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RIVER UNIVERSITY



THE LOWER SILESIAN
WATER POLICY

Katarzyna Dudek

24 - 28
Aug
2026



mission



We build bridges – to the future, between people, across generations, and beyond administrative borders. Through strategic planning and cross-border cooperation, we promote balanced social, economic, and environmental development.



The Institute of Territorial Development is an organisational unit of the Lower Silesian Voivodeship Government.

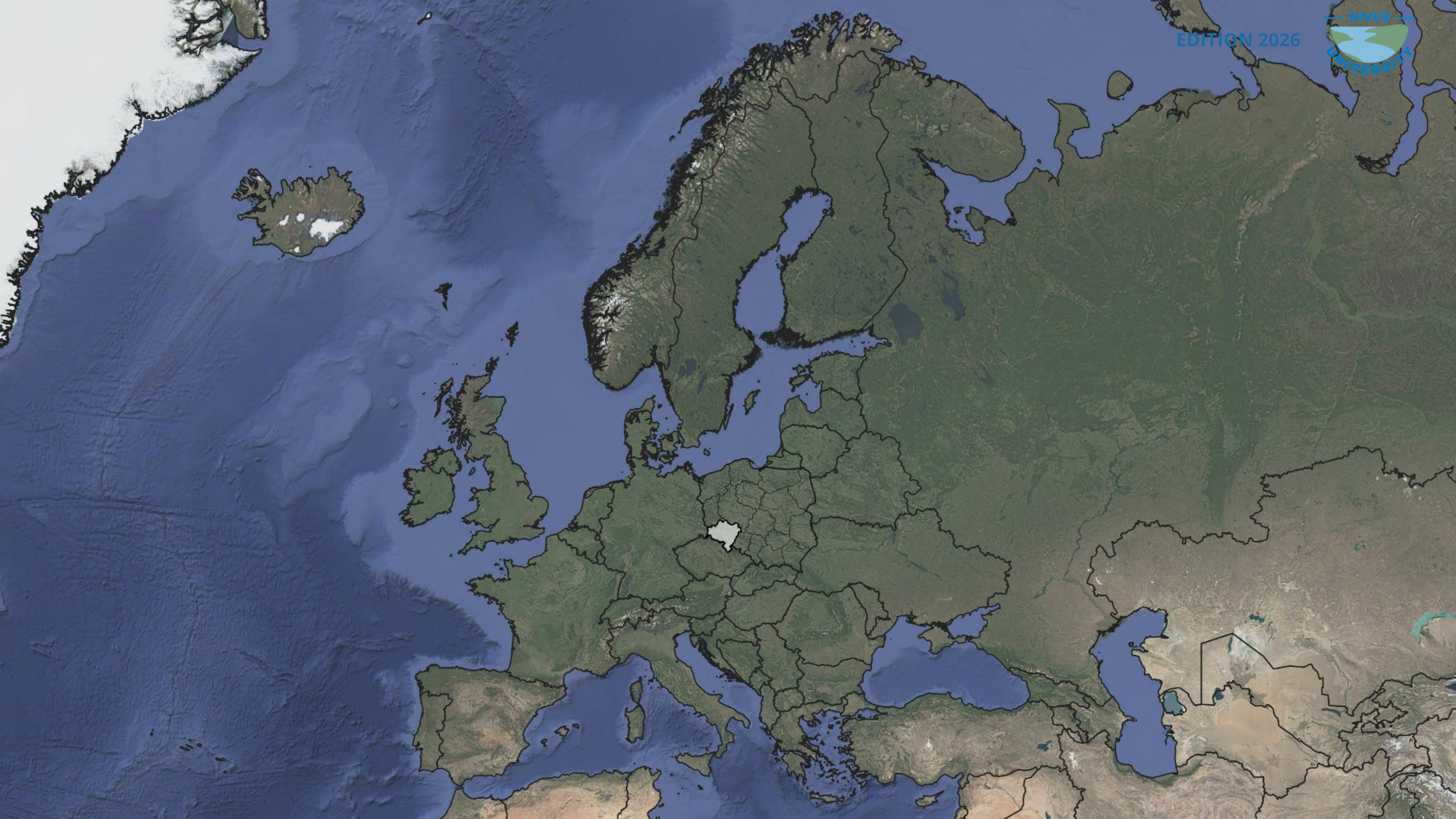
The Institute prepares documents that provide the foundation for regional socio-economic development, environmental protection, and regional development policy, with particular emphasis on spatial planning in the Lower Silesian Voivodeship.

Regional governments in Poland do not have direct responsibility for water resources management.

However, it is responsible for:

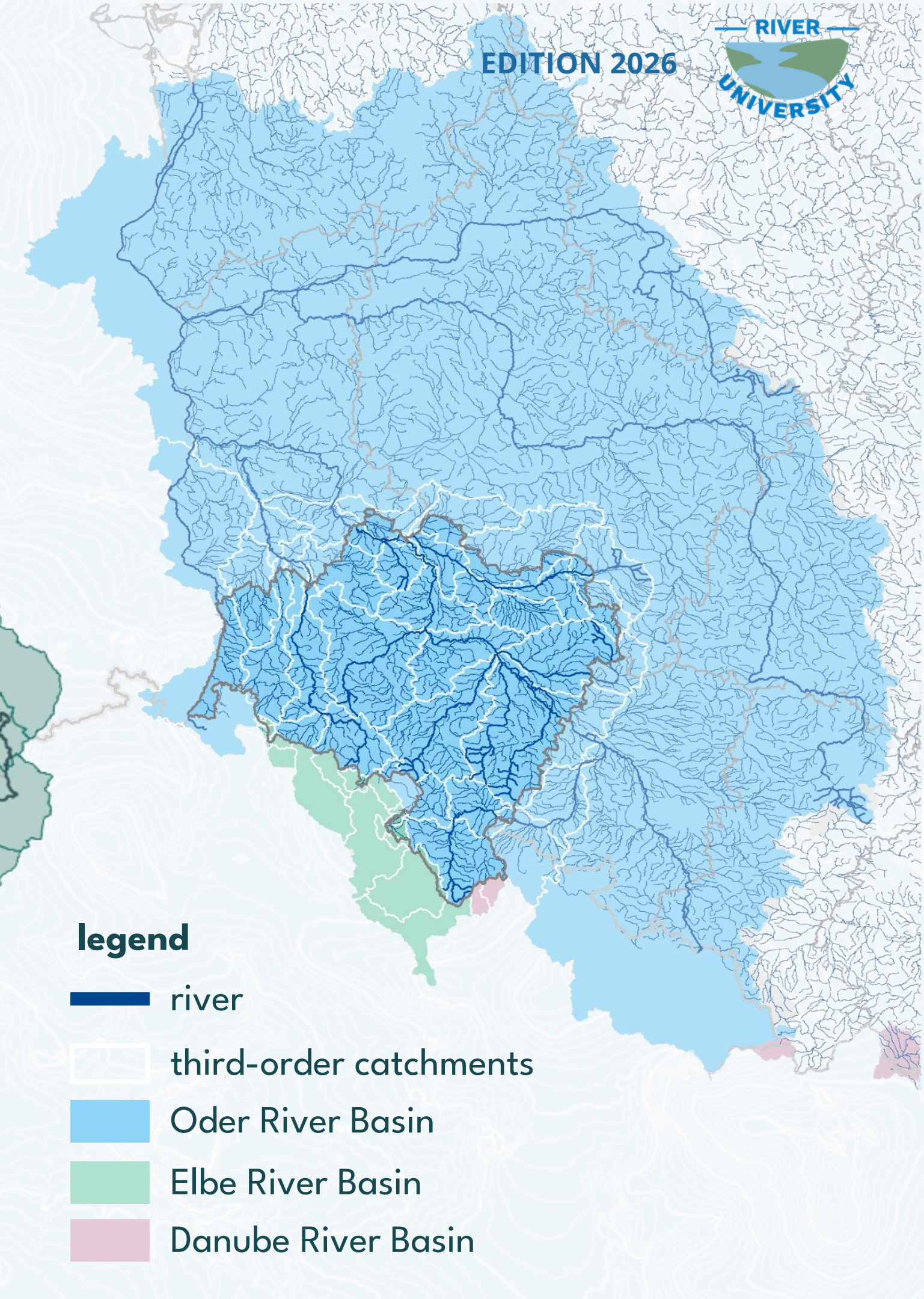
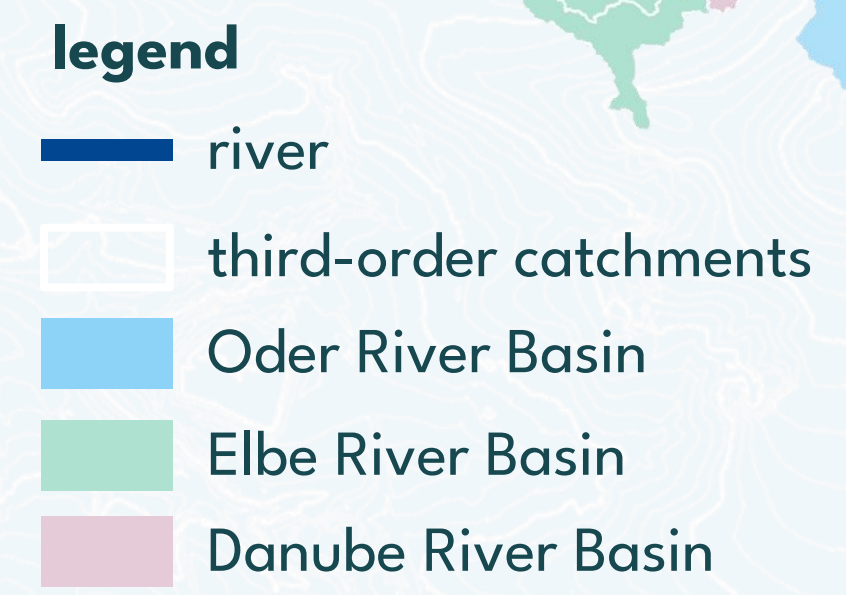
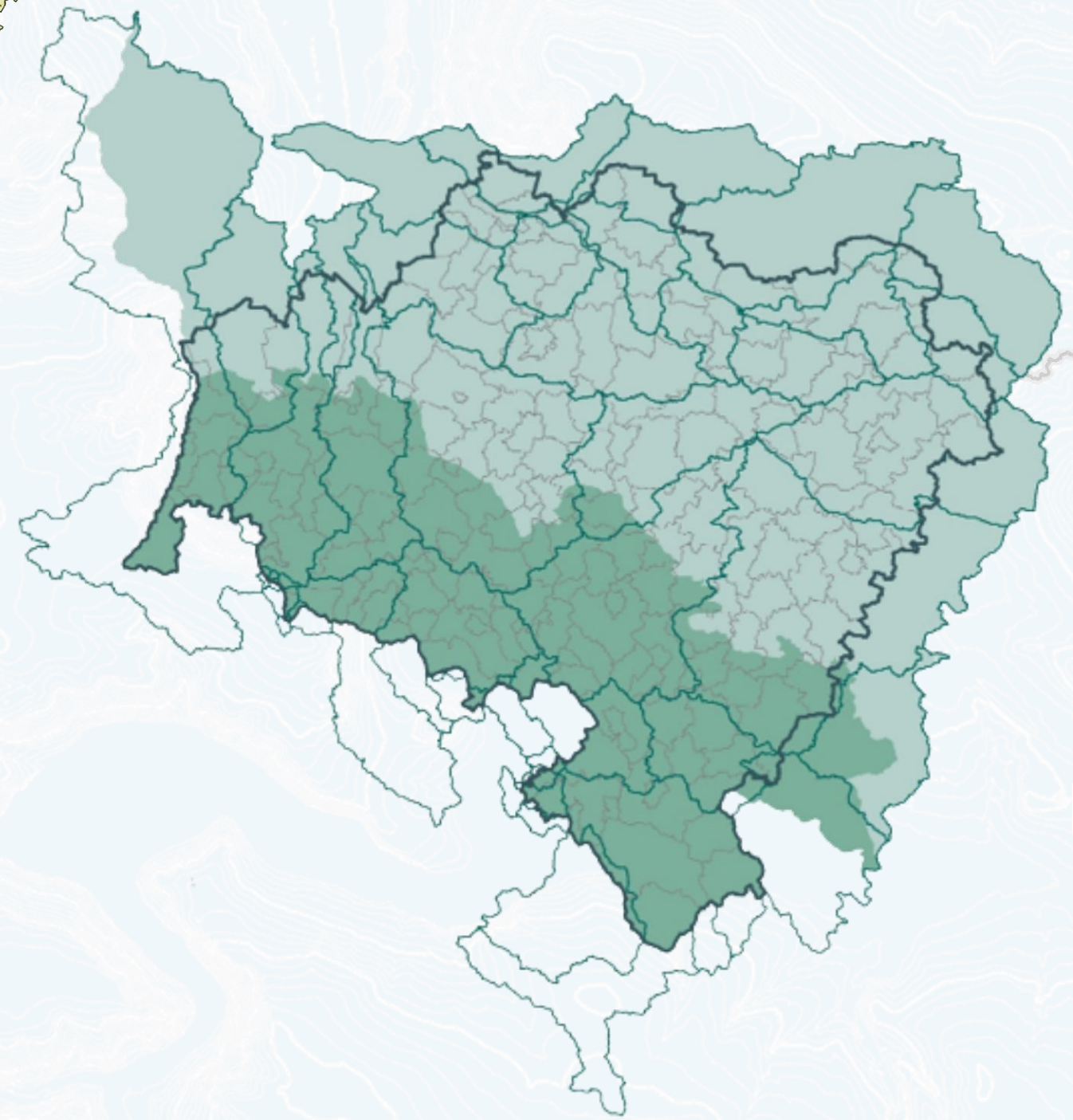
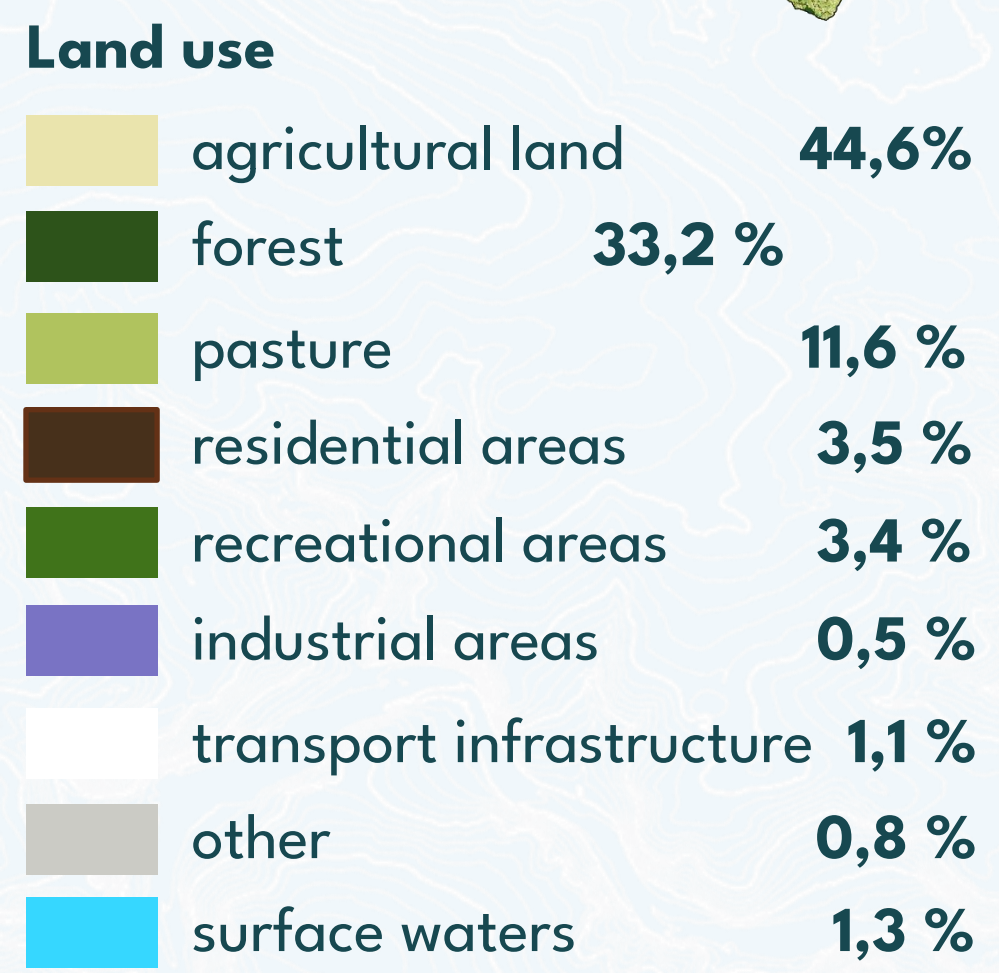
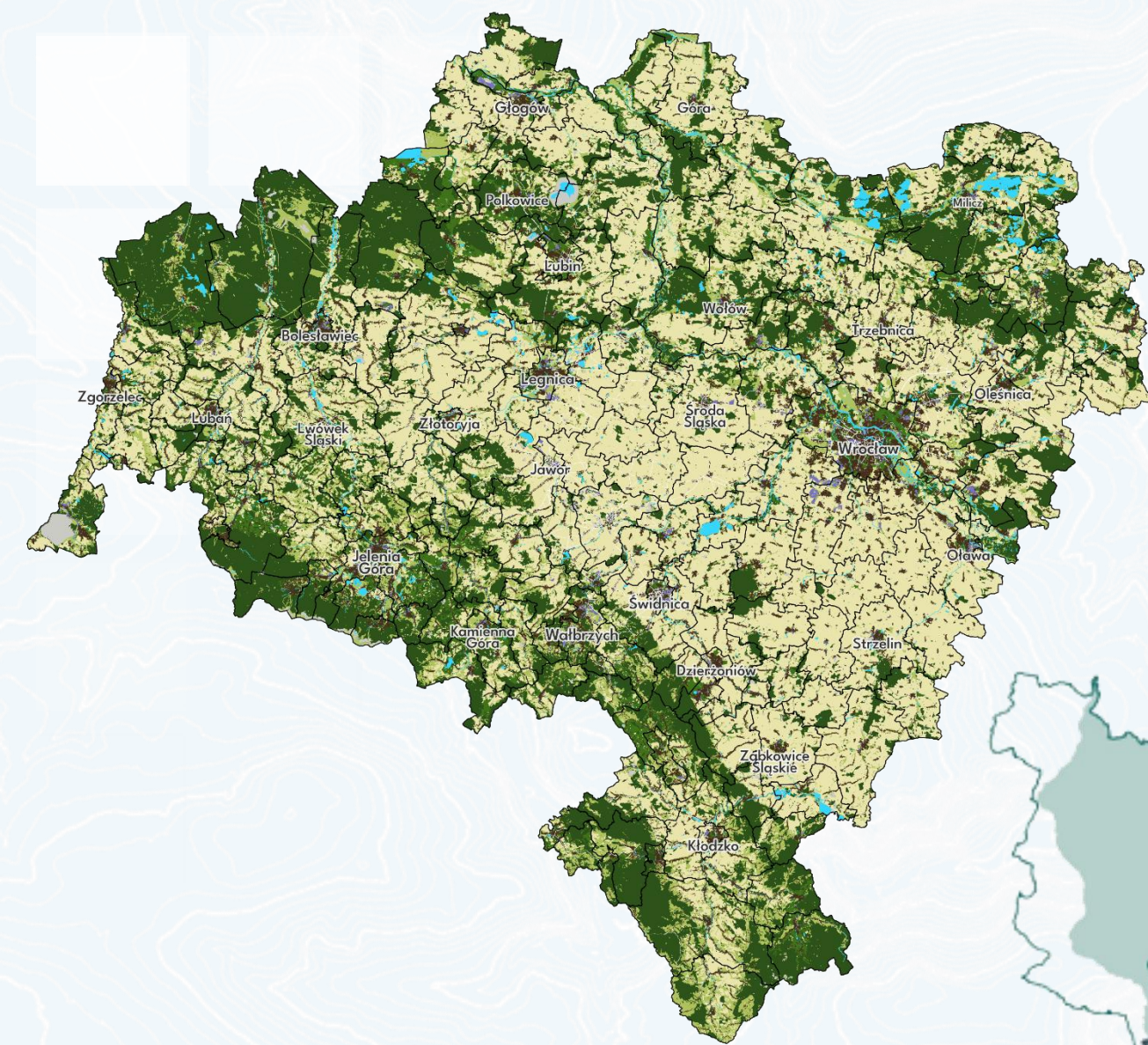
-  **Regional development policy**, including spatial planning, the sustainable use of natural resources, and environmental management in line with the principles of sustainable development.
-  **Programming and allocating national and EU funding** or development initiatives.
-  **Education and awareness-raising**, on the need for sustainable water use, recognizing water as a finite resource.
-  **Advocacy** or the effective protection of rivers (including strengthening the legal recognition and protection of the Oder River) and water-dependent ecosystems.
-  **An advisory and consultative role**, enabling regional authorities to influence national-level policies and decision-making.





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Spatial variability of the region's climatic conditions

Rising temperature



months are warmer than the long-term average, and heatwaves are becoming more frequent.



Change of rainfall distribution patterns

winter precipitation is decreasing, while summer rainfall is becoming more intense and short-lived.



Declining snow cover duration

resulting in reduced surface water and groundwater resources during the spring.



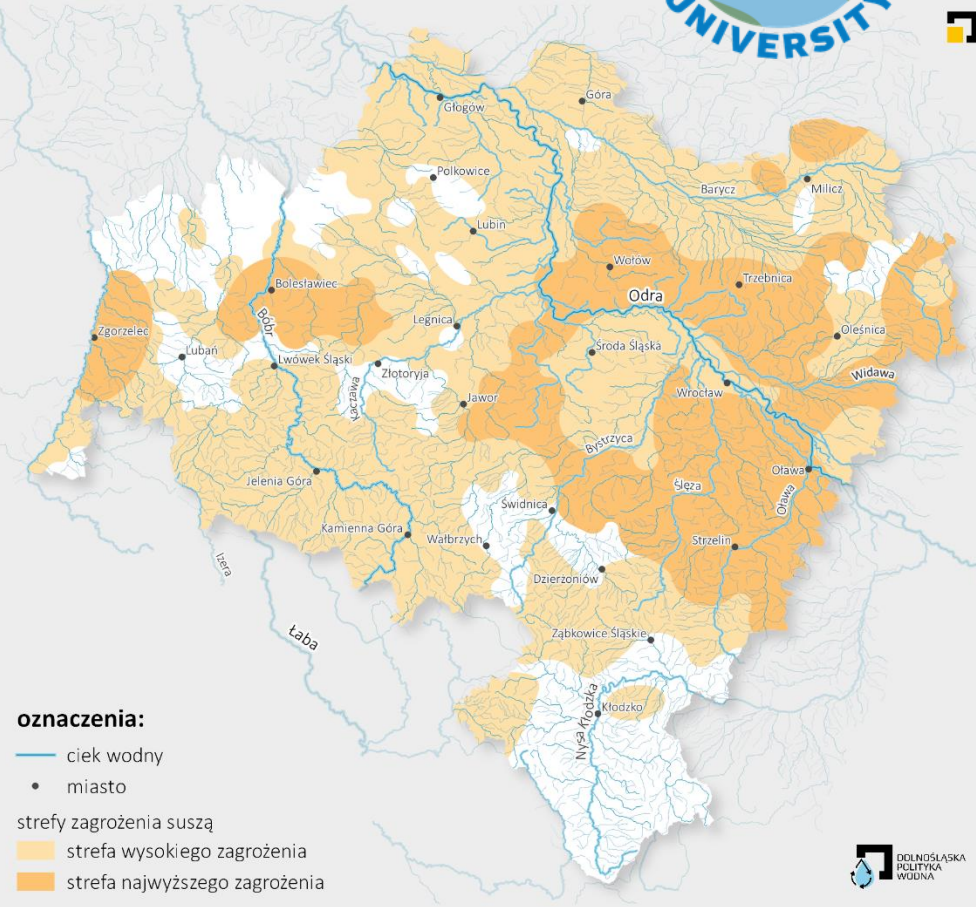
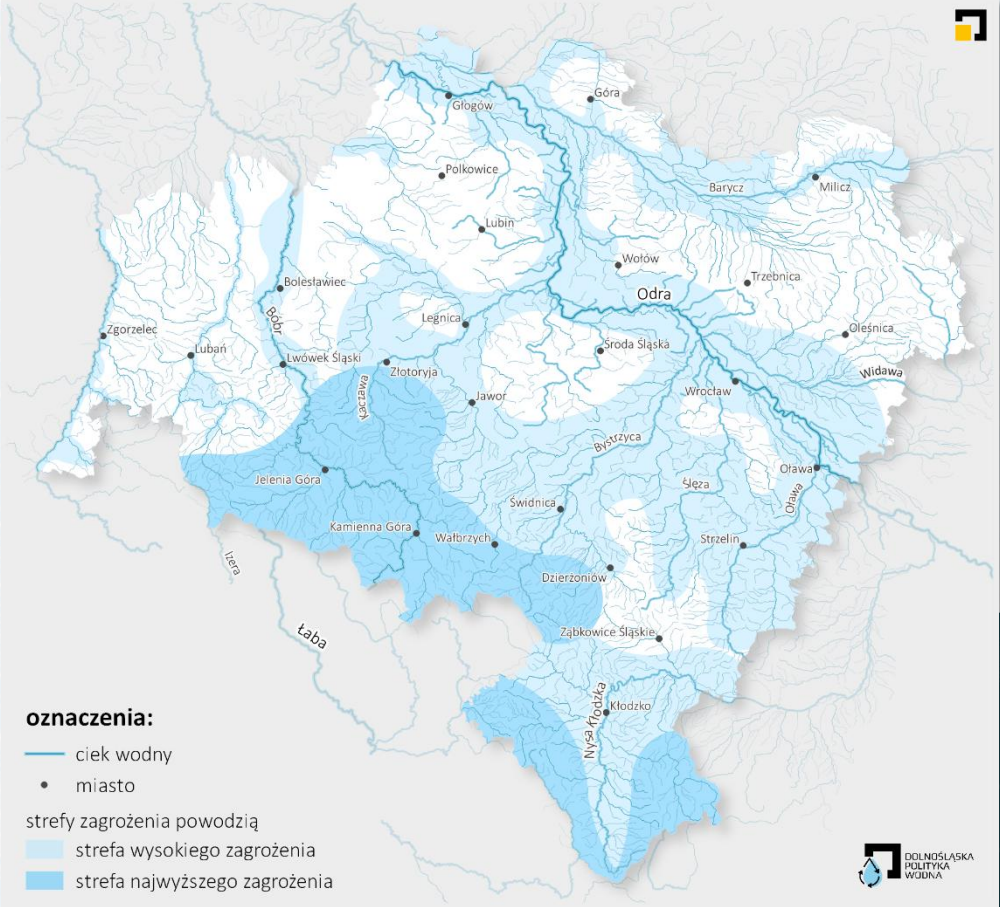
Urban climate effects

urban heat island, intensified rainfall, flash floods, and urban flooding.



Negative climatic water balance

an annual occurrence, indicating a growing water deficit.



These challenges require integrated regional planning rather than isolated sectoral actions, with solutions that do not conflict with one another in reducing the impacts of both droughts and floods.

Recognizing the growing importance of water-related challenges, the Lower Silesian Regional Executive Board decided to integrate water management into the region's broader development policy through the development and implementation of the **Lower Silesian Water Policy**.

Its objective is to guide sectoral policies towards the intelligent and sustainable use of water resources.

Guiding Principles

of the Lower Silesian Water Policy

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Catchment-Based Approach



Spatially relevant measures should be planned and implemented at the catchment level, requiring cooperation across institutions and administrative boundaries.

Preventive Spatial Planning



Spatial planning should play a preventive role in strengthening water security and climate resilience. It helps minimize the adverse impacts of land-use change, reduce flood and drought risks, and prevent the degradation of natural water retention areas.

Nature-Based Solutions (NbS)



NbS should be the preferred option for increasing water retention in the landscape, including soils, forests, wetlands, and natural water bodies, as a cornerstone of sustainable water management.

Reducing the Water Footprint

Promote more efficient and responsible water use across all sectors of society. Everyone has a role to play through everyday choices and actions.



Protecting Aquatic Ecosystems

Water is not only a resource but also the foundation of healthy ecosystems. Degradation leads not only to the loss of species and habitats but also to the loss of valuable ecosystem services.



Water as a Strategic Resource

Water policy should be treated as a priority in spatial planning, economic development, and national security policy due to water becoming a strategic asset for national sovereignty and long-term resilience.



Stakeholder Engagement

Effective water governance requires the active involvement of all stakeholders—from public authorities and local governments to local communities, the private sector, and non-governmental organizations.



mission

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To establish water as a priority across all areas of development policy pursued by the Lower Silesian Regional Government, while raising public awareness of water as a shared heritage and a finite resource.

DOLNOŚLĄSKA POLITYKA WODNA - ZAŁOŻENIA / ASSUMPTIONS

MAJ 2024

GOALS



**Water as a Priority in
Regional Sectoral
Policies**



**Good Status of
Water and Aquatic
Ecosystems in the
Oder River Basin**



**Water Security and
Regional Resilience
Cooperation and "Blue
Diplomacy"**

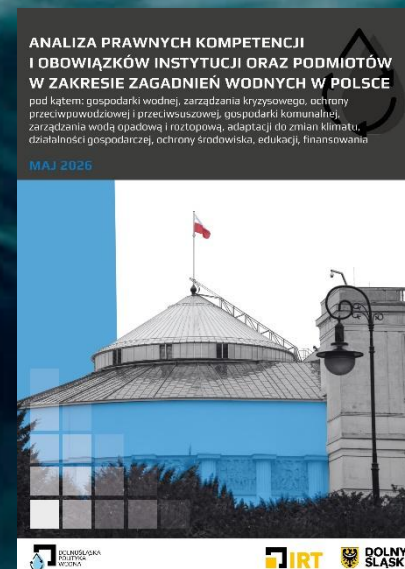


**Building Water
Awareness**

analytical basis of the policy



**Analysis of the retention
potential
of the Lower Silesian
Voivodeship**



**Analysis of the legal
competencies and
responsibilities of
institutions and
stakeholders
in the field of water
management.**





Analysis of the water retention potential of the Lower Silesian Voivodeship

Where do we **already retain water**,
how much,
and where could we **retain more**?

results presented in a cartographic form
open source

**spatial
database**



Spatial Scope

The spatial scope of the study covers the Lower Silesian Voivodeship, using a river basin (catchment-based) approach based on third-order catchments, including transboundary catchments.

retain water

WETLANDS



FOREST
WATER RETENTION



SOIL
WATER RETENTION



AGRICULTURAL
WATER MANAGEMENT



RIVER VALLEY
RETENTION
(setback levees)



OXBOW LAKE
RETENTION



WATER BODY
RETENTION

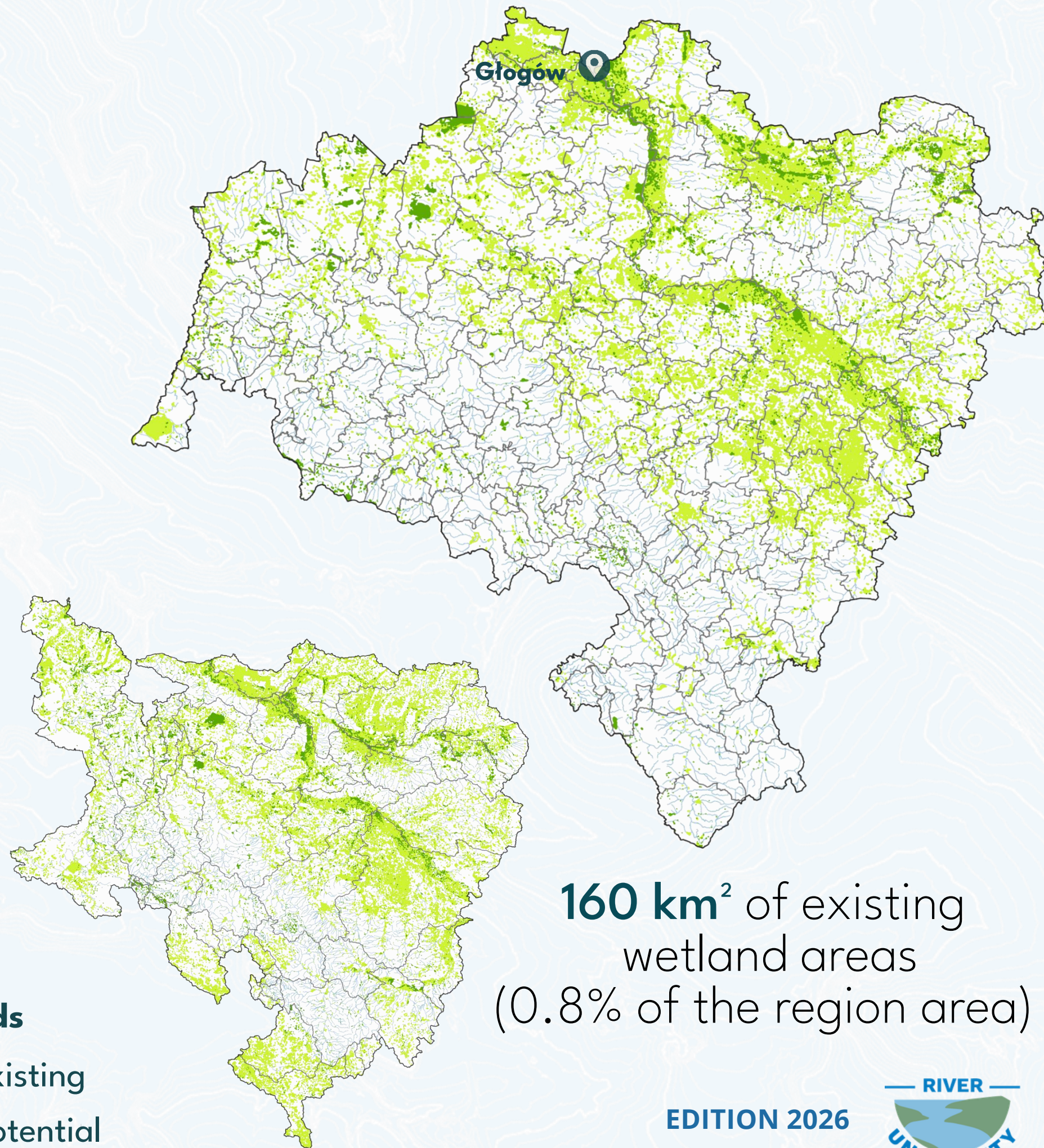
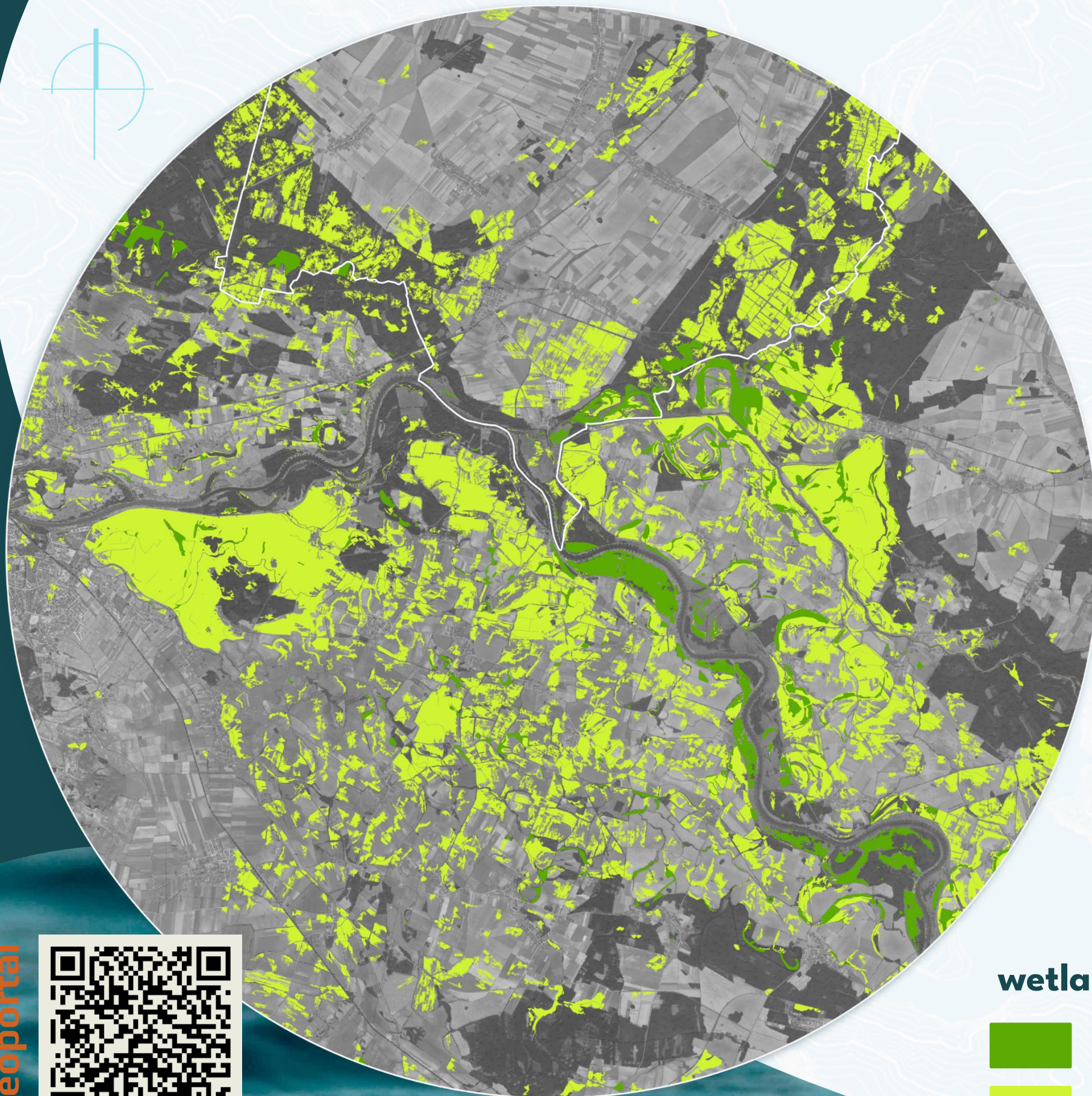


URBAN WATER
RETENTION





WETLANDS



160 km² of existing
wetland areas
(0.8% of the region area)

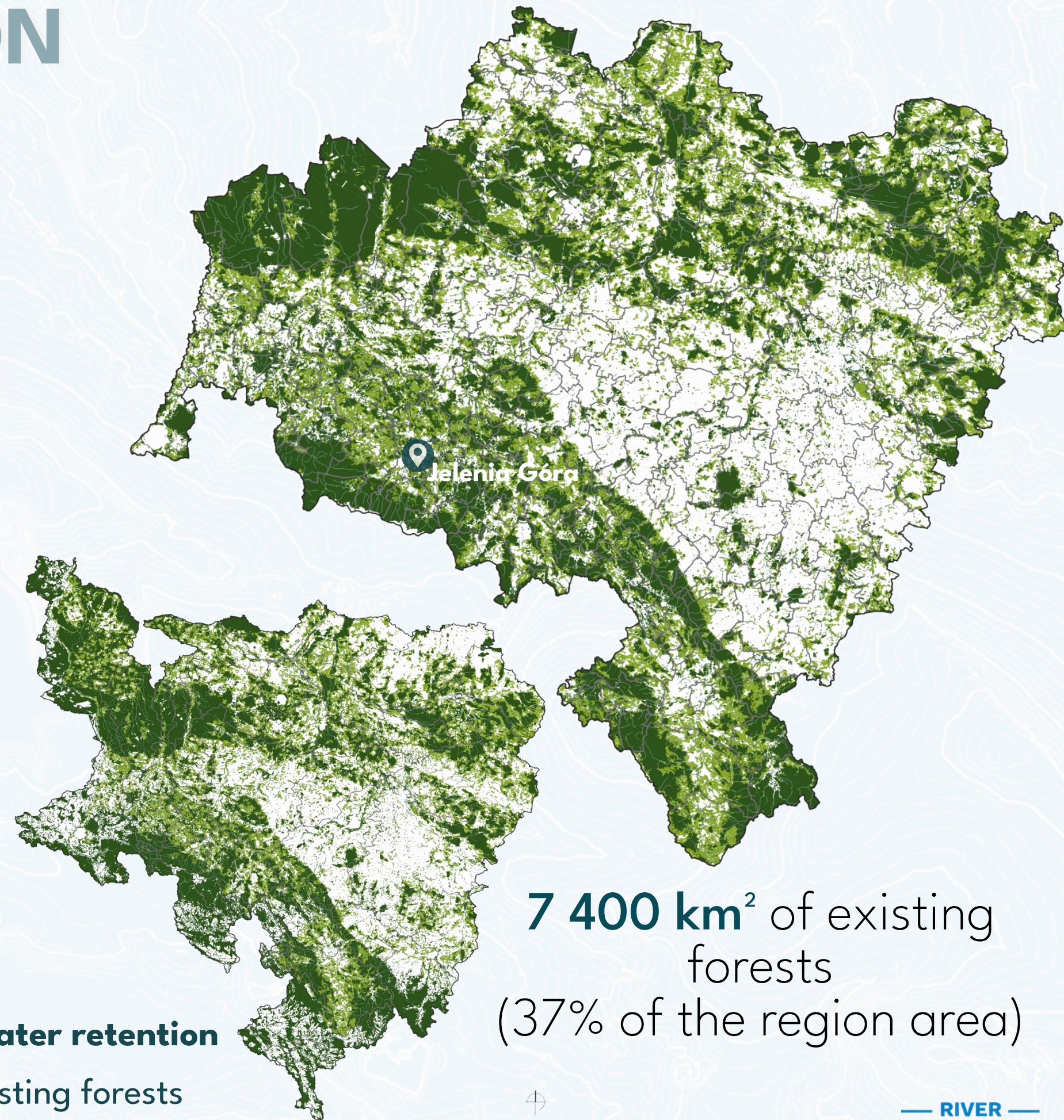
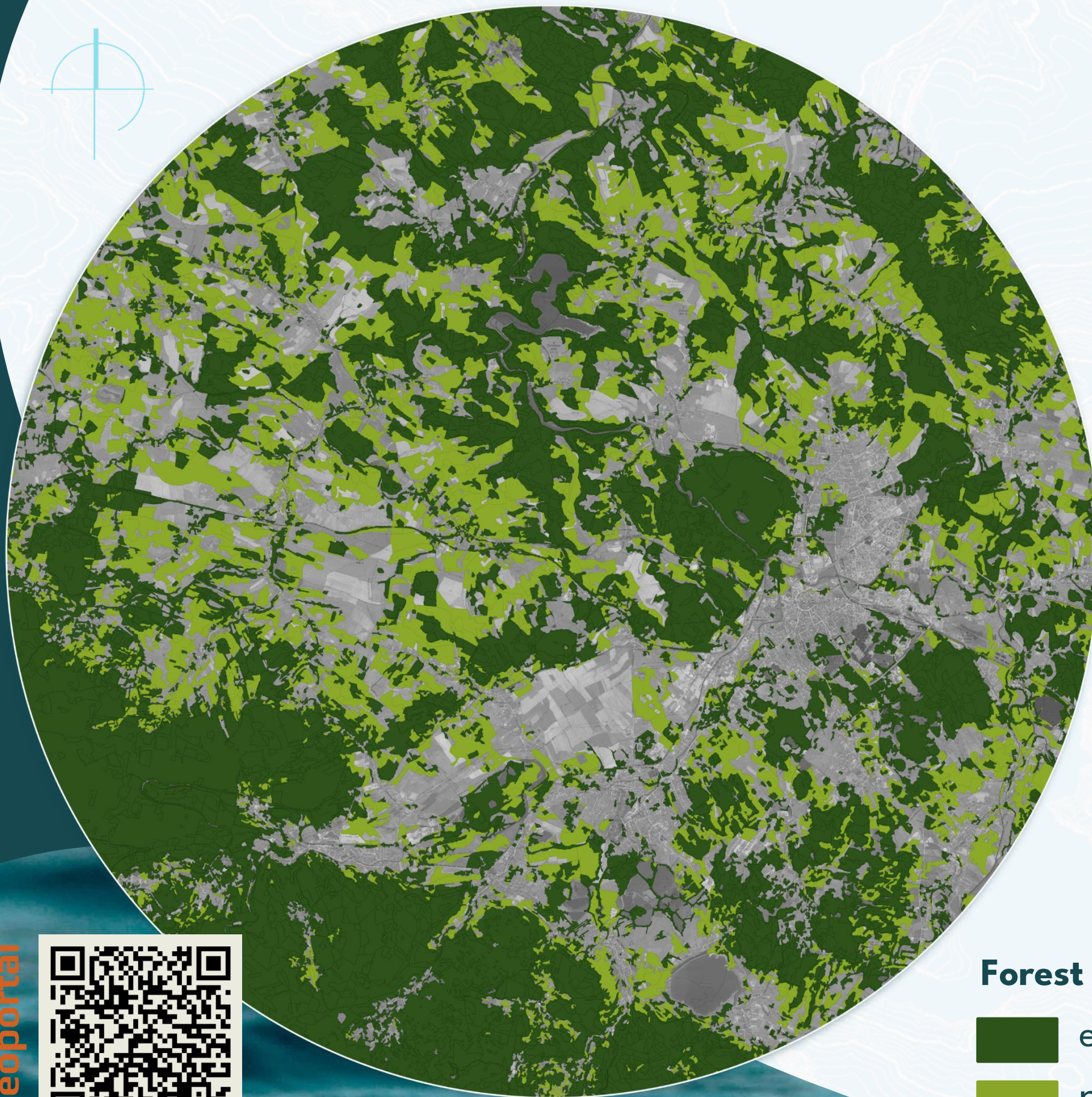
wetlands

-  existing
-  potential



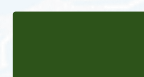


FOREST WATER RETENTION



7 400 km² of existing forests
(37% of the region area)

Forest water retention

-  existing forests
-  potential afforestation areas

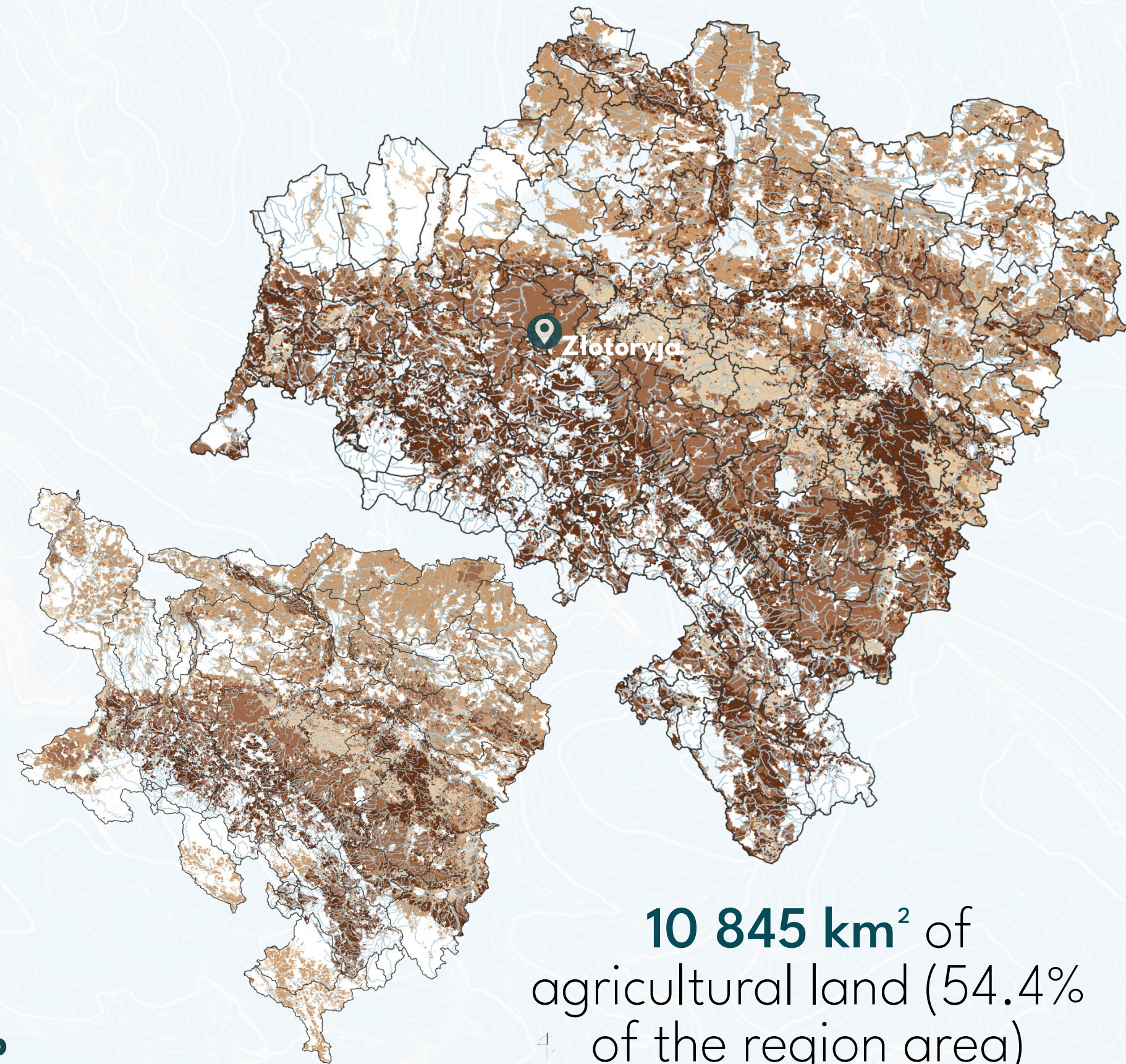
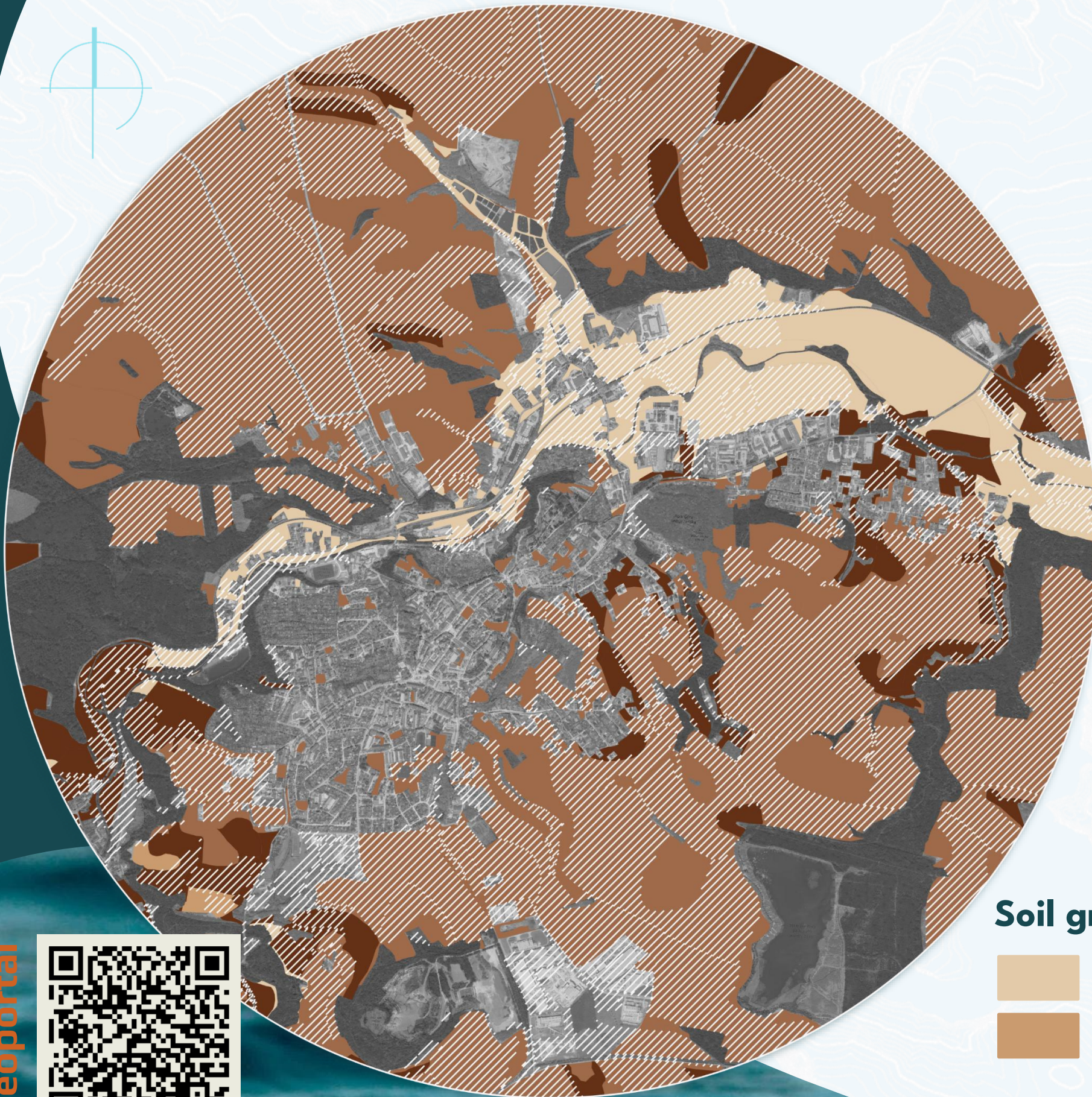


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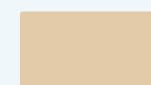


SOIL WATER RETENTION



10 845 km² of
agricultural land (54.4%
of the region area)

Soil group



A – very light



B – light



C – medium



D – heavy



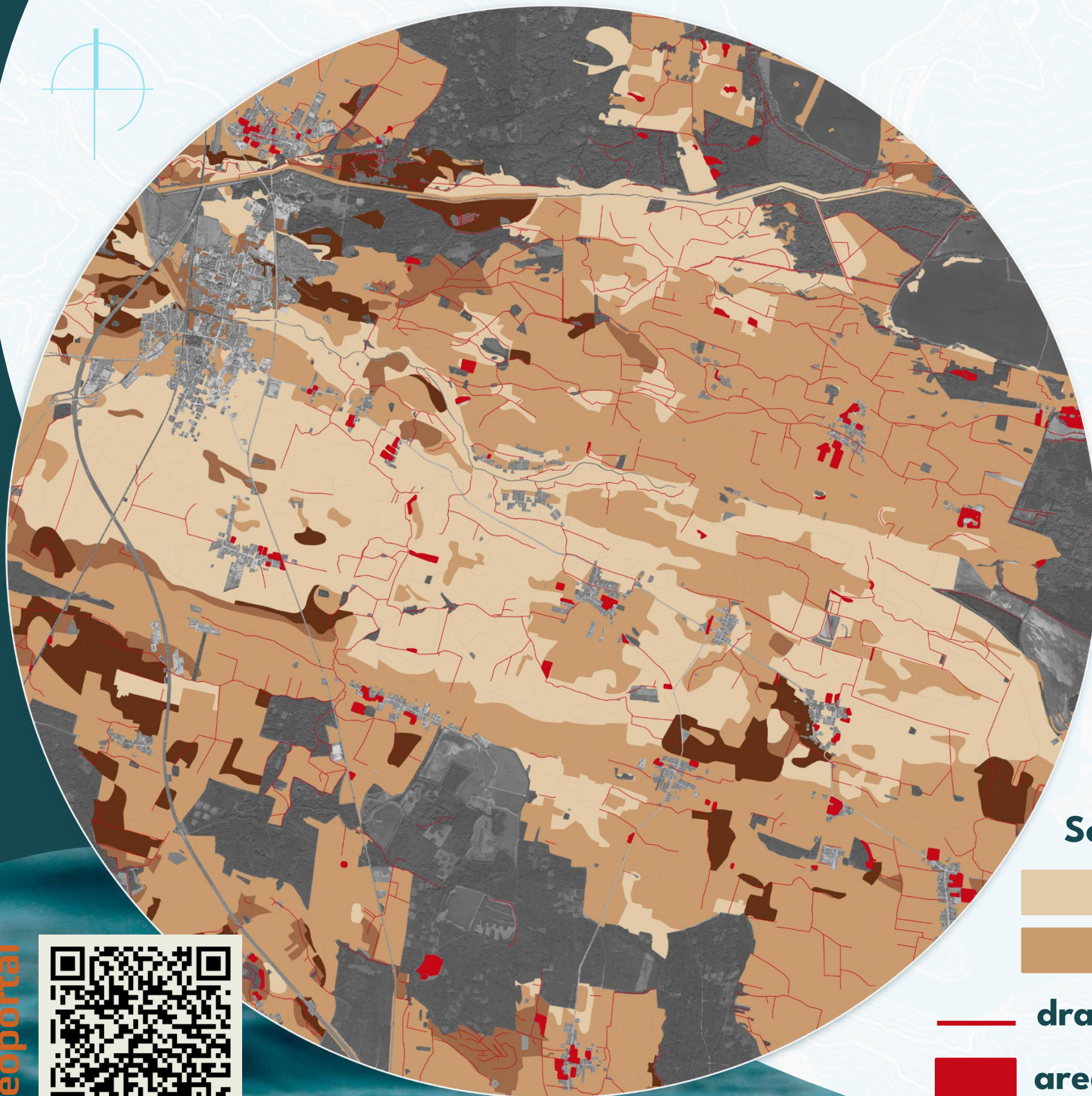
agriculturally valuable soils

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AGRICULTURAL WATER MANAGEMENT

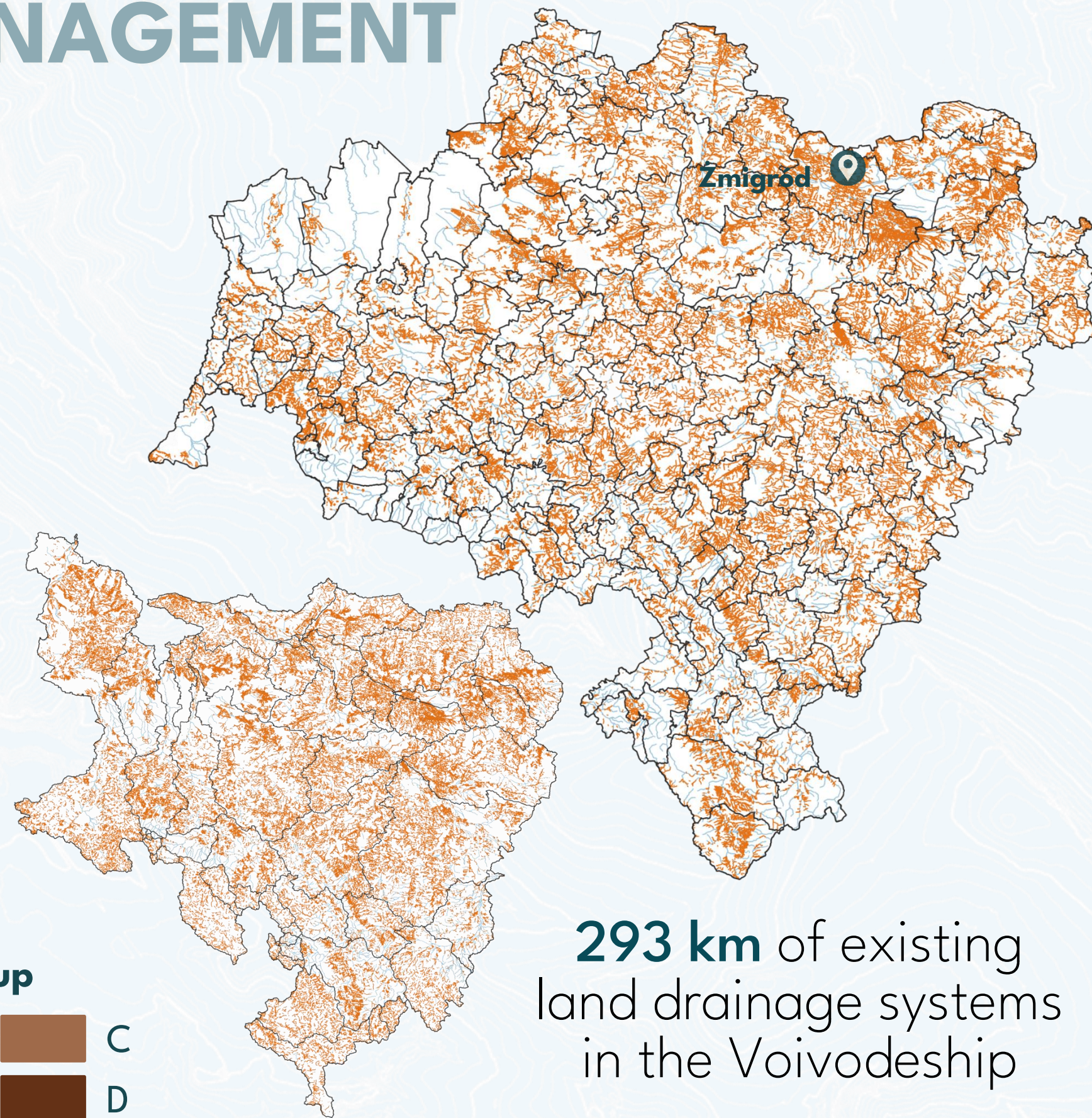


Soil group



 drainage systems

 areas suitable for the implementation of drainage/irrigation systems (150,5 km²)

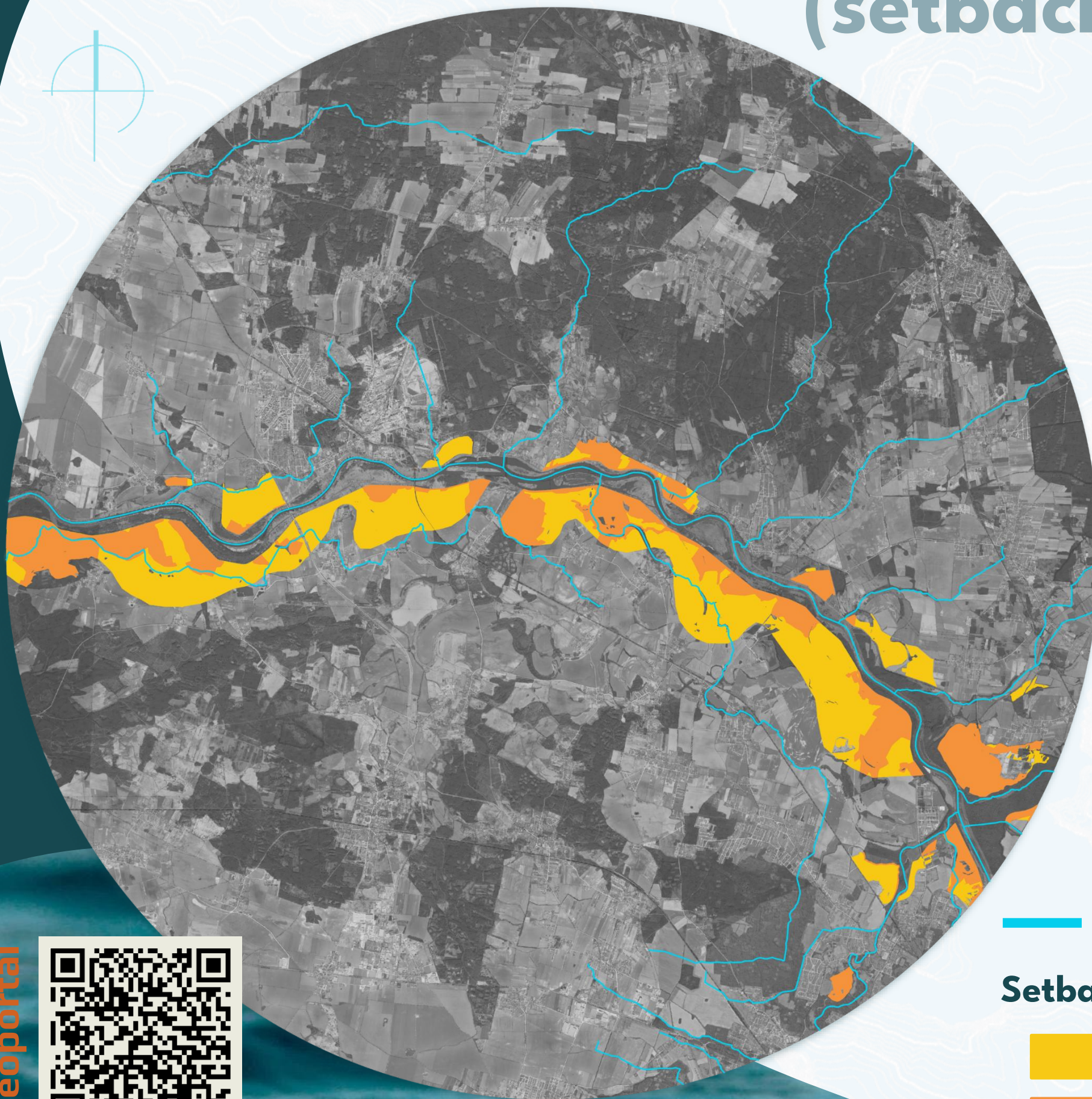


293 km of existing land drainage systems in the Voivodeship





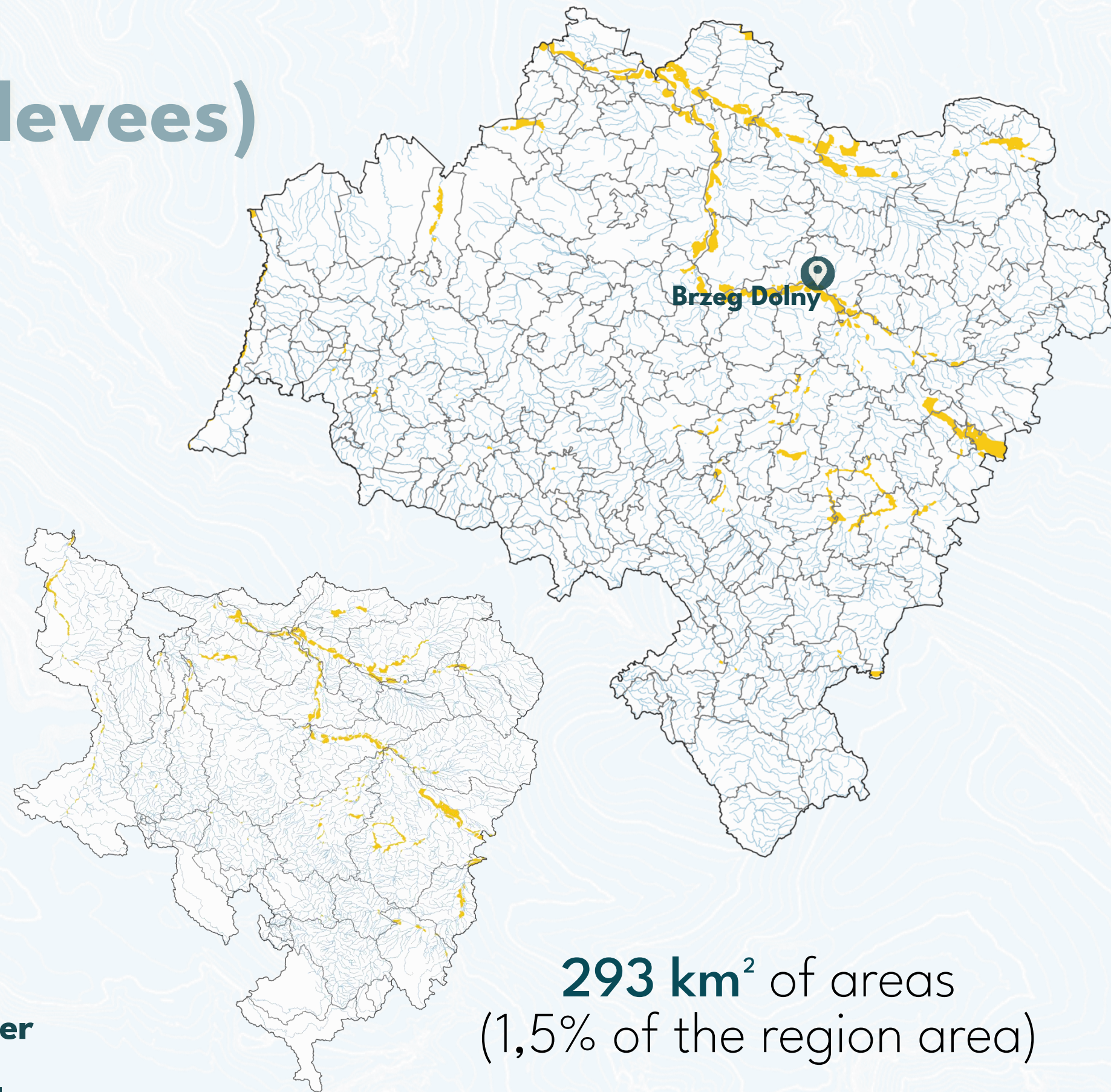
RIVER VALLEY RETENTION (setback levees)



— river

Setback levees

- with agricultural land
- without agricultural land

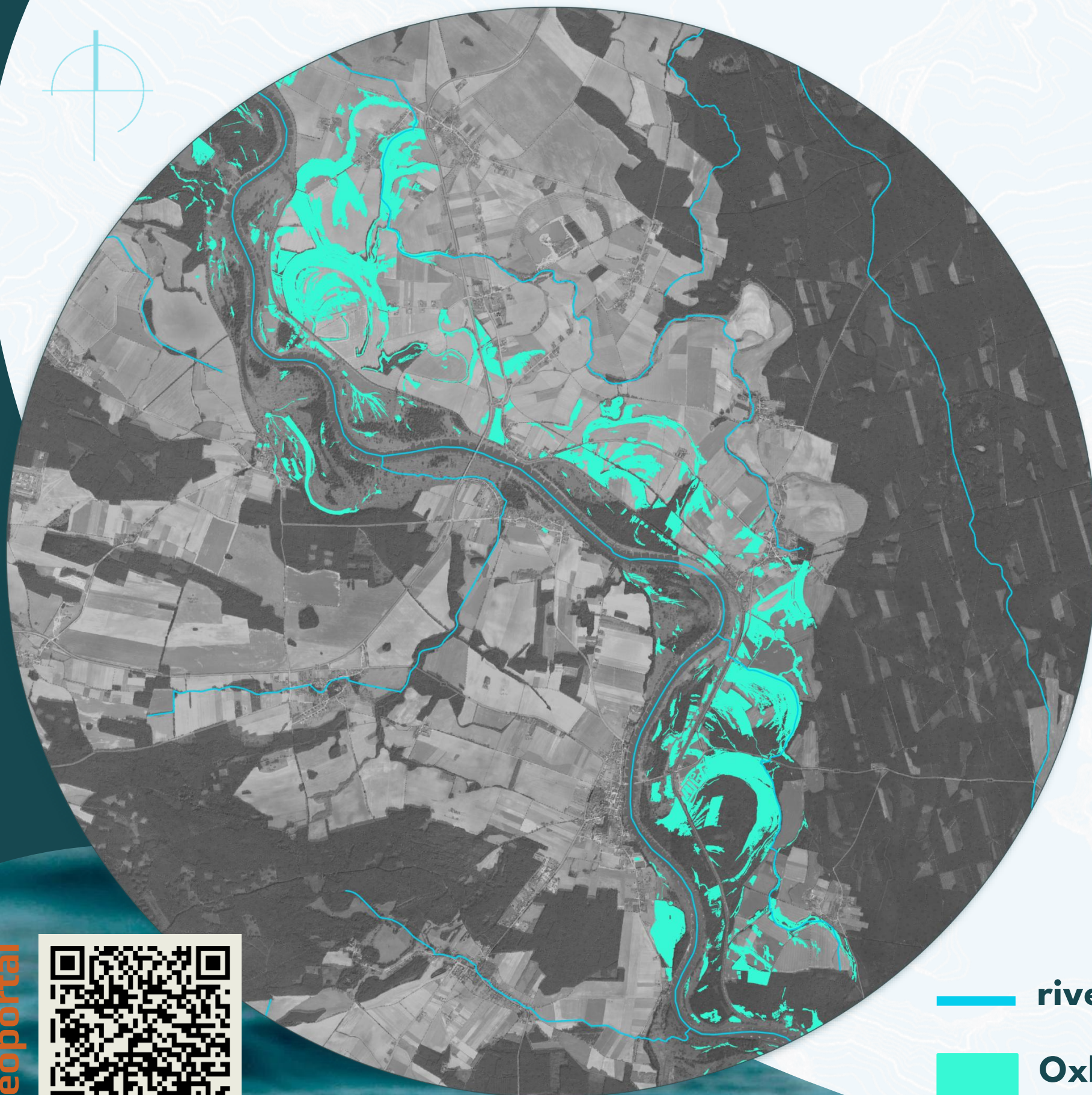


293 km² of areas
(1,5% of the region area)

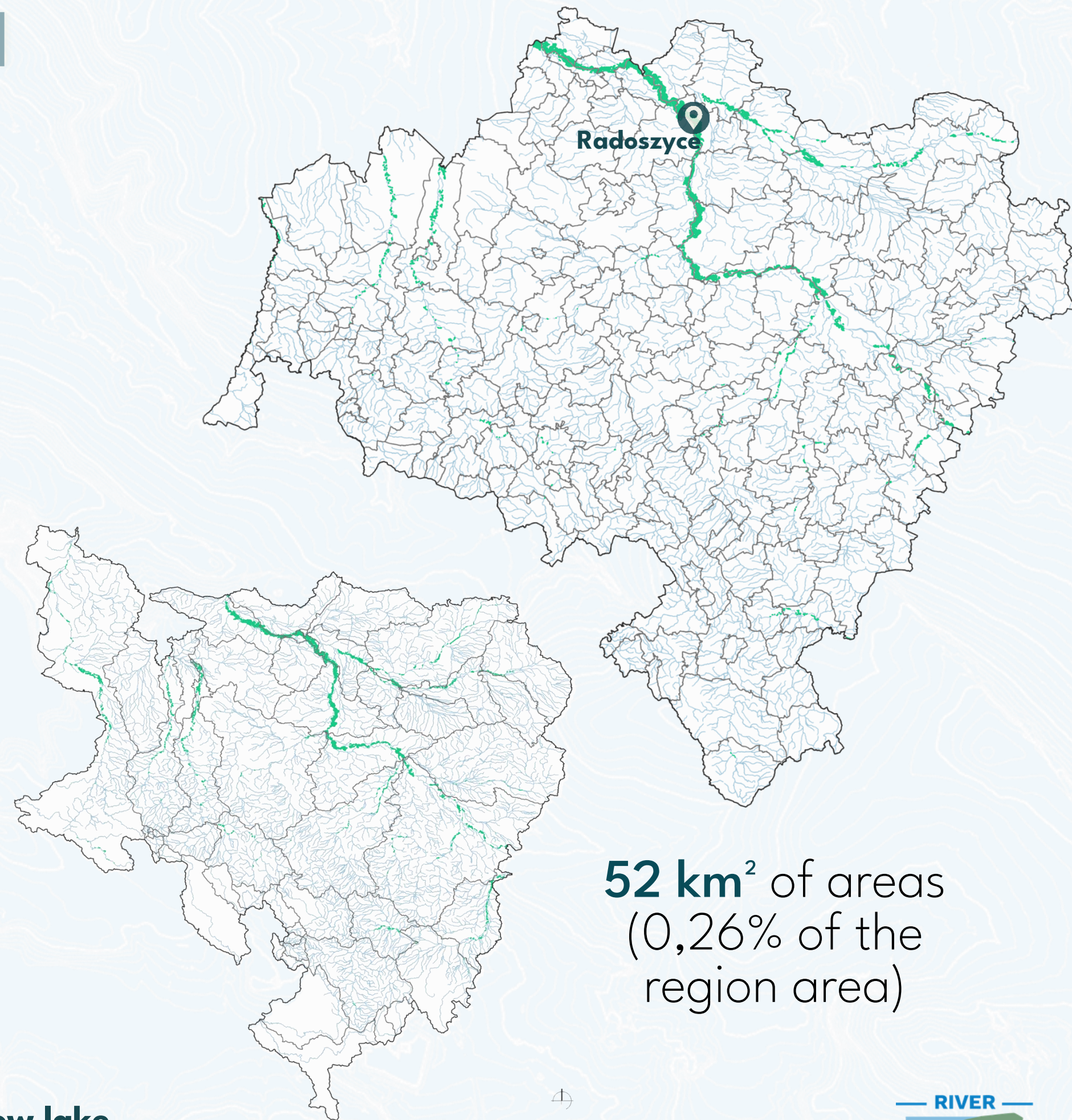




OXBOW LAKE RETENTION



-  river
-  Oxbow lake

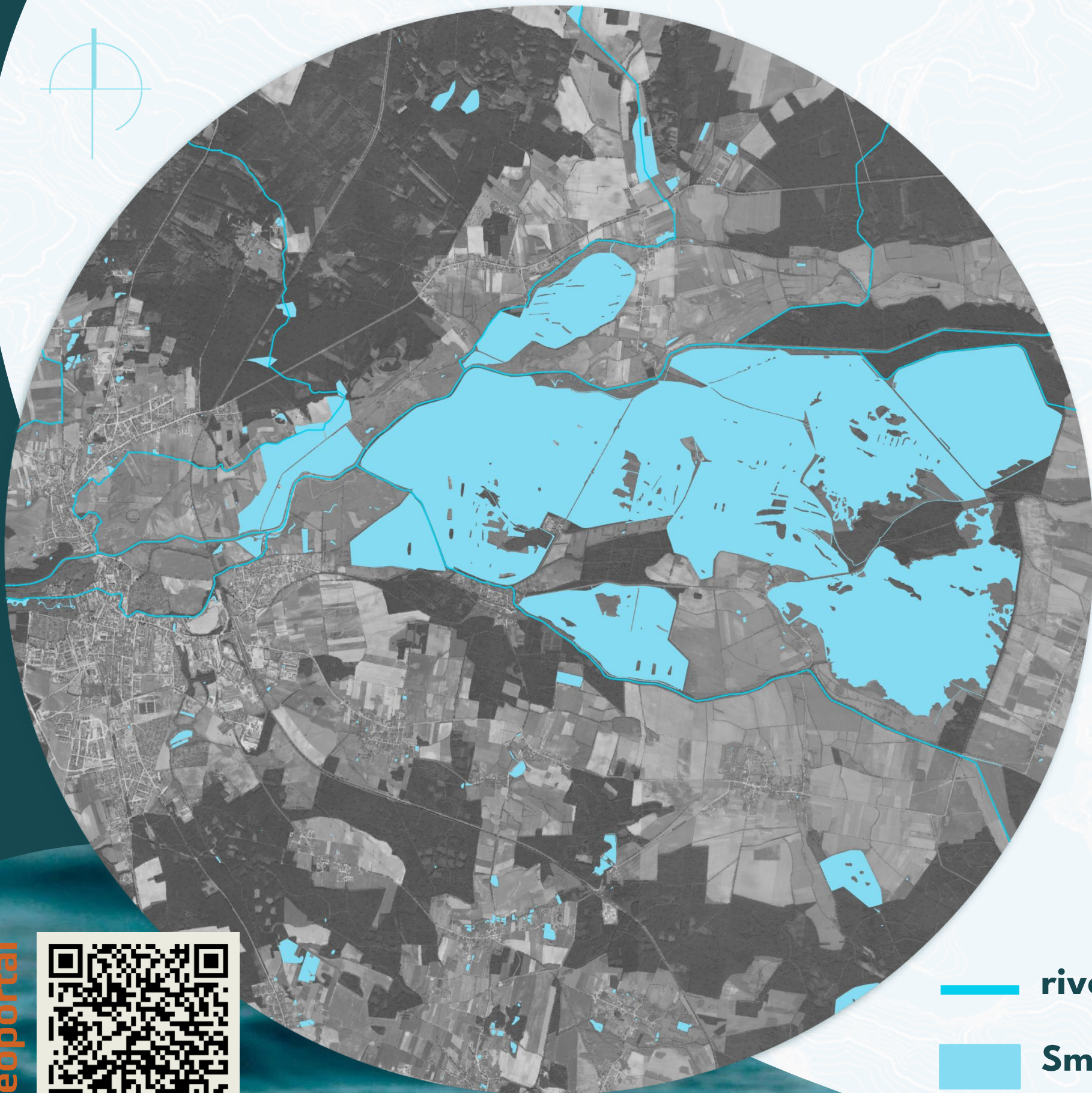


52 km² of areas
(0,26% of the
region area)

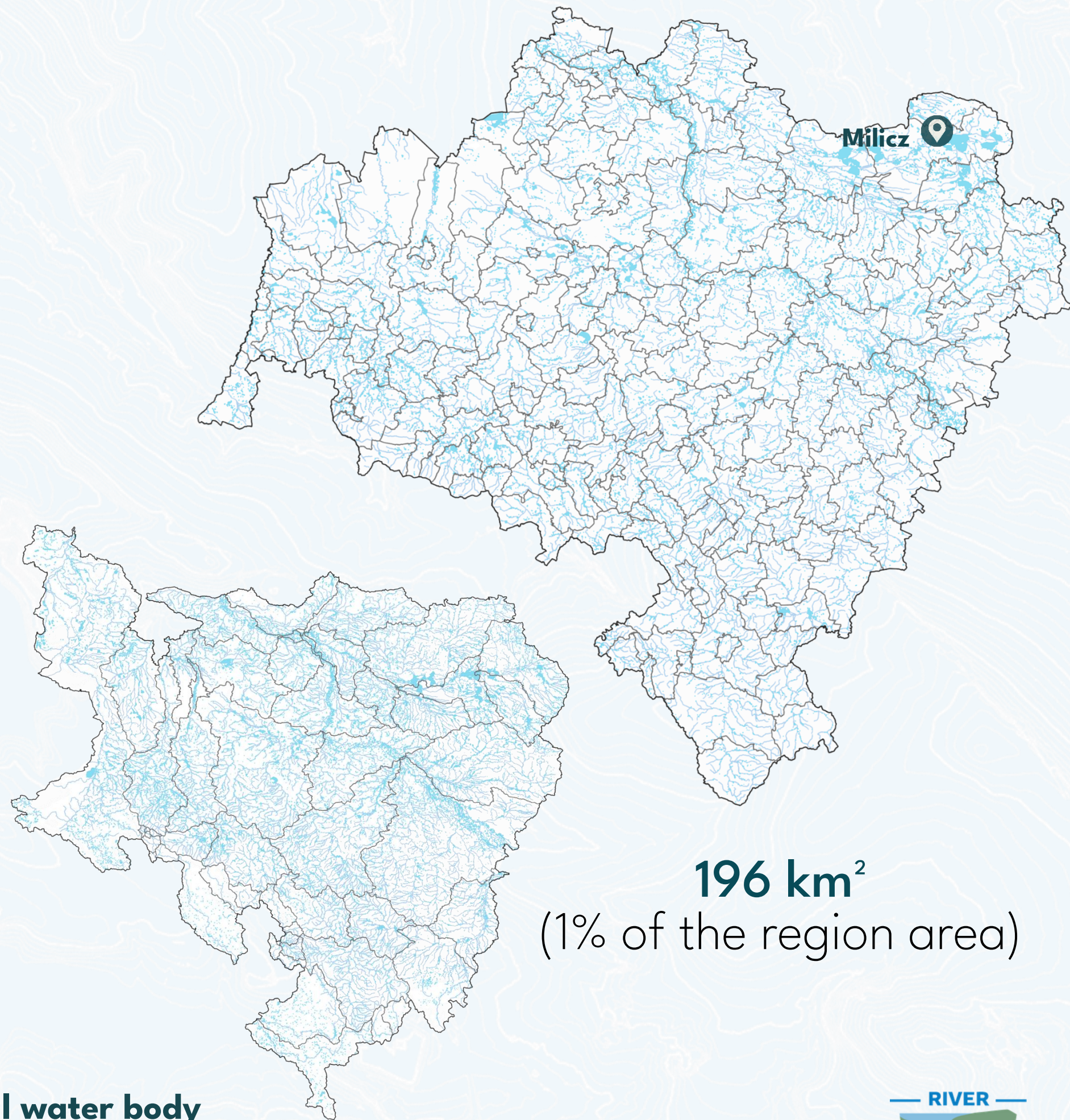




WATER BODY RETENTION



- river
- Small water body



196 km²
(1% of the region area)





URBAN WATER RETENTION

Geoportal

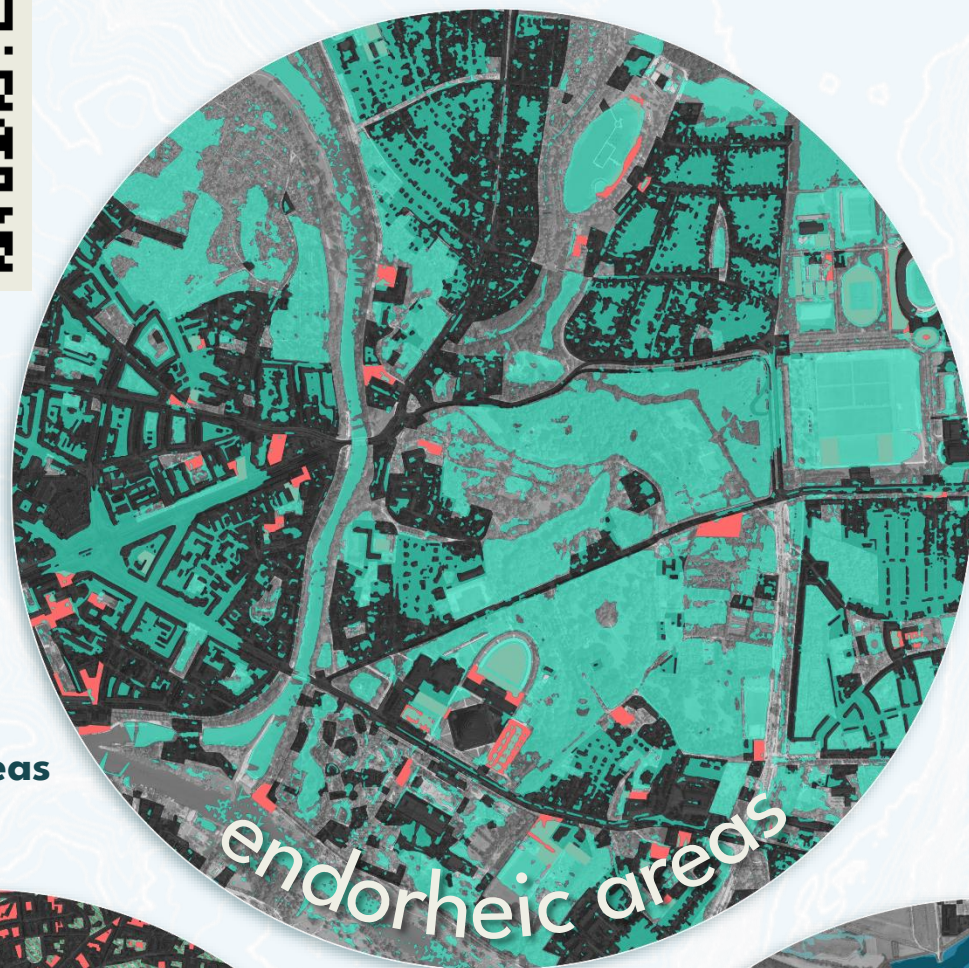


Impervious surfaces

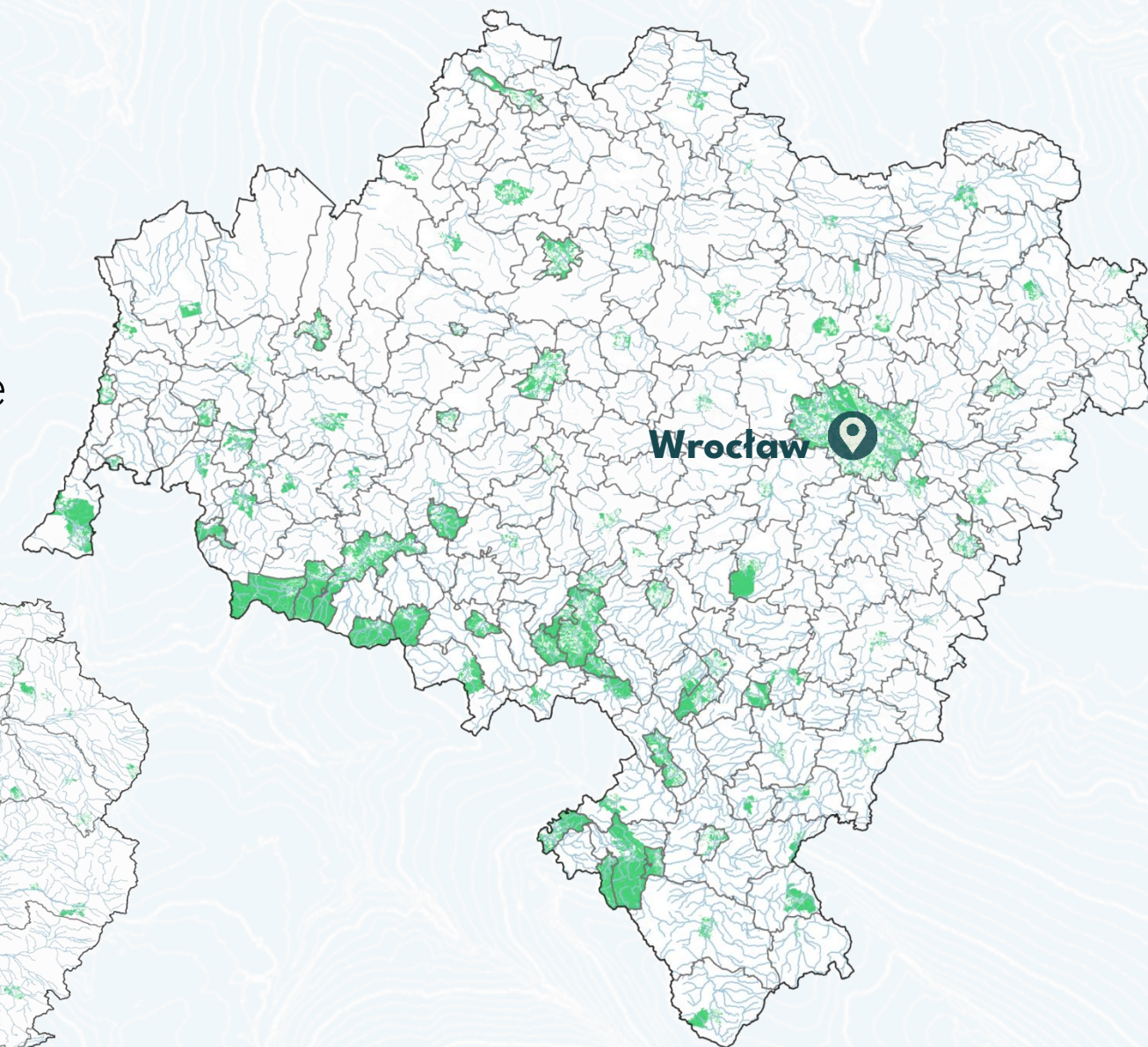
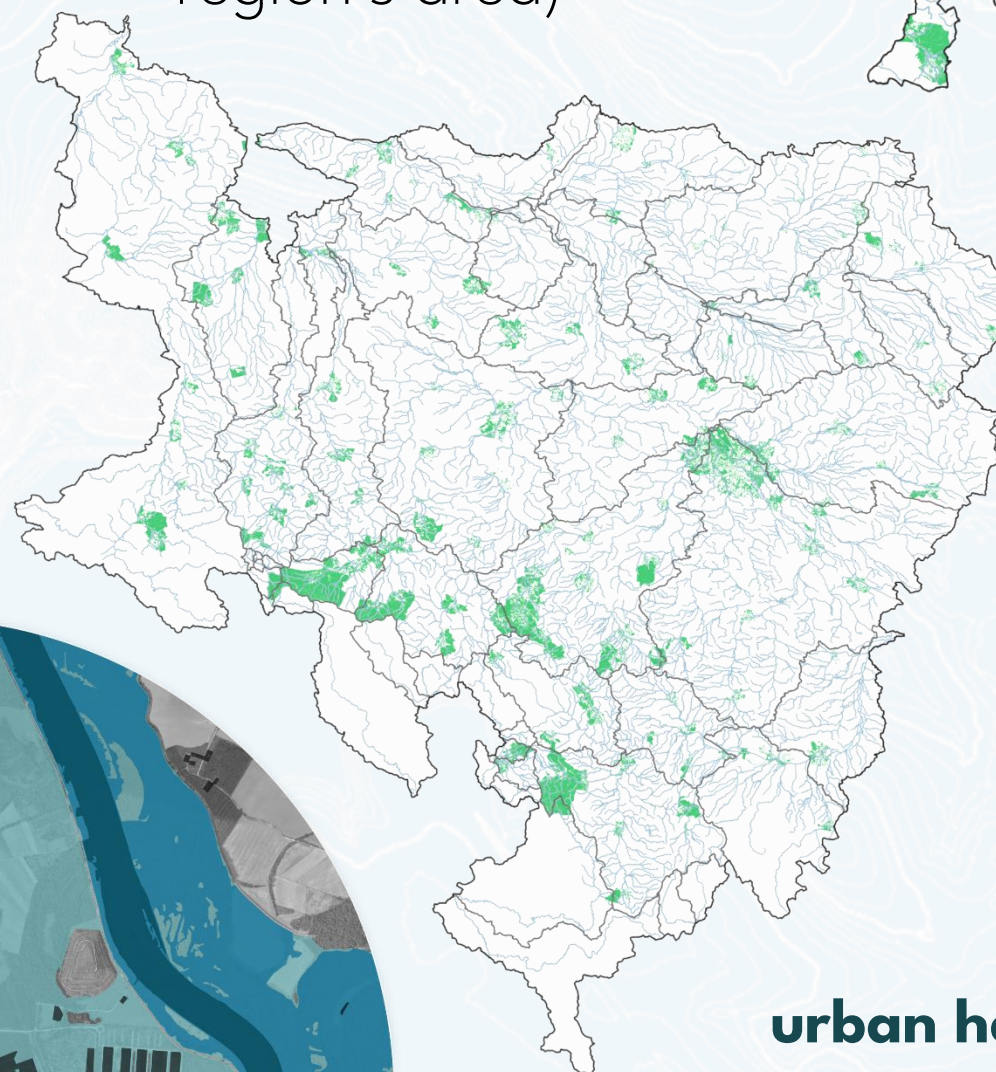
plaza

blue-green infrastructure

endorheic areas



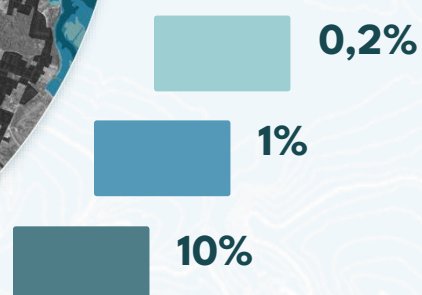
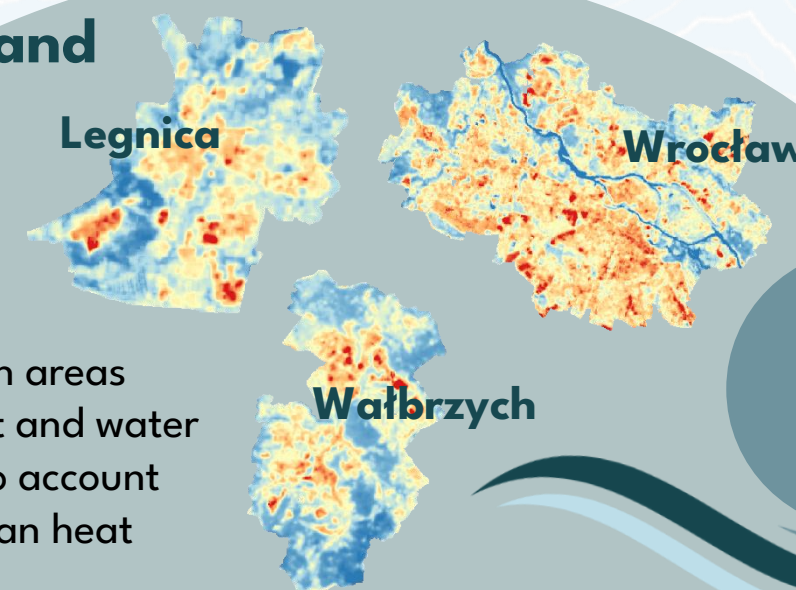
1 317 km² of existing blue-green infrastructure (BGI) areas in 92 cities in Lower Silesia (6.6% of the region's area)



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urban heat island



- identification of urban areas vulnerable to drought and water shortages, taking into account the impact of the urban heat island effect

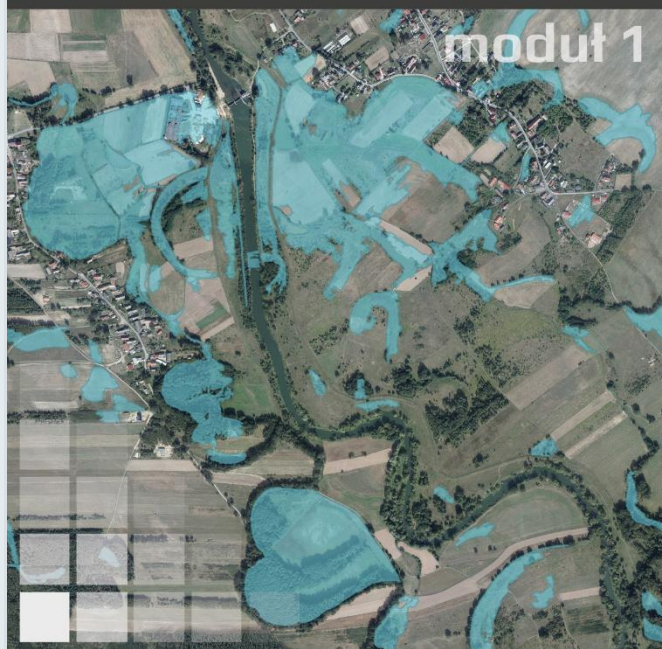


**ANALIZA POTENCJAŁU RETENCYJNEGO
NA OBSZARZE WOJEWÓDZTWA
DOLNOŚLĄSKIEGO**

Metodyka

październik 2025

moduł 1



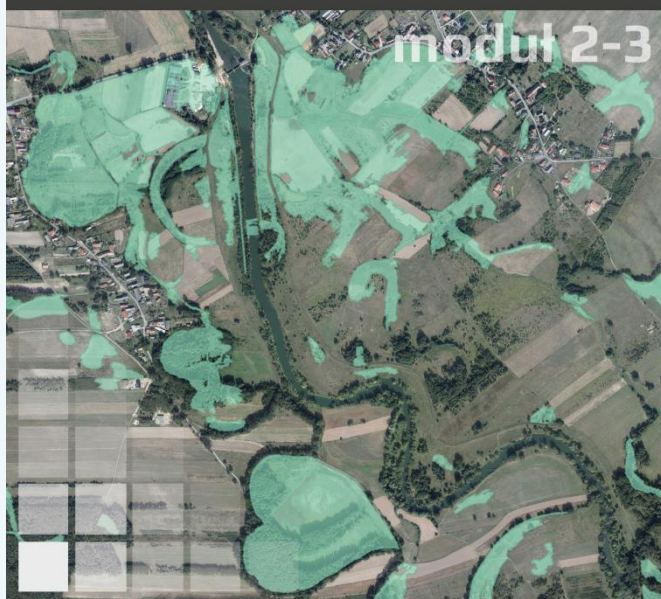
**ANALIZA POTENCJAŁU RETENCYJNEGO
NA OBSZARZE WOJEWÓDZTWA
DOLNOŚLĄSKIEGO**

Baza danych

Struktura bazy danych

październik 2025

moduł 2-3



**ANALIZA POTENCJAŁU RETENCYJNEGO
NA OBSZARZE WOJEWÓDZTWA
DOLNOŚLĄSKIEGO**

Słowniczek

październik 2025

moduł 4



PRODUKTY

MODUŁ 1 Methodology

MODUŁ 2-3 Database
Database structure

MODUŁ 4 Glossary

MODUŁ 5 Analysis of regulations
and documents regarding
rainwater and meltwater
management

MODUŁ 6-7 Retention reports for:
▪ catchments areas (169)
▪ commune (54)

MODUŁ 8 Final report
moduł 8a recommendations

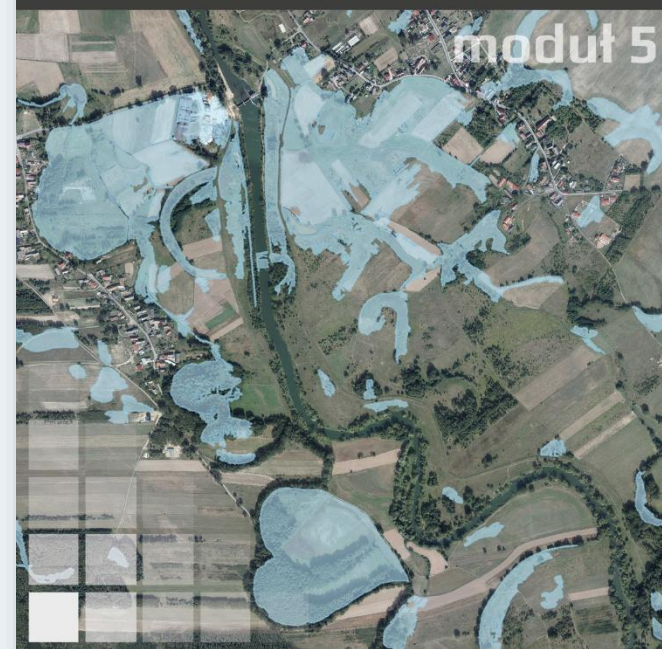
moduł 8b numerical data

**ANALIZA POTENCJAŁU RETENCYJNEGO
NA OBSZARZE WOJEWÓDZTWA
DOLNOŚLĄSKIEGO**

Analiza dokumentów

październik 2025

moduł 5



**ANALIZA POTENCJAŁU RETENCYJNEGO
NA OBSZARZE WOJEWÓDZTWA
DOLNOŚLĄSKIEGO**

Karty retencji

październik 2025

moduł 6-7

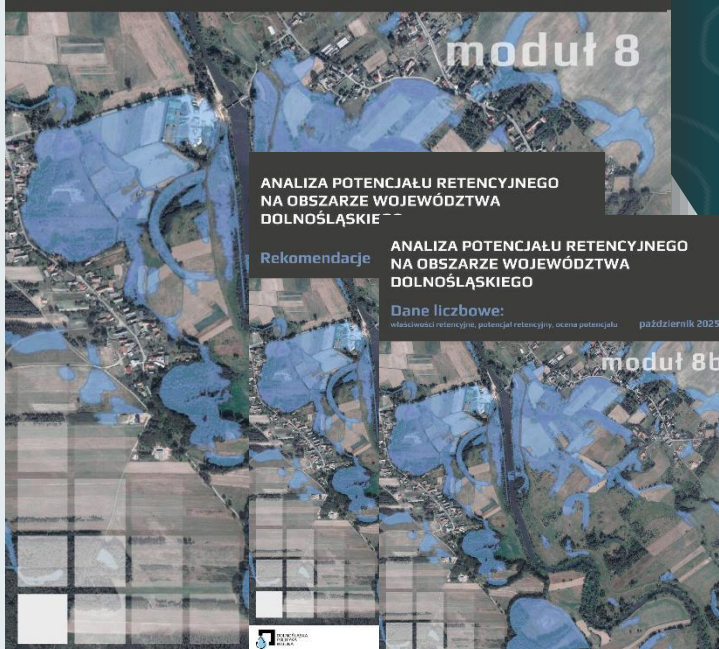


**ANALIZA POTENCJAŁU RETENCYJNEGO
NA OBSZARZE WOJEWÓDZTWA
DOLNOŚLĄSKIEGO**

Raport końcowy - WNIOSKI

październik 2025

moduł 8



The analysis included

Matrix table

including: institution, legal basis, type of competence, sector, scope of responsibilities and powers, supervisory authority.

Summary

Synthesis of the results and a cross-sectoral perspective

Identification of competence gaps

Conclusions and recommendations, particularly relevant for the regional water policy



The water governance system in Poland is based on an extensive institutional structure, with a **broad range** of responsibilities and competences assigned to different institutions and stakeholders.



Analysis of Legal Competences and Responsibilities in Water Management

Selected findings:

Fragmentation

The effectiveness of the system is constrained by the fragmentation of responsibilities and insufficient coordination of actions.

Strengthening institutional links

A key direction for improvement should be greater cross-sectoral integration, particularly at the interface of water management, agriculture, forestry, and spatial planning.

Responsibility gaps

Responsibilities should be more clearly assigned in selected areas, particularly with regard to stormwater management and drought risk mitigation, including the implementation of Nature-Based Solutions (NbS).

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Clean Baltic*



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THANK YOU

Katarzyna Dudek

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