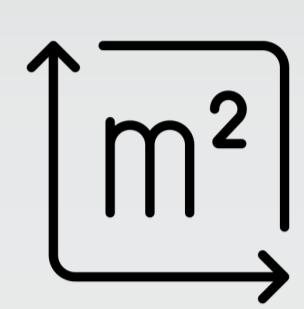


Chernobyl Radiation and Ecological Biosphere Reserve



Location:
Polesia, Ukraine



Area:
226,964.7 ha



National protection
status:
Biosphere Reserve



International
protection status:
Emerald Network
(UA0000046) -
Chernobylskyi Biosphere
Reserve (227,381.0 ha); IBA
(UA015) - Kyivs'ke reservoir
(partly).

General information

The reserve is an evacuation zone following the Chernobyl nuclear power plant accident (1986), with high levels of radioactive contamination. To the north it borders the Polesie Radioecological Reserve (Belarus), which is also an evacuation zone.

The area has a variety of landscapes and ecosystems typical for Polesia. It includes forests and peat bogs, the Pripyat River valley and many medium and small rivers. Abandoned settlements and former agricultural areas occupy a significant part of the reserve.

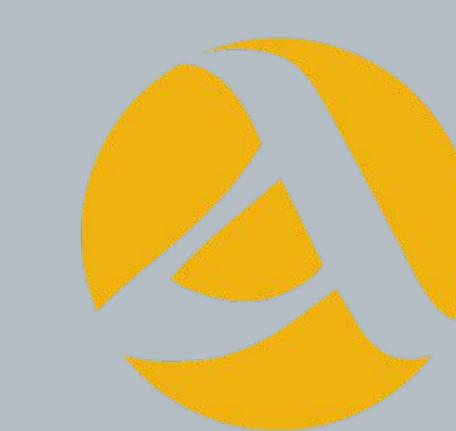
Large forest areas are located in the north-western part of the reserve, along the border with Belarus, as well as in the south and north-east of the reserve. The eastern part of the area is crossed by the Pripyat River valley (up to 7 km wide), which is almost completely preserved in its natural state, with numerous meanders and channels.

At the south-eastern edge of the biosphere reserve, the Pripyat River joins the Dnieper to form the Kyiv Water Reservoir. The central part includes abandoned, overgrown agricultural land interspersed with small forest massifs.

Biodiversity and natural values

The biosphere reserve is currently in the process of the natural ecosystem restoration after the almost complete cessation of anthropogenic impact. The most valuable within the reserve are fragments of natural oak, pine, willow forests, as well as forest and floodplain marsh and water complexes of the rivers Pripyat, Braginka, Uzh, Hrezlya, Zhrev, Ilya, and Sakhan.

The site has diverse wetland, forest and meadow habitats, including 25 endangered habitats requiring specific protection under the Bern Convention (Resolution No 4 of the Standing Committee to the Bern Convention): Inland Sand Dunes (2330), Floating frogbit rafts (3150), Floating water-soldier rafts (3150), Floating bladderwort colonies (3150), Mesotrophic vegetation of slow-flowing rivers (3260), Transition mires and quaking bogs (7140), Beds of large sedges normally without free-standing water,



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Open non-Mediterranean dry acid and neutral grassland, including inland dune grassland (2330), Moist or wet eutrophic and mesotrophic grassland (6440), Moist or wet tall-herb and fern fringes and meadows (6430), Riverine scrub, Riverine willow woodland (91E0), Sphagnum birch woods (91D0), Acidophilous oak-dominated woodland (9190), Oak - ash - hornbeam woodland on eutrophic and mesotrophic soils (9170) etc.

Flora and fauna

The site is of great importance for a number of species of flora and fauna. Over 60 species are included into Resolution No 6 Standing Committee to the Bern Convention. Over 100 species of animals and plants are listed in the Red Book of Ukraine.

The flora of the biosphere reserve comprises 1290 vascular plant species (including synanthropic species). Among them are such rare ones as: the Lilyleaf Ladybells (*Adenophora liliifolia*), the Waterwheel (*Aldrovanda vesiculosa*), the Eastern pasqueflower (*Pulsatilla patens*), the Lapland willow (*Salix lapponum*), the Myrtle-Leaved Willow (*Salix myrtilloides*), the Siberian Iris (*Iris sibirica*), the Buxbaum'S Sedge (*Carex buxbaumii*).

Wildlife includes 370 vertebrate species: 48 species of fish, 18 – of amphibians and reptiles, 245 species of birds, and 59 species of mammals.

The site is an important habitat for the Tawny Pipit (*Anthus campestris*), the Short-eared Owl (*Asio flammeus*), the Bittern (*Botaurus stellaris*), the Black Tern (*Chlidonias niger*), the Whiskered tern (*Chlidonias hybridus*), the Ortolan Bunting (*Emberiza hortulana*), the Little Bittern (*Ixobrychus minutus*), the Little crake (*Porzana parva*), the Common tern (*Sterna hirundo*), the Barred Warbler (*Sylvia nisoria*), the Terek Sandpiper (*Xenus cinereus*), the European beaver (*Castor fiber*), the Wolf (*Canis lupus*), the Common Otter (*Lutra lutra*), the Desman (*Desmanos moschata*), the European mink (*Mustela lutreola*), the Brown Bear (*Ursus arctos*).



The absence of dykes and the excellent hydrological conditions make the site a valuable spawning ground for many rare fish species, such as the Ukrainian brook lamprey (*Eudontomyzon mariae*), the Asp (*Aspius aspius*), the Spined loach (*Cobitis taenia*), the White-finned gudgeon (*Gobio albipinnatus*), the Balon's Ruffe (*Gymnocephalus baloni*), the Ziege (*Pelecus cultratus*), the Lake minnow (*Phoxinus percnurus*), the European bitterling (*Rhodeus sericeus amarus*), the Golden Loach (*Sabanejewia aurata*) as well as of reptiles and amphibians: the European pond turtle (*Emys orbicularis*), the Crested newt (*Triturus cristatus*), the Fire-bellied toad (*Bombina bombina*).

The large area and absence of people are the important conditions for conservation of large European mammals, including the re-establishment of the European Bison (*Bison bonasus*), the Wolf (*Canis lupus*), the Eurasian lynx (*Lynx lynx*), and the Brown bear (*Ursus arctos*).

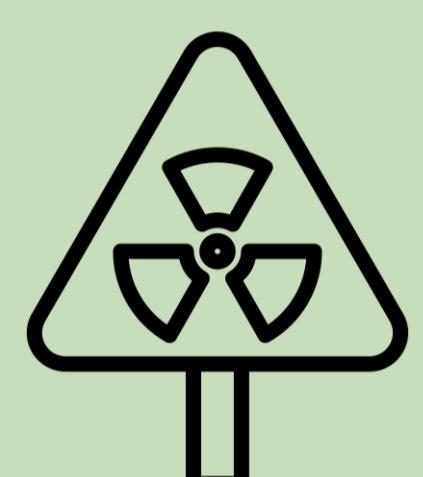
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The most important impacts and threats

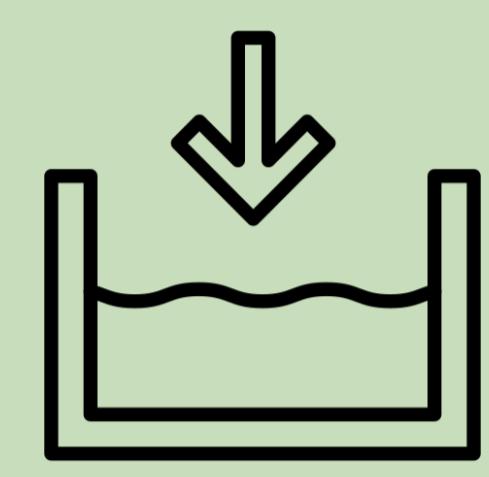
The forest habitats and species are threatened by clearcut logging, sanitation felling, deadwood withdrawal, forest plantation. The wetland ecosystems are degrading due to old drainage systems. The meadow ecosystems are overgrowing with shrubs due to abandoning of hay-making and grazing. All land habitats suffer from spring and autumn burnings and invasive species. The entire area is subject to a high level of radiation contamination.



Wildfires



Radioactive contamination



Old drainage systems

Conservation measures

Zoning has been established for the entire Biosphere Reserve. About 31.5% of its area is the strict protection zone, 19.8% - the zone of regulated protected regime. Restrictions on economic activity are set for the entire Reserve. Visiting the site without a special permission is prohibited. A management plan has been developed for the Biosphere Reserve. Detailed inventory of the conservation values, as well as handing them over under the land-users' protection are necessary.

