**The Man and the Biosphere Programme (UNESCO)**

The World Network of Biosphere Reserves (WNBR) is a diverse mosaic of unique areas, designated by United Nations Educational, Scientific and Cultural Organization (UNESCO) under the Man and the Biosphere Programme (MAB). **The biosphere reserves, despite its name, are not focused on nature conservation only, as they respect and support all the human activities that lead to the positive and sustainable use of the landscape.** They serve as testing sites for search of improvement of relationship between people and the environment.

Members of the WNBR cooperate and help each other to fulfill the three main functions that all BRs have in common:

**1. Conservation of natural and cultural diversity**
**2. Support of sustainable economic and social development**
**3. Support of education, research and information exchange**

**The Lower Morava Biosphere Reserve**

The Committee of the International Coordination Council of UNESCO's MAB Programme approved the designation of the **Lower Morava Biosphere Reserve** in 2003. The area of 349 $km^2$ connects the Palava Protected Landscape Area with the Lednice-Valtice Cultural Landscape, listed as a UNESCO World Heritage Site and the floodplain forests of the Podluzi region.

Since August 2004 the stakeholder- based **Lower Morava Biosphere Reserve, Public Benefit Company**, became the administrative authority of the Lower Morava BR. In the Czech Republic it is for the very first time that a biosphere reserve is administered by a non-governmental organization. The members of the BR Management Board represent small and large businesses of the region, farmers, communities living within the BR, Mendel University and others. This concept of an independent management is unique to the Czech Republic, as the remaining five Czech biosphere reserves are managed by nature conservation authorities through administrations of large scale protected areas with which the BRs share their territories. **The Lower Morava BR governance structure was declared model for WNBR in 2014.**

**Recent history of wetlands in the Lower Morava BR**

Floodplain forests, meadows and wetlands of the floodplains of the Morava and Dyje rivers have been and still are one of the most important ecosystems of the South Moravian Region. Vast floods once used to be a typical feature for the floodplains along the lower reaches of the Morava and Dyje rivers. Flood areas of both rivers consisted of great number of various types of wetlands. However, the past centuries brought human activity that resulted in ever more conspicuous changes in the original landscape character. The changes started with melioration measures, particularly in small stream basins. Meliorations resulted in a shift from indigenous meadows and pastures to arable land. The outcome was a devastation of natural character of small streams. The pressure aimed at intensive agricultural use of the landscape grew stronger. In the course of time, a significant part of the flood area was transformed into meadows and fields which led to a loss of most wetlands.

The greatest changes inflicted on the floodplain landscape were brought to by the projects of water management measures and torrent control carried out from 1968 through 1989. The communist government set the project´s goal to mitigate negative flood impact on the local population; nevertheless, it radically changed natural hydrological conditions of the whole area. Almost all former floodplain, except for a small area along the lower reaches of the Dyje river, was left without access to floods. The water regime behind the flood dikes dramatically changed, including all the negative impact on the environment. A considerable portion of alluvial meadows was turned into arable land and some wetlands were filled in.

**Ramsar convention on wetland protection**

Despite the strong impact of the water management measures and transfer of meadows to arable land in the past, there were still a number of locations with unique insect, amphibian, reptile, bird and outstanding plant communities left in the area. These locations needed recognition, and as such they were included on the international Ramsar wetlands list. Convention on Wetlands of International Importance Especially as Waterfowl Habitat, better known as the Ramsar Convention, and was signed in Ramsar, Iran, in 1971. It was the first international convention focusing on the protection and sustainable use of natural resources. Its objective is the worldwide protection of all wetland types (**www.ramsar.org**).

Lower Morava Biosphere Reserve has two wetlands enlisted as Ramsar sites. **Lednice Fishponds** (area 650 ha, enlisted in 1990)**.** The area is of international ornithological importance as a habitat for several protected bird species as well as an important migration site. Together with extensive growths of reed and reedmace, it is a site of occurrence of important water and halophytic plant species, as well as of specific communities of periodically exposed banks. **Floodplain of the Lower Dyje River** (area 11 500 ha, enlisted in 1993) is the largest floodplain forests and alluvial meadows complex characterize this area in the Czech Republic with a number of permanent and periodic pools, oxbows and forest channels. It also includes the most important nesting grounds of a number of waterfowl species in the country, as well as an important migration stopover and wintering ground for migratory birds, predominantly geese.

**Wetland restoration in Lower Morava Biosphere Reserve**

Since the political regime changed in 1989, new iniciatives have emerged in order to eliminate the negative impact of water management measures and torrent control on the landscape. The business sector, private landowners as well as government authorities carry out these positive projects. These activities are examples of possibilities to restore wetlands in areas with missing "creative" river dynamics and/or in areas with advanced natural forest succession.

**Soutok (Confluence)**

The confluence of the rivers Morava and Dyje gave the name to the whole area. Thanks to its former inaccessibility, the area of the tri-state border has retained its natural character as a floodplain landscape with all its positive and negative aspects. The area of the confluence was under a strict border zone regime until 1989 due to the proximity of the state border with Austria. It was used under the “iron curtain” special management regime and free movement and economic activities was severely restricted. Since the fall of the communist regime, the area has been open to visitors, whose numbers are increasing every year. The area has unique natural and cultural values. The largest floodplain forest complex in the Czech Republic can be found here. The whole area is managed by the Forests of the Czech Republic, state enterprise. Majority of the area is managed as the largest game preserve in the country.

In the area of Soutok was implemented the largest wetland restoration project in the Lower Morava BR. Favorable conditions have made controlled flooding of floodplain biotopes possible, which enables to simulate a nearly natural water regime that existed prior to the implementation of inconsiderate water management measures . Four big sluice gates and six openings were built into Hrazova road - the original elevated road across the Soutok polder (catchment basin protected by levees). The road serves as a bank to store incoming water for flooding the adjacent forest. In the period of 1990 – 1999, a total of 70 km of forest channels were renewed, 25 sluice gates and 84 openings were built. The combination of irrigation and flooding proved optimal for the area. The leader of the project was the Forests of the Czech Republic, s.e. The climate change effects limited the functionality of the system that is currently under the review in order to provide sufficient water volume for the forest year round.