



REsilienT water gOvernance Under climate CHange within the WEF E NEXUS: South-Western Slovakia case study



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THE RETOUCH NEXUS PROJECT



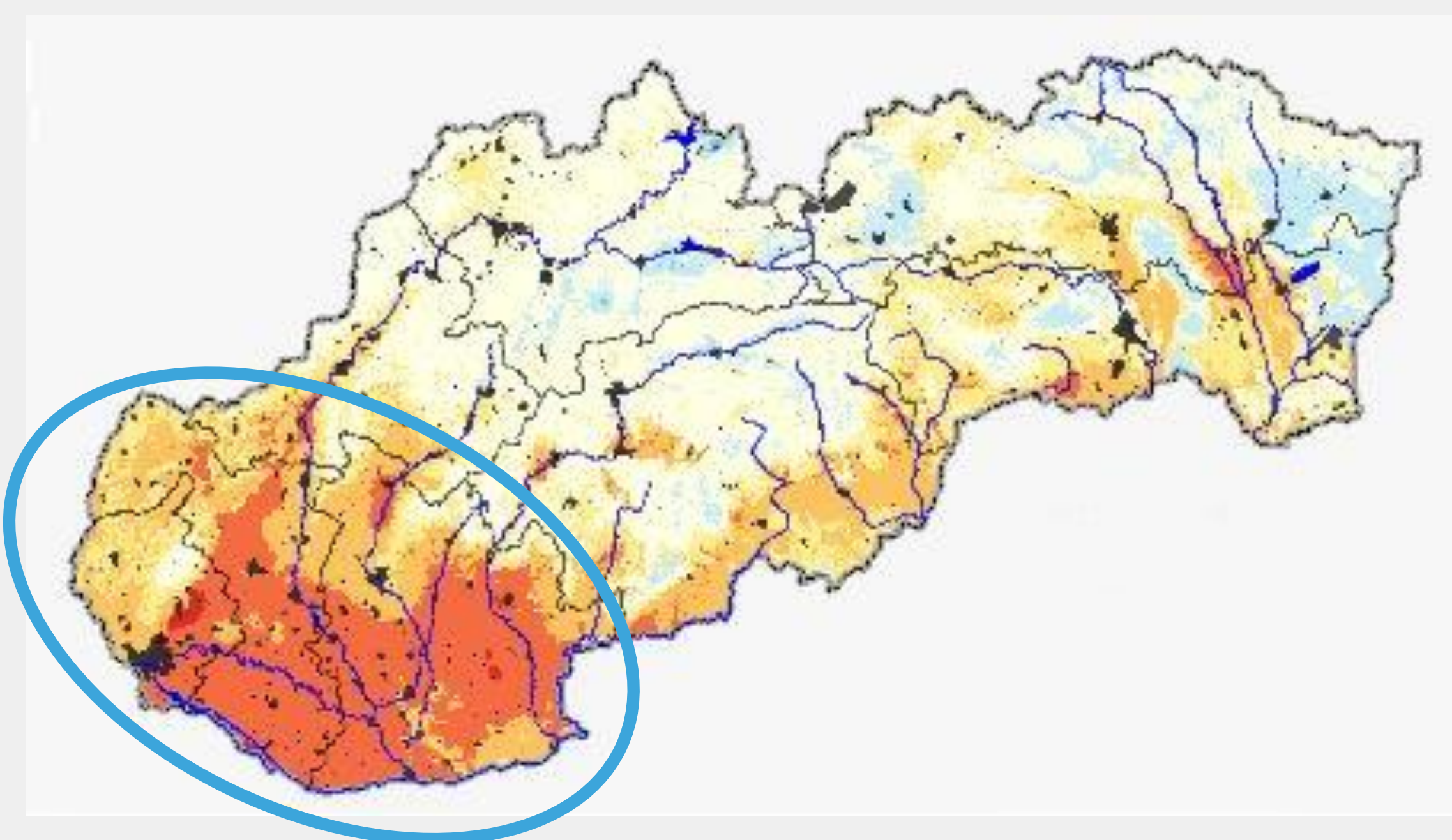
CASE STUDY OVERVIEW

THE CASE STUDY IN A NUTSHELL

Region:	southwestern part of Slovakia
Nexus:	water - vegetation (food) – ecosystems
Problems addressed:	risks of floods and droughts water security desertification loss of biodiversity
Foreseen measures:	increasing water retention capacity improving irrigation systems (and land consolidation) enhancing the landscape structure

CONTEXT OF THE CASE STUDY

Extreme weather:	droughts causing significant precipitation unevenness, resulting in an increase in potential evapotranspiration occurrence of extreme daily precipitation totals resulting in more often local floods
Consequences:	extreme excess of precipitation and subsequent floods damage cultivated agricultural land continuous drainage lakes formed in the fields, rising groundwater levels compaction of agricultural land, soil contamination, loss of organic matter, erosion and landslides
Needs:	to increase the care of systems enabling rainwater retention or a safe drainage of surface areas through drainage elements or infiltration devices



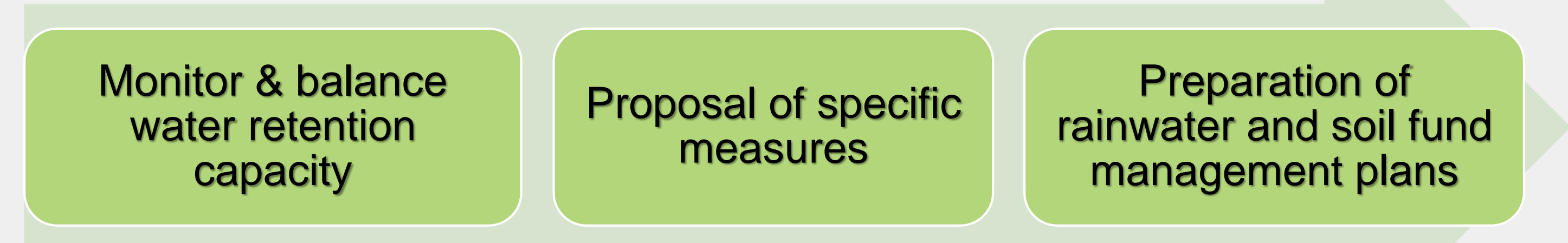
CONTRIBUTION

Economy:	water security for sustainable agriculture and living integrated water and soil management plans
Ecosystems:	protection of bio- and landscape diversity

METHODOLOGY & EXPECTED RESULTS

Case study methodology and results:

- monitoring and balancing water retention capacity in the cadastres of municipalities
- cost-benefits of land consolidation measures
- proposal of measures to improve water retention capacity and to increase the carbon content in soil (to improve erosion protection)
- preparation of integrated rainwater and soil fund management plans (as part of local water and soil planning)



LOCAL WATER GOVERNANCE SYSTEMS ANALYSIS

Legislative framework:

- Water Act (2004), Package of hydro-melioration measures for adaptation to climate change and renewal of irrigation infrastructure, Strategy for adaptation of the SR to climate change, Action plan for solving the effects of droughts and water shortage, Integrated national energy and climate plan for 2021-2030, Strategic Plan of the Common Agricultural Policy, Strategy for protection of nature and countryside till 2030, Land Consolidation Act (1991), Slovak Rural Development Programme, national and local urban planning policies

Policy and management measures in place:

- financial support and investment grants for water retention measures and irrigation infrastructure, permits and fees for groundwater usage, surface water usage and wastewater discharge, approvals in case of urban planning (buildings), pricing schemes and insurance policies

LOCAL INDICATORS USED FOR MONITORING WATER GOVERNANCE

By improving soil management, water retention capacity of soils and landscape structure, we can effectively moderate and address three main indicators of climate change:

- average global, regional, local temperatures
- water levels, land drying and groundwater levels
- carbon sequestration in soils and soil protection

STAKEHOLDER ENGAGEMENT & PUBLIC PARTICIPATION ANALYSIS

Stakeholders with competing interests:

- national and local governments,
- farmers
- private sector (industrial use of water)
- civil society, consumers / citizens
- NGOs

References:

Government of the Slovak Republic: Integrated water and landscape management (online).
Government of the Slovak Republic: Draft principles, rules and framework conditions for preventative measures against floods, decreasing flood risk, risk of drought and other risks related to a sudden, natural disaster, and integrated management of river basins (online).
Ministry of Agriculture and Rural Development of the Slovak Republic: Measures in the field of hydro-melioration for adaptation to climate change and restoration of irrigation infrastructure in Slovakia (online).



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