



WaterAct project

1st Newsletter

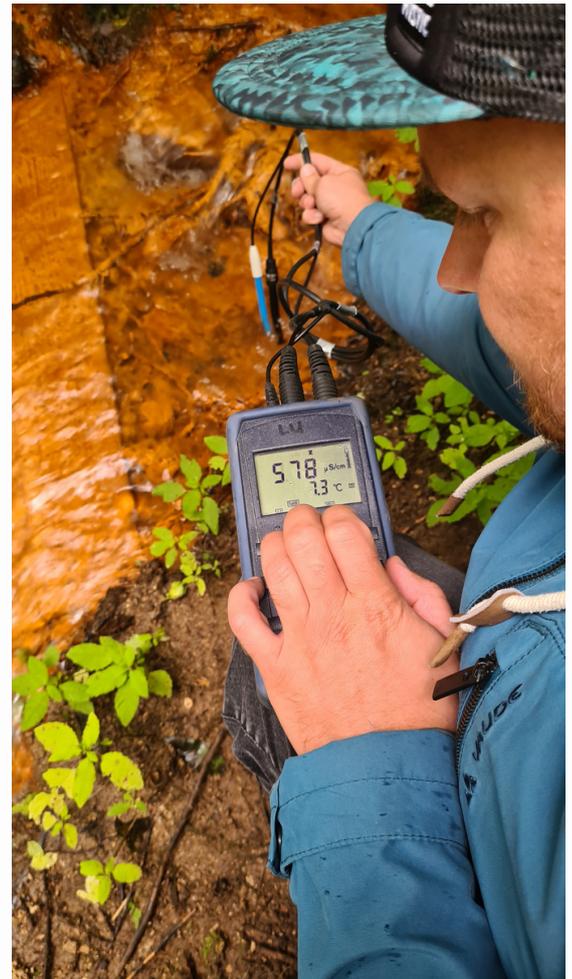
JANUARY 2021

For more efficient management of common groundwater resources

Within the project WaterAct close co-operation will continue between the Estonian and Latvian organizations involved in the preparation of River Basin Management Plans to improve the efficiency of joint groundwater resources management in the transboundary area.

Joint transboundary management of the Gauja-Koiva and Salaca-Salatsi river basins is necessary for both countries to implement the requirements of the EU water policy (Water Framework Directive 2000/60/EC).

The project is important for strengthening Latvian-Estonian cross-border cooperation. This will ensure a harmonized approach to the management of groundwater resources and the assessment of the status of groundwater bodies in the Latvian-Estonian cross-border area, thus ensuring the long-term sustainable management and protection of the main drinking water resource - groundwater.



THIS ISSUE

Project kick-off

Spring monitoring guide

**Handbook on
groundwater
dependent ecosystems**

Experience exchange

To promote sustainable management of shared groundwater resources in a transboundary area:



development of a **common approach** for status assessment of groundwater bodies



implementation and **testing** of developed approach in the Latvian-Estonian transboundary Gauja-Koiva and Salaca-Salatsi river basin districts



development of **common understanding** about groundwater-dependent ecosystem management, raising **public awareness** and interest in groundwater management and protection by organising and **involving citizens** in spring monitoring

The same project team, even stronger goals

During the WaterAct kick-off meeting partners looked back at what had already been done during the GroundEco project, which aimed to enhance sustainable management of common groundwater resources and associated ecosystems in the transboundary Gauja - Koiva river basin, and set further objectives for cooperation.



Currently, the Latvian and Estonian partner organizations almost in the same team will continue the successful cooperation towards the new goals.



Spring monitoring guide for volunteers in Latvia and Estonia

In Estonia and Latvia, the situation with water resources is good, but climate change and increasingly intensive human activities are leaving their mark on the availability and quality of water. We still do not know how many springs we have and which residues of pesticides, nutrients or bacteria may have contaminated them. To maintain the water quality, protection of the springs and their catchment zone has to be ensured and **monitoring of water quality** has to be conducted regularly. WaterAct team hope to solve this problem with the **help of volunteers**.

Volunteer monitoring is a good systematic and repeatable way to **collect new data** and involve locals in water protection. Project team is working out a **web-based map application** and spring monitoring guide for volunteers. It will cover all aspects of observations which could be done by volunteers - **registering a new spring** to the system, **taking pictures** of the spring and describing it, and detailed but simple guidelines of how to conduct water quality and discharge **measurements**.

What one can do, depends directly on the means of measurement one has. But even a new picture and description of the spring water properties (taste, smell) are very useful and needed input!



Handbook on groundwater dependent ecosystems

Analysing groundwater-dependent ecosystems from the species and habitat perspective, both aquatic and terrestrial, the freshwater is one of the most important resources to support and **ensure natural processes, structures, and functions**. In addition, the water provides an environment also for human activities. To actualize **proper protection and management** of groundwater-dependent ecosystems, high-quality expertise is needed from nature experts, governmental officers, NGO experts working on hydrogeology agenda.



Photo: Agnese Priede, NCA

Habitats guide will be developed in collaboration between hydrologists, geographers, geologists and biologists, as a **tool for water body quality maintenance and anthropogenic pressure elimination**.

Topics like the diversity of groundwater-dependent ecosystems (i.e., springs, fens, mires, bogs, swamp woods, coastal and aquatic habitats), their hydrological and chemical properties, as well as potential threats and their possible solutions through restoration will be described in detail from gained experience in Latvia and Estonia.



Photo: Agnese Priede, NCA

Experience exchange

To develop harmonized principles for joint assessment and management of common groundwater resources in cross-border Gauja/Koiva and Salaca/Salatsi river basin, during two meetings – on July in Āraiši, Latvia and on November in an online seminar – groundwater assessment methodologies and approaches used by project partners were identified and exchanged. In total, both meetings covered more than **10 methodologies and approaches** in both partner countries, ranging from strategies for conceptual understanding and modelling to delineation of groundwater bodies and assessment of their overall status, pressures identification and assessment.

Within the framework of both meetings, an extensive information and knowledge base was acquired, which will serve as a basis for the following project activity – adaption and harmonization of exchanges practices to fit the



specific needs of groundwater management in cross-border areas. It can already be concluded that there are **differences between shared methodologies and approaches between the two partner countries**, and some methodologies are only available in one country (e.g. conceptual model development and trend assessment strategies are only available to Estonian partners), but in general the approaches are considered related.

Although the amount of information obtained is significant and invaluable, it can already be stated that the development of a common approach will require additional literature studies and examination of other country experiences, which will be done in the next steps of the project.

Rakvere experience exchange seminar

The department of Hydro- and Environmental Geology of the Estonian Geological Survey organized a seminar for project partners on November 2020. The aim of the meeting was to **exchange good practices and start developing harmonized principles for ground water status assessment**. Due to the situation of COVID-19 virus spread the seminar took place in a hybrid format - partly in Rakvere, Estonia at the Geological Survey of Estonia main office and virtually.

The main purposes for the seminar was to share experiences and knowledge gained through the implementation of various groundwater management projects. An overview of methodologies and main outcomes for different steps in groundwater status assessment of quantity and quality process was presented by both countries. In discussions similarities and differences between countries were pointed out.

Agnese Priede from the Latvian Nature Conservation Agency talked about **citizen science** in collecting biodiversity data in Latvia. Jaanus Terasmaa from Tallinn University gave a presentation, talking about voluntary spring monitoring and introducing good examples from EU and Estonia.

Didzis Elferts from the University of Latvia introduced the possibilities of the **R programming language** for data processing and visualization.

A training event for project partners is planned in 2021 to learn groundwater data analyses and visualization using R.



Photo: Maris Lanno



Project partnership

LATVIA

- S **Latvian Environment, Geology and Meteorology Centre** (lead partner)
- S **University of Latvia**, Faculty of Geography and Earth Sciences
- S **Nature Conservation Agency**
- S **Vidzeme Planning Region**

ESTONIA

- S **Ministry of the Environment**
- S **Tallinn University**, Institute of Ecology
- S **Geological Survey of Estonia**
- S **Estonian Environment Agency**

The newsletter is prepared within the **Interreg Estonia - Latvia** 2014-2020 cross-border cooperation programme project "Joint actions for more efficient management of common groundwater resources" (WaterAct) (Nr. Est-Lat 155).

It aims to promote sustainable management of shared groundwater resources in a transboundary area.

bit.ly/estlat-WaterAct
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MINISTRY OF THE ENVIRONMENT



Nature
Conservation Agency
Republic of Latvia



TALLINN UNIVERSITY



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