Minsk-Vitebsk road which currently is subject to upgrading (Map 1 available from the Secretariat).

Historically, the Reserve was first established in 1925 as a hunting reserve where most silvicultural activities were banned while in 1959 the site was given a status of a state nature reserve. Since 1979 it has been granted a status of a Biosphere Reserve. Its most important value include its location within a vast tract of near natural or natural lowland forest (over 130 thous ha). More than half of the site (56.2) take pine and spruce boreal forests on mineral soils while oak and ash forests grow along rivers and on fens, especially in the southern part of the Reserve. The forest is interspersed with open spaces – fields, meadows and mires sheltering a great variety of habitats. Open mown meadows cover some 6% of the area, and about 33.4% of the Site are mostly intact fens and transitional bogs, open and forested. The Reserve embraces many sites (e.g. raised and transitional bogs, black alder and willow forests, and flood-plain forests) belonging to categories of ecosystems representing threatened and/or well preserved examples of habitats protected under the EU Habitat and/or Bird Directive and the Bern Convention. Surfaces of individual bogs occasionally exceed 10 thous ha with thickness of peat deposits greater than 8 m (A. Lukashuk – personal communication). The uniqueness of the Reserve in the European Plain continental zone lies, above all, in the local variety of hydrological regimes and abundance of water with meandering Berezina river and its tributaries providing a skeleton of the Reserve. The site boasts of a dense network of 69 permanent and temporary watercourses and 5 greater lakes (Map 1 available from the Secretariat). Forest and mire communities are in a very good state of conservation featuring classical examples of phytocenoses already non-existent beyond Eastern Europe. The vegetation cover of the Berezina Reserve has preserved a great degree of naturalness considering a long period during which no major human interventions were made and the inaccessibility of its habitats.

## **3. MERITS AND PROTECTION SYSTEM**

### **3.1 Administration**

The SNPSD is managed since 2002 by Mr Ivan Sandrozd, Director General, specialist in forestry, who is directly accountable to the Presidential Affairs Management Department of the Republic of Belarus.

A Scientific-Technical Council made up of specialists from the reserve and representatives of the Belorussian Academy of Sciences and Ministries coordinates the research and other activities of the Reserve and decides on the research priorities and advises on the scientific aspects of the management.

The SNPSD Management employs a large staff of 404 people including 248 persons working in forest protection [Gosudarstvennoe...2004]. The Reserve Management has several departments including: general management and bookkeeping, research, tourism, forest protection and silviculture, fauna protection, catchment and hunting management and the technical department. Forests of the Reserve are managed through seven forest inspectorates. The forest inspectorates employ day and night forest wardens, at least 3 persons per 10-12 thous ha, to watch over illegal activity in the Reserve.

### 3.2 Management

Management principles are set out in several documents covering individual sectors, but there is no consolidated document as yet.

A document entitled: “Plan for the development of the State Nature Protection and Research Department “Berezinski Biosphere Reserve” in the years 2003-2005 was produced in 2002. The document lists main tasks to be implemented in order to enhance protection measures of the Reserve), fauna population monitoring, research and development work on the restoration of hydrobiological regime within the system of eutrophic lakes [Proyekt...2002].

The basic research work is conducted with the aim to assess the impact of natural and human made changes on natural ecosystems in order to support the protective policies of the State. Main directions of research work include soil study and mapping, wildlife population study, big mammal censuses, stand growth dynamics, assessment of durability of forest phytocoenoses, biology of European bison, protection of Red Book plant species, study on the effect of forest practices on forest ecosystems, inventory of meadow flora, meadow productivity and the development of concept of sustainable tourism (under TACIS Programme).

Electronic database has been established recently to collect information on forests, hydrology, soil and meadow vegetation data.

It is also planned to build a website on the Reserve with regular update in order to disseminate, among others, the scientific output produced.

The document describes also other tasks such as improvement of protection tools in the Reserve to effectively copy with poaching and other infringements and forest fires. Separate sector of activity is linked with the enhancement of ecological education and tasks devoted to raising ecological awareness of the society. A part of tasks is devoted to improve the technical and institutional capacity of the SNPSD by developing the visitor infrastructure, restoration of the house of ecological instruction, construction of a new residential house for the Reserve staff and by removing the timber production enterprise from the Reserve Headquarter at Domjeritsy.

Promotion of nature conservation and development of tourism is a money consuming task and there are talks with GEF and IUNEP to obtain partial support for this activity.

The general objective of management is to protect the biodiversity of forest ecosystems in the core area and to implement the results obtained in the course of study in the Reserve for the benefit of nature conservation both locally and elsewhere [Proyekt..2002].

### 3.3 Zoning

The basic schematic of the Reserve zoning remains unchanged since the last appraisal. However, the Reserve core zone has two years ago (2002) been extended from 38,187 ha to 85,149 ha, by encroachment on the buffer zone. The core zone is strictly protected, no development is permitted there and only accompanied visitors may enter the area using a few designated accession paths and by the Berezina River.

Another strictly protected zone to the north, separated from the main reserve, shelters the only stand of the dwarf birch *Betula nana*.

The buffer zone extends over about 22,230 ha, where limited forestry and agricultural activity is permitted under the supervision of the reserve authorities. In the buffer zone the main body of research has been carried out. Inhabitants of 11 local villages (and 19 remote cottages) are allowed to gather forest fruits and mushrooms there. Several specially protected zones of a total area of 4,674 ha with more strict protection regime are located within the buffer zone.

The Reserve is contoured by a transition belt 1 to 2 km wide, where other economic activities which do not impair the reserve may be authorised.

A most external perimeter, extending 5 km outside the Reserve boundary, constitutes the “hydrological zone” where no draining is allowed and all investment associated with changing hydrological conditions must be agreed with the Reserve Management.

### 3.4 Vegetation, flora and fungi

The biodiversity of the Reserve, both at ecosystem and species level results from the diversity of local hydrological and soil conditions. Forest communities vary from fresh pine forests on mineral soils to spruce forests and to birch and alder forest on swamps. Mixed deciduous forest with oak and ash stands are encountered along rivers. Numerous fen and transitional bog communities shelter characteristic flora including species rare at the European scale. Meadow vegetation is also diverse, though not in depth recognised.

The local vegetation is made up of some 70 types of forest communities. The flora comprises 1331 species with 798 species of vascular plants, 216 species of mosses and 317 species of algae. The biota of fungi comprises 238 species of lichens and 463 species of higher mushrooms. More than half of the plant species known in Belarus and several very rare species grow within the site, including such as *Aldrovanda vesiculosa*, *Allium ursinum*, *Arnica montana*, *Betula nana*, *Carex irrigua*, *Cypripedium calceolus*, *Drosera rotundifolia*, *Gladiolus imbricatus*, *Iris sibirica*, *Lilium martagon*, *Linnaea borealis* and *Saxifraga hirculus*. *Aldrovanda vesiculosa*, *Cypripedium calceolus* and *Saxifraga hirculus* are listed in the Annex II to Council Directive 92/43/EEC. The vascular flora of the Reserve is well recognised and described in numerous publications, with distribution maps for many species. During my visit the need was voiced for further in depth study with the participation foreign specialists in order to increase knowledge on lower organisms, and especially on fungi (lichens).

### 3.5 Fauna

The vertebrate fauna has been intensively studied over the last 5 years and there is an increase in the numbers of respective taxa. 336 animal species have been found in the Reserve including 56 (51 in 1999) species of mammals, 45 of which are resident throughout the year (*Ursus arctos*, *Canis lupus*, *Castor fiber*, *Lutra lutra*, *Lynx lynx*, *Alces alces* and *Bison bonasus*). There are 230 (220 in 1999) species of birds (including *Ciconia nigra*, *Pandion haliaetus*, *Tetrao urogallus* and *Grus grus*), 34 (23 in 1999) species of fish, 11 species of amphibians and 5 species of reptiles.

The reserve and its environs are an important roosting and feeding ground for passing migratory birds. There is an opportunity to think about submitting the Reserve to the Ramsar List.

Game populations in the Reserve have been continuously monitored, in particular the population of such species as brown bear, wolf, European elk, red deer, roe deer, European bison, capercaillie, wood grouse and lynx. Annual censuses are carried out and mid-forest fields are sown to improve the food base available. Feeding of game is organised when necessary during particularly harsh weather conditions.

According to the information I received at the Reserve, the population of wolf over the last five years is stable and is maintained at the level of 14 - 18 individuals (Igor Medvedyev – personal communication).

In view of the increasing traffic on the M3 road through the Reserve, several cases of road kill (red deer and elk) were registered in the years 1998-2002. No fauna passages exist yet on the road although the construction of such has been planned. In order to alleviate the problem of passage for animals (big game and amphibians, reptiles, rodents) the Institute of Zoology of the Belorussian Academy of Sciences (Prof. Mikhail Nikiforov) has addressed in 2003 the Road Constructing Agency responsible for the M3 upgrade with a note on the necessity to build or extend three passages at the road intercept through the Reserve. No answer so far has been received from the Agency.

### 3.6 Forests

Natural or close to natural forests constitute the main natural resource of the Reserve and have a decisive role in shaping the local environment. Main woody species include pine, birch and spruce growing in the taiga-type boreal forests as well as black alder covering large swamps in mainly in the southern part of the Reserve, while grey alder, oak and ash have a minor role in the Reserve vegetation cover. The share of most important woody species in the land cover of the Berezina Reserve is as follows: pine (*Pinus sylvestris*) – 38%; birch (*Betula verrucosa* and *B. pubescens*) – 20%; black alder (*Alnus glutinosa*) – 14%; and spruce (*Picea abies*) – 9% [Complex Background Monitoring...].

The forest management (exploitation) ceased in the core zone in 1925 when the Reserve was established. It still continues on a localised and non-intensive basis in the buffer zone where only dead trees may be felled, mainly to supply local inhabitants with firewood. The forest is used for timber production in the “Barsuki” experimental-sylvicultural farm to generate income for the Reserve.

In various places of the Reserve a few pine, spruce and oak plantations survived on about 9% of the land. They are left to develop naturally without human intervention and have been studied in order to follow the dynamics of forest succession and related phenomena (presence of symbiotic and pathogenic fungi, tree species rotation etc.)

To make scientific research and surveillance easier, forest tracks have been made wherever possible. They form a regular grid of about 1km x 1km. Some tracks in exposed areas are dug out to eliminate part of the vegetation and act as a firebreak.

### 3.7 Agriculture

Agricultural activity has been largely limited in the Reserve. In the core zone no agricultural activity is allowed. Within the settled area, most of the Reserve inhabitants produce their own potatoes and vegetables in their gardens. Recently the area of the Reserve is depopulating naturally. At present it is inhabited by about 700 people, most of them are retired forest and agricultural workers to whom assistance is provided by the Reserve Management (Maria Podabyed – personal communication).

Permanent meadows and pastures are in the buffer zone and main crops are cereals and potatoes grown on a small scale, using extensive farming methods and without the use of synthetic fertilisers or plant protection means, under the control of the Reserve’s management. There are problems with game animals damaging the crops, despite fencing and surveillance, but virtually no problem of livestock being attacked by large carnivores.

In meadows where rare and threatened plants occur, special rules for mowing have been applied in line with the instruction from the Reserve Management.

### 3.8 Cultural heritage

Traces of ancient human occupation are to be found in the form of tombs and the remains of a settlement from the beginning of our era. The main historical site in the Reserve, apart from the spot where the French Army passed the river in 1812, is the Berezina water system built in 1797–1805 to replace an ancient water connection from *Vareg* (Varangian) cities in the north to Greece. Six canals were then dug out and sluices were erected, with the major Berezinski canal of a length of 8 km and Serguch canal of a length of 8.5 km. Sections of the Serguch canal, which was built in 18<sup>th</sup> century to link the Berezina to the Dvina river, in other words to create a water way from the Black to the Baltic Sea, are well preserved up to now. A sluice gate has been restored and is used to regulate the water level in nearby marshes. Most of the constructions, however, have been degraded and now resemble rivers in the natural state. Several monuments from the World War II remind about fierce battles fought by local partisans in the forests of the Reserve [Priglasaem....]

#### 4. EDUCATION AND INFORMATION

Ecological education is one of the leading fields of activity of the Berezina Biosphere Reserve. Main visitor facilities at the Reserve include a Natural Museum, a forest educational path of several km and a small zoo (*volieres*) with local forest animals (mammals and birds). The museum at the Reserve headquarters has recently been renewed (2002) and new exhibition made to show the history of the Reserve, its main goals and tasks as well as the main animal species to be found in the forests. An educational path (trail) has been established nearby in Domjeritsy forest and is much used. During the walk one can learn about major habitat types, forest landscapes, woody species, vascular plants and problems of forest protection. The zoo has been built at a walking distance from the Reserve headquarters. The educational facilities receive each year more than 20 thous of visitors, mainly schoolchildren [Gosudarstvennoe....].

In addition, students aged from 14 to 16 receive ecological education within the Reserve in a special Ecological School (173 pupils) and the Lyceum (high school) – 55 students. The ecological schools prepare staff for the Reserve and courses are in high demand since a great majority of students enters easily the university level schools [Klara Pauss – personal communication].

It should be emphasized that a part of educational activities is organised on the basis of local ecological schools as well as on the Station of Integrated Environmental Monitoring (ICP - Integrated Monitoring) located in the central part of the Reserve. The Station conducts, among others, the monitoring of air pollution and collects weather and atmospheric data, soil, vegetation and geophysical data and serves as a reference for the whole of the Republic of Belarus.

A special educational activity is addressed to local inhabitants to make them acquainted with traditional occupations in the region – traditional Belorussian “cuisine”, wood sculpturing and folk cultural tradition.

Every year the Reserve publishes booklets, books, folders and cards to provide an ecological advertising of the Reserve, its role and activities.

#### 5. TOURISM

Main directions of tourist activity in the Reserve involve recreational, ecological and hunting tourism in addition to above mentioned educational tourism. Visitors arriving in the Reserve either individually or in groups can be accommodated at the hotel Plavno on Plavno lake and in several cottages situated in diverse spots around the Reserve (outside the core zone). The other hotel located in the Reserve at Domjeritsy village has been recently given to the health care service as a sanatorium Borovoe, this is considered as a loss to of income for the Reserve Management.

Tourists at the Reserve have the opportunity to rent bicycles and boats in summer and ski in winter. Horse riding excursions may also be organised. The tourist infrastructure has been developed, with the technical assistance of the Council of Europe, since the reserve was awarded the European Diploma. The hunting area operated by the Reserve is an attraction for a number of customers and is a source of income for the Reserve. The hunting tourism is organised in the hunting areas “Barsuki” and “Berezina”. Every year about 30 hunting tours are organised for about 100 hunters and 5-7 agreements are being concluded [Gosudarstvennoe...].

Ecological tourism has started in 1994 and now it acquired many forms – basically it is used to provide services to small groups of eco-tourists (ten-day tours) by showing them the life of the Reserve, enabling observations of flora (300-400 plant species) and fauna (120-150 animal species) with the aid of specially trained guides [Gosudarstvennoe...].

Recently five new cottages for eco-tourists are under construction, one is reconstructed. This infrastructure is being built mainly in the abandoned old villages.

The eco-tourists I met in the Reserve were satisfied with their nature observation excursions and local food, though pointed out to certain lack of basic infrastructure at the place they lived – a better toilet, mirror and other simple and low cost improvements of the rooms they stayed in.

## 6. RESEARCH

Scientific-research activity of the Reserve embraces basic ecological study on permanent plots (100 square plots for long-term observation) directed to learn forest dynamics, productivity, biogeochemical cycles and the impact of airborne pollution, carried on regular basis all the year round. The aim of this study is to elucidate mechanisms of forest ecosystem functioning and to forecast the state of ecosystems in order to improve nature conservation methods and policies.

Another important subject of study is the effect of forest management on nature conservation; this study is made in the buffer zone of the Reserve.

Scientific work is directed to monitor processes in natural habitats and to study the structure and dynamics of forest, mire, meadow and water ecosystems.

In addition, a study projects on ornitofauna and ground fauna have been conducted with the cooperation of scientists from various other establishments, and mainly with the Institute of Zoology of the Belorussian Academy of Sciences.

Every year a game census is being made. This helps, among other things, to assess the possibility of culling big game in the hunting area. When planning the number of animals to be hunted the density of population assessed by the Reserve is taken into account along with the distance from the core zone, and a percent index is then drawn. The lowest percentage of animals potentially intended for culling is used as estimate in the hunting management plan. This is considered as a measure to alleviate possible damage to fauna at the core zone.

The study on fauna migration poses certain problems as some animals may migrate long distances over one day, for example, a wolf may cover a distance of up to 60 km daily.

Special study is devoted to the behaviour of wood grouse in order to elucidate the problem of diminishing population numbers in recent years.

The ICP-Monitoring Station measures and collects data on the anthropogenic impact on the Reserve environment and contributes to the International Programme for monitoring the effects of air pollution on ecosystems, the Global Atmosphere Watch and to the ICP Water.

All the study results, data and observations, including the large volume of meteorological and hydrological data, are included in a very detailed annual report called the Scientific Chronicle of the Reserve – “*Letopis*”. There is a plan to make an electronic version of the Chronicle to enable a wider distribution of the results of study. The results of the long-term research carried out in the virtually unspoiled areas of the Berezinsky Reserve are worthy of being published in a more accessible, consolidated form.

As was stated in the previous appraisal report – “certain areas of research, such as the dynamics of mammal populations, game migration between hunting and protected zone and the sustainable use of natural resources, deserve to be given greater attention in further study”.

## 7. PENDING QUESTIONS

### *Finances*

The economic situation of the Reserve still remains quite difficult since the State contribution to the functioning of the Berezinsky Reserve roughly covers only about half of its needs. Insufficient State financial support does not allow for the preparation of a long-term management plan for the Reserve.

The budget is supplemented by the income from tourism, including revenue from tenants, from hunting agreements, wood production and guesthouses while the ecological tax on vehicles that use the major road could no longer be maintained because of political reasons (and its legal basis seemed to be doubtful). There were suggestions that the activity should be intensified to get money on the basis of grants from both national and international sources available in several programmes, and additional sources could be tapped in cooperation with the Belorussian NGOs – such as Okhova Ptushak Belorusi (Belorussian Birdlife – a member of Birdlife International) (Prof. Nikiforov and Alexander Vintchewski – personal communication).

### *Dynamics of fauna populations and the M3 road*

The inventory work has been done remarkably well. Game censuses are performed according to guidelines. However, there is still need for effective monitoring of the dynamics of the populations and animal movements, an essential aspect of management which affects the central area, the buffer zone and the hunting preserve. The more effective game population monitoring is still required. The previously voiced concern about considerations on the balance between predators and prey is still in force.

The problem of road effects upon nature and road kill (both big game and small animals) is expected to intensify in view of the increased traffic on the M3 road. This will open the question of the Reserve fragmentation and a possible need for future changes in its spatial organisation. A recommendation for a partial solution could be to postulate the construction of fauna passages above and under the road, and to impose speed limit within the Reserve intersect.

### *Poaching and illegal picking*

Illegal berry and mushroom picking and gathering in the central area, and illegal fishing and poaching still remains a problem. This results from general economic difficulties in the surrounding area. If these illegal activities are not widespread they seem to be kept under control. General economic difficulties may, however, put the reserve under greater pressure, and the Reserve has prepared logistical plans concerning control over its territories [Proyekt.....]. This however requires substantial financial support.

### *Impact of forest management on nature conservation*

There is a need to monitor closely the results of study of forest activity on nature conservation and in case of negative effects observed there is a need to undertake counteractive measures in the Reserve.

## 8. ASSESSMENT OF THE FOLLOW-UP ACTION REGARDING CONDITIONS AND RECOMMENDATIONS

### 1. Privatisation

Privatisation measures have not had a negative influence on the reserve's status as a protected area. According to the binding legal regulations no large scale privatisation of land is possible. All the land is still state property and, at present, only some small farmlands outside the protected area have been privatised.

## **2. Management planning** (management plan must be drawn up within five years)

The Reserve Management considers the management plan an essential document to the proper management of the reserve as a whole. However, the preparation of an overall management plan in consultation with all the reserve's partners and incorporating, in particular, the following aspects: biodiversity, scientific research, monitoring, education and information, ecotourism, sustainable development, and the participation of the local populations requires adequate financing. The Reserve Management has prepared a document containing a Programme for development of the Biosphere Reserve in the years 2003-2005. In addition the individual sectors of the Reserve activity have their own programmes established until 2010.

### **Recommendations**

1. Sufficient resources should be provided to ensure the proper functioning of the reserve and the continuation of scientific research.

This recommendation still applies. In the present economic situation the Reserve has not sufficient means available for managing the Reserve, the State funding being limited to a half of needs. Additional income is now obtained from tourism (hotel, cottages) hunting agreements and wood production as extra-budgetary finance. One hotel was recently taken away from the Reserve and given to the Sanatorium. This is considered as a loss of income. Extra-budgetary resources now essential, must not be used as justification for reducing government support. Efforts should be directed to obtain funds from national and international grants.

2. The public education and information effort should be consolidated and increased, taking advantage of what the reserve has to offer and the abundance of scientific findings available.

Great efforts have been made to improve the ecological education by developing new curricula for the ecological schools, to promote the eco-image of the Reserve by publishing new folders, brochures and booklets and by developing new eco-touristic projects, especially for guided visits for schoolchildren and adults. There is still however room to increase the promotion of the Reserve – billboards, road signs etc could be used as a mean, so that information on the Reserve activity can be expanded.

3. The strict protection area should be extended, particularly in sensitive areas, in order to prevent any extra pressure being exerted in the adjacent land.

The area of strict protection has been extended and study plots in the buffer zone were established to examine the effect of various economic activity of forest ecosystem functioning. The protection regime is sufficiently restrictive in the core zone. The results of the study will be used in practical management of the Reserve [Spravka..].

4. A study programme of the dynamics of the mammal populations, animal movements and the balance between predators and prey should be developed.

There are scientific work directed to monitor mammal populations and every year a game census is being made. But there is still a need to document and elucidate the migration of game populations in order to assess the density of population in the Reserve and to alleviate possible damage to fauna at the core zone from hunting in the hunting farm.

5. Applied research programmes should be developed in the peripheral zone in order to establish useful models for the sustainable use of natural resources.

The effects of economic activity in the buffer zone has been studied on a series study plots with the aim to determine how this activity influences forest biodiversity and forest sustainability. In addition the project is in place to study the effect of anthropopression on the wood grouse population in the buffer zone and to study the migration of bison between the core and peripheral zones [Spravka...].

6. All tourist development that is contrary to the reserve's objectives should be avoided.

Tourism has been successfully developed without becoming a threat to the reserve and remains under control on the part of the Reserve Management. Tourist activities are mainly confined to the buffer zone and are limited in comparison with the size of the Reserve. They require a certain amount of commitment on the part of the Reserve's staff but generate useful income [Spravka...].

## **9. CONCLUSIONS AND RECOMMENDATIONS**

On the basis of this appraisal, one can consider that the European value of the Berezinsky State Biosphere Reserve and its state of conservation justify the renewal of the European Diploma for a further five years.

The following conditions and recommendations could be proposed to be attached to this renewal to ensure that precautions are sufficient for protection against foreseeable dangers:

### **Conditions**

Sufficient resources should be provided to ensure the proper functioning of the Reserve. In addition to extra-budgetary sources of income, other sources should be tapped especially in cooperation with NGOs such as Okhova Ptushak Beloarusi - Belorussian BirdLife and WWF.

A consolidated management plan must be drawn up within five years, as such an instrument is essential to the proper management of the Reserve as a whole.

The protection regime should be unchanged and measures should be taken to protect the integrity of the Reserve against negative influences from external investments (M3 road).

### **Recommendations**

1. Sufficient resources need to be generated both by the Government and by the Reserve to effectively protect the biodiversity resources. Cooperation should be strengthened with NGOs.
2. The Reserve shall be submitted as a Ramsar site refuge of wilderness to the Ramsar Convention Secretariat as this will help to promote the image of the Reserve and attract funding.
3. All efforts must be taken to prevent negative effects of fragmentation of the Reserve by the M 3 road and to preserve the integrity of the core zone.
4. A study programme of the dynamics of the mammal populations, animal movements and fauna migration between the core and the buffer zones should be carried out to elucidate the unclear situation of the effect of hunting
5. Efforts should be continue to ensure that the development of tourism is well controlled.

## 10. REFERENCES

- Gosudarstvennoe...2004: "Berezinsky Biosphere Reserve" - the State Nature Protection and Research Department. Manuscript. In Russian.
- Priglasenie...Welcome to Berezinsky Reserve. A booklet by the Berezinsky Biosphere Reserve" - the State Nature Protection and Research Department. Domjeritsy.
- Proyekt....2002: Programme for Development of "Berezinsky Biosphere Reserve" - the State Nature Protection and Research Department. The Department of Management of Presidential Affairs in Minsk. 2002. In Russian.
- Spravka ...Report on the implementation of recommendations of the On the Spot Appraisal 1999 in the "Berezinsky Biosphere Reserve" - the State Nature Protection and Research Department. Adopted by the ministerial Council of the Republic of Belarus in 2000. Manuscript. In Russian
- Complex Background Monitoring Station – "Berezinsky Biosphere Reserve" information booklet by A.Srybny

**APPENDIX I****COUNCIL OF EUROPE  
COMMITTEE OF MINISTERS****Resolution Dip (2000) 1  
on the renewal of the European Diploma  
awarded to the Berezinsky State Biosphere Reserve  
(Belarus)**

*(Adopted by the Committee of Ministers on 21 June 2000  
at the 715<sup>th</sup> meeting of the Ministers' Deputies)*

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, as amended by Resolution (98) 29 on the regulations for the European Diploma for protected areas;

Having regard to Resolution (95) 19 concerning the award of the European Diploma to the Berezinsky State Biosphere Reserve in Category A;

Taking into consideration the expert's report as presented at the meeting of the Group of Specialists for the European Diploma of Protected Areas on 21 and 22 February 2000;

Having regard to the proposals of the Committee for the activities of the Council of Europe in the field of biological and landscape diversity (CO-DBP);

Renews until 11 September 2005 the European Diploma awarded to the Berezinsky State Biosphere Reserve;

Attaches the following conditions and recommendations to the renewal:

**Conditions**

1. Privatisation measures must have no adverse effect whatsoever on the protection status of the reserve.
2. An overall management plan must be drawn up as soon as possible, and within 5 years at the latest, in consultation with all the reserve's partners and incorporating, in particular, the following aspects: biodiversity, scientific research, monitoring, education and information, ecotourism, sustainable development, participation of local inhabitants.

**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 abundance of scientific findings available.
3. The strict protection area should be extended, particularly in sensitive areas, in order to prevent any extra pressure being exerted in the adjacent land.

4. A study programme of the dynamics of the mammal populations, animal movements and the balance between predators and prey should be conducted.
5. Applied research programmes should be developed in the buffer zone in order to establish practical models for the sustainable use of natural resources.
6. All tourist development that is contrary to the reserve's objectives should be avoided.

## **APPENDIX II**

### **Draft resolution on the renewal of the European Diploma of Protected Areas to the Berezinsky State 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, as amended by Resolution (98) 29 on the regulations for the European Diploma of Protected Areas;

Having regard to Resolution (95) 19 concerning the award of the European Diploma to the Berezinsky state biosphere reserve in category A;

Taking into consideration the expert's report as presented at the meeting of the Group of Specialists for the European Diploma of Protected Areas on 28 February and 1 March 2005;

Having regard to the proposals of the Committee for the activities of the Council of Europe in the field of biological and landscape diversity (CO-DBP);

Renews until 11 September 2010 the European Diploma of Protected Areas awarded to the Berezinsky state biosphere reserve;

Attaches the following conditions and recommendations to the renewal:

#### **Conditions**

1. A consolidated management plan must be drawn up within five years, as such an instrument is essential to the proper management of the reserve as a whole.
2. The protection regime should be unchanged and measures should be taken to protect the integrity of the reserve against negative influences from external developments.

#### **Recommendations**

1. Increased resources should be provided to ensure the proper functioning of the reserve. In addition to extra-budgetary sources of income, other financial sources should be explored, in particular in partnership with interested NGOs.
2. Presentation of the reserve to other appropriate international designations should be considered as this may help to promote the image of the reserve and attract funding.
3. All efforts must be taken to prevent negative effects of fragmentation of the reserve by the M3 road and to preserve the integrity of the core zone.
4. A study programme of the dynamics of the mammal populations, animal movements and fauna migration between the core and the buffer zones should be carried out to further elucidate the effect of hunting.
5. Efforts should continue to ensure that the development of tourism is well controlled.