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SZÉCHENYI EGYETEM
UNIVERSITY OF GYŐR

DALIA
DANUBE LIGHTHOUSE

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Water Resources Research Group

EcoAdvence online meeting 29. May 2025.

Introduction

PARTICIPANTS OF THE VIDEO-INTERVIEW

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Background

Project background-Large-scale rehabilitation by the Water Resources Agency during the last 30 years

Our research group involvement –Insula historical floodplain

DALIA goal

Quantifying benefits research activity

Knowledge transfer – replication sites guidelines, manuals and consultation

Educational materials – for both local and wider public informing, training, capacity building

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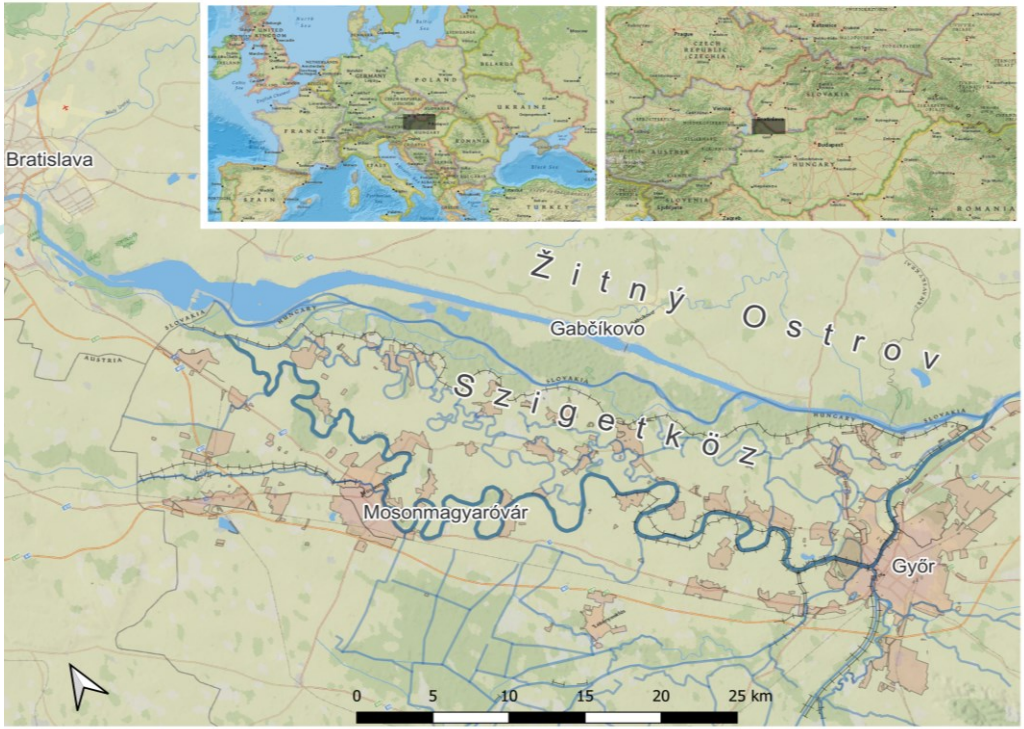
Szigetköz



Total area:	375 km2
Length:	53 km
Width:	6-8 km
Inhabitants:	167.000
Elevation:	110 – 125 m.a.s.l.
Floodplain area:	99%

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Construction of Gabcikovo in 1992

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What is important about this work/project, its goals, what is special or unique about it?

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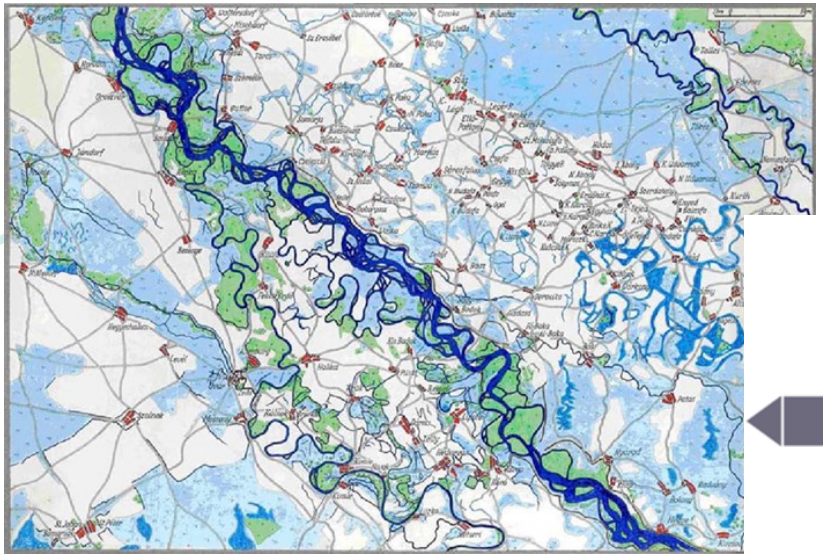
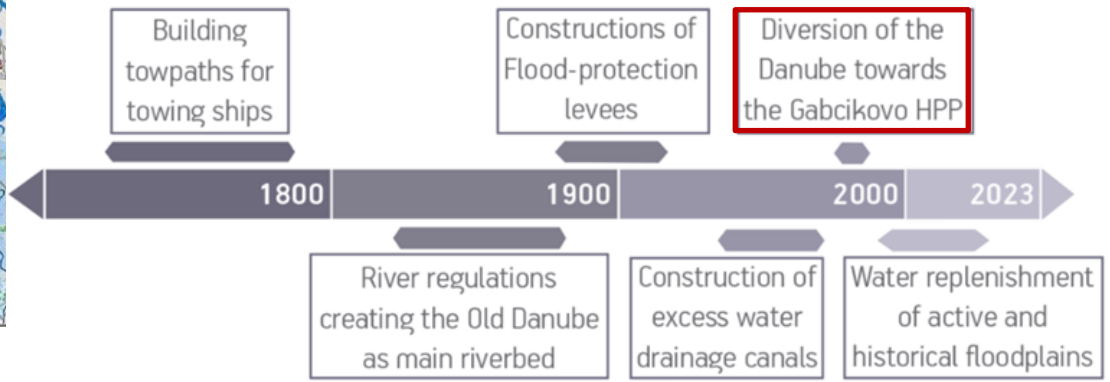
Historical perspective





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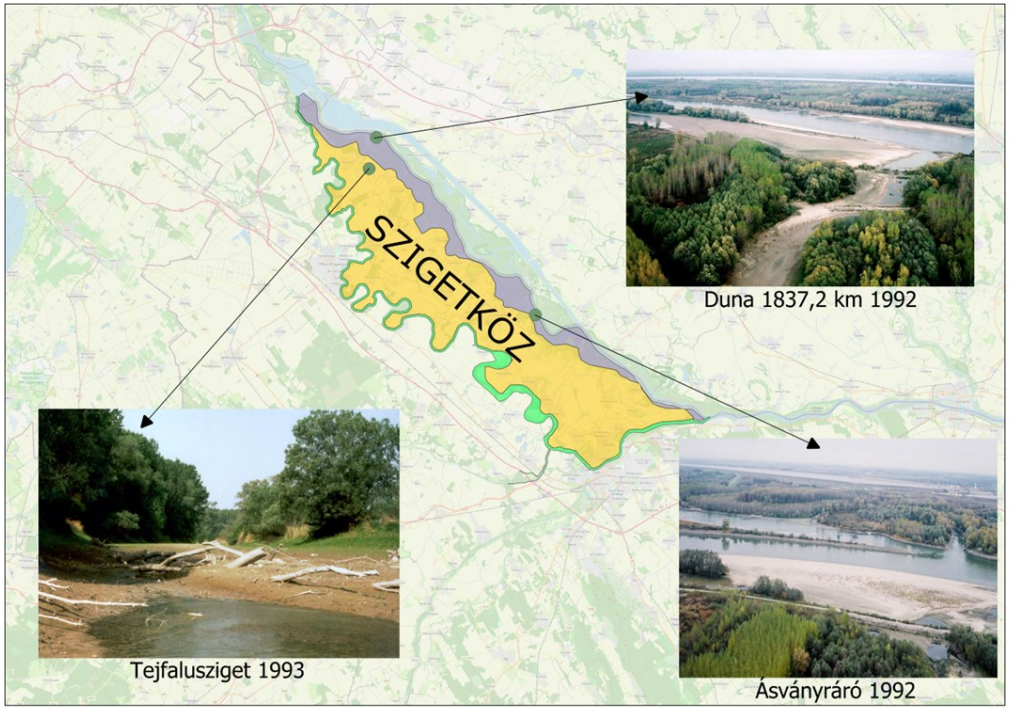
Active and Historical Floodplains in 1992



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Active and Historical Floodplains in 1992

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What measures did you take to achieve the goals of the project?

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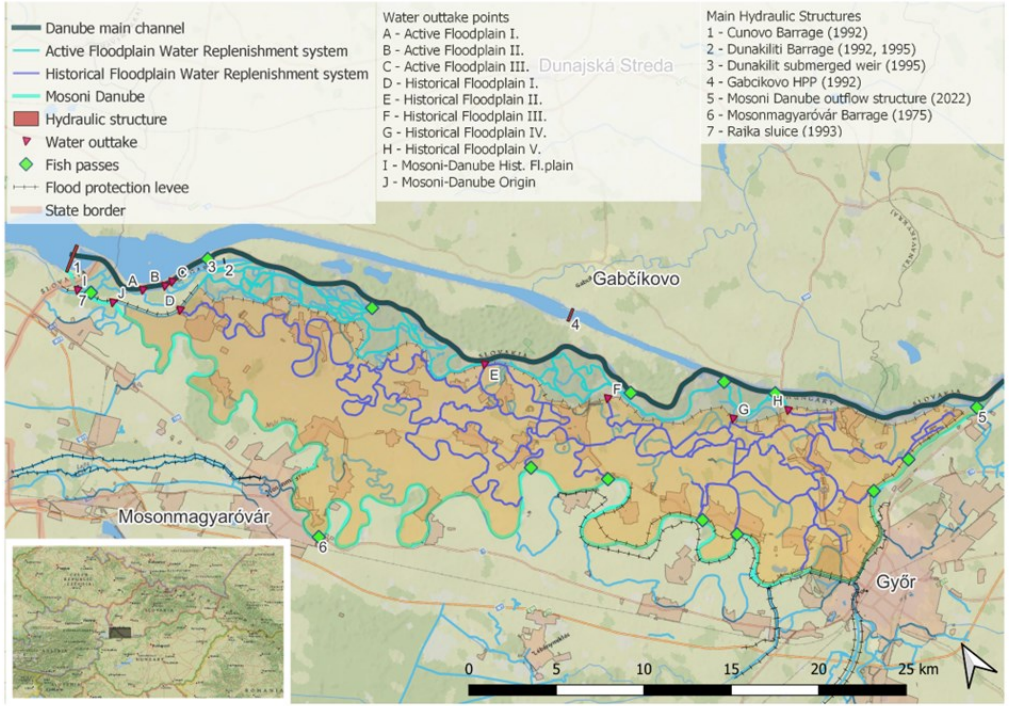
Water Replenishment – 1992-2022



Start:	1992
End:	(2022)
Active floodplain:	120 km
Historical floodplain:	240 km
Mosoni-Danube	125 km
Waterbodies.:	9+1

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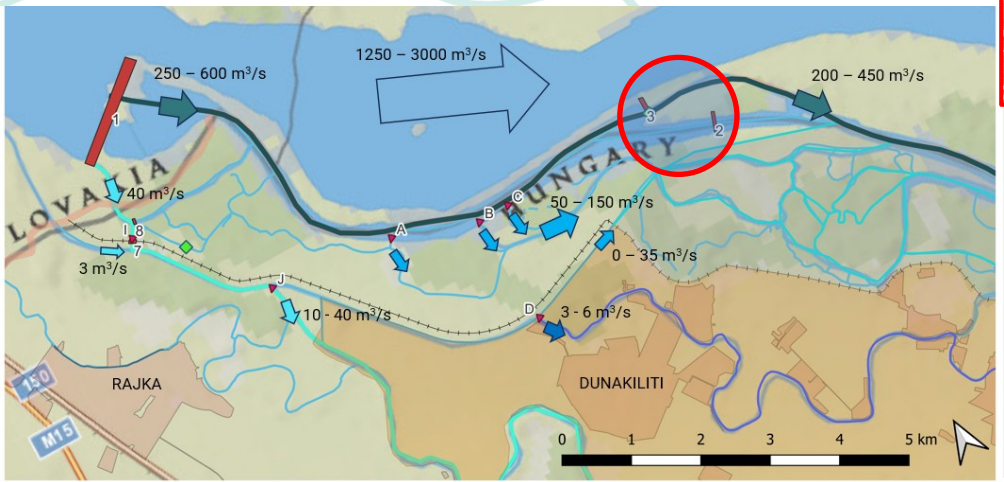
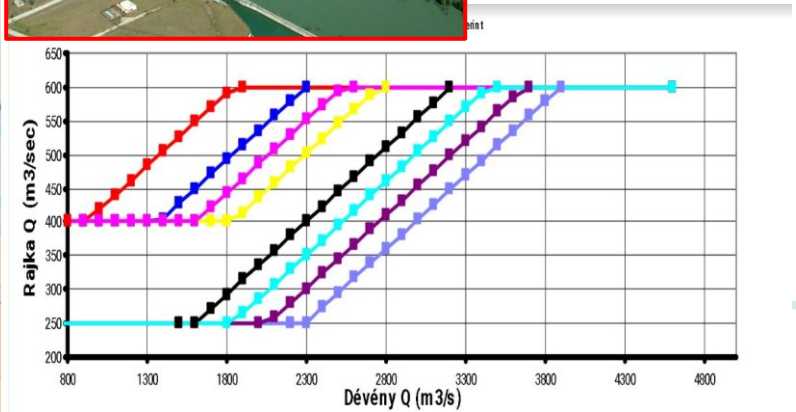
Water allocation – dynamic control





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Fish passages – unique designs

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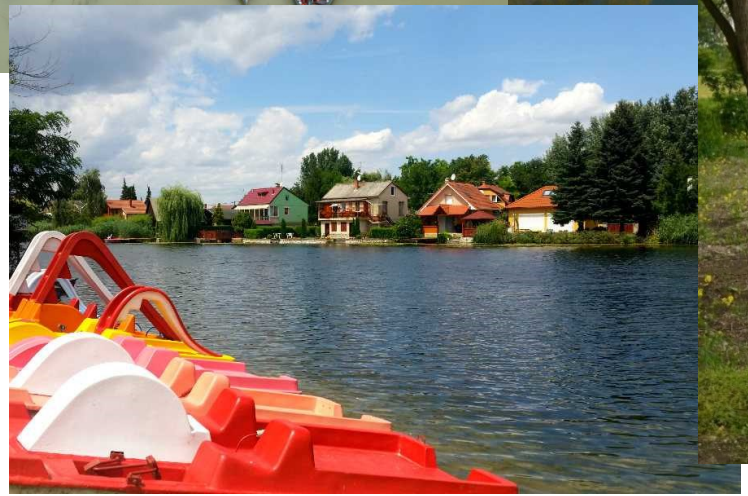
Active and Historical Floodplains in 2023



VIDEO

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Was the project focused on biodiversity as well?

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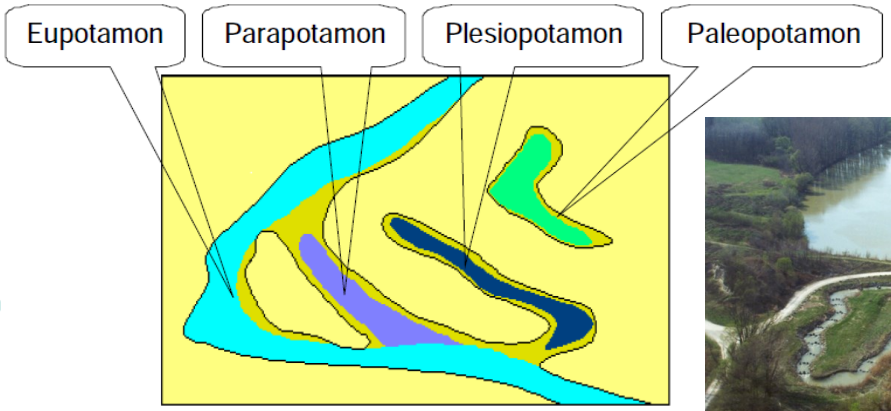
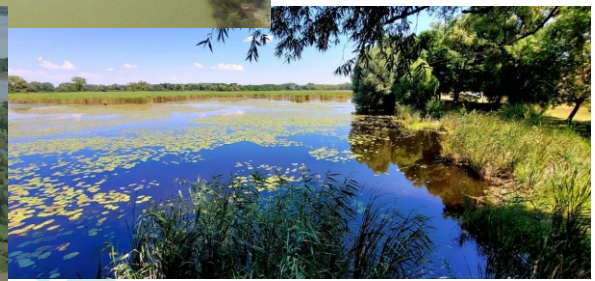
Biodiversity considerations



7-1 Schematic demonstration of the main types of functional sets within the
system according to Amo



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Where did the funding come from and did the funders impose any specific constraints?

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Phases and funding of rehabilitation

Phase	Measures	Primary funding source
Phase I. (1992-1993)	**Emergency Measures and Initial Flow Restoration**	National Government of Hungary
Phase II. (1993-1995)	**Planning and Cross-Border Coordination**	National Government of Hungary
Phase III. (1995-2006)	**Infrastructure Development and Operation (Upper Szigetköz)**	National Government of Hungary
Phase III. (1995-2006)	**Infrastructure Development and Operation (Lower Szigetköz)**	European Union cohesion and regional development funds

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What were the main challenges in implementing this project?

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- International Agreement with Slovakia
- Public Trust and Perception
- Internal Conflict and Stakeholder Compromise
- Planning the water replenishment systems
- Designing and Operating a Gravity-Based Water Distribution System

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How much does the local community have to be involved to make a project successful? Sustainable over time?

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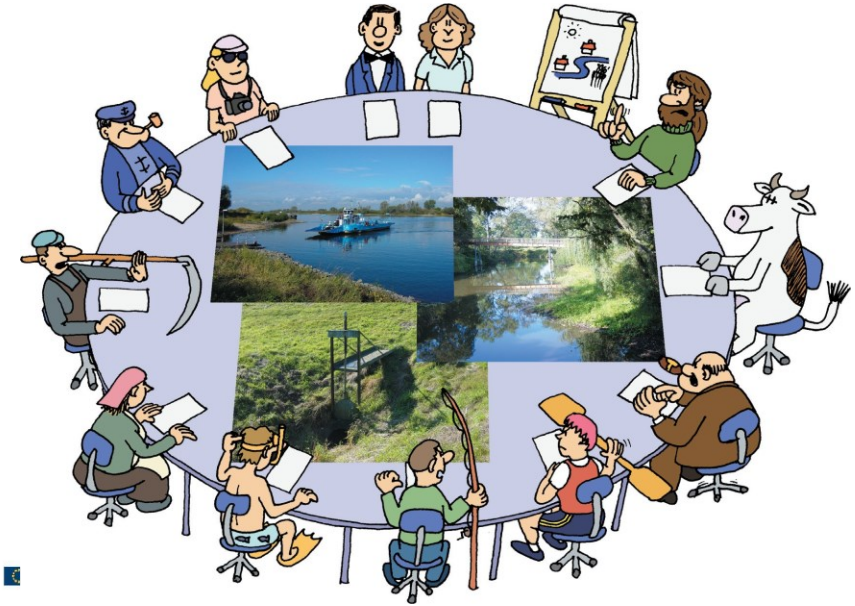
Stakeholder involvement activities



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Szigetköz Operating Committee

All water-related sectors and stakeholders represented

Annual meetings

Supervising, advising and conflict resolution role

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Are there aspects of this project that are specific to the location, region or country? What would be transferable?

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LOCATION SPECIFIC ASPECTS

Inland-river-delta – special ecosystem

Cross-border

Crucial groundwater resource

Most important navigation bottleneck along the Rhein-Main-Danube route

Significant flood risk

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REPLICATION POTENTIAL

1. Design: Technical solutions for gravitational replenishment
   Design guidelines for fish passes
2. Operation: Dynamic Control
   Artificial flooding
3. Policy and Decision-making:
   Conflict resolution and Szigetköz Operating Committee

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How could your experience on this project help others implement successful restoration works?

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REPLICATION SITES

A. **LIFE4LAMPREY -Portugal**

Action: Ecosystem monitoring and restoration

-policy and decision-making

B. **WATER-GUIDE-Bosnia and Herzegovina**

Action: Revitalisation of ecological systems (Sava)

-stakeholder involvement

C. **SMARR – Israel**

Action: NBS to balance economic factors and biodiversity

-design principles into action

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In summary – what are your key messages for those facing the restoration challenge?

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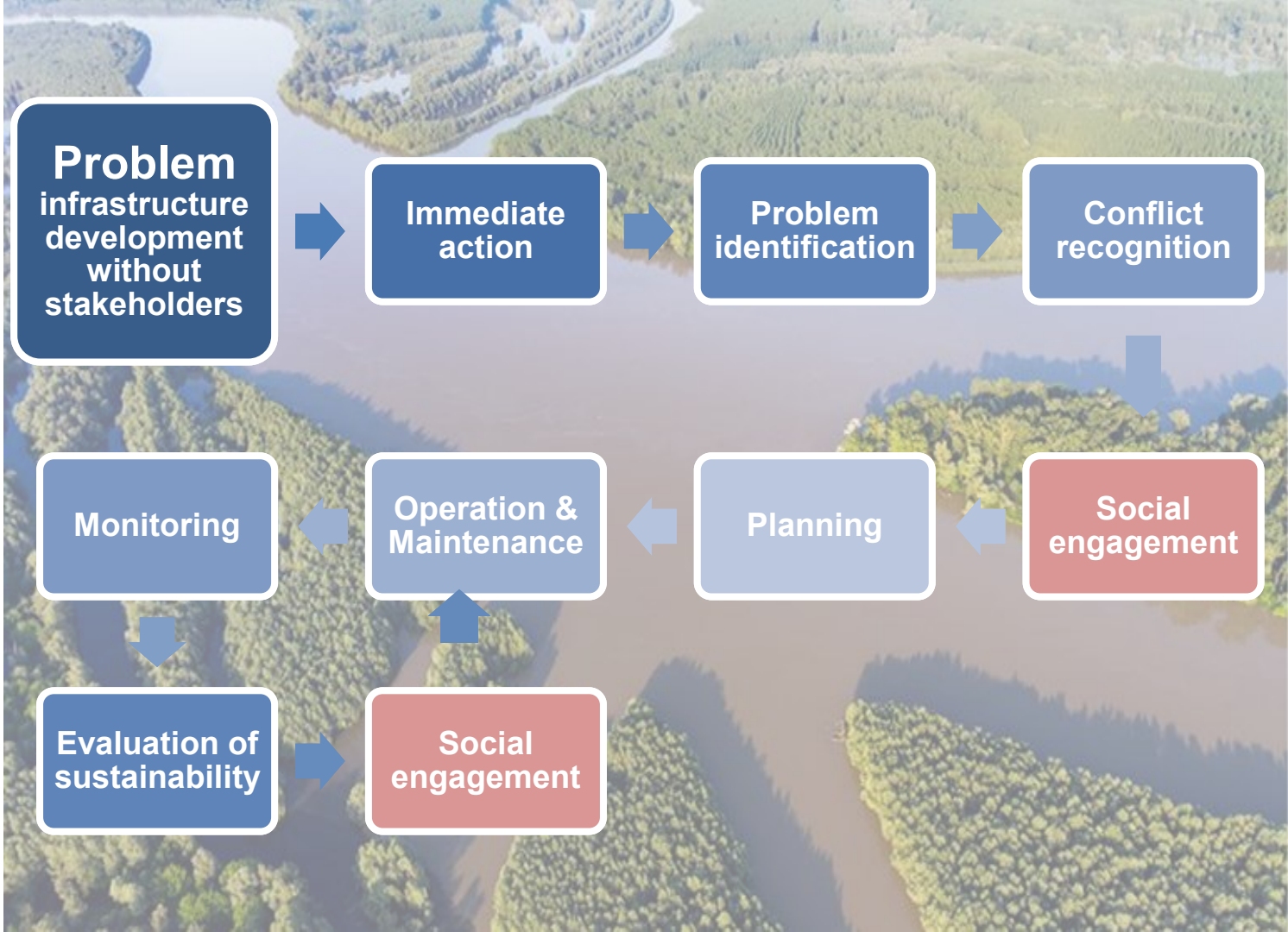
KEY TAKEAWAY

Good water stewardship with social engagement for provision of ecosystem services

Restoration is not just about fixing rivers—it's about reconnecting people and processes. Success requires collaboration, technical expertise, local inclusion, and long-term commitment.



THANK YOU!

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