



Project WISA

Report on relevant actors to involve
in developing green technologies
for handling storm water

Port of Gdynia, Poland

PROJECT WISA

REPORT ON RELEVANT ACTORS TO INVOLVE IN DEVELOPING GREEN TECHNOLOGIES FOR HANDLING STORM WATER.

Mapping of stakeholders with knowledge and insights in solving identified challenges in participating ports.

DESCRIBE THE IDENTIFIED CHALLENGE/CHALLENGES IN YOUR PORT:

The challenge related to the numerous stormwater outlets (all together more than 60)

The challenge related to the management of the terminals - terminals are rented by different companies, which have different interests and different cargo shipments.

The challenge related to the location of the area and the complexity of the port infrastructure, including: catchment area diversity, potential challenges with power supply in case of on-line sampling, potential challenges with the suitable place for autosampler installation due to the port traffic.

The challenge related to the collected stormwater, including occurrence of the suspended solids and the influence of seawater in stormwater sampling.

DESCRIBE WHAT KNOWLEDGE AND/OR TECHNOLOGY YOU NEED TO SOLVE THE IDENTIFIED CHALLENGE:

There is a need to better inventory of existing infrastructure connected with runoff water generation in ports.

There is a need to recognise the source of pollutants in runoff water generated in ports.

There is a need to better characterised of runoff water generated in ports, in terms of both quality and quantity.

There is a need to better recognise of receiver sensitivity (dilution and dispersion factors, total load estimation, self-purification potential).

There is a need-to-know what kind of technologies are currently available in runoff water treatment.

There is a need-to-know which of these technologies could be applied for the treatment of runoff water generated at port facilities:

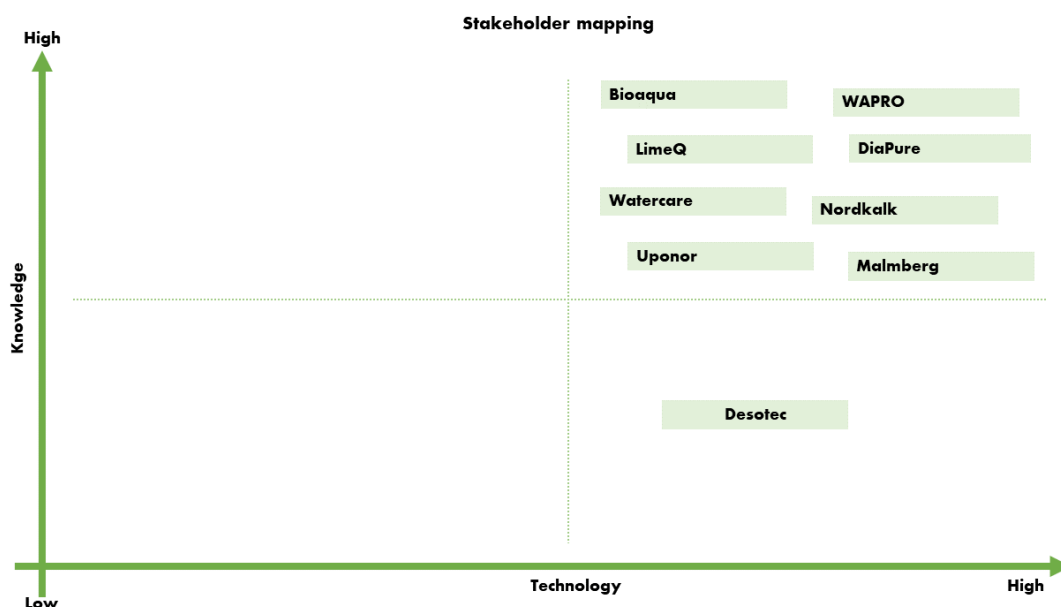
- in terms of effective pollutants removal,
- taking under account the specificity of port areas - hardened surface, heavy car traffic, lack of space, restrictions and difficulties in energy supply,
- lack of staff qualified to operate the runoff water treatment systems,
- recognition of methods that could be applied for prevention and mitigation of pollutants dissemination during cargo shipments and handling,
- recognition of the influence of seawater inflow on the existing and planned infrastructure.

There is a need to integrate of various stakeholders' opinions and goals in terms of runoff water treatments options.

There is a need to recognise of financing for advanced treatment investment, operation and maintenance.

DESCRIBE WHO HAS THIS KNOWLEDGE AND/OR TECHNOLOGY TO SOLVE THE IDENTIFIED CHALLENGE:

Various companies and people, such as Wapro, Desotec, Nordkalk, LimeQ, Uponor, Malmberg, Bioaqua, DiaPure, Watercare (danish company) etc., may have knowledge on how to solve the described problems and appropriate technologies. A good way to use the solutions proposed by companies is to read the examples of applications and reports provided by companies. The knowledge used in other related projects, e.g. NuRedrain (agriculture project focus on P, N) may also be needed.



DESCRIBE WHAT CAN BE ACHIEVED WITH SOLVING THIS CHALLENGE FOR THE WISA PROJECT:

By solving described challenges for the WISA project, people may gain information and education how to care more of the pollution handling and what can be the preventive tools used in seaports to reduce the spreading of transported materials and maintain the cleanliness of the quays. Moreover, development of new green technologies is crucial in terms of stormwater purification and improvement of the state of the Baltic Sea, which is the overarching goal of the WISA project.

DESCRIBE WHAT CAN BE ACHIEVED WITH SOLVING THIS CHALLENGE FOR THE LONGEVITY AFTER THE WISA PROJECT:

By solving described challenges, we may focus on further developing of the created innovations in ports and using them also in other sectors of the industry for the treatment of rainwater. We may use the developed technologies as the permanent pre-treatment of rainwater and, in the longer term, we may achieve cleaner waters discharged into the seas.

Project WISA

WISA (Water Innovation System Amplifier) is a 3-year project that will contribute to a cleaner Baltic Sea by developing and testing new green technologies to reduce pollution by stormwater from ports and other large hard surfaces.

The Baltic Sea is one of the world's most polluted seas. More than 45 million tonnes of fertilizer pass through the ports of the Baltic Sea annually, and the handling contributes to the release of fertilizers and nutrients into the stormwater. This leads to eutrophication with extensive algal blooms and dead seabed.