



DECEMBER 2017

Reducing Nutrients and Carbon in the Baltic Sea

BONUS RETURN is an EU-funded project exploring how eco-technologies can help turn nutrients and carbon from environmental problems into societal benefits in the Baltic Sea Region.

The Baltic Sea is one of the most threatened marine ecosystems on the planet. A large part of the problem is the release of plant nutrients from agriculture and wastewater, leading to eutrophication and eventually marine dead zones, along with a range of pollutants from industry and other sources.

Despite significant investments in measures to reduce these emissions, progress has been slow while economic activities that generate them continue to grow. This poses challenges to its fragile ecosystems as well as opportunities to innovate and cooperate across borders.

Starting from a circular economy approach, BONUS RETURN shows the potential for eco-technologies to turn pollution and waste into profit in the Baltic Sea Region. This is done by bringing together research, local authorities and the private sector to identify and pilot economically and environmentally efficient technologies.



Photo: Jukka Rapo

Algae blooms: Gulf of Finland, Tilgu, Estonia.

What does BONUS RETURN do?

1. The project compiles evidence on eco-technologies for nutrient reuse to understand what has worked, where and under what conditions.
2. Models hydrological flows to obtain a better understanding of current and future scenarios of nutrient and carbon streams in BONUS RETURN's pilot cases.
3. Invites innovations that need further tests, business plans and a link to markets, to participate in the project's competition, *The Baltic Sea Nutrients and Carbon Reuse Challenge*.
4. Assesses environmental, social and economic costs and benefits of selected eco-technologies.
5. Tailors procurement and business plans for eco-technologies in three Baltic municipalities, namely: Sweden, Finland and Poland.
6. Brings onboard stakeholders by providing a platform for interaction between researchers, entrepreneurs, investors, and municipalities through an innovative decision support tool.

BONUS RETURN case study sites

The **Vantaanjoki river basin** in Finland flows through the Helsinki metropolitan area, where there are about one million inhabitants, before discharging into the Baltic Sea.

The **Ślupia river basin** is one of the largest catchments on the Polish coast that includes a large city (Ślupsk), thus offering a unique opportunity to study both the pressure from rural and urban areas on water quality.

The **Fyrisån River** is located in the south-eastern part of Sweden. It is a tributary of Lake Mälaren, which has its outlet through Stockholm into the Baltic Sea. The basin covers a diverse set of landscapes including actively managed forests and agricultural lands in Sweden's fourth largest city, Uppsala.

Did you know that the EU Baltic Sea Region has 85 million inhabitants? That's 17% of the EU's population!

The Project team

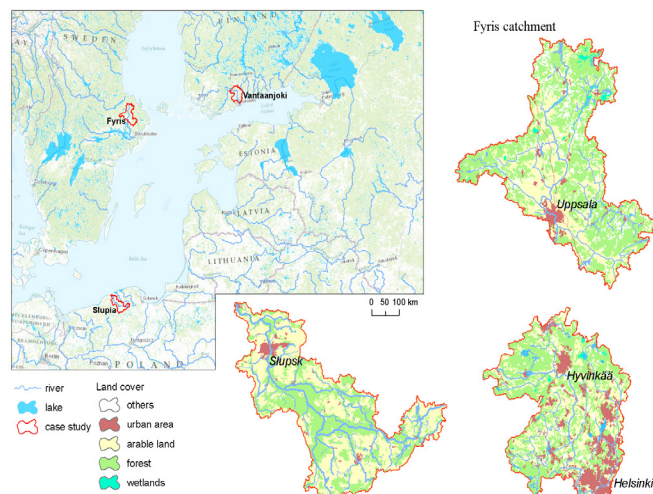
BONUS RETURN is being implemented by a consortium of partners from four countries in the Baltic Sea Region namely: Sweden, Finland, Poland and Denmark.

The team comprises a combination of expertise in: evidence based reviews; identifying and testing eco-technologies; dissemination and communication activities; socio-economic analyses; commercialization of technologies; and facilitation of stakeholder-inclusive processes.

It is led by the Stockholm Environment Institute (SEI).

Other consortium members include:

- Warsaw University of Life Sciences (WULS)
- Finnish Environment Institute (SYKE)
- Uppsala University (UU)
- Research Institutes of Sweden (RISE)
- University of Copenhagen (UCPH)



Case study sites in Finland, Sweden and Poland.

Time Frame

BONUS RETURN was launched in May 2017 and will run until May 2020. The findings will be published in three reports presented yearly and available on the BONUS RETURN website: www.bonusreturn.com

The BONUS RETURN project has received funding from BONUS (Art 185), funded jointly by the EU and Swedish Foundation for Strategic Environmental Research FORMAS, Innovation Fund Denmark, Academy of Finland and National Centre for Research and Development in Poland.

For more information, please visit

www.bonusreturn.com

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