Restoring Degraded River Branches and Oxbows of the Danube

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REGIONAL ASSOCIATION FOR NATURE CONSERVATION AND SUSTAINABLE DEVELOPMENT
Bratislavské regionálne ochranárske združenie

• non-governmental organization, since 1997

• nature conservation, habitats restoration and management, research, education, public awareness

• activities along Danube, wetlands in Záhorie, meadows restoration in Carpathian mountains, conservation of bats and common swifts in buildings all around Slovakia, restoration of salt marshes and sand dunes in South and Western Slovakia and much more...
LIFE PROJECTS WITHIN DANUBE FLOODPLAINS

- Conservation of endangered bird species populations in natural habitats of the Danube inland delta  LIFE07 NAT/SK/000707

- Restoration of NATURA 2000 sites in cross-border Bratislava capital region  LIFE10 NAT/SK/080

- Conservation of root vole  LIFE08 NAT/SK/000239

- Conservation of Sand Martin, Kingfisher and European Bee-eater in Danube - Morava region  LIFE12 NAT/SK/001137
RESTORATION OF WETLANDS, DRIED-UP RIVER BRANCHES AND OXBOWS

Restoration of Veľký háj oxbow

- 5,5 ha
- dry since 1992
- water regime restored since 2012

5.3.2012
26.3.2012
11.4.2012
RESTORATION OF WETLANDS, DRIED-UP RIVER BRANCHES AND OXBOWS

Restoration of Veľký háj oxbow

29.4.2010

11.4.2012

5.3.2012

8.4.2013
RESTORATION OF WETLANDS, DRIED-UP RIVER BRANCHES AND OXBOWS

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Restoration of Medved'ovské river branch (rkm 1808)
RESTORATION OF WETLANDS, DRIED-UP RIVER BRANCHES AND OXBOWS

Restoration of Medveďovské river branch (rkm 1808)

- rkm 1808
- 4 000 m
RESTORATION OF WETLANDS, DRIED-UP RIVER BRANCHES AND OXBOWS

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RESTORATION OF WETLANDS, DRIED-UP RIVER BRANCHES AND OXBOWS

Restoration of Veľkolélske river branch (rkm 1781-1785)

- inflow opened in total width of 100 m; finished 11/2013
- 2 outflows opened in total width 80 m; finished 07/2014
- reconstruction of bridge finished 09/2015
RESTORATION OF WETLANDS, DRIED-UP RIVER BRANCHES AND OXBOWS

Restoration of Veľkolélske river branch (rkm 1781-1785)
RESTORATION OF WETLANDS, DRIED-UP RIVER BRANCHES AND OXBOWS

Restoration of Veľkolélske river branch (rkm 1781-1785)
Restoration of Vel'kolélske river branch (rkm 1781-1785)
RESTORATION OF WETLANDS, DRIED-UP RIVER BRANCHES AND OXBOWS

Restoration of Veľkolélske river branch (rmk 1781-1785)
RESTORATION OF WETLANDS, DRIED-UP RIVER BRANCHES AND OXBOWS

Restoration of Vel’kolélske river branch (rkm 1781-1785)

- outflow a opened in the width 80 m
- outflow b opened in the width 45 m
RESTORATION OF WETLANDS, DRIED-UP RIVER BRANCHES AND OXBOWS

Restoration of Vel'kolelske river branch (rkm 1781-1785)
RESTORATION OF WETLANDS, DRIED-UP RIVER BRANCHES AND OXBOWS

Restoration of Vel'kolélske river branch (rkm 1781-1785)
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Restoration of Vel'kolélske river branch (rkm 1781-1785)
RESTORATION OF WETLANDS, DRIED-UP RIVER BRANCHES AND OXBOWS

Restoration of Veľkolelske river branch (rkm 1781-1785)

- reconstruction of bridge – finished 09/2015
RESTORATION OF WETLANDS, DRIED-UP RIVER BRANCHES AND OXBOWS

Restoration of Vel’kolélske river branch (rkm 1781-1785)

- reconstruction of bridge – finished 09/2015
RESTORATION OF WETLANDS, DRIED-UP RIVER BRANCHES AND OXBOWS

Restoration of Vel’kolélske river branch (rm 1781-1785)

• reconstruction of bridge – finished 09/2015
Kralova luka river branch system

- part of Danube Inland Delta
- system of river branches, oxbows and small wetlands
- near Baka village and infamous Gabčíkovo water power plant
- fish spawning, reproduction of Amphibians, breeding of birds

Map from 16\textsuperscript{th} – 17\textsuperscript{th} century
Kralova luka river branch system

- 19\textsuperscript{th} century disconnected from main river branch system
- 1992 Gabčíkovo dam construction
- suffering by lack of water - most of the year dry
Kralova luka river branch system

- planned restoration of river branch system and adjacent wetlands
- 10 most problematic parts
- 1\textsuperscript{st} phase – pilot project of Building BlueGreen infrstructure in Central- Eastern Europe: from pilot projects to regional action
Kralova luka river branch system

- expert study 07/2015
- technical documentation 09/2015
- obtain necessary permission 10-11/2015
- public procurement 10/2015
- field works 11-12/2015

Digital terrain model of river branch system

1st phase of technical works
Kralova luka river branch system

- since 01/2015 meetings with experts and stakeholders
Kralova luka river branch system

- 01 – 03/ 2015 mapping and marking of invasive trees along river branch system
- planned cutting of invasive trees 11 – 12/2015
Kralova luka river branch system

- planting of riparian forest along river branch system
- planted original tree species – *Alnus glutinosa*
Kralova luka river branch system

- during 2 days planted 1,000 young trees
- action with stakeholders:
  - land owners – representatives of Forests of SR
  - representatives of State Nature Conservancy of SR
  - experts from Faculty of Natural Sciences UK
- presentation, excursion and planting with volunteers
Thank you for your attention
Kralova luka river branch system

Map from 3rd military mapping – the end of 19th century
VEL’KOLÉLSKY OSTROV ISLAND
VEL’KOLÉLSKY OSTROV ISLAND

RESTORED STEEP RIVER BANKS
RESTORATION OF STEEP RIVER BANKS

- Chřaba (rkm 1709)
- restored 200 m of steep river bank
- in the past: nesting colony of Sand Martins
RESTORATION OF STEEP RIVER BANKS

- early August 2011

- late August 2011
RESTORATION OF STEEP RIVER BANKS

- May 2012: 970 breeding pairs of Sand Martin
  1 pair of European Bee-eater
- the largest Sand Martin colony in Slovakia
Kralova luka river branch system

- 19th century disconnected from main river branch system

Ortophotomap from 1950