



**Taxonomy**

fish – benthic invertebrates –  
algae  
morphological identification –  
ecological classification –  
reference collections

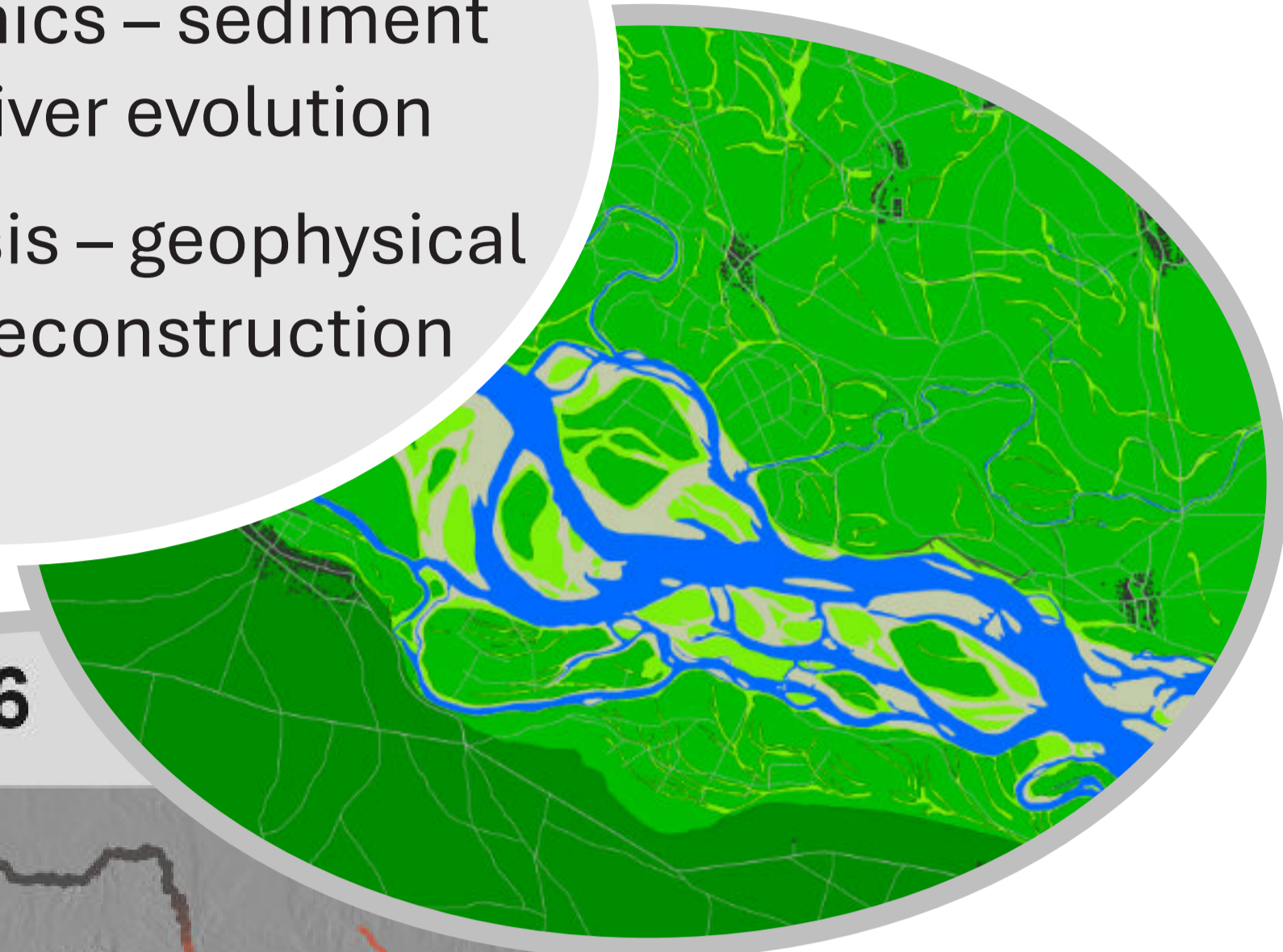


**Biodiversity**

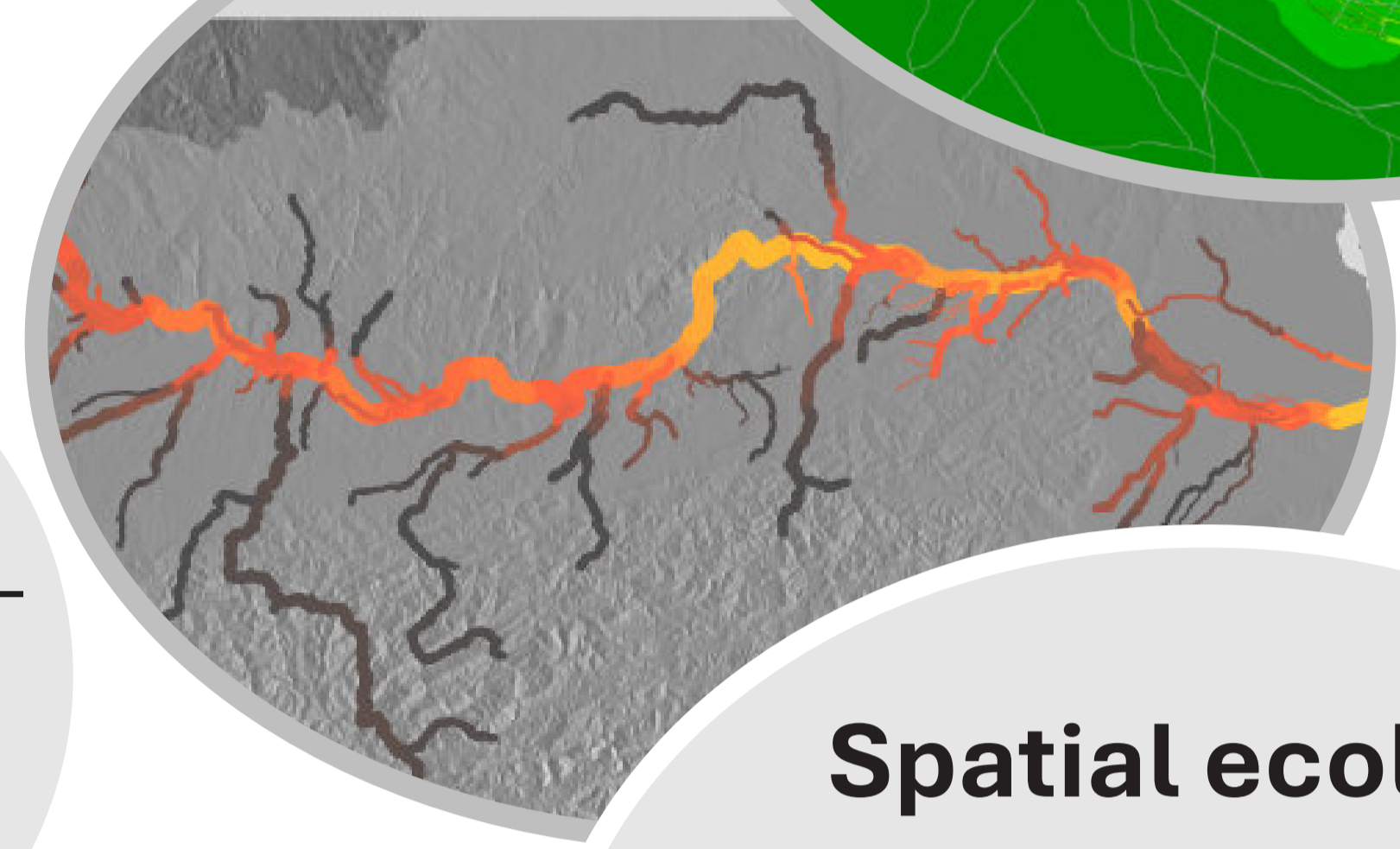
species diversity – functional  
diversity – species interactions  
diversity metrics – trait-based  
analysis – ecological  
modelling

**Fluvial  
morphology & history**

channel dynamics – sediment  
processes – river evolution  
historical analysis – geophysical  
surveys – 3D reconstruction



2026



**Genetics & eDNA**

species detection – population  
genetics – cryptic diversity  
eDNA analysis – molecular  
tools – laboratory  
diagnostics

**Fish migration**

connectivity – migration ecology –  
habitat requirements  
telemetry – tracking  
technologies – movement  
analysis

**Spatial ecology**

habitat distribution – connectivity  
patterns – species-environment  
interactions  
GIS – spatial modelling –  
scenario analysis

**Conservation**

species conservation – habitat  
protection – priority setting  
Red List assessment – IUCN  
Specialist Groups –  
conservation planning



**Experimental  
river processes**

flow dynamics – hydropeaking  
effects – sediment processes  
flume experiments – laboratory  
studies – process-based  
analysis



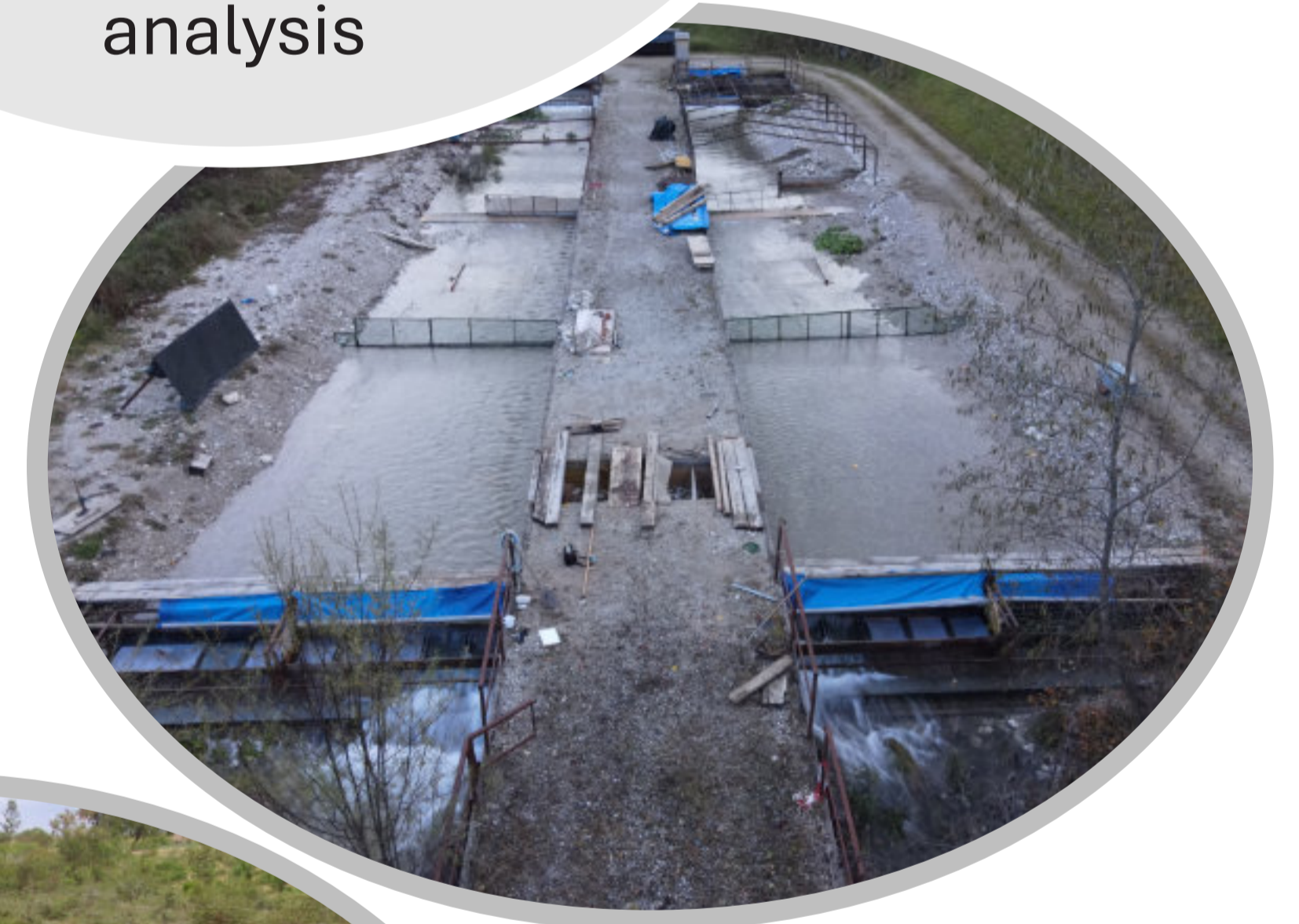
**Monitoring**

long-term observation – environ-  
mental change – trend detection  
sampling design – field surveys –  
sensor technologies



**Restoration**

process-based restoration –  
habitat enhancement – connectivity  
design & planning –  
implementation measures –  
success evaluation



**Sustainable  
aquaculture**

food production – species  
selection – system efficiency  
system design – production  
optimisation – resource  
management



**Sustainable  
development**

water resources – livelihood  
support – climate adaptation  
capacity building – knowledge  
transfer – local  
implementation

**Assessment**

ecological status – ecosystem  
function – environmental pressures  
indicator development –  
assessment systems – inter-  
national application



**Adaptive  
management**

decision-making – system  
integration – conflict resolution  
stakeholder engagement – policy  
alignment – iterative  
planning

