INTERREG BALTIC SEA REGION

SUWMAB

Sustainable communal waste-water management in the Baltic Sea

Partnership: (9 project partners - Still open for new project partners and cooperation with interested NGOs and local/regional administrations from Baltic Sea Region countries
• Gdańsk University of Technology (GUT), Poland
• Pomorskie Fund for Environment and WaterProtection (WFOŚ), Poland
• Halmstad University (HH), Sweden
• Oulu University of Applied Sciences (OU), Finland
• Finnish Environment Institute (SYKE)
• University of Tartu (UT), Estonia
• Estonian Fund for Nature (ELF)
• Aarhus University(AU), Denmark
• Cooperating municipalities from Poland, Denmark, Finland and Sweden
- Stowarzyszenie Gmin RP Euroregion Bałtyk (since November 2016)

Priority axis: 2 Efficient management of natural resources

Programme specific objective: To increase efficiency of water management for reduced nutrient inflows and decreased discharges of hazardous substances to the Baltic Sea and the regional waters based on enhanced capacity of public and private actors dealing with water quality issues

Description for the initial situation: SUWMAB aims to combat eutrophication which is the most serious environmental problem threatening the Baltic Sea. Mainly responsible are point sources such as discharge of treated and untreated wastewater and surface run-off from rural areas. While almost all settlements above 2000 PE in the region are now connected to municipal sewer networks, in the areas of dispersed development and low population density such systems are simply unaffordable. Moreover, even if a municipal wastewater treatment plant (up to 100 000 PE) exists, in the current state of operation most of the effluents do not meet the discharge quality requirements. Another problem is the rapid growth of holiday infrastructure on the coast and hinterland resulting in severe fluctuations between high and low holiday season. For such places, the conventional solutions e.g. activated sludge technology are not adequate and very often even worsen the situation.
Pollution from dispersed sources is the weakest spot of all the BSR countries' wastewater treatment strategies. Application of constructed wetlands and/or buffer zones with developed phosphorous removal filters (with selective materials for binding phosphorous in all its forms) in agriculture fields would limit the discharge of biogenic compounds that will reach streams and rivers and the Baltic Sea.

In Poland and in Latvia, activities on national level regarding wastewater treatment mainly target areas with more than 2000 inhabitants, so SUWMAB would contribute to development of small-scale solutions relevant for populated places with less than 2000 inhabitants. In Nordic countries, including Estonia more and more efforts have been taken recently to increase number of small-scale wastewater treatment systems for e.g. private households, farms and enterprises in dispersed areas and also for removal off diffused pollution from agricultural lands. Most households are still using septic systems with infiltration beds, however, there are many areas in the BSR where infiltration is not allowed because of geological conditions and/or high nitrate sensitivity of water bodies and groundwater (i.e. Nitrate Vulnerable Zones defined by the Nitrates Directive).

Estimated duration : 36 months

Estimated budget: Almost. 3.300.000 EUR (the amount is subject to change)

Pilot wastewater treatment plants (transnational activity involving investments)
One of the crucial tasks in the project will be the implementation (i.e. design and construction) of the pilot treatment systems in all participation regions of the project, to demonstrate methods suitable for each specific problem/location. The municipal project partners will provide ground and implement the investments. While the materials such as plants and wetlands' building materials (e.g. filter media,

liners, piping systems) will be purchased by project partners, the installment itself has to be outsourced to professional external companies, since they are rather complex works.
The periodical maintenance shall be carried out by the end-users themselves - under supervision of academic project partners (e.g. in the framework courses for students/PhD students) and using guidelines produces by the project. This will have an additional educational effect on target groups 3, 4 and 5. On-the-spot trainings for SMEs will be also carried out on the pilot sites.
Main outputs will be at least 8 ecological wastewater treatments plants built/significantly upgraded by the project.

SUWMAB will address the needs of the following target groups:
1. Rural municipalities: as operators of wastewater treatment plants they have a vital interest in optimizing their wastewater treatment systems, both economically and quality-wise. They could also use our help with preparation of the municipal wastewater plans and strategies.
2. Regional authorities from water management, agricultural and environment sectors; and NGOs are acting as multiplicators in disseminating guidance and in many cases funds for wastewater treatment to the end-users.
3. Engineers and designers (branch SMEs and their associations). Also in their case SUWMAB will fill the information and know-how gap, thus supporting the development of new business opportunities.
4. Academia
5. Transnational organisations (HELCOM, EU BSRS, other EU-funded projects) will have a chance to discuss the state-of-art and carry our recommendations further to the national legislation.

Main Outputs:
Database and map of existing solutions for constructed wetlands
・ Awareness raising events like workshops, trainings and seminars
・ 8 pilot actions (upgraded or new build wastewater treatment plants applying constructed wetlands approach)
・ Updated and newly set-up municipal wastewater management plans and guidelines
SUWMAB will enhance institutional capacity of public authorities, public and private practitioners in the participating countries, by recommending, demonstrating in practice and helping to implement eco-engineering solutions for communal (decentralized) wastewater treatment for both point and non-point nutrient sources (domestic sewage, communal sewage, crop field run-off, manures deposits, biomass storages etc.).

Compliance with policies and strategies
In 2015 SUWMAB project idea has been awarded flagship status by the EUSBSR PA Nutri (action "Improving waste water treatment") for counteracting eutrophication of the Baltic Sea.
Project activities and their envisaged results are fully in line with Water Framework Directive (2000/60/EC) goal to achieve a good ecological and chemical status of surface waters (rivers, lakes etc.), by counteracting their pollution from both point and disperse sources. It will at the same time contribute to the Marine Strategy Framework Directive's (2008/56/EC) goal to achieve clean Baltic Sea in 2020. Also the HELCOM Baltic Sea Action Plan goal "Baltic Sea unaffected by eutrophication" is being addressed by the project.
SUWMAB will also help implement the Nitrates Directive (91/676/EEC) on the protection of waters against pollution caused by nitrates from agricultural sources by helping communes to set up appropriate strategies aiming at preventing and reducing pollution.

Contact persons:
Gdańsk Universtity of Technology, Tel. +48 508 084 149
Ph.D.D.Sc Magdalena Gajewska, mgaj@pg.gda.pl
Ph.D.D.Sc Ewa Wojciechowska, esien@pg.gda.pl
Katarzyna Fidler, kf@eu-projects.pl
Biuro Projektów Fidler, Tel. +49 30 787 585

Project Partner - Association of Polish Communes of Euroregion Baltic (Poland)
ul. Stary Rynek 25 82-300 Elbląg
Tel: +48 55 611 20 00
Email: sekel@eurobalt.org.pl www.eurobalt.org.pl