



DOLNÍ MORAVA

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Floodplain Forest Management in the Lower Morava Biosphere Reserve

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Floodplain forests in the Lower Morava BR cover approximately 80 km², which is one quarter of its total area.

A further 60 km² are covered by floodplains of big rivers and are under agricultural use. 40 per cent of the BR's territory represents an inundation area which was subject to natural flooding up to recently.





The area of the Lower Morava BR has been inhabited since the dawn of history. First records of human activity date back more than 400,000 years. The sculpture of Věstonice Venus is about 25,000 years old.

The area ranks among important civilization and cultural centers of Europe.

Mammoth hunters, agricultural colonizers, Celts, Germans, Slavs, Romans and later also the Dietrichstein and Liechtenstein families have all left a trace in the landscape.



The floodplain forest ecosystems are characterized by high groundwater level, low profile of the terrain, regular inundation of the floodplain especially during spring floods and nutrient-rich habitats made up from deposits from upper reaches of the local rivers.



However, socialism has left visible traces in the floodplain landscape as well. The Nové Mlýny Reservoirs and the canalization of the Dyje and Morava rivers made natural flooding impossible for a long time. The last natural floods in the Dyje river occurred in 1972, in the Morava river in 1977. Socialist farming transformed most of the alluvial meadows into arable land.



The construction of the Nové Mlýny Reservoirs and canalization of rivers resulted in a drop of groundwater levels by up to 1 m and in the absence of regular flooding. The floodplain forests began to change into a different, drier type. The floodplain forest started to degrade.



In the 1990s a restoration network was built in all the floodplain forests. It brings water from the rivers back to forests through a system of water channels and sluice gates. The channels are more than 120 km long and the area of new water bodies, periodic and permanent pools covers more than 240 ha.



The main tree species composition in the Lower Morava BR floodplain forests according to the valid Forest Management Plan for 2000-2009 is as follows: English oak (*Quercus robur*) 41 %, narrow-leaved ash (*Fraxinus angustifolia*) 29 %, poplar (mainly cultivars) 13 %, willow 4 %, alder 3 %, maple 3 %, hornbeam 2 %, linden 2 %, other broad-leaves and pine 3 %.



Large-scale clear-cutting forest management was introduced by the Liechtensteins in the early 18th century. In the clear-cut areas covering 10-40 ha they sowed English oak acorns and for 7-10 years they grew crops side by side. This provided the young oak plantations with the necessary care they require.



Floodplain forest ecological stability is closely connected with the ecological stability of the entire floodplain landscape, which relies on a single hydrological system.

Species diversity depends on the management of biotopes in a cultural landscape, which is characterized by a number of ecotone zones. These provide the rich species diversity and sufficient size of populations of individual plant and animal groups.



Ecological stability of a floodplain landscape depends on traditional tried and tested methods of management and cultivation of the cultural landscape. The solution of ecological problems in a cultural landscape must be provided systemically by experts of all the landscape professions and by landowners. Direct legal and moral responsibility following from legal bounds to the land is crucial.



Strict nature conservation in a cultural landscape cannot be understood as an end in itself. It is more advisable as a natural component of economic activities of a professional and positively motivated person, should it be an owner, manager or businessman.



Sustainable management of floodplain forests and floodplain landscape is related to the maintenance and operation of the restoration network in all the South Moravian floodplain forests in the context of the natural stream discharge in major rivers.



Floodplain forest management aims at sustainability. It maintains tried and tested methods of forest management focused on the cultivation of hardwood floodplain forest with predominant hardwood species, especially the English oak and narrow-leaved ash.

It maintains balance in the distribution of young, coppice-with-standards and old stands while keeping a sufficient number of reserved trees and dead wood.

It creates conditions for the conservation of biotope and species diversity of the entire floodplain landscape.



The Lower Morava BR, Public Benefit Corporation, initiates projects focusing on the floodplain forests in terms of an interdisciplinary approach. It promotes and complements the expert knowledge of foresters by latest scientific findings and encourages their implementation in everyday work.



The Public Benefit Corporation in co-operation with a number of landscape experts strives to integrate the latest principles of poly-functional forest management and cultural landscape cultivation into the new Forest Management Plan 2010-2019, including the principles of contractual protection of floodplain ecosystems under the Natura 2000 programme.



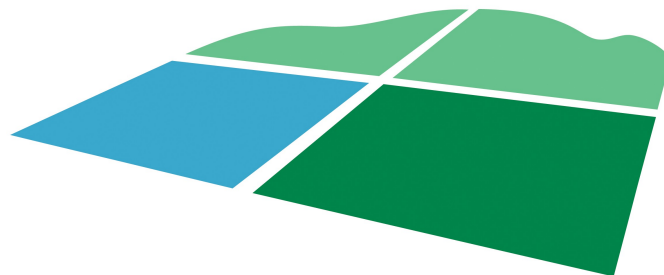
In co-operation with experts of Forests of the Czech Republic we are preparing nature trails and field-trip objects for students and both general and expert public. We are initiating the establishment of the “Exposition of Floodplain Landscape”, an information-educational center focused on eco-systematic multi-disciplinary education.



The idea of biosphere reserves is a philosophy of looking for a sensible relation between man and natural resources and for the rules of sustainable use of nature, which would not affect the biological and cultural diversity of the landscape. The Lower Morava BR would like to be a good partner to all the landscape professions and the inhabitants of the area.

It does its best to create an “island of positive deviation” where people are aware of historical and global contexts.





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