

An aerial photograph of a wide river with a large, forested island in the center. To the left of the island, there is a small industrial or power plant facility with several buildings and a pier. To the right of the island, a golf course with green fairways and sand traps is visible, surrounded by more forested areas and some agricultural fields. The text is overlaid on the right side of the image.

Harnessing nature for sustainable water resources management

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Content

Example Liberty Island, Hungary

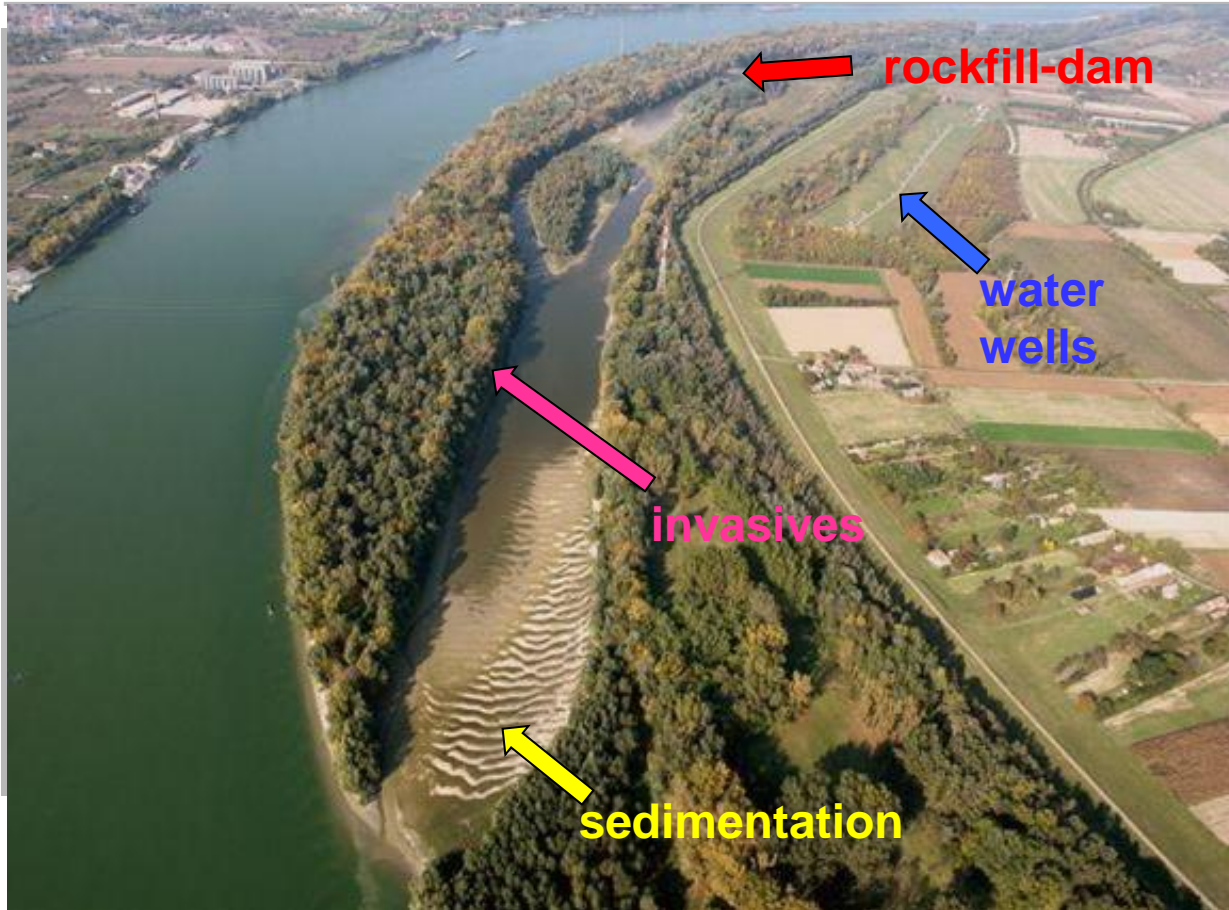
Example Reghin, Romania

Example Bistret, Romania

Obstacles

Conclusions

“Liberty Island” restoration in Hungary - before



Motivation and resources

Mayor with vision to foster recreation, drinking water supply, nature conservation in integrated fashion

WWF searching for restoration pilots that show multiple benefits

Partners: state bodies, local institutions, corporation

Duration: 2009-2013

Funding: LIFE Nature, budget of 1,795,529 Euro

“Liberty Island” restoration in Hungary - after



Results

Water: secured drinking water quality

Fish: Better conditions for angling, fishing

Recreation: Improved recreational use (beach, canoe, excursions)

Floods: More space for the river - flood peak mitigation

Nature: invasive plant species in check

Watershed rehabilitation in Reghin city, Romania



Restoration of channel Canalul Morii (old arm of Mureș river) in Reghin, in past used for transportation and electricity generation; garages and kiosks built on banks

Expected benefits:

- Reduce flood risk
- Reduce river bed erosion
- Create green spaces for sports and leisure
- Space for gastronomic facilities
- real estate added values
- Know-how generation for NbS

....still in the planning phase!

Economic impact assessment by Earnst & Young



Economic impact assessment

Canalul Morii Reghin - Nature based watershed rehabilitation

3 November 2020

02 Economic impact summary

In our analysis we calculated the annual economic impact that the analyzed investment can have in Romania through the economic activities carried out. The investment will take place over a period of 5 years.

Summary of total (direct, indirect and induced) annual effects to be generated by the analyzed investments:

Canalul Morii investment



Source: results from EY Spectrum model



Why this investment?

- ✓ Potential for replication in cities
- ✓ Integration of NbS for flooding&erosion control
- ✓ Urban regeneration by transforming rivers into points of social and economic interest.

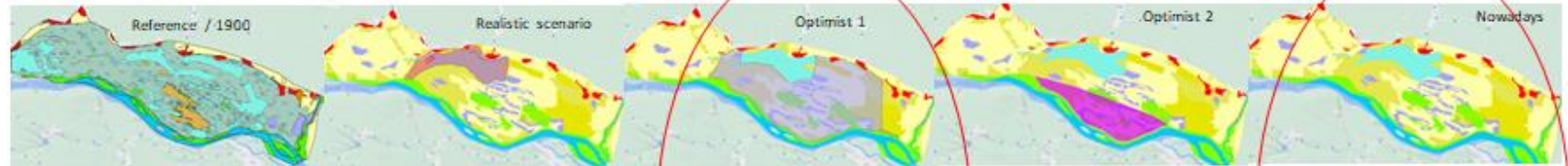
⇒ **River restoration in cities has a high return in terms of job creation, fiscal impact and urban standard of living**

Economic arguments:

- ✓ Added value generated in the economy
- ✓ Jobs created in the economy
- ✓ ROI: government revenues generated

Floodplain restoration along the Romanian Danube, Bistret

Ecosystems values (EUR/yr) by restoration option



EUR / year (agriculture)	1,006,668	4,377,906	2,867,670	4,156,542	4,417,218
EUR /year (wetland)	26,360,528	4,065,664	12,674,818	5,160,797	2,853,146
Total EUR / year	27,367,196	8,443,570	15,542,488	9,317,339	7,270,364

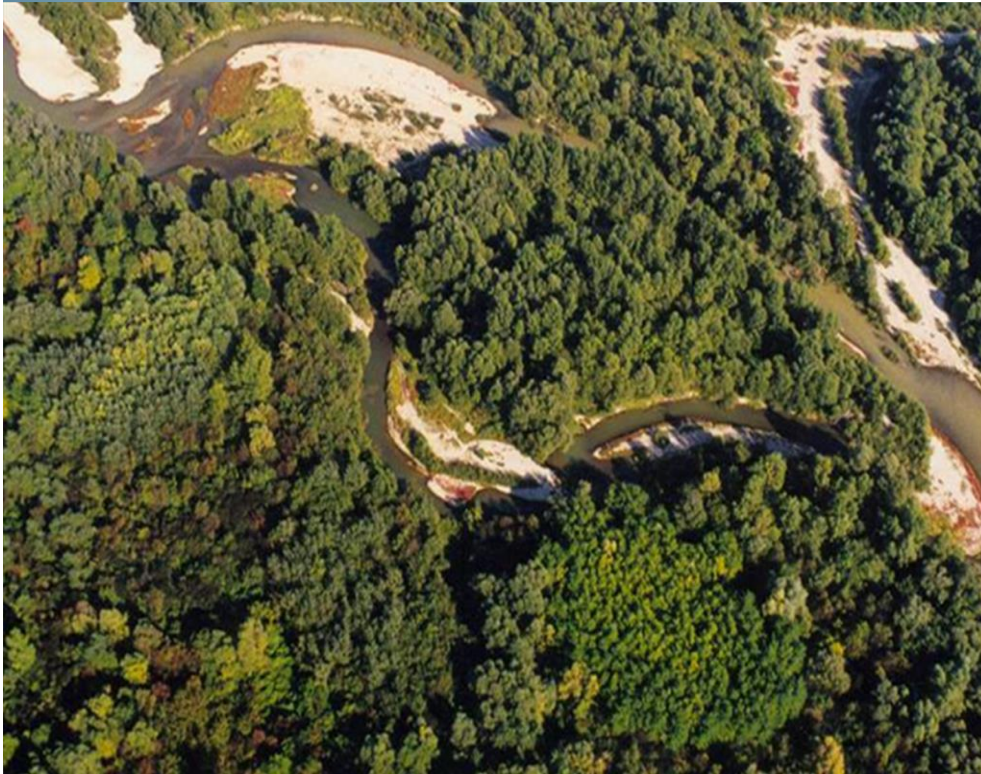
Stakeholder involvement is key for mobilising support for restoration measures – takes time and resources!

Obstacles to Nature-based Solutions (NbS)




- **Trust:** insufficient evidence and pilots that NbS provide the expected benefits
- **Short-term thinking:** NbS need long time to prepare and sometimes to pay off;
- **Complexity:** multisectoral negotiations and solutions needed; no off the shelf solutions
- **Land rights:** often land ownership unclear or there are many landowners to deal with
- **Land use:** strong agriculture interests to maintain the status-quo driven by lucrative agricultural subsidies
- **Knowledge:** insufficient know-how for planning and implementing of NbS; tendency to apply tested approaches
- **Funding:** insufficient project preparation funds; harmful subsidies (e.g. CAP)

Conclusions



- Examples show that harnessing nature for sustainable development can be a **feasible** option
- Nature-based Solutions are still rarely considered as they must **compete with “off the shelf” grey infrastructure** solutions that enjoy higher trust
- Nature-based Solutions usually win over conventional solutions if their **multiple benefits** are being taken into account and costs are written off over longer period of time
- Nature-based Solutions are likely to play an increasing role in **mitigating complex pressures** caused by climate change and grey water infrastructure interventions of the past

An aerial photograph showing a large river, likely the Danube, winding through a landscape. The river is dark blue and occupies the central part of the frame. On the left bank, there are patches of green and brown agricultural fields. On the right bank, there is a dense, continuous forest of green trees. The river flows from the top left towards the bottom right of the image.

Thank you for your attention!

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