

Latvijas nacionālās Pētniecības infrastruktūras informācijas diena
15.04.2026.

Apvārsnis Eiropa projekts AquaINFRA

Infrastructure for Marine and Inland Water Research

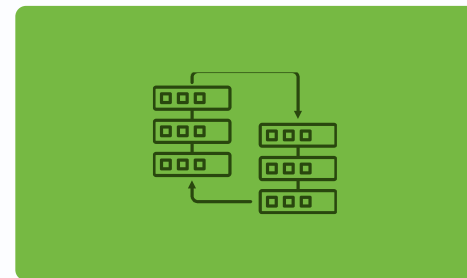
Solvita Strāķe

Latvijas Hidroekoloģijas institūts

solvita.strake@lhei.lv



This project has received funding from the European Commission's Horizon Europe Research and Innovation programme under grant agreement No 101094434. The European Commission is not responsible for any use that may be made of the information it contains.



 [/aquainfraeu](#)

 [/aquainfraeu](#)

 [/aquainfra](#)

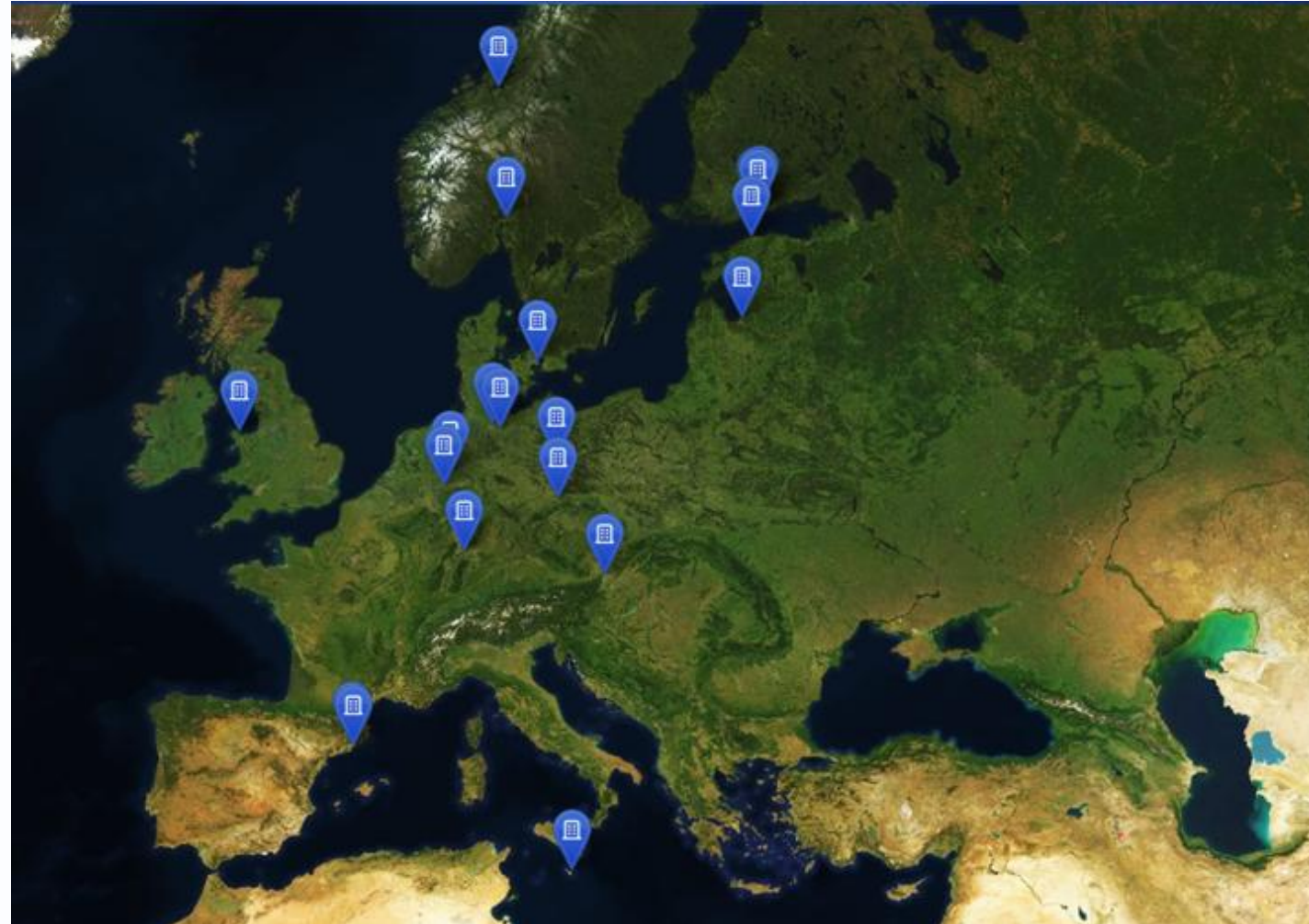


Daugavpils Universitātes aģentūra Latvijas Hidroekoloģijas institūts

Pētījumu virzieni un ekspertīze

- Jūras vides **monitorings**;
- Baltijas jūras **biodaudzveidības** dinamika un **svešo sugu** ietekme
- **Jūras telpiskā plānošana**, ekosistēmas pakalpojumi;
- Inovatīva un ilgtspējīga **jūras resursu izmantošana**;
- **Attālinātā izpēte**;
- Ūdens vides veselība – **piesārņotāju ietekmes vērtēšana**;
- **Mikroplastmasas** daļiņu izplatība, avoti un ietekmes ūdens vidē;
- **Aļģu toksīni**;
- **Ekotoksikoloģijas** procesi un testi;
- **Saldūdeņu ekosistēmu atjaunošana un monitorings**;
- **Paleolimnoloģija**;
- **Taksonomija** (zooplanktons, zoobentoss, fitoplanktons)

Partnerība



AquaINFRA Project: Overview

AquaINFRA aims to create a virtual environment supporting marine and freshwater scientists, fostering collaboration, and enabling effective data management and analysis.



Significance:

- Addresses the need for collaboration across marine and freshwater domains.
- Facilitates cross-disciplinary, cross-border data sharing and analysis.

Alignment with EU Goals:

- Directly aligns with EU's "Restore our Ocean and Waters" mission
- Advances the European Open Science Cloud (EOSC)

Strategic Impact:

- Establishes an EOSC-based research infrastructure for marine and freshwater domains.
- Enhances search, discovery, and spatio-temporal analysis services for targeted research communities.

Expected Outcomes:

- Contributes to achieving EU's environmental goals through collaborative research and data utilisation.
- Strengthens the role of EOSC in fostering interdisciplinary research and sustainable aquatic ecosystems.

Tools ▼ ☆

Discover Tools

search tools ✕

Get Data

Send Data

Collection Operations

GENERAL TEXT TOOLS

Text Manipulation

Filter and Sort

Join, Subtract and Group

Convert Formats

Machine Learning

Graph/Display Data

GIS Data Handling

Climate Analysis

Interactive tools

Build Matrix create a contact matrix

Welcome to Aqua's Galaxy

The Aqua Galaxy instance is a virtual research environment developed as part of the [Aqualnfra](#) project. It is composed of a set of tools to analyse FAIR multi-disciplinary data and services to support marine and freshwater scientists and stakeholders restoring healthy oceans, seas, coastal and inland waters. The virtual environment will enable the target stakeholders to store, share, access, analyse and process research data and other research digital objects from their own discipline, across research infrastructures, disciplines and national borders leveraging on EOSC and the other existing operational dataspace.

The current implementation comprises a number of more or less GIS-related tools from the Galaxy environment, but more tools will be developed soon in the context of the [case studies](#) in the project. In the future, this platform will provide ready-to-use executable workflows.

Our Data Policy

Registered Users

User data on UseGalaxy.eu (i.e. datasets, histories) will be available as long as they are not deleted by the user. Once marked as deleted the datasets will be permanently removed within 14 days. If the user "purges" the dataset in the Galaxy, it will be removed immediately, permanently. An [extended quota can be requested](#) for a limited time period in special cases.

Unregistered Users

Processed data will only be accessible during one browser session, using a cookie to identify your data. This cookie is not used for any other purposes (e.g. tracking or analytics). If UseGalaxy.eu service is not accessed for 90 days, those datasets will be permanently deleted.

FTP Data

Any user data uploaded to our [FTP server](#) should be imported into Galaxy as soon as possible. Data left in FTP folders for more than 3 months, will be deleted.

GDPR Compliance

The Galaxy service complies with the EU General Data Protection Regulation (GDPR). You can read more about this on our [Terms and Conditions](#).

The central gateway for scientific communities to find, access, and reuse aquatic digital resources.

Search for research data

SEARCH

BROWSE THROUGH OUR READY-TO-USE DEMONSTRATORS

Data-to-Knowledge Package for the AquaINFRA Elbe Use Case on dasymetric refinement of human population from EU NUTS3 regions level to river catchments

DATA-TO-KNOWLEDGE PACKAGE

Data-to-Knowledge Package for specleanr, a Tool-kit for Ensemble Outlier Detection and Removal

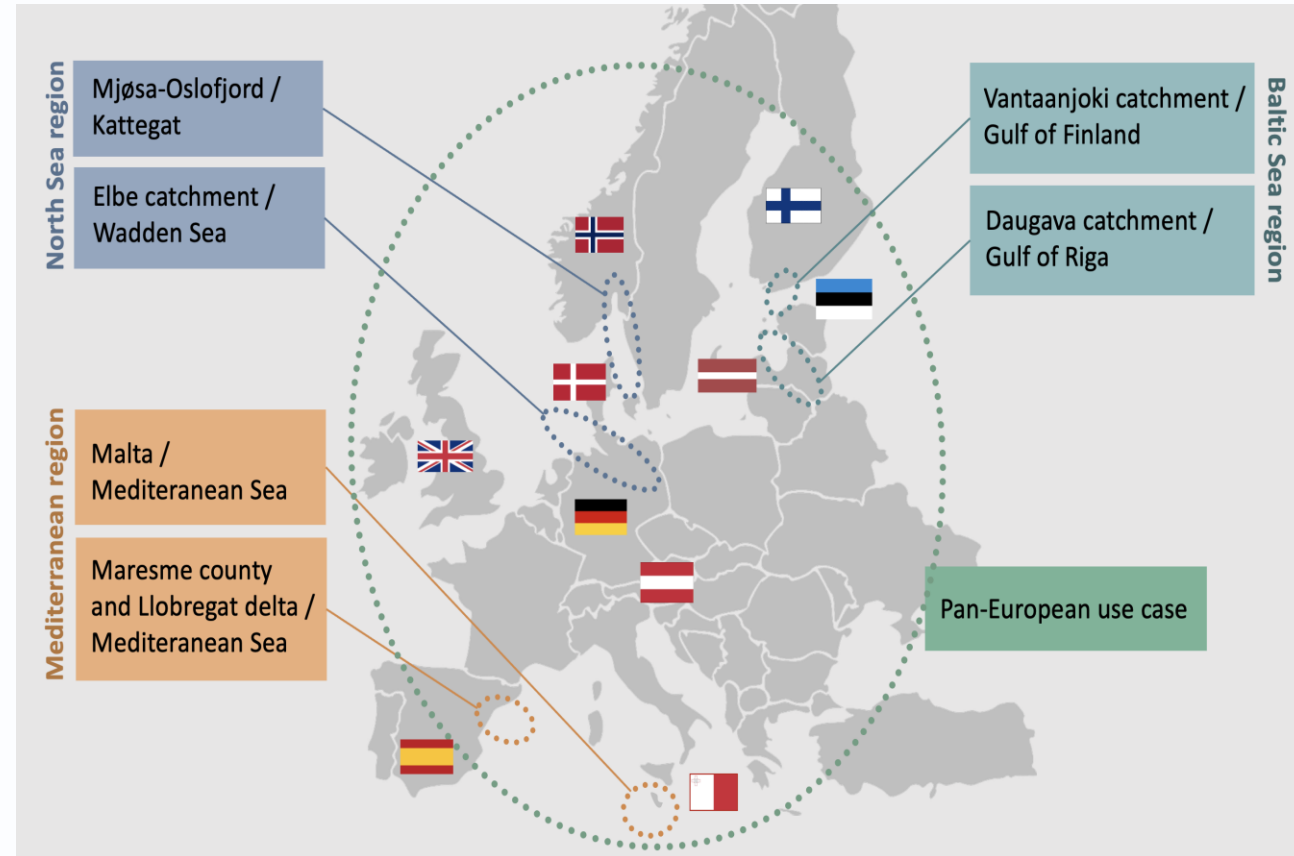
DATA-TO-KNOWLEDGE PACKAGE

Data-to-Knowledge Package for a Reproducible Spatiotemporal Trend Detection Analysis

DATA-TO-KNOWLEDGE PACKAGE

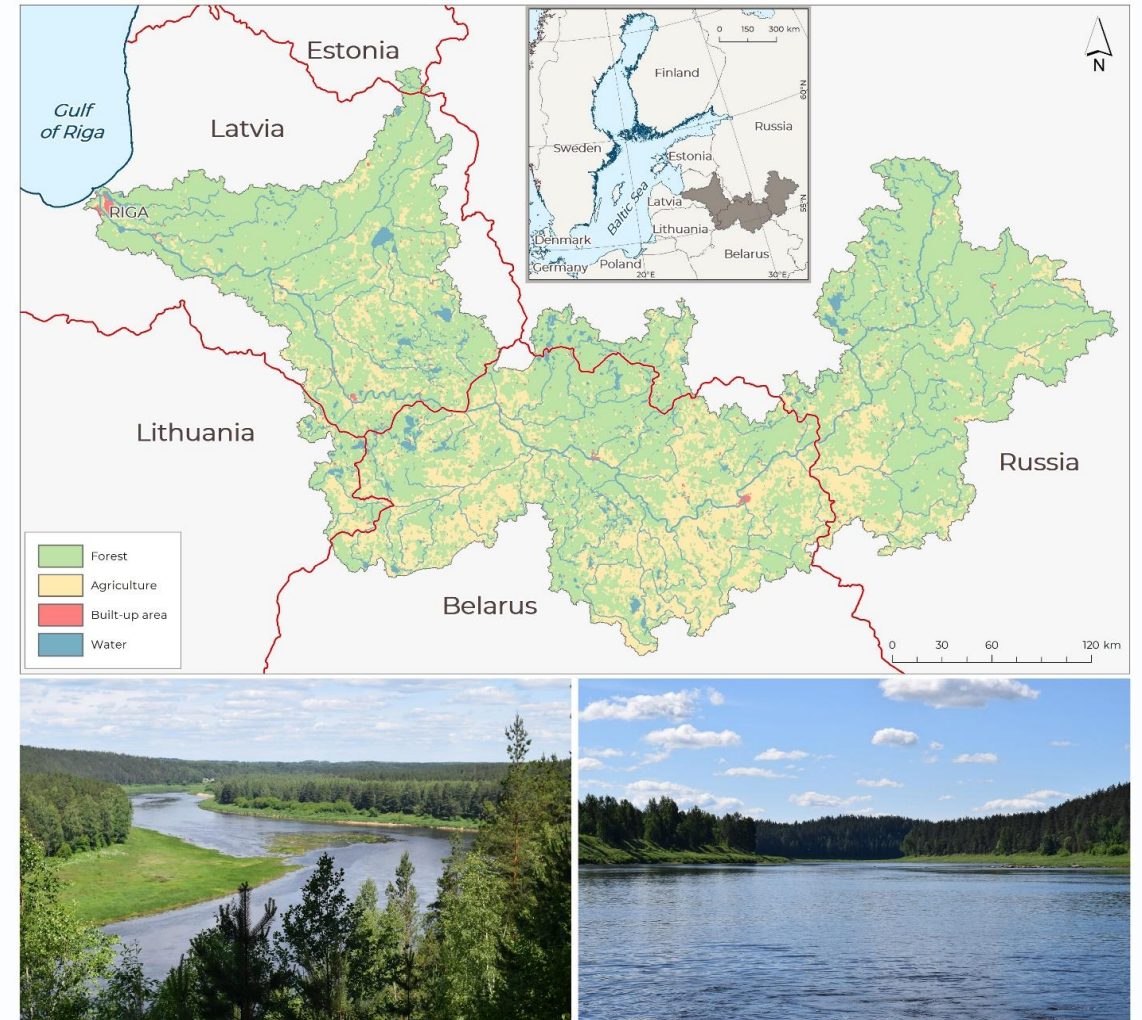
Overall ambition of the AquaINFRA use cases

- target important scientific challenges regarding water quality management
- demonstrate the usefulness of the AquaINFRA services for science for healthy waters
- guide the design of the AquaINFRA solutions
- create a strong dialogue across on analysing (i) water quantity and quality, (ii) socio-economy, and (iii) biological data.

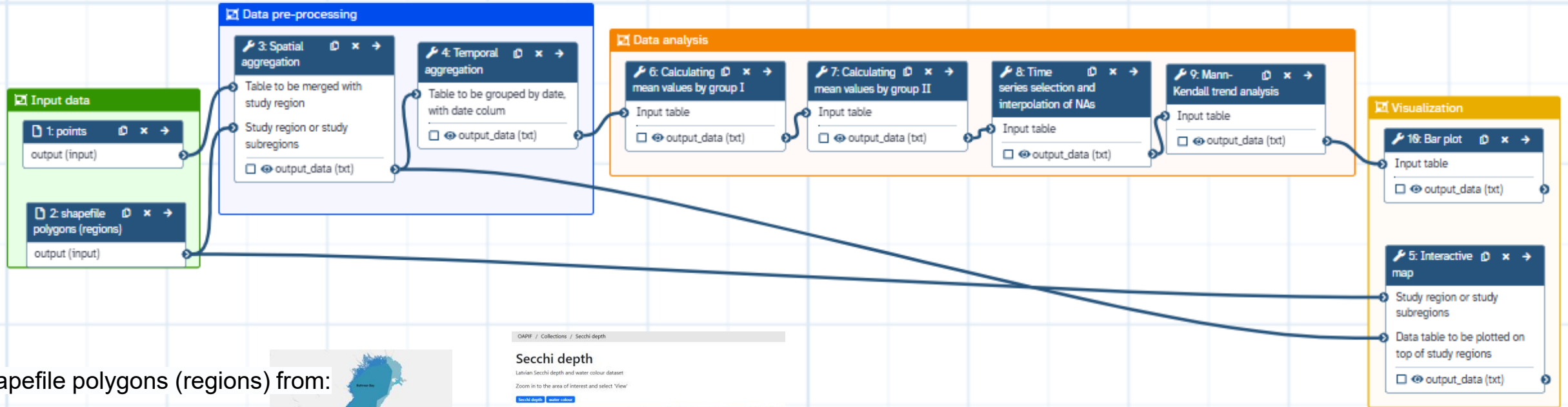


Change of water optical properties in the Daugava River and the Gulf of Riga

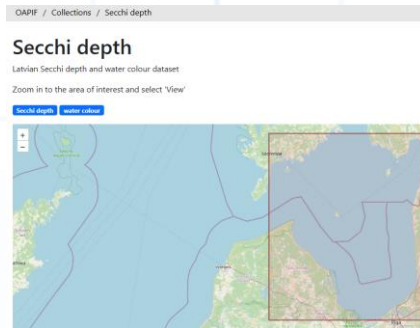
- Do the optical properties in the Gulf of Riga water change in the long term?
- What are the explanatory components contributing to the change in water optical properties?
- Are there any indications of change in the riverine loads and/or concentrations of these components in rivers discharging into the Gulf of Riga?
- Which activities and pressures (e.g., land-use, climate) most probably affect the changes in the water optical properties?



Do the optical properties in the Gulf of Riga water change in the long term?



Shapefile polygons (regions) from:



Dataset (points) from the National monitoring of Latvia
Dataset stored in Aquainfra DDAS for demonstration purposes

Atziņas

Attieksme, atbildība un rezultāts

Uzņemties līderību uzdevumu,
darba paku un projektu
vadīšanā



Paldies!

Solvita Strāķe
Latvijas Hidreokoloģijas institūts
E-pasts: solvita.strake@lhei.lv



This project has received funding from the European Commission's Horizon Europe Research and Innovation programme under grant agreement No 101094434. The European Commission is not responsible for any use that may be made of the information it contains.

