

Restoration of several types of floodplain habitats on the Slovak section of the Danube



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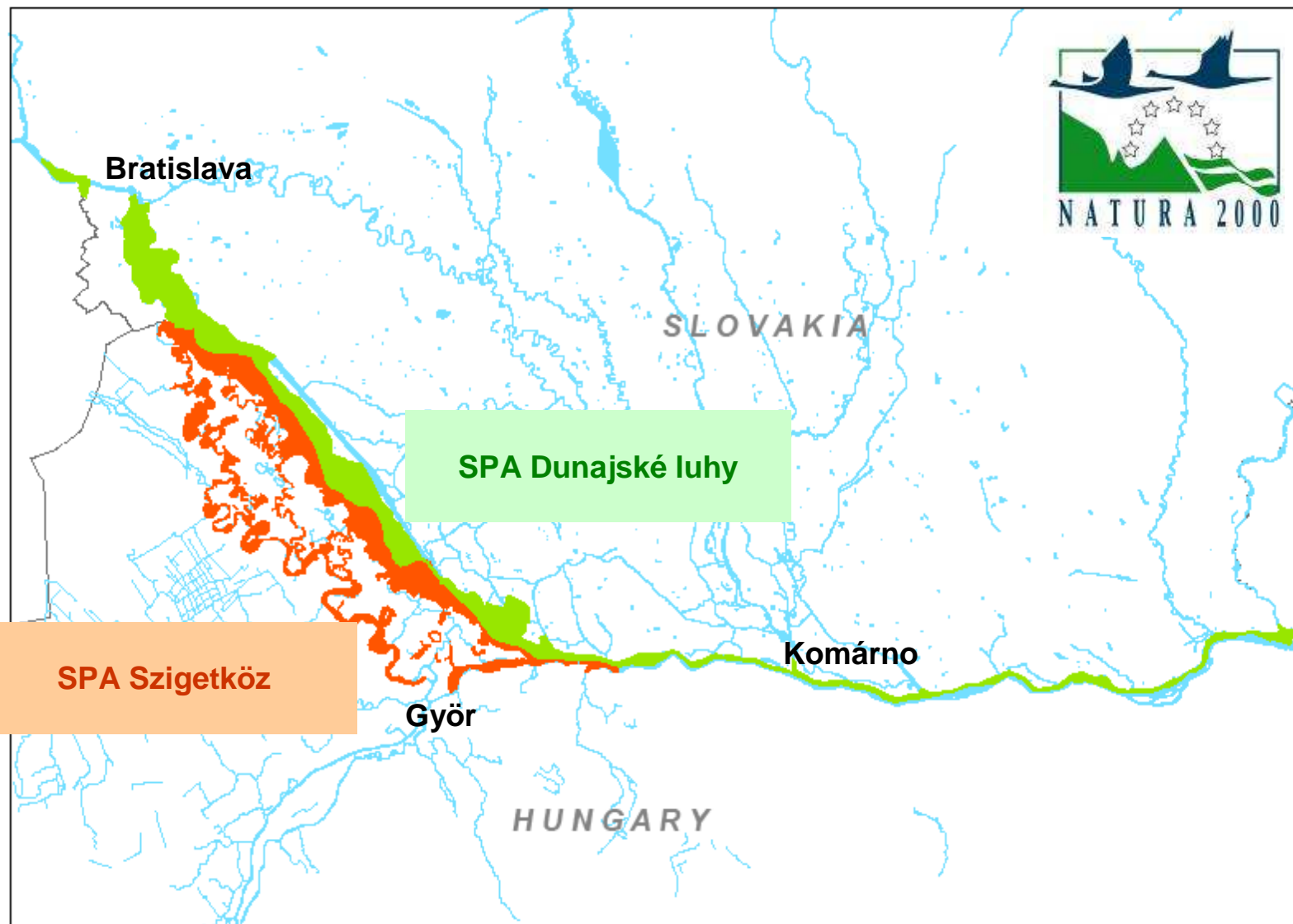
European River Restoration Conference, October 27 – 29, 2014
Vienna, Austria

Project LIFE Danube birds conservation

- Project site: SK – SPA Dunajské luhy
HU – SPA Szigetköz
- Duration: 2009 – 2014
- Project partners:
 - 1) BROZ
 - 2) Water management construction , s.e. (SK)
 - 3) Comenius University in Bratislava, Faculty of natural sciences (SK)
 - 4) EDUVIZIG (HU)
 - 5) Association for Nature Conservation of Szigetköz –SZITE (HU)



Project site



Project goals and objectives

1) Restoration actions:

- reconnection of river branches to Danube
- river branch systems, oxbows
- wetlands and marshes
- river banks
- lowland meadows
- floodplain forests



2) Awareness actions:

- education
- promotion
- stakeholders

improvement of awareness about
river restoration actions, Natura
2000, LIFE projects



Lowland meadows – in the past

- In 19th century meadows covered significantly large area of Danube lowland



Lowland meadows – in the past



- many species evolved in accordance with traditional lowland meadows management
- high biodiversity of Danube lowland ecosystem

Lowland meadows – in the past

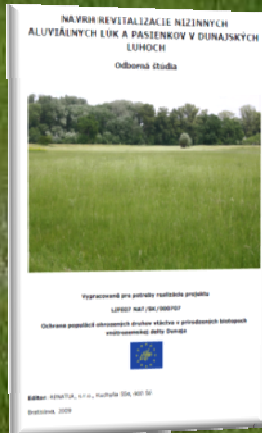


Lowland meadows

- In 20th century the majority of meadows were:
 - changed to arable fields
 - transformed into forests
 - left abandoned and overgrown by invasive species



Restoration of lowland meadows



Expert study on restoration of lowland meadows

Restoration of lowland meadows has been carried out since 2009:

- grazing
- combination of removing of invasive tree species and grazing
- change of arable land to grasslands by seeding natural grasslands species

Restoration of lowland meadows

- in 2009 - 70 cows, 100 sheep and 20 goats purchased
- 2010 - herd of 8 Hucul horses purchased
- grazing by BROZ
- cooperation with local farmers



Restoration of lowland meadows



Restoration of lowland meadows



Restoration of lowland meadows

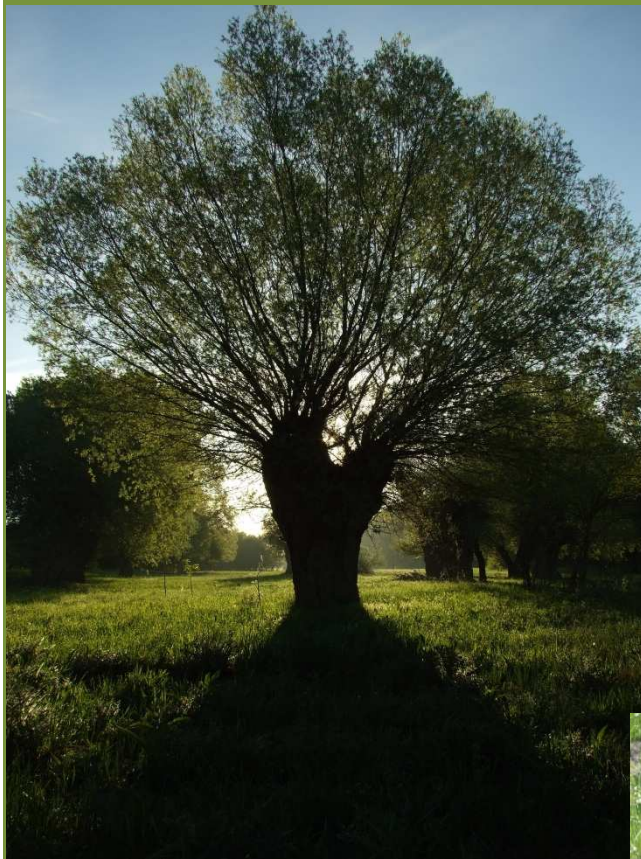
Veřkolélský ostrov island



Since 2009 meadows have been restored on **5 localities** within Danube floodplains

Total size of the restored lowland meadows is **210 ha**

Restoration of lowland meadows



Restoration of floodplain forests

Construction of water dam and water power plant Gabčíkovo

Fixed weirs – lines constructed

Enabled access to whole area of Danube inland delta

Intensive forestry within Danube floodplains



Restoration of floodplain forests

Plantations of hybrid poplars had replaced natural forests in large part of the area

- short rotation period
- no lateral branches
- do not provide suitable refuge and nesting conditions for birds
- extremely low biodiversity



Restoration of floodplain forests

1st step: Expert study on restoration of floodplain forests

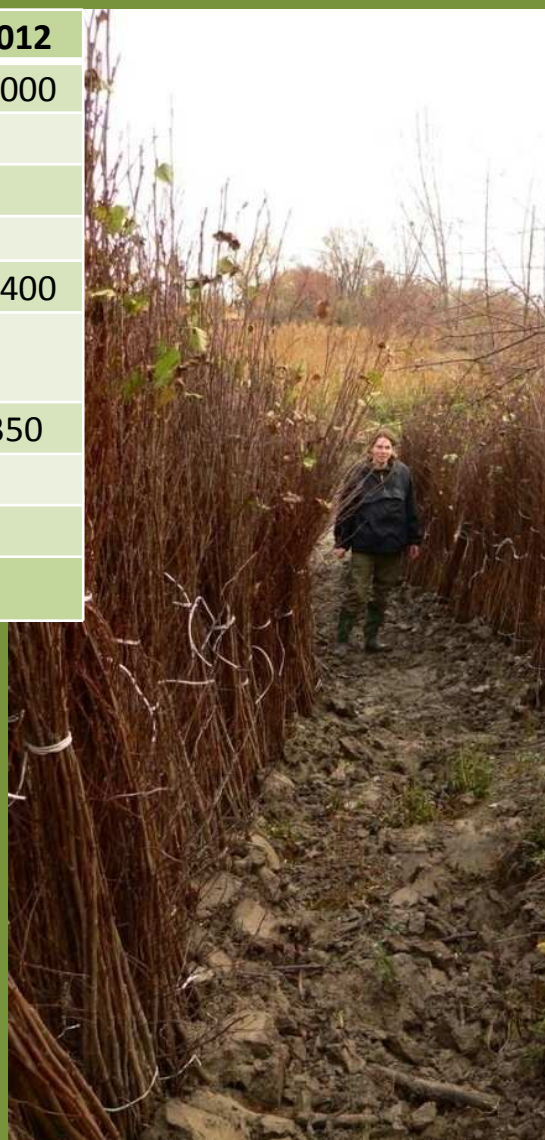
1. Planting groups of native tree species between and into the plantations of hybrid poplars
2. Planting of whole forest stands of native trees in the areas where hybrid poplars were logged and removed



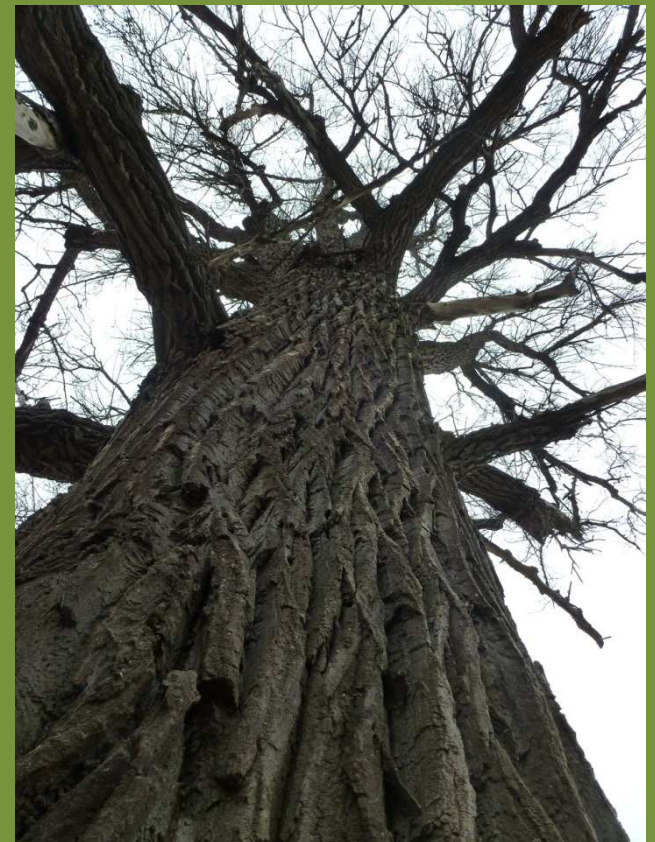
Restoration of floodplain forests

Planted 30 000 trees (9 species), 55 300 seeds of oaks

Tree species	2009	2010	2012
<i>Quercus robur</i>	300	200	5 000
<i>Fraxinus excelsior</i>	500		
<i>Populus alba</i>	350	950	
<i>Populus x canescens</i>	600	14 350	
<i>Populus nigra</i>		2 000	2 400
<i>Acer pseudoplatanus</i>		200	
<i>Salix alba</i>		1 000	350
<i>Alnus glutinosa</i>		1 000	
<i>Acer platanoides</i>		800	
Overall	30 000		



Restoration of floodplain forests



- breeding habitats (White-tailed Eagle, Black Stork)
- high biodiversity forests

Awareness raising activities - river restoration

- information panels -

- 20 information panels installed within Danube floodplains (SK, HU, EN)



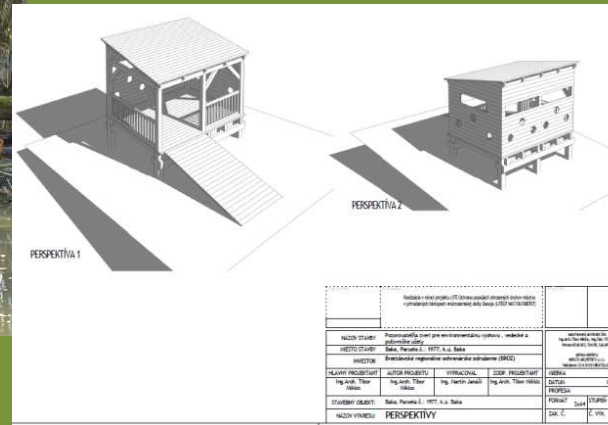
Awareness raising activities - river restoration

- bird watching towers -

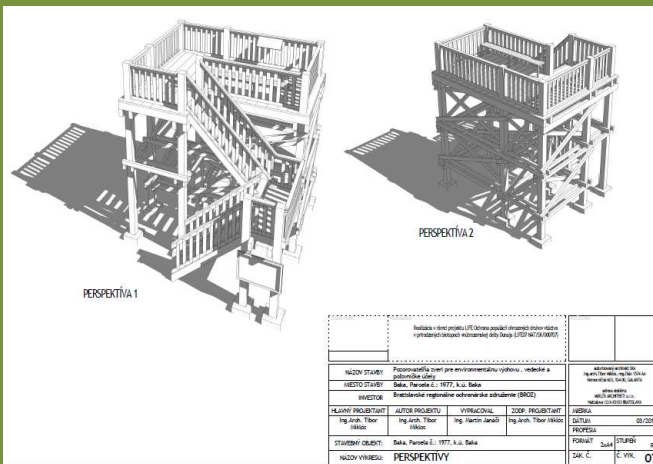


Čunovo

- 2 places
- 2 types of watching towers
- Čunovo (low)
- Baka (high)



Baka



Awareness raising activities - river restoration

- bird watching towers -

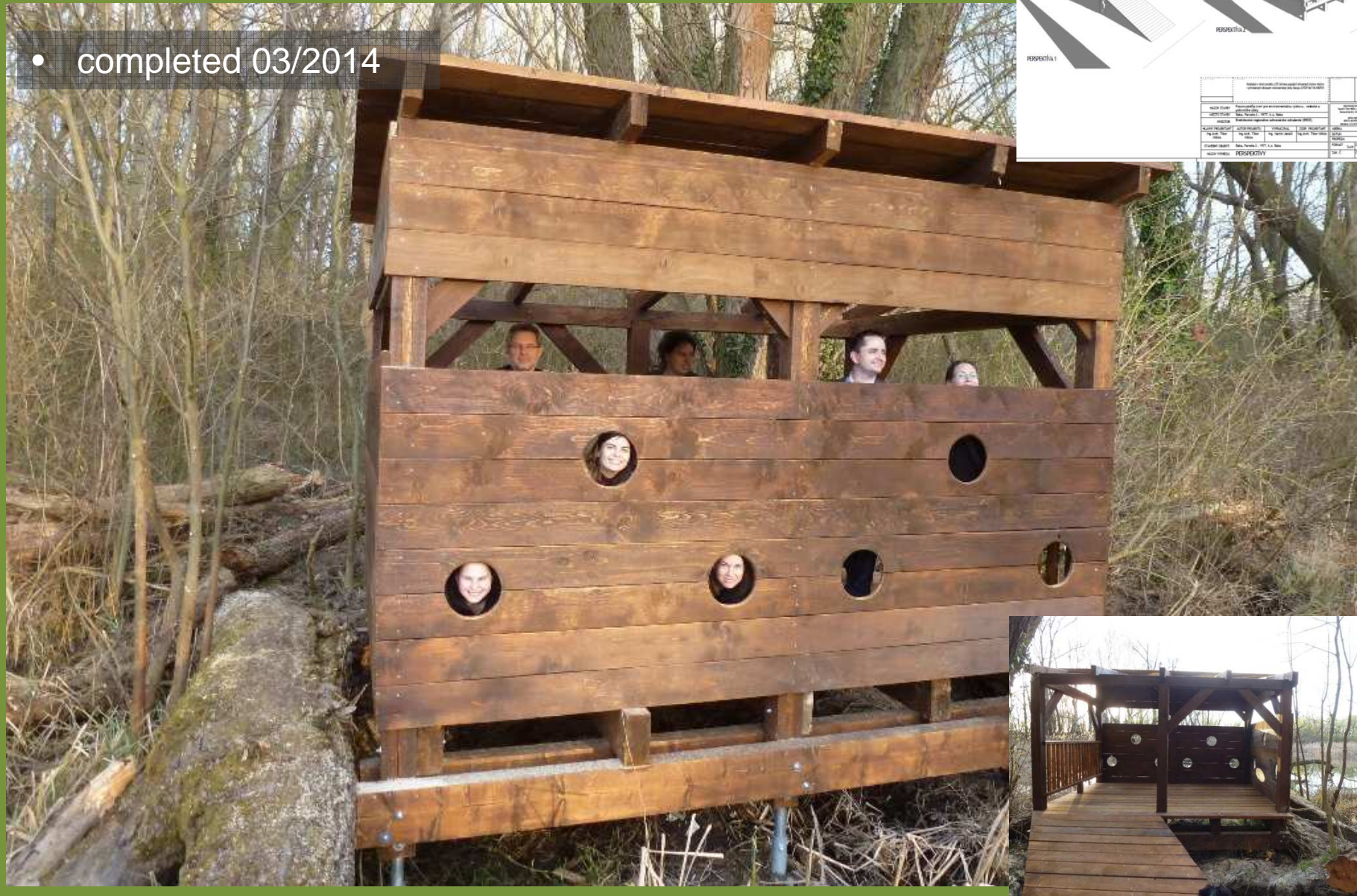
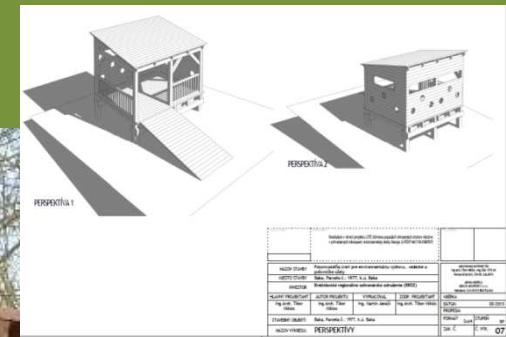
- Bratislava – Čunovo (low)



Awareness raising activities - river restoration

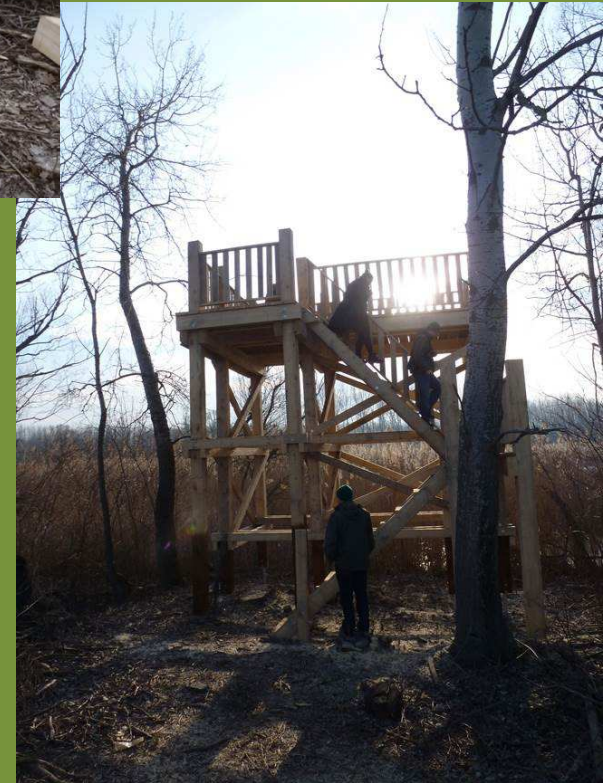
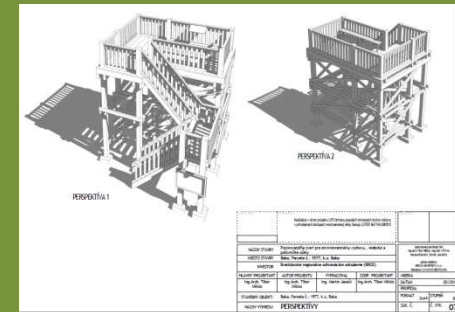
- bird watching towers -

- completed 03/2014



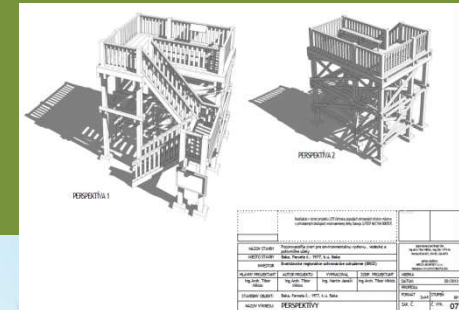
Awareness raising activities - river restoration - bird watching towers -

- close to the tourist and cycling paths



Awareness raising activities - river restoration

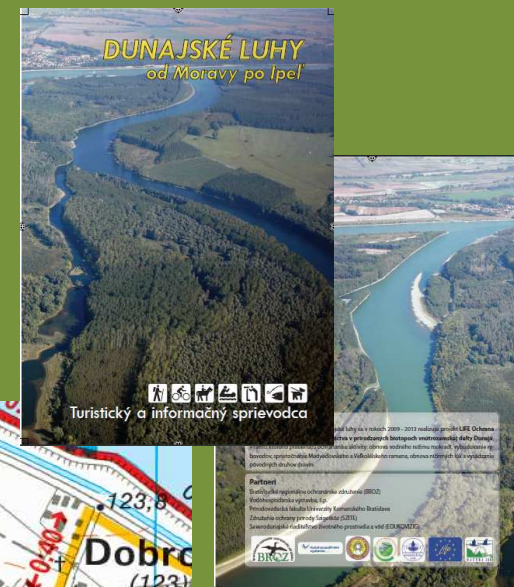
- bird watching towers -



Awareness raising activities - river restoration

- map brochure of Danube floodplains -

- map brochure – SK, HU, EN, DE
- information on Danube floodplains, LIFE project and interesting places
- 2nd edition included changes based on successful restoration actions



Awareness raising activities - river restoration

- interactive travelling exhibition -

- more than 30 000 participants
- 32 visited places



Awareness raising activities - river restoration

- presentations and field excursions -

- | | | |
|-----------------------------|-----------|--------------------|
| • presentation for students | 15 events | 300 participants |
| • excursions for students | 20 events | 366 participants |
| • presentation for public | 25 events | 1 000 participants |
| • excursions for public | 25 events | 400 participants |



Awareness raising activities - river restoration

- presentations and field excursions -



Awareness raising activities - river restoration

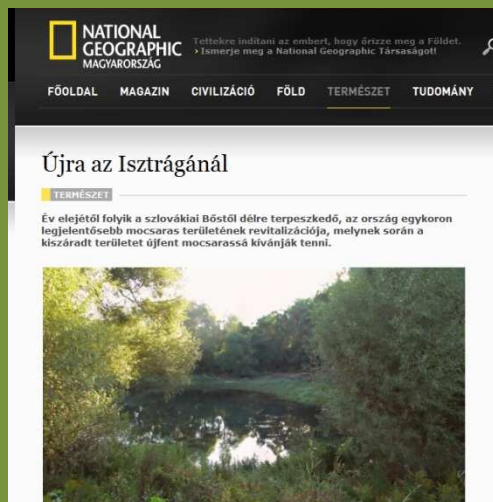
- presentations and field excursions -



Awareness raising activities - river restoration

- communication with media -

- 17 conferences
- 5 press conferences
- 23 press releases
- 50 articles
- 12 radio interviews
- 15 TV shots



We bring Life back to Danube River

