



LIFE20 CCA/HU/001604

CLIMATE ADAPTATION WITH NATURAL WATER RETENTION MEASURES AT LOCAL AND REGIONAL LEVEL

EXPERIENCES OF LIFE-MICACC & LIFE LOGOS 4 WATERS
PROJECTS

LIFE IP CleanEST project international conference—
25-26 October 2023, Narva

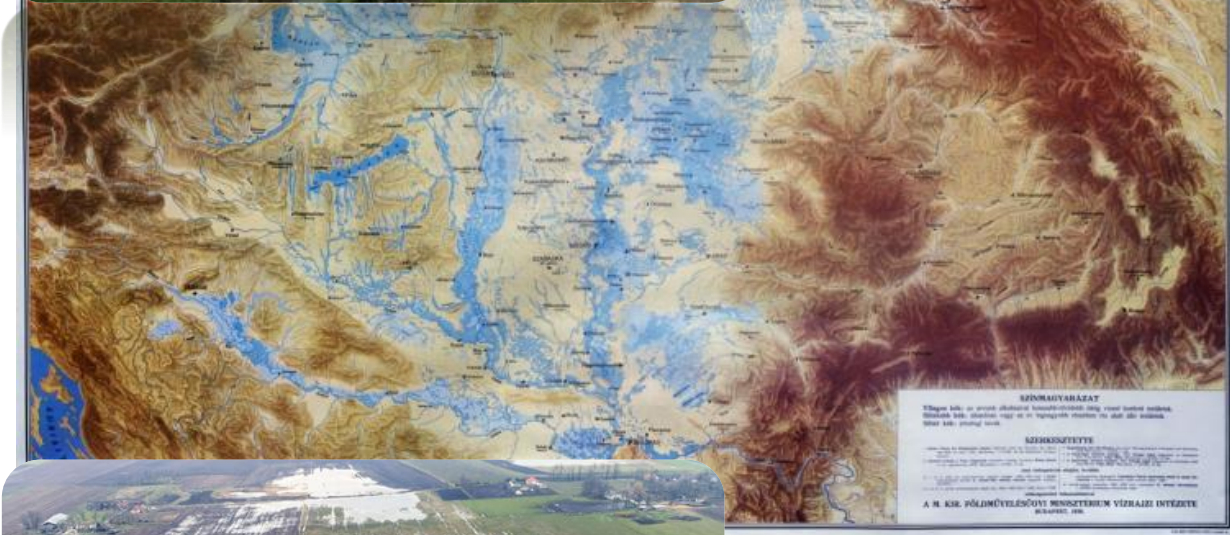
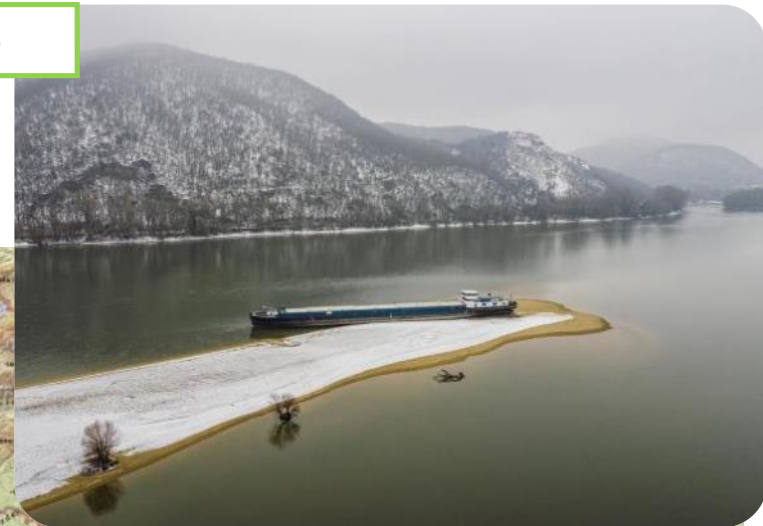


Flash flooding

Water shortage

Effects of climate change

200 ys



Inland water logging

Droughts



Natural water retention measures (NWRMs)



Using or mimicking nature

- Close-to-nature (but not only natural entities)
- Multifunctional
- Small scale
- Self-acting, natural process
- Improves and/or restore soil water retention capacity, aquatic ecosystems, aquifers
- Localized, but spillover effect



Direct effect: increase water retention in river basin (slow down, store, reduce run off), improve quantity and quality of surface and groundwater bodies

Indirect effect: erosion protection, soil protection, creation and preservation of natural wetlands, microclimate regulation, recreation

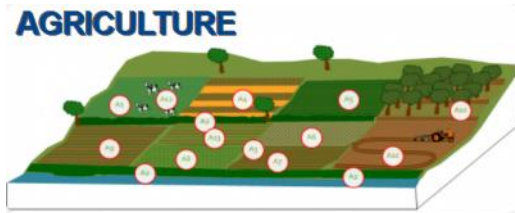
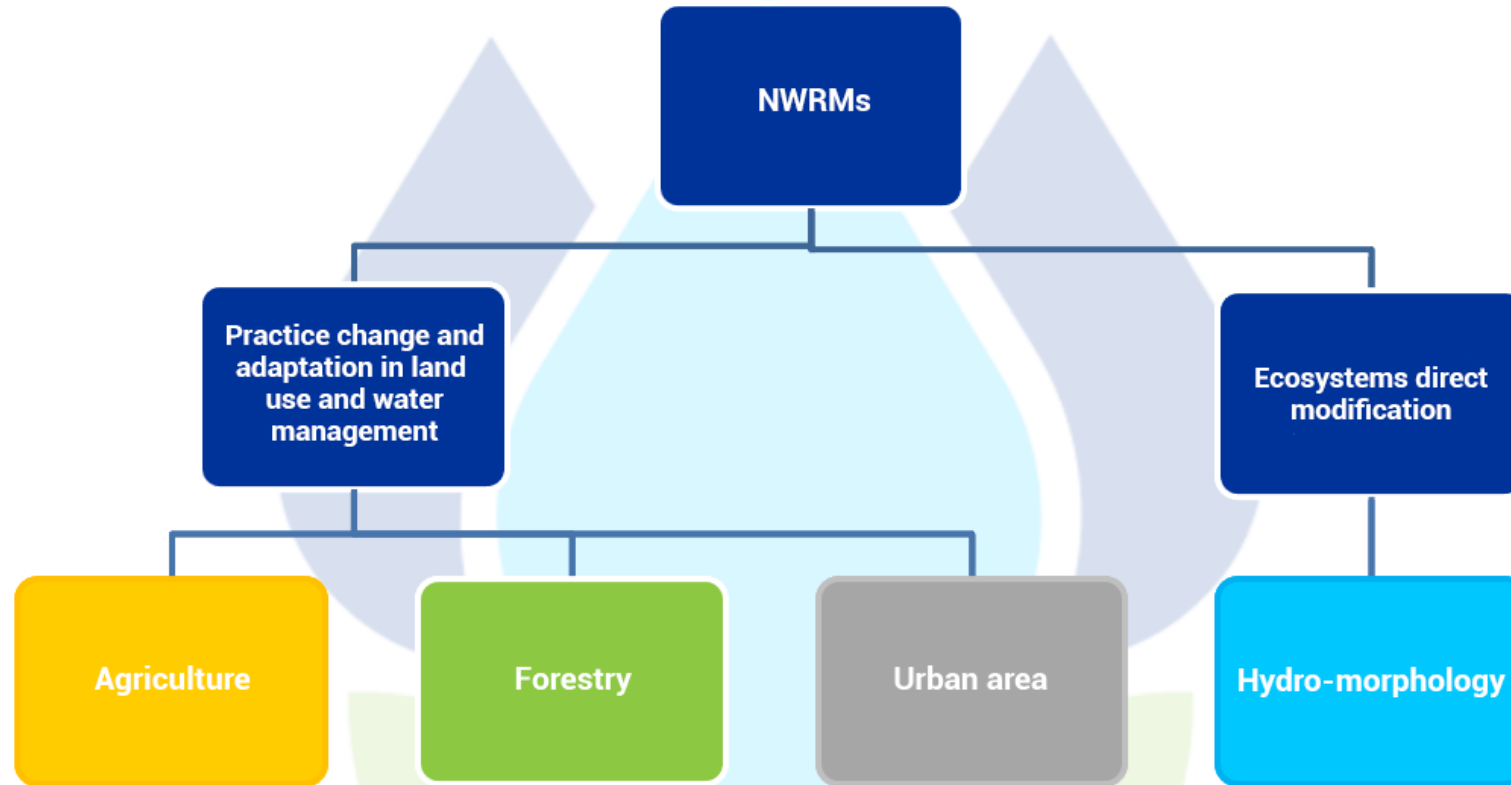


Set of techniques with objectives:

- Ecosystem direct modification
- Attitude change, adaptation



Types and application areas of NWRMs



Why NWRMs?



“Little streams make great rivers!”



Cost-effective



Close-to-nature



Protects settlements



Green spaces



Attractive townscape

Why municipalities?



➤ Municipalities have first-hand experiences at the settlements



➤ Know the potential resources

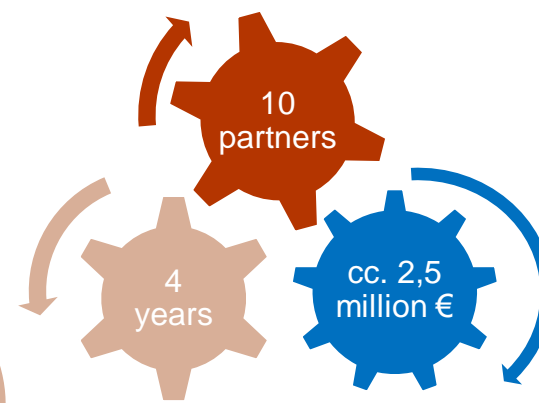
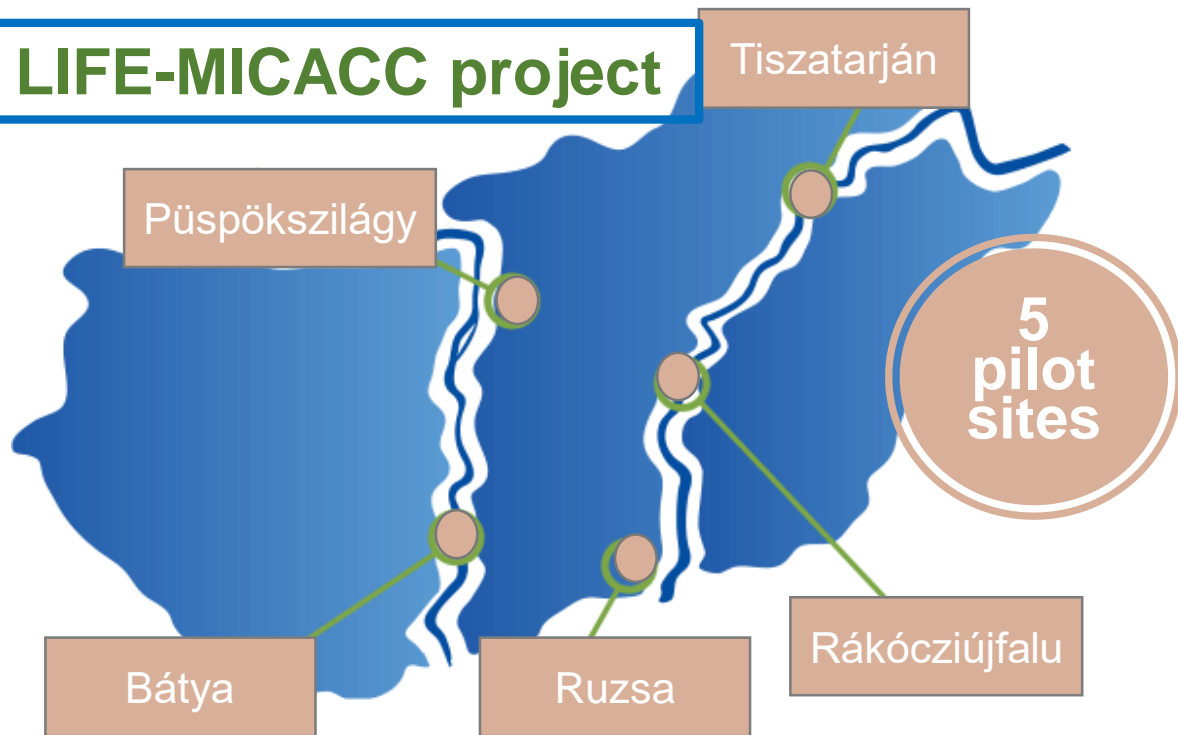


➤ Know the local stakeholders



➤ Form local strategies and plans

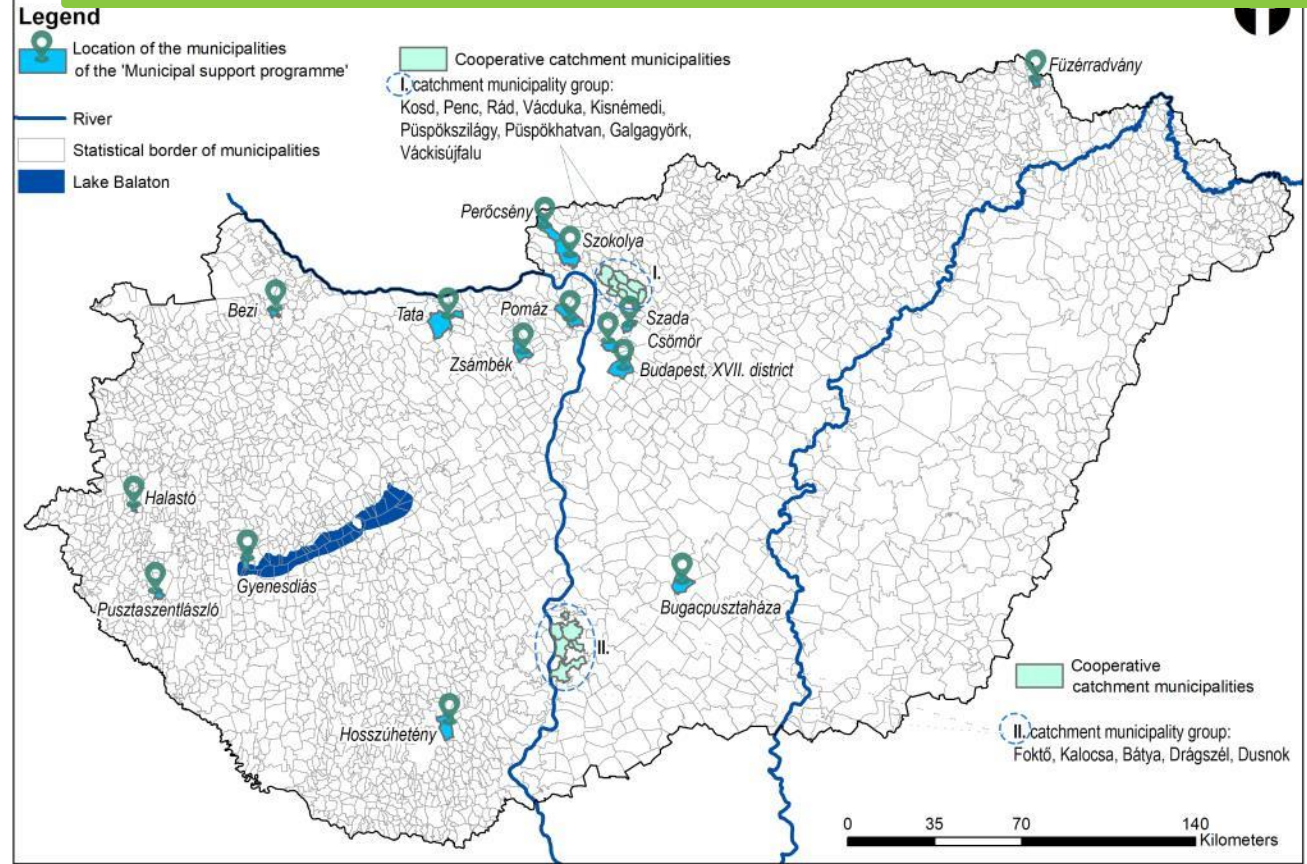
LIFE-MICACC project



<http://nwrmbm.hu>

LIFE LOGOS 4 WATERS project locations

2 demonstration catchments



<https://lifelogos4waters.bm.hu>

Multi-basin wetland to manage inland water inundation



Complex floodplain adaptation model



Slowing the flow with leaky wooden dams



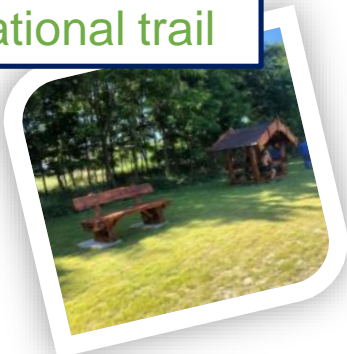
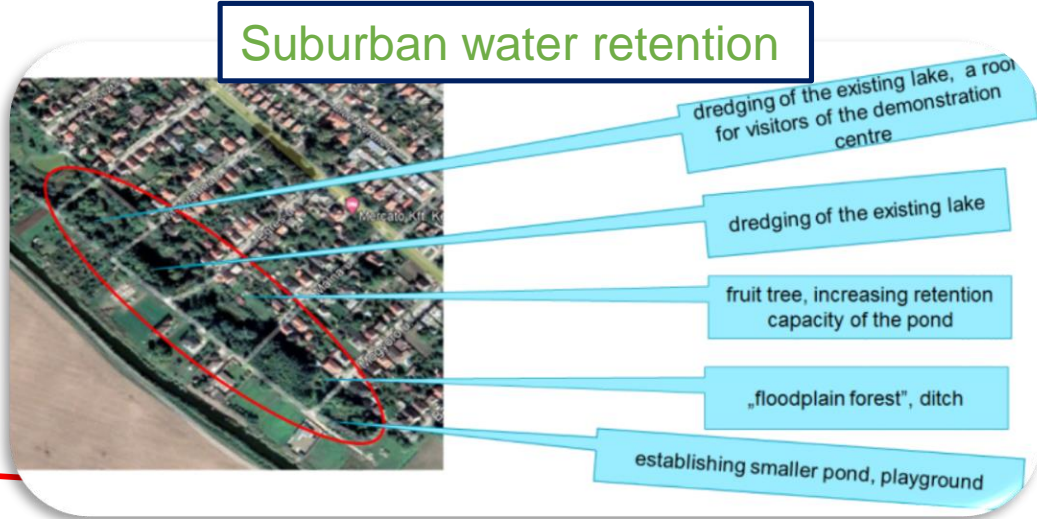
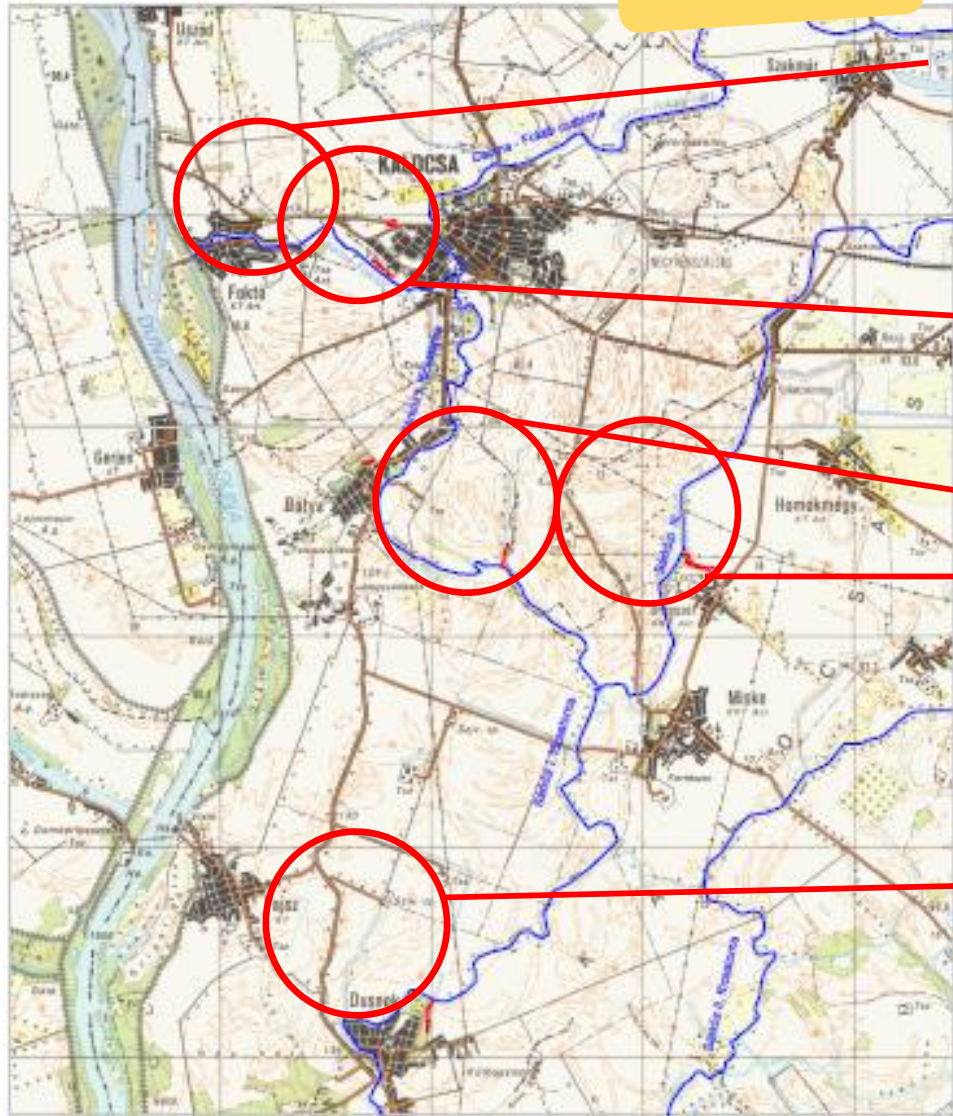
Water retention by grey water reuse



Drought risk management based on water retention

5 settlements
5 NWRMs

Lowland demonstration catchment



9 settlements
15 NWRMs

Hilly demonstration catchment

Log-dams



Sedimentation



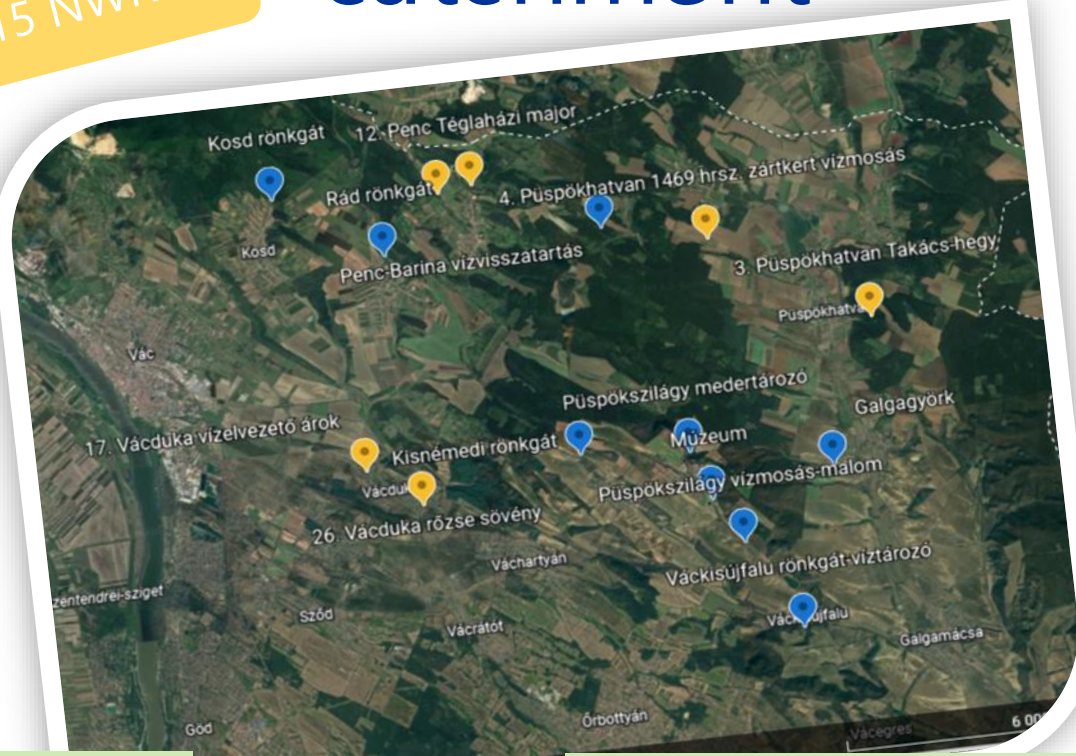
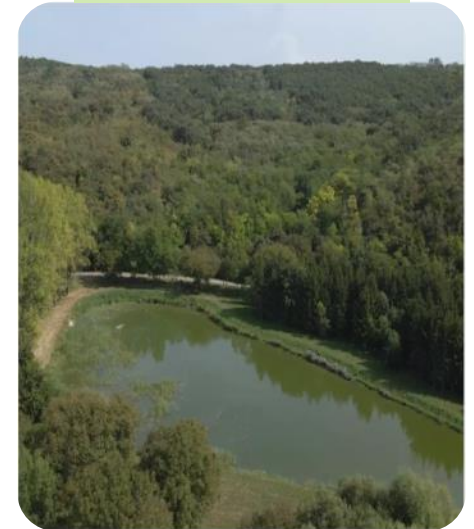
Mud reservoir



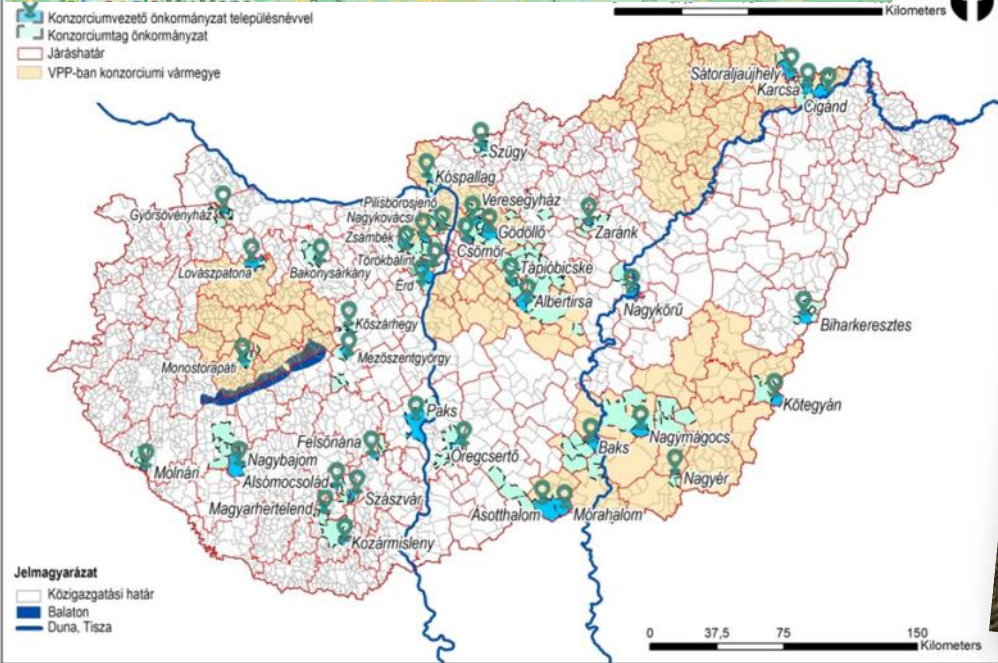
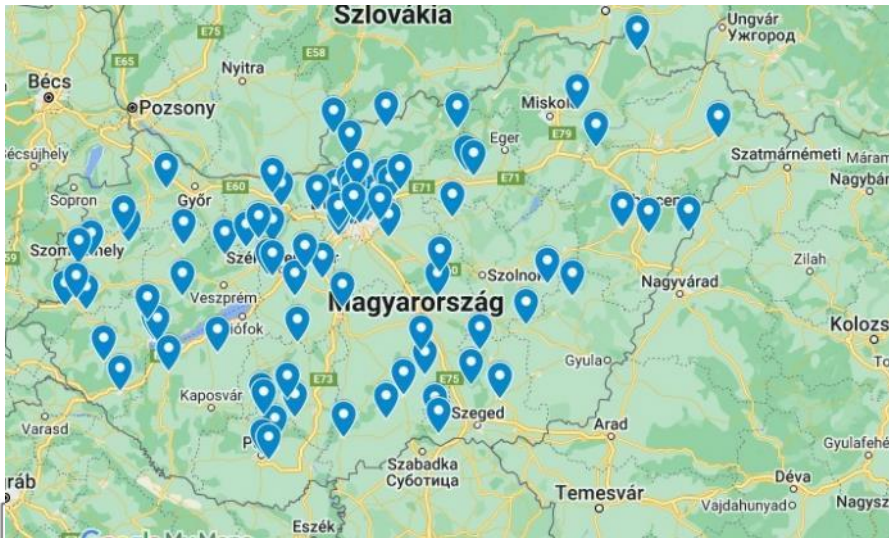
Slowing down, infiltration



Side reservoir



2 support programme for municipalities – 286 participants

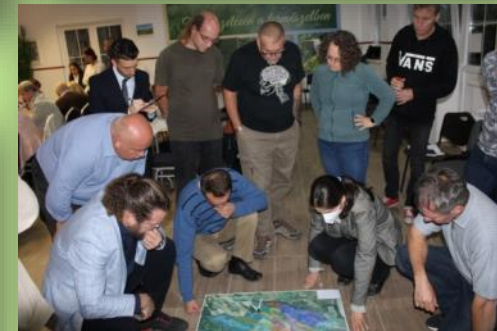
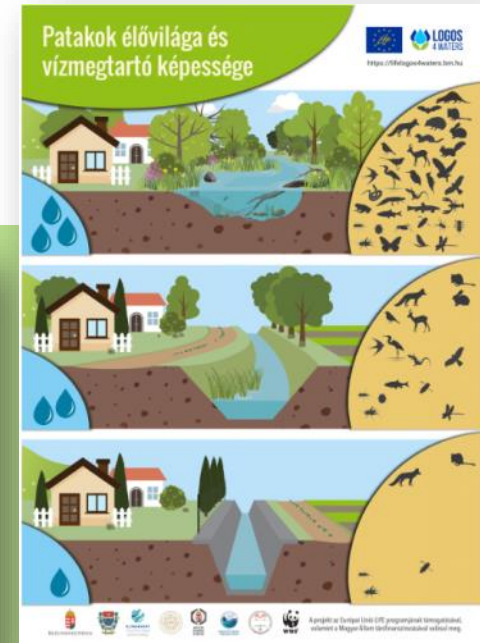


Successful implementation

Multi-stakeholder Catchment Forums

Key issues:

- Inform, involve and raise awareness of local residents
- Understand and address the needs of local stakeholders; bring them closer together
- Preliminary consultations with the licencing authorities
- Multi-sectoral cooperation
- Nationwide awareness-raising



More about our work ...

- **MICACC project film:** <https://www.youtube.com/watch?v=1oNLBn4N0GU>
- **Adaptation guide:**
<https://vizmegtartomegoldasok.bm.hu/storage/dokumentumok/LIFE%20MICACC%20Adaptation%20Guide.pdf>
- **Summary of 5 NWRMs:**
https://vizmegtartomegoldasok.bm.hu/storage/dokumentumok/LIFE-MICACC_Summary%20of%20the%205%20pilot%20NWRMs.pdf
- <https://vizmegtartomegoldasok.bm.hu/en/gallery/video>
- **LL4W leaflet:** https://lifelogos4waters.bm.hu/wp-content/uploads/2022/05/LOGOS4Waters_LA4hajtottENG_JAVnezokep_vegleges.pdf



Thank you for the attention!

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