Białowieża/Biełavieskaja Pušča: history, current state and problems (POV)

Sviataslau Valasiuk, WNE UW

TRANPAREA Kick-Off Meeting,
15-17th September 2013, Białowieża,
BPN Headquarters
Białowieża/Biełavieskaj Pušča

Total area:
2173 km² (including Dzikaje Mire)
1529 km² in BY
643 km² in PL

Strictly protected area
BPN (PL) 10 517,27 ha
Reserves (PL) 12 206,33 ha
Strict reserve zone of the NP „Biełavieskaja Pušča” (BY)
57 071,00 ha
TOTAL: 79 774,6 ha
History of Land Tenure

• 1409: Big Royal Hunt with military purposes – the first record of the 'Białowieża forest' title in history
• 1538: The first recorded law protecting the forest;
• 1541: declared a hunting reserve to protect the bison;
• 1557: A forest charter was issued, appointing a special board to examine the rights of forest usage;
• End of the XVIII century – industrial logging began for the naval purposes at the most;
• Royal road Hajnówka – Pružany built
History of Land Tenure: Russian Empire (1795 – 1914)

- 1795 -- Considerable plots of land granted to Empire’s top nobility; the forest opened to public use;
- 1802 – decree of Alexander I on bisons’ protection
- 1811 – first artificial feeding of bisons in winter introduced after the great wood fire
- 1847 – first forestry management plan implemented (German type) – industrial logging of mast pines
- 1859 – the first Emperor’s hunt
- 1888 – forest in royal family’s posession, industrial logging suspended
- 1894 – royal autumn residence in Białowieża established
- 1894, 1897, 1900, 1903, 1912 – ‘brilliant’ hunts
History of Land Tenure: 1914 – 1944

- 1914 – 1918 heavy mechanised logging by Germans, 4 sawmills and 300km of narrow-gauge railways built, 4,5 mio m3 harvested
- 1917: the forest formally nationalised after the Russian February revolution
- 1918 – „Naturschutzpark” established (4640ha)
- 1919: The last free bison female killed
- 1921: National Forest Reserve established
- 1923 Bison’s restitution started
- 1931: Białowieża National Park designated (4,500 ha);
- 1927-1928 „Centura”’s logging 2 mio m3
- 1934-1935 – 1,2 mio m3 logged
- 1940: Soviet State Industrial Forestry and Game Reserve established. Plans to fell down 1 mio m3 per year.
- 1941 – 1944 – Reichsmarschal Göring’s personal game reserve
History of Land Tenure: Transboundary Period

1947 -- BNP re-established
1959 – Emperor’s palace in Białowieża destroyed
1976 -- designated MaB-UNESCO Biosphere Reserve
1992 -- UNESCO World Heritage Site designated
1997 -- awarded Diploma of Council of Europe
1996 – BPN surface more then doubled
2004 – Natura2000 Site designated

1944 -- State Reserve (Zapaviednik) „Biełavieskaja Pušča” established
1957 – railroad demounted
1957 – reorganised into ‘hunting reserve’
1976 -- designated MaB-UNESCO Biosphere Reserve
1980s – frontier system constructed
1991 – reorganised into National Park
1992 – designated UNESCO World Heritage Site
1993 – designated MaB-UNESCO Biosphere Reserve
1997 – awarded Diploma of Council of Europe
2002, 2004 – NP enlargements
2002 – 2007, 'struggle' with Spruce bark beetle
2008 – first Management Plan adopted
2012 – new zonation implemented, strict reserve zone almost doubled
Current Land Use

- Białowieski National Park (10 517,27 ha)
- Polish State Forests: Hajnówka (19 665,2 ha), Białowieża (12 588 ha) and Browsk (20 385 ha) forestries united into the Forest Promotional Complex
- Minor private land-owners (3 464,84)

- National Park „Biełavieskaja Pušča” (152 900 ha)
Location & Physical Features

60 km north-northwest of Brest (BY)
62 km south-east of Białystok (PL)
Latitude: 52° 25' to 52° 59'N
Longitude: 23° 28' to 24° 33'E
Altitude: 145m to 202m

- Flat to rolling lowland plain on the hydrological divide between the Baltic and Black Seas.
- Mosaic of peatlands, streams and river valleys.
- Glacial formations with deposits of deep sands overlying clays and loams, podsols and bog soils above Cretaceous bedrock.
- The organogenic peat and marshy peat formations in river valleys and local depressions often contain mire systems.
- Soils are predominantly acid.
Climate

- cool-temperate continental
- mean annual precipitation of 620mm
- mean annual temperature is +7°C
- average January -5°C
- average July +18°C
- snow cover average of 92 days
- vegetation 205 days per year
Hydrology

Drainage of the forest and adjacent area has significant impact on natural habitats.
Habitat structure

- Afforested areas absolutely dominate.
- Watercourses and large wetlands have been drivers of variety of ecological conditions and natural barriers to overexploitation.
- High habitat diversity and heterogeneity.
Vegetation & Flora (BY)

- Mean age of stands 97 years, 105 years in the old part
- 1024 species of vascular plants, (62 protected)
- about 200 algae
- over 3000 (12) fungi
- 270 (5) moss
- 292 (17) lichen
- 9 forest formations (of 10 in BY)

Lies in between the two geobotanical zones: predominantly coniferous Eurasian and predominantly deciduous, Western

Age of tree stands differs in the core (‘old’) and adjacent (‘new’) parts of the forest

Forest diversity is stable enough

Pine woods absolutely dominated throughout the XX century

Alder woods have been the most stable due to the most stable water regime

Spruce stands decline as a result of drainage, windfalls and European spruce bark beetle breakouts
Vegetation & Flora (PL)

- A bit lower mean age of stands as compared with BY part: around 73 years
- However, even higher mean age in the strict reserve: 130 years
- 786 species of vascular plants (including 76 protected)
- 1585 (31) fungi
- 352 (63) lichens
- 145 (31) mosses
Fauna and Animal Population (BY)

• Over 12000 species of invertebrates, 31 fishes, 11 amphibians, 7 reptiles, 253 (184) birds, 59 mammals
Fauna and Animal Population (PL)

- Over 10500 species of invertebrates, 23 fishes, 10 amphibians, 6 reptiles, 117 (108) birds, 59 mammals
Forest dependent species

- European bison
- Lynx
- Capercaillye
- Woodpeckers
- Owls
- Wolf
Cultural Heritage

- Multi-cultural environment
- “Natural” character of cultural heritage
- Historical isolation, ‘local climate’
Human Population and Its Occupation

- Anthropogenic landscapes: clearings, hunting grounds, riverside meadows, road systems and trails, forest settlements, narrow-gauge railways.
- Use of the forest for bee-keeping, charcoal-burning, animal rearing, game-keeping and hay-making.
- In BY about 2,500 people live within the Park, 1,500 in the buffer zone, over 30,000 in closely adjacent areas. Few financial benefits to the local population. Work and training opportunities in forestry, nature protection and other services.
- In PL there are no human settlements in the strict preservation area but some 3,000 people live in villages nearby: foresters, park servicemen, business owners.
- The nearest towns are Hajnówka (PL), Kamianiec and Pružany (BY).
- Tourism development
Most important features

- (One of) the largest semi-intact aged forest on European lowland
- Big and relatively stable island of wilderness surrounded by human transformed lands
- High diversity of habitats driven with variety of relief, hydrology, soils and vegetation
- Natural processes preserved in the strict reserve area including deadwood biomass storage
- Floristic and faunistic complexes reference for forests of the given biogeographic region
- Many typically forest species, especially fungi, invertebrates and avifauna (109 forest bird species including 9 woodpeckers)
- Merely last refuge for some of the species (invertebrates)
- Full range of ungulates (including the Europe’s largest semi-wild horde of the European bison)
- Full range of carnivores
- Relatively little penetration with alien and invasive species
- Transboundary character
- Long record of wildlife protection
- High values of traditional culture correspond with high natural values
Conservation Management (BY)

Zoning of NP "Biełavieskaja Pušča"

- Strict reserve zone
- Managed reserve zone
- Recreational zone
- Economic zone

- Šarašova game reserve
- Outer protected zone

Management Plan 2008-2013
Conservation Management (PL)

- BPN Strict reserve
- BPN Active protection zone
- BPN protected landscape zone
- Outer reserves
- Natural forest regeneration areas
- Industrial forestry

Conservation Tasks Plan (PZO) for BPN (2010)
Conservation Tasks Plan (PZO) for Natura 2000 site yet to come

**Białowieża forest (PL)**

- Strict: 50%
- Active protection: 17%
- Landscape protection: 7%
- Outer reserves: 9%
- Natural regeneration: 17%
- Industrial: 0%
Problems (BY)

• Hydrology (water table lowering)
• Ungulates’ overpopulation/wolf
• Mass tourism
• Centralised governance (+/-):
  - Struggle with Spruce bark beetle
  + Enlargement

• Lack of holistic approach to conservation
Problems (PL)

• Conflict ‘conservationists – foresters’ (Blicharska & Angelstam 2010)
• Heterogeneity of preferences ‘local – national’
Transboundary aspect

- Physical division of the all-of-a-piece site with the frontier system
- Isolation of big mammals’ populations, including bison
- Difference of conservation management and regime
- Difference in perception... ...and preferences (?)
Conclusion (POV)

Introduction of the unified conservation regime, namely -- strict reserve -- on the both sides and its spacial expansion on adjacent forests would have facilitate regeneration of the aged semi-natural forest there in a long run.
Thank you for your attention!