Project idea form - small projects

Version 2.1

Registration no. (filled in by MA/JS only) _____

Project Idea Form

Date of submission 04/06/2025

1. Project idea identification

Project idea name	From Energy Peaks to Solutions: Managing Wastewater in Baltic Coastal Regions/ Sustainable Approaches to Local Tourism Wastewater
Short name of the project	SALT
Previous calls	yes ○ no ◉
Seed money support	yes ○ no ◉

2. Programme priority

	3. Climate-neutral societies

3. Programme objective

	3.2. Energy transition

4. Potential lead applicant

Name of the organisation (original)	Politechnika Gdańska
Name of the organisation (English)	Gdańsk University of Technology
Website	www.pg.edu.pl
Country	PL

Type of Partner	Higher education and research institution

Contact person 1	
Name	Katarzyna Januszewicz
Email	katarzyna.januszewicz@pg.edu.pl
Phone	888-244-101
Contact person 2	
Name	Marta Morańska
Email	marta.moranska@pg.edu.pl
Phone	+48 58 348 65 83

Which organisation(s) in the planned partnership take part in a project within the Interreg Baltic Sea Region Programme for the first time? Please list the respective partners.

PARTNER 1
Baltic Marine Environment Protection Commission
Helsinki Commission – HELCOM
Katajanokanlaituri 6 B (3rd floor)
FI-00160 Helsinki
Finland

PARTNER 2
Lithuanian Energy Institute
Breslaujos g. 3,
Kaunas,
44403 Kauno m. sav.,
Litwa

PARTNER 3
Wyspa Anholt - Gmina Norddjurs (Norddjurs Kommune) Midtjylland.
Wastewater treatment industry
Torvet 3, 8500 Grenaa, Dania
www.norddjur

5.1 Specific challenge to be adressed

This project aims to bridge the gap between academic research and real-life environmental challenges faced by small coastal tourist towns in the Baltic Sea region. These towns often experience a dramatic seasonal increase in wastewater generation during the summer, exceeding the capacity of existing treatment infrastructure. While on- and offshore wind turbines generate surpluses that grid operators must curtail. Valuable renewable energy is lost just when coastal utilities need it most. The main direction will be to use the energy peaks generated at coastal wind farms; the energy surpluses can be used to treat increased amounts of sewage. Investments are planned ad-hoc, water and energy sectors act in silos, and smaller municipalities lack both expertise and capital to deploy modular, seasonally scalable circular-economy solutions. No common technical standards or contractual templates exist for using local RES surpluses in municipal services.
The project will: Identify and compare the scope of the problem in selected small coastal towns across different Baltic countries (e.g., Poland, Lithuania, Sweden, Germany). Collaborate with local communities, businesses, and municipalities to investigate current wastewater management practices, limitations, and needs. Engage students and researchers in developing innovative, scalable solutions based on circular bioeconomy principles — such as decentralized treatment systems, water reuse technologies, and nature-based solutions.
A cross-border, water-smart approach that couples wastewater management with surplus wind power directly supports Interreg BSR Priority 2 and strengthens the resilience of Baltic coastal communities.

5.2 Focus of the call

During the project we will done:
1. Water-energy nexus audits mapping wastewater peaks, energy use and wind curtailment volumes.
2. Co-created with stakeholders to define functional requirements and social acceptance criteria.
3. Produce the “Baltic Seasonal Water-Energy Toolkit”—a plug-and-play treatment module powered by local wind PPAs, a ready-to-sign contract template and a rapid-deployment checklist.
4. Field schools and an open data platform that embed skills and keep knowledge accessible.
The single Work Package delivers tangible outputs, not just knowledge exchange. Pilot towns will install and keep the Toolkit during the project, creating adaptive infrastructure able to absorb population swings, cut nutrient loads to the Baltic Sea and open new revenue streams from water reuse and eco-tourism.
5. The main element is the possibility of providing knowledge and experience in small towns, municipalities and cooperation with sewage treatment plants and renewable energy sources so as to provide solutions to problems that provide the Baltic Sea water ecosystem. Ready solutions will be responsible for the care of residents.

6. Transnational relevance

Currently, the problems of wind farms with surplus energy and at the same time increased demand for energy of sewage treatment plants in the summer in coastal towns have not been connected. Additionally, the experience and knowledge of scientists will allow to solve the problems of local communities. Joint action yields clear added value.
Transnational cooperation will:

• compare flow and cost profiles across four climate zones (PL, LT, SE, DE);
• test identical modular units under varying wastewater compositions and RES patterns;
• draft common design guidelines and multilingual PPA templates, accelerating uptake elsewhere;
• exchange best practices rapidly—e.g. Nordic ESCO contracts versus Polish energy clusters.
No single municipality can attract technology suppliers, secure affordable finance or validate solutions at scale. A compact international consortium pools market weight, shares risks and offers investors credibility, fulfilling Interreg's mission of solving shared Baltic challenges together.

7. Specific aims to be adressed

Building trust that could lead to further cooperation initiatives

Solution in each pilot town publish real-time operational data. Joint field schools and study visits bring academics, public officials and businesses together, lowering distrust and paving the way for follow-on investments.

Initiating and keeping networks that are important for the BSR

The SALT project will serve municipalities under 50 000 inhabitants. An open-data repository, an annual online conference and supplier matchmaking ensure the network's longevity beyond project end.

Bringing the Programme closer to the citizens

A mobile app visualises live wastewater flows and wind-energy share; citizen workshops and Interreg information boards at beaches make EU support tangible for residents and visitors alike.

Allowing a swift response to unpredictable and urgent challenges

The proposed solutions will allow for use in unexpected situations. Plug-and-play container units can be redeployed or up-scaled within 48 h during sewer failures, floods or sudden population influxes, with smart controllers matching power draw to available wind surplus.

8. Target groups

• Municipal authorities of Władysławowo (PL), Denmark, Anholt, Palanga (LT), Simrishamn (SE) and Kühlungsborn (DE) – infrastructure owners, data providers and hosts of pilots.
• Water utilities – test sites, O&M expertise, cost evaluation.
• Energy companies / wind-farm operators – supply curtailed energy volumes and PPA contract know-how.
• Universities & research institutes (Gdańsk Tech, Lithuanian Energy Institute, Lund U, HAW Hamburg)

– research, validation, training.
• Tourism SMEs (hotels, campsites, restaurants) – users of reclaimed water, multipliers toward tourists.
• NGOs & local communities – co-creation workshops, environmental monitoring, social outreach.
• Students & PhD candidates – primary beneficiaries of field schools and hackathons, bringing fresh ideas.

	Please use the drop-down list to define up to five target groups that you will involve through your project's activities.	Please define a field of responsibility or an economic sector of the selected target group	Specify the countries and regions that the representatives of this target group come from.
1.	Higher education and research institution	drive innovation and knowledge transfer; international organizations coordinate cross-border policies; local authorities implement sustainable regional development.	Poland, pomerania
2.	International governmental organisation	Collects data, supports analyses and approves solutions, ensuring policy coherence and international coordination.	Finland, Helsinki
3.	Local public authority	Runs local laboratories, provides data and organizes pilot implementations of solutions in the field.	Denmark, Anholt
4.	Higher education and research institution	Analyses data, conducts research and supports students in collecting and interpreting data.	Lithuania, Kowno

9. Contribution to the EU Strategy for the Baltic Sea Region

Please indicate if your project idea has the potential to contribute to the implementation of the Action Plan of the EU Strategy for the Baltic Sea Region (https://eusbsr.eu/implementation/).

yes ◉ no ◯

Please select which policy area(s) of the EUSBSR your project idea contributes to most.

PA Bio-economy

PA Energy

The MA/JS may share your project idea form with the respective policy area coordinator(s) of the EUSBSR. You can find contacts of PACs at the EUSBSR website (https://eusbsr.eu/contact-us/).

☐ If you disagree, please tick here.

10. Partnership

The partnership consists of complementary organizations from across the Baltic Sea region, representing research, policy coordination, and local implementation capacities. Each partner plays a distinct and essential role in addressing the seasonal wastewater management challenges faced by small coastal tourist towns.Lead Partner: Gdańsk University of Technology (Politechnika Gdańska), PolandAs the project coordinator, the university leads research activities, data analysis, and student engagement. It supports solution development and fosters collaboration between academia and practice by integrating circular bioeconomy principles into wastewater management strategies.

Partner 1: Baltic Marine Environment Protection Commission – HELCOM (Helsinki, Finland)HELCOM serves as the regional policy coordination body. It supports the project by providing access to environmental datasets, facilitating knowledge dissemination, and contributing to policy-relevant outputs such as regional recommendations and guidelines.

Partner 2: Lithuanian Energy Institute (Kaunas, Lithuania)This research institution contributes expertise in wastewater treatment technologies and environmental modeling. It supports the analytical work and co-supervises student activities, ensuring high-quality research outputs and regional applicability.

Partner 3: Municipality of Norddjurs / Island of Anholt (Midtjylland, Denmark)The island of Anholt, a small coastal tourist community with seasonal wastewater surges, serves as a pilot site. Norddjurs Municipality provides access to local infrastructure, including the wastewater treatment plant and offshore wind farm, and hosts living labs for testing and validating proposed solutions.

11. Workplan

1. Baseline diagnostics problems (M1–M4)
• Daily–monthly data collection on wastewater flows, energy use and curtailed wind volumes in eg. six pilot towns. Espescially model Anholt Island
All partners meeting
Output #1: standardised water-energy profiles and a comparative report.

2. Co-creation workshops (M3–M6)
• Living-lab sessions with municipalities, utilities, wind companies, NGOs and tourism SMEs.

• Output #2: needs map and joint investment-decision matrix.

3. Toolkit development (M5–M20)
• Plug-and-play container plant (MBR + bio-lagoon) with a smart power controller that adjusts to available wind surplus will be disign.
• Draft a bilingual PPA template and a “48-h rapid deployment” checklist.

• Output #3: Baltic Seasonal Water-Energy Toolkit (hardware + documents).

4. Capacity building & dissemination (M6–M24)
• Summer field schools, online hackathon and “wind-to-water” webinars.
• Launch the Open Baltic Nexus Platform: live dashboard + document repository.

• Output #4: active SALT project (≥ 40 members) and a policy brief for national funding bodies.

12. Planned budget

ERDF budget (planned expenditure of partners from the EU)	EUR 490,000.00
Norwegian budget (planned expenditure of partners from Norway)	EUR 0.00
Total budget (including preparatory costs)	**EUR 490,000.00**

13. Project consultation

Please indicate if you wish to have a consultation (online meeting) with the MA/JS to discuss your project idea

yes ◉ no ◯

14. Questions to the MA/JS

Questions related to the content of the planned	1. What are the best practices for engaging local authorities and businesses in co-creating and adopting nature-based or decentralized

project	wastewater solutions? 2.Can HELCOM or similar organizations support the validation and dissemination of our outputs as regional recommendations or policy briefs? 3.What types of outputs (e.g. reports, guidelines, tools) are considered most useful and impactful by coastal municipalities under existing EU or Baltic strategies? 4.How can we meaningfully involve students in living labs and pilot testing without compromising the scientific or technical quality of the results?
Questions related to budgeting and expenditure	-
Any other questions	-

15. Additional information

(max. 1.000 characters incl. spaces)

Your account in BAMOS+

Please remember that to officially submit your application you need to access our electronic data exchange system BAMOS+. More information about the process of applying for your account in BAMOS+ you will find here:
https://interreg-baltic.eu/gateway/bamos-account