

A photograph of a lush green floodplain with tall trees and their reflections in the water, serving as the background for the text.

# **WWF's experience in Danube basin floodplain restoration**

## **Lessons learnt and main challenges**

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WWF objectives



## WWF CEE freshwater targets

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- Halt/mitigate future freshwater ecosystem deterioration stemming from unsustainable infrastructure development (hydropower, navigation, flood protection, gravel excavation)
- Restore and maintain ecosystem quality through good management, habitat restoration, sturgeon conservation





The Danube has lost more than 80% of its wetlands over the last 150 years. But today water quality is improving, and there is growing commitment to conserve and restore valuable wetlands across the Danube basin.







# 2

## WWF floodplain restoration projects





## Liberty Island and side-arm restoration - HU







## Low quality forests and rockfill dam causing.....

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.....serious siltation in the side-arm







## Shallow /no water causing bad water quality







## Aims of the project

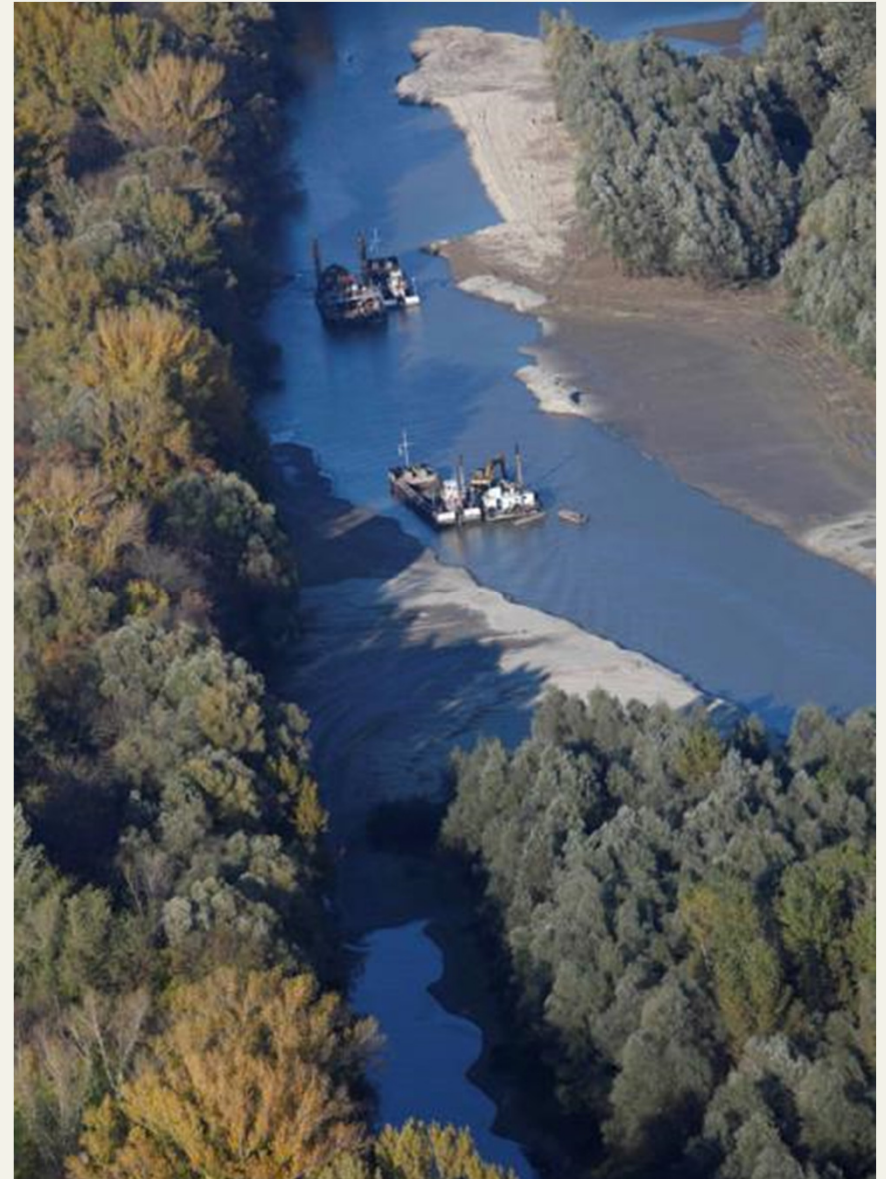
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- continuous waterflow in the side-arm
- improve wetland ecosystems
- undisturbed semi-natural forest on the island
- Enhance ecosystem services
- Establish field example for replication





## Dredging in the sidearm







## Opening of the rock fill dam, relocation of dam







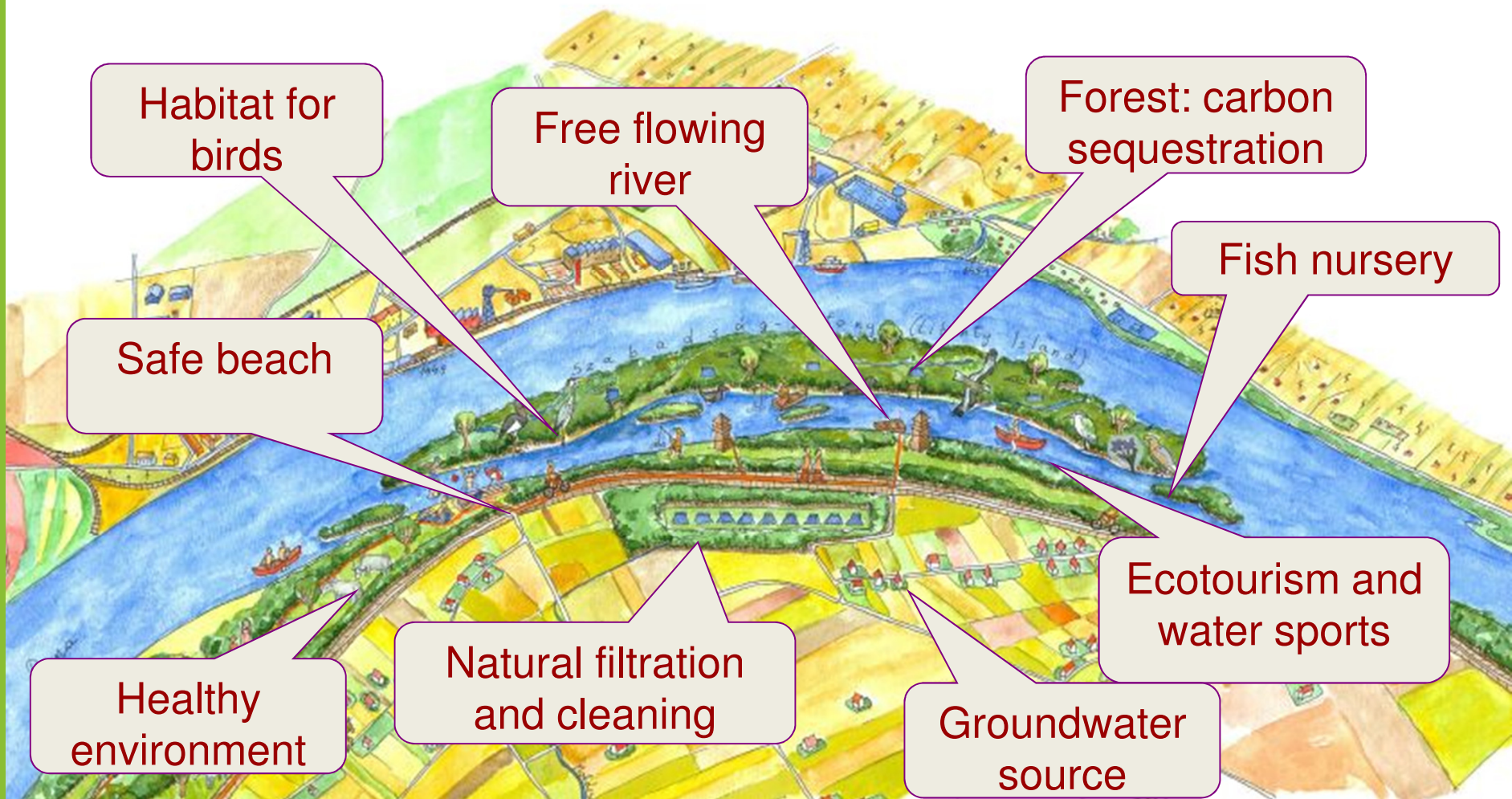
## After restoration...







## „Services” offered by the Liberty Island

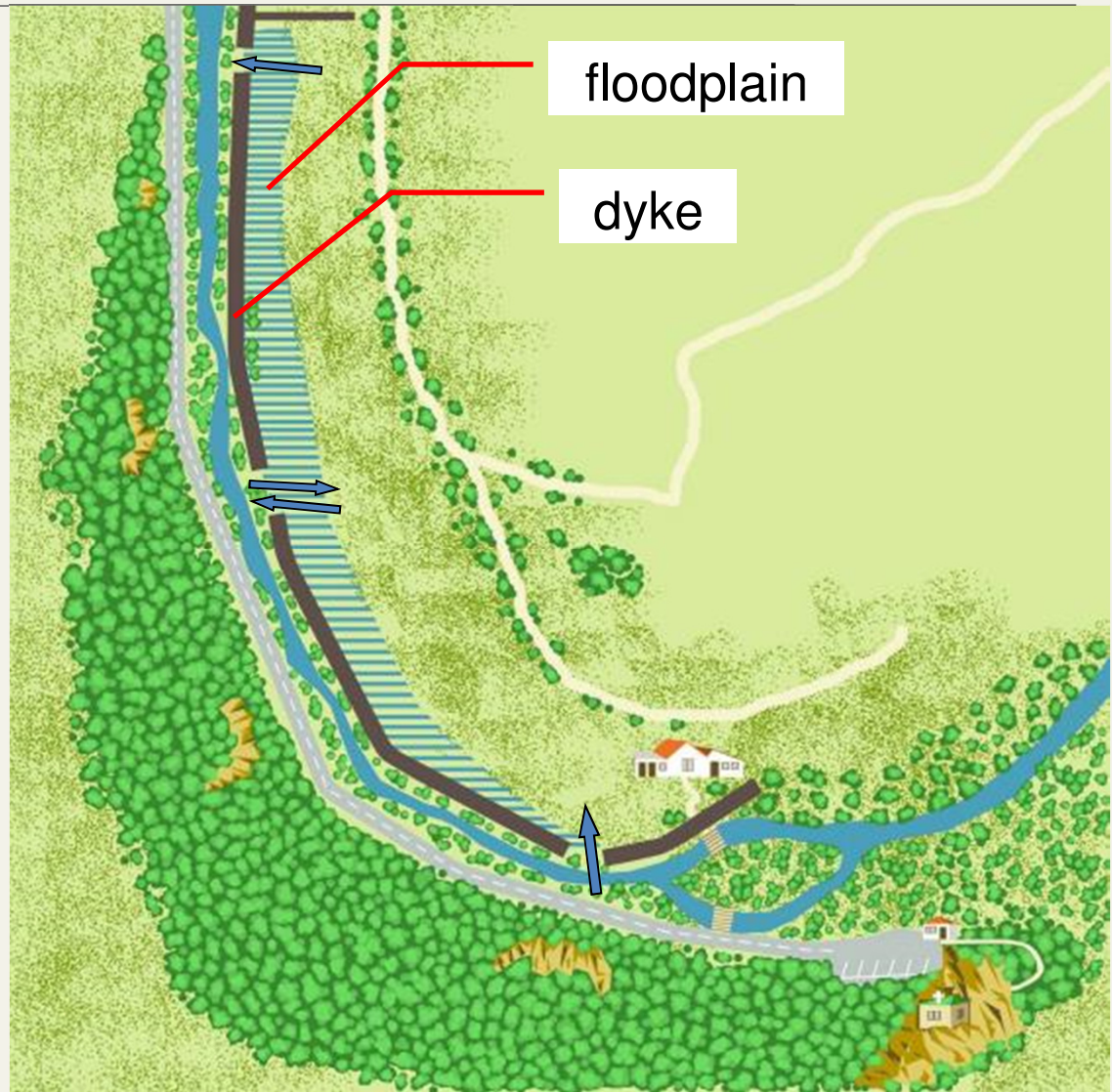






## Restoration of the Rusenski Lom River - BG

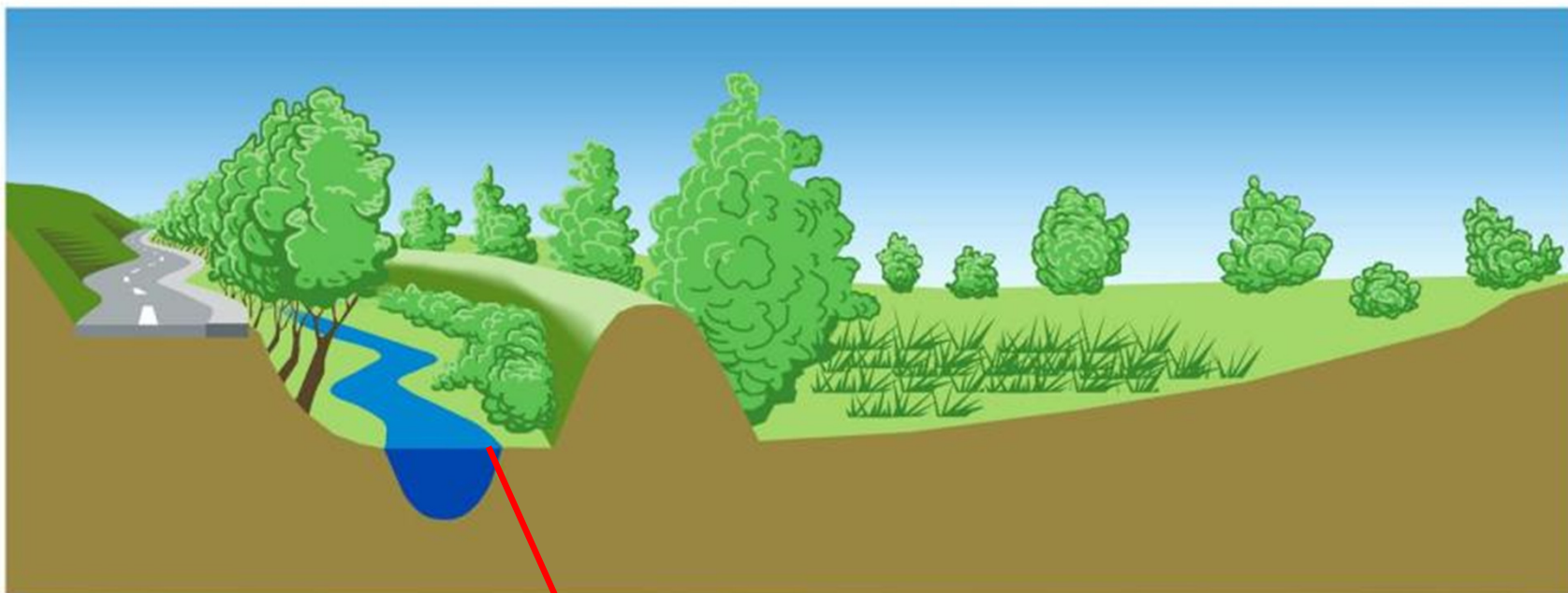
- Russenski Lom River flooded road
- River not replenished after flood
- 2006: bridge washed away







## Average water level

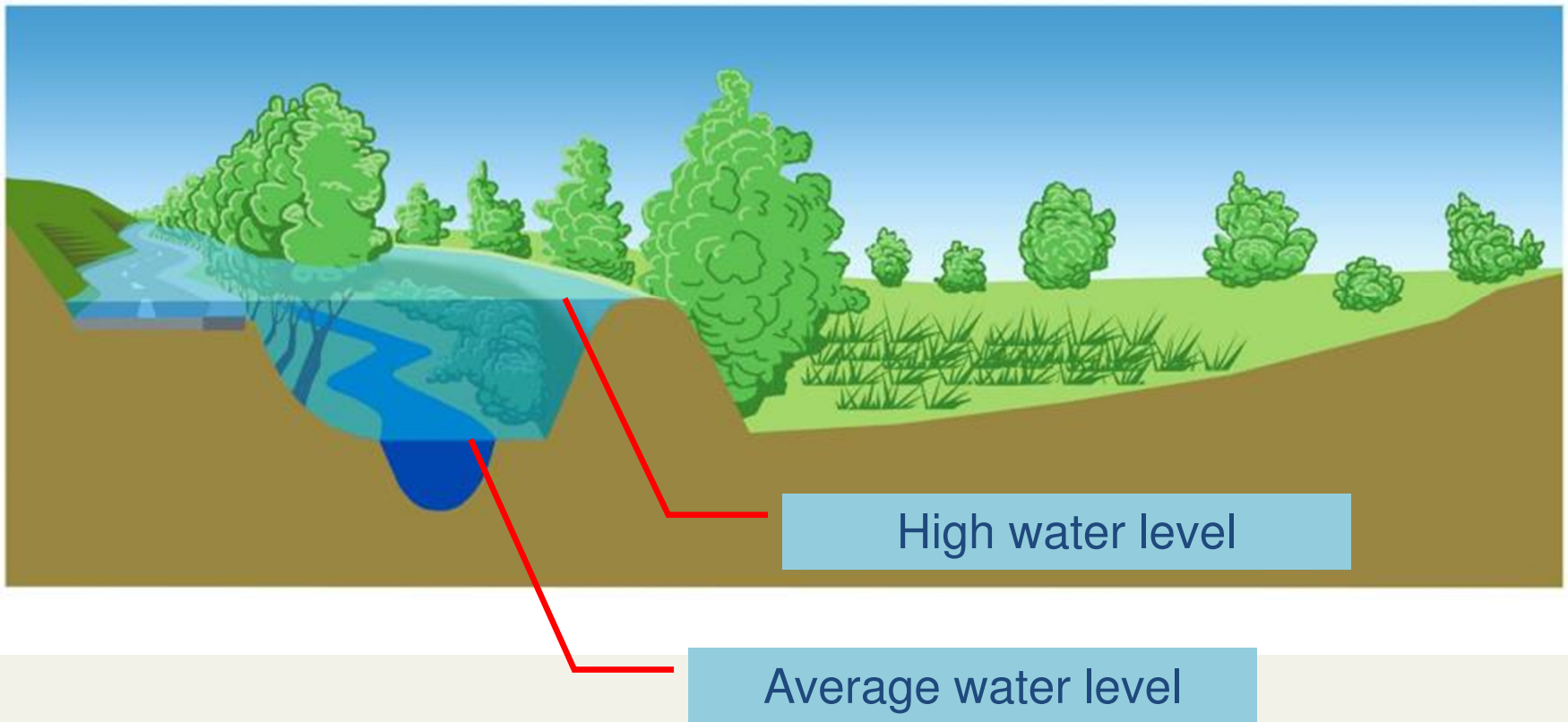


Average water level





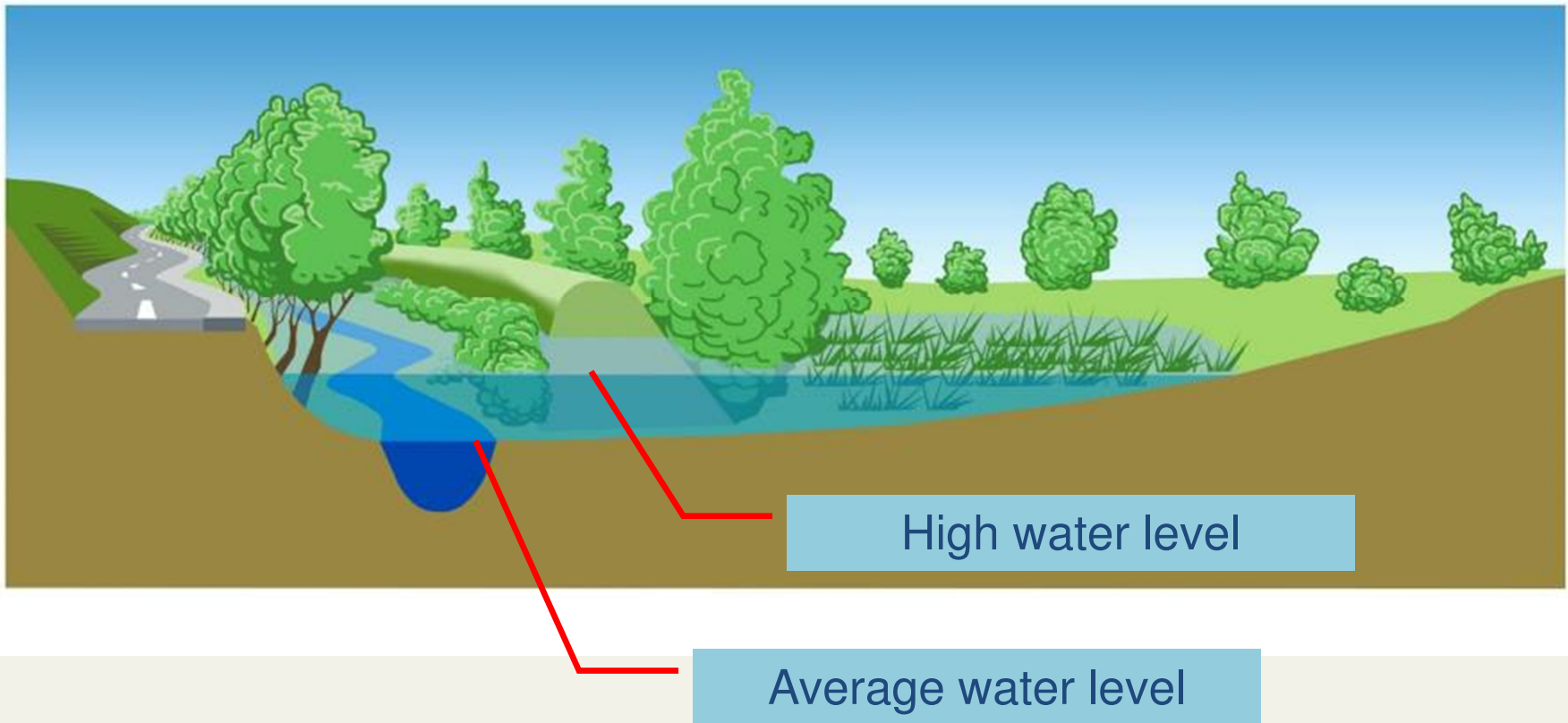
# Flooded road



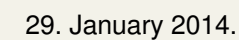




# Opening of the flood protection dykes









## Balta Geraiului restoration - Ro

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### Problem:

Drainage of former wetlands to improve conditions for agriculture (...not very successfully)

a) water springs were collected through a large longitudinal channel along the Danube's terrace and drained into the river

b) small drainage ditches divert the water from the former wetland into a second collector that drained the water into the Danube.





## Balta Geraiului restoration – Ro Solution: fill in ditches

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## Balta Geraiului restoration - Ro



29. January 2014.





# 3

## Lessons learnt



6. November 2012.



## Challenge land ownership

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- (Large) number of land owners / area
- Floodplain restoration often requires change of land use
- interest of stakeholders diverging
- Weak public participation / stakeholder involvement processes





## Challenge finance

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- Harmful agricultural subsidies
- No/lack of financial incentives for changing land use
- No/ lack of integration of financial schemes
- Payment for ecosystem services schemes difficult to set up
- No viable long-term financial mechanism for sustainable land use after restoration



## Challenge knowledge

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- Lack of knowledge how to plan and implement larger scale restorations
- No prioritisation / strategic approach





# 4

## Recommendations



6. November 2012.



## Lessons learnt

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- More time to investigate area, define restoration objectives including, include local knowledge;
  - each site requires specific solutions in specific socio-economic context;
  - Economic incentives / alternatives for landowners/stakeholders increase local support
  - Monitoring from day 1 and for many yrs
  - Prioritisation approach would help
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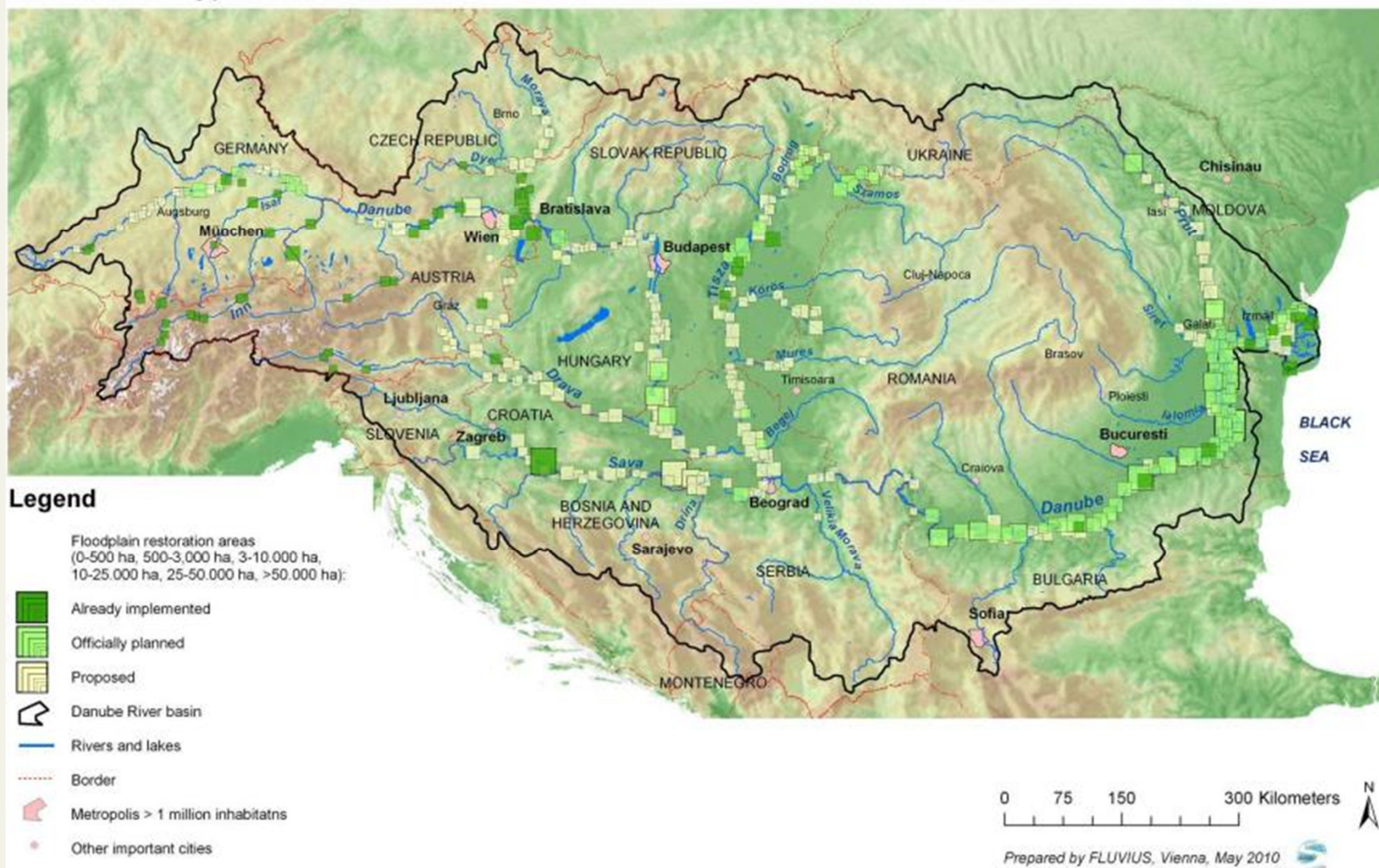


# DRB restoration potential



WWF for a living planet®

Floodplain restoration areas (implemented, planned, proposed)  
along the Danube and major tributaries





## NWRM project

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- Collect and analyse lessons learnt/knowledge of how to overcome obstacles and reach solutions effectively (e.g. financing)
- Analyse knowledge and funding gaps and identify ways of filling them in future
- Identify ways of ensuring long-term monitoring
- Promote integrated, prioritised solutions





# Thank you!

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