

BIALOWIEZA FOREST

“BELOVEZHSKAYA PUSHCHA / BIALOWIEZA FOREST”

WORLD HERITAGE SITE (33 BIS)

PROPOSED MODIFICATION OF THE CRITERIA AND BOUNDARIES

CHANGE OF THE NAME OF THE PROPERTY

**Nomination Dossier to the UNESCO for the Inscription
on the World Heritage List**

2012

Applicant Body

Republic of Poland

In agreement with Republic of Belarus

Coordination

Białowieża National Park

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Executive Summary

State Party

Republic of Poland

In agreement with Republic of Belarus

State, Province or Region

Belarus – the South – West of Belarus, Brest Region and Grodno Region

Poland – the North – East of Poland, in Podlasie Province, southeast of Bialystok

Identification of the property

Bialowieza Forest

Modification to the property inscribed in 1979, Bialowieza National Park (ref. 33),
and enlarged in 1992, Belovezhskaya Pushcha / Bialowieza Forest (ref. 33 bis)

Geographical Coordinates

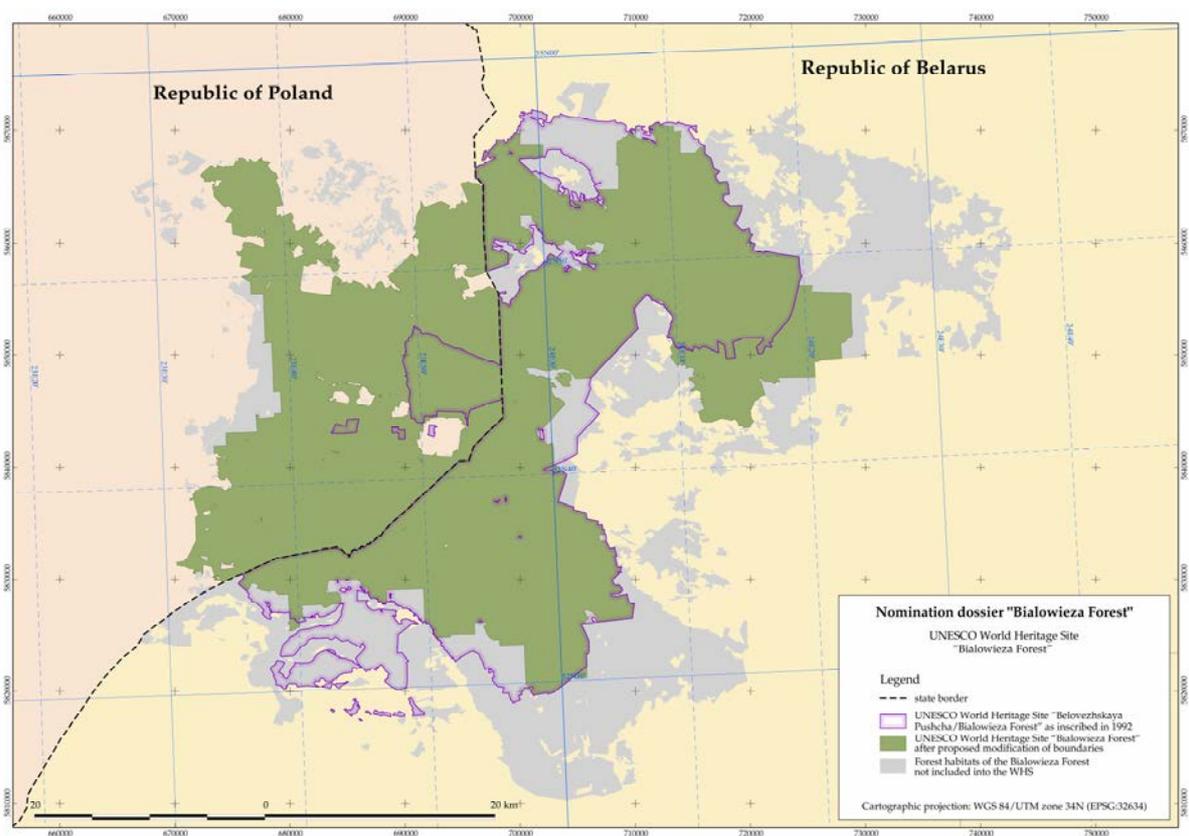
| | Latitude | Longitude |
|--------------|----------|-----------|
| North – East | E24.3317 | N52.9587 |
| Central | E23.8988 | N52.7326 |
| South – West | E23.5127 | N52.4748 |

Written description of the boundaries of the property after proposed modification

The boundaries of the property after modification follow basically the line of forest. In Belarusian part it is the line of the strictly protected area, including the Dikoye Marshes.

In Polish part the borders of the property after modification follow the borders of the II zone of the Biosphere Reserve. All the bigger glades and clearings are not included into the boundaries of the World Heritage Site but are situated in the buffer zone. The boundaries are compact and clearly defined.

Boundaries of the World Heritage Site from 1992 and after modification and its buffer zone.



Justification

The World Heritage Committee has acknowledged the exceptional value of the Bialowieza Forest upon inscription in 1979 of the Polish property "Bialowieza National Park" (33). Among the first twelve Sites inscribed onto the World Heritage List in 1978 just four were natural properties. A year later, during the third session of the World Heritage Committee, nomination of the Bialowieza National Park was the fourth examined and the first

natural one. One should bear in mind that the Bialowieza National Park was the fifth natural property inscribed onto the World Heritage List.

Proposed Statement of Outstanding Universal Value

The “Białowieża Forest” World Heritage Site straddles the border of the Republic of Poland and the Republic of Belarus. The site protects the unique temperate deciduous forest of primeval character with additional mixed and pure coniferous stands. This is the remnant core of the forests which prevailed in Europe in the past. The Site is characterized by the presence of rare fauna of forest dwelling birds, saproxylic invertebrates and fungi. The natural processes have been running here unbroken for thousands of years. It is the last place where the largest terrestrial mammal of Europe, the European bison, survived in wild until the beginning of the 20th century. The Białowieża Forest is now home to the largest free-roaming herd of the European bison. Exceptional biological diversity as well as a high number of relicts of primeval forests characterize the Site.

The size of the Site ensures that all stages of natural forest development are present. The proposed boundaries guarantee the continuity of the ongoing natural processes as well as a favorable conservation status of a whole range of communities and species forming the unique diversity of the ecosystem. The mosaic of natural phenomena and its’ dynamic as well as the rich and diverse habitats are of outstanding international importance as an essential habitat for numerous species typical of natural forest ecosystems of temperate climate zone.

The Site encompasses over sixty thousand hectares of forest under a strict legal protection regime on both sides of the border (IUCN category I). It is surrounded by more than one hundred thousand hectares of forest of varying protection regimes as well as a production forest which serves as the buffer zone.

The joint management framework for the World Heritage Site presents main aims and objectives of the management of the Site. Each of the managing authorities acts according to

long term management plans and the annual plans of activities, taking into account the joint management framework.

The undisturbed wild nature is basic principle for the management. The unique combination of habitats, species and ecological processes is respected; the old-growth natural forest of primeval character prevails and is the object of special consideration. With respect to hydrological conditions, the main aim of management is to maintain the existing hydrological regime. The management of water ecosystems of artificial origin will be maintained with the view to sustain long-term and stable persistence of the existing plant and animal water and water-dependent communities. Timber exploitation for economical purposes is banned.

Research on natural processes and biodiversity is carried out and the results are shared among organizations and the general public. Experiments which might cause irreversible alteration of the environment and natural processes or threaten unique forms of plants, fungi, animals and landscapes are prohibited as well as the introduction of alien species. Visitors are admitted exclusively in a way that has no impact on the Site's natural value while more intensive tourism and recreation is channeled to the buffer zone.

Proper measures to reduce the risk of disaster, in particular the risk of fire, have been implemented.

Criteria the property is proposed for inscription

Criterion ix: outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals.

Climatic conditions and biological processes were the basic factors shaping the ecosystems of the Białowieża Forest. Due to centuries of restricted access human impact on the environment has been severely limited. A large part of the Białowieża Forest, undestroyed

by the exploitations of World War I, and since then protected under a strict regime or managed through a very limited intervention, maintained the continuity of these biological processes. The forest stands have a characteristic multi-layered and multi-aged structure. The dominant processes of fluctuation and regeneration ensure permanent linkages between the components and the environment. These processes also secure the active role of biotic factors, which include: the toppling over of trees and the appearance of overgrowing vegetation, rooting by wild boars, direct impact of herbivores (such as red deer, roe deer, moose, and European bison) on the Forest, and the relationship between herbivores and carnivores. All of these factors support the emergence of innumerable niches, particularly for cryptogamous plants and invertebrates.

Processes of vegetation dynamics

The dominant processes of fluctuation and regeneration ensure permanent linkages between components and the environment as well as the active role of biotic factors. The latter include the toppling over of trees and appearance of overgrowing vegetation, rooting by wild boar, direct impact of herbivores such as red deer, roe deer, moose and European bison on the forest and the relationship between herbivores and carnivores.

Network of relationships – big animals

The Bialowieza Forest is home for the whole community of ungulates native for the area (except for the mountain species), large predators such as lynx and wolf as well as typical forest dwelling birds. The park has a strong population of owls and woodpeckers, among of which particularly interesting are white-backed woodpecker and three-toed woodpecker which are typical species of natural old growth forests. All these species function within a complicated and complex network of dependence. This is one of few areas worldwide where trophic relationships between plants, herbivore and predators can be observed unmodified by human activity, along with sharing of ecological niches between related species.

Network of relationships – coarse woody debris

Dead wood holds the vital importance for forest carbon budgets as well as is invaluable wildlife resource. Dead wood appears in many forms, sizes and positions including standing dead trees, dead branches in the canopy trunks and branches on the ground. Wood is difficult to decompose. It is built mainly of cellulose, hemicellulose and lignin. In boreal and boreo-nemoral forests, polypores are the most important decomposers of dead trees. Decomposition of a tree is a process that leads to disappearance of the habitat of some species. To persist, the decomposer species must be able to disperse to a new habitat patch (dead wood unit of suitable quality) within a finite time-scale. In forests under natural disturbance dynamics without human exploitation of wood, the input of dead wood is more or less constant in relation to the life-spans and dispersal abilities of decomposer species.

Exceptional dimensions and age

Most of the old growth tree species present here are distinct from their counterparts in Europe in terms of their height and breast-height diameter. Exemplary data are presented in the chapter 2. Description. The trees live here until natural death and the forest stands have a characteristic uneven-age and multi-layered structure.

Criterion x: Contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.

Most of the Site's area is covered by oak-lime-hornbeam forest *Tilio-Carpinetum* – a forest habitat of high value for nature protection in the temperate zone. The majority of forest habitats protected by law on both sides of the Polish-Belarusian border exhibit a primeval character which gives the Site an exceptional value. Moreover, a great deal of dead wood present in each of the habitat types provides a very specific and unique microhabitat for

numerous species, most of them endangered, threatened or rare. Despite a relatively good knowledge of the biological diversity of Europe, new species of fungi or invertebrate fauna are discovered in the Białowieża Forest, almost every year. The Forest is also home to a whole range of ungulates present in Poland (with the exception of mountain species), large predators such as lynx and wolf as well as typical forest dwelling birds. The Forest has a large population of woodpeckers, among which the white-backed woodpecker and the three-toed woodpecker, which are typical species of old and natural tree stands, are particularly interesting.

The European bison

It is the last place where the largest terrestrial mammal of Europe, the European bison, survived in wild until the beginning of the 20th century. The Białowieża Forest is now home to the largest free-roaming herd of the European bison. In the whole of the BF there are almost 900 individuals.

Big animals

The Białowieża Forest is home for the whole community of native ungulates of central European lowlands, large predators such as lynx and wolf as well as typical forest dwelling birds. The park has a strong population of owls and woodpeckers, among of which particularly interesting are white-backed woodpecker and three-toed woodpecker which are typical species of old and natural tree stands.

Cryptogamus species

Exceptional biological diversity as well as a high number of relicts of primeval forests characterize the Site. Despite relatively good knowledge of biological diversity of Europe, almost each year new species of fungi or invertebrate fauna are discovered. Species diversity is best studied for cryptogamous plants. The virgin forest is extremely rich, in particular, in wood inhabiting fungi and majority of species are rare or very rare, practically extinct from

cultivated and managed forest areas in the whole of Central European Plain. This richness is an evidence of the paramount importance of the BF as genetic reservoir of threatened species. From the mycological point of view, BF is the most valuable single forest area in the northern hemisphere. Diversity of sizes and ages with occurrence of very old trees accompanied by the occurrence of dead wood (standing or fallen), in different stages of decay distributed in the whole BF creates possibility of continuous persistence of saproxylic species. Furthermore, “dead wood” is not a homogeneous habitat type but rather a collective term – similar to “forests” – for a range of habitats. These habitat types, or microhabitats, include, for example, different tree species of different trunk diameters at different stages of decay. During the decomposition process, the decomposers further alter the structure, moisture and chemistry of the decaying trees and thus create new niches for other saproxylic species. Also, the variety of decomposition pathways involves successions of different fungal species, and this also contributes to the variety of microhabitats in the trunks at advanced stages of decay.

It is certain that the forest still holds many mysteries and offers immense possibilities to natural sciences.



Designation of the responsible local authorities and contact data

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Introduction

The present re-nomination dossier proposes the modification of the already inscribed World Heritage Property “Belovezhskaya Pushcha/Bialowieza Forest” (33bis). The changes concern criteria, boundaries as well as change of the name of the property.

Change of the name of the property into Bialowieza Forest

World Heritage Committee inscribed on the List of World Heritage Sites in 1979 a part of the Bialowieza Forest, situated in Poland, under the name “Bialowieza National Park”. Then, in 1992, the Site was enlarged and incorporated a large Belarusian part of the Bialowieza Forest. The Transboundary World Heritage Site “Belovezhskaya Pushcha / Bialowieza Forest” was created.

At present, the State Parties present the re-nomination dossier with new proposition of the name of the property. State Parties agreed that the name “**Bialowieza Forest**” is simple and easily recognized worldwide and therefore propose the new name.

Modification to the boundaries

According to suggestions of the experts visiting the Site in March 15 – 19, 2004, the boundaries of the Site should be changed. It is suggested that the separate areas now belonging to the Site (Polish part) such as The Palace Park (the area of 49.04 ha) and the European Bison Breeding Centre (the area of 274.25 ha) should be excluded as according to the report of the Joint UNESCO/IUCN Mission to Belovezhskaya Pushcha/Bialowieza Forest do not carry World Heritage values. The World Heritage Site should be enlarged, however. We agree with the statement that the Palace Park (the area of 49.04 ha) does not carry the World Heritage values. Nevertheless, we are convinced that the European Bison Breeding

Centre (the area of 274.25 ha) is the unique place for the restoration and conservation of the European bison. That is the place where the process of species restoration started. The area is embedded into the forest complex and within the new proposed boundaries it forms one continuous area. We propose that the re-nominated property should encompass all forests of natural character of the Bialowieza Forest. The mission of experts taking place in 2008, October 21 – 25, also recommended to modify the boundaries. It was suggested that certain areas which at present fail to meet the currently existing stringent requirements for conservation areas are nonetheless important in terms of making the boundaries of the proposed Site more compact. The Mission also pointed out that the existing site fails to sufficiently reflect the biological and landscape diversity of the entire Bialowieza Forest natural complex. With its insignificant size the Site does not suffice to ensure long-term sustainable management of the Site. In Belarus, the boundaries will encompass the best preserved part of the natural forest that is subject to the most stringent conservation regulations due to its historic and natural value. It is an area overgrown with the old-age forest that historically constitutes the core of the Bialowieza Forest and ‘Dikoye’ complex, made up of lowland and transition bogs. The aggregate area of the Belarusian section of the Site will be total 82 309 ha. After the modification of the boundaries Polish part will cover 59 576 ha. For the existing and proposed boundaries of the Site please refer respectively to maps 1.4 and 1.5.

Adding new criteria

We suggest that the whole Site should be nominated on the basis of new criteria which are more adequate for the Site. The property has been nominated on the basis of the natural criterion iii (at present criterion vii). We are convinced, however, that it meets the criteria ix and x (see below ‘Justification for outstanding universal value’). We suggest change of the criteria as we believe that as far as nature conservation is concerned, the criteria ix and x are

much more adequate to the site which was one of the first protected areas in Europe, even before the concept of the national park was introduced in this part of Europe. The Bialowieza Forest is known in the world mainly for its unique flora, fauna and unbroken natural processes which are studied carefully by the researches from all over the world. We believe that new criteria will reflect better the outstanding universal values of the Site.

Acronyms

BF – Bialowieza Forest

NP“BF” – National Park “Bielawiezska Puszca” (Belarus)

RDSF – Regional Directorate of State Forests (Poland)

FPC “BF” – Forest Promotional Complex “Bialowieza Forest” (Poland)

BNP – Bialowieza National Park (Poland)



1. Identification of the Property

1.1 Country

Belarus/Poland

1.2 Province

The site is located in:

- Belarus: in South-West of Belarus, Brest Region and Grodno Region
- Poland: in the North-East of Poland, in Podlasie Province, southeast of Bialystok

1.3 Name of the site

Bialowieza Forest

At present, the site is called the Belovezhskaya Pushcha/Białowieża Forest (33 bis).

Nevertheless, in this re-nomination dossier we propose the name “**Bialowieza Forest**”.

1.4 Maps and geographical coordinates

Geographical coordinates to the nearest second

| | Latitude | Longitude |
|------------|----------|-----------|
| North-East | E24.3317 | N52.9587 |
| Central | E23.8988 | N 52.7326 |
| South-West | E23.5127 | N52.4748 |

Fig. 1.1. Situation of the Bialowieza Forest in Europe.

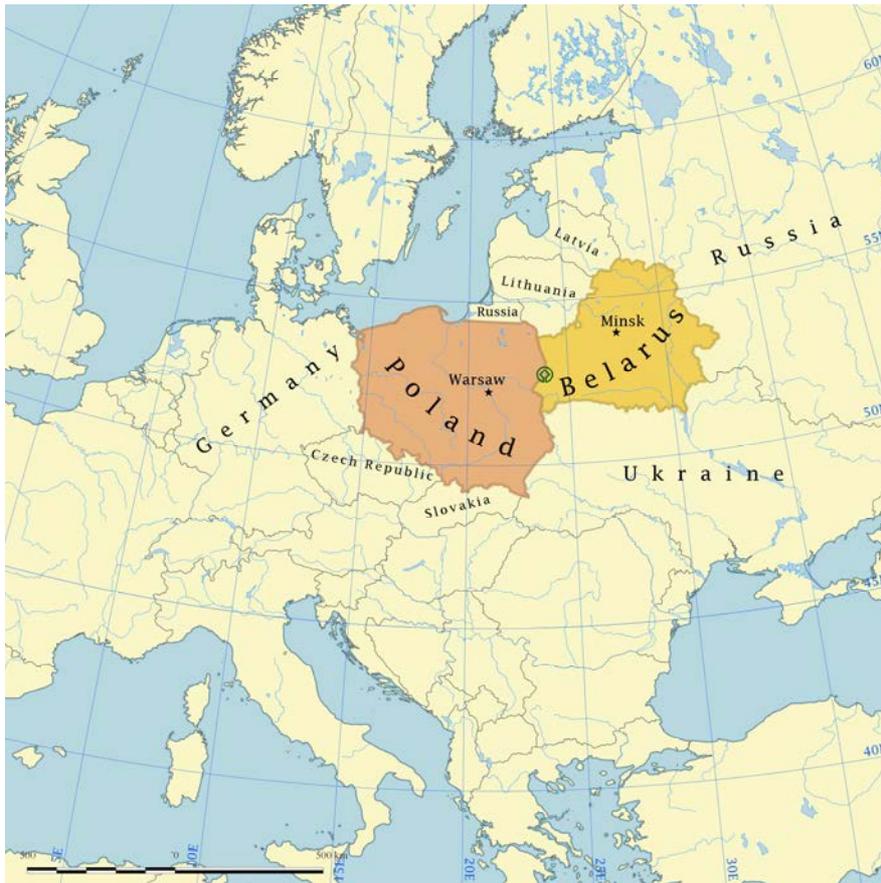
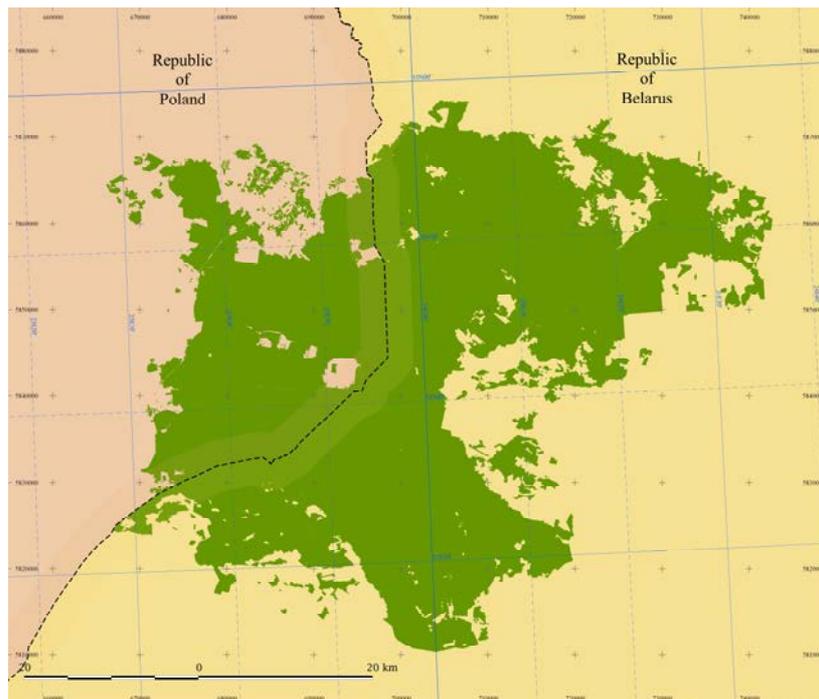


Fig. 1.2 Situation of the Bialowieza Forest in the region.



1.5 Map of the site

Fig. 1.3. Map of the Site as inscribed in 1979.

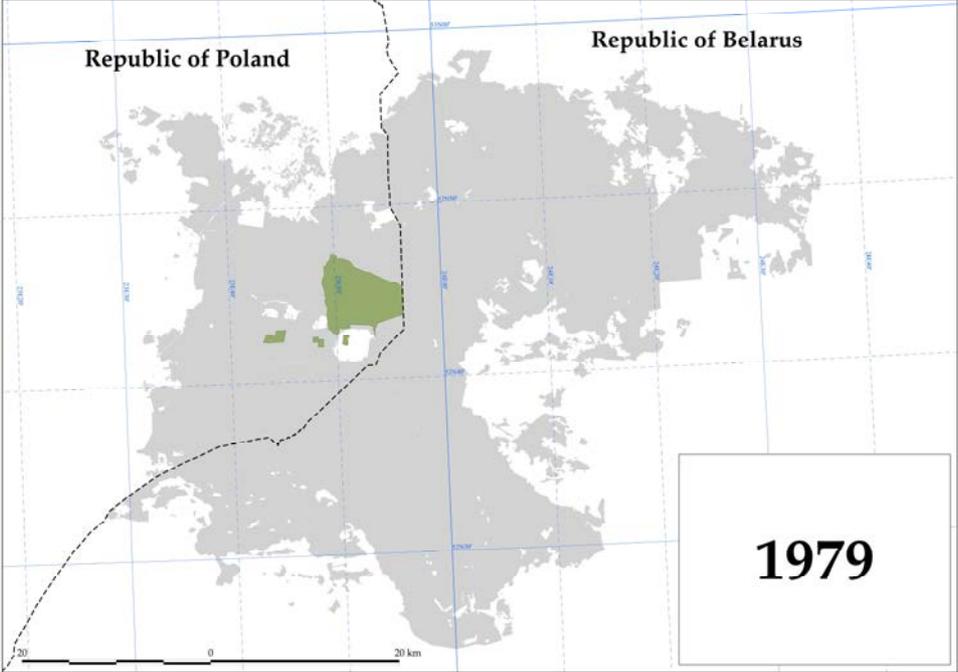


Fig. 1.4. Map of the Site as enlarged in 1992.

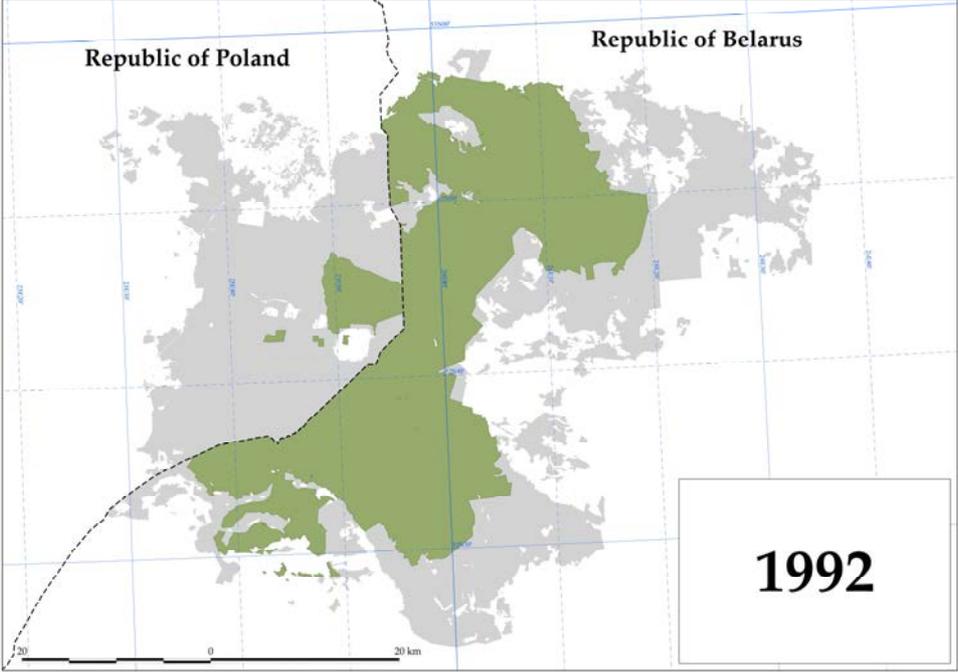
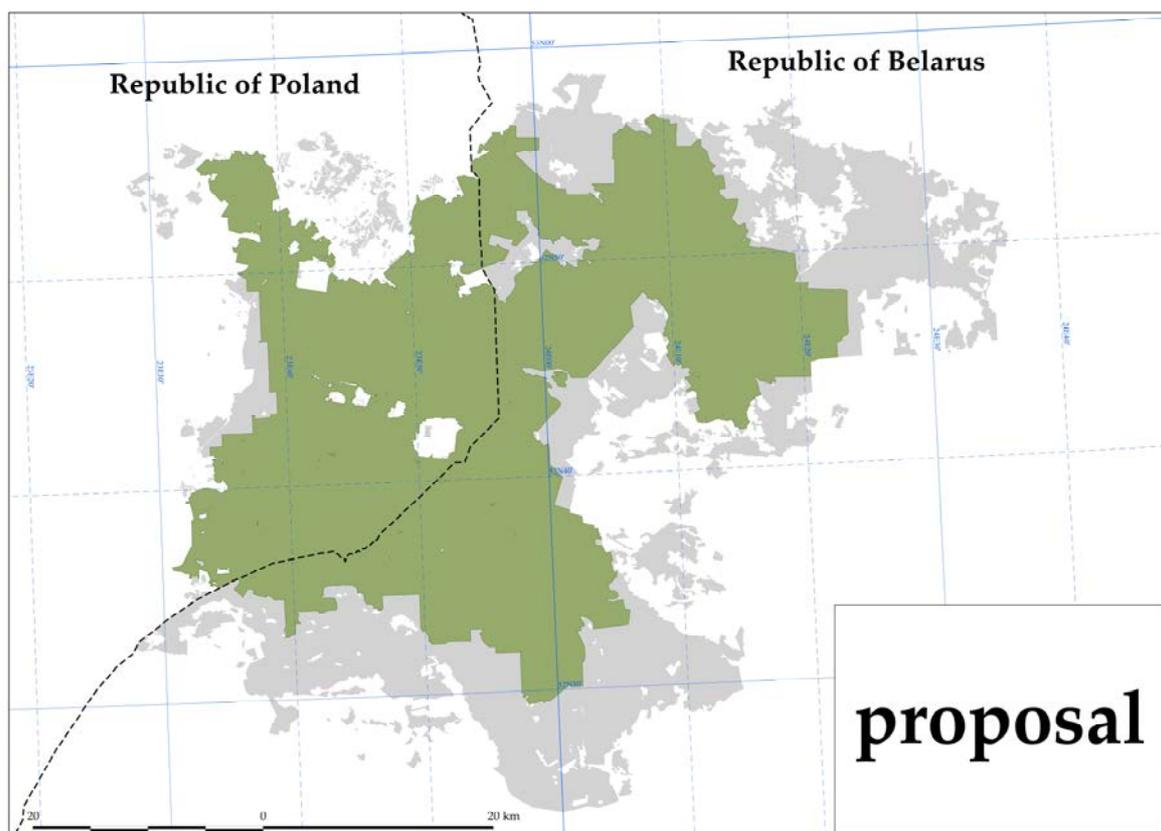


Fig. 1.5. Map of the Site after proposed modification.



1.6 Area of the nominated property and buffer zone after proposed modification

The area of the Property after proposed modifications: **141 885 ha**

The area of the buffer zone: **166 708 ha**

Total area: **308 593 ha**

2. Description

2.1 Description of the site

2.1.1 Geology, geomorphology and climate

The physio-geographical situation of the Bialowieza Forest is classified by Kondracki (1978) as follows:

Physio-geographical territory: East Europe

Province: West Russian Lowland

Subprovince: Podlasie – Byelorussia Uplands

Macroregion: North Podlasie Lowland

Mesoregion: Bielsk Plain

The BF lies at the boundary of West and East Europe in the neighbourhood of the great swamp complex of Polesie.

The land of the entire Bialowieza Forest has been overlain by the Scandinavian ice sheet during the maximum Pleistocene glaciation, which was situated on a large part of Europe.

Pre-Anthropogenic deposits generally include the Neogene/Paleogene systems with individual Cretaceous and Jurassic deposits. Anthropogenic deposits primarily include fluvio-glacial deposits with morainic sedimentations occurring in the southern part, marsh and lacustrine-alluvial deposits in the northern part and alluvial deposits along river valleys. Predominating forms include thick glacial and fluvio-glacial deposits of consecutive glaciations and fluvial deposits of considerable thickness on local spots. The latter sometimes have locally fossil floras which occur in deposits sometimes decametres thick and belong to different stages (Mojski 1985).

As BF occupies the higher part of Neman, Bug and Pripyat watershed (Baltic/Black sea basins watershed). It is a hilly plain which undulating terrain was formed by fluvioglacial sandy and sandy-pebble deposits after the last glacier has retreated. The mean altitude of Forest's prevailing part ranges within 160 – 180 m above the sea level. The minimum altitude is 134 m above mean sea level and the maximum is 202 m AMSL.

Geomorphologically, the territory of the National Park, according to the Belarusian classification, lies at the juncture of two geomorphological regions, i.e. Predpolesye plains and Belarusian Polesye. The NP'BP' covers three geomorphological regions. The southern part belongs to Pruzhany fluvioglacial/morainic plain with marginal glacial faces while the northern part belongs to Kossovo morainic/fluvioglacial plain with marginal glacial faces. Both regions belong to Predpolesye plains. The central part of the Bialowieza Forest (forestr administration units located in the Narev River's floodplain and the small southern part located in the Yaselda River's floodplain) belongs to the Belarusian Polesye and is a part of the Narev/Yaselda lacustrine-alluvial plain. Westwardly, 10-15 km wide Narev/Yaselda lacustrine-alluvial plain stretches along the Narev River till the Polish border.

The geomorphologic values of Polish part are dominated by flat plains of biogenic accumulation, which occur along the rivers and their branches, and flat plains of ground moraine. Spread through the park, there are undulating plains of ablation moraine. North of the Hwozna and Northwest of the Narewka and at a few small patches in the middle of the Park, flat plains of eolic accumulation occur. Small patches of sand dune hillocks are formed in the part north of the Hwozna and northwest of the Narewka.

BF belongs to the boreo-nemoral biogeographical region and is situated in the transition area between continental and sub-boreal climate zones. Some Atlantic climate elements are perceptible here as well. With moderately warm and humid climate such an extensive forest

complex composes a specific microclimate which implies reduced wind speed, high air humidity and a moderation of extremes of temperature (Prusinkiewicz 1998).

Climatic conditions differ slightly between western and eastern part. The mean annual air temperature for Bialowieza (western Polish part) in the period of 1986 – 2007 was 7.1°C. In January the mean temperature was -3.0°C and in July 18.3°C, but winters can easily reach lower than -20°C and summers can easily reach above 20°C. The lowest temperature ever recorded was -38.7°C (in 1950) and the highest 34.6°C (1994). The absolute amplitude was 73.3°C. In the eastern part, however, the average annual air temperature is 6.7 °C, ranging from 5.1 °C to 8.5 °C, with the absolute maximum of 36.4°C and the absolute minimum of -40.1°C. The warmest month is July (17.4°C) and the coldest one is January (-4.5°C).

The mean annual precipitation in period of 1986 – 2007 was 606 mm (data from meteorological station in Bialowieza). Data on annual precipitation from meteorological station in Kamieniuki (Belarus) for the 53-year period give mean precipitation of 652.7 mm (401.8 – 994.5 mm). The mean period of snow cover is 92 days/year but varies widely. Extremes are 132 days of snow cover and almost no snow at all. On average the first snow cover is registered on 23 November and it disappears on April 2.

Spring and summer start later than in the centre and west of Poland, while autumn starts significantly earlier. The vegetation season (days with air temperature over +5) lasts about 205 days, which is a whole month shorter than at the western border of Poland. However during last decade the average length of the vegetation season was 219 days. (Olszewski 1986, Malzahn et al. 2009).

Prevailing winds include western, north-western and south-western ones. Winds are generally moderate; however, sometimes they may be of substantial force, even heavy winds occur that cause windfalls and windbreaks especially in spruce forest stands when the soil has

thawed out and there are no leaf-bearing trees. Remarkable windfalls and windbreaks took place in 1980, 1982, 1983, 1986 and 2005.

2.1.2 Hydrology

The continental watershed between the Baltic and the Black Seas, in which the Bialowieza Forest is situated, runs along the north-eastern edge of the BF in Belarus. The main part of the BF belongs to the Vistula catchment. The central and northern waters are carried to the Vistula by the Narew River and its tributaries. The south-western and western parts are drained by the Lesna River which flows southwards to the river Bug which joins the Narew north of Warsaw. The Niemen-catchment approaches the north-eastern border of the Swislocz Forest at the drainage basin to the river Ross. The Yaselda River, belonging to the Dniepr catchment, carries the waters east.

The Narew River, the largest one of the Bialowieza Forest, has its source in the central-eastern part of the forest, in Dikoye marshes. The Narew river plays an extremely important role in the process of forming the hydrologic conditions in the Forest's northern part.

There are some other rivers in the western part of the forest such as: Hwozna, Lutownia and Orlowka. The Narewka and the Hwozna border the area strictly protected since the year of 1921. The small and short Orlowka river has its source in the southeast of the Park. It streams west to join the Narewka. The entire length of Orlowka is situated within the strictly protected area.

Svisloch is the Dniepr river's tributary and have its sources near the Forest's northern limits while the source of the Yaselda River that is the tributary of the Pripyat flowing into the Dniepr river is at the north-eastern skirts. There are no natural lakes in the BF. Land reclaiming operations that took place in previous decades resulted in a number of relatively

large artificial water bodies, i.e.: Lyatskie, Khmelevskoye, Sipurka, Pererovnitsa, and Kolonna.

Some fragments of rivers have been straightened and canalized in the past. Some of the swampy areas got drained and sometimes dried out. The most recent and active water management activities were related to land reclamation operations that took place in the Republic of Belarus in 1960s – 1980s. Most land reclamation facilities lie along southern and eastern borders of the National Park “Bialowieza Forest”.

2.1.3 Soils

Soils of the BF represent various types – from poor sands through loam to peat soils. In the western part of the forest loam soils overgrown with deciduous forest predominate while in the eastern part poor soils with coniferous and mixed forest are most abundant. The soils of the BF belong to the divisions of: Autogenic soils, Semi-hydrogenic soils, Hydrogenic soils, Alluvial soils and Antropogenic soils.

Brown forest soils predominate in the sandy gravel elevations of the ablation plateau. Within this class of soils the following types are met: leached brown soil, podzolized brown soil, crypto-podzol soil and rusty soil. In clay formations typical lessive soils and podzolized lessive soils are met. Small areas of pararendzinas soils occur in carbonate gravels of some kame hills. Eolic plains and dune sands are dominated by podzol soils (podzolized rusty soils, podzol soils (xero-podzol) and podzolized ranker soils). Flat plains with shallow ground water are covered with podzol soils and gley-podzol soils. High moor peat bog soils, transitional peat bog soils and peaty gley-podzol soils are also present around boggy depressions. On the sloping surfaces gley soils predominate but gleyed lessive soils and podzolic gley-soils are also present. Along the river beds the reed-sedge soils of low moor and transitional peat bog soils stretch. Along the edge of moraine plateau the alder peat-bog soils and muck-peat soils

appear. In water-logged depressions semi-boggy soils are met, including muck-mineral soils, black-earth soils, gley-soils and muck soils (Kwiatkowski 1994).

2.1.4 Flora

The BF is situated in the Central European Plain in the transition zone of the European deciduous forests and the Eurasian coniferous forests. The terrain is lowland in character – there are no major geographical boundaries such as mountains or sea. It resulted in free dispersal of plants and lack of isolation of populations. Therefore there are no endemic species in the BF. There are, however, relicts of times when different flora, reflecting other climatic condition, dominated. The following species can be listed as relicts of cooler periods: *Salix myrtilloides*, *Saxifraga hirculus*, *Swertia perennis*, *Betula humilis*. On the other hand, *Hordelymus europaeus* and *Hedera helix* are the relicts of warmer and wetter climate. There are over 1060 vascular plant species present in the BF. Among them the most impressive ones are tree species reaching here exceptional dimensions and age.

Tab. 2.1. Exceptional dimensions of trees in BF.

| Species | Maximum age (years) | Height (m) | BHD breast height diameter (cm) |
|---------------------------|---------------------|------------|---------------------------------|
| <i>Picea abies</i> | 300 + | 57 | 140 + |
| <i>Pinus silvestris</i> | 377 + | 45 + | 130 + |
| <i>Quercus robur</i> | 500 + | 45 + | 237 |
| <i>Tilia cordata</i> | 350 + | 40 + | 185 + |
| <i>Fraxinus excelsior</i> | 350 + | 40 + | 160 |
| <i>Salix caprea</i> | 75 + | 32 + | 57 |

The BF flora includes 58 shrub and 14 undershrub species. The following species are common in broad-leaved and coniferous forest undergrowth: *Corylus avellana*, *Euonymus verrucosa*, and *E. europaea*, *Daphne mezereum*, *Frangula alnus*. In coniferous forests there

are *Juniperus communis*, *Cytisus ruthenicus*, *Calluna vulgaris*, *Genista tinctoria*. The most numerous is the group of herbaceous plants counting for almost 90% of vascular plant species.

The list of vascular plants with rare, endangered and protected species is enclosed in the Annex 2.

It is estimated that there are 402 lichen species in the BF. The exact number is difficult to give as some species present here 50 years ago were not observed in the last decade while some new species were described (Cieśliński, Tobolewski 1988).

Recent data show that the BF has over 230 bryophyte species, 71 liverworts and 2 antocerotes.

According to Tishchikov (1996), water bodies and water courses support all main groups of phytoplankton and are characterized by high taxonomic diversity (over 200 species). The phytoperiphyton community includes 250 species. Diatoms and green algae prevail in both groups.

2.1.5. Vegetation types of the Bialowieza Forest

The present combination of forest types of the BF is characteristic of the denudation plains in the eastern part of the postglacial North European Lowland. The characteristic combination consists of mesotrophic oak-linden-hornbeam forest, meso-oligotrophic oak-spruce-pine forest, oligotrophic pine forest, and a small participation of spruce forest (Faliński 1986). All types of forest communities possible in the given geographical situation are present in the BF.

The Bialowieza Forest is a large indiscrete area with low-disturbed natural vegetation that mainly includes old-aged deciduous and coniferous forests. The forest vegetation in the BF is dominated by fresh oak-linden-hornbeam forest (*Tilio-Carpinetum*). The second most

significant forest community are ash-alder flood plain forests (*Circaeo-Alnetum*) along the rivers and branches of rivers, and bog-birch forest (*Thelypterido-Betuletum pubescentis*) in dead-ice hollows and boggy river benches. This type is close to bog-spruce forest (*Sphagno girgensohnii-Piceetum*) in dead-ice hollows and boggy river valleys.

Other forest communities are thermophilous oak-hornbeam forest (*Melitti-Carpinetum*), thermophilous pine-spruce forest and mosaics of humid pine forest (*Vaccinio myrtilli-Pinetum*), fresh pine forest (*Vaccinio vitis-idaeae-Pinetum*) and bog-pine forest (*Vaccinio uliginosi-Pinetum*).

Larger and smaller patches of alder-spruce forest, bog-alder forest (*Carici elongatae-Alnetum*), humid oak-spruce forest (*Quercu-Piceetum*), pine-spruce mixed forest (*Calamagrosti anundinaceae-Piceetum*), pine-oak mixed forest (*Pino-Quercetum*), thermophilous-oak forest (*Potentillo albae-Quercetum*), eutrophic oak-linden-hornbeam forest and the types mentioned before, are spread through the Bialowieza Forest.

A considerably large area of Dikoye bog of transition type occupies the north-eastern part of the Site. Non-forest ecosystems contain natural bog areas. The boggy ecosystem structure includes lowland hollow bogs with the prevailing gramineous/sedge and mixed herb/sedge associations. Some boggy areas were changed as a result of reclamation operations; they are currently used as hayfields, pastures and arable lands. Water habitats (rivers, water passages, channels and stagnant water bodies) cover small area of the Site.

2.1.6 Fauna

The Bialowieza Forest houses many animal species, of which 59 mammal species, over 250 bird, 13 amphibian, 7 reptile and over 12 000 invertebrate species. The very symbol of the BF is the European bison.

The European Bison

There are approximately 900 individuals in the whole forest which make almost 25% of the total world's population and over 30% of free-living animals. This illustrates how vulnerable the world population is and what a large and important part the BF population makes.

The species links the past and the present. The population in the BF is one of only few of free wandering populations in Europe. It forms exceptional animal community with four other ungulates and several predatory species. The bison is the species with a long and complicated past and still threatened with extinction.

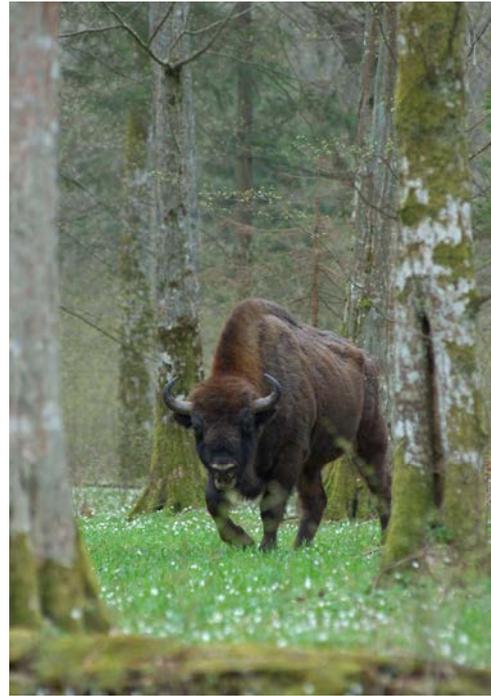
In 1919 the last European bison in the BF was killed by poachers. Ten years later, a breeding program was set up to conserve the species and to bring it back into the wild. In 1952 the first two individuals were released into forest and two years later the group of 16 bison was reintroduced into the BF. Since then, the local population has grown to about 306 individuals in 2000 (Pucek 2004) and 402 in 2006 (Pedigree book 2006) and 473 at the end of 2010. The history of the European bison is elaborated in paragraph 2.2.2.

Bison are not territorial, but still they do need a large area to live. They need enough food, which is difficult to get in winter. Therefore, bison are provided with supplemental hay food in winter. Bison live in mixed groups of females, calves and juveniles and sometimes adult bulls. Bulls live solitary or form small groups. In wintertime, the groups form bigger ones gathering around the feeding places, while young and old bulls live solitary in the forest.

The home range of a bison, living solitary, is approximately 70 km² (29 – 152 km²). Bison living in herds have home ranges of about 69 km² (45 – 100 km²). Mean home range covers an area, which is about one seventh of the Polish part of the Bialowieza Forest (Kraśńska, Kraśński 2004).

The risk of extinction is still high for various reasons including natural disasters, outbreaks of infectious diseases, as well as inbreeding. The entire free-roaming world population of the European Bison was founded by 13 animals.

The large size of the species and its habitat requirements are not often met in European forests. In addition forest complexes are scattered and surrounded by large agriculture, urban and industrial areas. Bison populations are therefore isolated.



Other mammals

The Bialowieza Forest and surroundings house numerous orders of mammals, such as ungulates, carnivores, insectivores, bats, lagomorphs and rodents (Stachura et al. 2004).

Ungulates like the roe deer, the red deer, the moose and the wild boar have the forest as their habitat. Predators like the grey wolf and lynx predate on them. Smaller predators like weasel, marten and their relatives, are also abundant.

Many small mammals like shrews, voles, mice, dormice, other rodents and insectivores also have their home in the forest, but there is still a lot to learn about these animals. Especially the rodents with a nocturnal life are not well known (Stachura et al. 2004).

For small rodents like yellow-necked mouse (*Apodemus flavicollis*) and bank vole (*Clethrionomys glareolus*) uprooted trees are important for foraging (Olszewski 1968).

A list of protected mammals living in the Bialowieza Forest can be found in Annex 3.

Several mammalian species are rare, threatened with extinction and/or have the BF as one of their last refuges.

Wolf and lynx both require a large habitat for successful populations. The mean annual territory of wolf packs is 232 km² and the territories of different packs overlap only by small percentage (Jędrzejewski 2001).

Mean annual home range of a lynx is 147 km². It varies from 194 km² for a male and 100 km² for a female. The home ranges sometimes overlap for large parts. Density of lynx in natural ecosystem ranges from approximately 2 to 6.5 individuals/100 km² (Jędrzejewski 1996).

The brown bear does not inhabit the Białowieża Forest anymore, although the forest might be a suitable place for them to live (Samojlik 2004).

Birds

There are 254 species recorded in the Białowieża Forest so far and 170 – 180 of them are nesting here. In comparison with other European woodlands, the Białowieża Forest is



extraordinary rich in species. It is especially abundant in raptor birds (15 species), owls (8 species), woodpeckers (9 species) and leaf-warblers (23 species).

The state of bird fauna preservation in the Bialowieza Forest is considered to be exceptional. The list of threatened birds breeding in the BF includes among others: white backed woodpecker, three-toed woodpecker, short-toed eagle, booted eagle, lesser spotted eagle, pygmy owl, great grey owl, Eurasian Eagle-owl and others.

Other threatened birds, probably breeding in the BNP are short-eared owl and tengmalm's owl.

The list of threatened species observed in the Forest includes also corn crake, black grouse, capercaillie, bittern, redpoll, roller, bluethroat, aquatic warbler, great snipe, black and red kite, golden eagle, lesser spotted eagle, white-tailed eagle, hen harrier and eagle owl (Walankiewicz et al. 2001).

The list of protected bird species occurring in the Bialowieza Forest with their breeding status and red list status, is recorded in Annexe 3.

Reptiles, amphibians and fish

The BF houses 7 reptile species among which the most rare and charismatic is the European pond tortoise *Emys orbicularis*. Most common species are *Natrix natrix*, *Anguis fragilis* and *Zootoca vivipara*. There are 13 amphibian species in the BF. They represent different families with different habitat requirements, ecology and behaviour. They are most visible in spring during breeding season when thousands of frogs and toads emerge after few-month hibernation period. Some species, such as *Bufo bufo*, *Rana temporaria*, *R. arvalis* or *Hyla arborea* are abundant while others, including *Bufo calamita* and *Bombina bombina* are very rare (Krzyściak-Kosińska 2009). According to the existing data there are 31 fish species representing 11 families here.



A list of protected reptile, amphibian and fish species occurring in the Bialowieza Forest is recorded in Annex 3.

Invertebrates

There are over 12 000 invertebrate species known from the BF but it is estimated that there are even as many as 20 000. Each year there are new species described from the Forest new to the area or even new to science. Invertebrates are extremely diverse group in all aspects: body size, breeding strategies, habitat type and life history. Diverse forest types with abundance of coarse woody debris support numerous rare and endangered species, also the relicts of primeval forest of past ages. The old-growth forests are home for saproxylic species, especially those requiring old and large trees. *Boros schneideri* needs over two-hundred-year-old trees, *Monochamus urusovi* – typical of boreal forests, *Pytho kolwensis* – needs large-dimension trunks. There are also relicts of primeval forests, extinct in the rest of Europe, (*Phryganophilus ruficollis*, *Stictoleptura variicornis*, *Buprestis splendens* or *Carabus menetriesi*). Even though the Site is predominated by forest habitats, the presence of open

areas in river valleys, peat bogs, glades, and meadows makes the landscape more diverse and enriches biological diversity. Also non-forest habitats support rare and endangered species, such as *Coenonympha oedippus*, *Boloria eunomia*, *Carsia sororiata* or *Euphydryas aurinia*. There are 28 mosquito species and 9 ticks.

2.1.7 Mycoflora

According to many micologists the BF can be considered one of the most important refuges for large-cap fungi (macromycete) not only in Poland and Belarus, but also in the whole boreo-nemoral region. Only on the small area of 10 000 ha, over 1 600 macromycete's species were listed. In such a small area there are 25% of the European species. Such a high diversity is based on two factors: 1) large area of forest habitats of primeval character; 2) continuity of ecological processes. Out of 33 species regarded as critically endangered in Europe, at least 5 occur in the BF.

Large number of protected or endangered species have the only localities here – this emphasises how important the site is for the protection of the species diversity of mycobiota. The group of species associated with coarse woody debris is foremost among the fungi threatened with extinction across Europe. In the BF wood-inhabiting and tree-dwelling fungi find perfect conditions for the development.



They thrive on diversity of substrata of different tree species, dimensions and the variety of microhabitats ensuring proper conditions for the species of different temperature, light and humidity demands. Diversified forest types of natural character support also other trophic groups of fungi: ground-dwelling, litter-growing and parasites.

The list of macromycetes species recorded in the Bialowieza Forest is available at the Research Unit of the Bialowieza National Park upon request.

2.1.8 Ecosystems

The BF is home to different types of forests, in which different plant and animal communities and species live. The different types of forest and communities are inseparably linked within the bigger ecosystem of the Bialowieza Forest.

An important aspect of the Bialowieza Forest – especially for the big mammals – is the size. The size of the valuable area determines the degree of freedom to wander around and to migrate towards places where there is enough of food, and it also decides how large populations may become. Strong populations make balanced communities and a balanced ecology.

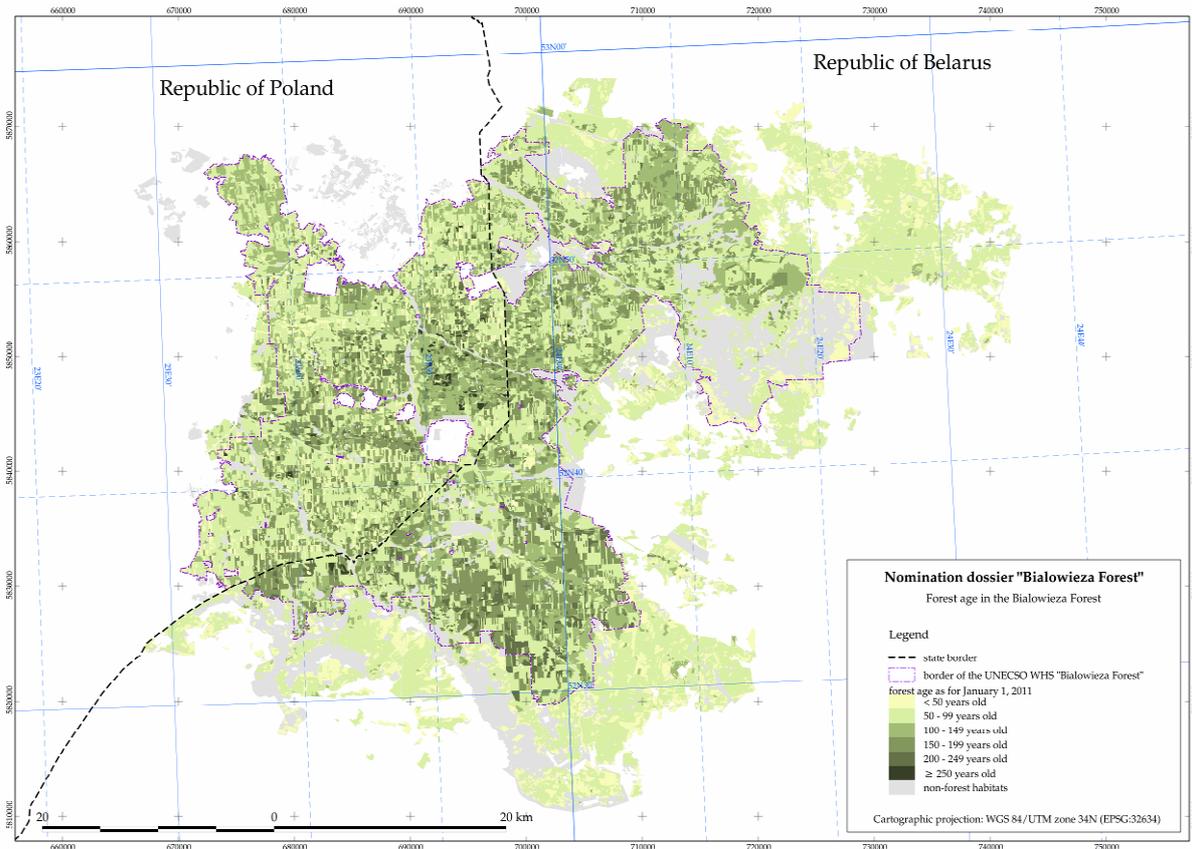
The ecosystem of the Bialowieza Forest is complex. It had hundreds of years to develop almost entirely undisturbed and has a rare richness of species of all kingdoms. Still, the entire forest is not uniform. Old-growth forests are intersected by productive forests. Non-forest communities, situated mainly in the river valleys, are extremely important. Insects such as rare butterflies and dragonflies occur there. The rivers have their natural rhythm and periodically, the valleys are flooded which prevents encroachment of the forest. A gradient of different habitat types may be observed across the river valleys: from the forests at the edges to bushes, then shrubs, reed and the river itself. This enhances biodiversity.



Tab. 2.2. Types of ecosystems present within the Site.

| Ecosystem | Area (ha) | | | | Percentage | | | |
|-----------------------|-----------|----------|-------|--------|------------|----------|--------|--------|
| | NP "BF" | FPC "BF" | BNP | Total | NP "BF" | FPC "BF" | BNP | Total |
| Forests | 70863 | 47148 | 9783 | 127794 | 86,10 | 96,01 | 93,47 | 90,07 |
| Non-forest ecosystems | 1739 | 698 | 535 | 2971 | 2,10 | 1,42 | 5,11 | 2,09 |
| Bogs | 9319 | 585 | 0 | 9903 | 11,30 | 1,19 | 0,00 | 6,98 |
| Waters | 388 | 33 | 19 | 440 | 0,50 | 0,06 | 0,18 | 0,31 |
| Others | 0 | 646 | 130 | 776 | 0,00 | 1,32 | 1,24 | 0,55 |
| Total | 82309 | 49109 | 10467 | 141885 | 100,00 | 100,00 | 100,00 | 100,00 |

Fig. 2. 1. Age structure of tree stands in the Bialowieza Forest.



2.1.9 Biodiversity

The Bialowieza Forest is home to many different species. It is extraordinary rich, in common as well as in rare species. It has a unique position in the world, because it is one of the last natural forests of primeval character in lowland temperate West Palearctic and it is of a significant area. Large parts of the forest have not been touched by man's hand for decades. It is a forest that had the chance to develop a balanced ecology with a huge diversity of species of all kingdoms, especially fungi, plants and animals. There are species nowhere else in the world to be found and those having only a few other localities. Many are vulnerable and some are threatened with extinction. To maintain this great biodiversity the forest needs to be protected as a whole, including other habitats: non-forest and water ecosystems. Coarse woody debris provide habitat and food for numerous (rare and threatened) species. Open spaces are maintained as they are an irreplaceable habitat to numerous species of plants and

invertebrates. They also are wonderful feeding places for forest dwelling animals, especially ungulates and birds.

To present the picture of a wide biodiversity in the Bialowieza Forest, numbers of species present there is recorded in the tables 2.3 (vascular plant species) and 2.4 (animals).

Tab. 2.3 Numbers of vascular plant species in the Bialowieza Forest (Sokołowski 1995).

| Group | Species | Group | Species | Group | Species |
|-------------------------|---------|-------------------------|---------|-------------------------|---------|
| <i>Alismataceae</i> | 2 | <i>Equisetaceae</i> | 7 | <i>Papaveraceae</i> | 4 |
| <i>Amaranthaceae</i> | 3 | <i>Ericaceae</i> | 9 | <i>Parnassiaceae</i> | 1 |
| <i>Anthericaceae</i> | 1 | <i>Euphorbiaceae</i> | 5 | <i>Pinaceae</i> | 7 |
| <i>Apiaceae</i> | 36 | <i>Fabaceae</i> | 56 | <i>Plumbaginaceae</i> | 5 |
| <i>Apocynaceae</i> | 1 | <i>Fagaceae</i> | 3 | <i>Poaceae</i> | 92 |
| <i>Araceae</i> | 1 | <i>Fumariaceae</i> | 3 | <i>Polemoniaceae</i> | 1 |
| <i>Araliaceae</i> | 1 | <i>Geraniaceae</i> | 15 | <i>Polygalaceae</i> | 3 |
| <i>Aristolochiaceae</i> | 1 | <i>Glossurariaceae</i> | 4 | <i>Polygonaceae</i> | 22 |
| <i>Asclepiadaceae</i> | 1 | <i>Haloragaceae</i> | 1 | <i>Polypodiaceae</i> | 9 |
| <i>Asteraceae</i> | 113 | <i>Hyacinthaceae</i> | 1 | <i>Portulacaceae</i> | 1 |
| <i>Balsaminaceae</i> | 3 | <i>Hydrocharitaceae</i> | 3 | <i>Potamogetonaceae</i> | 13 |
| <i>Berberidaceae</i> | 1 | <i>Hypericaceae</i> | 3 | <i>Pyrolaceae</i> | 17 |
| <i>Betulaceae</i> | 9 | <i>Iridaceae</i> | 4 | <i>Ranunculaceae</i> | 34 |
| <i>Boraginaceae</i> | 18 | <i>Juncaceae</i> | 21 | <i>Resedaceae</i> | 1 |
| <i>Brassicaceae</i> | 40 | <i>Juncaginaceae</i> | 1 | <i>Rhamnaceae</i> | 2 |
| <i>Butomaceae</i> | 1 | <i>Lamiaceae</i> | 41 | <i>Rosaceae</i> | 62 |
| <i>Callitrichaceae</i> | 6 | <i>Lemnaceae</i> | 4 | <i>Rubiaceae</i> | 16 |
| <i>Campanulaceae</i> | 12 | <i>Lentibulariaceae</i> | 3 | <i>Salicaceae</i> | 17 |
| <i>Cannabaceae</i> | 1 | <i>Lilliaceae</i> | 12 | <i>Santalaceae</i> | 1 |
| <i>Caprifoliaceae</i> | 6 | <i>Lliaceae</i> | 5 | <i>Saxifragaceae</i> | 4 |
| <i>Caryophyllaceae</i> | 42 | <i>Loranthaceae</i> | 1 | <i>Scheuchzeriaceae</i> | 1 |
| <i>Celastraceae</i> | 2 | <i>Lycopodiaceae</i> | 5 | <i>Scrophulariaceae</i> | 43 |
| <i>Ceratophyllaceae</i> | 1 | <i>Lythraceae</i> | 2 | <i>Solanaceae</i> | 5 |
| <i>Chenopodiaceae</i> | 10 | <i>Malvaceae</i> | 6 | <i>Sparganiaceae</i> | 3 |
| <i>Cistaceae</i> | 1 | <i>Melanthiaceae</i> | 1 | <i>Taxaceae</i> | 1 |
| <i>Convolvulaceae</i> | 2 | <i>Menyanthaceae</i> | 1 | <i>Thelypterudaceae</i> | 3 |

| | | | | | |
|---------------------|----|------------------------|----|----------------------|----|
| <i>Cornaceae</i> | 1 | <i>Monotropaceae</i> | 1 | <i>Thymelaceae</i> | 1 |
| <i>Crassulaceae</i> | 4 | <i>Nymphaeaceae</i> | 3 | <i>Tiliaceae</i> | 1 |
| <i>Cupressaceae</i> | 1 | <i>Oenotheraceae</i> | 14 | <i>Typhaceae</i> | 2 |
| <i>Cuscutaceae</i> | 2 | <i>Oleaceae</i> | 1 | <i>Ulmaceae</i> | 3 |
| <i>Cyperaceae</i> | 66 | <i>Ophioglossaceae</i> | 4 | <i>Urticaceae</i> | 2 |
| <i>Dipsacaceae</i> | 6 | <i>Orchidaceae</i> | 25 | <i>Valerianaceae</i> | 2 |
| <i>Droseraceae</i> | 1 | <i>Orobanchaceae</i> | 1 | <i>Violaceae</i> | 12 |
| <i>Empetraceae</i> | 1 | <i>Oxalidaceae</i> | 3 | <i>Woodsiaceae</i> | 3 |

Tab. 2.4. Numbers of animal species in the Bialowieza Forest (Gutowski, Jaroszewicz 2001, 2004).

| Species group | Number | Species group | Number |
|--|--------|--------------------------------------|---------------|
| <i>Metchnikovellidea</i> | 1 | <i>Bivalvia</i> (bivalves and clams) | 17 |
| <i>Microsporea</i> | 7 | <i>Oligochaeta</i> (earthworms) | 50 |
| <i>Diplomonadea</i> (diplomonads) | 3 | <i>Hirudinea</i> (leeches) | 20 |
| <i>Parabasalea</i> | 3 | <i>Tardigrada</i> (water bears) | 10 |
| <i>Trypanosomatidea</i> | 23 | <i>Crustacea</i> (crustaceans) | 95 |
| <i>Coccidea</i> | 2 | <i>Arachnida</i> (arachnids) | 893 |
| <i>Haematozoa</i> | 1 | <i>Chilopoda</i> (centipedes) | 12 |
| <i>Nassophorea</i> | 2 | <i>Diplopoda</i> (millipedes) | 18 |
| <i>Oligohymenophorea</i> | 2 | <i>Protura</i> (proturans) | 3 |
| <i>Lobosea</i> | 25 | <i>Collembola</i> (springtails) | 67 |
| <i>Filosea</i> | 18 | <i>Insecta</i> (insects) | 9820 |
| <i>Trematoda</i> (trematodes) | 39 | <i>Cephalaspidomorphi</i> | 2 |
| <i>Monogenea</i> (flatworms) | 1 | <i>Osteichthyes</i> | 26 |
| <i>Cestoda</i> (cestodes) | 33 | <i>Amphibia</i> (amphibians) | 13 |
| <i>Rotifera</i> (rotifers) | 187 | <i>Reptilia</i> (reptiles) | 7 |
| <i>Gastrotricha</i> (gastrotrichs) | 49 | <i>Aves</i> (birds) | 254 |
| <i>Nematoda</i> (nematodes) | 354 | <i>Mammalia</i> (mammals) | 59 |
| <i>Palaeacanthocephala</i> (parasitic worms) | 2 | Animal species total number | 12 210 |
| <i>Gastropoda</i> (gastropods) | 92 | | |

A great number of species from various systematic groups are protected at national and international levels.

2.2 History and development

2.2.1 History of the forest

The Bialowieza Forest is a large forest complex located on the border between Poland and the Republic of Belarus. Thanks to several ages of protection, first as a hunting ground of the Grand Dukes of Lithuania, later as the so called “Royal Table Property” (private property of the monarch) and in the 19th century as the appanage of Russian tsars, the Forest had survived in its natural form until the beginning of the 20th century. The name of the Bialowieza Forest was mentioned for first time in written documents in the 15th century Chronicle of Jan Dlugosz (*Historiae Poloniae*), as a place of King Jagiello's hunting in 1409, prior to the Grunwald Battle against the Teutonic Knights Order. Official protection of the Bialowieza Forest starts in the 15th century. The forest was protected together with animals, particularly with the European bison. The reason for protection was not just a pleasure or benefits of hunting, but also prestige of possessing so unique a place (it was unique already in the 15th century). Special ranger service was created in order to control the use of forest resources and organize Royal hunting games in the Bialowieza Forest. It worked up to the first half of the 19th century. The first commercial exploitation of the forest on a large scale took place in 1915-1918 during the German occupation. However, the central part of the Forest, with well-defined borders on Narewka and Hwozna rivers, was not exploited, and, thanks to that, in 1921, Polish government established a forest range “The Reserve” within the structure of the State Forests, which in 1932 was transformed into a special unit “The National Park in Bialowieza”. Since its establishment most of the protected area was subjected to the strict protection regime.

In September 1939 the Bialowieza Forest became a part of the Belarusian Soviet Socialist Republic. In December of that year the establishment of the “zapovednik” (strictly

protected area) in the whole Bialowieza Forest was announced. This nevertheless did not prevent exploitation of timber. In June 1941 the German army entered Bialowieza. The Bialowieza Forest was recognised as the hunting area of the marshal of the Third Reich Herman Göring ‘‘Reichsjagdgebiete’’. Tree cutting was therefore stopped.

As a result of the World War II and the change of borders, the western part of the Bialowieza Forest (58 000 ha) remained a part of Poland and the eastern part (79 000 ha) became a part of the Soviet Union. Beginning from 1944 the regimes of protection and management in both parts of the forest have differed.

Since 1944 the eastern part was subject to protection in the form of *zapovednik* ‘‘Belovezhskaya Pushcha’’. In 1957 the State Nature Protection and Game Area ‘‘Belovezhskaya Pushcha’’ was created, which was designed mainly as a hunting ground for the high-ranking officials of the Soviet Union. In 1946 breeding programme of the European bison was started after receiving of 5 individuals from the breeding centre situated in the Polish part of the BF. Beavers were reintroduced in 1956. In 1960 intensive melioration works drying the vast complex of swamps Dziki Nikor began and the fragments of the Narewka, Biala and Lesna Lewa rivers were straightened. These works caused lowering of the ground water table both in the eastern and western parts of the Forest. In 1972 the strict protection regime was introduced on the area of 7694 ha which in 1992 was enlarged onto 15 677 ha, and then in 2004 the area of 30769 ha was strictly protected. In 1981 along the state border a 2-metre-high fence was built, preventing migration of ungulates. In 1991 the State Nature Protection and Game Area ‘‘Belovezhskaya Pushcha’’ was transformed into the National Park ‘‘Belovezhskaya Pushcha’’. Forest complexes and neighbouring agricultural areas were included into the park. The following zones with different regime of protection were marked off: the strict protection zone, the regulated management zone, the recreational zone and the economic zone. The buffer zone (80 715 ha) was set up around the park. The

entrance of car vehicles on the area of the park is strictly regulated, it requires the permission of the park management. The sequence of bicycle and bus trails was marked for tourists needs (Semakov, Cherkas 2003).

In the Polish part of the Forest in 1947 the Bialowieza National Park was restituted. Successful breeding of bison in reserves allowed to release into the wild the first individuals on September 13, 1952 (in the Eastern part the first bisons were released in 1953). The first nature reserve in the managed part of the forest administered by the State Forests was created in 1961 – Lipiny Nature Reserve. A few years later next nature reserves were created. The year of 1975 saw introduction of separate principles of forest management in the Bialowieza Forest. The age of trees cut was raised, natural renovation was preferred while introducing alien seeds and seedlings was banned. Gradually the area of nature reserves around the forest was enlarged as well as the number of trees recognized as nature monuments increased significantly. Several research institutes were based in Bialowieza which led to intensification of research and increased efficiency of protection of natural resources.

The importance of the BF for world's nature protection was recognized by UNESCO in 1977 by including the Park into the network of Biosphere Reserves, and its uniqueness by inclusion of the Polish Bialowieza National Park on the World Heritage List in 1979. The World Heritage Site was enlarged in 1992 and transboundary World Heritage Site (Belovezhskaya Pushcha/Bialowieza Forest) was created by joining adjacent Belarusian National Park "Belovezhskaya Puszcza".

In November of 1994 the Forest Promotion Complex "Bialowieza Forest" was established over the territory of Polish part of the forest administered by the State Forests (not including the national park). Two years later the Bialowieza National Park was enlarged to 10 517 ha. In 1995 the Chairman of the Polish Academy of Sciences submitted the project of enlargement of BNP on the whole Polish part of the Forest (Jędrzejewski, Jędrzejewska

1995). The project, however, was not implemented so far. In order to protect the best preserved fragments of natural tree stands, the reserve ‘Natural Forests of the Bialowieza Forest’ was established in 2003.

At present the Bialowieza Forest is managed by authorities:

1. National Park ‘‘Belovezhskaya Pushcha’’ (Belarus)
2. Bialowieza National Park (Poland) – State Property
3. Bialowieza Forest District (Poland) – State Property
4. Browsk Forest District (Poland) – State Property
5. Hajnówka Forest District (Poland) – State Property

The whole Polish part of the Forest is encompassed within the boundaries of the NATURA 2000 Site. Both Polish and Belarusian parts of the Forest have the status of the biosphere reserves. The Transboundary World Heritage Site at present comprises the area of 92 669 hectares, 5056 ha of which are located within Polish borders. Present nomination proposes the modification of the boundaries of the Belarusian part and large extension of the Polish part of the BF (total area of 141 885 ha).

2.2.2 History of the European Bison, Brown bear, Beaver and Small Polish horse (konik)

European bison

The Bialowieza Primeval Forest has had the European bison living in its environment for longest. Prior to World War I there were over 700 individuals there. As a result of damages of this World War, there was not one bison left in 1919. The survival of this subspecies of the European Bison depended on a small number of bison in zoos and private collections in several European countries (Kraśiński 2005).

In order to unite efforts to save the species, an International Society for the Protection of the European Bison was established, initiated by Professor Sztolcman at an international conference held in Paris in 1923. This society's first task was to register all of the pure-blooded lowland European bison remaining. By the end of 1924, it had located 54 of the animals in the whole world, and most beyond breeding age. The first registration of bison was drawn up in 1932, in the German-based European Bison Pedigree Book. The registration and publication of the pedigree book has been continued until this day, but they have been drawn up in Poland since 1947. The book lists captive European bison of known origin, and in accordance to this, bison obtain their names and pedigree numbers. The free-living bison are only being counted. There are only quantitative records of these animals (Kraśiński 2005).



The first of the Bison were brought to the Bialowieza Forest in 1929. These bison were kept in a special vast reserve. In 1939 there were 16, at the end of World War II there were 17 individuals. Further captive breeding made it possible to release some into the wild forest, in 1952 (Kraśiński 2005). Ever since then, the population kept growing and now has a number of about 900 individuals.

Brown Bear

The brown bear was driven to extinction in Poland around 1871 by excessive hunting. This happened not only because Royal hunting focussed on predators, but also because they were perceived as pests, because of killing cattle and destroying bee hives. From 1937 different attempts to reintroduce bears into the Bialowieza Forest were made. A few cubs

were bought and brought to the forest. These cubs were tame, not afraid of humans and could not find their own food. Friendly meetings between bears and humans who fed them, led to fatal consequences. They approached people, demolished houses, and robbed food. One cub was killed by villagers and another one was sent to the Warsaw zoo. Four new cubs were brought to the forest, but these were tame as well. One even attacked a girl collecting berries in the forest. Only one or two cubs learnt to live in the wild and survived longer. Another project was Lola, a pregnant female who gave birth in January 1938 in a big cage in the Bialowieza Forest. The bars of the cage were bent in a way which enabled the cubs to get out, but kept the mother inside. This way the cubs could gradually adapt to the forest life and became independent. Lola was taken to another part of the forest.

In 1941, at the time of Soviet Union administration in the Bialowieza Forest, Lola was set free from her cage. In June 1941, the invading German forces turned the forest into the Third Reich's hunting reserve. Five more bears of unknown origin were brought into the forest. One of them killed two people in the forest and soon after, almost all other bears were killed by poachers. In 1945, a new Polish-Soviet border divided the Bialowieza Forest. Tracks from one bear were observed on the Soviet (now Belarusian) side until 1950. It is probable that these were one of Lola's cubs. The last tracks were observed in 1963. After that, there were no observations of the Brown Bear in the Bialowieza Forest (Samojlik 2004).

Eurasian beaver

The Eurasian beaver disappeared from the Bialowieza Forest in the mid of 19th century. It was reintroduced after the World War II as a result of the importation of animals from the areas located in present Belarus. The numbers of animals grew steadily thanks to the protected status as well as very suitable habitats met in the Forest. At present, the beaver and traces of its activities can be encountered along all watercourses within the Forest. Apart from digging



burrows in the river banks and building lodges, they also make dams which hold water back and have a significant impact on the ecosystems either changing forest habitats or creating new habitats for the whole range of species.

Small Polish horse (konik)

In medieval times, a horse breed called *tarpan* inhabited forests in Central Europe like in Prussia, Poland and Lithuania, as well as the steppes extending from the Black to the Caspian Sea. They had been extirpated by the 12th century. In pre-war Poland, peasants still raised a primitive breed of horses with 'wild' traits in the appearance and behaviour of extinct tarpans.

Prof. Tadeusz Vetulani became interested in the primitive horses, and he advanced the hypothesis that ancient Europe must have supported the forest tarpan of the subspecies *Equus caballus gmelini*. However, the existence of forest forms of horses is not documented.

Professor Vetulani also pressed forward a motion to establish a reserve in the Bialowieza Forest in which tarpan-type horses might be bred. The idea was accepted in 1933 and put into practice in 1936 when selected animals with most primitive traces were brought and bred among themselves. Over the next years new animals were brought to the breeding centre and when war broke out, there were 35 animals. In the next two years, 33 individuals were transported to Germany.

Today a small group has two large pens in the Animal Park near Bialowieza. These typical horses are about 130 cm tall, have a mouse-grey coat with a characteristic dark line along the back. Their hairy coats grow longer in winter, allowing them to stay outside (Krasinski, 1999). Nowadays these tarpan-type horses, Small Polish horses called in Polish *konik* have been released into natural areas in Poland and other countries like the Netherlands and Germany and some of them are developed to large herds.

2.2.3 Human use

The forest has been extensively used by man for ages for several purposes, such as hunting, beekeeping and picking natural resources from the forest like mushrooms and berries. Haymaking was present in the river valleys.

Nowadays, the Site is a mixture of areas under strict protection regime, partial protection as well as productive forest. The priorities for the area managed by the national parks are nature protection, research, education and extensive tourism. The state forests (in Poland) are partly used for wood production, but the amount of cut wood has been limited greatly in last years. The Minister of the Environment decided that in 2011 approximately 48 000 m³ of wood can be taken from the forest. Timber cannot be exploited for economic purposes. The justification for such practices are of ecological character: bark beetle infestation or re-modelling of a tree

stand altered in the past. There is no exploitation of nature reserves. In the areas which are not strictly protected, mushroom and berry picking for individual needs is allowed.

2.3 Form and date of most recent records of the site

Records of the site can be found in several places; a lot of documentation is filed in the libraries of both National Parks, some recent documents are on the websites:

<http://www.npbb.brest.by/home>

<http://www.bpn.com.pl>

<http://www.bialystok.lasy.gov.pl/web/bialowieza>

<http://www.bialystok.lasy.gov.pl/web/hajnowka>

<http://www.bialystok.lasy.gov.pl/web/browsk>

In the library of the Mammal Research Institute as well as European Centre of Natural Forests and Geobotanical Station of Warsaw University there are also records to be found. The short list of best-known publications presenting data and knowledge gathered in the Bialowieza Forest is presented in paragraph 3.4.



Snapshots of the Recent History of the Bialowieza Forest

- 1915 – Dr Hugo Conwentz, German scientist, visits the Bialowieza Forest in relation to the project of creating a large nature reserve. The part of the forest situated at the junction of the Hwozna and Narewka rivers is to be protected. The project however, was never put into practise.
- 1919, April – The committee consisting of Prof. Władysław Szafer, Prof. Eugeniusz Kiernik and engineer Jan Kloska visits the Bialowieza Forest to assess the situation of the European bison population. They do not find living animals but the visit results in the definite idea of protecting the most valuable forest fragments.
- 1920, June – Members of the State Committee of Nature Conservation led by Prof. Władysław Szafer, visit Bialowieza to establish the area of the forest which should be protected.
- 1920, November 22 – State Committee of Nature Conservation submits to the Ministry of Religion and Education a forest reserve project. In December an issue of “Sylvan” the journal of forestry sciences carrying the article by Prof. Władysław Szafer called “The project of establishing forest reserve in the Bialowieza Forest” is published.
- 1921, December 29 – During the meeting at the Forestry Department of the Ministry of Agriculture and State Property the decision is reached to create the Forest Unit “Rezerwat” within the boundaries of Forest District Unit Bialowieza. The area of the unit “Rezerwat” is 4594.56 ha, of which 1061.11 ha is strictly protected. The “Rezerwat” at that moment met all the requirements imposed on the national parks during the UNESCO General Meeting in New Delhi in 1969.
- 1923, November – Head of the Forest Administration Unit “Rezerwat” is designated.
- 1924, April 13, – The Ministry of Agriculture and State Property changes the status of the Forest Administration Unit into Forest District Administration Unit “Rezerwat”.
- 1927 – Organisation of the Bialowieza Forest District Administration Units, organisation of the inventory of the state of forests and determining of methods of their management.
- 1929, January – the total area of the Forest District “Rezerwat” – 4640.09 ha – becomes strictly protected.
- 1929, September 19 – the first two European bison are brought back to Bialowieza, where breeding centre is created.

- 1932, August 4 – The Minister of Agriculture and Agricultural Reforms declares a special administration unit named “National Park” in Bialowieza covering an area of 4693.24 ha.
- 1933, February – Instructions of the Head of the Regional Directorate of the State Forests in Bialowieza concerning using of natural regeneration in forest regeneration.
- 1941, September 22 to 1939, June 22 – the Soviet Union administration. The whole of the Bialowieza Forest is considered to be a nature reserve (by decision of the Soviet of People’s Deputies of Belarus). During this time however, 1.5 million cubic metres of wood are logged.
- 1941, June 22 to 1944, July 17 – the Nazi occupation. The whole of the Bialowieza Forest is considered to be a hunting ground for Reich dignitaries. At the end of the war the Tsar’s Palace is burned. Scientific documents, laboratory equipment, some museum exhibits are destroyed. Approximately 2000 cubic metres of wood are logged in the Park itself.
- 1944 – Liberation of the Bialowieza Forest and division of the forest complex between Poland and the Soviet Union.
- 1946 – The first European bison were brought from Poland to Belarusian part of the Forest.
- 1947, November 21 – The Council of Ministers confirms the status of the national park under the name of the Bialowieza National Park, covering an area of 4716 ha.
- 1948 – 1950 – Meadows situated on the Hwozna and Narewka river banks are included in the Park as a result of land exchange. In effect, the western and northern boundaries of the Park run along the rivers.
- 1952, September 13 – The first two European bison are released.
- 1957, January 19 – The Minister of Forestry (Poland) establishes the Scientific Council of the Bialowieza National Park. Prof. Dr August Dehnel is the first President of the Council.
- 1957, August – the Reserve (Belarus) was transformed into Belovezhskaya Pushcha State Nature Protection and Game Area.
- 1958 – Organisation of the Bialowieza Forest District Administration Units, organisation of the inventory of the state of forests and determining of methods of their management. Change of state borders and range of forest district administrative units.
- 1960s – Creation of artificial water reservoirs in the Eastern part of the Forest.
- 1965 – Establishment of the Experimental Forest Administration Unit “Budy” under scientific supervision of the Forest Research Institute in Warsaw.
- 1975 – The new “Management Principles of the Bialowieza Forest” was issued by the Minister of Forestry and Wood Industry. Priority tasks of forestry were as follows: necessity of

water regime protection, maintaining of multi-species forests with a complicated structure, new regulations on forest renewal, raising of the cutting age by about 20% – 40% in relation to other forests in Poland. The Forest was recognized as the main sanctuary of the European bison.

1977, January 17 – UNESCO designates the Bialowieza National Park as a Biosphere Reserve.

1979, October – The Bialowieza National Park is listed as a UNESCO World Heritage Site.

1981, March 18 – The buffer zone for the strict nature reserve of the Park is created. It encompasses 248.11 ha of idle land adjacent to the reserve in the Bialowieza Clearing.

1984 – The Scientific Council of the Park starts an initiative leading to enlargement of the Park so it comprises of all the representative forest communities of the Bialowieza Forest together with its characteristic flora and fauna.

1991 – Establishing of the Belovezhskaya Pushcha State National Park (Belarus).

1992 – UNESCO enlarges the boundaries of the World Heritage Site, so it encompasses the part of the Belarusian National Park ‘‘Bielawiezhskaja Puszcza’’ which is adjacent to the Polish Bialowieza National Park. Both parts create one transborder Polish-Belarusian World Heritage Site.

1993 – UNESCO declared Belovezhskaya Pushcha State National Park a part of the World Network of Biosphere Reserves.

1994, November – Decision no 23 of the Minister of Environment Protection, Natural Resources and Forestry on introduction of new regulations in the management of the Bialowieza Forest and establishment of the Forest Promotion Complex Bialowieza Forest. Implementation of sustainable forestry, biodiversity protection and forest education of the society are its basic tasks.

1996 – Natural Education Centre of the Bialowieza National Park is open. It is situated in the newly renovated building of historic interest dating from 1845.

1996, July – The Council of Ministers enlarges the Bialowieza National Park to 10 501.95 ha. The Park is surrounded by the buffer zone with an area of 3224.26 ha.

1996 – Opening of the education trail of the Forest Narrow-gauge Railway in the Hajnowka Forest District.

1997 – Scientific-Social Council of the Forest Promotion Complex Bialowieza Forest accepted the ‘‘Regulations of management of ecosystems of the FPC Bialowieza Forest’’ which were then approved by the General Director of the State Forests and the Chief Nature Conservator.

- 1997 – The Bialowieza National Park, as the first national park in Poland, is awarded the European Diploma. Belarusian Belovezhskaya Pushcha State National Park is awarded the European Diploma at the same time.
- 1998, September – Forest Education Centre “Jagiellonskie” in the Bialowieza Forest District was opened.
- 1998 – General Director of the State Forests introduced a moratorium on cutting of trees of selected species with defined diameters at breast height (dbh) and trees more than 100 years old.
- 1998 – The Minister of the Environment Protection, Natural Resources and Forestry launches “Contract for the Bialowieza Forest” which promotes activities leading to the park enlargement within the boundaries of the Polish part of the Bialowieza Forest.
- 1999 – The modernisation of buildings housing the museum is started.
- 1999 – The State budget appropriates the sum of 20 million Polish zlotys to support the activities undertaken by the local authorities as well as the Bialowieza National Park within the “Contract for the Bialowieza Forest”.
- 2003, June 10 – the Minister of the Environment approves a plan of forest management for the forest districts of the FPC Bialowieza Forest and sustains a ban on cutting trees older than 100 years determining at the same time specific rules of dealing with spruces aged more than 100 years attacked by a bark beetle.
- 2003, June 25 – the Minister of the Environment establishes the nature reserve ‘Natural Forests of the Bialowieza Forest’ with the area of 8581.62 ha; in total 22 nature reserves comprise 18.48% of the area of the Forest outside the Bialowieza National Park.
- 2004 – Bialowieza Forest listed as the Natura 2000 Site - PLC200004 “Bialowieza Forest”.
- 2004 – The new exhibition in the J. Miklaszewski Natural History and Forestry Museum is open to public.
- 2005 – Extending of the status of the Biosphere Reserve on the whole Polish part of the Bialowieza Forest.
- 2009, February – The Minister of the Environment starts the “Development Programme for the Bialowieza Region”.
- 2011 – Forest Education Centre in the Browsk Forest District is established.
- 2012, January – Re-nomination dossier presented to UNESCO World Heritage Committee: “Belovezhskaya Pushcha/Bialowieza Forest” World Heritage Site (33 bis). Proposed modification of the criteria and boundaries. Change of the name of the property.

3. Justification for Inscription



The World Heritage Committee has acknowledged the exceptional value of the Bialowieza Forest upon inscription in 1979 of the Polish property “Bialowieza National Park” (33). Among the first twelve Sites inscribed onto the World Heritage List in 1978 just four were natural properties. A year later, during the third session of the World Heritage Committee, nomination of the Bialowieza National Park was the fourth examined and the first natural one. One should bear in mind that the Bialowieza National Park was the fifth natural property inscribed onto the World Heritage List. Prior to this, the following properties were enlisted: Nahanni National Park (Canada), Galapagos Islands (Equador), Simien National Park (Ethiopia) and Yellowstone (USA). The universal value of the Bialowieza Forest was confirmed by the Committee in 1992 when the Belarusian part of the Forest was inscribed and together with already inscribed Bialowieza National Park one Transboundary World Heritage Property “Belovezhskaya Pushcha – Bialowieza Forest” was created. At present new data show that the inscribed property is too small to sustain the outstanding universal value of this

natural forest complex, especially with respect to the home ranges of big mammals. While forests are perceived as priceless and irreplaceable human assets their area is constantly diminishing. Forests cover approximately 30% of terrestrial surface of the globe and up to 40% of the world's forests are protected to various degrees. World Heritage forests represent only 11 percent of all World Heritage sites. Moreover, the forest sites are not distributed evenly in biogeographic regions. The best representation of forest sites is in the Neotropical (23.4%) and the East Palearctic (23%) regions. The poorest representation of forest sites is in the West Palearctic region (0.3%). The Bialowieza Forest is situated in West Palearctic and enlarging the Site would improve representativeness of forest ecosystems inscribed onto the World Heritage List in the region as well as on the European continent.

3.1 Criteria under which inscription is proposed and justification

Criterion ix

Be outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals.

The Bialowieza Forest comprises outstanding examples of the ecological and biological processes typical of lowland natural forests of primeval character of temperate climate since the last glacial period. Climatic conditions and biological processes were the basic factors shaping ecosystems. The Bialowieza Forest has been for hundreds of years under strictly limited human impact. The area of the Bialowieza Forest, not destroyed by excessive exploitation in the past, and since 1921 protected under strict regime in some parts and in others managed in a limited degree, maintained the continuity of these processes. Numerous phenomena typical of natural forest ecology, as well as new taxa of organisms described from

this site prove that this is the perfect example representing significant on-going ecological and biological processes in the evolution and development of European forest ecosystems and their communities of plants, animals and fungi. Natural cycle of growth and decay is the driving force of phenomena and diversity of the Forest.

Processes of vegetation dynamics

The Bialowieza Forest is the place where natural processes may run unbroken and, what is equally important, are carefully observed. There is here a network of schematically distributed study plots where detailed inventory of all standing trees, both dead and alive, is carried out together with measurements of fallen trees and natural regeneration. Results from the strictly protected area compared to data obtained during inventory in the 50s and 90s of the 20th century show major changes in species percentage in tree stands. We know that spruce constituted over 25% of surface share in the forest in the 50s, in 90s – 16.6, while nowadays it varies between 5 – 8%. The surface share of oak remains at the same level of 19%. Other species, such as lime and hornbeam, increase their surface share to 30%. Decreasing percentage of spruce is directly caused by more intensive and frequent gradations of bark beetle. However, it is necessary to bear in mind that bark beetle infestations are the secondary factor, as bark beetles infest trees which are already weakened by other factors, such as long dry periods, strong winds which break or fell trees, high temperatures or lowering of groundwater table.

Permanent monitoring of groundwater table carried out since mid 80s shows that groundwater table systematically decreases. In water-logged biotopes it decreased by up to 20 cm, while in fresh and humid habitat types it decreased by 40 cm. The dynamics of groundwater table in the Bialowieza Forest is shaped mainly by the amount and annual distribution of precipitation as well as air temperature which affects evaporation intensity

(Pierzgalski et al. 2002). Analysis of precipitation during last 4 decades did not show significant changes but temperature during first half of the year increased by 2.7°C. This led to changes in phenology. Since 1964, in the area of strict protection, dates of flowering of selected plant species have been monitored. The analysis of the observations showed that majority of spring flowering species flower earlier than 45 years ago. The statistically significant changes were observed in 4 species: *Oxalis acetosella* (wood sorrel), *Viola reichenbachiana* (early dog violet), *Lamium galeobdolon* (yellow archangel) and *Maianthemum bifolium* (False lily of the valley). They flower 12 to 14 days earlier than half a century ago (Sparks et al. 2009).



The dominant processes of fluctuation and regeneration ensure permanent linkages between components and the environment as well as the active role of biotic factors. The latter include the toppling over of trees and appearance of overgrowing vegetation, rooting by wild boar, direct impact of herbivores such as red deer, roe deer, moose and European bison on the forest and the relationship between herbivores and carnivores. All of these factors

support the emergence of innumerable niches, particularly for cryptogamous plants and invertebrates (Faliński 2003). Rooting by wild boar impacts soil-generating processes by breaking down larger particles into smaller ones and enabling the mixing of leaf litter with mineral layer thus accelerating the process of incorporation of organic matter into a soil's humus accumulation. Fragmentation of the plants' tubers, e.g. anemones, facilitates the plants' vegetative reproduction.

Network of relationships – big animals

The Bialowieza Forest is home for the whole community of ungulates present in Poland (except for the mountain species), large predators such as lynx and wolf as well as typical forest dwelling birds. The park has a strong population of owls and woodpeckers, among of which particularly interesting are white-backed woodpecker and three-toed woodpecker which are typical species of natural old growth forests. All these species function within a complicated and complex network of dependence. This is one of few areas worldwide where trophic relationships between plants, herbivore and predators can be observed unmodified by human activity, along with sharing of ecological niches between related species (of deer, insectivores, mustelids ect.). Numerous phenomena described in scientific literature were observed for the first time in the Bialowieza Forest, including Dehnel Effect, relations between numbers of rodents and fruiting of forest trees, influence of predators on population of hoofed animals (Zub 2009). The effects of intensive pressure of herbivores onto the forest ecosystems can be observed here.

Climatic changes, in particular temperatures and precipitation, affect the use of forest habitat types by the European bison. In dry years the animals are more frequently observed in alder carr, while in wet years the use of coniferous stands increases (Daleszczyk et al. 2006).

Network of relationships – coarse woody debris

Coarse woody debris holds the vital importance for forest carbon budgets as well as is invaluable wildlife resource. Dead wood appears in many forms, sizes and positions including standing dead trees, dead branches in the canopy, trunks and branches on the ground. Wood is difficult to decompose. It is built mainly of cellulose, hemicellulose and lignin. In boreal and boreo-nemoral forests, polypores are the most important decomposers of dead trees (Renvall 1995). Many of the conifer-decaying polypores are brown-rot fungi. Brown-rot fungi decompose only carbohydrate components of wood, leaving most of the lignin unaltered, and produce residues that may remain stable in forest soils; contrary to white-rot fungi that decompose all major components of wood equally and eventually decay the wood completely. Brown-rot logs are known to provide favourable microsites for the establishment of conifer seedlings in forests (Harmon, Franklin 1989; Hofgaard 1993). This may be related to the quality of the decay: brown-rot residues improve soil conditions including water holding capacity, pH and soil temperature (Ryvarden, Gilbertson 1993). Furthermore, decayed wood provides important substrate for ectomycorrhizal development (e.g. Harvey et al. 1979). Thus, it is not only that trees facilitate the existence of polypores, but to some extent also the trees depend on polypores, particularly in northern regions (Junninen 2007). Decomposition of a tree is a process that leads to disappearance of the habitat of some species. To persist, the decomposer species must be able to disperse to a new habitat patch (dead wood unit of suitable quality) within a finite time-scale. In forests under natural disturbance dynamics without human exploitation of wood, the input of dead wood is more or less constant in relation to the life-spans and dispersal abilities of decomposer species (Kuuluvainen 1994; Renvall 1995; Jonsson 2000; Stokland 2001; Rouvinen, Kouki 2002). This relative predictability and abundance of dead-wood habitats has provided good possibilities for evolution of diverse decomposer communities through resource partitioning and niche

specialization (Junninen 2007). Diversity of sizes and ages with occurrence of very old trees accompanied by the occurrence of dead wood (standing or fallen), in different stages of decay distributed in the whole BF creates possibility of continuous persistence of saproxylic species. The patchy and ephemeral nature of dead wood imposes particular challenges to “dead wood” is not a homogeneous habitat type but rather a collective term – similar to “forests” – for a range of habitats. These habitat types, or microhabitats, include, for example, different tree species of different trunk diameters at different stages of decay (e.g. Harmon et al. 1986; Renvall 1995). During the decomposition process, the decomposers further alter the structure, moisture and chemistry of the decaying trees and thus create new niches for other saproxylic species. Also, the variety of decomposition pathways involves successions of different fungal species, and this also contributes to the variety of microhabitats in the trunks at advanced stages of decay (Renvall 1995).



Exceptional dimensions and age

Most of the old growth tree species present here are distinct from their counterparts in Europe in terms of their height and breast-height diameter. Exemplary data are presented in the chapter 2. Description. The trees live here until natural death and the forest stands have a characteristic uneven-age and multi-layered structure.

Criterion x

Contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.

Most of the site's area (over 50%) is covered by oak-lime-hornbeam forest *Tilio-Carpinetum* – forest habitat listed in Annex I to the EU Habitat Directive. The fact that all forest habitats of the Białowieża



Forest present primeval character is extremely important as there are no many other forest complexes of such character in this region. Moreover, a great deal of dead wood present in each habitat type provides a very specific and unique microhabitat for numerous species most of which are endangered or rare in the rest of the continent. Dead wood is therefore an extremely important habitat for in-situ conservation of wide range of saproxylic and relict species. The species themselves as well as their communities are of great significance, especially when nature conservation and science are taken into consideration.

The European bison

It is the last place where the largest terrestrial mammal of Europe, the European bison, survived in wild until the beginning of the 20th century. The Białowieża Forest is now home to the largest free-roaming herd of the European bison. In the whole of the BF there are almost 900 individuals.



Big animals

The Białowieża Forest is home for the whole community of native ungulates of central European lowlands, large predators such as lynx and wolf as well as typical forest dwelling birds. The park has a strong population of owls and woodpeckers, among of which particularly interesting are white-backed woodpecker and three-toed woodpecker which are typical species of old and natural tree stands. All these species function within a complicated and complex network of dependence.

Research on species composition, density and reproduction success of bird community as well as ecology and behavior of selected species, in particular those related to old growth forest habitats showed that 74 bird species bred in a 33-ha patch of forest over a 30-year period. List of species on which attention of researchers is focused include many species, but primarily white-backed woodpecker, three-toed woodpecker and white-collared flycatcher which occurrence is determined by presence of dead trees in the forest. Long-term studies of densities of woodpeckers showed that the highest densities are in the strictly protected area of the park. It is positively correlated with dead wood amount. Results of ornithological observations in the strictly protected area of the park differ significantly from those from other forest complexes subjected to human intervention but are concurrent to results obtained from tropical forests. Basic characteristics of the bird fauna of the park are mainly high species diversity, low densities and high predation pressure. These are characteristics of pristine forests, irrespective of climatic zone and may be used as indicators of forest maturity and absence of human disturbance (Wesołowski et al. 2006).

Cryptogamus species

Exceptional biological diversity as well as a high number of relicts of primeval forests characterize the Site. Despite relatively good knowledge of biological diversity of Europe, almost each year new species of fungi or invertebrate fauna are discovered (Annex 4). Species diversity is best studied for cryptogamous plants. During a research project, carried out at the beginning of the 90s of the 20th century on the area of c.a. 1.4 km², the scientists found 1706 species of cryptogamous plants. Out of 1706 species, 104 fungi were classified as endangered in Poland and 44 species of lichen were classified as threatened with extinction. The number included for instance 2 fungi species known only from the Site, described as new for the science and 5 fungi known exclusively from Poland (Faliński, Mułenko 1997). The virgin

forest is extremely rich, in particular, in wood inhabiting fungi and majority of species are rare or very rare, practically extinct from cultivated and managed forest areas in the whole of Central European Plain. This richness is an evidence of the paramount importance of the BF as genetic reservoir of threatened species. From the mycological point of view, BF is the most valuable single forest area in the northern hemisphere (Niemela 2010).



It is certain that the forest still holds many mysteries and offers immense possibilities to natural sciences.

3.2 Proposed Statement of Outstanding Universal Value

The “Bialowieza Forest” World Heritage Site straddles the border of the Republic of Poland and the Republic of Belarus. The site protects the unique temperate deciduous forest of primeval character with additional mixed and pure coniferous stands. This is the remnant

core of the forests which prevailed in Europe in the past. The Site is characterized by the presence of rare fauna of forest dwelling birds, saproxylic invertebrates and fungi. The natural processes have been running here unbroken for thousands of years. It is the last place where the largest terrestrial mammal of Europe, the European bison, survived in wild until the beginning of the 20th century. The Białowieża Forest is now home to the largest free-roaming herd of the European bison. Exceptional biological diversity as well as a high number of relicts of primeval forests characterize the Site.

Criterion ix

Be outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals.

The Białowieża Forest is a Site, where, due to centuries of restricted access human impact on the environment has been severely limited. Climatic conditions and biological processes were the basic factors shaping the ecosystems. A large part of the Białowieża Forest, undestroyed by the exploitations of World War I, and since then protected under a strict regime or managed through a very limited intervention, maintained the continuity of these biological processes. The forest stands have a characteristic multi-layered and multi-aged structure. The dominant processes of fluctuation and regeneration ensure permanent linkages between the components and the environment. These processes also secure the active role of biotic factors, which include: the toppling over of trees and the appearance of overgrowing vegetation, rooting by wild boars, direct impact of herbivores (such as red deer, roe deer, moose, and European bison) on the Forest, and the relationship between herbivores and carnivores. All of these factors support the emergence of innumerable niches, particularly for cryptogamous plants and invertebrates.

Criterion x

Contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.

Most of the Site's area is covered by oak-lime-hornbeam forest *Tilio-Carpinetum* – a forest habitat of high value for nature protection in the temperate zone. The majority of forest habitats protected by law on both sides of the Polish-Belarusian border exhibit a primeval character which gives the Site an exceptional value. Moreover, a great deal of dead wood present in each of the habitat types provides a very specific and unique microhabitat for numerous species, most of them endangered, threatened or rare. Despite a relatively good knowledge of the biological diversity of Europe, new species of fungi or invertebrate fauna are discovered in the Bialowieza Forest, almost every year. The Forest is also home to a whole range of ungulates (with the exception of mountain species), large predators such as lynx and wolf as well as typical forest dwelling birds. The Forest has a large population of woodpeckers, among which the white-backed woodpecker and the three-toed woodpecker, which are typical species of old and natural tree stands, are particularly interesting.

Integrity

The size of the Site ensures that all stages of natural forest development are present. The proposed boundaries guarantee the continuity of the ongoing natural processes as well as a favorable conservation status of a whole range of communities and species forming the unique diversity of the ecosystem. The mosaic of natural phenomena and its' dynamic as well as the rich and diverse habitats are of outstanding international importance as an essential habitat for numerous species typical of natural forest ecosystems of temperate climate zone.

Management

The Site encompasses over sixty thousands hectares of forest under a strict protection regime on both sides of the border (IUCN category I). It is surrounded by more than one hundred thousand hectares of forest of varying protection regimes as well as a production forest which serves as the buffer zone.

The joint management framework for the World Heritage Site presents main aims and objectives of the management of the Site. Each of the managing authorities acts according to long term management plans and the annual plans of activities, taking into account the joint management framework.

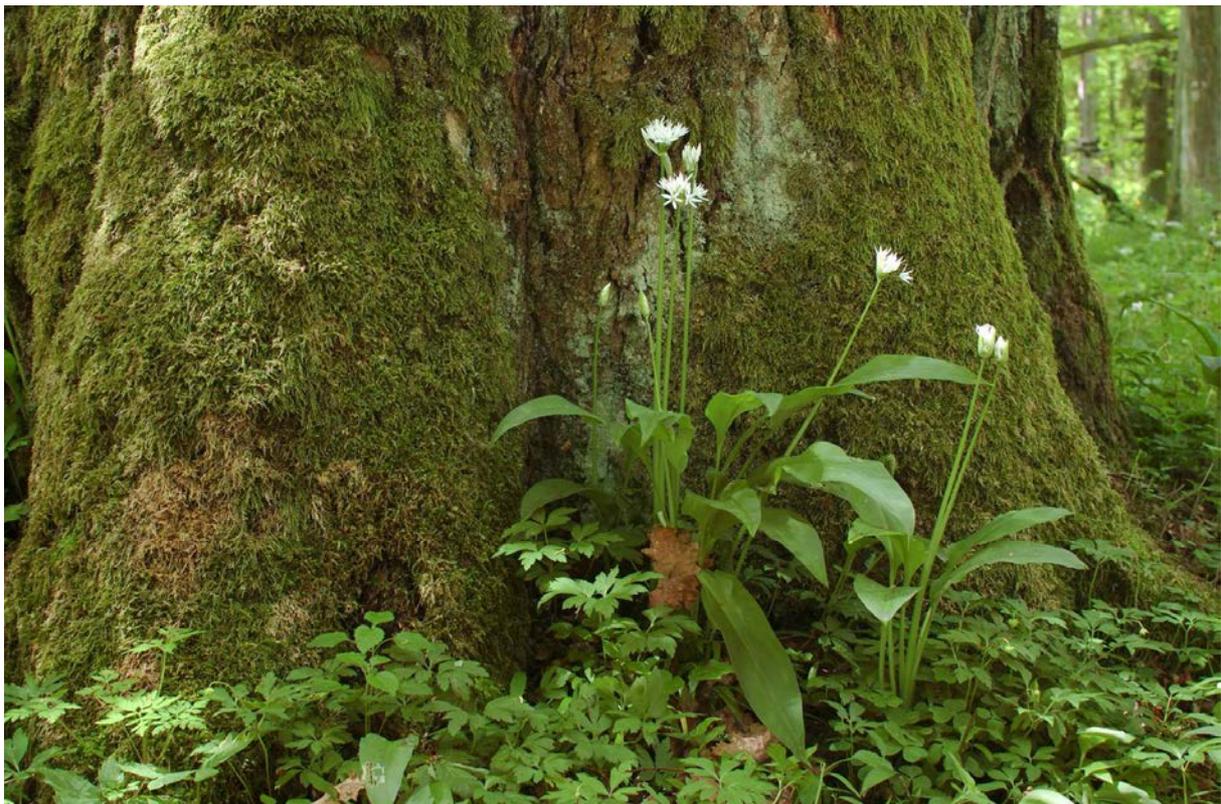
The undisturbed wild nature is basic principle for the management. The unique combination of habitats, species and ecological processes is respected; the old-growth natural forest of primeval character prevails and is the object of special consideration. With respect to hydrological conditions, the main aim of management is to maintain the existing hydrological regime. The management of water ecosystems of artificial origin will be maintained with the view to sustain long-term and stable persistence of the existing plant and animal water and water-dependent communities. Timber exploitation for economical purposes is banned.

Research on natural processes and biodiversity is carried out and the results are shared among organizations and the general public. Experiments which might cause irreversible alteration of the environment and natural processes or threaten unique forms of plants, fungi, animals and landscapes are prohibited as well as the introduction of alien species. Visitors are admitted exclusively in a way that has no impact on the Site's natural value while more intensive tourism and recreation is channeled to the buffer zone.

Proper measures to reduce the risk of disaster, in particular the risk of fire, have been implemented.

3.3 Comparative analysis

The Bialowieza Forest is one of the last remaining natural forest complexes of primeval character in European lowlands. Thanks to the six-hundred year history of legal protection and strict protection being established on a part of the Forest over 90 years ago it maintained its unique character. The greatest value of the area is its unique diversity of habitats and species as well as natural processes running unbroken for thousands of years. Even though the traces of human presence in the Bialowieza Forest date back to 5th century BC, it never was intensively exploited and the administrative measures installed for the hunting grounds for the rulers provided necessary protection. Numerous research confirmed that the Bialowieza Forest maintained the primeval character (Faliński 2003, Wesolowski 2005).



Out of 180 natural properties inscribed on the World Heritage List, 104 are the sites where forests play significant role, situated in all biogeographical provinces and covering the area of over 76 million hectares. The great majority of them are situated in the tropical region

while just 9 of them are situated in the Palearctic Biogeographical Realm. These are: Central Sikhote-Alin, Durmitor National Park, Mount Huangshan, Mount Sanqingshan National Park, Mount Wuyi, Pirin National Park, Plitvice Lakes National Park, Primeval Beech Forests of the Carpathians, Putorana Forests, Yakushima (meeting point of the palearctic and oriental biotic regions). Ten forest sites are situated in the Nearctic Biogeographical Realm: Canadian Rocky Mountains, Great Smoky Mountains, Gros Morne National Park, Nahanni National Park, Olympic National Park, Redwood National and States Park, Waterton Glacier International Peace Park, Wood Buffalo National Park, Yellowstone National Park, Yosemite National Park. Out of those just 7 sites are inscribed under the criterion x and 11 under the criterion ix. The report “Forest Protected Areas Warranting Further Consideration as Potential WH Forest Sites: Summaries from Various and Thematic Regional Analysis” (Patry 2005) listed other forest areas around the globe which could be assessed. Among them there are several sites from Nearctic: South Moresby National Park, Volcan Nevado de Colima National Park, Kalmiopsis Wilderness and Siskiyou Region and Atikaki-Woodland Caribou/East Side. List of sites of Palearctic included mainly boreal forests: Green Belt of Fennoscandia, Basegi Nature Reserve, Magadansky Nature Reserve, Malaya Sos’va Reserve, Pinezhsky Reserve, The Western Sayan, Tsentralno-Sibisrsky State Nature Reserve, The Tungusky phenomenon, Valdai – the Great Watershed and Kuril Islands. Tentative List of the World Heritage Centre has the following forest sites viable for comparison: Hohe Tauern National Park (Austria), Hyrkan State Reservation (Azerbaijan), Central Balkan Park (Bulgaria), Gwaii Haanas (Canada), Ivvavik/Vuntut/Herschel Island (Qikiqtaruk) (Canada), China Altay (China), Shennongjia Nature Reserve (China), Xinjiang Tianshan (China), Velebit Mountain (Croatia), Colchis Wetlands and Forests (Georgia), Mta-Tusheti (Georgia), Golestan NP (Iran), “Biogradska gora” NP (Montenegro), Djerdab NP (Serbia), Fungal Flora of Bukovske Hills (Slovakia), State Reserve Dashti Djum (Tajikistan). Most of those sites are

mountainous regions what makes them more diverse with different vegetation zones and species characteristic of mountains.

It is undeniable that forests of the tropical region are hard to compare with those of north temperate zone as the abiotic conditions differ significantly. Differences are particularly evident in climate, air temperatures and water availability, which is the main factor shaping plant and animal communities of the world. Forest communities become more productive and complex as the climate becomes warmer and wetter (Sands 2005). That implies that most productive and diverse are tropical forests which contain 70% of world's plants and animals, 70% of the world's vascular plants and over 90% of all invertebrates. Out of the tropical forests the tropical moist evergreen forest is the most bio-diverse with a high level of endemism. No terrestrial ecosystem can be compared to the Amazonian rainforest.

The Bialowieza Forest is classified as temperate forest distinguished by significant differences in temperature and day length between the seasons. Temperate continental forests occur only in the northern hemisphere. They occupy most of eastern USA and a belt of forests stretching from Western Europe across Asia, south to the boreal forest. Its tree stand is composed of a mixture of deciduous angiosperms and conifers including, among others, the following genera: *Quercus*, *Fagus*, *Fraxinus*, *Acer*, *Ulmus*, *Populus*, *Salix*, *Tilia*, *Betula*, *Picea* and *Pinus*. In Europe and North America most temperate forests have been cleared. Temperate continental forests cover approximately 13% of the total forest area in Asia, 40% in Europe and 46% in North America (Sands 2005). As biodiversity decreases with latitude, temperate and boreal forests have lower biodiversity than tropical and subtropical forests. In addition, large scale clearings carried out in the past and replacing them with agriculture, grazing and urban development reduced biodiversity. Biodiversity of forest ecosystems of temperate zone cannot achieve the level of the tropics mainly because of abiotic conditions. Moreover, the species composition of the ecosystems in different climatic zones or

biogeographic provinces is totally different as the great majority of species cannot stand or adapt to different ecological factors, such as temperatures, water availability or competitiveness of resident species. Therefore one cannot compare ecosystems from various biogeographical and climatic zones neither in term of ecological processes nor biodiversity and species composition.

The Bialowieza Forest may be compared to forest ecosystems from palearctic and nearctic biogeographical realms. The biogeographically transitional character of the Bialowieza Forest corresponds to the specific conditions of the boreo-nemoral zone. Flora and vegetation gradually changes from the West to the East with numerous species attaining here the limit of their distribution. Decreasing number of tree species composing forest communities, especially those forming deciduous forests *Carpinion betuli* type as well as decrease of the total number of vegetation units is the most striking feature for the changes from west to east of the continent. Vegetation of the BF is difficult to compare to other areas in the adjacent periglacial plains – a combination of communities and species of west central European character with boreal and boreal-continental elements arose in a unique way. The same development was not possible west of the forest because of the absence of the spruce and east of the forest because of major differences in the habitat and the climate (Faliński 1986).

The continental climate favours the species adapted to the shorter vegetation season, severe winters and prolonged persistence of the snow cover. The Bialowieza Forest differs from West European forests in the absence of the beech and from the East European forests in the abundance and large portion of the oak and hornbeam in



the structure of forest communities (Faliński 1986). On the other hand, it is similar to North-Eastern European forests by presence of spruce in nearly all types of forests and its significant role in the structure and dynamics of forest communities of the region.

Generally the greatest species richness is described in the tropics, with the number of species decreasing towards higher latitudes (Rohde 1992). Nevertheless, some groups of species show an opposite biogeographical pattern (Kouki 1999), thus emphasizing the importance of complementary approach in species conservation also on the global scale. Boreal and boreo-nemoral forests, for example, although not as species-rich as tropical forests, contain some particular features and conditions not met elsewhere. One feature of special importance for species diversity is dead wood that due to cold climate decomposes at a relatively slow rate (10 – 100 years depending on the tree species, dimensions and local microclimate) and, thus, provides a diversity of habitats for a diversity of species (Hanski, Hammond 1995; Renvall 1995).

The large and well-preserved forests are often encountered in numerous protected areas, but are dominated to a large extent by different species. Typical for Pirin are the Macedonian and Bosnian Pine forests while Durmitor is famous for its virgin Austrian pine forests. The closest World Heritage Site of forest character to the Bialowieza Forest is Primeval Beech Forests of the Carpathians and the Ancient Beech Forests of Germany and is formed of beech forests with the dominant tree species *Fagus sylvaticus* which is absent totally from the Bialowieza Forest.

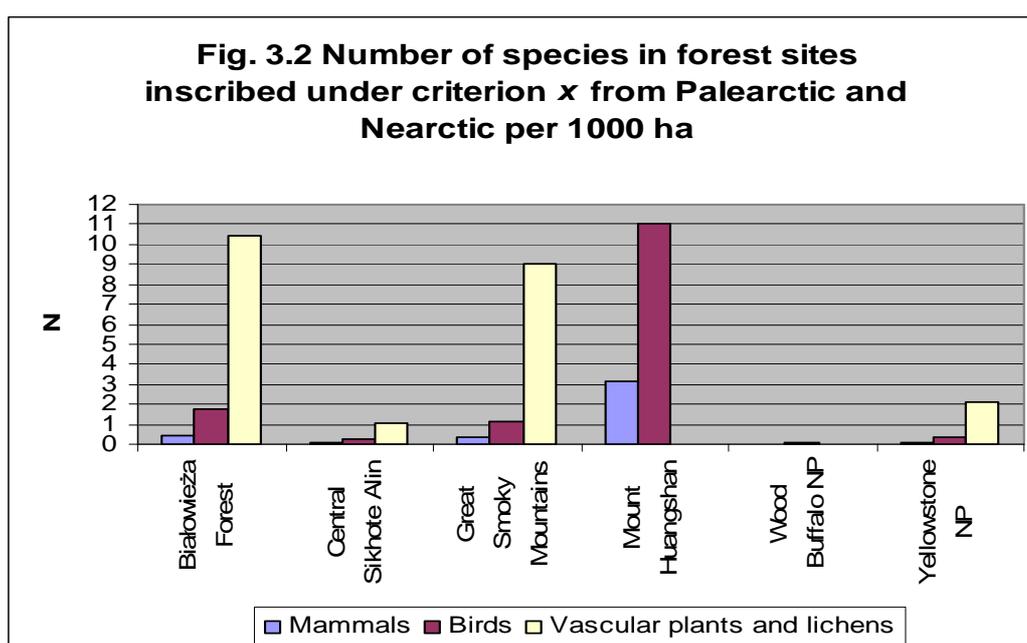
It proved to be impossible to gather reliable data on number of species in different systematic groups of living organisms in the forest World Heritage Sites to which the Bialowieza Forest could be compared. Therefore in this report we present data we managed to acquire for the selected Sites. There are so far approximately 12 000 invertebrates known from the Bialowieza Forest among which the great majority are insects. There are over 3000

species of *Coleoptera* while in the Great Smoky Mountains there are 2518 species of *Coleoptera*.

Number of species in different systematic groups is comparable to other forest areas with similar climatic conditions inscribed onto the World Heritage List under the criterion (x) concerning biodiversity. The basic data are presented in Table 3.1. Even though some groups are less numerous in the Białowieża Forest, it is important to note the extent of the area differs greatly.

Tab. 3.1. Number of species of forest sites inscribed in the World Heritage List under criterion (x) from the palearctic and nearctic biogeographical realms.

| | Area (ha) | Mammals | Birds | Vascular plants | Lichens |
|-----------------------|-----------|---------|-------|-------------------|---------|
| Białowieża Forest | 141 885 | 59 | 254 | 1060 | 402 |
| Central Sikhote Alin | 1 553 928 | 71 | 370 | 1200 | 400 |
| Great Smoky Mountains | 209 000 | 66 | 240 | 1450 | 431 |
| Mount Huangshan | 15 400 | 48 | 170 | 1650 | |
| Wood Buffalo NP | 4 480 000 | 47 | 226 | No data available | |
| Yellowstone NP | 898 349 | 67 | 311 | 1700 | 186 |

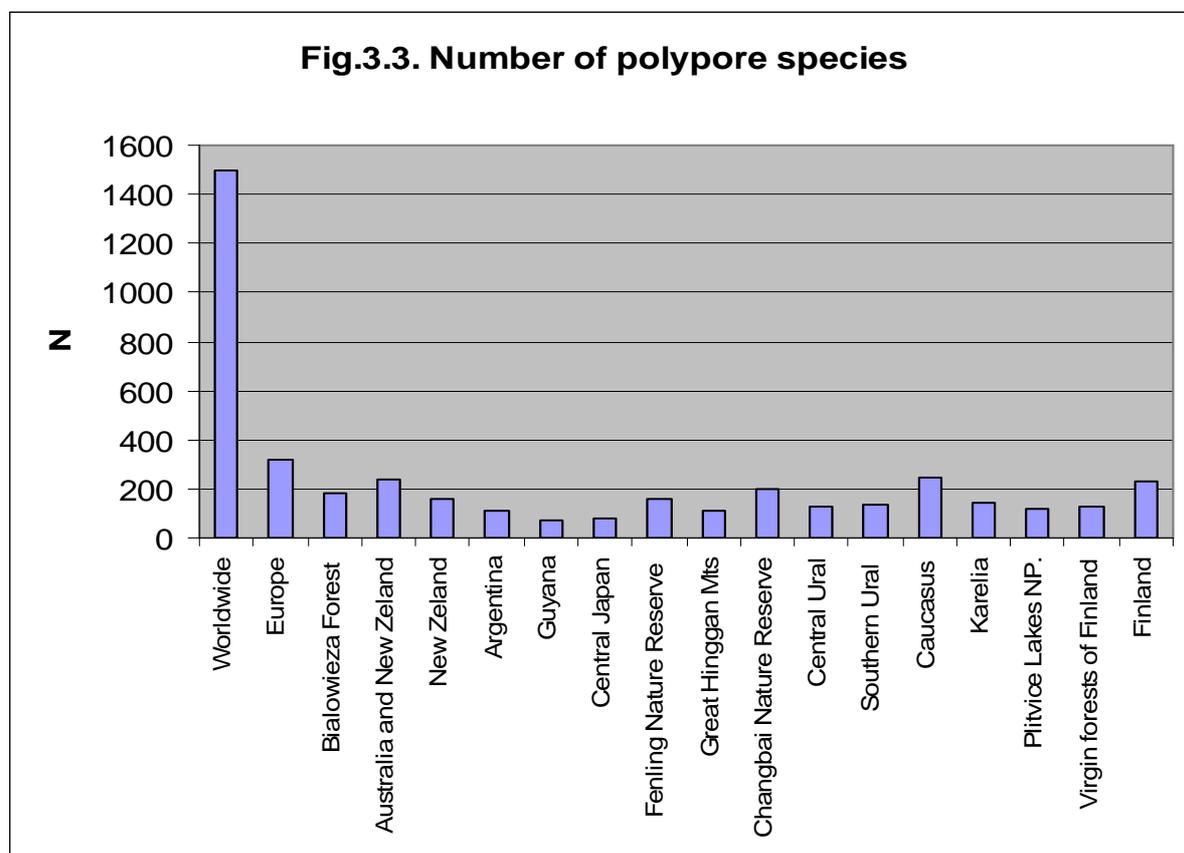


Polypore fungi



The virgin forest of Bialowieza is extremely rich in wood-inhabiting fungi and the majority of species are rare or very rare, practically extinct from the cultivated and managed forest areas of whole central European lowland. Virgin forests of Finland have up to 125 species, while the whole Finland supports 230 polypore species and the total number of polypores of the world is estimated at the level of approximately 1500 species and 322 in Europe. Studies of polypore's in different forest types of Central Japan, including areas protected for over 140 years, resulted in recording 82 species (Hattori 2005). Report from Argentina, from tropical and subtropical montane forest where the biodiversity is very high and there are at least 230 tree species, lists just 111 polypore species (Robledo, Rajchenberg 2007). In Guyana there are 73 species. Fenglin Nature Reserve – virgin forest in the north – eastern China supports 161 species (Dai, Penttila 2006). In the Great Hinggan Mts. of the north-eastern China Dai et al. (2004) found 112 species. Intensive studies of Changbai Nature Reserve carried on for 15 years recorded almost 200 species. Polypores of old-growth forest of Russian Karelia include 143 species (Niemela 2001). The research in Central Ural, on an expanse territory of several national parks and nature reserves and various forest types resulted in 127 species (Kotiranta 2007) while Southern Ural supports 139 polypore species (Kotiranta 2005). New Zealand has 163 polypore species and together with polypores of Australia the number grows to 242 (Buchanan and Ryvardeen, in press). The checklist of polypore species from the territories in the Caucasus region, an immense and a great deal

more diverse area in comparison to the Bialowieza Forest, including Armenia, Azerbaijan, Georgia, Russian Caucasus, NE Turkey and N-NW Iran contains 246 species. The checklist of polypores of the Plitvice Lakes National Park counts 116 species (Tortic 1988). The total number of polypore species found during three one-week inventories only in the Bialowieza National Park (of the area of 10 512 ha) in 2008, 2009 and 2010 was exceptionally high – 142 (Niemela, 2010) while the total number of polypores listed from the Bialowieza Forest so far amounts to 182 species. That means that the Bialowieza Forest supports 56% of the European polypores. The list is not, however, closed yet and some species are still being worked on. It is also worth mentioning that there were several polypore species new to science described from the area (*Dentipratulum bialoviesense*, Domański 1965). Thirteen species present in the Bialowieza Forest are regarded as extremely rare in the whole of Europe and red listed wherever they occur. Another eighteen species are very rare, mostly confined to virgin forests or exceptionally old trees and sensitive to any kind of human activities.



***In situ* conservation**

The Bialowieza Forest is home to a largest free-roaming herd of the European bison. In the whole of forest there are almost 900 individuals which makes almost 25% of the total world's population and over 30% of free-living animals. There is no other locality with such big population of this largest terrestrial mammal of Europe.



The location of the Forest ensures presence of mammal species originating from a range of different zoogeographical zones. Blue hare and masked shrew are boreal species while Mediterranean water shrew and edible dormouse reach here their northern limits. The Bialowieza Forest is paradise for woodpeckers – there are 10 species here, nearly the entire European fauna of *Picidae* family. The only missing species – Syrian woodpecker – nests just few kilometres from

the forest complex. There are 8 bird species reaching in the Bialowieza Forest the limits of their ranges. Almost one hundred species are typical for the forest interior or the forest edge. In addition, the Forest has rich population of hole-nesters, including species which normally do not use tree holes for breeding, such as wren, robin or blackbird.

3.4 Integrity

Low degree of segmentation and dismemberment of its borders as well as high proportion of primeval forest with different-aged, multi-layer stands of various species make the Bialowieza Forest a relict forest object. The exceptional state of preservation, the numerous splendid trees, the small proportion of adventitious elements, its specific geographical and biogeographical situation together with the variety and the wealth of wildlife including the presence of the European bison give the unique picture of the Bialowieza Forest (Faliński 1986). The BF can be divided into three areas: 1. Compact best preserved central part under strict protection regime for several decades; 2. the western part of the forest where fertile habitats and mixed forests prevail with essentially intact water relationships, partially subjected to forestry practices; 3. the eastern part where coniferous forests dominate, with special care to wildlife management, partially transformed by the land drainage. All these factors form a unique mosaic of forest types, forest and non-forest habitats interconnected by the network of rivers. The river valleys of Narew, Narewka, Lesna, Svisloch, Ross, Yaselda and their tributaries integrate the whole area as they are natural migration corridors for animals. They are used not only by mammals such as: elk, beaver, otter but also by representatives of other groups, for instance European pond tortoise. River valleys serve as migration routes for water birds. It should be also remembered that corridors along river valleys serve as perfect habitats for occurrence of numerous rare bird species, like corn crane, red-backed shrike or barred warbler. These habitats are also hunting grounds for lesser spotted eagle. It is crucial to maintain grasslands and stop encroachment of woodlands. The Site constitutes also a mosaic of different protection regimes and areas where limited cutting is permitted. The impact of timber production on biodiversity depends largely on the forest type and the standard of management. Low intensity logging may have little effect on biodiversity. In fact it may help to maintain population of some species, especially those light-

demanding ones (Sands 2005). Maintaining all saproxylic species requires maintaining the full ranges of different types of dead wood habitats, in sufficient quantities and without breaks in continuity. Furthermore, the composition of polypore assemblages of early successional forests was found to be very different from those at later stages of succession, particularly in natural forests. It is evident that the greatest diversity is present in the area strictly protected for almost a century but it is necessary to bear in mind that the area is too small for populations to survive in the long run, and it would be essential to expand the area to include remaining forests. Only then all habitat types and succession stages will be present within the boundaries of the World Heritage enabling the maintenance and continuity of natural processes and huge diversity of phenomena. The integrity of the whole forest is also well visible in the results of radiotracking of animals – the European bison, wolf and lynx (Fig. 3.4, 3.5). Radiotelemetry showed that the fence existing along the state border between Poland and Belarus and dividing the forest complex does not hinder wolf or lynx from crossing the border.

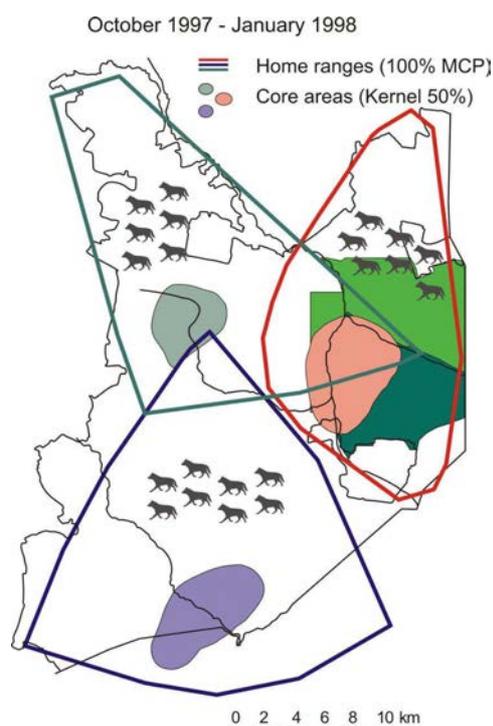
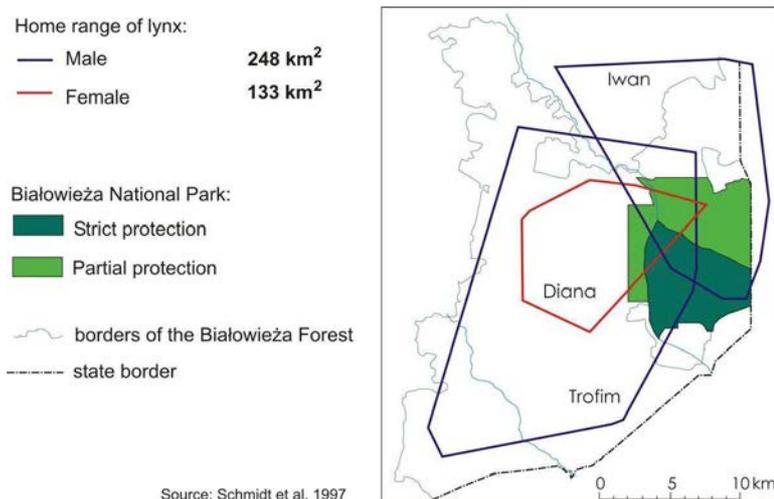


Fig. 3.4 Home range of wolves in the Białowieża Forest based on telemetry (source: Jędrzejewski et.al. 2001).

Fig. 3.5. Home range of lynx in the Białowieża Forest based on telemetry.



Main features proving the integrity and primeval character of the Site are as follows:

- representative ecosystems and forest communities, typical of this part of the world;
- natural composition and distribution of species;
- complex structures (stratified on vertical plan and mosaic on horizontal plan), according to the development stages (specific textures);
- diversity of sizes and ages (occurrence of very old trees);
- the occurrence of coarse woody debris (standing or fallen), in different stages of decay.

The fulfilment of these criteria as well as the overall scientific value of the Site is widely acknowledged within the international scientific circles. The list of best-known publications presenting data and knowledge gathered in the Białowieża Forest includes, among others:

Adamowski W., Dvorak L., Ramanjuk I. 2002. Atlas of alien woody species of the Białowieża Primeval Forest. *Phytocoenosis N.S. 14, Supplementum Cartographiae Geobotanicae 14*, Warszawa – Białowieża: 304 pp.

Bajko P. 2008. *Bibliografia Puszczy Białowieskiej 2001 – 2005*. Białowieski Park Narodowy, Białowieża: 364 pp.

- Bobiec A. (ed.), Gutowski J.M., Zub K., Pawlaczyk P., Laudenslayer W.F. 2005. The afterlife of a tree. WWF Poland, Warszawa – Hajnówka: 252 pp.
- Cieśliński S., Tobolewski Z. 1988. Lichens (*Lichenes*) of the Białowieża forest and its western foreland. Phytocoenosis N.S. 1, Supplementum Cartographiae Geobotanicae 1, Warszawa – Białowieża: 216 pp.
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- Kazulka H. 2005. Will Belovezhskaya Pushcha be a true World Heritage Site? Bialystok: 48 pp.
- Klama H. 2002. Distribution patterns of liverworts (*Marchantiopsida*) in natural forest communities (Białowieża Primeval Forest, NE Poland). Rozprawy habilitacyjne, Akademia Techniczno-Humanistyczna w Bielsku-Białej, Bielsko-Biała: XIV, 278 pp.
- Korochkina L.N., Kovalkov M.P., Tolkach V.N. 1980. Belovezhskaya Pushcha. Uradzhaj, Minsk: 230 pp.
- Korochkina L.N., Vakula V.A. 2008. Zubr Belovezhskoj Pushchi. Alternativa. Brest: 96 pp.
- Kovalkov M.P., Balyuk S.S., Budnichenko N.I. 1985. Belovezhskaya Puscha. Annotirovannyi bibliograficheskii ukazatel otechestvennoi literatury (1835 – 1983 gg.). Uradzhaj, Minsk: 336 pp.
- Kozlo P.G., Bunevich A.N. 2009. Zubr v Belarusi. Belaruskaja navuka, Minsk: 318 pp.
- Krasińska M., Krasiński Z.A. 2004. European Bison. The Nature Monograph. Warszawa – Białowieża: 312 pp.
- Kwiatkowski W. 1994. Vegetation landscapes of Białowieża Forest. Phytocoenosis N.S. 6, Supplementum Cartographiae Geobotanicae 6, Warszawa – Białowieża: 1 – 88 + I mapa.
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- Okołów C. 1976. Bibliografia Puszczy Białowieskiej 1967 – 1972. Białowieski Park Narodowy, Białowieża: 164 pp.
- Okołów C. 1983. Bibliografia Puszczy Białowieskiej 1973 – 1980. Białowieski Park Narodowy, Muzeum Przyrodniczo-Leśne im. prof. Jana Miklaszewskiego, Białowieża: 190 pp.

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- Tomiałojć L., Wesołowski T. 2005. The avifauna of Białowieża Forest: a window into the past. *British Birds*, London, 98, April 2005: 174 – 193.

4. State of Conservation and Factors Affecting the Property

The property after proposed modifications is the last large forest complex of natural nemoral and boreo-nemoral forests in central and eastern European lowlands. The forests of such character prevailed in Europe in the past. There are all forest communities possible in this geographical situation present within the proposed new boundaries. All the biotic and abiotic elements create the unique ecosystem not met anywhere else in the world.



4.1 Present State of Conservation

The European forests have been subjected to human activity for several thousands of years. The use of forests steadily increased, especially during last Millennium. Nevertheless, there were fragments which maintained their natural character until now. Bialowieza Forest is undoubtedly the best example.

The property after proposed modifications is administered by three authorities: National Park “Belovezhskaya Pushcha” manages the part of the Property situated within the Belarusian borders. Polish part of the Property is managed by the Bialowieza National Park and by the Regional Directorate of the State Forests in Bialystok. Regional Directorate administers the area of the Bialowieza Forest which is not enclosed within the boundaries of the Bialowieza National Park. The whole area of Polish part of the Bialowieza Forest outside the national park constitutes the Forest Promotional Complex “Bialowieza Forest” which is composed of three Forest Districts: Bialowieza, Browsk and Hajnowka. For clear reference in this document the component administered by the State Forests will be consistently referred to as Forest Promotional Complex “Bialowieza Forest” (FPC “BF”).

Tab. 4.1. Component parts of the World Heritage Site and its buffer zone.

| | Component part | Area within the boundaries of WHS (ha) | Area of the buffer zone of WHS (ha) | Total |
|---------|--|--|-------------------------------------|---------|
| Belarus | National Park “Belovezhskaya Pushcha” | 82 308.6 | 130 873.4 | 213 182 |
| Poland | Bialowieza National Park | 10 467 | | 10 467 |
| | Forest Promotional Complex “Bialowieza Forest” | 49 109.09 | 35 834.91 | 84 944 |
| | Total | 141885 | 166 708 | 308 593 |

National Park “Belovezhskaya Pushcha” (Belarus)

In accordance with the Decree No.352 of September 16, 1991 of the Council of Ministers of BSSR “On Reorganization of the State Nature Protection and Game Area “Belovezhskaya Pushcha”, the territory was granted National Park status. Entire area proposed as World Heritage Site managed by NP ‘BF’ is situated within the boundaries of the national park. The

great majority of the area is strictly protected with exception of Dikoye Marshes which have been altered by human intervention in the past and now it requires carefully planned restoration activities.

Bialowieza National Park (Poland)

The protection regime was first established on a part of the area on the basis of the Decision of the Department of the Ministry of Agriculture and State Properties from the 29th December 1921. The Bialowieza National Park was established by the order of the Council of Ministers from the 21st November 1947 about establishment of the Bialowieza National Park (Law Gazette 1947, no 74, item 469). Its contemporary area and borders were determined by the order of the Council of Ministers from the 16th July 1996 on the Bialowieza National Park (Law Gazette 1996, no 93, item 424).

Bialowieza Forest District, Browsk Forest District, Hajnowka Forest District – forming Forest Promotional Complex “Bialowieza Forest” (Poland)

Decision no 23 of the Minister of Environment Protection, Natural Resources and Forestry on introduction of new regulations in the management of the Bialowieza Forest the Forest Promotional Complex “Bialowieza Forest” was established. It is administered by three forest districts: Bialowieza, Browsk and Hajnowka. Various regimes of nature and landscape protection function, with a diverse arrangement of protection regimes, including area of protected landscape, the Natura 2000 site, nature reserves, nature monuments, ecologically valuable lands and species protection of plants and animals. The table 4.2 presents the regimes of nature protection on the territory of FPC. Forest compartments bordering the Bialowieza National Park form the buffer zone of the Park (covering 3224.26 ha) where more restrictive principles of management of natural resources is introduced.

The Polish part of the Bialowieza Forest, since 2007, as a whole has been included into a special area of habitat protection and an area of special bird protection Natura 2000 PLC 200004 Bialowieza Forest.

Apart from that there are 1149 nature monuments, mainly trees.

Tab. 4.2. The regimes of nature protection on the territory of FPC “BF”.

| Regimes of nature protection | Area (ha) |
|--|-----------|
| Nature reserves | 12054.51 |
| Protection zones around the places of the reproduction and regular stay of protected birds | 1761.72 |
| Protection zones of lichens | 254.34 |
| Ecologically valuable lands | 738.48 |
| Natura 2000 | 49109,09 |

4.2 Management and protection regimes existing within the Site

4.2.1 Strict protection

According to the definition, the principle of the strict protection is to leave specified area entirely in the power of natural forces where humans have no direct interference. The strict protection enables free course of ecological processes, eg. forest regeneration after cessing cutting, changes in the species composition and in a structure of forest communities, which are results of natural development of forest stands and processes of succession.

Activities permitted within the area subjected to a strict protection regime are as follows:

- a) monitoring of the condition of biotic and abiotic components of ecosystems;
- b) recognition of the state and threats of resources and components;
- c) taking of generative and vegetative propagules for ex-situ breeding and reintroduction programmes of species with special needs;

- d) fire prevention measures;
- e) maintenance of main roads and routes passable in order to ensure fire safety and safety for people being on the territory of the Park;
- f) repairs of tourist, information and educational infrastructure related to public access to the area;
- g) protection against not-entitled human penetration and harmful activities;
- h) minimization of the negative effects of public access to the area.

4.2.2 Active protection

Human interference is allowed in a form of protection measures in order to restore the state of ecosystems and the components of nature to the conditions closest to natural or to preserve natural habitats and habitats of plants, animals and fungi. An example of active protection is meadows mowing and removing bushes from meadows in the river valleys, in-forest meadows and terrains after the former timber depot areas. These are places of occurrence of many valuable and rare species of plants, including: marsh gentian, marsh pea, matgrass, *Succisella inflexa* or orchids as well as rare bird species (corncrake, common snipe and lesser spotted eagle). Maintenance of an open character of these habitats helps to stop the succession, i.e. overgrowing with shrubs and trees. The above works are carried out in the summer period, after shedding of blossom by rare species of plants and bird clutching season.

The following protective activities are allowed:

- a) environment monitoring, including monitoring of threats imposed by factors which may disturb the course of natural processes or put in danger the durability of ecosystems;
- b) establishing of seed banks and *ex-situ* gene banks as well as pure cultures of fungi species;
- c) protection against damages caused by external factors and limiting their effects;

- d) slowing down and stopping surface water outflow in order to increase retention capacity of ecosystems;
- e) protection and restoration of biodiversity and genetic diversity of ecosystems, including maintenance of populations of species requiring special care treatments of active protection;
- f) supporting non-forest plant communities through mowing or pasturage adjusted to a type of plant communities and to biological proprieties of the species being the subject of protection;
- g) removing invasive species and those of alien origin threatening the subjects of protection;
- h) fire prevention;
- j) building and repairing of tourist infrastructure.

4.2.3 Landscape protection

The objectives of landscape protection is to preserve characteristic features of a given landscape. The landscape protection includes sanitary cuttings of trees and shrubs and mowing of meadows. In practice the landscape protection of a part of a national park or nature reserve often allows to maintain economic use of a given area. This status usually is given to technical terrains such as roads, car parks, buildings, etc.

- a) preventing overgrowing of semi-natural ecosystems and maintenance of disappearing plant communities;
- b) maintaining communication roads and routes passable;
- c) slowing down of the outflow of surface waters, including maintenance of dams and other hydrological infrastructure;
- d) protecting values and revitalisation of historic-cultural landscape;

- e) protecting former agricultural land by preservation of traditional and extensive way of their use;
- f) removing alien species except for plant species belonging to the historic landscape plan;
- g) active protection of animals, fungi and plants;
- h) building educational, touristic and administrative infrastructure.

Area of the separate nature protection regimes within the Site is presented in the table 4.3.

Tab. 4.3. Protection regimes within the Site.

| Protection regime | IUCN category | NP “BF” | FPC “BF” | BNP | Total |
|---------------------------------|---------------|-----------|----------|-------|--------|
| | | Area (ha) | | | |
| Strict protection | I | 56861 | 11613 | 6061 | 74535 |
| Active protection | II | 22509 | 35565 | 4103 | 62177 |
| Habitat/Species Management Area | IV | | 1931 | | 1931 |
| Landscape protection | V | 2939 | | 303 | 3242 |
| Others | VI | | | | |
| | | 82309 | 49109 | 10467 | 141885 |

4.3 Nature Conservation Programmes and Decisions concerning the Bialowieza Forest

World Heritage Property

The Transboundary World Heritage Site within its present borders encompasses 92 669 ha. The majority of the site is situated in Belarus and 5069 ha is situated in Poland. The Polish part of the Site was inscribed on the World Heritage List in 1979 while the Belarusian part was added in 1992. Due to huge differences in political systems as well as nature conservation policies in both countries both parts are managed separately, however a joint management framework has been elaborated and accepted by the management authorities in both countries. Since the Belarusian part was added, there has been a major disparity in size and in

management of the parts. The Polish part of the site consists almost exclusively of forest habitats subjected to strict protection regime for over eight decades. This area is surrounded by a large forest complex which in terms of management forms a complicated mosaic of patches of different protection regimes. Belarusian part of the Site encompasses, apart from the forest ecosystems, the 'Dikoye' marshland complex – one of Europe's largest mesotrophic marshes which is of major importance for the regulation of water regime in the Bialowieza Forest.

Biosphere Reserve

The Bialowieza National Park was inscribed onto the list of Biosphere Reserves in 1977. State National Park "Bialowieza Forest" (Belarus) was separately inscribed on the list in 1993. In 2005 the Polish Bialowieza Biosphere Reserve was enlarged onto the entire area of the Bialowieza Forest. There is no single Transboundary Biosphere Reserve so far.

Natura 2000

The whole area of the BF was included into Natura 2000 network in 2004 by the Minister of the Environment. This was accepted by the European Commission in 2007.

The Natura 2000 network is a system of areas established to ensure conservation of nature elements regarded as threatened in the territory of the European Union. The habitat types and species of special importance were listed in annexes to Bird Directive and Habitat Directive which are basic documents in EU legislation concerning nature protection. Every EU Member State is obliged to establish a network of Natura 2000 sites and implement proper measures to maintain or restore their favourable conservation status. The whole Polish part of the Bialowieza Forest is designated the Natura 2000 site (code PLC 200004). It occupies 63147 ha and it is an integrated Special Protection Area as well as a Special Area of Conservation.

Within its boundaries it protects 12 natural habitat types, 50 bird species, 6 mammals, 2 amphibians, 1 reptile, 4 fish, 25 invertebrate and 3 plant species which are regarded as objects of special interest by the European Community. Among the top priority objects of conservation are: the European bison, three-toed woodpecker, white-backed woodpecker, wrinkled bark beetle, flat bark beetle and others. The Bialowieza Forest is of high significance for the European Network as a refuge for unique species and habitats related to old-growth forests.

As Belarus is not the EU Member State, it is not obliged to implement the relevant EU Directives. Therefore majority of data of conservation objects related to Natura 2000 is available only for the Polish part of the BF.

The European Diploma of Protected Areas

The Diploma was granted to the Bialowieza National Park (Poland) and separately to the National Park “Belovezhskaya Pushcha” (Belarus) in 1997. After the revision of the state of conservation of the sites carried out by an independent expert in 2002, the Diploma was renewed. Nevertheless, in 2007 it was suspended with the following conditions: 1) implementation of the long term peer reviewed management plan; 2) designation of all old growth forest under strict regime within the entire Bialowieza Forest (Poland).

The visit of an expert of the Council of Europe is planned for the 2012 and after that the final decision will be taken by the Council of Europe.

The Diploma for the National Park “Belovezhskaya Pushcha” was also suspended under the following condition: that a peer-reviewed ten-year management plan for the Belovezhskaya Pushcha National Park, including adjacent areas of internationally recognised natural importance, with due regard to the conclusions of the “Forest of Hope” appeal be prepared and implemented.

In September of 2011 the mission of experts from the Council of Europe took place in Belarus and the decision on the renewal of the Diploma for the National Park “Belovezhskaya Pushcha” shall be taken at the beginning of 2012.

Selected nature conservation projects carried out within the area

In recent years, in recognition of the need to provide opportunities for the forest ecosystems to adapt, some attempts have been undertaken to increase connectivity among these forest ecosystems and surrounding lands. One of them was the project entitled ‘European bison conservation in the Bialowieza Forest’ in which all the major stakeholders from the area participated. The main aim of the project was to ameliorate the situation of the species in the Bialowieza Forest by creating possibilities for it to expand its range over the forest areas and in the vicinity of the Bialowieza Forest. This could be achieved by enhancing connectivity with other forest complexes by improving food and water availability along the dispersion routes. This include dispersion of winter feeding sites managed by the Bialowieza National Park authorities as well as agreements with individual land owners for contracting meadows for the use of the bison. The land owners who agreed to be a part of the project were paid for using the land as hay meadows which were cut and then hay was left in hay stacks for the winter as additional feeding places for the bison. The project is continued and the results will bring benefits not only to the European bison but also to other animal species creating migratory corridors. Another project with participation of the Bialowieza National Park and the State Forest Administration was ‘Protection of *Emys orbicularis* (European pond turtle) and amphibians in the north European lowlands’. One of the goals of that project was creating breeding and feeding habitats for amphibians as well as their protection during spring migration between forest and grassland habitats. Within the area of the park as well as in the surrounding private lands there were new ponds created, supporting not only breeding

populations of amphibians but also serving as water reservoirs for other animals and facilitating migration of numerous species. Enhancing connectivity of ecosystems is also the aim of the project “Protection of lesser-spotted eagle in Natura 2000 sites”. The species nests in forest but feeds on grasslands and cut meadows – large scale meadow reclamation in the area of the Bialowieza Forest is realized within the framework of that project.

4.4. Factors affecting the Site

Development pressure

The road network within the Bialowieza Forest is the hereditary form from the 19th century when it was established in order to create an easy access to forest areas mainly for hunting. State Forest Administration as well as the Bialowieza National Park undertake various activities aiming at minimizing the adverse effect of factors which may possibly lead to threats of proper functioning of the ecosystems of the Bialowieza Forest. The road network in the Polish part of the Site allowed for the mechanic vehicles reflects the needs of effective protection and monitoring of forest ecosystems. Roads allowed for public transport are exclusively those necessary to reach the human settlements situated within the forest complex. The highest traffic is observed at the road linking the town of Hajnowka (at the western outskirts of the Forest) and Bialowieza. The rest of the roads in Polish part are of poor quality (without asphalt surface) and traffic there is very limited. Most of the roads are kept exclusively for safety reasons as well as implementation protective measures. Forest roads may be used only by the special services, including the forest administration, national park service, police and border police as well as fire service. The Bialowieza Forest is situated on the border of Poland which constitutes also the border of the European Union. Therefore, our country is obliged to provide the best and most effective border protection.

In the whole area of the property after re-nomination the main reason for maintaining the roads is the risk of fire. In view of diminishing precipitation we are forced to take into consideration enhanced risk of fires. The Bialowieza Forest is the last complex of so well preserved deciduous and mixed lowland forest of Europe so proper protection and immediate intervention in case of fire is essential.

The nominated property is situated in sparsely populated regions of Poland and Belarus. There are no big cities or industrial areas in the region. Therefore sustainable development of the area requires maintaining practices such as farming, limited forestry practices, fishing and other small-scale businesses. It needs to be underlined that those activities mainly take place in the buffer zone of the property after re-nomination. World Heritage status cannot be the reason for depopulation of the area. Cultural history and the traditional landscape of the inhabited glades situated within the forest complex and at its outskirts shall be maintained and persistence of the unique mosaic of local customs, traditions, religions and languages should be supported.

Environmental pressures

Water regime changes

The Bialowieza Forest's ecosystem is sensitive to the climate change and changes of water regime. Permanent monitoring of ground water table carried out since the mid 1980's shows that the ground water table is systematically decreasing. In water-logged biotopes it decreased by up to 20 cm, while in fresh and humid habitat types it decreased by 40 cm. This leads to disappearing of small water bodies and seasonal drying of small water courses which in turn affects the whole range of species. There is no drinking water available for big mammals, including bison. Some species cannot complete their larval development, such as amphibians

or dragonflies. Lower ground water table affects also tree species weakening them and thus making them more susceptible to insects and fungi infections.

These threats are mitigated by small scale retention works on the river courses, creating new ponds in the buffer zone of the nominated property. The natural ally is the European beaver. Its population is stable with favourable conservation status. Through dam building – the species ameliorates water conditions in the forests as well as creates new habitats for numerous species related to water ecosystems.



Eutrophication of soils leading to regression of habitats on poor soils

The process of eutrofication of the habitats, observed in the BF in the last 40 years, is the result of increased nitrogen deposition. In result, change in species composition from poorer habitats to richer habitats is observed. Therefore the state of conservation of some plant communities is difficult to control and manage. Changes of forest vegetation of a directional character are difficult to examine, because they happen during many tens and even hundreds of years. Changes of floristic composition on the permanent plots have been studied in the Bialowieza Forest for the last 30-40 years. The largest differences, and also the largest pace of changes were stated in the formations of boreal spruce forest *Sphagno girgensohnii-Piceetum*, then bog-birch marsh forest *Sphagno-Betuletum pubescentis*, pine-birch marsh forest *Thelypteridi-Betuletum pubescentis* and pine bog forest *Vaccinio uliginosi-Pinetum*.

Deterioration of health of the European bison

The species, saved from extinction, is still under threat as the number of animals living worldwide is still low, the herds are isolated and the genetic diversity is extremely low due to bottle neck existing in the 30s of the 20th century. All those factors make the species prone to outbreaks of new diseases and infestation to parasites. Research show that the animals are infected with numerous parasites, including most common liver flukes *Fasciola hepatica* the new and invasive one – *Ashworthius sidemi*. In addition, behaviour of the animals which aggregate in winter forming large herds helps spreading the parasites as well as existing and potential diseases. Balanoposthitis is the disease leading to infertility in males which causes greatest concern in recent years.

Withdrawal of termophilous species, isolation of populations

Change in forest management leads to withdrawal of termophilous and light demanding species as well as habitats. In the past grazing cattle was allowed in some parts of the Bialowieza Forest. During several hundreds of years of particular mixture of conditions termophilous oak forest developed. At present, cattle grazing is forbidden and the habitat's state of conservation deteriorated greatly. However, the habitat is still well preserved in the eastern part of the forest. Limiting tree cutting also limits occurrence of termophilous and light-demanding species or enhances the isolation of localities.

Alien and invasive species

Ecosystems of the BF are believed to be in a good shape of preservation. Nevertheless, they are not void of alien and invasive species. Some of them were brought deliberately by man, some were introduced accidentally along the communication tracks and in the vicinity of human settlements. Some dispersed from neighbouring areas. Among the most impressive

alien species are red oak, box elder and red elderberry. Among the herb plants there are quaking grass sedge and small balsam. The most emblematic invasive species is American mink changing the ecosystems wherever it appears. Another alien species well established in the area is raccoon dog.

4.5. Natural disasters

The BF is situated in a relatively stable area where majority of the Earth's natural disasters may be excluded. Volcano eruption, earthquakes and flooding are not relevant. Fire is regarded as main disaster which may affect the Bialowieza Forest. The fire risk is real as the latest fire took place in April of 2009 in the Bialowieza National Park (but outside of the boundaries of the World Heritage area as inscribed in 1992). As the fire was controlled by proper services immediately it consumed only partially 7 ha of forest. The Eastern part of the Forest has larger proportion of dry coniferous forests therefore the probability of fire outbreak there is higher than in the western part. The network of roads is more dense there as well as fire prevention procedures are more strict and obligatory even within the strictly protected areas. This implies that a network of roads must be maintained to enable quick access to the threatened area. Detailed information on fire prevention and reacting to emerging fires will be included in management plans for both sides of the World Heritage Site which is being prepared at present.

Large – area windstorms may be regarded as natural disaster but on the other hand they may also be seen as part of natural processes.

4.6. Visitor/tourism pressures

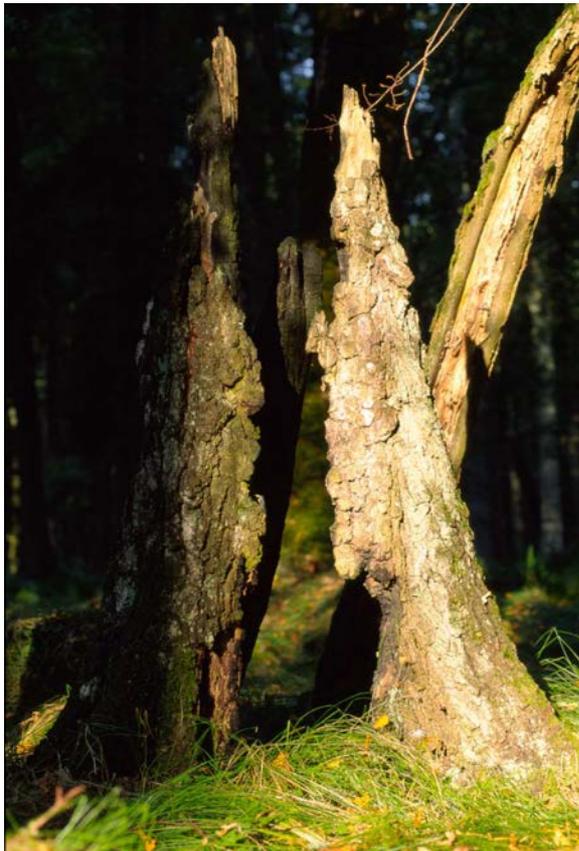
Excessive and uncontrolled development of tourism might be a serious threat for the protection of the natural values of the Bialowieza Forest. The main factors negatively

affecting natural values are: increased risk of fires, disturbing of animals, noise, littering and trampling of vegetation. Growth of the number of visitors in the Site would also cause increase in traffic intensity, leading to higher probability of collisions of animals and vehicles. Limiting of threats which may accompany tourism is possible primarily through good planning and careful organization of tourism as well as keeping it under steady control.

So far the intensity of the tourism within the Site does not carry an excessive strain for the environment.

4.7. Number of inhabitants within the site

Within the proposed boundaries of the Site there are no inhabitants. In the villages and towns neighbouring the Site, situated within its buffer zone there are approximately 3000 people.

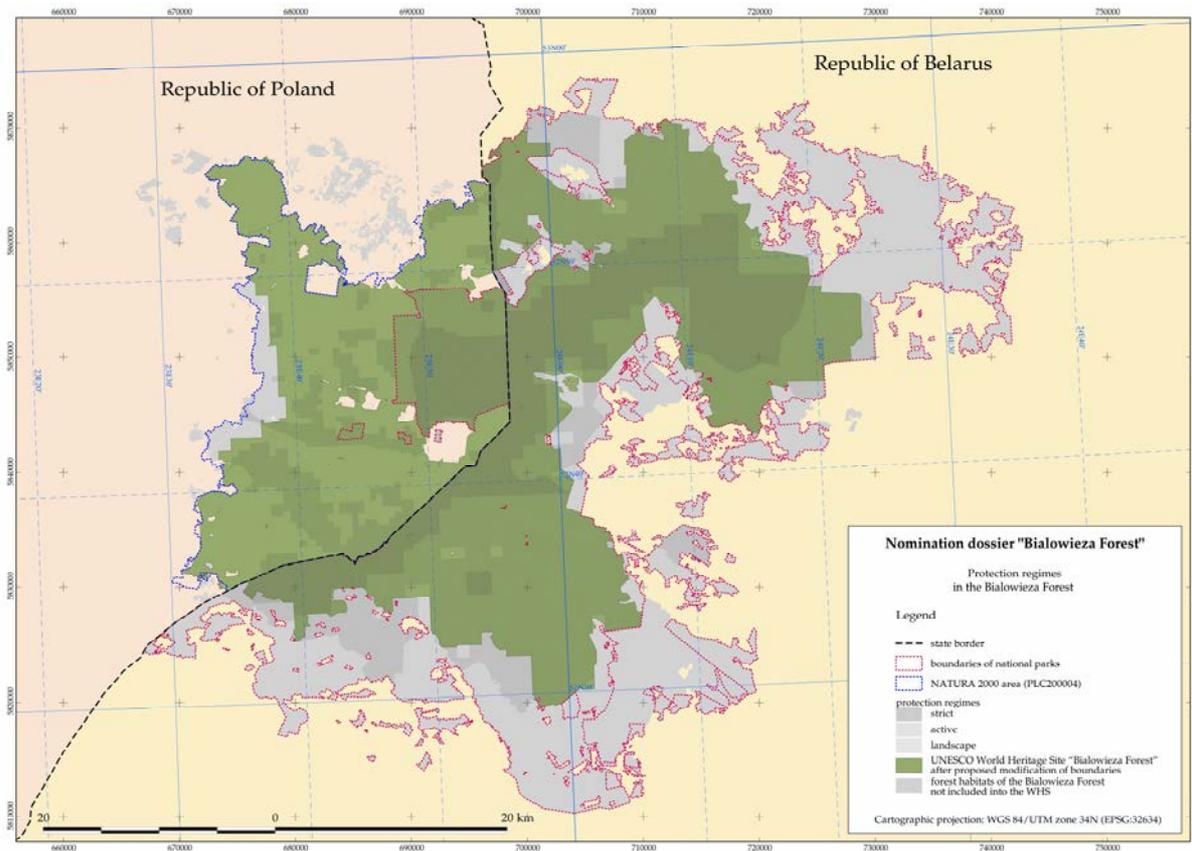


5. Management

5.1. Ownership

The entire area of the Bialowieza National Park (Poland), National Park “Belovezhskaya Pushcha” (Belarus) and State Forests (Poland) is owned by the State of respective countries, thus all parts are State Property. There are no private properties within the Site in its proposed boundaries.

Fig. 5.1. Protection regimes in the Bialowieza Forest.



5.2. Legal status

National Park “Belovezhskaya Pushcha” (Belarus)

In accordance with the Decree No.352 of September 16, 1991 of the Council of Ministers of Belarusian Soviet Socialist Republic “On Reorganization of the “Belovezhskaya Pushcha” State Nature Protection and Game Area, the territory was granted National Park status. The National Park is the Republic's area of preferential protection.

At the 16th session of UNESCO (7 – 14 December 1992), the Committee inscribed the core zone of the Belarusian part of the Bialowieza Forest on the World Heritage List.

By decision of the Bureau of the International Co-ordinating Council of the Programme on Man and the Biosphere 03/12/1993 the Bialowieza Forest is recognized as a part of the international network of Biosphere Reserves.

Bialowieza National Park (Poland)

The area of the Park became subject to legal protection on basis of the decision of the Forestry Department in the Ministry of Agriculture and State Properties from 29th December 1921.

The Bialowieza National Park was established by the government’s decree from 21st November 1947 on establishing of the Bialowieza National Park (Law Gazette 1947, no. 74, item 469), and its current area and borders were determined by the government’s decree from 16th July 1996 on the Bialowieza National Park (Law Gazette 1996, no. 93, item 424).

The whole territory of the Park is included into the area of special protection of habitats and into the area of special protection of birds Natura 2000 PLC 200004 Bialowieza Forest.

Forest Promotional Complex “Bialowieza Forest” (Poland)

Administrative units of the Regional Directorate of the State Forests Administration in Bialystok: Bialowieza, Browsk and Hajnowka Forest Districts constitute the functional unit with special regulations - Forest Promotional Complex “Bialowieza Forest”.

Forest Districts of the FPC “BF” are registered in the Registry of Enterprises of the Ministry of Finance in the Section A, no. 5381 under the name Regional Board of State Forests in Bialystok, 51, Lipowa St, *The copy was prepared in September 1961.* The establishment took place on the basis of: the Decision No. E-2-003/26 of the Minister of Forestry and Wood Industry from 26.05.1961 on establishing of Forest District Units.

Numbers under which these Forest District Units were registered are as follows:

- Forest District in Bialowieza – 67
- Forest District in Browsk – 68
- Forest District in Hajnowka – 69

5.3. Protective measures and means of implementing them

National Park “Belovezhskaya Pushcha” (Belarus)

Activities of the National Park are regulated by national legislation and the Regulation approved by Presidential Decree of September 27th, 2004 no 460 ‘About the National Park Belovezhskaya Pushcha’, the forest management plan (2006 – 2015), the Management Plan for the National Park ‘Belovezhskaya Pushcha’ (2008 – 2013).

In order to optimize the protection of natural systems, object’s area was divided into 12 forest districts, which were further divided into 25 sections. The total number of forest guards is 210 people. They are directly responsible for the protection regime at the entrusted territory. In addition to the administration of the national park there is a rapid response team

(10 people), to detect poaching, unauthorized logging and other types of violations of environmental laws, as well as carrying out preventive work with the local community.

Number of visitors is controlled at 6 checkpoints. The boundaries of the World Heritage Site are marked with information signs.

Fire prevention is based mainly on the forestry personnel on duty established at towers and office buildings which were properly equipped in order to timely detect and locate fires.

Statistics of violations of environmental laws and degree of damage is the basis for monitoring of the conservation status.

Bialowieza National Park (Poland) is managed according to the long-term protection plan. The protection plan of the Bialowieza National Park is a document defining the ways of protection of nature recourses and all components occurring on its territory. In order to ensure the proper functioning of the Bialowieza National Park and its protection, the protection plan, according to the art. 20 of the act on nature protection from 16th April 2004 (Law Gazette from 2009, no. 151, item 1220, with later amendments), is prepared for the period of 20 years. Regulations of art. 18, 19 and 20 of the quoted act define who and when prepares the project of the protection plan for the national park. They also define the range of information which should be considered while preparing the project of the protection plan and what elements the project should contain. According to art. 30 sec. 1 in connection with the art. 29 of the act, the protection plan of the national park become the protection plan for the Natura 2000 area situated within the borders of the Park.

In the last years (since 1996), the authorities of the Park were preparing annual management tasks' plans. The plans had to be approved by the Scientific Council of the Park. The Scientific Council of the Park (consisting of scientists, NGO's and representatives of local governments) meets several times a year and is involved in the life and management of the

Park as advisory body. The annual management tasks' plan must be approved and signed by the Minister of the Environment.

At present, new management plan for the years 2012 – 2031 has been prepared. After public consultation process it will be approved by the Minister of the Environment in 2012. New plan will comply with Natura 2000 requirements.

The area of 6061 ha is strictly protected (thus IUCN category I) and the remaining area (4103 ha) is partially protected (IUCN category II).

Forest Promotional Complex “Bialowieza Forest” (Poland)

The areas administered by the Forest Districts of the Bialowieza Forest are managed according to the forest management plan. This plan is a basic document, on basis of which the forest district units conduct forest economy. The plan is prepared for ten-year periods for the separate forest district of the Regional Directorate of the State Forests. The responsibility to execute the plan rests with the Director of the RDSF. The plan is approved by the Minister of the Environment. At present the Forest Management Plan for the years 2012 – 2021 is being prepared. Simultaneously, the Plan of Protective Tasks for the Natura 2000 “Bialowieza Forest” is being prepared, also for the period 2012 – 2021. The Natura 2000 plan will be superior to regulations of the forest management plan.

The most valuable fragments of the Forest are protected within the boundaries of 21 nature reserves with a total area of 12055.38 ha. Among these objects only 9 reserves possess protection plans and 7 – protection tasks.

Detailed data relating to the nature reserves on the territory of the FPC “BF” are presented in the table 5.1

Tab. 5.1. Nature reserves in the Forest Promotional Complex "Bialowieza Forest".

| Name of the nature reserve | Area (ha) | Legal document establishing the reserve | Protection plan (valid for the period) | Protection tasks (valid until) | Reserve type/Aim of the protection |
|----------------------------|-----------|--|--|--------------------------------|--|
| Kozłowe Borki | 246,20 | Order of the MofEPNRandF from 27.06.1995 (G. No. 33, item 395) | from 4.01.2008 to 3.01.2028 | – | Forest nature reserve / preservation of forest communities with big share of boreal spruce-bog forest / <i>Sphagno girgensohnii-Piceetum</i> / with rich flora of Bryophyte in a natural state |
| Podcerkwa | 228,18 | Order of the MofEPNRandF from 27.06.1995 (G. No. 33, item 401) | from 4.01.2008 to 3.01.2028 | – | Fauna nature reserve / preservation of a fragment of the Forest with specific habitats of relict fauna of butterflies being characterized by richness of species and occurrence of endemic forms in a natural state |
| Pogorzelce | 7,63 | Order of the MofFandWI from 16.09.1974 (G. No. 32, item 194 from 1974) | no | no | Forest nature reserve / preservation of a fragment of the Forest with broadleaved forest communities / <i>Tilio-Carpinetum</i> / with large share of small-leaved Lime / <i>Tilia cordata</i> / in a natural state |
| Wysokie Bagno | 78,81 | Order of the MofFandWI from 16.10.1979 (G. No. 26, item 141) | no | no | Forest nature reserve / preservation of an extensive peat bog overgrown with spruce forest / <i>Sphagno girgensohnii-Piceetum</i> / and a fragment of peat valley of the river Narewka with a beavers stand in a natural state |

| | | | | | |
|--|---------|--|-----------------------------|----------------|--|
| Podolany | 15,10 | Order of the MofEPNRandF from 27.06.1995 (G. No. 33, item 402) | from 4.01.2008 to 3.01.2028 | – | Forest nature reserve / preservation of wet broadleaved forest with big share of monument oaks in a natural state |
| Natural Forests of the Bialowieza Forest | 8593,96 | Order of the Minister of Environment from 25.06.2003 (Law G. No. 132, item 1236) | no | to 18.06. 2015 | Forest nature reserve / preservation of forests (particularly alder and ash-alder forests as well as old-growth tree stands) characteristic for the Bialowieza Forest for research, educational and landscape reasons, also species protection of plants, fungi and animals and maintenance of ecological processes and biological diversity |
| Wladyslaw Szafer Landscape Reserve | 1356,83 | Order of the MofFandWI from 08.04.1969 (G. No. 16, item 128) | no | to 18.06. 2015 | Forest nature reserve / preservation of natural forest communities of the Bialowieza Forest, situated along the road Hajnowka - Bialowieza for landscape reasons |
| Olszanka Mysliszcze | 276,76 | Order of the MofEPNRandF from 27.06.1995 (G. No. 33, item 398) | from 5.09.2008 to 4.09.2028 | – | Fauna nature reserve / preservation of a fragment of the Forest with specific habitats of relict fauna of butterflies being characterized by richness of species and occurrence of endemic forms in a natural state |
| Nieznanowo | 27,70 | Order of the MofFandWI from 16.09.1974 (G. No. 32, item | no | no | Forest nature reserve / preservation of a fragment of the Forest with well preserved alder forest and marsh |

| | | | | | |
|-------------|--------|--|----|----------------|--|
| | | 194) | | | communities and communities of a mixed forest type in a natural state |
| Gleboki Kat | 40,26 | Order of the MofFandWI from 16.10.1979 (G. No. 26, item 141) | no | no | Forest nature reserve / preservation of a fragment of the Bialowieza Forest with boreal spruce-bog forest / <i>Sphagno girgensohnii-Piceetum</i> / in a natural state |
| Michnowka | 84,92 | Order of the MofFandWI from 16.10.1979 (G. No. 26, item 141) | no | no | Peat nature reserve / preservation of a fragment of the Forest with high peat bog and surrounding forests representing well preserved coniferous and broadleaved forest communities in a natural state |
| Sitki | 35,20 | Order of the MofFandWI from 16.10.1979 (M.P. No. 26, item 141) | no | no | Forest nature reserve / preservation of a fragment of the Forest with rarely met here dune highland coniferous forests communities with rare and protected plant species in the groundcover |
| Starzyna | 369,43 | Order of the MofFandWI from 16.10.1979 (G. No. 26, item 141) | no | to 18.06. 2015 | Forest nature reserve / preservation of a fragment of the Forest with well developed forest communities of mixed type with numerous plots of protected plants |
| Szczekotowo | 36,63 | Order of the MofFandWI from 16.10.1979 (M.P. No 26, item 141) | no | no | Forest nature reserve / preservation of a fragment of the Forest with broadleaved forest communities with numerous monument trees and the biggest concentrations of |

| | | | | | |
|-------------|--------|--|-----------------------------|----------------|--|
| | | | | | early medieval burial mounds and remains of tar workshop from 18 th c. in this area |
| Debowy Grad | 100,17 | Order of the MofFandWI from 11.04.1985 (G. No. 7, item 60) | no | no | Forest nature reserve / preservation of a fragment of the Forest with well developed broadleaved forest and alder-ash forest communities with numerous share of monument oaks and monument-related ashes and elms, occurring numerous species of animals (insectivorous, predatory and herbivorous mammals as well as rodents) |
| Berezowo | 115,42 | Order of the MofEPNrandF from 27.06.1995 (G. No. 33, item 389) | from 4.01.2008 to 3.01.2028 | no | Fauna nature reserve / preservation of a fragment of the Forest with specific habitats of relict fauna of butterflies being characterized by richness of species and occurrence of endemic forms |
| Lipiny | 56,29 | Order of the MofFandWI from 12.12.1961 (G. No. 13, item 54) | no | to 18.06. 2015 | Forest nature reserve / preservation of the pedunculate oak occurring in a mixed tree stand next to sessile oak |
| Przewłoka | 78,52 | Order of the MofEPNrandF from 27.06.1995 (G. No. 33, item 403) | from 4.01.2008 to 3.01.2028 | – | Fauna nature reserve / preservation of a fragment of the Forest with specific habitats of relict fauna of butterflies being characterized by richness of species and occurrence of endemic forms |

| | | | | | |
|--------------------------------|--------|--|-------------------------------|---|---|
| Siemianowka | 224,54 | Order of the MofEPNRandF from 27.06.1995 (G. No. 33, item 404) | from 5.08.2003 to 4.08.2023 | – | Forest nature reserve / preservation of a fragment of the Forest with rich flora with dominating marsh forest communities occurring on the outskirts of the upper Narew, in the vicinity of the Siemianowka reservoir |
| Valley of the river Waliczowka | 44,75 | Order of the MofEPNRandF from 27.06.1995 (G. No. 33, item 392) | from 14.08.2003 to 13.08.2023 | – | Floristic nature reserve / preservation of sedge flora communities occurring in the source zone of the forest stream and natural riparian forest |
| Gnilec | 37,21 | Order of the MofEPNRandF from 27.06.1995 (G. No. 33, item 393) | from 5.08.2003 to 4.08.2023 | – | Floristic nature reserve / preservation of sedge communities with share of rare species of vascular plants and bryophyte, the only ones on the territory of the Bialowieza Forest |

5.4. Agencies with management authority

National Park “Belovezhskaya Pushcha” (Belarus)

The National Park “Belovezhskaya Pushcha” possesses the management authority, it is directly subordinated to the Government of the President of the Republic of Belarus.

The Bialowieza National Park (Poland) possesses the management authority, received from the Ministry of the Environment.

Forest Promotional Complex “Bialowieza Forest” (Poland) – functional unit consisting of: Bialowieza, Browsk and Hajnowka Forest Districts manage a part of the area of the World

Heritage Site “Bialowieza Forest”. Heads of these units are responsible for all the activities conducted on this territory.

Both the Bialowieza National Park as well as the Bialowieza, Browsk and Hajnowka Forest Districts forming Forest Promotional Complex “Bialowieza Forest” are administratively subordinated to the Ministry of the Environment (Poland).

5.5. Level at which management is exercised

National Park “Belovezhskaya Pushcha” (Belarus)

The management is implemented by the employees of the National Park. Activities of the National Park is regulated by national legislation (see paragraph 4.1) and the Regulation approved by Presidential Decree of September 27th, 2004 no 460 “About the National Park Belovezhskaya Pushcha”, the forest management plan (2006 – 2015), the Management Plan for the National Park “Belovezhskaya Pushcha” (2008 – 2013).

Name and address of the director of the park can be found in Annex 5.

The Bialowieza National Park (Poland)

The management is implemented by the employees of the National Park and controlled by the Ministry of the Environment.

Name and address of the director of the park can be found in Annexe 5.

Forest Promotional Complex “Bialowieza Forest” (Poland)

The management is implemented by the managing authorities of the forest districts and is coordinated and controlled by Regional and General Directorate of the State Forests.

Name and address of the director of the Regional Directorate of the State Forests in Bialystok can be found in Annexe 5.

5.6. Plans related to the site

- Management plan of the National Park “Belovezhskaya Pushcha” (Belarus)
- Conservation plan for the Bialowieza National Park (Poland)
- Forest management plan for the forest district administration units of the Bialowieza Forest for the years 2012 – 2021 (Poland)
- Plan of protection tasks for the Natura 2000 “Bialowieza Forest” for the years 2012 – 2021

All plans related to the Polish part of the Bialowieza Forest will be complementary to each other. The responsible authorities cooperate with each other. Conservation plan for the BNP includes the information and management activities concerning requirements of the Natura 2000 habitats and species occurring in the Park (it was consulted with scientists, local authorities, representatives of local governments, NGOs and other stakeholders). For the remaining part of the Forest, the plan of the management tasks for the Natura 2000 area is consulted with scientists, local authorities, representatives of local governments, NGOs and other stakeholders as well. Moreover, its directives shall be taken into account in the Forest management plan.

Communes within which the Site is situated lack the land use management plans.

5.7. Sources and levels of financing

National Park “Belovezhskaya Pushcha” (Belarus)

Financing comes from the state budget and extra-budgetary funds (own funds generated by the proceeds of the National Park).

The Bialowieza National Park (Poland)

The National Park has various sources of income. It receives a fixed budget from the State Budget - the Ministry for the Environment. Apart from that, additional funding has been acquired for various activities from external funds.

Regional Directorate of State Forests in Bialystok (Poland)

Financing comes from the forestry budget and extra-budgetary funds.

Tab. 5.2. Budget of the component parts.

| Year | Budget in \$ | | | | | | |
|------|--------------|----------------|---------------|----------------|--------------|----------------|------------|
| | NP "BF" | | FPC "BF" | | BNP | | Total |
| | State Budget | External Funds | Forest Budget | External Funds | State Budget | External Funds | |
| 2010 | 15 692 301 | 15 729 493 | 7 348 344 | 91 786 | 2 836 821 | 1 107 869 | 41 698 745 |
| 2011 | 4 760 821 | 7 145 334 | 7 861 860 | 353 171 | 2 767 429 | 162 651 | 23 051 266 |

5.8. Sources of expertise and training in conservation and management techniques

The national parks (Belarus and Poland) have within their structures research units – the researchers substantially support the activities of the staff and train the field staff, in particular in recognizing species of certain groups, natural processes and nature monitoring. Employees of the parks as well as the State Forests administration take part in trainings organized by other institutions, e.g. GIS trainings, fire prevention trainings, national and international funding possibilities. In Poland trainings, workshops and seminars on management of Natura 2000 sites are frequented. Postgraduate studies and internships at scientific institutes of the staff are supported by the managers. Employees of the Forest Districts Bialowieza, Browsk and Hajnowka participate in trainings on recognition of habitats, plant communities and protected species of animals, fungi and plants.

In Belarus training for the National Park staff is carried out by leading universities of the Republic of Belarus. Further training is carried out through cooperation with the Institute

of Tourism of Belarusian State University in Minsk, exchange of experiences with institutions of similar profile, internships at leading research institutions in the Republic of Belarus, master's degree and postgraduate studies at various research institutes and universities of Belarus.

Both parks have libraries stocked with literature concerning general biology and ecology, nature protection, issues regarding the Bialowieza Forest and the region. There are Forest Education Centres in the Forest Districts stocked with thematic literature. Moreover, the the offices are provided with current literature on nature conservation. The results of research and monitoring carried out by other institutions are used by forest service.

5.9. Visitor facilities and statistics

National Park 'Belovezhskaya Pushcha' (Belarus)

There are 4 hotels and 2 guest houses. The total capacity of the hotel complex of the national park is of 207 places. In recent years, considerable work on the alteration and renovation of hotels, restaurants, cafes, tennis courts and saunas was done. The reconstruction of the former nature history museum into the restaurant able to house 250 guests was done. New building for the administrative centre with nature history museum was constructed in 2009. Also, the reconstruction of the enclosures for the animals in the animal park was completed. The network of tourist routes for various purposes (car, bicycle, pedestrian) with total length of 181 km serves the tourists and sightseers in the whole national park, but majority of them is situated in the buffer zone of the World Heritage Property. There is a fleet of vehicles to transport visitors, there is a bicycle rental, 5 places where souvenirs can be bought. The hotel offers four cafes and two bars. Cultural and entertainment centre 'Santa Claus Manor' was established in the Park in 2004 the park. The bypass road in the buffer zone

of the National Park was constructed. About 320 000 tourists, among which 45% were students and school children and 10% – foreign tourists, visited the national park in 2010.

Bialowieza National Park (Poland)

Forest Promotional Complex “Bialowieza Forest” (Poland)

For a long time the Bialowieza Forest has constituted a subject of interest of sightseers and naturalists. Establishing of a germ of a national park in 1921 and return of bison to the Forest in 1929 undoubtedly influenced an increase of interest in this area and tourism development. Tourism cannot be separately considered in the BNP and in the surrounding forests of the “Forest Promotion Complex”. This is the result of the location of the Park in the centre of this forest complex and interconnections of the network of tourist trails.

The region of the Bialowieza Forest is a place mainly visited by Polish tourists. In majority they are inhabitants of the following provinces: Podlaskie, Lubelskie and Mazowieckie. Students are a numerous group. A very important, although less numerous group of qualified tourists are nature lovers and scientists: ecologists, botanists, ornithologists, foresters and photographers. Bialowieza is a place, where a great number of scientific symposia, conferences, seminars and trainings are organised.



The main objective of visitors in the Polish part of the Site is the Bialowieza National Park. People hope to see the European bison and desire the possibility of walking in the forest. The Animal Park of the BNP is the most popular, it is visited by about 140 thousand tourists annually. The trail in the Strictly Protected Area is annually visited by about 20 thousand people. The Park is annually visited by 10 thousand foreign tourists coming from almost 90 countries.

Recreational tourism is merged with elements of ecological education. The offer of managing authorities of the BF in this matter is considerable and still growing. It comprises educational paths, centres of ecological education, museums, exhibitions, open-air ethnographic museums, summer workshops and the like. Ecological education is one of the main aims of school trips. The possibility of using fruits of the forest, berry and mushroom picking is essential component of recreation in the area, especially for the local citizens.

The seasonal character of the tourism in the area of the Bialowieza Forest is noticeable with its highest intensity between May to October.

At present, the largest part of tourism concentrates in Bialowieza. It is related to accumulation of attractions in the Park as well as concentration of tourist infrastructure (accommodation, tourist information centre, restaurants, tourist bureaus) in Białowieża.

Tourist bureaus are mainly located in Bialowieza but also in Hajnowka and Dubicze Cerkiewne. Tourist bureaus create sightseeing programmes for sightseers taking into account attractions of the BNP and the FPC. They have at their disposal guides who after receiving of appropriate authorizations and passing examinations can show tourists around the territory of the BF and the facilities of the BNP. The thematic scope of guide trainings is agreed with the BNP's management. At present there are about 110 active tour guides and their number has remained at similar level for several years. Such solutions have a big influence on a quality of

information passed on and enable to undertake co-operation between tour operators in BF and the administrators of the territory (BNP and FPC).

Because of a high value and peculiarity of the Strict Reserve, it is open for visitors with assumptions that visiting is accompanied by professional information about aims and reasons of a strict protection regime. Therefore the Strict Reserve is visited only with a tour guide possessing the licence issued by the Director of the BNP. On the area of the BNP one can stay from half an hour before the sunrise to half an hour after the sunset. For security reasons the stay in the BNP during storms and strong winds is prohibited. The Strict Reserve is permanently patrolled by guards.

4.10. Property management plan and statement of objectives

National Park “Belovezhskaya Pushcha” and Bialowieza National Park

According to already agreed “Joint management framework for the World Heritage Site “Belovezhskaya Pushcha/Bialowieza Forest” signed by the Directors of BNP and NP “BP” and approved by respective Ministries the current objectives of the Parks' management are:

Nature protection

Protection of old-growth forest

The primeval old-growth forest will be left undisturbed.

Protection is the general principle for the management of this forest; no activities will take place except for scientific research, education, limited and monitored tourism, keeping paths clear of fallen trees as well as fire risk reduction.

Outside the strictly protected area natural regeneration of the forest will be prioritized but when planting would be unavoidable, only native species from local ecotypes will be used.

Species protection

All species and habitats of the lists from the national law, EU-directives and international conventions will be protected. However, in the Strictly Protected Area no intervention is planned, management practices will take place on the remaining area.

One of the activities which will enhance protection of species, ungulates in particular, would be dismantling of the fence existing along the state border. This will enhance migration possibilities of animals and gene exchange.

Exploitation limiting

Tree cutting and management of wildlife with exception of invasive alien species will be limited.

Protection of the river valleys and wetlands

River valleys and wetlands will retain their present character. Those which were changed by human activity in the past and are regarded as rich habitats will be kept open by management activities like tree-seedlings elimination and regular mowing.

Hydrological regime

Management of water ecosystems of artificial origin will be maintained in that way that it will sustain long-term and stable persistence of existing water plants and animal as well as water dependent communities. It will exclude the negative effects on the ground water level of surrounding ecosystems. The main aim is to maintain existing hydrological regime.

No drainage works will take place. In selected areas there might be necessary to slow down the outflow of water from the ecosystem, then relevant activities might be undertaken.

Archaeological and historical objects

Archaeological sites and objects of historical importance will be preserved.

Research

Research on natural processes and biodiversity

The basic aims of scientific research are as follows: complex knowledge of all natural elements, phenomena and processes as well as knowledge of impact of various forms of human activity affecting nature and constant improvement of methods of nature conservation.

Research on natural processes and biodiversity are the priority ones.

Research on rare and endangered species

Research will be done on rare and endangered species, especially of species characteristic of the natural old-growth forest and relict species. Inventories of relatively unknown groups like invertebrates and fungi will be supported.

Research regulations

Scientific research are organized according to principles of scientific exploration obligatory in both national parks which were accepted by the relevant Scientific Councils. Each research project is analysed and provided with an opinion of the Scientific Council. Non-invasive observational methods of scientific exploration are fundamental. Experiments including irreversible alteration of the environment and natural processes or threatening unique forms of plants, fungi, animals and landscape in the Bialowieza Forest are forbidden.

Education

Education development

Different ways of education for children as well as adults are being developed and implemented, aiming at local communities and visitors. Education is regarded as the key to better protection of nature not only of the Bialowieza Forest but also in wider context.

Educate and involve local communities

Environmental courses will be developed, with which local people can earn an environmental awareness-label. Stakeholders as well as tourists will be more alert on environmental friendliness, and might be more involved in nature protection and the environmental issues.

Recreation

Exclusive accessibility in Strictly Protected Area

In Belarus, the strictly protected area is not accessible for tourists, it may be visited only by groups of specialists after obtaining special permission.

In Poland the Strictly Protected Area offers one unmarked tourist path and may be visited only with a guide and in groups not bigger than 20 people.

Outside of the strictly protected area, the Site may be visited by tourists along the marked tourists paths.

Involvement

Set up campaign for involvement

A long-term campaign to involve people in their natural environment will be set up. Change in traditional attitude of people to the environmental issues is a difficult and long-term process and it demands involvement of different people as well as media sources.

Maintain regulations concerning forest resources gathering

Small-scale gathering of forest resources, like picking mushrooms and berries, will be permitted within a Site, except for the Strictly Protected Area. This will enhance the positive relation between local community and the forest as well as stress non-productive forest functions.

Forest Promotional Complex “Bialowieza Forest” (Poland).

The great majority of the already agreed Framework are also accepted by the RDSF. The exceptions will be described and justified in the Management Plan for the World Heritage Site “Bialowieza Forest”. In the area of FPC “BF” tree cutting is a result of current regulations nature resources management with its main aims such as maintenance and renaturalization of habitats and ensurance of favourable cobnservation status of priority habitats and rare and endangered species, according to the Bird and Habitat Directives. Regulation of game species is based on results of regular monitoring and scientific analysis.

Management Plan for the World Heritage Site “Bialowieza Forest”.

The Plan is under preparation and will be completed after the Protection Plan for the BNP, Plan of Protection Tasks for the Natura 2000 “Bialowieza Forest” and the Forest Management Plan will be ready and approved by the Ministry of the Environment. The management plan will include also regulations concerning the buffer zone of the Site after modification of boundaries.

5.9. Staffing levels

The National Park “Belovezhskaya Pushcha” (Belarus) employs almost 1300 people. Some of them work in research, education and tourism departments. Nevertheless most of the employees work in the management section of productive forests and agriculture areas which are part of the Park but are not within the boundaries of the World Heritage Site.

The Bialowieza National Park (Poland) employs 110 people. Within the structure of the institution there are people working in the nature protection unit, forest management, education, tourism management, research as well as administration. Almost 30 people work in

the European Bison Breeding Centre, overlooking the captive animals as well as the free-roaming herd.

The Forest District Units constituting the Forest Promotion Complex 'Bialowieza Forest' (Poland) together employ 134 people. They are working as a forest service and administration staff.



6. Monitoring

The state of conservation of the property after modification of boundaries is regularly monitored as the majority of its area is protected by law. The whole Polish part of the property is designated Natura 2000 site which requires regular monitoring of priority habitats and species listed in annexes to the Habitat's and Bird's Directives. Moreover, there is a great number of long-term research projects carried out by various scientific institutions in the Bialowieza Forest.

6.1 Key indicators for measuring the state of conservation

| | Indicators | Methods | Repositories | Frequency |
|------------------------|---|---|---|-----------|
| Nature conservation | Number of established nature conservation areas | Statistics from the environmental authorities | Regional Directorate of the Environment Protection (P) NP "BP" (B) | 1 year |
| | Nature conservation area [ha] | Statistics from the environmental authorities | Regional Directorate of the Environment Protection (P) NP "BP" (B) | 1 year |
| Status of conservation | Ground water table | Measurement of the parameters | BNP NP "BP" | 1 year |
| | Precipitation | Measurement of the parameters | BNP NP "BP" | 1 year |
| | Dynamic of forest habitats | Measurement of selected parameters | BNP NP "BP" | 10 years |
| | Non-forest habitats | Measurement of selected parameters | BNP NP "BP" | 5 years |
| | Selected Natura 2000 habitats (Poland) | Measurement of changes in the habitat structure and species diversity | RDSF BNP NP "BP" | 20 years |
| Visitors | Number of visitors | Information from ticket offices and automatic counters | BNP NP "BP" | 1 year |

Other monitoring and surveillance

Birds

There is a long-term monitoring of bird population carried out for almost 40 years within the Strictly Protected Area of the Bialowieza National Park. It is executed by the researchers from Podlasie Academy in Siedlce, Wroclaw University and Warsaw University of Life Sciences.

Mammals

Number of game species is monitored each winter by the State Forest Administration in cooperation with BNP authorities. Other mammal species are being monitored for decades by the Mammal Research Institute which is based in Bialowieza.

Invertebrates

Selected groups of invertebrates, especially insects, are monitored by the specialists of the European Centre of Natural Forests of Forest Research Institute based in Bialowieza.

Phenology

Phenology is monitored for over 40 years by Geobotanical Station of Warsaw University based in Bialowieza.

6.2 Administrative arrangements for monitoring the site

Responsible authorities

National Park “Belovezhskaya Pushcha”

Kamenjuki

Kameneckij Rajon

225063 Brestskaja oblast

Belarus

Bialowieza National Park
Park Palacowy 11
17 – 230 Bialowieza
Poland

Regional Directorate of State Forests in Bialystok
Lipowa St 51
15 – 424 Bialystok
Poland

Regional Directorate of the Environment Protection
Dojlidy Fabryczne St 23
15 – 554 Bialystok
Poland

6.3 Results of previous investigations and reporting exercises

First notes on nature of the Bialowieza Forest date back to the turn of the 18th and 19th centuries. They are fragmentary notes and short relations from excursions to the Bialowieza Forest. They concern mainly the plant species composition, selected groups of insects as well as bison and monographic data on the Forest. At the turn of the 19th and 20th centuries a relatively precise information on history of the forest as well as description of tree stands was published.

More detailed inventory of flora which included vascular and cryptogamous plants was commenced at the end of the 19th century. At the beginning of the 20th century research concerning biology and ecology of the European bison was carried out as the species was already perceived as threatened with extinction.

In 1921 the forestry division was established which was excluded from standard management practices. This started systematic and more intensive inventory of particular groups of organisms forming the basis for research on ecology.

The first Director of the nature reserve, which in 1932 was transformed into national park, Prof. Paczoski, studied forest plant diversity and composition and created the basis for new branch of science called phytosociology. Results of his observations formed basis for modern classification of forest types. He published a monographic book “Forests of Bialowieza”. Another Director of the park, Prof. J.J. Karpinski, concentrated his research on fauna and ecology of bark beetles which are believed to be one of major driving forces of changes within the natural forest ecosystem. In 1936 first permanent study plots were established where changes of spatial structure and species composition of tree stands were monitored. At the end of the 1940s, Prof. Dehnel described the phenomenon of changes of parameters of shrews’ skeletons as a result of seasonal climate changes. Research on productivity of forest communities and secondary productivity of small mammals was carried out here.

At present, there are approximately 70 research projects carried out annually on the territory of the Park, and majority of them are long-term projects.

For over 10 years functions a network of schematically distributed study plots where detailed inventory of all standing trees, both dead and alive, is carried out together with measurements of fallen trees and natural regeneration. Results compared to data obtained during inventory in the 1950s and 1990s show major changes in species percentage in tree stands. We know that spruce constituted over 25% of surface share in the forest, in 1990s – 16.6, while nowadays it varies between 5 – 8%. The surface share of oak remains at the same level of 19%. Other species, such as lime and hornbeam, increase the surface share to 30%. Decreasing percentage of spruce is directly caused by more intensive and

frequent gradations of bark beetle. However, it is necessary to bear in mind that bark beetle infestations are the secondary factor, as bark beetles infest trees which are already weakened by other factors, such as long dry periods, strong winds which break or fell trees, high temperatures or lowering of groundwater table.

Permanent monitoring of groundwater table carried out since mid 1980s shows that groundwater table systematically decreases. In water-logged biotopes it decreased by up to 20 cm, while in fresh and humid habitat types it decreased by 40 cm. The dynamics of groundwater table in the Bialowieza Forest is shaped mainly by the amount and annual distribution of precipitation as well as air temperature which affects evaporation intensity. Analysis of precipitation during last 4 decades did not show significant changes but temperature during first half of the year increased by 2.7°C. This led to changes in phenology. Since 1964, in the area of strict protection, dates of flowering of selected plant species have been monitored. The analysis of the observations showed that majority of spring flowering species flower earlier than 45 years ago. Some species flower 12 to 14 days earlier than half a century ago. Climatic changes, in particular temperatures and precipitation, affect the use of forest habitat types by the European bison. In dry years the animals are more frequently observed in alder carr while in wet years the use of coniferous stands increases. It is also supposed that as a result of climatic change high mortality of amphibian eggs is observed during last several years. Mortality, up to 80% of embryos, is caused by infestation with water molds from genus *Saprolegnia*. Species of *Saprolegnia* are saprophytic organisms but may turn into parasite. This phenomenon is at present observed in the Bialowieza Forest, as well as in other parts of Europe. Research carried out in the United States of America show that amphibian eggs are much more prone to be infested with *Saprolegnia* when the UV-B radiation is enhanced.

Over 30 years ago the study plot was established on abandoned meadows which border the Strictly Protected Area. Spatial dynamics of population and changes in species composition of plant community was observed. It led to description of mechanisms of succession and different ways of forest return into the river valley from where it was removed two centuries before.

There are several permanent study plots used by ornithologists for over 35 years. The team of researchers monitors species composition, density and reproduction success of bird community as well as ecology and behaviour of selected species, in particular those related to old growth forest habitats. 74 bird species bred in a 33 ha patch of forest over a 30-year period. List of species on which attention of researchers is focused includes many species, but primarily white-backed woodpecker, three-toed woodpecker and white-collared flycatcher which occurrence is determined by presence of dead trees in the forest. Long-term studies of densities of woodpeckers showed that the highest densities are in the Strictly Protected Area of the park, lower densities are observed in natural reserves where forest management is limited and the lowest densities are in managed parts of the forest. It is positively correlated with dead wood amount. Results of ornithological observations in the Strictly Protected Area of the park differ significantly to those from other forest complexes subjected to human intervention but are concurrent to results obtained from tropical forests. Basic characteristics for the bird fauna of the park are mainly high species diversity, low densities and high predation pressure. These are characteristics of pristine forests, irrespective of climatic zone and may be used as indicators of forest maturity and absence of human disturbance.

In the early 1990s in the Bialowieza National Park the pioneer project on natural population of Eurasian lynx using telemetry was commenced. Application of new technology enabled studies of ecology and behaviour of this rare and endangered species in totally natural environment. One of the surprising results was the area of territory of one animal which

turned to be much larger than the area of strict protection. There was also a project on wolves using radiotelemetry which revealed the spatial structure of population as well as impact of large predators on population of ungulates.

The Bialowieza National Park is of great significance to studies of biodiversity of natural forests of primeval character, not subjected to economic exploitation, especially of saproxylic invertebrates and fungi. It is a model area for studying biology and ecology of organisms related to dead and decaying wood. Research programme carried out in the 1990s on the area of 144 ha brought information on almost 2000 cryptogamous species including 1400 fungi. The final number of species is still open and each year there are several new species of invertebrates and fungi described from the area.

Bibliography of the BF encompasses so far over 25 000 titles, including over 8000 of scientific publications. In the Bialowieza village there are based 3 scientific institutions. These are European Centre of Natural Forests created in 1932, Mammal Research Institute Polish Academy of Sciences (1952) and Geobotanical Station of Warsaw University (1952). The Bialowieza National Park and National Park “Belovezhskaya Pushcha” have their own research units.

7. Documentation

7.1 List of photographs used in the dossier:

- The bird's eye view of the Bialowieza Forest – 11
- The Narewka river valley at dawn – 15
- The European bison – 29
- Certhia familiaris* in its environment – 30
- Ficedula albicollis* in the Bialowieza Forest – 30
- Rana temporaria* breeding – 32
- Gymnopilus penetrans* – 33
- Ash alder carr of the Bialowieza Forest – 35
- The *European bison* in winter – 43
- Eurasian beaver* inhabits all rivers and streams of the Forest – 45
- Dead wood is a characteristic feature of the Forest – 47
- Natural dynamism of the ecosystem – 52
- Bialowieza Forest floor in Spring (*Alium ursinum* in the flower) – 55
- Fomitopsis pinicolais* a common species in the Forest – 58
- Winter in the Forest – 60
- Postia floriformis* – 62
- Pycnoporellus fulgens* – 62
- Stereum hirsutum* – 62
- Clavicornia pyxidata* – 62
- The ecosystem of the Bialowieza Forest is diverse – 66
- Ash alder carr with additional spruce trees – 69
- Dead wood is present in different forms in the ecosystem – 72
- Dead wood creates new habitats in the forest – 72
- Dendrocopos minor* – 74
- Early spring in the forest – 81
- Beaver dams create new habitats and slow down the outflow of the water from the forest – 93
- Aegolius funereus* – 96
- Forms of dead wood – 96
- Visitors at the entrance to the strictly protected area (BNP) – 111
- Winter in the Forest – 118
- Rights to the photographs: RM Kosinscy; marek@kosinscy.pl

7.2 Most recent records or inventory of the property:

Records and inventories of the nominated property are available at the following addresses:

<http://www.npbp.brest.by/home>

<http://www.bpn.com.pl>

<http://www.bialystok.lasy.gov.pl/web/bialowieza>

<http://www.bialystok.lasy.gov.pl/web/hajnowka>

<http://www.bialystok.lasy.gov.pl/web/browsk>

7.3 Addresses where inventories, records and archives are held:

National Park “Belovezhskaya Pushcha”

Kamenjuki

Kameneckij Rajon

225063 Brestskaja oblast

Belarus

Bialowieza National Park

Park Palacowy 11

17 – 230 Bialowieza

Poland

Regional Directorate of State Forests in Bialystok

Lipowa St 51

15 – 424 Bialystok

Poland

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Adamowski W., Dvorak L., Ramanjuk I. 2002. Atlas of alien woody species of the Białowieża Primaeval Forest. *Phytocoenosis N.S.* 14, Supplementum Cartographiae Geobotanicae 14, Warszawa – Białowieża: 304 pp.

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9. Signature on behalf of the State Parties

Signature on behalf of the Republic of Poland

Signature on behalf of the Republic of Belarus

Annex 1.

The list of plant communities present in the Bialowieza Forest

| No. | Object name | International status | Belarusian part | Polish part |
|-----------------|--|-------------------------|-----------------|-------------|
| HABITATS | | | | |
| 1. | <i>Carpinion betuli</i> (9160) | EEC Habitats Directives | + | + |
| 2. | <i>Sub-Atlantic and medio-European oak forests (Quercus petraea) of the Carpinion betuli</i> (9160) | EEC Habitats Directives | + | – |
| 3. | <i>Tilio-Acerion forests (Acer platanoides)</i> (9180) | EEC Habitats Directives | + | – |
| 4. | <i>Tilio-Acerion forests (Tilia cordata) of slopes, screes and ravines</i> (9180) | EEC Habitats Directives | + | - |
| 5. | <i>Fraxinus excelsior</i> forests (9020, 9080, 91E0, 91F0) | EEC Habitats Directives | + | + |
| 6. | <i>Salicetum albo-fragilis, Populetum albae, Fraxino-Alnetum, Alnus glutinosa</i> forests (91D0, 91E0) | EEC Habitats Directives | + | + |
| 7. | <i>Natural old and uneven-aged pine forests (Cladonia Pinetum) on dry sand heaths</i> (2310, 2330) | EEC Habitats Directives | + | – |
| 8. | <i>Vaccinio uliginosi-Betuletum pubescentis, Ledo-Sphagnetum, Vaccinio uliginosi-Pinetum, Sphagno girgensohnii-Piceetum, natural old and uneven-aged pine forests on bog woodland</i> (91D0) | EEC Habitats Directives | + | + |
| 9. | <i>Unique formation of Abies alba</i> | – | + | – |

| | | | | |
|-----|--|-------------------------|---|---|
| 10. | <i>Fennoscandian herb-rich forests with Picea abies</i> (9050) | EEC Habitats Directives | + | - |
| 11. | <i>Juniperus communis</i> formations on heaths or calcareous grasslands (5130) | EEC Habitats Directives | + | - |
| 12. | <i>Malcolmietalia</i> dune grasslands (2330) | EEC Habitats Directives | + | + |
| 13. | <i>Nardion</i> (6230) | EEC Habitats Directives | + | + |
| 14. | <i>Molinion caeruleae</i> (6410) | EEC Habitats Directives | + | + |
| 15. | Transition mires and quaking bogs (7140) | EEC Habitats Directives | + | + |
| 16. | Alkaline fens (7230) | EEC Habitats Directives | + | + |
| 17. | <i>Nympheion, Potamion</i> (3150) | EEC Habitats Directives | - | + |
| 18. | <i>Arrhenatherion elatioris</i> (6510) | EEC Habitats Directives | - | + |
| 19. | High degraded peatbogs, but clever to the natural and stimulated regeneration (7120) | EEC Habitats Directives | - | + |
| 20. | <i>Tilio-Carpinetum, Melitti Carpinetum</i> (9170) | EEC Habitats Directives | - | + |
| 21 | <i>Quercetalia pubescenti-petraeae</i> (9110) | EEC Habitats Directives | - | + |

Annex 2.

The list of vascular plants

| № | Species | Protected by national law | | Red book or red list | | IUCN | Conventions |
|------------------------|------------------------------------|---------------------------|--------|----------------------|--------|------|--------------------------------|
| | | Belarus | Poland | Belarus | Poland | | |
| Vascular plants | | | | | | | |
| 1. | <i>Lycopodiella inundata</i> | + | + | IV (NT) | V | | |
| 2. | <i>Huperzia selago</i> | + | + | IV (NT) | V | | |
| 3. | <i>Botrychium multifidum</i> | + | + | III (VU) | E | | Bern Convention |
| 4. | <i>Botrychium matricariifolium</i> | + | + | II (EN) | E/CR | CR | Bern Convention |
| 5. | <i>Polypodium vulgare</i> | + | + | IV (NT) | | | |
| 6. | <i>Abies alba</i> | + | | I (CR) | | | |
| 7. | <i>Nymphaea alba</i> | + | + | III (VU) | | | |
| 8. | <i>Cimicifuga europaea</i> | + | + | I (CR) | | | |
| 9. | <i>Trollius europaeus</i> | + | + | IV (NT) | | | |
| 10. | <i>Pulsatilla pratensis</i> | + | + | IV (NT) | V | | |
| 11. | <i>Isopyrum thalictroides</i> L. | + | | II (EN) | | | |
| 12. | <i>Quercus petraea</i> | + | | II (EN) | | | |
| 13. | <i>Stellaria crassifolia</i> | + | + | III (VU) | | | |
| 14. | <i>Hypericum montanum</i> | + | | III (VU) | | | |
| 15. | <i>Viola montana</i> | + | | I (CR) | | | |
| 16. | <i>Dentaria bulbifera</i> | + | | IV (NT) | | | |
| 17. | <i>Salix myrtilloides</i> | + | + | III (VU) | E/EN | | |
| 18. | <i>Oxycoccus microcarpus</i> | + | | III (VU) | | | |
| 19. | <i>Moneses uniflora</i> | + | | III (VU) | | | |
| 20. | <i>Saxifraga hirculus</i> | + | + | I (CR) | E/EN | | Habitats Dir., Bern Convention |
| 21. | <i>Saxifraga granulata</i> | + | | III (VU) | | | |
| 22. | <i>Aruncus vulgaris</i> | + | + | III (VU) | | | |
| 23. | <i>Potentilla alba</i> | + | | III (VU) | | | |
| 24. | <i>Prunus spinosa</i> | + | | III (VU) | | | |

| | | | | | | | |
|-----|--|---|---|----------|------|--|---------------------------------------|
| 25. | <i>Genista germanica</i> | + | | IV (NT) | | | |
| 26. | <i>Hedera helix</i> | + | + | II (EN) | | | |
| 27. | <i>Astrantia major</i> | + | | I (CR) | | | |
| 28. | <i>Berula erecta</i> | + | | III (VU) | | | |
| 29. | <i>Linnaea borealis</i> | + | + | IV (NT) | | | |
| 30. | <i>Pulmonaria mollis</i> | + | | III (VU) | | | |
| 31. | <i>Pedicularis sceptrum-carolinum</i> L. | + | + | II (EN) | E | | |
| 32. | <i>Dracocephalum ruyschiana</i> | + | + | III (VU) | E | | Bern Convention |
| 33. | <i>Melittis sarmatica</i> | + | | III (VU) | | | - |
| 34. | <i>Adenophora lilifolia</i> | + | + | II (EN) | E | | Habitats Dir. |
| 35. | <i>Scorzonera purpurea</i> L. | + | + | II (EN) | V | | |
| 36. | <i>Arctium nemorosum</i> | + | | III (VU) | | | |
| 37. | <i>Crepis mollis</i> | + | | III (VU) | | | |
| 38. | <i>Lilium martagon</i> | + | + | IV (NT) | | | |
| 39. | <i>Allium ursinum</i> | + | + | III (VU) | | | |
| 40. | <i>Allium schoenoprasum</i> | + | | II (EN) | | | |
| 41. | <i>Iris sibirica</i> | + | + | IV (NT) | V | | |
| 42. | <i>Gladiolus imbricatus</i> | + | + | IV (NT) | | | |
| 43. | <i>Herminium monorchis</i> | + | + | I (CR) | E/CR | | CITES |
| 44. | <i>Cypripedium calceolus</i> | + | + | I (CR) | V/VU | | Habitats Dir., Bern Convention, CITES |
| 45. | <i>Epipactis atrorubens</i> | + | + | III (VU) | | | CITES |
| 46. | <i>Gymnadenia conopsea</i> | + | | III (VU) | | | CITES |
| 47. | <i>Corallorhiza trifida</i> | + | + | II (EN) | V | | CITES |
| 48. | <i>Platanthera chlorantha</i> | + | + | III (VU) | | | CITES |
| 49. | <i>Malaxis monophyllos</i> | + | + | II (EN) | V/LR | | CITES |
| 50. | <i>Neottianthe cucullata</i> | + | + | I (CR) | E/EN | | CITES |
| 51. | <i>Dactylorhiza majalis</i> | + | + | III (VU) | | | CITES |
| 52. | <i>Cephalanthera rubra</i> | + | + | III (VU) | E/EN | | CITES |
| 53. | <i>Listera cordata</i> | + | + | II (EN) | V | | CITES |
| 54. | <i>Listera ovata</i> | + | + | IV (NT) | | | CITES |

| | | | | | | | |
|-----|-----------------------------|---|---|----------|------|--|---|
| 55. | <i>Carex heleonastes</i> | + | | I (CR) | | | |
| 56. | <i>Carex umbrosa</i> | + | | IV (NT) | | | |
| 57. | <i>Carex buxbaumii</i> | + | | II (EN) | E | | |
| 58. | <i>Eriophorum gracile</i> | + | + | III (VU) | CR | | |
| 59. | <i>Bromopsis benekenii</i> | + | | II (EN) | | | |
| 60. | <i>Festuca altissima</i> | + | | IV (NT) | | | |
| 61. | <i>Trisetum sibiricum</i> | + | | II (EN) | | | |
| 62. | <i>Hordelymus europaeus</i> | + | | I (CR) | | | |
| 63. | <i>Pulsatilla patens</i> | | + | | E\LR | | Bern Convention, Habitats Dir II, IV |
| 64. | <i>Thesium ebracteatum</i> | | + | | V | | Habitats Dir |
| 65. | <i>Agrimonia pilosa</i> | | + | | | | Habitats Dir |

Annex 3.

The list of protected animal species occurring in the Bialowieza Forest

| Species | Protected by national law | | Red book or red list | | IUCN | Conventions |
|----------------------------------|---------------------------|--------|----------------------|--------|-------|--------------------------------------|
| | Belarus | Poland | Belarus | Poland | | |
| Insects | | | | | | |
| <i>Calosoma inquisitor</i> | + | + | III (VU) | | | |
| <i>Carabus cancellatus</i> | + | + | IV (NT) | | | |
| <i>Carabus menetriesi</i> | + | + | III (VU) | | | |
| <i>Carabus clathratus</i> | + | + | III (VU) | EN | | |
| <i>Carabus violaceus</i> | + | + | IV (NT) | | | |
| <i>Carabus coriaceus</i> | + | + | IV (NT) | | | |
| <i>Carabus intricatus</i> | + | + | III (VU) | | | |
| <i>Graphoderus bilineatus</i> | + | | III (VU) | | | |
| <i>Rhantus incognitus</i> | + | | III (VU) | | | |
| <i>Geotrupes vernalis</i> | + | | III (VU) | | | |
| <i>Lucanus cervus</i> | +? | | II (EN) | | | |
| <i>Emus hirtis</i> | + | | IV (NT) | | | |
| <i>Catocala sponsa</i> | + | | III (VU) | | | |
| <i>Pericalia matronula</i> | + | | III (VU) | LR | | |
| <i>Gagitodes sagittata</i> | + | | II (EN) | | | |
| <i>Chariaspilates formosaria</i> | + | | III (VU) | LR | | |
| <i>Lopinga achine</i> | + | + | III (VU) | EN | | SPEC3 |
| <i>Colias palaeno</i> | + | + | III (VU) | EN | | |
| <i>Bombus muscorum</i> | + | + | III (VU) | | | |
| <i>Formica rufa</i> | + | + | | | LR/NT | |
| <i>Leucorrhinia pectoralis</i> | | + | | | | Habitats Dir |
| <i>Euphydryas maturna</i> | | + | | NT/LR | + | Bern Convention, Habitats Dir II, IV |
| <i>Euphydryas aurinia</i> | | + | | EN | | Habitats Dir |
| <i>Lycaena dispar</i> | | + | | NT | NT | |
| <i>Dytiscus latissimus</i> | | + | | VU | VU | |
| <i>Osmoderma eremita</i> | | + | | NT | NT | Habitats Dir |
| <i>Buprestis splendens</i> | | + | | CR | EN | |
| <i>Cucujus cinnaberinnus</i> | | + | | LC | | Habitats Dir |
| <i>Boros schneideri</i> | | + | | EN | | |
| <i>Mesosa myops</i> | | + | | | | Habitats Dir |
| <i>Oxyporus mannerheimii</i> | | + | | VU | | Habitats Dir |
| <i>Pytho kolwensis</i> | | + | | CR | | Habitats Dir |
| <i>Phryganophilus ruficollis</i> | | + | | EN | | Habitats Dir |

| | | | | | | |
|--|-------|---|----------|----|--------|---------------------------------------|
| <i>Rhysodes sulcatus</i> | | + | | EN | | Habitats Dir |
| <i>Colias myrmidone</i> | | + | | VU | | Habitats Dir |
| Fishes | | | | | | |
| <i>Lampetra planeri</i> | + | + | | | LR/NT | |
| <i>Barbus barbus</i> | +? | | III (VU) | | | |
| <i>Misgurnus fossilis</i> | + | + | | NT | LR/NT- | |
| <i>Silurus glanis</i> | + | | | | LR/NT- | |
| Amphibians | | | | | | |
| <i>Triturus cristatus</i> | + | + | IV (NT) | | LR | |
| <i>Bufo calamita</i> | + | + | III (VU) | | | |
| <i>Hyla arborea</i> | + | + | - | | LR | |
| <i>Bombina bombina</i> | + | + | - | | LR | |
| <i>Bufo viridis</i> | | + | | | LC | |
| <i>Bufo bufo</i> | | + | | | LC | |
| <i>Rana arvalis</i> | | + | | | LC | |
| <i>Rana esculena</i> | | + | | | | |
| <i>Rana lessonae-Pelophylax lessonae</i> | | + | | | LC | Bern Convention, Habitats Dir. Annex4 |
| <i>Rana temporaria</i> | | + | | | LC | Bern Convention, Habitats Dir. Annex5 |
| <i>Pelobates fuscus</i> | | + | | | | |
| <i>Triturus cristatus</i> | | + | | NT | LC | Bern Convention, Habitats Dir. Annex4 |
| <i>Lissotriton vulgaris</i> | | + | | | LC | Bern Convention |
| Reptiles | | | | | | |
| <i>Coronella austriaca</i> | + | + | III (VU) | VU | | |
| <i>Emis orbicularis</i> | + | + | III (VU) | EN | DD | |
| <i>Zootoca vivipara</i> | | + | | | LC | |
| <i>Lacerta agilis</i> | | + | | | LC | |
| <i>Anguis fragilis</i> | | + | | | | |
| <i>Natrix natrix</i> | | + | | | LC | |
| <i>Vipera berus</i> | | + | | | LC | |
| Birds | | | | | | |
| <i>Botaurus stellaris</i> | 7-20 | + | III (VU) | | | SPEC3 |
| <i>Ixobrychus minutus</i> | 5-10 | + | II (EN) | | | SPEC3 |
| <i>Ciconia nigra</i> | 25-30 | + | III (VU) | | | SPEC3 |
| <i>Milvus milvus</i> | 0-2 | + | II (EN) | NT | | SPEC2 |
| <i>Milvus migrans</i> | 2-4 | + | III (VU) | NT | VU | SPEC3 |
| <i>Circaetus gallicus</i> | 2-3 | + | II (EN) | CR | | SPEC3 |
| <i>Circus cyaneus</i> | 1-3 | + | III (VU) | VR | | SPEC3 |

| | | | | | | |
|--------------------------------|--------------------------------|---|----------|-----|----|--|
| <i>Aquila clanga</i> | 4-6 | + | I (CR) | CR | EN | SPEC1 |
| <i>Aquila pomarina</i> | 60 | + | III (VU) | LC | | SPEC3 |
| <i>Aquila chrysaetos</i> | 1? | + | I (CR) | EN | | SPEC3 |
| <i>Hieraaetus pennatus</i> | 1-2 | + | I (CR) | CR | | SPEC3 |
| <i>Haliaeetus albicilla</i> | 2-3 | + | II (EN) | LC | NT | SPEC1 |
| <i>Falco tinnunculus</i> | 3-5 | + | III (VU) | | | SPEC3 |
| <i>Falco subbuteo</i> | 8-10 | + | IV (NT) | | | |
| <i>Falco vespertinus</i> | 1? | + | I (CR) | EXP | VU | SPEC3 |
| <i>Falco peregrinus</i> | 0-1? | + | I (CR) | CR | | |
| <i>Perdix perdix</i> | 150-300 | + | | | | SPEC3 |
| <i>Grus grus</i> | 40-70 | + | III (VU) | | | SPEC2 |
| <i>Crex crex</i> | 150-200 | + | III (VU) | | NT | SPEC1 |
| <i>Vanellus vanellus</i> | 200-400 | | | | | SPEC2 |
| <i>Gallinago media</i> | 30-50 | + | II (EN) | VU | NT | SPEC1 |
| <i>Limosa limosa</i> | 20-40 | | III (VU) | | NT | SPEC2 |
| <i>Numenius arquata</i> | 1-5 | + | III (VU) | VU | | SPEC2 |
| <i>Tyto alba</i> | 0-3 | + | III (VU) | | | SPEC3 |
| <i>Bubo bubo</i> | 10-15 | + | II (EN) | NT | | SPEC3 |
| <i>Glaucidium passerinum</i> | 195-240 | + | IV (NT) | LC | | |
| <i>Athene noctua</i> | 20-30 | + | III (VU) | | | SPEC3 |
| <i>Strix nebulosa</i> | 7-20 | + | II (EN) | LC | | |
| <i>Asio flammeus</i> | 5-10 | + | IV (NT) | VU | | SPEC3 |
| <i>Coracias garrulus</i> | 1-3 | + | I (CR) | LC | VU | SPEC2 |
| <i>Alcedo atthis</i> | 1-5 | + | III (VU) | | | SPEC3 |
| <i>Picus viridis</i> | 5-10 | + | III (VU) | | | SPEC2 |
| <i>Dendrocopos leucotos</i> | 150-250 | + | IV (LR) | NT | | |
| <i>Picoides tridactyllus</i> | 50-100 | + | IV (LR) | VU | | SPEC3 |
| <i>Gallerida cristata</i> | 1-3 | + | III (VU) | | | SPEC2 |
| <i>Anthus campestris</i> | 1-? | + | IV (NT) | | | SPEC2 |
| <i>Acrocephalus paludicola</i> | 100-155 | + | II (EN) | VU | VU | SPEC1 |
| <i>Ficedula albicollis</i> | *25-42 pair/km ² | + | IV (NT) | | | SPEC4 |
| <i>Lanius minor</i> | 1? | + | II (EN) | CR | | SPEC2 |
| <i>Emberiza hortulana</i> | 15-20 | + | II (EN) | | | SPEC2 |
| <i>Pernis apivorus</i> | | + | | | LC | Habitats Dir. AnnexI |
| <i>Aegolius funereus</i> | | + | | LC | LC | Bern Convention, Habitats Dir. AnnexI |
| <i>Ciconia ciconia</i> | | + | | LC | LC | |
| <i>Cygnus cygnus</i> | | + | | LC | LC | |
| <i>Circus pygargus</i> | | + | | LC | LC | |
| <i>Bonasa bonasia</i> | | + | | LC | LC | |

| | | | | | | |
|----------------------------------|-----------|---|----------|----|---------|---|
| <i>Porzana porzana</i> | | + | | LC | LC | |
| <i>Porzana parva</i> | | + | | LC | LC | |
| <i>Caprimulgus europaeus</i> | | + | | LC | LC | |
| <i>Picus canus</i> | | + | | LC | LC | |
| <i>Dryocopus martius</i> | | + | | LC | LC | |
| <i>Dendrocopos medius</i> | | + | | LC | LC | |
| <i>Ficedula parva</i> | | + | | LC | LC | |
| <i>Rallus aquaticus</i> | | + | | LC | LC | |
| <i>Scolopax rusticola</i> | | + | | LC | LC | |
| <i>Tingra ochropus</i> | | + | | LC | LC | |
| <i>Columba oenas</i> | | + | | LC | LC | |
| <i>Phylloscopus trochiloides</i> | | + | | LC | LC | |
| <i>Nucifraga caryocatactes</i> | | + | | LC | LC | |
| Mammals | | | | | | |
| <i>Myotis nattereri</i> | + | + | IV (NT) | | LC | Red List UE VU |
| <i>Myotis brandtii</i> | + | + | III (VU) | | LC | |
| <i>Barbastella barbastellus</i> | + | + | II (EN) | | VU | |
| <i>Nyctalus leisleri</i> | + | + | III (VU) | VU | | |
| <i>Eptesicus nilssonii</i> | + | + | III (VU) | NT | | |
| <i>Micromys minutus</i> | + | | | | LR/NT | |
| <i>Myoxus glis</i> | + | + | III (VU) | NT | LR/NT | |
| <i>Eliomys quercinus</i> | + | + | III (VU) | CR | VU | |
| <i>Muscardinus avellanarius</i> | + | + | IV (NT) | | LR/NT - | |
| <i>Castor fiber</i> | 230 | + | | | LR/NT | |
| <i>Sciurus vulgaris</i> | 1500-1600 | + | | | LR NT | |
| <i>Meles meles</i> | 70 | + | III (VU) | | | |
| <i>Lutra lutra</i> | 40-50 | + | | | VU | |
| <i>Linx linx</i> | 15-25 | + | II (EN) | NT | NT | |
| <i>Bison bonasus</i> | 340 | + | II (EN) | EN | EN | |
| <i>Lepus timidus</i> | | + | | EN | | Bern Convention, Habitats Dir. Annex5 |
| <i>Vespertilio murinus</i> | | + | | LC | | Bern Convention, Bońska Appendix2, Habitats Dir. Annex4 |
| <i>Neomys anomalus</i> | | + | | LC | | Bern Convention |
| <i>Sorex caecutiens</i> | | + | | NT | | Bern Convention |
| <i>Canis lupus</i> | | + | | NT | LR/lc | CITES, Bern Convention, Habitats Dir II, IV |

Annex 4.

List of species new for science described from Bialowieza Forest

Regnum: *Algae*

Trentepohlia bialowiesensis MROZIŃSKA 1990

Regnum: *Mycota*

Ordo: *Hyphomycetales*

Cladosporium galii MUŁENKO, SCHUBERT & KOZŁOWSKA 2004

Cephalosporium suspensum BAŁAZY 1973

Penicilium bialowiezense ZALESKI 1927

Ordo: *Entomophthorales*

Tarichium distinctum BAŁAZY, WIŚNIEWSKI & KACZMAREK 1987

Zoophthora autumnalis BAŁAZY 1993

Zoophthora bialowiezensis BAŁAZY 1993

Zoophthora brevispora BAŁAZY 1993

Zoophthora crassispora BAŁAZY 1993

Zoophthora ichneumon BAŁAZY 1993

Zoophthora phalloides BATKO 1966

Zoophthora psyllae BAŁAZY 1993

Zoophthora heteropterae BAŁAZY 1993

Ordo: *Laboulbeniales*

Siemaszkoa ramificans MAJEWSKI 1991

Siemaszkoa flexa TAVARES & MAJEWSKI 1976

Euphoriomyces huggertii MAJEWSKI 1986

Corethromyces bialowiezensis MAJEWSKI 1999

Monoicomycetes bolitocharae MAJEWSKI 1994

Rickia polonica MAJEWSKI 1974

Rickia ptilidarum MAJEWSKI 1982

Ordo: *Polyporales*

Poria albidofusca DOMAŃSKI 1966

Dendipratulum bialowiezense DOMAŃSKI 1965

Clavaria albo-vinacea PILAT 1950

Ordo: *Xylariales*

Hypoxylon macrocarpum POUZAR 1978

Ordo: *Basidiomycetes*

Tricholoma Orlosii PILAT 1950

Phylum: *Lichenes*

Usnea carpinea BYSTREK 1986

Regnum: *Protista*

Aspidiophorus longichaetus KISIELEWSKI 1986

Nosema coccinellae LIPA 1968

Nosema lepturae LIPA 1968

Nosema bialoviesiana LIPA 1966

Nosema phyrrocoridis LIPA 1977

Thelophania nepae LIPA 1966

Plistopora geotrupina LIPA 1968

Stenophora caudata LIPA 1967

Stenophora schizophylli LIPA 1967

Stenophora strongylosomae LIPA 1967

- Gregarina cossinellae* LIPA 1967
Gregarina chrysomelae LIPA 1967
Ancyrospora balazyi LIPA 1967
Ancyrospora philonthi LIPA 1967
Stylocephalus carabi LIPA 1967
Blastocrithidia raabei LIPA 1966
Chaetonotus oculifer KISIELEWSKI 1981
Chaetonotus sphagnophilus KISIELEWSKI 1981
Chaetonotus pawlowskii KISIELEWSKI 1984
Heterolepiderma tenuiscuamatum KISIELEWSKI 1981
Heteroderma macrops KISIELEWSKI 1981
Trypanosoma wrublewskii WLADIMIROFF & JAKIMOV 1909
- Regnum: *Animalia*
- Ordo: *Acarina*
- Steneotarsonemus gibber* SUSKI 1970
Nenteria riedeli WIŚNIEWSKI & HIRSCHMANN 1990
Demodex bisonianus KADULSKI & IZDEBSKA 1996
Cheiroseius kargi GWIAZDOWICZ 2002
Schizocyrtillus josefinae GWIAZDOWICZ 2002
Iphidozercon poststigmatus GWIAZDOWICZ 2003
- Ordo: *Nematoda*
- Helionema gracilis* BRZESKI 1962
Zanenchus nemorosus BRZESKI 1985
Calodium cholidicola SOŁTYS 1952
Eucoleus oesophagicola SOŁTYS 1952
Stammerinema rhophalocephala SOŁTYS 1952
Stefanskostrongylus soricis SOŁTYS 1954
Protosopirula glareoli SOŁTYS 1949
- Ordo: *Mallophaga*
- Bisonicola sedecimdecembrii* EICHLER 1946
- Ordo: *Coleoptera*
- Agrilus bialowiezaensis* GUTOWSKI 1993
- Ordo: *Hymenoptera*
- Platygerrius millenius* SZCZEPAŃSKI 1961
Centrobia annae KARPIŃSKI 1954
- Ordo: *Diptera*
- Poloniphora bialoviesensis* DISNEY 1998
Megaselia henridisnei DURSKA 1998
Megaselia marekdurski DURSKA 1998
Megaselia trojani DISNEY 1998
Megaselia joanna DISNEY 1998
Megaselia teresamajewskae DISNEY 1998
Phora michali DISNEY 1998

Annex 5.

Names and addresses of responsible authorities

Poland

Ministry of the Environment
Chief Nature Conservator
Janusz Zaleski
ul. Wawelska 52/54
00-922 Warszawa
tel.: (22) 57-92-366

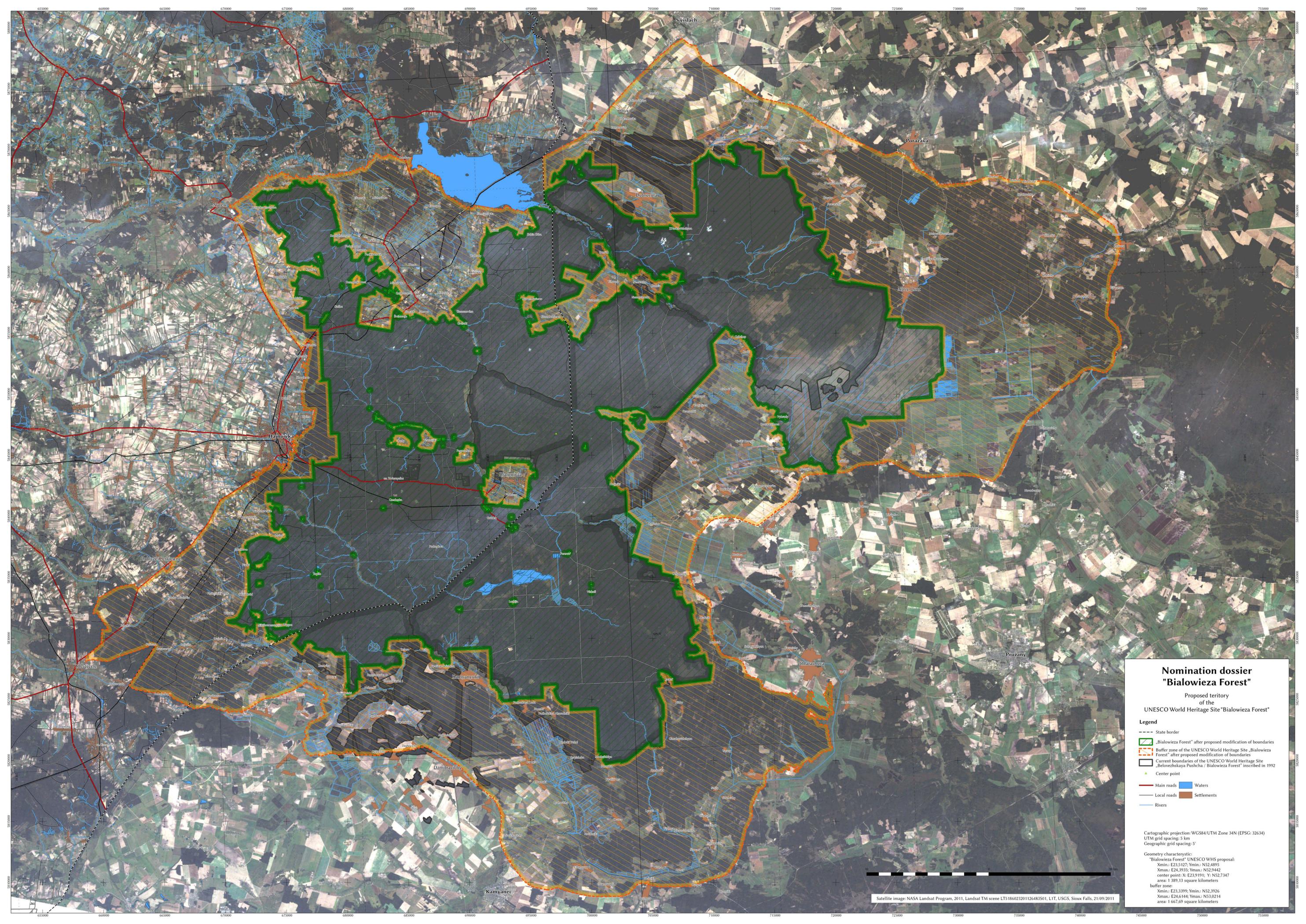
Bialowieza National Park
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National Commission of the Republic of Belarus for UNESCO
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National Park “Belovezhskaya Pushcha”
Mr Aleksander Buryj
Kamenjuki
Kameneckij Rajon
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tel. +375 (1631) 5-61-69
e-mail: npbpy@rambler.ru



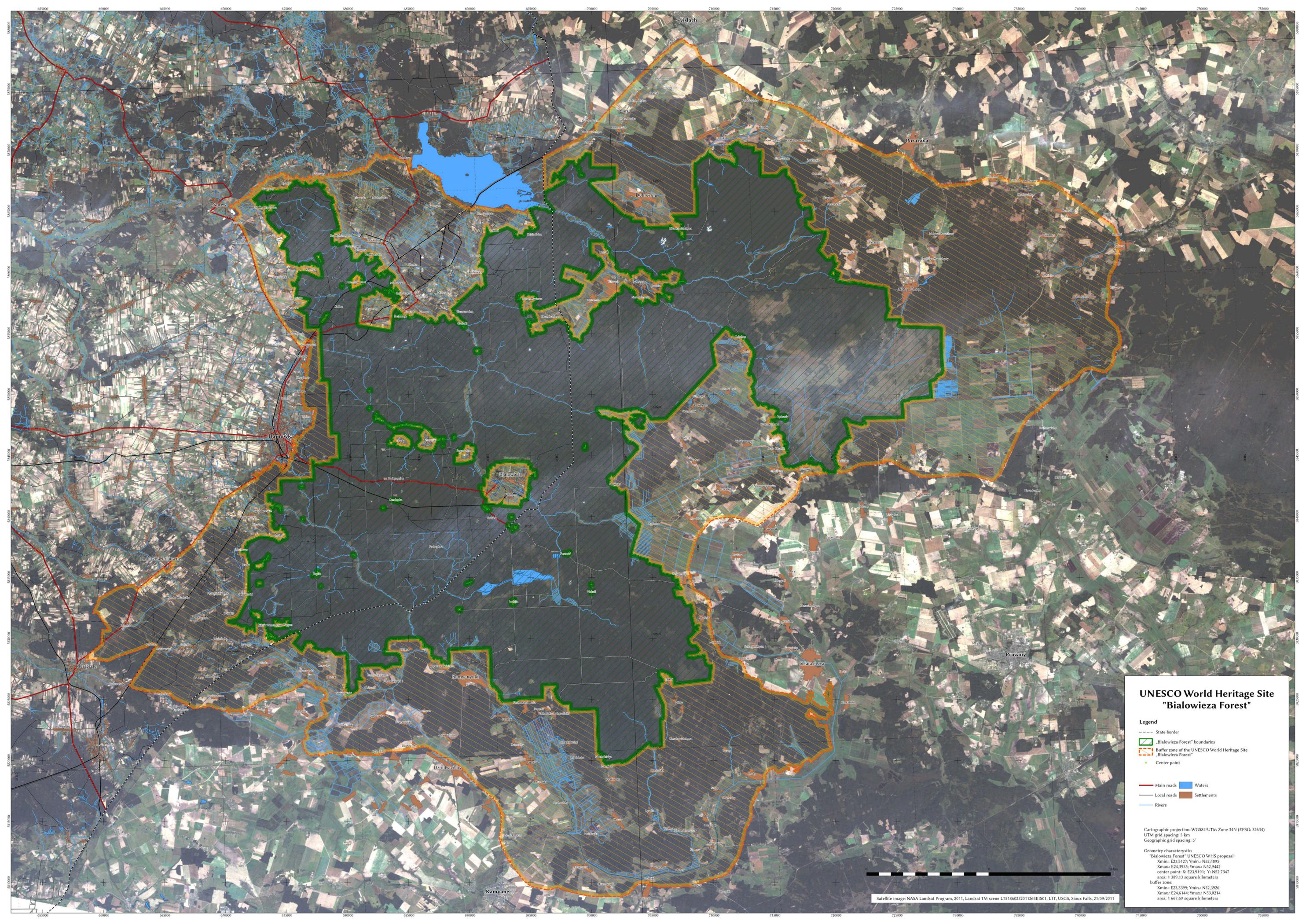
Nomination dossier "Białowieża Forest"

Proposed territory
of the
UNESCO World Heritage Site "Białowieża Forest"

- Legend**
- State border
 - "Białowieża Forest" after proposed modification of boundaries
 - Buffer zone of the UNESCO World Heritage Site "Białowieża Forest" after proposed modification of boundaries
 - Current boundaries of the UNESCO World Heritage Site "Belovezhskaya Pushcha" / "Białowieża Forest" inscribed in 1992
 - ▲ Center point
 - Main roads
 - Waters
 - Local roads
 - Settlements
 - Rivers

Cartographic projection: WGS84/UTM Zone 34N (EPSG: 32634)
UTM grid spacing: 5 km
Geographic grid spacing: 5'

Geometry characteristics:
"Białowieża Forest" UNESCO WHS proposal:
Xmin: E23,5127; Ymin: N52,4895
Xmax: E24,3935; Ymax: N52,9442
center point: X: E23,9531; Y: N52,7347
area: 1 389,13 square kilometers
buffer zone:
Xmin: E23,3399; Ymin: N52,3926
Xmax: E24,6144; Ymax: N53,0214
area: 1 667,69 square kilometers



UNESCO World Heritage Site "Białowieża Forest"

Legend

- State border
- ▭ "Białowieża Forest" boundaries
- ▭ Buffer zone of the UNESCO World Heritage Site
- ▭ "Białowieża Forest"
- Center point

— Main roads ■ Waters
— Local roads ■ Settlements
— Rivers

Cartographic projection: WGS84/UTM Zone 34N (EPSG: 32634)
UTM grid spacing: 5 km
Geographic grid spacing: 5'

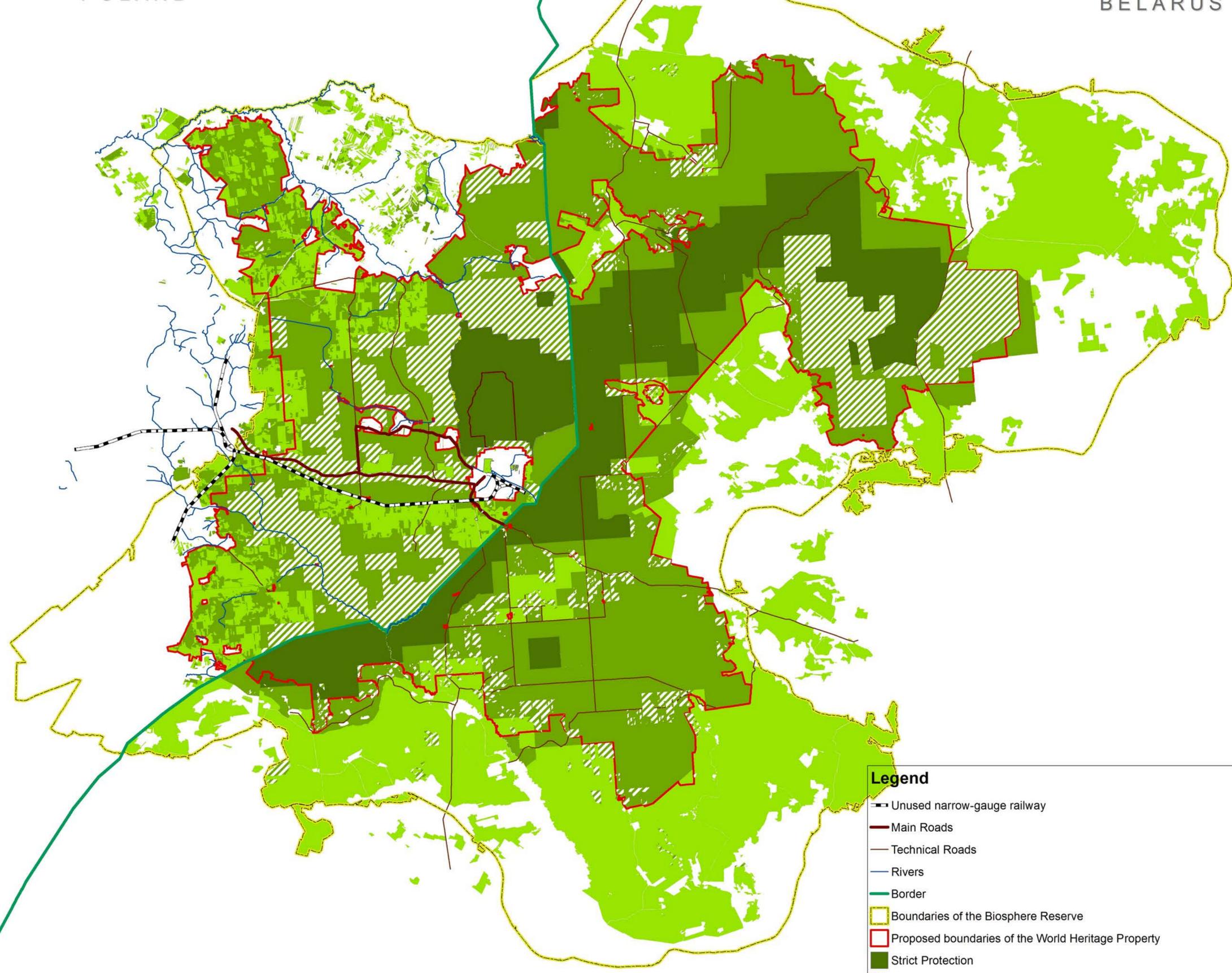
Geometry characteristics:
"Białowieża Forest" UNESCO WHS proposal:
Xmin: E23.5127; Ymin: N52.4895
Xmax: E24.3935; Ymax: N52.9442
center point: X: E23.9191; Y: N52.7347
area: 1 389,13 square kilometers
buffer zone:
Xmin: E23.3399; Ymin: N52.3926
Xmax: E24.0144; Ymax: N53.0214
area: 1 667,69 square kilometers

Satellite image: NASA Landsat Program, 2011, Landsat TM scene LT51860232011264KIS01, L1T, USGS, Sioux Falls, 21/09/2011

Białowieża Forest

POLAND

BELARUS



Legend

- Unused narrow-gauge railway
- Main Roads
- Technical Roads
- Rivers
- Border
- Boundaries of the Biosphere Reserve
- Proposed boundaries of the World Heritage Property
- Strict Protection
- Partial protection I – forests excluded from use (nature reserves, partial protection in the boundaries of the BNP)
- Partial protection II – other forests excluded from use
- Active protection of biodiversity and landscape

0 2 875 5 750 11 500 17 250 23 000 Meters

Management Plan for the World Heritage Property „Bialowieza Forest” Roadmap for preparation and implementation

The entire area of the Bialowieza National Park (Poland), National Park “Belovezhskaya Pushcha” (Belarus) and State Forests (Poland) is owned by the State of respective countries, thus all parts are State Property. There are no private properties within the Property in its proposed boundaries. Private property is present however in the proposed buffer zone.

The Transboundary World Heritage Property “Bialowieza Forest”, situated at the border between Poland and Belarus is administered by three administrative authorities: National Park “Belovezhskaya Pushcha” manages the part of the Property situated within the Belarusian borders. Polish part of the Property is managed by the Bialowieza National Park and by the State Forests. State Forests administer the area of the Bialowieza Forest which is not enclosed within the boundaries of the Bialowieza National Park. The whole area of Polish part of the Bialowieza Forest outside the national park constitutes the Forest Promotional Complex “Bialowieza Forest” which is composed of three Forest Districts: Bialowieza, Browsk and Hajnowka. For clear in this document the component administered by the State Forests will be referred to as Forest Promotional Complex “Bialowieza Forest” (FPC “BF”).

Tab. 1. Component parts of the World Heritage Site and its buffer zone.

| | Component part | Area within the boundaries of WHS (ha) | Area of the buffer zone of WHS (ha) | Total |
|---------|--|--|-------------------------------------|---------|
| Belarus | National Park “Belovezhskaya Pushcha” | 82 308.6 | 130 873.4 | 213 182 |
| Poland | Bialowieza National Park | 10 467 | 0 | 10 467 |
| | Forest Promotional Complex “Bialowieza Forest” | 49 109.09 | 35 834.91 | 84 944 |
| | Total | 141885 | 166 708 | 308 593 |

Tab. 2. Changes between existing boundaries of the property and the proposal.

| | Original area (1992) (ha) | Added area (ha) | Subtracted area (ha) | Nomination 2013 (ha) |
|--|------------------------------|--------------------|-------------------------|-------------------------|
| Poland – WH Property | 5 069,00 | 54 557,00 | 49.04 | 59 576,00 |
| Belarus – WH Property | 87 600,00 | 9 409,60 | 14 701,00 | 82 308.60 |
| Total WH Property | 92 669,00 | 63 966,60 | 14 750,04 | 141 884,60 |
| Poland – buffer zone | 0 | 35 835,00 | 0 | 35 835,00 |
| Belarus – buffer zone | 0 | 130 873.40 | 0 | 130 873.40 |
| Total buffer zone | 0 | 166 708,40 | 0 | 166 708,40 |
| Total WH Property with buffer zone. | 92 669,00 | 230 675,00 | 14 750,04 | 308 593,00 |

The management plan for the World Heritage Property „Bialowieza Forest” is in preparation. It is based on the following documents:

1. Protection plan for the Bialowieza National Park
2. Management tasks for the Natura 2000 Site
3. Management Plan for the State Forests Administrative Units: Białowieża, Browsk, Hajnówka
4. Management Plan for the National Park “Bialowieza Forest” (Belarus)

For more information see Table 3.

All the documents are put through the public consultation process and all remarks received are taken into consideration. For creating the management plan for the WHP the following steps are foreseen:

1. Steering committee for the Polish part of the WHP – end of 2013

At the moment there is an agreement signed by the Director of the Bialowieza National Park and the Head Foresters of Forest divisions: Białowieża, Browsk and Hajnówka (Annex I).

Invitations to interested parties (listed in the agreement) to join the Steering Committee will be sent soon so the Committee may start its work by the end of the year.

2. English summary of Management Plan for the State Forests Administrative Units: Białowieża, Browsk, Hajnówka – middle of 2014.
3. Acceptance of the Management Plan for the BNP – middle of 2014.
4. International Steering committee – middle of 2014

5. Acceptance of the Management Tasks for Natura 2000 – end of 2014
6. Preparing of detailed maps of activities – end of 2014
7. Management plan for the World Heritage Property – middle of 2015

For managing the area of the proposed World Heritage Site “Bialowieza Forest”, the area is divided into management zones. The regulations are summarised in the Table 4. Taking into consideration the fact that the Property is situated in two different countries with different political and social environment we present the zoning and the regulations separately for Polish and Belarusian parts of the Property.

POLAND

Strict protection

According to the definition, the principle of the strict protection is to leave specified area entirely in the power of natural forces where humans have no direct interference. The strict protection enables free course of ecological processes, eg. forest regeneration after ceasing cutting, changes in the species composition and in a structure of forest communities, which are results of natural development of forest stands and processes of succession.

Activities permitted within the area subjected to the strict protection regime are as follows:

- a) monitoring of the condition of biotic and abiotic components of ecosystems;
- b) recognition of the state and threats of resources and components;
- c) taking of generative and vegetative propagules for ex-situ breeding and reintroduction programmes of species with special needs;
- d) fire prevention measures;
- e) maintenance of main roads and routes passable in order to ensure fire safety and safety for people being on the territory of the Park;
- f) repairs of tourism, information and educational infrastructure related to public access to the area;
- g) protection against not-entitled human penetration and harmful activities;
- h) minimization of the negative effects of public access to the area.

Partial protection I

This protection regime encompasses some area of the Bialowieza National Park and all nature reserves managed by the State Forest Administration. The basic difference between strict protection

and Partial protection I is that mushroom and berry picking for individual purposes is allowed in the latter.

Activities permitted within the area subjected to a partial protection regime I are as follows:

- a) monitoring of the condition of biotic and abiotic components of ecosystems;
- b) recognition of the state and threats of resources and components;
- c) taking of generative and vegetative propagules for ex-situ breeding and reintroduction programmes of species with special needs;
- d) fire prevention measures;
- e) maintenance of main roads and routes passable in order to ensure fire safety and safety for people being on the territory of the Park;
- f) repairs of tourism, information and educational infrastructure related to public access to the area;
- g) minimization of the negative effects of public access to the area;
- h) mushroom and berry picking for individual purposes;
- i) alien species removing;
- j) maintenance of open non-forest habitats through mowing.

Partial protection II

This protection regime encompasses forest ecosystems managed by the State Forest Administration which are excluded from forestry practices. These are: treestands of over 100 year old, pioneer stands with dominant (forming over 50% of treestand) birch and aspen of over 60 years old, protective zones of species (black stork, lesser spotted eagle, Tengmalm's owl, tree lungwort). There is no wood extraction but hunting is allowed.

Activities permitted within the area subjected to a partial protection regime II are as follows:

- a) monitoring of the condition of biotic and abiotic components of ecosystems;
- b) recognition of the state and threats of resources and components;
- c) taking of generative and vegetative propagules for ex-situ breeding and reintroduction programmes of species with special needs;
- d) fire prevention measures;
- e) maintenance of main roads and routes passable in order to ensure fire safety and safety for people
- f) repairs of tourism, information and educational infrastructure related to public access to the area;
- g) protection against not-entitled human penetration and harmful activities;
- h) minimization of the negative effects of public access to the area;
- i) mushroom and berry picking for individual purposes;
- j) alien species removing;

k) hunting.

Active protection of biodiversity and landscape protection

Human interference is allowed in a form of protection measures in order to restore the state of ecosystems and the components of nature to the conditions closest to natural or to preserve natural habitats and habitats of plants, animals and fungi. An example of active protection is meadow mowing and removing bushes from meadows in the river valleys, in-forest meadows and terrains after the former timber depot areas. These are places of occurrence of many valuable and rare species of plants, including: marsh gentian, marsh pea, matgrass, *Succisella inflexa* or orchids as well as rare bird species (corncrake, common snipe and lesser spotted eagle). Maintenance of an open character of these habitats helps to stop the succession, i.e. overgrowing with shrubs and trees. The above works are carried out in the summer period, after shedding of blossom by rare species of plants and bird clutching season.

The objectives of landscape protection is to preserve characteristic features of a given landscape. The landscape protection includes sanitary cuttings of trees and shrubs and mowing of meadows. In practice the landscape protection of a part of a national park or nature reserve often allows to maintain economic use of a given area. This status usually is given to technical terrains such as roads, car parks, buildings, etc.

The following protective activities are allowed:

- a) environment monitoring, including monitoring of threats imposed by factors which may disturb the course of natural processes or put in danger the durability of ecosystems;
- b) establishing of seed banks and *ex-situ* gene banks as well as pure cultures of fungi species;
- c) protection against damages caused by external factors and limiting their effects;
- d) slowing down and stopping surface water outflow in order to increase retention capacity of ecosystems;
- e) protection and restoration of biodiversity and genetic diversity of ecosystems, including maintenance of populations of species requiring special care treatments of active protection;
- f) supporting of non-forest plant communities through mowing or pasturage adjusted to a type of plant communities and to biological proprieties of the species being the subject of protection;
- g) removing invasive species and those of alien origin threatening the subjects of protection;
- h) fire prevention;
- i) building and repairing of tourism, educational and administrative infrastructure;
- j) maintaining communication roads and routes passable;
- k) protecting values and revitalisation of historic-cultural landscape;

- l) protecting former agricultural land by preservation of traditional and extensive way of their use;
- m) active protection of animals, fungi and plants;
- n) sanitary tree cutting and thinnings;
- o) hunting.

Buffer zone covering forest habitats

Generally the proposed World Heritage Property covers the entire area of the Białowieża Forest. Nevertheless after serious consideration the managers of the area decided to exclude from the Property a narrow stripe of the forest habitats which is bordering the town Hajnówka. The proximity of town poses some threats to natural values of the wild area. Moreover within this area there is an area used exclusively by Polish Army. Therefore it was decided that the area will form a buffer zone to the Property. Management of this area, with the exception of the military area, is exactly the same as in the zone of active protection of biodiversity and landscape.

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- h) fire prevention;
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- j) maintaining communication roads and routes passable;
- k) protecting values and revitalisation of historic-cultural landscape;
- l) protecting former agricultural land by preservation of traditional and extensive way of their use;
- m) active protection of animals, fungi and plants;
- n) sanitary tree cutting and thinnings;
- o) hunting

Buffer zone outside the forest

This area is generally non-forest and agricultural area situated to the North and West of the Bialowieza Forest. The buffer zone of the World Heritage Property “Bialowieza Forest” covers almost exactly the same area as the transition zone of the Biosphere Reserve “Bialowieza Forest” . Moreover it overlaps with the boundaries of the Landscape Protected Area of the Bialowieza Forest with the fragments of the Landscape Protected Area of the Upper Narew River Valley. These areas are characterized by a high share of natural landscapes: peatbogs, meadows, pastures and extensively used agriculture land. The manner of functioning and management of this zone is defined by the communal Spatial Development Plans which include the principle of sustainable development of the region.

REGIMES VALID FOR THE WHOLE TERRITORY OF THE BELOVEZHSKAYA PUSHCHA NATIONAL PARK (BELARUS)

The following activities are prohibited in the national park (unless provided by the national park’s management plan):

- (a) exploration and development of minerals fields;

- (b) extraction of peat and bottom ooze;
- (c) performance of land reclamation activities, and any other activities that may bring about any changes in the natural landscape or the existing hydrological regime (other than those aimed at reconstruction of the existing reclamation systems, and restoration of the disturbed hydrological regime);
- (d) discharges of crude sewage into the environment;
- (e) any scientific experiments involving natural complexes and sites located within the national park's boundaries, which may cause a failure to meet the protection and nature management requirements;
- (f) final harvesting of trees and harvesting of galipot;
- (g) arrangement of vegetable gardens or orchards;
- (h) introduction and acclimatization of flora and fauna, other than recurrent introduction (re-introduction);
- (i) cultivation of trees using introduced tree and shrub species;
- (j) activities resulting in disturbance of the habitats of flora and fauna;
- (k) arrangement of camping sites, placement of tents and making of fires outside of locations specifically designated for such purposes;
- (l) use by legal entities and/or individuals of aquatic vehicles equipped with outboard internal combustion motors with over 15 horse power, other than vehicles operated by the Institution, agencies and units of the Ministry of Emergencies, Ministry of Natural Resources and Environmental Protection, and territorial bodies thereof, Ministry of Transportation and Communications, and State Inspectorate of Flora and Fauna Protection under the President of Belarus;
- (m) operation and parking of any automotive or self-propelled vehicles outside of roads and locations specifically designated for such purposes, other than automotive vehicles operated by the institution, agencies and units of the Ministry of Emergencies, Ministry of Natural Resources and Environmental Protection and territorial bodies thereof, Armed Forces of the Republic of Belarus, and automotive vehicles operated by the Border Guard agencies to maintain and protect the state border of the Republic of Belarus, State Inspectorate of Flora and Fauna Protection under the President of Belarus, agencies of the Governmental Control Committee, local executive committees (while exercising governmental control over use and protection of land), and automotive and self-propelled vehicles engaged in forest management and agricultural activities enabling operation of the national park. Entry of any automotive or self-propelled vehicles to the national park shall take place through

checkpoints, and shall only be permitted under special authorizations issued by the institution in accordance with the procedure established by the relevant statutory acts.

Reconstruction and restoration of hydrological network may take place as part of project that have been subject to state expert review and environmental impact assessment.

FUNCTIONS OF THE ZONES

1. The following zones are defined in the BPNP:

Allocation of the zones according to their area

| <i>Zone</i> | <i>Name of the zone</i> | Area km² | % of the total park area |
|--------------|--------------------------|--------------------------------|---------------------------------|
| I | Strictly protected zone | 570.5 | 38.0 |
| II | Regulated zone | 391.0 | 26.1 |
| III | Recreational zone | 78.2 | 5.2 |
| IV | Economic activities zone | 461.0 | 30.7 |
| TOTAL | | 1530 | 100 |

2. **Zone I – Strictly protected Zone.**

1) The Strictly protected zone is managed with the goals of:

- (a) Preserving the natural succession processes in the ecosystems;
- (b) Preserving of samples of natural ecosystems, including characteristic and/or remarkable wild plant and animal species and their habitats;
- (c) Preserving of structural landscape peculiarities;
- (d) Encouraging the scientific research and ecological monitoring activities.

2) The zone meets the following criteria for defining regimes:

- (a) It is almost entirely free of direct human impact;
- (b) The biodiversity conservation in this zone is achievable only through protection and does not require active habitat management or manipulation;
- (c) It is sufficiently big and allows the achieving of the conservation goals.

3. **Zone II – Regulated zone.**

1) The Regulated zone is managed with the goals of:

- (a) Preservation of natural complexes and sites and maintenance of conditions contributing into their natural development and restoration;
- (b) Ensuring access in a way, providing physical and spiritual pleasure for the visitors and simultaneously maintaining the wild nature of the area for the present and future generations;
- (c) Establishing an ecological corridor between natural habitats of conservation value and protected areas in and out of the park's boundaries.

2) The zone meets the following criteria for defining regimes:

- (a) It has natural qualities of high conservation value and allows stopping of the human interference, which guarantees management sustainability;
- (b) It has typical ecological, biological and landscape features, which are of great importance for the scientific and educational goals;
- (c) It is sufficiently large and allows both the conservation and the applying of the described ways of management.

4. Zone III – Recreational zone.

1) The Recreational zone is managed with the goals of:

- (a) Tourism, recreation and improvement of people's health;
- (b) Maximum protection of the ecological features;
- (c) Establishing conditions and orientate the visitors to such forms of sports, tourism and recreational use, which allow the preservation of the territory in its close to natural state;
- (d) Protection of the natural resources from tourism and sports practices, which damage the biodiversity on the park's territory out of the zone;
- (e) Establishing facilities for providing visitor information and interpretation.

2) The zone meets the following criteria for defining regimes:

- (a) It is clearly defined and covers ecosystems, which are influenced by man;
- (b) It allows the long-term use of the existing tourist resources and sports facilities without additional destruction of the natural values.

5. Zone IV - Economic activities zone.

1) The Economic activities zone is managed with the goals of:

- (a) Enable operations of the national park.

- (b) Development of economic and other activities that use nature conservation technologies and do not impede preservation of preferentially protected natural complexes, sites, tourist and recreational resources;
 - (c) Protection of the natural resources from methods of using and maintaining the facilities, which damage the biodiversity on the park's territory.
- 2) The zone allows the long-term use of the existing resources and facilities with maximum preservation of the ecological qualities.

III. REGIMES BY ZONES

6. Zone I – Strictly protected Zone.

- 1) All activities **are prohibited** on the territory of the strictly protected area, except for the following:
- (a) preservation in their natural state of natural complexes and sites and prevention of any alterations thereof caused by man's impact;
 - (b) combating invasive species of wild animals and plants;
 - (c) preservation of individual populations of rare and endangered wild plants that are red-listed in Belarus;
 - (d) maintenance of conditions contributing into fire safety;
 - (e) prevention and elimination of the effects of fires and natural disasters. Measures intended to prevent fires and natural disasters in the national park's strict protection zone shall be implemented in pursuance of a relevant decision adopted by the scientific and technical council set up in the institution following approval thereof by the Academy of Sciences of Belarus;
 - (f) sanitary and veterinarian and health activities intended to preserve the European bison's gene pool upon approval by the Ministry of Natural Resources and Environmental Protection and the National Academy of Sciences of Belarus;
 - (g) arrangement of tours, however provided that the number of visitors in a group including the Institution's accompanying personnel does not exceed 20 individuals;
 - (h) environmental monitoring;
 - (i) performance of research;
 - (j) exercise of supervisory and regulatory functions;
 - (k) maintenance of motor roads, including removal of overhanging individual hazardous trees and collection of fallen dead wood in the 30 m right-of-way zone, provided

however than no such trees or any parts thereof are removed to any locations outside of the sites of their origin;

(l) maintenance and protection of the state border.

2) To ensure natural development of nature complexes in the national park's strict protection zone no individuals shall be allowed into such zone other than personnel of the Institution, Department of Presidential Affairs of Belarus, Ministry of Natural Resources and Environmental Protection and territorial agencies thereof, agencies and units of the Ministry of Emergencies and personnel of the National Academy of Sciences of Belarus, who shall access the strict protection zone subject to the institution's approval, border patrols to maintain and protect the state border of the Republic of Belarus, officials representing the State Inspectorate of Flora and Fauna Protection under the President of Belarus and agencies of the State Control Committee in the discharge of their official duties, and groups of up to 20 visitors accompanied by the institution's employees, who shall travel on the forest roads in compartments No. 122A in Svislotchskoye forestry, No. 91, 116, 139, 142 in Yazvinskoye forestry, No. 262, 263, 264, 291, 292, 322 in Khvoynikskoye forestry, No. 806, 807 in Korolevo-Mostovskoye forestry, and No. 847, 848 in Pashukovskoye forestry.;

7. Zone II – Regulated zone.

1) The following are the activities **prohibited** in the regulated zone:

- (a) Placement of waste, other than placement of waste of consumption in specifically designated temporary waste sites, where such waste is stored until transportation thereof to waste burial sites, waste neutralization sites and/or waste handling sites;
- (b) Disturbance of the natural soil cover, other than delineation of agricultural lands, forest management, protection of forest resources, preservation of the European bison and maintenance and protection of the state border;
- (c) burning out of dry vegetation and remaining standing crops;
- (d) Commercial harvesting of wild plants or parts thereof;
- (e) presence of industrial enterprises, residential development, including existence of temporary accommodation premises (garden cottages, dachas);
- (f) Residential development, including existence of temporary accommodation premises (garden cottages, dachas);
- (g) Existence of any tourist infrastructure (other than hunters' and fishers' cabins, specifically equipped resting places and ecological paths).
- (h) hunting, removal of fallen dead wood and all and any types of tree felling, other than activities intended to remove trees and bushes to restore open lowland swamps, construction of power lines, roads, pipelines and other utility lines in compartments No.

153A, 153B, 153B, 166A, 166B, 166B, 177, 178, 188, 188A, 189, 197-199, 207, 208A, 209, 216, 216A, 217 in Oshchepskoye and compartment No. 200, 202, 210-212, 218, 219, 222, 224 in Novoselkovskoye forestries;

- (i) hunting during the bird nesting season (from April 10 to August 1), removal of fallen dead wood and all and any types of tree felling, other than activities intended to remove trees and bushes to restore open lowland swamps, construction of power lines, roads, pipelines and other utility lines in compartments No. 254-256, 282, 292-294, 285, 286, 302-304, 310-312 of Oshchepskoye and compartment No. 227-233, 235-239, 242-247, 261-266, 272-275, 287-289 of Novoselkovskoye forestries;
- (j) any types of tree felling and removal of fallen dead wood in units 21, 22 of compartment No. 69 of Brovskoye forestry; unit 34 of compartment No. 176 of Oshchepskoye forestry; unit 1 of compartment No. 481, unit 20 of compartment No. 482 of Khvoynikskoye forestry; unit 9 of compartment No. 678, unit 28 of compartment No. 708, unit 16 of compartment No. 709, unit 18 of compartment No. 710, unit 8 of compartment No. 711, units 33 and 38 of compartment No. 744, units 11, 22–28 of compartment No. 773, units 1, 2, 20 of compartment No. 774, unit No. 4 of compartment No. 804 in Korolevo-Mostovskoye forestry, unit 9 of compartment No. 683, unit 5 of compartment No. 715 in Nikorskoye forestry, units 8, 17, 19 in compartment No. 863, units 5, 12-16 of compartment No. 864 in Pashukovskoye forestry; unit 6 of compartment No. 870, units 10, 11, 21 of compartment No. 871, unit 3 of compartment No. 886, and units 4 and 5 of compartment No. 887 in Yasenskoye forestry;
- (k) any types of tree felling, other than sanitation felling in case of total loss of forest stand in units 31, 37, 44, 49, 51, 53, 56 of compartment No. 10, units 1, 4, 17, 24, 32 of compartment No. 13, units 20, 21, 23, 26, 32 of compartment No. 14, units 1, 13, 17–19, 26–28, 35, 37, 62–64 of compartment No. 32A, units 1, 3, 5, 25, 27, 31, 54, 56, 67 of compartment No. 43A, units 13, 18, 22, 29, 32, 39, 47, 49 of compartment No. 47, units 15, 30 of compartment No. 69, unit 29 of compartment No. 70, units 24, 25, 31, 37, 43, 44, 52 of compartment No. 74, units 3, 7 of compartment No. 119 in Brovskoye forestry; unit 3 of compartment No. 4, units 2, 5 of compartment No. 5, units 8, 9 of compartment No. 6, units 5, 7, 9, 15, 16, 20, 21, 26, 28 of compartment No. 56, units 6, 10-12, 14, 16, 17, 25 of compartment No. 75, units 1, 3, 9, 12, 17, 18, 31, 32, 37, 38, 40 of compartment No. 121, units 21, 22, 52 of compartment No. 122, units 14, 15, 21 of compartment No. 256 in Svislochskoye forestry, units 24-26, 30, 31, 33 of compartment No. 72A, units 5-8, 11, 13 of compartment No. 85, units 5-8, 10, 12, 14-18 of compartment No. 86, units 14, 15, 17, 19, 21, 22, 24 of compartment No. 87, units 32, 46, 48 of compartment No. 201 in Yazvinskoye forestry; units 1, 29, 36, 38, 55 of compartment No. 176, units 1, 2, 4, 8-10, 19 of compartment No. 187, units 2, 9, 13 of

compartment No. 196, units 4, 7, 18 of compartment No. 206, units 12, 19 of compartment No. 215, units 9, 13 of compartment No. 253, units 2, 3, 5, 6 of compartment No. 284 in Oshchepskoye forestry; units 11, 12, 19, 20 of compartment No. 134 in Yazvinskoye forestry; units 6-18 of compartment No. 323, units 1-6, 14, 16, 18 of compartment No. 324, units 13, 26 of compartment No. 353, units 1, 29 of compartment No. 382, units 29, 30 of compartment No. 436, units 14, 17, 27, 28, 30, 33, 40 of compartment No. 437, units 7, 15 of compartment No. 461, units 6, 12, 14, 18, 19, 29 of compartment No. 481, units 10, 13, 15, 28 of compartment No. 482, units 12, 21, 25, 27, 28 of compartment No. 483, units 7, 26 of compartment No. 484, units 3, 5, 8, 9, 11-16 of compartment No. 509 in Khvoynikskoye forestry; unit 4 of compartment No. 528, units 4, 14 of compartment No. 552, unit 1 of compartment No. 553, unit 7 of compartment No. 554, units 6, 22, 35 of compartment No. 586, unit 26 of compartment No. 587, units 14, 15, 28 of compartment No. 588, units 7, 30 of compartment No. 613, units 5, 7, 9, 26, 29, 33 of compartment No. 614, units 7, 17 of compartment No. 615, units 5, 9, 14 of compartment No. 616, units 7, 8, 11-13, 15-18, 20 of compartment No. 677, units 7, 8, 11, 13 of compartment No. 678, units 2, 6-13, 17-21, 25, 32, 33, 40, 41, 45, 46, 50, 52 of compartment No. 708, units 1, 11, 15, 18, 22, 24 of compartment No. 709, units 7, 10, 12, 16 of compartment No. 710, units 7, 12 of compartment No. 711, units 7, 10 of compartment No. 712, units 2, 7, 9, 12-14, 16-18, 25, 27, 28 of compartment No. 742, units 1, 10 of compartment No. 744, units 7, 9, 13-15, 17, 29 of compartment No. 773, units 18, 26 of compartment No. 774, units 1, 2, 5, 13, 14, 18, 19 of compartment No. 775, units 8, 9, 12, 14, 16, 19, 21 of compartment No. 799, units 2, 6, 9, 16, 17, 19, 20, 25 of compartment No. 804 in Korolevo-Mostovskoye forestry; units 1, 3-7, 12, 20 of compartment No. 561, units 17, 21, 22 of compartment No. 589A, units 1, 2 of compartment No. 618, units 3, 5-10 of compartment No. 623, units 1-5 of compartment No. 624, units 1, 4, 8, 9, 16, 20, 21 of compartment No. 652, units 2-5, 10, 21 of compartment No. 653, units 6-11, 14-16 of compartment No. 654, units 15, 16 of compartment No. 682, units 2, 8, 18 of compartment No. 683, units 4, 20, 21 of compartment No. 684, units 3, 7-9 of compartment No. 685, unit 21 of compartment No. 690, units 3, 4, 14 of compartment No. 714, units 1, 2, 3, 14 of compartment No. 715, unit 1 of compartment No. 723, units 4, 5 of compartment No. 758, unit 15 of compartment No. 791 in Nikorskoye forestry; units 19, 21 of compartment No. 792B, units 2-4, 6, 8, 10, 13 of compartment No. 798, units 3-7, 10, 17 of compartment No. 820, units 5, 11-13, 16 of compartment No. 823, units 3-5 of compartment No. 823A, unit 6 of compartment No. 925, units 2, 6, 8, 12, 18, 19, 21, 23, 27, 29 of compartment No. 931, units 1, 7, 11, 12, 19, 34 of compartment No. 932, units 2, 5, 6, 10, 11, 20, 21, 26, 27, 31, 32 of compartment No. 938, units 1, 11 of compartment No. 939 in

Belyanskoye forestry; units 3, 5, 7, 9, 10, 12 of compartment No. 826, units 1, 4, 8, 13, 16, 20 of compartment No. 827, units 4, 7, 16 of compartment No. 843, units 1, 6, 7, 10, 13, 17, 19, 20 of compartment No. 844, units 9, 16, 17, 21, 25 of compartment No. 861, units 2, 4, 9, 14, 16, 20, 21, 24 of compartment No. 862, units 1-4, 9, 12, 13, 16, 20-23 of compartment No. 863, units 1, 3, 17, 19, 26 of compartment No. 864, units 1, 3, 4 of compartment No. 880, units 4, 11, 21 of compartment No. 880A, units 1, 3, 7, 16 of compartment No. 889, unit 10 of compartment No. 1006, unit 10 of compartment No. 1017 in Pashukovskoye forestry; units 1, 10, 13, 17, 18 of compartment No. 819, units 1-3, 8, 10, 12-14 of compartment No. 870, units 1-8, 12, 14-20, 23, 27, 28, 30 of compartment No. 871, units 1, 6, 8, 10, 17-19, 21, 25, 29, 31 of compartment No. 885, units 1, 2, 6-8, 19, 22 of compartment No. 886, units 7, 8 of compartment No. 887, units 1, 10, 13, 14, 16, 17 of compartment No. 888A, units 1, 3 of compartment No. 916, unit 10 of compartment No. 919B, units 1, 4, 12 of compartment No. 922, units 1, 2, 3, 14 of compartment No. 923, unit 1 of compartment No. 924 in Yasenskoye forestry;

- (l) all and any types of tree felling (other than measures to preserve and restore the white fir population) in units 4-13 of compartment No.562 in Nikorskoye forestry;
- (m) all and any types of tree felling (other than measures to preserve and restore populations of rare plants) in units 3 of compartment No. 712 in Korolevo-Mostovskoye forestry;
- (n) biotechnical measures, other than arrangement of man-made bird nesting sites in compartments No. 561, 562, 589, 589A, 590, 593, 618, 619, 623, 624, 652-655, 657, 658, 682, 687-689, 717, 748-750 in Nikorskoye forestry, compartment No. 482 in Khvoynikskoye forestry and compartments No. 529, 552-554, 585, 588, 613, 646, 712, 745-747 in Korolevo-Mostovskoye forestry.
- (o) Abstraction of water from water bodies and waterways for industrial and household purposes; clearance of water-side and aquatic vegetation in the riverside areas other than in areas intended as resting places;

2) Arrangement of feeding sites for the European bison and other wild ungulates shall take place in pursuance of a relevant decision taken by the institution's scientific and technical council upon approval thereof by the national Academy of Sciences of Belarus.

3) Hunting, fishing and use of flora and fauna sites for research, cultural, educational, aesthetic and other purposes in the national park's regulated zone shall take place in locations specifically designated for such purposes by the institution and in accordance with the procedure established by the applicable law.

4) Haying and cattle grazing shall only be allowed to the benefit of the institution and the locals and shall take place in locations specifically designated for such purposes in accord with the approved standards establishing the maximum permissible load on the national park;

8. Zone III – Recreational zone.

1) The following are the activities **prohibited** in the recreational zone:

- (a) placement of waste, other than placement of consumption waste in specifically designated temporary waste sites, where such waste is stored until transportation thereof to waste burial sites, waste neutralization sites and/or waste handling sites;
- (b) burning out of dry vegetation and remaining standing crops;
- (c) commercial harvesting of wild plants or parts thereof.
- (d) any types of tree felling in units 23, 26, 28 of compartment No. 2, units 18, 20, 21, 24, 30, 31, 36, 39, 43 of compartment No. 3, unit 25 of compartment No. 234, unit 29 of compartment No. 236 in Brovskoye forestry; unit 1 of compartment No. 963, units 15, 32 of compartment No. 968, units 6, 8, 18, 24, 25 of compartment No. 971 in Dmitrovichskoye forestry, units 1, 3-6, 16, 20-22, 32, 40 of compartment No. 77 in Svislochskoye forestry, units 1-6, 8, 10 of compartment No. 649, units 11, 17, 18, 20, 21 of compartment No. 679, units 3, 5, 7, 11-14, 17, 18, 20, 22-25 of compartment No. 680, units 13, 16, 17, 21 of compartment No. 681, unit 8 of compartment No. 713, units 2, 4, 7, 12, 25, 26 of compartment No. 800, units 1, 4, 9, 15, 16, 21-24, 28, 33 of compartment No. 801, units 6, 12, 16, 17, 23, 26, 28 of compartment No. 823B, units 2, 3, 9, 10 of compartment No. 823B in Korolevo-Mostovskoye forestry, unit 28 of compartment No. 828, units 6, 10, 20 of compartment No. 877, units 1, 2, 6 of compartment No. 878A in Pashukovskoye forestry;
- (e) biotechnical measures, other than arrangement of man-made bird nesting sites in compartments No. 589 and 617 in Nikorskoye forestry and compartment No. 1005 in Dmitrovichskoye forestry.

2) Location of campsites, equipped places for recreation, a campfire in the recreation zone of national park are determined by the institution;

9. Zone IV – Economic activity zone.

1) The following are the activities **prohibited** in the zone:

- a) hunting, any types of tree felling and removal of fallen dead wood in compartment No.205 in Rechitskoye forestry and compartment No.76 in Svislotchskoye forestry;

- b) any types of tree felling in unit 4 of compartment No. 825 of Pashukovskoye forestry; unit 18 of compartment No. 729A, units No. 1, 2, 7, 10, 11 in compartment No. 797 in Belyanskoye forestry;
- c) any types of tree felling, other than indiscriminate sanitation fellings in case of total loss of forest stand, in unit 9 of compartment No. 933, units 1, 4-6 of compartment No. 934 in Belyanskoye forestry; unit 36 of compartment No. 988, units 1-6, 8-13, 15, 16, 18-28, 30, 33 of compartment No. 1037, units 1-7 of compartment No. 1041 in Dmitrovichskoye forestry; units 29, 43 of compartment No. 21, units 7, 9, 12, 15, 17, 21, 25, 27, 28, 31, 37, 40, 53 of compartment No. 120 in Brovskoye forestry; unit 4 of compartment No. 133 in Novoselkovskoye forestry; units 1-8, 15, 16, 19, 23, 25 of compartment No. 325, units 1, 2, 12, 20, 21, 25, 27, 30 of compartment No. 326, units 2, 5, 8 of compartment No. 351, units 2, 10, 11-13, 19 of compartment No. 352, units 5, 11, 16 of compartment No. 380, unit 5 of compartment No. 381, units 3, 5, 8, 10, 12-14, 17, 18, 20 of compartment No. 458, unit 1 of compartment No. 459, unit 23 of compartment No. 460 in Khvoynikskoye forestry, units 5, 6, 13, 17 of compartment No. 802, units 8, 20 of compartment No. 803, unit 10 of compartment No. 824 in Korolevo-Mostovskoye forestry, unit 1 of compartment No. 67 in Sukhopolskoye forestry, unit 4 of compartment No. 889A, units 1, 3, 7, 9-12, 14 of compartment No. 898, units 1, 2, 4, 5 of compartment No. 899, units 11, 19 of compartment No. 906, units 1, 10, 16, 17 of compartment No. 907, unit 4 of compartment No. 915, units 5, 9 of compartment No. 920 in Pashukovskoye forestry; units 1, 3, 5, 7, 8, 15, 17, 18, 21, 23, 25 of compartment No. 872, units 1, 2 of compartment No. 873 in Yasenskoye forestry; units 15, 19 of compartment No. 4, units 4, 12 of compartment No. 11, unit 16 of compartment No. 15, unit 8 of compartment No. 16, units 1, 8 of compartment No. 17, unit 13 of compartment No. 18, units 1, 8, 9 of compartment No. 24, unit 8 of compartment No. 25, units 3, 14 of compartment No. 32, unit 6 of compartment No. 33, unit 4 of compartment No. 36, unit 4 of compartment No. 66, and unit 7 of compartment No. 98 in Rechitskoye forestry;
- d) biotechnical measures, other than arrangement of man-made bird nesting sites in compartment No. 76 in Svislotchskoye forestry and compartment No. 1037 in Dmitrovichskoye forestry.

10. To prevent any adverse impact of economic and other activities upon the national park's natural complexes and sites the area adjacent to the national park was declared a *buffer zone*.

1) The following are the activities **prohibited** in the buffer zone:

- (a) abstraction of water from water bodies in quantities that may cause any changes in the behaviour of such water bodies, other than water abstracted for fire suppression purposes;
- (b) discharges of crude sewage and waste into water bodies;
- (c) aerial dusting with pesticides;
- (d) introduction of invasive species of wild animals and plants;
- (e) hydrotechnical reclamation activities, activities capable of bringing about any changes in the existing hydrology of water bodies, waterways, groundwater or producing an adverse impact upon natural complexes;
- (f) clearance of the riparian and aquatic plants found in the waterside areas of rivers and water bodies, other than in reclamative networks and areas intended as recreational locations;
- (g) placement of waste, other than placement of waste in specifically designated waste sites, where such waste is stored until transportation thereof to waste burial sites, waste neutralization sites and/or waste handling sites;
- (h) other economic activities that may adversely affect the reserve's or national parks' natural complexes, bring about change or deterioration of the species diversity or number of animals or plants

2) Exploration and development of minerals fields, allotment of land for construction, construction of power lines, roads, pipelines and other utility lines, reconstruction of the hydrological network shall only take place upon approval thereof by the Institution.

3) Forest management, hunting and commercial fishing in the buffer zone shall take place in accordance with the applicable law and following approval thereof by the Institution.

4) Owners of land lots, land owners and land users whose land is located within the national park's buffer zone shall comply with the protection and nature management requirements established hereby.

IV. STIPULATIONS

11. The boundaries of the national park, its strictly protected zone and buffer zone shall be designated in appropriate locations with information and other signs. All and any changes of the boundaries and areas of the foregoing zones shall take place in accordance with the law.

12. The protection and nature management requirements applicable in the national park and its buffer zone shall be taken into consideration while developing and adjusting land management projects and schemes for Kamenets and Pruzhany Districts in Brest Region and Svislotch District in Grodno Region, land reclamation projects, projects providing for setting up of water protection zones

and water-side strips of water bodies, game management, forest management and town planning projects, programs of social and economic development of Kamenets and Pruzhany Districts in Brest Region and Svislotch District in Grodno Region.

13. Measures to combat invasive species of wild animals and plants in the national park shall be implemented in pursuance of a relevant decision adopted by the natural park's scientific and technical council upon approval thereof by the National Academy of Sciences of Belarus.

14. Setting up and reconstruction of construction sites in the national park shall take place in accordance with projects approved by the Ministry of Natural Resources and Environmental Protection and the Ministry of Architecture and Construction of the Republic of Belarus.

15. Tourist, recreational and health promotion activities in the national park shall take place in full accord with the effective protection and area management requirements and permissible load standards.

16. Personnel of the nature reserve protection agencies and national parks being a part of the system run by the Belarusian Department of the Presidential Affairs shall be responsible for protection of the national park, its natural complexes and sites and supervision of compliance with the requirements applicable in the strictly protected zone.

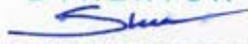
17. The list of positions of personnel of the nature reserve protection agencies and national parks being a part of the system run by the Belarusian Department of the Presidential Affairs, and their distinctive insignia shall be approved by the President of Belarus.

18. Legal entities and individuals responsible for any failure to meet the protection and nature management requirements applicable in the national park shall be held liable in accordance with the provisions of the statutory acts of the Republic of Belarus.

19. All and any damages caused to the national park shall be reimbursed by legal entities and/or individuals to the extent and in the manner prescribed by the statutory acts of the Republic of Belarus.

Taking into account the requirements of the Operational Guidelines for the implementation of the World Heritage Convention, the managing authorities of the administrative units of the proposed World Heritage Property "Białowieża Forest" confirm the will to implement the management plan for the Property according to the regulations reported in this document.

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DYREKTOR

dr Mirosław Stepaniuk

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REG. 200664828, NIP 6030074673
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National Park "Belovezhskaya Pushcha"
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Regional Directorate of State Forests in Białystok
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e-mail: rdlp@bialystok.lasy.gov.pl

DYREKTOR
Regionalnej Dyrekcji Lasów Państwowych
w Białymstoku

mgr inż. Ryszard Ziemblicki

Table 3. Management plans and documents:

| Document | Managing authority | Relevant area | Accepted by | Time period | Remarks |
|---|---|--|---|-------------|--|
| Protection plan for the Bialowieza National Park (PL) | Director of the Bialowieza National Park | Bialowieza National Park (BNP) | Minister of the Environment | 2014 - 2035 | After the first round of public consultations; at present at law department of the Ministry of the Environment; to be signed in the first half of 2014 after the second round of public consultations. The plan takes into account all recommendations of Natura 2000 Directives. |
| Management tasks for the Natura 2000 Site (PL) | Regional Directorate of the Environment Protection, Head foresters of forest divisions: Bialowieza, Browsk, Hajnówka. | Natura 2000 area (PLC200004). See the map "Protection regimes in the Bialowieza Forest" except for the BNP | Regional Directorate of the Environment Protection in Białystok | 2014 - 2019 | After public consultations; to be signed in the second half of 2014, after the management plan for the Bialowieza National Park is accepted by the Minister of the Environment. The plan does not include the territory of the Bialowieza National Park. The requirements of Natura 2000 are included into the management plan of the Park. |
| Management Plan for the State Forests Administrative Units: Białowieża, Browsk, Hajnówka (PL) | Head foresters of forest divisions: Bialowieza, Browsk, Hajnówka. | Forest divisions: Bialowieza, Browsk, Hajnówka. | Minister of the Environment | 2012 - 2021 | In force The document takes into account requirements of Natura 2000 and includes the activities foreseen by the project of Management tasks for the Natura 2000 Site. |
| Management Plan for the National Park "Bialowieza Forest" (BY) | Director of the National Park "Bialowieza Forest" | National Park "Bialowieza Forest" | Minister of Natural Resources and Environmental Protection Head of the Department of Presidential Affairs of the Republic of Belarus | 2008 - 2017 | In force |

Management of the proposed World Heritage Property “Bialowieza Forest”

Table 4. Regulations in different protection regimes of the World Heritage Property and its buffer zone.

| | Protection regime | Wood extraction | Hunting | Berry-, mushroom picking | Recreation activities | Public access | Road construction | Others |
|-----|--|-----------------|-------------|--------------------------|-----------------------|---------------|--|--|
| PL | Strict protection | Not allowed | Not allowed | Not allowed | Not allowed | Restricted | Not allowed, maintenance permitted | Restricted research and education |
| | Partial protection I | Not allowed | Not allowed | Allowed | Allowed | Restricted | Not allowed, maintenance permitted | Restricted research and education, alien species removal, maintenance of open habitats |
| | Partial protection II | Not allowed | Allowed | Allowed | Allowed | Restricted | Not allowed, maintenance permitted | Research and education |
| | Active protection of biodiversity (including landscape protection) | Allowed | Allowed | Allowed | Allowed | Allowed | Not allowed, maintenance permitted | Research and education |
| | Buffer zone covering forest habitats | Allowed | Allowed | Allowed | Allowed | Allowed | Not allowed, maintenance permitted | Research and education |
| | Buffer zone outside the forest | Allowed | Allowed | Allowed | Allowed | Allowed | Allowed according to local spatial plans | Development according to local spatial plans. |
| | | | | | | | | |
| BEL | Strict protection (Ia) | Not allowed | Not allowed | Not allowed | Not allowed | Not allowed | Not allowed | |
| | Strict protection (Ib) | Not allowed | Not allowed | Not allowed | Not allowed | Allowed | Not allowed | |
| | Regulated use | Allowed | Allowed | Allowed | Not allowed | Allowed | Not allowed | |
| | Regulated use with | Not allowed | Allowed | Allowed | Not allowed | Allowed | Not allowed | |

POROZUMIENIE

między

jednostkami Skarbu Państwa

Dyrektorem Białowieskiego Parku Narodowego z siedzibą w Białowieży

i

Nadleśniczym Nadleśnictwa Białowieża z siedzibą w Białowieży

i

Nadleśniczym Nadleśnictwa Browsk z siedzibą w Gruszkach

i

Nadleśniczym Nadleśnictwa z siedzibą w Hajnówce

zawarte w Białowieży w dniu 24 października 2013 r.

w sprawie utworzenia Komitetu Sterującego

Obiektu Światowego Dziedzictwa Puszcza Białowieska

Mając na uwadze wspólne Dobro, jakim jest Puszcza Białowieska, władze Rzeczypospolitej Polskiej złożyły do Centrum Światowego Dziedzictwa wniosek o powiększenie istniejącego Obiektu Światowego Dziedzictwa „Belovezhskaya Pushcha / Białowieża Forest”. Proponowane nowe granice Obiektu obejmą niemal całą polską część Puszczy Białowieskiej, tym samym rozszerza się lista organów odpowiedzialnych za zarządzanie Obiektem o Nadleśniczych Nadleśnictw Białowieża, Browsk i Hajnówka, zarządzających znaczną częścią Obiektu.

Utworzenie Komitetu w intencji porozumiewających się stron jest świadectwem władz Polski zaangażowania się w realizację *Konwencji w sprawie ochrony światowego dziedzictwa kulturalnego i naturalnego, przyjętej w Paryżu dnia 16 listopada 1972 r. przez Konferencję Generalną Organizacji Narodów Zjednoczonych dla Wychowania, Nauki i Kultury na jej siedemnastej sesji*, jak również dowodem planowanego zacieśniania współpracy między podmiotami, które wspólnie przygotowały wniosek o zmianę granic, kryteriów wpisu oraz nazwy istniejącego Obiektu Światowego Dziedzictwa „Belovezhskaya Pushcha / Białowieża Forest”. Komitet Sterujący ułatwi współpracę między instytucjami, jak też współpracę z Komitetem Dziedzictwa Światowego, które wymaga przesyłania wspólnych dla całości Obiektu dokumentów, map, jak również raportów o stanie zachowania Transgranicznego Obiektu Światowego Dziedzictwa.

Powołanie Komitetu Sterującego, w skład którego wchodzi przedstawiciele wszystkich zarządców Obiektu oznacza, że strony porozumienia przykładają bardzo dużą wagę do zarządzania Dobrem poważnie traktujemy wyróżnienie, jakim jest wpis na Listę Światowego Dziedzictwa. Zamiarem porozumiewających się stron jest by Komitet był ciałem o charakterze roboczym, którego głównym zadaniem będzie wspólne opracowanie planu zarządzania Obiektem i nadzór nad realizacją wyznaczonych zadań, przygotowywanie raportów okresowych oraz wdrażanie zaleceń Komitetu Dziedzictwa Światowego w zakresie powierzonych kompetencji.

Komitet Sterujący Transgranicznego Obiektu Światowego Dziedzictwa „Białowieża Forest”

- I. Komitet Sterujący jest powoływany i odwoływany na mocy porozumienia pomiędzy Dyrektorem Białowieskiego Parku Narodowego a Nadleśniczymi Nadleśnictw Białowieża, Browsk, Hajnówka. Komitet Sterujący powołany na mocy tego porozumienia pełni swe funkcje do czasu powołania Polsko-Białoruskiej Komisji do spraw współpracy w dziedzinie ochrony środowiska na mocy porozumienia między Rządem Rzeczypospolitej Polskiej a Rządem Republiki Białorusi, i powołania przez tę Komisję międzynarodowej grupy roboczej ds. Transgranicznego Obiektu Światowego Dziedzictwa „Białowieża Forest”

- II. W skład Komitetu Sterującego wchodzi:
 1. Dyrektor Białowieskiego Parku Narodowego
 2. Nadleśniczy Nadleśnictwa Białowieża
 3. Nadleśniczy Nadleśnictwa Browsk
 4. Nadleśniczy Nadleśnictwa Hajnówka
 5. Pracownik Białowieskiego Parku Narodowego wyznaczony przez Dyrektora Parku
 6. Pracownik Regionalnej Dyrekcji Lasów Państwowych w Białymstoku wyznaczony przez Dyrektora Regionalnej Dyrekcji Lasów Państwowych w BiałymstokuPonadto do udziału w pracach Komitetu Sterującego zaproszeni są:
 7. Przedstawiciel Ministerstwa Środowiska
 8. Przedstawiciel Generalnej Dyrekcji Ochrony Środowiska
 9. Przedstawiciel Regionalnej Dyrekcji Ochrony Środowiska w Białymstoku

- III. Zadania Komitetu Sterującego:
 1. Czuwanie nad realizacją zadań wynikających z Konwencji w sprawie ochrony światowego dziedzictwa kulturalnego i naturalnego oraz realizacją decyzji Komitetu Dziedzictwa Światowego;
 2. Podejmowanie działań zmierzających do traktowania transgranicznego Obiektu Światowego Dziedzictwa „Białowieża Forest”, jako całości;
 3. Nadzorowanie przygotowania, a następnie wdrażania wspólnego planu zarządzania obiektem;
 4. Przygotowanie wspólnego planu działań;

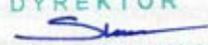
5. Stymulacja i koordynacja działań na rzecz jak najlepszej ochrony wartości uniwersalnej obiektu;
6. Inicjowanie wspólnych projektów oraz poszukiwanie funduszy na realizację działań mających na celu ochronę dziedzictwa światowego oraz propagowanie idei dziedzictwa światowego wśród społeczności lokalnych oraz turystów;
7. Wymiana doświadczeń

IV. W ramach Komitetu Sterującego działać będzie grupa robocza złożona z przedstawicieli instytucji zarządzających Obiektem Światowego Dziedzictwa „Białowieża Forest”:

- Dyrektora Białowieżskiego Parku Narodowego,
- Nadleśniczego Nadleśnictwa Białowieża,
- Nadleśniczego Nadleśnictwa Browsk,
- Nadleśniczego Nadleśnictwa Hajnówka.

Do zadań grupy roboczej należy bieżąca analiza funkcjonowania obiektu oraz przygotowywanie raportów okresowych i innych dokumentów do opiniowania przez Komitet Sterujący.

V. Komitet Sterujący podejmuje działania zgodne z kompetencjami instytucji zarządzających obszarem Obiektu Światowego Dziedzictwa „Białowieża Forest”.

DYREKTOR

dr Mirosław Stepaniuk

NADLEŚNICZY

mgr inż. Grzegorz Bielecki

NADLEŚNICZY

mgr inż. Dariusz Skórko

p.o. NADLEŚNICZY
Nadleśnictwa Białowieża

dr inż. Andrzej Konieczny

AGREEMENT

among
Director of the Białowieża National Park
and
Head Forester of the Białowieża Forestry District, based in Białowieża
and
Head Forester of the Browsk Forestry District, based in Browsk
and
Head Forester of the Hajnówka Forestry District, based in Hajnówka

Signed in Białowieża on October 24, 2013
Regarding establishing of Steering Committee
For the World Heritage Property "Białowieża Forest"

Having in mind common Property of the Białowieża Forest, The Ministry of the Environment of Republic of Poland submitted to the World Heritage Centre the application to enlarge the World Heritage Property "Białowieża Forest". Proposed new boundaries will encompass almost the whole Polish part of the Białowieża Forest, including new administrative units responsible for management of the Property: Head Foresters of the Forestry Districts of Białowieża, Browsk and Hajnówka.

Establishing of the Committee, according to the intentions of the signatory parties, is the proof of involvement of Republic of Poland into the implementation of the Convention Concerning the Protection of the World Cultural and Natural Heritage, adopted on October 16, 1972 at the 17th session of The General Conference of UNESCO, as well as the will of strengthening of cooperation among the units which prepared the application on changing the boundaries, criteria of inscription and name of the World Heritage Property „*Belovezhskaya Pushcha / Białowieża Forest*". Steering Committee will facilitate the cooperation among the managing authorities as well as the cooperation with the World Heritage Committee.

Establishing of the Committee consisting of representatives of all managing authorities of the Property means that the signatory parties pay attention to proper managing of the Property and cherish the distinction of being enlisted as the World Heritage Property. It is presumed that the Steering Committee is the task group with the main aim of preparing of the Management Plan for the Property as well as supervising of the implementation of tasks, preparation of periodic reports as well as implementation of recommendations of the World Heritage Committee.

Steering Committee of the Transboundary World Heritage Property

“Białowieża Forest”

- I. Steering Committee is set up and disbanded on the basis of an agreement among the Director of the Białowieża National Park and Head Foresters of the Forestry Districts: Białowieża, Browsk, and Hajnówka. The Committee set up on the basis of this agreement is in force until the Polish-Belarusian Committee for the environmental protection is established which will be done on the basis of the agreement between the Government of Poland and the Government of Belarus. Then establishing of the international working group for Transboundary World Heritage Property “Białowieża Forest” is possible.
- II. The Steering Committee consists of:
 1. Director of the Białowieża National Park
 2. Head Forester of the Forestry District Białowieża
 3. Head Forester of the Forestry District Browsk
 4. Head Forester of the Forestry District Hajnówka
 5. Representative of the Białowieża National Park designated by the Director of the Park
 6. Representative of the Regional Directorate of the State Forests Administration in Białystok designated by the Director of the Regional Directorate.

In addition the representatives of the following institutions will be invited:

1. The Ministry of the Environment
 2. General Directorate of the Environment Protection
 3. Regional Directorate of the Environment Protection in Białystok
-
- III. Tasks of the Steering Committee
 1. Supervising of the implementation of the Convention Concerning the Protection of the World Cultural and Natural Heritage and recommendations of the World Heritage Committee;
 2. Undertaking initiatives directed at managing the Property as one unit;
 3. Supervising of preparing and implementing of the Management Plan for the Property;

4. Preparing of the joint action plan;
5. Stimulation and coordination of actions aiming at the best protection of outstanding universal value of the Property;
6. Initiating of joint projects as well as searching for funds for putting into practice plans of the world heritage protection and educating local community and visitors;
7. Exchange of knowledge and experience.

IV. Within the Steering Committee there will be the working group created consisting of the representatives on managing authorities of the Property:

1. Director of the Białowieża National Park
2. Head Forester of the Forestry District Białowieża
3. Head Forester of the Forestry District Browsk
4. Head Forester of the Forestry District Hajnówka

The tasks of the group will encompass the current analysis of functioning of the Property, as well as preparation of the periodic reports and other documents presented later for consultation to the Steering Committee.

V. Steering Committee undertakes the actions according to the competences of the bodies managing the World Heritage Property "Białowieża Forest".

Annex II

List of protected species observed within the boundaries of the World Heritage Property “Bialowieza Forest”

The list of vascular plants

| № | Species | Protected by national law | Red book or red list | IUCN | Conventions |
|------------------------|--|------------------------------|-------------------------|------|-----------------|
| | | Belarus and Poland | Belarus and Poland | | |
| Vascular plants | | | | | |
| 1. | <i>Lycopodiella inundata</i> | + | + | | |
| 2. | <i>Huperzia selago</i> | + | + | | |
| 3. | <i>Botrychium multifidum</i> | + | + | | Bern Convention |
| 4. | <i>Botrychium matricariifolium</i> | + | + | + | Bern Convention |
| 5. | <i>Polypodium vulgare</i> | + | + | | |
| 6. | <i>Abies alba</i> | + | + | | |
| 7. | <i>Nymphaea alba</i> | + | + | | |
| 8. | <i>Cimicifuga europaea</i> | + | + | | |
| 9. | <i>Trollius europaeus</i> | + | + | | |
| 10. | <i>Pulsatilla pratensis</i> | + | + | | |
| 11. | <i>Isopyrum thalictroides</i> L. | + | + | | |
| 12. | <i>Quercus petraea</i> | + | + | | |
| 13. | <i>Stellaria crassifolia</i> | + | + | | |
| 14. | <i>Hypericum montanum</i> | + | + | | |
| 15. | <i>Viola montana</i> | + | + | | |
| 16. | <i>Dentaria bulbifera</i> | + | + | | |
| 17. | <i>Salix myrtilloides</i> | + | + | | |
| 18. | <i>Oxycoccus microcarpus</i> | + | + | | |
| 19. | <i>Moneses uniflora</i> | + | + | | |

| | | | | | |
|-----|--|---|---|--|---------------------------------------|
| 20. | <i>Saxifraga hirculus</i> | + | + | | Habitats Dir., Bern Convention |
| 21. | <i>Saxifraga granulata</i> | + | + | | |
| 22. | <i>Aruncus vulgaris</i> | + | + | | |
| 23. | <i>Potentilla alba</i> | + | + | | |
| 24. | <i>Prunus spinosa</i> | + | + | | |
| 25. | <i>Genista germanica</i> | + | + | | |
| 26. | <i>Hedera helix</i> | + | + | | |
| 27. | <i>Astrantia major</i> | + | + | | |
| 28. | <i>Berula erecta</i> | + | + | | |
| 29. | <i>Linnaea borealis</i> | + | + | | |
| 30. | <i>Pulmonaria mollis</i> | + | + | | |
| 31. | <i>Pedicularis sceptrum-carolinum</i> L. | + | + | | |
| 32. | <i>Dracocephalum ruyschiana</i> | + | + | | Bern Convention |
| 33. | <i>Melittis sarmatica</i> | + | + | | - |
| 34. | <i>Adenophora lilifolia</i> | + | + | | Habitats Dir. |
| 35. | <i>Scorzonera purpurea</i> L. | + | + | | |
| 36. | <i>Arctium nemorosum</i> | + | + | | |
| 37. | <i>Crepis mollis</i> | + | + | | |
| 38. | <i>Lilium martagon</i> | + | + | | |
| 39. | <i>Allium ursinum</i> | + | + | | |
| 40. | <i>Allium schoenoprasum</i> | + | + | | |
| 41. | <i>Iris sibirica</i> | + | + | | |
| 42. | <i>Gladiolus imbricatus</i> | + | + | | |
| 43. | <i>Herminium monorchis</i> | + | + | | CITES |
| 44. | <i>Cypripedium calceolus</i> | + | + | | Habitats Dir., Bern Convention, CITES |
| 45. | <i>Epipactis atrorubens</i> | + | + | | CITES |
| 46. | <i>Gymnadenia conopsea</i> | + | + | | CITES |
| 47. | <i>Corallorhiza trifida</i> | + | + | | CITES |
| 48. | <i>Platanthera chlorantha</i> | + | + | | CITES |

| | | | | | |
|-----|------------------------------|---|---|--|---|
| 49. | <i>Malaxis monophyllos</i> | + | + | | CITES |
| 50. | <i>Neottianthe cucullata</i> | + | + | | CITES |
| 51. | <i>Dactylorhiza majalis</i> | + | + | | CITES |
| 52. | <i>Cephalanthera rubra</i> | + | + | | CITES |
| 53. | <i>Listera cordata</i> | + | + | | CITES |
| 54. | <i>Listera ovata</i> | + | + | | CITES |
| 55. | <i>Carex heleonastes</i> | + | + | | |
| 56. | <i>Carex umbrosa</i> | + | + | | |
| 57. | <i>Carex buxbaumii</i> | + | + | | |
| 58. | <i>Eriophorum gracile</i> | + | + | | |
| 59. | <i>Bromopsis benekenii</i> | + | + | | |
| 60. | <i>Festuca altissima</i> | + | + | | |
| 61. | <i>Trisetum sibiricum</i> | + | + | | |
| 62. | <i>Hordelymus europaeus</i> | + | + | | |
| 63. | <i>Pulsatilla patens</i> | + | + | | Bern Convention, Habitats Dir II, IV |
| 64. | <i>Thesium ebracteatum</i> | + | + | | Habitats Dir |
| 65. | <i>Agrimonia pilosa</i> | + | | | Habitats Dir |

The list of protected animal species occurring in the Bialowieza Forest

| № | Species | Protected by national law | Red book or red list | IUCN | Conventions |
|----------------|----------------------------------|---------------------------|----------------------|--------------------|--------------------------------------|
| | | Belarus and Poland | Belarus and Poland | Belarus and Poland | Belarus and Poland |
| Insects | | | | | |
| 1 | <i>Calosoma inquisitor</i> | + | + | | |
| 2 | <i>Carabus cancellatus</i> | + | + | | |
| 3 | <i>Carabus menetriesi</i> | + | + | | |
| 4 | <i>Carabus clathratus</i> | + | + | | |
| 5 | <i>Carabus violaceus</i> | + | + | | |
| 6 | <i>Carabus coriaceus</i> | + | + | | |
| 7 | <i>Carabus intricatus</i> | + | + | | |
| 8 | <i>Graphoderus bilineatus</i> | + | + | | |
| 9 | <i>Rhantus incognitus</i> | + | + | | |
| 10 | <i>Geotrupes vernalis</i> | + | + | | |
| 11 | <i>Lucachus cervus</i> | +? | + | | |
| 12 | <i>Emus hirtis</i> | + | + | | |
| 13 | <i>Catocala sponsa</i> | + | + | | |
| 14 | <i>Pericalia matronula</i> | + | + | | |
| 15 | <i>Gagitodes sagittata</i> | + | + | | |
| 16 | <i>Chariaspilates formosaria</i> | + | + | | |
| 17 | <i>Lopinga achine</i> | + | + | | SPEC3 |
| 18 | <i>Colias palaeno</i> | + | + | | |
| 19 | <i>Bombus muscorum</i> | + | + | | |
| 20 | <i>Formica rufa</i> | + | | LR/NT | |
| 21 | <i>Leucorrhinia pectoralis</i> | + | | | Habitats Dir |
| 22 | <i>Euphydryas maturna</i> | + | + | + | Bern Convention, Habitats Dir II, IV |
| 23 | <i>Euphydryas aurinia</i> | + | + | | Habitats Dir |
| 24 | <i>Lycaena dispar</i> | + | + | NT | |
| 25 | <i>Dytiscus latissimus</i> | + | + | VU | |
| 26 | <i>Osmoderma eremita</i> | + | + | NT | Habitats Dir |
| 27 | <i>Buprestis splendens</i> | + | + | EN | |
| 28 | <i>Cucujus cinnaberinnus</i> | + | + | | Habitats Dir |
| 29 | <i>Boros schneideri</i> | + | + | | |
| 30 | <i>Mesosa myops</i> | + | | | Habitats Dir |
| 31 | <i>Oxyporus mannerheimii</i> | + | + | | Habitats Dir |
| 32 | <i>Pytho kolwensis</i> | + | + | | Habitats Dir |
| 33 | <i>Phryganophilus ruficollis</i> | + | + | | Habitats Dir |

| | | | | | |
|-------------------|---|---|---|--------|---|
| 34 | <i>Rhysodes sulcatus</i> | + | + | | Habitats Dir |
| 35 | <i>Colias myrmidone</i> | + | + | | Habitats Dir |
| Fishes | | | | | |
| 36 | <i>Lampetra planeri</i> | + | | LR/NT | |
| 37 | <i>Barbus barbus</i> | + | + | | |
| 38 | <i>Misgurnus fossilis</i> | + | + | LR/NT- | |
| 39 | <i>Silurus glanis</i> | + | | LR/NT- | |
| Amphibians | | | | | |
| 40 | <i>Triturus cristatus</i> | + | + | LR | |
| 41 | <i>Bufo calamita</i> | + | + | | |
| 42 | <i>Hyla arborea</i> | + | | LR | |
| 43 | <i>Bombina bombina</i> | + | | LR | |
| 44 | <i>Bufo viridis</i> | + | | LC | |
| 45 | <i>Bufo bufo</i> | + | | LC | |
| 46 | <i>Rana arvalis</i> | + | | LC | |
| 47 | <i>Rana esculena</i> | + | | | |
| 48 | <i>Rana lessonae- Pelophylax lessonae</i> | + | | LC | Bern Convention, Habitats Dir. Annex4 |
| 49 | <i>Rana temporaria</i> | + | | LC | Bern Convention, Habitats Dir. Annex5 |
| 50 | <i>Pelobates fuscus</i> | + | | | |
| 51 | <i>Triturus cristatus</i> | + | | LC | Bern Convention, Habitats Dir. Annex4 |
| 52 | <i>Lissotriton vulgaris</i> | + | | LC | Bern Convention |
| Reptiles | | | | | |
| 53 | <i>Coronella austriaca</i> | + | + | | |
| 54 | <i>Emis orbicularis</i> | + | + | DD | |
| 55 | <i>Zootoca vivipara</i> | + | | LC | |
| 56 | <i>Lacerta agilis</i> | + | | LC | |
| 57 | <i>Anguis fragilis</i> | + | | | |
| 58 | <i>Natrix natrix</i> | + | | LC | |
| 59 | <i>Vipera berus</i> | + | | LC | |
| Birds | | | | | |
| 60 | <i>Botaurus stellaris</i> | + | + | | SPEC3 |
| 61 | <i>Ixobrychus minutus</i> | + | + | | SPEC3 |
| 62 | <i>Ciconia nigra</i> | + | + | | SPEC3 |
| 63 | <i>Milvus milvus</i> | + | + | | SPEC2 |
| 64 | <i>Milvus migrans</i> | + | + | VU | SPEC3 |
| 65 | <i>Circaetus gallicus</i> | + | + | | SPEC3 |
| 66 | <i>Circus cyaneus</i> | + | + | | SPEC3 |
| 67 | <i>Aquila clanga</i> | + | + | EN | SPEC1 |

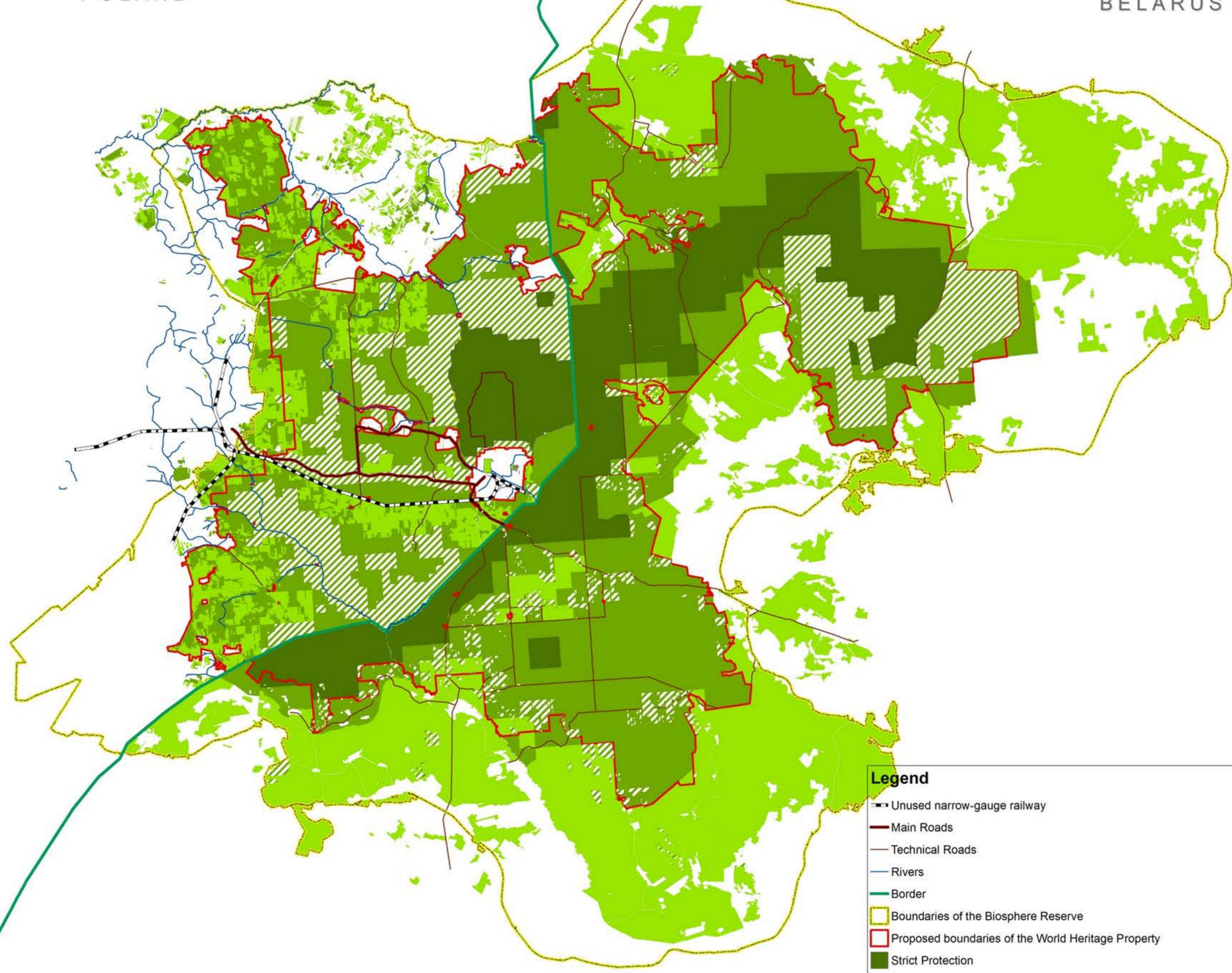
| | | | | | |
|-----|--------------------------------|----|---|----|---|
| 68 | <i>Aquila pomarina</i> | + | + | | SPEC3 |
| 69 | <i>Aquila chrysaetos</i> | +? | + | | SPEC3 |
| 70 | <i>Hieraaetus pennatus</i> | + | + | | SPEC3 |
| 71 | <i>Haliaeetus albicilla</i> | + | + | NT | SPEC1 |
| 72 | <i>Falco tinnunculus</i> | + | + | | SPEC3 |
| 73 | <i>Falco subbuteo</i> | + | + | | |
| 74 | <i>Falco vespertinus</i> | +? | + | VU | SPEC3 |
| 75 | <i>Falco peregrinus</i> | +? | + | | |
| 76 | <i>Perdix perdix</i> | + | | | SPEC3 |
| 77 | <i>Grus grus</i> | + | + | | SPEC2 |
| 78 | <i>Crex crex</i> | + | + | NT | SPEC1 |
| 79 | <i>Vanellus vanellus</i> | + | | | SPEC2 |
| 80 | <i>Gallinago media</i> | + | + | NT | SPEC1 |
| 81 | <i>Limosa limosa</i> | + | + | NT | SPEC2 |
| 82 | <i>Numenius arquata</i> | + | + | | SPEC2 |
| 83 | <i>Tyto alba</i> | + | + | | SPEC3 |
| 84 | <i>Bubo bubo</i> | + | + | | SPEC3 |
| 85 | <i>Glaucidium passerinum</i> | + | + | | |
| 86 | <i>Athene noctua</i> | + | + | | SPEC3 |
| 87 | <i>Strix nebulosa</i> | + | + | | |
| 88 | <i>Asio flammeus</i> | + | + | | SPEC3 |
| 89 | <i>Coracias garrulus</i> | + | + | VU | SPEC2 |
| 90 | <i>Alcedo atthis</i> | + | + | | SPEC3 |
| 90 | <i>Picus viridis</i> | + | + | | SPEC2 |
| 92 | <i>Dendrocopos leucotos</i> | + | + | | |
| 93 | <i>Picoides tridactyllus</i> | + | + | | SPEC3 |
| 94 | <i>Gallerida cristata</i> | + | + | | SPEC2 |
| 95 | <i>Anthus campestris</i> | + | + | | SPEC2 |
| 96 | <i>Acrocephalus paludicola</i> | + | + | VU | SPEC1 |
| 97 | <i>Ficedula albicollis</i> | | | | SPEC4 |
| | | + | + | | |
| 98 | <i>Lanius minor</i> | + | + | | SPEC2 |
| 99 | <i>Emberiza hortulana</i> | + | + | | SPEC2 |
| 100 | <i>Pernis apivorus</i> | + | | LC | Habitats Dir. AnnexI |
| 101 | <i>Aegolius funereus</i> | + | + | LC | Bern Convention, Habitats Dir. AnnexI |
| 102 | <i>Ciconia ciconia</i> | + | + | LC | |
| 103 | <i>Cygnus cygnus</i> | + | + | LC | |
| 104 | <i>Circus pygargus</i> | + | + | LC | |
| 105 | <i>Bonasa bonasia</i> | + | + | LC | |
| 106 | <i>Porzana porzana</i> | + | + | LC | |

| | | | | | |
|----------------|----------------------------------|---|---|---------|--|
| 107 | <i>Porzana parva</i> | + | + | LC | |
| 108 | <i>Caprimulgus europaeus</i> | + | + | LC | |
| 109 | <i>Picus canus</i> | + | + | LC | |
| 110 | <i>Dryocopus martius</i> | + | + | LC | |
| 111 | <i>Dendrocopos medius</i> | + | + | LC | |
| 112 | <i>Ficedula parva</i> | + | + | LC | |
| 113 | <i>Rallus aquaticus</i> | + | + | LC | |
| 114 | <i>Scolopax rusticola</i> | + | + | LC | |
| 115 | <i>Tingra ochropus</i> | + | + | LC | |
| 116 | <i>Columba oenas</i> | + | + | LC | |
| 117 | <i>Phylloscopus trochiloides</i> | + | + | LC | |
| 118 | <i>Nucifraga caryocatactes</i> | + | + | LC | |
| Mammals | | | | | |
| 119 | <i>Myotis nattereri</i> | + | + | LC | Red List UE VU |
| 120 | <i>Myotis brandtii</i> | + | + | LC | |
| 121 | <i>Barbastella barbastellus</i> | + | + | VU | |
| 122 | <i>Nyctalus leisleri</i> | + | + | | |
| 123 | <i>Eptesicus nilssonii</i> | + | + | | |
| 124 | <i>Micromys minutus</i> | + | | LR/NT | |
| 125 | <i>Myoxus glis</i> | + | + | LR/NT | |
| 126 | <i>Eliomys quercinus</i> | + | + | VU | |
| 127 | <i>Muscardinus avellanarius</i> | + | + | LR/NT - | |
| 128 | <i>Castor fiber</i> | + | | LR/NT | |
| 129 | <i>Sciurus vulgaris</i> | + | | LR NT | |
| 130 | <i>Meles meles</i> | + | + | | |
| 131 | <i>Lutra lutra</i> | + | | VU | |
| 132 | <i>Linx linx</i> | + | + | NT | |
| 133 | <i>Bison bonasus</i> | + | + | EN | |
| 134 | <i>Lepus timidus</i> | + | + | | Bern Convention, Habitats Dir. Annex5 |
| 135 | <i>Vespertilio murinus</i> | + | + | | Bern Convention, Bonn Appendix2, Habitats Dir. Annex4 |
| 136 | <i>Neomys anomalus</i> | + | + | | Bern Convention |
| 137 | <i>Sorex caecutiens</i> | + | + | | Bern Convention |
| 138 | <i>Canis lupus</i> | + | + | LR/lc | CITES, Bern Convention, Habitats Dir II, IV |

Białowieża Forest

POLAND

BELARUS



Legend

- Unused narrow-gauge railway
- Main Roads
- Technical Roads
- Rivers
- Border
- Boundaries of the Biosphere Reserve
- Proposed boundaries of the World Heritage Property
- Strict Protection
- Partial protection I – forests excluded from use (nature reserves, partial protection in the boundaries of the BNP)
- Partial protection II – other forests excluded from use
- Active protection of biodiversity and landscape

0 2 875 5 750 11 500 17 250 23 000 Meters



MINISTRY
OF THE ENVIRONMENT

Department of Forestry
and Nature Conservation

DLP-III-083-6/7692/13/ZK

Warszawa, 24 February 2014

Mr. Kishore Rao
Director
World Heritage Centre

Dear Sir,

Subject: Nomination of Bialowieza Forest (as an extension of Belovezhskaya Pushcha / Bialowieza Forest) (Belarus / Poland) for inscription on the World Heritage List (N 33 bis)

With reference the request concerning the supplement of the application of the World Heritage Site Belovezhskaya Pushcha / Bialowieza Forest we are pleased to jointly submit the information required in the letter from the Director of World Heritage Programme of IUCN, dated on December 13, 2013.

The information provided were agreed among all the managing authorities of the area of the proposed World Heritage Site Bialowieza Forest.

Please accept, Sir, the assurance of our highest consideration.

Best regards,

Director Departmentu
Leśnictwa i Ochrony Przyrody
Nina Doleżyńska

Appendices:

1. Project of a protection plan (regulation) of the Białowieża National Park for the years 2014 – 2035 (its summary in English);
2. Map of the territorial scope of individual management plans in the area of the proposed Property with respective table;
3. Map of the territorial scope of different protection regimes of the proposed World Heritage Property with respective table;

-
4. Project of a Protective Tasks' Plan for the Natura 2000 area, outside the BNP (document in Polish, English version will be submitted no later than March 15, 2014);
 5. Management plan for the Białowieża Forest National Park, Belarus (its summary in English);
 6. Agreement on the exchange of information between the Regional Directorate of the State Forests in Białystok, Białowieża National Park and the Białowieża Forest National Park (17.02.2010);
 7. Agreement on mutual transfer and use of spatial data between the Regional Directorate of the State Forests in Białystok and the Białowieża National Park (17.02.2011);
 8. Agreement on establishing the Steering Committee of the World Heritage Site, the Białowieża Forest (24.10.2013);
 9. Agreement on preparation and implementation of the Management Plan for the World Heritage Site, the Białowieża Forest (11.02.2014);
 10. Agreement between the Government of the Republic of Poland and the Government of the Republic of Belarus on cooperation in the field of environmental protection (12.09.2009);
 11. Agreement on cooperation between the Białowieża National Park and the Białowieża Forest National Park (10.08.2010).

Mr. Kishore Rao
Director
World Heritage Centre

Subject: Nomination of Bialowieza Forest (as an extension of Belovezhskaya Pushcha / Bialowieza Forest) (Belarus / Poland) for inscription on the World Heritage List (N 33 bis)

With reference the request concerning the supplement of the application of the World Heritage Site Belovezhskaya Pushcha / Bialowieza Forest we are pleased to jointly submit the information required in the letter from the Director of World Heritage Programme of IUCN, dated on December 13, 2013.

The information provided were agreed among all the managing authorities of the area of the proposed World Heritage Site Bialowieza Forest.

Please accept, Sir, the assurance of our highest consideration.

Appendices:

1. Project of a protection plan (regulation) of the Białowieża National Park for the years 2014 – 2035 (its summary in English);
2. Map of the territorial scope of individual management plans in the area of the proposed Property with respective table;
3. Map of the territorial scope of different protection regimes of the proposed World Heritage Property with respective table;

4. Project of a Protective Tasks' Plan for the Natura 2000 area, outside the BNP (document in Polish, English version will be submitted no later than March 15, 2014);
5. Management plan for the Białowieża Forest National Park, Belarus (its summary in English);
6. Agreement on the exchange of information between the Regional Directorate of the State Forests in Białystok, Białowieża National Park and the Białowieża Forest National Park (17.02.2010);
7. Agreement on mutual transfer and use of spatial data between the Regional Directorate of the State Forests in Białystok and the Białowieża National Park (17.02.2011);
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9. Agreement on preparation and implementation of the Management Plan for the World Heritage Site, the Białowieża Forest (11.02.2014);
10. Agreement between the Government of the Republic of Poland and the Government of the Republic of Belarus on cooperation in the field of environmental protection (12.09.2009);
11. Agreement on cooperation between the Białowieża National Park and the Białowieża Forest National Park (10.08.2010).

IUCN Evaluation of Bialowieza Forest

(extension of Belovezhskaya Pushcha / Bialowieza Forest) (Poland / Belarus)

Request for Supplementary Information

According to the request of the IUCN World Heritage, we provide supplementary information which were agreed among the State Parties and all managing authorities of the proposed area of the World Heritage Property Bialowieza Forest.

- 1. Please provide a copy of the current management plan, even if outdated, of Bialowieza National Park in Poland, together with details of the timeframe and commitment to providing an updated management plan, and for its formal adoption. Please also provide a map with accompanying details of all of the management plans that currently cover the property and the proposed extension, the date of their last update, and their current status.**

The current management of the Białowieża National Park (hereinafter interchangeably referred to as the BNP) as required by the Polish law, including in particular the Act on Nature Conservation, is conducted on the basis of annual plans approved by the Minister of the Environment. Each draft annual ordinance concerning the Protective Tasks is made public on the Park's website in order to enable all stakeholders to submit comments on the document. Before being sent to the Minister of the Environment the projects undergo substantive consultations of the Park's Scientific Council. The Ministry of the Environment verifies each draft annual protection plan in respect of its substantive and legal content. Since 2011 the protective tasks have been drawn up based on a simultaneously prepared project regulation of the Ministry of the Environment on the protection plan for the Park for the years 2014-2035. With regard to the changes of Nature Conservation Act, Białowieża National Park does not yet have a long-term protection plan established by the Minister of the Environment. It should also be emphasised that the project of BNP protection plan, prepared in 2010 by teams of scientists including specialists in different domains of natural sciences, is a document which considers the requirements of the European Union concerning the need for developing protection plans for the protected sites within the area of Natura 2000 PLC 200004 Puszcza Białowieska which is integral to the national park. Hence, in accordance with the legal requirements of the Act on Nature Conservation, the BNP protection plan will also become the protection plan for Natura 2000. The Regulation of the Ministry of the Environment on establishing a protection plan for the Białowieża National Park is presently in the last stage of proceedings, having undergone public consultations, including consultations with Polish scientific research centres and non-governmental organisations, as well as inter-ministerial consultations. Currently, the project of the Regulation undergoes the final stage of examination and application of justified reservations reported by the consulting authorities. It is being given its proper formal and legal shape by the Legal Department of the Ministry of

the Environment and later by the Governmental Legislation Centre. Considering the high substantive complexity of the document and the difficulties encountered in the process of its translation into the language of legal regulations, as well as the requirements specified by the Polish legislative process, it is envisaged that the protection plan for the Białowieża National Park will be established and signed by the Minister of the Environment no sooner than in mid 2014.

Attached:

1. Project protection (management) plan for the Białowieża National Park for the years 2014 – 2035 summary in English (Appendix 1);
2. Map of the territorial scope of individual management plans in the area of the proposed Property (Appendix 2);
3. Map of territorial scope of different protection regimes of the proposed World Heritage Property with respective table (Appendix 3).

2. Please provide a succinct and updated statement, and copies of all the relevant agreements, regarding the delivery of coordinated management plan within the proposed extended area in Poland, and in particular on the collaboration agreement in place between the National Park administration and the Forest Administration, and any additional agreements foreseen.

The area of the Polish part of the proposed World Heritage Site Białowieża Forest, constitutes the property of the State Treasury and is administered by four organisational units: The Białowieża National Park and the Browsk, Białowieża and Hajnówka forest districts, remaining under the supervision of the Director of the Regional Directorate of State Forests in Białystok. These forest districts form the Promotional Forest Complex “Białowieża Forest”, which constitutes a functional unit, however it is not an organisational unit. The responsibility for the management of particular forest districts lies with forest district managers. The entire area of the Białowieża Forest, administered by the Białowieża National Park and the forest districts of Białowieża, Browsk and Hajnówka, constitutes the area of Natura 2000, Puszcza Białowieska PLC 200004. The cooperation between administrative units and the Polish part of the Białowieża Forest is based on the following agreements:

- Agreement on the exchange of information between the Regional Directorate of the State Forests in Białystok, Białowieża National Park and the Białowieża Forest National Park (17.02.2010) (Appendix 6);
- Agreement on mutual transfer and use of spatial data between the Regional Directorate of the State Forests in Białystok and the Białowieża National Park (17.02.2011) (Appendix 7);
- Agreement on establishing the Steering Committee of the World Heritage Site, the Białowieża Forest (24.10.2013) (Appendix 8);
- Agreement on preparation and implementation of the Management Plan for the World Heritage Site, the Białowieża Forest (11.02.2014) (Appendix 9).

The Steering Committee established on the basis of the Agreement dated on 24.10.2013 met on February 11, 2014 when the agreement on preparation and implementation of the Management Plan for the World Heritage Site was signed. It was agreed that the Steering Committee will be extended to incorporate representatives of the authorities managing the Belarusian part of the Property. Due invitation were issued and the first meeting of the joint Transboundary Steering Committee for World Heritage Site Białowieża Forest is planned for March 12, 2014.

Apart from the mentioned agreements, the cooperation is also based on mutual participation in consultative and advisory bodies: The Director of the Regional Directorate of State Forests in Białystok is a member of the BNP Scientific Council, and the managers of the forest districts are invited to all meetings of this body. The Director of the Białowieża National Park and Chairman of the BNP Scientific Board are members of the Scientific and Social Council of the Promotional Forest Complex Białowieża Forest.

3. Please provide a succinct summary, with copies of the relevant documents, providing a clear and agreed roadmap for how the transboundary management plan required for the property will be established, maintained and implemented, and the collaboration between the States Parties that is envisaged to achieve this, together with the concrete actions and timelines foreseen;

The Management Plan for the Białowieża Forest World Heritage Site will be based on the following studies required by the Polish and Belorussian legislation:

- Protection Plan for BNP (project included in Appendix 1);
- Protective Tasks Plan for the Natura 2000 area, outside the BNP (project included in Appendix 4);
- Forest Arrangement Plans for the following forest districts: Białowieża, Browsk, Hajnówka;
- Protection plan for the Białowieża Forest National Park (summary included in Appendix 5).

Works on the preparation of the coordinated Management Plan for the Property shall be conducted on the basis of the following agreement between States – Parties and individual partners managing the Property:

- Agreement between the Government of the Republic of Poland and the Government of the Republic of Belarus on cooperation in the field of environmental protection (12.09.2009) (Appendix 10);
- Agreement on cooperation between the Białowieża National Park and the Białowieża Forest National Park (10.08.2010) (Appendix 11);
- Agreement on preparation and implementation of the Management Plan for the World Heritage Site, the Białowieża Forest (11.02.2014) (Appendix 9).

Actions aimed at the development of the Management Plan for the Property include:

- Appointment of the Transboundary Steering Committee for the Property – March 2014;

- Preparation of the English summary of the Forest Arrangement Plans for the following forest districts of the Białowieża Forest: Białowieża, Browsk, Hajnówka – June 2014;
- Approval of the BNP Protection Plan (including Natura 2000 issues) – June 2014;
- Approval of the Protective Tasks' Plan for the Natura 2000 area (except for the area of the BNP) - end of 2014;
- The Management Plan for the Białowieża Forest World Heritage Site - June 2015;
- Public consultations and approval of the Management Plan for the Białowieża Forest World Heritage Site – end of 2015.

The Property Management Plan will be prepared by the Steering Committee in cooperation with experts from and the National Heritage Board of Poland. The Steering Committee includes, *inter alia*, working group members, consisting of the representatives of the Białowieża National Park, the Regional Directorate of the State Forests in Białystok, the Białowieża Forest National Park, the Ministry of the Environment and the National Heritage Board of Poland working with the Białowieża National Park for three years. The result of their work was a preparation of the renomination application presented before the World Heritage Centre in January 2012. Presently, the Steering Committee will mainly deal with the preparation of a coordinated Property Management Plan.

The Management Plan for the Białowieża Forest World Heritage Site will be approved by the Directors of the Parks as well as Heads of Forest Districts forming the Property. Administrations of those units will be also responsible for its implementation.

4. Please provide a statement regarding the approach that is intended to management of the fence that currently exists on the national border that crosses the property, and the possibilities for facilitating natural wildlife movement across the property as a whole.

The fence on the border between the States located on the side of Belarus may constitute a physical barrier to several species of animals, mainly to large ungulates, such as: the European Bison, Eurasian Elk, Deer and Roe Deer. Telemetric tests show that in the case of large predators such as Lynx and Wolf the fence does not constitute a migration barrier (Schmidt et al. 1997; Jędrzejewski et al. 2001; Kowalczyk et al. 2012). The fence does not constitute a barrier to other species of animals which cross the border directly or use water courses as indirect migration routes.

In the light of the most recent results of genetic tests concerning genetic purity of the European Bison on the Belarusian side of the Białowieża Forest and the 85-year process of reintroduction of the European Bison, it should be assumed that the decisions concerning further procedures with regard to the fence located along the border between the countries ought to be preceded by extensive scientific consultations with regard to the genetic purity of the Białowieża European Bison in Poland. The results of comparative genetic tests conducted on the Polish and Belorussian bison from the Białowieża Forest with the use of different genetic markers indicate that statistically the bison from the Belarusian and Polish parts of the Forest substantially differ. Numerous genetic variants confirmed in the Bison from the Belarusian part of the Forest is absent in the Polish population of the European Bison,

although they are present in the Białowieża-Caucasian genetic line (Tokarska 2010, Tokarska et al in prep.) When it comes to the necessity of providing a proper conservation status of the European Bison belonging to the Białowieża line as the priority species of Natura 2000 area, all actions concerning the current spatial barrier in the form of the fence on the border between the States should be broadly and thoroughly considered. **Undoubtedly, in the present situation the fence on the state border facilitates the preservation of the genetic purity of the Białowieża line of the European Bison from the Polish side of the border.** The hybridisation of the Belarusian population of the European Bison does not apply solely to the area of the Białowieża Forest. Almost all other populations of the European Bison that dwell in Belarus originate directly or indirectly from the herd in the Belarusian side of the Białowieża Forest.

The results of contemporary genetic tests should constitute the basis for the preparation of a future strategy for managing the two populations of the bison within the entire area of the Białowieża Forest and subsequently for the decision making with regard to migration corridors across the border.

Jędrzejewski W., Schmidt K., Theuerkauf J., Jędrzejewska B., Okarma H. 2001. Daily movements and territory use by radio-collared wolves (*Canis lupus*) in Białowieża Primeval Forest. *Can. J. Zool.* 79: 1993 – 2004.

Kowalczyk R., Schmidt K., Jędrzejewski W. 2012. Do fences or humans inhibit the movements of large mammals in Białowieża Primeval Forest? W: *Fencing for conservation. Restriction of evolutionary potential or a riposte to threatening processes?* Red. Sommers MJ, Hayward MW. Springer, New York-Dordrecht-Heidelberg-London: 235-244.

Tokarska M. Genetic discrepancies between Polish and Belarusian populations of the European bison in the Białowieża Forest. Is Belarusian bison the lowland line?, in prep.

Tokarska M. 2010. Zmienność genetyczna współczesnego żubra nizinnego (*Bison bonasus bonasus*) w Puszczy Białowieskiej. Wskazówki dla ochrony zmienności genetycznej żubra. ZBS PAN, Białowieża)

Schmidt K., Jędrzejewski W. i Okarma H. 1997. Spatial organization and social relations in the Eurasian lynx population in Białowieża Primeval Forest, Poland. *Acta Theriologica* 42: 289 – 312.

OBJECTIVES OF NATURE PROTECTION IN THE AREA OF THE PARK AND THE
INDICATION OF NATURAL AND SOCIAL CONDITIONS OF THEIR IMPLEMENTATION

1. The purpose of nature protection in the area of the Park is to:

- 1) preserve the forest ecosystem, which is unique in the world, along with its biological diversity shaped as a result of natural processes and the ongoing biological, environmental and evolutionary changes as well as its geologic, geomorphological, hydro-geological and soil structures (the main goal of nature protection in the Park),
- 2) ensure the undisturbed course of environmental and evolutionary processes typical of lowland natural forests of the boreo-nemoral zone, in particular of multi-territorial and long-term processes,
- 3) protect biodiversity at the level of species (genetic diversity of the species), interspecies and the ecosystem,
- 4) protect the European bison (*Bison bonasus*) in the whole area of its Białowieża population as well as the green corridors that ensure its spread.

1.1. The purpose of protecting inanimate nature is to:

- 1) preserve the undisturbed course of natural processes,
- 2) preserve the natural geological, geomorphological, hydrological, soil and pedogenic processes and structures,
- 3) protect water resources and increase the retention capacity of habitats,
- 4) preserve organic soils,
- 5) protect soil, water and air against pollution.

1.2. The purpose of protecting ecosystems in the area of the Park is to:

- 1) preserve the natural diversity of habitats,
- 2) preserve the diversity of species, plant communities, fungi and animals,
- 3) reduce anthropopressure,
- 4) counteract exotic species invasion.

1.2.1 The purpose of protecting forest ecosystems in the Park is to:

- 1) protect the durability, continuity and stability of environmental processes,
- 2) preserve the diversity of habitats and microhabitats of forest organisms,
- 3) maintain a favourable conservation status of natural habitats covered by Natura 2000: 9170-2¹⁾ subcontinental oak-hornbeam forests (*Tilio - Carpinetum*), 91E0-3¹⁾ alder and ash riparian forests (*Fraxino - Alnetum*), 91D0-5¹⁾ Boreal spruce swamp forests (*Sphagno girgensohnii - Piceetum*) and 91D0-6¹⁾ Subboreal birchwood swamp forests (*Betula pubescens - Thelypteris palustris*), 91D-02¹⁾ pine swamp forests (*Vaccinio uliginosi - Pinetum*).

1.2.2. The purpose of protecting non-forest terrestrial ecosystems in the area of the Park is to:

- 1) protect the durability of ecosystems, including semi-natural meadow ecosystems,
- 2) preserve species and natural habitats of Community Importance,
- 3) impede the process of decomposition and further compression of peats,
- 4) preserve plant associations that require active protection, allowing for the need to protect natural habitats and species,
- 5) restore the favourable conservation status of natural habitats covered by Natura 2000: 6230-4¹⁾ Matgrass grasslands from the Nardetalia order and 6510¹⁾ extensively used fresh meadows (*Arrhenatherion elatioris*).

1

) Natura 2000 code.

1.2.3. The purpose of protecting water ecosystems in the area of the Park is to:

- 1) obtain good ecological condition and ecological potential of waters,
- 2) provide water conditions suitable for obtaining a favourable conservation status of natural habitats and species which are under Natura 2000 protection within the Park,
- 3) maintain inviolable flow of watercourses.

1.3. The purpose of protecting fungi, plant and animal species and their habitats is to:

- 1) maintain species diversity,
- 2) maintain the diversity of microhabitats and places of reproduction
- 3) ensure the existence and restoration of species habitats,
- 4) create suitable environmental conditions for maintaining a favourable conservation status of rare and endangered species of wild plants, fungi and animals in the area of the Park, particularly of:
 - a) fungi: *Xerocomus parasiticus*, *Sarcoscypha coccinea*, *Grifola frondosa*, *Meripilus giganteus*, *Geastrum corollinum*, *Geastrum quadrifidum*, *Geastrum fimbriatum*, *Geastrum triplex*, *Hydnellum aurantiacum*, *Hydnellum concrescens*, *Sarcodon imbricatus*, *Ganoderma lucidum*, *Fistulina hepatica*, *Antrodia albobrunnea*, *Fomitopsis rosea*, *Amylocystis lapponica*, *Langermannia gigantea*, *Clavariadelphus truncatus*, *Clavariadelphus pistillaris*, *Clavariadelphus ligula*, *Hericium coralloides*, *Ptychoverpa bohemica*, *Verpa conica*, *Morchella esculenta*, *Morchella conica*, *Mutinus caninus*, *Sparassis crispa*, *Polyporus umbellatus*, *Hapalopilus croceus*, *Pycnoporellus alboluteus*, *Inonotus obliquus*,
 - b) lichen: *Bryoria capillaris*, *Bryoria fuscescens*, *Bryoria implexa*, *Bryoria subcana*, *Cetraria ericetorum*, *Cetraria sepincola*, *Cetrelia olivetorum*, *Chrysothrix candelaris*, *Cladonia arbuscula*, *Cladonia ciliata*, *Cladonia rangiferina*, *Evernia divaricata*, *Evernia prunastri*, *Hypogymnia tubulosa*, *Hypotrachyna revoluta*, *Imshaugia aleurites*, *Lobaria pulmonaria*, *Lobaria scrobiculata*, *Melanelixia fuliginosa*, *Melanelixia subargentifera*, *Melanelixia subaurifera*, *Melanelia sorediata*, *Melanohalea elegantula*, *Melanohalea exasperata*, *Melanohalea olivacea*, *Menegazzia terebrata*, *Parmeliopsis ambigua*, *Peltigera canina*, *Peltigera didactyla*, *Peltigera neckeri*, *Peltigera ponojensis*, *Peltigera praetextata*, *Peltigera rufescens*, *Platismatia glauca*, *Pleurosticta acetabulum*, *Pseudevernia furfuracea*, *Ramalina farinacea*, *Ramalina fastigiata*, *Ramalina fraxinea*, *Ramalina pollinaria*, *Thelotrema lepadinum*, *Usnea barbata*, *Usnea ceratina*, *Usnea dasypoga*, *Usnea florida*, *Usnea fulvoreaegens*, *Usnea glabrescens*, *Usnea hirta*, *Usnea lapponica*, *Lobaria amplissima*, *Calicium abietinum*, *Cetrelia cetrarioides*, *Cetrelia chicitae*, *Cetrelia monachorum*, *Cladonia parasitica*, *Gyalecta ulmi*, *Ramalina thrausta*,
 - c) animals: - invertebrates: *Astacus astacus*, *Hirudo medicinalis*, *Aeschna viridis*, *Nehalennia speciosa*, *Ophiogomphus cecilia*, *Leucorrhinia albifrons*, *Leucorrhinia pectoralis*, *Buprestis splendens*, *Eurythyrea austriaca*, *Eurythyrea quercus*, *Ergates faber*, *Leptura thoracica*, *Stictoleptura variicornis*, *Tragosoma depsarium*, *Oxyporus mannerheimii*, *Dytiscus latissimus*, *Graphoderus bilineatus*, *Ceruchus chrysomelinus*, *Dorcus parallelopipedus*, *Hydrophilus aterrimus*, *Hydrophilus piceus*, *Boros schneideri*, *Osmoderma bamabita*, *Protaetia aeruginosa*, *Pytho kolwensis*, *Elater ferrugineus*, *Phryganophilus ruficollis*, *Rhysodes sulcatus*, *Cucujus cinnaberinnus*, *Cucujus haematodes*, *Lycaena dispar*, *Lycaena helle*, *Maculinea arion*, *Polyommatus eroides*, *Catocala pacta*, *Boloria aquilonaris*, *Boloria eunomia*, *Euphydryas aurinia*, *Euphydryas maturna*, *Parnassius mnemosyne*, *Colias myrmidone*, *Colias palaeno*, *Coenonympha hero*, *Coenonympha oedippus*, *Lopinga achine*, *Proserpinus proserpina*, *Formica truncorum*, *Formica stern*, *Formica polyctena*, *Bombus confusus*, *Bombus cryptarum*, *Bombus distinguendus*, *Bombus hortorum*, *Bombus humilis*, *Bombus hypnorum*, *Bombus jonellus*, *Bombus lucorum*, *Bombus magnus*, *Bombus muscorum*, *Bombus pascuorum*, *Bombus pomorum*, *Bombus pratorum*, *Bombus ruderarius*, *Bombus rudeatus*, *Bombus schrencki*, *Bombus sicheli*, *Bombus soroeensis*, *Bombus subterraneus*, *Bombus sylvorum*, *Bombus lapidarius*, *Bombus terrestris*, *Myxas glutinosa*, *Vertigo angustior*, *Vertigo genesi*, *Vertigo moulinsiana*, *Pseudanodonta complanata*, *Anodonta cygnea*, *Helix pomatia*,
- vertebrates: *Eudontomyzon mariae*, *Eudontomyzon fluviatilis*, *Rhodeus sericeus*, *Cobitis taenia*, *Misgurnus fossilis*, *Cottus poecilopus*, *Triturus vulgaris*, *Triturus cristatus*, *Pelobates fuscus*, *Bufo bufo*, *Bufo calamita*, *Bufo viridis*, *Hyla arborea*, *Rana arvalis*,

Rana temporaria , *Rana lessonae* , *Rana esculenta* , *Emys orbicularis* , *Lacerta agilis* , *Lacerta vivipara* , *Anguis fragilis* , *Natrix natrix* , *Coronella austriaca* , *Vipera berus* , *Ciconia ciconia* , *Ciconia nigra* , *Pernis apivorus* , *Haliaeetus albicilla* , *Circaetus gallicus* , *Circus aeruginosus* , *Circus cyaneus* , *Circus pygarrus* , *Accipiter gentilis* , *Accipiter nisus* , *Buteo buteo* , *Buteo lagopus* , *Aquila pomarina* , *Aquila clanga* , *Aquila chrysaetos* , *Hieraetus pennatus* , *Falco subbuteo* , *Tetrao tetrix* , *Tetrao urogallus* , *Coturnix coturnix* , *Rallus aquaticus* , *Porzana porzana* , *Porzana parva* , *Crex crex* , *Grus grus* , *Vanellus vanellus* , *Gallinago gallinago* , *Limosa limosa* , *Tringa ochropus* , *Columba oenas* , *Streptopelia decaocto* , *Streptopelia turtur* , *Cuculus canorus* , *Glaucidium passerinum* , *Strix aluco* , *Asio otus* , *Caprimulgus europaeus* , *Apus apus* , *Alcedo atthis* , *Upupa epops* , *Jynx torquilla* , *Picus canus* , *Picus viridis* , *Dryocopus martius* , *Dendrocopos major* , *Dendrocopos medius* , *Dendrocopos leucotos* , *Dendrocopos minor* , *Picoides tridactylus* , *Lullula arborea* , *Alauda arvensis* , *Hirundo rustica* , *Anthus campestris* , *Anthus trivialis* , *Anthus pratensis* , *Motacilla flava* , *Motacilla alba* , *Bombycilla garrulus* , *Troglodytes troglodytes* , *Prunella modularis* , *Erithacus rubecula* , *Luscinia luscinia* , *Luscinia svecica* , *Phoenicurus phoenicurus* , *Saxicola rubetra* , *Saxicola torquata* , *Saxicola rubicola* , *Turdus merula* , *Turdus pilaris* , *Turdus philomelos* , *Turdus iliacus* , *Turdus viscivorus* , *Locustella naevia* , *Locustella fluviatilis* , *Locustella luscinioides* , *Acrocephalus schoenobaenus* , *Acrocephalus palustris* , *Acrocephalus scirpaceus* , *Acrocephalus arundinaceus* , *Hippolais icterina* , *Hippolais polyglotta* , *Sylvia nisoria* , *Sylvia curruca* , *Sylvia communis* , *Sylvia borin* , *Sylvia atricapilla* , *Phylloscopus trochiloides* , *Phylloscopus fuscatus* , *Phylloscopus sibilatrix* , *Phylloscopus collybita* , *Phylloscopus trochilus* , *Regulus regulus* , *Regulus ignicapillus* , *Muscicapa striata* , *Ficedula hypoleuca* , *Ficedula albicollis* , *Ficedula parva* , *Aegithalos caudatus* , *Parus palustris* , *Parus montanus* , *Parus cristatus* , *Parus ater* , *Parus caeruleus* , *Parus major* , *Sitta europaea* , *Certhia familiaris* , *Certhia brachydactyla* , *Remiz pendulinus* , *Oriolus oriolus* , *Lanius collurio* , *Lanius excubitor* , *Garrulus glandarius* , *Nucifraga caryocatactes* , *Sturnus vulgaris* , *Passer domesticus* , *Passer montanus* , *Fringilla coelebs* , *Fringilla montifringilla* , *Carduelis chloris* , *Carduelis carduelis* , *Carduelis spinus* , *Carduelis flammea* , *Loxia curvirostra* , *Carpodacus erythrinus* , *Pyrrhula pyrrhula* , *Coccothraustes coccothraustes* , *Emberiza citrinella* , *Emberiza schoeniclus* , *Erinaceus roumanicus* , *Barbastella barbastellus* , *Eptesicus serotinus* , *Myotis nilsoni* , *Myotis brandtii* , *Myotis daubentonii* , *Myotis natterei* , *Nyctalus noctula* , *Nyctalus leiseri* , *Pipistrellus pipistrellus* , *Pipistrellus nathusii* , *Plecotus auritus* , *Vespertilio murinus* , *Sorex caecutiens* , *Sorex araneus* , *Sorex minutus* , *Neomys fodiens* , *Neomys anomalus* , *Lepus timidus* , *Sciurus vulgaris* , *Sicista betulina* , *Dryomys nitedula* , *Glis glis* , *Muscardinus avellanarius* , *Canis lupus* , *Lynx lynx* , *Mustela erminea* , *Mustela nivalis* , *Bison bonasus* , *Ardea cinerea* , *Corvus corax* , *Corvus corone* , *Pica pica* , *Talpa europaea* , *Micromys minutus* , *Arvicola terrestris* , *Apodemus sylvaticus* , *Castor fiber* , *Lutra lutra* ,

d plants: *Cephalozia catenulata* , *Odontoschisma denudatum* , *Nowellia curvifolia* , *Antitrichia curtipendula* , *Helodium blandowii* , *Tomentypnum nitens* , *Homalia trichomanoides* , *Neckera complanata* , *Neckera crispa* , *Neckera pennata* , *Pseudobryum cinclidioides* , *Ulota crispa* , *Orthotrichum lyellii* , *Zygodon viridissimus* , *Sphagnum angustifolium* , *Sphagnum auriculatum* var. *inundatum* , *Sphagnum capillifolium* syn. *S. nemoreum* , *Sphagnum centrale* , *Sphagnum cuspidatum* , *Sphagnum fimbriatum* , *Sphagnum flexuosum* , *Sphagnum girgensohni* , *Sphagnum magellanicum* , *Sphagnum obtusum* , *Sphagnum palustre* , *Sphagnum riparium* , *Sphagnum russowii* , *Sphagnum subnitens* , *Sphagnum warnstorffii* , *Sphagnum wulfianum* , *Sphagnum teres* , *Dicranum bergeri* , *Dicranum bonjeanii* , *Anomodon attenuatus* , *Anomodon longifolius* , *Anomodon viticulosus* , *Botrychium lunaria* , *Botrychium matricariifolium* , *Botrychium multifidum* , *Ophioglossum vulgatum* , *Polypodium vulgare* , *Huperzia selago* , *Lycopodium annotinum* , *Lycopodium clavatum* , *Diphasiastrum complanatum* , *Diphasiastrum tristachyum* , *Diphasiastrum zeilleri* , *Betula humilis* , *Campanula bononiensis* , *Viola epipsila* , *Swertia perennis* , *Dianthus superbus* , *Chimaphila umbellata* , *Aquilegia vulgaris* , *Trollius europaeus* , *Hepatica nobilis* , *Pulsatilla patens* , *Batrachium aquatile* , *Lathyrus laevigatus* , *Utricularia vulgaris* , *Drosera rotundifolia* , *Aruncus sylvestris* , *Agrimonia pilosa* , *Thesium ebracteatum* , *Saxifraga hirculus* , *Succisella inflexa* , *Pedicularis palustris* , *Digitalis grandiflora* , *Daphne mezereum* , *Melittis melissophyllum* , *Dracocephalum ruyschiana* , *Polemonium coeruleum* , *Salix myrtilloides* , *Ledum palustre* , *Arctostaphylos uva-ursi* , *Arnica montana* , *Iris sibirica* , *Gladiolus imbricatus* , *Lilium martagon* , *Cephalanthera rubra* , *Neottia nidus-avis* , *Epipactis helleborine* , *Epipactis atrorubens* ,

Epipactis palustris, *Dactylorhiza incarnata*, *Dactylorhiza majalis*, *Dactylorhiza maculata*, *Dactylorhiza fuchsii*, *Listera ovata*, *Listera cordata*, *Platanthera bifolia*, *Platanthera chlorantha*, *Goodyera repens*, *Carex chordorrhiza*, *Carex loliacea*, *Bazzania trilobata*, *Trichocolea tomentella*, *Leucobryum glaucum*, *Climacium dendroides*, *Rhytidiadelphus triquetrus*, *Hylocomium splendens*, *Pleurozium schreberi*, *Pseudoscleropodium purum*, *Eurhynchium striatum*, *Eurhynchium angustirete*, *Polytrichum strictum*, *Polytrichum commune*, *Aulacomnium palustre*, *Calliergonella cuspidata*, *Ptilium crista-castrensis*, *Sphagnum fallax*, *Sphagnum squarrosum*, *Thuidium delicatulum*, *Thuidium tamariscinum*, *Dicranum polysetum*, *Dicranum scoparium*, *Hedera helix*, *Menyanthes trifoliata*, *Nuphar lutea*, *Nymphaea alba*, *Asarum europaeum*, *Galium odoratum*, *Ononis arvensis*, *Primula veris*, *Viburnum opulus*, *Ribes nigrum*, *Frangula alnus*, *Helichrysum arenarium*, *Allium ursinum*, *Convallaria majalis*, *Hierochloë australis*,

1.3.1. Actions aimed at protecting species and their habitats:

- reintroduction of species provided that their habitats remain in their proper state,
- prevention of the spread of diseases that pose a threat to populations,
- counteracting the expansion of exotic invasive species,
- maintaining the proper health condition and proper population number of *Bison bonasus*,
- maintaining a favourable conservation status of: A072¹ *Pernis apivorus*, A104¹ *Bonasa bonasia*, A217¹ *Glaucidium passerinum*, A223¹ *Aegolius funereus*, A224¹ *Caprimulgus europaeus*, A234¹ *Picus canus*, A239¹ *Dendrocopos leucotos*, A236¹ *Dryocopus martius*, A238¹ *Dendrocopos medius*, A241¹ *Picoides tridactylus*, A207¹ *Columba oenas*, A307¹ *Sylvia nisoria*, A320¹ *Ficedula parva*, A321¹ *Ficedula albicollis*, A338¹ *Lanius collurio*, 1337¹ *Castor fiber*, 1352¹ *Canis lupus*, 1355¹ *Lutra lutra*, 1060¹ *Lycaena dispar*, 1086¹ *Cucujus cinnaberinus*, 1920¹ *Boros schneideri*, 4021¹ *Phryganophilus ruficollis*, 4026¹ *Rhysodes sulcatus*, 1939¹ *Agrimonia pilosa*, 1084¹ *Osmoderma bamabita*,
- restoring a favourable conservation status of: A030¹ *Ciconia nigra*, A089¹ *Aquila pomarina*, A119¹ *Porzana porzana*, A122¹ *Crex crex*, 1361¹ *Lynx lynx*, 2647¹ *Bison bonasus*, 1166¹ *Triturus cristatus*, 1014¹ *Vertigo angustior*, 1016¹ *Vertigo moulinsiana*, 1065¹ *Euphydryas aurinia*, 1085¹ *Buprestis splendens*, 1925¹ *Pytho kolwensis*, 1437¹ *Thesium ebracteatum*, 1477¹ *Pulsatilla patens*, 1308¹ *Barbastella barbastellus*.

1.4. The purpose of landscape protection is to:

- 1) preserve the mutual cultural landscape structure shaped by historical processes (buildings, use of land forms and the natural environment (mosaic of the Białowieża Forest ecosystems,
- 2) maintain open spaces and characteristic features determining the specificity of the Białowieża Forest landscapes,
- 3) preserve the basic spatial systems, passageways and scenery (viewing axes, landscape openings of the highest quality,
- 4) preserve observation points.

1.5. The purpose of protecting cultural values is to:

- 1) preserve and disseminate tangible and intangible cultural assets of the Park,
- 2) maintain the facilities entered in the Register of Monuments in due technical condition and revitalise them,
- 3) promote regional architectonic forms as well as the traditional building materials and structures,
- 4) preserve the proper condition of archaeological sites.

2. Environmental conditions affecting the implementation of protection objectives in the area of the Park:

2.1. The Park features the following ecosystems:

- 1) forest,
- 2) non-forest terrestrial,
- 3) aquatic

2.2. Forest ecosystems cover 9783.53 ha and constitute 94.84% of the Park area. The important natural conditions for the protection of forest ecosystems are:

- 1 good maintenance of biodiversity at the ecosystem level, constituting the basis for the minimisation of natural processes disruption,
- 2 high compliance of actual and potential vegetation in forest habitats, including population compositions of tree stands,
- 3 low fire hazard thanks to the lack of dry forest habitats and small percentage of fresh coniferous forest habitats.

2.3. Types of forest habitats and corresponding potential plant communities

| No. | Type of the forest habitat | Surface [ha] | Share [%] | Plant communities according to Matuszkiewicz's typology | Plant communities according to Sokołowski's typology |
|-----|------------------------------------|--------------|-----------|--|--|
| 1 | Fresh coniferous forest Fcf | 171,45 | 1.75 | Subcontinental fresh coniferous forest (<i>Peucedano - Pinetum</i>) | 1. Coniferous lingonberry forest (<i>Vaccinio vitis- idaeae - Pinetum</i>). 2. Bilberry spruce forest (<i>Vaccinio myrtilli - Piceetum</i>) |
| 2 | Moist coniferous forest Mcf | 349,38 | 3.57 | Inland moist coniferous forest (<i>Molinio caeruleae - Pinetum</i>) | |
| 3 | Coniferous bog forest Cbf | 143,92 | 1.47 | 1. Coniferous pine bog forest (<i>Vaccinio uliginosi - Pinetum</i>). 2. Lowland raised bogs (<i>Ledo - Sphagnetum magellanicum</i>) | |
| 4 | Fresh mixed coniferous forest Fmcf | 795,68 | 8.13 | Subboreal mixed coniferous forest (<i>Serratulo- Pinetum</i>) | 1. Reed grass and spruce fresh mixed coniferous forest (<i>Calamagrostio arundinaceae - Piceetum</i>). 2. Reed grass and pine fresh mixed coniferous forest (<i>Calamagrostio arundinaceae - Pinetum</i>). 3. Pine and oak fresh mixed coniferous forest (<i>Pino - Quercetum</i>) |
| 5 | Moist mixed coniferous forest Mmcf | 397,38 | 4.06 | Spruce and oak moist mixed coniferous forest (<i>Quercu-Piceetum</i>) | Oak and spruce moist mixed coniferous forest (<i>Quercu - Piceetum typicum</i>) |
| 6 | Mixed coniferous bog forest Mcbf | 108,95 | 1.11 | Boreal spruce forest in peat areas (<i>Sphagno girgensohnii - Piceetum</i>) | (<i>Sphagno girgensohnii-Piceetum myrtilletosum</i>) |
| | | | | | Sphagnum and birch bog forest (<i>Sphagno - Betuletum pubescentis</i>) |
| 7 | Fresh mixed forest Fmf | 989,76 | 10,12 | Raised subcontinental oak-hornbeam and reed grass forest (<i>Tilio - Carpinetum calamagrostietosum</i>) | 1. Oak-hornbeam and melitti forest (<i>Melitti - Carpinetum</i>). 2. Hazel and spruce fresh mixed forest (<i>Corylo - Piceetum</i>) |
| 8 | Moist mixed forest mmf | 677,48 | 6.93 | Spruce and oak moist mixed coniferous forest (<i>Quercu - Piceetum</i>) | Oak and spruce moist mixed coniferous forest (<i>Quercu - Piceetum stellarietosum</i>) |
| | | | | | Oak-hornbeam and reed grass forest (<i>Tilio - Carpinetum calamagrostietosum</i>) |

| No. | Type of the forest habitat | Surface [ha] | Share [%] | Plant communities according to Matuszkiewicz's typology | Plant communities according to Sokołowski's typology |
|-------|----------------------------------|--------------|-----------|---|--|
| 9 | Mixed bog forest Mbf | 521,70 | 5,33 | Subboreal birch bog forest (<i>Thelypteridi-Betuletum pubescentus</i>) | 1. Subboreal birch bog forest (<i>Thelypteridi -Betuletum pubescentus</i>) 2. Sedge oak forest (<i>Carici elongatae - Quercetum</i>). 3. Mixed sphagnum forest (<i>Betulo pubescentis - Piceetum</i>). 4. Coniferous spruce sphagnum forest (<i>Sphagno girgensohnii - Piceetum dryopteridosum</i>) |
| 10 | Fresh forest Ff | 1846,18 | 18,87 | Standard subcontinental oak-hornbeam forest (<i>Tilio-Carpinetum typicum</i>) | |
| 11 | Moist forest Mf | 2350,60 | 24,03 | Low subcontinental betony oak-hornbeam forest (<i>Tilio - Carpinetum stachyetosum sylvaticae</i>) | 1. low subcontinental betony oak-hornbeam forest (<i>Tilio - Carpinetum stachyetosum sylvaticae</i>) 2. Oak-hornbeam muck forest (<i>Tilio - Carpinetum circaeaetosum alpinae</i>). 3. Sedge oak-hornbeam forest (<i>Tilio - Carpinetum caricetosum remotae</i>) |
| 12 | Moist alder bog forest OI | 573,98 | 5,87 | 1. Blackcurrant moist alder bog forest (<i>Ribeso nigri - Alnetum</i>). 2. Sphagnum moist alder bog forest (<i>Sphagno squarrosi - Alnetum</i>) | |
| 13 | Ashen moist alder bog forest OIJ | 857,07 | 8,76 | 1. Riparian mixed forest of ash and alder (<i>Fraxino - Alnetum</i>). 2. Riparian mixed forest of elm and ash (<i>Ficario - Ulmetum minoris</i>) | 1. Riparian mixed forest of ash and alder (<i>Fraxino - Alnetum</i>). 2. Riparian mixed forest of elm and ash (<i>Ficario - Ulmetum minoris</i>) 3. Riparian mixed forest of alder and spruce (<i>Piceo-Alnetum</i>) |
| Total | | 9783,53 | 100.0 | | |

2.4. Average density of trees and volume of tree stands in the Białowieża National Park including living and dead, standing and fallen trees (status as of 01.01.2010)

| Parameter | | Sierganowo and Dziedzinka Protected District | Zamosze, Gruszki, Cupryki and Masiewo Protected District |
|--|------------------------|--|--|
| Living trees ($d^2 \geq 5\text{cm}$) | pcs./ha | 659,3 | 851,5 |
| | m^3/ha | 475,9 | 399,5 |
| Dead trees standing ($d \geq 5\text{cm}$) | pcs./ha | 95.0 | 149,9 |
| | m^3/ha | 50.1 | 43.1 |
| Dead trees fallen ($d_c^3 \geq 10\text{cm}$) | pcs./ha | 246,4 | 165,7 |
| | m^3/ha | 108.4 | 38.2 |
| Natural replacement of trees ($d < 5\text{cm}$) | pcs./ha | 15258,0 | 8898,0 |

2.5. Non - forest terrestrial ecosystems occupy the area of 534.58 ha and constitute 5.08% of the Park area. We can distinguish the following environmental conditions which are significant for the protection of ecosystems:

1 peatland:

- a) desiccation of the peat deposit, especially of its surface layers,
- b) initiation of unfavourable phenomena and processes in peat deposits, including mineralisation and decrease in the sediment volume, decrease or inhibition in the accumulation of peat deposits,
- c) regression and unification of biocoenoses, decrease in biodiversity within biocoenoses,

2 other non-forest terrestrial ecosystems:

- a) anthropogenic origin of the majority of terrestrial non-forest ecosystems and the need to take active protection measures in order to conserve ecosystems and their species,
- b) advanced process of secondary succession in most areas.

2.6. The following non-forest plant communities occur within the Park area:

- 1) 6230-4¹ *Polygalo-Nardetum* ,
- 2) *Molinio-Arrhenatheretea* ,
- 3) 6510 *Arrhenatherion elatioris* ,
- 4) 6410-1¹ *Molinietum caeruleae* ,
- 5) 6410-2¹ *Junco-Molinietum*
- 6) *Calthion palustris* ,
- 7) *Caricetum cespitosae* ,
- 8) (*Deschampsia caespitosa* ,
- 9) *Epilobio-Juncetum effusi* ,
- 10) *Scirpetum silvatici* ,
- 11) *Alopecuretum pratensis* ,
- 12) *Filipendulo-Geranium* ,
- 13) *Caricetum lasiocarpae* ,
- 14) *Caricetum diandrae* ,
- 15) *Caricetum paniceo-lepidocarpae* ,
- 16) *Sparganio-Glycerietum fluitantis* ,
- 17) *Eleocharitetum palustris* ,
- 18) *Equisetetum fluviatilis* ,
- 19) *Glycerietum maximae* ,
- 20) *Phragmitetum australis* ,
- 21) *Typhetum angustifoliae* ,
- 22) *Typhetum latifoliae* ,
- 23) *Caricetum acutiformis* ,

2) d - trunk diameter at the height of 1.3 m.

3) Dc - log diameter at the thinner end.

- 24) *Caricetum appropinquatae* ,
- 25) *Caricetum elatae* ,
- 26) *Caricetum gracilis* ,
- 27) *Caricetum paniculatae* ,
- 28) *Caricetum ripariae* ,
- 29) *Caricetum rostratae* ,
- 30) *Caricetum vesicariae* ,
- 31) *Iridetum pseudacori* ,
- 32) *Phalaridetum arundinaceae* ,
- 33) *Calamagrostis canescens* ,
- 34) *Calamagrostietum epigeji* ,
- 35) a community of *Urtica dioica*,
- 36) *Bromus inermis*,
- 37) *Salicetum pentandro-cinereae* ,
- 38) *Betulo-Salicetum repentis* ,
- 39) A community of *Salix rosmarinifolia*.

2.7. Aquatic ecosystems cover 19.19 ha, which constitutes 0.18% of the Park area. They consist of:

- 1) river –11.7611 ha,
- 2) stagnant water bodies – 5.8548 ha
- 3) drainage ditches – 1.5707 ha.

2.8. The following groups of fungi have been identified in the area of the Park:

- 1) macrofungi (*Macromycetes* - 1585 species, of which 31 protected,
- 2) lichen (*Lichenes* - 352 species, of which 63 protected).

2.9. The following taxonomic groups of plants have been identified in the area of the Park:

- 1) vascular plants (*Pteridophyta* and *Spermatophyta* - 786 species, of which 81 protected, including 3 species from Appendix II to the Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Official Journal L 206 22.7.1992, p.7,
- 2) mosses (*Bryopsida* and liverworts (*Hepaticopsida* - 145 species, of which 31 protected).

2.10. The following taxonomic groups of animals have been identified in the area of the Park:

- 1) invertebrates (*Invertebrata* - approximately 10 500 species, of which 84 protected, including 15 species from Appendix II to the Council Directive 92/43/EEC,
- 2) fish (*Pisces* - 23 species, of which 4 protected,
- 3) amphibians (*Amphibia* - 10 species, all protected, including 1 species from Appendix II to the Council Directive 92/43/EEC,
- 4) reptiles (*Reptilia* - 6 species, all protected, including 1 species from Appendix II to the Council Directive 92/43/EEC,
- 5) birds (*Aves* - 117 breeding species, of which 108 protected, including 23 species from Appendix I to the Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (Official Journal L 20 of 26.1.2010, pp. 7-25,
- 6) mammals (*Mammalia* - 59 species, of which 37 protected, including 6 species from Appendix II to the Council Directive 92/43/EEC.

2.11. The following types of landscape have been identified in the area of the Park:

- 1) moraine uplands -49.81%,
- 2) eolian - 14.38 %,
- 3) lowerings -21.19%,
- 4) river valleys -14.61%.

2.12. Characteristics of the objects under protection within Natura 2000 PLC 200004 Białowieża Primeval Forest in the area located within the Park.

2.12.1. Types of natural habitats that require protection within Natura 2000 PLC 200004 Białowieża Primeval Forest, along with their assigned codes (65% of the area of the Park in total)

| No. | Name of the natural habitat type | Natura 2000 code | Area [ha] |
|-------|---|------------------|-----------|
| 1 | Matgrass grasslands from the <i>Nardetalia</i> order | 6230-4 | 0.57 |
| 2 | Lowland and mountainous fresh extensively used meadows (<i>Arrhenatherion elatioris</i>) | 6510 | 43.50 |
| 3 | Subcontinental oak-hornbeam forest (<i>Tilio - Carpinetum</i>) | 9170-2 | 5186,54 |
| 4 | Coniferous pine bog forest (<i>Vaccinio uliginosi - Pinetum</i>) | 91D0-2 | 142,80 |
| 5 | Boreal spruce bog forest (<i>Sphagno girgensohnii-Piceetum</i>) | 91D0-5 | 146,78 |
| 6 | Subboreal birch bog forest (<i>Betula pubescens - Thelypteris palustris</i>) | 91D0-6 | 419,34 |
| 7 | Alder-ash marshy meadow (<i>Fraxino - Alnetum</i>) | 91E0-3 | 857,07 |
| Total | | | 6799, 57 |

2.12.2. The estimated number of species included in the Council Directive 92/43/EEC (appendices II and IV) and in the Directive 2009/147/EC of the European Parliament and the Council (Appendix I) that occur in the area of the Park

| No. | Name of species | Natura 2000 code | Estimated population in the area of the Park | Species status in the area of Natura 2000 PLC 200004 Białowieża Primeval Forest |
|------|---|------------------|---|---|
| 1 | Birds | | | |
| 1.1 | Black stork (<i>Ciconia nigra</i>) | A030 | 1-2 pairs | 10-12 pairs |
| 1.2 | Honey Buzzard (<i>Pernis apivorus</i>) | A072 | 25-30 pairs | 90-120 pairs |
| 1.3 | Lesser Spotted Eagle (<i>Aquila pomarina</i>) | A089 | 1-3 pairs | 30-60 pairs |
| 1.4 | Hazel Grouse (<i>Bonasa bonasia</i>) | A104 | over 100 pairs | 1600-1800 pairs |
| 1.5 | Spotted Crane (<i>Porzana porzana</i>) | A119 | 1-5 pairs | 10-40 pairs |
| 1.6 | Corncrake (<i>Crex crex</i>) | A122 | 5-10 territorial males (males of the species that occupy a specific territory) | 80-120 territorial males |
| 1.7 | Eurasian Pygmy Owl (<i>Glaucidium passerinum</i>) | A217 | 10-15 pairs | 80-100 pairs |
| 1.8 | Boreal Owl (<i>Aegolius funereus</i>) | A223 | 15-20 pairs | 30-50 pairs |
| 1.9 | Grey-headed Woodpecker (<i>Picus canus</i>) | A234 | 11-13 pairs | 30-35 pairs |
| 1.10 | Black Woodpecker (<i>Dryocopus martius</i>) | A236 | 25-30 pairs | 150-180 pairs |
| 1.11 | Middle Spotted Woodpecker (<i>Dendrocopos medius</i>) | A238 | 500-650 pairs | 1100-13000 pairs |
| 1.12 | White-backed Woodpecker | A239 | approximately 35 pairs | 60-90 pairs |

| | | | | |
|------|--|------|---|--------------------|
| | <i>(Dendrocopos leucotos)</i> | | | |
| 1.13 | Eurasian Three-toed Woodpecker (<i>Picoides tridactylus</i>) | A241 | 28-35 pairs | 60-90 pairs |
| 1.14 | Barred Warbler (<i>Sylvia nisoria</i>) | A307 | 20-30 pairs | 200-220 pairs |
| 1.15 | Red-breasted Flycatcher (<i>Ficedula parva</i>) | A320 | less than 200 pairs | 300-600 pairs |
| 1.16 | Collared Flycatcher (<i>Ficedula albicollis</i>) | A321 | less than 3000 pairs | 5 000-10 000 pairs |
| 1.17 | Red-backed Shrike (<i>Lanius collurio</i>) | A338 | 80-100 pairs | 1000-1500 pairs |
| 1.18 | Eurasian Woodcock (<i>Scolopax rusticola</i>) | A155 | over 100 pairs | 500-550 pairs |
| 1.19 | Green Sandpiper (<i>Tringa ochropus</i>) | A165 | over 100 pairs | 100-300 pairs |
| 2 | Mammals | | | |
| 2.1 | Barbastelle (<i>Barbastella barbastellus</i>) | 1308 | less than 2% of all bats in the Park | 51-100 specimens |
| 2.2 | Eurasian Beaver (<i>Castor fiber</i>) | 1337 | 10 – 20 specimens | 60-90 specimens |
| 2.3 | Wolf (<i>Canis Lupus</i>) | 1352 | The area of the Park is part of the territory of the pack | over 40 specimens |
| 2.4 | European Otter (<i>Lutra lutra</i>) | 1355 | 5 - 10 specimens | 10-20 specimens |
| 2.5 | Lynx (<i>Lynx lynx</i>) | 1361 | The area of the Park is part of the territory of 2 – 5 specimens | over 14 specimens |
| 2.6 | European Bison (<i>Bison bonasus</i>) | 2647 | 30-40 specimens bred in an enclosed area; additionally, the area of the Park is part of the territory of herds with the total population of 120 specimens in the periods of their maximum concentration | 350-400 specimens |
| 3 | Amphibians and reptiles | | | |
| 3.1 | Great Crested Newt (<i>Triturus cristatus</i>) | 1166 | sparse | P ⁴⁾ |
| 4 | Invertebrates | | | |
| 4.1 | Narrow-mouthed Whorl Snail (<i>Vertigo angustior</i>) | 1014 | sparse | P ⁴⁾ |
| 4.2 | Desmoulin's Whorl Snail (<i>Vertigo moulinsiana</i>) | 1016 | sparse | P ⁴⁾ |
| 4.3 | Large Copper (<i>Lycaena dispar</i>) | 1060 | sparse | P ⁴⁾ |
| 4.4 | Marsh Fritillary (<i>Euphydryas aurinia</i>) | 1065 | unknown | P ⁴⁾ |
| 4.5 | Hermit Beetle | 1084 | commonly occurring | P ⁴⁾ |

4) P - presence of a given species in the area, without determination of its population size.

| | | | | |
|------|---|------|--|-------------------------|
| | <i>(Osmoderma bamabita)</i> | | | |
| 4.6 | Goldstreifiger <i>(Buprestis splendens)</i> | 1085 | sparse | P ⁴⁾ |
| 4.7 | Flat Bark Beetle(<i>Cucujus cinnaberinus</i>) | 1086 | numerous, commonly occurring | P ⁴⁾ |
| 4.8 | <i>Boros schneideri</i> | 1920 | fairly numerous, commonly occurring | P ⁴⁾ |
| 4.9 | <i>Pytho kolwensis</i> | 1925 | sparse | P ⁴⁾ |
| 4.10 | False Darkling Beetle <i>(Phryganophilus ruficollis)</i> | 4021 | sparse, commonly occurring | P ⁴⁾ |
| 4.11 | Wrinkled Bark Beetle <i>(Rhysodes sulcatus)</i> | 4026 | sparse, commonly occurring | P ⁴⁾ |
| 5 | Plants | | | |
| 5.1 | Bractless Toadflax <i>Thesium ebracteatum</i> | 1437 | 3 points of occurrence | C ⁵⁾ |
| 5.2 | Eastern Pasqueflower <i>(Pulsatilla patens)</i> | 1477 | 1 point of occurrence | 12 points of occurrence |
| 5.3 | Hairy Agrimony <i>(Agrimonia pilosa)</i> | 1939 | 4 points of occurrence | 8 points of occurrence |

2.12.3. Conservation status of natural habitats referred to in Appendix I to the Council Directive 92/43/EEC, with regard to the area of Natura 2000 PLC 200004 Białowieża Primeval Forest located within the Park

| No. | Habitat name | Natura 2000 code | Parameter 1 Habitat area | Parameter 2 Structure and function | Parameter 3 Possible behaviour | Total evaluation of the conservation status |
|-----|--|------------------|-----------------------------|--|--------------------------------------|---|
| 1 | Matgrass grasslands | 6230-4 | U1 ⁶⁾ | U1 | U1 | U1 |
| 2 | Fresh extensively used meadows <i>(Arrhenatherion elatioris)</i> | 6510 | U1 | U1 | FV ⁷⁾ | U1 |
| 3 | Subcontinental oak-hornbeam forest <i>(Tilio - Carpinetum)</i> | 9170-2 | FV | FV | FV | FV |
| 4 | Coniferous pine bog forest <i>(Vaccinio uliginosi - Pinetum)</i> | 91D0-2 | FV | FV | FV | FV |
| 5 | Boreal spruce bog forest <i>(Sphagno girgensohnii - Piceetum)</i> | 91D0-5 | FV | FV | FV | FV |
| 6 | Subboreal birch bog forest <i>(Dryopteridi thelypteridis - Betuletum pubescentis)</i> | 91D0-6 | FV | FV | FV | FV |
| 7 | Alder-ash marshy meadow <i>(Fraxino - Alnetum)</i> | 91E0-3 | FV | FV | FV | FV |

5) C - common presence of a given species in the area, without determination of its population size.

6) U1 - evaluation of the condition of: unsatisfactory.

7) FV - evaluation of the condition of: proper.

2.12.4. Conservation status of animal and plant species listed in Appendix II to the Council Directive 92/43/EEC and birds species included in Appendix I to the Council Directive 2009/147/EC with regard to the area of Natura 2000 PLC 200004 Białowieża Primeval Forest located within the Park.

| No. | Name of species | Natura 2000 code | Parameter 1 Population | Parameter 2 Habitat | Parameter 3 Possible behaviour | Total evaluation |
|------|--|------------------|------------------------|---------------------|--------------------------------|------------------|
| 1 | Birds | | | | | |
| 1.1 | Black Stork (<i>Ciconia nigra</i>) | A030 | U1 | U1 | U1 | U1 |
| 1.2 | Honey Buzzard (<i>Pernis apivorus</i>) | A072 | FV | FV | FV | FV |
| 1.3 | Barred Warbler (<i>Sylvia nisoria</i>) | A307 | U1 | U1 | U1 | U1 |
| 1.4 | Lesser Spotted Eagle (<i>Aquila pomarina</i>) | A089 | U2 ⁸⁾ | U2 | U1 | U2 |
| 1.5 | Hazel Grouse (<i>Bonasa bonasia</i>) | A104 | FV | FV | FV | FV |
| 1.6 | Red-backed Shrike (<i>Lanius collurio</i>) | A338 | U1 | U1 | U1 | U1 |
| 1.7 | Corncrake (<i>Crex crex</i>) | A122 | U1 | U1 | U1 | U1 |
| 1.8 | Stock Dove (<i>Columba oenas</i>) | A207 | FV | FV | FV | FV |
| 1.9 | Eurasian Pygmy Owl (<i>Glaucidium passerinum</i>) | A217 | FV | FV | FV | FV |
| 1.10 | Boreal Owl (<i>Aegolius funereus</i>) | A223 | FV | FV | FV | FV |
| 1.11 | European Nightjar (<i>Caprimulgus europaeus</i>) | A224 | U2 | U2 | U2 | U2 |
| 1.12 | Grey-headed Woodpecker (<i>Picus canus</i>) ⁹⁾ | A234 | FV | FV | FV | FV |
| 1.13 | Black Woodpecker (<i>Dryocopus martius</i>) ⁹⁾ | A236 | FV | FV | FV | FV |
| 1.14 | Middle Spotted Woodpecker (<i>Dendrocopos medius</i>) ⁹⁾ | A238 | FV | FV | FV | FV |
| 1.15 | White-backed Woodpecker (<i>Dendrocopos leucotos</i>) ⁹⁾ | A239 | FV | FV | FV | FV |
| 1.16 | Eurasian Three-toed Woodpecker (<i>Picoides tridactylus</i>) ⁹⁾ | A241 | FV | FV | FV | FV |
| 1.17 | Red-breasted Flycatcher (<i>Ficedula parva</i>) ⁹⁾ | A320 | FV | FV | FV | FV |
| 1.18 | Collared Flycatcher (<i>Ficedula albicollis</i>) ⁹⁾ | A321 | FV | FV | FV | FV |
| 2 | Mammals | | | | | |
| 2.1 | Barbastelle (<i>Barbastella barbastellus</i>) | 1308 | XX ¹⁰⁾ | FV | XX | XX |
| 2.2 | Eurasian Beaver (<i>Castor fiber</i>) | 1337 | FV | FV | FV | FV |
| 2.3 | Wolf (<i>Canis Lupus</i>) | 1352 | FV | FV | FV | FV |
| 2.4 | European Otter (<i>Lutra lutra</i>) | 1355 | FV | FV | FV | FV |
| 2.5 | Lynx (<i>Lynx lynx</i>) | 1361 | U1 | FV | U1 | U1 |
| 2.6 | European Bison (<i>Bison bonasus</i>) | 2647 | FV | FV | U1 | U1 |
| 3 | Amphibians and reptiles | | | | | |
| 3.1 | Great Crested Newt (<i>Triturus cristatus</i>) | 1166 | U1 | U1 | U1 | U1 |
| 4 | Invertebrates | | | | | |
| 4.1 | Narrow-mouthed Whorl Snail (<i>Vertigo angustior</i>) | 1014 | U1 | FV | FV | U1 |
| 4.2 | Desmoulin's Whorl Snail (<i>Vertigo moulinsiana</i>) | 1016 | U1 | FV | XX | U1 |
| 4.3 | Large Copper (<i>Lycaena dispar</i>) | 1060 | FV | FV | FV | FV |

8) U2 - evaluation of the condition of: bad.

9) within the area of the Zamosze Gruszki, Cupryki and Masiewo Protective District the population of birds nesting in hollows (woodpeckers and red-breasted flycatchers) obtained, according to the adopted categorization, the value of U1 (unsatisfactory conservation state) owing to the current small amount of dead wood as compared with the Protective District of Sierganowo and Dziedzinka. The protection plan does not include the removal of dead wood and consequently one should expect that living conditions of the above species will undergo systematic improvement. Strictly protected areas occupy more than 50% of the area of the Park where the conservation status of habitats has been assessed as proper (FV).

10) XX - evaluation of the condition of: unknown (in case of lack of data).

| | | | | | | |
|------|--|------|----|----|----|----|
| 4.4 | Marsh Fritillary (<i>Euphydryas aurinia</i>) | 1065 | U2 | U2 | U2 | U2 |
| 4.5 | Hermit Beetle (<i>Osmoderma bamabita</i>) | 1084 | FV | FV | FV | FV |
| 4.6 | Goldstreifiger (<i>Buprestis splendens</i>) | 1085 | FV | U1 | FV | U1 |
| 4.7 | Flat Bark Beetle (<i>Cucujus cinnaberinus</i>) | 1086 | FV | FV | FV | FV |
| 4.8 | <i>Boros schneideri</i> | 1920 | FV | FV | FV | FV |
| 4.9 | <i>Pytho kolwensis</i> | 1925 | U1 | U1 | U1 | U1 |
| 4.10 | False Darkling Beetle (<i>Phryganophilus ruficollis</i>) | 4021 | FV | FV | FV | FV |
| 4.11 | Wrinkled Bark Beetle (<i>Rhysodes sulcatus</i>) | 4026 | FV | FV | FV | FV |
| 5 | Plants | | | | | |
| 5.1 | Bractless Toadflax <i>Thesium ebracteatum</i> | 1437 | FV | U1 | FV | U1 |
| 5.2 | Eastern Pasqueflower (<i>Pulsatilla patens</i>) | 1477 | U2 | U1 | U2 | U2 |
| 5.3 | Hairy Agrimony (<i>Agrimonia pilosa</i>) | 1939 | FV | FV | FV | FV |

2.12.5. Conservation status of commonly occurring migrating species of birds, which are not listed in Appendix I to the Council Directive 2009/147/EC, but are objects of protection under part of Natura 2000 area PLC 200004 Białowieża Primeval Forest located within the Park.

| No. | Name of species | Natura 2000 code | Parameter 1 Population | Parameter 2 Habitat | Parameter 3 Possible behaviour | Total evaluation |
|-----------------|---|------------------|------------------------|---------------------|--------------------------------|------------------|
| Migrating birds | | | | | | |
| 1 | Eurasian Woodcock <i>Scolopax rusticola</i> | A155 | FV | FV | FV | FV |
| 2 | Green Sandpiper <i>Tringa ochropus</i> | A165 | FV | FV | FV | FV |

3. Social conditioning in achieving conservation objectives

The area of the Park has been covered by legal protection pursuant to the decisions of the Forestry Department of the Ministry of Agriculture and State Property of 29 December 1921, while the Białowieża Primeval Forest was established by the regulation of the Council of Ministers of 21 November 1947 on the establishment of the Białowieża Primeval Forest (Dz.U. 1947, No. 74, item 469), and its current area and boundaries have been determined by the regulation of the Council of Ministers of 16 July 1996 on the Białowieża Primeval Forest (Dz.U. 1996, No. 93, item 424). The whole Park lies within the Special Area of Conservation and the Special Protection Area within the framework of Natura 2000 PLC 200004 Białowieża Primeval Forest. The area was approved as a Site of Community Importance on 1 October 2007 and declared a Special Protection Area on 1 June 2004. The boundaries of the Natura 2000 site PLC 200004 Białowieża Primeval Forest that correspond with the boundaries of the Park are specified in Appendix 3 to the regulation. The strictly protected area, located between river Narewka on the west, river Hwoźna on the north, the state border on the east, Browska road and the edge of Polana Białowieska on the south, as well as the area of the Palace Park and the European Bison Conservation Centre, constitutes one of the UNESCO World Heritage Sites.

3.1. Location of the Park

| Voivodeship | Gmina | Area [ha] |
|-------------|------------|-------------|
| Podlaskie | Białowieża | 6 055.6357 |
| | Narewka | 4 461.6309 |
| Total | | 10 517.2666 |

3.2. As of 31 December 2011 the area of the Park covers 10 517.2666 ha, including 10 516.9100 ha in perpetual usufruct of the Park, and includes the following usable lands:

| No. | Type of usable land | Land use category group (type of surface) | Areas belonging to the State Treasury [ha] | Areas that are not property of the State Treasury [ha] | Total area of the Park [ha] | Percentage of the Park area [%] |
|-------|-----------------------|---|--|--|-----------------------------|---------------------------------|
| 1 | Forests | tree stands, unwooded forest lands, grounds related to conservation in the Park | 9974.2599 | - | 9974.2599 | 94.84 |
| 2 | Woodland or shrubland | woodland | 1.4864 | - | 1.4864 | 0.01 |
| 3 | Agricultural land | arable land, permanent grassland, permanent pastures | 14.9406 | 0.3599 | 15.3005 | 0.15 |
| 4 | Water bottoms | standing water bottoms, flowing water bottoms | 19.1866 | - | 19.1866 | 0.18 |
| 5 | Transport areas | transport areas | 0.0270 | - | 0.0270 | 0.00 |
| 6 | Housing areas | housing areas | 45.4535 | - | 45.4535 | 0.43 |
| 7 | wastelands | wasteland (swamps, fallows) | 446.1373 | - | 446.1373 | 4.24 |
| 8 | Miscellaneous areas | miscellaneous areas | 15.4154 | - | 15.4154 | 0.15 |
| Total | | | 10516.9067 | 0.3599 | 10517.2666 | 100.00 |

3.3. Division of the Park into protective precincts and districts

| Protective precinct | Protective district | Division numbers ¹¹ | Area [ha] | | | |
|---------------------|---------------------|---|-----------|------------------------------------|------------|---------|
| | | | Leśna | Related to the Park's conservation | Non-forest | Total |
| Reserve | Cupryki | 158,159, 189, 190, 221, 253, 282, 313, 339, 368 | 1052.50 | 22.04 | 168.63 | 1243.17 |
| | Gruszki | 104-107, 130-132, 160-162, 191A,C,D-193, 225 | 1310.87 | 42.35 | 73.30 | 1426.52 |
| | Masiewo | 108, 109, 133, 134, 163, 164, 194, 195, 226, 227, 258A,B | 1069.00 | 27.18 | 24.11 | 1120.29 |
| | Zamosze | 110, 111, 135, 136, 165, 166, 196, 197, 228, 229, 259-261 | 1296.02 | 33.30 | 50.20 | 1379.52 |

¹¹) distribution of divisions marked with a number and an upper case letter, subdivisions marked with a lower case letter are specified in accordance with the cadastral map of the Białowieża Primeval Forest prepared by the Forest Management and Geodetics Office, Branch in Białystok, in the scale 1: 10 000, on the day of 01.01.2001. The map remains in the seat of the Directorate of the Białowieża Primeval Forest in the town of Białowieża.

| Protective precinct | Protective district | Division numbers ¹¹ | Area [ha] | | | |
|--|--------------------------------|---|-----------|------------------------------------|------------|-----------|
| | | | Leśna | Related to the Park's conservation | Non-forest | Total |
| | Sierganowo | 191B, 191C, 222, 223, 224A, 254, 255, 283-285, 314, 315, 340, 341, 369, 370, 398, 398A, 398B, 398C, 398D, 398F, 398G, 398H, 399 | 2079.34 | 29.04 | 194.86 | 2303.24 |
| | Dziedzinka | 256A, 256B, 256C, 256D, 256F, 257, 258C, 258D, 286-289, 290A, 290B, 316-320, 342-346, 371-374, 375A, 375B, 400, 401A, 401B, 401C, 401D, 401F, 402A, 403 | 2719.89 | 22.46 | 27.62 | 2769.97 |
| Total protective area of the Reserve | | | 9527,62 | 176,37 | 538,72 | 10242,71 |
| European Bison Breeding Centre | European Bison Breeding Centre | 420B,C, 421A,B, 425C,D, 450B | 255,91 | 14,34 | 4.31 | 274,56 |
| Total area of the European bison Breeding Centre | | | 255,91 | 14,34 | 4.31 | 274,56 |
| Total area of the Białowieża National Park | | | 9783,53 | 190,71 | 543,03 | 10 517,27 |

3.4. Agricultural land covers 15.31 ha, including:

- 1 fallows – 12.86 ha,
- 2 permanent meadows – 0.58 ha,
- 3 pastures – 1.87 ha.

3.5. The buffer zone of the Park covers 3224.26 ha of land and consists entirely of forests belonging to the State Treasury, governed by Białowieża and Browsk forest divisions.

3.6. Approximately 80% of the Park borders on lands belonging to the State Treasury and the remaining 20% borders on private lands, located in the following village units: Stoczek, Zastawa, Pogorzelce in the Białowieża gmina and Stare Masiewo in the Narewka gmina.

AREAS UNDER STRICT, ACTIVE AND LANDSCAPE PROTECTION

| No. | Protection type | Location ¹ | Surface [ha] |
|-------|----------------------|--|--------------|
| 1 | Strict protection | Divisions– 135A, 135B, 135Ca-cx, 135Da-j, 136Aa-g,l,n, 160C, 191A, 191B, 191C, 192, 193C, 193D, 222, 223, 224, 225, 226, 227, 228, 229A, 229Bb-l, 229C, 229Db-n, 254, 255, 256, 257, 258, 259, 260A, 260Bb-o, 260C, 260Db-h, 261A, 261Bb-m, 283, 284, 285, 286, 287, 288, 289, 290A, 290Bb-j, 314, 315, 316, 317, 318, 319, 320A, 320Bb-i, 320C, 320Db-j, 340, 341, 342, 343, 344, 345, 346A, 346Bb-h, 346C, 346Db-k, 369, 370, 371, 372, 373, 374, 375A, 375Bb-n, 398A, 398B, 398C, 398D, 398F, 398Ga-f,j,x,y, 398H, 399A, 399B, 399Ca-c, 400A, 400B, 401A, 401B, 402Af-t, 402Az-ax | 6059,27 |
| 2 | Active protection | Divisions - 104A, 104B, 105, 106, 107, 108, 109A, 109B, 110Ab,c,g,h,m-t, 110B, 111Aa-d,k,m,n, 111B, 111Cb-l, 130, 131, 132, 133, 134, 135Cdx, 135Dk, 136Ah-k,m,o-s, 136Bb-m, 136C, 136Db-k, 158, 159, 160A, 160B, 160D, 161, 162, 163, 164, 165, 166A, 166Bb-o, 166C, 166Db-g, 189, 190, 193A, 193B, 194, 195, 196, 197A, 197Bb-h, 197C, 197Db-h, 221, 253, 282, 313, 339B, 339C, 339D, 368A, 368B, 368E, 398Gg-i,k-w,z,ax, 399Cd,f, 399D, 400C, 400D, 401C, 401D, 401F, 402Aa-d, 402Aw,y, 403a-c as well as Braszcza , Łutownia and Narewka rivers within the area of the Park | 4104,63 |
| 3 | Landscape protection | Divisions – 110Aa,d,f,i-l, 111Af-j,l, 111Ca, 136Ba, 136Da, 166Ba, 166Da, 197Ba, 197Da, 229Ba, 229Da, 260Ba, 260Da, 261Ba, 290Ba, 320 Ba, 320Da, 346Ba, 346Da, 375Ba, 398 (Palace Park, 403d,f, 420B, 420C, 421A, 421B, 425C, 425D, 450B, 402Ax as well as parcels no 726, 732, 742 geodetic precinct of Budy | 353,37 |
| Total | | | 10 517,27 |

1) distribution of divisions marked with a number and an upper case letter, subdivisions marked with a lower case letter are specified in accordance with the cadastral map of the Białowieża Primeval Forest prepared by the Forest Management and Geodetics Office, Branch in Białystok, in the scale 1: 10 000, on the day of 01.01.2001. The map remains in the seat of the Directorate of the Białowieża Primeval Forest in the town of Białowieża.

IDENTIFICATION AND DETERMINATION OF METHODS OF ELIMINATION OR
REDUCTION IN THE EXISTING AND POTENTIAL INTERNAL AND EXTERNAL HAZARDS
AND THEIR IMPACT ON THE AREA OF THE PARK, INCLUDING IDENTIFICATION OF THE
EXISTING AND POTENTIAL HAZARDS TO THE PRESERVATION OF THE FAVOURABLE
CONSERVATION STATUS OF NATURAL HABITATS AND SPECIES OF PLANTS AND
ANIMALS AND OF THEIR HABITATS UNDER NATURA 2000 PLC 200004 BIAŁOWIEŻA
PRIMEVAL FOREST IN THE AREA LOCATED WITHIN THE PARK

1. Internal hazards in existence¹⁾

| No. | Identified hazards | Method of elimination or reduction |
|-----|---|--|
| 1 | Threats to the population of species 2647 ²⁾ – European Bison (<i>Bison bonasus</i>): <ol style="list-style-type: none"> 1) a high degree of close breeding (inbreeding in the population), 2) necrotic inflammation of the foreskin, 3) decrease in the availability of open areas, 4) restricted access to water, 5) excessive concentration of herds in the winter, 6) spatial isolation of the population, 7) a high degree of parasite infection, 8) poaching | <ol style="list-style-type: none"> 1. Population monitoring (including death rate, reproduction capacity, age and sex ratio). 2. Harvest and relocation designed to create and strengthen populations outside Białowieża Primeval Forest. 3. Elimination of specimens that show pathological symptoms. 4. Supervision of infectious and invasive diseases among the eliminated and harvested animals. 5. Preparation and disinfection of waterholes and places designed for feeding in winter. 6. Medical and veterinary actions designed to prevent and combat mass appearance of contagious diseases among wild animals in a given area (epizootics) and parasites. 7. Maintenance and construction of waterholes. 8. Maintenance and creation of attractive hunting spots. 9. Dispersing places designed for feeding in winter to reduce concentration of herds, allowing for the possibility of controlled feeding reduction. 10. Initiation and support for actions aimed at creating green corridors outside the Park (at the local and supralocal level). 11. Cooperation with the police and the State Forests National Forest Holding, hereinafter referred to as "PGL LP", along with preventive actions in the buffer zone of the Park, in order to eliminate poaching |
| 2 | Spreading of exotic plant species in the Park, which facilitates synanthropisation of habitats, in particular: <ol style="list-style-type: none"> 1) 9170²⁾ Subcontinental oak-hornbeam forest (<i>Tilio - Carpinetum</i>), 2) 91E0²⁾ willow, poplar, alder and ash riparian forests (<i>Salicetum albae</i>, <i>Populetum albae</i>, <i>Alnenion glutinoso-incanae</i>, springfen alder forests) | <ol style="list-style-type: none"> 1. Supervision of exotic species in the area of the Park and in its buffer zone. 2. Elimination of exotic species in areas under active or landscape protection with the use of mechanical methods. 3. Prevention of the spreading of exotic species. 4. Reduction in some forms of anthropogenic impact on the environment which influence the appearance of exotic species |
| 3 | Changes in hydrographic conditions (lowering of the underground water level, disappearance of water reservoirs, eutrophication) that pose a threat to: <ol style="list-style-type: none"> 1) natural habitats: <ol style="list-style-type: none"> a) 91D0²⁾ wildwoods and swamp forests (<i>Vaccinio</i> | <ol style="list-style-type: none"> 1. Hydrological supervision of ground and rainfall waters in major natural watercourses, including erosion processes of the Narewka river bottom, if the need for improved hydrographic conditions is confirmed by hydro-geological tests- initiation of actions aimed at reducing erosion processes at the Narewka river bottom; reduction in the outflow of rainfall and thaw waters with the use |

1) hazards are arranged from the most to the least significant.

2) Natura 2000 code.

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| | <p><i>uliginosi-Betuletum pubescentis</i>, <i>Vaccinio uliginosi-Pinetum</i>, <i>Pino mugo-Sphagnetum</i>, <i>Sphagno girgensohnii-Piceetum</i> and birch and pine boreal swamp forests),</p> <p>b) 91E0²⁾ willow, poplar, alder and ash riparian forests (<i>Salicetum albae</i>, <i>Populetum albae</i>, <i>Alnenion glutinoso-incanae</i>, springfen alder forests)</p> <p>2) habitats of:</p> <p>a) 1014²⁾ Narrow-mouthed Whorl Snail (<i>Vertigo angustior</i>),</p> <p>b) 1016²⁾ Desmoulin's Whorl Snail (<i>Vertigo moulinsiana</i>),</p> <p>c) 1060²⁾ Large Copper (<i>Lycaena dispar</i>),</p> <p>d) 1065²⁾ Marsh Fritillary (<i>Euphydryas aurinia</i>),</p> <p>e) 1166²⁾ Great Crested Newt (<i>Triturus cristatus</i>)</p> | <p>of damming devices.</p> <ol style="list-style-type: none"> Maintenance and conservation of the existing hydraulic infrastructure. Wildlife population monitoring of species 1337²⁾ - Beaver (<i>Castor fiber</i>) |
| 4 | <p>Natural succession processes leading to overgrowing and reduction in the area of the following semi-natural non-forest habitats (natural habitats):</p> <ol style="list-style-type: none"> 62302²⁾ – Lowland matgrass grasslands (<i>Nardion</i> – floristically rich patches), 65102²⁾ – Lowland and mountainous fresh extensively used meadows (<i>Arrhenatherion elatioris</i>) and the species associated with them | <p>Removal of the young generation of trees and shrubs, grazing farm animals or mowing green plants on meadows characterised by high biological diversity or by great importance as hunting places</p> |
| 5 | <p>Disappearance of species and their refugia, in particular:</p> <ol style="list-style-type: none"> A030²⁾ – Black Stork (<i>Ciconia nigra</i>), A089²⁾ – Lesser Spotted Eagle (<i>Aquila pomarina</i>), 1361²⁾ – Lynx (<i>Lynx lynx</i>), 1065²⁾ – Marsh Fritillary (<i>Euphydryas aurinia</i>), 1925²⁾ – <i>Phyto kolwensis</i>, 1437²⁾ – Bractless Toadflax (<i>Thesium ebracteatum</i>), 1477²⁾ – Eastern Pasqueflower (<i>Pulsatilla patens</i>) | <ol style="list-style-type: none"> Reduction in disturbance to animals by sharing land in accordance with the requirements of species conservation schemes. Adjustment of time and scope of active protection measures to the needs of priority species. Leaving dead trees. Supervision of the number of rare and endangered species of wild plants, fungi and animals in the area of the Park. Maintenance of bats' hibernacula (<i>Chiroptera</i>) in refurbished facilities |
| 6 | <p>Predatory pressure of wild dogs and cats on animal species in the area of the Park</p> | <ol style="list-style-type: none"> Supervision of the impact of wild dogs and cats on the populations of animals in the area of the Park. The effect of the existence of wild dogs and cats in the area covered by active and landscape protection according to the provisions of the Act of 21 August 1997 on animal protection (Dz.U. of 2013, item 856) |

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| 7 | Shading of sites, withdrawal of heliophilic and thermophilic plant species, resulting in the regression of sites – threat to the following species: 1) 1085 ²⁾ Goldstreifiger (<i>Buprestis splendens</i>), 2) 1437 ²⁾ Bractless Toadflax (<i>Thesium ebracteatum</i>), 3) 1477 ²⁾ Eastern Pasqueflower (<i>Pulsatilla patens</i>) | Maintenance or shaping of relevant habitat conditions adjusted to the biology of protected species through methods such as: 1) maintenance of the most valuable open non-forest ecosystems through pasturing, periodical mowing and removal of the young generation of trees and shrubs from natural succession, 2) reproduction of species occurrence sites, 3) shaping habitat conditions relevant for preserving a favourable conservation status of the protected populations, 4) storage of seeds in seed banks, 5) breeding plant species under <i>ex situ</i> conditions, 6) supervision of priority species |
| 8 | Greater access to sites which causes deterioration in the Park's natural assets | 1. Supervision of the amount of people who enter the area of the Park, especially those parts which are covered by strict protection. 2. Supervision of damage to vegetation and soil near tourist paths. 3. Continued restrictions on access to the most valuable areas. 4. Development of infrastructure aimed at protecting objects of conservation from degradation. 5. Initiation and support for tourist attractions and educational activities outside the borders of the Park. 6. Assessment of the impact of the planned methods of granting access to the Park on the protected objects |
| 9 | The area of the Park is too small for the protection of large predators that require greater home range and proper living conditions, in particular: 1) 1352 ²⁾ Wolf (<i>Canis Lupus</i>), 2) 1361 ²⁾ Lynx (<i>Lynx lynx</i>), | Initiation and support for activities designed to ensure relevant environmental conditions for the reproduction and dwelling of populations in the areas of existing green corridors at the local and supralocal level |
| 10 | Fires – threats resulting from category 3 fire hazard | 1. Supervision of fire hazard to ecosystems. 2. Education of the society. 3. Preventive measures in cooperation with PGL LP and the State Fire Brigade. 4. Supporting applications for financing and equipping volunteer fire departments in the gminas adjacent to the Park |
| 11 | Deterioration in the state of cultural heritage sites | 1. Rehabilitation of the Palace Park. 2. Refurbishment of historical buildings. 3. Protection of archaeological sites against unauthorised exploration. 4. Educational activities aimed at maintaining and shaping awareness among local communities in respect of the sense of identity and responsibility for material and spiritual cultural goods. 5. Preservation of the traditional nomenclature of facilities of material culture. 6. Cooperation with maintenance services, local government units and non-governmental organisations |
| 12 | Shallowing and overgrowing of ponds in the Palace Park | Deepening of ponds and removal of the accumulated sediment |
| 13 | Unlawful use of the Park resources, e.g. as a result of: 1) poaching, 2) unlawful collection of protected plant and animal species, 3) unauthorised entry of motor vehicles | 1. Cooperation with the Police, PGL LP and Border Guards with regard to preventive measures. 2. Patrolling of the endangered areas and facilities in the Park. 3. Removal of poaching devices. 4. Performing checks on persons responsible for harvesting animals and collecting plants or fungi. 5. Provision of training for employees of the Park and PGL LP and for the Police and Border Guard officers with regard to the |

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| | | ability to recognise protected species of fungi, flora and fauna |
| 14 | Insufficient knowledge concerning resources, formations and components of nature, cultural resources and environmental processes | <ol style="list-style-type: none"> 1. Performance of wildlife stock-taking and assessment of material goods. 2. Development of scientific research and environmental monitoring |

2. Potential internal hazards¹⁾

| No. | Identified hazards | Method of elimination or reduction |
|-----|--|--|
| 1 | <ol style="list-style-type: none"> 1. Increase in the degree of close breeding of species 2647²⁾ the European Bison (<i>Bison bonasus</i>). 2. Appearance of new infectious and parasitic diseases. 3. Adverse changes in the structure of populations. 4. Threat to the integrity of refugia of the European Bison (<i>Bison bonasus</i>) due to changes in the methods of managing the Białowieża Primeval Forest | <ol style="list-style-type: none"> 1. Supervision of size and health of populations. 2. Minimisation of interactions between specimens and human bystanders in the periods of increased risk of epizootics. 3. Exchange of specimens between wild and bred populations with due observance of preventive measures concerning contagious and parasitic diseases. 4. Removal of sick specimens from populations. 5. Supervision of infectious and invasive diseases among the eliminated and harvested animals. 6. Performance of medical and veterinary actions aimed at preventing epizootics and parasites in a free range herd and combating epizootics and parasites in the breeding centre. 7. Support for activities designed to ensure the integrity of refugia of the European Bison (<i>Bison bonasus</i>) in the Białowieża Primeval Forest. 8. Allowing greater impact of natural factors that shape the sizes and structures of populations |
| 2 | Increase in anthropogenic pressure resulting from allowing tourism in the Park | <ol style="list-style-type: none"> 1. Supervision of the amount of people who are granted access to facilities located within the Park. 2. Supervision of the impact of anthropogenic pressure on the protected objects in the accessible area of the Park |
| 3 | Increased fire hazard | <ol style="list-style-type: none"> 1. Fire hazard monitoring. 2. Ensuring continuity of fire duties and patrols in the periods of the highest fire hazard. 3. Maintenance of fire protection equipment and infrastructure |
| 4 | Deterioration in the conservation of cultural assets | <ol style="list-style-type: none"> 1. Evaluation of the condition of facilities and sites. 2. Cooperation with maintenance services and non-governmental organisations. 3. Preservation and restoration of traditional nomenclature of sites and facilities |
| 5 | Changes in the population composition of ichthyofauna | <ol style="list-style-type: none"> 1. Supervision of changes in species composition of ichthyofauna. 2. Stocking ponds in the Palace Park exclusively with indigenous species of fish (Roach (<i>Rutilus rutilus</i>), Carp Bream (<i>Abramis gate</i>), Northern Pike (<i>Esox lucius</i>) originating from the area of the Narew river basins |
| 6 | Changes in the genetic diversity of plants | Cooperation with gene banks in the area of preserving floral genetic resources <i>ex situ</i> |

3. External hazards in existence¹⁾

| No. | Identified hazards | Method of elimination or reduction |
|-----|---|---|
| 1 | Uncontrolled spreading of exotic plant species related to the synanthropisation of habitats, in particular: | <ol style="list-style-type: none"> 1. Development and implementation of a common strategy of dealing with invasive species in cooperation with PGL LP, local authorities and other institutions from the area of the Białowieża Primeval Forest. |

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| | <p>1) 9170²⁾ Subcontinental oak-hornbeam forest <i>Tilio - Carpinetum</i>,</p> <p>2) 91E0²⁾ willow, poplar, alder and ash riparian forests (<i>Salicetum albae</i>, <i>Populetum albae</i>, <i>Alnenion glutinoso-incanae</i>, springfen alder forests)</p> | <p>2. Removal of individual specimens and sites of occurrence of exotic species prior to their appearance within the boundaries of the Park.</p> <p>3. Cooperation with stakeholders with regard to education on the subject of exotic species</p> |
| 2 | Small population and a high degree of homozygosity (unification) of species 2647 ²⁾ of the European Bison (<i>Bison bonasus</i>) in the world | <p>1. Breeding of the European Bison (<i>Bison bonasus</i>) <i>ex situ</i>.</p> <p>2. Support for further enclosed breeding and for herds outside Białowieża Primeval Forest, as well as for keeping the European Bison Pedigree Book</p> |
| 3 | <p>Disappearance of the traditional landscape of Polana Białowieska, Polana Masiewska, Polana Pogorzelecka and of agrocenosis, which poses a threat to some species, particularly to:</p> <p>1) A030²⁾ Black Stork (<i>Ciconia nigra</i>),</p> <p>2) A089²⁾ Lesser Spotted Eagle (<i>Aquila pomarina</i>),</p> <p>3) A122²⁾ Corncrake (<i>Crex crex</i>),</p> <p>4) A307²⁾ Barred Warbler (<i>Sylvia nisoria</i>),</p> <p>5) A338²⁾ Red-backed Shrike (<i>Lanius collurio</i>)</p> | <p>1. Cooperation with local authorities with regard to the revitalisation and maintenance of observation points and sites in the foreground of the Park.</p> <p>2. Education of local communities on the need to maintain traditional architectonic elements of villages located in the area covered by the framework of Natura 2000 PLC 200004 Białowieża Primeval Forest, along with the preservation of the current spatial location of its buildings as characteristic features of the area's cultural landscape.</p> <p>3. Promoting traditional forms of agricultural cultivation and extensive use of meadows.</p> <p>4. Postulating relevant regulations pertaining to planning documents concerning the need for excluding fragments of clearings constituting a threat to natural assets of the Park and of the objects under protection from residential buildings and farming facilities within the framework of Natura 2000 PLC 200004 Białowieża Primeval Forest.</p> <p>5. Undertaking actions related to the purchase of grounds which are not property of the State Treasury.</p> <p>6. Designating a buffer zone for the Park in the area of Polana Białowieska, Polana Masiewska and Polana Pogorzelecka</p> |
| 4 | <p>Lack of spatial connection between habitats of species that live in the area of the Park and their habitats in the remaining area of the Białowieża Primeval Forest resulting in the deterioration in the state of species conservation, especially when it comes to:</p> <p>1) 1361²⁾ Lynx (<i>Lynx lynx</i>),</p> <p>2) 1925²⁾ <i>Pytho kolwensis</i></p> | <p>1. Initiation and support for delineating, in cooperation with PGL LP, green corridors between the area of the Park and forests with a large degree of naturalness and between the Białowieża Primeval Forest and other forest complexes, characterised by the mosaic diversity of the forest habitat structure typical of natural forests (hollows made by windfall trees, broken trees, high density of the forest stand, presence of mid-forest clearings and natural regenerations, along with the preservation of dead trees in the amount of more than 10% of the total forest stand).</p> <p>2. Actions aimed at preventing the creation of migration barriers (roads for public traffic, insufficient amount of old, dead trees) and restricting their impact in the vicinity of the Park</p> |
| 5 | <p>Insufficient amount of dead and decaying trees in the buffer zone of the Park, posing a threat especially to the following species:</p> <p>1) 1086²⁾ Flat Bark Breetle (<i>Cucujus cinnaberinus</i>),</p> <p>2) 1920²⁾ <i>Boros schneideri</i>,</p> <p>3) 1925²⁾ <i>Pytho kolwensis</i>,</p> <p>4) 4021²⁾ False Darkling Beetle (<i>Phryganophilus ruficollis</i>),</p> <p>5) 4026²⁾ Wrinkled Bark Beetle (<i>Rhysodes sulcatus</i>),</p> | Support for activities taken by the PGL LP (State Forests National Forest Holding) consisting in leaving dead and decaying trees in the buffer zone of the Park |

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| | <p>6) A234²⁾ Grey-faced Woodpecker (<i>Picus canus</i>),</p> <p>7) A238²⁾ Middle Spotted Woodpecker (<i>Dendrocopos medius</i>),</p> <p>8) A239²⁾ White-backed Woodpecker (<i>Dendrocopos leucotos</i>),</p> <p>9) A241²⁾ Eurasian Three-toed Woodpecker (<i>Picoides tridactylus</i>),</p> <p>10) A320²⁾ Red-breasted Flycatcher (<i>Ficedula parva</i>),</p> <p>11) A321²⁾ Collared Flycatcher (<i>Ficedula albicollis</i>)</p> | |
| 6 | <p>Destroying populations of rare species by collectors, which poses a particular threat to the following species:</p> <p>1) 1085²⁾ Goldstreifiger (<i>Buprestis splendens</i>),</p> <p>2) 1925²⁾ <i>Pytho kolwensis</i>,</p> <p>3) 4021²⁾ False Darkling Beetle (<i>Phryganophilus ruficollis</i>),</p> <p>4) 4026²⁾ Wrinkled Bark Beetle (<i>Rhysodes sulcatus</i>),</p> <p>5) 1065²⁾ Marsh Fritillary (<i>Euphydryas aurinia</i>)</p> | <p>1. Cooperation with the Forest Guards, the Police and Border Guards with regard to control of persons who harvest insects and collect plants or fungi.</p> <p>2. Organisation of trainings for employees of the Park and for the Police, Border Guard and Forest Guard officers as well as employees of PGL LP on the subject of species protected by law (cooperation with PGL LP applies to the area of the buffer zone)</p> |
| 7 | <p>Traffic accidents involving animals which poses a threat to the following species:</p> <p>1) 1352²⁾ Wolf (<i>Canis Lupus</i>),</p> <p>2) 1361²⁾ Lynx (<i>Lynx lynx</i>),</p> <p>3) 2647²⁾ European Bison (<i>Bison bonasus</i>),</p> <p>4) 1166²⁾ Great Crested Newt (<i>Triturus cristatus</i>)</p> | <p>1. Putting up information boards by the roads.</p> <p>2. Submission of applications to road administrators for designing passages for amphibians when renewing or building new roads</p> |
| 8 | Air pollution | <p>1. Local promotion of low-carbon heat sources and renewable energy sources.</p> <p>2. Reduction in combustion vehicle traffic in the area of the Park</p> |
| 9 | Contamination of waters resulting from the migration of chemical contamination with landfill leachates | <p>1. Supporting local government in obtaining funds for the removal of landfills and for land rehabilitation.</p> <p>2. Removal of the former landfill in the forested area of "Cegielnia" and its rehabilitation</p> |

4. Potential external hazards¹⁾

| No. | Identified hazards | Method of elimination or reduction |
|-----|---|--|
| 1 | Excessive increase in the number of people who use facilities located in the Park | <p>1. Supervision of the amount of people who are granted access to facilities located in the Park.</p> <p>2. Introduction of periodical and permanent constraints and limits in access to facilities which are used the most.</p> <p>3. Promotion of and substantive support for the creation of tourist attractions and facilities for educational activities outside the borders of the Park in order to minimise and space out strains resulting from excessive tourist pressure in cooperation with the Park administrators</p> |

| No. | Identified hazards | Method of elimination or reduction |
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| 2 | Epizootic diseases which pose a threat to species 2647 ²⁾ of the European Bison (<i>Bison bonasus</i>) | <ol style="list-style-type: none"> 1. Monitoring the health condition of the European Bison (<i>Bison bonasus</i>) population. 2. Preparation and implementation of procedures of conduct when observing epizootics or disturbing symptoms among animals. 3. Restriction of contacts of bystanders with animals and places of their dwelling in the periods of increased risk of epizootics |
| 3 | Exceeding the ecological carrying capacity of the Forest for ungulates, which entails a risk of deterioration in the condition of protected species 2647 ²⁾ of the European Bison (<i>Bison bonasus</i>) | <ol style="list-style-type: none"> 1. Harvesting and relocating specimens of the European Bison (<i>Bison bonasus</i>) outside the area of the Białowieża Primeval Forest. 2. Increasing feed base by preserving meadows as areas essential for feeding specimens remaining at large. 3. Promotion of the concept of green corridors at the local and regional level in order to preserve spatial relations which facilitate the migration of large ungulates |
| 4 | <ol style="list-style-type: none"> 1. Changes in the components of the water balance in forest ecosystems and drainage areas. 2. Deterioration in the quality of surface and ground waters. 3. Water eutrophication | <ol style="list-style-type: none"> 1. Supervision of hydrographic conditions (recognition of the state of hydrogenic ecosystems, hydrological modeling). 2. If necessary, taking actions aimed at improving hydrographic conditions. 3. Education of the society and support for local governments in equipping all settlement units with a sewage system. 4. Removal of potential sources of water pollution |
| 5 | <p>Growing size of the population of invasive species that pose a threat to the following habitats:</p> <ol style="list-style-type: none"> 1) 9170²⁾ Subcontinental oak-hornbeam forest (<i>Tilio - Carpinetum</i>), 2) 91E0²⁾ willow, poplar, alder and ash riparian forests (<i>Salicetum albae</i>, <i>Populetum albae</i>, <i>Alnenion glutinoso-incanae</i>, springfen alder forests) | <ol style="list-style-type: none"> 1. Supervision of the size of the population of species coming from other geographic areas characterised by considerable expansiveness that spread naturally or as a result of anthropic activity and constitute a threat to the fauna and flora of a given ecosystem by competing with indigenous (autochthonic) species over site conditions (of invasive species), which often contribute to the displacement or even extinction of local species. 2. Preparation of a strategy of handling invasive species within the area of the Białowieża Forest (with cooperation of research units, PGL LP, local governments and other organisations) |
| 6 | Cross-border flow of pollutants in rivers – Narewka and Hwoźna coming from the catchment area of Belarus | <ol style="list-style-type: none"> 1. Monitoring the quality of water. 2. Cooperation with Belorussia with regard to reporting possible failures. 3. Educating local governments about this type of risks and the need for their reporting. 4. Hydrological supervision of the quantity and quality of water resources in Narewka and Hwoźna rivers near the border of the state along with the possibility to utilise ponds in the Palace Park as a buffer tank for the river Narewka in emergencies |
| 7 | Melioration works in the area of the "Belovezhskaja Pushha" National Park that pose cross-border threat to the hydrographic conditions of the Park and to the conservation of hydrogenic habitats | Cooperation with Belorussia with regard to identification of cross-border hazards and the reduction in their effects |
| 8 | The possibility of cross-breeding specimens of species 2647 ²⁾ of the European Bison (<i>Bison bonasus</i>) with specimens of the American Bison (<i>Bison bison</i>) which might lead to the creation of hybrids and | <ol style="list-style-type: none"> 1. Promotion and support for breeding bison of the clean Białowieża line (<i>Bison bonasus</i>) within the territory of Poland. 2. Undertaking actions aimed at preventing cross-breeding of specimens of the clean lowland (Białowieża Forest) line with specimens of the Białowieża-Caucasian line. 3. Taking up broad educational measures in order to inform of |

| No. | Identified hazards | Method of elimination or reduction |
|-----|--|---|
| | specimens of the clean Białowieża line of European bison with specimens belonging to the Białowieża-Caucasian line of European bison | hazards to domestic populations of the European Bison (<i>Bison bonasus</i>) resulting from possible import of the American Bison |

CONDITIONS FOR THE MAINTAINANCE OR RECONSTRUCTION OF A FAVOURABLE CONSERVATION STATUS OF OBJECTS PROTECTED BY NATURA 2000 PLC 200004 BIAŁOWIEŻA PRIMEVAL FOREST IN THE AREA LOCATED WITHIN THE PARK, PRESERVATION OF THE AREA'S INTEGRITY AND THE CONSISTENCY OF THE NETWORK OF NATURA 2000 SITES

1. Conditions of maintenance or restoration of a favourable conservation status for the following objects of protection under Natura 2000 PLC 200004 Białowieża Primeval Forest that occur in the area of the Park:
 - 1 for the following natural habitats:
 - a) 6230¹ Matgrass grasslands form the *Nardion* order - floristically rich patches – mowing or pasturing,
 - b) 6510¹ extensively used fresh meadows (*Arrhenatherion elatioris*) - maintaining extensive use (maintaining meadows,
 - c) 9170¹ subcontinental oak-hornbeam forest (*Tilio – Carpinetum*) - strict protection lack of treatments to ensure spontaneous development of oak-hornbeam ecosystems,
 - d) 91D0¹ swamp pine forest (*Vaccinio uliginosi – Pinetum*), boreal spruce forest in peat areas (*Sphagno girgensohnii–Piceetum*), subboreal swamp birch forest (*Dryopteridi thelypteridis - Betuletum pubescentis*) and 91E0¹ alder-ash riparian forest-(*Fraxino – Alnetum*) – maintenance of hydrographic conditions suitable for swamp habitats and strict protection or lack of treatments to ensure spontaneous development of swamp ecosystems;
 - 2 for the following bird species:
 - a) A030¹ Black Stork (*Ciconia nigra*) - preservation of woodland areas involving historic tree stands and preservation of the appropriate level of ground and surface waters,
 - b) A072¹ European Honey Buzzard (*Pernis apivorus*) - preservation of woodland areas, including historic tree stands,
 - c) A089¹ Lesser Spotted Eagle (*Aquila pomarina*) - preservation of woodland areas with the presence of historic tree stands near the open areas along with maintenance and restoration of the extensive use of meadows and pastures,
 - d) A104¹ Hazel Grouse (*Bonasa bonasia*) - preservation of natural and diverse deciduous and mixed forests with well developed undergrowth, elimination of stray dogs and cats,
 - e) A155¹ Eurasian Woodcock (*Scolopax rusticola*) - preservation of natural humid deciduous and mixed forests with well developed undergrowth,
 - f) A119¹ Spotted Crake (*Porzana porzana*) - preservation of wet, extensively used mud sedges, preservation of oxbow lakes and maintenance of the reed bed zone near small water reservoirs,
 - g) A122¹ Corncrake (*Crex crex*) - maintenance of the current acreage of meadows and pastures and the mowing of meadows as of 1 August,
 - h) A165¹ Green Sandpiper (*Tringa ochropus*) - preservation of the current area of riparian forests, alder forests and reed fields and maintenance of extensively used meadows and fields,
 - i) A217¹ Eurasian Pygmy-owl (*Glaucidium passerinum*) and A223¹ Tengmalm's Owl (*Aegolius funereus*) - preservation of woodland areas with large percentage of historic tree stands and leaving all trees with pidgeonholes including decaying and dead ones,
 - j) A307¹ Barred Warbler (*Sylvia nisoria*) and A338¹ Red-backed Shrike (*Lanius collurio*) - maintenance of mowed meadows in their current state, leaving shrubs,
 - k) A236¹ Black Woodpecker (*Dryocopus martius*), A241¹ Three-toed Woodpecker (*Picoides tridactylus*), A207¹ Stock Dove (*Columba oenas*) - preservation of woodland areas with the presence of historic tree stands, leaving all decaying and dead trees,
 - l) A238¹ Middle Spotted Woodpecker (*Dendrocopos medius*), A234¹ Gray-headed Woodpecker (*Picus canus*) and A239¹ White-backed Woodpecker (*Dendrocopos leucotos*) -

1) Natura 2000 code.

- preservation of woodland areas with the presence of historic tree stands and leaving decaying and dead deciduous trees,
- m) A320¹ Red-breasted Flycatcher (*Ficedula parva*), A231¹ Collared Flycatcher (*Ficedula albicollis*) - preservation of woodland areas with the presence of historic tree stands and preservation of a large number of trees with pigeonholes;
- 3 for mammal species:
- a) 1308¹ Barbastelle (*Barbastella barbastellus*) - maintenance of the current method of protection, preservation of woodland areas with large percentage of historic tree stands and old trees with pigeonholes, especially ash and oak,
- b) A1337¹ Eurasian Beaver (*Castor fiber*) - lack of protective treatments,
- c) 1352¹ wolf (*Canis lupus*) and 1361¹ lynx (*Lynx lynx*) – maintenance of large population of red deer (*Cervus elaphus*) and roe deer (*Capreolus capreolus*), maintenance of forest habitats with old growth forests and dead wood forming important microhabitats, maintenance of important breeding areas as well as special connectivity among populations,
- d) 1355¹ Otter (*Lutra lutra*) -lack of protective treatments,
- e) 2647¹ the European Bison (*Bison bonasus*) - maintaining non-forest ecosystems that constitute feeding grounds of the European Bison (*Bison bonasus*), ensuring the possibility of migrating beyond the borders of the Park and the Natura 2000 area, exchange of specimens between isolated populations nationwide with due observance of preventive measures concerning infectious diseases and parasites, maintenance of breeding in enclosed areas of the European Bison (*Bison bonasus*) and ensuring medical and veterinary care;
- 4 for amphibian species –1166¹ Great Crested Newt (*Triturus cristatus*) - maintaining the proper condition of mating places and their surroundings and reproduction, creation and preservation of overwintering sites;
- 5 for invertebrates:
- a) 1014¹ Left-handed Narrow Mouthed Whorl Snail (*Vertigo angustior*) and 1016¹ Desmoulin's Whorl Snail (*Vertigo moulinsiana*) - preservation of the natural condition of open habitats, e.g.. alkaline peat bogs in the form of caricion, moss complexes and mud sedges,
- b) 1060¹ Large Copper (*Lycaena dispar*) - maintaining the current number of sites in separate patches of habitats,
- c) 1065¹ Marsh Fritillary (*Euphydryas aurinia*) - maintenance of Purple Moor Grass meadows with high percentage of Devil's-bit *Succisa pratensis* in a non-shrubbed and non-forested condition and the mowing of Purple Moor Grass meadows every several years,
- d) 1084¹ Hermit Beetle (*Osmoderma bamabita*) - leaving trees with pigeonholes in the forest stand;
- e) 1085¹ Goldstreifiger (*Buprestis splendens*) and 1920¹ *Boros schneideri* - preservation of forest ecosystems with old and decaying pines (*Pinus sylvestris*),
- f) 1086¹ Flat Bark Beetle (*Cucujus cinnaberinus*), 4021¹ False Darkling Beetle (*Phryganophilus ruficollis*) and 4026¹ Bark Beetle (*Rhysodes sulcatus*) - leaving decaying and dead trees in the forest ecosystems,
- g) 1925¹ *Pytho kolwensis*) - leaving all decaying and dead spruces (*Picea abies*) in humid and swamp forest habitats;
- 6 for plant species:
- a) 1437¹ Bractless Toadflax (*Thesium ebracteatum*) and 1477¹ Eastern Pasque Flower (*Pulsatilla patens*) - preservation of optimum lighting conditions through removal of brushwood of trees and shrubs on sites, breeding in the *ex situ* conditions and reintroduction to potential habitats,
- b) 1939¹ Hairy Agrimony (*Agrimonia pilosa*) - maintenance of the existing sites of the species.
2. Conditions of maintaining the integrity of the Nature 2000 area PLC 200004 Białowieża Primeval Forest and general consistency of the NATURA 2000 network of sites:
- 1) maintenance of natural habitats in a favourable conservative status in the area of the Park, including habitats important for ensuring the integrity and consistency of the whole Natura 2000 area and network;
- 2) maintenance of the natural dynamics of the upper groundwater location;
- 3) the need to allow for spatial conditions and conditions for preserving a favourable conservation status of the objects of protection in planning documents;

- 4) dissemination of knowledge about natural habitats and species which are under the protection of Natura 2000 and their most important habitats;
- 5) establishment and maintenance of green corridors ensuring migration of species within the area covered by the framework of Natura 2000 PLC 200004 Białowieża Primeval Forest (the course and scope of green corridors is presented in Appendix no. 12 to the regulation:
 - a) along each natural watercourse by banning construction of buildings in a 100 m radius from the banks of rivers, lakes and other water reservoirs,
 - b) within the area of Polana Masiewska at a distance of 200 m on both sides of road no. 1654B, along with an area of 100 m from the northern border of the Park (Masiewo green corridors: eastern corridor no. VI and western corridor no. VII,
 - c) within the area of Polana Pogorzelska – on both sides of road no. 1651B on a stretch between the road and an edge of the Park in the northern part of the clearing, and south from the roadway that goes up to the dense forest border (Pogorzelska green corridors – northern corridor no. IV and southern corridor no. V; in the area of the village Pogorzelska excluding a 75 m stretch on both sides of road,
 - d) within the area of Polana Białowieska – west and north of the Palace Park and north of Żubrowa Street, east of Puszczańska Street and north of Kamienne Bagno Street and Droga Browska (Białowieża green corridor – northern corridor no. I east and south of Olga Gabiec and Grudkowska streets as well as Północna and Polna streets excluding a 100 m land stretch along these roads, south and east of Podolany II (Białowieża green corridor – southern corridor no. II; in the distance of 150 m east of the border of the forest complex located between Zastawa and Krzyże streets (Białowieża green corridor – eastern corridor no. III.

PROTECTIVE ACTIONS IN THE AREAS UNDER STRICT, ACTIVE AND LANDSCAPE PROTECTION, WITH THE SPECIFICATION OF THEIR TYPE, SCOPE AND LOCATION AS WELL AS PROTECTIVE ACTIONS AIMED AT MAINTENANCE OR RESTORATION OF A FAVOURABLE CONSERVATION STATUS OF OBJECTS PROTECTED BY NATURA 2000 PLC 200004 BIAŁOWIEŻA PRIMEVAL FOREST IN THE AREA LOCATED WITHIN THE PARK

I. Protective actions in the areas of strict, active and landscape protection. The National Park is responsible for implementation of protective measures.

1. Protective measures in the areas of strict protection include:

- 1) Monitoring biotic and abiotic components of nature (ecosystems,
- 2) recognition of the condition and hazards to resources, formations and nature components,
- 3) collecting generative and vegetative parts of plants, which may give rise to a new plant when transferred to another place (propagule for *ex situ* cultivation and for species reintroduction programmes,
- 4) fire protection consisting in preventive measures – no entry to woodland areas and patrols in periods of increased fire hazard, arranging information boards,
- 5) keeping the main roads and routes open to ensure fire safety and safety of the people who stay in the area of the Park,
- 6) refurbishment of tourist, information and educational infrastructure associated with granting access to the Park,
- 7) protection against unauthorised human penetration and damage,
- 8) minimisation of negative effects of granting access to sites.

2. Active protective measures involve enabling the course of natural processes, including regeneration processes, succession and renaturalisation of ecosystems in accordance with the assumed objectives and designated goals of protection. The following protective measures are accepted:

- 1) Monitoring of nature, including hazards in the form of factors that may cause disturbance of the course of natural processes or endanger the sustainability of ecosystems,
- 2) creation of *ex situ* seed gene banks and of pure cultures of species of fungi,
- 3) protection against damage caused by external factors and removal of their effects,
- 4) reduction and retaining surface outflow of water to increase the retention capacity of ecosystems,
- 5) protection of species diversity (genetic and interspecific in ecosystems, including maintenance of population of rare and endangered species of wild plants, fungi and animals in the area of the Park, that require active protection measures,
- 6) removal of invasive species and species of exotic origin that pose a threat to objects of protection,
- 7) fire protection,
- 8) protection against acts of sabotage,
- 9) construction and maintenance of tourist facilities,
- 10) keeping roads and tourist routes open and maintenance of forest division signs to ensure fire safety and safety of the people who stay in the area of the Park,
- 11) minimisation of effects of granting access to sites,
- 12) reduction in populations of species that constitute a threat to the objects under protection,
- 13) removal of fencing for cultivations and of young stands,
- 14) inhibition of succession in non-forest ecosystems by removing trees and shrubs,
- 15) maintenance of non-forest plant communities by mowing or pasturing adapted to the type of plant communities and biological properties of species under protection,
- 16) monitoring surface and ground waters allowing for their characteristics (hydromorphological, physical, chemical and biological parameters,
- 17) elimination of sources of water pollutants.

- 2.1. Active protective measures for plants, fungi and animals include:
 - 1) reproduction of species habitats,
 - 2) elimination of hazards to rare and endangered species of wild plants, fungi and animals in the area of the Park,
 - 3) supervision of population size of species, in the case of the European Bison (*Bison bonasus* unified in the whole area of the Białowieża Primeval Forest, in the case of other species application of methodology consistent with the guidelines of the Chief Inspector of Environmental Protection,
 - 4) support for reproduction of naturally occurring rare and endangered species,
 - 5) protection of critically endangered and endangered species through *ex situ* breeding,
 - 6) collecting propagation material for storage in seed and gene banks,
 - 7) strengthening wildlife populations by introduction of *ex situ* bred specimens and by exchange of specimens between isolated populations living at large and those which are bred *ex situ* with due observance of preventive measures concerning infectious diseases and parasites,
 - 8) creation and protection of green corridors that ensure animal, plant and fungi migrations between their relevant habitats within the Park, as well as ensure spatial connection with habitats located outside the borders of the Park,
 - 9) elimination of exotic species that pose a threat to populations of indigenous species,
 - 10) undertaking activities aimed at reintroducing species which receded from the area of the Park, provided that their local genotypes have not changed and that the condition of their habitats gives hope for their permanent return,
 - 11) maintenance of feed base for rarely occurring and endangered animals.

- 2.2. Active protective measures for inanimate nature include:
 - 1) avoiding any activities that may disturb soil processes,
 - 2) elimination and prevention of contamination of soils and waters.

- 2.3. Active protective measures for landscapes include:
 - 1) removal of vegetation (mowing , shrub removal, cutting trees that cover up viewing axes and points as well as view openings,
 - 2) adjustment of small tourist infrastructure to local architectonic features,
 - 3) rationalisation of tourist and educational signposts.

3. Landscape protection measures include:
 - 1) counteracting overgrowing of semi-natural ecosystems and maintenance of receding, valuable floral communities,
 - 2) stocking of ponds in the Palace Park with species naturally occurring on this territory (indigenous species,
 - 3) keeping roads and traffic routes open,
 - 4) reduction of surface water outflow by implementing such measures as maintenance of the damming structure and a system of outlet boxes by a group of ponds in the Palace Park,
 - 5) protection of the cultural landscape and revitalisation of the historic Palace Park,
 - 6) protection of agricultural lands by means of maintaining the traditional and extensive method of their use,
 - 7) removal of exotic species except for species of plants belonging to the historic layout of the Palace Park,
 - 8) active protection of animals, fungi and plants,
 - 9) construction of educational, tourist and administrative infrastructure,
 - 10) maintenance of a stretch of a border road of the Republic of Poland in the area of the Park,
 - 11) recognition, supervision and elimination or reduction in anthropogenic hazards, particularly resulting from urbanisation, contamination of air, soil and water,
 - 12) removal of trees that constitute a threat to the life and health of people and animals near tourist paths and animal farms ,
 - 13) restoration breeding of the European Bison (*Bison bonasus* based on genetic characteristics of the population; ensuring ensuring animal welfare by conducting agrotechnical treatments as well as preventive veterinary measures and nursing of trees in farms,

14) Breeding and exposure of animals in the European Bison Show Reserve.

II. The type, scope and location of protective actions in the Park and in the area of Natura 2000 plc 200004 Białowieża Primeval Forest located within the Park

1. The type, scope and location of protective actions in the Park

1.1 Areas covered by strict protection

| No. | Type of activity | Scope of activity | Location of activity ¹ |
|-----|--|--|-----------------------------------|
| 1 | Protection of forest ecosystems | | |
| 1.1 | Maintenance and conservation of permanent areas used for monitoring the condition of the forest | Conservation or replacement of signposts and restoration of other surface markings in the area | Strictly protected areas |
| 1.2 | Protection of forest ecosystems against invasive organisms spreading in horse faeces and fodder | Use of bun bags for faeces (or other solutions, as well as feed bags | Strictly protected areas |
| 1.3 | Removing waste from forest ecosystems | Collection and removal of waste | Strictly protected areas |
| 2 | Protection of plant, animal and fungi species | | |
| 2.1 | Monitoring the population size of plant and animal species | 1 Winter tracing and driving (as necessary: 2) counting shoots/specimens on permanent test surfaces, 3) registering observation | Strictly protected areas |
| 2.2 | Recording occurrences of selected groups of plant, animal and fungi species in the area of the Park | Stock-taking conducted by employees of the Park and other persons, after training by specialists in selected taxonomic groups (as necessary | Strictly protected areas |
| 3 | Granting access to the Park | | |
| 3.1 | Maintenance of touristic and educational infrastructure related to the securing of the area and of objects under protection from destruction | Refurbishment and and conservation of the gate, footbridges, small graves and crosses | Strictly protected areas |
| 3.2 | Maintenance of tourist routes and paths | 1. Renewal of signposts, ongoing refurbishment of paths roads. 2. Minimisation of the effects of anthropogenic impact on the environment. 3. Other actions as necessary | Strictly protected areas |
| 3.3 | Maintenance and ongoing renewal of roads | Maintenance of road surfaces and roadside ditches, repairs of road culverts | Strictly protected areas |
| 3.3 | Removal of broken, fallen and dead trees from tourist routes and roads | Cutting of trees that block passages on roads and paths and cutting of suspended trees as well as those which pose direct threat to human health and life: 1) leaving the tree biomass in the ecosystem to natural decomposition, 2) with the use of tools that ensure the smallest possible impact on the | Strictly protected areas |

1) distribution of divisions marked with a number and an upper case letter, subdivisions marked with a lower case letter are specified in accordance with the cadastral map of the Białowieża Primeval Forest prepared by the Forest Management and Geodetics Office, Branch in Białystok, in the scale 1: 10 000, on the day of 01.01.2001. The map remains in the seat of the Directorate of the Białowieża Primeval Forest in the town of Białowieża.

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| | | natural environment, 3) other actions as needed | |
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1.2 Areas covered by active protection

| No. | Type of activity | Scope of activity | Location of activity ¹ |
|-----|---|--|---|
| 1 | Protection of forest ecosystems | | |
| 1.1 | Maintenance of sites with heliotropic plants associated with fresh coniferous forests: 1) Creeping Lady's Tresses (<i>Goodyera repens</i> , 2) Mountain Arnica (<i>Arnica montana</i> , 3) Ground Pine (<i>Lycopodium clavatum</i> , 4) Blue Ground-cedar (<i>Diphasiastrum tristachyum</i> | 1. Local removal of the young generation of trees and shrubs and their brushwood coming from natural succession, shading the bottom of the forest and the removal of sod and dwarf shrubs from sites in order to reveal the soil surface. 2. One-time treatments, at any period of the year, performed without snow cover. 3. Repeatability of treatments – as needed, at least once every 5 years. 4. Total area of treatments – 2.00 ha | Area covered by active protection – as needed |
| 1.2 | Preservation of sites of heliophiles associated with thermophilous oak forests, especially Red Helleborine (<i>Cephalantera rubra</i> | 1. Thinning of the young generation of trees and shrubs with additional removal of the obtained biomass – in the period from December to March, with thick snow cover. 2. Repeating treatment as necessary, at least once every 5 years. 3. Area covered by the treatment – 1.50 ha | Area covered by active protection – as needed |
| 1.3 | Removal of fencing of young stands | Dismantling of fencings, along with the removal of materials until 2015 (nets and parts of poles) | Protective area of the Reserve |
| 1.4 | Protection of ecosystems against fires | Mechanical maintenance of a fire break without vegetation within 3.5 km | Divisions – 399D, 400C, 400D, 401C, 401D, 401F |
| | | Manual maintenance of a fire break within 0.4 km | Divisions – 368Aj, 368Ak, 368Al, 110Ak |
| 1.5 | Maintenance of proper technical condition of sites with water for fire-fighting purposes | Maintenance of 3 water intake points for fire-fighting purposes: a) Maintenance of driveways. b) Removing vegetation from the bank | Divisions – 130Ch, 160Dg, 189Cc |
| 1.6 | Maintenance of the network of roads used for monitoring purposes and fire protection in the forest | Ongoing repairs of the surface, mowing and shrub removal from roadsides and road ditches, repairs of culverts on the total length of 73 km – as needed | Protective area of the Reserve |
| 1.7 | Maintenance of lines and forest division signposts with regard to their visibility | Renewal and maintenance of the forest's division line | Area covered by active protection – as needed |
| 1.8 | Maintenance and conservation of permanent areas used for monitoring the condition of the forest | Conservation or replacement of signposts and restoration of other surface markings in the area | Area covered by active protection – as needed |
| 1.9 | Protection of ecosystems against artificial barriers preventing migration of animals and strengthening functions of local green corridors | 1. Dismantling of fencing on the length of 6 km together with the removal of construction elements until 2017 2. Gradual removal of fencing in | The boundary of the Park and Polana Białowieska |

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| | | the direction of east to west with the exception of its sections approximately 150 m on both sides of the historic gate | |
| 1.10 | Dismantling of the remains of fencing within the boundaries of the Park | Dismantling of metal elements on the length of 4 km on the border of the area covered by strict protection, along with their removal | Southern boundary of tree stands covered by strict protection |
| 1.11 | Removing waste from forest ecosystems | Collection and removal of waste | Area covered by active protection |
| 2 | Protection of non-forest terrestrial ecosystems | | |
| 2.1 | Preservation of various species of meadow communities and maintenance of non-forest ecosystems constituting food base for large herbivores, birds and insects | Mechanical mowing of meadows once a year in the period from June to August with additional removal of the obtained biomass or with placing it in ricks: 1) leaving 10-20% of unmowed vegetation, 2) possible local (point flattening of meadows (manual or mechanical through smoothing, 3) area of the treatment – up to 9.96 ha | Divisions – 134Bg, 282Da, 339Dd, 159Dh, 190Ba, 253Ba, 339Bk, |
| | | Mechanical mowing of from June to August, with the possibility of partial removal of the obtained biomass: 1) once a year, but at least once every 2 years, 2) possible local (point flattening of meadows (manual or mechanical through smoothing, 3) total area covered by the treatment – up to 13.54 ha | Divisions – 221Af, 339Db, 104Bg, 160Af, 104Aa, 130Ag, 130Cd, 253Da |
| | | Mechanical mowing of from June to August, with the possibility of partial removal of the obtained biomass: 1) twice a year, 2) possible local (point flattening of meadows (manual or mechanical through smoothing, 3) total area covered by the treatment – up to 0.43 ha | Division 193Bh |
| | | Mechanical mowing of meadows once a year in the period from June to August with additional removal of the obtained biomass or placing it in ricks: 1) possible local (point flattening of meadows (manual or mechanical through smoothing, 2) leaving 10-20% of unmowed vegetation, area of the treatment – up to 46 ha | Divisions – 398Gg, 398Gl, 398Gr, 399Da, 399Dc, 399Di, 399Dj, 399Dl, 399Dd, 399Dh, 399Dg, 400Cc, 400Cg, 400Ch, 400Cf, 400Ck, 400Cj, 400Cl, 400Co, 400Cn, 400Ci, 400Db, 400Dd, 400Dg, 401Cb, 401Ci, 401Ck, 401Cl, 401Cm |
| 3 | Protection of plant, animal and fungi species | | |

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| 3.1 | Maintenance of mating sites of amphibians | Deepening the central part of water reservoirs which are the most important mating sites of amphibians within the area of the Park by 20 to 40 cm: 1) frequency of deepening – as needed, 2) removing trees and shrubs that continue to regrow on southern and western banks of tanks located in the area covered by active protection | Divisions – 399D, 400C, D.401C |
| 3.2 | Improvement of environmental conditions of mating sites of amphibians | Deepening, rearrangement of bottom and edges and connection of the existing small water reservoirs – 4 tanks with surfaces of 35-100 m ² each | Divisions – 403 and, b, c, 402Ab, c, d |
| 3.3 | Creation of winter habitats for amphibians | Raising stone mounds and leaving branches and tree trunks near mating sites – up to 14 winter habitats | Divisions – 399Do, 403d |
| 3.4 | Improvement in the living conditions of reptiles | Manual removal of shrubs and mowing of embankments of a narrow gauge railway once every 3-5 years, at the height of 3-8 cm in the period from July to September, on the total length of 11 km | Divisions – 158A, 158B, 159A, 159B, 160A, 160B, 161A, 161B, 106B, 106D, 131B, 131D, 162A, 162B, 163A, 163B, 164A, 164B, 165A, 165B, 166A, 166B |
| | | Manual cleansing of the Gluszec forester's lodge ruins from plants – every 5 years | Division 164Bg |
| 3.5 | Preservation of points of occurrence of Blue Ground-cedar (<i>Diphasiastrum tristachyum</i>) | Removal of young spruce trees (<i>Picea abies</i>) and other plants which shade the site, with additional removal of the obtained biomass: 1) treatment in the period from December to March, with thick snow cover repeated as needed, but at least once every 5 years, 2) area of the treatment – 0.10 ha | Area covered by active protection – as needed |
| 3.6 | Protection of sites of orchids (i.a., <i>Epipactis atrorubens</i> , <i>Cephalantera rubra</i> , <i>Dactylorhiza incarnata</i>) | Manual removal of shrubs and mowing of sites along with the removal of the obtained biomass | Area covered by active protection – as needed |
| 3.7 | Protection of sites of Siberian Iris (<i>Iris sibirica</i>) | Manual removal of shrubs and mowing of sites along with the removal of the obtained biomass | Area covered by active protection – as needed |
| 3.8 | Preservation of sites of heliotropic plant species in former timber yards | Mechanical mowing from June to August, with removal of the obtained biomass: 1) once a year, but at least once every 2 years, 2) total area covered by the treatment – up to 6.6 ha | Divisions – 106Ba, 107Af, 130Dh, 131Cg, 132Dk, 133Ci, 135Dk, 134Dl, 135Cdx, 136Ci, 158Ba, 159Ai, 160Ba, 161Ag, 162Ba, 163Ad, 164Ba, 165Af, 165Ba, 166Ac, 166Bi, 189Ac, 189Ci, 282Ch, |

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| | | | 313Ad |
| | | Mechanical mowing of from June to August, with the possibility of partial removal of the obtained biomass: 1) once a year, but at least once every 2 years, 2) total area covered by the treatment – up to 1.36 ha | Divisions – 221Ad, 313Cg |
| 3.9 | Monitoring the population size of plant and animal species | 1) Winter tracing and driving (as needed: 2) counting shoots/specimens on permanent test surfaces, 3) trapping, 4) registering observation | Area covered by active protection – as needed |
| 3.10 | Recording occurrences of selected groups of plant, animal and fungi species in the area of the Park | Stock-taking conducted by employees of the Park and other persons, after training by specialists in selected taxonomic groups (as necessary) | Area covered by active protection – as needed |
| 3.11 | Removal of individual specimens and sites of exotic plant species | Cutting of exotic species of trees and removal of their regenerations: 1) Cutting and grubbing of shrubs of exotic species, 2) Manual mowing and grubbing of perennials of exotic species, 3) removal of the obtained biomass, 4) removal of regenerations of exotic species over the next years, 5) total area covered by the treatments – 2.12 ha | The area around the settlements of Dziejzinka, Divisions – 402Aa, 402Ab, 402Ac, 402Ad, 403a, 403b, 403c |
| 3.12 | Rehabilitation of the unexploited landfill in the forested area of "Cegielnia" | Rehabilitation of the facility based on the owned technical documentation | Division 399D |
| 3.13 | Removal of the exotic species of –, Sycamore Maple (<i>Acer pseudoplatanus</i>) | One-time, manual and mechanical logging of trees from May to September – in subsequent years area control of the Park and gradual removal of the found trees and emerging regenerations (as needed - total area covered by the treatment – 0.51 ha | Divisions – 110Ah, 368Al, 398Gs |
| 3.14 | Removal of the exotic species of Ash-leaved Maple (<i>Acer negundo</i>) | One-time logging of the Ash-leaved Maple (<i>Acer negundo</i>) and removal of its regenerations, between May and September: 1) in subsequent years area control of the Park and gradual removal of emerging regenerations (as needed, 2) collecting, removal and burning of possible fruiting branches, 3) total area covered by the treatments – 18.03 ha | Divisions – 159Db, 159Dh, 190Ba, 221Ea, 253Da, 282Ba, 104Aa, Bg, 130Ag, Ch, g, 160Af |
| 3.15 | Removal of the exotic species of Thicket Creeper (<i>Partenocissus inserta</i>) | Gradual manual and mechanical cutting and removal of roots: 1) from May to September (as needed, 2) area control of the Park and removal of emerging regenerations, 3) total area covered by the treatment – 0.10 ha | Division 110Ba |

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| 3.16 | Removal of the exotic species of Quaking Grass Sedge (<i>Carex brizoides</i>) | Covering of the undergrowth with a black gardening foil in places with Quaking Grass Sedge (<i>Carex brizoides</i>) for a period of minimum two years, repeat in the event of the recovery of the species – total area covered by the treatment – 0.10 ha | Divisions – 136Ca, 196Da |
| 3.17 | Removal of the exotic species of Small Balsam (<i>Impatiens parviflora</i>) | Manual mowing and removal of plants before or during blossoming. The treatment should be repeated 2 - 3 times in the subsequent years for total removal of the species - total area covered by the treatment – 1.37 ha | Divisions – 161Af, 368Al, 420Cc |
| 3.18 | Reduction in the number of the exotic species of – American Mink (<i>Neovison vison</i>) | 1. Execution of , ten-day harvesting sessions involving trapping twice a year from October to November and from February to March, with traps arranged 500 – 1000 m from each other along river banks. 2. Elimination of the caught animals outside the area of the Park | River valleys covered by active protection |
| 3.19 | Preservation of endangered plant species by means of <i>ex situ</i> cultivation | Establishment of an <i>ex situ</i> cultivation of the most endangered plant species from seeds and vegetative organs obtained on the area of the Białowieża Primeval Forest – total cultivation area – up to 0.25 ha | Divisions – 402Ab, 402Ad |
| 3.20 | Monitoring and removal of exotic animal species | Supervision of the appearance of exotic species, monitoring their impact on the ecosystems of the Park, reduction in their numbers (as needed) | Area covered by active protection |
| 3.21 | Monitoring and removal of exotic plant species, in particular: 1) Northern Red Oak (<i>Quercus rubra</i> , 2) Red Elderberry (<i>Sambucus racemosa</i> , 3) Sycamore Maple (<i>Acer pseudoplatanus</i> , 4) Box Elder (<i>Acer negundo</i> , 5) Small Balsam (<i>Impatiens parviflora</i> , 6) Snowy Mespilus (<i>Amelanchier lamarckii</i> , 7) Quaking Grass Sedge (<i>Carex brizoides</i> , 8) Thicket Creeper (<i>Partenocissus inserta</i> , 9) Himalayan Balsam (<i>Impatiens glandulifera</i> , 10) Wild Privet (<i>Ligustrum vulgare</i> , 11) Large-leaved Lupine (<i>Lupinus polyphyllos</i> , 12) Rum Cherry (<i>Padus serotina</i> , 13) Giant Knotweed (<i>Reynourtia</i> spp., 14) Rugosa Rose (<i>Rosa rugosa</i> , 15) Goldenrod (<i>Solidago gigantea</i> , <i>S. canadensis</i> , 16) Confused Bridewort (<i>Spiraea × pseudosalicifolia</i> , | 1. Supervision of exotic species – as needed. 2. Manual and mechanical removal of individual specimens and sites of occurrence of exotic species | Area covered by active protection |

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| | 17) Western Redcedar (<i>Thuja plicata</i>) | | |
| 4 | Granting access to the Park | | |
| 4.1 | Maintenance of touristic and educational infrastructure related to the securing of the area and of objects under protection from destruction | Ongoing refurbishment and and conservation of information boards, rest facilities, roofing, footbridges, observation towers and platforms, shelters, benches, hedges, bonfires and other (as needed) | Area covered by active protection |
| 4.2 | Maintenance of tourist routes and paths | <ol style="list-style-type: none"> 1. Renewal of signposts, ongoing refurbishment of paths roads. 2. Minimisation of the effects of anthropogenic impact on the environment. 3. Other actions as necessary | Area covered by active protection |
| 4.3 | Maintenance and ongoing renewal of roads | Maintenance of road surfaces and roadside ditches, repairs of road culverts | Area covered by active protection |
| 4.4 | Maintenance of observation points and viewing axes | Logging, manual removal of shrubs and mowing with additional removal of biomass from the foreground of the observation tower in the valley of Narewka in the area of up to 1 ha | Divisions – 159Bf, 159Bj, 159Da, 159Db |
| 4.5 | Removal of broken, fallen and dead trees from tourist routes and roads | <ol style="list-style-type: none"> 1. Cutting of trees that block passages on roads and paths, removal of suspended trees and trees that create hazards to human life and health. 2. Partial utilisation of biomass that comes only from tourist tracks or the road lane (as needed) | Area covered by active protection |

1.3 Areas covered by landscape protection

| No. | Type of activity | Scope of activity | Location of activity ¹ |
|-----|---|--|--------------------------------------|
| 1 | Protection of forest ecosystems | | |
| 1.1 | Maintenance of sites with heliotropic plants associated with fresh coniferous forests: <ol style="list-style-type: none"> 1) Creeping Lady's Tresses (<i>Goodyera repens</i>, 2) Mountain Arnica (<i>Arnica montana</i>, 3) Ground Pine (<i>Lycopodium clavatum</i>, 4) Blue Ground-cedar (<i>Diphasiastrum tristachyum</i> | <ol style="list-style-type: none"> 1. Local removal of the young generation of trees and shrubs and their brushwood coming from natural succession, shading the bottom of the forest and the removal of sod and dwarf shrubs from sites in order to reveal the soil surface. 2. One-time treatments, at any period of the year, performed without snow cover. 3. Repeatability of treatments – as needed, at least once every 5 years. 4. Total area of treatments – 2.00 ha | Area covered by landscape protection |
| 1.2 | Preservation of sites of heliotropic plant species associated with thermophilous oak forests, especially Red Helleborine (<i>Cephalanthera rubra</i>) | <ol style="list-style-type: none"> 1. Thinning of the young generation of trees and shrubs with additional removal of the obtained biomass – in the period from December to March, with thick snow cover. 2. Repeating treatment as necessary, at least once every 5 years. 3. Area covered by the treatment – 1.50 ha | Area covered by landscape protection |

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| 1.3 | Maintenance of a stretch of state border road of the Republic of Poland | Cutting of low growing tree branches, removal of young trees and shrubs as well as broken and fallen trees, on the length of 9.5 km (with partial utilisation of biomass) | Divisions – 111Ah, 111Ca, 136Ba, 136Da, 166Ba, 166Da, 197Ba, 197Da, 229Ba, 229Da, 260Ba, 260Da, 261Ba, 290Ba, 320Ba, 320Da, 346Ba, 346Da, 375Ba |
| 1.4 | Removing waste from forest ecosystems | Collection and removal of waste | Area covered by landscape protection |
| 2 | Protection of plant, animal and fungi species | | |
| 2.1 | Maintenance of mating sites of amphibians | Deepening the central part of water reservoirs which are the most important mating sites of amphibians within the area of the Park by 20 to 40 cm: 1) frequency of deepening – as needed, 2) removing trees and shrubs that continue to regrow on southern and western banks of tanks located in the area covered by active protection | Division 398 |
| 2.2 | Creation of winter habitats for amphibians | Raising stone mounds and leaving branches and tree trunks near mating sites – up to 14 winter habitats | Division 398 |
| 2.3 | Improvement in the living conditions of reptiles | Removal of self-seeding trees and shrubs around buildings in the settlement of Dziedzinka – every 3-5 years | Division 403d |
| 2.4 | Protection of sites of orchids (i.a., <i>Epipactis atrorubens</i> , <i>Cephalantera rubra</i> , <i>Dactylorhiza incarnata</i>) | Manual removal of shrubs and mowing of sites along with the removal of the obtained biomass | Area covered by landscape protection – as needed |
| 2.5 | Monitoring the population size of plant and animal species | 1) Winter tracing and driving (as needed): 2) counting shoots/specimens on permanent test surfaces, 3) trapping, 4) registering observation | Area covered by landscape protection |
| 2.6 | Recording occurrences of selected groups of plant, animal and fungi species in the area of the Park | Stock-taking conducted by employees of the Park and other persons, after training by specialists in selected taxonomic groups (as necessary) | Area covered by landscape protection |
| 2.7 | Preservation of endangered plant species by means of <i>ex situ</i> cultivation | Establishment of an <i>ex situ</i> cultivation of the most endangered plant species from seeds and vegetative organs obtained on the area of the Białowieża Primeval Forest – total cultivation area – up to 0.25 ha | Divisions – 403d, 403f, 398 |
| 2.8 | Running of the Wildlife Rehabilitation Centre | Creation and maintenance of the following infrastructure: building, corrals, roofing, coops, sites for performing medical and veterinary treatments, feeding stations, preventive treatment as well as medical and veterinary care (as needed) | Breeding reserve no. III and IV, divisions – 425C, 425D and 450B |
| 2.9 | Adjustment of the populations of animals in the European Bison Show | Adjustment of the populations of animals not covered species protection, kept in captivity | Breeding reserve no. III and IV, |

| | | | |
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| | Reserve | – harvesting or elimination according to expositional needs and resulting from the feeding capacity of enclosures | divisions – 425C, 425D and 450B |
| 2.10 | Removal of individual specimens and sites of exotic plant species | Cutting of exotic species of trees and removal of their regenerations: 1) Cutting and grubbing of shrubs of exotic species, 2) Manual mowing and grubbing of perennials of exotic species, 3) removal of the obtained biomass, 4) removal of regenerations of exotic species over the next years, 5) total area covered by the treatments – 2.12 ha | The area around the settlements of Dziejzinka, Divisions – 403d, 403f |
| 2.11 | Reduction in the number of the exotic species of – American Mink (<i>Neovison vison</i>) | Execution of ten-day harvesting sessions involving trapping twice a year from October to November and from February to March, with traps arranged 500 – 1000 m from each other along river banks. 1. Elimination of the caught animals outside the area of the Park | River valley covered by landscape protection |
| 2.12 | Monitoring and removal of exotic animal species | Supervision of the appearance of exotic species, monitoring their impact on the ecosystems of the Park, reduction in their numbers (as needed) | Area covered by landscape protection |
| 2.13 | Monitoring and removal of exotic plant species, in particular: 18) Northern Red Oak (<i>Quercus rubra</i> , 19) Red Elderberry (<i>Sambucus racemosa</i> , 20) Sycamore Maple (<i>Acer pseudoplatanus</i> , 21) Box Elder (<i>Acer negundo</i> , 22) Small Balsam (<i>Impatiens parviflora</i> , 23) Snowy Mespilus (<i>Amelanchier lamarckii</i> , 24) Quaking Grass Sedge (<i>Carex brizoides</i> , 25) Thicket Creeper (<i>Partenocissus inserta</i> , 26) Himalayan Balsam (<i>Impatiens glandulifera</i> , 27) Wild Privet (<i>Ligustrum vulgare</i> , 28) Large-leaved Lupine (<i>Lupinus polyphyllos</i> , 29) Rum Cherry (<i>Padus serotina</i> , 30) Giant Knotweed (<i>Reynourtia</i> spp., 31) Rugosa Rose (<i>Rosa rugosa</i> , 32) Goldenrod (<i>Solidago gigantea</i> , <i>S. canadensis</i> , 33) Confused Bridewort (<i>Spiraea × pseudosalicifolia</i> , 34) Western Redcedar (<i>Thuja plicata</i>) | 1. Supervision of exotic species – as needed. 2. Manual and mechanical removal of individual specimens and sites of occurrence of exotic species | Area covered by landscape protection |
| 3 | Protection of cultural heritage | | |

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| 3.1 | Rehabilitation and maintenance of the Palace Park layout | Mechanical mowing of meadows with additional removal of the obtained biomass – total area treatment - up to 12.65 ha | Palace Park, division 398a and 398b |
| | | Conducting of revitalisation works | Palace Park, division 398 |
| | | Maintenance of forest cover clusters through removal of dead, decaying, broken and fallen trees and the adjustment of the range of shrubland – removal of spontaneously emerging regenerations of trees and shrubs (as needed) | Palace Park, divisions – 398a, 398m, 398n, 398p |
| | | Overhaul of the bridge and roofing on the levee | Palace Park, divisions – 398a, 398l |
| | | Disassembly of old fencing of the Palace Park and construction of a new one within the distance of 2.5 km | Palace Park, division 398 |
| | | Protection and repairs of historic buildings (as needed) | Palace Park, divisions – 398g, 398h, 398i, 398k |
| 3.2 | Maintenance of in the settlement of Dziedzinka | Ongoing refurbishment and development | Divisions – 403d and 403f |
| 4 | Granting access to the Park | | |
| 4.1 | Maintenance of touristic and educational infrastructure related to the securing of the area and of objects under protection from destruction | Ongoing refurbishment and conservation of information boards, rest facilities, roofing, footbridges, shelters, benches, hedges, bonfires and other (as needed) | Area covered by landscape protection |
| 4.2 | Maintenance of tourist routes and paths | 1. Renewal of signposts, ongoing refurbishment of paths roads. 2. Minimisation of the effects of anthropogenic impact on the environment. 3. Other actions as necessary | Area covered by landscape protection |
| 4.3 | Maintenance and ongoing renewal of roads | Maintenance of road surfaces and roadside ditches, repairs of road culverts | Area covered by landscape protection |
| 4.4 | Removal of broken, fallen and dead trees | Removal of trees that pose a threat to human health and life and to the health and life of animals kept in captivity: 1) cutting of trees that block roads and transport routes located on the fencing of the Palace Park, 2) removal of biomass – as necessary | Area covered by landscape protection |
| 4.5 | Supportive stocking of ichthyofauna in ponds of the Palace Park | Stocking with indigenous species of juvenile fish originating in the basin of Narew depending on the needs resulting from the dynamics of qualitative and quantitative changes in the populations of fish | Division 398l |

2. Protective measures aimed at maintenance or restoration of a favourable conservation status of the objects under protection – obligatory tasks within the area of Nature 2000 PLC 200004 Białowieża Primeval Forest within the Park

| No. | Subject and objectives of protective | Protective measures, methods and scope | Location ¹ |
|-----|--------------------------------------|--|-----------------------|
|-----|--------------------------------------|--|-----------------------|

| | measures | of their execution | |
|---|--|---|--|
| 1 | Habitat maintenance 6230-4 ² Matgrass meadows and lawns of the <i>Nardetalia</i> order | Pasturing of farm animals or mechanical mowing of meadows once a year or once every two years in the area of up to 2.2 ha: 1) from July to August, 2) with partial collection of biomass and its removal or placing in a rick on site, 3) leaving 10-20% of unmowed vegetation | Division 104Aa, 104Ah |
| 2 | Shaping species diversity of communities 6510 ² on fresh meadows (<i>Arrhenatherion elatioris</i> | Mechanical mowing of meadows once a year or once every two years in the area of up to 14.2 ha: 1) from June to August, with additional collection and removal of biomass or its placing it in a rick on site, 2) possible local (point flattening of meadows (manual or mechanical through smoothing, 3) leaving 10-20% of unmowed vegetation | Divisions – 398Gl, 398Gr, 399Dc, 399Dj, 399Di |
| 3 | Shaping of the diversity of species in communities 6510 ² on fresh meadows (<i>Arrhenatherion elatioris</i> and 6230-4 ² , Matgrass grasslands form the <i>Nardetalia</i> order | Mechanical mowing of meadows once a year or once every two years in the area of up to 30 ha: 1) mowing from June to August, with additional collection and removal of biomass or its placing in a rick on site, in the case of Matgrass grasslands along with partial collection of biomass 2) possible local (point flattening of meadows (manual or mechanical through smoothing, 3) leaving 10-20% of unmowed vegetation, 4) mowing may be supported by pastruring | Divisions – 400Cc, 400Cg, 400Ck, 400Cn, 400Co, 400Dd, 400Db 400Dh, 401Ck, 401Cm |
| 4 | Management of the population of species 2647 ² the European Bison (<i>Bison bonasus</i> in the Białowieża Primeval Forest | 1. Supervision of the number and health of animals, handling of the wild herd, including preventive as well as medical and veterinary treatments, 3. Mitigation of conflicts arising from the presence of populations, including damage to agricultural crops: 1) deterrence (scaring, harvesting and displacement of specimens that persistently cause damage, 2) Educating society with regard to handling specimens, including education of farmers with regard to the methods of damage prevention | The species range of the European Bison (<i>Bison bonasus</i>) in the Białowieża National Park |

2) Natura 2000 code.

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|----|--|--|--|
| 5 | Maintenance and improvement to the feed base for species 2647 ² the European Bison (<i>Bison bonasus</i>) | Improvement of feeding conditions, removal of shrubs and maintenance of meadows, mowing and collection of plants from meadows for hay and haylage, winter feeding, distributing salt in mineral licks – as needed | The species range of the European Bison (<i>Bison bonasus</i>) from the Białowieża National Park |
| 6 | Maintenance of places designed for feeding of species 2647 ² European Bison (<i>Bison bonasus</i>) | Arrangement and disinfection of places designed for feeding, removal of feed remnants and excess faeces | The species range of the European Bison (<i>Bison bonasus</i>) from the Białowieża National Park |
| 7 | Restoration breeding of species 2647 ² the European Bison (<i>Bison bonasus</i>) | Maintenance of infrastructure used for breeding of the bison (<i>Bison bonasus</i>) – feeding racks, catching pens, roads, fences, buildings and breeding and agrotechnical treatments (as needed): 1) handling of breeding reserves, 2) cultivation of pastures with seeding of indigenous species and varieties of grasses as well as fertilisation with agricultural lime in the area of up to 35 ha, 3) planting of indigenous species of trees and shrubs, 4) hardening of feeding sites, 5) medical and veterinary treatments, improvement of animal dwelling conditions, 6) Adjustment of the populations size by means of eliminating and harvesting | The European Bison breeding reserves, divisions – 420B, 420C, 421A, 421B, 425C, 425D, 450B |
| 8 | Improvement in the genetic structure of species 2647 ² herd of the European Bison (<i>Bison bonasus</i>) bred in enclosed areas | Import and strengthening of specimens who do not carry infectious diseases and parasites which may constitute a threat to the European Bison bred in the wild and in enclosed areas with due observance of preventive measures concerning infectious diseases and parasites, of known origin to the European Bison Conservation Center (as needed) | Breeding reserves of the European Bison (<i>Bison bonasus</i>), divisions – 420B, 420C, 421A, 421B, 425C, 425D, 450B |
| 9 | Improvement in the genetic structure of species 2647 ² of the herd of the European Bison (<i>Bison bonasus</i>) | Strengthening of a wild herd with specimens born in the European Bison Conservation Centre and brought from other herds and breeding centres – as needed | The area of the Białowieża Primeval Forest |
| 10 | Protection of habitats 1065 ² of Marsh Fritillary (<i>Euphydryas aurinia</i>) | , permanent blocking of a draining ditch in order to reduce the outflow of waters | Area covered by active and landscape protection – as needed |
| 11 | Protection of the habitat 1065 ² of Marsh Fritillary (<i>Euphydryas aurinia</i>) | Manual mowing of meadows once a year or once every two years (treatments as needed): 1) treatments in September, | Area covered by active and landscape protection – as |

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| | | <p>with additional collection and removal of the obtained biomass,</p> <p>2) the need for location of caterpillar nests (<i>Euphydryas aurinia</i>) before mowing,</p> <p>3) removal of trees and shrubs that cover up the site</p> | needed |
| 12 | Protection of sites of occurrence of the species 1437 ² of Bractless Toadflax (<i>Thesium ebracteatum</i>) | <p>Removal of young of trees and shrubs from December to March, with thick snow cover:</p> <p>1) repetition as needed, but at least once every 5 years,</p> <p>2) area covered by the treatment – 0.1 ha</p> | Area covered by active and landscape protection – as needed |
| 13 | Protection of the species range of the species 1477 ² Eastern Pasque Flower (<i>Pulsatilla patens</i>) | <p>Manual cutting of shrubs and mowing of the site with additional removal of the obtained biomass:</p> <p>1) spot thinning of forest stand,</p> <p>2) treatment carried out as necessary</p> | Area covered by active and landscape protection – as needed |

METHODS OF THE CONSERVATION STATUS OF NATURAL HABITATS OR SPECIES OF PLANTS AND ANIMALS AND THEIR HABITATS, WITHIN THE FRAMEWORK OF NATURA 2000 PLC 200004 BIAŁOWIEŻA PRIMEVAL FOREST IN THE AREA LOCATED IN THE PARK

1. Methods of monitoring the conservation status of natural habitats which are under the protection of Natura 2000 PLC 200004 Białowieża Primeval Forest within the boundaries of the Park

| No. | Subject of protection | Natura 2000 code | Monitored parameter/index of monitoring | Type of surface | Frequency of control | Method and scope of monitoring |
|-----|--|------------------|---|---|----------------------|--|
| 1 | Matgrass grasslands from the <i>Nardetalia</i> order | 6230-4 | Habitat area and number of patches | Non-forest ecosystems on poor sand soils | Once a year | Phytosociological photos on permanent surfaces, analysis of the sites of occurrence of rare species of plants and estimated assessment of their numbers in phytocoenoses |
| | | | | | Every 6 years | Mapping and assessment of the conservation of grasslands on permanent surfaces in accordance with the methodology of the Chief Inspectorate of Environmental Protection ¹²⁾ |
| 2 | Fresh extensively used meadows (<i>Arrhenatherion elatioris</i>) | 6510 | Extensively used fresh meadows | Non-forest ecosystems in fresh habitats | Every 6 years | Evaluation of the state of habitats on permanent surfaces in accordance with the methodology of the Chief Inspectorate of Environmental Protection ¹³⁾ |
| 3 | Subcontinental oak-hornbeam forest (<i>Tilio-Carpinetum</i>) | 9170-2 | Habitat area | Forest ecosystems in fertile habitats with different degree of moisture content | Every 6 years | Supervision of permanent surfaces in accordance with the methodology of the Chief Inspectorate of Environmental Protection ¹³⁾ |
| 4 | Coniferous pine bog forest (<i>Vaccinio uliginosi - Pinetum</i>) | 91D0-2 | Habitat area | Forest ecosystems on raised peats | Every 6 years | Supervision of permanent surfaces in accordance with the methodology of the Chief Inspectorate of Environmental Protection ¹²⁾ |

¹²⁾ Mróz W. (ed.) 2010. Monitoring siedlisk przyrodniczych. Przewodnik metodyczny. Część I. GIOŚ, Warszawa.

¹³⁾ Mróz W. (ed.) 2012. Monitoring siedlisk przyrodniczych. Przewodnik metodyczny. Część III. GIOŚ, Warszawa.

| No. | Subject of protection | Natura 2000 code | Monitored parameter/index of monitoring | Type of surface | Frequency of control | Method and scope of monitoring |
|-----|---|------------------|---|--|----------------------|---|
| 5 | Boreal spruce bog forest (<i>Sphagno girgensohnii-Piceetum</i>) | 91D0-5 | Habitat area | Forest ecosystems on transitional peats | Every 6 years | Supervision of permanent surfaces in accordance with the methodology of the Chief Inspectorate of Environmental Protection ¹²⁾ |
| 6 | Subboreal birch bog forest (<i>D ryopteridi thelypteridis –Betuletum pubescentis</i>) | 91D0-6 | Habitat area | Forest ecosystems on transitional peats | Every 6 years | Supervision of permanent surfaces in accordance with the methodology of the Chief Inspectorate of Environmental Protection ¹²⁾ |
| 7 | Alder-ash marshy meadow (<i>Fraxino-Alnetum</i>) | 91E0-3 | Habitat area | Forest ecosystems on mineral, periodically flooded soils | Every 6 years | Supervision of permanent surfaces in accordance with the methodology of the Chief Inspectorate of Environmental Protection ¹²⁾ |

2. Methods of monitoring the conservation status of bird species included in Appendix I to the Council Directive 2009/147/EC, as well as species of animals and plants listed in Appendix II to the Council Directive 92/43/EEC and their habitats which are under the protection of Natura 2000 PLC 200004 for Białowieża Primeval Forest within the boundaries of the Park

| No. | Subject of protection | Natura 2000 code | Monitoring index | Habitat | Type of surface | Frequency of control | Number of controls | Control dates | | Method and scope of monitoring |
|-----|--|------------------|---|---|--|----------------------|--------------------|---------------|------------------------|---|
| | | | | | | | | I | II | |
| 1 | Black stork (<i>Ciconia nigra</i>) | A030 | Number of occupied nests and successful breeding | Old oak-hornbeam and riparian forests, old growth forests | Known sites and the whole area of the Park | Once a year | 2 | May | The first half of July | 1. Control 1 – occupation of nests. 2. Control 2 – successful breeding |
| 2 | Honey Buzzard (<i>Pernis apivorus</i>) | A072 | Number of occupied areas and successful breeding expressed by the | Deciduous forests | Known sites and the whole area of the Park | Every 3 years | 2 | June | July – August | 1. Control 1 – number of pairs that show breeding behaviour. 2. Control 2 – observation of pairs |

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| | | | number of nests with the young | | | | | | | that feed the young |
| 3 | Stock Dove (<i>Columba oenas</i>) | A207 | Number of occupied areas | Deciduous tree stands with large percentage of dead wood | Deciduous forests | Every 3 years | 2 | 1-15 April | 16 April -30 April | Any confirmed sites of Stock Dove and Black Woodpecker registered on the basis of male mating calls |
| 4 | Lesser Spotted Eagle (<i>Aquila pomarina</i>) | A089 | Number of occupied areas and number of mating pairs | Forests with old large trees and non-forest ecosystems neighboring with forests | The whole area the Park | Every year | 2 | The turn of April and May | May – July | 1. Control 1 – counting of tooting pairs. 2. Control 2 – observation of carrying pray to nests |
| 5 | Hazel Grouse (<i>Bonasa bonasia</i>) | A104 | Number of males | Woodlands and coniferous forests with well developed multi-species undergrowth | Forest ecosystems | Every 3 years | 3 | Beginning of April | - | Counting of males responding to voice stimuli along 3 transects, in observation points arranged every 500 m, reflecting the habitat variability of woodland ecosystems |
| 6 | Spotted Crake (<i>Porzana porzana</i>) | A119 | Number of territorial males | Small, overgrown water holes in river valleys | Open river valleys | Every 3 years | 2 | The turn of April and May | The turn of May June | Control counting of males responding to voice stimuli in transects arranged along the Narewka river valley |
| 7 | Corn Crake (<i>Crex crex</i>) | A122 | Number of calling males | Extensive meadows and mud sedges | Non-forest ecosystems of the Park covered in meadow | Every 3 years | 2 | The turn of and May June | End of June | Evening counting of calling territorial males in dry weather conditions |
| 8 | Crane (<i>Grus grus</i>) | A127 | Number of territorial pairs | Alder bog forests, willow scrubs, with existing terrestrialisation, floodings and ponds | Alder forests and intensely hydrated non-forest ecosystems, especially watercourse valleys | Every 3 years | 1 | End of March and April | - | Counted by means of listening of calling pairs at dawn, conducted in dry weather conditions |

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| 9 | Eurasian Pygmy Owl (<i>Glaucidium passerinum</i>) | A217 | Number of territorial males | Mature tree stands with large percentage of spruce trees (<i>Picea abies</i>) | Fresh and damp coniferous forests, fresh and damp mixed coniferous forests, mixed forests with high percentage of old, spruces (<i>Picea abies</i>) | Every 3 years | 1 | April | - | Counting of males responding to voice stimuli on transects running along Potential habitats of the Eurasian Pygmy-owl immediately after dusk or before dawn. Points of voice stimulation every 500 m |
| 10 | Boreal Owl (<i>Aegolius funereus</i>) | A223 | Number of territorial males | Mature tree stands with large percentage of spruce trees (<i>Picea abies</i>) | Fresh coniferous forests, mixed fresh coniferous forests, mixed fresh forests with high percentage of old spruces (<i>Picea abies</i>) | Every 3 years | 2 | 25 March -10 April | 15-30 April | Counting of males responding to voice stimuli on transects running along potential habitats of the Tengmalm's Owl immediately after dusk or before dawn. Points of voice stimulation every 500 m |
| 11 | European Nightjar (<i>Caprimulgus europaeus</i>) | A224 | Number of territorial males | Clearings and borders of fresh coniferous forests and mixed fresh coniferous forests | Open spaces in coniferous and mixed coniferous forest habitats | Every 3 years | 2 | 1-20 June | 1-20 July | Nocturnal counting of males responding to voice stimuli in potential habitats of the European Nightjar |
| 12 | Barred Warbler (<i>Sylvia nisoria</i>) | A307 | Number of territorial males | Extensive meadows and mud sedges | Non-forest ecosystems of the Park covered in meadow vegetation and shrubs | Every 3 years | 2 | 20-30 May | 5-15 June | Counting of males responding to voice stimuli along transects |
| 13 | Grey-faced Woodpecker (<i>Picus canus</i>) | A234 | Number of males that show territorial behaviour, availability of | Deciduous tree stands with large percentage of dead wood | Deciduous forests | Every 3 years | 2 | 20 March-10 April | 10-30 April | Counting of calling males and males responding to voice stimuli along 3 transects passing through the area |

| | | | | | | | | | | |
|----|---|------|--|--|-------------------|---------------|-----|---|-------------|---|
| | | | decaying and dead trees | | | | | | | of the whole Park, points of voice stimulation every 500 m. estimation of the percentage of dead and decaying trees in places of bird counting |
| 14 | Black Woodpecker (<i>Dryocopus martius</i>) | A236 | Number of males that show territorial behaviour, availability of decaying and dead trees | Deciduous tree stands with high percentage of dead trees | Deciduous forests | Every 3 years | 2 | 20 March-10 April | 10-30 April | Counting of picking or calling males and males responding to voice stimuli along 3 transects passing through the area of the whole Park with points of voice stimulation arranged every 500 m. Estimation of the percentage of dead and decaying trees in places of bird counting |
| 15 | Middle spotted woodpecker (<i>Dendrocopos medius</i>) | A238 | Number of nesting birds | Tree stands with old oaks (<i>Quercus robur</i> , <i>Quercus petrae</i>) | Forest ecosystems | Every 3 years | 5-8 | April | - | Estimation of the populations of species by means of mapping places of male calls and calls of birds during several (5-8) weekly controls in the area of 20-25 ha of test surfaces including oak-hornbeam forests, riparian forests, alder forests, coniferous forests |
| 16 | White-backed Woodpecker (<i>Dendrocopos leucotos</i>) | A239 | Number of males that show territorial behaviour, availability of | Deciduous tree stands with large percentage of dead wood | Deciduous forests | Every 3 years | 1 | Second half of March/ first half of April | - | Counting of picking or calling males and males responding to voice stimuli along 3 transects passing through the area |

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|----|--|------|---|--|-------------------------------|---------------|-----|-------------------|---|---|
| | | | decaying and dead trees | | | | | | | of the whole Park, points of voice stimulation every 500 m. Estimation of the percentage of dead and decaying trees in places of bird counting |
| 17 | Eurasian Three-toed Woodpecker (<i>Picoides tridactylus</i>) | A241 | Number of males that show territorial behaviour, availability of decaying and dead spruces (<i>Picea abies</i>) | Tree stands with spruce trees (<i>Picea abies</i>) | Forest ecosystems in the Park | Every 3 years | 2 | April | - | Counting of picking or calling males and males responding to voice stimuli along 3 transects passing through the area of the whole Park; points of voice stimulation distributed every 500 m. Estimation of the percentage of dead spruces in places of bird counting |
| 18 | Red-breasted Flycatcher (<i>Ficedula parva</i>) | A320 | Number of nesting birds | Tree stands with high percentage of trees with pigeonholes | Forest ecosystems | Once a year | 5-8 | End of May – June | - | Estimation of the populations of species by means of mapping, sites of singing males during several (5-8) weekly controls in the area of 20-25 ha of test surfaces including oak-hornbeam forests, riparian forests, alder forests, coniferous forests |
| 19 | Collared Flycatcher (<i>Ficedula albicollis</i>) | A321 | Number of nesting birds | Tree stands with high percentage of trees with pigeonholes | Forest ecosystems | Once a year | 5-8 | May | - | Estimation of the populations of species by means of mapping (marking sites of singing males and the location of nests during several (5- |

| | | | | | | | | | | |
|----|---|------|-------------------------------|-------------------------------------|---|---------------|---|---------------------------------------|---------------------|---|
| | | | | | | | | | | 8) weekly controls in the area of 20-25 ha of test surfaces including oak-hornbeam forests, riparian forests, alder forests, coniferous forests |
| 20 | Red-backed Shrike (<i>Lanius collurio</i>) | A338 | Number of pairs | Extensive meadows and mud sedges | Non-forest ecosystems of the Park covered in meadow vegetation and shrubs | Every 3 years | 3 | Second half of May and the end of May | Second half of June | Counting of nesting pairs |
| 21 | Eurasian Woodcock (<i>Scopolax rusticola</i>) | A155 | Number of tooting males | | Borders of alder forests and moist oak-hornbeam forests | Every 6 years | 1 | May | - | Counting of tooting males immediately after dusk |
| 22 | Green Sandpiper (<i>Tringa ochropus</i>) | A165 | Number of nesting pairs | Moist and flooded forest ecosystems | Alder bog forests, riparian forests, moist oak-hornbeam forests | Every 6 years | 1 | The turn of and May June | - | Counting of nesting pairs along transects crossing potential habitats of |
| 23 | Barbastelle (<i>Barbastella barbastellus</i>) | 1308 | Number of wintering specimens | Basements | Known and potential overwintering sites | Once a year | 1 | Winter | - | Checks on the populations of in selected shelters, determination of the degree of their availability, protection against disturbances and control of microclimatic conditions of these wintering spots. |
| 24 | Eurasian Beaver (<i>Castor fiber</i>) | 1337 | Number of families | Watercourses | Area of the Park | Once a year | 1 | October – November | - | Stock-taking of food storages, lodges and burrows of beavers |
| 25 | Meat grinder (<i>Canis Lupus</i>) | 1352 | Number of specimens | Forest and non-forest ecosystems | Area of the Park | Once a year | 1 | Winter | - | Stock-taking of the population size by means of counting trails left on |

| | | | | | | | | | | |
|----|--|------|--|---|-----------------------------------|---------------|---|--------------------|---------------------|--|
| | | | | | | | | | | snow |
| 26 | Otter (<i>Lutra lutra</i>) | 1355 | Number of specimens | Watercourse valleys | Area of the Park | Every 3 years | 1 | Winter | - | Stock-taking of the population size by means of counting trails left on snow |
| 27 | Lynx (<i>Lynx lynx</i>) | 1361 | Number of specimens | Forest ecosystems | Area of the Park | Once a year | 2 | All year | Winter | <ol style="list-style-type: none"> Control 1 – recording animal observation. Control 2 – Winter tracking |
| 28 | European Bison (<i>Bison bonasus</i>) | 2647 | Population size, health and shape of specimens | Forest ecosystems and non-forest ecosystems | Area of the Park | Once a year | 1 | Winter | | <ol style="list-style-type: none"> Counting near places designed for feeding allowing for specimens that do not take advantage of additional feeding Veterinary sections of the eliminated and dead specimens followed by an assessment of the extensiveness and intensity of parasitic invasion |
| 29 | Great Crested Newt (<i>Triturus cristatus</i>) | 1166 | Number of observed adult individuals/larvae | Shallow water reservoirs | Water tanks | Once a year | 2 | First half of June | Second half of July | Counting of larvae and young individuals in water tanks preceded by harvesting with the use of a net |
| 30 | Narrow-mouthed Whorl Snail (<i>Vertigo angustior</i>) | 1014 | Densification of specimens per one square meter of sites | Unused, well-hydrated mud sedges | Mud sedges with large sedge tufts | Once a year | 1 | June | - | Counting of specimens on site, on randomly selected test surfaces |
| 31 | Desmoulin's Whorl Snail (<i>Vertigo</i>) | 1016 | Densification of specimens per one square meter of | Unused well hydrated mud sedges | Mud sedges with large sedge tufts | Once a year | 1 | June | - | Counting of specimens on site on a randomly selected test surfaces |

| | | | | | | | | | | |
|----|---|------|---|---|---|---------------|---|--------------------------|-----------|--|
| | <i>moulinsiana</i>) | | sites | | | | | | | |
| 32 | Large Copper (<i>Lycaena dispar</i>) | 1060 | Number of adult individuals observed on transects | Moist meadows with docks (<i>Rumex Sp</i>) | Moist meadows, fens | Once a year | 2 | June | July | In accordance with the monitoring guidelines prepared by the Chief Inspectorate of Environmental Protection |
| 33 | Marsh Fritillary (<i>Euphydryas aurinia</i>) | 1065 | Number of adult individuals on site, number of caterpillar nests on site | Meadows of variable moisture content with Devil's-bit (<i>Succisa pratense</i>) | Extensively used meadows of variable moisture content | Once a year | 2 | June | September | 1. Counting of adult individuals on site in June. 2. Searching and counting of larvae nests in September |
| 34 | Hermit Beetle (<i>Osmoderma bamabita</i>) | 1084 | Number of populated trees | Old deciduous trees with hollows with well-developed rotten wood microhabitat | Old deciduous forests with hollowed trees | Every 3 years | 1 | July – August | - | Counting of populated trees on the basis of the presence of larvae faeces – twice every 1-2 weeks |
| 35 | Goldstreifiger (<i>Buprestis splendens</i>) | 1085 | Number of observed adult individuals, the acreage occupied by old pine tree stands | 1. Old pine (<i>Pinus sylvestris</i>), often with side necrosis. 2. Declining pine trees | Old pine forests | Every 6 years | 1 | June – July | - | 1. Collection of data concerning the presence of adult specimens. 2. Checking attics and other rooms made of wood. 3. Ongoing supervision of the acreage of old pine tree stands |
| 36 | Flat Bark Beetle (<i>Cucujus cinnaberinus</i>) | 1086 | Number of observed adult individuals and larvae, quantity of standing and fallen dead trees | Dead Oaks (<i>Quercus robur</i> , <i>Quercus petrae</i>), Maples (<i>Acer platanoides</i>), Goat Willows (<i>Salix caprea</i>), Ashes | Old moist deciduous and mixed forests with high quantity of dead wood | Every 6 years | 1 | In the vegetative period | - | Collection of data concerning the presence of adult specimens stock-taking of the quantity of dead wood |

| | | | | | | | | | | |
|----|--|------|--|---|--|---------------|---|--------------------------|---|---|
| | | | | (<i>Fraxinus excelsior</i>), Elms (<i>Ulmus Sp</i>), Pines (<i>Pinus sylvestris</i>) with bark | | | | | | |
| 37 | <i>Boros schneideri</i> | 1920 | Number of observed adult individuals and larvae, number of old, decaying and dead pines, oaks, spruces, alders | Dead old Pines (<i>Pinus sylvestris</i>), Oaks (<i>Quercus robur</i> , <i>Quercus petrae</i>), Spruces (<i>Picea abies</i>) and Alders (<i>Alnus glutinosa</i>) in bark | Old fresh coniferous forests, moist coniferous forests, mixed fresh coniferous forests and moist deciduous forests with high quantity of dead wood | Every 6 years | 1 | In the vegetative period | - | 1. Collection of data concerning the presence of adult specimens. 2. Stock-taking of the quantity of dead wood |
| 38 | <i>Pytho kolwensi</i> | 1925 | Number of observed adult individuals, number of dead, fallen thick spruces | Thick dead European Spruces (<i>Picea abies</i>) in humid deciduous and riparian forests | Old deciduous forests and riparian forests with thick dead spruces (<i>Picea abies</i>) | Every 6 years | 1 | - | - | 1. Collection of data concerning the presence of adult specimens. 2. Stock-taking of the quantity of dead spruce wood, |
| 39 | False Darkling Beetle (<i>Phryganophilus ruficollis</i>) | 4021 | Number of observed adult individuals, quantity of dead spruce, birch and oak wood in advanced stage of decomposition | Dead Spruce <i>Picea abies</i> Birch (<i>Betula Sp</i>) and Oak wood (<i>Quercus robur</i> , <i>Quercus petrae</i>) oaks covered in mycelium of fungi causing white rot | Old deciduous and mixed forests with high quantity of dead wood | Every 3 years | 1 | - | - | 1. Collection of data concerning the presence of adult specimens. 2. Stock-taking of the quantity of dead wood |
| 40 | Wrinkled Bark Beetle (<i>Rhysodes sulcatus</i>) | 4026 | Number of observed adult individuals, quantity of standing and fallen dead trees | Dead Aspen (<i>Populus tremula</i>), Spruces (<i>Picea abies</i>), Birches (<i>Betula Sp</i>), Oaks (<i>Quercus robur</i> , | Deciduous and mixed forests | Every 3 years | 1 | - | - | 1. Collection of data concerning the presence of adult specimens. 2. Stock-taking of the quantity of dead |

| | | | | | | | | | | |
|----|---|------|--|---|--|----------------|---|-------------|---|---|
| | | | | <i>Quercus petrae)</i> and Maples (<i>Acer platanoides)</i> | | | | | | wood |
| 41 | Bractless Toadflax (<i>Thesium ebracteatum</i>) | 1437 | Number of sites, total number of shoots and number of plants for propagation (generative shoots) | insolated edges of mixed and coniferous forests | Mixed and coniferous forests | Once a year | 1 | May | - | 1. Searching for new sites of species occurrence. 2. Counting of the total number of shoots and flowering shoots |
| 42 | Eastern Pasqueflower (<i>Pulsatilla patens</i>) | 1477 | Number of sites, total number of shoots and number of generative shoots | Edges of fresh coniferous forests, strongly insolated places | Fresh coniferous forests with low density of forest stand | Once a year | 1 | April | - | 1. Searching for new sites of species occurrence. 2. Counting of the total number of shoots and flowering shoots |
| 43 | Hairy Agrimony (<i>Agrimonia pilosa</i>) | 1939 | Number of sites, total number of shoots and number of generative shoots | Moist roadsides, edges of moist oak- hornbeam forests and riparian forests with ash and alder | Deciduous and mixed forests | Once a year | 1 | June – July | - | 1. Searching for new sites of species occurrence. 2. Counting of the total number of shoots and flowering shoots |

ARRANGEMENTS CONCERNING STUDIES OF CONDITIONS AND DIRECTIONS OF SPATIAL MANAGEMENT OF GMINAS, LOCAL SPATIAL DEVELOPMENT PLANS, SPATIAL DEVELOPMENT PLANS FOR THE PODLASKIE VOIVODESHIP, RELATING TO THE ELIMINATION OR REDUCTION IN EXTERNAL HAZARDS AND NECESSARY FOR THE MAINTENANCE OR RESTORATION OF A FAVOURABLE CONSERVATION STATUS OF NATURAL HABITATS AND PLANT AND ANIMAL SPECIES, FOR WHICH THE DESIGNATED PROTECTION AREA UNDER NATURA 2000 PLC 20004 IS THE BIAŁOWIEŻA PRIMEVAL FOREST

The following arrangements are introduced when it comes to studies of conditions and directions of spatial development for gminas – Białowieża and Narewka, local spatial development plans, spatial development plans for the podlaskie voivodeship relating to the elimination or reduction in external hazards:

- 1 with respect to maintaining the necessary green corridors connecting the National Park with the Natura 2000 area, as well as these two areas together with their surroundings in the system of superregional environmental relations, the following arrangements are agreed on:
 - a) delineation of green corridors of local importance:
 - Białowieża – northern, southern and western corridor,
 - Pogorzelce – northern and southern corridor,
 - Masiewo – eastern and western corridor.

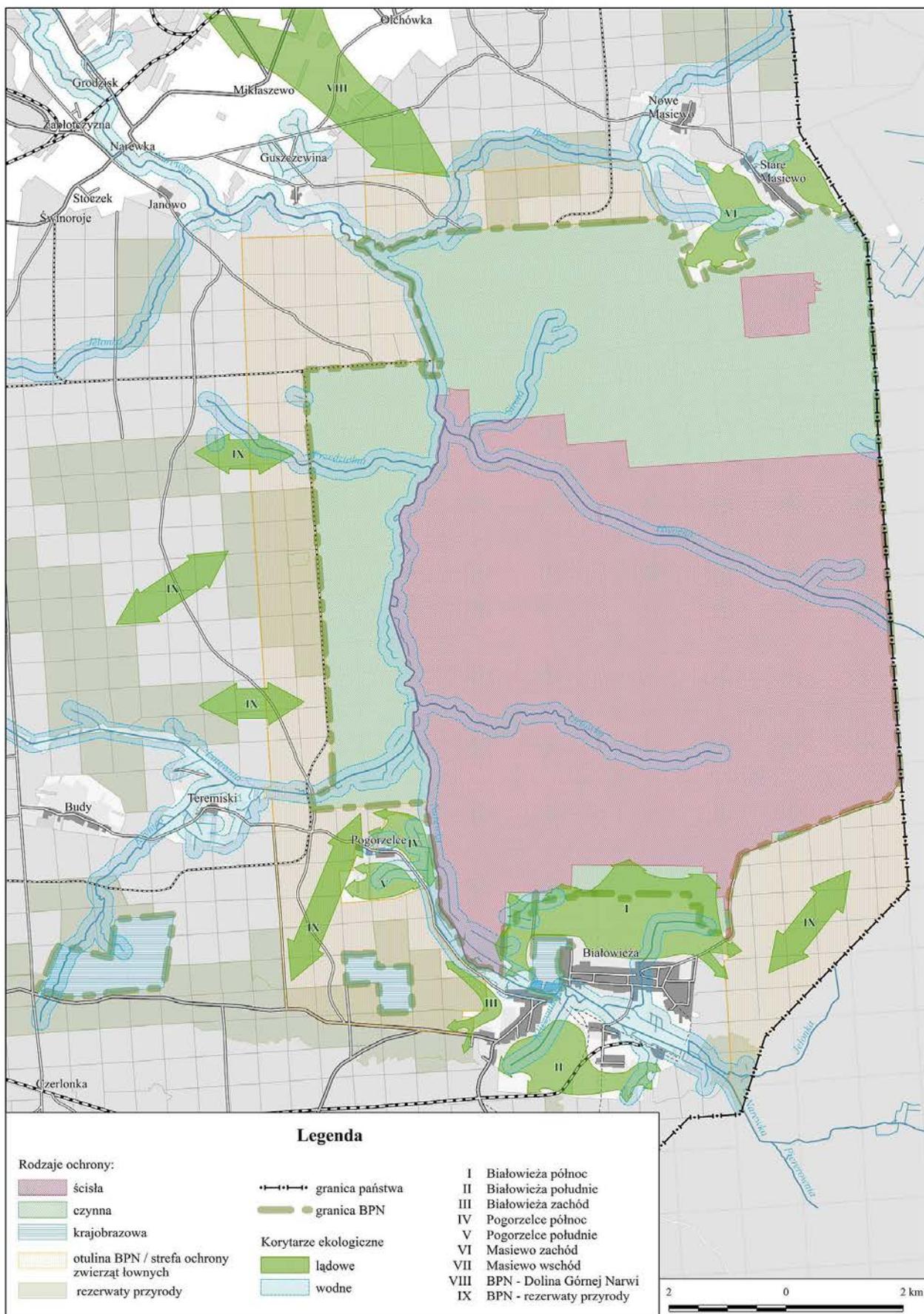
The map illustrating green corridors of local importance is presented in the figure below.

- b) it has been proposed to establish forest green corridors connecting the Białowieża Primeval Forest with the Knyszyńska Primeval Forest with the intersection of the valley of Narew between the Siemianówka water tank and the state border and with the intersection of the valley of Narew on the level of the Ładzka Forest,
 - c) creation of a forest green corridor connecting the Białowieża Primeval Forest with the Mielnik Primeval Forest,
 - d) it is recommended to design new and maintain the existing facilities of transport infrastructure to ensure migration of amphibians;
- 2 with regard to hydrographic conditions and water management – it is suggested to maintain water extraction at gmina intakes to the extent needed for securing the reproduction of underground water resources;
- 3 with regard to agriculture and forestry, it is suggested to:
 - a) exempt gmina Białowieża from afforestation and maintain extensive agricultural or meadow infrastructure record parcels located on both sides of the road between the Palace Park and the protective area of the Reserve on the width of 400 m on each side,
 - b) promote breeding of the bison (*Bison bonasus*; in the area of Podlasie voivodeship)
- 4 suggestions with regard to specific conditions of land development and the necessary restrictions in its use:
 - a) in gmina Narewka construction is allowed within the area of the Stare Masiewo village units on the width of 200 m on both sides of road no. 1654B excluding a 100 m radius from the northern border of the Park,
 - b) exemption of areas located to the west of the Palace Park and to the north of Żubrowa and Paczoskiego streets, east of Puszczańska street and north of Kamienne Bagno street and Droga Browka from development in gmina Białowieża, including the development of farming facilities,
 - c) exemption of the areas located between the river Narewka and the road between Białowieża and Pogorzelce from development in gmina Białowieża, including the development of farming facilities,
 - d) protection of major viewing axes over the Narewka river valley and the area of strict protection (in the foreground of the Park in the area of the road between Białowieża and Pogorzelce against development and afforestation; protection of the observation point

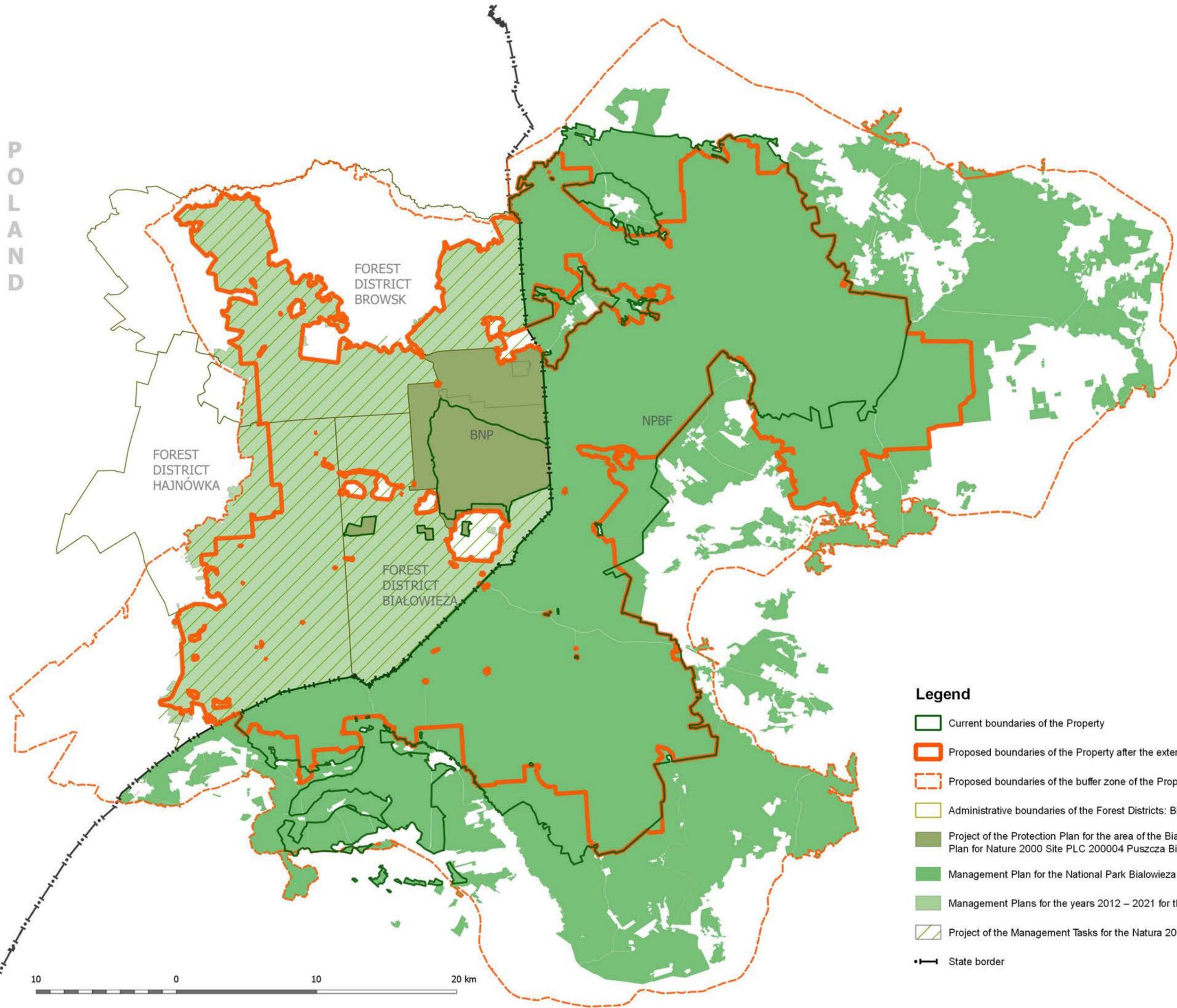
overlooking the area of strict protection of the Park from the north and western corner of the Palace Park in Białowieża and of major viewing axes in the north overlooking the Park from the line marked by Żubrowa and Paczoskiego streets in Białowieża against development and afforestation,

- e) removal of the overhead power line running to the north and west of the Palace Park in Białowieża and along the road between Białowieża and Pogorzelce,
 - f) maintenance of bicycle and pedestrian border crossing with Belarus between Białowieża and Piererow,
 - g) location of new residential housing areas in Białowieża and Pogorzelce (in the Białowieża gmina and in Nowe Masiewo, Stare Masiewo and Zamosze (in the Narewka gmina in the immediate vicinity of the present development, taking into account the historical system of settlement units and the specific nature of the gminas,
 - h) preservation of traditional architectonic elements in the housing of gminas – Białowieża and Narewka, including: the maximum height for buildings up to 2 floors, with the second floor constituting a utilised attic, the maximum height of the ground floor above ground up to 0.65 m, symmetric gable roof with equal surfaces and inclination angles ranging from 43° to 45° and the maximum height of the roof ridge of 8.0 m from the ground level,
 - i) striving for protection and exposure of heritage and natural resources as priority values for the protection of the Białowieża Primeval Forest,
 - j) creation of quiet areas within the area of the Białowieża Primeval Forest and its buffer zone.
- 5 with regard to the protection of water and soil:
- a) striving for equipping all settlement units in the gminas – Białowieża and Narewka with environmental protection infrastructure, and in particular with local or collective sanitary drainage networks, local systems for initial treatment of rainfall water extracted from transport and industrial areas (roads, car parks, tourist facilities and other hard surfaces,
 - b) removal and its rehabilitation of inactive landfills within the gmina of Białowieża;
- 6 with regard to air protection – promotion of low carbon emission heating technologies and technical solutions allowing the use of renewable energy sources in the area of the Park and the Białowieża Primeval Forest.

Fig. Green corridors of local importance



THE PROPOSITION OF EXTENSION OF THE WORLD HERITAGE SITE BIALOWIEZA FOREST (MANAGEMENT PLANS)



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Legend

- Current boundaries of the Property
- Proposed boundaries of the Property after the extension
- Proposed boundaries of the buffer zone of the Property
- Administrative boundaries of the Forest Districts: Białowieża, Browsk, Hajnówka
- Project of the Protection Plan for the area of the Białowieża National Park (including Protection Plan for Natura 2000 Site PLC 200004 Puszcza Białowieńska) - BNP
- Management Plan for the National Park Białowieża Forest - NPBF
- Management Plans for the years 2012 – 2021 for the Forest Districts: Białowieża, Browsk, Hajnówka
- Project of the Management Tasks for the Natura 2000 Site PLC200004 Puszcza Białowieńska
- State border



Management plans and documents:

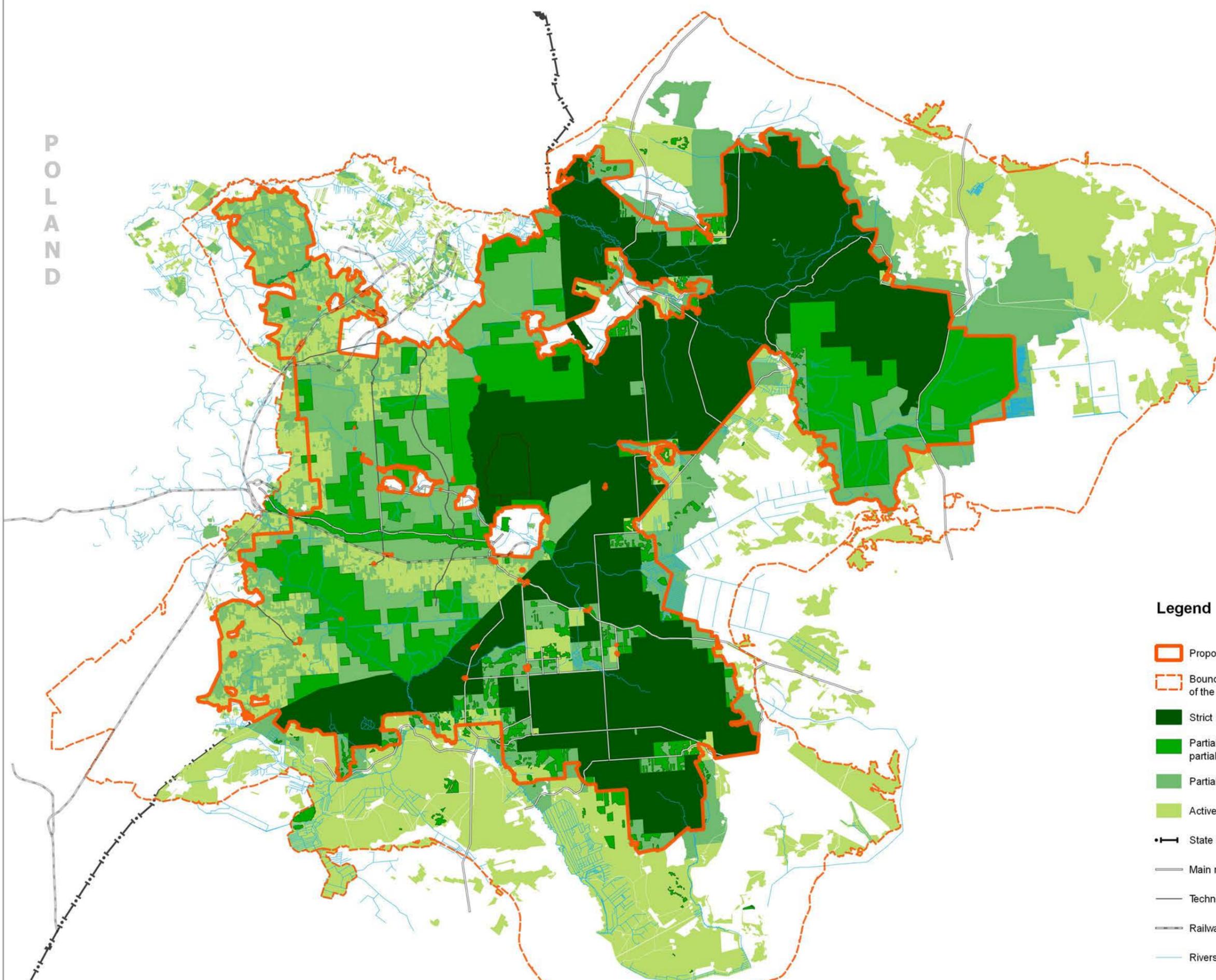
| Document | Managing authority | Relevant area | Accepted by | Time period | Remarks |
|---|---|--|---|-------------|--|
| Protection plan for the Bialowieza National Park (PL) | Director of the Bialowieza National Park | Bialowieza National Park (BNP) | Minister of the Environment | 2014 - 2035 | After the first round of public consultations; at present at law department of the Ministry of the Environment; to be signed in the first half of 2014 after the second round of public consultations. The plan takes into account all recommendations of Natura 2000 Directives. |
| Management tasks for the Natura 2000 Site (PL) | Regional Directorate of the Environment Protection, Head foresters of forest divisions: Bialowieza, Browsk, Hajnówka. | Natura 2000 area (PLC200004). See the map "Protection regimes in the Bialowieza Forest" except for the BNP | Regional Directorate of the Environment Protection in Białystok | 2014 - 2019 | After public consultations; to be signed in the second half of 2014, after the management plan for the Bialowieza National Park is accepted by the Minister of the Environment. The plan does not include the territory of the Bialowieza National Park. The requirements of Natura 2000 are included into the management plan of the Park. |
| Management Plan for the State Forests Administrative Units: Białowieża, Browsk, Hajnówka (PL) | Head foresters of forest divisions: Bialowieza, Browsk, Hajnówka. | Forest divisions: Bialowieza, Browsk, Hajnówka. | Minister of the Environment | 2012 - 2021 | In force The document takes into account requirements of Natura 2000 and includes the activities foreseen by the project of Management tasks for the Natura 2000 Site. |
| Management Plan for the National Park "Bialowieza Forest" (BY) | Director of the National Park "Bialowieza Forest" | National Park "Bialowieza Forest" | Minister of Natural Resources and Environmental Protection Head of the Department of Presidential Affairs of the Republic of Belarus | 2008 - 2017 | In force |

THE PROPOSITION OF EXTENSION OF THE WORLD HERITAGE SITE BIALOWIEZA FOREST (STATUS OF PROTECTION)



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Legend

- Proposed boundaries of the Property after the extension
- Boundaries of the Biosphere Reserve and Proposed buffer zone of the World Heritage Site Bialowieza Forest
- Strict Protection
- Partial protection I - forests excluded from use (nature reserve, partial protection in the boundaries of the national parks)
- Partial protection II - other forests excluded from use
- Active protection of biodiversity and landscape
- State border
- Main roads
- Technical roads
- Railway line
- Rivers and other waters

10 0 10 20 km



**INFRASTRUKTURA
I ŚRODOWISKO**
NARODOWA STRATEGIA SPÓJNOŚCI



GENERALNA
DYREKCJA
OCHRONY
ŚRODOWISKA



UNIA EUROPEJSKA
EUROPEJSKI FUNDUSZ
ROZWOJU REGIONALNEGO



**BIAŁOWIEŻSKI PARK NARODOWY
REGIONALNA DYREKCJA OCHRONY ŚRODOWISKA W BIAŁYMSTOKU**

PROJEKT PLANU ZADAŃ OCHRONNYCH OBSZARU NATURA 2000

PUSZCZA BIAŁOWIEŻSKA PLC 200004

- wyciąg z dokumentu wg stanu na 20 lutego 2014

1.2 Ustalenie terenu objętego Planem.

| L.p. | Nazwa krajowej formy ochrony przyrody pokrywającej się z obszarem | Dokument planistyczny | Uzasadnienie wyłączenia części terenu ze sporządzania PZO | Procent powierzchni obszaru pokryty istniejącym dokumentem planistycznym |
|------|--|---|--|--|
| 1 | Białowieżski Park Narodowy | Zarządzenie Nr 20 Ministra Środowiska z dnia 20 grudnia 2010 roku w sprawie zadań ochronnych dla Białowieżskiego Parku Narodowego na 2011 rok Projekt Planu Ochrony Białowieżskiego Parku Narodowego | Nie zachodzą przesłanki określone w art. 28 ust. 11 ustawy o ochronie przyrody Białowieżski Park Narodowy (BPN) zostaje wyłączony z opracowania niniejszego PZO. Ministerstwo Środowiska jest w trakcie przygotowywania projektu rozporządzenia Ministra Środowiska w sprawie Planu Ochrony dla BPN. Wykonawca otrzymał z Ministerstwa Środowiska w piśmie DOPpn-4102-273/15223/11/TP jednoznaczne wytyczne o nie obejmowaniu obszaru BPN Planem Zadań Ochronnych | 16,7 16,7 |
| 2 | Obszar Chronionego Krajobrazu Puszcza Białowieża | Rozporządzenie Nr 7/05 Wojewody Podlaskiego z dnia 25 lutego 2005 r. w sprawie Obszaru Chronionego Krajobrazu „Puszcza Białowieża” | Nie zachodzą przesłanki określone w art. 28 ust. 11 ustawy o ochronie przyrody | 97,5 |
| 3 | Rezerwat przyrody Berezowo | Rozporządzenie Nr 23/07 Wojewody Podlaskiego z dnia 10 grudnia 2007 r. w sprawie ustanowienia planu ochrony dla rezerwatu przyrody „Berezowo”, obowiązuje do 2011 r. | Nie zachodzą przesłanki określone w art. 28 ust. 11 ustawy o ochronie przyrody | 0,18 |
| 4 | Rezerwat przyrody Dębowy Grąd | Brak | Nie zachodzą przesłanki określone w art. 28 ust. 11 ustawy o ochronie przyrody | - |
| 5 | Rezerwat przyrody Dolina Waliczówki | Rozporządzenie Nr 23/03 Wojewody Podlaskiego z dnia 23 lipca 2003 r. w sprawie ustanowienia planu ochrony dla rezerwatu przyrody „Dolina Waliczówki” na lata 2003-2022. | Nie zachodzą przesłanki określone w art. 28 ust. 11 ustawy o ochronie przyrody | 0,07 |

| L.p. | Nazwa krajowej formy ochrony przyrody pokrywającej się z obszarem | Dokument planistyczny | Uzasadnienie wyłączenia części terenu ze sporządzania PZO | Procent powierzchni obszaru pokryty istniejącym dokumentem planistycznym |
|------|---|---|--|--|
| 6 | Rezerwat przyrody Głęboki Kąt | Brak | Nie zachodzą przesłanki określone w art. 28 ust. 11 ustawy o ochronie przyrody | - |
| 7 | Rezerwat przyrody Gnilec | Rozporządzenie Nr 14/03 Wojewody Podlaskiego z dnia 16 lipca 2003 r. w sprawie ustanowienia planu ochrony dla rezerwatu przyrody „Gnilec” na lata 2003-2022. | Nie zachodzą przesłanki określone w art. 28 ust. 11 ustawy o ochronie przyrody | 0,06 |
| 8 | Rezerwat przyrody Kozłowe Borki | Rozporządzenie Nr 22/07 Wojewody Podlaskiego z dnia 10 grudnia 2007 r. w sprawie ustanowienia planu ochrony dla rezerwatu przyrody „Kozłowe Borki”, obowiązuje do 2028 r. | Nie zachodzą przesłanki określone w art. 28 ust. 11 ustawy o ochronie przyrody | 0,39 |
| 9 | Rezerwat przyrody Krajobrazowy im. Prof. Wł. Szafera | Zarządzenie Regionalnego Dyrektora Ochrony Środowiska z maja 2010 r., w sprawie ustanowienia zadań ochronnych dla rezerwatu przyrody „im Władysława Szafera” do 2015 | Nie zachodzą przesłanki określone w art. 28 ust. 11 ustawy o ochronie przyrody | 2,15 |
| 10 | Rezerwat przyrody Lipiny | Zarządzenie nr 14/10 Regionalnego Dyrektora Ochrony Środowiska z dnia 18 czerwca 2010 r., w sprawie ustanowienia zadań ochronnych dla rezerwatu przyrody „Lipiny” do 2015 | Nie zachodzą przesłanki określone w art. 28 ust. 11 ustawy o ochronie przyrody | 0,04 |
| 11 | Rezerwat przyrody Michnówka | Brak | Nie zachodzą przesłanki określone w art. 28 ust. 11 ustawy o ochronie przyrody | - |
| 12 | Rezerwat przyrody Nieznanowo | Brak | Nie zachodzą przesłanki określone w art. 28 ust. 11 ustawy o ochronie przyrody | - |
| 13 | Rezerwat przyrody Olszanka Myśliszcze | Rozporządzenie Nr 7/08 Wojewody Podlaskiego z dnia 14 sierpnia 2008 r. w sprawie ustanowienia planu ochrony dla rezerwatu przyrody „Olszanka Myśliszcze”, obowiązuje do 2028 r. | Nie zachodzą przesłanki określone w art. 28 ust. 11 ustawy o ochronie przyrody | - |
| 14 | Rezerwat przyrody Podcerkwa | Rozporządzenie Nr 20/07 Wojewody Podlaskiego z dnia 10 grudnia 2007 r. w sprawie ustanowienia planu ochrony dla rezerwatu przyrody „Podcerkwa”, obowiązuje do 2028 r. | Nie zachodzą przesłanki określone w art. 28 ust. 11 ustawy o ochronie przyrody | 0,36 |
| 15 | Rezerwat przyrody Podolany | Rozporządzenie Nr 19/07 Wojewody | Nie zachodzą przesłanki określone w art. | 0,02 |



| L.p. | Nazwa krajowej formy ochrony przyrody pokrywającej się z obszarem | Dokument planistyczny | Uzasadnienie wyłączenia części terenu ze sporządzania PZO | Procent powierzchni obszaru pokryty istniejącym dokumentem planistycznym |
|------|---|---|--|--|
| | | Podlaskiego z dnia 10 grudnia 2007 r. w sprawie ustanowienia planu ochrony dla rezerwatu przyrody „Podolany”. obowiązuje do 2028 r. | 28 ust. 11 ustawy o ochronie przyrody | |
| 16 | Rezerwat przyrody Pogorzelce | Brak | Nie zachodzą przesłanki określone w art. 28 ust. 11 ustawy o ochronie przyrody | - |
| 17 | Rezerwat przyrody Przewłoka | Rozporządzenie Nr 21/07 Wojewody Podlaskiego z dnia 10 grudnia 2007 r. w sprawie ustanowienia planu ochrony dla rezerwatu przyrody „Przewłoka”, obowiązuje do 2028 r. | Nie zachodzą przesłanki określone w art. 28 ust. 11 ustawy o ochronie przyrody | 0,12 |
| 18 | Rezerwat przyrody Siemianówka | Rozporządzenie Nr 20/03 Wojewody Podlaskiego z dnia 16 lipca 2003 r. w sprawie ustanowienia planu ochrony dla rezerwatu przyrody „Siemianówka” na lata 2003-2022. | Nie zachodzą przesłanki określone w art. 28 ust. 11 ustawy o ochronie przyrody | 0,36 |
| 19 | Rezerwat przyrody Sitki | Brak | Nie zachodzą przesłanki określone w art. 28 ust. 11 ustawy o ochronie przyrody | - |
| 20 | Rezerwat przyrody Starzyna | Zarządzenie Regionalnego Dyrektora Ochrony Środowiska z maja 2010 r., w sprawie ustanowienia zadań ochronnych dla rezerwatu przyrody „Starzyna” do 2015 | Nie zachodzą przesłanki określone w art. 28 ust. 11 ustawy o ochronie przyrody | 0,59 |
| 21 | Rezerwat przyrody Szczekotowo | Brak | Nie zachodzą przesłanki określone w art. 28 ust. 11 ustawy o ochronie przyrody | - |
| 22 | Rezerwat przyrody Wysokie Bagno | Brak | Nie zachodzą przesłanki określone w art. 28 ust. 11 ustawy o ochronie przyrody | - |
| 23 | Rezerwat przyrody Lasy Naturalne Puszczy Białowieskiej | Zarządzenie Regionalnego Dyrektora Ochrony Środowiska z maja 2010 r., w sprawie ustanowienia zadań ochronnych dla rezerwatu przyrody „Lasy Naturalne Puszczy Białowieskiej” do 2015 | Nie zachodzą przesłanki określone w art. 28 ust. 11 ustawy o ochronie przyrody | 13,59 |

1.5. Ustalenie przedmiotów ochrony objętych Planem.

| Lp. | Kod | Nazwa Polska | Nazwa łacińska | % pokrycia | Pop. Osiadł. | Pop. Lęgowa | Populacja Migr. | Ocena Pop./Stopień reprezentatywności | Ocena St. zach./Powierzchnia względna | Ocena Izol. | Ocena Ogólna | Opinia dot. wpisu |
|-----|------|--|----------------|------------|--------------|-------------|-----------------|---------------------------------------|---------------------------------------|-------------|--------------|--|
| S1 | 3150 | Starorzeczka i naturalne eutroficzne zbiorniki wodne ze zbiorowiskami z <i>Nymphaea</i> , <i>Potamogeton</i> | | 0,02 | | | | C | C | C | C | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| S2 | 6230 | Górskie i niżowe murawy bliźniczkowe <i>Nardus</i> - płaty bogate florystycznie | | 0,21 | | | | B | B | C | C | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| S3 | 6410 | Zmiennowilgotne łąki trzęślicowe <i>Molinia</i> | | 0,01 | | | | D | | | | Nie uznano za przedmiot ochrony |
| S4 | 6510 | Niżowe i górskie świeże łąki użytkowane ekstensywnie <i>Arrhenatherum elatius</i> | | 0,83 | | | | B | B | C | C | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| S5 | 7120 | Torfowiska wysokie zdegradowane, lecz zdolne do naturalnej i stymulowanej regeneracji | | 0,01 | | | | D | | | | Nie uznano za przedmiot ochrony |



| Lp. | Kod | Nazwa Polska | Nazwa łacińska | % pokrycia | Pop. Osiadł. | Pop. Lęgowa | Populacja Migr. | Ocena Pop./Sto- pień reprezentat ywnosci | Ocena St. zach./Powie rznia względna | Ocena Izol. | Ocena Ogólna | Opinia dot. wpisu |
|-----|------|--|----------------|------------|--------------|-------------|-----------------|---|---|-------------|--------------|--|
| S6 | 7140 | Torfowiska przejściowe i trzęsawiska przeważnie z roślinnością z <i>Scheuchzeria-Caricetea</i> | | 0,03 | | | | B | B | C | C | Uznano za przedmiot ochrony (niezbędna inwentaryzacja i weryfikacja występowania w obszarze) |
| S7 | 7230 | Górskie i nizinne torfowiska zasadowe o charakterze młak, turzycowisk i mechowisk | | 0,25 | | | | C | C | C | C | Uznano za przedmiot ochrony (niezbędna inwentaryzacja i weryfikacja występowania w obszarze) |
| S8 | 9170 | Grąd subkontynentalny <i>Tilio-Carpinetum</i> , <i>Melitti-Carpinetum</i> | | 63,05 | | | | A | B | B | A | Uznano za przedmiot ochrony |
| S9 | 91D0 | Bory i lasy bagienne <i>Vaccinio uliginosi-Betuletum pubescentis</i> , <i>Ledo-Sphagnetum Vaccinio uliginosi-Pinetum</i> , <i>Sphagno girgensohnii-Piceetum</i> , <i>Thelypter-Betuletum</i> | | 4,35 | | | | A | B | B | A | Uznano za przedmiot ochrony |



| Lp. | Kod | Nazwa Polska | Nazwa łacińska | % pokrycia | Pop. Osiadł. | Pop. Łęgowa | Populacja Migr. | Ocena Pop./Sto- pnie reprezentat ywnosci | Ocena St. zach./Powie rzchnia względna | Ocena Izol. | Ocena Ogólna | Opinia dot. wpisu |
|-----|------|---|-------------------------------|------------|--------------|-------------|-----------------|---|---|-------------|--------------|---------------------------------------|
| | | <i>Piceo-Alnetum</i> <i>Sphagno</i> <i>squarrosi-Alnetum</i> | | | | | | | | | | |
| S10 | 91E0 | Łęgi wierzbowe, topolowe, olszowe i jesionowe <i>Salicetum albo- fragilis, Populetum albae, Fraxino- Alnetum</i> | | 0,02 | | | | A | A | C | A | Uznano za przedmiot ochrony |
| S11 | 91F0 | Łęgowe lasy dębowo-wiązowo- jesionowe <i>Ficario- Ulmetum</i> | | 0,10 | | | | B | B | C | B | Uznano za przedmiot ochrony |
| S12 | 91I0 | Ciepłolubne dąbrowy <i>Quercetalia pubescenti- petraeae</i> | | 0,01 | | | | C | C | C | C | Uznano za przedmiot ochrony |
| Z1 | A022 | Bączek | <i>Ixobrychus minutus</i> | | | P | | D | | | | Nie uznano za przedmiot ochrony |
| Z2 | A030 | Bocian czarny | <i>Ciconia nigra</i> | | | 10-12p | | C | B | C | C | Uznano za przedmiot ochrony |
| Z3 | A031 | Bocian biały | <i>Ciconia ciconia</i> | | | 16 – 18p | | D | | | | Nie uznano za przedmiot ochrony |
| Z4 | A038 | Łabędź krzykliwy | <i>Cygnus cygnus</i> | | | 1 | | D | | | | Nie uznano za przedmiot ochrony |



| Lp. | Kod | Nazwa Polska | Nazwa łacińska | % pokrycia | Pop. Osiadł. | Pop. Lęgowa | Populacja Migr. | Ocena Pop./Sto- pień reprezentat ywnosci | Ocena St. zach./Powie rznia względna | Ocena Izol. | Ocena Ogólna | Opina dot. wpisu |
|-----|------|------------------|-----------------------------|------------|--------------|-------------|-----------------|---|---|-------------|--------------|--|
| Z5 | A072 | Trzmielojad | <i>Pernis apivorus</i> | | | 90-120p | | B | B | C | B | Uznano za przedmiot ochrony |
| Z6 | A073 | Kania czarna | <i>Milvus migrans</i> | | | 2p | | D | | | | Nie uznano za przedmiot ochrony |
| Z7 | A074 | Kania ruda | <i>Milvus milvus</i> | | | P | | D | | | | Nie uznano za przedmiot ochrony |
| Z8 | A075 | Bielik | <i>Haliaeetus albicilla</i> | | | P | | D | | | | Nie uznano za przedmiot ochrony |
| Z9 | A80 | Gadożer | <i>Circaetus gallicus</i> | | | 0-1p | | B | B | B | B | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| Z10 | A081 | Błotniak stawowy | <i>Circus aeruginosus</i> | | | 1-2p | | D | | | | Nie uznano za przedmiot ochrony |
| Z11 | A082 | Błotniak zbożowy | <i>Circus cyaneus</i> | | | P | | D | | | | Nie uznano za przedmiot ochrony |
| Z12 | A084 | Błotniak łąkowy | <i>Circus pygargus</i> | | | 3-6p | | D | | | | Nie uznano za przedmiot ochrony |
| Z13 | A089 | Orlik krzykliwy | <i>Aquila pomarina</i> | | | 30-60p | | B | C | C | B | Uznano za przedmiot ochrony |



| Lp. | Kod | Nazwa Polska | Nazwa łacińska | % pokrycia | Pop. Osiadł. | Pop. Lęgowa | Populacja Migr. | Ocena Pop./Sto- pień reprezentat ywnosci | Ocena St. zach./Powie rzchnia względna | Ocena Izol. | Ocena Ogólna | Opinia dot. wpisu |
|-----|------|--------------|----------------------------|------------|--------------|-------------|-----------------|---|---|-------------|--------------|--|
| Z14 | A092 | Orzełek | <i>Hieraaetus pennatus</i> | | | 0-1p | | A | B | A | A | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| Z15 | A098 | Drzemlik | <i>Falco columbarius</i> | | | | P | D | | | | Nie uznano za przedmiot ochrony |
| Z16 | A104 | Jarząbek | <i>Bonasa bonasia</i> | | 1600-1800 p | | | B | A | C | B | Uznano za przedmiot ochrony |
| Z17 | A108 | Głuszec | <i>Tetrao urogallus</i> | | 0-3p | | | D | | | | Nie uznano za przedmiot ochrony |
| Z18 | A119 | Kropiatka | <i>Porzana porzana</i> | | | 10-40p | | C | B | C | C | Uznano za przedmiot ochrony |
| Z19 | A120 | Zielonka | <i>Porzana parva</i> | | | 3-8p | | D | | | | Nie uznano za przedmiot ochrony |
| Z20 | A122 | Derkacz | <i>Crex crex</i> | | | 80-120m | | C | B | C | C | Uznano za przedmiot ochrony |
| Z21 | A127 | Żuraw | <i>Grus grus</i> | | | 40-45p | | D | | | | Nie uznano za przedmiot ochrony |
| Z22 | A151 | Batalion | <i>Philomachus pugnax</i> | | | | P | D | | | | Nie uznano za przedmiot ochrony |



| Lp. | Kod | Nazwa Polska | Nazwa łacińska | % pokrycia | Pop. Osiadł. | Pop. Lęgowa | Populacja Migr. | Ocena Pop./Sto- pień reprezentat ywnosci | Ocena St. zach./Powie rznia względna | Ocena Izol. | Ocena Ogólna | Opina dot. wpisu |
|-----|------|-----------------|------------------------------|------------|--------------|-------------|-----------------|---|---|-------------|--------------|--|
| Z23 | A154 | Dubelt | <i>Gallinago media</i> | | | P | | D | | | | Nie uznano za przedmiot ochrony |
| Z24 | A193 | Rybitwa rzeczna | <i>Sterna hirundo</i> | | | P | | D | | | | Nie uznano za przedmiot ochrony |
| Z25 | A197 | Rybitwa czarna | <i>Chlidonias niger</i> | | | P | | D | | | | Nie uznano za przedmiot ochrony |
| Z26 | A215 | Puchacz | <i>Bubo bubo</i> | | 1-2p | | | D | | | | Nie uznano za przedmiot ochrony |
| Z28 | A217 | Sóweczka | <i>Glaucidium passerinum</i> | | 80-100p | | | A | B | B | A | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| Z29 | A222 | Uszatka błotna | <i>Asio flammeus</i> | | | P | | D | | | | Nie uznano za przedmiot ochrony |
| Z30 | A223 | Włochatka | <i>Aegolius funereus</i> | | | | 30-50p | B | B | C | B | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| Z31 | A224 | Lelek | <i>Caprimulgus europaeus</i> | | | | 250-280p | C | B | C | C | Uznano za przedmiot ochrony |



| Lp. | Kod | Nazwa Polska | Nazwa łacińska | % pokrycia | Pop. Osiadł. | Pop. Lęgowa | Populacja Migr. | Ocena Pop./Sto- pień reprezentat ywnosci | Ocena St. zach./Powie rzchnia względna | Ocena Izol. | Ocena Ogólna | Opina dot. wpisu |
|-----|------|------------------------|-----------------------------|------------|--------------|-------------|-----------------|---|---|-------------|--------------|--|
| Z32 | A229 | Zimorodek | <i>Alcedo atthis</i> | | | 1-5p | | D | | | | Nie uznano za przedmiot ochrony |
| Z33 | A234 | Dzięcioł zielonosiwy | <i>Picus canus</i> | | 30-35p | | | C | B | C | C | Uznano za przedmiot ochrony |
| Z34 | A236 | Dzięcioł czarny | <i>Dryocopus martius</i> | | 150-180p | | | D | | | | Nie uznano za przedmiot ochrony |
| Z35 | A238 | Dzięcioł średni | <i>Dendrocopos medius</i> | | 1100-1300p | | | B | B | C | B | Uznano za przedmiot ochrony |
| Z36 | A239 | Dzięcioł białogrzbiety | <i>Dendrocopos leucotos</i> | | 60-90p | | | A | C | B | A | Uznano za przedmiot ochrony. Populacja oszacowana na 1/3 obszaru |
| Z37 | A241 | Dzięcioł trójpalczasty | <i>Picoides tridactylus</i> | | 60-80p | | | A | C | B | A | Uznano za przedmiot ochrony. Populacja oszacowana na 1/3 obszaru |
| Z38 | A246 | Lerka | <i>Lullula arborea</i> | | | 100-120p | | D | | | | Nie uznano za przedmiot ochrony |
| Z39 | A272 | Podróżniczek | <i>Luscinia svecica</i> | | | P | | D | | | | Nie uznano za przedmiot ochrony |



| Lp. | Kod | Nazwa Polska | Nazwa łacińska | % pokrycia | Pop. Osiadł. | Pop. Lęgowa | Populacja Migr. | Ocena Pop./Sto- pień reprezentat ywnosci | Ocena St. zach./Powie rznia względna | Ocena Izol. | Ocena Ogólna | Opinia dot. wpisu |
|-----|------|-----------------------|-----------------------------|------------|--------------|-------------|-----------------|---|---|-------------|--------------|--|
| Z40 | A307 | Jarzębatka | <i>Sylvia nisoria</i> | | | 200-220p | | C | C | C | C | Uznano za przedmiot ochrony |
| Z41 | A320 | Muchołówka mała | <i>Ficedula parva</i> | | | 300-600p | | B | B | C | B | Uznano za przedmiot ochrony |
| Z42 | A321 | Muchołówka białoszyja | <i>Ficedula albicollis</i> | | | 5000-10000p | | A | C | C | A | Uznano za przedmiot ochrony |
| Z43 | A338 | Gąsiorek | <i>Lanius collurio</i> | | | 1000-1500p | | C | C | C | C | Uznano za przedmiot ochrony |
| Z44 | A379 | Ortolan | <i>Emberiza hortulana</i> | | | 0p | | D | | | | Nie uznano za przedmiot ochrony |
| Z45 | A409 | Cietrzew | <i>Tetrao tetrix tetrix</i> | | 0-3p | | | C | B | C | C | Uznano za przedmiot ochrony (niezbędne badania stanu obecności w Obszarze) |
| Z46 | A118 | Wodnik | <i>Rallus aquaticus</i> | | | 50-60p | | D | | | | Nie uznano za przedmiot ochrony |
| Z47 | A155 | Słonka | <i>Scolopax rusticola</i> | | | 500-550p | | C | B | C | C | Uznano za przedmiot ochrony |
| Z48 | A165 | Samotnik | <i>Tringa ochropus</i> | | | 100-300p | | B | B | C | B | Uznano za przedmiot ochrony |



| Lp. | Kod | Nazwa Polska | Nazwa łacińska | % pokrycia | Pop. Osiadł. | Pop. Lęgowa | Populacja Migr. | Ocena Pop./Sto- pień reprezentat ywnosci | Ocena St. zach./Powie rchnia względna | Ocena Izol. | Ocena Ogólna | Opinia dot. wpisu |
|-----|------|--------------|----------------------------------|------------|--------------|-------------|-----------------|---|--|-------------|--------------|--|
| Z49 | A312 | Wójcik | <i>Phylloscopus trochiloides</i> | | | P | | D | | | | Nie uznano za przedmiot ochrony |
| Z50 | A344 | Orzechówka | <i>Nucifraga caryocatactes</i> | | | P | | D | | | | Nie uznano za przedmiot ochrony |
| Z51 | A207 | Siniak | <i>Columba oenas</i> | | | | 150-250p | C | B | C | C | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| Z52 | 1308 | Mopek | <i>Barbastella barbastellus</i> | | | | 51-100i | C | A | C | A | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| Z53 | 1337 | Bóbr | <i>Castor fiber</i> | | | | 60-90i | C | A | C | B | Uznano za przedmiot ochrony |
| Z54 | 1352 | Wilk | <i>Canis lupus</i> | | | | <40i | B | A | C | A | Uznano za przedmiot ochrony |
| Z55 | 1355 | Wydra | <i>Lutra lutra</i> | | | | 10-20i | C | A | C | B | Uznano za przedmiot ochrony |
| Z56 | 1361 | Ryś | <i>Lynx lynx</i> | | | | <14i | B | A | B | A | Uznano za przedmiot ochrony |



| Lp. | Kod | Nazwa Polska | Nazwa łacińska | % pokrycia | Pop. Osiadł. | Pop. Lęgowa | Populacja Migr. | Ocena Pop./Sto- pnie reprezentat ywnosci | Ocena St. zach./Powie rzchnia względna | Ocena Izol. | Ocena Ogólna | Opinia dot. wpisu |
|-----|------|-----------------------|--------------------------------|------------|--------------|-------------|-----------------|---|---|-------------|--------------|--|
| Z57 | 2647 | Żubr | <i>Bison bonasus</i> | | 350-400 | | | A | A | A | A | Uznano za przedmiot ochrony. |
| Z58 | 1166 | Traszka grzebieniasta | <i>Triturus cristatus</i> | | P | | | C | B | C | C | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| Z59 | 1188 | Kumak nizinny | <i>Bombina bombina</i> | | P | | | C | C | C | C | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| Z60 | 1220 | Żółw błotny | <i>Emys orbicularis</i> | | P | | | D | | | | Nie uznano za przedmiot ochrony |
| Z61 | 1098 | Minóg ukraiński | <i>Eudontomyzon mariae</i> | | P | | | C | B | C | B | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| Z62 | 1134 | Różanka | <i>Rhodeus sericeus amarus</i> | | P | | | D | | | | Nie uznano za przedmiot ochrony |
| Z63 | 1145 | Piskorz | <i>Misgurnus fossilis</i> | | P | | | D | | | | Nie uznano za przedmiot ochrony |



| Lp. | Kod | Nazwa Polska | Nazwa łacińska | % pokrycia | Pop. Osiadł. | Pop. Lęgowa | Populacja Migr. | Ocena Pop./Sto- pień reprezentat ywnosci | Ocena St. zach./Powie rzchnia względna | Ocena Izol. | Ocena Ogólna | Opina dot. wpisu |
|-----|------|----------------------|------------------------------|------------|--------------|-------------|-----------------|---|---|-------------|--------------|--|
| Z64 | 1149 | Koza | <i>Cobitis taenia</i> | | P | | | D | | | | Nie uznano za przedmiot ochrony |
| Z65 | 1014 | Poczwarówka zwężona | <i>Vertigo angustior</i> | | P | | | B | A | C | C | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| Z66 | 1016 | Poczwarówka jajowata | <i>Vertigo moulinsiana</i> | | P | | | B | A | A | B | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| Z67 | 1037 | Trzepla zielona | <i>Ophiogomphus cecilia</i> | | P | | | C | C | C | C | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| Z68 | 1042 | Zalotka większa | <i>Leucorhina pectoralis</i> | | P | | | C | B | C | C | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| Z69 | 1052 | Przeplatka maturalna | <i>Hypodryas maturalna</i> | | P | | | B | A | A | A | Uznano za przedmiot ochrony |



| Lp. | Kod | Nazwa Polska | Nazwa łacińska | % pokrycia | Pop. Osiadł. | Pop. Lęgowa | Populacja Migr. | Ocena Pop./Sto- pień reprezentat ywnosci | Ocena St. zach./Powie rznia względna | Ocena Izol. | Ocena Ogólna | Opinia dot. wpisu |
|-----|------|-----------------------|-------------------------------|------------|--------------|-------------|-----------------|---|---|-------------|--------------|--|
| Z70 | 1060 | Czerwończyk nieparek | <i>Lycaena dispar</i> | | P | | | C | A | C | A | Uznano za przedmiot ochrony |
| Z71 | 1065 | Przeplatka aurinia | <i>Euphydryas aurinia</i> | | P | | | C | B | A | B | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| Z72 | 1071 | Strzępotek edypus | <i>Coenonympha oedippus</i> | | P | | | D | | | | Nie uznano za przedmiot ochrony |
| Z73 | 1081 | Pływak szerokobrzeżek | <i>Dytiscus latissimus</i> | | P | | | C | A | C | C | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| Z74 | 1082 | Kreślinek nizinny | <i>Graphoderus bilineatus</i> | | P | | | C | B | C | C | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| Z75 | 1083 | Jelonek rogacz | <i>Lucanus cervus</i> | | P | | | D | | | | Nie uznano za przedmiot ochrony |
| Z76 | 1084 | Pachnica dębowa | <i>Osmoderma eremita</i> | | P | | | C | A | C | B | Uznano za przedmiot ochrony |



| Lp. | Kod | Nazwa Polska | Nazwa łacińska | % pokrycia | Pop. Osiadł. | Pop. Lęgowa | Populacja Migr. | Ocena Pop./Sto- pień reprezentat ywnosci | Ocena St. zach./Powie rzchnia względna | Ocena Izol. | Ocena Ogólna | Opina dot. wpisu |
|-----|------|-------------------------|------------------------------|------------|--------------|-------------|-----------------|---|---|-------------|--------------|--|
| Z77 | 1085 | Bogatek wspaniały | <i>Buprestis splendens</i> | | P | | | A | B | A | A | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| Z78 | 1086 | Zgniotek cynobrowy | <i>Cucujus cinnaberinus</i> | | P | | | A | A | A | A | Uznano za przedmiot ochrony |
| Z79 | 1088 | Kozioróg dębosz | <i>Cerambyx cerdo</i> | | P | | | D | | | | Nie uznano za przedmiot ochrony |
| Z80 | 1920 | Ponurek Schneidera | <i>Boros schneideri</i> | | P | | | A | A | B | A | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| Z81 | 1923 | Średzinka | <i>Mesosa myops</i> | | P | | | A | A | A | A | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| Z82 | 1924 | Pogrzybnica Mennerheima | <i>Oxyporus mannerheimii</i> | | P | | | A | A | B | A | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |



| Lp. | Kod | Nazwa Polska | Nazwa łacińska | % pokrycia | Pop. Osiadł. | Pop. Lęgowa | Populacja Migr. | Ocena Pop./Sto- pień reprezentat ywnosci | Ocena St. zach./Powie rznia względna | Ocena Izol. | Ocena Ogólna | Opinia dot. wpisu |
|-----|------|----------------------|----------------------------------|------------|--------------|-------------|-----------------|---|---|-------------|--------------|--|
| Z83 | 1925 | Rozmiarż kolweński | <i>Pytho kolwensis</i> | | P | | | A | B | B | A | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| Z84 | 4021 | Konarek tajgowy | <i>Phryganophilus ruficollis</i> | | P | | | A | A | A | A | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| Z85 | 4026 | Zagłębek bruzdkowany | <i>Rhysodes sulcatus</i> | | P | | | B | B | A | A | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| Z86 | 4030 | Szlaczkoń szafraniec | <i>Colias myrmidone</i> | | P | | | C | C | C | B | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| Z87 | 4038 | Czerwończyk fioletek | <i>Lycaena helle</i> | | P | | | D | | | | Nie uznano za przedmiot ochrony |
| Z88 | 4042 | Modraszek eroides | <i>Polyommatus eroides</i> | | P | | | D | | | | Nie uznano za przedmiot ochrony |



| Lp. | Kod | Nazwa Polska | Nazwa łacińska | % pokrycia | Pop. Osiadł. | Pop. Lęgowa | Populacja Migr. | Ocena Pop./Sto- pnie reprezentat ywnosci | Ocena St. zach./Powie rzchnia względna | Ocena Izol. | Ocena Ogólna | Opina dot. wpisu |
|-----|------|------------------------|----------------------------|------------|--------------|-------------|-----------------|---|---|-------------|--------------|--|
| Z89 | 4056 | Zatoczek łamliwy | <i>Anisus vorticulus</i> | | P | | | C | B | C | C | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| R1 | 1437 | Leniec bezpodkwiatkowy | <i>Thesium ebracteatum</i> | | C | | | B | B | C | B | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| R2 | 1477 | Sasanka otwarta | <i>Pulsatilla patens</i> | | p | | | C | B | C | C | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |
| R3 | 1939 | Rzepik szczeciniasty | <i>Agrimonia pilosa</i> | | p | | | C | B | C | A | Uznano za przedmiot ochrony (niezbędna inwentaryzacja) |

2.3. Struktura własności i użytkowania gruntów.

| Typy użytków gruntowych | Typ własności | Powierzchnia użytków w ha | % udział powierzchni w obszarze |
|--------------------------|--|---------------------------|---------------------------------|
| <i>Lasy</i> | Lasy Państwowe, Białowiecki Park Narodowy | 58570,28 | 92,75 |
| <i>Grunty orne</i> | Prywatne, Lasy Państwowe | 1134,97 | 1,80 |
| <i>Łąki trwałe</i> | Prywatne, Lasy Państwowe | 380,37 | 0,60 |
| <i>Pastwiska trwałe</i> | Prywatne, Lasy Państwowe | 2016,67 | 3,19 |
| <i>Bagna</i> | Lasy Państwowe, Białowiecki Park Narodowy, prywatna | 546,53 | 0,87 |
| <i>Grunty zabudowane</i> | Prywatne, Gminne, Białowiecki Park Narodowy, Lasy Państwowe | 111,59 | 0,18 |
| <i>Wody</i> | Prywatne, Gminne, Białowiecki Park Narodowy, Lasy Państwowe | 387,19 | 0,61 |

Dane użytkowania i pokrycia terenu z programu CORINE Land Cover 2006

2.6. Informacja o przedmiotach ochrony objętych Planem wraz z zakresem prac terenowych – dane zweryfikowane.

| Przedmiot ochrony | Ocena ogólna | Powierzchnia | Liczba stanowisk | Rozmieszczenie w obszarze | Stopień rozpoznania | Zakres prac terenowych uzupełniających/ Uzasadnienie do wyłączenia z prac terenowych |
|---|--------------|--------------|------------------|---------------------------|---------------------|---|
| 3150 Starorzeczca i naturalne eutroficzne zbiorniki wodne ze zbiorowiskami z <i>Nympheion</i> , <i>Potamion</i> | C | 2,91 | XX | Plik shp | Słaby | Konieczna szczegółowa inwentaryzacja terenowa, zwłaszcza doliny Narewki i Leśnej |
| 6230 Górskie i niżowe murawy bliźniczkowe (<i>Nardion</i> - płaty bogate florystycznie) | B | 113,07 | XX | Plik shp | Słaby | Niezbędna inwentaryzacja siedliska |
| 6510 Niżowe i górskie świeże łąki użytkowane ekstensywnie (<i>Arrhenatherion elatioris</i>) | B | 428,55 | XX | Plik shp | Słaby | Niezbędna inwentaryzacja siedliska |
| 7140 Torfowiska przejściowe i trzęsawiska (przeważnie z roślinnością z <i>Scheuchzerio-Caricetea</i>) | B | 34,01 | XX | Plik shp | Średni | Niezbędna inwentaryzacja siedliska |
| 7230 Górskie i nizinne torfowiska zasadowe o charakterze młak, turzycowisk i mechowisk | C | 57,32 | XX | Plik shp | Średni | Niezbędna inwentaryzacja siedliska |
| 9170 Grąd subkontynentalny (<i>Tilio-Carpinetum</i> , <i>Melitti Carpinetum</i>) | A | 26824,23 | 6882 | Plik shp | Bardzo dobry | Szczegółowo zinwentaryzowano siedlisko |
| 91D0 Bory i lasy bagienne (<i>Vaccinio uliginosi-Betuletum pubescentis</i> , <i>Vaccinio uliginosi-Pinetum</i> , <i>Ledo-Sphagnetum</i> , <i>Sphagno girgensohnii-Piceetum</i> i brzoźowo-sosnowe bagienne lasy borealne) | A | 1060,56 | 390 | Plik shp | Bardzo dobry | Szczegółowo zinwentaryzowano siedlisko |
| 91E0 Łęgi wierzbowe, topolowe, olszowe i jesionowe (<i>Salicetum</i>) | A | 5360,27 | 1359 | Plik shp | Bardzo dobry | Szczegółowo zinwentaryzowano siedlisko |



| Przedmiot ochrony | Ocena ogólna | Powierzchnia | Liczba stanowisk | Rozmieszczenie w obszarze | Stopień rozpoznania | Zakres prac terenowych uzupełniających/ Uzasadnienie do wyłączenia z prac terenowych |
|---|--------------|--------------|------------------|---------------------------|---------------------|---|
| <i>albo-fragilis, Populetum albae, Fraxino-Alnetum</i> olsy źródliskowe) | | | | | | |
| 91F0 Łęgowe lasy dębowo-wiązowo-jesionowe (<i>Ficario-Ulmetum</i>) | B | 18,75 | 8 | Plik shp | Słaby | Niezbędna inwentaryzacja siedliska |
| 91I0 Cieptolubne dąbrowy (<i>Quercetalia pubescenti-petraeae</i>) | C | 3,99 | 1 | Plik shp | Bardzo dobry | Szczegółowo zinwentaryzowano siedlisko |
| Gatunki roślin | | | | | | |
| 1437 Leniec bezpodkwiatkowy <i>Thesium ebracteatum</i> | C | | XX | XX | Słaby | Niezbędna inwentaryzacja populacji |
| 1477 Sasanka otwarta <i>Pulsatilla patens</i> | C | | XX | XX | Słaby | Niezbędna inwentaryzacja populacji |
| 1939 Rzepik szczeciniasty <i>Agrimonia pilosa</i> | C | | XX | XX | Słaby | Niezbędna inwentaryzacja populacji |
| Gatunki zwierząt | | | | | | |
| A030 Bocian czarny <i>Ciconia nigra</i> | C | | XX | Plik shp | Dobry | W ramach prac nad PZO nie prowadzono weryfikacji terenowej populacji |
| A072 Trzmielojad <i>Pernis apivorus</i> | B | | XX | XX | Dostateczny | W ramach prac nad PZO nie prowadzono weryfikacji terenowej populacji |
| A080 Gadożer <i>Circaetus gallicus</i> | B | | XX | XX | Niedostateczny | Niezbędna inwentaryzacja populacji |
| A089 Orlik krzykliwy <i>Aquila pomarina</i> | B | | XX | Plik shp | Dobry | W ramach prac nad PZO nie prowadzono weryfikacji terenowej populacji |
| A092 Orzełek <i>Hieraetus pennatus</i> | A | | XX | XX | Niedostateczny | Niezbędna inwentaryzacja populacji |
| A104 Jarząbek <i>Bonasa bonasia</i> | B | | XX | XX | Dostateczny | W ramach prac nad PZO nie |

| Przedmiot ochrony | Ocena ogólna | Powierzchnia | Liczba stanowisk | Rozmieszczenie w obszarze | Stopień rozpoznania | Zakres prac terenowych uzupełniających/ Uzasadnienie do wyłączenia z prac terenowych |
|--|--------------|--------------|------------------|---------------------------|---------------------|---|
| | | | | | | proszono weryfikacji terenowej populacji |
| A119 Krociatka <i>Porzana porzana</i> | C | | XX | XX | Dostateczny | W ramach prac nad PZO nie prowadzono weryfikacji terenowej populacji |
| A122 Derkacz <i>Crex crex</i> | C | | XX | XX | Dobry | W ramach prac nad PZO nie prowadzono weryfikacji terenowej populacji |
| A217 Sóweczka <i>Glaucidium passerinum</i> | A | | XX | XX | Niedostateczny | Niezbędna inwentaryzacja populacji |
| A223 Włochatka <i>Aegolius funereus</i> | B | | XX | XX | Niedostateczny | Niezbędna inwentaryzacja populacji |
| A224 Lelek <i>Caprimulgus europaeus</i> | C | | XX | XX | Dostateczny | W ramach prac nad PZO nie prowadzono weryfikacji terenowej populacji |
| A234 Dzięcioł zielonosiwy <i>Picus canus</i> | C | | XX | XX | Dostateczny | W ramach prac nad PZO nie prowadzono weryfikacji terenowej populacji |
| A238 Dzięcioł średni <i>Dendrocopos medius</i> | B | | XX | XX | Dobry | W ramach prac nad PZO nie prowadzono weryfikacji terenowej populacji |
| A239 Dzięcioł białoziębny <i>Dendrocopos leucotos</i> | A | | XX | XX | Niedostateczny | Niezbędna inwentaryzacja populacji |
| A241 Dzięcioł trójpalczasty <i>Picoides tridactylus</i> | A | | XX | XX | Niedostateczny | Niezbędna inwentaryzacja populacji |
| A307 Jarzębatka <i>Sylvia nisoria</i> | C | | XX | XX | Niedostateczny | Niezbędna inwentaryzacja populacji |



| Przedmiot ochrony | Ocena ogólna | Powierzchnia | Liczba stanowisk | Rozmieszczenie w obszarze | Stopień rozpoznania | Zakres prac terenowych uzupełniających/ Uzasadnienie do wyłączenia z prac terenowych |
|--|--------------|--------------|------------------|---------------------------|---------------------|---|
| A320 Muchotówka mała <i>Ficedula parva</i> | B | | XX | XX | Dostateczny | W ramach prac nad PZO nie prowadzono weryfikacji terenowej populacji |
| A321 Muchotówka iąto szyja <i>Ficedula albicollis</i> | A | | XX | XX | Dostateczny | W ramach prac nad PZO nie prowadzono weryfikacji terenowej populacji |
| A338 Gąsiorek <i>Lanius collurio</i> | | | XX | XX | Niedostateczny | Niezbędna inwentaryzacja populacji |
| A409 Cietrzew <i>Tetrao tetrix tetrix</i> | C | | XX | XX | Niedostateczny | Niezbędne badania statusu gatunku na terenie Obszaru i stanu siedlisk gatunku |
| A155 Słonka <i>Scolopax rusticola</i> | C | | XX | XX | Dostateczny | W ramach prac nad PZO nie prowadzono weryfikacji terenowej populacji |
| A165 Samotnik <i>Tringa ochropus</i> | B | | XX | XX | Dostateczny | W ramach prac nad PZO nie prowadzono weryfikacji terenowej populacji |
| A207 Siniak <i>Columba oenas</i> | B | | XX | XX | Dostateczny | W ramach prac nad PZO nie prowadzono weryfikacji terenowej populacji |
| 1308 Mopek <i>Barbastella barbastellus</i> | C | | XX | XX | Niedostateczny | Niezbędna inwentaryzacja populacji |
| 1337 Bóbr <i>Castor fiber</i> | C | | XX | XX | Dostateczny | W ramach prac nad PZO nie prowadzono weryfikacji terenowej populacji |
| 1352 Wilk <i>Canis lupus</i> | B | | XX | XX | Dobry | W ramach prac nad PZO nie prowadzono weryfikacji terenowej populacji |
| 1355 Wydra <i>Lutra lutra</i> | C | | XX | XX | Dostateczny | W ramach prac nad PZO nie prowadzono weryfikacji terenowej |

| Przedmiot ochrony | Ocena ogólna | Powierzchnia | Liczba stanowisk | Roźmieszczenie w obszarze | Stopień rozpoznania | Zakres prac terenowych uzupełniających/ Uzasadnienie do wyłączenia z prac terenowych |
|---|--------------|--------------|------------------|---------------------------|---------------------|---|
| | | | | | | populacji |
| 1361 Ryś <i>Lynx lynx</i> | B | | XX | XX | Dobry | W ramach prac nad PZO nie prowadzono weryfikacji terenowej populacji |
| 2647 Żubr <i>Bison bonasus</i> | A | | XX | XX | Bardzo dobry | W ramach prac nad PZO nie prowadzono weryfikacji terenowej populacji |
| 1166 Traszka grzebieniasta <i>Triturus cristatus</i> | C | | XX | XX | Niedostateczny | Niezbędna inwentaryzacja populacji |
| 1188 Kumak nizinny <i>Bombina bombina</i> | C | | XX | XX | Niedostateczny | Niezbędna inwentaryzacja populacji |
| 1098 Minóg ukraiński <i>Eudontomyzon mariae</i> | C | | XX | XX | Niedostateczny | Niezbędna inwentaryzacja populacji |
| 1014 Poczwarówka zwężona <i>Vertigo angustior</i> | B | | XX | XX | Niedostateczny | Niezbędna inwentaryzacja populacji |
| 1016 Poczwarówka jajowata <i>Vertigo moulinsiana</i> | B | | XX | XX | Niedostateczny | Niezbędna inwentaryzacja populacji |
| 1037 Trzepla zielona <i>Ophiogomphus cecilia</i> | C | | XX | XX | Niedostateczny | Niezbędna inwentaryzacja populacji |
| 1042 Żalotka większa <i>Leucorrhinia pectoralis</i> | C | | XX | XX | Niedostateczny | Niezbędna inwentaryzacja populacji |
| 1052 Przeplatka maturalna <i>Hypodryas maturalna</i> | B | | XX | XX | Dostateczny | W ramach prac nad PZO nie prowadzono weryfikacji terenowej |



| Przedmiot ochrony | Ocena ogólna | Powierzchnia | Liczba stanowisk | Roźmieszczenie w obszarze | Stopień rozpoznania | Zakres prac terenowych uzupełniających/ Uzasadnienie do wyłączenia z prac terenowych |
|---|--------------|--------------|------------------|---------------------------|---------------------|---|
| | | | | | | populacji |
| 1060 Czerwończyk nieparek <i>Lycaena dispar</i> | C | | XX | XX | Dostateczny | W ramach prac nad PZO nie prowadzono weryfikacji terenowej populacji |
| 1065 Przeplatka aurinia <i>Euphydryas aurinia</i> | C | | XX | XX | Dostateczny | W ramach prac nad PZO nie prowadzono weryfikacji terenowej populacji |
| 1081 Pływak szerokobrzeżek <i>Dytiscus latissimus</i> | C | | XX | XX | Niedostateczny | Niezbędna inwentaryzacja populacji |
| 1082 Kreślinek nizinny <i>Graphoderus bilineatus</i> | C | | XX | XX | Niedostateczny | Niezbędna inwentaryzacja populacji |
| 1084 Pachnica dębowa <i>Osmoderma eremita</i> | C | | XX | Plik shp | Dostateczny | W ramach prac nad PZO nie prowadzono weryfikacji terenowej populacji |
| 1085 Bogatek wspaniały <i>Buprestis splendens</i> | A | | XX | XX | Niedostateczny | Niezbędna inwentaryzacja populacji |
| 1086 Zgniotek cynobrowy <i>Cucujus cinnaberinus</i> | A | | XX | Plik shp | Dostateczny | W ramach prac nad PZO nie prowadzono weryfikacji terenowej populacji |
| 1920 Ponurek Schneidera <i>Boros schneideri</i> | A | | XX | Plik shp | Niedostateczny | Niezbędna inwentaryzacja populacji |
| 1923 Średzinka <i>Mesosa myops</i> | A | | XX | XX | Niedostateczny | Niezbędna inwentaryzacja populacji |
| 1924 Pogrzybnica Mennerheima <i>Oxyporus mannerheimii</i> | A | | XX | XX | Niedostateczny | Niezbędna inwentaryzacja populacji |

| Przedmiot ochrony | Ocena ogólna | Powierzchnia | Liczba stanowisk | Roźmieszczenie w obszarze | Stopień rozpoznania | Zakres prac terenowych uzupełniających/ Uzasadnienie do wyłączenia z prac terenowych |
|--|--------------|--------------|------------------|---------------------------|---------------------|---|
| 1925 Rozmiarz kolweński <i>Pytho kolwensis</i> | A | | XX | XX | Niedostateczny | Niezbędna inwentaryzacja populacji |
| 4021 Konarek tajgowy <i>Phryganophilus ruficollis</i> | A | | XX | XX | Niedostateczny | Niezbędna inwentaryzacja populacji |
| 4026 Zagłębek bruzdkowany <i>Rhysodes sulcatus</i> | B | | XX | XX | Niedostateczny | Niezbędna inwentaryzacja populacji |
| 4030 Szlaczkoń szafraniec <i>Colias myrmidone</i> | C | | XX | XX | Niedostateczny | Niezbędna inwentaryzacja populacji |
| 4056 Zatokczek łamliwy <i>Anisus vorticulus</i> | C | | XX | XX | Niedostateczny | Niezbędna inwentaryzacja populacji |



Moduł B

3. Stan ochrony przedmiotów ochrony objętych Planem

| Przedmioty ochrony objęte Planem | | | | | | | | |
|--|------------|---|------------------------|----------|--|--|--|--|
| Siedliska przyrodnicze | Kod Natura | Stanowisko | Parametr stanu | Wskaźnik | Ocena stanu ochrony na podstawie dostępnych danych wg skali FV, UI, U2 | Ocena stanu ochrony po weryfikacji terenowej wg skali FV, UI, U2 | Ogólna ocena stanu ochrony siedliska/gatunku wg skali FV, UI, U2 | Uwagi |
| Starorzeczca i naturalne eutroficzne zbiorniki wodne ze zbiorowiskami z <i>Nympheion</i> , <i>Potamion</i> | 3150 | Dolina Narewki i kilka odosobnionych stanowisk w dolinie Leśnej i Łutowni | Powierzchnia siedliska | - | U1 | - | U1 | Ograniczone możliwości ochrony w dłuższej perspektywie czasu. |
| | | | Struktura i funkcje | - | FV | - | | |
| | | | Perspektywy ochrony | - | U1 | - | | |
| Górskie i niżowe murawy bliźniczkowe (<i>Nardion</i> - płaty bogate florystycznie) | 6230 | Ogół płatów siedliska na terenie Obszaru | Powierzchnia siedliska | - | U1 | - | U1 | Ocena ekspercka dla wszystkich stanowisk w Obszarze. Do uzyskania pełnej oceny zgodnie z wytycznymi GIOŚ konieczne są badania terenowe |
| | | | Struktura i funkcje | - | U1 | - | | |
| | | | Perspektywy ochrony | - | U1 | - | | |
| Niżowe i górskie świeże łąki użytkowane ekstensywnie (<i>Arrhenatherio</i> | 6510 | Ogół płatów siedliska na terenie Obszaru | Powierzchnia siedliska | - | U1 | - | U1 | Ocena ekspercka dla wszystkich stanowisk w Obszarze. Do uzyskania pełnej oceny zgodnie z wytycznymi GIOŚ |
| | | | Struktura i funkcje | - | U1 | - | | |



| Przedmioty ochrony objęte Planem | | | | | | | | |
|---|------------|--|------------------------|---------------------------|--|--|--|--|
| Siedliska przyrodnicze | Kod Natura | Stanowisko | Parametr stanu | Wskaźnik | Ocena stanu ochrony na podstawie dostępnych danych wg skali FV, U1, U2 | Ocena stanu ochrony po weryfikacji terenowej wg skali FV, UI, U2 | Ogólna ocena stanu ochrony siedliska/gatunku wg skali FV, UI, U2 | Uwagi |
| <i>n elatioris</i> | | | Perspektywy ochrony | - | FV | - | | konieczne są badania terenowe |
| Torfowiska przejściowe i trzęsawiska (przeważnie z roślinnością z <i>Scheuchzeria-Caricetea</i>) | 7140 | Ogół płatów siedliska na terenie Obszaru | Powierzchnia siedliska | - | XX | - | XX | Siedlisko prawdopodobnie nie występuje na terenie Obszaru |
| | | | Struktura i funkcje | - | XX | - | | |
| | | | Perspektywy ochrony | - | XX | - | | |
| Górskie i nizinne torfowiska zasadowe o charakterze młak, turzycowisk i mechowisk | 7230 | Ogół płatów siedliska na terenie Obszaru | Powierzchnia siedliska | - | U2 | - | U2 | Ocena ekspercka dla wszystkich stanowisk w Obszarze. Do uzyskania pełnej oceny zgodnie z wytycznymi GIOŚ konieczne są badania terenowe |
| | | | Struktura i funkcje | - | U1 | - | | |
| | | | Perspektywy ochrony | - | U1 | - | | |
| Grąd subkontynentalny (<i>Tilio-Carpinetum</i> , <i>Melitti Carpinetum</i>) | 9170 | Ogół płatów siedliska na terenie Obszaru | Powierzchnia siedliska | | FV | FV | U1 | Ocena na podstawie inwentaryzacji siedliska |
| | | | Struktura i funkcje | Gatunki charakterystyczne | - | FV | | |
| | | | | Gatunki dominujące | - | U1 | | |



| Przedmioty ochrony objęte Planem | | | | | | | | |
|----------------------------------|------------|------------|----------------|--|--|--|--|-------|
| Siedliska przyrodnicze | Kod Natura | Stanowisko | Parametr stanu | Wskaźnik | Ocena stanu ochrony na podstawie dostępnych danych wg skali FV, UI, U2 | Ocena stanu ochrony po weryfikacji terenowej wg skali FV, UI, U2 | Ogólna ocena stanu ochrony siedliska/gatunku wg skali FV, UI, U2 | Uwagi |
| | | | | Gatunki obce geograficznie | - | FV | | |
| | | | | Inwazyjne gatunki obce w runie | - | U1 | | |
| | | | | Martwe drewno | - | U1 | | |
| | | | | Wiek drzewostanu | - | U1 | | |
| | | | | Pionowa struktura roślinności | - | U1 | | |
| | | | | Naturalne odnowienie drzewostanu | - | FV | | |
| | | | | Zniszczenia runa i gleby związane z pozyskaniem drewna | - | FV | | |



| Przedmioty ochrony objęte Planem | | | | | | | | |
|---|-------------|--|------------------------|---|--|--|--|---|
| Siedliska przyrodnicze | Kod Natura | Stanowisko | Parametr stanu | Wskaźnik | Ocena stanu ochrony na podstawie dostępnych danych wg skali FV, UI, U2 | Ocena stanu ochrony po weryfikacji terenowej wg skali FV, UI, U2 | Ogólna ocena stanu ochrony siedliska/gatunku wg skali FV, UI, U2 | Uwagi |
| | | | Perspektywy ochrony | | - | FV | | |
| Bory i lasy bagienne (<i>Vaccinio uliginosi-Betuletum pubescentis</i> , <i>Vaccinio uliginosi-Pinetum</i> , <i>Ledo-Sphagnetum</i> , <i>Sphagno girgensohnii-Piceetum</i> i brzozowo-sosnowe bagienne lasy borealne) | 91D0 | Ogół płatów siedliska na terenie Obszaru | Powierzchnia siedliska | | FV | FV | FV | Ocena na podstawie inwentaryzacji siedliska |
| | | | Struktura i funkcje | Gatunki charakterystyczne | - | FV | | |
| | | | | Gatunki dominujące | - | FV | | |
| | | | | Inwazyjne gatunki obce w runie | - | FV | | |
| | | | | Rodzime gatunki ekspansywne roślin zielnych | - | FV | | |
| | | | | Uwodnienie | - | FV | | |
| | | | | Wiek drzewostanu | - | FV | | |
| | | | | Gatunki obce geograficznie w drzewost- | - | FV | | |



| Przedmioty ochrony objęte Planem | | | | | | | | |
|----------------------------------|------------|------------|----------------|--|--|--|--|-------|
| Siedliska przyrodnicze | Kod Natura | Stanowisko | Parametr stanu | Wskaźnik | Ocena stanu ochrony na podstawie dostępnych danych wg skali FV, UI, U2 | Ocena stanu ochrony po weryfikacji terenowej wg skali FV, UI, U2 | Ogólna ocena stanu ochrony siedliska/gatunku wg skali FV, UI, U2 | Uwagi |
| | | | | nie | | | | |
| | | | | Gatunki obce ekologicznie w drzewostanie | - | U1 | | |
| | | | | Martwe drewno leżące lub stojące >3m długości i 30 cm grubości | - | FV | | |
| | | | | Naturalne odnowienie drzewostanu | -- | FV | | |
| | | | | Występowanie mchów torfowców | - | FV | | |
| | | | | Występowanie charakterystycznych krzewinek | - | FV | | |
| | | | | Pionowa struktura | - | FV | | |



| Przedmioty ochrony objęte Planem | | | | | | | | |
|--|------------|--|------------------------|--|--|--|--|---|
| Siedliska przyrodnicze | Kod Natura | Stanowisko | Parametr stanu | Wskaźnik | Ocena stanu ochrony na podstawie dostępnych danych wg skali FV, UI, U2 | Ocena stanu ochrony po weryfikacji terenowej wg skali FV, UI, U2 | Ogólna ocena stanu ochrony siedliska/gatunku wg skali FV, UI, U2 | Uwagi |
| | | | | roślinności | | | | |
| | | | | Zniszczenia runa i gleby związane z pozyskaniem drewna | - | FV | | |
| | | | | Inne zniekształcenia | | FV | | |
| | | | Perspektywy ochrony | | FV | FV | | |
| Łęgi wierzbowe, topolowe, olszowe i jesionowe (<i>Salicetum albo-fragilis</i> , <i>Populetum albae</i> , <i>Fraxino-Alnetum</i> , olsy źródliskowe) | 91E0 | Ogół płatów siedliska na terenie Obszaru | Powierzchnia siedliska | | FV | FV | U1 | Ocena na podstawie inwentaryzacji siedliska |
| | | | Struktura i funkcje | Gatunki charakterystyczne | - | U1 | | |
| | | | | Gatunki dominujące | - | FV | | |
| | | | | Gatunki obce geograficznie w drzewostanie | - | FV | | |
| | | | | Inwazyjne gatunki obce w | - | U1 | | |



| Przedmioty ochrony objęte Planem | | | | | | | | |
|----------------------------------|------------|------------|----------------|---|--|--|--|-------|
| Siedliska przyrodnicze | Kod Natura | Stanowisko | Parametr stanu | Wskaźnik | Ocena stanu ochrony na podstawie dostępnych danych wg skali FV, UI, U2 | Ocena stanu ochrony po weryfikacji terenowej wg skali FV, UI, U2 | Ogólna ocena stanu ochrony siedliska/gatunku wg skali FV, UI, U2 | Uwagi |
| | | | | podszycie i runie | | | | |
| | | | | Rodzime gatunki ekspansywnych roślin zielnych | - | FV | | |
| | | | | Martwe drewno | - | FV | | |
| | | | | Martwe drewno wielkowieńcowe | - | FV | | |
| | | | | Naturalność koryta cieku wodnego | - | FV | | |
| | | | | Reżim wodny | - | FV | | |
| | | | | Wiek drzewostanu | - | U1 | | |
| | | | | Pionowa struktura roślinności | - | FV | | |
| | | | | Naturalne odnowienie drzewostanu | - | FV | | |



| Przedmioty ochrony objęte Planem | | | | | | | | |
|---|------------|--|------------------------|--|--|--|--|---|
| Siedliska przyrodnicze | Kod Natura | Stanowisko | Parametr stanu | Wskaźnik | Ocena stanu ochrony na podstawie dostępnych danych wg skali FV, UI, U2 | Ocena stanu ochrony po weryfikacji terenowej wg skali FV, UI, U2 | Ogólna ocena stanu ochrony siedliska/gatunku wg skali FV, UI, U2 | Uwagi |
| | | | | Zniszczenia runa i gleby związane z pozyskaniem drewna | - | FV | | |
| | | | | Inne zniekształcenia | - | U1 | | |
| | | | Perspektywy ochrony | | FV | FV | | |
| Łęgowe lasy dębowo-wiązowo-jesionowe (<i>Ficario-Ulmetum</i>) | 91F0 | Ogół płatów siedliska na terenie Obszaru | Powierzchnia siedliska | - | U1 | U1 | U1 | Ocena na podstawie inwentaryzacji siedliska. Konieczne dodatkowe badania terenowe |
| | | | Struktura i funkcje | - | U1 | U1 | | |
| | | | Perspektywy ochrony | - | FV | FV | | |
| Cieptolubne dąbrowy (<i>Quercetalia pubescenti-petraeae</i>) | 91I0 | Ogół płatów siedliska na terenie Obszaru | Powierzchnia siedliska | | U2 | U2 | U2 | Ocena na podstawie inwentaryzacji siedliska |
| | | | Struktura i funkcje | Udział procentowy siedliska na transektach | - | U2 | | |
| | | | Gatunki | | - | U2 | | |



| Przedmioty ochrony objęte Planem | | | | | | | | |
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| Siedliska przyrodnicze | Kod Natura | Stanowisko | Parametr stanu | Wskaźnik | Ocena stanu ochrony na podstawie dostępnych danych wg skali FV, UI, U2 | Ocena stanu ochrony po weryfikacji terenowej wg skali FV, UI, U2 | Ogólna ocena stanu ochrony siedliska/gatunku wg skali FV, UI, U2 | Uwagi |
| | | | | charakterystyczne | | | | |
| | | | | Gatunki dominujące | - | U2 | | |
| | | | | Obce gatunki inwazyjne w runie i podszycie | - | U1 | | |
| | | | | Rodzime gatunki ekspansywnych roślin zielnych | - | U1 | | |
| | | | | Gatunki ciepłolubne | - | U2 | | |
| | | | | Leżące martwe drewno | - | U1 | | |
| | | | | Wiek drzewostanu | - | FV | | |
| | | | | Zwarcie podszyciu | - | U2 | | |
| | | | | Zwarcie koron drzew | - | U2 | | |
| | | | | Gatunki obce | - | U1 | | |



| Przedmioty ochrony objęte Planem | | | | | | | | |
|---|-------------|---|-----------------------------|--|--|--|--|---|
| Siedliska przyrodnicze | Kod Natura | Stanowisko | Parametr stanu | Wskaźnik | Ocena stanu ochrony na podstawie dostępnych danych wg skali FV, UI, U2 | Ocena stanu ochrony po weryfikacji terenowej wg skali FV, UI, U2 | Ogólna ocena stanu ochrony siedliska/gatunku wg skali FV, UI, U2 | Uwagi |
| | | | | geograficznie i ekologicznie w drzewostanie | | | | |
| | | | | Naturalne odnowienie | - | U2 | | |
| | | | | Obecność nasadzeń drzew | - | FV | | |
| | | | | Zniszczenia runa i gleby związane z pozyskaniem drewna | - | U1 | | |
| | | | | Zniszczenia drzewostanów | - | FV | | |
| | | | Perspektywy ochrony | | U2 | U2 | | |
| Gatunki | | | | | | | | |
| Leniec bezpodkwiatkowy <i>Thesium ebracteatum</i> | 1437 | Ogół stanowisk na terenie Obszaru - brak szczegółowych danych | Parametry populacji | - | XX | - | U2 | 2009 r. monitoring GIOŚ – 3 stanowiska w Puszczy Białowieżskiej (populacja – U1, siedlisko – U1). |
| | | | Parametry siedliska gatunku | - | U2 | - | | |



| Przedmioty ochrony objęte Planem | | | | | | | | |
|---|------------|---|-----------------------------|----------|--|--|--|---|
| Siedliska przyrodnicze | Kod Natura | Stanowisko | Parametr stanu | Wskaźnik | Ocena stanu ochrony na podstawie dostępnych danych wg skali FV, UI, U2 | Ocena stanu ochrony po weryfikacji terenowej wg skali FV, UI, U2 | Ogólna ocena stanu ochrony siedliska/gatunku wg skali FV, UI, U2 | Uwagi |
| | | | Szanse zachowania gatunku | - | U1 | - | | Ocena ekspercka dla wszystkich stanowisk w Obszarze. Do uzyskania pełnej oceny zgodnie z wytycznymi GIOŚ konieczne są badania terenowe |
| Sasanka otwarta <i>Pulsatilla patens</i> | 1477 | Ogół stanowisk na terenie Obszaru - brak szczegółowych danych | Parametry populacji | - | U2 | - | U2 | Ocena ekspercka dla wszystkich stanowisk w Obszarze. Do uzyskania pełnej oceny zgodnie z wytycznymi GIOŚ konieczne są badania terenowe |
| | | | Parametry siedliska gatunku | - | U2 | - | | |
| | | | Szanse zachowania gatunku | - | U2 | - | | |
| Rzepik szczeniasty <i>Agrimonia pilosa</i> | 1939 | Ogół stanowisk na terenie Obszaru - brak szczegółowych danych | Parametry populacji | - | XX | - | FV | 2009 r. monitoring GIOŚ – 4 stanowiska w Puszczy Białowieżskiej, wszystkie w BPN (populacja – FV, siedlisko – FV). Ocena ekspercka dla wszystkich stanowisk w Obszarze. Do uzyskania pełnej oceny zgodnie z |
| | | | Parametry siedliska gatunku | - | FV | - | | |
| | | | Szanse zachowania gatunku | - | FV | - | | |



| Przedmioty ochrony objęte Planem | | | | | | | | |
|---------------------------------------|------------|-----------------------------------|-----------------------------|----------|--|--|--|--|
| Siedliska przyrodnicze | Kod Natura | Stanowisko | Parametr stanu | Wskaźnik | Ocena stanu ochrony na podstawie dostępnych danych wg skali FV, UI, U2 | Ocena stanu ochrony po weryfikacji terenowej wg skali FV, UI, U2 | Ogólna ocena stanu ochrony siedliska/gatunku wg skali FV, UI, U2 | Uwagi |
| | | | | | | | | wytocznymi GIOŚ konieczne są badania terenowe |
| Bocian czarny <i>Ciconia nigra</i> | A030 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | U1 | - | U1 | Pugacewicz 1997, 2006; Rowiński 2004; |
| | | | Parametry siedliska gatunku | - | U1 | - | | |
| | | | Szanse zachowania gatunku | - | U1 | - | | |
| Trzmiołojad <i>Pernis apivorus</i> | A072 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | FV | - | FV | Pugacewicz 2010; Wesołowski i inni 2003; Rowiński 2004 |
| | | | Parametry siedliska gatunku | - | FV | - | | |
| | | | Szanse zachowania gatunku | | FV | | | |
| Gadożer <i>Circaetus gallicus</i> | A080 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | XX | - | XX | Rowiński 2004; Pugacewicz 2010. |
| | | | Parametry siedliska gatunku | - | U1 | - | | |



| Przedmioty ochrony objęte Planem | | | | | | | | |
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| Siedliska przyrodnicze | Kod Natura | Stanowisko | Parametr stanu | Wskaźnik | Ocena stanu ochrony na podstawie dostępnych danych wg skali FV, UI, U2 | Ocena stanu ochrony po weryfikacji terenowej wg skali FV, UI, U2 | Ogólna ocena stanu ochrony siedliska/gatunku wg skali FV, UI, U2 | Uwagi |
| | | | Szanse zachowania gatunku | - | XX | - | | |
| Orlik krzykliwy <i>Aquila pomarina</i> | A089 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | U1 | - | U1 | Rowiński 2004; Wesołowski i inni 2003; Pugacewicz 2010 |
| | | | Parametry siedliska gatunku | - | U1 | - | | |
| | | | Szanse zachowania gatunku | - | U1 | - | | |
| Orzełek <i>Hieraetus pennatus</i> | A092 | Brak danych | Parametry populacji | - | XX | - | XX | Rowiński 2004; Wesołowski i inni 2003; Pugacewicz 2010 |
| | | | Parametry siedliska gatunku | - | FV | - | | |
| | | | Szanse zachowania gatunku | - | XX | - | | |
| Jarząbek <i>Bonasa bonasia</i> | A104 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | XX | - | FV | Pugacewicz 1997; Wesołowski i inni 2003; Rowiński 2004 |
| | | | Parametry siedliska gatunku | - | FV | - | | |



| Przedmioty ochrony objęte Planem | | | | | | | | |
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| Siedliska przyrodnicze | Kod Natura | Stanowisko | Parametr stanu | Wskaźnik | Ocena stanu ochrony na podstawie dostępnych danych wg skali FV, UI, U2 | Ocena stanu ochrony po weryfikacji terenowej wg skali FV, UI, U2 | Ogólna ocena stanu ochrony siedliska/gatunku wg skali FV, UI, U2 | Uwagi |
| | | | Szanse zachowania gatunku | - | FV | - | | |
| Kropiatka <i>Porzana porzana</i> | A119 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | U1 | - | U2 | Rowiński 2004; Pugacewicz 2009 |
| | | | Parametry siedliska gatunku | - | U2 | - | | |
| | | | Szanse zachowania gatunku | - | U1 | - | | |
| Derkacz <i>Crex crex</i> | A122 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | FV | - | U1 | Rowiński 2004; Pugacewicz 2009 |
| | | | Parametry siedliska gatunku | - | U1 | - | | |
| | | | Szanse zachowania gatunku | - | U1 | | | |
| Sóweczka <i>Glaucidium passerinum</i> | A217 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | U1 | - | U1 | Domaszewicz 1993; Pugacewicz 1997; Wesołowski i inni 2003; Rowiński 2004 |
| | | | Parametry siedliska gatunku | - | U1 | - | | |



| Przedmioty ochrony objęte Planem | | | | | | | | |
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| Siedliska przyrodnicze | Kod Natura | Stanowisko | Parametr stanu | Wskaźnik | Ocena stanu ochrony na podstawie dostępnych danych wg skali FV, UI, U2 | Ocena stanu ochrony po weryfikacji terenowej wg skali FV, UI, U2 | Ogólna ocena stanu ochrony siedliska/gatunku wg skali FV, UI, U2 | Uwagi |
| | | | Szanse zachowania gatunku | - | U1 | - | | |
| Włochatka <i>Aegolius funereus</i> | A223 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | U1 | - | U1 | Domaszewicz 1993; Pugacewicz 1997; Wesołowski i inni 2003; Rowiński 2004 |
| | | | Parametry siedliska gatunku | - | U1 | - | | |
| | | | Szanse zachowania gatunku | - | U1 | - | | |
| Lelek <i>Caprimulgus europaeus</i> | A224 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | XX | - | U1 | Pugacewicz 1997; Wesołowski i inni 2003; Rowiński 2004 |
| | | | Parametry siedliska gatunku | - | U1 | - | | |
| | | | Szanse zachowania gatunku | - | FV | - | | |
| Dzięcioł zielonosiwy <i>Picus canus</i> | A234 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | FV | - | FV | Pugacewicz 1997, 2010; Wesołowski i inni 2003; Rowiński 2004 |
| | | | Parametry siedliska gatunku | - | FV | - | | |



| Przedmioty ochrony objęte Planem | | | | | | | | |
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| Siedliska przyrodnicze | Kod Natura | Stanowisko | Parametr stanu | Wskaźnik | Ocena stanu ochrony na podstawie dostępnych danych wg skali FV, UI, U2 | Ocena stanu ochrony po weryfikacji terenowej wg skali FV, UI, U2 | Ogólna ocena stanu ochrony siedliska/gatunku wg skali FV, UI, U2 | Uwagi |
| | | | Szanse zachowania gatunku | - | FV | - | | |
| Dzięciol średni <i>Dendrocopos medius</i> | A238 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | FV | - | FV | Pugacewicz 1997; Wesołowski i inni 2003; Rowiński 2004 |
| | | | Parametry siedliska gatunku | - | FV | - | | |
| | | | Szanse zachowania gatunku | - | FV | - | | |
| Dzięciol biało grzbiety <i>Dendrocopos leucotos</i> | A239 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | U1 | - | U1 | Pugacewicz 1997; Wesołowski i inni 2003; Rowiński 2004; Walankiewicz 2002, 2010 |
| | | | Parametry siedliska gatunku | - | U1 | - | | |
| | | | Szanse zachowania gatunku | - | FV | - | | |
| Dzięciol trójpalczasty <i>Picoides tridactylus</i> | A241 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | U1 | - | U1 | Pugacewicz 1997; Wesołowski i inni 2003; Rowiński 2004; Walankiewicz 2002, 2010 |
| | | | Parametry siedliska gatunku | - | U1 | - | | |



| Przedmioty ochrony objęte Planem | | | | | | | | |
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| Siedliska przyrodnicze | Kod Natura | Stanowisko | Parametr stanu | Wskaźnik | Ocena stanu ochrony na podstawie dostępnych danych wg skali FV, UI, U2 | Ocena stanu ochrony po weryfikacji terenowej wg skali FV, UI, U2 | Ogólna ocena stanu ochrony siedliska/gatunku wg skali FV, UI, U2 | Uwagi |
| | | | Szanse zachowania gatunku | - | FV | - | | |
| Muchotłówka mała <i>Ficedula parva</i> | A320 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | FV | - | FV | Pugacewicz 1997; Wesołowski i inni 2003; Rowiński 2004 |
| | | | Parametry siedliska gatunku | - | FV | - | | |
| | | | Szanse zachowania gatunku | - | FV | - | | |
| Muchotłówka białoszyja <i>Ficedula albicollis</i> | A321 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | FV | - | FV | Pugacewicz 1997; Walankiewicz 2002; Wesołowski i inni 2003; Rowiński 2004 |
| | | | Parametry siedliska gatunku | - | FV | - | | |
| | | | Szanse zachowania gatunku | - | FV | - | | |
| Cietrzew <i>Tetrao tetrix tetrix</i> | A409 | W 2011 nie występował | Parametry populacji | - | XX | - | XX | Gatunek nie występuje na terenie Obszaru. Ostatnio widziany w 2006. Podstawa: inwormacja ustna PTOP, Rowiński 2004 |
| | | | Parametry siedliska gatunku | - | U2 | - | | |
| | | | Szanse zachowania | - | XX | - | | |



| Przedmioty ochrony objęte Planem | | | | | | | | |
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| Siedliska przyrodnicze | Kod Natura | Stanowisko | Parametr stanu | Wskaźnik | Ocena stanu ochrony na podstawie dostępnych danych wg skali FV, UI, U2 | Ocena stanu ochrony po weryfikacji terenowej wg skali FV, UI, U2 | Ogólna ocena stanu ochrony siedliska/gatunku wg skali FV, UI, U2 | Uwagi |
| | | | gatunku | | | | | |
| Słonka <i>Scolopax rusticola</i> | A155 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | FV | - | FV | Ocena ekspercka. Podstawa: Pugacewicz 1997; Wesołowski i inni 2003; |
| | | | Parametry siedliska gatunku | - | FV | - | | |
| | | | Szanse zachowania gatunku | - | FV | - | | |
| Samotnik <i>Tringa ochropus</i> | A165 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | FV | - | FV | Ocena ekspercka. Podstawa: Pugacewicz 1997; Wesołowski i inni 2003; |
| | | | Parametry siedliska gatunku | - | FV | - | | |
| | | | Szanse zachowania gatunku | - | FV | - | | |
| Siniak <i>Columba oenas</i> | A207 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | FV | - | FV | Ocena ekspercka. Podstawa: Pugacewicz 1997; Wesołowski i inni 2003; |
| | | | Parametry siedliska gatunku | - | FV | - | | |
| | | | Szanse zachowania gatunku | - | FV | - | | |



| Przedmioty ochrony objęte Planem | | | | | | | | |
|---------------------------------------|------------|-----------------------------------|-----------------------------|----------|--|--|--|---|
| Siedliska przyrodnicze | Kod Natura | Stanowisko | Parametr stanu | Wskaźnik | Ocena stanu ochrony na podstawie dostępnych danych wg skali FV, UI, U2 | Ocena stanu ochrony po weryfikacji terenowej wg skali FV, UI, U2 | Ogólna ocena stanu ochrony siedliska/gatunku wg skali FV, UI, U2 | Uwagi |
| Mopek <i>Barbastella barbastellus</i> | 1308 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | XX | - | FV | Rachwald 2004 |
| | | | Parametry siedliska gatunku | - | FV | - | | |
| | | | Szanse zachowania gatunku | - | FV | - | | |
| Bóbr <i>Castor fiber</i> | 1337 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | FV | - | FV | Kossak 2004 |
| | | | Parametry siedliska gatunku | - | FV | - | | |
| | | | Szanse zachowania gatunku | - | FV | - | | |
| Wilki <i>Canis lupus</i> | 1352 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | FV | - | FV | Jędrzejewski i Jędrzejewska 2001; Kossak 2004 |
| | | | Parametry siedliska gatunku | - | FV | - | | |
| | | | Szanse zachowania gatunku | - | FV | - | | |



| Przedmioty ochrony objęte Planem | | | | | | | | |
|----------------------------------|------------|-----------------------------------|-----------------------------|----------|--|--|--|---|
| Siedliska przyrodnicze | Kod Natura | Stanowisko | Parametr stanu | Wskaźnik | Ocena stanu ochrony na podstawie dostępnych danych wg skali FV, UI, U2 | Ocena stanu ochrony po weryfikacji terenowej wg skali FV, UI, U2 | Ogólna ocena stanu ochrony siedliska/gatunku wg skali FV, UI, U2 | Uwagi |
| Wydra <i>Lutra lutra</i> | 1355 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | FV | - | FV | Jędrzejewski i Jędrzejewska 2001; Kossak 2004 |
| | | | Parametry siedliska gatunku | - | FV | - | | |
| | | | Szanse zachowania gatunku | - | FV | - | | |
| Ryś <i>Lynx lynx</i> | 1361 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | FV | - | U1 | Jędrzejewski i Jędrzejewska 2001; Kossak 2004 |
| | | | Parametry siedliska gatunku | - | U1 | - | | |
| | | | Szanse zachowania gatunku | - | FV | - | | |
| Żubr <i>Bison bonasus</i> | 2647 | Populacja | Parametry populacji | - | U1 | - | U1 | Kossak 2004; Kowalczyk 2010 |
| | | | Parametry siedliska gatunku | - | U1 | - | | |
| | | | Szanse zachowania gatunku | - | U1 | - | | |



| Przedmioty ochrony objęte Planem | | | | | | | | |
|--|------------|-----------------------------------|-----------------------------|----------|--|--|--|---------------------------------|
| Siedliska przyrodnicze | Kod Natura | Stanowisko | Parametr stanu | Wskaźnik | Ocena stanu ochrony na podstawie dostępnych danych wg skali FV, UI, U2 | Ocena stanu ochrony po weryfikacji terenowej wg skali FV, UI, U2 | Ogólna ocena stanu ochrony siedliska/gatunku wg skali FV, UI, U2 | Uwagi |
| Traszka grzebieniasta <i>Triturus cristatus</i> | 1166 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | U2 | - | U2 | Briggs 2004 |
| | | | Parametry siedliska gatunku | - | U2 | - | | |
| | | | Szanse zachowania gatunku | - | U2 | - | | |
| Kumak nizinny <i>Bombina bombina</i> | 1188 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | U2 | - | U2 | Briggs 2004 |
| | | | Parametry siedliska gatunku | - | U2 | - | | |
| | | | Szanse zachowania gatunku | - | U2 | - | | |
| Minóg ukraiński <i>Eudontomyzon mariae</i> | 1098 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | XX | - | U1 | Penczak 1991; Kozłowski 2006 |
| | | | Parametry siedliska gatunku | - | U1 | - | | |
| | | | Szanse zachowania gatunku | - | FV | - | | |



| Przedmioty ochrony objęte Planem | | | | | | | | |
|--|------------|-----------------------------------|-----------------------------|----------|--|--|--|-------------------------------------|
| Siedliska przyrodnicze | Kod Natura | Stanowisko | Parametr stanu | Wskaźnik | Ocena stanu ochrony na podstawie dostępnych danych wg skali FV, UI, U2 | Ocena stanu ochrony po weryfikacji terenowej wg skali FV, UI, U2 | Ogólna ocena stanu ochrony siedliska/gatunku wg skali FV, UI, U2 | Uwagi |
| Poczwarówka zwężona <i>Vertigo angustior</i> | 1014 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | XX | - | U1 | Monitoring GIOŚ z 2009; Fog 2004 |
| | | | Parametry siedliska gatunku | - | U1 | - | | |
| | | | Szanse zachowania gatunku | - | U1 | - | | |
| Poczwarówka jajowata <i>Vertigo moulinsiana</i> | 1016 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | U1 | - | U1 | Monitoring GIOŚ z 2009; Fog 2004 |
| | | | Parametry siedliska gatunku | - | FV | - | | |
| | | | Szanse zachowania gatunku | - | U1 | - | | |
| Trzepla zielona <i>Ophiogomphus cecilia</i> | 1037 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | XX | - | U2 | Briggs 2004 |
| | | | Parametry siedliska gatunku | - | U2 | - | | |
| | | | Szanse zachowania gatunku | - | U2 | - | | |



| Przedmioty ochrony objęte Planem | | | | | | | | |
|--|------------|-----------------------------------|-----------------------------|----------|--|--|--|--|
| Siedliska przyrodnicze | Kod Natura | Stanowisko | Parametr stanu | Wskaźnik | Ocena stanu ochrony na podstawie dostępnych danych wg skali FV, UI, U2 | Ocena stanu ochrony po weryfikacji terenowej wg skali FV, UI, U2 | Ogólna ocena stanu ochrony siedliska/gatunku wg skali FV, UI, U2 | Uwagi |
| Zalotka większa <i>Leucorrhinia pectoralis</i> | 1042 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | XX | - | U2 | Briggs 2004 |
| | | | Parametry siedliska gatunku | - | U2 | - | | |
| | | | Szanse zachowania gatunku | - | U1 | - | | |
| Przeplatka maturalna <i>Hypodryas maturalna</i> | 1052 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | FV | - | U1 | Jaroszewicz 2004, 2010; Ginszt 2010 |
| | | | Parametry siedliska gatunku | - | U1 | - | | |
| | | | Szanse zachowania gatunku | - | U1 | - | | |
| Czerwończyk nieparek <i>Lycaena dispar</i> | 1060 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | FV | - | U1 | Jaroszewicz 2004, 2010; Ginszt 2010 |
| | | | Parametry siedliska gatunku | - | U1 | - | | |
| | | | Szanse zachowania gatunku | - | U1 | - | | |



| Przedmioty ochrony objęte Planem | | | | | | | | |
|---|------------|-----------------------------------|-----------------------------|----------|--|--|--|--|
| Siedliska przyrodnicze | Kod Natura | Stanowisko | Parametr stanu | Wskaźnik | Ocena stanu ochrony na podstawie dostępnych danych wg skali FV, UI, U2 | Ocena stanu ochrony po weryfikacji terenowej wg skali FV, UI, U2 | Ogólna ocena stanu ochrony siedliska/gatunku wg skali FV, UI, U2 | Uwagi |
| Przeplatka aurinia <i>Euphydryas aurinia</i> | 1065 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | U2 | - | U2 | Jaroszewicz 2004, 2010; Ginszt 2010 Monitoring GIOŚ 2008 |
| | | | Parametry siedliska gatunku | - | U1 | - | | |
| | | | Szanse zachowania gatunku | - | U1 | - | | |
| Pływak szerokobrzązek <i>Dytiscus latissimus</i> | 1081 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | XX | - | U2 | Briggs 2004 |
| | | | Parametry siedliska gatunku | - | U2 | - | | |
| | | | Szanse zachowania gatunku | - | XX | - | | |
| Kreślinek nizinny <i>Graphoderus bilineatus</i> | 1082 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | XX | - | U1 | Briggs 2004 |
| | | | Parametry siedliska gatunku | - | U1 | - | | |
| | | | Szanse zachowania gatunku | - | U1 | - | | |



| Przedmioty ochrony objęte Planem | | | | | | | | |
|---|------------|-----------------------------------|-----------------------------|----------|--|--|--|------------------------------------|
| Siedliska przyrodnicze | Kod Natura | Stanowisko | Parametr stanu | Wskaźnik | Ocena stanu ochrony na podstawie dostępnych danych wg skali FV, UI, U2 | Ocena stanu ochrony po weryfikacji terenowej wg skali FV, UI, U2 | Ogólna ocena stanu ochrony siedliska/gatunku wg skali FV, UI, U2 | Uwagi |
| Pachnica dębowa <i>Osmoderma eremita</i> | 1084 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | FV | - | FV | Gutowski 2004, 2010; Buchholz 2008 |
| | | | Parametry siedliska gatunku | - | FV | - | | |
| | | | Szanse zachowania gatunku | - | FV | - | | |
| Bogatek wspaniaty <i>Buprestis splendens</i> | 1085 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | XX | - | FV | Gutowski 2004, 2010; Buchholz 2008 |
| | | | Parametry siedliska gatunku | - | FV | - | | |
| | | | Szanse zachowania gatunku | - | FV | - | | |
| Zgniotek cynobrowy <i>Cucujus cinnaberinus</i> | 1086 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | FV | - | FV | Gutowski 2004, 2010; Buchholz 2008 |
| | | | Parametry siedliska gatunku | - | FV | - | | |
| | | | Szanse zachowania gatunku | - | FV | - | | |



| Przedmioty ochrony objęte Planem | | | | | | | | |
|--|------------|-----------------------------------|-----------------------------|----------|--|--|--|------------------------------------|
| Siedliska przyrodnicze | Kod Natura | Stanowisko | Parametr stanu | Wskaźnik | Ocena stanu ochrony na podstawie dostępnych danych wg skali FV, UI, U2 | Ocena stanu ochrony po weryfikacji terenowej wg skali FV, UI, U2 | Ogólna ocena stanu ochrony siedliska/gatunku wg skali FV, UI, U2 | Uwagi |
| Ponurek Schneidera <i>Boros schneideri</i> | 1920 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | FV | - | U1 | Gutowski 2004, 2010; Buchholz 2008 |
| | | | Parametry siedliska gatunku | - | U1 | - | | |
| | | | Szanse zachowania gatunku | - | FV | - | | |
| Średzinka <i>Mesosa myops</i> | 1923 | Brak danych | Parametry populacji | - | XX | - | XX | Gutowski 2004, 2010; Buchholz 2008 |
| | | | Parametry siedliska gatunku | - | FV | - | | |
| | | | Szanse zachowania gatunku | - | XX | - | | |
| Pogrzybica Mennerheima <i>Oxyporus mannerheimii</i> | 1924 | Brak danych | Parametry populacji | - | XX | - | XX | Gutowski 2004, 2010; Buchholz 2008 |
| | | | Parametry siedliska gatunku | - | FV | - | | |
| | | | Szanse zachowania gatunku | - | XX | - | | |



| Przedmioty ochrony objęte Planem | | | | | | | | |
|---|------------|-----------------------------------|-----------------------------|----------|--|--|--|------------------------------------|
| Siedliska przyrodnicze | Kod Natura | Stanowisko | Parametr stanu | Wskaźnik | Ocena stanu ochrony na podstawie dostępnych danych wg skali FV, UI, U2 | Ocena stanu ochrony po weryfikacji terenowej wg skali FV, UI, U2 | Ogólna ocena stanu ochrony siedliska/gatunku wg skali FV, UI, U2 | Uwagi |
| Rozmiazg kolweński <i>Pytho kolwensis</i> | 1925 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | XX | - | U1 | Gutowski 2004, 2010; Buchholz 2008 |
| | | | Parametry siedliska gatunku | - | U1 | - | | |
| | | | Szanse zachowania gatunku | - | U1 | - | | |
| Konarek tajgowy <i>Phryganophilus ruficollis</i> | 4021 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | XX | - | XX | Gutowski 2004, 2010; Buchholz 2008 |
| | | | Parametry siedliska gatunku | - | FV | - | | |
| | | | Szanse zachowania gatunku | - | XX | - | | |
| Zagłębek bruzdkowany <i>Rhysodes sulcatus</i> | 4026 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | FV | - | FV | Gutowski 2004, 2010; Buchholz 2008 |
| | | | Parametry siedliska gatunku | - | FV | - | | |
| | | | Szanse zachowania gatunku | - | FV | - | | |



| Przedmioty ochrony objęte Planem | | | | | | | | |
|---|------------|-----------------------------------|-----------------------------|----------|--|--|--|--|
| Siedliska przyrodnicze | Kod Natura | Stanowisko | Parametr stanu | Wskaźnik | Ocena stanu ochrony na podstawie dostępnych danych wg skali FV, UI, U2 | Ocena stanu ochrony po weryfikacji terenowej wg skali FV, UI, U2 | Ogólna ocena stanu ochrony siedliska/gatunku wg skali FV, UI, U2 | Uwagi |
| Szlaczkoń szafraniec <i>Colias myrmidone</i> | 4030 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | U2 | - | U2 | Jaroszewicz 2004, 2010; Ginszt 2010 |
| | | | Parametry siedliska gatunku | - | U2 | - | | |
| | | | Szanse zachowania gatunku | - | U2 | - | | |
| Zatoczek łamliwy <i>Anisus vorticulus</i> | 4056 | Ogół stanowisk na terenie Obszaru | Parametry populacji | - | XX | - | U2 | Fog 2004 |
| | | | Parametry siedliska gatunku | - | U2 | - | | |
| | | | Szanse zachowania gatunku | - | XX | - | | |

4. Analiza zagrożeń

| L.p. | Przedmiot ochrony | Numer stanowiska | Zagrożenia | | Opis zagrożenia |
|------|---|---------------------------|---|----------------------------|--|
| | | | Istniejące | Potencjalne | |
| 1 | 3150 Starorzeczca i naturalne eutroficzne zbiorniki wodne ze zbiorowiskami z <i>Nympheion</i> , <i>Potamion</i> | Ogół stanowisk w Obszarze | H01 zanieczyszczenie wód powierzchniowych K01.02 zamulenie K02.03 eutrofizacja J02.01 zasypywanie terenu, melioracje i osuszanie – ogólnie G05 inna ingerencja i zakłócenia powodowane przez działalność człowieka | X Brak zagrożeń i nacisków | Zanik siedlisk roślin i zwierząt; wypływanie i zarastanie siedliska; zanik różnorodności świata ożywionego, niekorzystne zjawiska jak np. zakwity, dominacja jednego gatunku roślin, zanik siedlisk; ograniczenie migracji lateralnej koryta cieków spowodowane regulacją i umacnianiem brzegów cieków; inne rodzaje zanieczyszczeń lub oddziaływań człowieka – puszki, butelki pet itp. |
| 2 | 6230 Górskie i niżowe murawy bliźniczkowe (<i>Nardion</i> - płaty bogate florystycznie) | Ogół stanowisk w Obszarze | A04.03 zarzucenie pasterstwa, brak wypasu K02 ewolucja biocenotyczna, sukcesja G05 inna ingerencja i zakłócenia powodowane przez działalność człowieka B01.01 zalesianie terenów otwartych (drzewa rodzime) E01.03 zabudowa rozproszona | X Brak zagrożeń i nacisków | zarzucenie pasterstwa i tradycyjnych form użytkowania; zarastanie siedliska w drodze procesu sukcesji wtórnej; inne rodzaje zanieczyszczeń lub oddziaływań człowieka – składowanie „beł” siana, puszki, butelki pet itp.; zalesianie terenów otwartych – plantacje choinkowe; zabudowa polan puszczańskich |
| 3 | 6510 Niżowe i górskie świeże łąki użytkowane ekstensywnie (<i>Arrhenatherion elatioris</i>) | Ogół stanowisk w Obszarze | A03.03 zanichanie / brak koszenia A04.03 zarzucenie pasterstwa, brak wypasu K02 ewolucja biocenotyczna, sukcesja I01 obce gatunki inwazyjne B01.01 zalesianie terenów otwartych (drzewa rodzime) E01.03 zabudowa rozproszona | X Brak zagrożeń i nacisków | zarzucenie ekstensywnej gospodarki łąkarskiej; zarastanie siedliska w drodze procesu sukcesji wtórnej; inwazja gatunków (np. szczaw omszony <i>Rumex confertus</i>); zalesianie terenów otwartych – plantacje choinkowe; zabudowa polan puszczańskich |
| 4 | 7140 Torfowiska przejściowe i trzęsawiska (przeważnie) | Ogół stanowisk w Obszarze | J02.01 zasypywanie terenu, melioracje i osuszanie – ogólnie K02 ewolucja biocenotyczna, sukcesja | X Brak zagrożeń i nacisków | odwodnienie – obniżenie poziomu wód gruntowych i powierzchniowych (zmiana poziomu wód); |

| L.p. | Przedmiot ochrony | Numer stanowiska | Zagrożenia | | Opis zagrożenia |
|------|--|---|--|---|---|
| | | | Istniejące | Potencjalne | |
| | z roślinnością z <i>Scheuchzerio-Caricetea</i>) | | G05.01 wydeptywanie, nadmierne użytkowanie | | zarastanie siedliska w drodze procesu sukcesji wtórnej; |
| 5 | 7230 Górskie i nizinne torfowiska zasadowe o charakterze młak, turzycowisk i mechowisk | Ogół stanowisk w Obszarze | K02 ewolucja biocenotyczna, sukcesja | J02.01 zasypywanie terenu, melioracje i osuszanie – ogólnie | zarastanie siedliska w drodze procesu sukcesji wtórnej; zahamowanie procesu torfotwórczego w wyniku odwodnienia. |
| 6 | 9170 Grąd subkontynentalny (<i>Tilio-Carpinetum</i> , <i>Melitti Carpinetum</i>) | Płaty siedliska w lasach gospodarczych z drzewostanami poniżej stu lat Płaty siedliska w rezerwatach przyrody oraz w lasach gospodarczych z drzewostanem powyżej stu lat | B02.04 usuwanie martwych i umierających drzew B02.01 gospodarka leśna i plantacyjna i użytkowanie lasów i plantacji K04.05 szkody wyrządzone przez roślinożerców (w tym przez zwierzyńę łowną) I01 obce gatunki inwazyjne K04.05 szkody wyrządzone przez roślinożerców (w tym przez zwierzyńę łowną) I01 obce gatunki inwazyjne | X Brak zagrożeń i nacisków | usuwanie zamierających drzew; gospodarka leśna - niszczenie runa i warstwy krzewów podczas zrywki; |
| 7 | 91D0 Bory i lasy bagienne (<i>Vaccinio uliginosi-Betuletum pubescentis</i> , <i>Ledo-Sphagnetum</i> , <i>Vaccinio uliginosi-Pinetum</i> , <i>Sphagno girgensohnii-Piceetum</i> i brzożowo-sosnowe bagienne lasy borealne) | Ogół stanowisk w Obszarze | J02.01 zasypywanie terenu, melioracje i osuszanie – ogólnie | K02 ewolucja biocenotyczna, sukcesja | odwodnienie – obniżenie poziomu wód gruntowych i powierzchniowych (w mniejszym stopniu rowy melioracyjne) |



| L.p. | Przedmiot ochrony | Numer stanowiska | Zagrożenia | | Opis zagrożenia |
|------|--|---|---|---|---|
| | | | Istniejące | Potencjalne | |
| 8 | 91E0 Łęgi wierzbowe, topolowe, olszowe i jesionowe (<i>Salicetum albo-fragilis</i> , <i>Populetum albae</i> , <i>Fraxino-Alnetum</i> , olsy źródłiskowe) | Siedliska w lasach gospodarczych z drzewostanami poniżej stu lat Siedliska w rezerwatach przyrody oraz w lasach gospodarczych z drzewostanem powyżej stu lat | B02.04 usuwanie martwych i umierających drzew I01 obce gatunki inwazyjne I02 problematyczne gatunki rodzime K biotyczne i abiotyczne procesy naturalne I01 obce gatunki inwazyjne I02 problematyczne gatunki rodzime K biotyczne i abiotyczne procesy naturalne | J02.01 zasypywanie terenu, melioracje i osuszanie – ogólnie | usuwania zamierających drzew; inwazja gatunków - obecność gatunków obcych w runie (duża podatność łęgów na neofityzację), obecność rodzimych gatunków ekspansywnych; modyfikowanie warunków wodnych i regulowanie rzek nawet w znacznym oddaleniu od siedlisk; brak odnowień naturalnych, chorobowe zamieranie jesionu |
| 9 | 91F0 Łęgowe lasy dębowo-wiązowo-jesionowe (<i>Ficario-Ulmetum</i>) | Ogół stanowisk w Obszarze | I01 obce gatunki inwazyjne J02.01 zasypywanie terenu, melioracje i osuszanie – ogólnie K biotyczne i abiotyczne procesy naturalne | X Brak zagrożeń i nacisków | inwazja gatunków (niecierpek drobnokwiatowy <i>Impatiens parviflora</i>); grądowienie – wkraczanie podrostów grabowych, skutek obniżenia poziomu wód gruntowych; chorobowe zamieranie wiązków i jesionu. |
| 10 | 91I0 Ciepłolubne dąbrowy (<i>Quercetalia pubescenti-petraeae</i>) | 249D | K02 ewolucja biocenotyczna, sukcesja A04.03 zarzucenie pasterstwa, brak wypasu | X Brak zagrożeń i nacisków | największym zagrożeniem dla ciepłolubnych lasów dębowych jest ekspansja gatunków zacieniającego dna lasu i ograniczających występowanie termofilnych składników flory |
| 11 | 1437 Leniec bezpodkwiatkowy <i>Thesium ebracteatum</i> | Ogół stanowisk w Obszarze | K02 ewolucja biocenotyczna, sukcesja B02.01 gospodarka leśna i plantacyjna i użytkowanie lasów i plantacji | X Brak zagrożeń i nacisków | sukcesja roślinności - ekspansja wysokich traw i ziół na murawach i w lasach, ekspansja gatunków liściastych w widnych dotychczas lasach i na ich skrajach; gospodarka leśna - zrywka, przypadkowe zniszczenie podczas prac leśnych |
| 12 | 1477 Sasanka otwarta <i>Pulsatilla patens</i> | Ogół stanowisk w Obszarze | K02 ewolucja biocenotyczna, sukcesja B02.01 gospodarka leśna i plantacyjna i użytkowanie lasów i plantacji K02.03 eutrofizacja | X Brak zagrożeń i nacisków | najważniejszym, stwierdzonym obecnie zagrożeniem dla gatunku jest sukcesja roślinności - ekspansja wysokich traw, ziół i krzewów, drzew gatunków liściastych w widnych skrajach lasów; zagrożenia związane są z gospodarką leśną – zrywka; |



| L.p. | Przedmiot ochrony | Numer stanowiska | Zagrożenia | | Opis zagrożenia |
|------|--|---------------------------|--|----------------------------|--|
| | | | Istniejące | Potencjalne | |
| | | | G05 inna ingerencja i zakłócenia powodowane przez działalność człowieka | | eutrofizacja siedlisk gatunku; plądrowanie stanowisk sasanki (wykopywanie roślin, zrywanie kwiatów) |
| 13 | 1939 Rzepik szczeciniasty <i>Agrimonia pilosa</i> | Ogół stanowisk w Obszarze | K02 ewolucja biocenotyczna, sukcesja K04.05 szkody wyrządzone przez roślinożerców (w tym przez zwierzę łąkową) I01 obce gatunki inwazyjne | X Brak zagrożeń i nacisków | ewolucja biocenotyczna – wkraczanie gatunków drzewiastych, zwiększanie zwarcia bylin; presja roślinożerców; inwazja gatunków (np. niecierpek drobnokwiatowy <i>Impatiens parviflora</i>) |
| 14 | A030 Bocian czarny <i>Ciconia nigra</i> | Ogół stanowisk w Obszarze | J02.01 zasypywanie terenu, melioracje i osuszanie – ogólnie J02.05 modyfikowanie funkcjonowania wód - ogólnie H01.08 rozproszone zanieczyszczenie wód powierzchniowych z powodu ścieków z gospodarstw domowych K biotyczne i abiotyczne procesy naturalne | X Brak zagrożeń i nacisków | obniżanie poziomu wód gruntowych i powierzchniowych (utrzymywanie się niskiego poziomu wód w ciekach puszczańskich); próg wodny na rzece Narewka w miejscowości Narewka; spływ ścieków z Hajnówki do rzeki Leśna; zmniejszenie zasobów pokarmowych - brak dostatecznej ilości ryb w ciekach puszczańskich |
| 15 | A072 Trzmielojad <i>Pernis apivorus</i> | Ogół stanowisk w Obszarze | B02.02 wycinka lasu | X Brak zagrożeń i nacisków | wycinka drzew w drzewostanach ponad 80 letnich na siedliskach łąkowych i łągowych |
| 16 | A080 Gadożer <i>Circaetus gallicus</i> | Brak danych | J02.01 zasypywanie terenu, melioracje i osuszanie – ogólnie | X Brak zagrożeń i nacisków | odwodnienie - obniżanie poziomu wód gruntowych i powierzchniowych |
| 17 | A089 Orlik krzykliwy <i>Aquila pomarina</i> | Ogół stanowisk w Obszarze | A04.03 zarzucenie pasterstwa, brak wypasu K02 ewolucja biocenotyczna, sukcesja E01.03 zabudowa rozproszona | X Brak zagrożeń i nacisków | zarzucenie ekstensywnej gospodarki łąkarskiej; wtórna sukcesja, zarastanie terenów żerowiskowych; zabudowa polan puszczańskich |



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|------|---|---------------------------|--|----------------------------|--|
| | | | Istniejące | Potencjalne | |
| 18 | A092 Orzełek <i>Hieraetus pennatus</i> | Brak danych | K02 ewolucja biocenotyczna, sukcesja | X Brak zagrożeń i nacisków | sukcesja wtórna w dolinach i polanach puszczańskich (pogorszenie bazy pokarmowej) |
| 19 | A104 Jarząbek <i>Bonasa bonasia</i> | Ogół stanowisk w Obszarze | X Brak zagrożeń i nacisków | X Brak zagrożeń i nacisków | |
| 20 | A119 Kropiatka <i>Porzana porzana</i> | Ogół stanowisk w Obszarze | K02 ewolucja biocenotyczna, sukcesja J02.01 zasypywanie terenu, melioracje i osuszanie – ogólnie | X Brak zagrożeń i nacisków | zarastanie otwartych, podmokłych przestrzeni w dolinach rzecznych lasem, rozprzestrzenianie się trzcinowisk; obniżanie poziomu wód gruntowych |
| 21 | A122 Derkacz <i>Crex crex</i> | Ogół stanowisk w Obszarze | K02 ewolucja biocenotyczna, sukcesja E01.03 zabudowa rozproszona B01.01 zalesianie terenów otwartych (drzewa rodzime) A06.04 zaniechanie produkcji uprawnej | X Brak zagrożeń i nacisków | rozwój trzcinowisk, wtórna sukcesja roślinności - wkraczanie drzew i krzewów na otwarte tereny dolin i polan puszczańskich; zabudowa polan puszczańskich; zalesienia terenów rolniczych – plantacje choinkowe; zaprzestanie uprawy pól |
| 22 | A217 Sóweczka <i>Glaucidium passerinum</i> | Ogół stanowisk w Obszarze | B02.02 wycinka lasu B02.04 usuwanie martwych i umierających drzew | X Brak zagrożeń i nacisków | wycinka lasu w drzewostanach powyżej 80 lat; usuwanie opanowanych świerków (zasiedlonych przez kornika drukarza) w wieku powyżej 80 lat |
| 23 | A223 Włochatka <i>Aegolius funereus</i> | Ogół stanowisk w Obszarze | K biotyczne i abiotyczne procesy naturalne B02.04 usuwanie martwych i umierających drzew | X Brak zagrożeń i nacisków | eutrofizacja siedlisk leśnych („grądowienie borów”) - zanik odpowiednich siedlisk; usuwanie opanowanych świerków (kornik drukarz) w wieku powyżej 80 lat |
| 24 | A224 Lelek <i>Caprimulgus europaeus</i> | Ogół stanowisk w Obszarze | K02 ewolucja biocenotyczna, sukcesja K biotyczne i abiotyczne procesy naturalne B leśnictwo | X Brak zagrożeń i nacisków | występowanie tego gatunku jest związane z rozluźnionymi ubogimi borami i požarzyskami, dużymi zrębami; ponieważ siedliska takie są w Puszczy w regresie, należy spodziewać się naturalnego spadku liczebności tego gatunku w przyszłości; wtórna sukcesja roślinności - wkraczanie drzew i krzewów na otwarte, ubogie tereny, polanki i luki w drzewostanie; |

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|------|---|------------------------------|--|--|---|
| | | | Istniejące | Potencjalne | |
| | | | | | eutrofizacja siedlisk leśnych („grądowienie borów”) - zanik odpowiednich siedlisk; zmniejszenie powierzchni zrębów (brak zrębów) |
| 25 | A234 Dzięcioł zielonosiwy <i>Picus canus</i> | Ogół stanowisk w Obszarze | X Brak zagrożeń i nacisków | X Brak zagrożeń i nacisków | |
| 26 | A238 Dzięcioł średni <i>Dendrocopos medius</i> | Ogół stanowisk w Obszarze | K biotyczne i abiotyczne procesy naturalne | K biotyczne i abiotyczne procesy naturalne | masowe zamieranie jesionu – ograniczenie bazy żerowej po chwilowym gwałtownym jej wzroście; brak odnowień naturalnych dębu spowoduje w przyszłości ograniczenie bazy żerowej |
| 27 | A239 Dzięcioł białogrzbiety <i>Dendrocopos leucotos</i> | Ogół stanowisk w Obszarze | B02.04 usuwanie martwych i umierających drzew | X Brak zagrożeń i nacisków | usuwanie zamierających drzew w drzewostanach ponad 80 letnich |
| 28 | A241 Dzięcioł trójpalczasty <i>Picoides tridactylus</i> | Ogół stanowisk w Obszarze | B02.04 usuwanie martwych i umierających drzew | X Brak zagrożeń i nacisków | usuwanie opianowanych świerków (kornik drukarz) w wieku powyżej 80 lat |
| 29 | A307 Jarzębatka <i>Sylvia nisoria</i> | Ogół stanowisk w Obszarze | X Brak zagrożeń i nacisków | A02.01 intensyfikacja rolnictwa A11 inne rodzaje praktyk rolniczych | nasilenie stosowania chemicznych środków ochrony roślin w rolnictwie, ujednolicanie i upraszczanie struktury krajobrazu rolniczego wycinanie zarośli i gęstych zadrzewień w dolinach rzecznych; |
| 30 | A320 Muchotłówka mała <i>Ficedula parva</i> | Ogół stanowisk w Obszarze | X Brak zagrożeń i nacisków | X Brak zagrożeń i nacisków | |
| 31 | A321 Muchotłówka | Ogół stanowisk | X Brak zagrożeń i nacisków | X Brak zagrożeń i nacisków | |



| L.p. | Przedmiot ochrony | Numer stanowiska | Zagrożenia | | Opis zagrożenia |
|------|--|---------------------------|---|--|--|
| | | | Istniejące | Potencjalne | |
| | białoszyja <i>Ficedula albicollis</i> | w Obszarze | | | |
| 32 | A338 Gąsiorek <i>Lanius collurio</i> | Ogół stanowisk w Obszarze | X Brak zagrożeń i nacisków | A02.01 intensyfikacja rolnictwa A11 inne rodzaje praktyk rolniczych | nasilenie stosowania chemicznych środków ochrony roślin w rolnictwie, ujednolicanie i upraszczanie struktury krajobrazu rolniczego wycinanie zarośli i gęstych zadrzewień w dolinach rzecznych; |
| 33 | A409 Cietrzew <i>Tetrao tetrix tetrix</i> | - | K02 ewolucja biocenotyczna, sukcesja | X Brak zagrożeń i nacisków | wtórna sukcesja roślinności - wkraczanie drzew i krzewów na otwarte, ubogie tereny, polanki i luki w drzewostanie; |
| 34 | A155 Słonka <i>Scolopax rusticola</i> | Ogół stanowisk w Obszarze | J02.01 zasypywanie terenu, melioracje i osuszanie – ogólnie F03.01 polowanie | X Brak zagrożeń i nacisków | obniżanie poziomu wód gruntowych i wynikająca z tego utrata siedlisk; polowania w zachodniej i południowej Europie |
| 35 | A165 Samotnik <i>Tringa ochropus</i> | Ogół stanowisk w Obszarze | J02.01 zasypywanie terenu, melioracje i osuszanie – ogólnie | X Brak zagrożeń i nacisków | obniżanie poziomu wód gruntowych - utrata siedlisk |
| 36 | A207 Siniak <i>Columba oenas</i> | Ogół stanowisk w Obszarze | Brak X Brak zagrożeń i nacisków | X Brak zagrożeń i nacisków | |
| 37 | 1308 Mopek <i>Barbastella barbastellus</i> | Ogół stanowisk w Obszarze | G05 inna ingerencja i zakłócenia powodowane przez działalność człowieka | X Brak zagrożeń i nacisków | Brak dostatecznej wiedzy o zimowiskach, co może prowadzić do przypadkowego niszczenia takich miejsc |
| 38 | 1337 Bóbr <i>Castor fiber</i> | Ogół stanowisk w Obszarze | X Brak zagrożeń i nacisków | X Brak zagrożeń i nacisków | |
| 39 | 1352 Wilk <i>Canis lupus</i> | Ostoja Puszcza Białowieża | X Brak zagrożeń i nacisków | X Brak zagrożeń i nacisków | |
| 40 | 1355 Wydra <i>Lutra lutra</i> | Ostoja Puszcza Białowieża | X Brak zagrożeń i nacisków | X Brak zagrożeń i nacisków | |

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|------|--|----------------------------|---|--------------------------------------|---|
| | | | Istniejące | Potencjalne | |
| 41 | 1361 Ryś <i>Lynx lynx</i> | Ostoja Puszcza Białowieska | J03.02 antropogeniczne zmniejszenie spójności siedlisk | K02 ewolucja biocenotyczna, sukcesja | ograniczona komunikacja z innymi populacjami; zanik otwartych terenów wewnątrz Puszczy jako skutek wtórnej sukcesji może spowodować spadek liczebności sarny – pogorszenie bazy żerowej |
| 42 | 2647 Żubr <i>Bison bonasus</i> | Ostoja Puszcza Białowieska | K02 ewolucja biocenotyczna, sukcesja J03.02.03 zmniejszenie wymiany materiału genetycznego J03.02.02 zmniejszenie rozproszenia J03.02 antropogeniczne zmniejszenie spójności siedlisk K03.03 zawleczenie choroby (patogeny mikrobowe) | X Brak zagrożeń i nacisków | ograniczona baza żerowa w okresie zimowym (skutek sukcesji wtórnej na śródleśnych powierzchniach otwartych); wąska pula genowa białowieskiej populacji – współczesna linia męska pochodzi od jednego samca; izolacja mikropopulacji w wyniku koncentracji zimowych dokarmiań; ograniczona komunikacja z innymi populacjami; pasożyty wewnętrzne – wzrost zarażeń w wyniku koncentracji przy zimowych karmowiskach oraz w wyniku dokarmiania sianem przywożonym z poza Puszczy |
| 43 | 1166 Traszka grzebieniasta <i>Triturus cristatus</i> | Ogół stanowisk w Obszarze | F01.01 Intensywna hodowla ryb K02.03 eutrofizacja (naturalna) | J03.02.02 zmniejszenie rozproszenia | zarybianie zbiorników wodnych; zarastanie niewielkich stawów na polanach puszczańskich (zanik siedliska); izolacja małych populacji może spowodować zmniejszenie liczebności gatunku, zanik rozproszonych stanowisk. |
| 44 | 1188 Kumak nizinny <i>Bombina bombina</i> | Ogół stanowisk w Obszarze | K02.03 eutrofizacja (naturalna) | J03.02.02 zmniejszenie rozproszenia | eutrofizacja – wypływanie, zarastanie i w konsekwencji zanik starorzeczy oraz zarastanie niewielkich stawów na polanach puszczańskich (zanik siedliska); izolacja małych populacji może spowodować zmniejszenie liczebności gatunku, zanik rozproszonych stanowisk |
| 45 | 1098 Minóg ukraiński <i>Eudontomyzon mariae</i> | Ogół stanowisk w Obszarze | H01.08 rozproszone zanieczyszczenie wód powierzchniowych z powodu | X Brak zagrożeń i nacisków | zanieczyszczenia wód, spływ ścieków z Hajnówki do rzeki Leśna; |



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|------|--|---------------------------|---|----------------------------|--|
| | | | Istniejące | Potencjalne | |
| | | | ścieków z gospodarstw domowych J02.05 modyfikowanie funkcjonowania wód - ogólnie | | próg wodny na rzece Narewka w miejscowości Narewka |
| 46 | 1014 Poczwarówka zwężona <i>Vertigo angustior</i> | Ogół stanowisk w Obszarze | K02 ewolucja biocenotyczna, sukcesja | X Brak zagrożeń i nacisków | wtórna sukcesja roślinności, wkraczanie drzew i krzewów na otwarte tereny w dolinach puszczańskich rzek prowadząca do przekształcenia turzycowisk w tereny leśne - zanik siedliska |
| 47 | 1016 Poczwarówka jajowata <i>Vertigo moulinsiana</i> | Ogół stanowisk w Obszarze | J02.01 zasypywanie terenu, melioracje i osuszanie – ogólnie K02 ewolucja biocenotyczna, sukcesja | X Brak zagrożeń i nacisków | niskie uwodnienia dolin rzecznych; wtórna sukcesja roślinności, wkraczanie drzew i krzewów na otwarte tereny w dolinach puszczańskich rzek prowadząca do przekształcenia turzycowisk w tereny leśne – pogorszenie stanu siedliska |
| 48 | 1037 Trzepla zielona <i>Ophiogomphus cecilia</i> | Ogół stanowisk w Obszarze | X Brak zagrożeń i nacisków | X Brak zagrożeń i nacisków | |
| 49 | 1042 Zalotka większa <i>Leucorhina pectoralis</i> | Ogół stanowisk w Obszarze | X Brak zagrożeń i nacisków | X Brak zagrożeń i nacisków | |
| 50 | 1052 Przeplatka maturalna <i>Hypodryas maturalna</i> | Ogół stanowisk w Obszarze | K biotyczne i abiotyczne procesy naturalne K02 ewolucja biocenotyczna, sukcesja | X Brak zagrożeń i nacisków | masowe zamieranie jesionu – roślina żywicielska postaci larwalnej; zarastanie dróg, lini oddziałowych, polanek śródlesnych, dolin rzecznych |
| 51 | 1060 Czerwończyk nieparek <i>Lycaena dispar</i> | Ogół stanowisk w Obszarze | K02 ewolucja biocenotyczna, sukcesja | X Brak zagrożeń i nacisków | rozwój trzcinowisk, wtórna sukcesja roślinności, wkraczanie drzew i krzewów na podmokłe łąki w dolinach i polanach puszczańskich |
| 52 | 1065 Przeplatka aurinia <i>Euphydryas aurinia</i> | Ogół stanowisk w Obszarze | K02 ewolucja biocenotyczna, sukcesja | X Brak zagrożeń i nacisków | rozwój trzcinowisk, wtórna sukcesja roślinności, wkraczanie drzew i krzewów na podmokłe łąki w dolinach i polanach puszczańskich |

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|------|---|---------------------------|---|----------------------------|--|
| | | | Istniejące | Potencjalne | |
| 53 | 1081 Pływak szerokobrzeżek <i>Dytiscus latissimus</i> | Ogół stanowisk w Obszarze | H01 zanieczyszczenia wód powierzchniowych | X Brak zagrożeń i nacisków | zanieczyszczenia wód powierzchniowych; brak wiedzy o liczebności i rozmieszczeniu populacji |
| 54 | 1082 Kreślinek nizinny <i>Graphoderus bilineatus</i> | Ogół stanowisk w Obszarze | H01 zanieczyszczenia wód powierzchniowych | X Brak zagrożeń i nacisków | zanieczyszczenia wód powierzchniowych; brak wiedzy o liczebności i rozmieszczeniu populacji |
| 55 | 1084 Pachnica dębowa <i>Osmoderma eremita</i> | Ogół stanowisk w Obszarze | B02.02 wycinka lasu B02.04 usuwanie martwych i umierających drzew G05 inna ingerencja i zakłócenia powodowane przez działalność człowieka | X Brak zagrożeń i nacisków | usuwanie przydrożnych drzew, czyszczenie i zabezpieczanie dziupli z próchnowiskami w założeniach parkowych |
| 56 | 1085 Bogatek wspaniały <i>Buprestis splendens</i> | Ogół stanowisk w Obszarze | B02.04 usuwanie martwych i umierających drzew | X Brak zagrożeń i nacisków | usuwanie zamierających sosen |
| 57 | 1086 Zgniotek cynobrowy <i>Cucujus cinnaberinus</i> | Ogół stanowisk w Obszarze | B02.04 usuwanie martwych i umierających drzew | X Brak zagrożeń i nacisków | usuwanie zamierających drzew |
| 58 | 1920 Ponurek Schneidera <i>Boros schneideri</i> | Ogół stanowisk w Obszarze | B02.02 wycinka lasu B02.04 usuwanie martwych i umierających drzew | X Brak zagrożeń i nacisków | wycinka lasu – odmładzanie borów i borów mieszanych przez gospodarkę lesną; usuwanie zamierających drzew |
| 59 | 1923 Średzinka <i>Mesosa myops</i> | Brak danych | B02.02 wycinka lasu B02.04 usuwanie martwych i umierających drzew | X Brak zagrożeń i nacisków | wycinka lasu – odmładzanie borów i borów mieszanych przez gospodarkę lesną; usuwanie zamierających drzew |
| 60 | 1924 Pogrzybnica Mennerheima <i>Oxyporus mannerheimii</i> | Brak danych | U nieznane zagrożenie lub nacisk | X Brak zagrożeń i nacisków | brak wiedzy o biologii i rozmieszczeniu gatunku |
| 61 | 1925 Rozmiarz kolweński <i>Pytho kolwensis</i> | Brak danych | B02.04 usuwanie martwych i umierających drzew | X Brak zagrożeń i nacisków | usuwanie zamierających drzew |
| 62 | 4021 Konarek tajgowy <i>Phryganophilus ruficollis</i> | Brak danych | B02.04 usuwanie martwych i umierających drzew | X Brak zagrożeń i nacisków | usuwanie zamierających drzew |



| L.p. | Przedmiot ochrony | Numer stanowiska | Zagrożenia | | Opis zagrożenia |
|------|--|---------------------------|---|----------------------------|--|
| | | | Istniejące | Potencjalne | |
| 63 | 4026 Zagłębek bruzdkowany <i>Rhysodes sulcatus</i> | Ogół stanowisk w Obszarze | B02.04 usuwanie martwych i umierających drzew | X Brak zagrożeń i nacisków | usuwanie zamierających drzew |
| 64 | 4030 Szlaczkoń szafraniec <i>Colias myrmidone</i> | Ogół stanowisk w Obszarze | K02 ewolucja biocenotyczna, sukcesja G05 niewłaściwie realizowane działania ochronne lub ich brak | X Brak zagrożeń i nacisków | zarastanie dużych luk i polanek śródleśnych (składnice przkolejkowe) drzewami, prowadzące do powstania zwartego drzewostanu; sukcesja wtórna na odlesionym pasie wokół toru kolejowego Białowieża – Hajnówka; brak działań ochronnych w puszczańskich rezerwatach faunistycznych |
| 65 | 4056 Zatoczek łamliwy <i>Anisus vorticulus</i> | Ogół stanowisk w Obszarze | H01 zanieczyszczenia wód powierzchniowych K01.02 zamulenie K02.03 eutrofizacja (naturalna) | X Brak zagrożeń i nacisków | zamulenie – wypłylenie i zarastanie |

5. Cele działań ochronnych.

| Przedmiot ochrony | Numer stanowiska | Stan ochrony | Cele działań ochronnych | Perspektywa osiągnięcia właściwego stanu ochrony |
|--|------------------------|--------------|---|---|
| 3150 Starorzeczca i naturalne eutroficzne zbiorniki wodne ze zbiorowiskami z <i>Nympheion</i> , <i>Potamion</i> | Ogół stanowisk w Ostoi | U2 | Utrzymanie właściwych stosunków wodnych w zlewniach puszczańskich cieków. Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia wszystkich płatów siedliska, oceny jego stanu oraz zaplanowania działań ochronnych. | Nie określa się, ograniczone możliwości ochrony w dłuższej perspektywie |
| 6230 Górskie i niżowe murawy bliźniczkowe (<i>Nardion</i> - płaty bogate florystycznie) | Ogół stanowisk w Ostoi | U1 | Poprawa stanu zachowania siedliska poprzez przywrócenie tradycyjnych form użytkowania. Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia wszystkich płatów siedliska, oceny jego stanu oraz zaplanowania działań ochronnych. | 10 lat Do określenia po wykonaniu inwentaryzacji |
| 6510 Niżowe i górskie świeże łąki użytkowane ekstensywnie (<i>Arrhenatherion elatioris</i>) | Ogół stanowisk w Ostoi | U1 | Poprawa stanu zachowania siedliska poprzez przywrócenie tradycyjnych form użytkowania. Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia wszystkich płatów siedliska, oceny jego stanu oraz zaplanowania działań ochronnych. | 10 lat Do określenia po wykonaniu inwentaryzacji |
| 7140 Torfowiska przejściowe i trzęsawiska (przeważnie z roślinnością z <i>Scheuchzerio-Caricetea</i>) | Ogół stanowisk w Ostoi | XX | Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia wszystkich płatów siedliska, oceny jego stanu oraz zaplanowania działań ochronnych. | Do określenia po wykonaniu inwentaryzacji |
| 7230 Górskie i nizinne torfowiska zasadowe o charakterze młak, turzycowisk i mechowisk | Ogół stanowisk w Ostoi | U2 | Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia wszystkich płatów siedliska, oceny jego stanu oraz zaplanowania działań ochronnych oraz poprawa stosunków wodnych. | Do określenia po wykonaniu inwentaryzacji |
| 9170 Grąd subkontynentalny (<i>Tilio-Carpinetum</i> , <i>Melitti carpinetum</i>) | Ogół stanowisk w Ostoi | U1 | Zachowanie, co najmniej obecnej powierzchni siedlisk we właściwym stanie. Doprowadzenie siedlisk zniekształconych do stanu właściwego | 10 lat 40 - 60 lat |
| 91D0 Bory i lasy bagienne (<i>Vaccinio uliginosi-Betuletum</i>) | Ogół stanowisk w Ostoi | FV | Utrzymanie właściwych stosunków wodnych. Zachowanie obecnej powierzchni siedlisk we | Nie określa się |



| Przedmiot ochrony | Numer stanowiska | Stan ochrony | Cele działań ochronnych | Perspektywa osiągnięcia właściwego stanu ochrony |
|---|------------------------|--------------|---|---|
| <i>pubescentis, Vaccinio uliginosi-Pinetum, Pino mugo-Sphagnetum, Sphagno girgensohnii-Piceetum</i> i brzozowo-sosnowe bagienne lasy borealne) | | | właściwym stanie. | |
| 91E0 Łęgi wierzbowe, topolowe, olszowe i jesionowe (<i>Salicetum albo-fragilis, Populetum albae, Alnion glutinoso-incanae</i> , olsy źródłiskowe) | Ogół stanowisk w Ostoi | U1 | Utrzymanie właściwych stosunków wód powierzchniowych i podziemnych; Doprowadzenie do właściwego stanu siedlisk zniekształconych | 20 lat |
| 91F0 Łęgowe lasy dębowo-wiązowo-jesionowe (<i>Ficario-Ulmetum</i>) | Ogół stanowisk w Ostoi | U1 | Utrzymanie właściwych stosunków wód powierzchniowych i podziemnych. Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia wszystkich płatów siedliska, oceny jego stanu oraz zaplanowania działań ochronnych. | W okresie obowiązywania PZO. Do określenia po wykonaniu inwentaryzacji |
| 91I0 Ciepłolubne dąbrowy (<i>Quercetalia pubescenti-petraeae</i>) | Oddz 249D | U2 | Utrzymanie siedliska na terenie Ostoi | 10 lat |
| 1437 Leniec bezpodkwiatkowy <i>Thesium ebracteatum</i> | Ogół stanowisk w Ostoi | U2 | Utrzymanie gatunku na terenie Ostoi Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych. | Do określenia po wykonaniu inwentaryzacji |
| 1477 Sasanka otwarta <i>Pulsatilla patens</i> | Ogół stanowisk w Ostoi | U2 | Utrzymanie gatunku na terenie Ostoi Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych. | Do określenia po wykonaniu inwentaryzacji |
| 1939 Rzepik szczeniasty <i>Agrimonia pilosa</i> | Ogół stanowisk w Ostoi | FV | Utrzymanie właściwego stanu zachowania gatunku na znanych stanowiskach. | W okresie obowiązywania PZO. |

| Przedmiot ochrony | Numer stanowiska | Stan ochrony | Cele działań ochronnych | Perspektywa osiągnięcia właściwego stanu ochrony |
|--|------------------------|--------------|---|--|
| | | | Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych. | Do określenia po wykonaniu inwentaryzacji |
| A030 Bocian czarny <i>Ciconia nigra</i> | Ogół stanowisk w Ostoi | U1 | Powstrzymanie spadku liczebności – utrzymanie co najmniej 10 par na terenie Ostoi; Utrzymanie właściwych stosunków wód powierzchniowych w puszczańskich ciekach | 10 lat |
| A072 Trzmielojad <i>Pernis apivorus</i> | Ogół stanowisk w Ostoi | FV | Utrzymanie co najmniej 90 par na terenie Ostoi | Nie określa się |
| A080 Gadożer <i>Circaetus gallicus</i> | Ogół stanowisk w Ostoi | XX | Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych. Utrzymanie gatunku na terenie Ostoi. | 10 lat |
| A089 Orlik krzykliwy <i>Aquila pomarina</i> | Ogół stanowisk w Ostoi | U1 | Utrzymanie co najmniej 30 par na terenie Ostoi | 10 lat |
| A092 Orzełek <i>Hieraaetus pennatus</i> | Ostoja | XX | Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych. Utrzymanie gatunku na terenie Ostoi. | Nie określa się |
| A104 Jarząbek <i>Bonasa bonasia</i> | Ogół stanowisk w Ostoi | FV | Utrzymanie co najmniej 1600 par na terenie Ostoi | Nie określa się |
| A119 Krociatka <i>Porzana porzana</i> | Ogół stanowisk w Ostoi | U2 | Utrzymanie co najmniej 10 par na terenie Ostoi | 10 lat |
| A122 Derkacz <i>Crex crex</i> | Ogół stanowisk w Ostoi | U1 | Utrzymanie co najmniej 80 terytorialnych samców na terenie Ostoi | 10 lat |
| A217 Sóweczka <i>Glaucidium passerinum</i> | Ogół stanowisk w Ostoi | U1 | Utrzymanie co najmniej 80 par na terenie Ostoi. Uzupełnienie stanu wiedzy o przedmiocie ochrony, | 10 lat |



| Przedmiot ochrony | Numer stanowiska | Stan ochrony | Cele działań ochronnych | Perspektywa osiągnięcia właściwego stanu ochrony |
|---|------------------------|--------------|---|--|
| | | | celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych. | |
| A223 Włochatka <i>Aegolius funereus</i> | Ogół stanowisk w Ostoi | U1 | Utrzymanie co najmniej 30 par na terenie Ostoi. Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych. | 10 lat |
| A224 Lelek <i>Caprimulgus europaeus</i> | Ogół stanowisk w Ostoi | U1 | Utrzymanie co najmniej 250 par na terenie ostoi. | 10 lat |
| A234 Dzięcioł zielonosiwy <i>Picus canus</i> | Ogół stanowisk w Ostoi | FV | Utrzymanie co najmniej 30 par na terenie Ostoi | Nie określa się |
| A238 Dzięcioł średni <i>Dendrocopos medius</i> | Ogół stanowisk w Ostoi | FV | Utrzymanie populacji gatunku na poziomie co najmniej 1100 par | Nie określa się |
| A239 Dzięcioł białostrzbiety <i>Dendrocopos leucotos</i> | Ogół stanowisk w Ostoi | U1 | Utrzymanie co najmniej 60 par na terenie Ostoi. Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych. | 10 lat |
| A241 Dzięcioł trójpalczasty <i>Picoides tridactylus</i> | Ogół stanowisk w Ostoi | U1 | Utrzymanie co najmniej 60 par na terenie Ostoi. Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych. | 10 lat |
| A307 Jarzębatka <i>Sylvia nisoria</i> | Ogół stanowisk w Ostoi | XX | Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych | Do określenia po wykonaniu inwentaryzacji |
| A320 Muchotówka mała <i>Ficedula parva</i> | Ogół stanowisk w Ostoi | FV | Utrzymanie co najmniej obecnej powierzchni dobrze wykształconych grądów. | Nie określa się |
| A321 Muchotówka białoszyja <i>Ficedula albicollis</i> | Ogół stanowisk w Ostoi | FV | Utrzymanie co najmniej obecnej powierzchni dobrze wykształconych grądów. | Nie określa się |

| Przedmiot ochrony | Numer stanowiska | Stan ochrony | Cele działań ochronnych | Perspektywa osiągnięcia właściwego stanu ochrony |
|--|------------------------|--------------|--|--|
| A338 Gąsiorek <i>Lanius collurio</i> | Ogół stanowisk w Ostoi | XX | Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych | Do określenia po wykonaniu inwentaryzacji |
| A409 Cietrzew <i>Tetrao tetrix tetrix</i> | Ogół stanowisk w Ostoi | XX | Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych | Do określenia po wykonaniu inwentaryzacji |
| A155 Słonka <i>Scolopax rusticola</i> | Ogół stanowisk w Ostoi | FV | Utrzymanie co najmniej 500 par na terenie Ostoi | Nie określa się |
| A165 Samotnik <i>Tringa ochropus</i> | Ogół stanowisk w Ostoi | FV | Utrzymanie co najmniej 100 par na terenie Ostoi. | Nie określa się |
| A207 Siniak <i>Columba oenas</i> | Ogół stanowisk w Ostoi | FV | Utrzymanie co najmniej 150 par na terenie Ostoi. | Nie określa się |
| 1308 Mopek <i>Barbastella barbastellus</i> | Ogół stanowisk w Ostoi | FV | Uzupełnienie stanu wiedzy o przedmiocie ochrony (parametry populacji i siedliska gatunku), celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych . | Nie określa się |
| 1337 Bóbr <i>Castor fiber</i> | Ogół stanowisk w Ostoi | FV | Ochrona siedlisk gatunku. | Nie określa się |
| 1352 Wilk <i>Canis lupus</i> | Ogół stanowisk w Ostoi | FV | Utrzymanie co najmniej 3 watach na terenie Ostoi. | Nie określa się |
| 1355 Wydra <i>Lutra lutra</i> | Ogół stanowisk w Ostoi | FV | Utrzymanie co najmniej 10 osobników na terenie Ostoi. | Nie określa się |
| 1361 Ryś <i>Lynx lynx</i> | Ogół stanowisk w Ostoi | U1 | Utrzymanie co najmniej 5 osobników na terenie Ostoi. | 10 lat |
| 2647 Żubr <i>Bison bonasus</i> | Ogół stanowisk w Ostoi | U1 | Utrzymanie populacji żyjącej na wolności, na poziomie minimum 450 osobników (łącznie z obszarem BPN). | 10 lat |
| 1166 Traszka grzebieniasta <i>Triturus cristatus</i> | Ogół stanowisk w Ostoi | U2 | Utrzymanie gatunku na terenie Ostoi Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu | Do określenia po wykonaniu inwentaryzacji |



| Przedmiot ochrony | Numer stanowiska | Stan ochrony | Cele działań ochronnych | Perspektywa osiągnięcia właściwego stanu ochrony |
|---|------------------------|--------------|--|--|
| | | | oraz zaplanowania działań ochronnych . | |
| 1188 Kumak nizinny <i>Bombina bombina</i> | Ogół stanowisk w Ostoi | U2 | Utrzymanie gatunku na terenie Ostoi Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych . | Do określenia po wykonaniu inwentaryzacji |
| 1098 Minóg ukraiński <i>Eudontomyzon mariae</i> | Ogół stanowisk w Ostoi | U1 | Utrzymanie gatunku na terenie Ostoi Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych . | Do określenia po wykonaniu inwentaryzacji |
| 1014 Poczwarówka zwężona <i>Vertigo angustior</i> | Ogół stanowisk w Ostoi | U2 | Zachowanie turzycowisk w dolinach rzecznych. Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych. | Do określenia po wykonaniu inwentaryzacji |
| 1016 Poczwarówka jajowata <i>Vertigo moulinsiana</i> | Ogół stanowisk w Ostoi | U1 | Zachowanie turzycowisk w dolinach rzecznych. Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych . | Do określenia po wykonaniu inwentaryzacji |
| 1037 Trzepla zielona <i>Ophiogomphus cecilia</i> | Ogół stanowisk w Ostoi | U2 | Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych . | Do określenia po wykonaniu inwentaryzacji |
| 1042 Zalotka większa <i>Leucorrhinia pectoralis</i> | Ogół stanowisk w Ostoi | U2 | Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych . | Do określenia po wykonaniu inwentaryzacji |
| 1052 Przeplatka maturalna <i>Hypodryas maturalna</i> | Ogół stanowisk w Ostoi | U1 | Utrzymanie znanych stanowisk gatunku. Utrzymanie właściwych stosunków wód w puszczańskich ciekach i otaczających je olsach jesionowych | Do określenia po wykonaniu inwentaryzacji |
| 1060 Czerwończyk nieparek <i>Lycaena dispar</i> | Ogół stanowisk w Ostoi | U1 | Utrzymanie znanych stanowisk gatunku | 10 lat |
| 1065 Przeplatka aurinia | Ogół stanowisk w Ostoi | U2 | Poprawa stanu zachowania siedlisk gatunku. | |

| Przedmiot ochrony | Numer stanowiska | Stan ochrony | Cele działań ochronnych | Perspektywa osiągnięcia właściwego stanu ochrony |
|---|------------------------|--------------|--|--|
| <i>Euphydryas aurinia</i> | | | Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych . | Do określenia po wykonaniu inwentaryzacji |
| 1081 Pływak szeroko brzeżek <i>Dytiscus latissimus</i> | Ogół stanowisk w Ostoi | U2 | Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych . | Do określenia po wykonaniu inwentaryzacji |
| 1082 Kreślinek nizinny <i>Graphoderus bilineatus</i> | Ogół stanowisk w Ostoi | U1 | Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych . | Do określenia po wykonaniu inwentaryzacji |
| 1084 Pachnica dębowa <i>Osmoderma eremita</i> | Ogół stanowisk w Ostoi | FV | Utrzymanie istniejących znanych stanowisk. Utrzymanie w drzewostanach poniżej 100 lat drzew dziuplastych; | Nie określa się |
| 1085 Bogatek wspaniały <i>Buprestis splendens</i> | Ogół stanowisk w Ostoi | FV | Utrzymanie niepomniejszonej ilości sosen i drzewostanów sosnowych w wieku powyżej 100 lat. Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych . | Nie określa się |
| 1086 Zgniotek cynobrowy <i>Cucujus cinnaberinus</i> | Ogół stanowisk w Ostoi | FV | Utrzymanie istniejących znanych stanowisk. Zapewnienie stałej obecności w drzewostanach drzew martwych. Utrzymanie niepomniejszonej ilości drzewostanów w wieku powyżej 100 lat. | Nie określa się |
| 1920 Ponurek Schneidera <i>Boros schneideri</i> | Ogół stanowisk w Ostoi | U1 | Utrzymanie niepomniejszonej ilości sosen i drzewostanów sosnowych w wieku powyżej 100 lat. Utrzymanie istniejących znanych stanowisk. Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych . | 10 lat |
| 1923 Średzinka <i>Mesosa myops</i> | Ogół stanowisk w Ostoi | XX | Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych . | Do określenia po wykonaniu inwentaryzacji |
| 1924 Pogrzybnica Mennerheima <i>Oxyporus mannerheimii</i> | Ogół stanowisk w Ostoi | XX | Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu | Do określenia po wykonaniu inwentaryzacji |



| Przedmiot ochrony | Numer stanowiska | Stan ochrony | Cele działań ochronnych | Perspektywa osiągnięcia właściwego stanu ochrony |
|---|------------------------|--------------|--|--|
| | | | oraz zaplanowania działań ochronnych . | |
| 1925 Rozmiarz kolneński <i>Pytho kolwensis</i> | Ogół stanowisk w Ostoi | U1 | Utrzymanie niepomniejszonej ilości świerków i drzewostanów świerkowych w wieku powyżej 100 lat na siedliskach olsu typowego i olsu jesionowego. Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych . | 10 lat |
| 4021 Konarek tajgowy <i>Phryganophilus ruficollis</i> | Ogół stanowisk w Ostoi | XX | Utrzymanie wykrytych stanowisk gatunku Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych . | Do określenia po wykonaniu inwentaryzacji |
| 4026 Zagłębek bruzdkowany <i>Rhysodes sulcatus</i> | Ogół stanowisk w Ostoi | FV | Zapewnienie stałej obecności w drzewostanach drzew martwych Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych . | Nie określa się |
| 4030 Szlaczkoń szafraniec <i>Colias myrmidone</i> | Ogół stanowisk w Ostoi | U2 | Utrzymanie obecnych stanowisk gatunku. Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych . | 10 lat |
| 4056 Zatokczek łamliwy <i>Anisus vorticulus</i> | Ogół stanowisk w Ostoi | U2 | Uzupełnienie stanu wiedzy o przedmiocie ochrony, celem wyznaczenia stanowisk gatunku, oceny stanu oraz zaplanowania działań ochronnych . | Do określenia po wykonaniu inwentaryzacji |



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Uzasadnienie

Obszar Natura 2000 Puszcza Białowieska PLC200004 wyznaczony został na mocy Dyrektywy Rady 92/43/EWG z dnia 21 maja 1992r. w sprawie ochrony siedlisk przyrodniczych oraz dzikiej fauny i flory (Dz.U.L 206 z 22.7.1992, str. 7) oraz na mocy Dyrektywy Parlamentu Europejskiego i Rady 2009/147/WE z dnia 30 listopada 2009 r. w sprawie ochrony dzikiego ptactwa (wersja ujednolicona – Dz.U.U.E.L.10.20.7). Jako obszar specjalnej ochrony ptaków (tzw. „obszar ptasi”) zatwierdzony został Rozporządzeniem Ministra Środowiska z dnia 12 stycznia 2011 r. w sprawie obszarów specjalnej ochrony ptaków Natura 2000 (Dz. U. Nr 25, poz. 133). Jako obszar mający znaczenie dla Wspólnoty (tzw. „obszar siedliskowy”) zatwierdzony został decyzją Komisji Europejskiej 2011/64/UE z dnia 10 stycznia 2011 r. przyjmującą na mocy dyrektywy Rady 92/43/EWG czwarty zaktualizowany wykaz terenów mających znaczenie dla Wspólnoty (Dz. U. UE. L 33 z 08.2.2011).

Obowiązek sporządzenia projektu planu zadań ochronnych (PZO) dla obszaru Natura 2000 wynika z art. 28 ust. 1 ustawy z dnia 16 kwietnia 2004 r. o ochronie przyrody (Dz. U. z 2013 r. poz. 627, z późn. zm.). Zgodnie z art. 28 ust. 5 tej samej ustawy regionalny dyrektor ochrony środowiska ustanawia, w drodze aktu prawa miejscowego w formie zarządzenia, plan zadań ochronnych dla obszaru Natura 2000.

W związku z art. 30 ust. 1 ustawy o ochronie przyrody z planu zadań ochronnych dla obszaru Natura 2000 Puszcza Białowieska wyłączony został obszar Białowieskiego Parku Narodowego, posiadającego projekt planu ochrony w fazie zatwierdzania, zawierający zakres o jakim mowa w art. 29 cytowanej powyżej ustawy.

Prace nad planem ochrony dla Białowieskiego Parku Narodowego rozpoczęły się w październiku 2008r. Pierwsza wersja projektu rozporządzenia Ministra Środowiska w sprawie ustanowienia planu ochrony dla Białowieskiego Parku Narodowego została poddana konsultacjom społecznym w lipcu 2010r. Wszystkie uwagi i wnioski, jakie wpłynęły podczas konsultacji były rozpatrywane przez Białowieski Park Narodowy.

W trakcie posiedzenia Prezydium Rady Naukowej Białowieskiego Parku Narodowego w dniu 09 września 2010r. podjęto decyzję o sporządzeniu drugiej wersji rozporządzenia, która będzie spełniała wymagania rozporządzenia Ministra Środowiska z dnia 30 marca 2010r. w sprawie sporządzania projektu planu ochrony dla obszaru Natura 2000 (Dz. U. z 2010 r. Nr 64, poz. 401). Druga wersja projektu rozporządzenia Ministra Środowiska w sprawie ustanowienia planu ochrony dla Białowieskiego Parku Narodowego została poddana ponownym konsultacjom społecznym na przełomie września i października 2010r. Wszystkie uwagi i wnioski, jakie wpłynęły podczas powtórnych konsultacji były rozpatrywane przez Białowieski Park Narodowy.

Projekt planu ochrony Parku na lata 2011-2031 został poparty przez Radę Naukową Białowieskiego Parku Narodowego podczas posiedzenia w



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dniu 22 października 2010r. (12 członków Rady Naukowej poparło projekt, 3 członków wstrzymało się od głosu, nie było głosów przeciwnych). W listopadzie 2010r. projekt planu ochrony dla Białowieżskiego Parku Narodowego na lata 2011-2031 został przesłany do zatwierdzenia przez Ministerstwo Środowiska. Na dzień wydania niniejszego zarządzenia projekt planu ochrony Parku znajduje się w fazie zatwierdzenia.

Zakres prac koniecznych do realizacji projektu planu zadań ochronnych regulują: art. 28 ustawy z dn. 16 kwietnia 2004 r. o ochronie przyrody (Dz. U. z 2013 r. poz. 627, z późn. zm.); rozporządzenie Ministra Środowiska z dn. 17 lutego 2010 r. w sprawie sporządzania projektu planu zadań ochronnych dla obszaru Natura 2000 (Dz. U. Nr 34, poz. 186, z późn. zm.) oraz art. 39 ustawy z dnia 3 października 2008 r. o udostępnianiu informacji o środowisku i jego ochronie, udziale społeczeństwa w ochronie środowiska oraz o ocenach oddziaływania na środowisko (Dz. U. Nr 199, poz. 1227, z późn. zm.).

Zgodnie z art. 28 ust. 3 ustawy o ochronie przyrody z dnia 16 kwietnia 2004 r. umożliwiono zainteresowanym osobom i podmiotom prowadzącym działalność w obrębie siedlisk przyrodniczych i siedlisk gatunków, dla których wyznaczono obszar Natura 2000 Puszcza Białowieża, udział w pracach związanych z opracowaniem projektu Planu zadań ochronnych. W tym celu zorganizowano cztery spotkania dyskusyjne, których celem było wypracowanie wspólnej wizji ochrony obszaru Natura 2000, uwzględniającej obowiązki ochrony przedmiotów ochrony, wykorzystującej wiedzę naukową oraz lokalną wiedzę na temat obszaru oraz potrzeby i dążenia osób i podmiotów korzystających z obszaru. Spotkania miały charakter otwarty dla wszystkich osób zainteresowanych ochroną obszaru.

Zgodnie z art. 28 ust. 4 ustawy o ochronie przyrody z dnia 16 kwietnia 2004 r. zapewniono możliwość udziału społeczeństwa w pracach nad projektem planu zadań ochronnych, na zasadach i w trybie określonym w ustawie z dnia 3 października 2008r. o udostępnianiu informacji o środowisku i jego ochronie, udziale społeczeństwa w ochronie środowiska oraz o ocenach oddziaływania na środowisko. Konsultacje projektu Planu dla obszaru Natura 2000 Puszcza Białowieża zostały przeprowadzone dwukrotnie. Pierwsze konsultacje społeczne przeprowadzone zostały w terminie 14 października – 04 listopada 2011r. przez Białowieżski Park Narodowy, który zgodnie z obowiązującym wówczas stanem prawnym był organem nadzorującym obszar Natura 2000 Puszcza Białowieża i sporządzającym projekt Planu dla tego obszaru. Wszystkie uwagi i wnioski zgłoszone w trakcie pierwszych konsultacji zostały rozpatrzone przez Białowieżski Park Narodowy.

Pismem znak ZOP/07-073/15/2012 z dnia 05 czerwca 2012r., Białowieżski Park Narodowy przekazał Regionalnej Dyrekcji Ochrony Środowiska w Białymstoku projekt planu zadań ochronnych dla obszaru Natura 2000 Puszcza Białowieża PLC200004 celem dalszego procedowania dokumentu, zmierzającego do ustanowienia planu zadań ochronnych w formie zarządzenia regionalnego dyrektora ochrony środowiska.

W związku ze zmianą przepisów prawnych dotyczących opracowania planów zadań ochronnych dla obszarów Natura 2000, wynikających z Rozporządzenia Ministra Środowiska z dnia 17 kwietnia 2012r. zmieniającego rozporządzenie w sprawie sporządzania projektu planu zadań ochronnych dla obszaru Natura 2000 (Dz.U. z 2012r., poz.506), zaistniała konieczność dokonania zmian w projekcie Planu,

polegających na wyodrębnieniu działań obligatoryjnych i fakultatywnych na terenie gospodarstw rolnych lub ich części, znajdujących się w granicach przedmiotowego obszaru Natura 2000. Zmiany projektu PZO w przedmiotowym zakresie zostały opracowane przez RDOŚ w Białymstoku. W związku z wprowadzeniem zmian do projektu Planu, Regionalna Dyrekcja Ochrony Środowiska w Białymstoku w okresie 14 czerwca – 05 lipca 2012r. przeprowadziła ponowne konsultacje społeczne projektu planu zadań ochronnych dla obszaru Natura 2000 Puszcza Białowieska. Przedmiotem konsultacji były działania obligatoryjne i fakultatywne wyodrębnione w projekcie Planu.

W trakcie ponownych konsultacji społecznych projektu PZO wpłynęły uwagi zgłoszone przez 6 instytucji. Uwagi zostały rozpatrzone przez RDOŚ w Białymstoku.

Ustanowienie planu zadań ochronnych dla obszaru Natura 2000 Puszcza Białowieska może powodować następujące skutki prawne:

- 1/ ułatwione jest kwalifikowanie (screening) przedsięwzięć pod kątem możliwości wywierania negatywnego wpływu na obszar - z zastrzeżeniem, że przedsięwzięcie nie ujęte w planie jako zagrożenia należy traktować jako mogące negatywnie wpływać na obszar;
- 2/ cele planu zadań ochronnych są punktem odniesienia dla ocen oddziaływania przedsięwzięć na obszar Natura 2000 oraz punktem odniesienia dla strategicznych ocen oddziaływania innych planów;
- 3/ możliwe jest zastosowanie w razie potrzeby art. 37 ust. 2 ustawy z dnia 16 kwietnia 2004r. o ochronie przyrody;
- 4/ ułatwione jest wdrażanie programu rolnośrodowiskowego, który musi być zgodny z planem zadań ochronnych. Uchybienia rolników wobec tzw. zasady wzajemnej zgodności mogą być kontrolowane i są podstawy do stosowania sankcji w zakresie płatności bezpośrednich – w przypadku gdy podjęto działania w gospodarce rolnej niezgodnie z ustaleniami planu zadań ochronnych.



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Zn. spr. PN/07-073/10/2014

Białowieża, March 11, 2014

Mr. Kishore Rao
Director
World Heritage Centre

Subject: Nomination of Białowieża Forest (as an extension of Belovezhskaya Pushcha / Białowieża Forest) (Belarus / Poland) for inscription on the World Heritage List (N 33 bis)

With reference the request concerning the supplement of the application of the World Heritage Site Belovezhskaya Pushcha / Białowieża Forest we were pleased to jointly submit in due time the information required in the letter from the Director of World Heritage Programme of IUCN, dated on December 13, 2013.

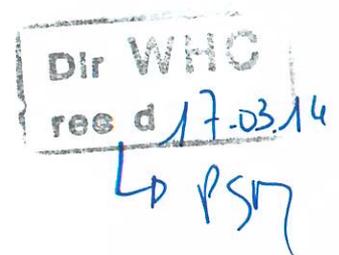
The information provided were agreed among all the managing authorities of the area of the proposed World Heritage Site Białowieża Forest. The materials sent to the World Heritage Centre by February 28, 2014 included, among others, the project of Protective Tasks' Plan for the Natura 2000 area "Puszcza Białowieża". Nevertheless, the attached document was in Polish and we have committed to provide English translation of the document by March 15. The translation was executed and we are pleased to complement the previously sent materials.

We would feel obliged if this translated document could be included into the file of the materials concerning proposed extension of the World Heritage Site Belovezhskaya Pushcha / Białowieża Forest.

Please accept, Sir, the assurance of our highest consideration.

DYREKTOR


dr Mirosław Stepaniuk



Subject: Nomination of Bialowieza Forest (as an extension of Belovezhskaya Pushcha / Bialowieza Forest) (Belarus / Poland) for inscription on the World Heritage List (N 33 bis)

APPENDIX 4 to the materials sent to the World Heritage Centre on February 28, 2014.

Draft Protective Tasks' Plan for the Natura 2000 area, outside the BNP (English version of the document submitted in Polish to the World Heritage Centre on February 28, 2014)

The project of the Protective Tasks' Plan for the Natura 2000 Are Bialowieza Forest PLC 200004 was prepared with accordance to the Guidelines for Assessment and reporting under Article 17 of the Habitats Directive.

According to these guidelines for reporting under Article 17 a format with three classes of Conservation Status has been adopted:

1. **Favourable (FV)** - 'Favourable Conservation Status' is defined in the Directive and effectively describes the situation where the habitat or species can be expected to prosper without any change to existing management or policies.
2. **Unfavourable-Inadequate (U1)** - The unfavourable category has been split into two classes to allow improvements or deterioration to be reported. 'Unfavourable-Inadequate' for situations where a change in management or policy is required to return the habitat type or species to favourable status but there is no danger of extinction in the foreseeable future.
3. **Unfavourable-Bad (U2)** - is for habitats or species in serious danger of becoming extinct (at least regionally).

There is also an '**Unknown**' (**XX**) class which can be used where there is insufficient information available to allow an assessment.

The term conservation status was also used by the former Natura 2000 Standard Data Form for describing the condition of each habitat type and species present on an individual site, with 3 basic classes:

A - excellent

B - good

C - average or reduced

There is also class **D** – insignificant.



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**BIAŁOWIEŻA NATIONAL PARK
REGIONAL DIRECTORATE FOR ENVIRONMENTAL PROTECTION IN BIAŁYSTOK**

**PROJECT OF THE PROTECTIVE TASKS' PLAN (PTP) FOR THE NATURA 2000
AREA**

BIAŁOWIEŻA FOREST PLC 200004

- summary of the document as of 20 February 2014



| No. | Name of the national form of environmental protection corresponding to the area | Planning document | Justification for excluding a part of the area from the development of PTP | Percentage of the area covered by the existing planning document |
|-----|---|---|--|--|
| 6 | Głębokki Kąt nature reserve | the protection plan for the „Dolina Waliczówki” nature reserve for the years 2003-2022. None. | No conditions laid down in Article 28(11) of the Nature Conservation Act are met | - |
| 7 | Gnilec nature reserve | Regulation No 1403 of the Voivode of Podlasie of 16 July 2003 on establishing the protection plan for the „Gnilec” nature reserve for the years 2003-2022. | No conditions laid down in Article 28(11) of the Nature Conservation Act are met | 0,06 |
| 8 | Kozłowe Borki nature reserve | Regulation No 2207 of the Voivode of Podlasie of 10 December 2007 on establishing the protection plan for the „Kozłowe Borki” nature reserve, valid till 2028 | No conditions laid down in Article 28(11) of the Nature Conservation Act are met | 0,39 |
| 9 | Prof. Wł. Szafer landscape nature reserve | Ordinance of the Regional Director for Environmental Protection of May 2010, on establishing protection tasks for the „Wł. Szafer” nature reserve till 2015 | No conditions laid down in Article 28(11) of the Nature Conservation Act are met | 2,15 |
| 10 | Lipiny nature reserve | Ordinance No 1410 of the Regional Director for Environmental Protection of 18 June 2010, on establishing protection tasks for the „Lipiny” nature reserve till 2015 | No conditions laid down in Article 28(11) of Nature Conservation Act are met | 0,04 |
| 11 | Michnówka nature reserve | None. | No conditions laid down in Article 28(11) of the Nature Conservation Act are met | - |
| 12 | Nieznanowo nature reserve | None. | No conditions laid down in Article 28(11) of the Nature Conservation Act are met | - |
| 13 | Olszanka Myśliszcze nature reserve | Regulation No 708 of the Voivode of Podlasie of 14 August 2008 on establishing the protection plan for the „Olszanka Myśliszcze” nature reserve, valid till 2028 | No conditions laid down in Article 28(11) of the Nature Conservation Act are met | - |
| 14 | Podcerkwa nature reserve | Regulation No 2007 of the Voivode of Podlasie of 10 December 2007 on establishing the protection plan for the „Podcerkwa” nature reserve, valid till 2028 | No conditions laid down in Article 28(11) of the Nature Conservation Act are met | 0,36 |
| 15 | Podolany nature reserve | Regulation No 1907 of the Voivode of | No conditions laid down in Article 28(11) | 0,02 |



| No. | Name of the national form of environmental protection corresponding to the area | Planning document | Justification for excluding a part of the area from the development of PTP | Percentage of the area covered by the existing planning document |
|-----|---|--|--|--|
| 16 | Pogorzelce nature reserve | Podlasie of 10 December 2007 on establishing the protection plan for the „Podolany” nature reserve, valid till 2028 None. | of the Nature Conservation Act are met | - |
| 17 | Przewłoka nature reserve | Regulation No 21/07 of the Voivode of Podlasie of 10 December 2007 on establishing the protection plan for the „Przewłoka” nature reserve, valid till 2028 | No conditions laid down in Article 28(11) of the Nature Conservation Act are met | 0,12 |
| 18 | Siemianówka nature reserve | Regulation No 20/03 of the Voivode of Podlasie of 16 July 2003 on establishing the protection plan for the „Siemianówka” nature reserve for the years 2003-2022. None. | No conditions laid down in Article 28(11) of the Nature Conservation Act are met | 0,36 |
| 19 | Sitki nature reserve | None. | No conditions laid down in Article 28(11) of the Nature Conservation Act are met | - |
| 20 | Starzyna nature reserve | Ordinance of the Regional Director for Environmental Protection of May 2010, on establishing protection tasks for the „Starzyna” nature reserve till 2015 | No conditions laid down in Article 28(11) of the Nature Conservation Act are met | 0,59 |
| 21 | Szczekotowo nature reserve | None. | No conditions laid down in Article 28(11) of the Nature Conservation Act are met | - |
| 22 | Wysokie Bagno nature reserve | None. | No conditions laid down in Article 28(11) of the Nature Conservation Act are met | - |
| 23 | Natural Forests Białowieża Forest nature reserve | Ordinance of the Regional Director for Environmental Protection of May 2010, on establishing protection tasks for the „Natural Forests Białowieża Forest” nature reserve till 2015 | No conditions laid down in Article 28(11) of the Nature Conservation Act are met | 13,59 |



1.5. Determination of the protected objects covered by the Plan.

| No. | Code | Polish name | Latin name | % of coverage | Permanent population | Breeding population | Migrating population | Assessment of population/Degree of representativeness | Assessment of conservation status/Relative area | Isolated assessment | Overall assessment | Opinion on the entry |
|-----|------|---|------------|---------------|----------------------|---------------------|----------------------|---|---|---------------------|--------------------|---|
| S1 | 3150 | Starorzeczka i naturalne eutroficzne zbiorniki wodne ze zbiorowiskami z <i>Nymphaeion, Potamion</i> | | 0,02 | | | | C | C | C | C | Considered to be the protected object (stock-taking required) |
| S2 | 6230 | Górskie i niżowe murawy bliźniczkowe <i>Nardion - platy</i> bogate florystycznie | | 0,21 | | | | B | B | C | C | Considered to be the protected object (stock-taking required) |
| S3 | 6410 | Zmiennowilgotne łąki trzęślicowe <i>Molinion</i> | | 0,01 | | | | D | | | | Not considered to be the protected object |
| S4 | 6510 | Nizowe i górskie świeże łąki użytkowane ekstensywnie <i>Arrhenatherion elatioris</i> | | 0,83 | | | | B | B | C | C | Considered to be the protected object (stock-taking required) |
| S5 | 7120 | Torfowiska wysokie zdegradowane, lecz zdolne do naturalnej i stymulowanej regeneracji | | 0,01 | | | | D | | | | Not considered to be the protected object |



| No. | Code | Polish name | Latin name | % of coverage | Permanent population | Breeding population | Migrating population | Assessment of population/ Degree of representativeness | Assessment of conservation status/ Relative area | Isolated assessment | Overall assessment | Opinion on the entry |
|-----|------|---|------------|---------------|----------------------|---------------------|----------------------|---|---|---------------------|--------------------|--|
| S6 | 7140 | Torfowiska przejściowe i trzęsawiska przeważnie z roślinnością z <i>Scheuchzeria-Caricetea</i> | | 0,03 | | | | B | B | C | C | Considered to be the protected object (stock-taking and verification of the occurrence within the site required) |
| S7 | 7230 | Górskie i nizinne torfowiska zasadowe o charakterze młak, turzycowisk i mechowisk | | 0,25 | | | | C | C | C | C | Considered to be the protected object (stock-taking and verification of the occurrence within the site required) |
| S8 | 9170 | Grąd subkontynentalny <i>Tilio-Carpinetum, Melitti-Carpinetum</i> | | 63,05 | | | | A | B | B | A | Considered to be the protected object |
| S9 | 91D0 | Bory i lasy bagienne <i>Vaccinio uliginosi-Betuletum pubescentis, Ledo-Sphagnetum Vaccinio uliginosi-Pinetum, Sphagno girgensohnii-Piceetum, Thelypter-</i> | | 4,35 | | | | A | B | B | A | Considered to be the protected object |



| No. | Code | Polish name | Latin name | % of coverage | Permanent population | Breeding population | Migrating population | Assessment of population/Degree of representativeness | Assessment of conservation status/Relative area | Isolated assessment | Overall assessment | Opinion on the entry |
|-----|------|---|------------|---------------|----------------------|---------------------|----------------------|---|---|---------------------|--------------------|---|
| | | <i>Betuletum</i> <i>Piceo-Alnetum</i> <i>Sphagno squarrosi-Alnetum</i> | | | | | | | | | | |
| S10 | 91E0 | Łęgi wierzbowe, topolowe, olszowe i jesionowe <i>Salicetum albobagalis, Populetum albae, Fraxino-Alnetum</i> | | 0,02 | | | | A | A | C | A | Considered to be the protected object |
| S11 | 91F0 | Łęgowe lasy dębowo-wiązowo-jesionowe <i>Ficario-Ulmetum</i> | | 0,10 | | | | B | B | C | B | Considered to be the protected object |
| S12 | 91I0 | Cieplolubne dąbrowy <i>Quercetalia pubescenti-petraeae</i> | | 0,01 | | | | C | C | C | C | Considered to be the protected object |
| Z1 | A022 | Bączek <i>Ixobrychus minutus</i> | | | | P | | D | | | | Not considered to be the protected object |
| Z2 | A030 | Bocian czarny <i>Ciconia nigra</i> | | | | 10-12p | | C | B | C | C | Considered to be the protected object |
| Z3 | A031 | Bocian biały <i>Ciconia ciconia</i> | | | | 16 – 18p | | D | | | | Not considered to be the protected object |



| No. | Code | Polish name | Latin name | % of coverage | Permanent population | Breeding population | Migrating population | Assessment of population/ Degree of representativeness | Assessment of conservation status/ Relative area | Isolated assessment | Overall assessment | Opinion on the entry |
|-----|------|------------------|-----------------------------|---------------|----------------------|---------------------|----------------------|---|---|---------------------|--------------------|---|
| Z4 | A038 | Łabędź krzykliwy | <i>Cygnus cygnus</i> | | | 1 | | D | | | | Not considered to be the protected object |
| Z5 | A072 | Trzmielojad | <i>Pernis apivorus</i> | | | 90-120p | | B | B | C | B | Considered to be the protected object |
| Z6 | A073 | Kania czarna | <i>Milvus migrans</i> | | | 2p | | D | | | | Not considered to be the protected object |
| Z7 | A074 | Kania ruda | <i>Milvus milvus</i> | | | P | | D | | | | Not considered to be the protected object |
| Z8 | A075 | Bielik | <i>Haliaeetus albicilla</i> | | | P | | D | | | | Not considered to be the protected object |
| Z9 | A80 | Gadożer | <i>Circus gallicus</i> | | | 0-1p | | B | B | B | B | Considered to be the protected object (stock-taking required) |
| Z10 | A081 | Błotniak stawowy | <i>Circus aeruginosus</i> | | | 1-2p | | D | | | | Not considered to be the protected object |
| Z11 | A082 | Błotniak zbożowy | <i>Circus cyaneus</i> | | | P | | D | | | | Not considered to be the protected object |
| Z12 | A084 | Błotniak łąkowy | <i>Circus pygargus</i> | | | 3-6p | | D | | | | Not considered to be the protected object |



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|-----|------|-----------------|----------------------------|---------------|----------------------|---------------------|----------------------|---|---|---------------------|--------------------|---|
| Z13 | A089 | Orlik krzykliwy | <i>Aquila pomarina</i> | | | 30-60p | | B | C | C | B | Considered to be the protected object |
| Z14 | A092 | Orzełek | <i>Hieraaetus pennatus</i> | | | 0-1p | | A | B | A | A | Considered to be the protected object (stock-taking required) |
| Z15 | A098 | Drzemlik | <i>Falco columbarius</i> | | | | P | D | | | | Not considered to be the protected object |
| Z16 | A104 | Jarząbek | <i>Bonasa bonasia</i> | | 1600-1800 p | | | B | A | C | B | Considered to be the protected object |
| Z17 | A108 | Giuszec | <i>Tetrao urogallus</i> | | 0-3p | | | D | | | | Not considered to be the protected object |
| Z18 | A119 | Kropiatka | <i>Porzana porzana</i> | | | 10-40p | | C | B | C | C | Considered to be the protected object |
| Z19 | A120 | Zielonka | <i>Porzana parva</i> | | | 3-8p | | D | | | | Not considered to be the protected object |
| Z20 | A122 | Derkacz | <i>Crex crex</i> | | | 80-120m | | C | B | C | C | Considered to be the protected object |
| Z21 | A127 | Żuraw | <i>Grus grus</i> | | | 40-45p | | D | | | | Not considered to be the protected object |



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|-----|------|-----------------|-------------------------------|---------------|----------------------|---------------------|----------------------|---|---|---------------------|--------------------|---|
| Z22 | A151 | Batalion | <i>Philomachus pugnax</i> | | | P | | D | | | | Not considered to be the protected object |
| Z23 | A154 | Dubelt | <i>Gallinago media</i> | | | P | | D | | | | Not considered to be the protected object |
| Z24 | A193 | Rybitwa rzeczna | <i>Sterna hirundo</i> | | | P | | D | | | | Not considered to be the protected object |
| Z25 | A197 | Rybitwa czarna | <i>Chlidonias niger</i> | | | P | | D | | | | Not considered to be the protected object |
| Z26 | A215 | Puchacz | <i>Bubo bubo</i> | | 1-2p | | | D | | | | Not considered to be the protected object |
| Z28 | A217 | Sóweczka | <i>Glauclidium passerinum</i> | | 80-100p | | | A | B | B | A | Considered to be the protected object (stock-taking required) |
| Z29 | A222 | Uszatka błotna | <i>Asio flammeus</i> | | | P | | D | | | | Not considered to be the protected object |
| Z30 | A223 | Włochatka | <i>Aegolius funereus</i> | | | 30-50p | | B | B | C | B | Considered to be the protected object (stock-taking required) |
| Z31 | A224 | Lelek | <i>Caprimulgus europaeus</i> | | | 250-280p | | C | B | C | C | Considered to be the protected object |



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|-----|------|--------------------------|-----------------------------|---------------|----------------------|---------------------|----------------------|---|---|---------------------|--------------------|--|
| Z32 | A229 | Zimorodek | <i>Alcedo atthis</i> | | | 1-5p | | D | | | | Not considered to be the protected object |
| Z33 | A234 | Dzięcioł zielonosiwý | <i>Picus canus</i> | | 30-35p | | | C | B | C | C | Considered to be the protected object |
| Z34 | A236 | Dzięcioł czarny | <i>Dryocopus martius</i> | | 150-180p | | | D | | | | Not considered to be the protected object |
| Z35 | A238 | Dzięcioł średni | <i>Dendrocopos medius</i> | | 1100-1300p | | | B | B | C | B | Considered to be the protected object |
| Z36 | A239 | Dzięcioł białostrzybiety | <i>Dendrocopos leucotos</i> | | 60-90p | | | A | C | B | A | Considered to be the protected object. Population estimated at 1/3 of the site |
| Z37 | A241 | Dzięcioł trójpalczasty | <i>Picoides tridactylus</i> | | 60-80p | | | A | C | B | A | Considered to be the protected object. Population estimated at 1/3 of the site |
| Z38 | A246 | Lerka | <i>Lullula arborea</i> | | | 100-120p | | D | | | | Not considered to be the protected object |
| Z39 | A272 | Podróżniczek | <i>Luscinia svecica</i> | | | P | | D | | | | Not considered to be the protected object |



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| Z40 | A307 | Jarzębatka | <i>Sylvia nisoria</i> | | | 200-220p | | C | C | C | C | Considered to be the protected object |
| Z41 | A320 | Muchołówka mała | <i>Ficedula parva</i> | | | 300-600p | | B | B | C | B | Considered to be the protected object |
| Z42 | A321 | Muchołówka białoszyja | <i>Ficedula albicollis</i> | | | 5000-10000p | | A | C | C | A | Considered to be the protected object |
| Z43 | A338 | Gąsiorek | <i>Lanius collurio</i> | | | 1000-1500p | | C | C | C | C | Considered to be the protected object |
| Z44 | A379 | Ortolan | <i>Emberiza hortulana</i> | | | 0p | | D | | | | Not considered to be the protected object |
| Z45 | A409 | Cietrzew | <i>Tetrao tetrix tetrix</i> | | 0-3p | | | C | B | C | C | Considered to be the protected object (necessary studies on the status of occurrence in the Area) |
| Z46 | A118 | Wodnik | <i>Rallus aquaticus</i> | | | 50-60p | | D | | | | Not considered to be the protected object |
| Z47 | A155 | Stonka | <i>Scolopax rusticola</i> | | | 500-550p | | C | B | C | C | Considered to be the protected object |



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| Z48 | A165 | Samotnik | <i>Tringa ochropus</i> | | | 100-300p | | B | B | C | B | Considered to be the protected object |
| Z49 | A312 | Wójcik | <i>Phylloscopus trochiloides</i> | | | P | | D | | | | Not considered to be the protected object |
| Z50 | A344 | Orzechówka | <i>Nucifraga caryocatactes</i> | | | P | | D | | | | Not considered to be the protected object |
| Z51 | A207 | Siniak | <i>Columba oenas</i> | | | 150-250p | | C | B | C | C | Considered to be the protected object (stock-taking required) |
| Z52 | 1308 | Mopek | <i>Barbastella barbastellus</i> | | 51-100i | | | C | A | C | A | Considered to be the protected object (stock-taking required) |
| Z53 | 1337 | Bóbr | <i>Castor fiber</i> | | 60-90i | | | C | A | C | B | Considered to be the protected object |
| Z54 | 1352 | Wilc | <i>Canis lupus</i> | | <40i | | | B | A | C | A | Considered to be the protected object |
| Z55 | 1355 | Wydra | <i>Lutra lutra</i> | | 10-20i | | | C | A | C | B | Considered to be the protected object |
| Z56 | 1361 | Ryś | <i>Lynx lynx</i> | | <14i | | | B | A | B | A | Considered to be the protected object |



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|-----|------|-----------------------|--------------------------------|---------------|----------------------|---------------------|----------------------|---|---|---------------------|--------------------|---|
| Z57 | 2647 | Żubr | <i>Bison bonasus</i> | | 350-400 | | A | A | A | A | A | Considered to be the protected object. |
| Z58 | 1166 | Traszka grzebieniasta | <i>Triturus cristatus</i> | | P | | C | B | C | C | C | Considered to be the protected object (stock-taking required) |
| Z59 | 1188 | Kumak nizinny | <i>Bombina bombina</i> | | P | | C | C | C | C | C | Considered to be the protected object (stock-taking required) |
| Z60 | 1220 | Żółw błotny | <i>Emys orbicularis</i> | | P | | D | | | | | Not considered to be the protected object |
| Z61 | 1098 | Minóg ukraiński | <i>Eudontomyzon mariae</i> | | P | | C | B | C | C | B | Considered to be the protected object (stock-taking required) |
| Z62 | 1134 | Różanka | <i>Rhodeus sericeus amarus</i> | | P | | D | | | | | Not considered to be the protected object |
| Z63 | 1145 | Piskorz | <i>Misgurnus fossilis</i> | | P | | D | | | | | Not considered to be the protected object |
| Z64 | 1149 | Koza | <i>Cobitis taenia</i> | | P | | D | | | | | Not considered to be the protected object |
| Z65 | 1014 | Poczwarówka zwężona | <i>Vertigo angustior</i> | | P | | B | A | C | C | C | Considered to be the protected object (stock-taking required) |



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| Z66 | 1016 | Poczwarówka jajowata | <i>Vertigo moulinsiana</i> | | P | | | B | A | A | B | Considered to be the protected object (stock-taking required) |
| Z67 | 1037 | Trzepla zielona | <i>Ophiogomphus cecilia</i> | | P | | | C | C | C | C | Considered to be the protected object (stock-taking required) |
| Z68 | 1042 | Zalotka większa | <i>Leucorrhinia pectoralis</i> | | P | | | C | B | C | C | Considered to be the protected object (stock-taking required) |
| Z69 | 1052 | Przeplatka maturna | <i>Hypodryas maturna</i> | | P | | | B | A | A | A | Considered to be the protected object |
| Z70 | 1060 | Czerwończyk nieparek | <i>Lycaena dispar</i> | | P | | | C | A | C | A | Considered to be the protected object |
| Z71 | 1065 | Przeplatka aurinia | <i>Euphydryas aurinia</i> | | P | | | C | B | A | B | Considered to be the protected object (stock-taking required) |
| Z72 | 1071 | Strzępotek edypus | <i>Coenonympha oedippus</i> | | P | | | D | | | | Not considered to be the protected object |
| Z73 | 1081 | Pływak szerokobrzeżek | <i>Dytiscus latissimus</i> | | P | | | C | A | C | C | Considered to be the protected object (stock-taking required) |



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|-----|------|-------------------------|-------------------------------|---------------|----------------------|---------------------|----------------------|---|---|---------------------|--------------------|---|
| Z74 | 1082 | Kreślinek nizinny | <i>Graphoderus bilineatus</i> | | P | | | C | B | C | C | Considered to be the protected object (stock-taking required) |
| Z75 | 1083 | Jelonek rogacz | <i>Lucanus cervus</i> | | P | | | D | | | | Not considered to be the protected object |
| Z76 | 1084 | Pachnica dębowa | <i>Osmoderma eremita</i> | | P | | | C | A | C | B | Considered to be the protected object |
| Z77 | 1085 | Bogatek wspaniały | <i>Buprestis splendens</i> | | P | | | A | B | A | A | Considered to be the protected object (stock-taking required) |
| Z78 | 1086 | Zgniotek cynobrowy | <i>Cucujus cinnaberinus</i> | | P | | | A | A | A | A | Considered to be the protected object |
| Z79 | 1088 | Kozioróg dębosz | <i>Cerambyx cerdo</i> | | P | | | D | | | | Not considered to be the protected object |
| Z80 | 1920 | Ponurek Schneidera | <i>Boros schneideri</i> | | P | | | A | A | B | A | Considered to be the protected object (stock-taking required) |
| Z81 | 1923 | Średzinka | <i>Mesosa myops</i> | | P | | | A | A | A | A | Considered to be the protected object (stock-taking required) |
| Z82 | 1924 | Pogrzybnica Mennerheima | <i>Oxyporus mannerheimii</i> | | P | | | A | A | B | A | Considered to be the protected object (stock-taking required) |



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|-----|------|----------------------|-----------------------------------|---------------|----------------------|---------------------|----------------------|---|---|---------------------|--------------------|---|
| Z83 | 1925 | Rozmiarż kolwenski | <i>Pytho kolwensis</i> | | P | | | A | B | B | A | Considered to be the protected object (stock-taking required) |
| Z84 | 4021 | Konarek tajgowy | <i>Phryganophilus rufficollis</i> | | P | | | A | A | A | A | Considered to be the protected object (stock-taking required) |
| Z85 | 4026 | Zagłębek bruzdkowany | <i>Rhysodes sulcatus</i> | | P | | | B | B | A | A | Considered to be the protected object (stock-taking required) |
| Z86 | 4030 | Szłaczkoń szafraniec | <i>Colias myrmidone</i> | | P | | | C | C | C | B | Considered to be the protected object (stock-taking required) |
| Z87 | 4038 | Czerwończyk fioletek | <i>Lycaena helle</i> | | P | | | D | | | | Not considered to be the protected object |
| Z88 | 4042 | Modraszek eroides | <i>Polyommatus eroides</i> | | P | | | D | | | | Not considered to be the protected object |
| Z89 | 4056 | Zatoczek tamiłowy | <i>Anisus vorticulus</i> | | P | | | C | B | C | C | Considered to be the protected object (stock-taking required) |



| No. | Code | Polish name | Latin name | % of coverage | Permanent population | Breeding population | Migrating population | Assessment of population/Degree of representativeness | Assessment of conservation status/Relative area | Isolated assessment | Overall assessment | Opinion on the entry |
|-----|------|------------------------|----------------------------|---------------|----------------------|---------------------|----------------------|---|---|---------------------|--------------------|---|
| R1 | 1437 | Leniec bezpodkwiatkowy | <i>Thesium ebracteatum</i> | | C | | | B | B | C | B | Considered to be the protected object (stock-taking required) |
| R2 | 1477 | Sasanka otwarta | <i>Pulsatilla patens</i> | | P | | | C | B | C | C | Considered to be the protected object (stock-taking required) |
| R3 | 1939 | Rzepik szczeciński | <i>Agrimonia pilosa</i> | | P | | | C | B | C | A | Considered to be the protected object (stock-taking required) |

2.3. Structure of land ownership and use.

| Types of land in use | Type of ownership | Area of land in use in ha | % of the share in the Area |
|----------------------|--|---------------------------|----------------------------|
| Forests | State Forests, Białowieża National Park | 58570,28 | 92,75 |
| Arable land | Private, State Forests | 1134,97 | 1,80 |
| Permanent grassland | Private, State Forests | 380,37 | 0,60 |
| Permanent pastures | Private, State Forests | 2016,67 | 3,19 |
| Swamps | State Forests, Białowieża National Park, private | 546,53 | 0,87 |
| Built-up land | Private, Communal, Białowieża National Park, State Forests | 111,59 | 0,18 |
| Waters | Private, Communal, Białowieża National Park, State Forests | 387,19 | 0,61 |

Data on land use and coverage from the programme CORINE Land Cover 2006



2.6. Information on protected objects covered by the Plan including the scope of field works – verified data.

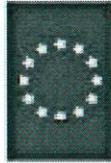
| Protected object | Overall assessment | Area | Number of occurrence sites | Distribution over the Area | Level of recognition | Scope of complementary field works/Justification for the exclusion from field works |
|--|--------------------|----------|----------------------------|----------------------------|----------------------|---|
| 3150 Oxbow lakes and natural and eutrophic water reservoirs with communities of <i>Nymphaeion</i> , <i>Potamion</i> | C | 2,91 | XX | .shp file | Poor | Detailed field stock-taking required, especially in the Narewka and Leśna valleys |
| 6230 Mountainous and lowland matgrass grasslands (<i>Nardion</i> – floristically rich patches) | B | 113,07 | XX | .shp file | Poor | Stock-taking of the habitat required |
| 6510 Lowland and mountainous fresh extensively used meadows (<i>Arrhenatherion elatioris</i>) | B | 428,55 | XX | .shp file | Poor | Stock-taking of the habitat required |
| 7140 Transition mires and quaking bogs mostly with vegetation of <i>Scheuchzeria-Caricetea</i>) | B | 34,01 | XX | .shp file | Medium | Stock-taking of the habitat required |
| 7230 Mountainous and lowland alkaline peat bogs in the form of caricion, moss complexes and mud sedges | C | 57,32 | XX | .shp file | Medium | Stock-taking of the habitat required |
| 9170 Standard subcontinental oak-hornbeam forest (<i>Tilio-Carpinetum</i> , <i>Melitti Carpinetum</i>) | A | 26824,23 | 6882 | .shp file | Very good | Detailed stock-taking of the habitat has been carried out |
| 91D0 Wildwoods and swamp forests (<i>Vaccinio uliginosi-Betuletum pubescentis</i> , <i>Vaccinio uliginosi-Pinetum</i> , <i>Ledo-Sphagnetum</i> , <i>Sphagno girgensohnii-Piceetum</i> and birch and pine boreal swamp forests) | A | 1060,56 | 390 | .shp file | Very good | Detailed stock-taking of the habitat has been carried out |
| 91E0 Willow, poplar, alder and ash riparian forests (<i>Salicetum alba-fragilis</i> , <i>Populetum albae</i> , <i>Fraxino-</i> | A | 5360,27 | 1359 | .shp file | Very good | Detailed stock-taking of the habitat has been carried out |



| Protected object | Overall assessment | Area | Number of occurrence sites | Distribution over the Area | Level of recognition | Scope of complementary field works/Justification for the exclusion from field works |
|---|--------------------|-------|----------------------------|----------------------------|----------------------|---|
| <i>Alnetum</i> springfen alder forests) | | | | | | |
| 91F0 Oak, elm and ash riparian forests (<i>Ficario-Ulmetum</i>) | B | 18,75 | 8 | .shp file | Poor | Stock-taking of the habitat required |
| 91I0 Thermophilous oak forests (<i>Quercetalia pubescenti-petraeae</i>) | C | 3,99 | 1 | .shp file | Very good | Detailed stock-taking of the habitat has been carried out |
| Plant species | | | | | | |
| 1437 Bractless Toadflax <i>Thesium ebracteatum</i> | C | | XX | XX | Poor | Stock-taking of the population required |
| 1477 Eastern Pasqueflower <i>Pulsatilla patens</i> | C | | XX | XX | Poor | Stock-taking of the population required |
| 1939 Hairy Agrimony <i>Agrimonia pilosa</i> | C | | XX | XX | Poor | Stock-taking of the population required |
| Animal species | | | | | | |
| A030 Black Stork <i>Ciconia nigra</i> | C | | XX | .shp file | Good | As part of works on PTP, no field verification of the population was carried out |
| A072 Honey Buzzard <i>Pernis apivorus</i> | B | | XX | XX | Satisfactory | As part of works on PTP, no field verification of the population was carried out |
| A080 Short-toed Snake Eagle <i>Circaetus gallicus</i> | B | | XX | XX | Insufficient | Stock-taking of the population required |
| A089 Lesser Spotted Eagle <i>Aquila pomarina</i> | B | | XX | .shp file | Good | As part of works on PTP, no field verification of the population was carried out |
| A092 Booted Eagle <i>Hieraetus pennatus</i> | A | | XX | XX | Insufficient | Stock-taking of the population required |
| A104 Hazel Grouse <i>Bonasa bonasia</i> | B | | XX | XX | Satisfactory | As part of works on PTP, no field |



| Protected object | Overall assessment | Area | Number of occurrence sites | Distribution over the Area | Level of recognition | Scope of complementary field works/Justification for the exclusion from field works |
|--|--------------------|------|----------------------------|----------------------------|----------------------|--|
| A119 Spotted Crake <i>Porzana porzana</i> | C | | XX | XX | Satisfactory | verification of the population was carried out As part of works on PTP, no field verification of the population was carried out |
| A122 Corncrake <i>Crex crex</i> | C | | XX | XX | Good | As part of works on PTP, no field verification of the population was carried out |
| A217 Eurasian Pygmy Owl <i>Glaucidium passerinum</i> | A | | XX | XX | Insufficient | Stock-taking of the population required |
| A223 Boreal Owl <i>Aegolius funereus</i> | B | | XX | XX | Insufficient | Stock-taking of the population required |
| A224 European Nightjar <i>Caprimulgus europaeus</i> | C | | XX | XX | Satisfactory | As part of works on PTP, no field verification of the population was carried out |
| A234 Grey-faced Woodpecker <i>Picus canus</i> | C | | XX | XX | Satisfactory | As part of works on PTP, no field verification of the population was carried out |
| A238 Middle Spotted Woodpecker <i>Dendrocopos medius</i> | B | | XX | XX | Good | As part of works on PTP, no field verification of the population was carried out |
| A239 White-backed Woodpecker <i>Dendrocopos leucotos</i> | A | | XX | XX | Insufficient | Stock-taking of the population required |
| A241 Eurasian Three-toed Woodpecker <i>Picoides tridactylus</i> | A | | XX | XX | Insufficient | Stock-taking of the population required |
| A307 Barred Warbler <i>Sylvia nisoria</i> | C | | XX | XX | Insufficient | Stock-taking of the population required |



| Protected object | Overall assessment | Area | Number of occurrence sites | Distribution over the Area | Level of recognition | Scope of complementary field works/Justification for the exclusion from field works |
|---|--------------------|------|----------------------------|----------------------------|----------------------|---|
| A320 Red-breasted Flycatcher <i>Ficedula parva</i> | B | | XX | XX | Satisfactory | As part of works on PTP, no field verification of the population was carried out |
| A321 Collared Flycatcher <i>Ficedula albicollis</i> | A | | XX | XX | Satisfactory | As part of works on PTP, no field verification of the population was carried out |
| A338 Red-backed Shrike <i>Lanius collurio</i> | | | XX | XX | Insufficient | Stock-taking of the population required |
| A409 Black Grouse <i>Tetrao tetrix tetrix</i> | C | | XX | XX | Insufficient | Niezbędne badania statusu gatunku na terenie Obszaru i stanu siedlisk gatunku |
| A155 Eurasian Woodcock <i>Scolopax rusticola</i> | C | | XX | XX | Satisfactory | As part of works on PTP, no field verification of the population was carried out |
| A165 Green Sandpiper <i>Tringa ochropus</i> | B | | XX | XX | Satisfactory | As part of works on PTP, no field verification of the population was carried out |
| A207 Stock Dove <i>Columba oenas</i> | B | | XX | XX | Satisfactory | As part of works on PTP, no field verification of the population was carried out |
| 1308 Barbastelle <i>Barbastella barbastellus</i> | C | | XX | XX | Insufficient | Stock-taking of the population required |
| 1337 Eurasian Beaver <i>Castor fiber</i> | C | | XX | XX | Satisfactory | As part of works on PTP, no field verification of the population was carried out |
| 1352 Wolf <i>Canis lupus</i> | B | | XX | XX | Good | As part of works on PTP, no field verification of the population was carried out |
| 1355 European Otter <i>Lutra lutra</i> | C | | XX | XX | Satisfactory | As part of works on PTP, no field verification of the population was carried out |



| Protected object | Overall assessment | Area | Number of occurrence sites | Distribution over the Area | Level of recognition | Scope of complementary field works/Justification for the exclusion from field works |
|---|--------------------|------|----------------------------|----------------------------|----------------------|---|
| | | | | | | verification of the population was carried out |
| 1361 Lynx <i>Lynx lynx</i> | B | | XX | XX | Good | As part of works on PTP, no field verification of the population was carried out |
| 2647 European Bison <i>Bison bonasus</i> | A | | XX | XX | Very good | As part of works on PTP, no field verification of the population was carried out |
| 1166 Great Crested Newt <i>Triturus cristatus</i> | C | | XX | XX | Insufficient | Stock-taking of the population required |
| 1188 European Firebelly Toad <i>Bombina orientalis</i> | C | | XX | XX | Insufficient | Stock-taking of the population required |
| 1098 Ukrainian Brook Lamprey <i>Eudontomyzon mariae</i> | C | | XX | XX | Insufficient | Stock-taking of the population required |
| 1014 Narrow-mouthed Whorl Snail <i>Vertigo angustior</i> | B | | XX | XX | Insufficient | Stock-taking of the population required |
| 1016 Desmoulin's Whorl Snail <i>Vertigo moulinsiana</i> | B | | XX | XX | Insufficient | Stock-taking of the population required |
| 1037 Green Snaketail <i>Ophiogomphus cecilia</i> | C | | XX | XX | Insufficient | Stock-taking of the population required |
| 1042 Large White-faced Darter <i>Leucorrhinia pectoralis</i> | C | | XX | XX | Insufficient | Stock-taking of the population required |
| 1052 Scarce Fritillary <i>Hypodryas</i> | B | | XX | XX | Satisfactory | As part of works on PTP, no field |



| Protected object | Overall assessment | Area | Number of occurrence sites | Distribution over the Area | Level of recognition | Scope of complementary field works/Justification for the exclusion from field works |
|--|--------------------|------|----------------------------|----------------------------|----------------------|---|
| <i>matura</i> | | | | | | verification of the population was carried out |
| 1060 Large Copper <i>Lycaena dispar</i> | C | | XX | XX | Satisfactory | As part of works on PTP, no field verification of the population was carried out |
| 1065 Marsh Fritillary <i>Euphydryas aurinia</i> | C | | XX | XX | Satisfactory | As part of works on PTP, no field verification of the population was carried out |
| 1081 <i>Dytiscus latissimus</i> <i>Dytiscus latissimus</i> | C | | XX | XX | Insufficient | Stock-taking of the population required |
| 1082 <i>Graphoderus bilineatus</i> <i>Graphoderus bilineatus</i> | C | | XX | XX | Insufficient | Stock-taking of the population required |
| 1084 Hermit Beetle <i>Osmoderma eremita</i> | C | | XX | .shp file | Satisfactory | As part of works on PTP, no field verification of the population was carried out |
| 1085 Goldstreifiger <i>Buprestis splendens</i> | A | | XX | XX | Insufficient | Stock-taking of the population required |
| 1086 Flat Bark Beetle <i>Cucujus cinnaberinus</i> | A | | XX | .shp file | Satisfactory | As part of works on PTP, no field verification of the population was carried out |
| 1920 <i>Boros schneideri</i> <i>Boros schneideri</i> | A | | XX | .shp file | Insufficient | Stock-taking of the population required |
| 1923 <i>Mesosa myops</i> <i>Mesosa myops</i> | A | | XX | XX | Insufficient | Stock-taking of the population required |
| 1924 <i>Oxyporus mannerheimii</i> | A | | XX | XX | Insufficient | Stock-taking of the population required |



| Protected object | Overall assessment | Area | Number of occurrence sites | Distribution over the Area | Level of recognition | Scope of complementary field works/Justification for the exclusion from field works |
|--|--------------------|------|----------------------------|----------------------------|----------------------|---|
| <i>Oxyporus mannerheimii</i> | | | | | | required |
| 1925 <i>Pytho kolwensis</i> <i>Pytho kolwensis</i> | A | | XX | XX | Insufficient | Stock-taking of the population required |
| 4021 False Darkling Beetle <i>Phyganophilus ruficollis</i> | A | | XX | XX | Insufficient | Stock-taking of the population required |
| 4026 Wrinkled Bark Beetle <i>Rhyssodes sulcatus</i> | B | | XX | XX | Insufficient | Stock-taking of the population required |
| 4030 Danube Clouded Yellow <i>Colias myrmidone</i> | C | | XX | XX | Insufficient | Stock-taking of the population required |
| 4056 Ramshorn Snail <i>Anisus vorticulus</i> | C | | XX | XX | Insufficient | Stock-taking of the population required |



Module B

3. Conservation status of protected objects covered by the Plan

| Protected objects covered by the Plan | | | | | | | | |
|--|-------------|--|--------------------------|-----------|---|--|--|--|
| Natural habitats | Natura code | Occurrence site | Status parameters | Indicator | Assessment of the conservation status based on the available data according to the FV, UI, U2 scale | Assessment of the conservation status following the field verification according to the FV, UI, U2 scale | Overall assessment of the conservation status of the habitat/species according to the FV, UI, U2 scale | Comments |
| Oxbow lakes and natural and eutrophic water reservoirs with communities of <i>Nymphaeion</i> , <i>Potamion</i> | 3150 | Narewka valley and several separate occurrence sites in the Leśna i Łutownia valleys | Area of the habitat | - | U1 | - | U1 | Limited protection possibilities in a longer term. |
| | | | Structure and functions | - | FV | - | | |
| | | | Prospects for protection | - | U1 | - | | |
| Mountainous and lowland matgrass grasslands (<i>Nardion</i> – floristically rich patches) | 6230 | All patches of habitat in the Area | Area of the habitat | - | U1 | - | U1 | Expert assessment for all occurrence sites in the Area . In order to obtain the complete assessment in accordance with the Chief Inspectorate of Environmental Protection guidelines, field studies are required |
| | | | Structure and functions | - | U1 | - | | |
| | | | Prospects for protection | - | U1 | - | | |
| Lowland and mountainous fresh extensively used meadows (<i>Arrhenatherio</i> | 6510 | All patches of habitat in the Area | Area of the habitat | - | U1 | - | U1 | Expert assessment for all occurrence sites in the Area . In order to obtain the complete assessment in accordance with the |
| | | | Structure and functions | - | U1 | - | | |



| Protected objects covered by the Plan | | | | | | | | |
|---|-------------|------------------------------------|--------------------------|-------------|---|--|--|--|
| Natural habitats | Natura code | Occurrence site | Status parameters | Indicator | Assessment of the conservation status based on the available data according to the FV, U1, U2 scale | Assessment of the conservation status following the field verification according to the FV, U1, U2 scale | Overall assessment of the conservation status of the habitat/species according to the FV, U1, U2 scale | Comments |
| <i>n elatioris</i>) | | | Prospects for protection | - | FV | - | | Chief Inspectorate of Environmental Protection guidelines, field studies are required |
| Transition mires and quaking bogs (mostly with vegetation of <i>Scheuchzeria-Caricetea</i>) | 7140 | All patches of habitat in the Area | Area of the habitat | - | XX | - | XX | The habitat probably does not occur in the Area |
| | | | Structure and functions | - | XX | - | | |
| | | | Prospects for protection | - | XX | - | | |
| Mountainous and lowland alkaline peat bogs in the form of caricion, moss complexes and mud sedges | 7230 | All patches of habitat in the Area | Area of the habitat | - | U2 | - | U2 | Expert assessment for all occurrence sites in the Area . In order to obtain the complete assessment in accordance with the Chief Inspectorate of Environmental Protection guidelines, field studies are required |
| | | | Structure and functions | - | U1 | - | | |
| | | | Prospects for protection | - | U1 | - | | |
| Standard subcontinental oak-hornbeam forest (<i>Tilio-</i> | 9170 | All patches of habitat in the Area | Area of the habitat | | FV | FV | U1 | Assessment based on stock-taking of the habitat |
| | | | Structure and | Characteris | - | FV | | |



| Protected objects covered by the Plan | | | | | | | | | |
|---|-------------|-----------------|-------------------|---|---|--|--|----------|--|
| Natural habitats | Natura code | Occurrence site | Status parameters | Indicator | Assessment of the conservation status based on the available data according to the FV, U1, U2 scale | Assessment of the conservation status following the field verification according to the FV, U1, U2 scale | Overall assessment of the conservation status of the habitat/species according to the FV, U1, U2 scale | Comments | |
| Carpinetum, Meliti Carpinetum) | | | functions | tic species | | | | | |
| | | | | Dominant species | - | | U1 | | |
| | | | | Alien species | - | | FV | | |
| | | | | Invasive alien species in undergrowth | - | | U1 | | |
| | | | | Dead wood | - | | U1 | | |
| | | | | Age of the forest stand | - | | U1 | | |
| | | | | Vertical structure of plants | - | | U1 | | |
| | | | | Natural replacement of the forest stand | - | | FV | | |
| Destruction of undergrowth and soil related to obtaining wood | - | | FV | | | | | | |



| Protected objects covered by the Plan | | | | | | | | |
|---------------------------------------|-------------|-----------------|-------------------|---|---|--|--|----------|
| Natural habitats | Natura code | Occurrence site | Status parameters | Indicator | Assessment of the conservation status based on the available data according to the FV, U1, U2 scale | Assessment of the conservation status following the field verification according to the FV, U1, U2 scale | Overall assessment of the conservation status of the habitat/species according to the FV, U1, U2 scale | Comments |
| | | | | Ecologically alien species in the forest stand | - | U1 | | |
| | | | | Dead wood fallen or standing >3m of length and 30 cm of thickness | - | FV | | |
| | | | | Natural replacement of the forest stand | -- | FV | | |
| | | | | Occurrence of peat moss | - | FV | | |
| | | | | Occurrence of characteristic dwarf shrubs | - | FV | | |
| | | | | Vertical structure of plants | - | FV | | |
| | | | | Destruction of | - | FV | | |



| Protected objects covered by the Plan | | | | | | | | |
|--|-------------|--|--------------------------|---|---|--|--|---|
| Natural habitats | Natura code | Occurrence site | Status parameters | Indicator | Assessment of the conservation status based on the available data according to the FV, U1, U2 scale | Assessment of the conservation status following the field verification according to the FV, U1, U2 scale | Overall assessment of the conservation status of the habitat/species according to the FV, U1, U2 scale | Comments |
| Willow, poplar, alder and ash riparian forests (<i>Salicetum albo-fragilis</i> , <i>Populetum albae</i> , <i>Fraxino-Alnetum</i> , springfen alder forests) | 91E0 | All patches of habitat in the Area | Prospects for protection | undergrowth and soil related to obtaining wood | | FV | U1 | Assessment based on stock-taking of the habitat |
| | | | | Other deformations | | FV | | |
| | | | | | FV | | | |
| | | | Area of the habitat | | FV | FV | | |
| | | | Structure and functions | Characteristic species | - | U1 | | |
| | | Dominant species | | - | FV | | | |
| | | Geographically alien species in the forest stand | | - | FV | | | |
| | | | | Invasive alien species in multi-species undergrowth | - | U1 | | |



| Protected objects covered by the Plan | | | | | | | | |
|---------------------------------------|-------------|-----------------|-------------------|--|---|--|--|----------|
| Natural habitats | Natura code | Occurrence site | Status parameters | Indicator | Assessment of the conservation status based on the available data according to the FV, U1, U2 scale | Assessment of the conservation status following the field verification according to the FV, U1, U2 scale | Overall assessment of the conservation status of the habitat/species according to the FV, U1, U2 scale | Comments |
| | | | | Shrub and in undergrowth | | | | |
| | | | | Native species of expansive green plants | - | FV | | |
| | | | | Dead wood | - | FV | | |
| | | | | Large dead wood | - | FV | | |
| | | | | Naturalness of the watercourse bed | - | FV | | |
| | | | | Water regime | - | FV | | |
| | | | | Age of the forest stand | - | U1 | | |
| | | | | Vertical structure of plants | - | FV | | |
| | | | | Natural replacement of the forest stand | - | FV | | |
| | | | | Destruction of | - | FV | | |



| Protected objects covered by the Plan | | | | | | | | |
|--|-------------|------------------------------------|--------------------------|--|---|--|--|--|
| Natural habitats | Natura code | Occurrence site | Status parameters | Indicator | Assessment of the conservation status based on the available data according to the FV, U1, U2 scale | Assessment of the conservation status following the field verification according to the FV, U1, U2 scale | Overall assessment of the conservation status of the habitat/species according to the FV, U1, U2 scale | Comments |
| | | | | undergrowth and soil related to obtaining wood | | | | |
| | | | | Other deformations | - | U1 | | |
| | | | | Prospects for protection | | FV | | |
| Oak, elm and ash riparian forests (<i>Ficario-Ulmetum</i>) | 91F0 | All patches of habitat in the Area | Area of the habitat | - | U1 | U1 | U1 | Assessment based on stock-taking of the habitat. Additional field studies required |
| | | | Structure and functions | - | U1 | U1 | | |
| | | | Prospects for protection | - | FV | FV | | |
| Thermophilous oak forests (<i>Quercetalia pubescenti-petraeae</i>) | 91I0 | All patches of habitat in the Area | Area of the habitat | | U2 | U2 | U2 | Assessment based on stock-taking of the habitat |
| | | | Structure and functions | | - | U2 | U2 | |



| Protected objects covered by the Plan | | | | | | | | |
|---------------------------------------|-------------|-----------------|-------------------|--|---|--|--|----------|
| Natural habitats | Natura code | Occurrence site | Status parameters | Indicator | Assessment of the conservation status based on the available data according to the FV, U1, U2 scale | Assessment of the conservation status following the field verification according to the FV, U1, U2 scale | Overall assessment of the conservation status of the habitat/species according to the FV, U1, U2 scale | Comments |
| | | | | Characteristic species | - | U2 | | |
| | | | | Dominant species | - | U2 | | |
| | | | | Invasive alien species in multi-species undergrowth and in undergrowth | - | U1 | | |
| | | | | Native species of expansive green plants | - | U1 | | |
| | | | | Thermophilous species | - | U2 | | |
| | | | | Fallen dead wood | - | U1 | | |
| | | | | Age of the forest stand | - | FV | | |
| | | | | Density of multi-species undergrowth | - | U2 | | |



| Protected objects covered by the Plan | | | | | | | | |
|---------------------------------------|-------------|-----------------|--------------------------|---|---|--|--|----------|
| Natural habitats | Natura code | Occurrence site | Status parameters | Indicator | Assessment of the conservation status based on the available data according to the FV, U1, U2 scale | Assessment of the conservation status following the field verification according to the FV, U1, U2 scale | Overall assessment of the conservation status of the habitat/species according to the FV, U1, U2 scale | Comments |
| | | | | Density of tree-tops | - | U2 | | |
| | | | | Geographically and ecologically alien species in the forest stand | - | U1 | | |
| | | | | Natural replacement | - | U2 | | |
| | | | | Presence of tree plantings | - | FV | | |
| | | | | Destruction of undergrowth and soil related to obtaining wood | - | U1 | | |
| | | | | Destruction of forest stands | - | FV | | |
| | | | Prospects for protection | | U2 | U2 | | |
| Gatunki | | | | | | | | |



| Protected objects covered by the Plan | | | | | | | | |
|--|-------------|---|---------------------------------------|-----------|---|--|--|---|
| Natural habitats | Natura code | Occurrence site | Status parameters | Indicator | Assessment of the conservation status based on the available data according to the FV, U1, U2 scale | Assessment of the conservation status following the field verification according to the FV, U1, U2 scale | Overall assessment of the conservation status of the habitat/species according to the FV, U1, U2 scale | Comments |
| Bractless Toadflax <i>Thesium ebracteatum</i> | 1437 | All occurrence sites in the Area - no detailed data | Population parameters | - | XX | - | U2 | 2009 – monitoring by the Chief Inspectorate of Environmental Protection – 3 occurrence sites in the Białowieża Forest (population – U1, habitat – U1). Expert assessment for all occurrence sites in the Area . In order to obtain the complete assessment in accordance with the Chief Inspectorate of Environmental Protection guidelines, field studies are required |
| | | | Species habitat parameters | - | U2 | - | | |
| | | | Opportunities to conserve the species | - | U1 | - | | |
| Eastern Pasqueflower <i>Pulsatilla patens</i> | 1477 | All occurrence sites in the Area - no detailed data | Population parameters | - | U2 | - | U2 | Expert assessment for all occurrence sites in the Area . In order to obtain the complete assessment in accordance with the Chief Inspectorate of Environmental Protection |
| | | | Species habitat parameters | - | U2 | - | | |
| | | | Opportunities to conserve the species | - | U2 | - | | |



| Protected objects covered by the Plan | | | | | | | | |
|---|-------------|---|---------------------------------------|-----------|---|--|--|---|
| Natural habitats | Natura code | Occurrence site | Status parameters | Indicator | Assessment of the conservation status based on the available data according to the FV, U1, U2 scale | Assessment of the conservation status following the field verification according to the FV, U1, U2 scale | Overall assessment of the conservation status of the habitat/species according to the FV, U1, U2 scale | Comments |
| Hairy Agrimony <i>Agrimonia pilosa</i> | 1939 | All occurrence sites in the Area - no detailed data | Population parameters | - | XX | - | FV | 2009 – monitoring by the Chief Inspectorate of Environmental Protection – 4 occurrence sites in the Białowieża Forest, all in BNP (population – FV, habitat – FV). Expert assessment for all occurrence sites in the Area . In order to obtain the complete assessment in accordance with the Chief Inspectorate of Environmental Protection guidelines, field studies are required |
| | | | Species habitat parameters | - | FV | - | | |
| | | | Opportunities to conserve the species | - | FV | - | | |
| Black Stork <i>Ciconia nigra</i> | A030 | All occurrence sites in the | Population parameters | - | U1 | - | U1 | Pugaczewicz 1997, 2006; Rowiński 2004; |



| Protected objects covered by the Plan | | | | | | | | | | |
|---|-------------|----------------------------------|---------------------------------------|-----------|---|--|--|--|--|--|
| Natural habitats | Natura code | Occurrence site | Status parameters | Indicator | Assessment of the conservation status based on the available data according to the FV, U1, U2 scale | Assessment of the conservation status following the field verification according to the FV, U1, U2 scale | Overall assessment of the conservation status of the habitat/species according to the FV, U1, U2 scale | Comments | | |
| | | Area | Species habitat parameters | - | U1 | - | | | | |
| | | | Opportunities to conserve the species | - | U1 | - | | | | |
| Honey Buzzard <i>Pernis apivorus</i> | A072 | All occurrence sites in the Area | Population parameters | - | FV | - | FV | Pugacewicz 2010; Wesołowski et al. 2003; Rowiński 2004 | | |
| | | | Species habitat parameters | - | FV | - | | | | |
| | | | Opportunities to conserve the species | | FV | | | | | |
| Short-toed Snake Eagle <i>Circaetus gallicus</i> | A080 | All occurrence sites in the Area | Population parameters | - | XX | - | XX | Rowiński 2004; Pugacewicz 2010. | | |
| | | | Species habitat parameters | - | U1 | - | | | | |
| | | | Opportunities to conserve the species | - | XX | - | | | | |
| Lesser Spotted Eagle <i>Aquila</i> | A089 | All occurrence sites in the | Population parameters | - | U1 | - | U1 | Rowiński 2004; Wesołowski et al. | | |



| Protected objects covered by the Plan | | | | | | | | |
|---|-------------|----------------------------------|---------------------------------------|-----------|---|--|--|--|
| Natural habitats | Natura code | Occurrence site | Status parameters | Indicator | Assessment of the conservation status based on the available data according to the FV, U1, U2 scale | Assessment of the conservation status following the field verification according to the FV, U1, U2 scale | Overall assessment of the conservation status of the habitat/species according to the FV, U1, U2 scale | Comments |
| <i>pomarina</i> | | Area | Species habitat parameters | - | U1 | - | | 2003; Pugacewicz 2010 |
| Booted Eagle <i>Hieraetus pennatus</i> | A092 | No data | Population parameters | - | XX | - | XX | Rowiński 2004; Wesołowski et al. 2003; Pugacewicz 2010 |
| | | | Species habitat parameters | - | FV | - | | |
| Hazel Grouse <i>Bonasa bonasia</i> | A104 | All occurrence sites in the Area | Population parameters | - | XX | - | FV | Pugacewicz 1997; Wesołowski et al. 2003; Rowiński 2004 |
| | | | Species habitat parameters | - | FV | - | | |
| | | | Opportunities to conserve the species | - | FV | - | | |
| Spotted Crane <i>Porzana</i> | A119 | All occurrence sites in the | Population parameters | - | U1 | - | U2 | Rowiński 2004; Pugacewicz 2009 |



| Protected objects covered by the Plan | | | | | | | | | | |
|--|-------------|----------------------------------|---------------------------------------|-----------|---|--|--|--|--|--|
| Natural habitats | Natura code | Occurrence site | Status parameters | Indicator | Assessment of the conservation status based on the available data according to the FV, U1, U2 scale | Assessment of the conservation status following the field verification according to the FV, U1, U2 scale | Overall assessment of the conservation status of the habitat/species according to the FV, U1, U2 scale | Comments | | |
| <i>porzana</i> | | Area | Species habitat parameters | - | U2 | - | | | | |
| | | | Opportunities to conserve the species | - | U1 | - | | | | |
| Corncrake <i>Crex crex</i> | A122 | All occurrence sites in the Area | Population parameters | - | FV | - | U1 | Rowiński 2004; Pugaczewicz 2009 | | |
| | | | Species habitat parameters | - | U1 | - | | | | |
| | | | Opportunities to conserve the species | - | U1 | - | | | | |
| Eurasian Pygmy Owl <i>Glaucidium passerinum</i> | A217 | All occurrence sites in the Area | Population parameters | - | U1 | - | U1 | Domaszewicz 1993; Pugaczewicz 1997; Wesołowski et al. 2003; Rowiński 2004 | | |
| | | | Species habitat parameters | - | U1 | - | | | | |
| | | | Opportunities to conserve the species | - | U1 | - | | | | |
| Boreal Owl <i>Aegolius</i> | A223 | All occurrence sites in the | Population parameters | - | U1 | - | U1 | Domaszewicz 1993; Pugaczewicz 1997; | | |



| Protected objects covered by the Plan | | | | | | | | |
|---|-------------|----------------------------------|---------------------------------------|-----------|---|--|--|---|
| Natural habitats | Natura code | Occurrence site | Status parameters | Indicator | Assessment of the conservation status based on the available data according to the FV, U1, U2 scale | Assessment of the conservation status following the field verification according to the FV, U1, U2 scale | Overall assessment of the conservation status of the habitat/species according to the FV, U1, U2 scale | Comments |
| <i>funereus</i> | | Area | Species habitat parameters | - | U1 | - | | Wesołowski et al. 2003; Rowiński 2004 |
| | | | Opportunities to conserve the species | - | U1 | - | | |
| European Nightjar <i>Caprimulgus europaeus</i> | A224 | All occurrence sites in the Area | Population parameters | - | XX | - | U1 | Pugaczewicz 1997; Wesołowski et al. 2003; Rowiński 2004 |
| | | | Species habitat parameters | - | U1 | - | | |
| | | | Opportunities to conserve the species | - | FV | - | | |
| Grey-faced Woodpecker <i>Picus canus</i> | A234 | All occurrence sites in the Area | Population parameters | - | FV | - | FV | Pugaczewicz 1997, 2010; Wesołowski et al. 2003; Rowiński 2004 |
| | | | Species habitat parameters | - | FV | - | | |
| | | | Opportunities to conserve the species | - | FV | - | | |
| Middle Spotted Woodpecker | A238 | All occurrence sites in the Area | Population parameters | - | FV | - | FV | Pugaczewicz 1997; Wesołowski et al. |



Protected objects covered by the Plan

| Natural habitats | Natura code | Occurrence site | Status parameters | Indicator | Assessment of the conservation status based on the available data according to the FV, U1, U2 scale | Assessment of the conservation status following the field verification according to the FV, U1, U2 scale | Overall assessment of the conservation status of the habitat/species according to the FV, U1, U2 scale | Comments |
|---|-------------|----------------------------------|---------------------------------------|-----------|---|--|--|---|
| <i>Dendrocopos medius</i> | | Area | Species habitat parameters | - | FV | - | | 2003; Rowiński 2004 |
| | | | Opportunities to conserve the species | - | FV | - | | |
| White-backed Woodpecker <i>Dendrocopos leucotos</i> | A239 | All occurrence sites in the Area | Population parameters | - | U1 | - | U1 | Pugacewicz 1997; Wesołowski et al. 2003; Rowiński 2004; Walankiewicz 2002, 2010 |
| | | | Species habitat parameters | - | U1 | - | | |
| Eurasian Three-toed Woodpecker <i>Picoides tridactylus</i> | A241 | All occurrence sites in the Area | Opportunities to conserve the species | - | FV | - | U1 | Pugacewicz 1997; Wesołowski et al. 2003; Rowiński 2004; Walankiewicz 2002, 2010 |
| | | | Population parameters | - | U1 | - | | |
| Red-breasted Flycatcher | A320 | All occurrence sites in the | Species habitat parameters | - | U1 | - | FV | Pugacewicz 1997; Wesołowski et al. |
| | | | Opportunities to conserve the species | - | FV | - | | |
| | | | Population parameters | - | FV | - | FV | Pugacewicz 1997; Wesołowski et al. |



| Protected objects covered by the Plan | | | | | | | | |
|---|-------------|----------------------------------|--|-------------|---|--|--|--|
| Natural habitats | Natura code | Occurrence site | Status parameters | Indicator | Assessment of the conservation status based on the available data according to the FV, U1, U2 scale | Assessment of the conservation status following the field verification according to the FV, U1, U2 scale | Overall assessment of the conservation status of the habitat/species according to the FV, U1, U2 scale | Comments |
| <i>Ficedula parva</i> | | Area | Species habitat parameters Opportunities to conserve the species | - - | FV FV | - - | | 2003; Rowiński 2004 |
| Collared Flycatcher <i>Ficedula albicollis</i> | A321 | All occurrence sites in the Area | Population parameters Species habitat parameters Opportunities to conserve the species | - - - | FV FV FV | - - - | FV | Pugaczewicz 1997; Walankiewicz 2002; Wesołowski et al. 2003; Rowiński 2004 |
| Black Grouse <i>Tetrao tetrix tetrix</i> | A409 | Did not occur in 2011 | Population parameters Species habitat parameters Opportunities to conserve the species | - - - | XX U2 XX | - - - | XX | The species does not occur in the area of the Area. Last seen in 2006. Basis: verbal information from PTOPI, Rowiński 2004 |
| Eurasian Woodcock | A155 | All occurrence sites in the | Population parameters | - | FV | - | FV | Expert assessment. Basis: Pugaczewicz |



| Protected objects covered by the Plan | | | | | | | | |
|---|-------------|----------------------------------|---------------------------------------|-----------|---|--|--|---|
| Natural habitats | Natura code | Occurrence site | Status parameters | Indicator | Assessment of the conservation status based on the available data according to the FV, UI, U2 scale | Assessment of the conservation status following the field verification according to the FV, UI, U2 scale | Overall assessment of the conservation status of the habitat/species according to the FV, UI, U2 scale | Comments |
| <i>Scolopax rusticola</i> | | Area | Species habitat parameters | - | FV | - | | 1997; Wesolowski et al. 2003; |
| | | | Opportunities to conserve the species | - | FV | - | | |
| Green Sandpiper <i>Tringa ochropus</i> | A165 | All occurrence sites in the Area | Population parameters | - | FV | - | FV | Expert assessment. Basis: Pugaczewicz 1997; Wesolowski et al. 2003; |
| | | | Species habitat parameters | - | FV | - | | |
| Stock Dove <i>Columba oenas</i> | A207 | All occurrence sites in the Area | Opportunities to conserve the species | - | FV | - | FV | Expert assessment. Basis: Pugaczewicz 1997; Wesolowski et al. 2003; |
| | | | Population parameters | - | FV | - | | |
| Barbastelle <i>Barbastella</i> | 1308 | All occurrence sites in the Area | Species habitat parameters | - | FV | - | FV | Rachwald 2004 |
| | | | Opportunities to conserve the species | - | FV | - | | |
| | | | Population parameters | - | XX | - | FV | |



| Protected objects covered by the Plan | | | | | | | | | |
|---------------------------------------|-------------|----------------------------------|---------------------------------------|-----------|---|--|--|---|--|
| Natural habitats | Natura code | Occurrence site | Status parameters | Indicator | Assessment of the conservation status based on the available data according to the FV, U1, U2 scale | Assessment of the conservation status following the field verification according to the FV, U1, U2 scale | Overall assessment of the conservation status of the habitat/species according to the FV, U1, U2 scale | Comments | |
| <i>barbastellus</i> | | Area | Species habitat parameters | - | FV | - | | | |
| | | | Opportunities to conserve the species | - | FV | - | | | |
| Eurasian Beaver <i>Castor fiber</i> | 1337 | All occurrence sites in the Area | Population parameters | - | FV | - | FV | Kossak 2004 | |
| | | | Species habitat parameters | - | FV | - | | | |
| | | | Opportunities to conserve the species | - | FV | - | | | |
| Wolf <i>Canis lupus</i> | 1352 | All occurrence sites in the Area | Population parameters | - | FV | - | FV | Jędrzejewski and Jędrzejewska 2001; Kossak 2004 | |
| | | | Species habitat parameters | - | FV | - | | | |
| | | | Opportunities to conserve the species | - | FV | - | | | |
| European Otter <i>Lutra lutra</i> | 1355 | All occurrence sites in the | Population parameters | - | FV | - | FV | Jędrzejewski and Jędrzejewska 2001; | |



| Protected objects covered by the Plan | | | | | | | | | | |
|--|-------------|----------------------------------|---------------------------------------|-----------|---|--|--|---|--|--|
| Natural habitats | Natura code | Occurrence site | Status parameters | Indicator | Assessment of the conservation status based on the available data according to the FV, U1, U2 scale | Assessment of the conservation status following the field verification according to the FV, U1, U2 scale | Overall assessment of the conservation status of the habitat/species according to the FV, U1, U2 scale | Comments | | |
| Lynx <i>Lynx lynx</i> | | Area | Species habitat parameters | - | FV | - | | Kossak 2004 | | |
| | | | Opportunities to conserve the species | - | FV | - | | | | |
| | 1361 | All occurrence sites in the Area | Population parameters | - | FV | - | U1 | Jędrzejewski and Jędrzejewska 2001; Kossak 2004 | | |
| | | | Species habitat parameters | - | U1 | - | | | | |
| | | | Opportunities to conserve the species | - | FV | - | | | | |
| | | | | | | | | | | |
| European Bison <i>Bison bonasus</i> | 2647 | Population | Population parameters | - | U1 | - | U1 | Kossak 2004; Kowalczyk 2010 | | |
| | | | Species habitat parameters | - | U1 | - | | | | |
| | 1166 | All occurrence sites in the | Opportunities to conserve the species | - | U1 | - | U2 | Briggs 2004 | | |
| | | | Population parameters | - | U2 | - | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |



| Protected objects covered by the Plan | | | | | | | | |
|--|-------------|----------------------------------|---------------------------------------|-----------|---|--|--|---|
| Natural habitats | Natura code | Occurrence site | Status parameters | Indicator | Assessment of the conservation status based on the available data according to the FV, U1, U2 scale | Assessment of the conservation status following the field verification according to the FV, U1, U2 scale | Overall assessment of the conservation status of the habitat/species according to the FV, U1, U2 scale | Comments |
| <i>cristatus</i> | | Area | Species habitat parameters | - | U2 | - | | |
| | | | Opportunities to conserve the species | - | U2 | - | | |
| European Firebelly Toad <i>Bombina bombina</i> | 1188 | All occurrence sites in the Area | Population parameters | - | U2 | - | U2 | Briggs 2004 |
| | | | Species habitat parameters | - | U2 | - | | |
| | | | Opportunities to conserve the species | - | U2 | - | | |
| Ukrainian Brook Lamprey <i>Eudontomyzon mariae</i> | 1098 | All occurrence sites in the Area | Population parameters | - | XX | - | U1 | Penczak 1991; Kozłowski 2006 |
| | | | Species habitat parameters | - | U1 | - | | |
| | | | Opportunities to conserve the species | - | FV | - | | |
| Narrow-mouthed | 1014 | All occurrence sites in the | Population parameters | - | XX | - | U1 | Monitoring by the Chief Inspectorate of |



| Protected objects covered by the Plan | | | | | | | | | | |
|---|-------------|----------------------------------|---------------------------------------|-----------|---|--|--|--|--|--|
| Natural habitats | Natura code | Occurrence site | Status parameters | Indicator | Assessment of the conservation status based on the available data according to the FV, U1, U2 scale | Assessment of the conservation status following the field verification according to the FV, U1, U2 scale | Overall assessment of the conservation status of the habitat/species according to the FV, U1, U2 scale | Comments | | |
| Whorl Snail <i>Vertigo angustior</i> | | Area | Species habitat parameters | - | U1 | - | | Environmental Protection of 2009; Fog 2004 | | |
| | | | Opportunities to conserve the species | - | U1 | - | | | | |
| Desmoulin's Whorl Snail <i>Vertigo moulinsiana</i> | 1016 | All occurrence sites in the Area | Population parameters | - | U1 | - | U1 | Monitoring by the Chief Inspectorate of Environmental Protection of 2009; Fog 2004 | | |
| | | | Species habitat parameters | - | FV | - | | | | |
| Green Snaketail <i>Ophiogomphus cecilia</i> | 1037 | All occurrence sites in the Area | Opportunities to conserve the species | - | U1 | - | U2 | Briggs 2004 | | |
| | | | Population parameters | - | XX | - | | | | |
| Large White-faced Darter | 1042 | All occurrence sites in the Area | Species habitat parameters | - | U2 | - | U2 | Briggs 2004 | | |
| | | | Opportunities to conserve the species | - | U2 | - | | | | |
| | | | Population parameters | - | XX | - | U2 | Briggs 2004 | | |



| Protected objects covered by the Plan | | | | | | | | |
|---|-------------|----------------------------------|---------------------------------------|-----------|---|--|--|--|
| Natural habitats | Natura code | Occurrence site | Status parameters | Indicator | Assessment of the conservation status based on the available data according to the FV, U1, U2 scale | Assessment of the conservation status following the field verification according to the FV, U1, U2 scale | Overall assessment of the conservation status of the habitat/species according to the FV, U1, U2 scale | Comments |
| <i>Leucorrhinia pectoralis</i> | | Area | Species habitat parameters | - | U2 | - | | |
| | | | Opportunities to conserve the species | - | U1 | - | | |
| Scarce Fritillary <i>Hypodryas maturna</i> | 1052 | All occurrence sites in the Area | Population parameters | - | FV | - | U1 | Jaroszewicz 2004, 2010; Ginszt 2010 |
| | | | Species habitat parameters | - | U1 | - | | |
| | | | Opportunities to conserve the species | - | U1 | - | | |
| Large Copper <i>Lycæna dispar</i> | 1060 | All occurrence sites in the Area | Population parameters | - | FV | - | U1 | Jaroszewicz 2004, 2010; Ginszt 2010 |
| | | | Species habitat parameters | - | U1 | - | | |
| | | | Opportunities to conserve the species | - | U1 | - | | |
| Marsh Fritillary <i>Euphydryas</i> | 1065 | All occurrence sites in the | Population parameters | - | U2 | - | U2 | Jaroszewicz 2004, 2010; |



| Protected objects covered by the Plan | | | | | | | | | | |
|---------------------------------------|-------------|----------------------------------|---------------------------------------|-----------|---|--|--|---------------------------------------|---|--|
| Natural habitats | Natura code | Occurrence site | Status parameters | Indicator | Assessment of the conservation status based on the available data according to the FV, U1, U2 scale | Assessment of the conservation status following the field verification according to the FV, U1, U2 scale | Overall assessment of the conservation status of the habitat/species according to the FV, U1, U2 scale | Comments | | |
| <i>aurinia</i> | | Area | Species habitat parameters | - | U1 | - | | | Ginszt 2010 Monitoring by the Chief Inspectorate of Environmental Protection 2008 | |
| | | | Opportunities to conserve the species | - | U1 | - | | | | |
| <i>Dytiscus latissimus</i> | 1081 | All occurrence sites in the Area | Population parameters | - | XX | - | U2 | | Briggs 2004 | |
| | | | Species habitat parameters | - | U2 | - | | | | |
| | | | Opportunities to conserve the species | - | XX | - | | | | |
| | | | Population parameters | - | XX | - | | | | |
| <i>Graphoderus bilineatus</i> | 1082 | All occurrence sites in the Area | Population parameters | - | XX | - | U1 | | Briggs 2004 | |
| | | | Species habitat parameters | - | U1 | - | | | | |
| | | | Opportunities to conserve the species | - | U1 | - | | | | |
| | | | Population parameters | - | XX | - | | | | |
| Hermit Beetle <i>Osmoderma</i> | 1084 | All occurrence sites in the | Population parameters | - | FV | - | FV | Gutowski 2004, 2010; Buchholz 2008 | | |



| Protected objects covered by the Plan | | | | | | | | | |
|---|-------------|----------------------------------|--|-------------|---|--|--|------------------------------------|--|
| Natural habitats | Natura code | Occurrence site | Status parameters | Indicator | Assessment of the conservation status based on the available data according to the FV, U1, U2 scale | Assessment of the conservation status following the field verification according to the FV, U1, U2 scale | Overall assessment of the conservation status of the habitat/species according to the FV, U1, U2 scale | Comments | |
| <i>eremita</i> | | Area | Species habitat parameters Opportunities to conserve the species | - - | FV FV | - - | | | |
| Goldstreifiger <i>Buprestis splendens</i> | 1085 | All occurrence sites in the Area | Population parameters Species habitat parameters Opportunities to conserve the species | - - - | XX FV FV | - - - | FV | Gutowski 2004, 2010; Buchholz 2008 | |
| Flat Bark Beetle <i>Cucujus cinnabarinus</i> | 1086 | All occurrence sites in the Area | Population parameters Species habitat parameters Opportunities to conserve the species | - - - | FV FV FV | - - - | FV | Gutowski 2004, 2010; Buchholz 2008 | |
| <i>Boros schneideri</i> | 1920 | All occurrence sites in the | Population parameters | - | FV | - | U1 | Gutowski 2004, 2010; Buchholz 2008 | |



| Protected objects covered by the Plan | | | | | | | | | | |
|---------------------------------------|-------------|-----------------------------|---------------------------------------|-----------|---|--|--|------------------------------------|--|--|
| Natural habitats | Natura code | Occurrence site | Status parameters | Indicator | Assessment of the conservation status based on the available data according to the FV, U1, U2 scale | Assessment of the conservation status following the field verification according to the FV, U1, U2 scale | Overall assessment of the conservation status of the habitat/species according to the FV, U1, U2 scale | Comments | | |
| <i>Mesosa myops</i> | 1923 | Area | Species habitat parameters | - | U1 | - | XX | Gutowski 2004, 2010; Buchholz 2008 | | |
| | | | Opportunities to conserve the species | - | FV | - | | | | |
| | | | Population parameters | - | XX | - | | | | |
| <i>Oxyporus mannerheimii</i> | 1924 | No data | Species habitat parameters | - | FV | - | XX | Gutowski 2004, 2010; Buchholz 2008 | | |
| | | | Opportunities to conserve the species | - | XX | - | | | | |
| | | | Population parameters | - | XX | - | | | | |
| <i>Pytho kolwensis</i> | 1925 | All occurrence sites in the | Species habitat parameters | - | FV | - | U1 | Gutowski 2004, 2010; Buchholz 2008 | | |
| | | | Opportunities to conserve the species | - | XX | - | | | | |
| | | | Population parameters | - | XX | - | | | | |



| Protected objects covered by the Plan | | | | | | | | |
|---|-------------|----------------------------------|---------------------------------------|-----------|---|--|--|------------------------------------|
| Natural habitats | Natura code | Occurrence site | Status parameters | Indicator | Assessment of the conservation status based on the available data according to the FV, U1, U2 scale | Assessment of the conservation status following the field verification according to the FV, U1, U2 scale | Overall assessment of the conservation status of the habitat/species according to the FV, U1, U2 scale | Comments |
| | | Area | Species habitat parameters | - | U1 | - | | |
| | | | Opportunities to conserve the species | - | U1 | - | | |
| False Darkling Beetle <i>Phryganophilus ruficollis</i> | 4021 | All occurrence sites in the Area | Population parameters | - | XX | - | XX | Gutowski 2004, 2010; Buchholz 2008 |
| | | | Species habitat parameters | - | FV | - | | |
| | | | Opportunities to conserve the species | - | XX | - | | |
| Wrinkled Bark Beetle <i>Rhyssodes sulcatus</i> | 4026 | All occurrence sites in the Area | Population parameters | - | FV | - | FV | Gutowski 2004, 2010; Buchholz 2008 |
| | | | Species habitat parameters | - | FV | - | | |
| | | | Opportunities to conserve the species | - | FV | - | | |
| Danube Clouded Yellow | 4030 | All occurrence sites in the | Population parameters | - | U2 | - | U2 | Jaroszewicz 2004, 2010; |



| Protected objects covered by the Plan | | | | | | | | |
|--|-------------|----------------------------------|---------------------------------------|-----------|---|--|--|-------------|
| Natural habitats | Natura code | Occurrence site | Status parameters | Indicator | Assessment of the conservation status based on the available data according to the FV, U1, U2 scale | Assessment of the conservation status following the field verification according to the FV, U1, U2 scale | Overall assessment of the conservation status of the habitat/species according to the FV, U1, U2 scale | Comments |
| <i>Colias myrmidone</i> | | Area | Species habitat parameters | - | U2 | - | | Ginszt 2010 |
| | | | Opportunities to conserve the species | - | U2 | - | | |
| Ramshorn Snail <i>Anisus vorticulus</i> | 4056 | All occurrence sites in the Area | Population parameters | - | XX | - | U2 | Fog 2004 |
| | | | Species habitat parameters | - | U2 | - | | |
| | | | Opportunities to conserve the species | - | XX | - | | |



4. Analysis of hazards

| No. | Protected object | Number of the occurrence site | Hazards | | Description of the hazard |
|-----|---|----------------------------------|---|----------------------------|--|
| | | | Existing | Potential | |
| 1 | 3150 Oxbow lakes and natural and eutrophic water reservoirs with communities of <i>Nymphaeion</i> , <i>Potamion</i> | All occurrence sites in the Area | H01 pollution to surface waters K01.02 silting up K02.03 eutrophication J02.01 landfill, land reclamation and drying out, general G05 other human intrusions and disturbances | X No hazards and pressures | Disappearance of habitats of plants and animals; Shallowing and overgrowing of the habitat; Disappearance of the diversity of the kingdom of animals and plants, negative phenomena such as, e.g. blooms, prevalence of one species of plants, disappearance of habitats; Limitation of lateral migration of watercourse beds due to control and reinforcement of watercourse banks; Other types of pollution or impacts on the part of humans – cans, PET bottles, etc. |
| 2 | 6230 Mountainous and lowland matgrass grasslands (<i>Nardion</i> – floristically rich patches) | All occurrence sites in the Area | A04.03 abandonment of pastoral systems, lack of grazing K02 biocenotic evolution, succession G05 other human intrusions and disturbances B01.01 forest planting on open ground (native trees) E01.03 dispersed habitation | X No hazards and pressures | Abandonment of pastoral systems and traditional forms of use; Overgrowing of the habitat due to the secondary succession process; Other types of pollution or impacts on the part of humans – storage of hay “bales”, cans, PET bottles, etc.; Afforestation of open areas – Christmas tree plantations; Development of Forest clearings. |
| 3 | 6510 Lowland and mountainous fresh extensively used meadows (<i>Arrhenatherion elatioris</i>) | All occurrence sites in the Area | A03.03 abandonment/lack of mowing A04.03 abandonment of pastoral systems, lack of grazing K02 biocenotic evolution, succession I01 invasive alien species B01.01 forest planting on open ground (native trees) E01.03 dispersed habitation | X No hazards and pressures | Abandonment of extensive meadow infrastructure; Overgrowing of the habitat due to the secondary succession process; Invasion of the species (e.g. Asiatic <i>Dock Rumex confertus</i>); Afforestation of open areas – Christmas tree plantations; Development of Forest clearings |
| 4 | 7140 Transition mires and | All occurrence sites in | J02.01 landfill, land reclamation and | X No hazards and pressures | Dehydration – reduced level of groundwaters and |



| No. | Protected object | Number of the occurrence site | Hazards | | Description of the hazard |
|-----|---|---|---|---|---|
| | | | Existing | Potential | |
| | quaking bogs mostly with vegetation of <i>Scheuchzeria-Caricetea</i>) | the Area | drying out, general K02 biocenotic evolution, succession G05.01 trampling, overuse | | surface waters (change in the water level); Overgrowing of the habitat due to the secondary succession process; |
| 5 | 7230 Mountainous and lowland alkaline peat bogs in the form of caricion, moss complexes and mud sedges | All occurrence sites in the Area | K02 biocenotic evolution, succession | J02.01 landfill, land reclamation and drying out, general | Overgrowing of the habitat due to the secondary succession process; Inhibition of the peat-forming process as a result of dehydration. |
| 6 | 9170 Standard subcontinental oak-hornbeam forest (<i>Tilio-Carpinetum</i> , <i>Melitti-Carpinetum</i>) | Patches of the habitat in timber forests with forest stands of less than 100 years Patches of the habitat in nature reserves and in timber forests with forest stands of more than 100 years | B02.04 removal of dead and dying trees B02.01 forest and plantation management & use K04.05 damage by herbivores (including game species) I01 invasive alien species K04.05 damage by herbivores (including game species) I01 invasive alien species | X No hazards and pressures | removal of dying trees; forest management – destruction of undergrowth and a layer of shrubs during logging; |
| 7 | 91D0 Wildwoods and swamp forests (<i>Vaccinio uliginosi-Betuletum pubescentis</i> , <i>Vaccinio uliginosi-Pinetum</i> , <i>Ledo-Sphagnetum</i> , <i>Sphagno girgensohnii-Piceetum</i> and birch and pine boreal swamp forests) | All occurrence sites in the Area | J02.01 landfill, land reclamation and drying out, general | K02 biocenotic evolution, succession | dehydration – reduced level of groundwaters and surface waters (to a lesser extent, drainage ditches) |
| 8 | 91E0 Willow, poplar, alder and ash riparian forests (<i>Salicetum albobfragilis</i> , <i>Populetum albae</i> , | Habitats in timber forests with forest stands of less than 100 years | B02.04 removal of dead and dying trees I01 invasive alien species I02 problematic native species | J02.01 landfill, land reclamation and drying out, general | Removal of dying trees; Invasion of the species – presence of alien species in undergrowth (high susceptibility of riparian forests to neophytisation), presence of native expansive |



| No. | Protected object | Number of the occurrence site | Hazards | | Description of the hazard |
|-----|---|---|---|----------------------------|---|
| | | | Existing | Potential | |
| | <i>Fraxino-Alnetum</i> springfen alder forests) | Habitats in nature reserves and in timber forests with forest stands of more than 100 years | K natural biotic and abiotic processes I01 invasive alien species I02 problematic native species K natural biotic and abiotic processes | | species; Modification of hydrographic conditions and control of rivers even at a considerable distance from habitats; No natural replacements, pathological dying of ash |
| 9 | 91F0 Oak, elm and ash riparian forests (<i>Ficario-Ulmetum</i>) | All occurrence sites in the Area | I01 invasive alien species J02.01 landfill, land reclamation and drying out, general K natural biotic and abiotic processes | X No hazards and pressures | Invasion of the species (Small-flowered Touch-me-not <i>Impatiens parviflora</i>); Turning riparian forests into oak and hornbeam forests – introduction of hornbeam brushwoods, result of reduction in the level of groundwaters; Pathological dying of elm and ash |
| 10 | 91I0 Thermophilous oak forests (<i>Quercetalia pubescenti-petraeae</i>) | 249D | K02 biocenotic evolution, succession A04.03 abandonment of pastoral systems, lack of grazing | X No hazards and pressures | The biggest threat to thermophilous oak forests is the expansion of the species shading the bottom of the forest and restricting the occurrence of thermo-and heliophilous elements of flora. |
| 11 | 1437 Bractless Toadflax <i>Thesium ebracteatum</i> | All occurrence sites in the Area | K02 biocenotic evolution, succession B02.01 forest and plantation management & use | X No hazards and pressures | Succession of plants – expansion of high grass and herbs in grasslands and forests, expansion of deciduous species in forests which have been clear so far and in their edges; Forest management – logging, accidental destruction during forest works |
| 12 | 1477 Eastern Pasqueflower <i>Pulsatilla patens</i> | All occurrence sites in the Area | K02 biocenotic evolution, succession B02.01 forest and plantation management & use K02.03 eutrophication G05 other human intrusions and disturbances | X No hazards and pressures | The most important, currently detected threat to the species is the succession of plants – expansion of high grass, herbs and shrubs, of deciduous species in clear forest edges; Threats are associated with forest management - logging, eutrophication of habitats of the species; Plundering of Eastern Pasqueflower occurrence sites (digging plants, picking flowers) |



| No. | Protected object | Number of the occurrence site | Hazards | | | Description of the hazard |
|-----|--|----------------------------------|--|----------------------------|--|---------------------------|
| | | | Existing | Potential | | |
| 13 | 1939 Hairy Agrimony <i>Agrimonia pilosa</i> | All occurrence sites in the Area | K02 biocenotic evolution, succession K04.05 damage by herbivores (including game species) I01. invasive alien species | X No hazards and pressures | Biocenotic evolution – expansion of woody species, enhanced density of perennials; Pressure of herbivores; Invasion of the species (e.g. Small-flowered Touch-me-not <i>Impatiens parviflora</i>) | |
| 14 | A030 Black Stork <i>Ciconia nigra</i> | All occurrence sites in the Area | J02.01 landfill, land reclamation and drying out, general J02.05 modification of hydrographic functioning, general H01.08 diffuse pollution to surface waters due to household sewage and waste waters K natural biotic and abiotic processes | X No hazards and pressures | Reduced level of groundwaters and surface waters (the persistence of low water level in the Forest watercourses); Dam on the Narewka River in the village of Narewka. Wastewater runoff from Hajnówka into the Leśna River; Reduced food resources – insufficient quantities of fish in the Forest watercourses | |
| 15 | A072 Honey Buzzard <i>Pernis apivorus</i> | All occurrence sites in the Area | B02.02 forestry clearance | X No hazards and pressures | Clearance of forest stands aged more than 80 years in oak and hornbeam habitats and riparian habitats. | |
| 16 | A080 Short-toed Snake Eagle <i>Circaetus gallicus</i> | No data | J02.01 landfill, land reclamation and drying out, general | X No hazards and pressures | Dehydration – reduced level of groundwaters and surface waters | |
| 17 | A089 Lesser Spotted Eagle <i>Aquila pomarina</i> | All occurrence sites in the Area | A04.03 abandonment of pastoral systems, lack of grazing K02 biocenotic evolution, succession E01.03 dispersed habitation | X No hazards and pressures | Abandonment of extensive meadow infrastructure; Secondary succession, overgrowing of feeding grounds; Development of Forest clearings. | |
| 18 | A092 Booted Eagle <i>Hieraetus pennatus</i> | No data | K02 biocenotic evolution, succession | X No hazards and pressures | Secondary succession in the Forest valleys and clearings (deterioration of the food base) | |
| 19 | A104 Hazel Grouse <i>Bonasa bonasia</i> | All occurrence sites in the Area | X No hazards and pressures | X No hazards and pressures | | |



| No. | Protected object | Number of the occurrence site | Hazards | | Description of the hazard |
|-----|--|----------------------------------|--|----------------------------|--|
| | | | Existing | Potential | |
| 20 | A119 Spotted Crane <i>Porzana porzana</i> | All occurrence sites in the Area | K02 biocenotic evolution, succession J02.01 landfill, land reclamation and drying out, general | X No hazards and pressures | Overgrowing of open wetland in river valleys with the forest; Spread of reed fields; Reduced level of groundwaters. |
| 21 | A122 Corncrake <i>Crex crex</i> | All occurrence sites in the Area | K02 biocenotic evolution, succession E01.03 dispersed habitation B01.01 forest planting on open ground (native trees) A06.04 abandonment of crop production | X No hazards and pressures | Development of reed fields, secondary succession of plants – expansion of trees and shrubs into the open areas of the Forest valleys and clearings; Development of Forest clearings; Afforestation of agricultural land – Christmas tree plantations; Abandonment of cultivation of fields. |
| 22 | A217 Eurasian Pygmy Owl <i>Glaucidium passerinum</i> | All occurrence sites in the Area | B02.02 forestry clearance B02.04 removal of dead and dying trees | X No hazards and pressures | Clearance of forest stands aged more than 80 years; Removal of infested spruces (inhabited by European spruce bark beetle) aged more than 80 years. |
| 23 | A223 Boreal Owl <i>Aegolius funereus</i> | All occurrence sites in the Area | K natural biotic and abiotic processes B02.04 removal of dead and dying trees | X No hazards and pressures | Eutrophication of forest habitats ("Turning coniferous forests into oak and hornbeam forests") - disappearance of suitable habitats; Removal of infested spruces (inhabited by European spruce bark beetle) aged more than 80 years. |
| 24 | A224 European Nightjar <i>Caprimulgus europaeus</i> | All occurrence sites in the Area | K02 biocenotic evolution, succession K natural biotic and abiotic processes B forestry | X No hazards and pressures | Occurrence of this species is associated with thinned meagre coniferous forests and burned areas, large clearings; as such habitats are in regress in the Forest, we should expect a natural decline in the size of this species in the future; Secondary succession of plants – expansion of trees and shrubs into open, poor areas, clearings and gaps in the forest stand; Eutrophication of forest habitats ("Turning coniferous forests into oak and hornbeam forests") - disappearance of suitable habitats; Reduced area of clearings (no clearings) |



| No. | Protected object | Number of the occurrence site | Hazards | | Description of the hazard |
|-----|--|----------------------------------|--|---|---|
| | | | Existing | Potential | |
| 25 | A234 Grey-faced Woodpecker <i>Picus canus</i> | All occurrence sites in the Area | X No hazards and pressures | X No hazards and pressures | |
| 26 | A238 Middle Spotted Woodpecker <i>Dendrocopos medius</i> | All occurrence sites in the Area | K natural biotic and abiotic processes | K natural biotic and abiotic processes | Massive dying of ash – limitation of the food base following its momentary rapid growth; No natural replacements of oak will result in limiting the food base in the future. |
| 27 | A239 White-backed Woodpecker <i>Dendrocopos leucotos</i> | All occurrence sites in the Area | B02.04 removal of dead and dying trees | X No hazards and pressures | Removal of dying trees in forest stands aged more than 80 years |
| 28 | A241 Eurasian Three-toed Woodpecker <i>Picoides tridactylus</i> | All occurrence sites in the Area | B02.04 removal of dead and dying trees | X No hazards and pressures | Removal of infested spruces (inhabited by European spruce bark beetle) aged more than 80 years |
| 29 | A307 Barred Warbler <i>Sylvia nisaria</i> | All occurrence sites in the Area | X No hazards and pressures | A02.01 Agricultural intensification A11 Agriculture activities not referred to above | Intensification of the use of chemical plant protection products in agriculture, unification and simplification of the structure of farmland; Clearance of shrubs and dense woodlots in river valleys; |
| 30 | A320 Red-breasted Flycatcher <i>Ficedula parva</i> | All occurrence sites in the Area | X No hazards and pressures | X No hazards and pressures | |
| 31 | A321 Collared Flycatcher <i>Ficedula albicollis</i> | All occurrence sites in the Area | X No hazards and pressures | X No hazards and pressures | |
| 32 | A338 Red-backed Shrike <i>Lanius collurio</i> | All occurrence sites in the Area | X No hazards and pressures | A02.01 Agricultural intensification A11 Agriculture activities not referred to above | Intensification of the use of chemical plant protection products in agriculture, unification and simplification of the structure of farmland; |



| No. | Protected object | Number of the occurrence site | Hazards | | Description of the hazard |
|-----|--|----------------------------------|---|--------------------------------------|--|
| | | | Existing | Potential | |
| 33 | A409 Black Grouse <i>Tetrao tetrix tetrix</i> | - | K02 biocenotic evolution, succession | X No hazards and pressures | Clearance of shrubs and dense woodlots in river valleys; Secondary succession of plants – expansion of trees and shrubs into open, poor areas, clearings and gaps in the forest stand; |
| 34 | A155 Eurasian Woodcock <i>Scolopax rusticola</i> | All occurrence sites in the Area | J02.01 landfill, land reclamation and drying out, general F03.01 polowanie | X No hazards and pressures | Reduced level of groundwaters and resultant loss of habitats; Hunting in Western and Southern Europe |
| 35 | A165 Green Sandpiper <i>Tringa ochropus</i> | All occurrence sites in the Area | J02.01 landfill, land reclamation and drying out, general | X No hazards and pressures | Reduced level of groundwaters - loss of habitats; |
| 36 | A207 Stock Dove <i>Columba oenas</i> | All occurrence sites in the Area | None. X No hazards and pressures | X No hazards and pressures | |
| 37 | 1308 Barbastelle <i>Barbastella barbastellus</i> | All occurrence sites in the Area | G05 other human intrusions and disturbances | X No hazards and pressures | No sufficient knowledge about wintering spots which may result in destruction of such places. |
| 38 | 1337 Eurasian Beaver <i>Castor fiber</i> | All occurrence sites in the Area | X No hazards and pressures | X No hazards and pressures | |
| 39 | 1352 Wolf <i>Canis lupus</i> | Białowieża Forest Refugium | X No hazards and pressures | X No hazards and pressures | |
| 40 | 1355 European Otter <i>Lutra lutra</i> | Białowieża Forest Refugium | X No hazards and pressures | X No hazards and pressures | |
| 41 | 1361 Lynx <i>Lynx lynx</i> | Białowieża Forest Refugium | J03.02 anthropogenic reduction of habitat connectivity | K02 biocenotic evolution, succession | Limited communication with other populations; Disappearance of open areas inside the Forest as a result of secondary succession may cause decline in the size of roe deer population – deterioration of the |



| No. | Protected object | Number of the occurrence site | Hazards | | Description of the hazard |
|-----|---|----------------------------------|---|----------------------------------|--|
| | | | Existing | Potential | |
| 42 | 2647 European Bison <i>Bison bonasus</i> | Białowieża Forest Refugium | K02 biocenotic evolution, succession J03.02.03 reduction in genetic exchange J03.02.02 reduction in dispersal J03.02 anthropogenic reduction of habitat connectivity K03.03 introduction of disease (microbial pathogens) | X No hazards and pressures | food base. Limited food base during the winter (result of secondary succession in open areas within the forest); Narrow gene pool of the Białowieża Forest population – the contemporary male line comes from one male; Isolation of micropopulations as a result of the concentration of winter feeding operations; Limited communication with other populations; Internal parasites – increase in infections as a result of concentration at winter feeding areas and as a result of feeding animals on hay imported from outside the Forest. |
| 43 | 1166 Great Crested Newt <i>Triturus cristatus</i> | All occurrence sites in the Area | F01.01 Intensive fish farming K02.03 eutrophication (natural) | J03.02.02 reduction in dispersal | Restocking of water reservoirs; Overgrowing of small ponds in Forest clearings (disappearance of the habitat); Isolation of small populations may result in a reduction in the size of species, disappearance of dispersed occurrence sites. |
| 44 | 1188 European Firebelly Toad <i>Bombina orientalis</i> | All occurrence sites in the Area | K02.03 eutrophication (natural) | J03.02.02 reduction in dispersal | Eutrophication – shallowing, overgrowing and, as a consequence, disappearance of oxbow lakes and overgrowing of small ponds in Forest clearings (disappearance of the habitat); Isolation of small populations may result in a reduction in the size of species, disappearance of dispersed occurrence sites. |
| 45 | 1098 Ukrainian Brook Lamprey <i>Eudontomyzon mariae</i> | All occurrence sites in the Area | H01.08 diffuse pollution to surface waters due to household sewage and waste waters J02.05 modification of hydrographic functioning, general | X No hazards and pressures | Water pollution, wastewater runoff from Hajnówka into the Leśna River; Dam on the Narewka River in the village of Narewka. |
| 46 | 1014 Narrow-mouthed Whorl Snail <i>Vertigo angustior</i> | All occurrence sites in the Area | K02 biocenotic evolution, succession | X No hazards and pressures | Secondary succession of plants, expansion of trees and shrubs into the open areas in valleys of Forest rivers leading to the transformation of mud sedges |



| No. | Protected object | Number of the occurrence site | Hazards | | Description of the hazard |
|-----|--|----------------------------------|---|----------------------------|---|
| | | | Existing | Potential | |
| 47 | 1016 Desmoulin's Whorl Snail <i>Vertigo moulinsiana</i> | All occurrence sites in the Area | J02.01 landfill, land reclamation and drying out, general K02 biocenotic evolution, succession | X No hazards and pressures | into forest areas – disappearance of the habitat. Low hydration of river valleys; Secondary succession of plants, expansion of trees and shrubs into the open areas in valleys of Forest rivers leading to the transformation of mud sedges into forest areas – deterioration of the condition of the habitat |
| 48 | 1037 Green Snaketail <i>Ophiogomphus cecilia</i> | All occurrence sites in the Area | X No hazards and pressures | X No hazards and pressures | |
| 49 | 1042 Large White-faced Darter <i>Leucorrhinia pectoralis</i> | All occurrence sites in the Area | X No hazards and pressures | X No hazards and pressures | |
| 50 | 1052 Scarce Fritillary <i>Hypodryas maturna</i> | All occurrence sites in the Area | K natural biotic and abiotic processes K02 biocenotic evolution, succession | X No hazards and pressures | Massive dying of ash – host plant for the larval form; Overgrowing of roads, division lines, forest clearings, river valleys |
| 51 | 1060 Large Copper <i>Lycaena dispar</i> | All occurrence sites in the Area | K02 biocenotic evolution, succession | X No hazards and pressures | Development of reed fields, secondary succession of plants, expansion of trees and shrubs into wet meadows in valleys and Forest clearings |
| 52 | 1065 Marsh Fritillary <i>Euphydryas aurinia</i> | All occurrence sites in the Area | K02 biocenotic evolution, succession | X No hazards and pressures | Development of reed fields, secondary succession of plants, expansion of trees and shrubs into wet meadows in valleys and Forest clearings |
| 53 | 1081 Pływak szerokobrzązłek <i>Dytiscus latissimus</i> | All occurrence sites in the Area | H01 pollution to surface waters | X No hazards and pressures | Pollution to surface waters; No knowledge about the size and distribution of the population |
| 54 | 1082 Kreslinek nizinny <i>Graphoderus bilineatus</i> | All occurrence sites in the Area | H01 pollution to surface waters | X No hazards and pressures | Pollution to surface waters; No knowledge about the size and distribution of the population |
| 55 | 1084 Hermit Beetle <i>Osmoderma eremita</i> | All occurrence sites in the Area | B02.02 forestry clearance | X No hazards and pressures | Removal of roadside trees, cleaning and securing of pigeonholes with rotten wood microhabitats in park |



| No. | Protected object | Number of the occurrence site | Hazards | | Description of the hazard |
|-----|---|----------------------------------|---|----------------------------|--|
| | | | Existing | Potential | |
| | | | B02.04 removal of dead and dying trees G05 other human intrusions and disturbances | | complexes |
| 56 | 1085 Goldstreifiger <i>Buprestis splendens</i> | All occurrence sites in the Area | B02.04 removal of dead and dying trees | X No hazards and pressures | Removal of dying pines |
| 57 | 1086 Flat Bark Beetle <i>Cucujus cinnaberinus</i> | All occurrence sites in the Area | B02.04 removal of dead and dying trees | X No hazards and pressures | Removal of dying trees |
| 58 | 1920 Ponurek Schneidera <i>Boros schneideri</i> | All occurrence sites in the Area | B02.02 forestry clearance B02.04 removal of dead and dying trees | X No hazards and pressures | Forestry clearance – rejuvenation of coniferous forests and mixed coniferous forests by forestry management; Removal of dying trees |
| 59 | 1923 Średzinka Mesosa <i>myops</i> | No data | B02.02 forestry clearance B02.04 removal of dead and dying trees | X No hazards and pressures | Forestry clearance – rejuvenation of coniferous forests and mixed coniferous forests by forestry management; Removal of dying trees |
| 60 | 1924 Pogrzybnica Mannerheima <i>Oxyporus mannerheimii</i> | No data | U unknown threat or pressure | X No hazards and pressures | No knowledge about the biology and distribution of the species |
| 61 | 1925 Rozmiaróg kolwenski <i>Pytho kolwensis</i> | No data | B02.04 removal of dead and dying trees | X No hazards and pressures | Removal of dying trees |
| 62 | 4021 False Darkling Beetle <i>Phryganophilus ruficollis</i> | No data | B02.04 removal of dead and dying trees | X No hazards and pressures | Removal of dying trees |
| 63 | 4026 Wrinkled Bark Beetle <i>Rhyssodes sulcatus</i> | All occurrence sites in the Area | B02.04 removal of dead and dying trees | X No hazards and pressures | Removal of dying trees |
| 64 | 4030 Danube Clouded Yellow <i>Colias myrmidone</i> | All occurrence sites in the Area | K02 biocenotic evolution, succession G05 missing or wrongly directed conservation measures | X No hazards and pressures | Overgrowing of large gaps and forest clearings (railway log yards) with trees, leading to the formation of the dense forest stand; Secondary succession in the deforested belt around |



| No. | Protected object | Number of the occurrence site | Hazards | | Description of the hazard |
|-----|---|----------------------------------|---|----------------------------|--|
| | | | Existing | Potential | |
| 65 | 4056 Ramshorn Snail <i>Anisus vorticulus</i> | All occurrence sites in the Area | H01 pollution to surface waters K01.02 silting up K02.03 eutrophication (natural) | X No hazards and pressures | the Białowieża-Hajnówka railway track; no protection measures in the Forest fauna reserves silting up – shallowing and overgrowing |

5. Objectives of protection measures.

| Protected object | Number of the occurrence site | Conservation status | Objectives of protection measures | Perspective of achieving the appropriate conservation status |
|---|--------------------------------------|---------------------|---|--|
| 3150 Oxbow lakes and natural and eutrophic water reservoirs with communities of <i>Nymphaeion</i> , <i>Potamion</i> | All occurrence sites in the Refugium | U2 | Maintenance of suitable hydrographic conditions in basins of Forest watercourses. Complementing the knowledge about the protected object, in order to determine all patches of the habitat, to assess its condition and to plan protection measures. | Not to be determined, limited possibilities of protection in a longer term |
| 6230 Mountainous and lowland matgrass grasslands (<i>Nardion</i> – floristically rich patches) | All occurrence sites in the Area | U1 | Improving the habitat's conservation status by restoring traditional forms of use. Complementing the knowledge about the protected object, in order to determine all patches of the habitat, to assess its condition and to plan protection measures. | 10 years To be determined after stock-taking |
| 6510 Lowland and mountainous fresh extensively used meadows (<i>Arrhenatherion elatioris</i>) | All occurrence sites in the Area | U1 | Improving the habitat's conservation status by restoring traditional forms of use. Complementing the knowledge about the protected object, in order to determine all patches of the habitat, to assess its condition and to plan protection measures. | 10 years To be determined after stock-taking |
| 7140 Transition mires and quaking bogs mostly with vegetation of <i>Scheuchzeria-Caricetea</i>) | All occurrence sites in the Area | XX | Complementing the knowledge about the protected object, in order to determine all patches of the habitat, to assess its condition and to plan protection measures. | To be determined after stock-taking |
| 7230 Mountainous and lowland alkaline peat bogs in the form of caricion, moss complexes and mud sedges | All occurrence sites in the Area | U2 | Complementing the knowledge about the protected object, in order to determine all patches of the habitat, to assess its condition and to plan protection measures and to improve hydrographic conditions. | To be determined after stock-taking |
| 9170 Standard subcontinental | All occurrence sites in the Area | U1 | Maintenance of at least the current area of habitats | 10 years |



| Protected object | Number of the occurrence site | Conservation status | Objectives of protection measures | Perspective of achieving the appropriate conservation status |
|--|----------------------------------|---------------------|--|--|
| oak-hornbeam forest (<i>Tilio-Carpinetum</i> , <i>Melitti Carpinetum</i>) | | | in the proper condition. Restoring deformed habitats to their proper condition | 40 - 60 years |
| 91D0 Wildwoods and swamp forests (<i>Vaccinio uliginosi-Betuletum pubescentis</i> , <i>Vaccinio uliginosi-Pinetum</i> , <i>Ledo-Sphagnetum</i> , <i>Sphagno girgensohnii-Piceetum</i> and birch and pine boreal swamp forests) | All occurrence sites in the Area | FV | Maintenance of suitable hydrographic conditions. Maintenance of at least the current area of habitats in the proper condition. | Not to be determined |
| 91E0 Willow, poplar, alder and ash riparian forests (<i>Salicetum albo-fragilis</i> , <i>Populetum albae</i> , <i>Fraxino-Alnetum</i> springfen alder forests) | All occurrence sites in the Area | U1 | Maintenance of suitable conditions of surface waters and groundwaters; Restoring deformed habitats to their proper condition | 20 years |
| 91F0 Oak, elm and ash riparian forests (<i>Ficario-Ulmetum</i>) | All occurrence sites in the Area | U1 | Maintenance of suitable conditions of surface waters and groundwaters. Complementing the knowledge about the protected object, in order to determine all patches of the habitat, to assess its condition and to plan protection measures. | During the term of PTP. To be determined after stock-taking |
| 91I0 Thermophilous oak forests (<i>Quercetalia pubescenti-petraeae</i>) | Division 249D | U2 | Maintenance of the habitat within the Area | 10 years |
| 1437 Bractless Toadflax <i>Thesium ebracteatum</i> | All occurrence sites in the Area | U2 | Maintenance of the species within the Area Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures | To be determined after stock-taking |
| 1477 Eastern Pasqueflower <i>Pulsatilla patens</i> | All occurrence sites in the Area | U2 | Maintenance of the species within the Area Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection | To be determined after stock-taking |



| Protected object | Number of the occurrence site | Conservation status | Objectives of protection measures | Perspective of achieving the appropriate conservation status |
|---|----------------------------------|---------------------|--|--|
| 1939 Hairy Agrimony <i>Agrimonia pilosa</i> | All occurrence sites in the Area | FV | measures Maintenance of the proper species conservation status in known occurrence sites. Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures | During the term of PTP. To be determined after stock-taking |
| A030 Black Stork <i>Ciconia nigra</i> | All occurrence sites in the Area | U1 | Restraining the declining in the size – Maintenance of at least 10 pairs within the Area; Maintenance of suitable conditions of surface waters in the Forest watercourses | 10 years |
| A072 Honey Buzzard <i>Pernis apivorus</i> | All occurrence sites in the Area | FV | Maintenance of at least 90 pairs within the Area | Not to be determined |
| A080 Short-toed Snake Eagle <i>Circaetus gallicus</i> | All occurrence sites in the Area | XX | Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures Maintenance of the species within the Area. | 10 years |
| A089 Lesser Spotted Eagle <i>Aquila pomarina</i> | All occurrence sites in the Area | U1 | Maintenance of at least 30 pairs within the Area | 10 years |
| A092 Booted Eagle <i>Hieraetus pennatus</i> | All occurrence sites in the Area | XX | Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures Maintenance of the species within the Area. | Not to be determined |
| A104 Hazel Grouse <i>Bonasa bonasia</i> | All occurrence sites in the Area | FV | Maintenance of at least 1600 pairs within the Area | Not to be determined |
| A119 Spotted Crane <i>Porzana porzana</i> | All occurrence sites in the Area | U2 | Maintenance of at least 10 pairs within the Area | 10 years |

| Protected object | Number of the occurrence site | Conservation status | Objectives of protection measures | Perspective of achieving the appropriate conservation status |
|---|----------------------------------|---------------------|---|--|
| A122 Corncrake <i>Crex crex</i> | All occurrence sites in the Area | U1 | Maintenance of at least 80 territorial males within the Area | 10 years |
| A217 Eurasian Pygmy Owl <i>Glaucidium passerinum</i> | All occurrence sites in the Area | U1 | Maintenance of at least 80 pairs within the Area. Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures | 10 years |
| A223 Boreal Owl <i>Aegolius funereus</i> | All occurrence sites in the Area | U1 | Maintenance of at least 30 pairs within the Area. Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures | 10 years |
| A224 European Nightjar <i>Caprimulgus europaeus</i> | All occurrence sites in the Area | U1 | Maintenance of at least 250 pairs within the Area. | 10 years |
| A234 Grey-faced Woodpecker <i>Picus canus</i> | All occurrence sites in the Area | FV | Maintenance of at least 30 pairs within the Area | Not to be determined |
| A238 Middle Spotted Woodpecker <i>Dendrocopos medius</i> | All occurrence sites in the Area | FV | Maintenance of the species population at the level of at least 1,100 pairs | Not to be determined |
| A239 White-backed Woodpecker <i>Dendrocopos leucotus</i> | All occurrence sites in the Area | U1 | Maintenance of at least 60 pairs within the Area. Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures | 10 years |
| A241 Eurasian Three-toed Woodpecker <i>Picoides tridactylus</i> | All occurrence sites in the Area | U1 | Maintenance of at least 60 pairs within the Area. Complementing the knowledge about the protected object, in order to determine occurrence sites of the | 10 years |



| Protected object | Number of the occurrence site | Conservation status | Objectives of protection measures | Perspective of achieving the appropriate conservation status |
|---|----------------------------------|---------------------|--|--|
| A307 Barred Warbler <i>Sylvia nisoria</i> | All occurrence sites in the Area | XX | species, to assess its condition and to plan protection measures Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures | To be determined after stock-taking |
| A320 Red-breasted Flycatcher <i>Ficedula parva</i> | All occurrence sites in the Area | FV | Maintenance of at least the current area of well developed oak-hornbeam forests. | Not to be determined |
| A321 Muchotłówka białoszyja <i>Ficedula albicollis</i> | All occurrence sites in the Area | FV | Maintenance of at least the current area of well developed oak-hornbeam forests. | Not to be determined |
| A338 Red-backed Shrike <i>Lanius collurio</i> | All occurrence sites in the Area | XX | Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures | To be determined after stock-taking |
| A409 Black Grouse <i>Tetrao tetrix tetrix</i> | All occurrence sites in the Area | XX | Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures | To be determined after stock-taking |
| A155 Eurasian Woodcock <i>Scolopax rusticola</i> | All occurrence sites in the Area | FV | Maintenance of at least 500 pairs within the Area | Not to be determined |
| A165 Green Sandpiper <i>Tringa ochropus</i> | All occurrence sites in the Area | FV | Maintenance of at least 100 pairs within the Area. | Not to be determined |
| A207 Stock Dove <i>Columba oenas</i> | All occurrence sites in the Area | FV | Maintenance of at least 150 pairs within the Area. | Not to be determined |
| 1308 Barbastelle <i>Barbastella barbastellus</i> | All occurrence sites in the Area | FV | Complementing the knowledge about the protected object (population parameters and species habitats), in order to determine occurrence sites of the species, to assess its condition and to plan protection measures | Not to be determined |



| Protected object | Number of the occurrence site | Conservation status | Objectives of protection measures | Perspective of achieving the appropriate conservation status |
|---|----------------------------------|---------------------|--|--|
| 1337 Eurasian Beaver <i>Castor fiber</i> | All occurrence sites in the Area | FV | Protection of species habitats | Not to be determined |
| 1352 Wolf <i>Canis lupus</i> | All occurrence sites in the Area | FV | Maintenance of at least 3 packs within the Area. | Not to be determined |
| 1355 European Otter <i>Lutra lutra</i> | All occurrence sites in the Area | FV | Maintenance of at least 10 specimens within the Area. | Not to be determined |
| 1361 Lynx <i>Lynx lynx</i> | All occurrence sites in the Area | U1 | Maintenance of at least 5 specimens within the Area. | 10 years |
| 2647 European Bison <i>Bison bonasus</i> | All occurrence sites in the Area | U1 | Maintenance of the free-living population at the level of at least 450 specimens (including the BNP area). | 10 years |
| 1166 Great Crested Newt <i>Triturus cristatus</i> | All occurrence sites in the Area | U2 | Maintenance of the species within the Area Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures | To be determined after stock-taking |
| 1188 European Firebelly Toad <i>Bombina orientalis</i> | All occurrence sites in the Area | U2 | Maintenance of the species within the Area Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures | To be determined after stock-taking |
| 1098 Ukrainian Brook Lamprey <i>Eudontomyzon mariae</i> | All occurrence sites in the Area | U1 | Maintenance of the species within the Area Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures | To be determined after stock-taking |
| 1014 Narrow-mouthed Whorl Snail <i>Vertigo angustior</i> | All occurrence sites in the Area | U2 | Conservation of mud sedges in river valleys. Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection | To be determined after stock-taking |



| Protected object | Number of the occurrence site | Conservation status | Objectives of protection measures | Perspective of achieving the appropriate conservation status |
|--|----------------------------------|---------------------|--|--|
| 1016 Desmoulin's Whorl Snail <i>Vertigo moulinsiana</i> | All occurrence sites in the Area | U1 | measures Conservation of mud sedges in river valleys. Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures | To be determined after stock-taking |
| 1037 Green Snaketail <i>Ophiogomphus cecilia</i> | All occurrence sites in the Area | U2 | Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures | To be determined after stock-taking |
| 1042 Large White-faced Darter <i>Leucorrhinia pectoralis</i> | All occurrence sites in the Area | U2 | Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures | To be determined after stock-taking |
| 1052 Scarce Fritillary <i>Hypodryas maturna</i> | All occurrence sites in the Area | U1 | Maintenance of known occurrence sites of the species. Maintenance of suitable hydrographic conditions in the Forest watercourses and surrounding ash bog forests | To be determined after stock-taking |
| 1060 Large Copper <i>Lycæna dispar</i> | All occurrence sites in the Area | U1 | Maintenance of known occurrence sites of the species. | 10 years |
| 1065 Marsh Fritillary <i>Euphydryas aurinia</i> | All occurrence sites in the Area | U2 | Improving the conservation status of species habitats. Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures | To be determined after stock-taking |
| 1081 Dyfiscus <i>latissimus</i> | All occurrence sites in the Area | U2 | Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures | To be determined after stock-taking |
| 1082 Graphoderus <i>bilineatus</i> | All occurrence sites in the Area | U1 | Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures | To be determined after stock-taking |



| Protected object | Number of the occurrence site | Conservation status | Objectives of protection measures | Perspective of achieving the appropriate conservation status taking |
|--|----------------------------------|---------------------|---|---|
| 1084 Hermit Beetle <i>Osmoderma eremita</i> | All occurrence sites in the Area | FV | object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures Maintenance of existing occurrence sites. Maintenance of trees with pigeonholes in the forest stands aged less than 100 years; | Not to be determined |
| 1085 Goldstreifiger <i>Buprestis splendens</i> | All occurrence sites in the Area | FV | Maintenance of the non-reduced quantity of pines and pine forest stands aged more than 100 years. Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures | Not to be determined |
| 1086 Flat Bark Beetle <i>Cucujus cinnaberinus</i> | All occurrence sites in the Area | FV | Maintenance of existing occurrence sites. Provision of the permanent presence of dead trees in forest stands. Maintenance of the non-reduced quantity of forest stands aged more than 100 years. | Not to be determined |
| 1920 <i>Boros schneideri</i> | All occurrence sites in the Area | U1 | Maintenance of the non-reduced quantity of pines and pine forest stands aged more than 100 years. Maintenance of existing occurrence sites. Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures. | 10 years |
| 1923 <i>Mesosa myops</i> | All occurrence sites in the Area | XX | Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures | To be determined after stock-taking |
| 1924 <i>Oxyporus mannerheimii</i> | All occurrence sites in the Area | XX | Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures | To be determined after stock-taking |
| 1925 <i>Pytho kolwensis</i> | All occurrence sites in the Area | U1 | Maintenance of the non-reduced quantity of spruces and spruce forest stands aged more than 100 years. In habitats of typical bog forests and ash bog forests. | 10 years |



| Protected object | Number of the occurrence site | Conservation status | Objectives of protection measures | Perspective of achieving the appropriate conservation status |
|---|----------------------------------|---------------------|---|--|
| 4021 False Darkling Beetle <i>Phryganophilus ruficollis</i> | All occurrence sites in the Area | XX | Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures Maintenance of detected species occurrence sites. Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures | To be determined after stock-taking |
| 4026 Wrinkled Bark Beetle <i>Rhyssodes sulcatus</i> | All occurrence sites in the Area | FV | Provision of the permanent presence of dead trees in forest stands. Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures | Not to be determined |
| 4030 Danube Clouded Yellow <i>Colias myrridone</i> | All occurrence sites in the Area | U2 | Maintenance of existing species occurrence sites. Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures | 10 years |
| 4056 Ramshorn Snail <i>Anisus vorticulus</i> | All occurrence sites in the Area | U2 | Complementing the knowledge about the protected object, in order to determine occurrence sites of the species, to assess its condition and to plan protection measures | To be determined after stock-taking |

Justification

The area of Natura 2000 PL200004 Białowieża Forest has been designated pursuant to the Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (OJ L 206, 22.7.1992, p. 7) and pursuant to the Directive of the European Parliament and Council 2009/147/EC of 30 November 2009 on the conservation of wild birds (consolidated version – OJ EU L 10.20.7). The special protection area for birds (the so-called “Bird Area”) has been approved by the Regulation of the Minister of the Environment of 12 January 2011 on Special Protection Areas for Birds Natura 2000 (Journal of Laws No 25, item 133). As the area of relevance to the Community (the so-called “habitat area”), it has been approved by the European Commission Decision 2011/64/EU of 10 January 2011 adopting, pursuant to Council Directive 92/43/EEC, a fourth updated list of sites of Community importance for the Continental biogeographical region (OJ EU L 33 of 08.2.2011).

The obligation to draw up a project of protective tasks’ plan (PTP) for the area of Natura 2000 results from Article 28(1) of the Nature Conservation Act of 16 April 2004 (Journal of Laws of 2013, item 627, as amended). Pursuant to Article 28(5) of the same Act, the Regional Director for Environmental Protection established, by way of local legal enactment, in the form of an ordinance, the protective tasks’ plan for the area of Natura 2000.

In conjunction with Article 30(1) of the Nature Conservation Act, the project of protective tasks’ plan for the area of Natura 2000 Białowieża Forest excluded the area of the Białowieża National Park having the project of the protection plan at the stage of approval and containing the scope referred to in Article 29 of the Act cited above.

The work on the protection plan for the Białowieża National Park started in October 2008. The first version of the project of the regulation of the Minister of the Environment on establishing the protection plan for the Białowieża National Park underwent public consultation in July 2010. All comments and conclusions which had been received during the consultation were examined by the Białowieża National Park.

During the meeting of the Scientific Council Board of the Białowieża National Park on 9 September 2010, it was decided to draw up the second version of the regulation which would meet the requirements of the Regulation of the Minister of the Environment of 30 March 2010 on drawing up the project of the protection plan for the area of Natura 2000 (Journal of Laws of 2010 No 64, item 401). The second version of the project of the regulation of the Minister of the Environment on establishing the protection plan for the Białowieża National Park underwent another public consultation at the turn of September and October 2010. All comments and conclusions which had been received during that repeated consultation were examined by the Białowieża National Park.

The project of the protection plan for the Park for the years 2011-2031 was supported by the Scientific Council of the Białowieża National Park



at the meeting on 22 October 2010 (12 members of the Scientific Council voted for the project, 3 members abstained from voting, there were no votes against). In November 2010, the project of the protection plan for the Białowieża National Park for the years 2011-2031 was sent for approval by the Ministry of the Environment. As of the day of issuing this regulation, the project of the protection plan for the Park is in the approval phase.

The scope of work required for the implementation of the protective tasks' plan is governed by: Article 28 of the Nature Conservation Act of 16 April 2004 (Journal of Laws of 2013, item 627, as amended); the Regulation of the Minister of the Environment of 17 February 2010 on drawing up the project of the protection plan for the area of Natura 2000 (Journal of Laws No 34, item 187, as amended) and Article 39 of the Act of 3 October 2008 on the provision of information about the environment and its protection, public participation in environmental protection and environmental impact assessments (Journal of Laws No 197, item 1227, as amended).

Pursuant to Article 28(3) of the Nature Conservation Act of 16 April 2004, interested persons and entities operating within natural habitats and habitats of the species for which the area of Natura 2000 Białowieża Forest had been designated were enabled to participate in the work related to drawing up the project of protective tasks' plan. To this end, four discussion meetings have been organised, whose aim was to develop a common vision for the protection of the area of Natura 2000, taking into account the obligation to protect protected objects, using scientific knowledge and local knowledge about the area as well as the needs and efforts of persons and entities that use the area. The meetings were open to all those interested in the protection of the area.

Pursuant to Article 28(4) of the Nature Conservation Act of 16 April 2004, the public had an opportunity to participate in the work on the project of protective tasks' plan, on the conditions and in the manner laid down in the Act of 3 October 2008 on the provision of information about the environment and its protection, public participation in environmental protection and environmental impact assessments. The consultation of the project of the plan for the area of Natura 2000 Białowieża Forest was carried out twice. The first public consultation was held from 14 October to 04 November 2011 by the Białowieża National Park, which, according to the legal status applicable back then, was the body supervising the area of Natura 2000 Białowieża Forest and drawing up the project of the plan for that area. All comments and conclusions reported during the first consultation were examined by the Białowieża National Park.

By letter ref. ZOP/07-073/15/2012 of 05 June 2012, the Białowieża National Park provided the Regional Directorate of Environmental Protection in Białystok with the project of protective tasks' plan for the area of Natura 2000 Białowieża Forest PLC200004 for the purpose of further proceeding with the document, with a view to establishing the protective tasks' plan in a form of the ordinance of the Regional Director for Environmental Protection.

Due to an amendment to the legislation relating to the development of protective tasks' plans for areas of Natura 2000, resulting from the Regulation of the Minister of the Environment of 17 April 2012 amending the regulation on drawing up the project of protective tasks' plan for



the area of Natura 2000 (Journal of Laws of 2012, item 506), there was a need to make amendments to the project of the Plan, consisting in identifying obligatory and optional operations in agricultural holdings or parts thereof, located within the given area of Natura 2000. Amendments to the project of the PTP in this respect have been developed by the Regional Directorate for Environmental Protection in Białystok. In connection with the introduction of the amendments to the project of the plan, the Regional Directorate for Environmental Protection in Białystok from 14 June to 05 July 2012 carried out again public consultation on the project of protective tasks' plan for the area of Natura 2000 Białowieża Forest. The subject of consultation were obligatory and optional operations identified in the project of the plan.

In the course of repeated public consultation of the project of the PTP, 6 institutions reported their comments. The comments were examined by the Regional Directorate for Environmental Protection in Białystok.

The establishment of the protective tasks' plan for the area of Natura 2000 Białowieża Forest may result in the following legal consequences:

- 1/it is easier to screen projects for the possibility of having a negative impact on the area – provided that the project not included in the plan as a threat should be treated as likely to have a negative impact on the area;
- 2/objectives of the protective tasks' plan are a point of reference for assessments of projects' impact on the area of Natura 2000 area and a point of reference for strategic assessments of impact of other plans;
- 3/it is possible to apply Article 37(2) of the Nature Conservation Act of 16 April 2004, if necessary;
- 4/it is easier to implement the agri-environmental programme which must be in accordance with the protective tasks' plan. Farmers' violations of the so-called cross-compliance principle may be controlled and there are grounds for the application of sanctions in the field of direct payments – in case where actions in the agricultural economy have been taken inconsistently with the arrangements of the protective tasks' plan.

APPROVED BY:
Minister of Natural Resources
and Environmental Protection of
the Republic of Belarus

_____ L.I. Khoruzhik
_____, 2008

APPROVED BY:
Head of the Department of
Presidential Affairs of the
Republic of Belarus

_____ N.F. Domashkevich
_____, 2008

MANAGEMENT PLAN

for Belovezhskaya Pushcha National Park

Director General of
the State
Research and Production
Association
“Academic and Research Center
of the National
Academy of Sciences of Belarus
for Bioresources

M.E. Nikiforov

Director General of
the State
Environmental Institution
“National
Park “Belovezhskaya Pushcha”

N.N. Bambiza

Minsk, 2008

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RECITAL

1. GENERAL INFORMATION

The Belovezhskaya Pushcha National Park was founded under Decree No.352 of September 16, 1991 of the Council of Ministers of BSSR "On Reorganization of the State Hunting Reserve "Belovezhskaya Pushcha" and is the Republic's area of preferential protection (APP). The National Park was created to ensure conservation of natural habitats and do comprehensive research of unique natural complexes and sites in Belovezha primeval forest, restore disturbed natural complexes and sites that are of environmental, historical, cultural and aesthetic significance, and ensure sustainable use thereof for conservation, research, education, health, recreation, etc. The most recent expansion of the National Park took place in 2004 when, in pursuance of order No. 95rp of May 7, 2004 by the Belarusian President, land users in Svislotch, Pruzhany and Kamenets Districts turned over 42 643 ha of land to Belovezhskaya Pushcha. The most recent forest management activities (2005) included revision of Belovezhskaya Pushcha's area within the boundaries established by order No. 460 of September 27, 2004 by the Belarusian President, which totaled 152.9 ths ha.

Belovezhskaya Pushcha is one of Europe's oldest natural areas of preferential protection. It was already in the early 15th century that Pushcha had the status of a hunting reserve. Thus, Pushcha's nature has been under protection for almost 600 years: first as a protected hunting ground used by the grand dukes of Lithuania, than by the Russian emperor family; in 1932 the first ever in Poland national park was created in Belovezhskaya Pushcha; in 1939 the Council of People's Commissars of BSSR decided "On Creation of the Belarusian State Reserve "Belovezhskaya Pushcha". In 1957 the reserve was reorganized into the State Hunting Reserve "Belovezhskaya Pushcha", which remained almost until Belarus became independent.

Pursuant to the State Plan of Comprehensive Territorial Management in the Republic of Belarus approved by Order No. 19 of the Belarusian President, the National Park "Belovezhskaya Pushcha" is categorized as the most significant area of preferential protection in the country and is the key structural component of the environmental network i.e. a hub of international significance. In terms of the regional environmental network of Polesye Region (Belarus, Poland, and Ukraine) the Belovezhskaya Pushcha natural complex is deemed to constitute an international hub and a prospective transboundary biosphere reserve.

Belovezhskaya Pushcha is amongst the world's most highly awarded areas of preferential protection. In 1992 UNESCO decided to put 5200 ha of old-age forests in Belovezhskaya Pushcha on the World Heritage List. In 1993 Belovezhskaya Pushcha was, as part of UNESCO's MAB program, awarded the International Biosphere Reserve status, and in 1997 it was awarded the Council of Europe's Diploma.

1.1. Location, Area and Lands Constituting the Belovezhskaya Pushcha NP

The Belovezhskaya Pushcha National Park is located in south-western Belarus, on the Belarusian - Polish border and spans three administrative districts: Kamenets and Pruzhany Districts in Brest Region, and Svislotch District in Grodno Region (see Figure 1.1). The National Park's central manor is located in Kameniuki Settlement, 18 km off the town of Kamenets, which is the district's center, and 56 km off the city of Brest, which is the region's center. The postal address of the State Natural Environmental Institution "Belovezhskaya Pushcha" National Park is as follows: 225063, Kameniuki Settlement, Kamenets District, Brest Region.

Belovezhskaya Pushcha's has the following geographic location: 23°28'-24°33' of eastern longitude and 52°25'-52°57' of northern latitude. The National Park is mostly compact forestland somewhat extending from south-west to north-east. The park's north to south border measures 64 km, however from west to east the park's length is non-uniform and varies from 20 to 52 km.

The National Park has an area of 152.9 ths ha. It accommodates permanent land allocated to the State Environmental Institution "National Park "Belovezhskaya Pushcha".

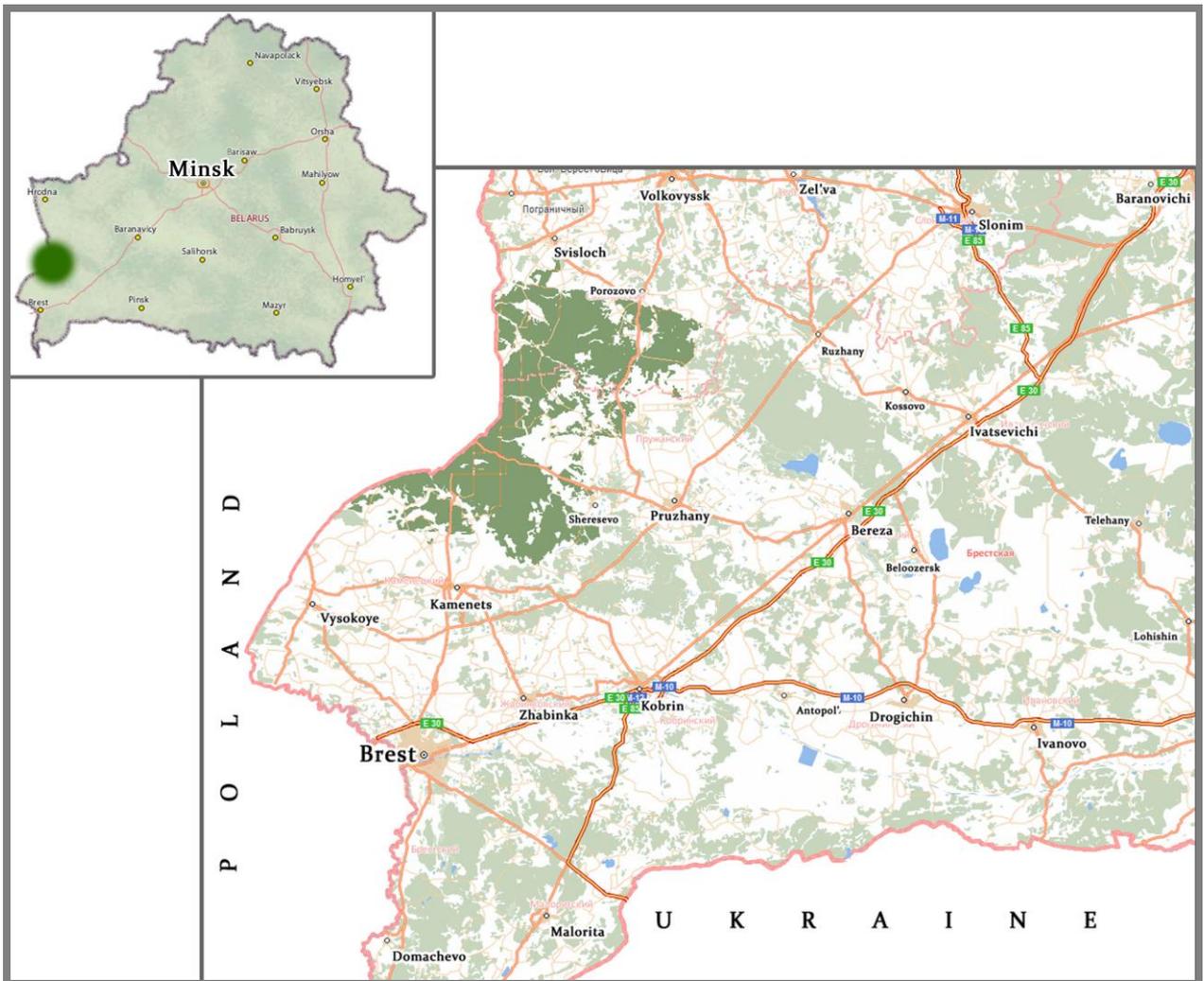


Figure 1.1 – Location Map

1.2. Legal and Regulatory Framework

Belovezhskaya Pushcha National Park operates under the following national and international statutory acts:

- Constitution of the Republic of Belarus.
- Convention on Biological Diversity.
- Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention)
- Convention “On Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention).
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES, Washington Convention).
- Convention on World Heritage and Natural Heritage.
- Law of the Republic of Belarus “On Environmental Protection” as amended of July 17, 2002, and Law "On Areas of Preferential Protection" as amended of July 8, 2008.
- National Strategy for Development and Management of the System of Environmental Areas until January 1, 2015, approved by resolution No. 1920 of 12/29/2007 of the Council of Ministers of the Republic of Belarus.
- Scheme of Efficient Location of Republic-Level Areas of Preferential Protection until January 1, 2015, approved by resolution No. 1919 of 12/29/2007 of the Council of Ministers of the Republic of Belarus.
- Regulations of the Belovezhskaya Pushcha National Park, approved by order of the Belarusian President of September 27, 2004.
- other statutory and regulatory acts.

1.3. Current Functional Zoning

The structure, protection and use of the National Park's area are subject to the provisions of the law of the Republic of Belarus of October 20, 1994 "On Areas of Preferential Protection", and are outlined in the Regulations, approved by Presidential Order No. 460 of September 27, 2004 "On Belovezhskaya Pushcha National Park".

No activities may be conducted within the National Park that may be detrimental to the natural complexes and sites, or run contrary to the constituent goals and objectives of the National Park as prescribed by the Law of the Republic of Belarus "On Areas of Preferential Protection". Prohibited activities shall include:

- any activities involving use of mineral resources and alternation of the natural landscape;
- discharges of untreated sewage and waste into water bodies and waterways;
- rafting of timber in water bodies and waterways;
- skidding of timber using caterpillar or heavy-duty machinery;
- operation of any mechanized vehicles outside of roads, other than vehicles used for agriculture, forest management and operation of the National Park;
- parking of motor vehicles in any locations, other than those specifically designed for such purpose;
- introduction and acclimatization of flora and fauna, other than recurring introduction (re-introduction);
- surveys and scientific research that may lead to disturbance and degradation of the natural complexes and sites, or affect their protection and utilization processes;
- business and other activities that may be detrimental in terms of conservation of natural complexes and sites within the National Park, other than re-naturalization of water bodies and waterways.

Given the National Park's specifics the following are the zones that exist within its boundaries:

1. **Strictly Protected Zone** shall incorporate unique natural forestland previously spreading across Central Europe which is of a high environmental, historic, cultural and aesthetic importance.

The Strictly Protected Zone includes entire natural complexes and individual sites, which are the key reserves of both flora and fauna gene pool, habitats of rare species of wild plants and wild animals, including old-aged mixed forests which are particularly important.

The only activities permitted in the Strictly Protected Zone include conservation activities and scientific research:

The conservation activities shall include:

- putting out forest fires;
- prevention of natural disasters, which may bring about total destruction of natural complexes and sites;
- enclosure of individual sites to ensure restoration and reproduction of rare wild plant species that grow within the Strictly Protected Zone.

Scientific and conservation activities within the Strictly Protected Zone shall take place under projects, programs and plans developed and approved in accordance with the established procedure.

No unauthorized persons may access the Strictly Protected Zone without a relevant permit being issued by the institution's officials.

Prohibited activities also include unjustified change of the Strictly Protected Zone's boundaries and size, and inclusion of natural complexes and sites therein that may be exposed to anthropogenic activities or those used for recreational or business purposes. The Strictly Protected Zone of the Belovezhskaya Pushcha National Park is 30.679 ha (Table 1.1).

2. The **Regulated Use Zone** shall incorporate core phytocenoses, individual ecosystems, natural, historic and cultural sites and monuments.

Forest management activities conducted within the regulated use zone shall be intended to create the most favorable environment for operation and development of natural ecosystems. The primary focus of such forest management activities shall be on restoration of forests, which must be accompanied by regulation of the numbers of wild ungulates.

Haymaking, cattle grazing, gathering of mushrooms and berries, as well as other nature management activities shall only be permitted to the extent that they are intended to satisfy the needs of the institution and locals, and shall only take place in specifically designated areas as required under forest management, wildlife management and land management projects.

Sanitary, veterinary and disease control and prevention measures shall take place with a view to preserving the gene pool and preventing wild animal diseases.

Regulated research, educational, environmental and other tourist activities, or tours shall take place along specifically designated environmental routes under control of the institution's guides and experts. The regulated use zone is 57.318 ths ha.

3. Recreational Zone shall incorporate sites that can accommodate tourist and recreational facilities, including buildings and structures that are recognized as important in cultural, educational, historic, informative, aesthetic, archeological, ethnographic and other recreational respects.

The recreational zone shall be used for purposes outlined in the relevant projects, programs and plans of recreational activities.

Recreational activities shall be conducted in accord with calculated maximum permissible recreational loads that the natural complexes may be subject to. Recreational activities shall incorporate measures to conserve the existing landscapes, soils, water, flora and fauna.

Gathering of mushrooms, berries and other by-products of forest management, hunting, fishing activities and use of flora and fauna for research, cultural, educational, aesthetic and other purposes shall take place in specifically designated areas subject to approval by the institution in accordance with the procedures established by the law.

The recreational zone may include enclosures with wild animals, park belts and arboretums.

The recreational zone is 7.739 ha.

Table No. 1.1 shows information on the location of strictly protected and recreational zones, and that of the regulated use zone broken down into forestries.

Table No. 1.1 – Areas of Various Functional Zones Broken Down into Forestries

| Forestry | Area, ths ha | | |
|----------------------|-------------------------|--------------------|-------------------|
| | Strictly Protected Zone | Regulated Use Zone | Recreational Zone |
| Belyanksoye | 3,196 | 2,169 | |
| Brovskoye | 0,883 | 5,660 | 2,065 |
| Dmitrovichskoye | | | 2,860 |
| Korolevo-Mostovskoye | 3,438 | 3,882 | 1,454 |
| Nikorskoye | 1,097 | 7,237 | 0,338 |
| Novoposelkovskoye | 6,217 | 7,199 | |
| Oshchepskoye | 5,127 | 4,626 | |
| Pashukovskoye | | 5,897 | |
| Svislochskoye | 0,97 | 7,770 | |
| Sukhopolskoye | | | 1,022 |
| Khvoynikskoye | 4,308 | 3,594 | |
| Yazvinskoye | 5,443 | 2,398 | |
| Yasenskoye | | 6,886 | |
| TOTAL | 30,679 | 57,318 | 7,739 |

4. Economic Activity Zone shall incorporate areas with administrative, natural, business, utility, recreation, cultural, educational and other buildings and facilities, buildings and facilities

to provide for the locals' needs, cater for the needs of visitors to the National Park and conduct industrial, business, trade, procurement, exports, imports, tourism, agricultural, forest management, hunting, fishing and other activities provided that such activities do not run contrary to the key goals and objectives of the National Park.

The Economic Activity Zone shall include forestland, agricultural land and other categories of land. The Economic Activity Zone is of no scientific, historic, cultural and recreational value.

Natural resources found within the Economic Activity Zone are used for the needs of the institution and the locals. The type and nature of business activities shall correspond to natural and business conditions, materials, technology, funding, personnel and other resources.

According to the applicable law the National Park's area may be divided into additional zones.

Special information and other signs are put up to mark the National Park's boundaries. No change of the aforementioned zones' boundaries and sizes may take place, unless such change occurs in full compliance with the law. The total area of the Economic Activity Zone is 57.226 ths ha.

The **Buffer Zone** of the National Park was created under the Law of the Republic of Belarus "On Areas of Preferential Protection" to prevent any adverse impact on its natural complexes and business and other sites.

The following are the activities prohibited in the Buffer Zone:

- introduction and acclimatization of flora and fauna that are foreign to the local flora and fauna, and capable of adversely impacting the National Park's natural complexes and sites, other than recurring introduction (re-introduction);
- any activities, including water intake, that may bring about changes in the natural hydrological regime, waterways or groundwater, or affect the National Park's natural complexes, other than re-naturalization of water bodies;
- discharges of untreated sewage and waste into water bodies and waterways;
- surveys, design and construction of soil-reclamation systems and peat producing and processing enterprises;
- other business activities that may be detrimental to the National Park's natural complexes and sites;

Forest management, hunting and commercial fishing in the Buffer Zone shall take place in accordance with applicable law upon the institution's approval.

Land owners and land users whose land is located within the National Park's protected areas shall comply with the requirements governing its protection and use as outlined in the Regulations on the National Park.

Special information and other signs are put up to mark the Buffer Zone's boundaries. No change of the Buffer Zone's boundaries and size may take place, unless such change occurs in full compliance with the law.

Location and reconstruction of facilities within the National Park shall be consistent with the provisions of the Law of the Republic of Belarus "On Areas of Preferential Protection" with the requirements for protection and use of the National Park and its Buffer Zone, established by the Regulations on the National Park, and shall be subject to the institution's approval.

Government takeovers of households and premises located in the National Park and on land owned by other land owners and individuals, shall take place in accordance with the law and subject to the institution's approval.

The Buffer Zone of the Belovezhskaya Pushcha National Park is located in Svislotch District of Grodno Region, and Pruzhany and Kamenets Districts of Brest Region. It includes forestland managed by state forest management institutions Volkovysk Forestry, Pruzhany Forestry and Brest Forestry, experimental forest hunting range "Shereshevskoye", State Environmental Institution "National Park "Belovezhskaya Pushcha" and lands of other landowners, land users and owners of land lots with the total area thereof reaching 66 ths ha.

Figure 1.2 shows the current functional zoning of the Belovezhskaya Pushcha National Park.

Table No. 1.2 shows information about compliance of the National Park’s functional zoning with IUCN protection categories.

Table No. 1.2 - Compliance of the National Park’s Functional Zoning with IUCN Protection Categories.

| IUCN category | Functional Zones of Belovezhskaya Pushcha National Park | | | | |
|---------------|---|---------------|--------------|-------------------|--------|
| | Strictly Protected | Regulated Use | Recreational | Economic Activity | Buffer |
| Ia | | | | | |
| Ib | | | | | |
| II | | | | | |
| III | | | | | |
| IV | | | | | |
| V | | | | | |
| VI | | | | | |

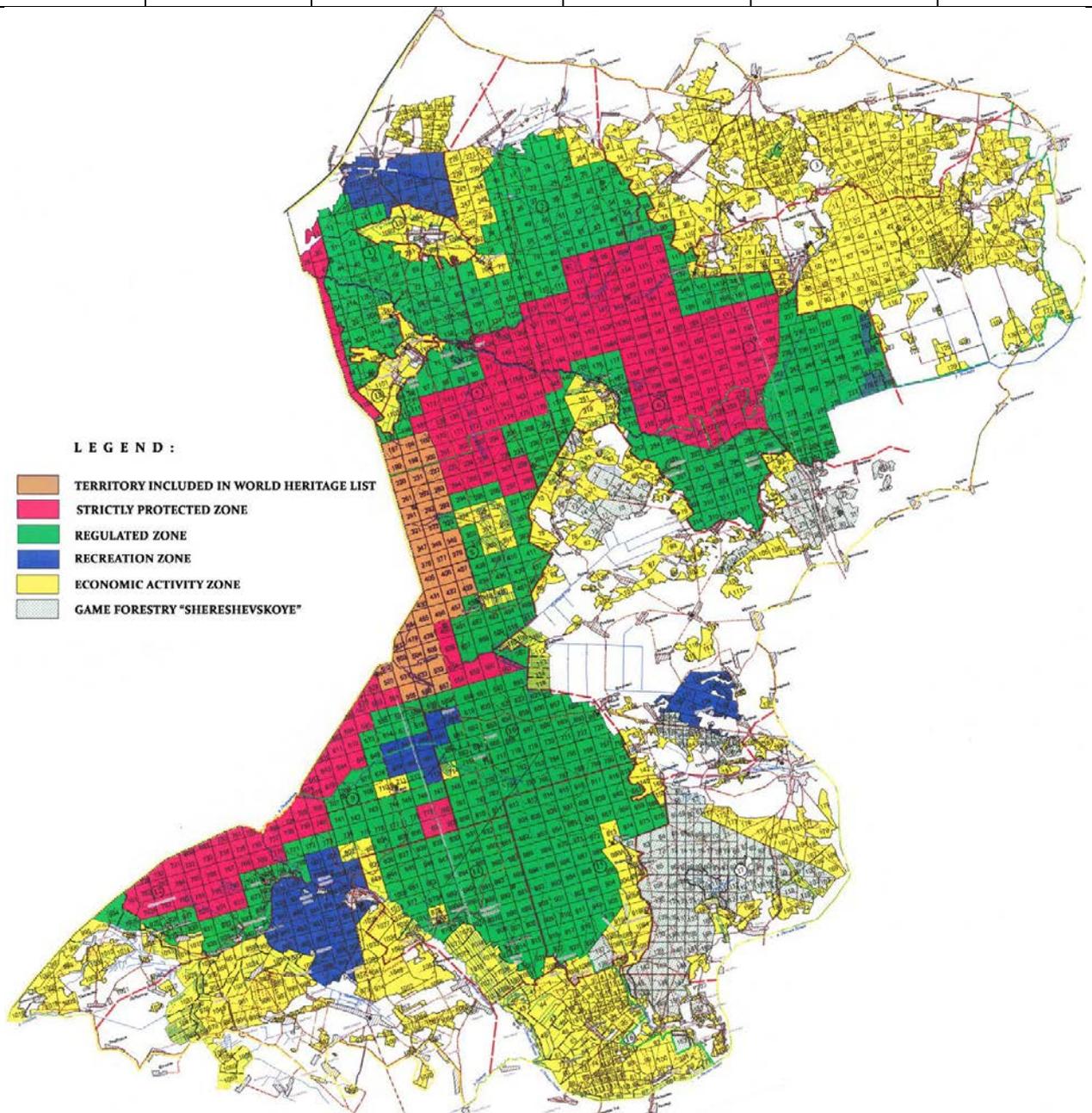


Fig. 1.2 Current Functional Zoning of the Belovezhskaya Pushcha National Park

1.4. Current Programs and Projects

Forest management, forest protection, forest restoration, fire safety, biotechnical and other activities and collateral use in forests shall take place in accordance with the National Park's forest management, wildlife management and land management projects. The aforementioned projects shall be subject to approval by the Department of Presidential Affairs of Belarus upon approval of the Ministry of Natural Resources and Environmental Protection. Based on such projects the institution develops programs, current and future work plans for the National Park, which shall be subject to approval by the Department Presidential Affairs of Belarus. The following are the programs being implemented in the Belovezhskaya Pushcha National Park:

- UNESCO's Man and Biosphere (MaB) Program;
- Program for creation of the national environmental monitoring system in Belarus, approved by order No. 949 of July 14, 2003 of the Council of Ministers of Belarus;
- 2008-2014 state program for development of areas of preferential protection, approved by the Belarusian President's Decree No. 146 of 03/06/2008;
- State program of targeted fundamental research "Flora and Fauna Resources" approved by order No. 1339 of 11/28/2005 of the Council of Ministers of Belarus;
- State research and technical program "Environmental Safety" approved by order No. 5 of January 4, 2006 of the Council of Ministers of Belarus;
- Plan of preparations for the 600th anniversary of the adoption of nature reserve practices in Belovezhskaya Pushcha marked in 2009, approved by order No.311 of February 29, 2009 of the Council of Ministers of Belarus.

1.5. Stakeholders

Stakeholders shall mean all and any subjects: enterprises, entities, organized and spontaneous groups of individuals that have interests that are related to the National Park's area and resources thereof, or exercise statutory functions with regard to the Park. Table No. 1.3 lists the key stakeholders of the National Park in the context of this Management Plan.

Table No.1.3 – Key Stakeholders of the National Park in the Context of This Management Plan

| Stakeholder | Functions/Interests | Abbreviation Used |
|--|---|---|
| State Environmental Institution "National Park "Belovezhskaya Pushcha" | <ul style="list-style-type: none"> – perform day-to-day management of the National Park's activities; – act as the sole land user of its area; – affect adoption of important business decisions regarding the National Park's protected area – Act as the customer under this Management Plan and the key performer of measures outlined therein | SEI |
| Department Presidential Affairs of Belarus | <ul style="list-style-type: none"> – act as a superior authority to SEI – approve this Management Plan | DPA |
| Ministry of Natural Resources and Environmental Protection | <ul style="list-style-type: none"> – monitor environmental activities and nature management activities within the Park – approve this Management Plan | Ministry of Nature |
| Brest and Grodno Regional Executive Committees | <ul style="list-style-type: none"> – communicate information regarding protection and use of the National Park to the public – exercise control over use of the National Park | Local governmental and regulatory authorities |
| Kamenets, Pruzhany and Svislotch District Executive Committees, village executive committees | | |
| District and Village Councils of Deputies, whose lands constitute a part of the National Park or the Buffer Zone thereof | <ul style="list-style-type: none"> – act as users of lands of populated locations within the National Park and the Buffer Zone thereof | Municipal authorities |

| Stakeholder | Functions/Interests | Abbreviation Used |
|--|--|----------------------------------|
| Enterprises and entities using lands that constitute a part of the National Park's protected area | – conduct business activities in the National Park's Buffer Zone, including areas of soil-reclamation activities | Land users |
| Individuals residing in areas adjacent to Belovezhskaya Pushcha: in the north of Kamenets District, north-west of Pruzhany District, and south of Svislotch District | – live in the immediate proximity of the National Park; – harvest non-timber forest products; – to a larger extent – employees of the National Park and their families – are interested in accessing certain types of the National Park's natural resources | Locals |
| Public associations that pursue environmental goals, public activities and nature lovers | – are interested in preserving Belovezhskaya Pushcha's natural wealth | Environmental community |
| National Academy of Sciences of Belarus, state research and educational institutions | – conduct research of Pushcha's natural complexes and components thereof, existing environmental, social and economic interdependences | Dedicated research organizations |
| Regional, national and foreign mass media | – Disseminate information about the National Park | Mass media |
| Visitors to the National Park and users of its recreational and tourist services: tourists, hunting tourists, holiday-makers, and sightseers | – use recreational and tourist and other associated resources of the National Park | Tourists |
| Directorate of the Bialowieza National Park in Poland | – Manage the protected territory which constitutes an integral part of Pushcha's natural complex | Bialowieza National Park |
| Agencies responsible for performance of the (Bern) Convention on the Conservation of European Wildlife and Natural Habitats | – Decide on extension of the diploma issued by the Council of Europe | International organizations |
| UNESCO | – Decide on extension of the World Heritage Site status – Administer the Man and Biosphere program | |

2. PHYSICS AND GEOLOGY

2.1. Geology and Terrain

The Dnepr and Moscow glaciers account for the modern terrain of Belovezhskaya Pushcha. This is proven by peripheral glacial forms of terrain.

Tectonically, the National Park lies within Podlaska-Brest depression of the Russian platform. Pre-Anthropogenic deposits generally include the Neogene/Paleogene system with individual Cretaceous and Jurassic impregnations. Anthropogenic deposits primarily include glaciofluvial deposits with morainic impregnations occurring in the southern part, marsh and lacustrine-alluvial impregnations in the northern part and alluvial impregnations along river valleys. The crystalline basement moves down northward from 250 to 1 km subsea depth within Pushcha.

As Pushcha occupies the higher part of Neman, Bug and Pripjat watershed (Baltic/Black sea basins watershed), it is a hilly plain whose undulating terrain was formed by glaciofluvial sandy and sandy-pebble deposits after the Moscow glacier has retreated. The true altitude of Pushcha's prevailing part ranges within 160-180 m above mean sea level. The minimum altitude is 143.6 m above mean sea level; the maximum altitude is 242.5 m.

Geomorphologically, the current National Park lies at the juncture of two geomorphological regions i.e. Predpolesye plains and Belarusian Polesye. The National Park covers 3 geomorphological regions. The southern part belongs to Pruzhany aqueoglacial/morainic plain with marginal glacial facies while the northern part belongs to Kosovo morainic/aqueoglacial plain with marginal glacial facies. Both regions belong to Predpolesye plains. The central part of Belovezhskaya Pushcha (woodlands in Brovskoye, Yazvinskoye, Oshchepskoye, Sukhopolskoye, and Novoselkovskoye forestries located in the Narev River's floodplain and the small southern part of Novodvorskoye forestry located in the Yaselda River's floodplain) belong to the Belarusian Polesye and is a part of the Narev/Yaselda lacustrine-alluvial plain. Westwardly, 10-15 km wide Narev/Yaselda lacustrine-alluvial plain stretches along the Narev River till the Polish border.

2.2. Climate

Agroclimatically, Belovezhskaya Pushcha belongs to the southern warm and unstably humid area of Belarus occupying its western outskirts within Pruzhany-Brest agroclimatic region.

The average annual air temperature is 6.6 °C with the absolute maximum of 31.8°C and the absolute minimum of – 26.6°C. The warmest month is July (17.8°C) and the coldest one is January (-5.4°C). Stable snow cover is observed for maximum 50-60 days. During one fifth of the winter there is no snow cover at all. The average number of frost-free days is 135. The annual sum of temperatures over 5°C ranges from 2,346 to 3,225°C. The average vegetation period is 201 days with the average daily air temperature of + 5°C. The rainfall factor during the warm season is 0.8. This is the lowest value in Belarus that shows the evaporation/precipitation imbalance. The average precipitation is 648 mm per year including 420 mm during the summer period (April-October). The average annual number of precipitation days ranges from 150 to 170.

Prevailing winds include western, north-western and south-western ones. Winds are generally moderate; however, sometimes they may be of substantial force, even heavy winds occur that cause windfalls and windbreaks especially in spruce forest stands when the soil has thawed out and there are no leaf-bearing trees. Remarkable windfalls and windbreaks took place in 1880, 1982, 1983, 1986 and 2005.

Generally, Pushcha's climate is similar to that of the Central Europe.

2.3. Hydrology and Hydrography

2.3.1. Available Hydrological Data

The Lesnaya River's flow and water levels near Kamenets have been systematically monitored since 1946; in 1972 the BSSR State Committee for Hydrometeorology started monitoring of the Narev River near the village of Nemerzha (Pruzhany Laboratory for

Hydrogeology and Reclamation has been monitoring water flow and levels near the village of Borky since 1976).

Ground water conditions have been monitored since 1970. The monitoring network in Belovezhskaya Pushcha includes 70 wells, two hydrometric and seven hydrologic points.

2.3.2. General Description of Hydrographic Network

Belovezhskaya Pushcha lies within the eastern part of the Visla Basin. The Visla/Neman/Dnepr watershed i.e. the Baltic/Black Sea watershed is located near the northern and north-eastern borders. There are sources of the Svisloch and Ross that are the Dnepr River's tributaries near the Pushcha's northern skirts while the source of the Yaselda River that is the tributary of the Pripyat flowing into the Dnepr River is at the north-eastern skirts. The watershed between two tributaries of the Bug River i.e. the Levaya Lesnaya and Mukhavets Rivers lies at the south-eastern part of the Pushcha. The water producing areas of the Visla Basin's two rivers i.e. the Narev and the Lesnaya (Levaya and Pravaya) cover Belovezhskaya Pushcha as such.

The Narev River whose source is in Dikoye bog plays an extremely important role in the process of forming the hydrologic conditions in the Pushcha's northern part. The Narevka River is the main Narev's tributary. The Pravaya Lesnaya and Levaya Lesnaya Rivers are main water arteries in the southern part of the National Park. The Pravaya Lesnaya River stems from Poland; it flows south-eastward through the National Park's southern part and flows together with the Levaya Lesnaya River at its border, thus forming the Lesnaya River that falls into the Zapadny Bug River to the north of Brest. The Levaya Lesnaya's sources lie in the National Park. The Levaya Lesnaya first flows south-eastward, and then turns south-westward; it forms the south-eastern border of the National Park. Sources of other rivers are generally located in the National Park; they flow into the Narev River, the Levaya and Pravaya Lesnaya Rivers.

There are no natural lakes in the National Park. Hydro land reclaiming operations that took place in previous decades resulted in a number of relatively large artificial water bodies i.e.: Lyatskie, Khmelevskoye, Sipurka, Pererovnitsa, and Kolonna.

Quite large areas in the National Park have a well-developed network of soil reclamation channels, especially areas included into Belovezhskaya Pushcha during the recent decade. According to 2006 forest management data, the total length of the hydro land reclamation network is 592 km.

The total area of bogs with the peat layer depth over 0.3 m is 20,550 ha including 83.2% of lowland bogs, 3.1% of transition bogs, and 13.7% of raised bogs. The peat layer depth ranges from 0.3 to 4.5 m; bogs with peat deposits from 1 to 3 m are the most wide spread in the Pushcha. Lowland bogs include valley bogs (657.3 ha) and non-valley bogs (16,435.2 ha). The area of bogs not covered with forests is 3,742.8 ha or 18.2% of all bogs. Bogs over 100 ha (Dikoye, Dikiy Nikor) occur in the north-eastern part of the Pushcha.

Substantial land reclamation operations took place in 50-60s at collective farm lands bordering with Belovezhskaya Pushcha. Some riverbeds were rectified and deepened (the Narevka River, the Belaya River). This resulted in lower water level. Some stows were reclaimed including: Dokudovo (130 ha), Zubritsa (160 ha), Galevo Boloto (300 ha), and Teplukhi (300 ha). Reclamation facilities in Nikor stow (1,450 ha) saw fundamental reconstruction. The total area of reclaimed land in Belovezhskaya Pushcha is 2,340 ha.

2.3.3. Ground Water Level Behavior

Water measuring well monitoring showed that variations in the ground water levels of all water-producing horizons and sites in the Pushcha are of similar nature. This proves that one and the same meteorological and hydrologic factors account for the level behavior. However, the ground water behavior at various areas (ecotopes) has different specifics. They include different periods of ground water level increase and decrease, different variation amplitudes. Watercourses, the aeration zone's thickness and lithology are key reasons for such deviations. The maximum decrease/increase amplitudes and higher intensity is observed in wells located in the close vicinity to rivers. The river size and water content also affect the ground water level

variations. The influence of the Pravaya Lesnaya River is observed within 3 km from the river bank. If ground water occurs at the depth of up to 1 m, annual variation amplitudes depend on the aeration zone; and if ground water occurs at the depth from 1 to 3 m, there is a direct relation between the aeration zone's thickness and the variation amplitude. If the occurrence depth is 6-8 m or more, the ground water level variations become smoother. However, the proximity of watercourses and terrain roughness account for substantial values (1.5 m) and often shade the influence of weather conditions.

2.3.4. Dikoye Bog Ground Water Level Behavior

The ground water level accounts for the bog type, vegetation and biological diversity. The bog level behavior depends, on the one hand, on the behavior of feed sources (in-flowing watercourses and precipitation) and the evaporation/flow factor. On the other hand, it is closely related with the type, structure and terrain of the bog itself.

2.3.5. Hydrobiology

The National Park's water body and water course phytoplankton includes all main groups of planktonic algae. It is characterized by a high taxonomic diversity (200 species) with the prevailing diatoms and green algae. Phytoplankton occurring in rivers and springs is relatively low in number. The algae taxonomy is much richer i.e. the phytoperiphyton includes 250 species with prevailing diatoms and green algae.

The zooplankton community includes 56 species and forms of zooplankton organisms with prevailing rotifers. The Crustaceans include Cladocerae species and two copepod taxa i.e. *Cyclopoida* and *Calanoida*

Bottom biocoenosis includes a rich and diverse fauna including 178 species and forms of macro invertebrates belonging to all main zoobenthos groups. The taxonomic diversity is based on chironomids (65), trichopteran (29) and mollusca (23 species). The community also includes wide-spread clean water species i.e. stoneflies (3 species), mayflies (8 species) and trichopteran.

2.3.6. Economic Activity Factors Affecting Hydrologic Behavior

According to local residents, the Narev's riverbed was rectified and the existing reclamation network at Dikoye bog was constructed in 1920-1930s. However, channels have been overgrown by now; they are hollow and lost their intended function. They do not practically reclaim adjacent bog lands.

The Verkhovye Yaseldy reclamation system considerably affects the hydrologic behavior of the area in question. The project provided for the construction of a water feeding channel to supply water to the reclaimed area from the water reservoir during dry years. The channel passed directly at the Narev/Yaselda watershed. The water level in the channel was continuously maintained at 40-50 cm from the land surface.

Motor roads passing through the Pushcha considerably affect the hydrologic behavior as they damaged the natural hydrologic relations at water producing areas. Many roads are equipped with pipe culverts; however, some road areas require more structures of such type. This is a very sensitive issue at areas when roads cross the surface and interflow lines.

2.4. Soils

According to the current soil and geographical zoning, the Pushcha belongs to Grodno/Volkovyssk/Slonim sub-region of sod-podzol sandy-loam and loamy soils of the central (Belarusian) province. Main soil types occurring in the National Park include semihydromorphic, sod-podzol sandy soils on aqueoglacial sands and hydromorphic peat bog lowland and lowland reclaimed soils.

The soil mosaic in the National Park is very distinctive and has a complex genesis. The area under study has 9 types and 14 subtypes of soil. Generally, the soil cover is characterized by soil types shown in Table 2.6.

Table 2.6 – Soil Structure in Belovezhskaya Pushcha National Park

| Soil types | Share of total soil area, % |
|-------------------------------------|-----------------------------|
| Brown forest automorphic | 0.8 |
| Brown forest semihydromorphic | 3.6 |
| Sod-podzol automorphic | 17.8 |
| Sod-podzol semihydromorphic | 46.1 |
| Sod semihydromorphic | 6.0 |
| Peat boggy soils of lowland bogs | 17.7 |
| Peat boggy soils of transition bogs | 4.2 |
| Peat boggy soils of upland bogs | 2.6 |
| Floodplain peat boggy | 1.2 |
| Total: | 100.0 |

2.5. Landscapes

The long-term protection helped to substantially conserve natural features of landscapes occurring in Belovezhskaya Pushcha National Park. The landscapes belong to forest and forest/boggy classes.

Wide spread aqueoglacial (about 40% of the area) and lacustrine-alluvial (25%) areas prevail among landscapes. Subdominant landscapes i.e. hilly/morainic/erosive (16%) and morainic/outwash terrain occur much rarely. Other landscapes (secondary morainic, floodplain, and lacustrine-boggy) occupy 10% in the aggregate and are rare in the National Park.

The protected (buffer) zone surrounding Belovezhskaya Pushcha is critical for preserving landscapes of the National Park. Various substantial influence factors affect natural sites resulting in their transformation and formation of anthropogenic landscapes.

Agriculture and water management are the main influence factors resulting in anthropogenic landscapes in the buffer zone; engineering and communications facilities and operations are influence factors of lesser importance. This resulted in wide spread natural/anthropogenic landscapes occurring in the area in question. They include agricultural landscapes (about 19%), forest/boggy agricultural (about 30%) and agricultural/forest (19.5%). Natural areas i.e. forest (17.5%) and forest boggy landscapes (14.3%) occupy about 1/3 of the area.

Agricultural landscapes are observed at large watersheds within hilly/morainic/erosive, secondary morainic and aqueoglacial landscapes. Agricultural landscapes primarily include old-arable lands being cultivated for hundreds of years. There is no natural vegetation; the micro relief is partially smoothed; the soil profile is changed; and the substance/energy cycle is transformed. Agricultural residential sites are wide spread within this landscape.

The most active water management activities were related with land reclamation operations that took place in the Republic of Belarus in 60-80s. Most land reclamation facilities lie along southern and eastern borders of the National Park within lacustrine-alluvial, lacustrine-boggy and floodplain landscapes. Locally, they include mineral relics of another genesis whose specifics include a higher orographic level, mineral and often water-logged sandy soils occurring under forest phytocenosis of various types. There were no land reclamation operations; however, the reclamation produces a remarkable influence, especially on over-soil grass mantle where weed groups become prevailing species.

Opencast spoil banks are observed at the areas of construction material extraction (gravel, sand, clay). They are located close to large settlements and roads. The largest open pit is located in Zhuravlevka stow near the Belarusian/Polish border; its length is about 0.5 km and the width is 0.2 km. Other open pits have the length of 0.2-0.3 km and the depth of 2-3 or 5 m.

3. BIOTA DESCRIPTION

3.1. Habitat Structure and General Description

Belovezhskaya Pushcha National Park is a large indiscrete area with low-disturbed natural vegetation that mainly includes old-aged coniferous and broad-leaved forests with individual open bog areas. A considerably large area of subshrub/sedge/peat moss Dikoye bog of transition type occupies the north-eastern part of the National Park. The National Park's total area is 152.9 ths ha.

The area occupied by natural and low-disturbed eco systems is about 95% of the National Park. Forests occupying 119.3 ths ha or 78.3 % are the dominant type of eco systems. Coniferous and broad-leaved forests of old age; complex structure and composition play a leading role in forest eco systems.

Open wetlands including bogs (about 10.8 ths ha or 7.1%) and rivers, water passages, channels and stagnant water bodies (about 0.6%) occupy 7.7% of the National Park. The boggy eco system structure includes lowland hollow bogs with the prevailing gramineous/sedge and mixed herb/sedge associations. Some boggy areas were changed as a result of hydro land reclamation operations; they are currently used as hayfields, pastures, and arable lands. As haymaking has been stopped at some open bog areas, such areas are gradually grown with marsh elders.

Meadows occupying about 4.6% of the area show a substantial diversity. Some part of the meadows is used as hayfields or, to a lesser extent, as pastures and grasslands. In both cases this prevents from overgrowing and promotes mixed herb communities. However, a substantial part of meadows is grown with shrubs as the economic activity has become less intense (less pasturing and haymaking).

Shrub communities occupy less than 1% of the area. Their structure primarily includes willow formations and junipers.

Anthropogenic, urban and industrial areas occupy about 2.9%. They include motor roads, power lines, gas lines, residential and economic facilities; arable lands account for about 6.1 ths ha or 2.3% of the territory.

The reason for the current biotope balance where non-forest lands account for a considerable part (21.7%) is that 2004 saw the inclusion of substantial adjacent areas (including Dikoye bog) into the National Park. The current National Park's total area increased by 65,599 ha or 75% as compared to 1992 basic forest management data. The total area of lands included into the National Park is composed of 70% of forest lands including 63% of forest-covered lands. Non-forest lands included into the National Park mainly include agricultural lands (12%), bogs (11%) and feeding fields.

3.2. Vegetation and Flora

3.2.1. General Description of Vegetation

Geobotanically, the National Parks' forests belong to three forest vegetation regions of two sub-zones: the hornbeam/oak/dark coniferous forest zone and broad-leaved/pine forest zone.

Natural and low-disturbed vegetation (forests, meadows, bogs, and shrubs) occupies about 142.2 ths ha (93% of the area). The larger part of the National Park's forests belongs to Belovezhsky woodlands of the Neman-Predpolesye region of the hornbeam/oak/dark coniferous forest zone; it is classified as a separate geobotanical region of Belovezhskaya Pushcha. Forests occurring in Porozovskoye, Novodvorskoye and partially in Novoselkovskoye forestries (Dikoye stow) belong to Zapadno-Predpolesye woodlands. Forests growing in Rechitsa forestry located at the south-eastern part of the Pushcha belong to Bug-Pripyat woodlands of the Bug-Polesye forest vegetation region of the broad-leaved/pine forest zone.

The Pushcha's forest formation structure primarily depends on the Pushcha location at the south-western skirts of the Eurasian pine forest region that is in close proximity to the European broad-leaved forest region. Therefore, the Pushcha's stands are of transition type between the above regions. They combine typical boreal coniferous forests and the Belarusian broad-

leaved/spruce and broad-leaved forests. The structure, typology and forest valuation indicators of the National Park's forests included into Belovezhsky woodlands are quite different from those of the forests included into the Pushcha in 2004 and of other adjacent forests. They are a vivid example of combined boreal and Western European vegetation components characteristic of spruce/hornbeam/oak sub-region. In addition to that, Belovezhskaya Pushcha is of great interest as it has large old-aged woodlands in the Central Europe that are conserved in the state close to natural. The age of individual forest areas is 250-350 years.

The border of continuous spruce distribution lies near the Pushcha's southern skirts; then, the spruce is distributed locally (sporadically) only. The Pushcha itself has sporadic areas of distribution of durmast oak and white fir that are located hundreds kilometers away from main areas of distribution.

3.2.2. Forest and Shrub Vegetation

Forest and shrubs occupy about 131.4 ths ha or 82.9% of Belovezhskaya Pushcha. The Pushcha's forests and shrubs include 21 tree species including 9 forest-forming species and 58 shrub species (refer to Figure 3.1). All the National Park's forests belong to Class I; the category of protection is national park forests.

In 2004 adjacent lands were included into the National Park. This greatly changed the stable land structure as follows: there was a substantial decrease in the share of forest and forest-covered lands while the share of non-forest lands and non-joined artificial stands has drastically increased. The age structure of forest lands included into the National Park included 22% of young growth, 73% of middle-aged forests, 2% of ripening forests and 3% of mature forests. By prevailing species, the included forests were as follows: 71% of coniferous forests; 1% of hardwooded broadleaved and 28% of soft-wooded broadleaved forests. In addition to that, included forests had lower forest valuation indicators (density, reserves, age) as compared to those growing in the Pushcha. Table 3.2 shows the distribution of forest-covered lands by age and species groups.

Table 3.2 – Distribution of Forest-Covered Lands and Total Reserves by Prevailing Species (%)

| Prevailing species | Forest-covered lands | | Total reserves | |
|--------------------------|--|--|--|--|
| | According to 1992 forest management data | According to 2005 forest management data | According to 1992 forest management data | According to 2005 forest management data |
| Pine in uplands | 54.4 | 60.1 | 56.2 | 63.9 |
| Pine in bogs | 3.6 | 2.5 | 1.6 | 1.3 |
| Total for species | 58.0 | 62.6 | 57.8 | 65.2 |
| Spruce | 10.7 | 4.4 | 13.8 | 5.1 |
| Oak | 4.7 | 3.5 | 5.2 | 4.3 |
| Hornbeam | 1.0 | 0.9 | 0.7 | 0.7 |
| Ash tree | 1.1 | 0.7 | 1.2 | 0.7 |
| Maple | 0.1 | 0.1 | 0.1 | 0.1 |
| Silver birch | 4.9 | 7.6 | 4.2 | 5.9 |
| Downy birch | 3.4 | 3.3 | 1.6 | 1.4 |
| Aspen | 0.8 | 1.0 | 0.9 | 1.1 |
| Common alder | 15.3 | 15.8 | 14.5 | 15.5 |
| Marsh elder | – | 0.1 | – | – |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |

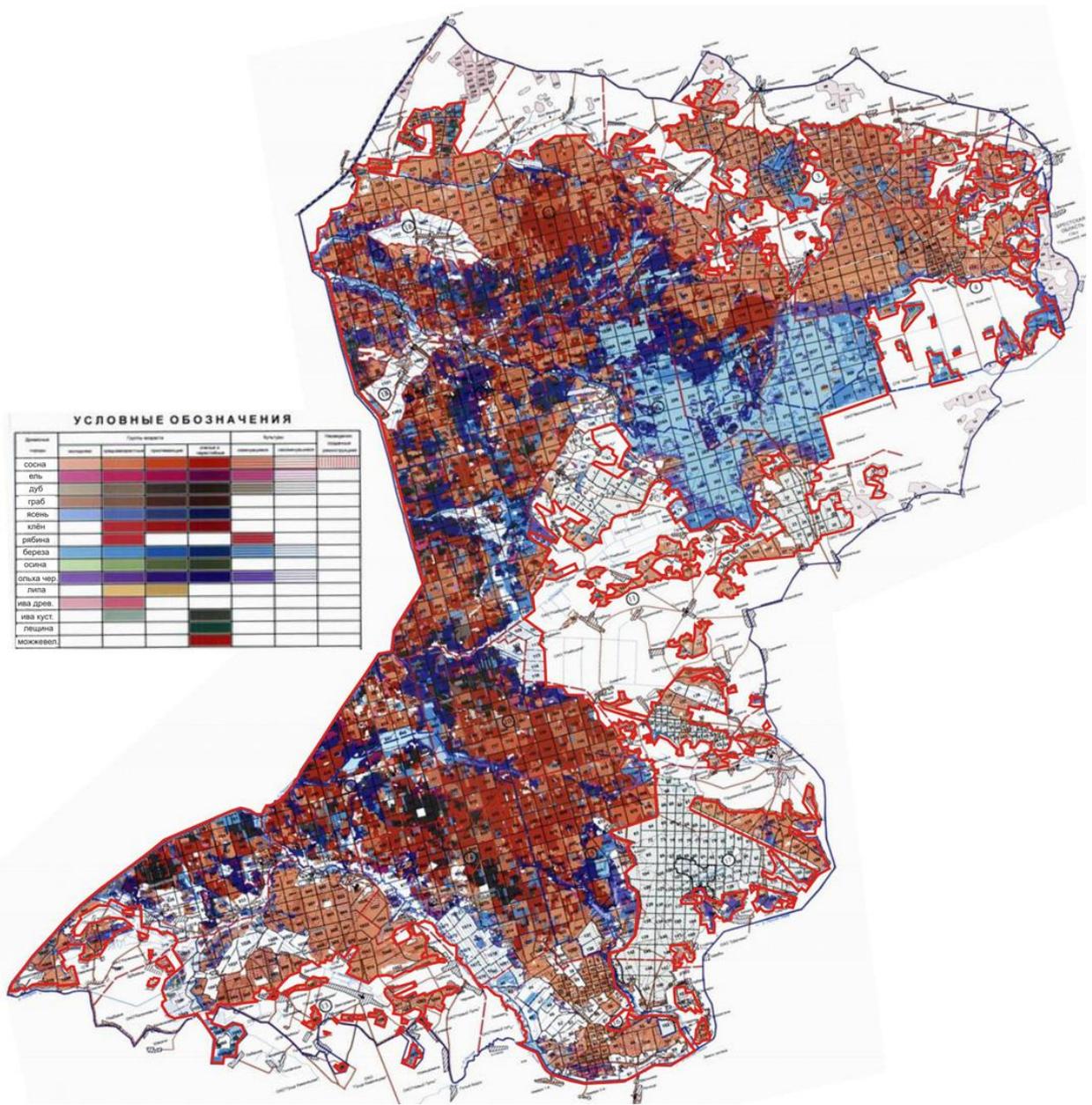


Figure 3.1. Forest Scheme

2004 forest management data shows negative changes in spruce forest valuation indicators. Even if included forests are taken into account (1.1 ths ha of spruce forests were included into the National Park), the total area of spruce forests decreased by 37% and the total reserves reduced by 50% (twice) and the average reserves per 1 ha reduced by 20%. Except for young growth, forest reserves indicators deteriorated for spruce forests of all age categories. The main reason for such negative dynamics is spruce drying caused by *Ips tipographus* population boom in 1995-1997 and 2001-2004 that resulted in large-scale selection and mass sanitary tree felling performed by the National Park.

In addition to spruce forests, the ash tree is another prevailing tree species that underwent drastic negative changes. Its overmature forests begin to dry and decay.

Positive trends observed for Belovezhskaya Pushcha's forest valuation indicators include the increase in hard-wood leaved forests (oak, maple) and linden forests.

Currently, the species composition of Belovezhskaya Pushcha's forests can be demonstrated by the average forest valuation formula 6.8Pine1.3CommonAlder1.0Spruce0.9SSilverBirch+Oak,DownBirch,Aspen,Hornbeam,Ashtree, Maple. The prevailing tree species is the spruce whose forests occupy 62.6% of all forest-

covered lands with the reserves of 65.2% of all forest reserves in the National Park. The spruce is followed by the common alder both by occupied area (15.8%) and reserves (15.5%). The birch ranked the third; its share has considerably increased since 1992: by 10.9% by area; and by 7.3% by reserves.

Along with the Scots pine and common spruce, coniferous forests include *Abies alba* that is a rare species for the region. In addition to the pedunculate oak, silver birch, down birch, hornbeam, common alder, common ash tree, and aspen, broad-leaved species include rarely occurring *Q. petraea*, *Ulmus glabra* and *U. laevis*.

Salix aurita, *S. cinerea*, *S. starkeana*, *S. mursinifolia* and *S. rosmarinifolia* generally occur along river banks and meadows. *Ribes pubescens* and *R. nigrum* often occur along river and spring banks and bog forest undergrowth.

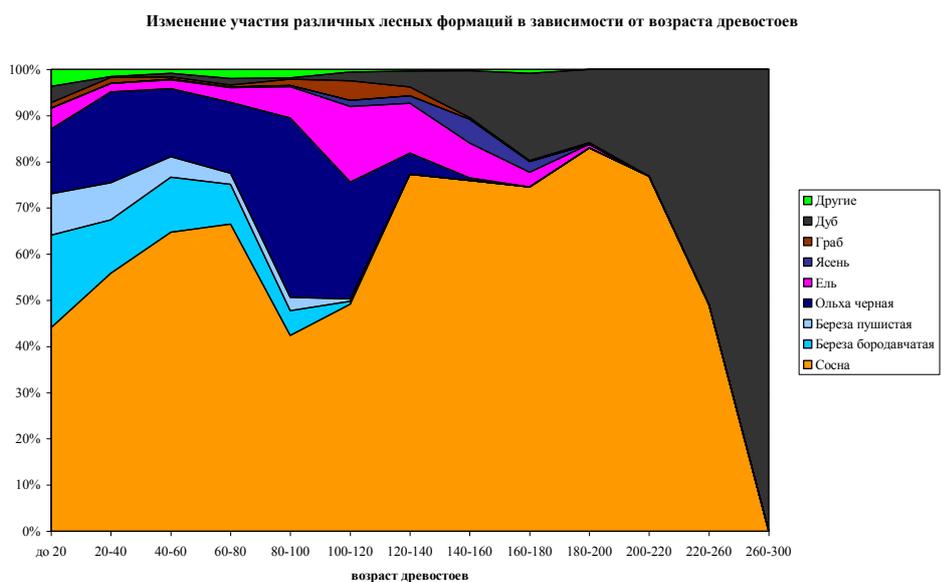
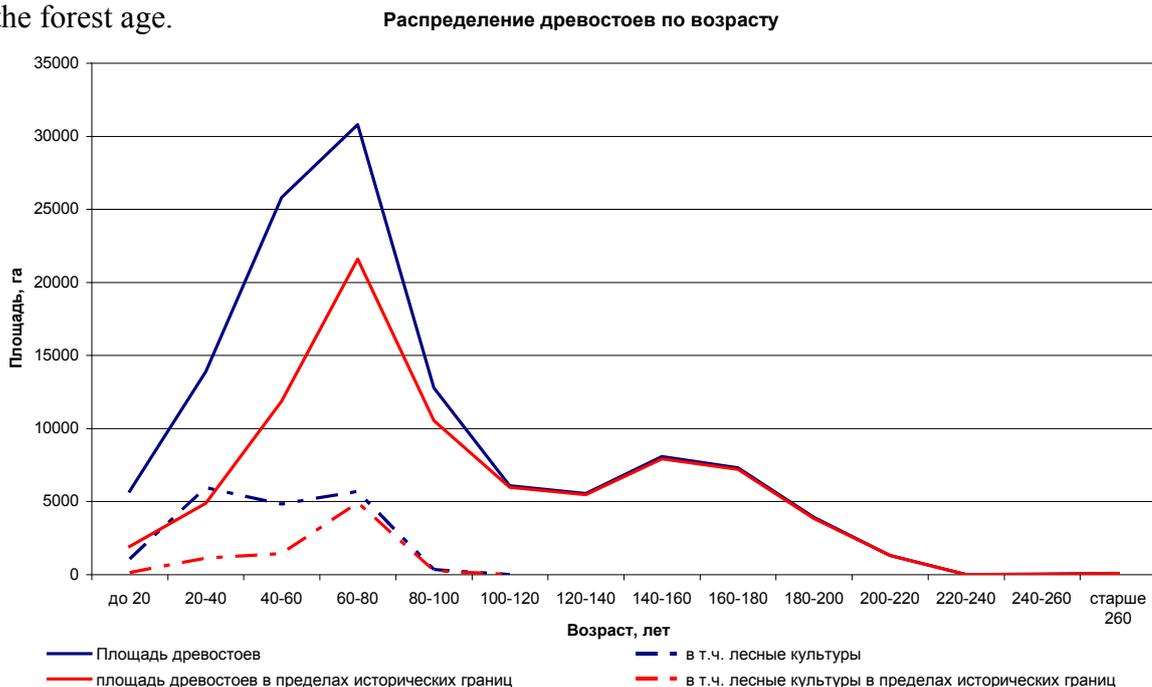
Table 3.3 shows the average National Park's forest valuation indicators and the average structure of Tier 1 forests. These values prove that Belovezhskaya Pushcha's forests are unique as compared to other forests growing in the Republic. The average age of oak forests is 157 years; that of ash tree forests is 139 years; the age of maple forests is 146 years; and pine forests are 90 years old. The Pushcha's forests have a complex structure. Along with the birch and aspen, spruce forests include oaks, ash trees and hornbeams. Oak forests have a considerable share of hornbeams (1.2 units); ash tree, linden and hornbeam forests have an extremely complex structure.

Table 3.3. Average Forest Valuation Indicators and Forest Structure in Belovezhskaya Pushcha National Park

| Prevailing species | Average age, years | Reserves per 1 ha, cu. m | | Average Tier I forest structure |
|--------------------|--------------------|--------------------------|-----------------------|---|
| | | Forest-covered lands | Mature and overmature | |
| Pine | 90 | 270 | 345 | 8.6Pine0.8Spruce0.6SilverBirch+Oak,Hornbeam, Aspen,DownyBirch,CommonAlder |
| Spruce | 100 | 299 | 344 | 6.8Spruce1.2CommonAlder1.1Pine0.9SilverBirch + Aspen,Oak,Hornbeam,AshTree,DownyBirch |
| Oak | 157 | 314 | 342 | 6.0Oak1.5Spruce1.3Pine1.2Hornbeam+SilverBirch, Aspen,CommonAlder,Ashtree,Maple |
| Red oak | 28 | 84 | – | 8.4RedOak0.9SilverBirch0.7Pine+ Spruce,Aspen,Hornbeam |
| Hornbeam | 85 | 190 | 258 | 8.1Hornbeam1.1Spruce0.8Oak+Maple,SilverBirch, Aspen,AshTree,Linden |
| Ash tree | 139 | 274 | 285 | 5.2AshTree2.9CommonAlder1.3Spruce0.6Hornbeam+Oak,Aspen,Maple,SilverBirch,Linden |
| Maple | 146 | 283 | 281 | 3.2Maple4.2Hornbeam1.0Oak0.9AshTree0.7Spruce+ Linden,SilverBirch,Aspen,CommonAlder,Pine |
| Birch | 52 | 173 | 255 | 7.1Birch0.9CommonAlder0.7Pine0.7Aspen0.6Spruce+Hornbeam,Oak,Linden,AshTree,Willow |
| Aspen | 64 | 271 | 317 | 6.9Aspen1.9SilverBirch1.2Spruce+CommonAlder, Hornbeam,Pine,Oak,Linden |
| Common alder | 71 | 255 | 305 | 8.7CommonAlder0.7Spruce0.6DownyBirch+ SilverBirch,AshTree,Pine,Aspen,Oak |
| Linden | 58 | 229 | – | 6.2Linden1.4Aspen1.0Spruce0.8SilverBirch0.6Ash Tree+ Oak,Hornbeam,Maple,CommonAlder |
| Willow | 24 | 50 | – | 9.2Willow0.8CommonAlder+Aspen,DownyBirch, Oak,SilverBirch,Maple |
| Total | 86 | 259 | 328 | 6.8Pine1.3CommonAlder1.0Spruce0.9SilverBirch +Oak,DownyBirch,Aspen,Hornbeam,AshTree |

The Pushcha's forests have the average age of 97 years (the old-aged forests are of 105 years old on average); the maximum age ranges from 200 to 300 years depending on tree species while individual gigantic trees are of 400-600 years old. Figure 3.2 shows the breakdown of the National Park's forests by age. According to research data, the minimum age of first signs of the

Pushcha's forests decay is: 140-150 years for pine forests; 180-200 for oak forests and 80-90 years for common alder forests. Figure 3.3 shows dynamics in various forest formations based on the forest age.



Typologically, **pine forests** include 13 main forest types and 2 reclamation derivative types. Mossy pine forests are the most wide spread forests in Belovezhskaya Pushcha. They occupy 40,069 or 53.7% of all pine forests. Mossy pine forests are followed by brake fern pine forests (15.4%), bilberry pine forests (12.2%), shamrock pine forests (7.4%) and heather pine forests (4%). The age structure of pine forests includes I-XII age classes; the average age is 90 years. Middle-aged forest stands (58%) prevail in pine forests in uplands; there are lots of mature (121-160 years) and overmature (161-240 years) trees while young growth (up to 40 years) accounts for 13% of pine forests only. Overmature trees reaches 260 years; individual trees may be of 300-350 years old. About 6% of pine forests are of bog type. They primarily include marsh tea, haircap moss and sphagnous pine forests.

Spruce forests growing in Belovezhskaya Pushcha include 12 main forest types and 3 reclamation derivative types. Prevailing types are shamrock (1,772 ha or 33.9%), bilberry (26%), fern (14.1%), brake fern (7.1%), mossy (5.3%) and nettle (4.9%) spruce forests. The spruce is a common species as a mixture or young growth of other forest formations. A large population of hoofed mammals that feed on the young growth of other tree species promotes the spruce population increase.

Spruce forests have the average age of 100 years; the maximum age is about 200 years while individual trees are of 300-350 years old. As compared to other key forest-forming species in the Pushcha, the spruce has the most surface root system. Therefore, it is very sensitive to the ground water level (GWL) and especially to its variation amplitude and air humidity. To this end, natural digenesis processes occasionally include the mass spruce drying. 28 ths ha of spruce forests were dried up during four seasons (2001-2004) with the total volume of spruce snags of 1.2 mln cu. m. Recent 15 years saw the two-fold decrease in the area occupied by spruce forests in Belovezhskaya Pushcha. Over 4 ths ha of spruce forests transformed into low-density oak and pine forests or in sparse stands.

The National Park's peculiar feature is **white fir** forests. The white fir is the Central European relic species. Its habitat is a small area among reclaimed bogs 120 km away from the north-eastern border of the fir's main area of distribution. The area is about 15 ha. Currently, there are only 20 mature white fir trees of 90-145 years old. This species fructifies well; it is a good self-sown tree.

Broad-leaved forests occupy 6.8% of all forest-covered lands in the Pushcha. Pedunculate oak forests prevail, especially on rich brown forest soils. Along with the pedunculate oak and other species, the **durmast oak** also occurs on the area of 1,000 ha. This is a relic species included in the Red List of the Republic of Belarus. The Pushcha is the eastern border of the plain area of distribution of the durmast oak.

Forests where the **pedunculate oak** prevails occupy 4,265 ha or 5.3% of forest-covered lands in Belovezhskaya Pushcha. Such forests are of the greatest age in Belarus. Oak forests have the average age of 157 years; the maximum age is about 300 years. Gigantic oaks of 400-600 years old often occur in the Pushcha. Typologically, oak forests include 6 forest types. Shamrock oak forests (83.4%) prevail. They are followed by bilberry (5.7%), glague (4.5%) and brake fern (4.0%) oak forests. Nettle and fern oak forests account for 2.4 % only in the aggregate.

Ash tree forests rank the second in terms of the area (0.7%) among the Pushcha's broad-leaved forests. Over 80% of ash tree forests were classified as higher sensitive forests during the recent forest management activities. According to forest management data, almost all ash tree forests are stricken by root rot and stem vermin. Ash tree forests have the average age of 139 years; the maximum age is 200 years. Ash tree forests occupy 1,083 ha of Belovezhskaya Pushcha. Ecologically and phytocenotically, ash tree forests are of the following forest types: shamrock, glague, nettle, spleenwort (fern), meadowsweet, and bog mixed herb forests.

Hornbeam forests occupy about 10% of forest-covered area. They prefer rich sandy-loam soils underlain with loam. They are of different age (up to 200 years). Hornbeam forests are of derivative type. Generally, they replaced broad-leaved and coniferous forests on the felling areas. Pure hornbeam forests are quite rare. They usually include the oak, spruce and other tree species.

Maple forests also derived from oak forests. They occupy only 60 ha and grow on rather rich and well wet soils. Only the hornbeam and ash tree only regenerate under their canopy. Maple forests have the average age of about 150 years. Like linden forests, the maple formation belongs to rare forest species. Maple forests usually replace old-aged oak forests and include a substantial number of old-aged trees.

Linden forests also formed on rich soils and replaced oak forests as part of long-term successions. They occupy 14 ha only. Their average age is about 70 years. Linden forests include the small-leaved linden, pedunculate oak, acutifoliate maple, spruce, and hornbeam. Similar to maple forests, linden forests are of derivative type.

Common alder and downy birch forests belong to the category of broad-leaved bog forests. **Alder** forests grow on rather water-flooded running areas of lowland bogs with rich soils. They occupy about 15% of forest-covered lands. Common alder forests growing in Belovezhskaya Pushcha include 8 main and 5 reclamation derivative forest types. Common alder forests have the average age of 71 years; the maximum age is 150 years. **Downy birch** forests generally grow on leaner stagnantly watered soils. They occupy 3% of forest-covered lands. Downy birch forests have the average age of 60 years; the maximum age is 120 years. About one third of downy birch forests were reclaimed in 50-60s of the past century.

Belovezhskaya Pushcha's small-leaved forests include silver birch forests and aspen forests that grown on tree felling or windfall areas of primary forests or within the areas of natural overgrowing of left fields and upland meadows. **Silver birch** forests occupy about 7% of forest-covered lands and the average age of 60 years; the maximum age is 110 years. Mature and overmature (over 80 years) birch forests account for 8%. They formed on the non-planted tree felling areas of 20-30s of the past century. **Aspen** forests occupy 0.8% of forest-covered lands. They grow on rich soils within tree felling areas of oak and spruce forests. Aspen forests have the average age of 70 years; the maximum age is 110 years.

The natural regeneration should be the preferable process in the National Park. In most cases there is lack of regeneration processes. One of key reasons for such lack of natural regeneration is a high pressure from hoofed animals.

Critical factors and processes affecting the current development of forest eco systems include:

- hydrological conditions damaged by land reclamation activities primarily performed in 1960s (large areas of lowland bogs around the forests and partially within forests were reclaimed with the help of an open drainage network; rectified river and spring bed; reclaimed forest lands);
- extreme climatic conditions affecting forests that took place in late XX - early XXI century (wind, temperature, precipitation);
- higher density of wild hoofed animals in forests;
- higher sensitivity of old-aged forests to adverse external impacts resulting from the natural biological ageing of forests;
- human economic activity taking place in different historic period that damaged the age and species structure of forests;
- large-scale forest fires in XIX century resulting in large areas of single-aged pine forests. The above factors resulted in the following adverse processes:
- changes in natural succession processes in forest eco systems; currently they are manifested by the damaged natural regeneration structure;
- almost complete lack of pine forest natural regeneration resulting from efficient anti-forest fire activities including lowland forest fires.
- smaller areas and transformation of the most watered types of forests (primarily some types of pine, alder and birch forests) caused by changes in the hydrologic conditions and climate

3.2.3. Meadow and Bog Vegetation

Meadow and bog vegetation growing in Belovezhskaya Pushcha National Park accounts for 4.6 and 7.1% respectively. The National Park's largest bogs are located in north-eastern and central parts of the Pushcha as part of Dikoye bog area. Predominately (97.9%), these are lowland bogs. Most bogs in the Pushcha formed by way of mineral soil water logging. One third of open lowland bogs have no tree vegetation; the remaining part is grown with willows (15-20% of the area), downy birch young growth (5-5%) and common alder trees (5-20%).

The large area and considerable peat layer thickness (up to 4 m) of Dikoye bog area account for different water/mineral feed balance observed in various parts i.e.: air, ground, flood. The larger part of the bog area belongs to lowland bog type; individual bog areas have some

features of transition bog. Vegetation primarily includes non-forest communities: mixed herb/sedge/hypnum, sedge/hypnum, gramineous/sedge/hypnum, mixed herb/sedge/sphagnous, sedge and shrub communities. Phytocenotical diversity of the vegetation is a prodromos developed based on the table processing of geobotanic descriptions using Brown-Blanke method and an integrated approach within the international system framework (Rodwell et al., 2002).

3.2.4. Flora

The borderline location of Belovezhskaya Pushcha among larges floristic and geobotanic regions accounts for its unique flora.

Higher Plants. Currently, higher plants growing in Belovezhskaya Pushcha include 1,024 species (about 65% of the listed Belarusian flora species) belonging to 454 genera and families.

The prevailing group is the Angiosperms (96.1% of all higher plants), the Dicotyledonous class (73.3%). The most numerous families include: Compositae (132 species), Graminoids (86 species), Cyperaceae (60), Rosaceae (56), Leguminosae (53), Caryophyllaceae (43), Cruciferae (42), Scrophulariaceae (31), Labiatae (37), and Ranunculus (36). Key genera include *Carex*, *Trifolium*, *Veronica*, *Salix*, and *Ranunculus*.

The absolutely prevailing life form is herbs that account for almost 90% of all Pushcha's plants. Perennial hers account for 65%; they form the basis of meadow herbs and the living oversoil mantle in forests. Annual and biennial plants (up to 25% of the flora) often occur in disturbed habitats: pastures, road sides, recent tree felling areas and glades.

Hardy-shrub plants account for 10% only. Forest-forming species growing in the Pushcha include: *Pinus sylvestris*, *Alnus glutinosa*, *Picea abies*, *Betula pendula*, *Betula pubescens*, *Quercus robur*, *Populus tremula*, *Fraxinus excelsior*, *Carpinus betulus*, *Acer platanoides*, *Tilia cordata*, as well as *Abies alba* and *Quercus petraea* that are typical of the Pushcha only.

The Pushcha's flora includes 58 shrub and 12 undershrub species. The following species are common for broad-leaved and coniferous forest undergrowth: *Corylus avellana*, *Euonymus verrucosa*, and *E. europaea*, *Daphne mezereum*, *Frangula alnus*; for coniferous forests – *Juniperus communi*, *Cytisus ruthenicus*, *Calluna vulgaris*, *Genista tinctoria*; less frequent species include: *Genista germanica*, *Lembotropis nigricans*, *Lonicera xylosteum*, *Linnaea borealis*; for alder and lowland bogs - *Ribes spicatum*, *R. nigrum*, and *R. alpinum*, *Viburnum opulus*, *Rhamnus cathartica*; for raised and transition bogs - *Andromeda polifolia*, *Ledum palustre*, and *Vaccinium uliginosum*. *Betula humilis* occur sometimes. *Salix* species and *Vaccinium myrtillus*, *V. uliginosum*, *V. vitis-idaea* are wide spread.

Recent years saw the distribution of alien tree species (*Quercus rubra*, *Acer pseudoplatanus*, *Prunus serotina* and *P. maackii*, etc) in Belovezhskaya Pushcha and in the republic in general. Their invasion into natural communities threatens the indigenous flora of Belovezhskaya Pushcha.

Algal Flora. According to G.M. Tishchikov (1996), the water body and water course phytoplankton include all main groups and is characterized by a quite high taxonomic diversity (200 species). The phytoperiphyton community includes 250 species. Diatoms and green algae prevail in both groups.

Lichenoflora. According to the recent research data, there are 292 lichen species growing in the Pushcha. The Pushcha has 16 of 17 species that are on the Red List of the Republic of Belarus. 70 lichen species belong to the foliose lichen; 67 species are of fruticose type and 115 species belong to the crustose lichen.

Bryophyte Flora. According to the recent research data (Experimental Biology Institute, National Academy of Science of Belarus), the Pushcha has 270 bryophyte species including 2 antocerote, 59 liverwort and 210 green moss species. One third of bryophytes listed on the Red List of the Republic of Belarus (5 of 15) occur in Belovezhskaya Pushcha.

Mycoflora. Over 3,000 fungi species occur in the Pushcha. Primarily they belong to *Aphyllorphorales* (256) and *Agaricales* (300). 60 species of plant pathogenic powdery mildew fungi have been discovered in recent years. Almost no data is available on micro mycete flora.

Belovezhskaya Pushcha has 12 rare fungi species that are included in the Red List of the Republic of Belarus.

The vascular plant flora of Belovezhskaya Pushcha includes 62 species included in the Red List of the Republic of Belarus; for other 11 species there is no evidence of growing in the Pushcha. This makes up over one third of higher vascular plants recommended for protection in the republic. Ten rare species growing in the Pushcha belong to Protection Class I; 14 species belong to Protection Class II; 24 species are of Protection Class III; and 14 species are of Protection Class IV. In addition to that, Belovezhskaya Pushcha has some species (21) protected under the CITES Convention, Bern Convention, and the EEC Habitat Directive. Figure 3.2 shows key areas of concentration of habitats of rare and threatened plant species growing in the Pushcha (by forest quarters).

Most rare species growing in Belovezhskaya Pushcha are relic species of the Tertiary Epoch. Previously, they were more wide spread; however, by now they have been conserved only in individual few areas among which Belovezhskaya Pushcha is of special importance as it conserved its natural image.

Many of such species occur at borderlines of or outside their areas of distribution. There are a lot of Western European species (26). The Eastern flora is less represented in the Pushcha i.e. only 5 species occur at the western borders of the areas of distribution. Belovezhskaya Pushcha also has 7 species growing at the northern border of the area of distribution and 11 species that occur at the southern border.

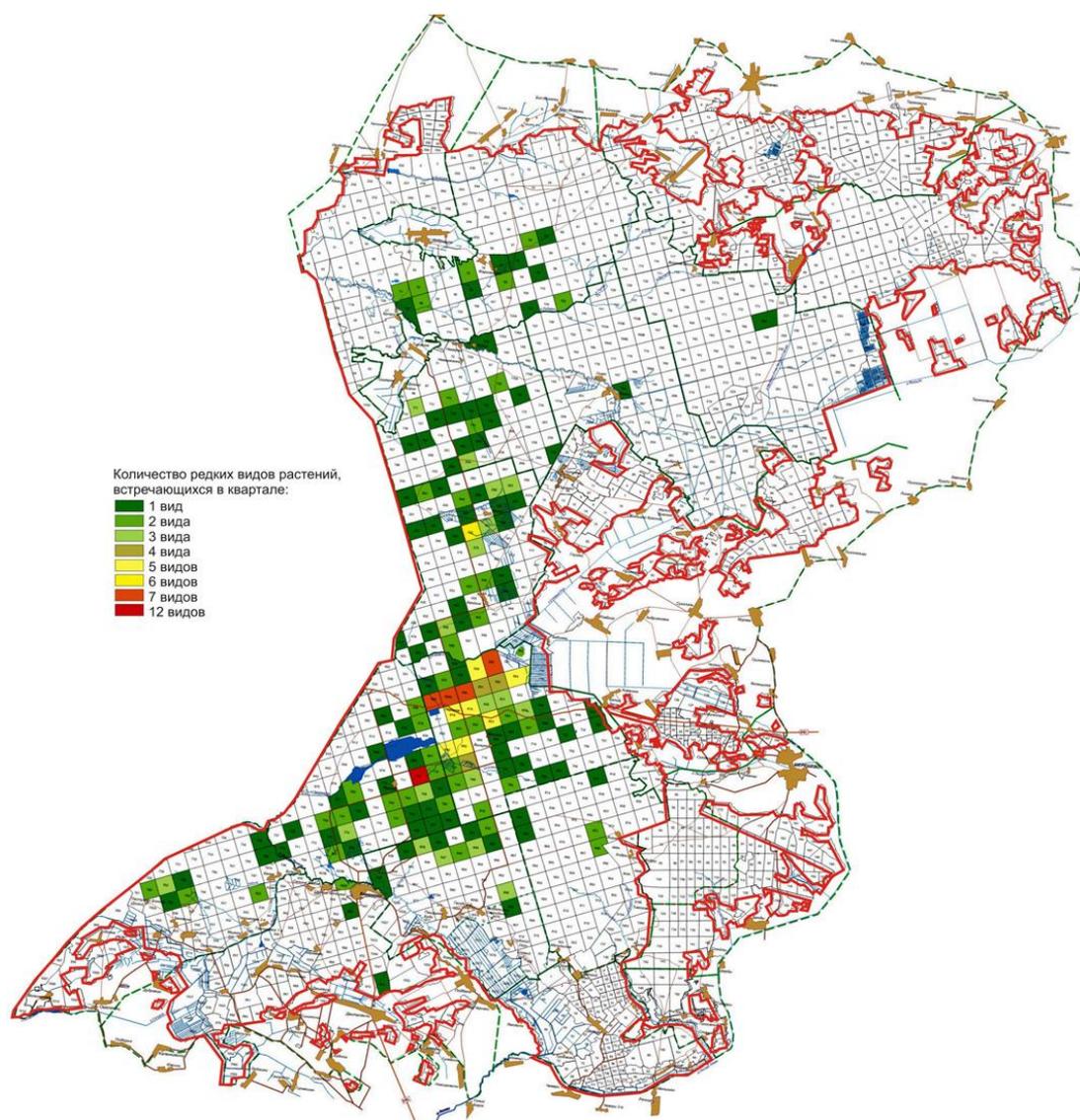


Figure 3.2. Rare Species Concentration Areas

Key factors threatening rare plant species growing in Belovezhskaya Pushcha fall under two groups i.e.: anthropogenic/zoogenic and natural. The first group includes human economic activity directly or indirectly affecting populations of rare species. Mostly, populations are located outside the strictly protected zone that provides for limited human interference. There are consequences of anthropogenic activity (land reclamation, agricultural land transformation, and excessive recreational load). The excessive pressure of wild hoofed animals (trampling-down and gnawing) is critical for Belovezhskaya Pushcha.

The primary natural factor is the natural plant succession that includes overgrowing of the tree tiers. This changes the lighting conditions of habitats; ecotopes are overgrown with shrubs and tree undergrowth; habitats become more matted; and rare more competitive species replace rare ones.

Top-priority methods described in the program aimed at conserving rare and threatened plant species of Belovezhskaya Pushcha is *in situ* conservation within primary habitats. The natural environment only will ensure integrated and long-term conservation of species and their natural evolution. Such methods are based on data available on the biology and ecology of conserved species, their dynamic development and the process of identification of adverse factors. In the general case, the most favorable methods should minimize any adverse impacts and conserve species in their typical habitats.

3.2.5. Vegetation Components Critical for Key Species and Biotic Groups

According to the forest management data, the National Park has some forest areas of a high environmental conservation value. These are forest and vegetation communities of unique structure, composition and age. They include population of rare and threatened plant species. Areas of preferential protection occupy 8,529.3 ha in total. Table 3.10 lists forest and vegetation communities of preferential protection and their breakdown by the forestries dealing with respective areas of preferential protection.

Table 3.10. List of Forest and Vegetation Communities by Areas of Preferential Protection (according to 2005 forest management data)

| № | Name of specially protected areas | Location (forestry, compartment) |
|----------------------|---|--|
| 1 | Foreststand with <i>Quercus petraea</i> | Korolevo-Mostovskoe: 777, 778, 779, 780, 805, 806, 807, 808 |
| | | Nikorskoe: 749, 781, 782, 783, 809, 810, 811 |
| | | Pashukovskoe: 829, 830, 831, 832, 833, 848, 849, 850 |
| 2 | Foreststand with <i>Abies alba</i> | Yasen'skoe: 812,813 |
| | | Yazvinskoe: 235 |
| | | Oschepskoe: 196 |
| | | Nikorskoe: 562 |
| | | Belyanskoe: 769 |
| 3 | <i>Acer platanoides</i> foreststand | Hvoynikskoe: 323, 379 |
| 4 | High-aged <i>Fraxinus excelsior</i> foreststand | Nikorskoe: 534, 558, 593, 682, 683 |
| | | Brovskoe: 42, 54, 90, 105, 3A, 29A, 30A |
| | | Svislochskoe: 75, 76, 91 |
| | | Yazvinskoe: 90, 115, 140, 144, 169, 172, 199, 200 |
| | | Oschepskoe: 206, 207, 177A |
| | | Hvoynikskoe: 323, 324, 348, 349, 350, 351, 352, 380, 434, 480, 506 |
| | | Korolevo-Mostovskoe: 681, 709, 710, 744 |
| Nikorskoe: 714, 589A | | |

| № | Name of specially protected areas | Location (forestry, compartment) |
|----|--|---|
| | | Pashukovskoe: 906, 920 |
| 5 | High-aged <i>Alnus glutinosa</i> foreststand | Brovskoe: 43 Yazvinskoe: 115,168, 199 Hvoynikskoe: 321, 350 |
| 6 | <i>Tilia cordata</i> foreststand | Svislochskoe: 82, 98 Oschepskoe: 176 |
| 7 | High-aged oak foreststand | Brovskoe: 54 Oschepskoe: 146, 176, 188,207 Hvoynikskoe: 350, 505 Korolevo-Mostovskoe: 583, 611, 642, 646 Nikorskoe: 788 Belyanskoe: 701, 736 |
| 8 | <i>Juniperus</i> thicket | Rechitskoe: 205 |
| 9 | Cladonio-Pinetum | Brovskoe: 14, 43 Svislochskoe: 247 Porozovskoe: 22, 71, 75, 76 Novodvorskoe: 51, 72 Belyanskoe: 995 Dmitrovichskoe: 943, 953, 964, 968, 971, 980, 987-989, 1033 Rechitskoe: 1, 3, 4, 5, 9, 11, 15-18, 24-26, 30, 32, 33, 35, 36, 66, 98, 202,209,210 Shereshevskoe: 167, 168, 169, 175, 194, 197, 198,201 |
| 10 | Ledo-sphagnetum | Yazvinskoe: 91, 143 |
| 11 | Areas with rare and endangered plants, included in the Red Book of Belarus | Brovskoe: 95, 71,72, 73, 88 Svislochskoe: 25, 35, 57-59, 75-78, 91, 93-95, 98, 107, 110, 111, 113,123-125 Novodvorskoe: 2 Yazvinskoe: 71, 87, 88, 116, 138, 139, 141, 143, 172, 173, 200, 202, 203,233, 234,236, 270 Oschepskoe: 141,197 Novoselkovskoe: 116, 143, 168,169, 170, 186 Hvoynikskoe: 263-265, 291, 292, 294-297, 321, 322, 327, 349-352, 377-379, 433-435,458,460, 479-482, 504, 506 Korolevo-Mostovskoe: 552-554, 586, 588, 614, 616,646, 647, 678- 681, 708-713, 740-746, 772-775, 777, 779, 780, 801, 802, 804, 806-808, 824 Nikorskoe: 533, 556-560, 562, 589-593, 589A, 618-622, 651-658,682, 683, 685-689, 714, 715, 719, 721, 748, 749, 751,753, 784, 786, 787,810,811 Belyanskoe: 698, 731, 732, 761-765, 769, 792-794, 925 Pashukovskoe: 828-833, 843, 847-850, 863, 864, 890, 898, 899, 866, 880-882, 889 Yasen'skoe: 815-817, 852, 869, 871-873, 886-888, 894, 910, 918, 922 |

According to floristic and faunistic research data, Dikoye bog area has the following habitats of a high environmental value that shall be conserved pursuant to the EEC Habitat Directive:

2330 *Malcolmietalia* dune grasslands.

Typical community: *Corynephorum canescentis*, *Agrostidetum vulgaris*.

The main plant species: *Corynephorus canescens*, *Agrostis vulgaris*, *Scleranthus perennis*, *Sedum acre*, *Artemisia campestris*.

6230 Species-rich *Nardus* grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe).

Typical community: *Nardetum strictae*.

The main plant species: *Nardus stricta*, *Luzula nivalis*, *Potentilla erecta*, *Briza media*, *Anthoxanthum odoratum*, *Agrostis capillaris*.

6410 *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils.

Typical community: *Molinietum coeruleae*.

The main plant species: *Molinia caerulea*, *Serratula tinctoria*, *Potentilla erecta*, *Galium boreale*, *Briza media*.

7140 Transition mires and quaking bogs.

Typical community: *Caricetum limosae*, *Caricetum chordorrhizae*, *Eriophoretum vaginati*.

The main plant species: *Carex limosa*, *Carex chordorrhiza*, *Carex lasiocarpa*, *Eriophorum vaginatum*, *Calamagrostis neglecta*, *Oxycoccus palustris*, *Menyanthes trifoliata*, *Comarum palustre*, *Betula pubescens*, *Betula humilis*, *Sphagnum*.

7230 Alkaline fens.

Typical community: *Phragmitetum communis*, *Caricetum elatae*, *Caricetum omskianae*, *Caricetum appropinquatae*, *Equisetetum limosi*, *Urtico-Alnetum glutinosae*, *Sphagno-Alnetum glutinosae*.

The main plant species: *Carex elata*, *Carex appropinquata*, *Equisetum fluviatile*, *Phragmites communis*, *Alnus glutinosa*, *Salix cinerea*, *Lysimachia vulgaris*, *Calamagrostis epigeios*, *Caltha palustris*.

3.3. Fauna and Animal Populations

3.3.1. General Description of Fauna

Belovezhskaya Pushcha has a rich fauna due to the fact that forests primarily include old-aged coniferous and coniferous/broad-leaved forests. As Dikoye bog area was included into Belovezhskaya Pushcha, the National Park has a wide range of animal species inhabiting lowland bogs. Habitats along small river valleys and near water reservoirs also enrich the biological diversity of the Pushcha's fauna.

According to long-term research data, Belovezhskaya Pushcha has over 12,000 invertebrate species and 362 vertebrate species including 31 fish species, 11 amphibian species, 7 reptile species, 254 bird species, and 59 mammal species.

3.3.2. Key Invertebrate Groups

Belovezhskaya Pushcha has an extremely rich invertebrate fauna composed of 12,000 species (according to incomplete data) including 8,500 insect species. Zoogeographically, wide spread palaeartic species prevail in the invertebrate fauna. There are numerous populations of Eastern and Central European invertebrate species in the Pushcha; Atlantic (Western European) species are more rare while there are few populations of Southern species. Generally, unlike other European forest areas, the Pushcha has a very diverse invertebrate fauna. By now there are almost no data available on other invertebrate groups (protozoans, worms, arachnids, mollusca, etc.). However, we know that unique invertebrate communities are conserved in the Pushcha. They inhabit dead and rotten wood, bracket fungi, raised and lowland bogs.

Belovezhskaya Pushcha National Park has coleopteran species belonging to 87 families i.e. 84.5% of families recorded in the Republic. This proves the unique nature of biological diversity. There are lots of relic species. They include species belonging to *Rhysodidae* (they primarily occur in virgin forests and disappear after tree felling), *Nosodendridae*, and *Prostomidae* families. A total of 1,900 coleoptera species are recorded in the Belarusian part of Belovezhskaya Pushcha (about 58% of the Republic's beetle fauna). The most data is available on species belonging to such families as *Carabidae*, *Dytiscidae*, *Silphidae*, *Scarabaeidae*, *Elateridae*, *Cantharidae*, *Byrrhidae*, *Mycetophagidae*, *Melandryidae*, *Cerambycidae*, and *Chrysomelidae*; while there is few data on *Staphylinidae*, *Hydrophilidae*, *Histeridae*, *Heteroceridae*, *Cryptophagidae*, *Nitidulidae*, and *Curculionidae* families. We expect that at least 500 more coleoptera species will be discovered in the Pushcha.

As forest eco systems prevail in the National Park, there is the most data available on the forest entomofauna. The species composition of herpetic biont coleopteran species is one of the most diverse among forest entomic communities. Beetles i.e. ground and road beetles are the kernel of this group. There are numerous populations inhabiting the soil surface and forest floor.

Thirty six ground beetle species are recorded in studied pine forests growing in Belovezhskaya Pushcha. The most wide spread species belong to 4 genera as follows: *Pterostichus* (7 species), *Carabus*, *Calathus* and *Notiophilus* (4 species in each genus). Along with ground beetles of common forest type, pine forests have some species typical of open eco systems. They are: *Synuchus vivalis*, *Poecilus cupreus*, *Broscus cephalotes*, *Harpalus rufipes*, and *H. griseus*. Probably, there are appropriate habitats for their populations (cleared strips, fire breaks, and open spaces resulting from the pine undergrowth loss).

There are some species that are rare for Belarus i.e.: *H. hirtipes* that is a xerophilous species (there are only some evidence of discoveries of this species in Belarus that date back to early XX century); *Pt. quadrioveolatus* that is a forest species more typical of broad-leaved forests (it rarely occurs within the whole area, there are only some discoveries); *Amara consularis* that is also wide spread throughout Belarus (it occurs in dry biotopes and prefers sandy soils; however, it is rather a rare species).

The Western European species of *Carabus intricatus* that is on the Red List of the Republic of Belarus has been recorded in pine plantations. Belovezhskaya Pushcha is the only

place in Belarus where this mesophilous species occurs in mossy pine forests and even in very dry mossy forests similar to lichen forests.

Carabus arvensis, *Calathus micropterus*, *Pt. Oblongopunctatus* prevail in pine plantations. They account for over 70% of all ground beetle populations in total. *Pt. Niger* is also a prevailing species; however, its populations is just over 5% and much lower as compared to the above three species. *Carabus hortensis* prevailed in plantations of 27 years old; however, it is a sub-dominating species in plantations of 60 years old.

Road beetles are an important component of carnivorous coleopterous herpetic bionts as they play an important role in biocenosis in terms of number of species and populations. There are 253 road beetle species recorded in the Pushcha (just under 35% of the family species in Belarus). The highest number of road beetle species was found in pine forests and near-water areas (69 and 59 species respectively).

A total of 60 road beetle species was discovered in pine forests. Such species belong to 9 subfamilies: *Aleocharinae* (22 species), *Tachyporinae* (20), *Xantholininae* (5), *Staphylininae* (4), *Paederinae* (3), *Steninae* (3), *Metopsiinae* (1), *Omaliinae* (1) and *Oxytelinae* (1). The representative of *Metopsiinae* *Metopsia similis* subfamily was recorded in the Pushcha for the first time.

Faunistic discoveries that pose a great interest include: *Mycetoporus baudueri*, *M.punctus*, *Bryoporus crassicornis*, *Sepedophilus obtusus*, *Quedius nemoralis*, *Q.nigriceps*, *Chilomorpha longitarsis*, and *Bolitochara lucida*. The species composition of road beetles occurring in the studied plantations is more diverse as compared to road beetles occurring in dry pine forests in various landscape subzones of Belarus. Many of the above species inhabit xerothermic areas. They are typical inhabitants of coniferous tree waste in sun-heated pine forests. However, road beetle communities are based on typical forest mesophilic species of *Staphylinus erythropterus* and *Ischnosoma splendidum* that prevail in pine forests of both types. There are only some representatives of common inhabitants of wet forest floor i.e. *Lathrimaeum atrocephalum* and *Stenus clavicornis*. Plantations also have diverse communities of ant-loving crickets (*Zyras*) and fungi inhabitants (*Lordithon*, *Bolitochara*, *Atheta*).

Staphylinus erythropterus and *Ischnosoma splendidum* prevail in 27-year-old pine plantations. *St. erythropterus*, *I.splendidum*, *Atheta fungi*, *Zyras funestus*, and *Stenus impressus* are dominant species in 60-year-old plantations. The factor of species similarity in plantations of different age is 62%. Due to greater forest rarity and lesser crown density, there are no hydrophilous *Lathrobium* species in 60-year-old plantations.

The increase in plantation age causes the composition of dominant species. While культурах *St. erythropterus* and *Ischnosoma splendidum* are the only dominants species in 27-year-old plantations and they account for about 60%, the share of such species was much lower (45%) in 60-year-old plantations and there are 5 dominant species. *Atheta fungi* and *Stenus impressus* are sub-dominant species in young plantations; however, they prevail in middle-aged forests.

Belovezhskaya Pushcha's near-water habitats include the banks of artificial water bodies and floodplains of small rivers, for instance, the Lesnaya River. *Stenus* and *Lathrobium* road beetles and species belonging to *Omaliinae*, *Oxytelinae* and *Aleocharinae* subfamilies prevail in near-water habitats. The composition of road beetle species inhabiting banks of water bodies at the water edge includes species typical of such habitats i.e. relatively large *Philonthus quisquiliarius*, *Ph. Rubripennis* that actively hunt at open areas in the dirt and alluvia near water. *Lathrobium* species that are large inhabitants are diverse and numerous on the soil surface. *L. fennicum* was recorded only in this habitat of all habitats under study. This species occurs throughout Belarus; however, it is rather rare in general. There are numerous populations of *Stenus boops*, *S. comma*, *S. cicindeloides*, *S. solutus* (recorded in Belovezhskaya Pushcha for the first time for Belarus) at the water edge. *C. lindrothi* belonging to *Carpelimus* genus is worth mentioning. It occurs more seldom than other large representatives of similar species. Generally, species feeding on algae and detritus are wide spread at well-heated near-water areas.

Paederus road beetles occur in near-water vegetation; in addition to numerous and wide spread *P. riparius* populations, *P. fuscipes* that is much rare species is also recorded. Diverse species of *Omaliniinae*, *Olophrum consimile*, *Arpedium quadrum* and other subfamilies inhabit floodplain meadows. *Anthobium fuscum* is recorded at one place in Belarus i.e. the Lesnaya River's floodplain near the village of Kameniuki. Hygrophilous *Ischnosoma longicorne* species occur on floodplain meadows together with eurytopic *Ischnosoma splendidum*. Other hygrophilous species i.e. *Aleochara brevipennis* and *Oxypoda lividipennis* are also typical of the Lesnaya River's floodplain.

Diverse and unique populations of road beetle species inhabit cattle dung on the Lesnaya River's floodplain meadow used as a pasture. Numerous populations of *Philonthus cruentatus*, *Ph. splendens*, and *Ph. varians* occur in the dung. Belovezhskaya Pushcha is the only place in Belarus where *Ph. coprophilus* occurs. Typical saprophilous species i.e. *Tachinus fimetarius*, *Aleochara tristis*, *Atheta longicornis*, *Acrotona aterrima* also occur in the dung.

Broad-leaved forests have less diverse species (from 12 to 38 species). The most common species for all forest types is the eurytopic hygrophilous forest species of *Philonthus decorus*. *Staphylinus erythropterus* is the second dominant forest species. *Quedius fuliginosus* and *Q. molochinus* large species are typical for oak and hornbeam forests. They are active raptorial feeder on the forest floor. *Xantholinus tricolor*, *Othius punctulatus* and other species are diverse and numerous on the broad-leaved forest floor. *Lathrobium* hygrophilous species occur almost in all types of the Pushcha's broad-leaved forest along with *Stenus humilis* that is typical of floodplain forests, swampy forest areas and banks of small forest water bodies and puddles. *Oxypoda lividipennis* hygrophilous species is a wide-spread and prevailing species in foliage forests. *Ocalea badia*, *Ilyobates nigricollis*, and *Meotica* species inhabit common alder forests. In fact, these species indicate common alder forests in Belarus. *Atheta arctica* species is worth mentioning. This rare species occurs only in two places of Belarus i.e. Belovezhskaya Pushcha and Vitebsk Oblast. The very rare species of *Amischa decipiens* was recorded in Belovezhskaya Pushcha only.

The fungi-specific entomofauna includes 44 species. *Gyrophaena* genus includes 8 species inhabiting pileate fungi and bracket fungi. They are primarily mycetophages. *G. nitidula* which is the largest species in the genus is recorded in Belovezhskaya Pushcha. Largest species of *Oxyporus rufus* and *O. Maxillosus* that are mycetophages are also typical of fungi. Fungi occupy an important ecological niche inhabited by diverse road beetle and other coleopterous species. The Pushcha's forest areas especially old-aged foliage forests are an important refugium for preservation and conservation of mycetobiont populations.

The group of sub-bark inhabitants is composed of 30 species including common xylobionts (*Gabrieus splendidulus*, *Quedius xanthopus*, *Nudobius lentus*, and *Phloeopora testacea*) and species that pass winter under the tree bark. They were found there in the late autumn or early spring (*Ontholestes murinus*, *Othius punctulatus*, *Lathrobium geminum*, and *Tachyporus hypnorum*). Similar to fungi inhabitants, such species include raptorial bark beetle larvae, for instance, *Nudobius lentus*.

Some road beetle species primarily occur in tree juice effluents where they hunt on other insects. *Carphacis striatus*, *Atheta trinotata*, *A. euryptera* and other mycetophiles and sub-bark *Phloeonomus planus* often occur in tree juice effluents. Belovezhskaya Pushcha's old-aged forests that have lots of "weeping" oaks ensure the reproduction and existence of this specific ecological niche inhabited by many rare insect species.

The National Park has 145 water beetles (59.4% of the Belarusian fauna). The greatest number of species and genera belong to *Dytiscidae* family (79 species, 23 genera). *Hydroporus* and *Agabus* genera are the most numerous (14 and 11 species respectively). 40 species belonging to 15 genera in *Hydrophilidae* family were recorded in the Pushcha. Unknown *Rhantus incognitus* mud species that is on the Red List of the Republic of Belarus was recorded in the National Park. Other rare species i.e. *Hydroporus melanarius*, *Laccornis oblongus*, *Deronectes latus*, and

Laccobius also occur in the National Park. Generally, water coleoptera are diverse in Belovezhskaya Pushcha.

By now there is few data available on soil invertebrates that are one of the most numerous and important forest biogeocenosis component. So far, we do not know the structural organization and distribution of invertebrate communities in the Pushcha's main forest types. There is few data available on their composition and density. There is a lack of inventory lists for some groups of soil animals.

Main types of Belovezhskaya Pushcha's forests have 3 types, 6 classes and 17 orders of soil invertebrates. They fall under some model groups that serve as indicators of soil and phytocenotic conditions. They are earthworm, click beetles, Diptera belonging to 94 species of 58 genera as part of 23 families. The unique geographical position of the Pushcha is the key reason for invertebrate heterogeneity. Along with Nemoral fauna components, typical boreal species inhabiting taiga biogeocenosis are wide spread in the Pushcha's forests.

Among invertebrates, insects (22-68%) and Arachnids (10-56%) are the most wide spread in soils of main types of the Pushcha's forests. Coleoptera (46-83%) and Diptera (6-38%) are prevailing insect types. In terms of zoomass, insects (23-79%) prevail in coniferous forests and earthworms (24-75%) prevail in foliage forests. The composition and structure of soil invertebrate communities prevailing in Belovezhskaya Pushcha's pine and foliage forests are similar to those typical of the central part of mixed forests while spruce forest communities are similar to those occurring in the Southern taiga sub-zone.

Soil mesofauna in Belovezhskaya Pushcha's forests has a high cumulative density. The minimum density value was recorded in lichen pine forests (243 ± 18 specimens per sq. m); and the maximum value is typical of haircap moss pine forests (586 ± 22 specimens per sq. m). The increase in soil humidity in pine forests results in higher cumulative invertebrate density; while higher soil humidity in spruce forests reduces the cumulative invertebrate density. The greatest cumulative zoomass of soil mesofauna is typical of foliage forests ($6.2 \pm 0.9 - 16.8 \pm 2.0$ g/sq. m); and the smallest value is recorded in pine forests ($1.9 \pm 0.2 - 4.8 \pm 0.5$ g/sq. m). Along with highly productive soil animal communities occurring in hornbeam, hornbeam/birch and hornbeam/oak forests, Belovezhskaya Pushcha has typically boreal areas characteristic of the southern taiga spruce forests.

There is data available on *Noctuidae* higher moths (owlet moths) belonging to *Lepidoptera* order. The research activities discovered 9,133 specimens of higher moths belonging to 11 families. By now 61 species have been recorded in the Pushcha. They belong to *Noctuidae* family; three owlet moth species (*Calotaenia celsa*, *Conistra rubiginosa*, and *Phragmitiphila nexa*) are new for Belarus; and one species is new for Belovezhskaya Pushcha.

Invertebrate distribution in the Pushcha strongly depends on natural conditions (terrain, ground-forming rocks, hydrology, and vegetation). The key factors include soil humidity and type. The composition of forest stands greatly affects the structural organization of soil animal communities under similar soil conditions.

3.3.3. Fishes

There is few data on the fish fauna of Belovezhskaya Pushcha's water bodies. There is only a summary list of fish species occurring in Belovezhskaya Pushcha's water bodies; and 1984 saw the research of fish fauna in a number of lakes. According to this information, 31 fish species belonging to 11 families inhabit water bodies of Belovezhskaya Pushcha.

Typical lake/river fish species are the most numerous and wide spread; they include *Esox lucius*, *Rutilus rutilus*, *Perca fluviatilis*, and *Gymnocephalus cernua*. They occur in all water bodies and prevail over other types.

There are no natural lakes in Belovezhskaya Pushcha. All artificial water bodies are classified as hollow water, eutrophic, nutrient-rich. They are of the crucian carp/line type. Typical limnophile species that are not sensitive to dissolved oxygen prevail in water bodies. They include *Tinca tinca*, *Leucaspius delineatus*, and *Carassius carassius*. There are some

introduced species i.e. *Carassius auratus gibelio* and *Cyprinus carpio*. There is also an invader species of *Percotus glenii*. The pike and line are prevailing species.

Unpretentious fish species such as *Blicca bjoerkna*, *Cobitis taena*, and *Misgurnus fossilis* constantly occur in small rivers and land reclamation channels of Belovezhskaya Pushcha. *Gobio gobio*, *Leuciscus idus*, and *Alburnus alburnus* prefer water courses with sandy bottom. *Abramis brama* and *Scardinius erythrophthalmus* rarely occur in former riverbeds.

Rheophilous fish species, for instance, *Leuciscus leuciscus* and *Leuciscus cephalus* inhabit larger rivers as they prefer clean water and fast current. However, they are not numerous as almost all rivers in Belovezhskaya Pushcha tend to shallowing and silting. The mudfish, loach, ide, silver bream, and muvarica occur in such water courses.

Gasterosteus aculeatus occurs in rivers with good oxygen conditions. It was brought together with the pond fish seeding to the Dnepr basin's water bodies and, then, invaded all rivers.

The only representative of the arctic freshwater fish fauna is *Lota lota*. It occurs in the largest rivers, for instance, in the Pravaya Lesnaya River. Its populations may be quite high. There are some reports on *Barbus barbus* occurring in the Pravays Lesnaya River. This species is on the Red List of Belarus; however, these reports require verification. The mass species occurring in the Pravaya Lesnaya River is the *Lampetra planeri*; while *Silurus glanis* is a rare species. Sometimes it occurs in the lower current. According to some data, small *Anguilla anguilla* specimens sometimes occur in the Pravaya Lesnaya River; however, such information also requires verification.

3.3.4. Amphibians and Reptiles

The herpetofauna research results showed that the amphibia are the most numerous species in Belovezhskaya Pushcha. They include 11 species two of which are on the Red List of the Republic of Belarus.

Rana arvalis is a prevailing species in Belovezhskaya Pushcha's forests. It prefers common alder and spruce forests. *Rana temporaria* representatives inhabiting open areas are also very numerous. *Hyla arborea* is also rather typical of Belovezhskaya Pushcha. *Rana lessonae* occurs more rarely. The little water frog inhabits areas near water bodies or water bodies themselves. In terms of number, *Bufo bufo* ranked the third following the moor frog and brown frog. It occurs in oak forests; individual specimens occur in common alder and birch forests. *Bombina bombina* inhabits open spaces; during the reproduction period their breeding cries are heard in all water bodies of Belovezhskaya Pushcha while *Bufo viridis* breeding cries are rarely recorded. *Pelobates fuscus* is a common species for Belovezhskaya Pushcha; however, it hides and inhabits cultivated lands.

Bufo calamita inhabiting open areas of Belovezhskaya Pushcha near river floodplains, lakes, land reclamation channels, and ponds is a rare species included into the Red List of the Republic of Belarus. Its populations vary; generally, they tend to considerable reduction.

Triturus vulgaris often occurs in stagnant water bodies; *Triturus cristatus* included into the Red List occurs much more rarely. This species is classified as non-threatened; however, its populations are low throughout the area.

Reptiles include 7 species in Belovezhskaya Pushcha. *Natrix natrix* is the most wide spread and numerous species of three species occurring in the Pushcha. *Lacerta vivipara* and *Lacerta agilis* are typical of Belovezhskaya Pushcha; their populations are quite numerous. They inhabit lowland well-warmed places. *Anguis fragilis* occurs more rarely. Its populations are quite numerous in birch forests only. Currently, *Vipera berus* is a rare species occurring in lowland areas with individual elevations. *Coronella austriaca* inhabiting Belovezhskaya Pushcha is on the Red List of the Republic of Belarus as it is one of the rarest species of herpetofauna. *Emys orbicularis* is the only turtle species in Belarus. Probably, it migrates along the beds of large rivers.

3.3.5. Birds

The Pushcha's bird fauna was studied in 200-2008. This research resulted in a current list of birds including 229 species 178 of which are nesting or supposedly nesting. In addition to that, 17 new species were recorded. They are primarily classified as aquatic/boggy species and occur in the Pushcha during the migration. New nesting birds were also recorded.

Thus, the list of birds occurring in the Belarusian part of Belovezhskaya Pushcha includes 253 species that were recorded there at least once. 184 species were recorded as nesting birds (or supposedly nesting). Large taxons include 18 orders and 54 families. Passeriformes have the most diverse species composition (99 species) followed by Charadriiformes (37), Anseriformes (27), Falconiformes (25), Strigiformes (12), Ciconiiformes (10), Piciformes (10), Gruiformes (7), etc.

The bird fauna of Belovezhskaya Pushcha has a number of specifics making it unique among other Belarusian areas including areas of preferential protection.

In Belovezhskaya Pushcha there are 64 rare and threatened bird species included into the Red List of the Republic of Belarus (88.9% of the list); 41 species are classified as nesting birds; 20 species include birds that occur in the Pushcha during migration; and 3 species are classified as vagrant.

3.3.6. Mammals

The historically established mammal fauna of the Belovezhskaya Pushcha is rather extensive in terms of both, species and number. Not only it includes the Central European species, but also the Southern, Northern, Western and Eastern European ones. For a number of species Belovezhskaya Pushcha serves as a border of the geographic range, while for the European bison it is the last remaining natural habitat on the entire Earth. Some of the species belonging to the indigenous mammal fauna were conserved, and certain deleted species were restored by way of renaturalization.

As of today the fauna found in Belovezhskaya Pushcha includes 59 mammal species (80% of the Belarusian mammal fauna) that belong to 17 families of 6 orders. The Rodentia (20 species), Chiroptera (13 species) and Carnivora (12 species) prevail on the territory of Belovezhskaya Pushcha National Park. These three orders account for 65.2% of the overall number of species registered here. The remaining 14 species are represented by the Insectivora (7), Artiodactyla (5) and Lagomorpha (2).

The rare mammal species inhabiting the Belovezhskaya Pushcha include 12 species of the orders of Artiodactyla (1), Chiroptera (5), Rodentia (4) and Carnivora (2).

The most valuable representatives of the wild beasts in the Belovezhskaya Pushcha are the Ungulata, including the bison, deer, wild boar, roe deer and elk. The game ungulates reached a high number and population density due to the extensive biotechnical and protective activities undertaken in the 80-s of the last century. Being nearly the largest consumers of the primary organic products represented by the woody forage, the ungulates that increased in number produced a significant adverse impact on reafforestation. The "ungulates-forest" issue that emerged in 1960-1980 was resolved through controlling the population of the game ungulate species and bison by capture, reduction and selection shooting. In the period between 1990 and 2003 the massive elimination of the deer, wild boar, a certain number of the roe deer and bison, coupled with other factors resulted in a substantial decrease of the ungulate population. The number of wild ungulates and their population dynamics for the last 7 years are shown in Table 3.15. The implemented biotechnical activities led to certain redistribution in the ungulates space structure and load rate with respect to the most valuable biocenoses, while the annual control over the number of game ungulate species generally decreased the pressure upon the undergrowth and underwood.

The **bison**, as a conditionally restored species, is unable to exist in Belovezhskaya Pushcha without human assistance. Because of the lack of woody forage, accumulation of heavy metals in the animal's body and the deficiency in certain microelements, some males are

prone to urinogenital diseases, while the females are not able to entirely realize their reproductive potential. As the organic feed is scarce, the bison and other ungulates are forced to migrate outside Belovezhskaya Pushcha, be it episodically or for good, in the fall and winter periods. In the recent years around 40% of bisons can be found outside the boundaries of their regular winter extra nutrition areas.

Table 3.15. - Wild Ungulates Population, 2000-2006

| Species | Population, Number of Specimens | | | | | | |
|-----------|---------------------------------|------|------|------|------|------|------|
| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
| Bison | 248 | 260 | 265 | 275 | 277 | 299 | 312 |
| Deer | 1400 | 921 | 746 | 840 | 1247 | 1474 | 1243 |
| Roe deer | 510 | 447 | 339 | 442 | 492 | 581 | 540 |
| Elk | 66 | 54 | 59 | 55 | 71 | 94 | 78 |
| Wild boar | 860 | 749 | 954 | 870 | 1193 | 1600 | 1500 |

The bison elimination rate amounted to the average of 5.8%, with the indicator varying from 3.6 to 9.7% for different years. As of the beginning of 2006, the bison population was characterized by the following sex-age structure: adults accounted for 62% with the number of females evidently prevailing (19% - males and 44% - females). Young immature specimens accounted for almost a quarter of the entire population (22%). Fifteen percent of the population was represented by the young of the current year. The distribution of bison groups throughout the Pushcha territory is described in Figure 3.13 below.

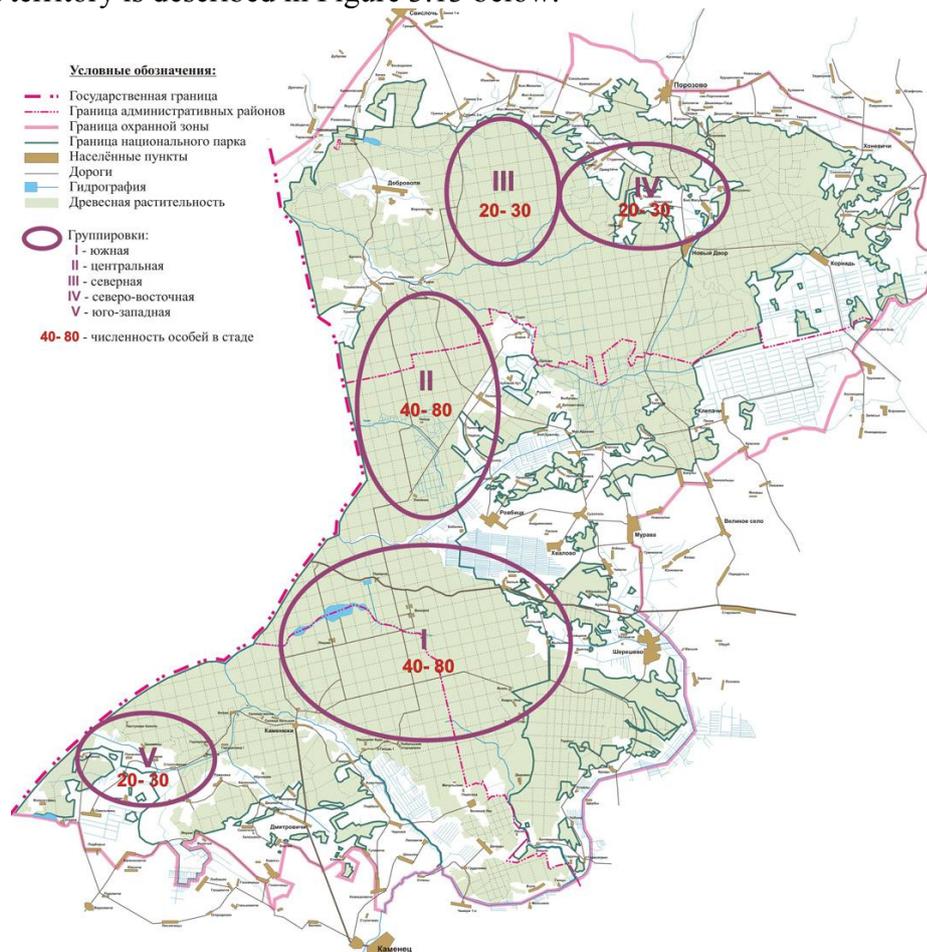


Fig. 3.13. Bison Distribution

The **European red deer** is the ungulate species that is most generously represented in Belovezhskaya Pushcha. After its massive kill in XVII, the species has been undergoing

systematic renaturalization since 1865. The population has increased to its historical maximum by the 80-s of the last century, when it amounted to about 3 ths specimens. In the period between 2000 and 2006 the number of the deer varied from 746 specimens in 2002 to 1,243 specimens in 2005.

If we look at the statistics by forestries, the largest number of the deer is registered in Nikorskoye, Yazvinskoye, Svislochskoye and Korolevo-Mostovskoye forestries, with about 140-150 animals per each. The number of howler males in the deer population amounted to 190 specimens or about 15% of the overall population.

In the recent years the **wild boar** became an unsurpassed leader of Belovezhskaya Pushcha in terms of the size of its population. According to the February count data, 1,500 wild boars were registered in Belovezhskaya Pushcha in 2006. This leads us to assume that there are about 9 specimens per 1,000 ha of the area. If compared to the 2001 data, the wild boar population increased by approximately 50% in the year 2006.

The **European roe deer** is the third largest ungulate population in Belovezhskaya Pushcha. 540 specimens were registered in the beginning of 2006, with about 3.4 specimens per 1,000 ha. The analysis of the roe deer population in the last 4 years revealed that the number has stabilized in the range of 400 specimens. It is impossible to explain the reasons for neither the low number of the roe deer, nor for the population stabilization, as the factors defining the dynamics of the population number are unexplored. The largest density of the roe deer population was registered in the Regulated Use Zone (6.4 specimens per 1,000 ha) and in the Strictly Protected Area (5.0 specimens per 1,000 ha).

The **elk** is characterized by the fewest ungulate population in Belovezhskaya Pushcha. In the recent year (2000-2006) its number has stabilized in the range of 70-90 specimens. 78 elk were registered in the winter of 2006. The density of the elk population, if calculated for the entire territory of Belovezhskaya Pushcha, reached 0.5 specimens per 1,000 ha. The population of the species is hugely isolated in terms of the territory. It is mostly concentrated in the North-Eastern part of the National Park. The average annual elimination of the elk reached 6.3%, which only slightly exceeds the indicator for the bison. The largest density of the elk population is registered in the strictly protected zone (0.9 specimens per 1,000 ha).

Thus, the European moose deer population number has stabilized in the range of 80-90 specimens. The sex-age structure of the species is misbalanced towards male domination.

Overpopulation of **Wild Ungulates** in Belovezhskaya Pushcha. Belovezhskaya Pushcha forests that are unique in their conservation capacity require maintaining the relative stability of its natural complex and diversity of the fauna and flora species. But this issue is historically coupled with the many difficulties, one of the main ones being the excessive increase in the game animal species.

Belovezhskaya Pushcha faced the misbalance in the “wild ungulates-forest” system back in the late XIX century after the title to the forestland was transferred to the tsar family for the purpose of developing a hunting range. Pushcha’s administration pursuit to breed the largest possible population of wild ungulates was quite successful. The well set up system for protection against poaching, coupled with provision of extra nutrition during the winter and introduction of new ungulate species led to a rapid growth in the number of animals, facilitated also by plenty of decent organic feed, watering and defenses. In 1907 Belovezhskaya Pushcha had 12,500 wild ungulates (5,054 deer, 5,229 roe deer, 1,250 fallow deer, 742 bisons and 222 elk). Apart from the wild ungulates, about 8,400 domestic animals were grazed under the Pushcha's forest cover. 7 years later, in 1914 the overall number of the Ruminantia reached 21,633 specimens, with the group of cervids – the largest consumers of woody forage, amounting to 13,290 specimens. Until a certain point in time, there was enough feed for everyone, since at the time the hardwood undergrowth was quite sufficient.

The lack of organic feed, coupled with preying of the wolf and lynx and poaching during World War 1 adversely impacted the dynamics of the wild ungulates population – the fallow

deer and bisons were exterminated and only a couple representatives were left from the runs of deer and roe deer that once amounted to thousands.

The second period of increase in the number and density of the wild ungulates population was observed in the Belarusian part of Belovezhskaya Pushcha in the 60-80-s of the XX century, when the natural reserve was converted to a preserved hunting range (1957). Due to the intensified biotechnical and protective activities, the number of wild ungulates continued its steady growth. The groundless activities that focused around maintaining large numbers of the deer, wild boar, roe deer and elk, coupled with the restrictions imposed on their production resulted in severe misbalance in relations between the forest and the ungulates inhabiting it. The increase in the number of deer from 311 specimens in 1947 to 540 in 1949 led to a 29-time increase in the number of damaged trees. And in 1952 Pushcha's administration faced the issue of deficient wood fromage for the deer and roe deer. Further studies revealed areas damaged to a catastrophic scale. Meanwhile, the population of wild ungulates continued to grow (see Figure 3.14). According to the 1962 forest management, the recommended deer population density increased more than twofold. It was also discovered, that the animals produced an increasingly adverse impact on reforestation and soil cover. The essence of such impact was the disturbance of the established interaction between all the phytocenosis components. As a result, the undergrowth of the major tree types forming the forest, including the pine, oak, ash tree and maple, were almost entirely destroyed. Thus, the organic forage resources for the wild ungulates have been undermined and continued to degrade.

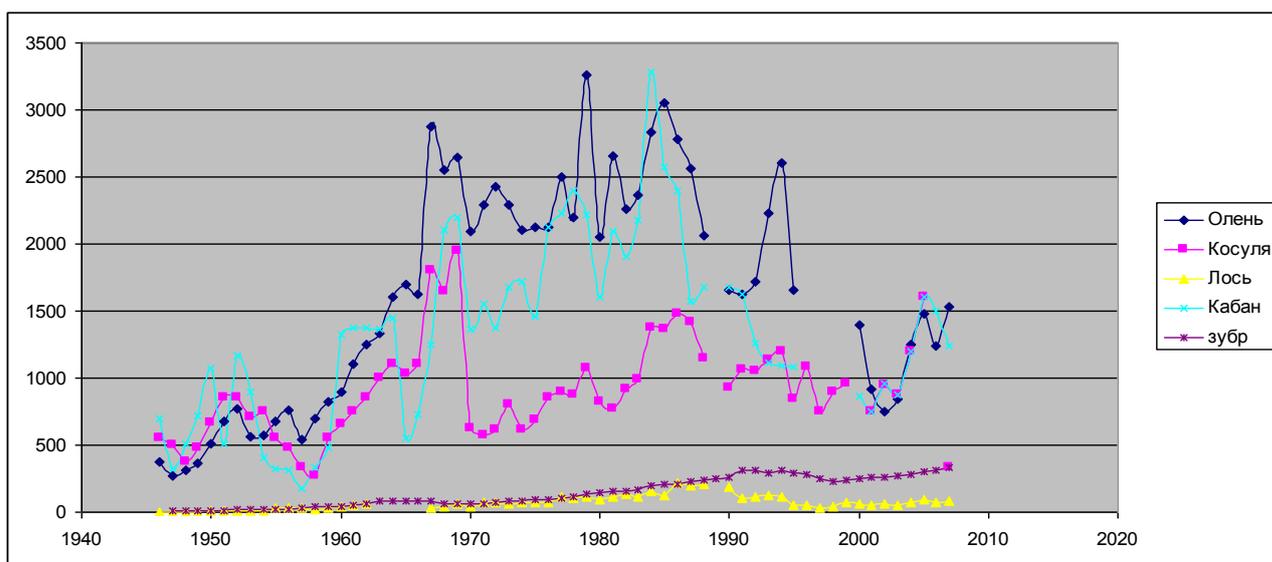


Figure 3.14. – Dynamics of Ungulate Population over the Years

Excessive density of the ungulates under the conditions of deficient organic feed also adversely effected the animals themselves. This led to poorer viability of animal populations, increased risk of epizooty, degraded trophy properties, etc. The lack of organic feed was especially seen in the bison population undergoing restoration. The diseases occurring in male reproduction organs became registered more often. Since a lot of males died, the sex-age structure changed towards domination of adult females. The studies on the reasons of the disease occurring in the male genitals revealed, that the condition is, apart from other factors (affinity breeding, metabolic imbalance, immunodepression and accumulation of heavy metals), caused by the high density of the ungulates and insufficient nutrition of bisons with the fully balanced organic feed.

The practice of bison breeding revealed that further build-up of the bison population in Belovezhskaya Pushcha adversely impacted the population's state. For example, in 1990-92, when the number of these species exceeded 300 specimens, the morbidity from a number of causes spiked, while the reproduction indicators went down.

It was then decided to resolve the emerged “ungulates-forest” issue by controlling the number of game ungulate species and bisons. In the 90-s of the last century the required measures were taken in order to decrease the number of ungulates on the territory of the National Park. The recommendations suggested with respect to the results of the studies conducted under the framework of the “Belovezhskaya Pushcha Forests Protection” project served as a scientific basis for such measures. According to the project on preserving the biodiversity in Belovezhskaya Pushcha forests, in the 10 year period (1995-2005) the number of wild ungulates was to be substantially decreased and stabilized in the following manner: deer – 600 specimens, roe deer – 500 specimens, wild boar – 900 specimens, elk – 50 specimens and bison – 250 specimens. This was supposed to facilitate enhancement of the ungulate population density considering the undergrowth condition.

In order to relieve the pressure produced on the forest and to provide for intensive hunting, the first open-air hunting cages in Belarus were built in Experimental Forest Hunting Range “Shereshevskoye” and Pashukovskoye forestry. Besides, new territories were added to Belovezhskaya Pushcha, which resulted in 1.8-time increase in the overall area of the National Part that now constituted 160 ths ha. Such addition was for the most part done in order to redistribute the number of the wild ungulates in a more or less even manner throughout the entire forestland, which would decrease the density of animals' population and lessen the adverse impact of the wild ungulates upon the reforestation processes.

The wild ungulates are also far from being evenly distributed among the special protection areas of the National Park (see Table 3.16). The lowest ungulate population density is registered in the Economic Activity Zone and Buffer Zone – 2.5 times lower than in the Strictly Protected Zone.

Table 3.16. - Ungulate Population Density in Different Areas of Special Protection in Belovezhskaya Pushcha (specimens per 1,000 ha), 2007 Winter Count Data

| Area of Special Protection | Area, ha | Deer | Roe deer | Elk | Wild Boar | Total |
|----------------------------|----------|------|----------|-----|-----------|-------|
| Strictly Protected Zone | 21769 | 12.4 | 3.7 | 3.4 | 36.4 | 55.9 |
| Regulated Use Zone | 58581 | 12.6 | 4.5 | 0.2 | 13.1 | 30.4 |
| Economic Activity Zone | 19387 | 4.3 | 6.4 | 0.5 | 8.3 | 19.5 |
| Recreational Zone | 4622 | 16.6 | 1.5 | 0.0 | 13.6 | 31.7 |
| Buffer Zone | 2801 | 4.3 | 3.4 | 0.0 | 6.3 | 14.0 |

Thus, the zoogenic conflict that has been long established in Belovezhskaya Pushcha can be summed up to the following:

1. The artificially induced ungulate oversaturation in fauna adversely effected the second growth processes;
2. Deficiency in organic feed and its misbalance in the nutrition of the ungulates produced an unfavorable effect on trophy and reproduction qualities of ungulate populations, and especially those of the bison.

The best-studied **carnivorous mammals** found in Belovezhskaya Pushcha include the wolf, red fox, European lynx, badger, raccoon dog and common marten. Table 3.17 shows the dynamics of their populations in the period between 2000 and 2006 (with the exception of the raccoon dog).

Wolf. According to the 2007-2008 winter count conducted by way of thoroughly exploring the territory by cars and on foot and involving mapping of the identified passes of

family groups and individual specimens, there are 23 wolves in the Belarusian part of Belovezhskaya Pushcha.

Table 3.17. - Carnivorous Mammals Population Dynamics

| Species | Population, Number of Specimen | | | | | | |
|---------|--------------------------------|------|------|------|------|------|------|
| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
| Wolf | 20 | 24 | 10 | 12 | 9 | 12 | 11 |
| Lynx | 18 | 11 | 11 | 17 | 29 | 12 | 11 |
| Fox | 218 | 132 | 136 | 153 | 175 | 442 | 405 |
| Marten | 84 | 75 | 33 | 102 | 89 | 181 | 129 |
| Badger | 20 | 18 | 22 | 24 | 22 | 22 | 28 |

There were two cross-border packs registered in the winter of 2007-2008: a pack of 5 specimens was found in the forest complex area from the Lesnaya River to the Narevka River close to the border, and a pack of 7 specimens - in the area from Khvoyniki village to Tikhovolia village close to the border. The cross-border nature of such packs is also evidenced by the coinciding data obtained by the Polish and Belarusian mammalogists. Another pack of 6 specimens lives in the Belarusian part of Pushcha in the area of Rudnia and Oshchep villages.

The number of **badgers** in the National Park remains low. According to the burrow count, 15 inhabited burrows of this carnivorous species were registered in 2006. The overall number of the population group reached 70 specimens.

In winter of 2007-2008 there were 19 specimens of the **European lynx** in Belovezhskaya Pushcha.

The number of smaller carnivores, if compared to the previous years, changed slightly and in 2007 amounted to the following: marten - 29 specimens, otter - 46 specimens and polecat - 49 specimens. The number of weasels and caresses has not been established, although these small carnivores are found throughout the entire territory of the National Park.

The beaver is a rodent that is rather common and wide-spread in Belovezhskaya Pushcha. The population of beavers experiences a steady growth. A total of 27 inhabited lodges, 31 inhabited burrows and 28 dams were found on the small rivers and soil-reclamation canals of the National Park during the beaver counts in 2006-2007. Taking into account that the family consists of 4 specimens at the most, the total number of beavers amounts to 230 specimens.

According to the 2007 winter counts, there are 1,550 squirrels in the National Park. The lagomorphs are for the most part represented by the European hare, the population of which constituted 180 specimens in 2007. The population of the lepus is very small.

Thus, the high conservation status of the territory of Belovezhskaya Pushcha for a considerable amount of time facilitated conservation of the entire mammal complex that is typical of the hornbeam-oak-dark-coniferous forests subzone.

4. SOCIAL, ECONOMIC, HISTORICAL AND CULTURAL INFORMATION

4.1 Economic Activities

Belovezhskaya Pushcha National Park is currently a multi-field entity conducting operations in a number of large and interconnected areas:

- Forest protection and forestry activities
- Wildlife protection, control over wildlife population and biotechnical activities
- Agricultural activities
- Scientific and research activities, education
- Wood processing
- Tourism, service activities and trade.

From the administrative and economic perspective, the National Park is comprised by 17 forestries and Tikhovolia agricultural industrial complex.

Agricultural production is the leading field of the region, and is undertaken by 20 entities of various forms of incorporation (open joint-stock companies, agricultural production co-operatives, unitary agricultural enterprises) in the Buffer Zone of the National Park. The industry in Pushcha region is poorly developed and is mainly represented by small wood processing, construction repairs, food and local enterprises. There are no large industrial enterprises. That's why the extent of man-made impact upon the forestland of Pushcha is for the most part determined by the activities of the agricultural enterprises (application of mineral fertilizers and pesticides, operation of the motor and tractor fleet, grazing).

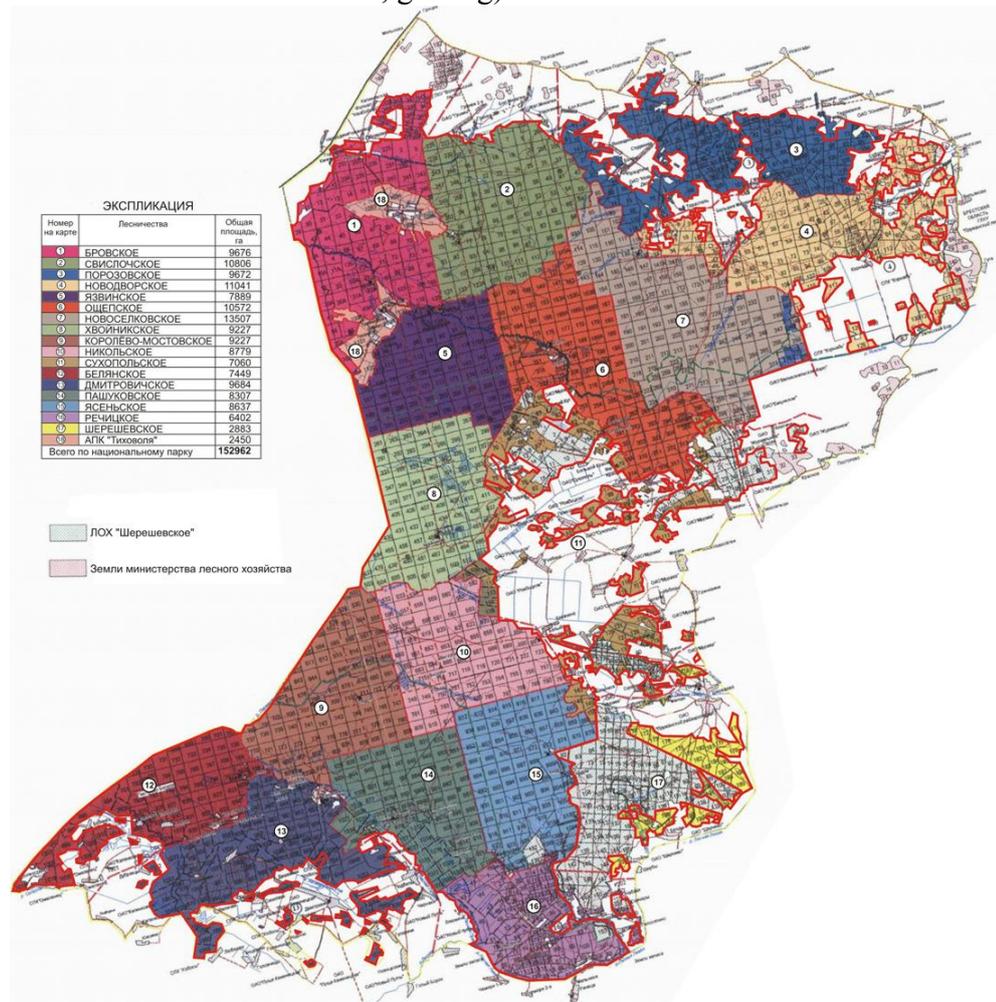


Fig. 4.1. Forestries Layout

4.2. Transportation and Road Network

The total road length of Belovezhskaya Pushcha National Park constitutes 1,818 km, including 144 km of hard motor roads, 224 km of intermediate roads and 1,450 km of unpaved roads. The road network density is 1,188 km/100 ha of the total area.

The territory, where the National Park is located, is characterized by a rather well-developed motor road network. The following roads are considered primary based on their purpose for Belovezhskaya Pushcha:

1). Republican motor roads:

R – 81 Pruzhany- state border with the Republic of Poland

R – 83 Brest-Kamenets-Belovezhskaya Pushcha National Park

R – 47 Svisloch-Porozovo-Pruzhany

2). Local motor roads

3). Departmental motor roads.

The public-access roads are 218 km long, including 53 km of the republican roads and 165 km of the local ones. The non-public-access roads constitute 1,600 km in length, with 150 km of forestry roads and 1,450 km of natural forest roads.

All the roads are in good condition. The repairs are done on time. The roads can be used during any time of the year.

The internal needs of the National Park are, apart from the road network, also met by the quarter and section glades, the majority of which can be used by transport during the summer.

4.3. Population

The region of the National Park's location (including the Buffer Zone designated around the National Park) comprises 202 settlements with the total population of 23.8 ths people, including 8.4 ths people and 74 settlements in Svisloch District, 9.8 ths people and 70 settlements in Pruzhany District and 5.6 ths people and 58 settlements in Kamenets District.

4.4. Historical Nature Use in Belovezhskaya Pushcha

Belovezhskaya Pushcha is the largest remainder of the relict virgin plain forest that was found on the territory of Europe in prehistoric times, but was conserved only in the Belavezha region. This territory was first mentioned in the works of Herodotus (II century B.C.). Pushcha is also referred to as an old virgin forest in the Hypatian Chronicle of 983. According to the Kiev Chronicles, the territory of Pushcha was inhabited by the yotvingian tribe, whose primary occupations included hunting and fishing.

During the three centuries to follow Pushcha was tossed back and forth between the Russian, Lithuanian and Mazovetsk dukes. In 1276 Vladimir Volynskiy used the high bank of the Lesnaya River to build a fortress city Kamenets with a watchtower (“vezha”) in the center for defense purposes. In the late XIII – XVIII centuries Belovezhskaya Pushcha belonged to the grand dukes of Lithuania.

The beginning of the XV century can be considered the time, when the conservation system was initially imposed. At the time the grand duke of Lithuania Vytautas reserved the right to hunt for big game in Pushcha to himself and his cousin - the Polish king Jagiello

The first legislation referring to Pushcha forests is dated February 27th, 1538, when the Polish king and the grand duke of Lithuania Sigismund II Augustus issued the first forest regulations in the old Belarusian language. The regulations set the rights for using the forest and hayfields, defined the privileges and rules for shooting animals, banned felling of even the dead wood without a special ticket that was to be signed by the grand duke himself, introduced a fee for building bee trees and limited fishing and dog keeping.

In 1559 the starosta Volovich produced the first detailed description of forests and hunting in Pushcha. He characterized the condition of forests, hunting and animal passes and divided Pushcha into “retreats” – that is sites that are most convenient for animal battues.

During the five centuries when Belovezhskaya Pushcha belonged to the grand dukes, the purposes and means of managing its natural resources changed numerously. The conservation of Pushcha was also facilitated by the fact that the forests were still inhabited by bison that have already started to die out. The desire to conserve this species in Europe forced first the grand dukes of Lithuania, and then – the Russian tsars to take great care over protecting the forest from the predatory activities of men.

In 1640 the king Vladislav IV signed a decree that banned felling of live trees. Felling of dead trees, treefall and scaffold branches was only permitted with a special ticket. The decree also stated that, for the purpose of protecting the game, the ploughmen should move away from Pushcha and the field areas should be decreased. New roads were to be built, while the old ones, that disturbed the forest, were to be destroyed. Also banned was the production of tar, ash and resin, ploughing up of new land and selling of timber.

In 1795 Belovezhskaya Pushcha was passed over to Russia. By the time its area constituted 120 ths dessiatines. Catherine the Great gave most of Pushcha away to her confidants, who participated in conquering the land (count Rumiantsev, Mikhail Kutuzov, etc.). It was allowed to hunt any game in Pushcha, but for the bison. This led to a rapid decrease in the number of animals. The bear and beaver were exterminated. In 1802 Alexander I in his decree “On Bison Preservation” banned hunting for the animal and ordered that the appropriate grazing lands be provided for them. In 1809 the bison began to be regularly counted using the "white trail" method. At the time there were 350 bison in Pushcha. 1821 saw the introduction of a ban on any felling and hunting on the territory of Belovezhskaya Pushcha.

In the period between 1842 and 1847 Belovezhskaya Pushcha was subjected to the first forest management procedure, which set its area at 112.1 ths dessiatines, including 88 ths dessiatines covered with forest. In 1888 Belovezhskaya Pushcha, along with Svislochskaya Dacha, was passed over to the state institution called “udelnoye vedomstvo” (i.e. the title to the land was transferred to the tsar family). This step marked the beginning of intensive hunting reserve development.

In 1897 Nikolai II issues a directive for the udelnoye vedomstvo to take all measures necessary to conserve Pushcha as a virgin forest without striving to generate the largest profit possible.

During World War I, in the period between 1915 and 1918 Belovezhskaya Pushcha was occupied by the German troops, who exploited the forest to the maximum. When the Germans left in December 1918, there were only about 180 bison left in the Pushcha, and even they were eventually killed by poachers and fugitives.

In 1919 Pushcha belonged to the Polish Republic. The Polish government suppressed the conservation practices and set up massive forest exploitation. However, in 1921, upon the initiative of Professor Vladislav Shaffer, the government proclaimed the first strictly protected zone in Poland - the still existing Bialowieza National Park with the area of 4.7 ths ha. Additionally set up were several conserved areas located mosaically throughout the territory of Pushcha. The rest of Pushcha's territory was left to the English concessionaires for massive felling. In 1927-1928 alone about 2 mln cu.m of timber was exported from Belovezhskaya Pushcha.

When World War I was over, the activities on bison conservation were started up again and on a rather wide scale. The revival of the species in Belovezhskaya Pushcha started with a group of three animals, brought here from Germany in 1929-30. They then set up a bison farm in Bialowieza and started to work on reviving the bison population. In the fall of 1939 the bison farm already had 19 bison. 1936 saw the establishment of a farm of tarpan horses that were the ancestors of the wild tarpans entirely exterminated in Pushcha earlier.

After the beginning of World War II and annexation of Western Belarus to BSSR, the Council of People's Commissars of BSSR on December 15th, 1939 issued Decree No. 1234 on establishing a state reserve. The reserve was to include the entire forest land of Pushcha, along with Svislochskaya Dacha and the meadow lands. The total area of the new reserve constituted

129.2 ths ha. However, this Decree introduced strict protection only for the former National Park (4,760 ha), the bison farm (297 ha) and the limited area (29.7 ha), so in essence, the same conservation practices as those in place in the Polish Bialowieza National Park continued to exist within the same borders.

At the time of the German occupation Belovezhskaya Pushcha was used as a game reserve of the Reich's military and political elite.

After the liberation from the German troops, the reserve was reopened already in October of 1944 in pursuance of the respective Decree by the Council of People's Commissars of BSSR. However, when establishing the state borders between the USSR and Poland, a part of Belovezhskaya Pushcha (about 55 ths ha), including the most valuable and less disturbed forest land, the National Park and Bialoweza settlement (where the reserve management, museum, laboratories, library, bison and tarpan farms were located prior to the war) were transferred to the People's Republic of Poland. Only 74.5 ths ha of the entire territory was left to Belarus.

In the period between 1944 and 1957 Pushcha enjoyed the status of a reserve. In August 1957 in pursuance of the decree by the Council of Ministers of USSR Belovezhskaya Pushcha State Reserve was reorganized into Belovezhskaya Pushcha State Hunting Reserve. The primary task of the new establishment was to conduct comprehensive studies on the forest nature, wildlife and hunting management. In 1946 2 bison females and 3 males were brought from Poland, which marked the beginning of reviving the bison population on the Belarusian part of Pushcha.

According to Decree No. 352 of September 16th, 1991 by the Council of Ministers of BSSR the State Hunting Reserve was reorganized only to be replaced by Belovezhskaya Pushcha State National Park located within the same borders. On December 8th, 1991 the state residence Viskuli located on the territory of Belovezhskaya Pushcha held a meeting that resulted in signing of Belavezha Agreement on dissolving the Soviet Union, declaring three independent states.

4.5. Historical and Cultural Sites

Ethnographic research and the studies aimed at detecting, mapping and cataloguing the archeological and historical sites have been held on the territory of Belovezhskaya Pushcha National Park and its surroundings since 1994.

Archaeological Sites on the Territory of the National Park:

- Stone Age (mesolite) sites. Located along the banks of the Narevka, Nemerzhanka and Belaya Rivers;
- Sand burial mounds with cremation burials on the side;
- Mounds with stone structures, ritual of burning bodies on the side, cremation remains in embankment. Dated I ths A.C.;
- Mound-like embankments along the old roads; no bones, tools or wake signs have been found. Location of these structures on the old roads leads us to assume that in the ancient times they were used as road signs;
- Religious worship sites of the ancestors on the territory of the National Park: funnel-shaped cavities; worshipped springs, handprints/footprints stones and wells, stones with grooves, worshipped trees, elevations named Babya Gora or Pani Gora – female earth god locations;
- Significant sites of economic activities of the prehistoric man in Pushcha - charcoal, ball iron production sites, stone processing sites.

Historical, Cultural and Ethnographic Sights

- Sacral architectural sites (churches in Dmitrovichi, Pashuki, Rozhkovka, Chemeri, Vezhnoye, Shereshevo, Noviy Dvor, Sukhopol);
- Sites of traditional architecture, material culture and folk art (a hut heated by a chimneyless stove in Rozhkovka village, traditional housing development of the

- settlements located on the territory of Pushcha, museum “Uspaminy Batskaushchyny” (Belarusian for “Memories of the Motherland”) in Stoily village, etc.);
- Architectural sites of the Pushcha’s imperial period (Pruzhan-y-Gainovka route, duke Tyshkevich's country estate, Kopyly park and estate ensemble);
- Sites commemorating modern history events (Leski village, Kamenets District, Viskuli residence);
- Various sites accessible by transport (Kamenets Tower, Shopping Arcade in Pruzhany, bread museum in Riasna village, park in Bialoweza, etc.).

4.6. Scientific Research

The interest towards studying the fauna of Belovezhskaya Pushcha has existed for a long time now, possibly from the very birth of science in the region. The biological diversity observed in Belovezhskaya Pushcha has been studied for over 100 years. However, initially and for a rather long period of time the scientific interest was quite limited and pertained to only a certain group of economically significant animal and plant species, including primarily large mammals, some birds and forest trees producing timber.

The systematic and active scientific development in the region began only after the post-war period, when Belovezhskaya Pushcha acquired the status of a state protected territory. This period of time helped collect extensive data on the fauna, flora and mycobiota.

The first data to ever be printed on the plants occurring on the territory of Belovezhskaya Pushcha was provided in a book by Yu.V. Zhiliber (1781). Since 1883 Belovezhskaya Pushcha served as a study platform for a famous botanist I. Pachoskiy, who checked and confirmed the data of his predecessors in his research, and then used this data in writing the monograph entitled “Flora of Polesye Region and Adjacent Territories”. The outstanding research of the pre-war period also includes the works by Vishnevskiy (1923) and Pachoskiy (1926-1927), as well as the book of the latter entitled “Lasy Białowieży” (polish for “Bialoweza Forests”) (1930), where the scientist listed 570 plant species of Belovezhskaya Pushcha flora.

The Soviet period marked a new stage in studying the flora occurring in Belovezhskaya Pushcha. The separation of the integral forest land by the state border required re-cataloguing of the flora observed in its Eastern and Western parts. For the first time in the period the materials from Belovezhskaya Pushcha were used by V.A. Mikhailovskaya in writing her book “Polesye Lowland Flora”. Later in 1969 I.D. Yurkevich and N.V. Kozlovskaya published a revised list of higher plants. This paper was the first to include the statistical and geographical flora analysis. Another important step in studying the nature of the reserve was marked by the outcome of the many years of work by V.M. Nikolayeva and B.M. Zefirova – the monograph entitled “Flora of Belovezhskaya Pushcha”. This work brought together and summarized all the research on higher plants. It describes 889 species, provides data on their systematic location, prevalence, occurrence, growth conditions, blossom period, economic purpose and other data.

In the post-war period special emphasis was placed on the rare plants found on the territory of Belovezhskaya Pushcha. The data on prevalence of such plants, their environmental and biological characteristics and geographic ranges are provided in a number of works published in the period between 1960 and 1996 by the professionals of the Experimental Biology Institute of the Belarusian National Academy of Sciences I.D. Yurkevich, V.A. Feofilov, N.V. Kozlovskaya, R.T. Protasevich, R.Yu. Blazhevich, R.P. Kuznetsova, V.I. Parfionov. A lot of research was dedicated to the white fir.

The point of departure in such research was the paper by B.M. Zefirova of 1958, and then later - the list of Pushcha’s rare and protected plants compiled by O.M. Grushevskaya. Based on the summarized literature data and on the results of their own research, L.E. Dvorak, V.N. Tolkach and O.M. Grushevskaya conducted certification of rare plants’ locations, provided edaphic and phytocenological characterization of 40 protected species, clarified their status in the region and recommended certain protection measures.

In the recent years the research has for the most part focused on environmental and biological characteristics and assessment of the current state of the rare species' cenopopulations. Out of the rare and protected plants that are part of the field layer studied were 21 species of rare plants, including those on the Red Endangered Species List of the Republic of Belarus. For the most part this includes the species with limited prevalence and number, or the ones that are most effected by the activities of men (collection for food and medicine, etc.).

The first data on the bryophyte in Belovezhskaya Pushcha were collected during the 1887 expedition and are outlined by F. Blonskiy, who specifies 25 bryophyte species for Belovezhskaya Pushcha, Svislochskaya Pushcha and Liatskaya Pushcha. 21 of those species are found on the territory of Belarus (21 Anthocerotophyta species, 7 liverwort species, 3 sphagnum species and 9 Bryidae species).

Another important contribution to the studies of Belovezhskaya Pushcha's bryoflora was made by the Ukrainian scientist M.A. Aleksenko. Blonskiy and Aleksenko together listed about 200 bryophytes for the Belarusian part of Belovezhskaya Pushcha. These included 150 Bryidae species, 7 sphagnum species, 40 liverwort species and 2 Anthocerotophyta species with some rare species. In the 70-80-s of the last century Belovezhskaya Pushcha's bryoflora was studied by G.F. Rykovskiy. Additionally, in the 80-90-s sampling of the bryophytes and field bryoflora studies were undertaken by M.P. Mlynarchik and O.M. Maslovskiy. In general the studies were conducted in all types of phytocoenoses and all types of substrates (soil, rotting wood, bark of live animals, silicate boulders, old concrete and stone structures, bonfire sites), as well as in water bodies.

Today, Belovezhskaya Pushcha's bryoflora includes 290 known species, including 2 Anthocerotophyta species, 69 liverwort species and about 220 moss species that include 1 Andreaea species, 19 sphagnum species and 199 Bryidae species.

The history of mycological studies on the territory of Belovezhskaya Pushcha is a little older than a hundred years old. The pioneer scientific publications that provided lists of species, as well as certain fungi data, appeared in the late XIX century. The respective research was done by the Polish scientist F. Blonskiy and pertained primarily to the wood-destroying fungi and pileate fungi. Mentioned were also certain plant pathogenic micromycete species. The Polish scientist detected a total of 380 fungi and myxomycete species, with 328 of them belonging to the macromycete type. In the first half of the XX century the mycological studies were rather sporadic. But in the 50-70s they livened up. A. Neśpiak, H. Orłos, S. Domański conducted a more detailed study of the species, ecology and biology of the hymenomycetes. The data on the mycobiota occurring in Belovezhskaya Pushcha was included into the series of publications of the Polish Flora on cryptogams (1960-1993) and Small Fungi Flora (1960-1991). In 1987-1991 under the leadership of Professor J. Falinski and Doctor W. Mullenko, carried out on the territory of Belovezhskaya Pushcha was the CRYPTO project — "Cryptogams in Bialoweza National Park Xylia". The comprehensive study within the project resulted in publishing of a list of species belonging to 6 classes and 37 orders. The mycological and phytopathological studies on the Belarusian part of Pushcha were most intensive in the 60-70-s and in the early 80-s. They were undertaken by the employees of the Belovezhskaya Pushcha's Scientific Department, including P.K. Mikhalevich, S.B. Kochanovskiy, V.P. Romanovskiy, A.P. Utenkova et alia, as well as by the mycologists of the Academy of Sciences of BSSR E.P. Komarova, A.I. Golovko, G.I. Serzhanina, O.S. Gapiyenko, and the members of the Belarusian Forestry Engineering Institute V.K. Zakharov, N.I. Fedorov. The Belarusian mycologists and phytopathologists detected 161 species, 11 types and 31 forms of the Polyporaceae. The scientists studied the prevalence and injuriousness of the wood-destroying fungi in pineries, spruce forests and oak-groves, their bioenvironmental characteristics, the nature of the Polyporaceae interspecies relations and their role in pathogenesis.

As of today Belovezhskaya Pushcha is one of the most studied territories of the countries in terms of fauna. The fauna studies conducted in Belovezhskaya Pushcha focused on two major

fields: inventory studies and population studies of the most significant and valuable species. The vertebrates and invertebrates were explored to various extents.

Well studied are the species, prevalence and number of mammals, as well as certain aspects of the population ecology with respect to the most significant species. The populations of the vertebrates, primarily those of the bison, roe deer, European red deer and wild boar have been subjected to monitoring on the territory of Belovezhskaya Pushcha National Park since the 90-s.

The first thorough full-scale studies focused on assessing the distribution and number of the European beaver, otter, American mink and fitchew, depending on the ecocapacity condition of the water ecosystems within the natural complex of Belovezhskaya Pushcha were conducted in 1994.

The history of ornithological studies in Belovezhskaya Pushcha is quite extensive. The first special fauna summary on the birds occurring in Belovezhskaya Pushcha appeared in 1918 (A. Reichonow). It contained data on 145 bird species. After World War II the Belarusian part of Belovezhskaya Pushcha was intensively studied by the national scientists, including ornithologists. Belovezhskaya Pushcha is the only territory in Belarus, where the basics of ornithological monitoring were laid out over 50 years ago by V.F. Gavrin. Starting from 1946, the scientist has set up collection, storage and analysis of ornithological data on Pushcha. The primary task – taking inventory of the avifauna – was completed by the mid 50-s. The first list of birds occurring in Belovezhskaya Pushcha (204 species) was published in the first issue of Works by Belovezhskaya Pushcha State Hunting Reserve in 1958. It included 198 bird species, with 153 of them on nesting. It was then, when 34 permanent sites, each 1 ha in area, were set up for the purpose of counting the small wrens. 18 sites with the area of 25 ha each were established for counting larger birds (thrushes, jays, pigeons, woodpeckers, orioles, etc.). The Tetraonidae were counted in all the forestries of Belovezhskaya Pushcha using the 26 permanent routes with the total length of 162 km. In the future these routes were used to count all the bird types. Besides, all the employees of the forest service and scientific department took part in the spring count of wood grouse, heath cocks on display and woodcocks on roding, coupled with the count and mapping of the nests built by the birds of prey, storks and crows. The phonological observations and studies of seasonal bird migration were conducted through both direct observation and ringing. In the period between 1946 and 1960 the reserve's scientific department, and then the employees of Belovezhskaya Pushcha State Hunting Reserve ringed a total of 30,000 birds. Apart from V.F. Gavrin, the ornithological studies at the time were conducted by V.A. Datskevich, M.I. Lebedeva, G.E. Korolkova, B.Z. Golodushko, V.N. Duchits, A. Diatlov et alias.

In 1988 birds in the pine forests of Belovezhskaya Pushcha were counted by N.N. Rakovskiy. In the early 90-s N.D. Cherkas continued to work on studying the condition of the wood grouse populations and other grouse species. The outcomes of the studies are provided in 12 joint publications, including those in foreign periodicals. Besides, the same project involved finding and mapping the nests of the birds of prey and storks (the outcomes are published in four joint papers).

The invertebrates of Belovezhskaya Pushcha are traditionally understudied. The fauna studies of the invertebrates (*Opilionidae*, *Trematoda*, *Hymenoptera*, *Diptera*, *Ephemeroptera*, *Trichoptera*, *Coleoptera*, etc.), as well as of the complexes of the injurious insects, their predators and parasites on the territory of Pushcha began after World War I. After World War II the research effort in the Belarusian part of Belovezhskaya Pushcha was for the most part focused on studying the complex of the parasitic arthropoda (ticks, fleas), as carriers of dangerous diseases, and their links to the host.

In 1975 L.I. Liashenko and L.V. KIRSTA published a list of 101 arthropoda species occurring in Belovezhskaya Pushcha. This was the first attempt to generalize and take inventory of its fauna.

The 80-s marked the beginning of studies of the ground beetles inhabiting spruce forests and oak-groves. As a result, revealed were the species of the beetles in the forest and the domination structure within these complexes. The bark beetles, their predators and parasites were subjected to a more thorough study.

Since 1988 comprehensive biogeocenological studies began with respect to the communities of the invertebrates inhabiting the soil, ground, field and shrub layers of the major forest types occurring in Belovezhskaya Pushcha.

In 1991 published was a collection of works entitled “Fauna and Ecology of the Coleoptera in Belarus”. It contained fauna summaries on the *Carabidae*, *Scarabaeidae* and *Histeridae*) including the species detected in Belovezhskaya Pushcha in the period between 1985 and 1990. Later issued was a “Belarusian Coleoptera, Insecta Catalogue” that, apart from the abovementioned beetle families, provided the previously unpublished data on the other Coleoptera taxons, including that on collections in Belovezhskaya Pushcha.

The massive reproduction of the *Ips typographus* resulted from severe droughts observed in the period between 1992 and 1993. Such reproduction led to another appearance of bark beetle loci and drying of spruce forests on large areas. This required a comprehensive biogeocenological study of the nature of the spread and dynamics of bark beetle loci considering the habitat factors and man-made impact characteristics.

A certain amount of attention is currently devoted to the studies of the Arachnida and Lepidoptera inhabiting Belovezhskaya Pushcha. A number of papers discuss the issue of protecting the rare insects occurring in Pushcha, preserving the invertebrates in reserves, studying the biology and ecology of earthworms. Great emphasis is placed on assessing succession-induced changes in ecosystem components. That's why, considering the great role that the invertebrates play in the functioning of ecosystems, explored are the changes in pedobionte communities caused by the altering forest types and the consequences of man-made impact for the pedogenic invertebrates.

5. ASSESSING SIGNIFICANCE OF THE SITE SUBJECT TO MANAGEMENT PLAN

5.1. Biological and Landscape Diversity

| Components | Measure of Significance | Explanation |
|----------------------|-------------------------|---|
| Landscape | 2 | The landscape structure is highly diverse, characterized by prevalence of aqueoglacial and lacustrine-alluvial landscapes with significant portion of undulating moreno-erosion and morenic outwash plain landscapes, as well as by the rarer occurring deuterogenic-moraine, inundated and lacustrine-boggy landscapes |
| Habitats | | |
| Water | 2 | Prevailing are small rivers and streams (over 30) with the total length of 350 km and a significant species diversity: phytoplankton - 166 species, zooplankton – 173, zoobenthos – about 200, macrovegetation is understudied – at least 40 species |
| Bogs | 3 | Bogs take up about 10.8 ths ha or 7.1% of the total area, lowland small-fallow bogs prevail |
| Meadows, shrubs | 2 | Meadows take up about 4.6% of the territory and are characterized by extensive diversity. Shrub communities take up less than 1% of the territory, willow and juniper bushes prevail. |
| Forests | 3 | Pushcha's forest habitats are most diverse, they are characterized by a combination of Boreal and Western-European Nemoral vegetation elements. |
| Fauna | | |
| Invertebrates | 3 | A list of Pushcha's invertebrates that is far from being complete includes 12,000 species, 9,500 of which are insects |
| Fishes | 1 | The ichthyocomplex includes 31 species (55%) |
| Amphibia and reptile | | There are 11 amphibia species (85% of the region's fauna list) and 7 reptile species (100%) |
| Birds | 3 | There are 254 bird species (80% of the overall number in Belarus) |
| Mammals | 3 | There are 59 mammals (81% of the overall number in Belarus) |

5.2. Typicality and Representation

| Components | Measure of Significance | Explanation |
|------------------|-------------------------|--|
| Landscape | 2 | The landscapes represented on the territory of Belovezhskaya Pushcha are for the most part typical. |
| Habitats | | |
| Water | 1 | The lack of lakes is a rather untypical characteristic for a forestland this large. |
| Bogs | 3 | The lowland and transition bogs of Belovezhskaya Pushcha are the most typical and representative water-bog ecosystems of the region |
| Meadows, shrubs | 2 | The meadow and shrub communities represent separate categories (formations and associations) and are typical. However, jointly they are not representative with respect to the entire diversity of meadows and shrubs in the region due to small area and lack of appropriate diversity in edaphic conditions. |
| Forests | 3 | From the formation and typological viewpoint, Belovezhskaya Pushcha's forests represent the subzone of spruce-hornbeam Belarusian oak-grooves. |
| Flora | 2 | The flora represents at least 57% of the entire Belarusian flora. The flora is in general typical for the forest regions of Central European plains. The protected category includes 99 plant and fungus species out of the 274 species in the 3rd edition of the Red Endangered Species List of the Republic of Belarus (36.1%). |
| Fauna | | |
| Invertebrates | 3 | Belovezhskaya Pushcha represents the fauna of invertebrates occurring in the forest regions of Central Europe, and, according to the incomplete data, includes 12,000 species, out of which 8,500 are insects. About 1,900 beetle types have been registered in Belovezhskaya Pushcha (about 58% of the total beetle fauna of the Republic). |
| Fishes | 2 | Due to absence of lakes and large rivers, the fish fauna is not representative with |

| Components | Measure of Significance | Explanation |
|----------------------|-------------------------|---|
| | | respect to the Republic's ichthyocomplex. 31 fish species belonging to 11 families inhabit Belovezhskaya Pushcha's water bodies. |
| Amphibia and reptile | 3 | The herpetofauna of Pushcha is representative in terms of amphibia (11 species) and reptiles (7 species) of the Republic. |
| Birds | 3 | The bird fauna of Belovezhskaya Pushcha is representative of the avifauna of the Republic (254 species, out of which 183 species nest). The territory of Pushcha has extensive and well-structured evened-out communities of birds belonging to the native forest biocenoses. |
| Mammals | 3 | The entire complex of mammals typical of the hornbeam-oak-dark-coniferous forests subzone can be observed on the territory of Belovezhskaya Pushcha. The fauna includes 59 mammal species (80% of the Belarusian theriofauna). |

5.3. Naturalness and Disturbance

| Components | Measure/ Level of Significance | Explanation | Recommendations |
|------------------|--------------------------------|--|--|
| Landscape | 3 | The majority of landscape is in the condition close to the natural one | Restore the hydrological regime, make effort to reduce shrubbing of lowland bogs and meadows |
| Habitats | | | |
| Water | 1 | Disturbance reaches up to 60-70% | Restore the hydrological regime of disturbed small rivers and water bodies |
| Bogs | 2 | Part of the bogs suffered changes as a result of irrigation and drainage activities, and are now used as hayfields, grazing land and tillage. Since haying is no longer done, certain portions of open bogs are gradually overgrown by marsh elders. | For lowland bogs – to conserve the regime of using as natural hayfields. For all the Park's bogs - to restore their natural water regime. |
| Meadows, shrubs | 2 | A portion of the meadows are used as hayfields, some - as grazing lands and pastures. This prevents overgrowth and facilitates development of diverse grass communities. Due to decreased economic activities (grazing, haying), a significant portion of meadows is subjected to shrubbing. | To conserve the regime of using as natural hayfields and pastures. |
| Forests | 2 | 84.8% of Belovezhskaya Pushcha forests are of natural origin; 15.2% are represented by forest cultures with only 29 ha of them introduced (0.02%). At the same time the Park's forests are actively introduced with invasive alien wood plants that pose a threat to naturalness. The ashen and, partly, spruce plantations are in critical condition due to man-induced unfavorable climate changes and melioration of the territory. Significant is the disturbance of the forest cover by windfalls and windbreaks, as well as by sanitary felling in the Regulated Use Zone. In the revision period between 1992 and 2005 1,193 ha of forests died, out of which 1,025 – as a result of forest diseases and 158 – due to unfavorable weather conditions. 27.7 ths ha of forests were damaged by diseases and insects (2005 forest pathology research). | To assist in natural restoration of the pine, oak, ash tree and fir; control ungulates density. To take effort against the spread of invasive alien wood plants. |
| Flora | 2 | Extensive spread of regular plants with wide ecological amplitude, as well as the spread of alien and invasive plants is observed against the background of significant naturalness. This results | To conserve the traditional use of bogs and meadows. Maintain and restore the water regime of the territory |

| Components | Measure/ Level of Significance | Explanation | Recommendations |
|-----------------------|--------------------------------------|--|---|
| | | in oversimplification and cosmopolitanism of the Pushcha's flora. Forest mortality and bog overgrowth leads to extinction of rare plant species. | destroyed as a result of drainage engineering. Assist in preserving and disseminating rare flora elements in the in-situ and ex-situ conditions. Limit the spread of invasive alien plants. |
| Fauna | | | |
| Invertebrates | 3 | The invertebrate fauna is in the condition close to the natural one. However, the state of certain invertebrate groups associated with deadwood causes a number of concerns. | Leave dead standing trees and fallen trees, when conducting forest management activities |
| Fishes | 2 | The natural structure is disturbed by river canalization and artificial stocking of the created water reservoirs | Restore the hydrological regime of disturbed small rivers |
| Amphibia and reptiles | 3 | The herpetofauna is in the condition close to the natural one. At the same time the difficulties in seasonal migration of amphibian caused by road construction causes certain concerns. | Provide for seasonal migration of amphibia |
| Birds | 3 | The avifauna is in the condition close to the natural one. At the same time reduction is observed in the population of the grouse birds, the state of the groups of the birds of prey and aquatic warbler causes concerns. | Restore the wood grouse population, maintain conditions for habitation of the birds of prey and aquatic warbler. |
| Mammals | 2 | The natural structure of mammal complexes is disturbed as a result of high density of ungulates, artificial restriction of the number of wolves and introduction of alien species (the American mink, raccoon dog). A number of species historically typical of the Pushcha's forests, including the brown bear and tarpan, are extinct. | Control the number of ungulates, ban shooting wolves, take measures against alien species, reintroduce the brown bear and tarpan as key elements of native zoocenoses. |

5.4. Rarity and Uniqueness

| Components | Measure of Significance | Explanation |
|------------------|----------------------------|--|
| Landscape | 2 | Rare landscapes (deutero-genic-moraine, inundated and lacustrine-boggy landscapes) take up a total of 10% of the entire territory of the National Park. |
| Habitats | | |
| Water | 1 | The territory of Belovezhskaya Pushcha abounds in valuable inland waters habitats subject to Annex I of the EEC Habitat Directive. <i>3270 Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidention</i> p.p. vegetation</i> |
| Bogs | 3 | The territory of Belovezhskaya Pushcha abounds in valuable bog habitats subject to Annex I of the EEC Habitat Directive. <i>7110 * Active raised bogs</i> <i>7120 Degraded raised bogs still capable of natural regeneration</i> <i>7140 Transition mires and quaking bogs</i> <i>7160 Fennoscandian mineral-rich springs and springfens</i> <i>7230 - Alkaline fens</i> The lowland bogs (including the Dikoye) occurring on the territory of Belovezhskaya Pushcha represent a very rare type of European ecosystems with the highest extent of conservation and a significantly large area. |
| Meadows | 2 | The territory of Belovezhskaya Pushcha abounds in valuable meadow habitats subject to Annex I of the EEC Habitat Directive. <i>6410 <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinia caerulea</i>)</i> <i>6510 Lowland hay meadows (<i>Alopecurus pratensis</i>, <i>Sanguisorba officinalis</i>)</i> |

| Components | Measure of Significance | Explanation |
|-----------------------|-------------------------|---|
| Forests | 3 | <p>According to the forest and plant zoning hierarchy, Belovezhskaya Pushcha is considered as a separate Belavezha forest-type complex (subregion). The native forest eco-systems of Pushcha are primarily unique in their high conservation extent and the exceptionally old age of the significant portion of forests as compared to the rest of the extensive Central and Eastern European region. For example, 31.0% of all the park's plantations belong to the group of old and overmature forests (including 41.8% within the former borders). The conserved forests of durmast oak and white fir formations are unique, and can only be found in this region of the country.</p> <p>The territory of Belovezhskaya Pushcha abounds in valuable forest habitats subject to Annex I of the EEC Habitat Directive.</p> <p>9010 * <i>Western Taiga</i> 9050 <i>Fennoscandian herb-rich forests with Picea abies</i> 9080 * <i>Fennoscandian deciduous swamp woods</i> 9160 <i>Sub-Atlantic and medio-European oak or oak-hornbeam forests of the Carpinion betuli</i> 9180 * <i>Tilio-Acerion forests of slopes, screes and ravines</i> 91D0 * <i>Bog woodland</i> 91E0 * <i>Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)</i></p> |
| Flora | 3 | <p>12 species of plants occurring in Belovezhskaya Pushcha are subject to the European Red List of Threatened Species, 10 species - to the CITES Convention, 7 species – to Annex I of Berne Convention.</p> <p>99 plant and fungus species are subject to the Belarusian Red List of Threatened Species, including 68 species of vascular plants, 3 bryophyta species, 16 lichen species and 12 fungus species.</p> <p>Belovezhskaya Pushcha is one of the world's centers in terms of plant diversity and endemism (Eu24) (WWF/IUCN 1994, 48).</p> |
| Fauna | | |
| Invertebrates | 2 | 1 worm species, 1 spider species and 20 insect species are subject to the National Red List of Threatened Species. |
| Fishes | 1 | The rare species of the biogeographic region are represented by 3 species, 2 of which are subject to the Red List of Threatened Species of the International Union for Conservation of Nature and Natural Resources (IUCN). |
| Amphibia and reptiles | 2 | 2 amphibia species and 2 reptile species are subject to the Red List of Threatened Species of the Republic of Belarus. 2 amphibia species and 1 reptile species are on the Red List of Threatened Species of the IUCN. |
| Birds | 3 | <p>64 bird species belong to the rare component of the avifauna.</p> <p>9 of these species are also subject to the IUCN's Red List of Threatened Species. The Dikoye lake that is part of the National Park's land serves as a support system for groups of the aquatic warbler, which is a species that is globally endangered throughout Europe (8% of the European population). The lake is also crucial for preserving a number of other globally endangered species: the greater spotted eagle, corncake and great snipe.</p> |
| Mammals | 3 | <p>11 mammal species are subject to the Belarusian Red List of Threatened Species, 10 species – to the IUCN's Red List of Threatened Species.</p> <p>Especially rare is the largest European bison population living free. The species has been revived after complete extermination in Europe. The population currently includes 340 bisons living free in the Belarusian part of Belovezhskaya Pushcha.</p> |

5.5. Vulnerability

| Components | Measure of Significance | Explanation | Recommendations |
|-----------------|-------------------------|---|--------------------------------------|
| Habitats | | | |
| Water | 3 | The majority of channels are characterized by high vulnerability, primarily due to their low depth, small width and straight beds. Overgrowth is another major factor in terms of vulnerability, as it leads to decreased current speeds. | Restore the old beds of small rivers |
| Bogs | 3 | The major vulnerability factor lies in disturbance of | Stabilize the hydrological |

| Components | Measure of Significance | Explanation | Recommendations |
|----------------------|-------------------------|--|---|
| | | the hydrological regime resulting from drainage engineering. Especially vulnerable is the natural complex of lowland bogs (the Dikoye, etc.), since their open status depends entirely on the man-made impact through regular grass haying (the practice has been in place for several centuries). | regime, rewater the drained bogs and perform regular haying. |
| Meadows, shrubs | 3 | The major vulnerability factor lies in overgrowth of open meadows. | Perform regular haying and controlled burning. |
| Forests | 2 | The most vulnerable are the broad-leaved forests - oak-grooves, ash and maple forests. Major vulnerability factors include absence of second growth, progressing decrease in the groundwater level, as conditioned by the climate dynamics and reclamation | Decrease man-made impact destabilizing the ecosystem state (drainage engineering, recreation, zoogenic pressure), in part - form a better adapted forest structure |
| Flora | 2 | Most vulnerable are the Atlantic and Boreal flora complexes, the development of which is associated with more vulnerable ecosystems - lowland bogs, spruce and spruce-oak forests. The massive invasion of alien plant species poses a significant threat. It has been established that 105 alien species of trees and shrubs alone are spontaneously growing in the forests of Belovezhskaya Pushcha. 46 of these species are already part of the forests. | Decrease man-made impact destabilizing the ecosystem state (drainage engineering, recreation, zoogenic pressure), in part - form a better adapted forest structure, limit the spread of alien plant species. |
| Fauna | | | |
| Invertebrates | 2 | Most vulnerable are the Atlantic and Boreal flora complexes, the development of which is associated with more vulnerable ecosystems - lowland bogs, spruce and spruce-oak forests. | Decrease man-made impact destabilizing the ecosystem state (drainage engineering, recreation) |
| Fishes | 3 | Most vulnerable are the representatives of the Arctic freshwater complex that are associated with the Lesnaya Pravaya river. | Restore the hydrological regime of small rivers |
| Amphibia and reptile | 2-3 | Most vulnerable are the species, the lifecycle of which is associated with seasonal migrations. | Set up passes for amphibia in locations, where their migration routes are intersected by the roadway. |
| Birds | 2 | Most vulnerable are the grouse species, birds of prey and aquatic warbler. The latter is especially threatened by the large number of ungulates, afforestation of open areas, shrubbing of lowland bogs. | Protect the hunting ranges of the birds of prey, perform a number of activities on reviving and preserving the wood grouse population, eliminate wood and shrub plants and overcrowded plants in certain areas of the Dikoye bog land |
| Mammals | 3 | The bison remains the most vulnerable species. It is primarily threatened due to the isolation of population groups. The badger and lynx populations that remain rather low on specimen number are also rather vulnerable. The shooting of wolves, which disturbs the predator-victim relation also causes concerns. | Provide border migration passes for bisons, put a ban on exterminating wolf groups that are territorially tied to the central part of Belovezhskaya Pushcha forest land. |

5.6. Viability and Restoration Potential

| Components | Measure of Significance | Explanation | Recommendations |
|-----------------|-------------------------|-------------|-----------------|
| Habitats | | | |

| Components | Measure of Significance | Explanation | Recommendations |
|-------------------|--------------------------------|--|--|
| Water | 2 | The restoration potential of Pushcha's small rivers is for the most part lost. | Restore the hydrological regime of disturbed small rivers and water bodies |
| Bogs | 3 | The viability and restoration potential of Pushcha's lowland bogs depends on the nature of their use. If the wood and shrub plants are controlled through regular haying or periodic controlled burning, this type of bogs can exist. The raised bogs are characterized by a rather high viability and self-restoration potential without the interference of men. The drained (dewatered) fragments of lowland and raised bogs give room for increased transformation into other plant species: shrubs and (or) forests. | For lowland bogs – to conserve the regime of using as natural hayfields. For all the Park's bogs - to restore their natural water regime (groundwater level) to the maximum possible extent. |
| Meadows, shrubs | 2 | The viability and restoration potential of dry (upland) and wet meadows in Belovezhskaya Pushcha depend on their use regime. If the regular haying is not done, or if the meadows are used as natural pastures, the meadows overgrow with shrubs and low forest, and get gradually transformed into ranges of other types. The restoration potential exists only until the stage of overgrowing with wood and shrub plants reaches 50-60%. | In terms of meadows - conserve the regime of using as natural hayfields and pastures. |
| Forests | 3 | The viability of a significant portion of old-age forests in Belovezhskaya Pushcha is relatively low due to decreased biological resistance of the old trees making up the plantations and the undermined restoration potential undermined by the excessive number of ungulates. A threat exists also with respect to losing the natural structures and the image because of the spread of invasive alien wood plants. | Assist in restoring the amount of undergrowth of the pine, oak, ash and fir; control the ungulate density and the spread of invasive alien wood plants. |
| Flora | 3 | The viability and restoration of the natural flora is generally high, but its individual components, like the species with a narrow ecological amplitude, and entire flora complexes of the lowland bogs and meadows, suffer from decreased viability and restoration potential as a result of unfavorable climate changes, drainage engineering and changes in the nature of land use (at meadows and bogs). The spread of certain alien invasive species with a high habitat-forming potential (red oak, some underbrush species) also decrease the restoration potential of a number of plants. The deadwood in upland forests of the Regulated Use Zone is removed through sanitary felling, which significantly decreases the restoration potential of a group of fungus and lichen species, despite the generally high viability of their populations. | Maintain traditional use mode and restore the water regime of bogs and meadows. Assist in preserving and dissemination of rare flora elements in the in-situ and ex-situ conditions. Limit the spread of invasive alien plants, including through maintaining the integrity of forest ecosystems and restoring the water regime of bogs. Retain part of the deadwood (fallen wood) in conducting sanitary felling in the Regulated Use Zone. |
| Fauna | | | |
| Invertebrates | 3 | The viability and restoration potential of the invertebrate fauna is high. The deadwood in upland forests of the Regulated Use Zone is removed through sanitary felling, which significantly decreases the restoration potential of a group species dependant upon the deadwood, despite the generally high viability of their populations. | Leave dead standing trees and fallen trees, when conducting forest management activities |
| Fishes | 2 | The restoration potential of the ichthyocomplex has been for the most part destroyed due to the river | Restore the hydrological regime of disturbed small |

| Components | Measure of Significance | Explanation | Recommendations |
|-----------------------|-------------------------|--|---|
| | | channeling and artificial stocking of the created water bodies | rivers |
| Amphibia and reptiles | 3 | The viability and restoration potential of the invertebrate fauna is high. At the same time the difficulties in seasonal migration of amphibia caused by road construction causes certain concerns. | Provide for seasonal migration of amphibia |
| Birds | 3 | The viability and restoration potential of the avifauna is high. At the same time reduction is observed in the population of the grouse birds, the state of the groups of the birds of prey and aquatic warbler causes concerns. | Restore the wood grouse population; maintain conditions for habitation of the birds of prey and aquatic warbler. |
| Mammals | 2 | The restoration potential of the mammal complex is significantly disturbed as a result of isolation of population groups of the large mammals' native species, the artificially maintained high ungulate density, limitation of the number of wolves and introduction of the alien species (the American mink, raccoon dog). | Control the number of ungulates, put a ban on shooting wolves, take measures to prevent the spread of alien species |

5.7. Capacity for Control, Social and Economic Potential

5.7.1. General Opportunities to Control Habitats and Species

The opportunities to control habitats and species on the territory of the National Park differ for its various functional zones.

According to the functional zoning in place, the opportunities to control the habitats and species on the territory of the Strictly Protected Zone are substantially limited and are reduced to one-time operations focused around combating the adverse processes of essentially catastrophic nature.

However, the following habitat and species control techniques can be used on the territory of the other functional zones of the National Park:

- Control the territory's hydrological regime;
- Control the number, density and spread of the regular species, including the alien ones;
- Conduct activities aimed at aiding the second growth;
- Combat shrubbing (valuable with respect to preserving open bogs);
- Carry out biotechnical activities aimed at active protection of rare species;
- Set the mode for the economic use of the ranges that are part of the National Park territory by the land users and local population;
- Set the mode for the use of transport communications on the territory of the National park;
- Set the mode for the use of recreation and tourists resources of the National Park by organized groups and individuals;
- Control the mode of use of the territories adjacent to the National Park and making up its protection zone by the land users and local population, etc.

5.7.2. Profit from Land Use

Land Use Structure

The territory of Belovezhskaya Pushcha National Park includes the land provided to the establishment for permanent use, as well as the land lots owned by other land users. The territory of the National Park is comprised by the conservation land, which is used in pursuance of the applicable laws in place. The land users, whose land lots are located within the National Park, are obliged to observe the protection and use mode, as established by the Regulations "On Belovezhskaya Pushcha National Park" of 2004.

According to the permitted use of the functional zones and the future functional re-zoning towards increasing the area of the Strictly Protected Zone to about 87,000 ha, the land use structure for the National Park would look as follows (see Table 5.2.). The economic indicators and the outcomes of the financial and economic activities of the SEI “Belovezhskaya Pushcha National Park” were analyzed considering the zoning system described and the land use structure.

Table 5.2. – Land Use Structure, Belovezhskaya Pushcha National Park

| Land Use Type | 2004–2008 | | Forecasted Changes in Land Use Structure | |
|------------------------|---|----------------------------|---|----------------------------|
| | Area, ha | In % of National Park Area | Area, ha | In % of National Park Area |
| Forest range | 94851 (124851 – 30000) forest area - Strictly Protected Zone area | 58.0 | 37851 (124851 – 87000) forest area - Strictly Protected Zone area | 23.1 |
| Agricultural range | 2450 Area of Tikhovolia Agricultural Industrial Complex | 1.5 | 2450 Area of Tikhovolia Agricultural Industrial Complex | 1.5 |
| Hunting range | 133505 (163505–30000) NP area - Strictly Protected Zone area | 81.7 | 76505 (163505–87000) NP area - Strictly Protected Zone area | 46.8 |
| Recreation and tourism | 133505 (163505–30000) NP area - Strictly Protected Zone area | 81.7 | 76505 (163505–87000) NP area - Strictly Protected Zone area | 46.8 |

Income Structure by Types of Activities and Sources of Finance

The proceeds received from the sale of the products, works and services of the State Environmental Institution “National Park “Belovezhskaya Pushcha” are generated primarily by the trade and tourist complex and through the wood processing activities. In 2006-2007 significant growth rates (120–146%) were observed with respect to the proceeds from all the activity types, but trade.

For the establishment as a whole, the proceeds from the sale of products (works and services) in 2007 constituted **22,022.3 mln BYR or 116,9% of the planned performance indicator. The funds of the establishment raised from the forest range** constituted 4,911.7 mln BYR with the growth rate of 106.5% if compared to the indicator registered in 2006.

The overall income of State Environmental Institution “National Park “Belovezhskaya Pushcha” in the last year constituted **51,263.8 mln BYR**, including the budgetary financing of **24,329.8 mln BYR (or 50% in the total amount of the sources of finance). The growth rates of the budgetary financing in the recent years have experienced a significant increase and constituted 355.9%. In 2006 budget funds accounted for only 20.9% of the total amount of the sources of finance of the National Park.** The following income structure with respect to the sources of finance was observed in the National Park in 2007: 53% – National Park's funds, 47% – budget funds.

Thus, the most promising fields of development for the establishment are the tourist field, hunting range and harvesting of minor forest products.

5.7.3. Potential of Use by Men General Use Opportunities

Taking into accounts the specific characteristics of Belovezhskaya Pushcha's environmental protection status, its resource potential can be used by men primarily to the following ends:

- Scientific research and monitoring;
- Demonstrative purposes, environmental protection propaganda, education and training;
- Making use of the habitat-forming resources;
- Sustainable recreation and tourist use;
- Inexhaustible nature use types (collection and harvesting of non-wood forest products, traditional crafts, extensive agriculture) in the best interest of the local population;
- Spread of genetic material (collection and distribution of seeds, capture and resettlement of animals);
- Sustainable foresting, hunting and agriculture in accordance with the functional zoning.

Consulting Opportunities

The overall volume and complete nature of the information, accumulated about Belovezhskaya Pushcha make the site unique in terms of demonstrating and providing consulting aid on controlling the plain woods of natural origin.

Trade Opportunities

The sustainable recreation and tourist activities, hunting and harvesting of the non-wood forest products are characterized by the largest commercial potential.

Commercial Potential of Developing Tourist Activities

In assessing the opportunities of developing the recreation and tourist activities of the National Park, one should consider the indicators of the maximum allowable recreation and tourist load upon the territory.

Table 5.8. shows the indicators used to assess the allowable load.

Table 5.8. – Recreation Capacity of the Territory of National Park “Belovezhskaya Pushcha” by Functional Zones

| Functional Zones | Zone Area, ha (since 2004) | Allowable Recreation and Tourist Loads, ind./year/ha | Territory's Recreation Capacity, ind./year |
|--------------------------|----------------------------|--|--|
| Presrved | 30000 | – | – |
| Recreational | 6140 | 1.8 | 11052 |
| Utility | 63320 | 1.3 | 82316 |
| Regulated Use | 52782 | 1.4 | 73895 |
| Forest and Hunting Range | 11263 | 1.8 | 20273 |
| Total | 163505 | | 187536 |

Thus, the recommended annual tourist capacity of Belovezhskaya Pushcha National Park, as calculated based on the maximum allowable load, constituted 187,536 individuals for the functional zoning system currently in place.

The tourist capacity of the territory and MAL can be expediently differentiated based on the various forms of tourist activities. The number of tourists, who visited the National Park in the recent years, is now close to 1989 (see Figure 5.1.). The growing number of visits since 2004 is associated with the construction of the Father Frost Residence.

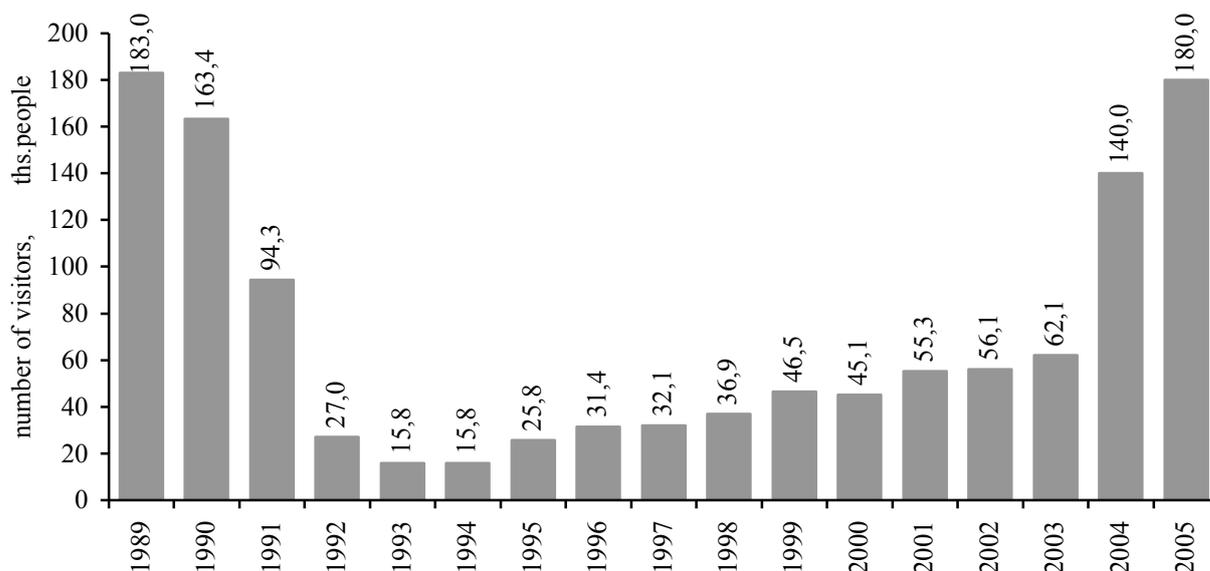


Figure 5.1. - Changes in the Number of Tourists Visiting Belovezhskaya Pushcha in 1989-2005

The number of tourists, who visited the territory for a long period of time (7,132 ind. in 2007) accounts for about 4% of the total number of tourists. The full-scale use of the hotel facilities can help bring the number of tourists falling under this category to up to 10,500 people. Thus, the following can be recommended with respect to using the potential of the National Park's tourist activities:

- Stabilize the overall number of tourist visits at the current level;
- Increase profitability per tourist;
- Full-scale use of the service facilities aimed at tourists arriving for a longer stay with implied increase of the tourists falling under this category to 10,500 people annually;
- Increase the volume of advertising with respect to the recreation and tourist product;
- Draw up an action plan on developing the environmentally-focused tourism field requiring world-level service;
- Develop agricultural tourism in Belovezhskaya Pushcha region.

Education Opportunities

The broad publicity and wide popularity of Belovezhskaya Pushcha, the high numbers of tourists visiting it, the location of the National Park in proximity to the large university cities (Brest, Grodno), and a number of smaller towns and urban settlements (Pruzhan, Kamenets, Svisloch, Gainovka, Belsk, Shereshevo, Porozovo, Kleshcheli) offer extensive opportunities for setting up education activities aimed at both, short-term visitors and local population. As the international tourism develops, the information and education potential of the site will increase.

Opportunities for Involving Locals

The structure of the local population on the territory of Belovezhskaya Pushcha is substantially different from that in the adjacent districts. Historically, the special conservation status of Pushcha played a major role in formation of the social and psychological peculiarities typical of the local population. If compared to the people in the neighboring territories, the inhabitants of Pushcha are generally characterized by a higher level of education, awareness about the natural processes and involvement in Park's activities. They have unique self-consciousness and a feeling of belonging to Pushcha. A significant portion of the local population are (or were) holding certain positions in the structure of the State Environmental Institution "National Park "Belovezhskaya Pushcha". On the other hand, the right to use Pushcha's resources is traditionally perceived by them as something natural that they have

inherited from their ancestors, which can conflict with the conservation status of the territory. Such conflicts may require mediation and settlement.

In the future, the population of the adjacent settlement centers can get increasingly involved in the comprehensive service of tourists and the associated fields.

5.8. Special Appeal

Apart from the abovementioned natural peculiarities, Belovezhskaya Pushcha's appeal is also associated with its place in the country's history, its spiritual, aesthetic and sacral value for the Belarusian people. The motives related to Belovezhskaya Pushcha can be found in the national literature, art and folklore. Besides, the National Park is unique in its scientific value, since from the beginning of the XX century it has not only become the best-explored Belarusian natural site in the broad scientific context, but also an excellent research platform for studying complex natural processes occurring against the background of the multiple factors of various origin. The natural values of Belovezhskaya Pushcha are uniquely appealing for tourists and all those, who are striving to explore the living nature.

5.9. Major Peculiarities of the Territory, List

The territory of Belovezhskaya Pushcha National Park offers 15 types of habitats recognized as internationally valuable according to the EES Habitats Directives (see Table 5.3.). 3 moss species, 16 lichen species, 62 higher vascular plant species, 12 fungus species, at least 20 insect species, 1 fish species, 2 amphibia species, 2 reptile species, 64 bird species and 11 mammal species occurring on the territory of the National Park are subject to the Belarusian Red List of Threatened Species.

Over 20 species of Belovezhskaya Pushcha are of environmental protection value on the European scale. High international conservation status is awarded to a number of animal species subject to the European Red List of the International Union for Conservation of Nature and Natural Resources (IUCN). These include 3 fish species, 2 amphibia species, 1 reptile species, 9 bird species and 10 mammal species. Of these 5 bird species are subject to the global Red List of the IUCN (Table 5.3.).

Belovezhskaya Pushcha is the home for a substantial number of bird species of a general European environmental protection value (SPEC). There 8 species that are globally threatened (SPEC 1 category). Registered are 24 species of SPEC 2 category and 65 species of SPEC 3 category, which include the species with an unfavorable conservation status in Europe.

Table 5.3. - List of Complexes and Sites Determining the Value and Major Peculiarities of Belovezhskaya Pushcha

| № | Object name | The population size | International status | National status |
|-----------------|--|---------------------|-------------------------|-----------------|
| HABITATS | | | | |
| 1. | Sub-Atlantic and medio-European oak forests (90-250 years or more) of the <i>Carpinion betuli</i> (9160) | - | EEC Habitats Directives | - |
| 2. | Sub-Atlantic and medio-European oak forests (<i>Quercus petraea</i>) of the <i>Carpinion betuli</i> (9160) | - | EEC Habitats Directives | |
| 3. | <i>Tilio-Acerion</i> forests (<i>Acer platanoides</i>) of slopes, screes and ravines (9180) | - | EEC Habitats Directives | - |
| 4. | <i>Tilio-Acerion</i> forests (<i>Tilia cordata</i>) of slopes, screes and ravines (9180) | - | EEC Habitats Directives | |
| 5. | Natural old-aged (<i>Fraxinus exelsior</i>) forests (9020, 9080, 91E0, 91F0) | - | EEC Habitats Directives | - |
| 6. | Natural old-aged (<i>Alnus glutinosa</i>) forests | - | EEC Habitats | - |

| No | Object name | The population size | International status | National status |
|------------------------|---|---------------------|-------------------------------|-----------------|
| | (91D0, 91E0) | | Directives | |
| 7. | Natural old and uneven-aged pine forests (<i>Cladonia Pinetum</i>) on dry sand heaths (2310, 2330) | - | EEC Habitats Directives | - |
| 8. | Natural old and uneven-aged pine forests on bog woodland (91D0) | - | EEC Habitats Directives | - |
| 9. | Unique formation of <i>Abies alba</i> | - | - | |
| 10. | Fennoscandian herb-rich forests with <i>Picea abies</i> (9050) | - | EEC Habitats Directives | - |
| 11. | <i>Juniperus communis</i> formations on heaths or calcareous grasslands (5130) | - | EEC Habitats Directives | - |
| 12. | <i>Malcolmietalia</i> dune grasslands (2330) | - | EEC Habitats Directives | - |
| 13. | Species-rich <i>Nardus</i> grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe) (6230) | - | EEC Habitats Directives | - |
| 14. | Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) (6410) | - | EEC Habitats Directives | - |
| 15. | Transition mires and quaking bogs (7140) | - | EEC Habitats Directives | - |
| 16. | Alkaline fens (7230) | - | EEC Habitats Directives | - |
| SPECIES | | | | |
| Vascular plants | | | | |
| 1. | <i>Lycopodiella inundata</i> | + | - | IV (NT) |
| 2. | <i>Huperzia selago</i> | + | - | IV (NT) |
| 3. | <i>Botrychium multifidum</i> | + | Bern Convention | III (VU) |
| 4. | <i>Botrychium matricariifolium</i> | + | Bern Convention | II (EN) |
| 5. | <i>Polypodium vulgare</i> | + | - | IV (NT) |
| 6. | <i>Abies alba</i> | + | - | I (CR) |
| 7. | <i>Nymphaea alba</i> | + | - | III (VU) |
| 8. | <i>Cimicifuga europaea</i> | + | - | I (CR) |
| 9. | <i>Trollius europaeus</i> | + | - | IV (NT) |
| 10. | <i>Pulsatilla pratensis</i> | + | - | IV (NT) |
| 11. | <i>Isopyrum thalictroides</i> L. | + | - | II (EN) |
| 12. | <i>Quercus petraea</i> | + | - | II (EN) |
| 13. | <i>Stellaria crassifolia</i> | + | - | III (VU) |
| 14. | <i>Hypericum montanum</i> | + | - | III (VU) |
| 15. | <i>Viola montana</i> | + | - | I (CR) |
| 16. | <i>Dentaria bulbifera</i> | + | - | IV (NT) |
| 17. | <i>Salix myrtilloides</i> | + | - | III (VU) |
| 18. | <i>Oxycoccus microcarpus</i> | + | - | III (VU) |
| 19. | <i>Moneses uniflora</i> | + | - | III (VU) |
| 20. | <i>Saxifraga hirculus</i> | + | Habitats Dir. Bern Convention | I (CR) |
| 21. | <i>Saxifraga granulata</i> | + | - | III (VU) |

| № | Object name | The population size | International status | National status |
|----------------|--|---------------------|---|-----------------|
| 22. | <i>Aruncus vulgaris</i> | + | - | III (VU) |
| 23. | <i>Potentilla alba</i> | + | - | III (VU) |
| 24. | <i>Prunus spinosa</i> | + | - | III (VU) |
| 25. | <i>Genista germanica</i> | + | - | IV (NT) |
| 26. | <i>Hedera helix</i> | + | - | II (EN) |
| 27. | <i>Astrantia major</i> | + | - | I (CR) |
| 28. | <i>Berula erecta</i> | + | - | III (VU) |
| 29. | <i>Linnaea borealis</i> | + | - | IV (NT) |
| 30. | <i>Pulmonaria mollis</i> | + | - | III (VU) |
| 31. | <i>Pedicularis sceptrum-carolinum</i> L. | + | - | II (EN) |
| 32. | <i>Dracocephalum ruyschiana</i> | + | Bern Convention | III (VU) |
| 33. | <i>Melittis sarmatica</i> | + | - | III (VU) |
| 34. | <i>Adenophora lilifolia</i> | + | Habitats Dir. | II (EN) |
| 35. | <i>Scorzonera purpurea</i> L. | + | - | II (EN) |
| 36. | <i>Arctium nemorosum</i> | + | - | III (VU) |
| 37. | <i>Crepis mollis</i> | + | - | III (VU) |
| 38. | <i>Lilium martagon</i> | + | - | IV (NT) |
| 39. | <i>Allium ursinum</i> | + | - | III (VU) |
| 40. | <i>Allium schoenoprasum</i> | + | - | II (EN) |
| 41. | <i>Iris sibirica</i> | + | - | IV (NT) |
| 42. | <i>Gladiolus imbricatus</i> | + | - | IV (NT) |
| 43. | <i>Herminium monorchis</i> | + | CITES | I (CR) |
| 44. | <i>Cypripedium calceolus</i> | + | Habitats Dir. Bern Convention CITES | I (CR) |
| 45. | <i>Epipactis atrorubens</i> | + | CITES | III (VU) |
| 46. | <i>Gymnadenia conopsea</i> | + | CITES | III (VU) |
| 47. | <i>Corallorhiza trifida</i> | + | CITES | II (EN) |
| 48. | <i>Platanthera chlorantha</i> | + | CITES | III (VU) |
| 49. | <i>Malaxis monophyllos</i> | + | CITES | II (EN) |
| 50. | <i>Neottianthe cucullata</i> | + | CITES | I (CR) |
| 51. | <i>Dactylorhiza majalis</i> | + | CITES | III (VU) |
| 52. | <i>Cephalanthera rubra</i> | + | CITES | III (VU) |
| 53. | <i>Listera cordata</i> | + | CITES | II (EN) |
| 54. | <i>Listera ovata</i> | + | CITES | IV (NT) |
| 55. | <i>Carex heleonastes</i> | + | - | I (CR) |
| 56. | <i>Carex umbrosa</i> | + | - | IV (NT) |
| 57. | <i>Carex buxbaumii</i> | + | - | II (EN) |
| 58. | <i>Eriophorum gracile</i> | + | - | III (VU) |
| 59. | <i>Bromopsis benekenii</i> | + | - | II (EN) |
| 60. | <i>Festuca altissima</i> | + | - | IV (NT) |
| 61. | <i>Trisetum sibiricum</i> | + | - | II (EN) |
| 62. | <i>Hordelymus europaeus</i> | + | - | I (CR) |
| Insects | | | | |
| 63. | <i>Calosoma inquisitor</i> | + | - | III (VU) |
| 64. | <i>Carabus cancellatus</i> | + | - | IV (NT) |
| 65. | <i>Carabus menetriesi</i> | + | - | III (VU) |

| No | Object name | The population size | International status | National status |
|-------------------|----------------------------------|---------------------|----------------------|-----------------|
| 66. | <i>Carabus clathratus</i> | + | - | III (VU) |
| 67. | <i>Carabus violaceus</i> | + | - | IV (NT) |
| 68. | <i>Carabus coriaceus</i> | + | - | IV (NT) |
| 69. | <i>Carabus intricatus</i> | + | - | III (VU) |
| 70. | <i>Graphoderus bilineatus</i> | + | - | III (VU) |
| 71. | <i>Rhantus incognitus</i> | + | | III (VU) |
| 72. | <i>Geotrupes vernalis</i> | + | - | III (VU) |
| 73. | <i>Lucahus cervus</i> | + | - | II (EN) |
| 74. | <i>Emus hirtis</i> | + | - | IV (NT) |
| 75. | <i>Catocala sponsa</i> | + | - | III (VU) |
| 76. | <i>Pericalia matronula</i> | + | - | III (VU) |
| 77. | <i>Gagitodes sagittata</i> | + | - | II (EN) |
| 78. | <i>Chariaspilates formosaria</i> | + | - | III (VU) |
| 79. | <i>Lopinga achine</i> | + | SPEC3 (VU) | III (VU) |
| 80. | <i>Colias palaeno</i> | + | - | III (VU) |
| 81. | <i>Bombus muscorum</i> | + | - | III (VU) |
| 82. | <i>Formica rufa</i> | + | IUCN, LR nt | - |
| Fishes | | | | |
| 83. | <i>Lampetra planeri</i> | + | IUCN, LR/nt | - |
| 84. | <i>Barbus barbus</i> | +? | - | III (VU) |
| 85. | <i>Misgurnus fossilis</i> | + | IUCN, LR/nt - | - |
| 86. | <i>Silurus glanis</i> | + | IUCN, LR/nt - | - |
| Amphibians | | | | |
| 87. | <i>Triturus cristatus</i> | + | IUCN, LR | IV (NT) |
| 88. | <i>Bufo calamita</i> | + | - | III (VU) |
| 89. | <i>Hyla arborea</i> | + | IUCN, LR | - |
| 90. | <i>Bombina bombina</i> | + | IUCN, LR | - |
| Reptiles | | | | |
| 91. | <i>Coronella austriaca</i> | + | - | III (VU) |
| 92. | <i>Emis orbicularis</i> | + | IUCN, DD | III (VU) |
| Birds | | | | |
| 93. | <i>Botaurus stellaris</i> | 7-20 | SPEC3 | III (VU) |
| 94. | <i>Ixobrychus minutus</i> | 5-10 | SPEC3 | II (EN) |
| 95. | <i>Ciconia nigra</i> | 25-30 | SPEC3 | III (VU) |
| 96. | <i>Milvus milvus</i> | 0-2 | SPEC2 | II (EN) |
| 97. | <i>Milvus migrans</i> | 2-4 | IUCN, VU SPEC3 | III (VU) |
| 98. | <i>Circaetus gallicus</i> | 2-3 | SPEC3 | II (EN) |
| 99. | <i>Circus cyaneus</i> | 1-3 | SPEC3 | III (VU) |
| 100. | <i>Aquila clanga</i> | 4-6 | IUCN, EN SPEC1 | I (CR) |
| 101. | <i>Aquila pomarina</i> | 60 | SPEC3 | III (VU) |
| 102. | <i>Aquila chrysaetos</i> | 1? | SPEC3 | I (CR) |
| 103. | <i>Hieraaetus pennatus</i> | 1-2 | SPEC3 | I (CR) |
| 104. | <i>Haliaeetus albicilla</i> | 2-3 | IUCN, NT SPEC1 | II (EN) |
| 105. | <i>Falco tinnunculus</i> | 3-5 | SPEC3 | III (VU) |

| № | Object name | The population size | International status | National status |
|----------------|---------------------------------|--------------------------------|----------------------|-----------------|
| 106. | <i>Falco subbuteo</i> | 8-10 | - | IV (NT) |
| 107. | <i>Falco vespertinus</i> | 1? | IUCN, VU SPEC3 | I (CR) |
| 108. | <i>Falco peregrinus</i> | 0-1? | - | I (CR) |
| 109. | <i>Perdix perdix</i> | 150-300 | SPEC3 | - |
| 110. | <i>Grus grus</i> | 40-70 | SPEC2 | III (VU) |
| 111. | <i>Crex crex</i> | 150-200 | IUCN, NT SPEC1 | III (VU) |
| 112. | <i>Vanellus vanellus</i> | 200-400 | SPEC2 | - |
| 113. | <i>Gallinago media</i> | 30-50 | IUCN, NT SPEC1 | II (EN) |
| 114. | <i>Limosa limosa</i> | 20 - 40 | IUCN, NT SPEC2 | III (VU) |
| 115. | <i>Numenius arquata</i> | 1 - 5 | SPEC2 | III (VU) |
| 116. | <i>Tyto alba</i> | 0-3 | SPEC3 | III (VU) |
| 117. | <i>Bubo bubo</i> | 10-15 | SPEC3 | II (EN) |
| 118. | <i>Glaucidium passerinum</i> | 195-240 | - | IV (NT) |
| 119. | <i>Athene noctua</i> | 20-30 | SPEC3 | III (VU) |
| 120. | <i>Strix nebulosa</i> | 7-20 | - | II (EN) |
| 121. | <i>Asio flammeus</i> | 5-10 | SPEC3 | IV (NT) |
| 122. | <i>Coracias garrulus</i> | 1 - 3 | IUCN, VU SPEC2 | I (CR) |
| 123. | <i>Alcedo atthis</i> | 1-5 | SPEC3 | III (VU) |
| 124. | <i>Picus viridis</i> | 5-10 | SPEC2 | III (VU) |
| 125. | <i>Dendrocopos leucotos</i> | 150-250 | - | IV (LR) |
| 126. | <i>Picoides tridactyllus</i> | 50-100 | SPEC3 | IV (LR) |
| 127. | <i>Gallerida cristata</i> | 1-3 | SPEC2 | III (VU) |
| 128. | <i>Anthus campestris</i> | 1-? | SPEC2 | IV (NT) |
| 129. | <i>Acrocephalus paludicola</i> | 100-155 | IUCN, VU SPEC1 | II (EN) |
| 130. | <i>Ficedula albicollis</i> | *25-42 pair/km ² | SPEC4 | IV (NT) |
| 131. | <i>Lanius minor</i> | 1? | SPEC2 | II (EN) |
| 132. | <i>Emberiza hortulana</i> | 15-20 | SPEC2 | II (EN) |
| Mammals | | | | |
| 133. | <i>Myotis nattereri</i> | + | - | IV (NT) |
| 134. | <i>Myotis brandtii</i> | + | - | III (VU) |
| 135. | <i>Barbastella barbastellus</i> | + | IUCN, VU | II (EN) |
| 136. | <i>Nyctalus leisleri</i> | + | - | III (VU) |
| 137. | <i>Eptesicus nilssonii</i> | + | - | III (VU) |
| 138. | <i>Micromys minutus</i> | + | IUCN, LR/nt | - |
| 139. | <i>Myoxis glis</i> | + | IUCN, LR/nt | III (VU) |
| 140. | <i>Eliomys quercinus</i> | + | IUCN, VU | III (VU) |
| 141. | <i>Muscardinus avellanarius</i> | + | IUCN, LR/nt - | IV (NT) |

* population density in the slot of suitable habitats

| № | Object name | The population size | International status | National status |
|------|-------------------------|---------------------|----------------------|-----------------|
| 142. | <i>Castor fiber</i> | 230 | IUCN, LR/nt | - |
| 143. | <i>Sciurus vulgaris</i> | 1500-1600 | IUCN, LR nt | - |
| 144. | <i>Meles meles</i> | 70 | - | III (VU) |
| 145. | <i>Lutra lutra</i> | 40-50 | IUCN, VU | - |
| 146. | <i>Linx linx</i> | 15-25 | IUCN, NT | II (EN) |
| 147. | <i>Bison bonasus</i> | 340 | IUCN, EN | II (EN) |

PRESCRIPTIVE PART

6. OBJECTIVE AND LONG-TERM GOALS

6.1. Long-term Vision of the Belovezhskaya Pushcha National Park

If consistently implemented, 50 years after adoption of the first Management Plan the National Park Management Plans will yield the following outcomes:

Belovezhskaya Pushcha will become an area where the wild nature will remain undisturbed for good. The Pushcha's habitat forming functions and unique terrains will be preserved; conditions essential to sustainable functioning of Belovezhskaya Pushcha's ecosystems will continuously improve including the habitats of rare or threatened species. The National Park will become a research centre dealing with the conservation of low-disturbed forest and bog ecosystems and the largest model of harmonious relationships between man and nature. We'll see highly-developed transboundary cooperation while addressing environmental and research issues to make Belovezhskaya Pushcha an integrated natural site and ensure sustainable use thereof. The Pushcha will become an attractive destination for numerous Belarusian and foreign eco tourists and nature lovers. The National Park will contribute into regional development. Agricultural produce grown using biosphere compatible technologies will enjoy high demand in domestic and foreign markets. People living around the Pushcha will see substantial increase in the quality of their life. The Pushcha's ecosystems under protection will account for a substantial part of the welfare and prosperity of the locals; they will be aware of such contribution and demonstrate their care for nature. The National Park management process will be based on transparent consistent planning involving all stakeholders. We protect Belovezhskaya Pushcha for the sake of the current and future generations as it is a top priority humanity value and the Belarusian sacred place where men worship the divine beauty of wildlife.

6.2. Long-Term Management Goals

The Long-Term Goals of the Belovezhskaya Pushcha National Park are as follows:

1. Preserve the genuine look of Belovezhskaya Pushcha's natural heritage;
2. Develop sustainable recreational business and tourism in Belovezhskaya Pushcha's region.
3. Conduct research of reference-class forest and bog ecosystems and their components.
4. Raise environmental awareness and promote environmentally friendly attitudes of the stakeholders, including those of locals and visitors to the National Park.
5. Improve and implement ways to ensure sustainable use of resources of Belovezhskaya Pushcha's ecosystems and ensure practical implementation thereof to the benefit of the locals.

7. ESTIMATED CONSTRAINTS AND RISKS TO IMPLEMENTATION OF LONG-TERM GOALS OUTLINED IN THE MANAGEMENT PLAN

| Tasks | Constraints, risks and their impact on goals | Potential impact* | Potential impact scale** | SMP's contribution into the risk prevention process*** | Overall estimated priority**** |
|---|--|-------------------|--------------------------|--|--------------------------------|
| Long-Term Goal 1. Preserve the genuine look of Belovezhskaya Pushcha's natural heritage | | | | | |
| <p>Restore and conserve the Pushcha's unique mosaic landscape and diverse communities; basically, by maintaining the natural hydrologic behaviour.</p> <p>– Create conditions to optimize the hydrologic behaviour and prevent deterioration of bog and hydrophilous forest ecosystems, decrease in forest phytocenosis species; and preserve the overall biological</p> | <p>Man-induced Transformation of Water Courses Flowing Directly through the Pushcha's Woodlands. <i>Causes:</i> considerable man-induced increase in water course lengths; rectification activities; increased surface water draining and soil drainage within the woodlands. <i>Effects:</i> extinction of bottomland meadows and deterioration of river floodplains; deterioration of hydrophilous forest communities; lower forest phytocenosis diversity and overall biological diversity; homogeneous biota forming.</p> | 2 | 3 | 2 | 7 |
| | <p>Lower Ground Water Level (GWL) Caused by Bog Reclamation in the Pushcha and Adjacent Areas. <i>Causes:</i> bog reclamation; water course drainage; higher area drainage degree. <i>Effects:</i> lower GWL results in deterioration of bog ecosystems, moistened lands, and woodlands in general; decrease in biological diversity; homogeneous biota forming.</p> | 3 | 3 | 2 | 8 |
| | <p>Disturbed Hydrologic Behaviour Caused by Hydro Land Reclamation Aimed at Creating Artificial Water Bodies in Woodlands. <i>Causes:</i> creation of artificial fishery and recreational water bodies. <i>Effects:</i> further actual and forecasted GWL decrease and deterioration of hydrophilous communities at adjacent areas caused by hydro engineering activities aimed at constructing beaches, hibernating holes, and other hydro engineering facilities.</p> | 2 | 2 | 3 | 7 |

* 3 – substantial impact lasting throughout the whole implementation period; 2 – medium-level constraint/risk which can be reduced through the implementation of the Management Plan; 1 – constraint/risk which can be completely eliminated through the Management Plan.

** 3 - constraint/risk affecting the whole Park's area; 2 – impacting local individual areas, habitats or species; 1 – potential constraint/risk (local or general) under specific conditions

*** 3 – constraint/risk which could be eliminated by SEI; 2 – require aligned activities of SEI and other organizations; SEI should take the initiative; 1 – beyond the scope of SEI's competence and requiring wide involvement of other organizations

**** priority of activities aimed at risk mitigation 3-5 – low; 6-7 – medium; 8-9 – high.

| Tasks | Constraints, risks and their impact on goals | Potential impact* | Potential impact scale** | SMP's contribution into the risk prevention process*** | Overall estimated priority**** |
|---|---|-------------------|--------------------------|--|--------------------------------|
| diversity; – Ensure restoration and conservation of open-area lowland bogs ecologically associated with the woodlands | | | | | |
| Ensure stabilization and/or restoration of natural processes in primary forests Ensure long-term natural forest regeneration at the historical area of Belovezhskaya Pushcha and enhance its conservation status. | Destabilizing Dynamic Processes in Forest Stands (Including Spruce Forests) under Current Environmental Conditions. <u>Causes:</u> Extreme weather and climatic conditions in the 1990s- early 2000s; secondary forest (timber) vermin; GWL changes; incomplete correspondence of soil and hydrologic conditions to tree species in individual spruce areas including <i>underlying causes</i> : previous drainage reclamation; climatic changes; human activities (large-scale tree felling in the XIX - early XX centuries combined with large populations of ungulates). <u>Effects:</u> spruce drying in 28 ths ha of forest stands during four seasons (2001-2004) with the total lost spruce volume reaching 1.2 mln cu m; two-fold shrinkage of the spruce forest area during the latest 15 years; transformation of 4 ths ha of spruce forests into low-density oak groves and pine forests or sparse stands; substantial downward changes in forest inventory values for remaining spruce forest stands i.e. reserve deterioration and spruce ratio; deterioration of spruce forest sanitation; forest decline; phytocenosis shifts from the mature development stages to initial ones. | 2 | 2 | 3 | 7 |
| | No Natural Pine Regeneration in Pine Forest Stands <u>Causes:</u> high density of wild ungulates eating pine understory; no bottomland fires promoting post-pyrogenous pine regeneration. <u>Effects:</u> forest structure changes in the short-term perspective at the major part of pine forest stands that reached the threshold age; disturbed formation of multiple-aged pine forest stands (lean soils). | 2 | 2 | 3 | 7 |

| Tasks | Constraints, risks and their impact on goals | Potential impact* | Potential impact scale** | SMP's contribution into the risk prevention process*** | Overall estimated priority**** |
|-------|--|-------------------|--------------------------|--|--------------------------------|
| | <p>Decrease in Oligotrophic Bog Moss Pine Forest Areas. <i>Causes:</i> changes in soil and hydrologic growing conditions caused by drainage reclamation near forests and climatic changes; eutrophication caused by transboundary migration of pollutants (one of potential causes). <i>Effects:</i> decrease in biological diversity; lower population or extinction of scanty fauna (e.g. wood grouse) and flora species; deteriorated micro climate.</p> | 3 | 2 | 2 | 7 |
| | <p>No Natural Oak (and other Tree Species) Regeneration in Old-Aged Broad-Leaved Forests <i>Causes:</i> High density of wild ungulates; disturbed natural forest development and structure caused without limitation by previous human activities (selective tree felling; removal of large dead woodlands preventing from dead wood serving as substrate for regeneration, etc.) <i>Effects:</i> Forest structure shifts from primary broad-leaved (oak, ash tree, and maple) to derivative hornbeam forests and to spruce forests to a lesser extent; simpler spatial, species and age structure of woodlands; extinction of some Nemoral fauna and flora species i.e. oak consorts.</p> | 2 | 2 | 3 | 7 |
| | <p>Disturbed Ash Tree Succession Processes in Woodlands Caused by Ash Tree Drying. <i>Causes:</i> presumably, disturbed hydrologic behaviour caused by climatic changes resulting in ash tree heart wood and root rot caused by parasitic fungi (<i>Armillariella mellea</i>) and further by timber vermin. <i>Effects:</i> changes in dominant wood species: as the ash tree contribution is generally 40-50% even its complete drying will not lead to complete forest stand decline; extinction of some Nemoral fauna and flora species i.e. ash tree consorts.</p> | 3 | 2 | 2 | 7 |
| | <p>Risk of Replacement of Primary Vegetation Communities with Alien Invasive Flora Species. <i>Reasons:</i> using introducents in greenery planting; forest cultivation, and bio engineering (to enrich forests with folder plants) in the National Park and at adjacent areas; lower level or forest ecosystem phytocenotic isolation caused by tree felling, drainage reclamation, and climatic changes. <i>Effects:</i> replacement or displacement of indigenous species of tree and bush plants and accompanying invertebrates with alien species; loss of the genuine look of the Pushcha's forests in the long-term perspective; higher risk of propagation of specific vermin and diseases not typical of indigenous flora and fauna.</p> | 2 | 2 | 3 | 7 |

| Tasks | Constraints, risks and their impact on goals | Potential impact* | Potential impact scale** | SMP's contribution into the risk prevention process*** | Overall estimated priority**** |
|--|---|-------------------|--------------------------|--|--------------------------------|
| | | | | | |
| Restore the natural zoocenosis structure | <p>Isolating Populations of Large Ungulates in National Areas of Belovezhskaya Pushcha Including the European Bison. <i>Causes:</i> the state border protection system existing since 80s of XX century. <i>Effects:</i> Non-balanced spatial distribution of large herbivorous animal populations putting higher pressure on forest vegetation, on genetic information exchange among groups within the Pushcha's overall population inhabiting national isolates which can cause the gene pool deterioration in the future.</p> | 2 | 2 | 2 | 6 |
| | <p>Overpopulation of Ungulates Caused by Intensive Bio Engineering Technologies. <i>Causes:</i> Bio engineering activities primarily aimed at conserving and increasing the reproduction of ungulates for hunting purposes. <i>Effects:</i> deterioration of forest ecosystems; lower regeneration of wood and bush vegetation, primarily, pine and broad-leaved forests; lower viability of ungulates; disturbed survival systems and smaller populations of some forest fauna species (heath cocks and species inhabiting the underwood tier – dormice and passerine birds).</p> | 3 | 3 | 3 | 9 |
| | <p>Ecologically Non-Balanced Wolf Population Management <i>Causes:</i> regular wolf shooting in the Pushcha (28 wolves killed during the latest 4 years). <i>Effects:</i> disturbed predator/victim relationships which is one of the most effective mechanisms for maintaining the sustainability of biotic communities; risk of losing the indigenous wolf population (including transboundary population groups) that is the All-European species of preferential protection.</p> | 2 | 1 | 3 | 6 |
| | <p>Disturbed Structure of Indigenous Fauna Communities and Populations Caused by Distribution of Alien Invasive Species <i>Causes:</i> invasion of alien fauna species (the American mink, raccoon dog). <i>Effects:</i> lower populations of duck birds and water voles. The decreased waver vole population, in its turn, accounts for a low population of predators feeding on water voles.</p> | 3 | 3 | 2 | 8 |

| Tasks | Constraints, risks and their impact on goals | Potential impact* | Potential impact scale** | SMP's contribution into the risk prevention process*** | Overall estimated priority**** |
|--|--|-------------------|--------------------------|--|--------------------------------|
| Conserve and rehabilitate indigenous flora and fauna species facing extinction in the Pushcha | No Natural Rocky Oak Regeneration and Lower Contribution of Rare Tree Species in Forest Stands <u>Causes:</u> extremely high density of forest stands or their individual areas; high density of wild ungulates, disturbed forest stand structure caused by previous human activities (selective tree felling; removal of large dead wood, etc.) <u>Effects:</u> lower species population and its absolute loss in the forest stand structure. | 2 | 2 | 3 | 7 |
| | Threatened Relic Insular White Fir Population. <u>Causes:</u> high density of wild ungulates; climatic changes; recently – wind impacts resulting in the loss of fruit-bearing trees. <u>Effects:</u> risk of losing the relic species population with the unique gene pool resulting from the species adaptation to the specific growing environment. | 2 | 2 | 3 | 7 |
| | Decrease of Grouse Bird Populations. <u>Causes:</u> smaller areas of bog moss pine forests and bilberry pine forests caused by reclamation activities and climatic changes; deterioration of forest ecosystems and protection conditions caused by high density of wild ungulates; deterioration of grouse lekking grounds in pine forests caused by bog overgrowing and higher availability of lekking grounds for ungulates; higher fox population and its spatial redistribution. <u>Effects:</u> risk of losing the Western European grouse subspecies i.e. <i>Tetrao urogallus major</i> caused by the drastic decrease in its population. | 2 | 2 | 3 | 7 |
| | Decrease of the Aquatic Warbler Population at the Dikoye bog. <u>Causes:</u> smaller fit-for-nesting areas caused by bushing of open-area sedge lowland bog, perennial herbaceous vegetation thickening caused by stopped hay mowing and disturbed hydrologic behaviour (bog drying-up during the summer low water period caused by the rectification of the Narev's upper reaches and channel networking). <u>Effects:</u> the overall population at the Dikoye bog saw the decrease from 1,200 male species in 1997 to 375 male species in 2005 and 150 male species in 2007; the overall area of open lowland bogs reduced by 16% from 1950 to 2005. | 3 | 2 | 3 | 8 |

| Tasks | Constraints, risks and their impact on goals | Potential impact* | Potential impact scale** | SMP's contribution into the risk prevention process*** | Overall estimated priority**** |
|--|---|-------------------|--------------------------|--|--------------------------------|
| | | | | | |
| Ensure an efficient monitoring system for ecosystems and key flora and fauna components | Lack of competent and skilled personnel | 1 | 1 | 2 | 4 |
| | The list of regular monitoring stations located outside the nature reserve is subject to frequent changes caused by man-induced (economic) activities. | 1 | 1 | 2 | 4 |
| | Difficulties associated with regular monitoring according to the monitoring program due to unstable financing. | 1 | 1 | 2 | 4 |
| Increase the international conservation status of Belovezhskaya Pushcha natural site | The status of UNESCO World Heritage, if assigned to the Pushcha in its historical boundaries, will result in substantial restrictions applied on the use of resources by local residents. | 3 | 3 | 1 | 7 |
| | The transboundary biosphere reserve may get in conflict with the state border protection tasks. | 3 | 3 | 1 | 7 |
| Long-Term Goal 2. Develop Sustainable Recreational Business and Tourism in Belovezhskaya Pushcha. | | | | | |
| Develop and implement the concept of the regional tourist product demonstrating competitiveness in domestic and foreign markets | Lack of Belarusian experience in development and promotion of the national tourist product based on natural and cultural values within natural sites of preferential protection. | 2 | 2 | 2 | 6 |
| | Weak domestic tourism traditions in Belarus. | 3 | 2 | 1 | 6 |
| | Conflicts and disagreements among various segments of demand for the Pushcha's natural values: eco tourists and hunters; mass and camera tourism. | 3 | 2 | 3 | 8 |

| Tasks | Constraints, risks and their impact on goals | Potential impact* | Potential impact scale** | SMP's contribution into the risk prevention process*** | Overall estimated priority**** |
|---|---|-------------------|--------------------------|--|--------------------------------|
| | High competition of similar tourist products of National Parks. | 3 | 2 | 2 | 7 |
| Create the National Park's tourist infrastructure according to globally recognized standards | Existing tourist infrastructure facilities are concentrated in the Park's Central Estate i.e. the village of Kameniuki. | 2 | 2 | 3 | 7 |
| | Obsolete tourist service standards failing to meet tourist demands. | 2 | 2 | 3 | 7 |
| | Underdeveloped primary tourist infrastructure: marked routes, camping sites, observation platforms, etc. | 2 | 2 | 3 | 7 |
| | High financial risks: the park's infrastructure development and upgrading thereof will require substantial resources with deferred payback. | 3 | 2 | 1 | 6 |
| | The risk that the infrastructure failing to correspond to the tourist product concept due to the wrong process cycle. | 2 | 2 | 2 | 6 |
| Provide information support and guidelines for tourism development in and near the Belovezhskaya Pushcha | Lack of tourism marketing and promotion professionals in the National Park. | 2 | 2 | 3 | 7 |
| | Lack of full-fledged promotional materials on Pushcha available for tourists in foreign languages. | 2 | 2 | 3 | 7 |
| | Lack of stable channels to provide information of the tourist product to the target consumers. | 2 | 2 | 3 | 7 |
| | Lack of the full-fledged visiting centre in the National Park. | 2 | 2 | 3 | 7 |
| Ensure sustainable use of the National Park for recreational purposes | <p>Deteriorated and Disturbed Natural Ecosystems within Individual Pushcha's Areas that are Actively Used to Develop Tourism and Recreation Business.</p> <p><i>Causes:</i> unreasonable location of tourist facilities and routes in relation to the reserve area; construction of artificial recreational water bodies.</p> <p><i>Effects:</i> loss of natural ecosystems caused by construction; threat of recreational deterioration of individual park areas, disturbed distribution and lower populations of some rare and protected wild fauna species caused</p> | 2 | 2 | 3 | 7 |

| Tasks | Constraints, risks and their impact on goals | Potential impact* | Potential impact scale** | SMP's contribution into the risk prevention process*** | Overall estimated priority**** |
|--|--|-------------------|--------------------------|--|--------------------------------|
| | by the higher disturbance factor. | | | | |
| Long-Term Goal 3. Carry out Research of Reference-Class Forest and Bog Ecosystems and their Components | | | | | |
| Achieve the optimal level or research logistical, engineering and HR support | Insufficient research logistical support. | 2 | 3 | 2 | 7 |
| | Insufficient research HR support. | 3 | 3 | 1 | 7 |
| | Insufficient involvement of leading ecologists, biologists and environmental professionals (the National Academy of Sciences of Belarus, higher education institutions) under the National Park's research programs. | 2 | 2 | 2 | 6 |
| Develop and implement consistent programs for long-term and comprehensive research of the Pushcha's ecosystems and their components using up-to-date research methods | Research and control bodies fail to see the Pushcha as the unique model and site of highly prospective ecological studies. | 2 | 3 | 2 | 7 |
| | Lack of physical resources. | 3 | 3 | 1 | 7 |
| Develop and maintain the research potential ensuring regular high- | Lack of competent and skilled personnel including personnel turnover caused by the lack of accommodation. | 3 | 1 | 3 | 7 |
| | Insufficient financing to attract third-party researchers (from the National Academy of Sciences of Belarus and educational institutions). | 3 | 1 | 2 | 6 |

| Tasks | Constraints, risks and their impact on goals | Potential impact* | Potential impact scale** | SMP's contribution into the risk prevention process*** | Overall estimated priority**** |
|---|---|-------------------|--------------------------|--|--------------------------------|
| quality studies | Insufficient logistical support of the Park's Research Department. | 3 | 1 | 2 | 6 |
| Long-Term Goal 4. Foster Environmental Awareness and Solicitous Attitude of Stakeholders to Nature Including Local Residents and People Visiting the National Park | | | | | |
| Establish the Public Relations Department in the State Environmental Institution "National Park Belovezhskaya Pushcha" and organize its activities | Increase in the National Park's staff which is quite large. | 3 | 1 | 3 | 7 |
| | Lack of competent professionals. | 2 | 1 | 2 | 5 |
| Improve environmental awareness of people living near Belovezhskaya Pushcha | Conflicts between environmental awareness improvement and conventional economic behaviour models typical of people living near Belovezhskaya Pushcha. | 3 | 3 | 2 | 8 |
| Long-Term Goal 5. Improve and Implement Techniques for Ensuring Sustainability of Belovezhskaya Pushcha's Ecosystem Resources for the Benefit of Local Population | | | | | |
| Create conditions for biosphere compatible agriculture in the vicinity of Belovezhskaya Pushcha | Agricultural producers located within the National Park's protected area need that the reclamation systems are functional. | 3 | 3 | 1 | 7 |
| | Inconsistence between the agricultural structure in the vicinity of Belovezhskaya Pushcha and the target areas of biosphere compatible agriculture. | 3 | 3 | 1 | 7 |
| Control sustainable use | The Pushcha's management bodies have no powers to establish quantities and standards for non-wood product | 1 | 2 | 1 | 4 |

| Tasks | Constraints, risks and their impact on goals | Potential impact* | Potential impact scale** | SMP's contribution into the risk prevention process*** | Overall estimated priority**** |
|--|---|-------------------|--------------------------|--|--------------------------------|
| of phytocenosis non-wood products | procurement. | | | | |
| | Difficulties associated with the interpretation of "local population" and "in-house needs" in practice. | 1 | 1 | 1 | 3 |
| Restore traditional trades and businesses of the locals based on the sustainable use of the Pushcha's ecosystem resources | Lack of tradition carriers. | 2 | 1 | 2 | 5 |
| | Lack of economic incentives. | 2 | 1 | 2 | 5 |
| Develop and implement Belovezhskaya Pushcha branding program | Lack of proper regulation of intellectual property rights (including brands, trademarks and etc.) allowing for uncontrolled use of the word "Belovezhsky" and expression "Belovezhskaya Pushcha" for business purposes. | 3 | 3 | 1 | 7 |
| | Risk of brand discrediting due to a poor quality of marked products. | 3 | 3 | 2 | 8 |

8. FUNCTIONAL RE-ZONING

Despite previous man-induced transformation and damage done by natural disasters, integral and heterogeneous woodlands of the Pushcha's historical area are capable of self-restoration and maintaining cenosis forming and rare flora and fauna populations provided that conservative protection activities are consistently implemented.

The applicable Regulations on "Belovezhskaya Pushcha National Park" stipulate that man-impacted areas shall not be included into the reserve area. However, the whole Pushcha's natural site was and is currently exposed to such impact, though the extent thereof may differ. Thus, the above Regulations impede application of conservative protection measures to all valuable areas. This provision will be amended in the new version of the Regulations on "Belovezhskaya Pushcha National Park".

We are going to develop and implement the project of the National Park's functional , which provides for inclusion of the natural sites requiring consistent conservative protection into the reserve area.

Along with communities and species requiring conservative protection established by the reserve regime to ensure their efficient conservation, Belovezhskaya Pushcha also includes communities, species and natural processes requiring active protection and activities compensating for the man-induced impact. Active interventions, in their turn, are in the point of fact incompatible with the National Park's reserve area regime. Therefore, the existing functional zoning of the National Park does not allow to properly implement plenty of activities and recommendations outlined in this Management Plan. On the other hand, substantial weakening of the existing protection and use regime does not meet the goals of the Belovezhskaya Pushcha conservation. We propose the following solution: develop a special regime for respective areas i.e. the strict regulation regime combining critical reserve area features and the possibility of implementing target active protection activities as established herein. Such a regime shall apply on an individual basis to relatively small areas with reference to the locations where respective activities will take place.

We will identify individual areas to implement the activities prescribed by the Management Plan, develop an individual strict regulatory regime for each zone and integrate these into the National Park Functional Zoning Project.

Long-term goals established herein call for the National Park's functional re-zoning including: the list, spatial location and areas of functional zones, applicable protection and use conditions and standards. Pursuant to the applicable law, the functional zoning project will be made a part of the Regulations on "Belovezhskaya Pushcha National Park" as amended and restated.

The key functional re-zoning activities include:

1. Expand the reserve area regime and apply this to Belovezhskaya Pushcha's historical centre (roughly corresponding to the area of the State Hunting Reserve "Belovezhskaya Pushcha" as of September, 1991) with the approximate area of 73-76 ths ha.
2. Include all old-aged natural forests in the National Park into the reserve area.
3. Establish a strict regulation zone whose regime prohibits any man-induced impacts other than those that are directly aimed at regulating environmental functions, in particular:
 - restore and/or maintain the natural hydrologic behaviour;
 - re-naturalize/rehabilitate previously disturbed natural or artificially created communities, in particular, tree planting;
 - struggle with invasive plant species;
 - the buffer between man-made sites and low-disturbed wildlife areas.

In consideration of the foregoing, the regime applicable to the strict regulation zone can be primarily applied to relatively small areas which are:

- fragments of water course beds that reasonably require activities aimed at restoring the natural hydrologic behaviour;
- areas where regulating hydro engineering facilities are located;
- trees planted at windfall and tree felling areas;
- plantations including predominantly alien species that are distribution source areas;
- wastelands caused by sanitation cutting of drying spruce groves that require activities to promote natural forest regeneration and/or other reforestation activities;
- open-area bogs affected by undesirable succession processes, in particular, over growing with trees and bushes;
- areas to restore populations of rare indigenous flora and fauna species requiring bio engineering activities, in particular, grouse lekking grounds and nesting locations of large woodland bird species;
- at least 50 meter roadside belts along internal roads intersecting the reserve area;

Permissible types of man-induced exposure shall be listed for each area of the strict regulation zone; the list shall be comprehensive and allow for no broader interpretation. The regime applicable to the strict regulation zone may apply to each individual area either for an indefinite period of time or for any period required to implement one-time environmental activities; such a zone will be further included into the National Park's reserve area.

4. List types of man-induced exposure permissible in the reserve area and the strict regulation zone to ensure passive nature monitoring within the safe load limits (up to 12 men) along the pre-determined routes on condition that the monitoring group has been trained and accompanied with the employee of the State Environmental Institution.

Figure 3.1 shows proposals regarding functional re-zoning.

The State Environmental Institution shall be responsible for functional re-zoning in 2009 involving third-party experts and taking account of the opinion of local residents.

Competent authorities also plan to determine and approve limits and standards of procurement of non-wood forest products performed by the locals for their in-house needs.

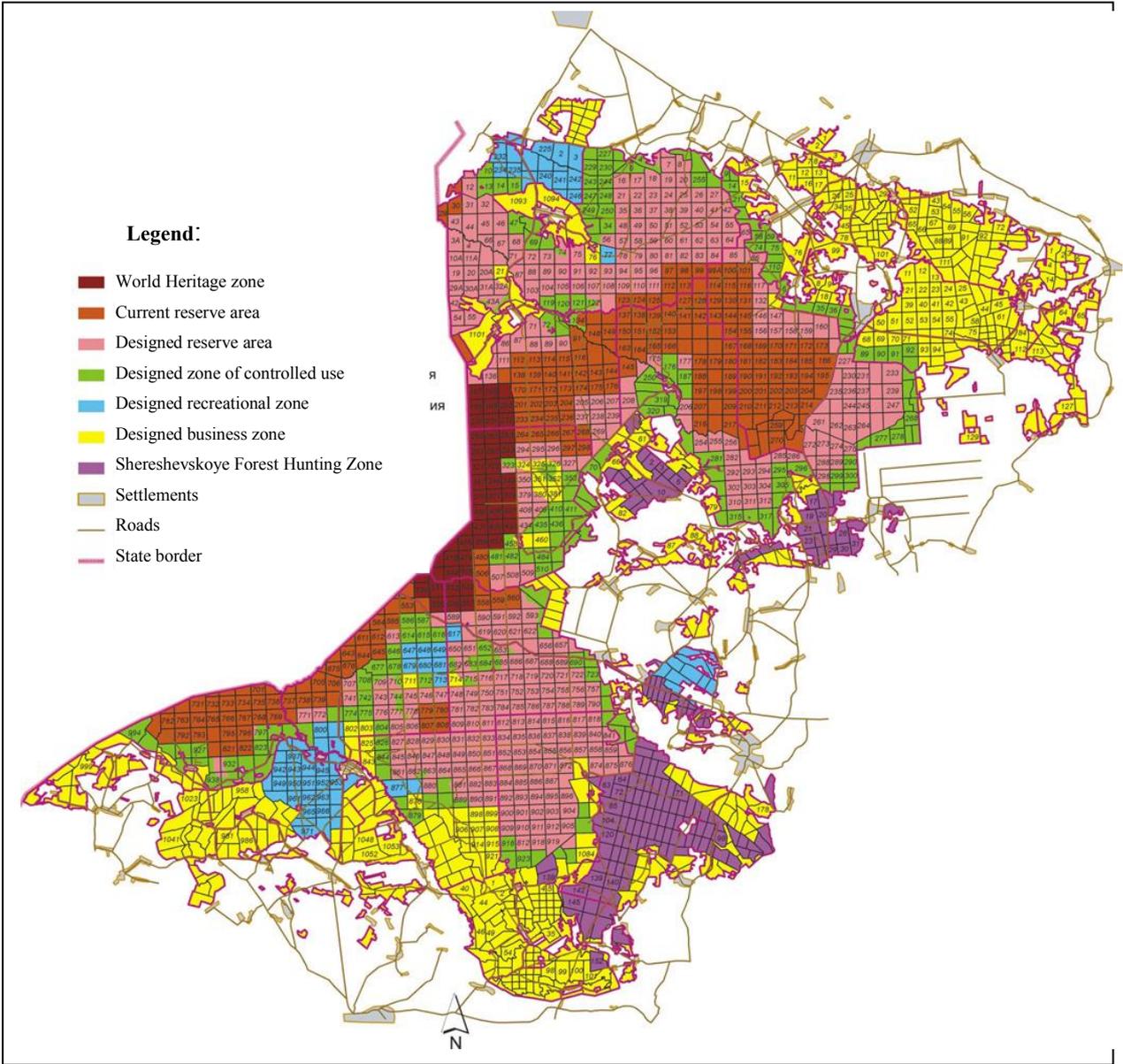


Figure 3.1. Proposed Functional Re-Zoning

9. IMPLEMENTATION AREAS AND ACTIVITIES (PROJECTS)

Numerous implementation areas and individual activities (projects) will enable achievement of long-term goals established by the Management Plan.

The Key implementation areas outlined in the Management Plan include:

Long-Term Goal 1.

Area 1.1. Restore and maintain the natural hydrologic behaviour

Area 1.2. Restore and maintain the genuine structure of the Pushcha's primary natural communities

Area 1.3. Conserve and rehabilitate threatened indigenous species

Area 1.4. Develop and operate an efficient monitoring system for ecosystems and key flora and fauna components

Area 1.5. Increase the international protection status of Belovezhskaya Pushcha

Area 1.6. Logistical support and procurement of protection agencies

Long-Term Goal 2.

Area 2.1. Develop the tourist product

Area 2.2. Create the tourist infrastructure

Area 2.3. Information and methodological support for tourism development

Long-Term Goal 3.

Area 3.1. Arrange research of the Pushcha's ecosystems and their components using up-to-date techniques

Area 3.2. Publish research and popular science literature about Belovezhskaya Pushcha

Long-Term Goal 4.

Area 4.1. Strengthen the ties of the National Park and the public

Area 4.2. Raise environmental awareness of the stakeholders

Long-Term Goal 5.

Area 5.1. Maintain sustainable agricultural activities in Belovezhskaya Pushcha's region

Area 5.2. Sustainable procurement of non-wood forestry products

Area 5.3. Restoration of traditional trades

Area 5.4. Belovezhskaya Pushcha branding

What's more, the Management Plan shall also include a separate implementation area 6.1 **Emergency Protection System** planned for potential natural and industrial disasters.

Long-Term Goal 1. Preserve the Genuine Look of Belovezhskaya Pushcha's Natural Heritage

Objectives

- Stop further decrease of the ground water level caused by drainage reclamation;
- Rehabilitate habitats deteriorated due to drainage reclamation;
- Restore the natural hydrologic behaviour of water bodies and courses;
- Slow down undesirable succession processes in bogs caused by disturbed hydrologic behaviour;
- Eliminate the artificial roughness caused by road construction which restrains natural hydrologic processes;
- Promote regeneration of primary old-aged forests including rare species forests;
- Add more natural phytocenotic look to previously planted artificial stands;
- Prevent invasive species from immigrating and distributing and mitigate their impact on indigenous populations and communities;
- Eliminate artificial obstacles hampering free genetic exchange in woodlands;
- Reduce pressure put by ungulates on primary forest communities, for example, by balancing the predator/victim system;
- Restore the natural zoocenosis structure, for example, by re-acclimatizing species previously lost in the Pushcha;
- Monitor water bodies and the regional hydrologic behaviour;
- Monitor forest pathology;
- Monitor populations of key and rare species;
- Monitor ecosystems;
- Monitor and control alien species and their distribution;
- Make the system of protecting and using Belovezhskaya Pushcha natural site more balanced and aligned;
- Enhance the international environmental prestige of Belovezhskaya Pushcha and Belarus in general.

Areas

Area 1.1. Restore and maintain the natural hydrologic behaviour

Area 1.2. Restore and maintain the genuine structure of the Pushcha's primary natural communities

Area 1.3. Conserve and rehabilitate critical, rare and threatened species

Area 1.4. Develop and operate an efficient monitoring system for ecosystems and key flora and fauna components

Area 1.5. Increase the international protection status of Belovezhskaya Pushcha

Area 1.6. Logistical support and procurement of protection agencies.

| No. | Activity | Goal of the activity | Expected outcomes | Responsible | Implementation period | Estimated cost, mln BYR; prices as of November 1, 2008 | Estimated source of funding |
|---|---|---|---|---------------------------------------|-----------------------|--|---|
| Area 1.1. Restore and maintain the natural hydrologic behaviour | | | | | | | |
| Implementation of activities in this area is planned to help accomplish the following goals: | | | | | | | |
| <ul style="list-style-type: none"> – Stop further decrease of ground water level; – Rehabilitate habitats deteriorated due to drainage reclamation; – Restore the natural hydrologic behaviour of water bodies and courses; – Slow down undesirable succession processes in bogs caused by disturbed hydrologic behaviour; – Eliminate the artificial roughness caused by road construction which restrains natural hydrologic processes; | | | | | | | |
| Fundamental requirements for activities to be implemented in this area | | | | | | | |
| <ul style="list-style-type: none"> – Comprehensive environmental feasibility studies shall precede the design and implementation of hydro engineering operations (refer to Area 3); – In some cases activities may require functional re-zoning to identify strict regulation zones at work sites (refer to Belovezhskaya Pushcha Functional Re-Zoning Section) – The most sparing and biosphere compatible technologies shall be selected to achieve the established goals. | | | | | | | |
| <i>1.1.1.</i> | Develop and implement stage-by-stage projects aimed at renaturalizing drained bogs located next to the National Park's boundaries (based on the outcomes of Activity 3.1.2) | Rehabilitate habitats deteriorated because of ever-decreasing GWL caused by drainage reclamation | Stabilized GWL; renaturalized bogs | State Environmental Institution (SEI) | 2011-2013 | 180 (develop design and budget documents, the implementation cost will be calculated at the project stage) | International Technical Assistance Program, Environmental Protection Fund (EPF) |
| <i>1.1.2.</i> | Develop the rationale, develop and implement projects of restoring hydrologic behaviour patterns of disturbed small | Restore the hydrologic behaviour of disturbed | Renaturalized beds of rectified rivers; lower | State Environmental | 2011-2013 | 150 (develop | International Technical |

| <i>No.</i> | Activity | Goal of the activity | Expected outcomes | Responsible | Implementati on period | Estimated cost, mln BYR; prices as of November 1, 2008 | Estimated source of funding |
|---------------|--|--|---|---------------------------------------|-----------------------------------|---|---|
| | rivers and water bodies (according to the outcomes of Activity 3.1.3) | water courses and water bodies | surface water drainage from the Pushcha | Institution (SEI) | | design and budget documents, the implementation cost will be calculated at the project stage) | Assistance Program, EPF |
| <i>1.1.3.</i> | Develop rules and regulations for use of Liatskie impounding reservoirs (according to the outcomes of Activity 3.1.3) | Restore the hydrologic behaviour of the Perevoloka river system (including Solomenka tributary) | Impounding reservoir hydro engineering system parameters identified according to the Perevoloka's natural hydrologic behavior | State Environmental Institution (SEI) | 2011 | 10 | EPF, SEI's own funds |
| <i>1.1.4.</i> | Prepare rationale for, develop and implement the engineering project to restore the Glubokoye bog hydrologic behaviour (according to the outcomes of Activity 3.1.3) | Renaturalize the Glubokoye bog hydrologic behaviour | Stabilized GWL at the Glubokoye bog; Undesirable succession processes slowed down | State Environmental Institution (SEI) | 2011-2012 | 40 (develop design and budget documents, the implementation cost will be | International Technical Assistance Program, EPF |

| <i>No.</i> | Activity | Goal of the activity | Expected outcomes | Responsible | Implementation period | Estimated cost, mln BYR; prices as of November 1, 2008 | Estimated source of funding |
|---------------|--|--|--|---------------------------------------|------------------------------|---|--|
| | | | | | | calculated at the project stage) | |
| 1.1.5. | Ensure sustainable operation of overflow dams at the Narev river, Vybrody and Borky channels (according to the outcomes of Activity 3.1.3) | Optimize the the Dikoye bog's hydrologic behaviour | GWL stabilized at the Dikoye bog; undesirable succession processes slowed down at the bog's peripherals | State Environmental Institution (SEI) | 2011-2013 | 15 | International Technical Assistance Program, EPF |
| 1.1.6. | Develop and implement the project to increase the number of multi-purpose pipe crossings at roads within the National Park | Eliminate the artificial roughness restraining natural hydrologic processes Reduce the Amphibia death rate during their reproduction migration (refer to Activity 1.3.7) | Pipe crossings constructed at roads where natural hydrologic processes are disturbed by the road network. The design of pipe crossings allows using them as migration crossings by Amphibian during reproduction migration. | State Environmental Institution (SEI) | 2010 | 30 (develop design and budget documents, the implementation cost will be calculated at the project stage) | International Technical Assistance Program, Republican Road Fund |

| No. | Activity | Goal of the activity | Expected outcomes | Responsible | Implementation period | Estimated cost, mln BYR; prices as of November 1, 2008 | Estimated source of funding |
|---|--|--|---|---------------------------------------|-----------------------|--|-----------------------------------|
| Area 1.2 Restore and maintain the genuine structure of the Pushcha's primary natural communities | | | | | | | |
| Implementation of activities in this area is planned to help accomplish the following goals: | | | | | | | |
| <ul style="list-style-type: none"> – Promote regeneration of primary old-aged forests including rare species forests; – Add more natural phytocenotic look to previously planted artificial stands; – Stop replacement of indigenous plants and plant communities with invasive species; – Eliminate artificial obstacles hampering free genetic exchange among animal populations in woodlands; – Reduce pressure put by ungulates on primary forest communities, for example, by balancing the predator/victim system; – Restore the natural zoocenosis structure, for example, by optimizing natural predator populations (wolf) – Fundamental requirements for activities to be implemented in this area – Comprehensive environmental feasibility studies shall precede the design and implementation of hydro engineering operations (refer to the activities under Long-Term Goal 3); – In some cases activities may require functional re-zoning to determine strict regulation zones at work sites (refer to Belovezhskaya Pushcha Functional Re-Zoning Section) | | | | | | | |
| 1.2.1. | Develop and implement projects of mixed stands in bare areas planned for inclusion into the reserve through activities promoting regeneration or by planting local artificial stands (bio groups) based on the forest health surveys | Promote natural spruce reproduction | Primary spruce groves stabilized | State Environmental Institution (SEI) | 2009-2013 | 20 | SEI's forestry funds |
| 1.2.2. | Develop and implement activities to expand non-joined local artificial stands, promoting regeneration and lighting by removing the small-leaved canopy | Naturalized previously planted artificial stands | Artificial stands have more natural phytocenotic look and structure | State Environmental Institution (SEI) | 2011-2013 | 30 | National Park's forestry funds |
| 1.2.3. | Assess the regeneration success; develop and introduce recommendations promoting the regeneration of old-aged pine and oak forests | Promote the regeneration of old-aged pine and oak forests | Succession processes stabilized in old-aged pine and oak forests | State Environmental Institution (SEI) | 2009-2012 | 20 | SEI's research and forestry funds |
| 1.2.4. | Develop and implement recommendations to expand planted rare formation forests in the National Park: | Promote the regeneration of rare formation forests | Higher share of rare forest formations | State Environmental | 2011-2013 | 15 | SEI's research and |

| No. | Activity | Goal of the activity | Expected outcomes | Responsible | Implementation period | Estimated cost, mln BYR; prices as of November 1, 2008 | Estimated source of funding |
|--------|---|---|---|--|-----------------------|--|---|
| | Improvement cuttings in rare formation forests outside the reserve area; promote the regeneration; protect understory trees against ungulates | | | Institution (SEI) | | | forestry funds |
| 1.2.5. | Remove trees, understory and underwood of invasive woody plants through scheduled sanitary cuttings followed by reforestation with primary indigenous tree species | Stop replacing indigenous tree species with invasive ones | Renaturalized stand structures and flora species composition | State Environmental Institution (SEI) | 2010-2013 | 20 | SEI's forestry funds |
| 1.2.6. | Improve fencing at the Belarusian/Polish border to arrange migration passages for large mammals | Ensure the possibility of transboundary migration of large mammals | Genetic information exchange between groups of large animals | State Boundary Commission SEI (outcomes of task 51 PM-600) | 2011-2012 | To be determined during activity planning | To be determined during activity planning |
| 1.2.7. | Develop the project for hunting within permitted hunting areas as part of 10-year game management based on the determining the optimal populations of ungulates and breeding game amounts | Optimize the population of ungulates in the National Park's reserve area | Long-term hunting plan in place | State Environmental Institution (SEI) | 2010-2011 | 70 | Republican budget |
| 1.2.8. | Optimize the game breeding locations to redistribute the animal load on forests in different zones | Optimize the population of ungulates in the National Park's reserve area | Ungulates drawn away from old-aged forests in the reserve area to the National Park's peripherals Lower pressure on old-aged forests | State Environmental Institution (SEI) | 2012-2013 | 15 | SEI's hunting management funds |
| 1.2.9. | Study the wolf biology in Belovezhskaya Pushcha together with Polish mammalogists; design and implement activities to conserve the indigenous wolf population | Conserve the indigenous wolf population | Zoocenosis structure optimized by maintaining the population of a large predator | State Environmental Institution (SEI) | 2010-2013 | 50 | International Technical Assistance Program, EPF |

| No. | Activity | Goal of the activity | Expected outcomes | Responsible | Implementation period | Estimated cost, mln BYR; prices as of November 1, 2008 | Estimated source of funding |
|---|--|---|---|---------------------------------------|-----------------------|--|---|
| Area 1.3. Conserve and rehabilitate critical, rare and threatened indigenous species | | | | | | | |
| Implementation of activities in this area is planned to help accomplish the following goals: | | | | | | | |
| <ul style="list-style-type: none"> – Conserve species of wild plants and animals under natural vegetation/habitation environment – Restore (re-acclimatize, rehabilitate, renaturalize) species lost in the Pushcha, for example, using cultivation techniques | | | | | | | |
| Fundamental requirements for activities to be implemented in this area | | | | | | | |
| <ul style="list-style-type: none"> – In some cases activities may require functional re-zoning to determine strict regulation zones at work sites (refer to Belovezhskaya Pushcha Functional Re-Zoning Section) – Some species such as the grouse, aquatic warbler, and European bison require alignment with other implementation areas of Long-Term Goal 1. | | | | | | | |
| 1.3.1. | Develop and implement the action plan to conserve Belovezhskaya Pushcha's wild plants and animals on the Red List under natural vegetation/habitation environment | Conserve rare plant and animal species in situ | Populations of rare indigenous species of plants and animals conserved | State Environmental Institution (SEI) | 2011-2013 | 150 | Environmental Protection Fund (EPF) |
| 1.3.2. | Grow individual plant species from local seed under controlled conditions followed by renaturalization | Conserve rare plant species ex situ | Rare plant seeds in plant; further renaturalization | State Environmental Institution (SEI) | 2011-2013 | 120 | SEI's forestry funds |
| 1.3.3. | Hand over seeds of the Pushcha's protected plants to the National Genetic Stock | Conserve rare plant species ex situ | Reserve of the genetic material of the Pushcha's protected plants | State Environmental Institution (SEI) | 2010-2013 | 20 | Environmental Protection Fund (EPF) |
| 1.3.4. | Remove trees and bushes and excessively thick herbaceous vegetation at individual areas of the Dikoye bog to conserve the aquatic warbler habitat | Select areas and develop recommendations to implement activities Mow and remove bushes | Aquatic warbler habitats conserved (at least 1,200 ha). The aquatic warbler population include at least | State Environmental Institution (SEI) | 2010-2011 | 300 | International Technical Assistance Program, |

| <i>No.</i> | Activity | Goal of the activity | Expected outcomes | Responsible | Implementati on period | Estimated cost, mln BYR; prices as of November 1, 2008 | Estimated source of funding |
|---------------|--|---|--|---|-----------------------------------|---|---|
| | | at the area of at least 1,200 ha | 500 warbling males. | | | | SEI's own funds |
| <i>1.3.5.</i> | Implement 2009-2013 action plan to conserve and efficiently manage the European bisons (applicable to Belovezhskaya Pushcha National Park) | Conserve the full-fledged population of the European bison | The European bison population conserved | State Environmental Institution (SEI) | 2009-2013 | According to the action plan | Funds allocated for the action plan implementati on |
| <i>1.3.6.</i> | Identify key open hunting areas of birds of prey and introduce reforestation restrictions | Conserve habitats (hunting areas) of birds of prey | Stable populations of birds of prey | State Environmental Institution (SEI) | 2010-2013 | 20 | SEI's own funds; International Technical Assistance Program |
| <i>1.3.7.</i> | Construct crossings for amphibians at the crossings of roads and their migration routes (partially according to the outcomes of Activity 1.17 hereof) | Ensure favorable conditions for amphibian migration | Lower amphibian death rate during migration including rare species | State Environmental Institution (SEI) | 2012-2013 | 80 | International Technical Assistance Program, Republican Road Fund |
| <i>1.3.8.</i> | Design and implement consistent activities to restore and maintain grouse populations in situ and ex situ | Restore and conserve the grouse in situ Conserve ex situ the Western European grouse | Grouse population restoration zones created Larger indigenous grouse population | State Environmental Institution (SEI) National | 2010-2013 | 285 | SEI's own funds; EPF; International Technical |

| No. | Activity | Goal of the activity | Expected outcomes | Responsible | Implementation period | Estimated cost, mln BYR; prices as of November 1, 2008 | Estimated source of funding |
|--|--|--|--|---|-----------------------|--|---|
| | | subspecies (<i>Tetrao urogallus major</i>) | The ex situ reserve gene pool of the Western European grouse subspecies created | Academy of Sciences of Belarus | | | Assistance Program |
| 1.3.9. | Develop rationale, recommendations and implement activities for the experimental naturalization of tarpan horse as the analogue of the extinct primary zoocenosis component | Reconstruct the Pushcha's zoocenosis by introducing the genetically and environmentally close analogue to the extinct tarpan's ecological niche | An in situ tapran horse population created within optimal hoofed animal load on the Pushcha's phytocenosis | State Environmental Institution (SEI) National Academy of Sciences of Belarus | 2011-2013 | 500 | International Technical Assistance Program, EPF |
| 1.3.10. | Develop rationale, recommendations and implement activities for re-introduction of the brown bear as the key component of primary zoocenosis | Environmental rehabilitation of the Pushcha's zoocenosis | The brown bear population created in Belovezhskaya Pushcha | State Environmental Institution (SEI) National Academy of Sciences of Belarus | 2011-2013 | 800 | International Technical Assistance Program, EPF |
| Area 1.4. Develop and operate an efficient monitoring system for ecosystems and key flora and fauna components | | | | | | | |
| Implementation of activities in this area is planned to help accomplish the following goals: | | | | | | | |
| <ul style="list-style-type: none"> – Monitor water bodies and the regional hydrologic behaviour; – Monitor forest pathology; – Monitor populations of key and rare species; – Monitor ecosystems; – Control distribution of alien species | | | | | | | |
| Fundamental requirements for activities to be implemented in this area | | | | | | | |

| No. | Activity | Goal of the activity | Expected outcomes | Responsible | Implementation period | Estimated cost, mln BYR; prices as of November 1, 2008 | Estimated source of funding |
|--------|---|--|--|--|-----------------------|--|--|
| | <ul style="list-style-type: none"> - Employ a hydrologic monitoring expert; - Professional development of the National Park's employees involved in hydrologic monitoring - Stability of monitoring points should be addressed during functional re-zoning (refer to Belovezhskaya Pushcha Functional Re-Zoning section) - Better logistical support of the Park's Research Department. | | | | | | |
| 1.4.1. | Improve the hydrologic behaviour monitoring system and monitor hydrology, hydro chemistry and hydro biology in the Pushcha | Make the Pushcha's hydrologic behaviour data more representative Monitor water bodies | Existing GWL monitoring system equipped with measuring wells. Updated management decision making information data base | SEI, National Academy of Sciences of Belarus Republican Unitary Enterprise "Belarusian Hydrologic Expedition" | 2010-2013 | 60 | Environmental Protection Fund (EPF) |
| 1.4.2. | Ensure efficient forest pathology monitoring of spruce, oak and ash tree groves | Monitor forest pathology | Improved management decision making information data base | State Environmental Institution (SEI) | 2009-2013 | 15 | SEI's forestry funds |
| 1.4.3. | Arranged monitoring of wild plant populations, species on the Red List of the Republic of Belarus | Monitor rare plant species | Improved management decision making information data base | State Environmental Institution (SEI) | 2009-2013 | 50 | SEI's research funds + task No. 29 of State Enterprise "National Environmental Monitoring" |

| No. | Activity | Goal of the activity | Expected outcomes | Responsible | Implementation period | Estimated cost, mln BYR; prices as of November 1, 2008 | Estimated source of funding |
|---------------|---|--|--|---------------------------------------|------------------------------|---|---|
| | | | | | | | System” NSMOS |
| 1.4.4. | Monitor populations of wild animal common species and species on the Red List including species requiring active protection and monitoring according to the this Management Plan | Monitor common and rare animal species | Better control of EI’s activity performance | State Environmental Institution (SEI) | 2009-2013 | 50 | SEI’s research funds + task No. 31 of State Enterprise “National Environmental Monitoring System” NSMOS |
| 1.4.5. | Arranged integrated monitoring of the National Park’s ecosystems (forest, bog, water, meadow, etc.) according to the regulations on the National Environmental Monitoring System of the Republic of Belarus | Monitor ecosystems | Improved management decision making information data base | SEI; task No. 43.2 GPOOPT | 2009-2012 | 200 | Environmental Protection Fund (EPF) |
| 1.4.6. | Build up the monitoring system for alien invasive flora and fauna species in the National Park | Control distribution of alien species | Improved information data base supporting management decision making to struggle with invasive species | State Environmental Institution (SEI) | 2010-2013 | 80 | EPF, SEI’s own funds |

| No. | Activity | Goal of the activity | Expected outcomes | Responsible | Implementation period | Estimated cost, mln BYR; prices as of November 1, 2008 | Estimated source of funding |
|---|--|---|---|---|-----------------------|--|---|
| Area 1.5. Increase the international protection status of Belovezhskaya Pushcha | | | | | | | |
| <p>Implementation of activities in this area is planned to help accomplish the following goals:</p> <ul style="list-style-type: none"> – Make the international system of protecting and using Belovezhskaya Pushcha natural site more balanced and aligned; – Enhance the international environmental prestige of Belovezhskaya Pushcha and Belarus in general. <p>Fundamental requirements for activities to be implemented in this area</p> <ul style="list-style-type: none"> – International treaties and taking account of state border protection tasks; – Increased reserve area and the strict regulation zones introduced as part of functional re-zoning will promote the status of UNESCO World Heritage site (refer to Belovezhskaya Pushcha Functional Re-Zoning section) – The Lesnaya river system as Ramsar Site will require aligned and coordinated activities of SEI and other land users. | | | | | | | |
| 1.5.1. | Cause Belovezhskaya Pushcha biosphere to be proclaimed a Transboundary International Reserve under the UNESCO Man and Biosphere Program including Białowiecki Park Narodowy (Poland); Belovezhskaya Pushcha National Park (Belarus) and other areas. Draft an international treaty and prepare the nomination application. | Coordinate the use and protection of Belovezhskaya Pushcha as a single natural site | Belovezhskaya Biosphere Transboundary International Reserve application filed | Ministry of Nature SEI Ministry of Internal Affairs National Academy of Sciences of Belarus | 2012-2013 | 20 | International Technical Assistance Program, EPF |
| 1.5.2. | Make Belovezhskaya Pushcha's reserve area and strict regulation zone a part of the UNESCO's World Heritage site. | Enhance the international prestige of Belarus and its National Park | The whole historical part of Belovezhskaya Pushcha nominated for UNESCO World Heritage site | SEI, The National Committee for UNESCO Affairs | 2009-2010 | 20 | International Technical Assistance Program, |

| <i>No.</i> | Activity | Goal of the activity | Expected outcomes | Responsible | Implementati on period | Estimated cost, mln BYR; prices as of November 1, 2008 | Estimated source of funding |
|--|---|---|--|--|-----------------------------------|---|---|
| <i>1.5.3.</i> | Prepare nomination applications to the Ramsar Convention Secretariat for assigning the status of Ramsar Site to the Lesnaya Pravaya – Lesnaya river system and the Dikoye bog and delegate them to the Ministry of Nature | Enhance the international prestige of Belarus and its National Park | The Lesnaya Pravaya – Lesnaya river system and the Dikoye bog nominated for Ramsar Site status | SEI National Academy of Sciences of Belarus Task 39 GPOOPT | 2009-2010 | 15 | International Technical Assistance Program, EPF |
| Area 1.6. Logistical support and procurement of protection agencies | | | | | | | |
| <i>1.6.1.</i> | Equip protection agencies with vehicles, special-purpose equipment, accessories, and protective equipment | Improve logistical support and procurement of environmental agencies | Vehicles, special-purpose equipment, and protective equipment purchased | Department of Presidential Affairs, SEI, Task 19.2 GPOOPT | 2009-2013 | 2100 | Republican budget |

Long-Term Goal 2. Develop Sustainable Recreational Business and Tourism in Belovezhskaya Pushcha.

Objectives

- Make tourism in the Pushcha regular, balanced and sustainable;
- Design a unique tourist product based on the sustainable and efficient use of the Pushcha's natural and cultural wealth;
- Promote and maintain demand for recreational and tourist services for the Pushcha's ecosystems in domestic and foreign markets;
- Develop and introduce the target tourist service standard;
- Create comfortable and aesthetically attractive environment for tourism development in the Pushcha;
- Enhance the National Park's exposition capacity;
- Optimize tourist flows; reduce the Southern load, and ensure uniform tourist load distribution throughout the Pushcha;
- Ensure practical implementation of the information component of the regional tourist product;
- Raise the environmental awareness of tourists.

Areas

Area 2.1. Develop the tourist product based on the optimal recreational load on natural sites and ecosystems;

Area 2.2. Create the tourist infrastructure;

Area 2.3. Information and methodological support for tourism development

| No. | Activity | Goal of the activity | Expected outcomes | Responsible | Implementation period | Estimated cost, mln BYR; prices as of November 1, 2008 | Estimated source of funding |
|--|---|--|---|-------------|-----------------------|--|-----------------------------|
| Area 2.1. Develop the tourist product | | | | | | | |
| <p>Implementation of activities in this area is planned to help accomplish the following goals:</p> <ul style="list-style-type: none"> – Make tourism in the Pushcha regular, balanced and sustainable; – Design the unique tourist product based on the sustainable and efficient use of the Pushcha’s natural and cultural wealth; – Promote and maintain demand for recreational and tourist services for the Pushcha in domestic and foreign markets; – Develop the target service standard. <p>Fundamental requirements for activities to be implemented in this area</p> <ul style="list-style-type: none"> – The development of regional tourist product requires the multi-disciplinary team involving experts experienced in developing tourist products of the European National Parks; – This area is of lesser priority than the aforementioned Goal. – The regional tourist product should include biosphere compatible tourism types only. – Environmentally and economically optimal recreational loads should be the basic parameter of the tourist product. | | | | | | | |
| 2.1.1. | Draft a tourism development program and business plans for the National Park and its protected area including activities aimed at promoting the tourist product at the foreign market. | Determine target environmental and economic parameters of Belovezhskaya Pushcha’s tourist product; Optimize tourism development in Belovezhskaya Pushcha based on environmental and economic criteria; Improve tourism sustainability in the Pushcha | Target standards of maximum permissible recreational loads, target throughput capacity of the recreational and tourist infrastructure; tourist flow seasonality; service reference prices, and other critical parameters of tourism development and recreational infrastructure; The recreational and tourism infrastructure layout plan is in place for the National Park and its reserve area. Investment amounts and potential investors identified. | SEI | 2010 | 50 | SEI’s own funds |
| 2.1.2. | Implement the program and business plan | Promote and maintain demand for the Pushcha at the foreign tourist market | The campaign promoting the National Park tourism at foreign markets is in place; Positive tourist image of the Pushcha; Excursions held for representatives of the | SEI | 2011-2013 | Based on the business plan and | SEI’s own funds |

| No. | Activity | Goal of the activity | Expected outcomes | Responsible | Implementation period | Estimated cost, mln BYR; prices as of November 1, 2008 | Estimated source of funding |
|--------|--|---|---|--------------------------|-----------------------|--|------------------------------------|
| | | | European tourist agencies. Higher foreign tourist flow. | | | program | |
| 2.1.3. | Certify the National Park's tourist products | Foster the positive image of the quality of offered recreational and tourist services | The certificate for conformity for ECEAT unified standards obtained for the National Park tourist product. Agricultural tourism services certified for conformity to EuroGites (European Federation of Farm and Village Tourism) unified standards | SEI Business entities | 2011-2013 | | Funds of SEI and business entities |
| 2.1.4. | Improve the package of special services offered to foreign tourists | Improved service quality | Improved service package including visa and document assistance, airport pickup service, comfortable hotels and lodges, guides and interpreters, huntsmen, car and equipment rent, and excursion program. Prices for offered prices calculated. | SEI | 2010-2011 | | SEI's own funds |

Area 2.2. Create the tourist infrastructure

Implementation of activities in this area is planned to help accomplish the following goals:

- Apply in practice the service standard developed under the above area.
- Create comfortable and aesthetically attractive environment for tourism development in the Pushcha;
- Enhance the National Park's exposition capacity.

Fundamental requirements for activities to be implemented in this area

- 2008-2014 State Program for Development of Areas of Preferential Protection (GPOOPT) and/or 600 Anniversary of Belovezhskaya Pushcha Reserve Celebrations Action Plan (PM-600) provide for the overall majority under this Area.

| No. | Activity | Goal of the activity | Expected outcomes | Responsible | Implementation period | Estimated cost, mln BYR; prices as of November 1, 2008 | Estimated source of funding |
|--------|---|--------------------------|---|--------------------|-----------------------|--|--|
| 2.2.1. | Construct the office and environmental centre combined with the museum of nature | Improved service quality | Office and environmental centre combined with the museum of nature in place | SEI, Unit 1 PM-600 | 2009 | 9100 | Centralized Innovation Fund under the Department for Presidential Affairs, EPF |
| 2.2.2. | Reconstruct the former museum of nature into a restaurant; develop design and budget documents | Improved service quality | Former museum of nature reconstructed into a restaurant | SEI, Unit 4 PM-600 | 2009 | 1200 | Centralized Innovation Fund under the Department for Presidential Affairs |
| 2.2.3. | Reconstruct hotel No. 2 in the village of Kameniuki | Improved service quality | Hotel No. 2 reconstructed in the village of Kameniuki | SEI, Unit 5 PM-600 | 2009 | 1600 | Centralized Innovation Fund under the Department for Presidential Affairs, SEI |

| <i>No.</i> | Activity | Goal of the activity | Expected outcomes | Responsible | Implementa tion period | Estimated cost, mln BYR; prices as of November 1, 2008 | Estimate d source of funding |
|------------|---|---|--|-------------------------------------|-----------------------------------|---|---|
| 2.2.4. | Construct and improve the estate of Belarusian Father Frost | Improved service quality | Improved facilities in the estate of Belarusian Father Frost (laundry and household unit, snowing well, lighting system upgraded, wastewater disposal system and other facilities) | SEI, Unit 6 PM-600 | 2009 | 2320 | Centralize d Innovatio n Fund under the Departme nt for Presidenti al Affairs, EPF |
| 2.2.5. | Overhaul and upgrade open-air demonstration cages and create wildlife habitat conditions | Improve the NP's expository value | Open-air demonstration cages upgraded | SEI, Unit 8 PM-600 task 33.2 GPOOPT | 2009-2012 | 1880 | Environm ental Protection Fund (EPF) |
| 2.2.6 | Construct Lavy and Romanovtsy tourist centers; develop design and budget documents | Improved service quality | Lavy and Romanovtsy tourist centers in place | SEI, Unit 10 PM-600 | 2009 | 4000 | Centralize d Innovatio n Fund under the Departme nt for Presidenti al Affairs, Republica n budget |
| 2.2.7. | Improve the NP's central estate | Create comfortable and aesthetically attractive environment for tourism | NP's central estate improved | SEI, Unit 2 PM-600 | 2009 | 1250 | Environm ental Protection |

| No. | Activity | Goal of the activity | Expected outcomes | Responsible | Implementation period | Estimated cost, mln BYR; prices as of November 1, 2008 | Estimated source of funding |
|---------|---|---|---|---|-----------------------|--|-------------------------------------|
| | | development | | | | | Fund (EPF) |
| 2.2.8. | Improve settlements bordering on the Belovezhskaya Pushcha National Park (conserve authenticity and traditional style) | Create comfortable and aesthetically attractive environment for tourism development | 10 villages improved; Belovezhskaya Pushcha's culture remained authentic and traditional | SEI; task No. 34 GPOOPT | 2009-2010 | 3000 | SEI's own funds; local budgets |
| 2.2.9. | Purchase equipment (accessories, tacking, etc.) for tourist development | Improved service quality | Equipment in place | SEI; task 35.2 GPOOPT | 2009-2013 | 1000 | SEI's own funds, EPF |
| 2.2.10. | Develop, improve and equip environmental tourist routes | Improve the NP's expositional value | At least 4 new tourist routes developed and improved. Accommodations and catering places, routes designed, design and budget documents in place; exposition conditions and subjects identified, season-depending permissible recreational load parameters; routes improved; tackling and equipment rental centers; information and guidelines available for excursions; guides trained. | DPA; SEI; task 32.2 GPOOPT; Unit 7 PM-600 | 2009-2012 | 380 | Environmental Protection Fund (EPF) |

Area 2.3. Information and guideline support for tourism development

Implementation of activities in this area is planned to help accomplish the following goals:

- Optimize tourist flows; reduce Southern load, and ensure even tourist load distribution throughout the Pushcha;
- Implement the information component of the regional tourist product in practice;
- Enhance environmental awareness of tourists.

Fundamental requirements for activities to be implemented in this area

| No. | Activity | Goal of the activity | Expected outcomes | Responsible | Implementation period | Estimated cost, mln BYR; prices as of November 1, 2008 | Estimated source of funding |
|--------|--|---|---|---|-----------------------|--|-------------------------------------|
| – | As experienced tourists demand high-quality information on the tourist product, researches from SEI and other research organizations should be involved into information product design; | | | | | | |
| – | Along with information contents and carriers distribution channels should be focused on tourist product consumers. | | | | | | |
| 2.3.1. | Create a tourist and information centre in Svisloch district, Hrodna Voblast | Optimize tourist flows; Improve service quality | Tourist and information centre in Svisloch district, Hrodna Voblast | SEI Svisloch District Executive Committee | 2010-2013 | 400 | Local budget, SEI's own funds |
| 2.3.2. | Design, issue and distribute tourist guides, maps, brochures, booklets, and other information products about the National Park | Improve service quality and enhance environmental awareness of tourists | Tourist guides, maps, brochures, booklets and other information products on Belovezhskaya Pushcha distributed. Tourists become more informed about Belovezhskaya Pushcha and its value | SEI; task No. 27.2 GPOOPT | 2009-2013 | 225 | Environmental Protection Fund (EPF) |
| 2.3.3. | Manufacture, install and service the tourist and information terminal in Kameniuki | Improve service quality and enhance environmental awareness of tourists | Active tourist and information terminal in Kameniuki | SEI; Clause 3 Annex 2 to Subprogram "Staff Policy. Tourism Guidelines and Recommendations" 2008 – 2010 Tourist Development Program in Belarus | 2010 | 30 | Program funds |
| 2.3.4. | Add updated tourist information to the NP's official web site | Improve service quality and enhance environmental awareness | NP's official web site contains updated and useful tourist information | SEI | 2009-2013 | 20 | SEI's own funds |

| <i>No.</i> | Activity | Goal of the activity | Expected outcomes | Responsible | Implementa tion period | Estimated cost, mln BYR; prices as of November 1, 2008 | Estimate d source of funding |
|------------|--|---|----------------------------|---------------------------------|-----------------------------------|---|--|
| | | of tourists | | | | | |
| 2.3.5. | Design and install information and direction signs and publicity boards | Improve service quality and enhance environmental awareness of tourists | Information signs in place | DPA, SEI Task 17.1 GPOOPT | 2009-2011 | 125 | Environm ental Protection Fund (EPF) |

Long-Term Goal 3. Carry out Research of Reference-Class Forest and Bog Eco Systems and their Components

Objectives

- Develop and implement consistent programs for long-term and comprehensive research of the Pushcha's ecosystems and their components using up-to-date research techniques
- Update and systematize data on plants and animals of preferential protection
- Obtain up-to-date data on populations of key species, their development and behaviour.
- Develop guidelines and recommendations for the implementation of activities under the Management Plan;
- Identify poorly-managed reclaimed areas affecting the Pushcha's hydrologic behaviour;
- Develop the true and consistent research concept of sustainable eco-systems of low-disturbed old-aged forests;
- Establish work practices and methods of the national wildlife reserve science and its applications;
- Identify how to conserve the Pushcha's old-aged forests;
- Identify the scope of reasonable compensation activities; develop the rationale for target parameters and limitations;
- Identify how to optimize the Pushcha's hydrologic behaviour;
- Study cumulative global and local factors of human impact on low-disturbed forest ecosystems to elaborate the optimum "response" in the reserve business;
- Improve the information data base supporting management decision making;
- Distribute research knowledge on Belovezhskaya Pushcha both to the general public and specialized audience;
- Achieve the optimal level of research logistical, engineering and HR support.

Areas

Area 3.1. Arrange research of the Pushcha's ecosystems and their components using up-to-date methods

Area 3.2. Publish research and popular science literature about Belovezhskaya Pushcha

| No. | Activity | Goal of the activity | Expected outcomes | Responsible | Implementation period | Estimated cost, mln BYR; prices as of November 1, 2008 | Estimated source of funding |
|--|--|---|---|--|-----------------------|--|-----------------------------|
| Area 3.1. Conduct research of the Pushcha's ecosystems and their components using up-to-date techniques | | | | | | | |
| <p>Implementation of activities in this area is planned to help accomplish the following goals:</p> <ul style="list-style-type: none"> – Develop and implement consistent programs for long-term and comprehensive research of the Pushcha's ecosystems and their components using up-to-date research guidelines and techniques – Update and systematize data on plants and animals of preferential protection – Obtain up-to-date data on populations and their development of key species. – Develop guidelines and recommendations for implementation of the activities outlined in the Management Plan; – Identify poorly-managed reclaimed areas affecting the Pushcha's hydrologic behaviour; – Develop the true and consistent research concept of sustainable eco-systems of low-disturbed old-aged forests; – Establish work practices and methods of the national wildlife reserve science and its applications; – Identify how to conserve the Pushcha's old-aged forests; – Identify the scope of reasonable compensation activities; develop the rationale for target parameters and limitations; – Identify how to optimize the Pushcha's hydrologic behaviour; – Study cumulative global and local factors of human impacts on low-disturbed forest ecosystems to elaborate the optimum "response" in the reserve business; – Improve the information data base supporting management decision making; <p>Fundamental requirements for activities to be implemented in this area</p> <ul style="list-style-type: none"> – Leading foreign experts representing prestigious national and foreign research centers should be involved into research work along with SEI's research staff; – Research and studies should widely employ multi-disciplinary approaches; – The reference nature of Belovezhskaya Pushcha as the natural site should be, where possible, used in research work to the fullest extent possible; – Implement modern research methods: molecular genetics; telemetry; remote sensing; geo information, etc; – Being transboundary in its nature, the site requires alignment with Polish researchers. | | | | | | | |
| 3.1.1. | Inspect and examine reclamation systems within the National Park's reserve area to identify those that are poorly-managed and affect Belovezhskaya Pushcha | <p>Identify reclamation systems that are poorly-managed and affect the Pushcha's hydrologic behaviour within the reserve area</p> <p>Identify sustainability parameters of reclamation systems planned for further</p> | The list of bottleneck reclamation systems for further improvements. Sustainability parameters identified for reclamation systems planned for further operation | SEI National Academy of Sciences of Belarus | 2010-2011 | 40 | Republican budget; EPF |

| No. | Activity | Goal of the activity | Expected outcomes | Responsible | Implementation period | Estimated cost, mln BYR; prices as of November 1, 2008 | Estimated source of funding |
|--------|--|---|--|---|-----------------------|--|--|
| | | operation | | | | | |
| 3.1.2. | Carry out integrated inspection of drained bogs and poorly-managed reclamation systems within the National Park | Identify poorly-managed drained bogs and reclamation systems affecting the Pushcha's hydrologic behavior | The list of drained bogs and bottleneck reclamation systems for further improvements. | SEI | 2010-2011 | 45 | Republican budget, EPF, SEI's own funds |
| 3.1.3. | Assess transformation and current condition of water bodies and waterlogged lands within the National Park and its reserve area; | Identify how to optimize the Pushcha's hydrologic behaviour | List of water bodies to be renaturalized in place; Target parameters determined for renaturalization and maintaining the Pushcha's hydrologic behavior | SEI | 2010-2011 | 100 | International Technical Assistance Program, EPF, SEI's own funds |
| 3.1.4. | Study plant pathology of forestry stands with ash tree, maple, and linden dominating | Identify causes for negative trends in primary broad-leaved forests | Succession dynamics diagrams and ash tree/maple/linden forest development forecasts in place | SEI | 2010-2011 | 45 | Environmental Protection Fund (EPF) |
| 3.1.5. | Forecast the condition of old-aged coniferous and broad-leaved forests of the NP and design conservation activities | Identify how to conserve the Pushcha's old-aged forests | Action plan to conserve old-aged coniferous and broad-leaved forests | Department of Presidential Affairs, SEI, Task 47 GPOOPT | 2011-2012 | 120 | Environmental Protection Fund (EPF) |
| 3.1.6. | Study populations of key species of wild plants and animals on the Red List using methods of telemetry and molecular | Obtain up-to-date data on populations and their | Research base in place for developing management | SEI, National Academy of | 2011-2013 | 500 | International Technical |

| No. | Activity | Goal of the activity | Expected outcomes | Responsible | Implementation period | Estimated cost, mln BYR; prices as of November 1, 2008 | Estimated source of funding |
|---|--|---|--|---|-----------------------|--|-------------------------------------|
| | genetics | development of key species. | plans for populations of key flora and fauna species | Sciences of Belarus | | | Assistance Program |
| 3.1.7. | Develop the NP's geo information system | Improve the information data base supporting management decision making | Geo information system in place for the NP and its reserve area | Department of Presidential Affairs, SEI, Task 46 GPOOPT | 2010-2013 | 170 | Environmental Protection Fund (EPF) |
| Area 3.2. Publish research and popular science literature about Belovezhskaya Pushcha | | | | | | | |
| <p>Implementation of activities in this area is planned to help accomplish the following goals:</p> <ul style="list-style-type: none"> – Disseminate scientific knowledge on Belovezhskaya Pushcha both amongst the public at large and specialized audiences; – Update and systematize data on plants and animals of preferential protection – Improve the information data base supporting management decision making; <p>Fundamental requirements for activities to be implemented in this area</p> <ul style="list-style-type: none"> – Both current and historical data accumulated during all regular observations in Belovezhskaya Pushcha should be used. | | | | | | | |
| 3.2.1 | Design and publish the Red List of Belovezhskaya Pushcha | Update and systematize data on plants and animals of preferential protection; Improve the information data base supporting management decision making; Disseminate scientific knowledge on Belovezhskaya Pushcha both amongst the public at large and specialized | Red List of Belovezhskaya Pushcha published based on current research base and practices | SEI, National Academy of Sciences of Belarus | 2013 | 200 | Environmental Protection Fund (EPF) |

| No. | Activity | Goal of the activity | Expected outcomes | Responsible | Implementation period | Estimated cost, mln BYR; prices as of November 1, 2008 | Estimated source of funding |
|--------|--|---|--|---|-----------------------|--|-------------------------------------|
| | | audiences; | | | | | |
| 3.2.2. | Design and publish Belovezhskaya Pushcha Atlas | Improve the information data base supporting management decision making; Disseminate scientific knowledge on Belovezhskaya Pushcha both amongst the public at large and specialized audiences; | Belovezhskaya Pushcha Atlas published | SEI Republican Unitary Enterprise "Belkartographia" | 2012-2013 | 300 | Environmental Protection Fund (EPF) |
| 3.2.3. | Design and publish Belovezhskaya Pushcha Flora catalogue based on records of population of the NP's wild plants | Improve the information data base supporting management decision making; Disseminate scientific knowledge on Belovezhskaya Pushcha both amongst the public at large and specialized audiences; | The catalogue of current Belovezhskaya Pushcha Flora published and distributed | SEI National Academy of Sciences of Belarus | 2012-2013 | 180 | Environmental Protection Fund (EPF) |
| 3.2.4. | Design and publish Belovezhskaya Pushcha Fauna catalogue based on records of population of the NP's wild animals | Improve the information data base supporting management decision making; Disseminate scientific | The catalogue of current Belovezhskaya Pushcha Fauna published and distributed | SEI National Academy of Sciences of Belarus | 2012-2013 | 180 | Environmental Protection Fund (EPF) |

| No. | Activity | Goal of the activity | Expected outcomes | Responsible | Implementation period | Estimated cost, mln BYR; prices as of November 1, 2008 | Estimated source of funding |
|-----|----------|--|-------------------|-------------|-----------------------|--|-----------------------------|
| | | knowledge on Belovezhskaya Pushcha both amongst the public at large and specialized audiences; | | | | | |

Additionally, we recommend to proceed with long-term research projects being currently implemented in the Pushcha. They include:

1. Formation, variations, and conservation: perform long-term integrated monitoring research of variations of natural forest ecosystems for all main tree species; study age-related changes and variations; the structure of forest biogeocenoses at all age stages; study the impact of individual ecological factors affecting such parameters.
2. Birds of prey as indicators for Belovezhskaya Pushcha's natural ecosystems: perform long-term monitoring of communities of day birds of prey at different NP's stations at different transformation levels, study man-induced transformation and post-disaster changes of Belovezhskaya Pushcha's ecosystems affecting communities of birds of prey and their ecology.
3. Develop a managerial and economic component to conserve the biological diversity of the Belovezhskaya Pushcha National Park.
4. Changes in processes and phenomena in the forests of Belovezhskaya Pushcha (Nature Chronicles).
5. Assess the ecology and hydrobiology of water ecosystems in the Belovezhskaya Pushcha National Park and design conservation activities (together with the National Academy of Sciences of Belarus).
6. Assess the impact of climatic changes and drainage reclamation on forests and model groups of animal species inhabiting the Belovezhskaya Pushcha National Park (in conjunction with the National Academy of Sciences of Belarus).

Long-term goal 4. Raise environmental awareness and promote environmentally friendly attitudes of the stakeholders, including those of locals and visitors to the National Park

Objectives

- Make sure that true information regarding SEI's activities is comprehensively and promptly communicated to the public.
- Make sure that information on implementation of the Belovezhskaya Pushcha management plan is communicated to the public.
- Create an attractive image of the National Park and a favourable public opinion.
- Facilitate cooperation of SEI with public organizations, locals and the environmental community in broad sense.
- Optimize utilization of SEI's capabilities enabling the National Park to host public events (in its conference hall).
- Raise the locals' awareness of the importance of environmental measures and the value of Belovezhskaya Pushcha's natural capital.
- Promote and disseminate knowledge of Belovezhskaya Pushcha amongst target groups: i.e. children and youth, nature lovers, and potential visitors to the Park.
- Set up an environmental education center and ensure operation thereof.
- Ensure efficient utilization of the information resources of Belovezhskaya Pushcha's ecosystems.

Areas.

Area 4.1. Strengthen the ties existing between the National Park and the public

Area 4.2. Raise environmental awareness of the stakeholders.

| № | Activity | Goal of the activity | Expected outcomes | Responsible | Implementation period | Estimated cost, mln BYR in the prices as of 11/01/2008 | Estimated source of financing |
|--|---|---|--|-------------|-----------------------|--|---|
| Area 4.1. Set up a public relations department and incorporate it into the management structure of SEI NP Belovezhskaya Pushcha | | | | | | | |
| <p>Implementation of activities in this area is planned to help accomplish the following goals:</p> <ul style="list-style-type: none"> – Make sure that true information regarding SEI’s activities is comprehensively and promptly communicated to the public. – Make sure that information on implementation of the Belovezhskaya Pushcha management plan is communicated to the public. – Create an attractive image of the National Park and a favourable public opinion. – Facilitate cooperation of SEI with public organizations, locals and the environmental community in broad sense. – Optimize utilization of SEI’s capabilities enabling the National Park to host public events (in its conference hall). <p>Fundamental requirements for activities to be implemented in this area</p> <ul style="list-style-type: none"> – Engage PR professionals, reporters, people that enjoy authority with the locals and the environmental community | | | | | | | |
| 4.1.1. | Improve SEI’s performance in public relations | Raise the locals’ awareness of the importance of environmental measures and the value of Belovezhskaya Pushcha’s natural capital. | The directorate of the National Park includes A public relations department. It used its resources to hold practical events to raise people’s awareness of the protection regime and use of the National Park’s land. | SEI | 2009-2013 | 30 | SEI’s own funds, international technical assistance |
| 4.1.2. | Provide membership to representatives of the public in the National Park’s Scientific and Technical Council | Increase the degree of public’s involvement in management of the National Park | The National Park’s Scientific and Technical Council includes representatives of reputable public associations that declare environmental objectives, and those of the locals | SEI | 2009-2013 | No special funding is required | - |

| № | Activity | Goal of the activity | Expected outcomes | Responsible | Implementation period | Estimated cost, mln BYR in the prices as of 11/01/2008 | Estimated source of financing |
|---|---|---|--|---|-----------------------|--|-------------------------------------|
| Area 4.2. Raise environmental awareness of the stakeholders. | | | | | | | |
| <p>Implementation of activities in this area is planned to help accomplish the following goals:</p> <ul style="list-style-type: none"> – Raise the locals' awareness of the importance of environmental measures and the value of Belovezhskaya Pushcha's natural capital. – Promote and disseminate knowledge of Belovezhskaya Pushcha amongst target groups: i.e. children and youth, nature lovers, and potential visitors to the Park. – Set up an environmental education center and ensure operation thereof. – Ensure efficient utilization of the information resources of Belovezhskaya Pushcha's ecosystems. <p>Fundamental requirements for activities to be implemented in this area</p> <ul style="list-style-type: none"> – In setting up and equipping the environmental education center, use the best practices of the National Parks' visit centers. – Establish long-term ties with school and out-of-school environmental education and upbringing centers. – Develop special tours for school students from the Belovezhskaya Puscha region and make sure that they cover all schools in Kamenets, Pruzhany and Svisloch districts. | | | | | | | |
| 4.2.1. | Equip and ensure operation of the environmental education center. | Raise the locals' awareness of the importance of environmental measures and the value of Belovezhskaya Pushcha's natural capital. | The environmental education center is functional. | Department of Presidential Affairs, SEI, Task 53 GPOOPT | 2010-2013 | 325 | Environmental Protection Fund (EPF) |
| 4.2.2. | Intensify cooperation with educational institutions | Raise the locals' awareness of the importance of environmental measures and the value of Belovezhskaya Pushcha's natural capital. | Information support (in the form of educational and information materials) of local educational institutions and libraries in Kameniuki, Pruzhany, Kamenets, Svislotch, Shereshevo, Prorzovo and other populated places. | SEI | 2009-2013 | No special funding is required | - |
| 4.2.3. | Improve tour-related activities | Raise the locals' awareness of the importance of | Tours with the participation of the National Park's specialists are being continuously held for educational purposes | SEI | 2009-2013 | No special funding is | - |

| <i>No</i> | Activity | Goal of the activity | Expected outcomes | Responsible | Implementation period | Estimated cost, mln BYR in the prices as of 11/01/2008 | Estimated source of financing |
|-----------|--|---|--|--------------------|------------------------------|---|--------------------------------------|
| | | environmental measures and the value of Belovezhskaya Pushcha's natural capital. | | | | required | |
| 4.2.4. | Improve cooperation with the district-level environmental education centers. | Raise the locals' awareness of the importance of environmental measures and the value of Belovezhskaya Pushcha's natural capital. | The district-level environmental education centers and relevant hobby groups in populated places have the required information materials in place. | SEI | 2009-2013 | No special funding is required | - |

Long-term goal 5. Search for ways to ensure sustainable use of resources of Belovezhskaya Pushcha's ecosystems and ensure practical implementation thereof to the benefit of the locals

Objectives

- Limit the adverse environmental impact of agricultural activities on Belovezhskaya Pushcha's protected ecosystems (functioning of reclamation systems, use of mineral fertilizers and weed and pest killers).
- Harmonize regional agricultural activities with the environmental requirements.
- Optimize the benefit/cost ratio of regional agricultural activities considering the advantages of the vicinity of a large area of protection (positive habitat-forming effects, possibility to grow organic agricultural products).
- Mitigate the adverse effects of controlled and uncontrolled side uses on Pushcha's ecosystems.
- Make sure that the harvesting activities being conducted in the Pushcha's region are stable.
- Increase the level of employment of the locals and promote their transition to sustainable forms of farm management.
- Restore and preserve the elements of regional cultural heritage.
- Ensure sustainable realization of the value of indirect use and the value of existence of Pushcha.
- Streamline the use of the National Park's intangible values.
- Find new sources of funding of environmental activities.
- Incentivize regional producers to harmonize their current methods and technologies with the environmental requirements.

Areas.

- Area 5.1. Maintain sustainable agricultural activities in Belovezhskaya Pushcha's region;
- Area 5.2. Sustainable procurement of non-wood forestry products;
- Area 5.3. Restoration of traditional trades;
- Area 5.4. Belovezhskaya Pushcha branding.

| № | Activity | Goal of the activity | Expected outcomes | Responsible | Implementation period | Estimated cost, mln BYR in the prices as of 11/01/2008 | Estimated source of financing |
|--|---|---|---|-------------|-----------------------|--|-------------------------------------|
| Area 5.1. Maintain sustainable agricultural activities in Belovezhskaya Pushcha's region | | | | | | | |
| <p>Implementation of activities in this area is planned to help accomplish the following goals:</p> <ul style="list-style-type: none"> – Limit the adverse environmental impact of agricultural activities on Belovezhskaya Pushcha's protected ecosystems (functioning of reclamation systems, use of mineral fertilizers and weed and pest killers). – Harmonize regional agricultural activities with the environmental requirements. – Optimize the benefit/cost ratio of regional agricultural activities considering the advantages of the vicinity of a large area of protection (positive habitat-forming effects, possibility to grow organic agricultural products). <p>Fundamental requirements for activities to be implemented in this area</p> <ul style="list-style-type: none"> – Voluntary cooperation of regional agricultural producers with SEI regarding development and introduction of biosphere compatible farm management techniques and technologies. – Extensive utilization of the global best practices. | | | | | | | |
| 5.1.1. | <p>Issue recommendations for biosphere compatible farm management in Belovezhskaya Pushcha's region, and develop a mechanism that promotes their voluntary introduction based on environmental labelling of agricultural produce</p> | <p>Reduce the adverse impact of agricultural activities upon Pushcha, including that produced by reclamation systems located in the National Park's area of preferential protection</p> | <p>Recommendations for biosphere compatible farm management in Belovezhskaya Pushcha's region have been developed.</p> <p>There is a mechanism in place that promotes voluntary introduction of biosphere compatible agricultural techniques based on environmental labelling of agricultural produce.</p> <p>Regional agricultural producers receive advice on environmental issues.</p> | SEI | 2010-2011 | 60 | Environmental Protection Fund (EPF) |

| № | Activity | Goal of the activity | Expected outcomes | Responsible | Implementation period | Estimated cost, mln BYR in the prices as of 11/01/2008 | Estimated source of financing |
|--|--|---|---|-------------|-----------------------|--|--------------------------------|
| Area 5.2. Sustainable procurement of non-wood forestry products | | | | | | | |
| <p>Implementation of activities in this area is planned to help accomplish the following goals:</p> <ul style="list-style-type: none"> – Mitigate the adverse effects of controlled and uncontrolled side uses on Pushcha’s ecosystems. – Make sure that the harvesting activities being conducted in the Pushcha's region are stable. – Increase the level of employment of the locals and promote their transition to sustainable forms of business activities. <p>Fundamental requirements for activities to be implemented in this area</p> <ul style="list-style-type: none"> – Develop and introduce at the relevant level standards and limits of procurement activities, which belong to procurement of non-wood forestry products of phytocenoses for households’ own needs. – Make sure that SEI provides methodological support. | | | | | | | |
| 5.2.1. | Develop and bring into operation the regulations for utilization of non-wood forestry products of Belovezhskaya Pushcha | Minimize the impact produced by the locals on Pushcha’s ecosystems. Increase the level of employment of the locals. | Sources of sustainable harvesting of berries, mushrooms, juice, and wild medicinal plants identified, environmental and economic performance of the procurement activities forecasted, relevant recommendations issued. Regulations for utilization of non-wood forestry products of Belovezhskaya Pushcha developed: requirements for harvesting and procurement of non-wood forestry products for in-house need by SEI's personnel, locals and other users made more specific, control over observance of such requirements streamlined. Stakeholders receive environmental advice. | SEI | 2010-2011 | 45 | SEI’s own funds, EPF |
| 5.2.2. | Issue and introduce recommendations for promotion of bee-keeping activities in Belovezhskaya Pushcha's region. | Increase the level of the locals’ employment. | Food resources for bee-keeping analyzed, environmental and economic efficiency of bee-keeping activities in the region of Belovezhskaya Pushcha forecasted, recommendations issued and put into practice. Stakeholders receive environmental advice. | SEI | 2010-2011 | 50 | SEI’s own funds, local budgets |

| № | Activity | Goal of the activity | Expected outcomes | Responsible | Implementation period | Estimated cost, mln BYR in the prices as of 11/01/2008 | Estimated source of financing |
|---|---|--|---|------------------------|-----------------------|--|-------------------------------|
| Area 5.3. Restoration of traditional trades | | | | | | | |
| <p>Implementation of activities in this area is planned to help accomplish the following goals:</p> <ul style="list-style-type: none"> - Increase the level of employment of the locals and promote their transition to sustainable forms of farm management. - Restore and preserve the elements of regional cultural heritage <p>Fundamental requirements for activities to be implemented in this area</p> <ul style="list-style-type: none"> - Develop and introduce an economic mechanism that promotes restoration and preservation of traditional trades - Make sure that SEI provides methodological support. | | | | | | | |
| 5.3.1. | Set up hobby groups involving the locals which are focused on restoration and promotion of the traditional trades | Increase the level of the locals' employment. Restore cultural heritage | <p>Analyze the potential of and create an environment for promotion of crafts based on sustainable utilization of resources of the park's ecosystems; forecast economic performance, issue and implement recommendations</p> <p>Stakeholders receive environmental advice.</p> | Local authorities, SEI | 2010-2013 | 50 | local budgets |

| № | Activity | Goal of the activity | Expected outcomes | Responsible | Implementation period | Estimated cost, mln BYR in the prices as of 11/01/2008 | Estimated source of financing |
|---|--------------------------------|--|--|-------------|-----------------------|--|-------------------------------|
| Area 5.4. Belovezhskaya Pushcha branding | | | | | | | |
| <p>Implementation of activities in this area is planned to help accomplish the following goals:</p> <ul style="list-style-type: none"> – Ensure sustainable realization of the value of indirect use and the value of existence of Pushcha – Streamline the use of the National Park’s intangible values – Find new sources of funding of environmental activities – Incentivize regional producers to harmonize their current methods and technologies with the environmental requirements <p>Fundamental requirements for activities to be implemented in this area</p> <ul style="list-style-type: none"> – The branding program must be developed and implemented by a multi-disciplinary team of experts including those that have experience of work at the European and global markets. – Ensure that an efficient system is in place used to control the quality of labeled products being sold vs. Pushcha’s existing requirements and values. | | | | | | | |
| 5.4.1. | Belovezhskaya Pushcha branding | Sustainable utilization of the park’s resources Contribute into increased profitability of SEI and regional development | Develop, register and streamline the use of trade marks and names of the National Park. Develop and implement the branding program, including labeling of regional products, authorization to perform commercial use of the brand, with a part of proceeds being paid to the national park. Stakeholders receive environmental advice. | SEI | 2010-2011 | 50 | SEI’s own funds |

Separate area of activities 6.1. Emergency protection system

| № | Activity | Goal of the activity | Expected outcomes | Responsible | Implementation period | Estimated cost, mln BYR in the prices existing as of 11/01/2008 | Estimated source of financing |
|---------------|--|---|---|---|------------------------------|--|--------------------------------------|
| 6.1.1. | Construction of 1 observation platform, 3 tower cabins, overhaul of 10 tower cabins, | Boost forest fires protection performance | Forest fire suppression means are in place. | Department of Presidential Affairs, SEI, Task 21.2 GPOOPT | 2010-2013 | 300 | Republican budget; EPF |

10. 2009 WORK PLAN

This Work Plan incorporates activities to be implemented by SEI's personnel starting 2009 and on.

Long-Term Goal 1. Preserve the genuine look of Belovezhskaya Pushcha's natural heritage

| <i>N^o</i> | Activity | Responsible | Implementation period | Estimated cost, mln RUR | Cost of 2009 activities |
|---|---|---|-----------------------|--------------------------------|--------------------------------|
| Area 1.2 Restore and maintain the genuine structure of the Pushcha's primary natural communities | | | | | |
| <i>1.2.1.</i> | Develop and implement projects of mixed stands in bare areas planned to be included into the reserve through activities promoting regeneration or by sporadic planting artificial stands (i.e. in bio groups) | SEI | 2009-2013 | SEI's forest management funds | SEI's forest management funds |
| <i>1.2.3.</i> | Assess the regeneration success; issue and introduce recommendations promoting regeneration of old-aged pine and oak forests | SEI | 2009-2012 | 20 | 5 |
| <i>1.2.9.</i> | Study the wolf biology in Belovezhskaya Pushcha together with Polish mammalogists; develop and implement activities to preserve the indigenous wolf population | SEI | 2009-2013 | No special funding is required | No special funding is required |
| Area 1.4. Develop and operate an efficient monitoring system for ecosystems and key environmental components | | | | | |
| <i>1.4.1.</i> | Improve the hydrologic behaviour monitoring system and monitor hydrology, hydro chemistry and hydro biology in the Pushcha | SEI | 2009-2013 | 60 | 10 |
| <i>1.4.2.</i> | Ensure efficient forest pathology monitoring of spruce, oak and ash tree groves | SEI | 2009-2013 | 15 | 3 |
| <i>1.4.3.</i> | Monitor populations of wild plant, species that are red-listed in the Republic of Belarus | SEI | 2009-2013 | 50 | 10 |
| <i>1.4.4.</i> | Monitor populations of common species of wild animals and red-listed species including species requiring active protection and monitoring according to this Management Plan | SEI | 2009-2013 | 50 | 10 |
| <i>1.4.5.</i> | Ensure integrated monitoring of the National Park's ecosystems (forest, bog, water, meadow, etc.) according to the regulations on the National Environmental Monitoring System of the Republic of Belarus | Department of Presidential Affairs, SEI, Task 43.2 GPOOPT | 2009-2012 | 200 | 45 |
| Area 1.5. Increase the international protection status of Belovezhskaya Pushcha | | | | | |
| <i>1.5.2.</i> | Make Belovezhskaya Pushcha's reserve area and strict regulation zone a part of the UNESCO's World Heritage site. | SEI | 2009-2010 | 20 | 15 |

Long-Term Goal 2. Develop Sustainable Recreational Business and Tourism in Belovezhskaya Pushcha

| <i>No</i> | Activity | Responsible | Implementation period | Estimated cost, mln RUR | Cost of 1st year activities |
|---|--|---|-----------------------|-------------------------|-----------------------------|
| Area 2.1. Develop tourist product | | | | | |
| Area 2.2. Create tourist infrastructure | | | | | |
| 2.2.1. | Construct the administrative and environmental centre combined with a museum of nature | SEI, Unit 1 PM-600 | 2009 | 9100 | 9100 |
| 2.2.2. | Reconstruct the former museum of nature into a restaurant; develop design and budget documents | SEI, Unit 4 PM-600 | 2009 | 1200 | 1200 |
| 2.2.3. | Reconstruct hotel No. 2 in the village of Kameniuki | SEI, Unit 5 PM-600 | 2009 | 1600 | 1600 |
| 2.2.4. | Reconstruct the site "Father Xmas' Manor" | SEI, Unit 6 PM-600 | 2009 | 2320 | 2320 |
| 2.2.5. | Overhaul and upgrade open-air demonstration enclosures and create wildlife habitats conditions | SEI, Unit 8 PM-600 task 33.2 GPOOPT | 2009-2012 | 1880 | 1800 |
| 2.2.6. | Construct Lavy and Romanovtsy tourist centers; prepare design and budget documents | SEI, Unit 10 PM-600 | 2009 | 4000 | 4000 |
| 2.2.7. | Improve the National Park's central estate | SEI, Unit 2 PM-600 | 2009 | 1250 | 1250 |
| 2.2.8. | Improve the populated places located within the boundaries of the National Park Belovezhskaya Pushcha | SEI; task No. 34 GPOOPT | 2009 | 3000 | 1400 |
| 2.2.14. | Develop, improve and equip environmental tourist routes | DPA; SEI; task 32.2 GPOOPT; Unit 7 PM-600 | 2009-2012 | 380 | 320 |
| Area 2.3. Information and methodological support for tourism development | | | | | |
| 2.3.2. | Design, issue and distribute tourist guides, maps, brochures, booklets, and other information products about the National Park | SEI; task No. 27.2 GPOOPT | 2009-2013 | 225 | 25 |
| 2.3.4. | Add updated tourist information to the National Park's official web site | SEI | 2009-2013 | 30 | 6 |

Long-Term Goal 4. Raise environmental awareness and promote environmentally friendly attitudes of the stakeholders, including those of locals and visitors to the National Park

| <i>No</i> | Activity | Responsible | Implementation period | Estimated cost, mln RUR | Cost of 1st year activities |
|--|--|-------------|-----------------------|--------------------------------|--------------------------------|
| Area 4.2. Raise environmental awareness of the locals | | | | | |
| 4.2.2. | Intensify cooperation with educational institutions | SEI | 2009-2013 | No special funding is required | No special funding is required |
| 4.2.3. | Tour-related activities | SEI | 2009-2013 | No special funding is required | No special funding is required |
| 4.2.4. | Cooperation with the district's environmental education centers | SEI | 2009-2013 | No special funding is required | No special funding is required |

11. REVISION OF THE MANAGEMENT PLAN

Analysis of the outcomes and revision of this Management Plan is scheduled for 2013-2014, considering the requirement for such revised Management Plan to cover the 2014-2018 period.

SEI is assigned responsible for undertaking the management plan revision activities. Such revision shall involve specialized research organizations, educational institutions, territorial bodies of the Ministry of Natural Resources and Environment, local authorities and municipalities, corporate land users, public associations, locals and other parties concerned. Revision of the Management Plan shall start with an enlarged session of the Scientific and Technical Council of SEI "Belovezhskaya Pushcha" National Park, whereat a representative of SEI reads out a report on implementation of the 2009-2013 National Park Management Plan. The report shall highlight the progress and outcomes of the following activities:

Long-Term Goal 1. Preserve the Genuine Look of Belovezhskaya Pushcha's Natural Heritage

| <i>N^o</i> | Activity | Performance Indicators |
|----------------------|---|---|
| <i>1.1.3.</i> | Develop rules and regulations for use of Lyatskie impounding reservoirs (based on the outcomes of Activity 3.1.3) | – Impounding reservoir hydro engineering system parameters identified according to the Perevoloka's natural hydrologic behaviour |
| <i>1.2.2.</i> | Develop and implement activities to expand local non-joined artificial stands, promoting regeneration and lighting by removing the small-leaved canopy | – forestry crops made look more "natural" |
| <i>1.2.3.</i> | Assess the regeneration success; issue and introduce recommendations promoting regeneration of old-aged pine and oak forests | – Succession processes in old-aged pine and oak forests stabilized |
| <i>1.2.4.</i> | Develop and implement recommendations to expand planted rare formation forests in the National Park; improvement cuttings in rare formation forests outside of the reserve area; promote natural regeneration; protect understory trees against ungulates | – Percentage of rare forest formations increased |
| <i>1.2.5.</i> | Remove trees, understory and underwood of invasive woody plants through scheduled sanitary cuttings followed by reforestation with primary indigenous tree species | – Stand structures and flora species composition renaturalized |
| <i>1.2.6.</i> | Improve fencing at the Belarusian/Polish border to arrange migration passages for larger mammals | – Control migration passages created – Genetic information exchange between groups of larger mammals |
| <i>1.2.8.</i> | Optimize the game breeding locations to redistribute the animal load on forests in different zones | – Feeding grounds brought outside of the woodland – Ungulates drawn away from old-aged forests in the reserve area to the National Park's peripherals – Pressure exerted by ungulates upon old-aged trees reduced |
| <i>1.2.9.</i> | Study the wolf biology in Belovezhskaya Pushcha together with Polish mammalogists; develop and implement activities to preserve the indigenous wolf population | – Zoocenosis structure optimized by maintaining the population of large predators – Pressure exerted by ungulates upon old-aged trees reduced |

| <i>N^o</i> | Activity | Performance Indicators |
|----------------------|--|---|
| 1.3.1. | Develop and implement the action plan to conserve Belovezhskaya Pushcha's red-listed wild plants and animals under natural vegetation/habitation conditions | – Populations of rare indigenous species of plants and animals conserved |
| 1.3.4. | Remove trees and bushes and excessively thick herbaceous vegetation in individual areas of the Dikoye bog to conserve the aquatic warbler habitats | – The density of the aquatic warbler population is sustainably suboptimal for the environmental conditions of the Dikoye bog |
| 1.3.6. | Identify key open hunting areas of birds of prey and introduce reforestation restrictions in such areas | – Stable populations of birds of prey |
| 1.3.8. | Design and implement consistent activities to restore and maintain grouse populations in situ and ex situ | – Areas for restoration of grouse populations identified – Succession processes in bog moss pine forests stabilized – Indigenous grouse population increased – The ex situ reserve gene pool of the Western European grouse subspecies created |
| 1.4.5. | Ensure integrated monitoring of the National Park's ecosystems (forest, bog, water, meadow, etc.) according to the regulations on the National Environmental Monitoring System of the Republic of Belarus | – Management decision making information data base improved – Better control of EI's activities |
| 1.5.1. | Cause Belovezhskaya Pushcha biosphere to be proclaimed a Transboundary International Reserve under the UNESCO Man and Biosphere Program including Białowiecki Park Narodowy (Poland); Belovezhskaya Pushcha National Park (Belarus). Draft an international treaty and prepare the nomination application. | – Fundamental inter-state agreement reached; – Belovezhskaya Biosphere Transboundary International Reserve application filed |
| 1.5.2. | Make Belovezhskaya Pushcha's reserve area and strict regulation zone a part of the UNESCO's World Heritage site. | – The entire historical part of Belovezhskaya Pushcha nominated for UNESCO World Heritage site |
| 1.5.3. | Prepare nomination application to be submitted to the Ramsar Convention Secretariat for assigning the status of Ramsar Site to the Lesnaya Pravaya – Lesnaya river system and the Dikoye bog and submit them to the Ministry of Nature | – The Lesnaya Pravaya – Lesnaya river system nominated for assignment of the Ramsar Site status |

Long-Term Goal 2. Develop Sustainable Recreational Business and Tourism in Belovezhskaya Pushcha

| <i>N^o</i> | Activity | Performance Indicators |
|----------------------|---|---|
| 2.1.1. | Draft the tourism development program and business plans for the National Park and its protected area including activities aimed at promoting the tourist product on the foreign market. | Target indicators identified: – levels of permissible recreational loads; – target throughput capacity of the recreational and tourist infrastructure; – tourist flow seasonality, – service reference prices, – other critical parameters of tourism development and recreational infrastructure – The recreational and tourism infrastructure layout plan is in place for the National Park and its reserve area. – Investment amounts and potential investors |

| | | |
|---------------|--|--|
| | | identified. |
| 2.1.2. | Implement the program and business plan | <ul style="list-style-type: none"> – The campaign promoting the National Park tourism at foreign markets is in place; – Positive tourist image of the Pushcha; – Tours for representatives of the European tourist agencies. – Higher flows of foreign tourists. |

Long-Term Goal 3. Carry out Research of Reference-Class Forest and Bog Ecosystems

| <i>N^o</i> | Activity | Performance Indicators |
|----------------------|--|---|
| 3.1.8. | Develop the National Park's geo-information system | – Geo-information system for the National Park and its reserve area developed |
| 3.2.2. | Design and publish Belovezhskaya Pushcha Atlas | – Belovezhskaya Pushcha Atlas published and disseminated |

Long-Term Goal 4. Raise Environmental Awareness and Promote Environmentally Friendly Attitudes of the Stakeholders, Including Those of Locals and Visitors to the National Park

| <i>N^o</i> | Activity | Performance Indicators |
|----------------------|--|--|
| 4.1.1. | Improve SEI's performance in public relations | <ul style="list-style-type: none"> – Public relations department created. – Practical events to raise people's awareness of the protection regime and use of the National Park's land. – Environmental awareness of the locals increased |
| 4.2.1. | Equip and ensure operation of the environmental education center. | <ul style="list-style-type: none"> – The environmental education center is functional. – Environmental awareness of the locals increased |

Long-Term Goal 5. Search for Ways to Ensure Sustainable Use of Resources of Belovezhskaya Pushcha's Ecosystems and Ensure Practical Implementation thereof to the Benefit of the Locals

| <i>N^o</i> | Activity | Performance Indicators |
|----------------------|--|--|
| 5.1.1. | Issue recommendations for biosphere compatible farm management in Belovezhskaya Pushcha's region, and develop a mechanism that promotes their voluntary introduction based on environmental labelling of agricultural produce | <ul style="list-style-type: none"> – Recommendations for biosphere compatible farm management in Belovezhskaya Pushcha's region have developed. – A mechanism that promotes their voluntary introduction based on environmental labeling of agricultural produce is in place – Regional agricultural producers receive advice on environmental issues. |
| 5.2.1. | Develop and bring into operation the regulations for utilization of non-wood forestry products of Belovezhskaya Pushcha | – Sources of sustainable harvesting of berries, mushrooms, juice, and wild medicinal plants identified, environmental and economic |

| № | Activity | Performance Indicators |
|--------|---------------------------------------|---|
| | | <p>performance of the procurement activities forecasted, relevant recommendations issued.</p> <p>Regulations for utilization of non-wood forestry products of Belovezhskaya Pushcha developed: requirements for harvesting and procurement of non-wood forestry products by SEI's personnel, locals and other users made more specific</p> <p>Improved control over their observance</p> |
| 5.4.1. | Belovezhskaya Pushcha branding | <p>Trade marks and names of the National Park developed and registered.</p> <p>The use of trade marks and names of the National Park streamlined.</p> <p>There is a branding program in place, which includes labelling of regional products, authorization to perform commercial use of the brand, and stipulates that a part of proceeds be paid to the national park.</p> <p>SEI's income increased.</p> |

To be properly highlighted in the final report and to be taken into account while supervising implementation of the Management Plan, the aforementioned activities shall be subject to continuous monitoring, the degree of their implementation shall be assessed on the basis of performance during each calendar year which shall be formalized as a report executed substantially in the form of Annex No.20.

The items being assessed shall include:

- Extent to which the set goals have been accomplished
- Restrictions/threats that have been fully eliminated or whose adverse impact upon accomplishment of the long-term goals has been reduced
- Acceptability of the techniques used in doing so
- Need to proceed with the implementation of such activities in future, replacement or supplementation thereof.

The annual Management Plan performance reports shall be subject to approval by the National Park's Scientific and Technical Council and made public through publication thereof in the press or at the National Park's official website.

Attendees of the enlarged session of the Scientific and Technical Council of the National Park shall determine the level of success in implementation of this Management Plan, priorities and target indicators of such revised Management Plan which are taken into account while developing the Terms of Reference for those responsible for drafting of such plan. The progress and the outcomes of such enlarged session of the Scientific and Technical Council of the National Park shall be recorded and entered into the minutes of such session.

AGREEMENT

Concluded on this day of 17.02.2010 between:

- The Regional Directorate of State Forests in Białystok (RDSF) represented by Director Ryszard Ziemblicki
- The Białowieża National Park represented by acting Director Aleksander Bołbot
- “Bielawiežskaja Puszcza” National Park represented by Director General Nikołaj Nikołajewicz Bambiza

The parties hereto declare their willingness to establish partnership within the scope of:

1. Exchange of information and improvement of knowledge with specific regard to nature conservation, protection of woodland, forestry, greening of the works performed in the forest, fire protection, education on nature and forestry, game management as well as legal and economic aspects of forest holdings.
2. Cooperation in obtaining aid with specific regard to the Cross-border Cooperation Programme Poland – Belarus – Ukraine.

The aim of the agreement is also to educate about the culture and history of both countries as well as to increase mutual contacts and initiate cooperation between forest social organisations.

The parties are to perform the following actions as part of this agreement:

1. Preparation of symmetrical projects with a common objective, application for and acquisition of resources within cross-border cooperation.
2. Exchange of experience in the form of study visits and expert exchanges. Each visit shall be organised according to a programme agreed on by both parties.
3. Meetings of the directors of the RDSF, BNP and “Bielawiežskaja Puszcza” National Park at least once a year, allowing for the needs and wishes of the parties.
4. Organisation of reciprocal visits concerning specific aspects foreseen by this agreement, with the consent of the directorate of the RDSF, BNP and “Bielawiežskaja Puszcza” National Park, according to the approved programmes.
5. Reciprocal invitations of the parties to take part in significant events and undertakings.

The coordination of cooperation and development of common projects and programmes of the parties shall lie with:

On the part of the RDSF.....

On the part of the BNP

On the part of “Bielawiežskaja Puszcza” National Park

Director General
of “Bielawiežskaja Puszcza”
National Park

Director of the RDSF

Director of the BNP

AGREEMENT

Concluded in Białystok on this day of 17.02.2011 between:

the State Treasury – the Regional Directorate of State Forests in Białystok based in Białystok, ul. Lipowa 51, represented by Ryszard Ziembicki, Director of the Regional Directorate of State Forests in Białystok, hereinafter referred to as Forests

and

the Białowieża National Park based in Białowieża, Park Pałacowy 11, represented by Zdzisław Szkiruc, Director of the Białowieża National Park, hereinafter referred to as Park

on mutual exchange and use of spatial (cartographic) data concerning the areas managed by the forest divisions of Białowieża, Browsk and Hajnówka in the Białowieża Primeval Forest and the Białowieża National Park Promotional Forest Complexes.

§ 1

Based on the acts:

- of 3 October 2008 on Providing Information on the Environment and Environmental Protection, Public Participation in Environmental Protection and on Environmental Impact Assessment (Journal of Laws no. 199, item 1227)
- of 4 March 2010 on Spatial Information Infrastructure (Journal of Laws no. 76, item 489 of 07/05/2010)

and the orders of the Director General of State Forests No. 8 and 48 of 2010,

the Forests and the Park hereby establish mutual exchange of suitable spatial data involving the divisions managed by these units.

§ 2

The purpose of the exchange of spatial information is to prepare a set of thematic maps:

- 1) indicative map of the site's location in Europe, Poland and Belarus,
- 2) map of plant communities (with the distinction of habitats covered by Natura 2000),
- 3) map of the forms of nature conservation,
- 4) map of protected species (fungi, plants, animals)
- 5) map of hydrographic conditions – especially surface waters,
- 6) map of cultural assets
- 7) map of access to the area (tourist trails, educational paths etc.),
- 8) hypsometric map,
- 9) map of tree stands and their age, where it has been initially assumed that due to the graphic and definition constraints each age group will cover 50 years (0-50, 51-100, 101-150, >150),
- 10) orthophotograph

§ 3

The purpose of the preparation of maps based on the exchanged spatial data is to:

- 1) prepare documentation for the entry of forest habitats contained in the Białowieża Primeval Forest on the World Heritage List of natural sites, concerning:
site location plans:

- a. location in Europe,
- b. location on the PL/BY border (polygon layer of the divisions – division number), thematic maps:
- c. plant communities (N2k) – vector layer with N2k communities,
- d. forms of protection – polygon layer with the scope of the applied protection forms (name, form of protection),
- e. protected species – locations of wild species of flora and fauna covered by protection, endangered and rare as well as N2k species (class, name of the species, year of data was acquisition),
- f. hypsometry + hydrography
 - i. digital land model
 - ii. polygon layer with the scope of the surface drainage basin (name of drainage basin, level)
 - iii. linear layer with the drainage basin network (name of drainage basin, width, type),
 - iv. layer with the location of damming objects (object type, height of damming, construction year),
- g. cultural assets:
 - i. layer with the location of cultural objects (name, type: barrow, charcoal pile, wood tar plant, turpentine plant etc.),
 - ii. layer with the location of ranges (name of range),
 - iii. linear layer with the network of roads and tracks (width, common name),
- h. access (tourism):
 - i. linear layer of tourist trails (colour, length, type: pedestrian, bicycle, ski, equestrian, other),
 - ii. linear layer of tourist and educational paths (name, length, type),
 - iii. layer with the location of tourist infrastructure facilities (type of the object: shelter, parking lot, observation tower/platform/spot, other),
- i. age of the forest stand – polygon layer with distinguished forest stands (division, assigned letter, main species, age); please include the year of assessment – preferably from 2000 or 2010,
- j. project of the scope of the UNESCO WH area – polygon layer with the scope of the UNESCO WH area.

- 2) issue promotional and educational materials for the purpose of promoting the idea of the UNESCO World Heritage Sites.

§ 4

The parties hereby agree that prior to the use of spatial data for other activities they will inform each other of this fact and submit the compiled materials (publications, audiovisual presentations and conference, seminar or training documents).

§ 5

This agreement has been drawn up in two identical copies, one for each of the parties.

Representative of the National Forest Holding
“State Forests

Representative of the BNP

AGREEMENT

among
Director of the Białowieża National Park
and
Head Forester of the Białowieża Forestry District, based in Białowieża
and
Head Forester of the Browsk Forestry District, based in Browsk
and
Head Forester of the Hajnówka Forestry District, based in Hajnówka

Signed in Białowieża on October 24, 2013
Regarding establishing of Steering Committee
For the World Heritage Property “Bialowieza Forest”

Having in mind common Property of the Bialowieza Forest, The Ministry of the Environment of Republic of Poland submitted to the World Heritage Centre the application to enlarge the World Heritage Property “Bialowieza Forest”. Proposed new boundaries will encompass almost the whole Polish part of the Bialowieza Forest, including new administrative units responsible for management of the Property: Head Foresters of the Forestry Districts of Białowieża, Browsk and Hajnówka.

Establishing of the Committee, according to the intentions of the signatory parties, is the proof of involvement of Republic of Poland into the implementation of the Convention Concerning the Protection of the World Cultural and Natural Heritage, adopted on October 16, 1972 at the 17th session of The General Conference of UNESCO, as well as the will of strengthening of cooperation among the units which prepared the application on changing the boundaries, criteria of inscription and name of the World Heritage Property „*Belovezhskaya Pushcha / Bialowieza Forest*”. Steering Committee will facilitate the cooperation among the managing authorities as well as the cooperation with the World Heritage Committee.

Establishing of the Committee consisting of representatives of all managing authorities of the Property means that the signatory parties pay attention to proper managing of the Property and cherish the distinction of being enlisted as the World Heritage Property. It is presumed that the Steering Committee is the task group with the main aim of preparing of the Management Plan for the Property as well as supervising of the implementation of tasks, preparation of periodic reports as well as implementation of recommendations of the World Heritage Committee.

Steering Committee of the Transboundary World Heritage Property
“Białowieża Forest”

- I. Steering Committee is set up and disbanded on the basis of an agreement among the Director of the Białowieża National Park and Head Foresters of the Forestry Districts: Białowieża, Browsk, and Hajnówka. The Committee set up on the basis of this agreement is in force until the Polish-Belarusian Committee for the environmental protection is established which will be done on the basis of the agreement between the Government of Poland and the Government of Belarus. Then establishing of the international working group for Transboundary World Heritage Property “Białowieża Forest” is possible.
- II. The Steering Committee consists of:
 1. Director of the Białowieża National Park
 2. Head Forester of the Forestry District Białowieża
 3. Head Forester of the Forestry District Browsk
 4. Head Forester of the Forestry District Hajnówka
 5. Representative of the Białowieża National Park designated by the Director of the Park
 6. Representative of the Regional Directorate of the State Forests Administration in Białystok designated by the Director of the Regional Directorate.

In addition the representatives of the following institutions will be invited:

1. The Ministry of the Environment
 2. General Directorate of the Environment Protection
 3. Regional Directorate of the Environment Protection in Białystok
-
- III. Tasks of the Steering Committee
 1. Supervising of the implementation of the Convention Concerning the Protection of the World Cultural and Natural Heritage and recommendations of the World Heritage Committee;
 2. Undertaking initiatives directed at managing the Property as one unit;
 3. Supervising of preparing and implementing of the Management Plan for the Property;
 4. Preparing of the joint action plan;

5. Stimulation and coordination of actions aiming at the best protection of outstanding universal value of the Property;
6. Initiating of joint projects as well as searching for funds for putting into practice plans of the world heritage protection and educating local community and visitors;
7. Exchange of knowledge and experience.

IV. Within the Steering Committee there will be the working group created consisting of the representatives on managing authorities of the Property:

1. Director of the Białowieża National Park
2. Head Forester of the Forestry District Białowieża
3. Head Forester of the Forestry District Browsk
4. Head Forester of the Forestry District Hajnówka

The tasks of the group will encompass the current analysis of functioning of the Property, as well as preparation of the periodic reports and other documents presented later for consultation to the Steering Committee.

V. Steering Committee undertakes the actions according to the competences of the bodies managing the World Heritage Property “Białowieża Forest”.

POROZUMIENIE

między

jednostkami Skarbu Państwa

Dyrektorem Białowieskiego Parku Narodowego z siedzibą w Białowieży

i

Nadleśniczym Nadleśnictwa Białowieża z siedzibą w Białowieży

i

Nadleśniczym Nadleśnictwa Browsk z siedzibą w Gruszkach

i

Nadleśniczym Nadleśnictwa z siedzibą w Hajnówce

zawarte w Białowieży w dniu 24 października 2013 r.

w sprawie utworzenia Komitetu Sterującego

Obiektu Światowego Dziedzictwa Puszcza Białowieska

Mając na uwadze wspólne Dobro, jakim jest Puszcza Białowieska, władze Rzeczypospolitej Polskiej złożyły do Centrum Światowego Dziedzictwa wniosek o powiększenie istniejącego Obiektu Światowego Dziedzictwa „Belovezhskaya Pushcha / Białowieża Forest”. Proponowane nowe granice Obiektu obejmą niemal całą polską część Puszczy Białowieskiej, tym samym rozszerza się lista organów odpowiedzialnych za zarządzanie Obiektem o Nadleśniczych Nadleśnictw Białowieża, Browsk i Hajnówka, zarządzających znaczną częścią Obiektu.

Utworzenie Komitetu w intencji porozumiewających się stron jest świadectwem władz Polski zaangażowania się w realizację *Konwencji w sprawie ochrony światowego dziedzictwa kulturalnego i naturalnego, przyjętej w Paryżu dnia 16 listopada 1972 r. przez Konferencję Generalną Organizacji Narodów Zjednoczonych dla Wychowania, Nauki i Kultury na jej siedemnastej sesji*, jak również dowodem planowanego zacieśniania współpracy między podmiotami, które wspólnie przygotowały wniosek o zmianę granic, kryteriów wpisu oraz nazwy istniejącego Obiektu Światowego Dziedzictwa „Belovezhskaya Pushcha / Białowieża Forest”. Komitet Sterujący ułatwi współpracę między instytucjami, jak też współpracę z Komitetem Dziedzictwa Światowego, które wymaga przesyłania wspólnych dla całości Obiektu dokumentów, map, jak również raportów o stanie zachowania Transgranicznego Obiektu Światowego Dziedzictwa.

Powołanie Komitetu Sterującego, w skład którego wchodzi przedstawiciele wszystkich zarządców Obiektu oznacza, że strony porozumienia przykładają bardzo dużą wagę do zarządzania Dobrem poważnie traktujemy wyróżnienie, jakim jest wpis na Listę Światowego Dziedzictwa. Zamiarem porozumiewających się stron jest by Komitet był ciałem o charakterze roboczym, którego głównym zadaniem będzie wspólne opracowanie planu zarządzania Obiektem i nadzór nad realizacją wyznaczonych zadań, przygotowywanie raportów okresowych oraz wdrażanie zaleceń Komitetu Dziedzictwa Światowego w zakresie powierzonych kompetencji.

Komitet Sterujący Transgranicznego Obiektu Światowego Dziedzictwa „Białowieża Forest”

- I. Komitet Sterujący jest powoływany i odwoływany na mocy porozumienia pomiędzy Dyrektorem Białowieskiego Parku Narodowego a Nadleśniczymi Nadleśnictw Białowieża, Browsk, Hajnówka. Komitet Sterujący powołany na mocy tego porozumienia pełni swe funkcje do czasu powołania Polsko-Białoruskiej Komisji do spraw współpracy w dziedzinie ochrony środowiska na mocy porozumienia między Rządem Rzeczypospolitej Polskiej a Rządem Republiki Białorusi, i powołania przez tę Komisję międzynarodowej grupy roboczej ds. Transgranicznego Obiektu Światowego Dziedzictwa „Białowieża Forest”

- II. W skład Komitetu Sterującego wchodzi:
 1. Dyrektor Białowieskiego Parku Narodowego
 2. Nadleśniczy Nadleśnictwa Białowieża
 3. Nadleśniczy Nadleśnictwa Browsk
 4. Nadleśniczy Nadleśnictwa Hajnówka
 5. Pracownik Białowieskiego Parku Narodowego wyznaczony przez Dyrektora Parku
 6. Pracownik Regionalnej Dyrekcji Lasów Państwowych w Białymstoku wyznaczony przez Dyrektora Regionalnej Dyrekcji Lasów Państwowych w BiałymstokuPonadto do udziału w pracach Komitetu Sterującego zaproszeni są:
 7. Przedstawiciel Ministerstwa Środowiska
 8. Przedstawiciel Generalnej Dyrekcji Ochrony Środowiska
 9. Przedstawiciel Regionalnej Dyrekcji Ochrony Środowiska w Białymstoku

- III. Zadania Komitetu Sterującego:
 1. Czuwanie nad realizacją zadań wynikających z Konwencji w sprawie ochrony światowego dziedzictwa kulturalnego i naturalnego oraz realizacją decyzji Komitetu Dziedzictwa Światowego;
 2. Podejmowanie działań zmierzających do traktowania transgranicznego Obiektu Światowego Dziedzictwa „Białowieża Forest”, jako całości;
 3. Nadzorowanie przygotowania, a następnie wdrażania wspólnego planu zarządzania obiektem;
 4. Przygotowanie wspólnego planu działań;

5. Stymulacja i koordynacja działań na rzecz jak najlepszej ochrony wartości uniwersalnej obiektu;
6. Inicjowanie wspólnych projektów oraz poszukiwanie funduszy na realizację działań mających na celu ochronę dziedzictwa światowego oraz propagowanie idei dziedzictwa światowego wśród społeczności lokalnych oraz turystów;
7. Wymiana doświadczeń

IV. W ramach Komitetu Sterującego działać będzie grupa robocza złożona z przedstawicieli instytucji zarządzających Obiektem Światowego Dziedzictwa „Białowieża Forest”:

- Dyrektora Białowieżskiego Parku Narodowego,
- Nadleśniczego Nadleśnictwa Białowieża,
- Nadleśniczego Nadleśnictwa Browsk,
- Nadleśniczego Nadleśnictwa Hajnówka.

Do zadań grupy roboczej należy bieżąca analiza funkcjonowania obiektu oraz przygotowywanie raportów okresowych i innych dokumentów do opiniowania przez Komitet Sterujący.

V. Komitet Sterujący podejmuje działania zgodne z kompetencjami instytucji zarządzających obszarem Obiektu Światowego Dziedzictwa „Białowieża Forest”.

DYREKTOR

dr Miroslaw Stepaniuk

NADLEŚNICZY

mgr inż. Grzegorz Bielecki

NADLEŚNICZY

mgr inż. Dariusz Skirko

p.o. NADLEŚNICZY
Nadleśnictwa Białowieża

dr inż. Andrzej Konieczny

AGREEMENT

Between

Director of the Białowieża National Park, based in Białowieża (Poland)
and
Director of the National Park “Białowieża Forest”, based in Kamieniuki (Belarus)
and
Head Forester of the Białowieża Forest District, based in Białowieża (Poland)
and
Head Forester of the Browsk Forest District, based in Browsk (Poland)
and
Head Forester of the Hajnówka Forest District, based in Hajnówka (Poland)

Signed in Białowieża on February 11, 2014
regarding preparation and implementation of the Management Plan
for the World Heritage Site, the Białowieża Forest

The Agreement expresses the will of cooperation of the parties regarding:

1. Preparation of Management Plan for the World Heritage Property Białowieża Forest, hereinafter referred to as Management Plan
2. Implementation of Management Plan for the World Heritage Property Białowieża Forest according to the competences of the bodies managing the World Heritage Property Białowieża Forest.

The aim of this agreement is effective cooperation in activities directed at preparation and implementation of the Management Plan taking into consideration the basic principles:

1. Outstanding Universal Value is reflected in:

- Ancient forest where natural processes were not interrupted during historic times;
- Numerous relict species of primeval forests;
- Wild European bison population – a species rescued from extinction
- Presence of numerous rare and endangered species of fungi, plants and animals and the existence of a whole complexity of relations among elements of ecosystem;
- All development stages – the structure of the Site guarantees the continuity of the ongoing natural and environmental processes as well as a favourable conservation status of a whole range of communities and species forming the unique diversity of the ecosystems. The mosaic of natural phenomena and its dynamics as well as the rich and diverse habitats are of outstanding importance as essential habitats for numerous species typical of natural forest ecosystems of the temperate climate zone.

2. The World Heritage Site Białowieża Forest will always be the place, where:

- The conservation of wild nature and respect for the unique combination of elements in the ecosystem constitute the basic principle of the Site’s management; the tree stand is mainly composed of old-growth natural forests of primeval character;

- Research on natural processes and biodiversity is carried out and the results are available for the interested organisations as well as people;
- Visitors are admitted exclusively in a way that sustains its natural values while more intensive tourism and recreation is channelled to the buffer zone;
- People live in harmony with nature and care for the natural environment and the level of environmental awareness is raised by constant education,
- Local community benefits from the well-being of nature.

3. **The main objective of the Site's management** is to preserve natural processes and the unique combination of habitats and species in the forest; the old-growth natural forests are covered by special protection. The existing hydrological regime shall be maintained and non-natural water ecosystems will be managed with the view to sustain the existing water-dependent plant and animal communities.

Nature protection

Protection of old-growth forest

The primeval old-growth forest will be left without direct human interference.

Its protection is the general principle of the Site's management; no activities shall be carried out except for scientific research, education, limited and monitored tourism, keeping paths clear of fallen trees as well as fire prevention.

Apart from the area of strict protection, natural regeneration of the forest will be promoted, supported by planting new trees and shrubs indigenous to the Białowieża Forest, if such need arises.

Species protection

All species and habitats protected by the national law, EU directives and international conventions will be protected. However, in the Strictly Protected Area no protective treatments shall be performed.

Limiting exploitation

Tree cutting and population size adjustment of game species may be executed only if it is required for habitat conservation and not for economic purposes.

Protection of the river valleys and wetlands

River valleys and wetlands will retain their present character. The areas which were altered by human activity in the past and are currently regarded as valuable habitats will retain their open character by such treatments as chopping and mowing.

Hydrological regime

Management of man-made water ecosystems will be maintained in a way that will ensure long-term survival of the existing plant communities as well as water and water-dependent animal communities. It will exclude the negative effects on the ground water level in the surrounding ecosystems. The main aim is to maintain the existing water regime.

No drainage works will take place. It might be necessary to slow down the outflow of water from the ecosystem in selected areas. Should such a need arise, relevant activities shall be undertaken.

Archeological and historical objects

Archeological sites and objects of historical importance will be preserved.

Research

Research on natural processes and biodiversity

The basic aims of scientific research are as follows: complex knowledge of all natural elements, phenomena and processes as well as recognition of the impact of various forms

of human activity on nature and the improvement of nature conservation methods. Research on natural processes and biodiversity are to be prioritised;

Research on rare and endangered species

Rare and endangered species will be studied and monitored, especially those typical of natural forests and relict species. Study of relatively unknown groups, mainly of invertebrates and fungi, will be supported;

Research regulations

Scientific research and monitoring are organised according to principles of scientific exploration applied in the national parks of the Białowieża Forest and accepted by the relevant Scientific Councils. Each research proposal is opinionated by the Scientific Council of the Park. Non-invasive observational methods of scientific exploration are applied. Scientific experiments, especially those which cause irreversible alteration of the environment and natural processes or threaten plants, fungi, animals or landscapes of the Białowieża Forest are forbidden. In the areas outside the boundaries of the National Parks of the Białowieża Forest, managed by the Forest Districts of: Białowieża, Browsk and Hajnówka, research shall be carried out in accordance with the internal regulations of the State Forests, especially with regulations on scientific research – the reports on the research shall be presented to the Socio-Scientific Council of the Forest Promotional Complex „Białowieża Forest”, whose conclusions will be used for planning future activities and agreements with research institutions. Research conducted in the nature reserves must be accepted by the Director of the Regional Directorate of the Environmental Protection in Białystok.

Education

Education development

A wide array of education methods for the whole spectrum of the target groups is being developed and implemented, aimed at local communities and visitors. Education is regarded as the key to better protection of nature not only in the Białowieża Forest but also in a wider context. The Forest Districts of the Białowieża Forest carry out education measures according to 10-year Programmes of Forest Education of the Society;

Education and involvement of local communities

Training courses on the subject of nature and environmental protection are organised. As a result the awareness of the natural and cultural values of the Site will be raised, leading to a better understanding of stakeholders, including managing authorities, local community and visitors, of the necessary activities and limitations imposed in the area of the Białowieża Forest.

Involvement

Campaign for involvement

A long-term campaign will be implemented, aimed at involving people in the issues concerning the natural environment that surrounds them. Change in the traditional attitude of the people towards the environment is a difficult and time-consuming process which demands participation of different social and professional groups as well as media.

Maintaining regulations concerning harvesting of forest resources

Collection of mushrooms and berries will be permitted outside the strictly protected areas of the Site. This will maintain the connection between the local community and the forest and stress non-productive forest functions.

Tourism and Recreation

Accessibility to the strictly protected areas

The strictly protected areas of the national parks can be accessed only by unmarked tourist paths in groups not larger than 20 people and with a guide.

Accessibility to the Property outside the strictly protected areas

Outside the strictly protected areas, the Site may be accessed by marked tourists paths, and according to national regulations on forests forming the State Property of Poland.

4. Existing and potential threats

The following main threats to the Outstanding Universal Values of the Site have been identified:

- Water regime changes (reductions in groundwater levels, disappearing of small water bodies, seasonal drying of small water courses);
- Deterioration in the health of the European bison caused by inbreeding and outbreaks of new diseases and emerging of new parasites;
- Eutrofication of soils leading to regression of habitats on poor soils;
- Vanishing of species (e.g. thermophilous and boreal) and isolation of their populations;
- Emergence and spreading of alien and invasive species;
- Potential uncontrolled development of tourist infrastructure in the vicinity of the Site;
- Ecological disasters, including fire hazard.

5. Disaster prevention

Fire is regarded as the main disaster which may affect the Site. This implies the need to maintain a network of roads to enable access to the threatened area. Some roads, which are not recognized as of great importance from the security point of view, will be no longer maintained.

Detailed information on fire prevention and actions to be taken in case of fire is included in management plans for particular parts of the World Heritage Site.

6. Buffer zone

The buffer zone is necessary for maintaining the outstanding universal value of the Site. The activities promoted within the buffer zone involve renaturalisation of altered ecosystems, education, tourism, promotion of the Site, maintaining local traditions, green agriculture and sustainable development.

Management activities in the buffer zone situated within the borders of the both countries will be defined in the management plan for the Property.

7. Transboundary cooperation

Steering Committee of the Transboundary World Heritage Site

- The establishment and tasks of the Steering Committee are regulated by a separate agreement;
- If needed, stakeholders from outside the Committee and experts may be invited to the meetings;
- The Committee will deal with issues concerning
 - Protection of the Outstanding Universal Value of the Site,
 - management
 - monitoring of the World Heritage Site and its buffer zone.

The members of the Committee will raise problems concerning the Site as one natural system and the emerging threats as well as exchange information on the natural

processes, phenomena and planned activities – their justification and the effectiveness of the applied methods.

8. Implementation programme

- On October 24, 2013, the Polish party (Forest Districts of Białowieża, Browsk and Hajnówka in accordance with the Director of the Regional Directorate of State Forests in Białystok and the Białowieża National Park) signed the cooperation agreement on establishing the Steering Committee for the World Heritage Site Białowieża Forest;
- Parties to this agreement (Polish and Belarusian) signed on this day declare that within 60 days an agreement will be prepared on the establishment and competences of the Steering Committee of the Transboundary World Heritage Site;
- The Steering Committee of the Transboundary World Heritage Site will continue the efforts of the working group which prepared the renomination dossier, consisting of the representatives of the managing authorities of the Property in its proposed boundaries, and its competences will be consistent with the agreement on establishing the Steering Committee for the World Heritage Site Białowieża Forest, concluded on October 24, 2013.
- The Steering Committee of the Transboundary World Heritage Site will develop the management plan for the Property which will be accepted by State Parties and presented to the UNESCO World Heritage Centre.

Director of the Białowieża National Park (Poland)

Manager of the Białowieża Forest District (Poland)

Manager of the Browsk Forest District (Poland)

Manager of the Hajnówka Forest District (Poland)

Director of the National Park “Białowieża Primeval Forest” (Belarus)

POROZUMIENIE

pomiędzy

Dyrektorem Białowieskiego Parku Narodowego z siedzibą w Białowieży (Polska)
i
Dyrektorem Parku Narodowego „Puszcza Białowieska” z siedzibą w Kamieniukach (Białoruś)
i
Nadleśniczym Nadleśnictwa Białowieża z siedzibą w Białowieży (Polska)
i
Nadleśniczym Nadleśnictwa Browsk z siedzibą w Gruszkach (Polska)
oraz
Nadleśniczym Nadleśnictwa Hajnówka z siedzibą w Hajnówce (Polska)

**zawarte w Białowieży w dniu 11 lutego 2014 r.
w sprawie przygotowania oraz wdrażania Planu Zarządzania
dla Obiektu Światowego Dziedzictwa Puszcza Białowieska**

Niniejsze porozumienie wyraża wolę partnerskiej współpracy stron w zakresie:

1. Przygotowania Planu Zarządzania dla Obiektu Światowego Dziedzictwa „Puszcza Białowieska”, zwanego dalej Planem Zarządzania.
2. Wdrożenia opracowanego wspólnie Planu Zarządzania w zakresie kompetencji reprezentowanych instytucji zarządzających obszarem Obiektu Światowego Dziedzictwa „Puszcza Białowieska”.

Celem porozumienia jest efektywna współpraca w zakresie działań mających na celu przygotowanie i wdrożenie Planu Zarządzania uwzględniającego podstawowe założenia:

1. Wyjątkową wartość uniwersalną obiektu stanowią:

- Istnienie pradawnej puszczy, w której przebieg procesów naturalnych w czasach historycznych nie został przerwany;
- Liczne gatunki reliktowe lasów pierwotnych;
- Żyjąca na wolności populacja żubra – gatunku uratowanego przed zagładą;
- Obecność rzadkich i zagrożonych wielu gatunków grzybów, roślin i zwierząt oraz całego kompleksu zależności między poszczególnymi elementami ekosystemu;
- Wszystkie stadia rozwojowe lasu - Obiekt zapewnia kontynuację naturalnych procesów ekologicznych i biologicznych, jak również właściwy stan ochrony i zachowania zbiorowisk oraz gatunków tworzących unikatową różnorodność ekosystemów. Mozaika zjawisk przyrodniczych, ich dynamika, jak również bogactwo i różnorodność siedlisk przyrodniczych przedstawiają wyjątkową wartość, jako siedliska niezbędne do bytowania licznych gatunków typowych dla lasów naturalnych strefy klimatu umiarkowanego.

2. Obiekt Światowego Dziedzictwa „Puszcza Białowieska” będzie zawsze miejscem, gdzie:

- Nadrzędną zasadą zarządzania jest ochrona dzikiej przyrody oraz szacunek dla wyjątkowej sieci powiązań w ekosystemach; w strukturze drzewostanu przeważają starodrzewia o charakterze naturalnym;
- Prowadzone są badania procesów naturalnych oraz różnorodności biologicznej, a ich wyniki są udostępniane zainteresowanym instytucjom i osobom;
- Udostępnienie oparte jest wyłącznie na zasadach, które wspierają wartości przyrodnicze, a intensywne turystyka i rekreacja skierowana jest do strefy buforowej;

- Ludzie żyją w harmonii z przyrodą troszcząc się o środowisko przyrodnicze, a poziom świadomości ekologicznej podnoszony jest przez stałą edukację;
- Dobro przyrody przynosi korzyści lokalnej społeczności.

3. **Podstawowe cele zarządzania Obiektem** to zachowanie procesów przebiegających w lesie naturalnym oraz unikalnej kombinacji siedlisk i gatunków. Szczególną ochroną objęte są starodrzewia. Utrzymany zostanie istniejący reżim hydrologiczny, natomiast ekosystemy wodne sztucznego pochodzenia zarządzane będą w taki sposób, aby zachować istniejące zbiorowiska roślin i zwierząt związanych z siedliskami wodnymi.

- **Ochrona przyrody**

Ochrona starodrzewi

Starodrzewia o charakterze naturalnym pozostaną bez bezpośredniej ingerencji człowieka.

Podstawową zasadą gospodarowania Obiektem jest ich ochrona. Jedyne dopuszczalne działania to badania naukowe, edukacja, ograniczony i kontrolowany ruch turystyczny, utrzymywanie drożności ciągów komunikacyjnych, ograniczanie ryzyka pożarowego.

Poza obszarem ochrony ścisłej promowana będzie naturalna regeneracja lasu, w uzasadnionych przypadkach wspierana odnowieniami gatunkami drzew i krzewów pochodzących z Puszczy Białowieskiej;

Ochrona gatunków

Ochronie będą podlegać wszystkie gatunki chronione przez prawo państwowe, a także gatunki chronione na mocy dyrektyw europejskich i konwencji międzynarodowych. Na obszarach ochrony ścisłej nie będą prowadzone żadne zabiegi ochronne;

Ograniczenie eksploatacji

Pozyskanie drewna oraz regulacja liczebności zwierząt łownych związane są wyłącznie z potrzebą ochrony siedlisk i ochrony lasu, i nie wynikają z przesłanek ekonomicznych;

Ochrona dolin rzecznych oraz obszarów podmokłych

Doliny rzeczne oraz obszary podmokłe utrzymują obecny charakter. Obszary, które zostały w przeszłości przekształcone przez gospodarkę człowieka, a które obecnie uznawane są za siedliska wartościowe przyrodniczo, zachowają otwarty charakter dzięki takim zabiegom jak koszenie i usuwanie nalołów;

Reżim wodny

Gospodarowanie ekosystemami wodnymi sztucznego pochodzenia będzie prowadzone w sposób zapewniający długoterminowe przetrwanie wykształconych już zbiorowisk roślinnych oraz zespołów zwierząt wodnych i zależnych od wody. Będzie wykluczać ich negatywny wpływ na poziom wód gruntowych w otaczających je ekosystemach. Głównym celem działań będzie podtrzymanie istniejących stosunków wodnych. Nie będą prowadzone prace skutkujące osuszeniem terenu. Tam, gdzie konieczne może być spowolnienie odpływu wód z ekosystemu mogą zostać podjęte odpowiednie działania;

Obiekty archeologiczne i historyczne

Stanowiska i obiekty archeologiczne o znaczeniu historycznym zostaną zachowane.

- **Badania naukowe**

Badania procesów naturalnych i różnorodności biologicznej

Za podstawowe cele badań naukowych uznaje się: poznawanie zjawisk przyrodniczych, procesów naturalnych oraz elementów ekosystemu, jak również rozpoznanie wpływu różnych form działalności człowieka na przyrodę i poprawa metod ochrony przyrody. Badania procesów naturalnych i różnorodności biologicznej są uważane za priorytetowe;

Badania gatunków rzadkich i zagrożonych

Prowadzone będą badania oraz monitoring rzadkich i zagrożonych gatunków, zwłaszcza gatunków typowych dla lasów naturalnych oraz gatunków reliktowych. Wspierane będą badania grup słabo poznanych, głównie grzybów i bezkręgowców;

Zasady eksploracji naukowej

Badania naukowe i monitoring prowadzone są zgodnie z zasadami eksploracji naukowej obowiązującymi w parkach narodowych Puszczy Białowieskiej, zatwierdzonymi przez ich Rady Naukowe. Każdy wniosek badawczy jest przedstawiony do zaopiniowania Radzie Naukowej Parku. Obowiązują nieinwazyjne, obserwacyjne metody badań. Eksperymenty naukowe, a zwłaszcza te prowadzące do nieodwracalnych zmian w środowisku przyrodniczym i procesach naturalnych lub zagrażające roślinom, grzybom, zwierzętom oraz krajobrazowi Puszczy Białowieskiej są niedopuszczalne. Na obszarach poza granicami Parków Narodowych w Puszczy Białowieskiej, zarządzanych przez Nadleśnictwa Białowieża, Browsk i Hajnówka, prace naukowe będą wykonywane zgodnie z obowiązującymi uregulowaniami wewnętrznymi Lasów Państwowych, a w szczególności z regulaminem wykonywania badań – informacje z realizacji badań są przedkładane Radzie Naukowo-Społecznej Leśnego Kompleksu Promocyjnego Puszcza Białowieska, a wnioski Rady będą służyły planowaniu badań na kolejne okresy oraz zawieraniu porozumień z placówkami naukowymi. Badania prowadzone na terenie rezerwatów przyrody wymagają zgody Dyrektora Regionalnej Dyrekcji Ochrony Środowiska w Białymstoku.

- **Edukacja**

- Rozwój edukacji

- Prowadzony i rozwijany jest szeroki wachlarz metod edukowania różnych grup wiekowych, skierowanych zarówno do społeczności lokalnych, jak i odwiedzających Obiekt. Edukacja jest postrzegana jako zagadnienie kluczowe dla lepszej ochrony przyrody nie tylko Puszczy Białowieskiej, ale także w szerszym kontekście. Nadleśnictwa Puszczy Białowieskiej prowadzą edukację w oparciu o 10-letnie Programy Edukacji Leśnej Społeczeństwa;

- Edukacja oraz zaangażowanie społeczności lokalnych

- Organizowane są szkolenia z zakresu ochrony przyrody i środowiska. Efektem prowadzonej edukacji jest podnoszenie świadomości znaczenia wartości przyrodniczych a także kulturowych Obiektu, a tym samym akceptacja działań i ograniczeń na obszarze Puszczy Białowieskiej przez wszystkie strony, w tym zarządzających Dobrem, lokalną społeczność oraz zwiedzających.

- **Zaangażowanie**

- Kampania na rzecz zaangażowania

- Prowadzona będzie długoterminowa kampania na rzecz zaangażowania ludzi w sprawy otaczającego ich środowiska przyrodniczego. Zmiana tradycyjnej postawy ludzi wobec środowiska przyrodniczego jest trudna i wymaga czasu oraz udziału różnych grup społecznych i zawodowych, jak również mediów;

- Utrzymanie zasad zbioru owoców runa leśnego

- Pozyskiwanie owoców runa leśnego oraz grzybów dozwolone jest poza obszarami ochrony ścisłej. Pozwala to na utrzymanie więzi lokalnej społeczności z lasem oraz służy podkreśleniu pozaprodukcyjnych funkcji lasu.

- **Turystyka i rekreacja**

- Udostępnienie obszarów ochrony ścisłej

- Obszary ochrony ścisłej parków narodowych może być zwiedzany wyłącznie po wytyczonych trasach turystycznych w grupach liczących nie więcej niż 20 osób, pozostających pod opieką przewodnika;

- Udostępnienie Dobra poza obszarami ochrony ścisłej

- Poza obszarami ochrony ścisłej turyści mogą poruszać się po oznakowanych szlakach turystycznych.

4. Występujące i potencjalne zagrożenia:

Zidentyfikowano następujące główne zagrożenia dla Wyjątkowej Wartości Uniwersalnej Obiektu:

- Zmiany reżimu wodnego (obniżanie się poziomu wód gruntowych, zanikanie małych oczek wodnych, okresowe wysychanie mniejszych cieków);
- Pogarszający się stan zdrowotny żubra europejskiego powodowany m.in. wysokim współczynnikiem wsobności, pojawianiem się nowych chorób i pasożytów;
- Regresja siedlisk występujących na glebach ubogich powodowana zwiększającą się żyznością gleb;
- Zanikanie populacji niektórych gatunków (np. ciepłolubnych i borealnych) oraz izolacja ich populacji;
- Pojawianie się i rozprzestrzenianie się gatunków obcych i inwazyjnych;
- Potencjalny niekontrolowany rozwój infrastruktury turystycznej w otoczeniu Obiektu;
- Katastrofy ekologiczne, w tym zagrożenie pożarem.

5. Zapobieganie katastrofom

Głównym zagrożeniem o katastrofalnych skutkach dla Obiektu jest ryzyko wystąpienia pożaru. To implikuje konieczność utrzymania sieci dróg umożliwiających dostęp do zagrożonych obszarów. Drogi, które nie mają strategicznego znaczenia dla bezpieczeństwa Obiektu nie będą utrzymywane.

Szczegółowe informacje dotyczące zapobieganiu oraz działaniach w razie wystąpienia pożaru zawarte są w planach zarządzania poszczególnych części Obiektu.

6. Strefa buforowa

Dla utrzymania wyjątkowej wartości uniwersalnej Obiektu konieczna jest strefa buforowa. W strefie buforowej wspierane będą działania związane z renaturalizacją przekształconych ekosystemów leśnych, edukacją, turystyką, promocją Obiektu, podtrzymaniem lokalnych tradycji, ekologiczną gospodarką rolną oraz zrównoważonym rozwojem.

Działania w strefach buforowych Obiektu położonych w granicach obydwu krajów zostaną zdefiniowane w planie zarządzania Dobrem.

7. Współpraca transgraniczna

Komitet Sterujący Transgranicznego Obiektu Światowego Dziedzictwa

- Powołanie oraz kompetencje Komitetu Sterującego regulowane są odrębnym porozumieniem;
- W zależności od potrzeb na spotkania mogą być zapraszane osoby spoza Komitetu;
- Do kompetencji Komitetu należą zagadnienia związane z:
 - ochroną wyjątkowej uniwersalnej wartości Obiektu,
 - zarządzaniem,
 - monitorowaniem Obiektu Światowego Dziedzictwa i jego strefy buforowej;

Na forum Komitetu będą poruszane problemy związane z funkcjonowaniem Obiektu jako jednorodnego ekosystemu przyrodniczego oraz pojawiającymi się zagrożeniami, jak również wymieniane informacje dotyczące procesów naturalnych, zjawisk przyrodniczych oraz planowanych działań – celowość ich podejmowania i skuteczność stosowanych metod.

8. Program wdrożenia

- Strona polska (Nadleśnictwo Białowieża, Nadleśnictwo Browsk, Nadleśnictwo Hajnówka – w uzgodnieniu z Dyrektorem Regionalnej Dyrekcji Lasów Państwowych w Białymstoku oraz Białowieski Park Narodowy) podpisała w dniu 24 października 2013 r. wewnętrzne porozumienie o współpracy poprzez utworzenie Komitetu Sterującego Obiektem Światowego Dziedzictwa Puszcza Białowieska.

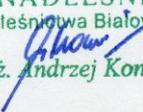
- Strony niniejszego porozumienia (polska i białoruska) podpisanego w dniu dzisiejszym uzgadniają, że w terminie 60 dni od dzisiejszej daty opracowane zostanie porozumienie w sprawie powołania i kompetencji Komitetu Sterującego Transgranicznego Obiektu Światowego Dziedzictwa.
- Komitet Sterujący Transgranicznego Obiektu Światowego Dziedzictwa będzie kontynuował prace grupy roboczej, która przygotowała wniosek re-nominacyjny, złożonej z przedstawicieli zarządzających Dobrem w jego proponowanych granicach, a jego kompetencje będą zgodne z podpisanym porozumieniem w sprawie powołania Komitetu Sterującego z dnia 24.10.2013 r.
- Komitet Sterujący Transgranicznego Obiektu Światowego Dziedzictwa opracuje plan zarządzania Dobrem, który zostanie zaakceptowany przez Państwa – Strony i przedstawiony Centrum Światowego Dziedzictwa UNESCO.

Dyrektor Białowieskiego Parku Narodowego (Polska)

DYREKTOR

 dr Mirosław Stepaniuk

Nadleśniczy Nadleśnictwa Białowieża (Polska)

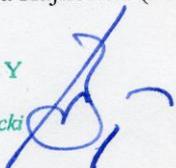
p.o. NADLEŚNICZY
 Nadleśnictwa Białowieża

 dr inż. Andrzej Konieczny

Nadleśniczy Nadleśnictwa Browsk (Polska)

INŻYNIER NADZORU

 mgr inż. Wojciech Niedzielski

Nadleśniczy Nadleśnictwa Hajnówka (Polska)

NADLEŚNICZY

 mgr inż. Grzegorz Bielecki

Dyrektor Parku Narodowego „Puszcza Białowieska” (Białoruś)




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translation from Polish into English

**AGREEMENT
BETWEEN
THE GOVERNMENT OF THE REPUBLIC OF POLAND
AND
THE GOVERNMENT OF THE REPUBLIC OF BELARUS
ON THE COOPERATION IN THE FIELD OF ENVIRONMENT
PROTECTION**

The Government of the Republic of Poland and the Government of the Republic of Belarus, further called the Parties,

- acting in accordance with the Treaty between the Republic of Poland and the Republic of Belarus of good neighbourhood and friendly cooperation dated 23 June 1992,
- aspiring to extend cooperation in the field of the environment protection,
- being aware of the significance of protection and improvement of the conditions of environment for the good of present and future generations,
- being governed by legislation of their states and widely accepted norms of the international law,
- taking into consideration the experience acquired as a part of international cooperation in the field of the environment protection,
- basing on the arrangements of international agreements in the field of the environment protection, parties of which are the Parties;
- recognizing that realization of the principles of the sustainable development accepted during the Conference of the United Nations Organization "Environment and Development" in Rio de Janeiro in 1992 and confirmed in the Johannesburg Declaration on sustainable development of 2002, requires responsible using of natural resources;

agreed as follows:



Article 1

The Parties will cooperate in the field of the environment protection on the principle of equality of rights and mutual advantage, being governed by the aims and principles of the sustainable development.

Article 2

The cooperation will be realized in the following directions:

- 1) exchange of experiences in the range of legal regulations in the field of the environment protection;
- 2) using of economic instruments in natural resources management;
- 3) monitoring of environment;
- 4) methodological approach to preparation and execution of assessment of the influence on environment ;
- 5) state audit in the field of the environment protection;
- 6) standardization, metrology and certification in the field of the environment protection;
- 7) state reports about the condition of the environment protection;
- 8) air protection;
- 9) protection of surface and underground waters;
- 10) geological research, protection of deposits and their rational using;
- 11) protection and reconstruction of landscapes and ecosystems;
- 12) protection and development of particularly protected natural areas;
- 13) soil protection;
- 14) protection of forests and running of forest economy, as well as rational using of forest resources;
- 15) protection of animal and plant world, especially rare and endangered species of flora and fauna;
- 16) salvage and neutralizing of wastes;
- 17) protection of environment during transborder moving of dangerous chemical and radioactive substances, as well as dangerous and radioactive wastes;
- 18) protection and improvement of the condition of environment in cities and on other inhabited areas;



- 19) scientific research in the field of the environment protection and rational using of natural resources;
- 20) ecological review;
- 21) ecological education of the society, supporting of ecological tourism development aiming at familiarizing of the society with the natural wealth and the need of nature protection;
- 22) other fields of cooperation which the Parties recognise as purposeful.

Article 3

1. The cooperation can be realized in the following forms:

- 1) working out and realization of common cooperation programmes, projects in accordance with directions mentioned in article 2;
- 2) carrying out of consultations, conferences, symposia, seminars;
- 3) realization of agreed undertakings aiming at decreasing of negative influence of global changes of natural environment and climate on a man;
- 4) publication of common articles, monographs, research results, exchange of state reports about the condition of environment and other official information relating to the condition of environment;
- 5) exchange of scientists and experts from the various fields of the environment protection for research, scientific and training purposes;
- 6) exchange of prescriptive legal documents, information about other legal documents, methodical, scientifically-technical literature and any information from the field of natural resources management and the environment protection;
- 7) participation of Polish and Belarusian experts in international undertakings relating to the environment protection, organized in the Republic of Poland and in the Republic of Belarus;
- 8) carrying out of common scientific and practical researches in the field of the environment protection;
- 9) appointing of common groups of experts or specialists.

2. The cooperation can be also realized in other forms than mentioned in the section 1, agreed by the Parties.


3



Article 4

1. The Parties for the achievement of the aims of this Agreement appoint the Polish-Belarusian Committee on cooperation in the field of the environment protection, further called the "Committee".
2. The Committee is chaired by two Co-chairpersons appointed by the Parties, having equal powers.
3. Competent bodies of the Parties' States will inform each other in a diplomatic way within two months since the day of coming into force of this Agreement about the appointment of the Committee's Co-chairpersons.
4. Taking into consideration providing of equal representation of the Parties in the Committee, the Co-chairpersons set number of members of the Polish and Belarusian parts of the Committee and determine its personal composition. For the first time the composition of the Committee should be determined by the Co-chairpersons in the period not longer than six months from the day of the last notification about the appointment of Committee's Co-chairpersons.
5. The meetings of the Committee will take place whenever necessary, however not less rarely than once a year, after arrangement by the Co-chairpersons in both states in turns.
6. The Committee, if it is necessary, can appoint working groups for the separate directions of cooperation.
7. The costs of organization and carrying out of the Committee's meeting are borne by the receiving Party. The delegating Party bears the costs connected with the participation in the meeting of the Committee.
8. The Committee will determine procedure of its work during the first meeting of the Committee.

Article 5

1. The principles of financing of the cooperation and realization of common projects will be considered by the Parties in each individual case appropriately to their budget possibilities in accordance with the legislation of the states.
2. Apart from the cases agreed by the Parties, each Party bears its costs occurred in connection with the realization of the present Agreement.



Article 6

1. The Parties, according to the legislation of their states, will support development of direct contacts between appropriate bodies and institutions, as well as enterprises of both states, whose activity is connected with the environment protection.

2. The subjects mentioned in the section 1, on the basis of this Agreement can conclude agreements and contracts defining principles of cooperation, among them terms and conditions of financing, settlement order and responsibility for non-fulfillment of their obligations.

3. The Parties are not responsible for the obligations of the subjects mentioned in the section 1, within the agreements and contracts concluded on the basis of this Agreement.

Article 7

Divergences resulting from interpretation and realization of this Agreement will be decided by consultations or negotiations between the Parties.

Article 8

The Agreement does not violate rights and duties of the Parties, resulting from international agreements previously concluded by them, or connected with their membership in international organizations in the field of the environment protection and natural resources management.

Article 9

1. This Agreement is to be accepted according to each Parties' legislation what will be affirmed by exchange of notes. The Agreement will come into the force on the day of the receipt of the later note.


5-



2. This Agreement is concluded for the period of five years and is automatically prolonged for the next five-year periods, if neither of the Parties gives notice by note six months before the expiry of its validity.

The Agreement was drawn up in Białowieża, on 12th of September 2009, in two original copies, each in Polish and Russian languages, at the same time both texts are equally authentic.

For the Government
of the Republic of Poland

For the Government
of the Republic of Belarus

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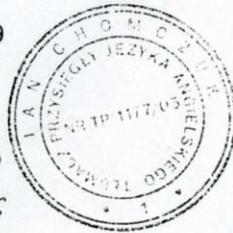
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I, Jan Chomczuk, a certified translator of German and English languages, authenticate the conformity of the translation to the original of the document shown to me.

Rep. No 134/09
Hajnówka, 16 November 2009



**POROZUMIENIE
MIĘDZY
RZĄDEM RZECZYPOSPOLITEJ POLSKIEJ
A
RZĄDEM REPUBLIKI BIAŁORUSI
O WSPÓŁPRACY W DZIEDZINIE OCHRONY ŚRODOWISKA**

Rząd Rzeczypospolitej Polskiej i Rząd Republiki Białorusi, zwane dalej Stronami,

- działając w duchu Traktatu między Rzeczpospolitą Polską a Republiką Białoruś o dobrym sąsiedztwie i przyjaznej współpracy z dnia 23 czerwca 1992 roku,
- dążąc do rozszerzenia współpracy w dziedzinie ochrony środowiska,
- świadome znaczenia ochrony i poprawy stanu środowiska dla dobra obecnych i przyszłych pokoleń,
- kierując się prawodawstwem swoich państw i ogólnie przyjętymi normami prawa międzynarodowego,
- biorąc pod uwagę doświadczenie zdobyte w ramach współpracy międzynarodowej w dziedzinie ochrony środowiska,
- opierając się na ustaleniach międzynarodowych umów w dziedzinie ochrony środowiska, których stronami są Strony,
- uznając, że realizacja zasad zrównoważonego rozwoju przyjętych podczas Konferencji Organizacji Narodów Zjednoczonych "Środowisko i Rozwój" w Rio de Janeiro w 1992 roku i potwierdzonych w Deklaracji z Johannesburga w sprawie zrównoważonego rozwoju z 2002 roku, wymaga odpowiedzialnego korzystania z zasobów naturalnych;

uzgodniły, co następuje:

Artykuł 1

Strony będą współpracowały w dziedzinie ochrony środowiska na zasadzie równouprawnienia i wzajemnej korzyści, kierując się celami i zasadami zrównoważonego rozwoju.

Artykuł 2

Współpraca będzie realizowana w następujących kierunkach:

- 1) wymiana doświadczeń w zakresie regulacji prawnych w dziedzinie ochrony środowiska;
- 2) wykorzystanie instrumentów ekonomicznych w gospodarowaniu zasobami naturalnymi;
- 3) monitoring środowiska;
- 4) metodologiczne podejście do przygotowania i przeprowadzenia ocen oddziaływania na środowisko;
- 5) państwowa kontrola w dziedzinie ochrony środowiska;
- 6) normowanie, standaryzacja, metrologia i certyfikacja w dziedzinie ochrony środowiska;
- 7) państwowe raporty o stanie ochrony środowiska;
- 8) ochrona powietrza;
- 9) ochrona wód powierzchniowych i podziemnych;
- 10) badania geologiczne, ochrona złóż i racjonalne ich wykorzystywanie;
- 11) ochrona i odtwarzanie krajobrazów i ekosystemów;
- 12) ochrona i rozwój szczególnie chronionych obszarów przyrodniczych;
- 13) ochrona gleb;
- 14) ochrona lasów i prowadzenie gospodarki leśnej, a także racjonalne wykorzystanie zasobów leśnych;
- 15) ochrona świata zwierząt i roślin, w szczególności rzadkich i zagrożonych wyginięciem gatunków flory i fauny;
- 16) odzysk i unieszkodliwianie odpadów;
- 17) ochrona środowiska podczas transgranicznego przemieszczania niebezpiecznych substancji chemicznych i radioaktywnych, a także niebezpiecznych i radioaktywnych odpadów;
- 18) ochrona i poprawa stanu środowiska w miastach i na innych obszarach zamieszkałych;

- 19) badania naukowe w dziedzinie ochrony środowiska i racjonalnego wykorzystania zasobów naturalnych;
- 20) przegląd ekologiczny;
- 21) edukacja, wykształcenie i oświata ekologiczna społeczeństwa, wspieranie rozwoju turystyki ekologicznej mającej na celu zapoznanie społeczeństwa z bogactwami przyrody i potrzebą jej ochrony;
- 22) inne dziedziny współpracy, które Strony uznają za celowe.

Artykuł 3

1. Współpraca może być realizowana w następujących formach:

- 1) opracowanie i realizacja wspólnych programów współpracy, projektów zgodnie z kierunkami, o których mowa w artykule 2;
- 2) przeprowadzanie konsultacji, konferencji, sympozjów, seminariów;
- 3) realizacja uzgodnionych przedsięwzięć, celem których będzie zmniejszenie negatywnego wpływu globalnych zmian środowiska przyrodniczego i klimatu na człowieka;
- 4) publikacja wspólnych artykułów, monografii, wyników badań, wymiana raportów państwowych o stanie środowiska oraz innych oficjalnych informacji dotyczących stanu środowiska;
- 5) wymiana naukowców i specjalistów z różnych dziedzin ochrony środowiska w celach poznawczych, naukowych i szkoleniowych;
- 6) wymiana normatywnych aktów prawnych, informacji na temat innych aktów prawnych, metodycznej, naukowo-technicznej literatury oraz innych informacji z dziedziny gospodarowania zasobami naturalnymi i ochrony środowiska;
- 7) udział polskich i białoruskich specjalistów w przedsięwzięciach międzynarodowych dotyczących ochrony środowiska, realizowanych w Rzeczypospolitej Polskiej i w Republice Białorusi;
- 8) realizacja wspólnych naukowych i praktycznych badań w dziedzinie ochrony środowisk;
- 9) powoływanie wspólnych grup ekspertów lub specjalistów.

2. Współpraca może także być realizowana w innych niż wymienione w ustępie 1 formach, uzgodnionych przez Strony.

Artykuł 4

1. Strony dla osiągnięcia celów niniejszego Porozumienia powołują Polsko-Białoruską Komisję do spraw współpracy w dziedzinie ochrony środowiska, zwaną dalej "Komisją".
2. Komisji przewodniczy dwóch Współprzewodniczących wyznaczonych przez Strony, mających jednakowe uprawnienia.
3. Kompetentne organy Państw Stron w ciągu dwóch miesięcy od dnia wejścia w życie Porozumienia powiadomią się wzajemnie w drodze dyplomatycznej o wyznaczeniu Współprzewodniczących Komisji.
4. Mając na uwadze zapewnienie równej reprezentacji Stron w Komisji Współprzewodniczący uzgadniają liczbę członków Polskiej i Białoruskiej części Komisji i określają jej skład osobowy. Po raz pierwszy skład Komisji powinien być określony przez Współprzewodniczących w terminie nie dłuższym niż sześć miesięcy od dnia ostatniego powiadomienia o wyznaczeniu Współprzewodniczących Komisji.
5. Posiedzenia Komisji będą odbywać się w miarę konieczności jednak nie rzadziej niż raz do roku, po uzgodnieniu przez Współprzewodniczących na przemian w obydwu państwach.
6. Komisja, jeśli będzie to konieczne, może tworzyć grupy robocze dla poszczególnych kierunków współpracy.
7. Koszty organizacji i przeprowadzenia posiedzenia Komisji ponosi Strona przyjmująca. Koszty związane z udziałem w posiedzeniu Komisji ponosi Strona delegująca.
8. Komisja określi tryb swojej pracy na pierwszym posiedzeniu Komisji.

Artykuł 5

1. Zasady finansowania współpracy i realizacji wspólnych projektów rozpatrywane będą przez Strony w każdym indywidualnym przypadku stosownie do ich możliwości budżetowych zgodnie z prawodawstwem ich państw.
2. Poza uzgodnionymi przez Strony przypadkami, każda ze Stron ponosi swoje koszty powstałe w związku z realizacją niniejszego Porozumienia.

Artykuł 6

1. Strony, zgodnie z prawodawstwem swoich państw, będą wspierać rozwój bezpośrednich kontaktów między właściwymi organami oraz instytucjami i przedsiębiorstwami obydwu państw, których działalność jest związana z ochroną środowiska.
2. Podmioty, o których mowa w ustępie 1, na podstawie niniejszego Porozumienia mogą zawierać umowy i kontrakty określające zasady współpracy, w tym warunki finansowania, trybu rozliczeń i odpowiedzialności za niedotrzymanie zobowiązań.
3. Strony nie odpowiadają za zobowiązania podmiotów, o których mowa w ustępie 1 w ramach umów i kontraktów, zawartych na podstawie niniejszego Porozumienia.

Artykuł 7

Rozbieżności wynikające z interpretacji i realizacji niniejszego Porozumienia, będą rozstrzygane w drodze konsultacji lub rokowań między Stronami.

Artykuł 8

Niniejsze Porozumienie nie narusza praw i obowiązków Stron, wynikających z wcześniej zawartych przez nie umów międzynarodowych, lub związanych z ich członkostwem w organizacjach międzynarodowych w dziedzinie ochrony środowiska i gospodarowania zasobami naturalnymi.

Artykuł 9

1. Niniejsze Porozumienie podlega przyjęciu zgodnie z prawem każdej ze Stron, co zostanie stwierdzone w drodze wymiany not. Porozumienie wejdzie w życie w dniu otrzymania noty późniejszej.

2. Niniejsze Porozumienie zawarte jest na okres pięciu lat i ulega automatycznie przedłużeniu na kolejne okresy pięcioletnie, jeżeli żadna ze Stron, nie wypowie go w drodze notyfikacji na sześć miesięcy przed upływem okresu jego ważności.

Porozumienie sporządzono w Białowieży, w dniu 12 września 2009 roku w dwóch oryginalnych egzemplarzach, każdy w językach polskim i rosyjskim, przy czym oba teksty są jednakowo autentyczne.

Za Rząd
Rzeczypospolitej Polskiej



Za Rząd
Republiki Białorusi



СОГЛАШЕНИЕ
МЕЖДУ ПРАВИТЕЛЬСТВОМ РЕСПУБЛИКИ ПОЛЬША
И
ПРАВИТЕЛЬСТВОМ РЕСПУБЛИКИ БЕЛАРУСЬ
О СОТРУДНИЧЕСТВЕ В ОБЛАСТИ ОХРАНЫ
ОКРУЖАЮЩЕЙ СРЕДЫ

Правительство Республики Польша и Правительство Республики Беларусь, именуемые в дальнейшем Сторонами, действуя в духе Договора между Республикой Польша и Республикой Беларусь о добрососедстве и дружелюбном сотрудничестве от 23 июня 1992 года,

стремясь к расширению сотрудничества в области охраны окружающей среды,

осознавая значение охраны и улучшения состояния окружающей среды для блага нынешних и будущих поколений,

руководствуясь законодательством своих государств и общепризнанными принципами международного права,

принимая во внимание опыт, накопленный в области охраны окружающей среды,

основываясь на положениях международных договоров в области охраны окружающей среды, участниками которых являются Стороны,

признавая, что реализация принципов устойчивого развития, провозглашенных на Конференции Организации Объединённых Наций по окружающей среде и развитию в Рио-де-Жанейро в 1992 году и подтвержденных Йоханнесбургской декларацией Всемирного саммита по устойчивому развитию в 2002 году, требует ответственного природопользования,

согласились о нижеследующем:

Статья 1

Стороны будут сотрудничать в области охраны окружающей среды на основе равноправия и взаимной выгоды, руководствуясь целями и принципами устойчивого развития.

Статья 2

Сотрудничество будет осуществляться по следующим направлениям:

- 1) обмен опытом в области правового регулирования деятельности в области охраны окружающей среды;
- 2) использование экономических методов в природопользовании;
- 3) проведение экологического мониторинга;
- 4) методические подходы в организации и проведении оценки воздействия на окружающую среду;
- 5) государственный контроль в области охраны окружающей среды;
- 6) нормирование, стандартизация, метрология и сертификация в области охраны окружающей среды;
- 7) государственная экологическая экспертиза;
- 8) охрана атмосферного воздуха;
- 9) охрана поверхностных и подземных вод;
- 10) геологическое изучение, охрана недр и рациональное недропользование;
- 11) охрана и восстановление ландшафтов и экосистем;
- 12) охрана и развитие особо охраняемых природных территорий;
- 13) охрана почв;
- 14) охрана и защита лесов, ведение лесного хозяйства, а также рациональное использование лесных ресурсов;
- 15) охрана животного и растительного мира, в особенности редких и находящихся под угрозой исчезновения видов флоры и фауны;
- 16) рециклинг (повторное использование) и обезвреживание отходов;
- 17) охрана окружающей среды при трансграничном перемещении опасных химических и радиоактивных

- веществ, а также при перемещении опасных и радиоактивных отходов;
- 18) охрана и улучшение состояния окружающей среды в городах и других населенных пунктах;
 - 19) научные исследования в области охраны окружающей среды и рационального использования природных ресурсов;
 - 20) экологический аудит;
 - 21) экологическое образование и просвещение населения, поддержка развития экологического туризма (с целью ознакомления общества с природными богатствами и их охраной);
 - 22) другие направления сотрудничества, которые будут признаны Сторонами целесообразными.

Статья 3

1. Сотрудничество может осуществляться в следующих формах:
 - 1) разработка и осуществление совместных программ сотрудничества, проектов по направлениям, указанным в статье 2 настоящего Соглашения;
 - 2) проведение консультаций, конференций, симпозиумов, семинаров;
 - 3) выполнение согласованных мероприятий, направленных на уменьшение негативного воздействия глобальных изменений природной среды и климата на человека;
 - 4) публикация совместных статей, монографий, результатов исследований, обмен государственными докладами и другой официальной информацией о состоянии окружающей среды;
 - 5) обмен учеными и специалистами в различных направлениях природоохранной деятельности в ознакомительных, научных и учебных целях;
 - 6) обмен нормативными правовыми актами, информацией о других правовых актах, методической и научно-технической литературой, другой информацией в области природопользования и охраны окружающей среды;
 - 7) участие белорусских и польских специалистов в международных мероприятиях в области охраны окружающей среды, проводимых в Республике Польша и в Республике Беларусь;
 - 8) проведение совместных научных и практических исследований в области охраны окружающей среды;

создание совместных групп экспертов или специалистов.

2. Сотрудничество также может осуществляться в иных формах, согласованных Сторонами.

Статья 4

1. Стороны для достижения целей настоящего Соглашения создают Польско-Белорусскую комиссию по сотрудничеству в области охраны окружающей среды, именуемую далее Комиссия.

2. Комиссия работает под руководством двух сопредседателей, назначенных Сторонами и имеющих одинаковые права.

3. Компетентные органы государств Сторон в течение двух месяцев со дня вступления в силу настоящего соглашения уведомляют друг друга по дипломатическим каналам о назначении сопредседателей Комиссии.

4. Исходя из принципа равного представительства Сторон в Комиссии, Сопредседатели согласовывают вопрос о количественном составе белорусской и польской частей и определяют их персональный состав. Первоначально состав Комиссии будет определён Сопредседателями не позднее, чем в 6-месячный срок после последнего уведомления о назначении Сопредседателей.

5. Комиссия будет проводить свои заседания по мере необходимости, но не реже одного раза в год, по взаимному согласованию Сопредседателей поочередно в обоих государствах.

6. Комиссия, если это будет необходимо, может создавать рабочие группы по отдельным направлениям сотрудничества.

7. Расходы по организации и проведению заседания Комиссии несёт принимающая сторона. Расходы, связанные с участием в заседании Комиссии, несёт направляющая Сторона.

8. Порядок работы Комиссии будет определён на её первом заседании.

Статья 5

1. Финансовые условия сотрудничества и реализации совместных проектов будут рассматриваться Сторонами в каждом отдельном случае в рамках бюджетных возможностей каждой из Сторон в соответствии с законодательством государств Сторон.

2. Кроме согласованных Сторонами случаев, каждая из Сторон самостоятельно несет собственные расходы, возникшие в ходе реализации настоящего Соглашения.

Статья 6

1. Стороны, в соответствии с законодательством своих государств, будут способствовать развитию непосредственных контактов между компетентными органами обоих государств, а также организациями, деятельность которых связана с охраной окружающей среды.

2. Указанные в пункте 1 настоящей статьи компетентные органы обоих государств, а также организации, на основе настоящего соглашения могут заключать договоры и контракты, определяющие условия сотрудничества, финансирование, порядок производства расчетов и ответственность за невыполнение обязательств.

3. Стороны не несут ответственности по обязательствам субъектов, указанных в пункте 1 настоящей статьи, в рамках договоров и контрактов, заключенных на основе настоящего Соглашения.

Статья 7

Разногласия, относительно толкования и реализации настоящего Соглашения, разрешаются путем консультаций или переговоров между Сторонами.

Статья 8

Настоящее Соглашение не затрагивает прав и обязательств Сторон, вытекающих из ранее заключённых ими международных договоров или связанных с их членством в международных организациях в области охраны окружающей среды и природопользования.

Статья 9

1. Настоящее Соглашение вступает в силу с даты получения последней ноты о выполнении Сторонами внутригосударственных процедур, необходимых для вступления его в силу.
2. Настоящее Соглашение заключается сроком на пять лет и будет автоматически продлеваться на последующие пятилетние периоды, если ни одна из Сторон за шесть месяцев до истечения срока его действия, не направит по дипломатическим каналам ноты другой Стороне о намерении прекратить его действия.

Совершено в г. Бяловежа, «12» сентября 2009 г. в двух оригинальных экземплярах, каждый на польском и русском языках, причем оба текста аутентичны.

За Правительство
Республики Польша



За Правительство
Республики Беларусь



Agreement
on cooperation between Białowieża National Park (Białowieża, Poland) and State nature protective enterprise National Park "Belovezhskaya Pushcha" (Kameniuiki, Belarus)

10 August 2010

We, signed below, in person of General Director of State nature protective enterprise "National park "Belovezhskaya Pushcha" Bambiza Nikolaj Nikolaevich and director of Białowieża National Park in person of Józef Popiel draw present agreement on cooperation between both parks as the continuation of document signed on November 15, 2006.

Both parties confirm, that they regard the Białowieża Forest as one forest complex, which due to historical events was divided into two parts: Belorussian and Polish. Priority goal of cooperation is the conservation of animal and plant diversity in the Białowieża Forest and as well as education and recreation.

Both parks state that they will:

1. Give all the necessary help on investigation of natural complexes of the Białowieża Forest disregarding the locality of the studied natural object.

2. Provide accommodation for employees of the national parks during their stay on the neighboring side on the cost of recipient side for 20 person per day in a given year.

3. Discuss the problems connected with functioning of ecosystems of the Białowieża Forest during meetings of national parks' Scientific Councils as well as during joint meetings, performed successively once a year on Belorussian or Polish sides. Expenses will be taken by both parks alternately.

4. Give mutual support to scientific investigations, tourist activities, ecological education, exchange of experience, organization of events concerning nature protection in the Białowieża Forest and propagation of its values.

5. Carry out exchange of publications related to research in the Białowieża Forest as well as give mutual support to publish most interesting materials in Belarus and Poland as well as to prepare joint publications.

6. Organize joint scientific and practical conferences, educational workshops and work on training of the employees of both national parks.

7. This agreement is long standing, but it could be supplemented by new points according to joint agreement of both sides.

General Director
SNPE NP "Belovezhskaya Pushcha"

Director
Białowieża National Park

UMOWA

o współpracy pomiędzy Białowieskim Parkiem Narodowym (os. Białowieża, Polska) i Państwową Instytucją Ochrony Przyrody "Park Narodowy „Białowieżska Puszcza” (wieś Kamieniuki, Białoruś)

10 sierpień 2010 roku

My, niżej podpisani w osobach Dyrektora Generalnego Państwowej Instytucji Ochrony Przyrody „Park Narodowy „Białowieżska Puszcza” Nikołaja Nikołajewicza Bambizy, z jednej strony i Dyrektora Białowieskiego Parku Narodowego w osobie Zdzisława Szkirucia, sporządziliśmy niniejsze porozumienie o współpracy pomiędzy obydwooma parkami jako kontynuację zawartej uprzednio umowy z 15 listopada 2006 roku.

Obydwe strony stwierdzają, że uważają, iż Puszcza Białowieska jest jednym kompleksem leśnym, który w wyniku historycznych zdarzeń został podzielony na dwie części: białoruską i polską. Zadaniem priorytetowym współpracy jest zachowanie różnorodności biologicznej świata zwierząt i roślin całego kompleksu leśnego puszczy i wykorzystanie jej terytorium do celów edukacyjnych i rekreacyjnych.

Obydwa Parki zobowiązują się do:

1. Okazywania wszechstronnej pomocy wzajemnej w poznaniu kompleksów przyrodniczych Puszczy Białowieskiej niezależnie od położenia określonego obiektu przyrodniczego.
2. Zapewnienia pobytu pracowników parków narodowych w czasie ich pobytu w sąsiedniej części na koszt strony przyjmującej w ilości 20 osobodni w roku.
3. Rozpatrywania zagadnienia funkcjonowania ekosystemów Puszczy Białowieskiej na posiedzeniach Rad Naukowych Parków, w tym również na wspólnych posiedzeniach, odbywanych kolejno raz w roku w białoruskiej i polskiej części puszczy. Koszty posiedzeń pokrywają obydwa parki (na przemian).
4. Okazywania obustronnej pomocy w sferze badań naukowych, działalności turystycznej, edukacji ekologicznej, wymiany doświadczeń i organizacji przedsięwzięć związanych z zachowaniem przyrody Puszczy Białowieskiej i propagowania jej wartości.
5. Prowadzenia wymiany wydawnictw dotyczących wyników badań w Puszczy jak również okazywania wzajemnej pomocy w publikowaniu najbardziej interesujących materiałów w prasie białoruskiej i polskiej oraz przygotowywania wspólnych wydawnictw.
6. Organizowania wspólnych naukowo-praktycznych konferencji, edukacyjno-metodycznych warsztatów oraz zajęć doszkalających personel Parków.
7. Niniejsze porozumienie jest długoterminowe, lecz może być uzupełniane o nowe punkty, stosownie do wzajemnego porozumienia obydwu stron.

Dyrektor Generalny
PPOP Park Narodowy
„Białowieżska Puszcza”
(+ N.N. Bam



Dyrektor
Białowieskiego Parku Narodowego
Z Szkiruc



Szkiruc