

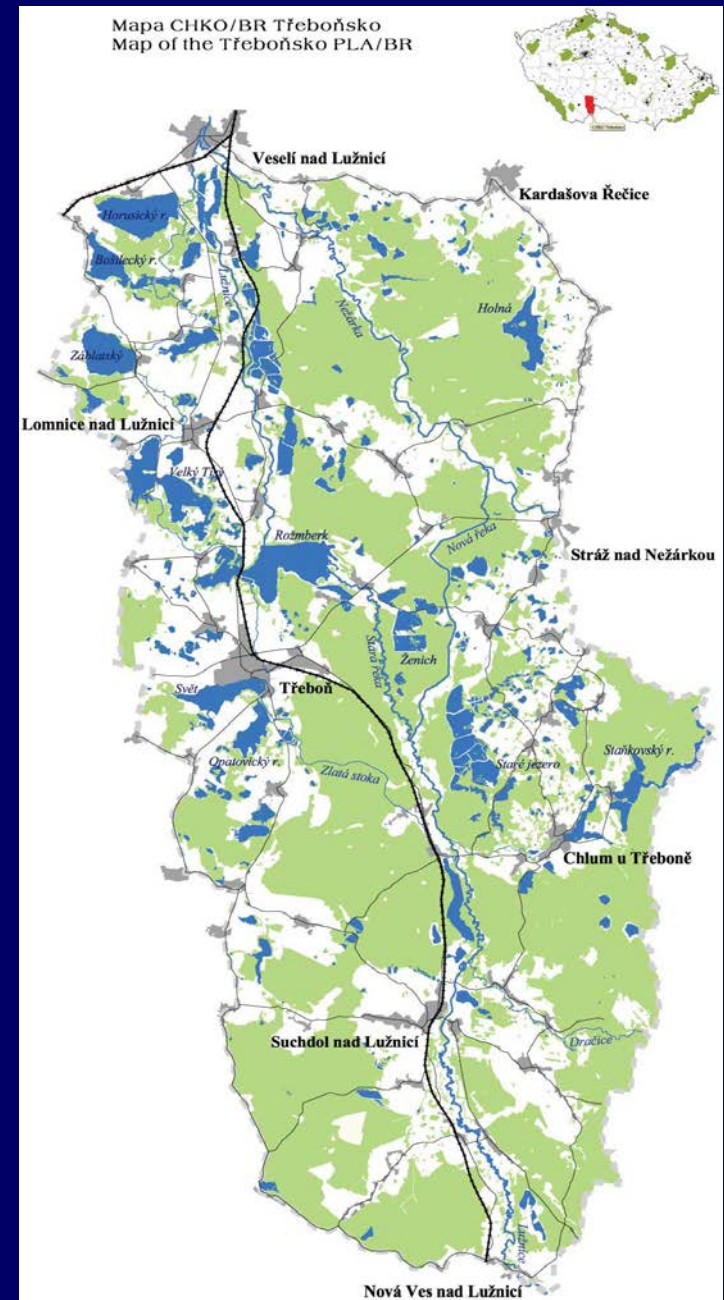


TŘEBOŇ BASIN: A WETLAND-BASED BIOSPHERE RESERVE

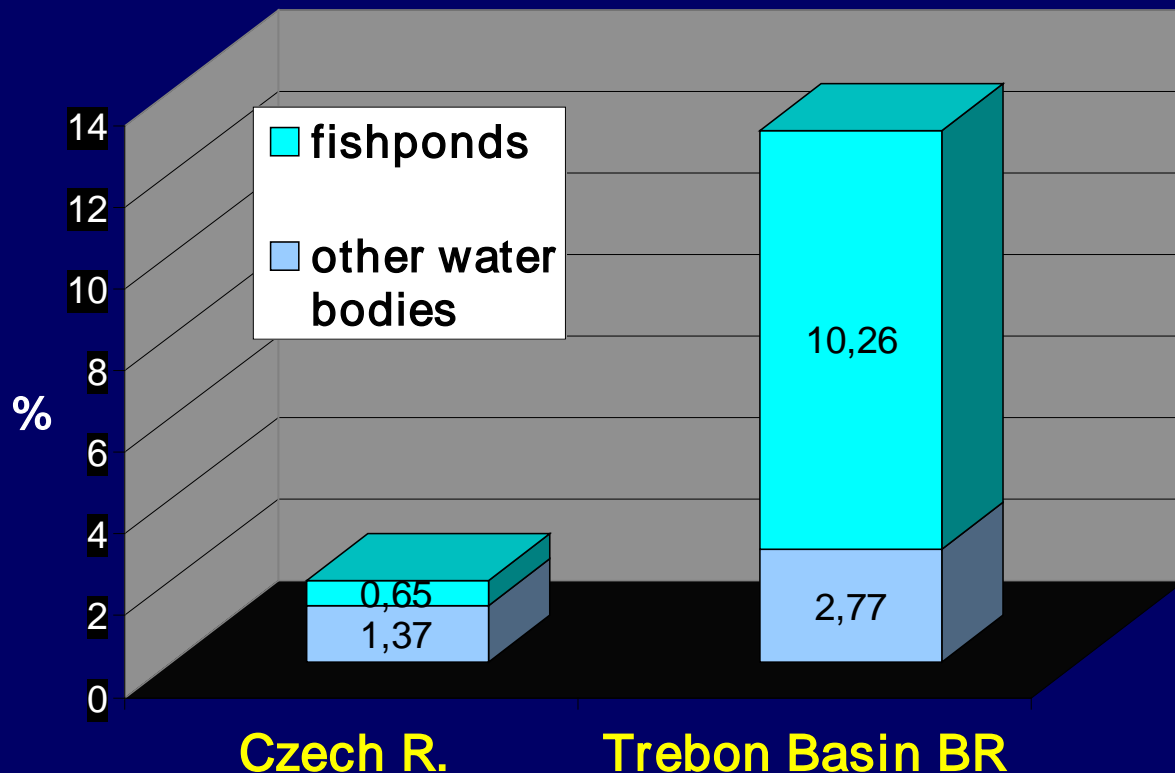
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Trebon Basin BR Czech Republic

- 700 km²
- BR MAB since 1977
- PLA since 1979
- IBA, 2 Ramsar sites
- (NATURA 2000)
- „Man-made”
landscape



Proportion of water bodies and fishponds: comparison of the Czech Republic and TBBR



Principal types of wetlands in the Trebon Basin BR

- **FISHPONDS** (with littoral zones and adjacent wet meadows)
- **MIRES** (peatbogs, fens, p. meadows)
- **RIVERINE W.** (floodplain w. – natural streams (the Lužnice River), pools, oxbows, marshes etc.)

Trebon Basin BR FISHPONDS (460 sites)





Trebon Basin BR

MIRES (peatbogs, fens)





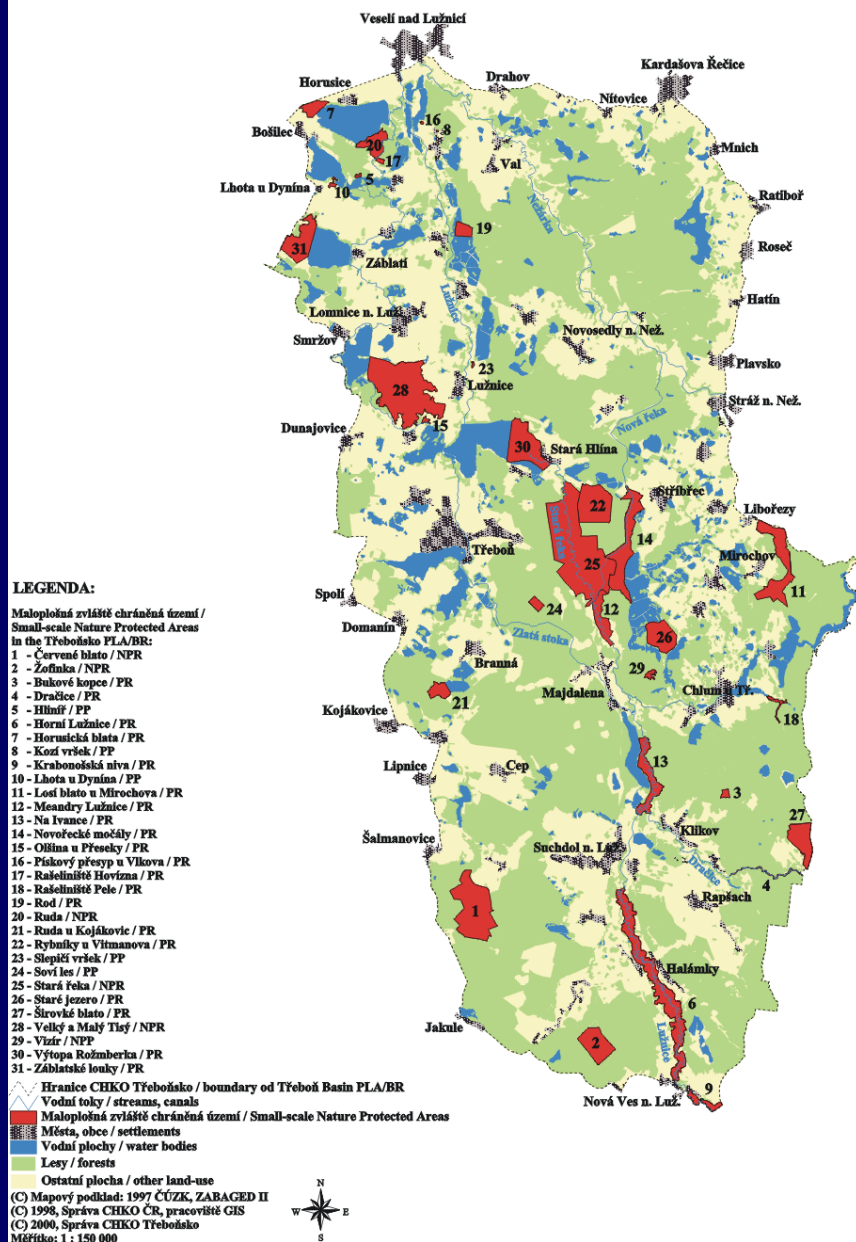
Trebon Basin BR RIVERINE (FLOODPLAIN) WETLANDS



The Lužnice (Lainsitz) River



Map of strictly protected areas (Nature reserves, Nature monuments)



Flagship species ...

White-tailed Eagle (*Haliaeetus albicilla*)



Otter (*Lutra lutra*)



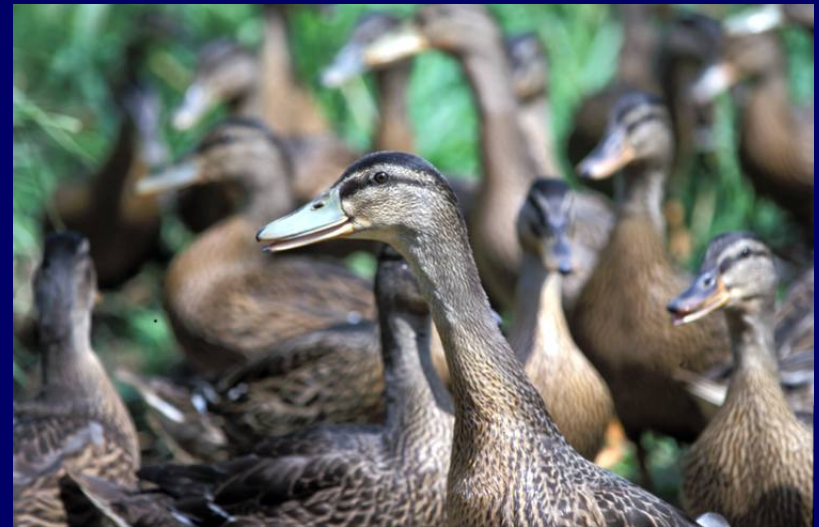
Fish-farming





Carp (*Cyprinus carpio*)

Mallard (*Anas platyrhynchos*)
bred in captivity



Water bloom of blue-green algae (Opatovický pond, August 19th, 2002)



Main problems

conflicts between the **intensive fish-farming** and the nature conservation

- fertilisation of fishponds, extremely high fish-stock with dominating Common Carp

Water **eutrophic or hypertrophic** with oxygen and pH fluctuations, cyanobacterial water bloom, fish intoxication caused by ammonia, extinction of sensitive plant species etc.

High fish-stocks destroy water vegetation and cause negative changes in the structure of zooplankton and do not provide enough natural food (zooplankton, benthos) available for water birds.

Main **conservation measures** are focused in the core area of the TBBR and in nature reserves and in Natura 2000 sites.

Economic instruments:

compensations of economic loss caused by conservation measures or by protected species (e.g., European Otter, or fishpond management based on a mutual agreement between the state and the fishpond owners)

in addition to **traditional administrative (legislative) instruments**.

The TBBR/PLA Administration promotes the **idea of sustainable fish-farming** (IUCN 1996).

Extraction of Quarternary sand and gravel



Large-scale extraction of peat



The Lužnice River - revitalisation of abandoned river oxbows



Sandpit lakes – new type of (oligo- and mesotrophic) wetland habitats



Restoration of wetlands in sandpits



Important role of wetlands in TBBR

NATURAL FLOOD CONTROL

- Deceleration of run-off, infiltration
- Storage capacity for water in the catchment of the Lužnice River (ponds, riverine forests, meadows, bogs etc.)
- Reduced and delayed water discharge, transformation of flood wave and protection of regions situated downstream (Vltava - Prague etc.)

Lesson from FLOODS - August 2002

- South and West Bohemia
- August 6 – 13, 2002: Precipitation - 350 mm (5-13 x normal)
- Total rain volume 3000 million m³
- Total controllable volume of all large reservoirs (Vltava River) 900 million m³
- Trebon Basin BR- total water storage in ponds, wetlands etc. 250-300 million m³ (i. e one full big reservoir - Slapy 269, Lipno 306 million m³)

Upper Lužnice Nature Reserve





Meanders of Lužnice Nature Reserve





Rožmberk fishpond





WETLANDS IN THE TREBON BASIN BR HAVE
MULTIPLE ROLE AND SHOULD BE MANAGED
WISELY WITH RESPECT TO THEIR NATURAL
AND CULTURAL HISTORY...