

THE AREA



Both sites are in Europe's Boreal region, with a temperate continental climate, coniferous forests full of berries and mushrooms, mires, large lakes, and rich wildlife.

Zemgale region, Latvia

- 10,742 km²
- Rural area with intensive agricultural activity and low population density
- Lowland landscape with flat terrain and dense river network

Biržai district, Lithuania

- 1,476 km²
- Rural area with fragmented agricultural land divided by individual karst ravines
- 3 rivers, many streams, lakes and ponds, including the oldest artificial lake in Lithuania. Forests cover 26.4% of the territory

INVOLVED PARTNERS



ABOUT NATALIE

NATALIE is an **European Union research project** contributing to the objectives of the **EU mission "Adaptation to Climate Change"**, aiming to empower at least 150 regions and local communities to become climate resilient by 2030.

To achieve our technical, financial, legal and social objectives, we are a consortium of **43 partners** committed for **5 years** to the common goal of accelerating the adoption of **Nature-based Solutions (NBS) across Europe**.

8 CASE STUDIES

18 NBS are being implemented, monitored and their performance assessed in 8 demonstration sites covering 6 different biogeographical regions of Europe. All these sites have different context and are facing different climatic challenges.

The potential of replication of these solutions will be studied in 4 "follower sites".

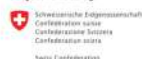


Funded by
the European Union



UK Research
and Innovation

Project funded by



Federal Department of Economic Affairs
Education and Research ERDF
State Secretariat for Education,
Research and Innovation SER



NATALIE

Accelerating and mainstreaming
transformative NATURE-based solutions to
enhance resiliENCE to climate change
for diverse bio-geographical European
regions

CONSTRUCTED WETLANDS

Latvia & Lithuania

Zemgale region, Latvia



Biržai district, Lithuania

GET IN TOUCH

Ingrida BREMERE, BEF

ingrida.bremere@bef.lv

Renata GRAZINIENE, BIRZAI

renata.graziniene@birzai.lt



www.natalieproject.eu



@NatalieProject



DEALING WITH CLIMATE CHANGE CHALLENGES

1 Mitigating flood risk



2 Diminishing eutrophication* of water bodies



*Increased nutrient pollution from land runoff and human activities degrading the water ecosystem e.g. water blooms (microorganisms, algae) affecting availability of oxygen for aquatic life (fish).

3 Maintaining biodiversity



Zemgale region, Latvia

Biržai district, Lithuania



OBJECTIVES

* **Assess the performance of constructed wetlands** in the light of climate impacts using modelling tools,
* **Conduct a feasibility study for upscaling similar NBS** in the region.

* **Gain experience from demonstrator** Zemgale region about constructed wetlands for **treatment of wastewater from small settlements and agricultural activities.**



HOW WILL THIS WORK?

* **Establish 2 new and monitor them** along with **4 operational constructed wetlands** for treatment of wastewater from small settlements and agricultural/industrial activities,
* **Estimate the potential** for constructed wetlands in the region.

* **Conduct a feasibility study for financing** constructed wetlands,
* **Identify suitable areas** for constructed wetlands,
* **Build capacity** for design and management.

What are Nature-based Solutions (NBS)?

Ever wondered how nature can help us tackle climate change?

NBS are “**Solutions inspired and supported by nature**, which are cost-effective, simultaneously provide **environmental, social and economic benefits** and help build resilience” European Commission, 2015.

What are Constructed Wetlands?



Constructed wetlands **treat wastewater using natural processes**, offering both treatment efficiency and resilience to hydrological hazard.

They involve complex interaction between water, soil, plants, micro-organisms and the atmosphere.

With proper design and management, they offer **simple** operation tasks, making them **cost-effective** for small municipalities.