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SLOVAK ENVIRONMENT AGENCY

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INTERNATIONAL CONFERENCE

CONTAMINATED SITES 2022

TRNAVA, SLOVAK REPUBLIC, 12 – 14 OCTOBER 2022

The activity has been implemented within the framework of national project
Information and providing advice on improving the quality of environment in Slovakia.
The project is cofinanced by Cohesion Fund of the EU under Operational programme Quality of Environment.

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The first national database of Potentially contaminated sites in Slovenia (PCSs) and a model approach for determinanting priority treatment

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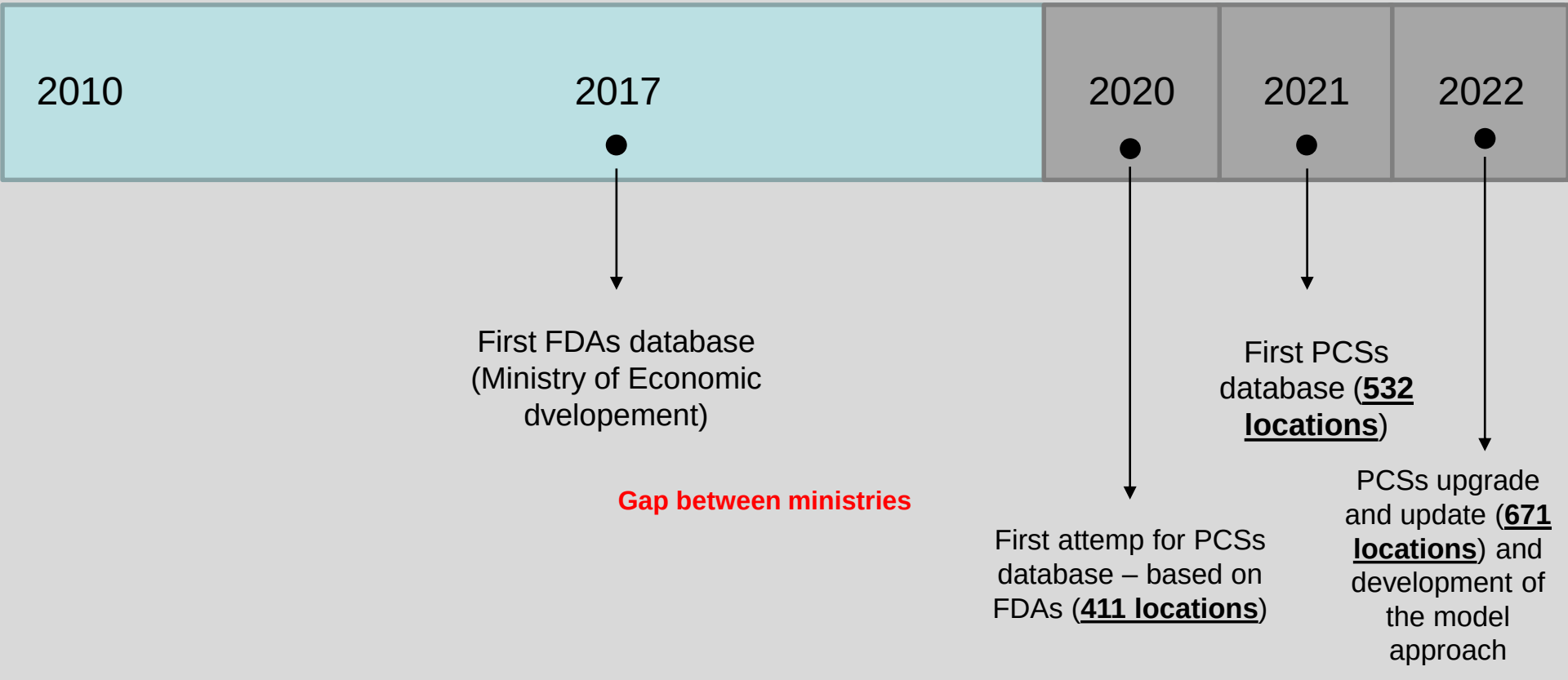
Slovenian PCSs database development

Functionally derelict areas (FDAs) research (2010-2012, 2015-2017, 2019-2020, 2022-2023 …)

Potentially contaminated sites research (2020-)



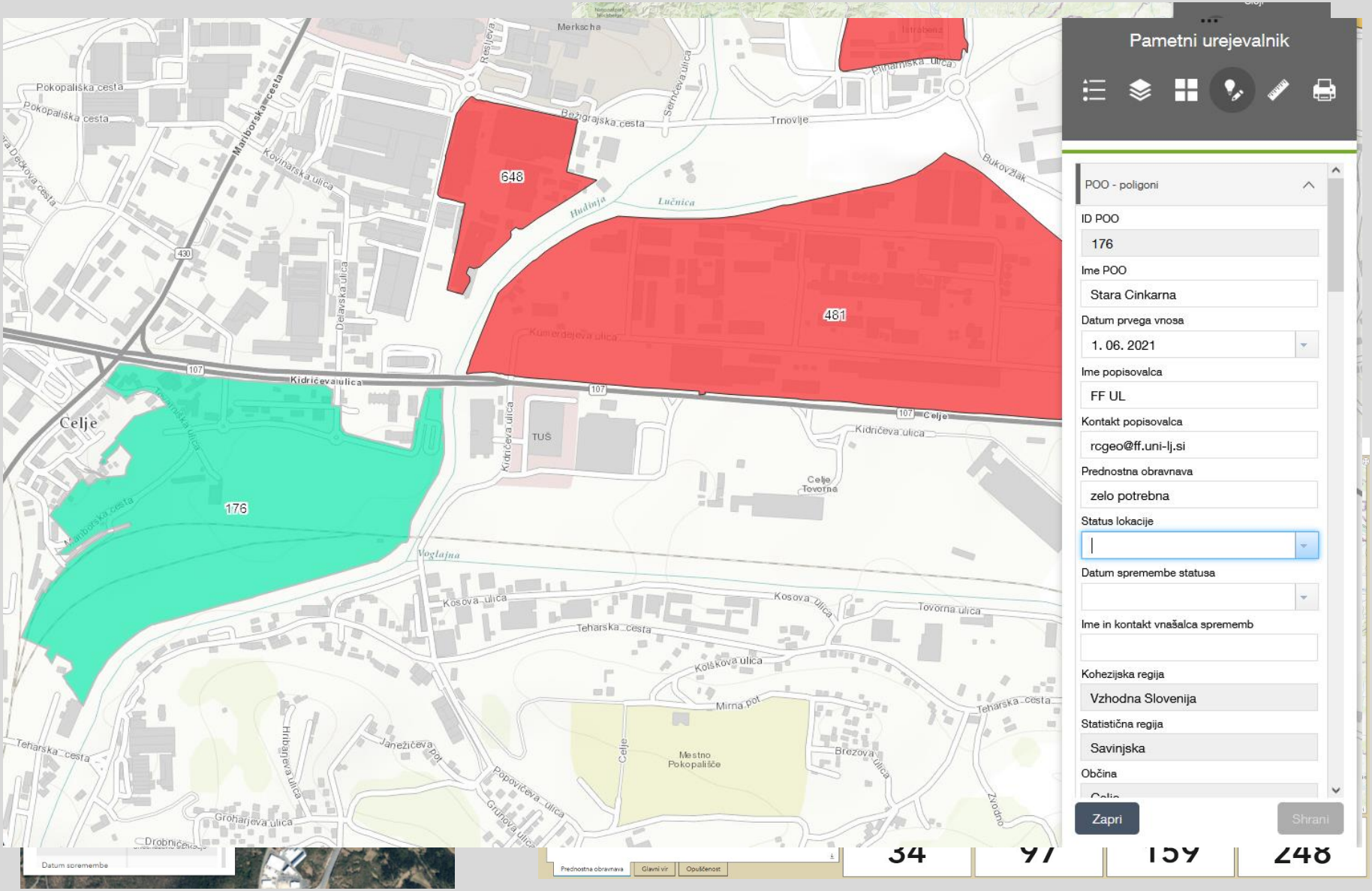
Resources for first database

- Databse of Functionally derelict areas (FDAs)
  - industrial and craft activities, infrastructure, agricultural activities, defense, protection and rescue, transitional use, extraction of mineral resources and service activities
- Closed industrial landfill
- Closed communal landfills
- Industrial esteblishments (Seveso directive)
- Locations based on Industrial emission directive (IED)
- Individual locations

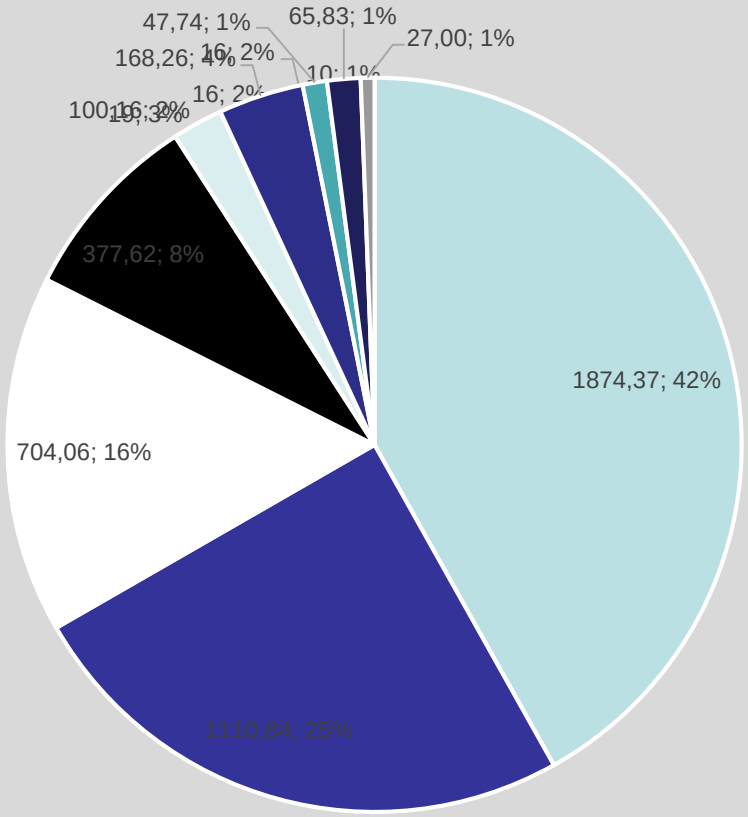
Monitoring system - set of attributes

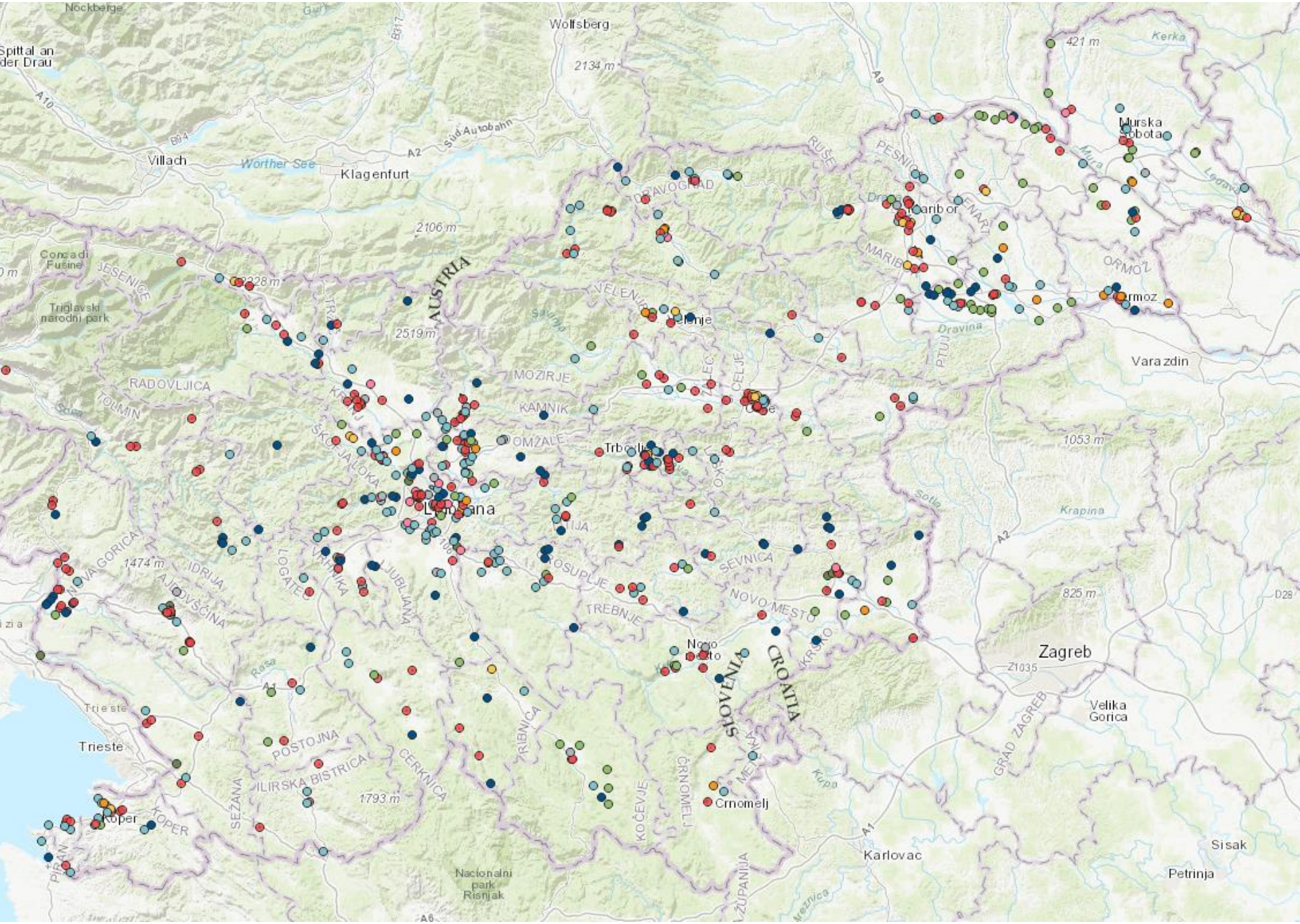
no.	group	attributes
1.	PCS INDETIFICATION	ID, Name, Date od identification, Status of the location
2.	LOCATION	Statistical region, Municipality, Cadastral municipality, Plot number(s)
3.	DESCRIPTION	PCS type and subtype, **Main pollution source** by activity, Pollution source - detailed, PCS size (ha), PCS abandonment rate, Presence of facilities, O**wnership**, Soil type, Land use, **Protection regimes**
4.	POLLUTION	Source of pollution (industrial activity; storage; disposal of waste, soil; spills, discharges; growth of invasive plant species; other), Description of the source of pollution, Pollutants (soil, water), Research to date, Reliability, Description of reliability
5.	IMPLEMENTATION OF MEASURES AND MONITORING	Risk reduction Measures, Description of the implementation of risk reduction measures, Monitoring
6.	SOURCES	Photographs, Attached materials, PCS identification source, Additional comments

Monitoring system - application

- 

Caracteristic of PCSs in Slovenia

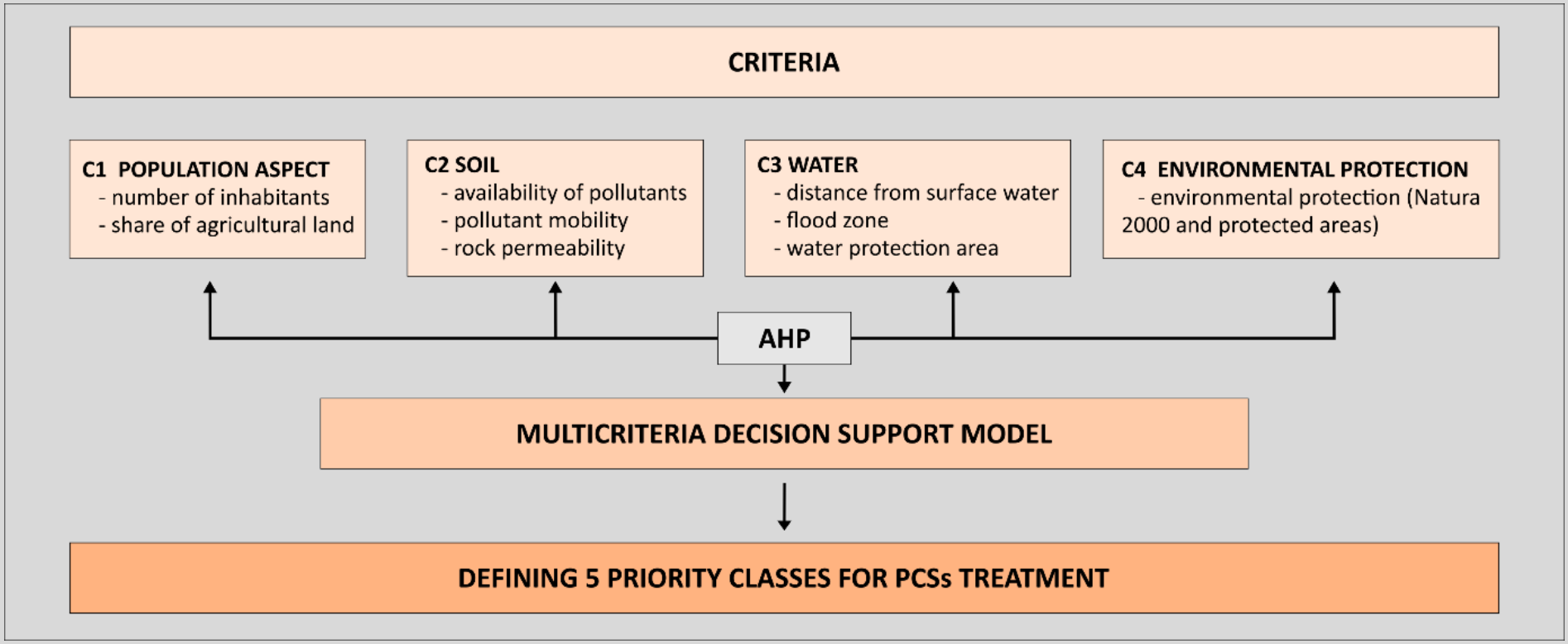




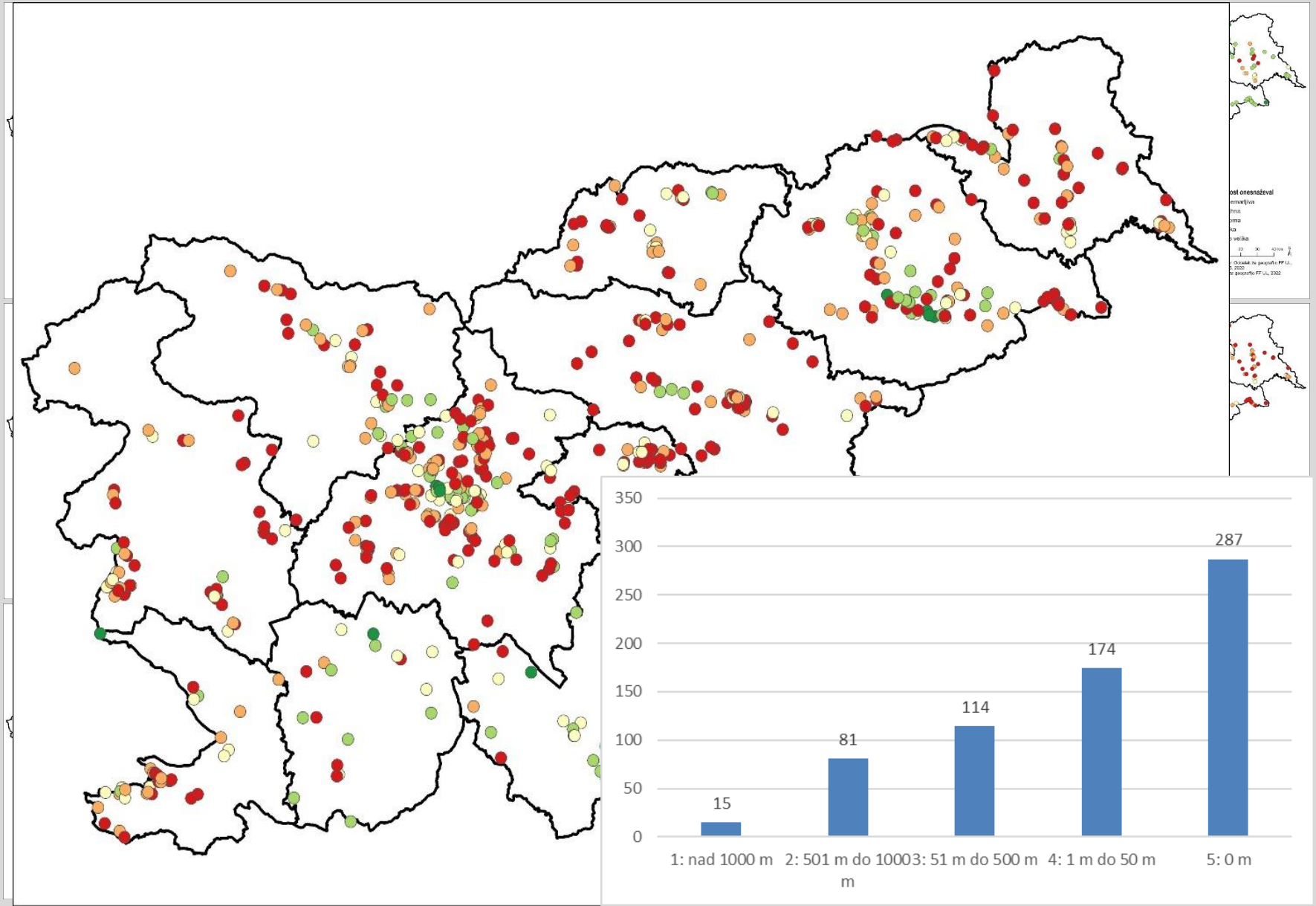
Nockberge
Wolfsberg
Spittal an der Drau
2134 m
421 m
Kerka
A10
B94
Villach
Worther See
Klagenfurt
A2
Süd Autobahn
A9
Murska Sobota
Mura
Ledava
RUŠE
PESNICA
DRAVOGRAD
Maribor
MARIBOR
ORMOŽ
Ormoz
2106 m
Concadi Fusine
JESENICE
Triglavski narodni park
AUSTRIA
VELENJE
Velenje
Dravina
PTUJ
Varazdin
2519 m
MOZIRJE
RADOVLJICA
TOLMIN
KAMNIK
CELJE
Trbovlje
1053 m
ŠKOFJA LOKA
Sotla
Krapina
A2
1474 m
IDRIJA
LOGATEC
VRHNIKA
LJUBLJANA
SEVNICA
NOVO MESTO
825 m
D28
TREBNJE
Novo mesto
SLOVENIA
CROATIA
Zagreb
Z1035
Velika Gorica
Trieste
POSTOJNA
ILIRSKA BISTRICA
CERKNICA
RIBNICA
GRAD ZAGREB
1793 m
SEŽANA
KOČEVJE
ČRNOMELJ
Crnomelj
Kupa
Koper
KOPER
A1
Karlovac
Sisak
Petrinja
Nacionalni park Risnjak
ŽUPANIJA
A6

Model approach for determinanting priority treatment

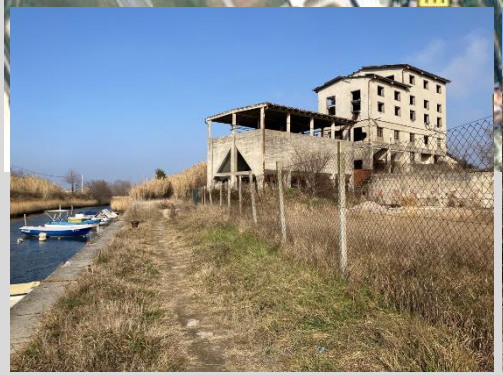
- Foreign practices, Literature analysis
- 4 criteria and 9 indicators



Criteria and indicators analysis



Criteria and indicators analysis - examples

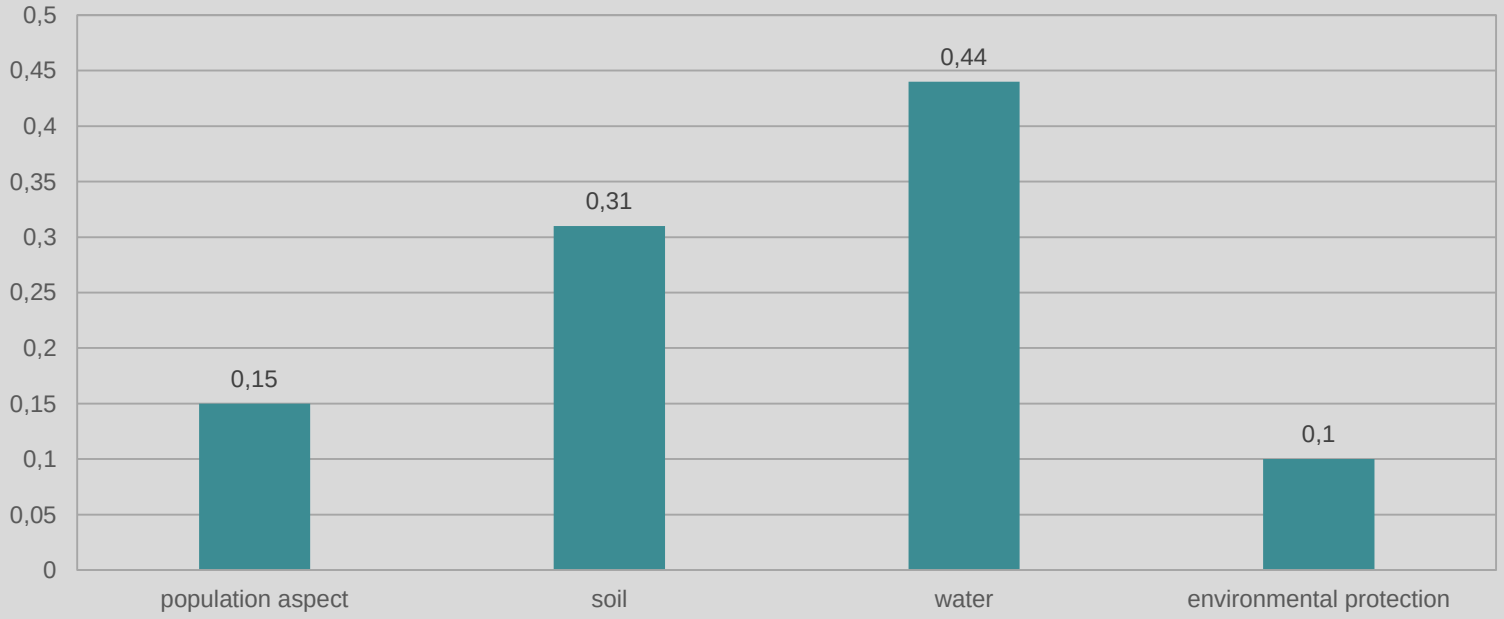


Sečovlje mine (Piran) is located in Natura 2000 and Sečovlje Salina Nature Park, directly next to a Dragonja river and in flood risk zone.

Ihan Farms (Domžale) located directly next to Kamniška Bistrica river, surrounded by agricultural land and Ihan town.

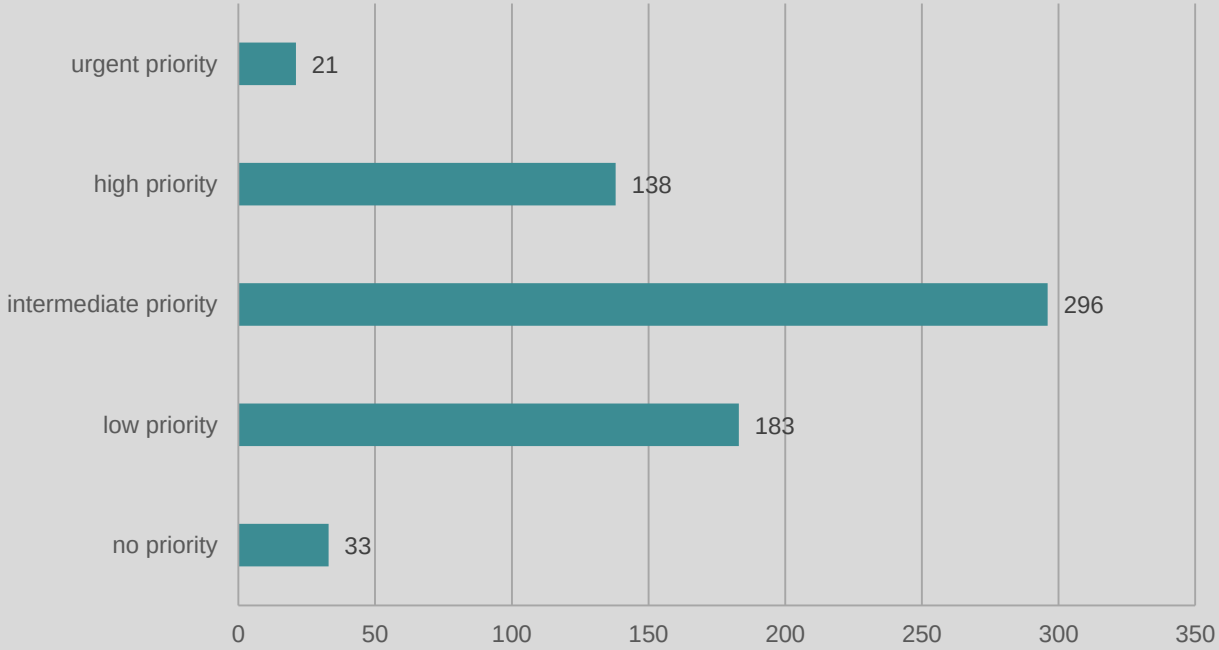
Weighting criteria

- The analytical hierarchy process (AHP)
- Most influenced by criteria related to water (0.44) and soil (0.31). Together, they account 3/4 of the total impact.

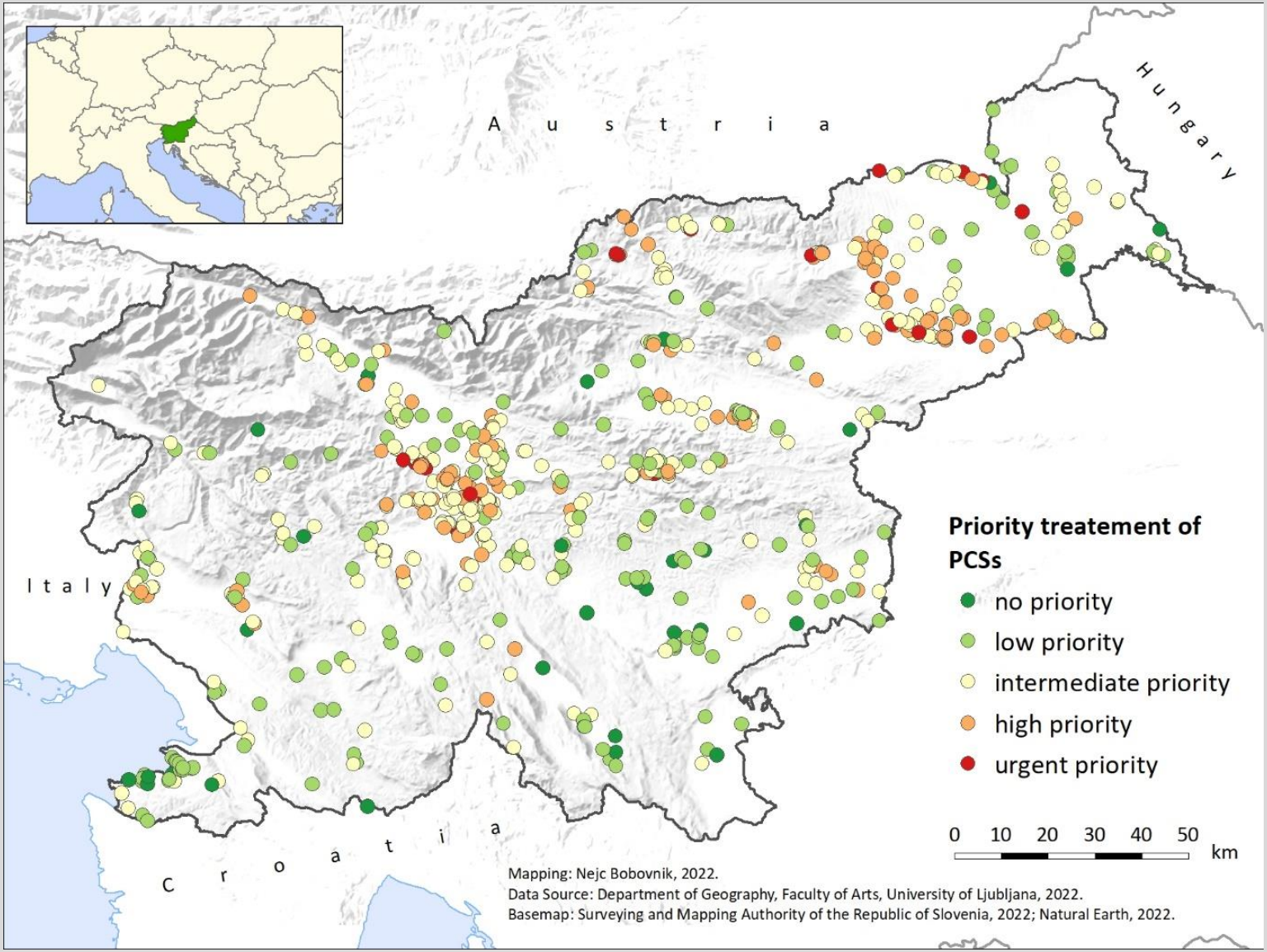


Priority treatment of PCSs in Slovenia

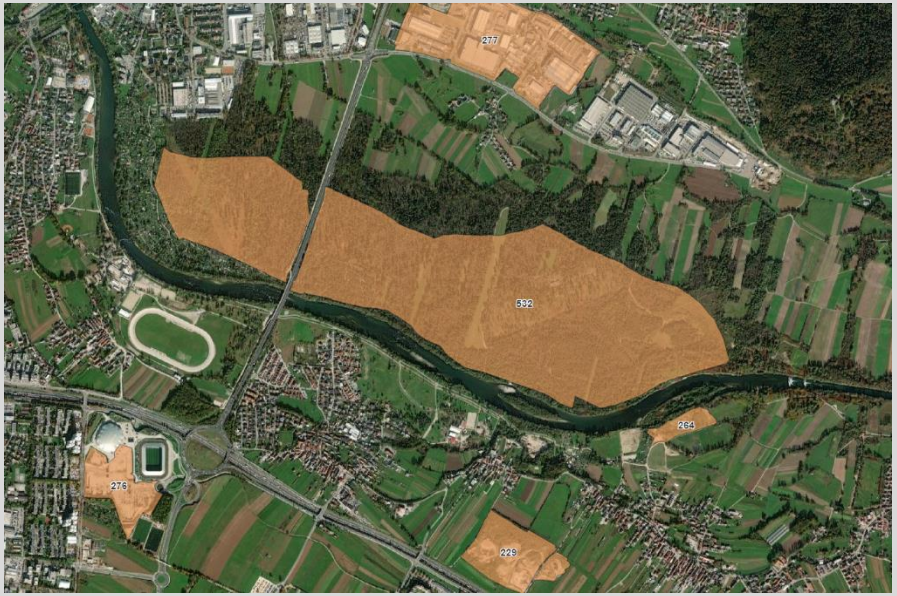
- Based on the sets of criteria and indicators.
- Multicriteria decision support model to define five priority classes



Spatial distribution of PCSs regarding priority treatment

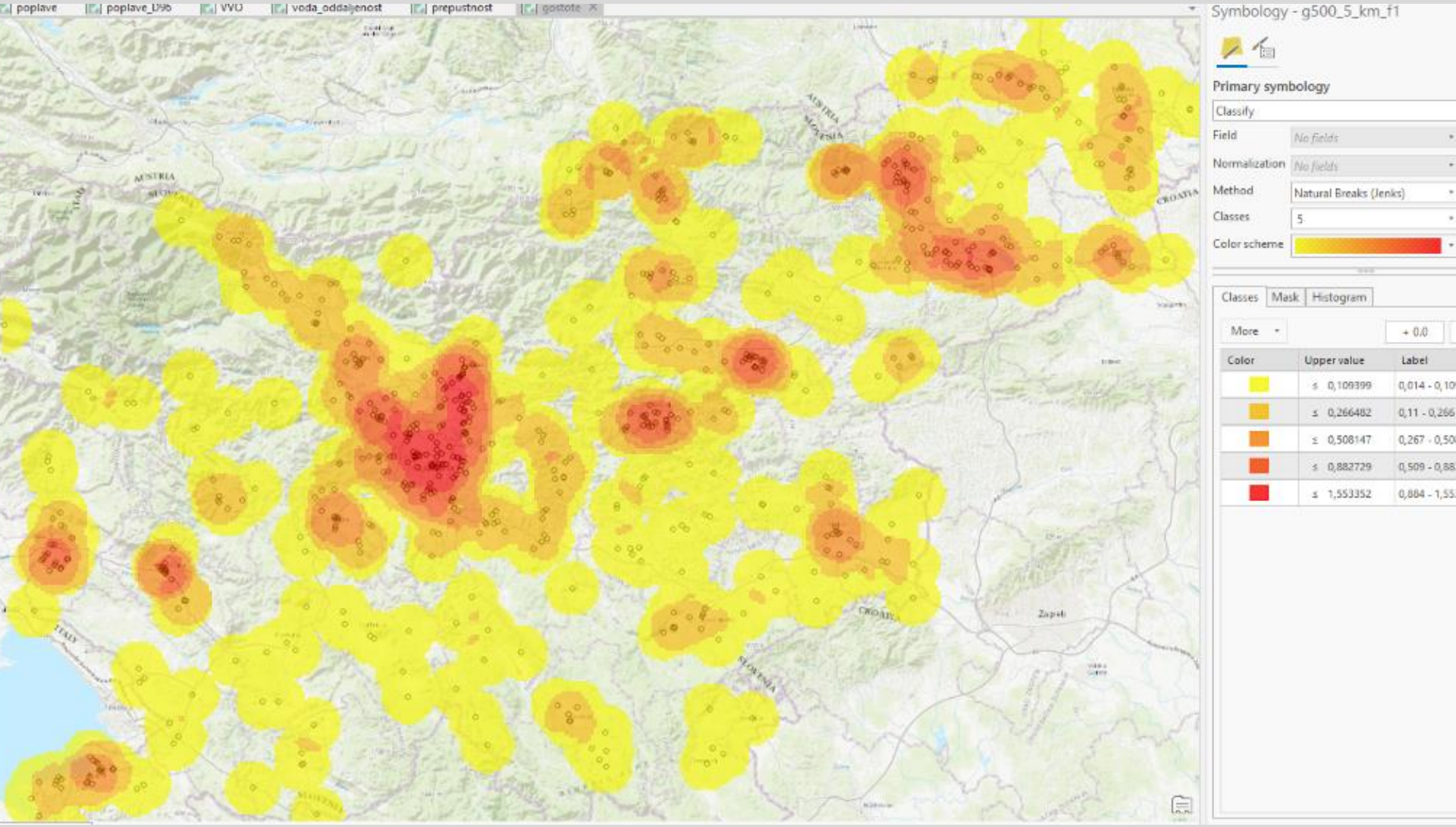


Locations with urgent priority



Jarški prod (Ljubljana) shows the highest priority.

- Population density 428 inhabitants/km2;
- 31 % agricultural land
- Rock permeability is critical (5);
- All indicators related to water are critical (5).

Lagoons in Podgrad (Gornja Radgona) shows the sencond highest priority.

The denisity of PCSs