

ANNUAL REPORT FOR THE YEAR 2019

State:	Republic of Belarus
Name of the area:	<u>Berezinsky Biosphere Reserve</u>
Year and number of years since the award or renewal of the European Diploma for Protected Areas:	Year 9 after renewal of the European Diploma for Protected Areas in 2010 (until 2020)

Central authority concerned:

Name:	State Nature Protection Institution "Berezinsky Biosphere Reserve"
Address:	211188, Tsentralnaya St. 3, Domzheritsy, Lepel District, Vitebsk Region, Republic of Belarus
Tel.:	+375 (0) 2132 263-44
Fax:	+375 (0) 2132 263-42
e-mail:	info@berezinsky.by
www:	berezinsky.by

Authority responsible for its management:

Name:	Presidential Affairs Management Department of the Republic of Belarus
Address:	220016, K. Marx Street, 38, Minsk, Republic of Belarus
Tel.:	+375 (0) 17 222-61-54
Fax:	+375 (0) 17 222-35-56
e-mail:	info@pmrb.gov.by
www:	pmrb.gov.by

1. Conditions:

1. The protection regime and ownership of the land should be kept unchanged.

Ownership of the Berezinsky Biosphere Reserve remained unchanged and thus, there were no changes in the Reserve's current protection status. Protection regime of the reserved area is carried out in accordance with the new Law of the Republic of Belarus "On Specially Protected Natural Areas", which was put in force on June 16, 2019.

2. Recommendations:

1. Sufficient resources need to be generated both by the government and by the Reserve to protect effectively the biodiversity resources and to continue scientific research. In addition to extra-budgetary sources of income, other sources should be tapped especially in co-operation with NGOs such as Akhova Ptushak Batskaushchyny (Belarusian BirdLife), and the WWF.

In order to increase efficiency of protection of the natural systems and to conduct the scientific research, a full range of activities scheduled for 2019 has been performed in accordance with the State program "Environment protection and sustainable use of nature resources for the years 2016-2020": information and indication signs have been constructed and installed along the boundaries of the Reserve; the areas of ecological systems (grasslands, fens, islands) have been cleared out from tree and shrubbery vegetation and reeds; a number of measures aimed at control the invasive alien species of the wild plants has been implemented.

With support of NGO "Akhova Ptushak Batskaushchyny" (APB) in the frames of the international project «Theoretically grounded protection of the globally vulnerable species the Greater Spotted Eagle in Belarus», financed by the Ministry of Foreign Affairs of Estonia, a census of diurnal birds of prey, finding nests and ringing of chicks have been carried out in the Reserve. In co-operation with APB the Photobirding Championship of Belarus «Reserved Shot» for amateur bird photographers was held there.

2. Further efforts should be taken to prevent negative effects from the fragmentation of the Reserve by the M3 road, and to preserve the integrity of the core area.

Monitoring is continued to assess the impact of the M3 road on death of large mammals (registration of cases, places and time of death) and the effectiveness of the existing crossings for amphibians. Designing of environmental actions on the highway M3 has been started during documentation development on justification of investments in the site «Highway M-3 Minsk-Vitebsk» renovation.

3. Further study of the dynamics of the mammal populations, animal movements and fauna migration between the core and the buffer zones should be carried out in order to follow the progress of the effects of hunting on the current situation and manage the populations accordingly.

Implementation of the following parts of scientific and research work has been continued in 2019: "Analysis of modern state and perspectives of development the theriocomplexes of the Berezinsky Biosphere Reserve", "Analysis of modern state of diurnal birds of prey on the territory of the Berezinsky Biosphere Reserve". Measures for feeding and evaluation of state of the free-living herd of bison have been realized in accordance with the Action plan for the conservation and sustainable use of bison's micropopulation in the Republic of Belarus for the years 2015-2019. The network of photo-traps has been extended (20 photo-traps in total) is used in the places of big mammals' (ungulates and predators) migration. The quadcopter DJI Phantom 4 Pro is used for these purposes as well.

4. Continue with the efforts between the appropriate ministries to ensure that the development of tourism is well controlled.

Tourism development is controlled effectively on the basis of scientific research. One-day weekend excursions into the wildlife of the Berezinsky Biosphere Reserve are regularly conducted. Primary emphasis is put on environmental awareness of the youth. New touristic routes have been developed: an equestrian route «Forest Secrets» (of one and two days long) and an extreme walking route «People at the marsh». A new ornithological route «Nesting Path» is being developed.

5. *In order to mitigate possible risks and hazards connected with climatic changes and possible large-scale disturbances on the reserve, the study programme on these topics should be continued.*

Realization of the research subject “Complex analysis of state and dynamics of nature ecosystems of the Berezinsky Biosphere Reserve, scientific support to its protection and sustainable use” in the frame of the state program “Biological diversity, biological and forest resources in terms of climate change and development of innovative environmental technology for the years 2016-2020” is continued. In accordance with this recommendation, the studies are conducted on the partitions: “Dynamics of structure of the forest ecosystems of the Reserve in the conditions of long-term regime of strict protection” and “Dynamics of phenomena and processes at the natural complexes of the Berezinsky Biosphere Reserve. “Nature records”.

An application on the topic “Dynamics of the structure and state of the broadleaved forests of the Berezinsky Biosphere Reserve in the conditions of climate change” has been submitted to the Belarusian Republican Foundation for Fundamental Research for a competition of fundamental research projects.

3. Site Management

The main activities planned for the current year as part of the Berezinsky Biosphere Reserve Management Plan for a five-year period (2015-2019) have been implemented. After annual audit conducted by the staff of the certificated organization FSC, the Berezinsky Biosphere Reserve has confirmed the certificate for the system of forest management and supply chain of FSC™ valid until the year 2020.

In the current moment 425 people work in the Reserve, 262 of them are financed from the state budget. Compared to the last year, there was an increase in staff by 8 people. Since the beginning of 2019 year 21 young specialists have been hired to work in the Reserve after graduation.

In the frames of measures implementation of the State program “Environment protection and sustainable use of nature resources for the years 2016-2020” structural repairs have been done at the Youth educational and ecological center based on a hostel at the central estate in the settlement of Domzheritsy, and it began operating. A single-family cottage type house has been built in Domzheritsy.

Financing from the state budget is 3.6 million Belarusian rubles in the yearly balance of the Reserve. A part of the monetary funds comes from tourism and other economic activities on the territories outside the Reserve.

Development of a comprehensive ten-year management plan for the Berezinsky Biosphere Reserve has been started, including its directive part for the years 2021-2025.

4. Boundaries

There has been a change of the boundaries of the Berezinsky Biosphere Reserve in the current year. According to the Presidential Decree of the Republic of Belarus from 26.07.2019 №279 «On changing the Presidential Decree of the Republic of Belarus from 09.02.2012 №59 «On Some Issues of Specially Protected Natural Areas Development», the Reserve's area has been increased by 880 ha and now stands at 86 072,8 ha (a new map of the Berezinsky Biosphere Reserve is attached to this report).

5. Other information

Employees of the Berezinsky Reserve took part in the work of the International scientific and practical conference devoted to 60-years anniversary of Kampinoski National Parc (Poland), and GYBN (Global Youth Biodiversity Network) Youth Voices Regional Capacity Building Workshop for Europe (Austria).

Berezinsky Biosphere Reserve extensively uses the logo of the European diploma. So, in presentations at the aforementioned events, this logo was used as well. At the official website <http://www.berezinsky.by/> in the sections “About the Reserve” and “Our partners” a logo and brief information on European Diploma award is given, as well as a link to the Council of Europe website. It is possible to acquaint oneself with the original document of the European Diploma awarded to the Berezinsky Biosphere Reserve in 1995 in the Museum of nature conservation history.

6. Natural heritage (general abiotic description: geomorphology, geology and hydrogeology, habitats, flora, fauna, landscape) – State of conservation

6.1. Berezinsky Biosphere Reserve is located in the temperate boreal nemoral zone. The territory of the Reserve totals 86 072,8 ha from the current year. Atmospheric precipitation and the level of water are close to standard. Abnormally warm autumn of the current year caused rebluming of the Cassandra (*Chamaedaphne calyculata*) on the bogs of the Berezinsky Biosphere Reserve.

6.2. For the period 2012-2019 more than 170 new places of growth of the plant species included in the Red Data Book of the Republic of Belarus have been identified, including the places of growth of 12 protected species new for the Reserve were found. In accordance with the Bern Convention criteria, 23 rare biotopes have been distinguished at the Reserve's territory.

6.3. For the period 2014-2018 the entomofauna of the Berezinsky Biosphere Reserve was replenished with the following new species: 32 species of the Beetles (*Coleoptera*), 4 species of the True bugs (*Hemiptera*), by 1 species from the orders *Megaloptera*, *Diptera*, *Odonata*, *Gastropoda*, including two species new to Belarus (*Machimus rusticus* and *Sialis nigripes*).

In 2019 the list of insects has increased on 24 new species: 11 species of the Beetles (*Coleoptera*), including a new to Belarusian list of species the water scavenger beetles *Hydrochus angustatus*; an invasive species the brown marmorated stink bug (*Halyomorpha halys*, *Hemiptera*); 2 species of the geometer moths (*Geometridae*, *Lepidoptera*); 6 species of Mosquitoes (*Culicidae*, *Diptera*), including the first mentioned for Belarus *Aedes mercurator*; 4 species of *Dryinidae* (*Hymenoptera*), that are new for Belarus as well.

For the period 2016-2018 years 4 species of birds new to the Reserve's territory have been added to the list of its avifauna: the tundra swan (*Cygnus columbianus*), the Savi's warbler (*Locustella luscinioides*), the collared flycatcher (*Ficedula albicollis*), the long-legged buzzard (*Buteo rufinus*). In 2019 the common firecrest (*Regulus ignicapilla*), the spotted redshank (*Tringa erythropus*) and the black-winged kite (*Elanus caeruleus*) have been discovered, registrations of which require approval of Belarusian avifaunistic commission. The black-winged kite is also a new species for the fauna of Belarus.

The white-tailed eagle (*Haliaeetus albicilla*) and the greylag goose (*Anser anser*) nesting has been confirmed, which allows to give them the status of very rare authentically breeding in the reserve species.

In 2019 ringing of the greater spotted eagle and the osprey chicks has been carried out. In one of the remote areas of the central part of the Berezinsky Biosphere Reserve on the outskirts of the large bog massif «Domzheritskoe» a living nest of the greater spotted eagle with two chicks was found, one of which was of very rare light morph *fulvescens* (which is distinguished by ochre colour). It is the first chick with such coloring of more than 200 greater spotted eagles ringed in Belarus.

7. Cultural heritage and socio-economic context

There is a permanent exhibition “History of the reserves of Russia and Belarus in XIX-XXI centuries” in the Ecological Education Centre. Since March 2019 there is a photo exhibition “Wildlife of Belarus”. Exposition of the exhibition is composed by the best works of the Belarusian Club of Wildlife Photographers.

At the Reserve's territory there was a torch relay route The Flame of Peace in the frames of the 2nd European Games 2019 in the Republic of Belarus.

At the territory of the central estate of the Berezinsky Reserve in 2019 was held the first international mythological festival “Tsmoks Way” with participation of the heroes of Slavic mythology. There were thematic platforms, play areas, musical groups performed during two days of the festival.

8. Education and scientific interest

8.1.1. In 2019 the infrastructure of leisure facilities in the tourist complex “Nivki” has been modernized (the heating network construction). Two types of promotional booklets were published, about ten kinds of souvenirs with the Berezinsky Reserve’s symbols have been produced.

8.1.2. During 10 months of 2019 year 23 123 visitors, including 3 118 foreigners, came to the Berezinsky Biosphere Reserve as tourists and excursionists for ecological education purposes. During this period 4 673 tourists, including 1 720 foreign guests, stayed in hotels and lodges. Burst of tourist activity is observed from May to August, while the largest number of visitors falls on July.

8.1.3. Among special visits, the following might be noted:

- Mrs. Blanca Ramos Losada, Council of Europe's expert (Spain);
- Mr. André Benchtein, Consul of the French Embassy in Minsk (France);
- Mrs. Alexandra Solovieva, Resident Representative of UNDP in Belarus (Russia);
- Mr. Hans Joosten, Secretary General of the International Mire Conservation Group (Germany), Mr. Dierk Michaelis, a teacher at the Institute of Botany and Landscape Ecology (Greifswald, Germany);
- Mr. Ülo Väli, senior researcher of Institute of Agricultural and Environmental Sciences, Estonian University of Life Sciences (Estonia).

8.2.1. As part of scientific research «Distribution analysis and assessment of status of the rare plant species and rare biotopes in the Reserve» confinement of rare species to different biotopes is established in accordance with the Appendix I of Bern Convention. As part of topics “Analysis of modern state and perspectives of development of theriocomplexes of the Berezinsky Biosphere Reserve”, “Analysis of modern state of diurnal birds of prey on the territory of the Berezinsky Biosphere Reserve” and “The state of the entomofauna of the Berezinsky reserve’s mires as exemplified by dragonflies, orthoptera and true bugs” the rare species of fauna are evaluated in accordance with the Appendices II and III of Bern Convention.

8.2.2. The reserve workers participated in 6 international conferences, 7 seminars, 2 forums and 5 exhibitions, including 4 abroad (Russian Federation, Austria, Poland). On the base of the Reserve 12 international and national conferences, scientific and educational seminars took place, including the seminar «Biological diversity and traditional knowledge on the use of genetic resources - the basis for the conservation of natural resources and human health» in the frame of the Global UNDP-GEF Project “Strengthening of Human Resources, Legal Frameworks and Institutional Capacities to Implement the Nagoya Protocol in the Republic of Belarus” (2018-2019).

23 scientific articles were published. A collection of scientific articles “Special Protected Territories of Belarus. Part 14” with the size of 224 pages has been issued.

In 2017 the State Nature Protection Institution «Berezinsky Biosphere Reserve» accredited by the State Committee for Science and Technology and the National Academy of Sciences of Belarus as a scientific organization for the period till November 29, 2022.

9. Site description (vulnerability, protection status, ownership, documentation)

9.1. The new Law of the Republic of Belarus “On Specially Protected Natural Areas” has been passed, which was put in force on June 16, 2019. Since January of this year, the new Forest management project of the Berezinsky Biosphere Reserve for the years 2019 – 2028 has come into effect.

9.2. Protection status has not changed.

9.3. During the forest planning of the Reserve, the special areas have been allocated on its territory which are designated for the Reserve’s functioning in accordance with the Statute of the Reserve.

10. Site management (management plans, budget and personnel)

10.1.1. A census of the background animal species was taken for fauna control purposes.

During 2016-2018 closed and open type nesting platforms have been installed for diurnal and nocturnal birds of prey: falcons, the osprey, the greater and lesser spotted eagles, the great grey owl, the ural and tawny owls, the pygmy and boreal owls. In total about 75 bird boxes have been installed.

Small shrubs, reeds and grasses were mowed on the square 10.6 ha, the balling equipment was bought.

The Sosnowsky's hogweed, the Canada goldenrod, the wild cucumber have been repeatedly mowed on the square of 2.29 ha, the Sosnowsky's hogweed was dugged up on the square of 0.06 ha.

10.1.2. During 2019 the plan to protect the Berezinsky Biosphere Reserve from forest fires was fulfilled, including air patrol, search for sources of ignition in the forest ecosystems, and identification of forest pest foci – the ipid bark beetle – with the help of quadcopter. Ground control, maintenance of fire-breaking lanes (168 km) and serving them (352 km) have been conducted.

In 2019 there were registered three fires with the total area of 2.82 hectares within the Reserve's area due to careless handling of fire (smoking) and due to lightning discharge. It is planned to purchase a video camera with a wide range of capabilities for visual detection of forest fires, with a function of determining coordinates, allowing to determine location of a forest fire in a short time.

10.1.3. 110 information billboards, 7 posters, and 5 barriers were erected, 20 barriers were repaired on the roads within the Berezinsky Reserve. 4 bridges on the rivers of the Reserve have been constructed.

10.1.4. It is planned to purchase materials and to arrange shelters on the black grouse lak for scientific research, observations and environmental excursions purposes.

10.1.5. In 2019 the forest was cleaned out of household garbage along the roads within the Berezinsky Reserve's territory in the amount of 14 cubic meters.

10.1.6. From October 2016 the solar power station with total capacity 2.5 kW p.h. has been installed and is fully operational there. During the period from October 2016 till February 2019 energy saving, got by conversion the solar energy into electrical energy, has amounted to more than 2000 kW p.h.

10.2.2. Protection personnel of the Berezinsky Biosphere Reserve counts 157 persons.

10.2.4. During 10 months of 2019 year, 218 cases of violation of the protective regime in the Berezinsky Reserve have been registered. Totally 28,26 ths Belarusian rubles of fines have been imposed.

II. INFLUENCE OF THE AWARD OF THE EUROPEAN DIPLOMA FOR PROTECTED AREAS

Council of Europe's expert has carried out the international expert review of compliance with resolution requirements of the European Diploma for the Berezinsky Reserve for the years 2010-2020.

Renewal of the European Diploma raises the status of the Berezinsky Biosphere Reserve, aids to form its international image, helps to strengthen the protective regime of the territory, and improves scientific research and ecological education.

Director of the Berezinsky
Biosphere Reserve



Andrej M. Prokoshin