



WATER QUALITY MONITORING AND ASSESSMENT

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Agenda

1. Water monitoring networks
2. Water quality assessment
3. Reporting and water quality management



1. Water monitoring networks



Environmental water quality

Rivers, Lakes and reservoirs, Groundwater



Local critical issues

Nitrates and organoalogenated compounds pollution in ground water



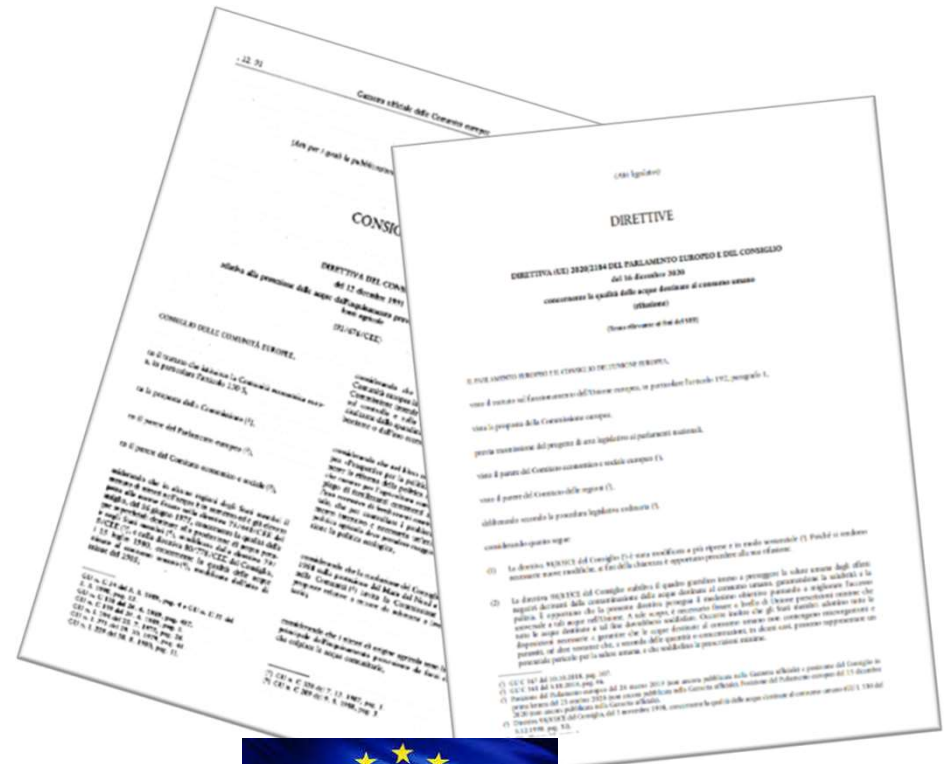
Bathing water quality

Lake bathing areas



Urban wastewater quality

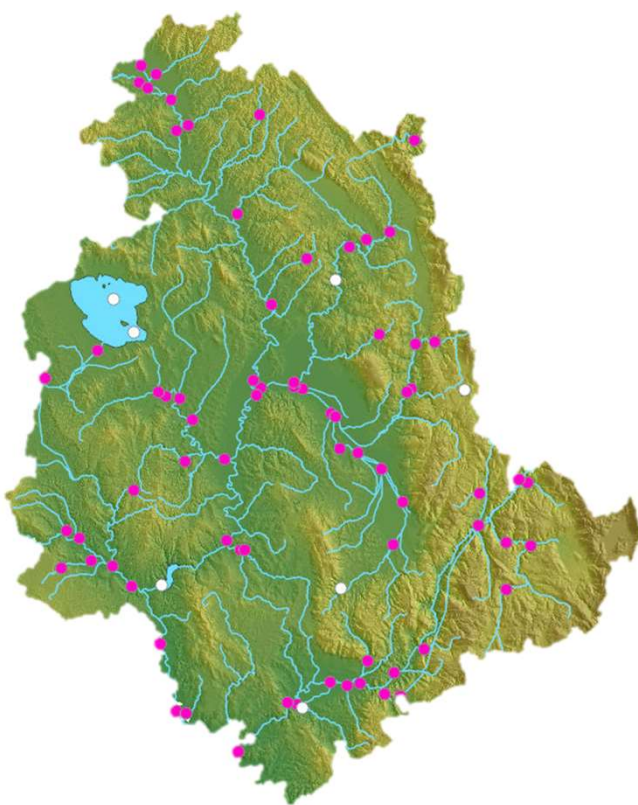
Urban wastewater treatment plants



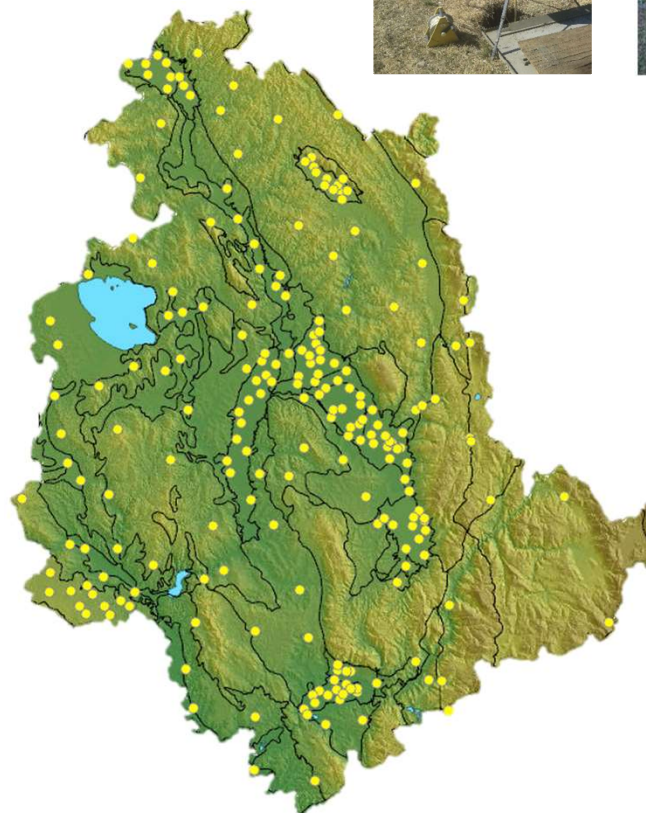


Environmental water quality

Rivers, Lakes and reservoirs, Groundwater



SURFACE WATER
Rivers – 72 sites
Lakes and reservoirs – 10 sites



GROUND WATER
220 sites

piezometer



well



spring



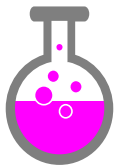
Mobile laboratory





Environmental water quality

Rivers, Lakes and reservoirs, Groundwater



Phenols



BTEX



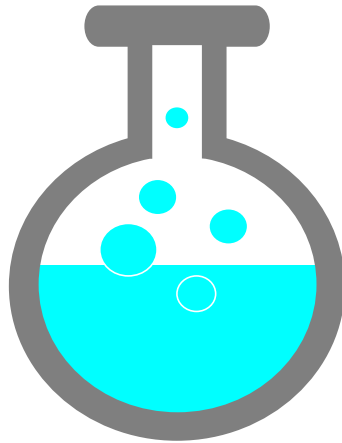
Dioxins



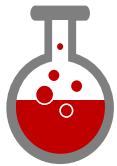
Metals



PCBs



Phytosanitary products



PFAS



VOCs



PAHs

Almost 300 substances analyzed!!





Environmental water quality

Rivers, Lakes and reservoirs, Groundwater

Biological monitoring

- Benthic invertebrates
- Macrophytes
- Diatoms
- Fish fauna
- Phytoplankton



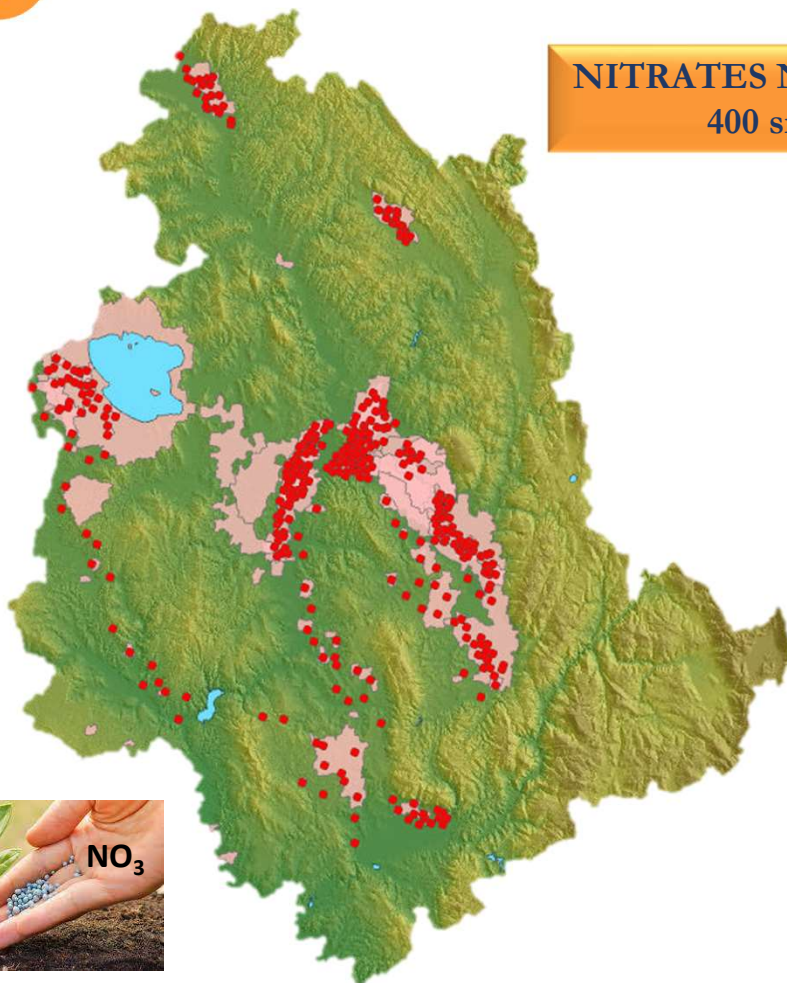


Local critical issues

Nitrates and organohalogen compounds pollution in ground water

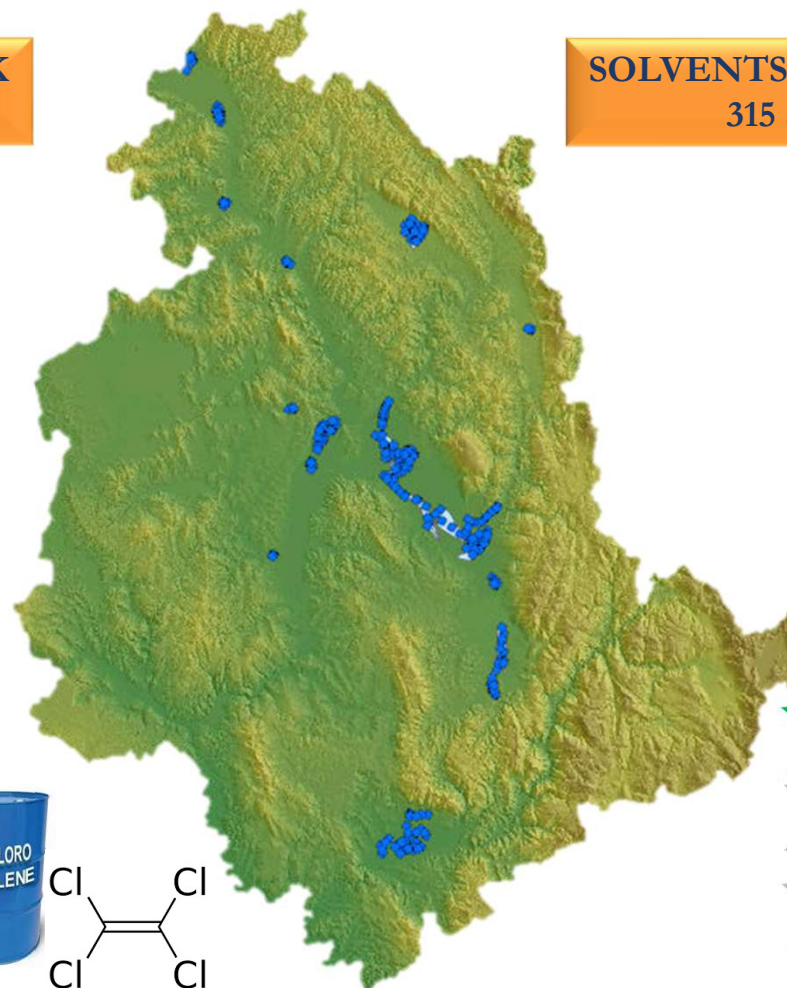
NITRATES NETWORK

400 sites

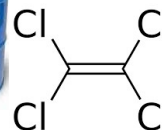


SOLVENTS NETWORK

315 sites



NO_3



Monitoring

Assessment

Reporting

Bathing water quality

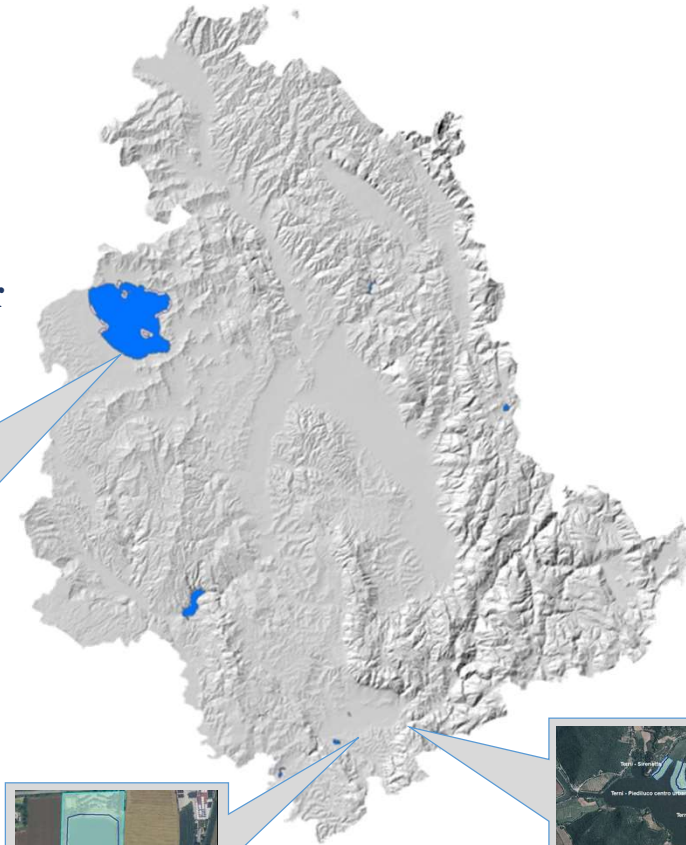


Lake bathing areas

3 lakes

21 bathing areas

Bathing season:
1st May – 30th September



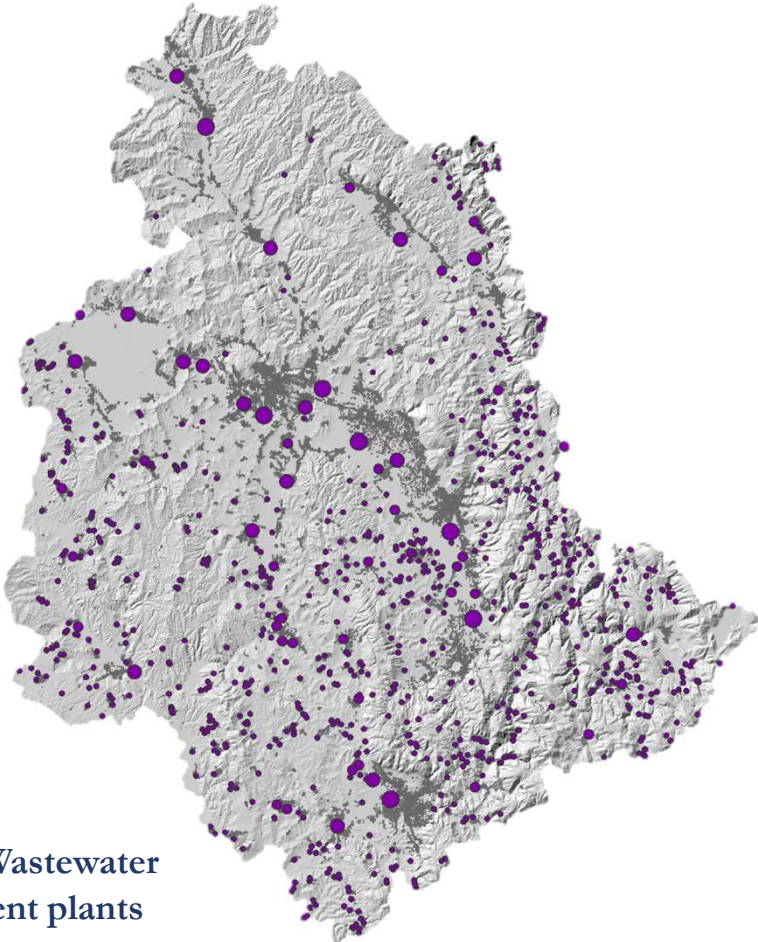
- Microbiological parameters
- Algal blooms
- Meteorological conditions





Urban wastewater quality

Urban wastewater treatment plants



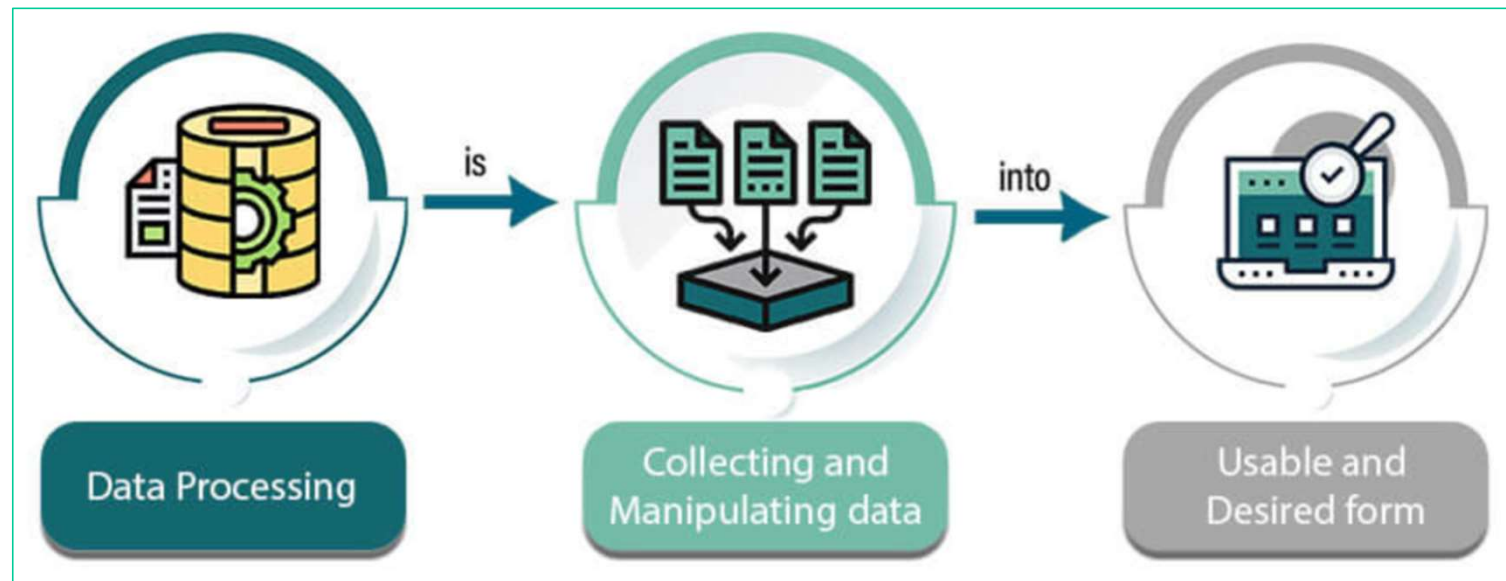
● Urban Wastewater treatment plants



Periodic check of plants with more than 2.000 population equivalents



2. Water quality assessment



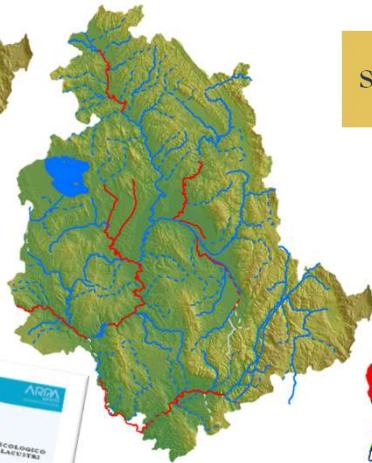
Main results



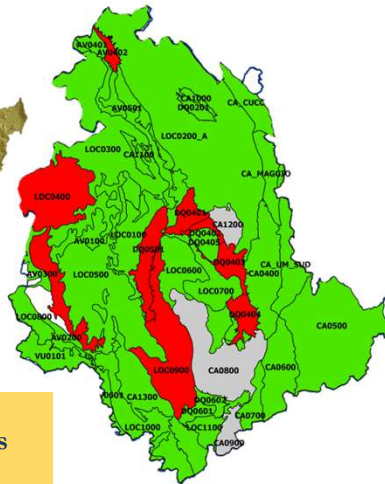
Environmental water quality



SW_chemical status



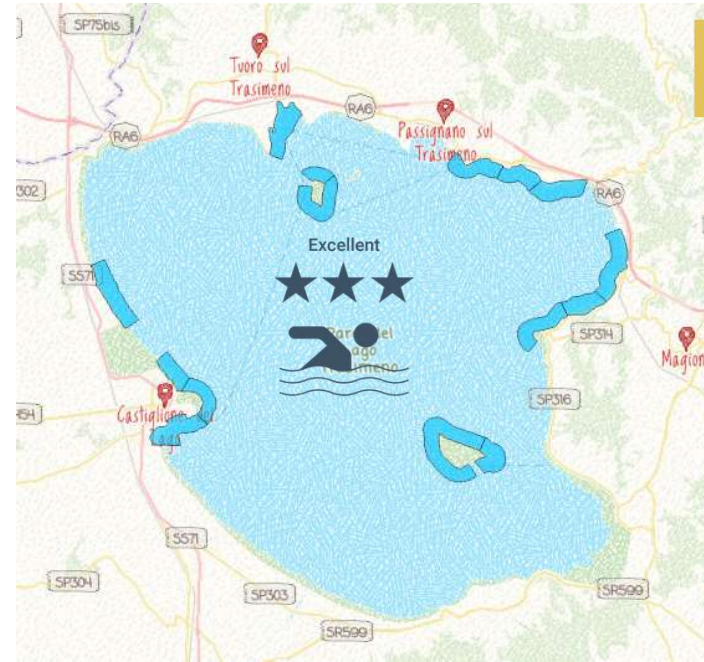
SW_chemical status



GW_chemical status



Bathing water quality



BW_water quality



... and more over

Long-term water quality trends



Effects of anthropic activities and climate change on water quality



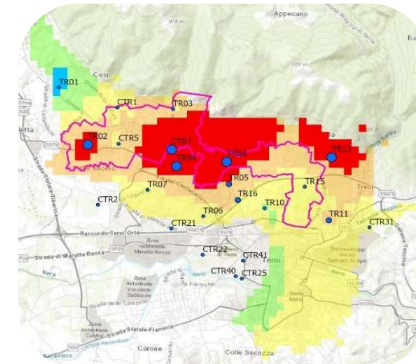
Impacts on aquatic ecosystems and human health



Sources of contaminants



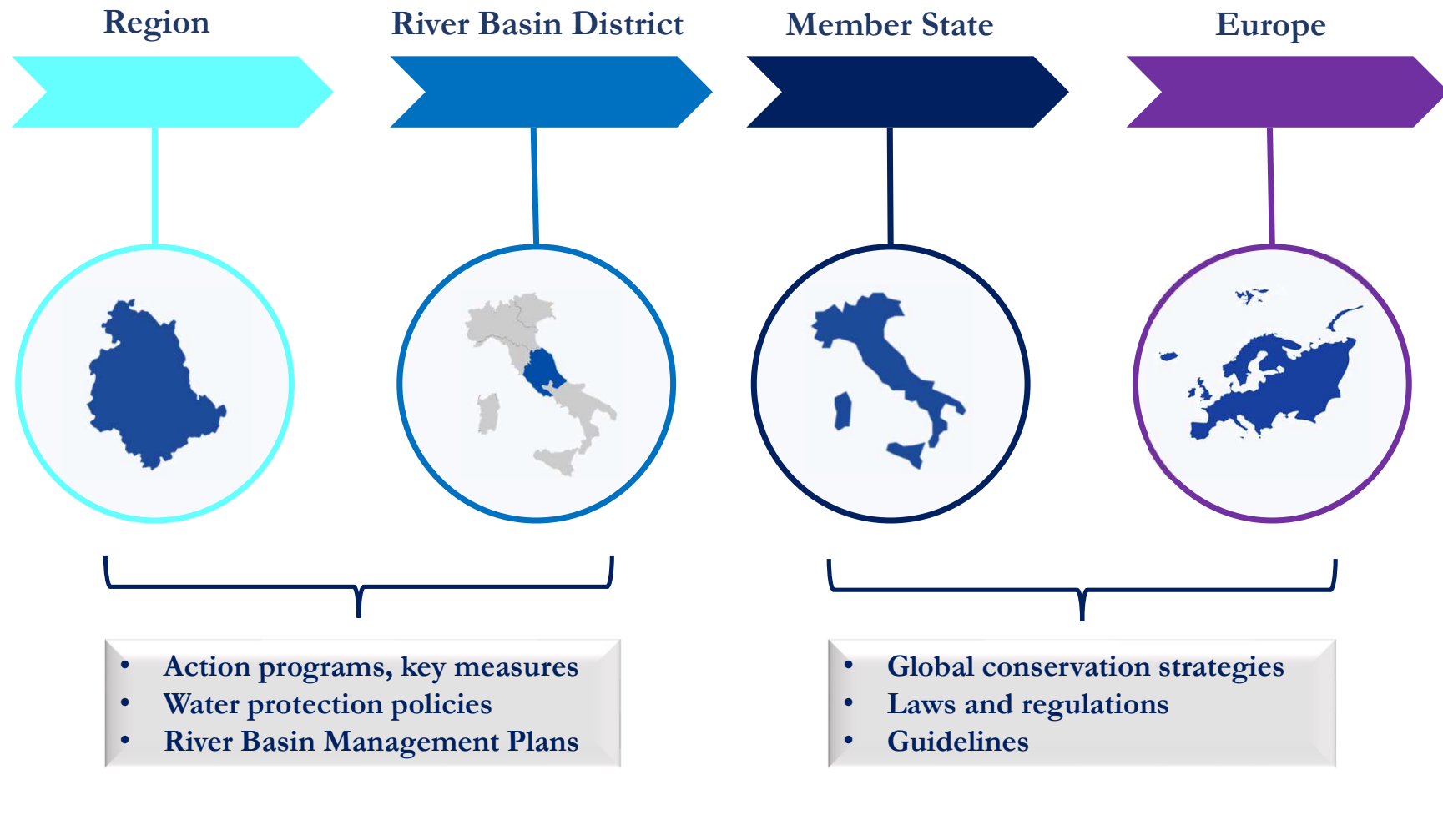
Extent of pollution



3. Reporting



3. Water quality management



***THANK YOU FOR YOUR
ATTENTION***

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