



# Local climate adaptation by NWRMs - The LIFE-MICACC project



# MAIN CHALLENGES (IN HUNGARY AND IN THE REGION)



- The average temperature is rising
- More heat wave days
- Extreme weather events more often
- Summer precipitation decreases (drought risk)
- Winter precipitation increases (flood risk)



What about water balance?



Does water means risk/danger?

OR

Water is a real value, a treasure to be preserved.

# MAIN FOCUSES OF THE PROJECT



## MUNICIPALITIES

They have first-hand experiences at the settlements → feel the consequences, see the damages of climate change

They know the potential resources → involvement of unused areas, other local opportunities

They know the local stakeholders → can involve and mobilize them

They form local strategies and plans → have the potential power to integrate CCA approach into these documents

## NWRMS

low cost, relatively cheap

small-scale

sustainable for the long run

ecological aspects, biodiversity are taken into account

win-win: good for flora&fauna, and for humans

innovative

design and implement quickly

reuse abandoned areas for water retention

close-to-nature



# THE 5 PILOT SITES– 5 MODEL SOLUTIONS



# BÁTYA



- Annual precipitation is unevenly distributed
- Water surplus and water scarce periods
- Heavy rainfall, inland inundation, drought
- Old claypit → multi-basin lake with open water surface, wetland (1 ha)
- Retain of excess water, recharge of groundwater (heat wave, drought treatment)



# RÁKÓCZIÚJFALU



Dual problem:

Driest region of the country (heat waves, increasing water demand) + frequent inland flooding (from snowmelt in spring)

Inland drainage channel (sluice gate) + retention of excess water in the neighbouring deeper area → mitigation of drought risk, rise of groundwater level

# RUZSA



- More and more drier countryside
- The average rainfall is constantly decreasing, the groundwater level is falling
  - increased water leakage
  - poor water retention capacity

Inland: retaining decanted water from the local waterwork (10-20 m<sup>3</sup>/day) in a small pond

Outskirts: retaining treated effluent water from the sewage treatment plant (150-200 m<sup>3</sup>/day) in a pond





# TISZATARJÁN



The settlement is located on the floodplain of the Tisza River.

Aim: to increase the local flood safety, to prevent the reproduction and proliferation of invasive species on the floodplain  
+ increase retained water resources



The solution increases the flood-receiving capacity of the floodplain and supports the storage of water and the distribution of water in the landscape.

## GENERALLY WE CAN SAY:



- Nature quickly reclaimed its place
- Local micro climate improved a lot
- Recreation opportunities opened (for residents)
- New community spaces were formed
- Average yield improved
- Groundwater level rose
- Drought risk decreased

**→ Work effectively at local level**

The term „NWRM” sounds more familiar than before.

More and more municipalities are interested in similar projects.

# LIFE-MICACC project deliverables

5 press trips to the pilot sites

5 NWRM prototypes at 5 Hungarian municipalities

Recommendations to the Government

Adaptation Guide

21 vulnerability assessments

5 catchment level feasibility studies

Water retention built into the national OPs as required element.

70 Hungarian municipalities joining the Covenant of Mayors

14 roadshow events

the pilot sites

Project webs

LIFE-MICACC mobile application

1 full and 5 short project movies

Hungarian guide for the global Water Risk Filter

Runoff models for catchment sites

Climate adaptation training material for municipalities

6x2 days CCA trainings and 2 trainings for 100 people

4 climate conferences and 1 online

There is higher interest and openness among experts.

# LIFE LOGOS 4 WATERS PROJECT

1st October 2021 – 30th September 2025

„In cooperation for a  
climate-conscious  
river basin  
management”

Disseminate  
the use of Natural  
Water Retention  
Measures  
(NWRMs)

Support climate  
governance on local  
and regional level

Catchment level  
cooperation  
between  
municipalities and  
stakeholders

Education of  
stakeholders  
in key NWRM  
affected sectors

Nationwide  
citizen education  
and information  
sharing



**LOGOS**  
**4 WATERS**

**THANK YOU FOR THE ATTENTION!**

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