



FREE
FLOW

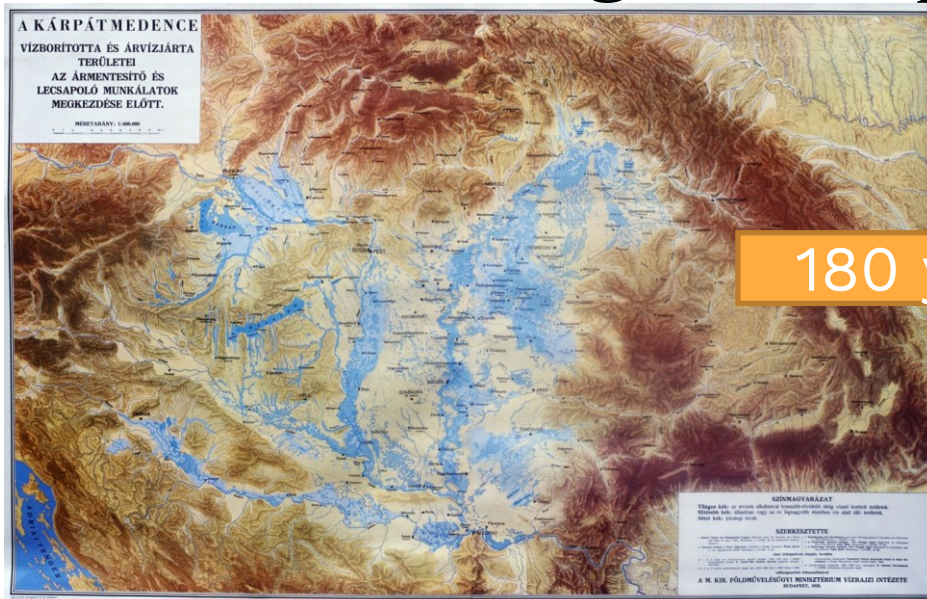
Involving local stakeholders into lateral connectivity restoration along the River Tisza, Hungary

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Ágnes Kalóczkai, Zsolt Pinke

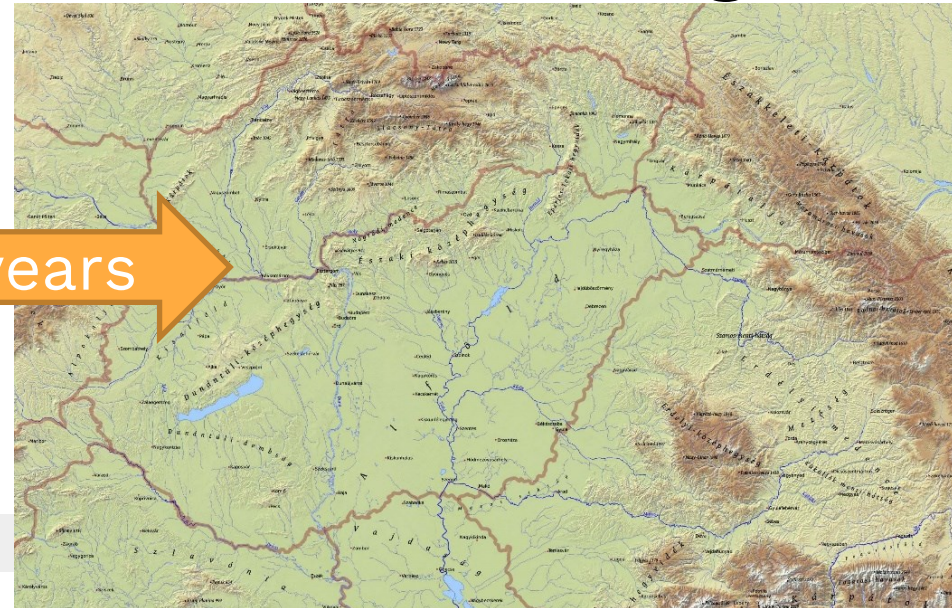
Missing the water of the Tisza



- Rivers used to provide water for dryer plains
- River regulation: **arable lands** ↑ **wetlands** ↓
- Water management optimized for draining

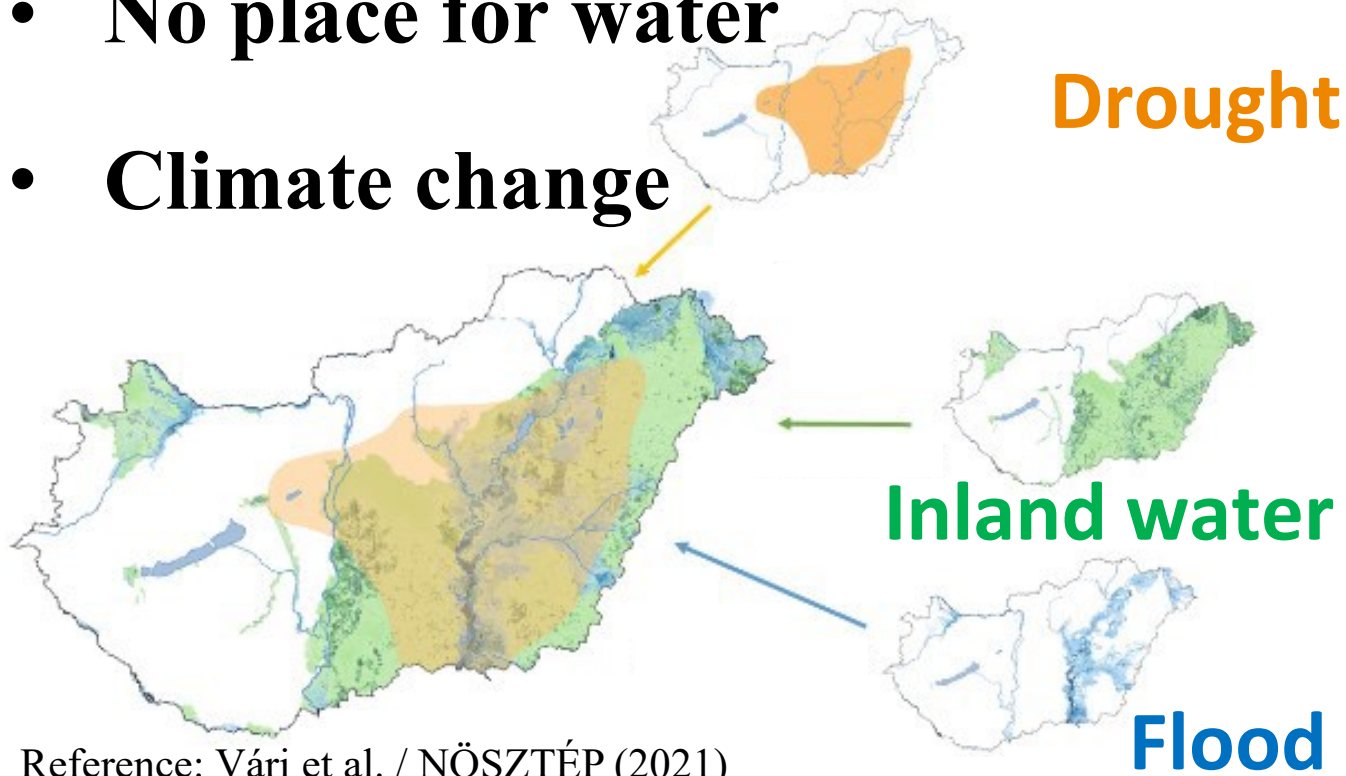


180 years



Drying, increasing extremes

- No place for water
- Climate change



Reference: Vári et al. / NÖSZTÉP (2021)

Involving local stakeholders into lateral connectivity restoration along the River Tisza, Hu

2022



2023



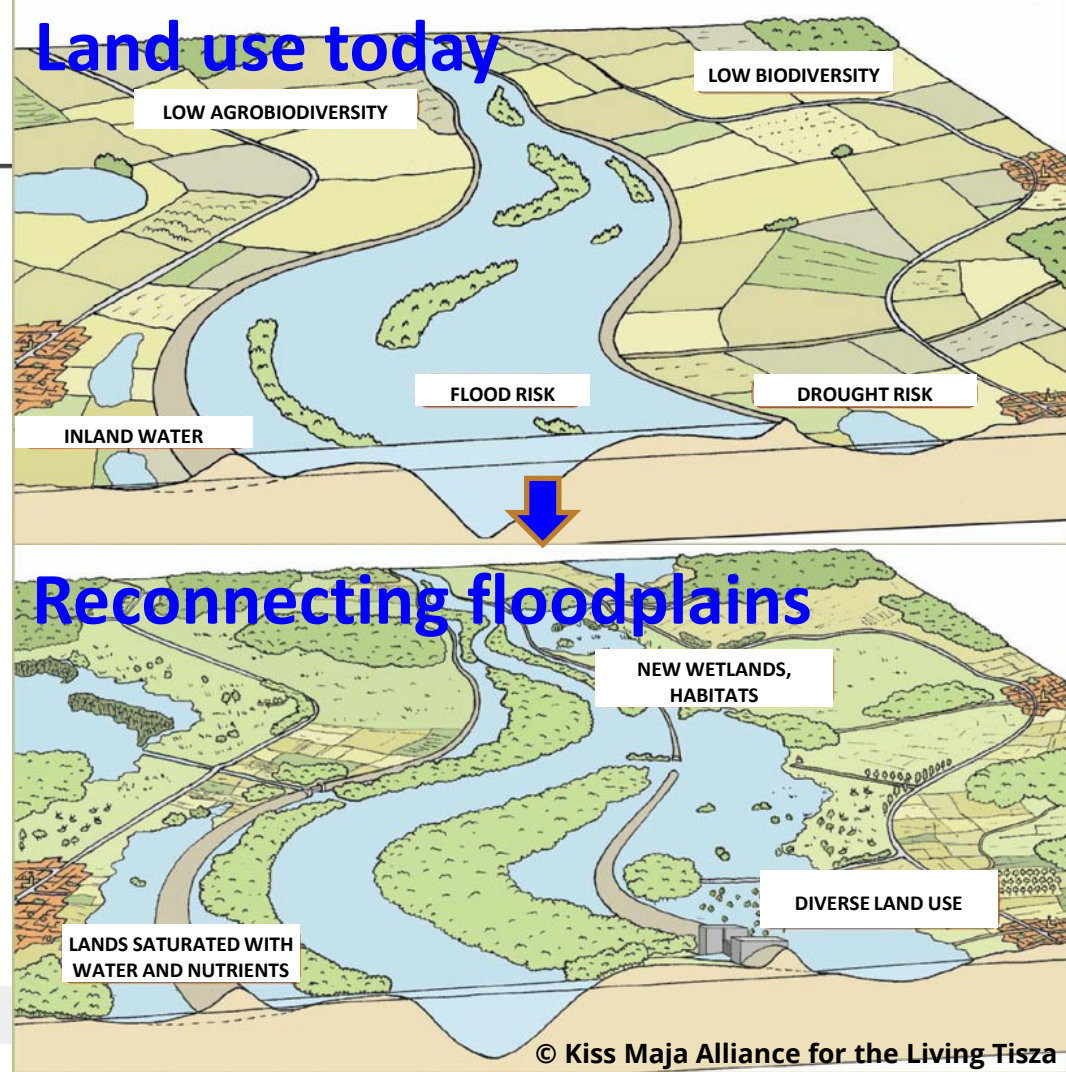
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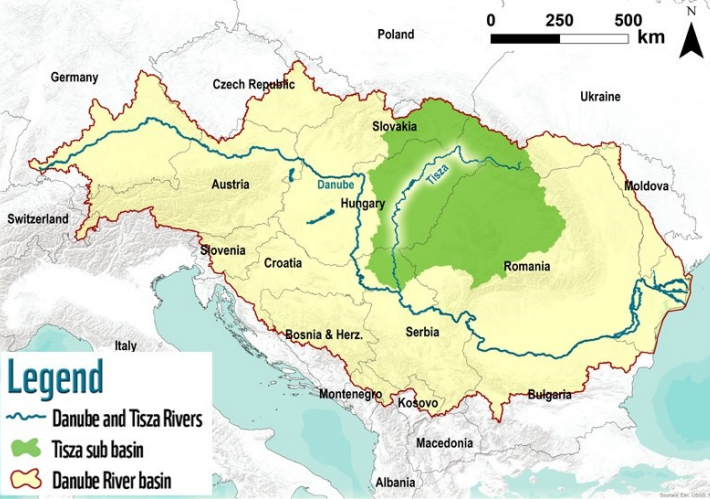


Space for water

- Water retention to stop drying
- The key for NWRM is land use
- Involvement of farmers is inevitable

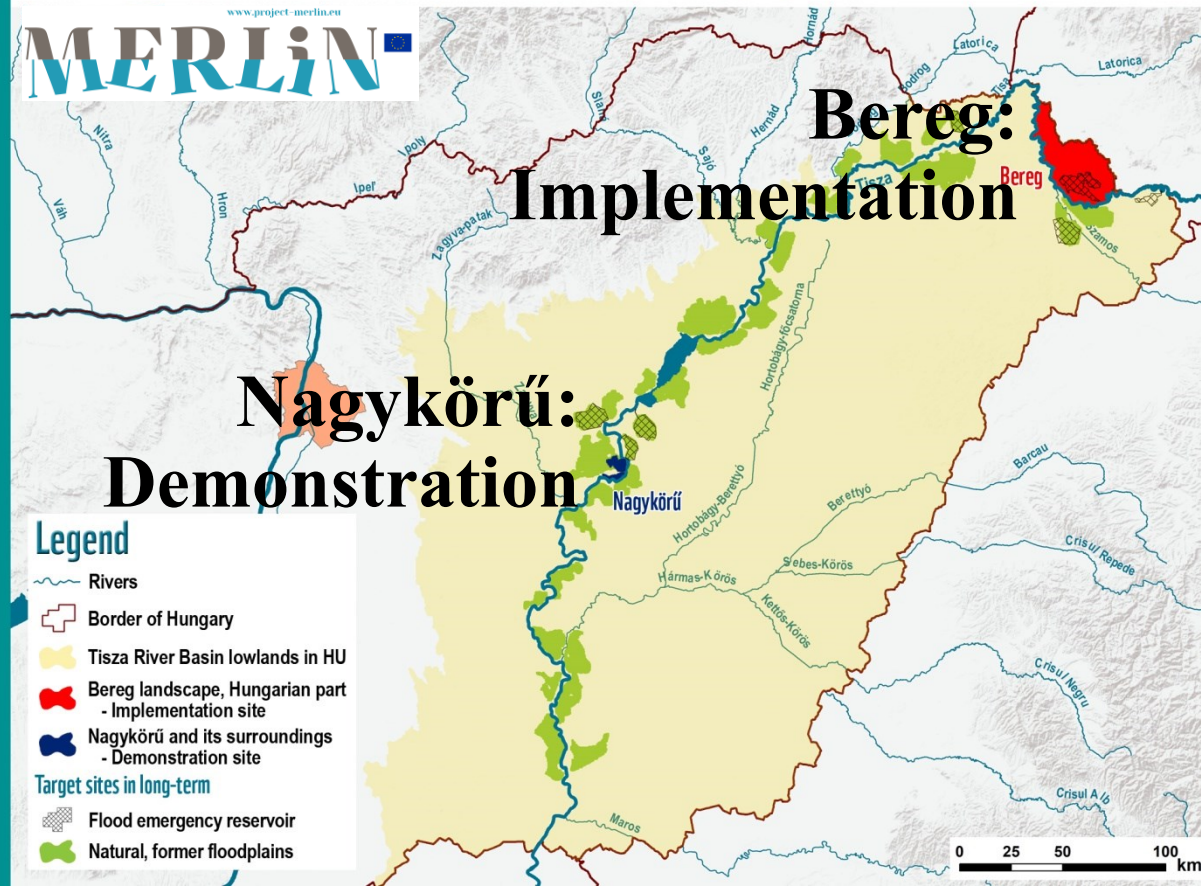
Involving local stakeholders into lateral connectivity





www.project-merlin.eu
MERLIN 

MERLIN case study number and name: 9 - Tisza
 Case study cluster: large transboundary rivers
 Country: Hungary



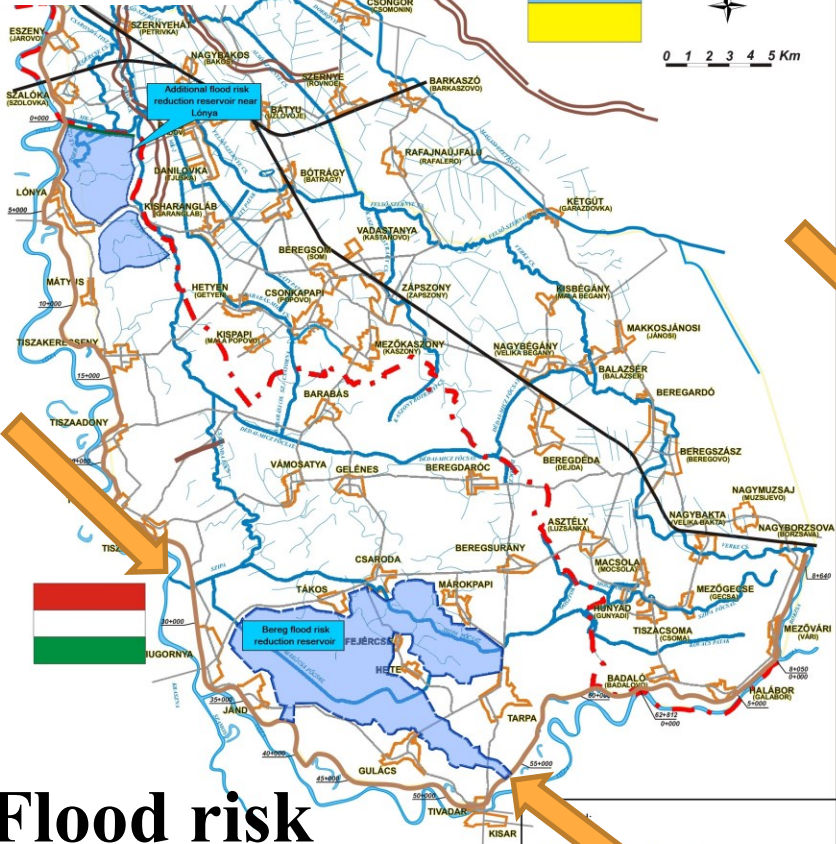
Tisza 21 Program

- Floodplain farming
- Target: 150,000 ha by 2030
- Biodiversity
- Social and economic development

Bereg



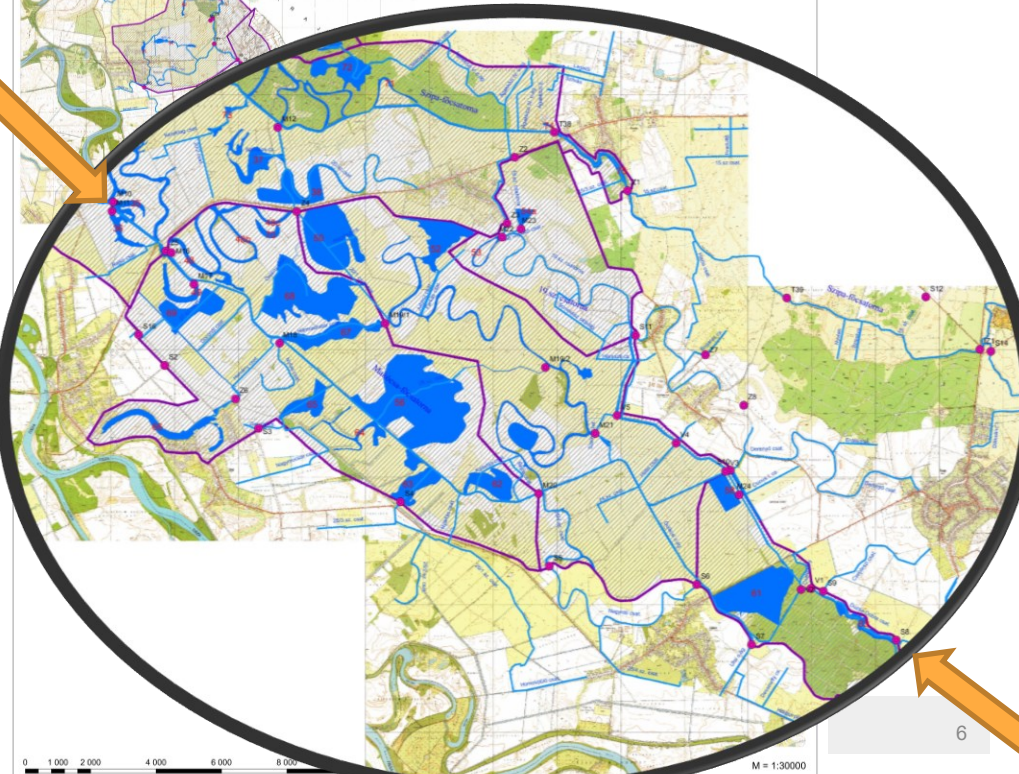
0 1 2 3 4 5 Km



Flood risk reservoir system

- - - Outline of the reservoir
- Green embankment of the flood risk reservoir
- · - · - County border
- Tisza flood protection dike

Water replenishment



Social and attitudinal survey in the Bereg



- **Methodology:**
 - **Desk-research (statistical + other databases)**
 - **38 semi-structured stakeholder interviews**
 - **+38 questionnaires with farmers**
- **17 settlements (1 city, 1 large village)**
- **Mainly agriculture, no significant industry**
- **Ageing farmers, slow land concentration**
- **Local products, tourism seen as breakout points**

Attitudes to water replenishment



- They feel the increase of weather extremes
- Landscape drying is a major problem
- Profitability of agriculture low
- Low level of cooperation
- Lack of workforce in farming
- Vanishing small farms
- **Filling canals** with water would be supported
- **Land flooding** would be supported w. conditions

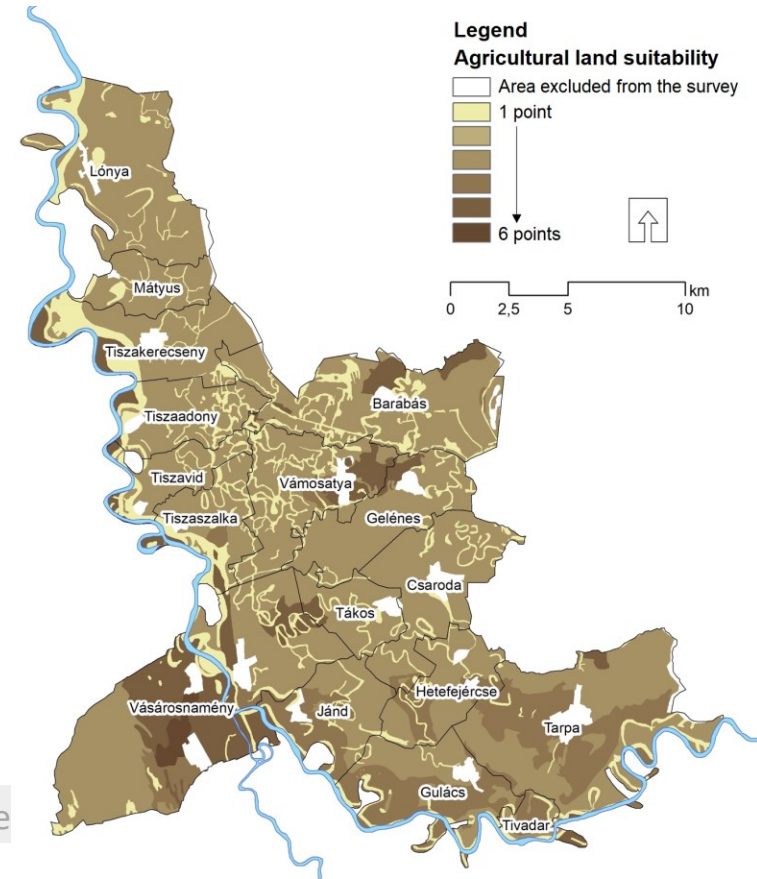


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Agricultural land suitability assessment



- **Weak soils**
- **Arable lands decreasing, but still high proportion**
- **Fruit, orchards**
- **Afforestation increasing**
- **Water would be needed, but in a controlled way**



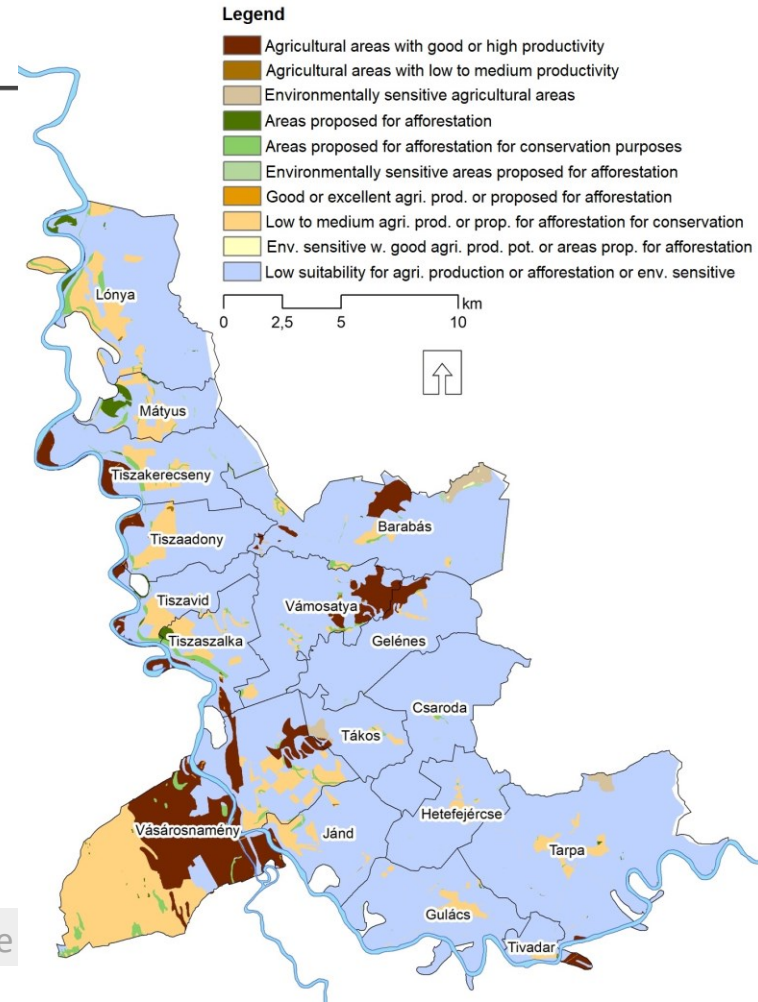
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Promoting land use change

- Land use change planning involving farmers
- Changes proposed to CAP subsidy system
- Designing new value chains for floodplain farming
- Organizing cooperation
- Interest representation, lobby
- Complex rural development

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Ecotype delineation map



Involving local stakeholders



- **Cooperation with water management directorate, national park, municipalities, chamber for agriculture, NGOs...**
- **Fora for farmers and direct consultations**
- **Need to get the consent of all of the land owners**
- **Representing locals's interests**

