



**How a restoration project can integrate different interests?**

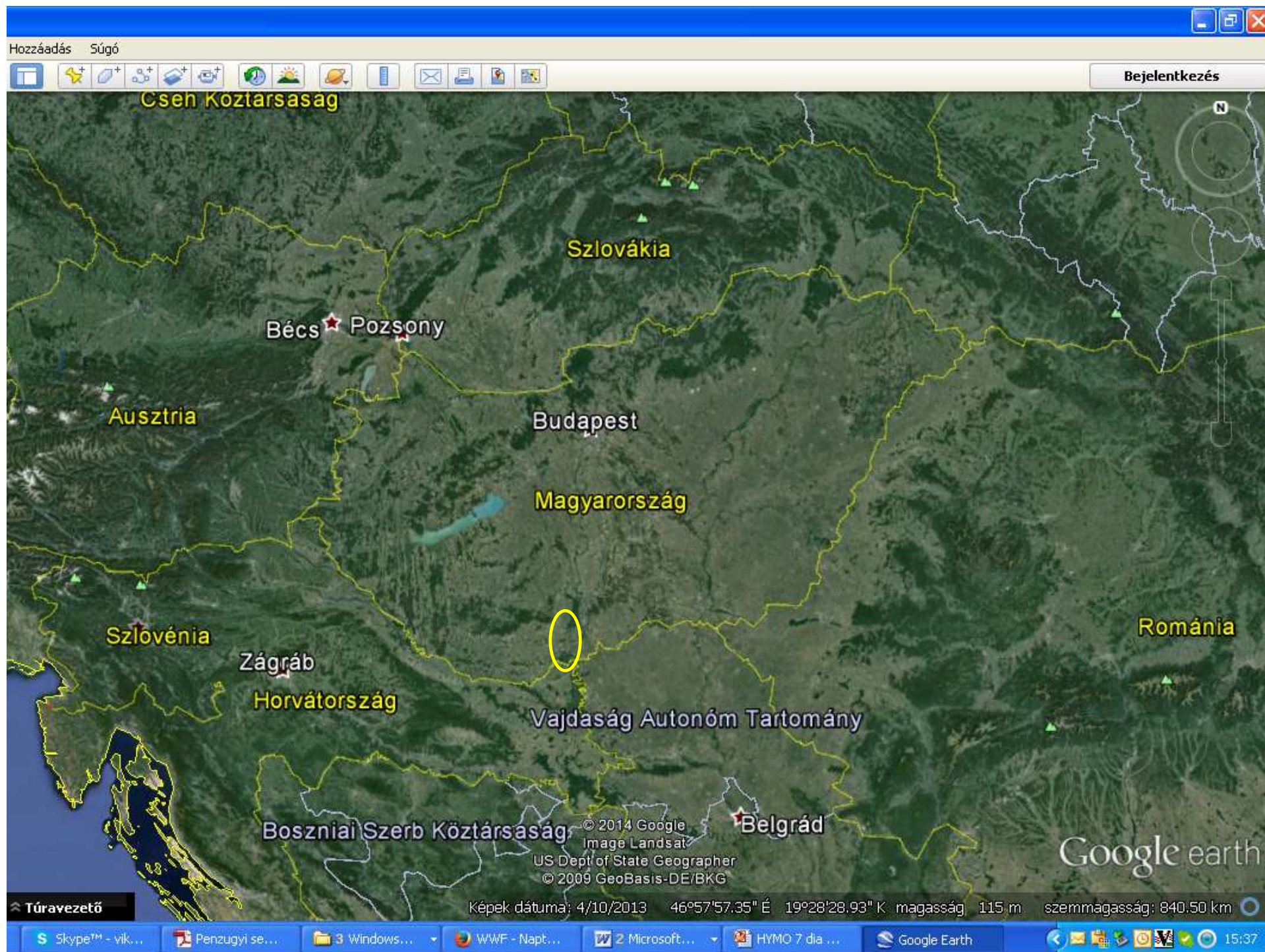
## **Liberty Island and side-branch restoration**

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ERRC

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Súgó

Bejelentkezés

3/24/2006

Image © 2014 DigitalGlobe

Google earth

iravezető

2006

Skype™ - viktoriasiposs.wwf.hu 46°01'05.92" É 18°41'49.54" K magasság 82 m szemmagasság: 3.98 km







# Preparations and project development

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- Initiator: a mayor who put different level of interests together (local: recreation, regional: drinking water table, national: nature conservation)
  - WWF: importance of field projects representing policy mission
  - Extra value: conservation and economics meet in ecosystem services
  - Partnership: 3 different sectors: state bodies on national (2) and local (1) level, NGO (1), corporation (1)
  - Approx. 3 years preparation
  - LIFE Nature: total budget: 1,795,529 Euro (60% EU, 40% own source)
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# Partners



## NGO:

- WWF Hungary, project lead

## State bodies:

- Danube-Drava National Park Directorate
- Lower-Danube-valley Water Management Directorate
- Transdanubian Waterworks Company

- Mohács Municipality

## Commercial corporation:

- Coca-Cola Hungary





## Description of area

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### Island

- 47 ha protected area
- Privately owned before, purchased within the project
- Alluvial softwood forests with invasive pressure

### Side-branch

- 3 km long and 50-150 m wide (appr. 50 ha)
  - Advanced sedimentation, stagnant water, degrading habitats
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# Problems targeted within the project 1.

## Problem 1: no longitudinal connectivity of the side-branch

The rockfill-dam (built in 1982) blocked the waterflow for 360 days a year.

3 technical steps of restoration were needed:

1. Dredging the side-branch
  2. Relocating the waterpipes in the dam
  3. Opening the rockfill-dam
-











## Problems targeted within the project 2.

### Problem 2: quality of forests on the island

Commercial forestry in the past and invasive tree species threatened the area.

Two activities were taken:

- Conversion of the poplar plantation to semi-natural softwood forest
  - Control of the invasive tree species on the entire island
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# Solutions

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## Ecological purpose dredging

Dredging was aimed:

- provide space for waterflow
- the river will take its morphological work
- requirement: the most self-sustaining way
- 3 km long and 30-50 m wide
- sediment placed in the main branch

**After the first floods the river already forms  
such sand dunes  
which are typical for „living” rivers.**

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## Opening the rockfill-dam and relocation of the waterpipes

- navigation purposes (1982)
- heightening (waterpipes, 1984)

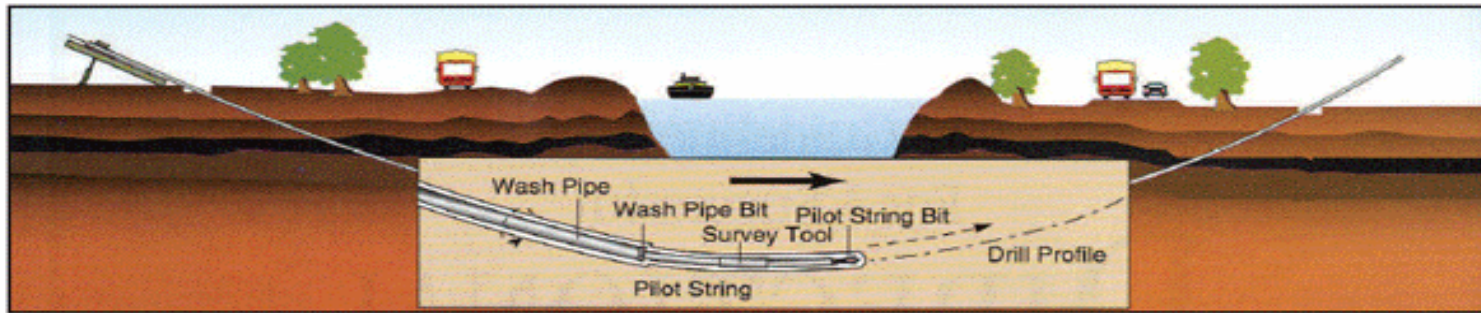
In the project:

- the waterpipes were placed under the riverbed (HDD technology)
- dam: lowered by 2 meters and a 40-50 m long section is opened

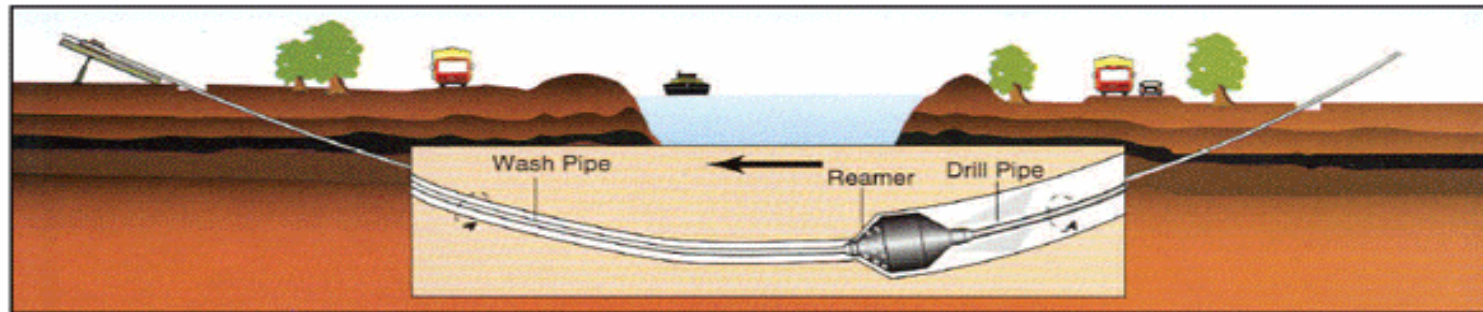
Now:

- waterflow all-year-round
- new sand-formations appeared already

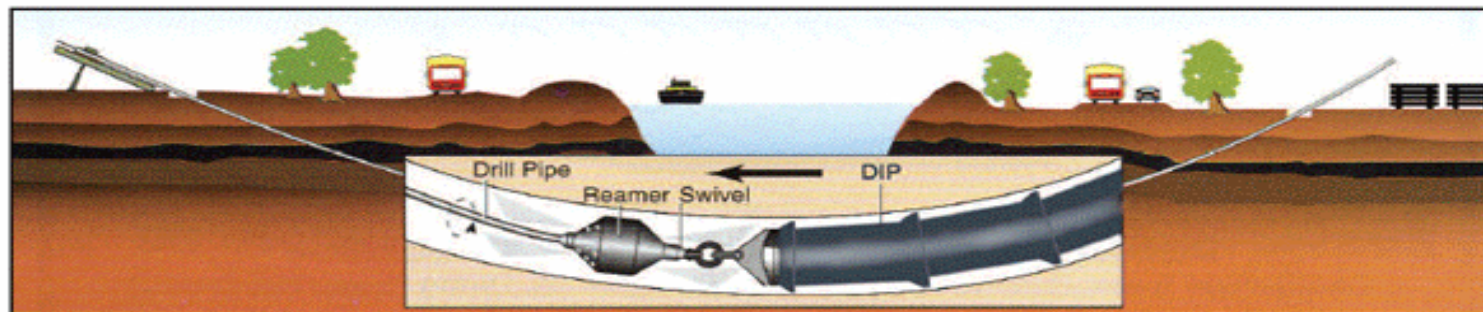




**PILOT HOLE**



**PRE-REAMING**



**PULL-BACK**













6/SZEP/2013





# Problems and solutions

<b>Rockfill dam</b> causing sedimentation and disconnected river stretches	<b>Dam is opened</b> 6.000 m <sup>3</sup> stone is removed <b>Relocation of water pipes in the dam</b>
<b>Shallow standing water</b> in the side-branch and poor water quality and degradation of habitats	<b>Side-arm is dredged</b> 160.000 m <sup>3</sup> sediment is removed •Shape: trapeze cross-section •Natural development: cup-shape after 1-2 floods •Re-appearance of natural shape sand dunes
<b>Side-branch and island would disappear</b>	<b>Longitudinal connectivity of the side-branch, flowing water, divers valuable habitats</b>
<b>Commercial forestry</b> (hybrid poplar plantations as well)	Island is saved, area purchased <b>Conservation oriented, later no-go forestry</b>
<b>Invasive tree species</b> ( <i>Fraxinus pennsylvanica</i> and <i>Acer negundo</i> )	<b>80% is eliminated, maintenance</b> will go on → <b>undisturbed floodplain forest</b>



## Results for nature

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- longitudinal connectivity
  - running water in the side-branch, divers ecosystem
  - semi-natural alluvial forest on the island, halted invasives
  - returning species – better life circumstances (beaver, black kite, otters, wader birds)
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## Results for people, ES

- clearer drinking water
  - angling, fishing
  - water sports – rowing club
  - recreation, tourism (beach, canoe, excursions)
  - aquarius nature study trail
  - more space to the river >> flood peak mitigation
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Fotó: Szökőcs - Mo













The flood level rises the  
information panels



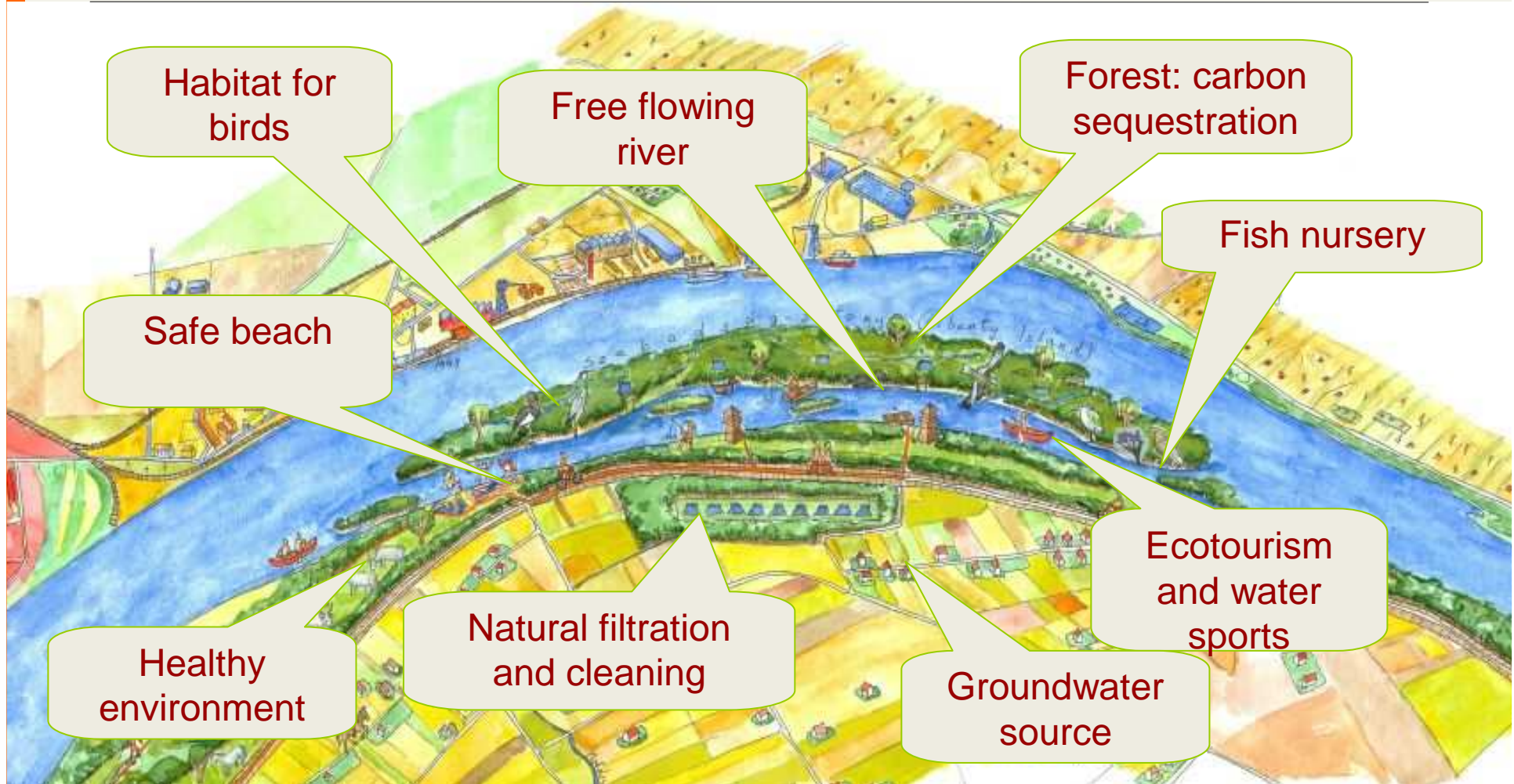
The end of the pole stops the  
panel







# Opportunities offered by the Liberty Island and side-arm



Before....







Before....

...and after.

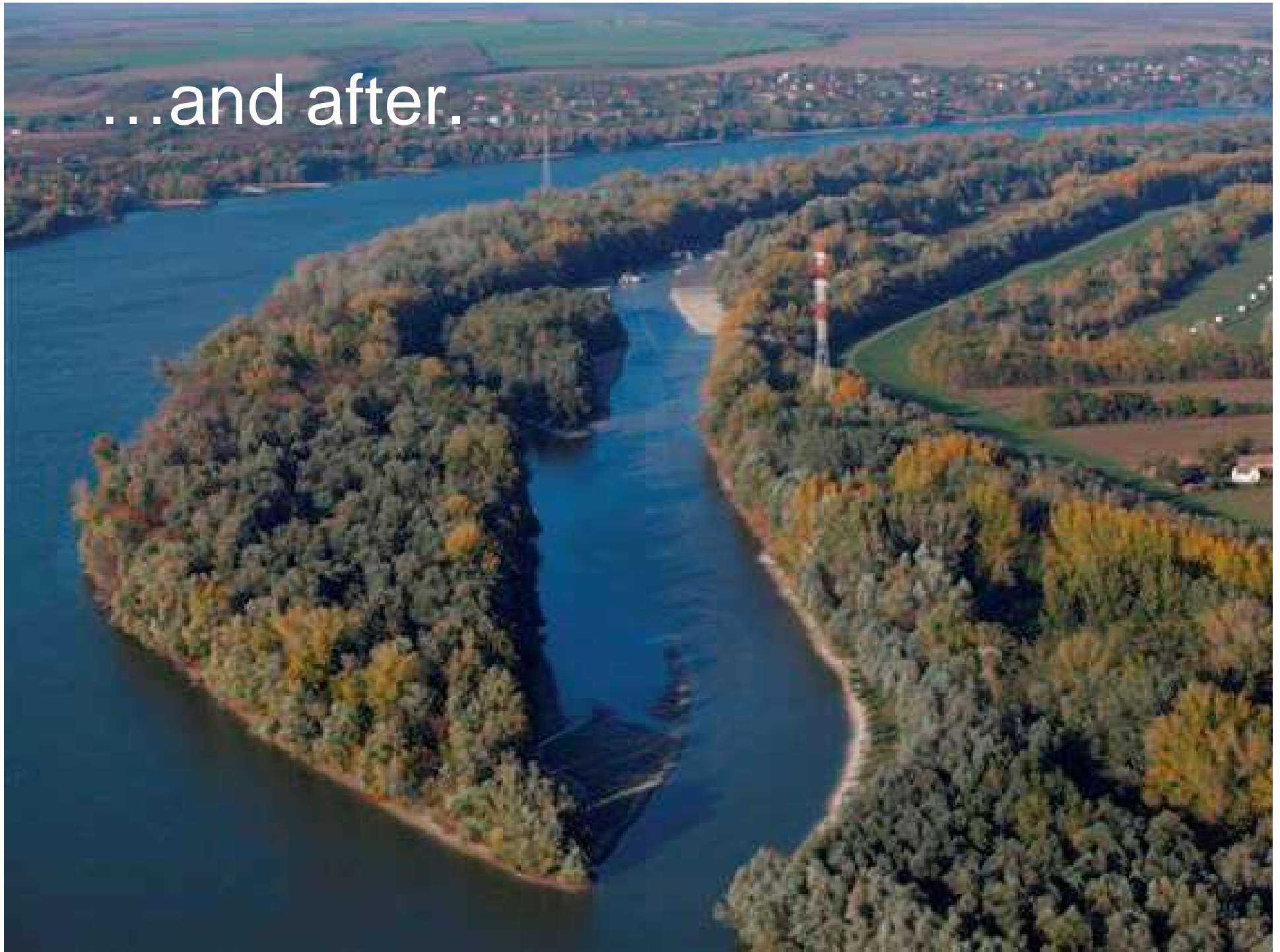


Before...



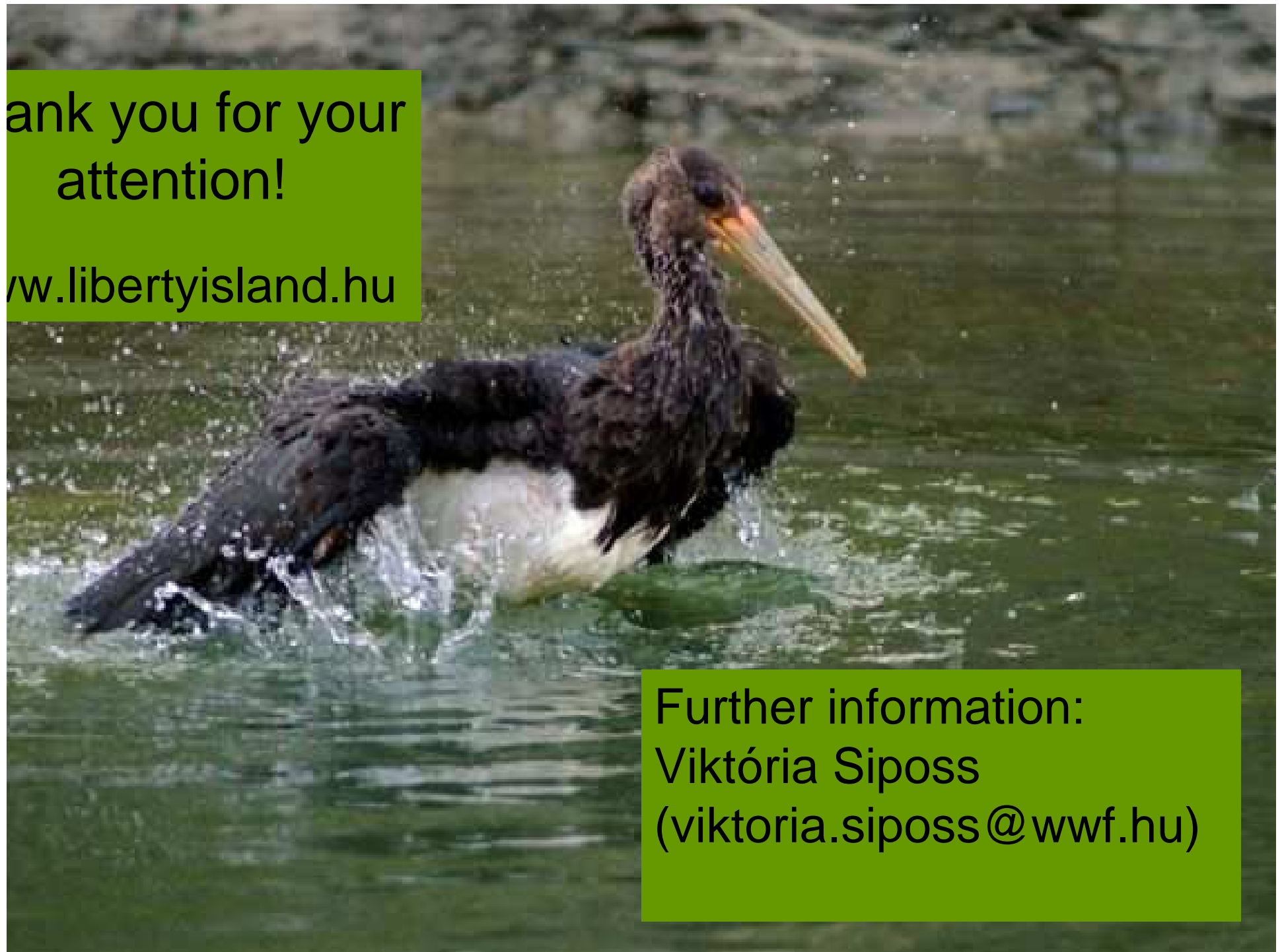


...and after.



Thank you for your  
attention!

[www.libertyisland.hu](http://www.libertyisland.hu)



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