

## Additional information

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### General ecological features

There are 12 species of plants growing in the wetland which are of European conservation importance. High international conservation status is noted for a number of animal species included in the European Red List of the International Union for Conservation of Nature (IUCN): 3 species of fish, 3 species of amphibians, 1 species of reptiles, 14 species of birds and 9 species of mammals, and from them 5 species of birds introduced to the global IUCN Red List (spotted eagle, white-tailed eagle, corncrake, great snipe, aquatic warbler).

Wetland ecosystem functions:

- keeping, updating and self-purification of water for ecosystems and society;
- the natural carbon storage;
- the natural regeneration of oxygen;
- climate regulation through transpiration;
- control of runoff;
- support of specific to the region ground water level;
- abrasion and erosion control;
- the natural deposition of many pollutants (primarily sulfur and products of acid rain);
- maintenance of biological diversity;
- role of habitats as a refuge for many as rare and economically important species of plants and animals;
- protection of soil and water.

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### Physical features of the site

**Geomorphology.** The wetland is located within the valley of river Pripyat, consisting of a floodplain with terraces. Only in the extreme south covers a small area of the north-western outskirts of Lelchitsy glacial water plains.

According to the geomorphological zoning of Belarus, most of the area is located in the Luninets alluvial plain, reaching the extreme south of the elevated areas of Lelchitsy glacial water plains. In the north, there is the river Pripyat with a wide floodplain.

**Origin.** The relief of the present territory as well as the modern hydrographic network were formed in the Anthropogenic period during which there were fivefold glaciations in Belarus.

**Hydrology and hydrography.** Water bodies within the territory form a complex drainage network (especially within the floodplain), represented by:

*Rivers* - Pripyat, Stviga, Ubort, Old Ubort, Svinovod, Utvoha, Rov, Krushinnaya, Korostinka etc.;

*Oxbow (floodplain) lakes periodically drying up ponds* - (within the floodplain of the river Pripyat): Plischin, Skripnitsa, Virky, Rechische, Krivskye, Gluhoe, Yama, Muto, Velizhye, Zaboky, Rov, Dolgoe, Podluzhnitsa, Pokolye, Bolshoe Rechische, Pleso, Ploskoye, Luke, Gritsevoe, Borodskoe etc.;

*Residual lakes* - within large areas of non-forest raised bog (Pupovskoe), fens (Myslichy, Siverskoe) or within a second-level terrace above the floodplain of the river Pripyat: lakes Karasin, Lubien, Bobrovo;

*Reclamation ditches and areas* - Glavnaya, Bychok, Krushinnaya, Severskaya, Zalesskaya Strelka, Yazovitskaya, Rybnikova etc.

The territory of the wetland is located between the rivers Stviga (in the west), Ubort (east) and Pripyat (in the north) and it is characterized by a developed network of adventitious bodies of water (backwater, oxbow and floodplain lakes). Rivers and drainage systems, as well as lakes, mostly of oxbow type, represent the hydrographic network of the wetland.

The leading role in the river network is performed by river Pripyat. This medium size river of the Black Sea basin crosses the wetland in the northern part from the west to the east delineating its north-eastern border. The length of the river within the wetland is 54.4 km. The width of riverbed is of 100-170 m. In 0.1-3 km from the north-western boundary of the site (on the border of its buffer zone) throughout 48.5 km, flows its right tributary river Stviga of 20-60 m wide. In the east throughout 11.5 km, the river Ubort, with a width of 30-40 m, limits the territory.

The wetland is crossed from north to south by the small rivers Svinovod (22.5 km), Belyanka (6.7 km), Mutvitsa (5.1 km), Snyadinka (4.5 km) and the streams Krushinnyj (3.5 km), Luchinets (1.7 km). Most of them are channelled in different extent. The total length of the river network right tributaries of Pripyat is 158.4 km. In the left bank of the land along the north-western border flow the channelized rivers Naut (6.3 km) and Skripitsa (4.5 km). Along the eastern boundary there is the Belevsky channel. Within the forest, Utvoha River (8.1 km) is preserved. Drainage reclamation of wetlands in the upper (outside the wetland) has decreased allowing the seasonal flowing of the watercourse.

In addition, as a result of the works carried out between 1871-1898 by a Western expedition, there is a system of reclamation canals consisting of more than 100 channels and ditches within the wetland with a total length of 317 km which have drained extensive wetland territories of the Polesie lowland in direction south-north- east.

On the territory of the wetland there are 526 lakes covering a total area of 504 hectares. Small in size (up to 1.5 m) and shallow (5 m) floodplain eutrophic oxbow lakes of Pripyat River dominate (70%). They are periodically flooded during abundant water seasons. There are also several lakes of residual type.

River	pH	mg per liter						
		PO4 2-	NO2 -	NH4 +	NO3 -	Mn 2+	Fe 2+	Cu2+
Pripyat	7.40	0.1	0.01	0.6	0.2	0.1	1.76	0.002

**Soils.** Within the territory of the wetland 154 different soils have been identified and have been combined in 12 soil types. The main groups of soil types are: sod-podzolic (11.2%, pH 5.5), sod (0.1%, pH 7.5), podzolic (0.02%), peat-bog (56.6% pH from 3.1 to 6.5), floodplain mineral (32.1% pH from 5.5 to 7.5) soils.

Hydromorphic and semi-hydromorphic soils occupy 91.7% of the territory, automorphic - 8.3%. Mineral soil (39.2%) on mechanical structure divided into loam (11.5%), sandy loam (10.4%) and sand (17.3%) soils. More often they are binomial. Marshes and transitional mires (24.6%), raised bogs (20.8%), fens (1.6%) and floodplain (9.6%) types. Peaty and peaty-gley soils occupy 4.2% of the territory.

In the north part of the wetland, modern sandy alluvium soil is characteristic within the river channel area of the floodplain. The central part of the wetland is characterized by the development of soil processes on

organogenic (peat) soil. In the south-west and south of the wetland, soil formation takes place on the ice and glacial lake sands with ancient alluvial loam.

Wetland soils clearly confined to the geomorphological structures and topography. On the water-glacial plain, automorphic sod-podzolic sandy soils predominate, with monomials soil-forming rock and deep groundwater level. In depressions and along small rivers fluvial floodplains, sod gleyey, gley on sand and sod-podzolic gleyey soils on loam are common. On the second terrace above the floodplain, peat and peat-bog soils raised bogs and transitional mires dominate. On the islands there are mineral soils of different texture. On the first terrace above the floodplain, alluvial binomial (sandy loam-sand, loam-sand), humus-gley, peat and peat-bog, sod soils have developed.

In the floodplain of the river channel, undeveloped floodplain soils on sandy alluvium are distributed, on outliers of the first terrace above the floodplain there are sod-podzolic soils. In the central floodplain on crests, floodplain sod soils on loamy or sandy alluvium develop, at high plateau with deep groundwater humus-gley and sod gley soils can be found. In the inter-crests spaces and terrace part of the floodplain, in shallow groundwater, flooded peat -bog, peat- and peat-gley soils have formed.

Thus, the area of the wetland is located within the South (Polesie) provinces in accordance with land-geographical zoning of Belarus. The northwestern part of the wetland is confined to Turow-David-Gorodok district of sod-calcareous soils of South-West region.

**Climate.** The territory of the wetland refers to Zhitkovichi-Mozyr agroclimatic area of South warm instability humid agroclimatic area.

The climate is temperate continental. Prevailing wind is west and south-west. The average January temperature is -5.5 to -6,5 °C, in July from 18.5 to 19,0 °C, the absolute minimum is -36 °C, the absolute maximum is +37 °C. The frost-free period is 153-159 days, the length of growing period 197-199 days. The period of active growing season (with a temperature above 10 °C) is 155-157 days. Annual average 580-600 mm of atmospheric precipitation falls, including the growing season is 67-71% of the annual amount.

Overall, there is a low moisture supply, the increased supply of heat and the deficit of humidity characterizes the area of location of the wetland. At the same time, the southwestern part of the wetland has the minimum number of wet and the largest number of dry days in the year, and the minimum relative humidity in Belarus.

In recent decades, temperature is increasing during winter and there is a decrease of wind speed and a slight increase in rainfall during the first half of the summer and in December. The increase of extreme weather events in certain seasons of the year are caused by the influence of global and regional anthropogenic factors.

Average temperature of the warmest month is +18.7°C; the absolute maximum: +37.0°C. Average temperature of the coldest month is -6.0°C; the absolute minimum: -36.0°C. Annual precipitation is 590 mm.

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### **Physical features of the catchment area:**

*Pripyat River* - the largest in size and water content the inflow of the Dnieper River, one of the largest rivers in Belarus, originates in Ukraine (Volyn Lakeland), crosses the east-west direction the whole country along 510 km and flows into the Dnieper. The river has a great natural, economic, cultural and historical significance for the Republic and the indigenous population of Polesie. It originates in the far west of Polesie, 1 km south- east of the village Golyadin of Lyuboml district, Volyn region, Ukraine. Pripyat river

flows into the Dnieper (Kiev reservoir) from the right bank at the 963-km away from the river mouth, about 2 km below the village Zgriazie. The river flows through Ukraine and Belarus. The river length is 761 km and catchment area is 121 000 km<sup>2</sup>, including 52,700 km<sup>2</sup> within Belarus (44%). General fall in the river is 69.5 m, the average slope of the water surface is 0.09‰, average elevation is 0.08‰. Tortuosity factor of the river is 1.25. The main tributaries are: in the right - Styr (length 94 km), Gorin (length 659 km) and Ubort (length 292 km), in the left - Yaselda (length 242 km), Sluch (length 197 km), Ptich (length 421 km).

Mixed forests, swamps and wetlands occupy half of the catchment area. Forests are mainly distributed along the left bank, between the lower reaches of the rivers Yaselda and Ptich, on the right bank direction southwest of Mozyr. Pine and oak are the dominant species. Mixed and swamp deciduous formations stand out from forests. The floodplains are often covered with oak and oak-hornbeam forests. Logging and burning are usually occupied by birch. The forested watershed is about the 20%.

Large areas of fen and grassy marshes lie on the left bank between Oginski channel and river Ptich (Vygonovskoe, Kopatsevichskoe, Grichino, Pinsk, Marino-Zagale). Ubort River is the eastern border of distribution of large marshes on the right. Marshes are mostly transition mires and raised bogs, often wooded or shrub (Morochno, Bolshie Gally, Turovskie). The most waterlogged are the following catchment rivers: Turia, Styr, Yaselda, Pina, Stviga, Sluch, Lan and Ubort. General waterlogged catchment is about 30%. Arable land covers about 25%. Polesie is an area of intensive drainage and land development. Area of reclaimed land is about million hectares. There are few lakes (<1%), the majority are small (surface area <1 km<sup>2</sup>) and overgrown, often flooded and with shallow waters. The largest of them are: Cervone, Vygonovskoe (watershed), Chernoe and Pogost, located on the left bank.

*Stviga river* - tributary of the Prip'yat River, the total length of the river is 178 km. It springs from the swamp Dobryl, on the southern outskirts of Prip'yat Polesie and flows into the Prip'yat River near the settlement Pogost. The catchment has a pear shape, with significant development of the left bank. It is located within the low-lying plains Polissya, adjacent to the south of the Volyn-Podolsk Upland. The north is on an elevated Turov plateau. The surface is flat, sometimes sandy hills and ridges occur with height of 10-15 m, they generally elongated in the north-south direction. Soils are formed by peat, and less often sand and loam. The vegetation is represented by mixed forests dominated by deciduous trees, often waterlogged. Fens are distributed throughout the catchment and lakes are almost absent.

The river valley to the settlement Blazhovo is trapezoidal, slightly sinuous, with a width of 0.5-1.0 km, below a vague expression merges with the surrounding area. The slopes are low, in some places (Berezhny, Storozhevtsy) are steep, precipitous, 3-4 m tall, covered with mixed forest, only on the left bank (from Lutky to the mouth) meadow, less often plowed. Soils are sandy, sandy loam and peat.

Floodplain is two-sided, straight, often swampy, almost completely covered by forest and scrub and sometimes grassland. The surface is straight, in the middle and lower reaches dissected by creases, channels, bays and lakes.

Soils are sandy and peaty, less often sandy. Width above Prevailing settlement Blazhovo is 80-200 m, below Blazhovo is 0.6-1.2 km. Flooded water layer is 0.5-1.0 m in depressions up to 3 m, for a period of 5 to 30 days in some places flood width is 10 km.

The river-bed is free to meander, strongly sinuous ( $K = 1.14$ ), on the upper 5 km is channelized. The river-bed is branched, with lots of little low, flooded, sandy and sandy-peat islands overgrown with bushes.

*Ubort river*. The total length is 292 km, flows into the Prip'yat Makarichi below the village. Catchment is narrow stretches from south-west to north. Surface is flat, at the top there are sand hills and ridges. Soils are mostly sandy, less often sandy loam, loamy, peat in swampy depressions. There are about

half of the catchment occupied marshes, wetlands and boggy mixed forests, which are mainly located in the northern part. A considerable part of the catchment is drained and cultivated. Fens largely drained; non-reclaimed areas covered with marsh vegetation and shrubs.

The valley is not clear defined. Slopes are gentle and very gentle, slightly crossed, covered with woods and shrubs. They composed by sandy, sandy loam and peat soils. Only between settlements Lopatichi and Varvarovka and near the settlement Litovki, valley close to V-shaped type with a width of 0.5-0.7 km and steep slopes, at the foot of which there are outputs of groundwater.

The floodplain is bilateral, alternating along the banks, the width is of 100-200 m in the upper reaches up to 1-5 km downstream, near settlement Lopatichi missing. The surface is hummocky, sometimes bumpy, sometimes crossed by drainage ditches and oxbows, swamped, almost everywhere forested and scrub, partly overgrown with grass. Soils are sandy loam, sand and peat. The river-bed is freely meandering, tortuous ( $K = 1.07$ ), only in lower reaches highly sinuous ( $K = 1.11$ ). The river-bed is slightly branched, with occasional low, sandy, and flooded islands. The banks are steep and precipitous, less often flat, swampy, forested and shrub, composed of sand, sandy loam, often with layers of clay, sometimes peaty.

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## **Ecosystem services**

### **Current scientific research and facilities**

Systematic research has been conducted in the wetland since 1969, since the announcement Pripyat landscape hydrological reserve (within which in 1996 was created the National Park "Pripyatsky").

Since the late 1990s, the natural systems of the wetland are a traditionally testing ground for research.

In the structure of the National Park "Pripyatsky" a research department operates, which deals with the problems associated with the study of resources of landscape and biological diversity, and monitoring. For 20 years the work on re-acclimatization of bison is underway. A nature chronicle is carried out and the system of integrated ecosystem monitoring is established and functioning.

Activities for the identification of the habitat of rare protected species of plants and animals are carried out. Geo-information system of the National Park «Pripyatsky» has been created and partially completed filling its cartographic and attributes information. A monitoring network of flora and fauna has been established and operates within an integrated ecosystem monitoring of protected areas.

Various specialists of V.F.Kuprevich Institute of Experimental Botany of NAS of Belarus, Institute of Forest, Scientific and Practical Center for Biological Resources of NAS of Belarus in 2000-2012 studied in detail the flora and fauna, prepared systematic lists of major groups of vertebrates, vascular plants, mosses, fungi, and identified rare and in need of protection species and plant communities.

A Wildlife Monitoring Network was organized within the national park as part of the State program of environmental monitoring in 2010-2012. The first cycle of monitoring observations were carried out in an integrated ecosystem monitoring of protected areas.

Periodically the following work is carried out: forest management, valuation of hunting lands, departmental surveys of hunting and monitoring of rare species. The materials of this work represent same scientific interest.

## Social and cultural values

Historical and cultural significance.

A significant number of objects are protected by the State as a historical and cultural heritage, including historical monuments, archeology and architecture are located in the territory of the wetland and in its immediate surroundings. Some of them can now be seen as of exposition objects for tourists, but most of them need restoration, reconstruction, conservation, etc.

The most significant archaeological heritage is represented by ancient sites, hill forts, ancient settlements, burial mounds and an ancient castle. Hill forts and the sites of ancient castles are of greatest interest to tourism in the archaeological monuments. Hill forts are remains of the ancient fortified settlements. They are identified on the terrain ramparts, moats, the remains of the walls, have a cultural layer and can be included as part of the demonstration sites of tourist and excursion routes. Despite the fact that since the middle of XX century, the traditional way of life began actively to break down, there are still preserved traditional architectural forms in the villages and small towns, as well as many traditions, customs, rituals and legends that have been lost on the rest of Belarus and Ukraine.

*The socio-economic potential.*

Population and system of settling.

The wetland is geographically located within the three administrative districts of the Gomel region: Zhitkovichi, Petrikov and Lelchitsy. In Zhitkovichi district, 4 settlements of Pererov Village Council are within the borders of wetland: Pererov, Pererovsky Mlynok, Hlupin, Hlupinskaya Buda. The total population of these settlements is 350. In Petrikov district 5 settlements of Golubitsa Village Council: Sudibor, Snyadin, Beleny, Torgoshin, Mordvin, where 150 people lives. In Lelchitsy district is Simonichskaya Rudnya of Simonichi Village Council with population of 50 people.

*Mineral resources.*

On the territory of wetland part of Zhitkovichi and Brinev brown coal deposits are located. Directly on the wetland part of Naydin deposits of Zhitkovichi brown coal deposit is located, its size is 15x2.5 km.

Formation industrial thickness is 0.4-7.2 m, average depth of its bedding is 21 m, the stock of coal seam is 19.6 million tons.

Brinev brown coal deposit size is 7.2 x1.0 km, formation thickness is 0.3-19.9 m, depth is 40-83 m, average formation industrial thickness is 5.8 m, the balance reserves is 38,800,000 tons.

Brinev deposit of gypsum area is 20 km<sup>2</sup>, depth is 142-496 m, formation thickness is 67-253 m, the proven reserves of gypsum are 278,000,000 tons.

On the territory of the wetland within the second Pripyat floodplain there are terraces in array of transition mires and raised bogs two peat deposits prospected: Mezhch (peat-land "Rum" and "Gorka" is actually ready for use) and Kandel-Yalovets-Olkhovo. Currently these fields are located in the reserved zone and protected from development by law.

In the area of the wetland bromine, iron, iodine-bromine, hydrogen sulfide mineral waters and brines are common. Mineralized chloride-bicarbonate, hydro-chloride waters are located to a depth of 250-300m, sulfate-chloride (chloride-sulfate) water is at a depth of 300m. In some places the yield of hydrogen sulfide and mineral water in the form of springs occur. The use of such mineral resources will not cause adverse effects, as their extraction is suitable near populated areas outside of the wetland, and the low water is not going to happen.

*Engineering and transport infrastructure.*

The road network within the wetland is not very dense. The road of national importance Turow - Lelchitsy (P128) runs across covering 46 km within the wetland. Along the northern boundary of the wetland there is the road Turow - Petrikov which does not cross the territory, but in some places is close to it (in settlements Lyaskovich, Doroshevichi, Golubitsa, Makarichi).

Within the wetland there is not a dense network of local unpaved roads (dirt, country, field, forest roads), connecting the settlements located within the territory. These settlements and the roads are primarily based in the northern part of the wetland (Ozerany, Bechi, Hvoensk, Snyadin, Mordvin, etc.). At the same time, some settlements are separated from the main transport routes by river Pripyat (Pererov, Hlupin, Sudibor, Hlupinskaya Buda, Pererovsky Mlynok) and the shortest communication to them is via the ferry at the settlement Doroshevichi. Railways within the wetland are absent.

Through the territory of the wetland in one technical corridor there are three main oil-pipelines "Mozyr - Brest" managed by the Republican Unitary Enterprise "Gomeltransneft Druzhba". The length of the technical corridor is 20.5 km. The area of land that is under the pipelines and systems for their maintenance and operation is 93 hectares.

*Agricultural production.*

The land structure of the wetland includes land users of Agricultural Plant "Lyaskovich", Private Agricultural Unitary Enterprise "Polesye-Agroinvest", Open Joint Stock Company "Turovshchina."

AP "Lyaskovich" is a meat and dairy farm and specializes in growing grains and legumes to provide livestock industry by complete food. There is a milk processing shop on the territory of AP "Lyaskovich."

On agricultural land located within the wetland there are fields of cereals (maize dominates - 72.8% of the gross harvest of grain and rapeseed - 19.4%), sugar beets, potatoes and vegetables. Part of the land is occupied by annual and perennial grasses.

*Forestry.*

The wetland area is 189,850 hectares. On the territory of the wetland there are six forestry companies (Richev, Ozerany, Pererov, Mlynok, Simonichi, Snyadin), Forest-Hunting Experimental Farm "Lyaskovich" and Naydyan forestry sector are also located on the territory.

Total timber stock in the forests is about 9.0 million m<sup>3</sup>, including 4.3 million m<sup>3</sup> of softwood or 47.6% and hardwood - 1.7 million m<sup>3</sup> or 19.3%. Average stock of wood in forests of the wetland is 144 m<sup>3</sup> per hectare of forest area. Average stock of pine reaches 148 m<sup>3</sup> per hectare, spruce - 302, oak - 185, linden - 150, maple - 152, hornbeam - 189, ash - 237; birch - 137, aspen - 235, black alder - 189. On the territory of the wetland high-age (130 years) the floodplain oak forests in Pererov forestry are the largest (more than 500 m<sup>3</sup> per hectare).

Each year, stocks of wood forests increased by 161.3 thousand m<sup>3</sup>. Current stock change per year is 2.6 m<sup>3</sup> per 1 hectare of forest area.

Felling of trees within the wetland is only allowed by agreement with the Forest Service of the State Environmental Institution "National park Pripyatsky," and only as health measures. In addition, forest workers carry out other forest management activities focused on protection and conservation, organization of fire prevention and safety, control of recreation activities and entry to the park as well as regular raids to protect against poaching.

*Hunting.*

Hunting is conducted by the Experimental Forest-Hunting Farm "Lyaskovichi." On the territory of the wetland (excluding protected zone) recreational fishing and hunting is allowed. In the waters of the wetland, commercial fishing by river seines with mesh standard lengths is carried out. Catches are held as in the rivers Pripyat, Stviga and in the subordinate system of watercourses and artificial reservoirs in the basin of the Pripyat River. There are 4 main targeted species of fish: silver bream, bream, silver crucian and pike (73.3% jointly).

### **Current recreation and tourism**

The ecological potential of the wetland for the development of tourism and recreation is very high. Within the wetland there is an increasing development of different types of tourism and recreational activities (hunting, cognitive, environmental, etc.).

On the territory of the wetland tourist services are provided, including: comfortable rooms in the hotel house Turov (for 10 people), the tourist complex "Lyaskovichi" (8 cottages "Doroshevichi", "Sosny" "Starushki", "Hlupinskaya Buda", etc. ), three-star hotel "Nad Pripyatiu" and a river cruise on the ships "Kirill Turovsky," "Lan" and "Los". Rental of motor and rowing boats as well as bicycles is also available.

Vouchers for recreational fishing are available. Transportation services are provided for travelers, as well as excursions and hunting escorts and tanning hides of trophies. The tourist complex has baths, billiards, bowling, gym, pool, restaurant, cafes and bars.

The main provision of tourism services is carried out through the sale of tours with specific routes. The National Park offers one, two and multi day tours, weekend tours, tours for groups (40 and 10 persons), and individual tours.

In the Experimental Forest-Hunting Farm "Lyaskovichi" a safari park was created in the natural lands where bison, elk, wild boar, roe deer, red deer, fallow deer inhabited, black stork, gray crane, spotted eagles and other birds can be found. Many semi-aquatic animals and water birds inhabit the Pripyat floodplain, and they can be found during migration.

In the short-term there are plans to provide services of photo safari, naturalistic observations or make a successful hunt of wild ungulates and birds with a camera or camcorder.

### **Current land (including water) use**

The main types of land use:

#### ***Forestry***

- logging,
- reforestation
- secondary forest use (gathering of berries, mushrooms, medicinal and technical raw materials)

#### ***Recreation***

- hunting
- fishing

#### ***Agricultural***

- perennial grasses
- tilled and crops
- grazing



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**Land tenure/ownership**

within the Ramsar site:

The land structure of the wetland includes lands of the State Environmental Institutions "National Park Pripyatsky" in constant use, as well as land of 4 other land users.

Zhitkovichi district

1. The State Environmental Institution "National Park Pripyatsky":
  - Naydyany forestry sector (3827 ha)
  - Richev Forestry (8842 ha)
  - Ozerany Forestry (6384 ha)
  - Mlynok Forestry (2102 ha)
  - Pererov Forestry (10,857 ha)
2. Agricultural complex "Lyaskovichi"
3. Open Joint Stock Company "Turovshchina" Petrikov district
  1. The State Environmental Institution "National Park Pripyatsky":
    - Naydyany forestry sector (20 ha)
    - Pererov Forestry (2768 ha)
    - Sniadin Forestry (14900 ha)
  2. Agricultural complex "Lyaskovichi"
  3. Private Agricultural Unitary Enterprise "Polesye-Agroinvest"

Lelchitsy district

1. The State Environmental Institution "National Park Pripyatsky":
  - Richev Forestry (2575 ha)
  - Mlynok Forestry (11,231 ha)
  - Simonichi Forestry (14,674 ha)
  - Snyadin Forestry (261 ha)
5. State Forestry Institution "Lelchitsy Forestry" (Zamoshie Forestry)

in the surrounding area:

State land that rented by agricultural enterprises, forestry, farming.

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**Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects**

within the Ramsar site:

Currently within the wetland different threats can be observed: threats to the biodiversity, to the environment and the habitats, and to the landscape. The origin of the environmental threats can be both natural and anthropogenic (technogenic), their effects can be controlled or uncontrolled.

The first group is abnormal, occurring periodically (every 7-11 years): high and long flooding and seasonal freshets, tornadoes, and hurricanes, droughts, frequent forest fires due to lightning.

The second group of environmental threats (anthropogenic) is more common and diverse on effects. We will focus only on some of the most important for the wetland:

- Pollution and changes in the atmosphere, the transboundary transport of polluted air masses, acid rain - has a limited impact on the biocenosis of swamps and sand hills, the impact is not sufficiently studied;
- Pollution and eutrophication of surface waters - waters of the Prip'yat River and oxbow lakes near populated areas susceptible to contamination by sewage of industrial and agricultural enterprises, residential areas and transport;
- Changes in land use, commercial use and management of land affects the system of land use: on the one hand land ownerless is quickly overgrown by shrubs and young forest, on the other hand, natural or partially modified grasslands plowed into the fields, forests become sharply defined. Intensification in some of the most fertile and most visited by tourists sites leads to the development of land erosion, trampling and destruction of the land cover. Termination of a number of traditional activities, agriculture and livestock, reduces the diversity of the landscape through the disappearance of the floodplain meadows and reduce the area of open areas around settlements;
- Commercial use of mature and primary forests strongly alters the area and the composition and productivity of oak, birch, pine and aspen forests. Cutting, even selectively, and the fragmentation of the surviving remnants of natural old-growth forests, leads to the threat of extinction of plants and animals, that are relic of primary forests. Forests with complex spatial, species and age structure, which comply with local growing conditions, are replaced by tree stands with a simplified structure, of course, with a smaller variety of flora and fauna;
- Partial alteration of floodplain, wetland and wooded meadows by grazing, mowing and drainage;
- Change in the natural hydrological regime of the territory of wetlands and floodplain meadows as a result of the construction of polders, drainage and hydromelioration, that leads to change and succession of species and extinction of native fauna and flora;
- Construction of infrastructures of communication, buildings, road networks and pipelines sometimes leads to a violation of the unique elements of the relief and the natural landscapes;
- Excessive increase in populations of game animals as a result of the prohibition on hunting and fishing leads to imbalance in natural communities of animals.
- Radioactive contamination in the form of increased background radiation is present in the wetland as a result of the transfer of radioactive elements after the accident at the Chernobyl nuclear power plant in 1986. Currently, in the east and south of the wetland there are lands contaminated with cesium-137. The level of cesium-137 in the area is defined in the range of 37-185 kBq/m<sup>2</sup> (1-5 Ku/km<sup>2</sup>). In this area there are two station points Zhytkavichy and Lelchitsy for the periodic monitoring of the level of exposure dose of gamma radiation and sampling of fallout radiation from the atmosphere

in the surrounding area:

The listed negative factors also occur in the surrounding areas.

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**Current communications, education and public awareness (CEPA) activities related to or benefiting the site**

The results of the research in the "National Park "Pripyatsky" have been published in various editorials of the country: in the proceedings of the Presidential Administration of the Republic of Belarus, the Forest Research Institute of NAS of Belarus, Belarusian Institute of Technology and in the scientific Journals "News of the Academy of Sciences", "Forestry and Hunting Economy", "Turovshchina". The proceedings and abstracts of conferences and seminars have also been published.

During this period, books were published: "Forest Landscape in Aeolian Sands of National Park "Pripyatsky"(2004), "Water Resources of the National Park "Pripyatsky", their impact on forest ecosystems" (monograph, 2007), "Vascular Plants of the National Park "Pripyatsky" (annotated list of flora, 2009), "Bryophytes of National Park "Pripyatsky" (evolutionary aspect, taxonomy, ecology, geography, life strategies)" (2010).

Environmental education in the wetland is carried out for secondary schools located in the villages Ozerany, Hvoensk, Pererov, Snyadin, Olmany.

Articles with environmental focus are published regularly in regional newspapers "Naviny Palesia", "Novaya Palesse" and "Petrykauskiya Naviny". Outreach materials have been issued and work with local residents and legal entities engaged in the activities within the biosphere reserve were held. Themes related to environmental education are communicated through the local cultural and educational radio program "Svetach" regularly.

Information about the park and its natural values for the conservation of biological diversity has been submitted in the pages of the regional and national press, television, radio, the Internet (the official site - npp.by).