

An aerial photograph of a large sailing regatta on a body of water. Numerous sailboats of various sizes are scattered across the water, with a large three-masted sailing ship in the center. The text is overlaid in a bold, orange, italicized font.

***Interreg as a tool to implement  
the EUSBSR - feedback from  
flagship-projects***

***Björn Grönholm – Head of Secretariat  
UBC Sustainable Cities Commission***

***“We make it possible together!”***

# UBC Sustainability Action Programme 2016 - 2021



## **Stairway towards Sustainable Baltic Cities**

*The UBC Sustainability Action Programme 2016-2021 is the guiding document for the whole network of the UBC, contributing to the development of a smart and sustainable Baltic Sea Region. The programme gives a strategic direction to which topics we work with towards our vision for the UBC cities in the future. Creating a smart and sustainable Baltic Sea Region is a common and cross-sector effort.*

## **Our vision for Sustainable UBC cities until 2020 and beyond**

*“UBC cities will be climate-smart, providing a good ground for green economy to grow, while being resource-efficient and sustainable in all their activities as well as protecting the environment and waterbodies in the Baltic Sea Region. They will increasingly be known as global forerunners when it comes to creating inclusive, diverse, democratic, gender equal, high quality living environment for their inhabitants.”*



## Green Urban economies

A leader in green urban economy is a city that provides favourable, green and efficient infrastructure and a suitable place for Green and clean tech businesses. The city integrates sustainability aspects in all its own business activities, incl. e.g. green Procurement and energy efficient buildings. This results in a higher quality of life for inhabitants, incl. job creation, welfare and a clean living environment.

### ***Our goal:***

*To make the UBC cities global green economy leaders which provides good opportunities for innovative green and clean tech businesses and enable resource efficient economic activities.*

*To support UBC cities on the way to a circular economy*

*To make UBC cities sustainable in their own economic activities.*

## Climate-smart Baltic Cities

Climate-smart leaders are cities that take **climate change aspects into consideration** in their entire decision making e.g. in **urban planning, mobility planning, energy related actions** (efficiency, production), **buildings** etc.

**UBC Cities want to take the leadership** in becoming climate-smart, decreasing their greenhouse gas emissions and using renewable energy sources efficiently.

### ***Our goal***

*To make the UBC cities climate change leaders in Europe and globally, to initiate and implement climate smart urban development (incl. climate smart-sustainable districts, mobility models, energy efficient transport – building-planning)*

## Sustainable Urban Ecosystems and Natural Resources

Attractive and prosperous UBC cities have clean and safe environments and they use all **resources efficiently**. Nature has a valuable role for inhabitants and the general **attractiveness** of urban areas. ***Our goal***

*To make UBC cities leaders in resource efficiency, sustainable urban planning and biodiversity*

*To have UBC cities that are not toxic and have a rich biodiversity*



# Baltic Sea and its catchment area

The Baltic Sea is a connecting element for all of us, the core of the region. At the same time the sea is one of the most polluted water bodies of the world and a very vulnerable ecosystem. **The Baltic Sea has a multifunctional role** for the whole region; a transport route, a source for fish and seafood, leisure and wellbeing, tourism and also a source for water. Many UBC member cities are located close to the shore or are otherwise closely connected to the sea and its inland water bodies. Due to alarming state of the Baltic Sea, **improved water management** has become an important goal for the countries around the Baltic Sea. Smart planning in water issues in cities will help inhabitants and businesses to enjoy clear waters. Many UBC cities are forerunners and have taken the leadership in protection of the regional waters and the Baltic Sea by implementing voluntary actions for example in treatment of municipal wastewater. Leader cities will see the potential of the concept “from waste to recourse” when dealing with for example sludge and manure. **Integrated water management** can be one the solution for the challenges caused by climate change. In addition, it helps to battle the water pollution. **Integrated Storm Water management** and **Coastal area management** are main topics for many of the UBC member cities close water areas. Blue growth is a key area of interest for the Baltic Sea region much due to the above mentioned reasons. Many UBC cities have big ports and are specialized in high quality shipbuilding.

## ***Our goal***

*To make UBC cities leaders in integrated water management*

*To improve the ecological state of the Baltic Sea*



# ***Strategic background for projects***

Request from UBC cities to combat eutrophication (2007)

HELCOM Action Plan

EUSBSR PA NUTRI, HA Neighbours

Interreg BSR IVB (2007 – 2013) and Interreg BSR (2014 – 2020)



## ***Investment projects 2009 -2014***

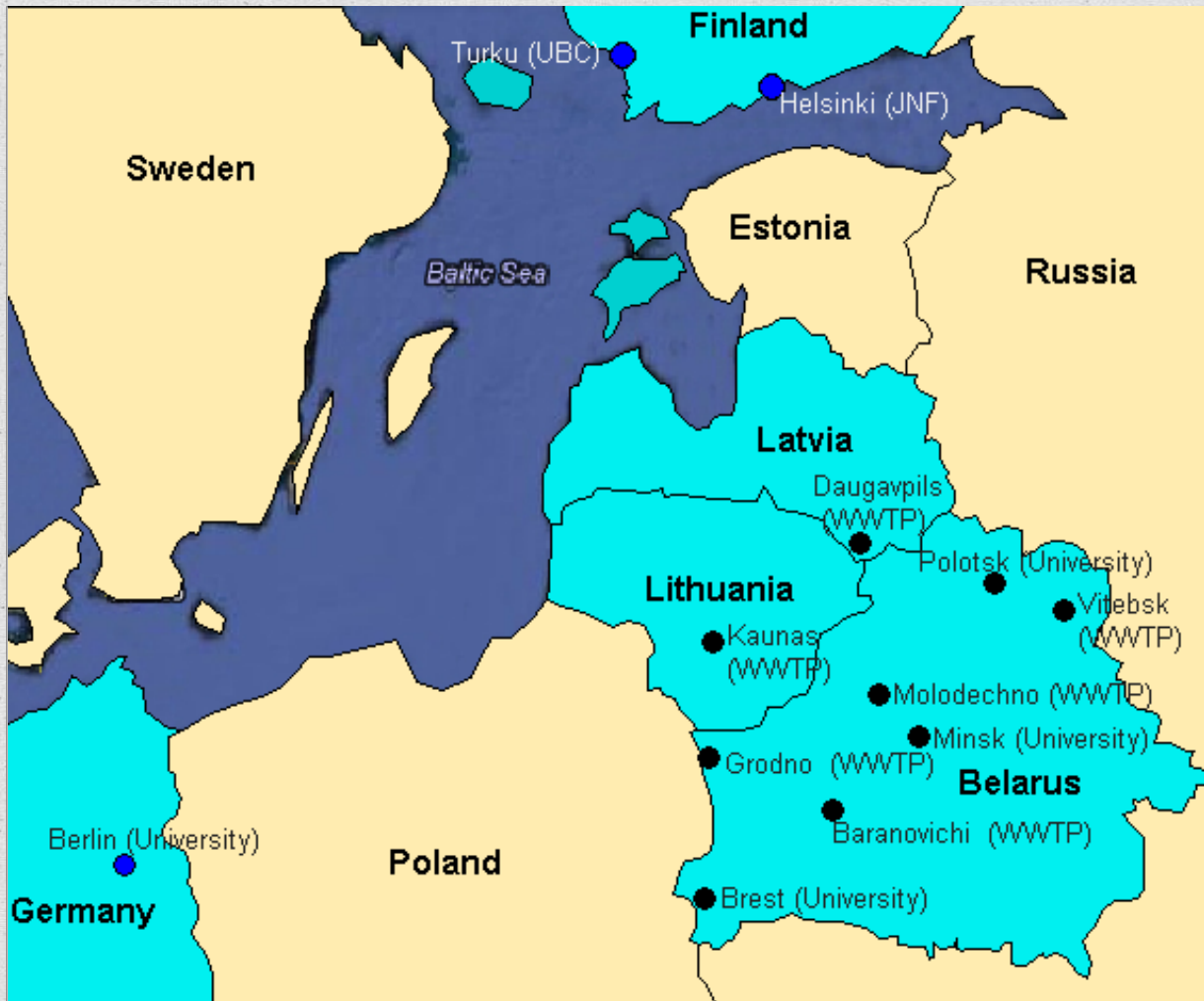
### **PURE 2009 – 2012**

Investments in Riga, Jurmala, Brest and audits in Kohta-Järve, Gdansk and Szczecin

### **Presto 2011 – 2014**

Investments in Belarus: Grodno, Molodechno, Vitebsk, and Baltic States: Kaunas and Daugavpils. Audits in Lida and Baranovichi

## Partners map



### + Associated Partners:

WWTP of Lida  
 WWTP of Brest  
 WWTP of Polotsk  
 WWTP of Slonim  
 WWTP of St Petersburg  
 Belarusian Ministry of  
 Housing and  
 Communal Services  
 Belarusian design  
 institutes (two)  
 Finnish Embassy in  
 Belarus  
 University of Latvia  
 + HELCOM, NDEB



Part-financed by the European Union  
 (European Regional Development Fund  
 and European Neighbourhood and  
 Partnership Instrument)



## Funded by Interreg BSR Programme 2014-2020, Priority 2 “Management of natural resources”, Specific objective 2.1 “Clear waters”

UBC Sustainable Cities Commission/Turku (UBC SCC) **LP**

- **4 WP leaders:** UBC SCC, Lahti University of Applied Sciences, Technical University of Berlin and University of Tartu

- **8 Wastewater treatment plants** of Tartu, Turi (EE), Jurmala, Daugavpils (LV), Kaunas (LT), Gdansk and Szczecin (PL) and Grevesmuhlen (DE)

- **3 Associations and environmental centers:** Estonian Water Works, German Association for Water, Wastewater and Waste – regional group North-East, EKAT-Lithuania Environmental Center for Administration and Technology; 1 more academic partner – Linnaeus University in Kalmar, Sweden

- **1 private company** Aqua & Waste International (Hannover-based)

**12 associated partners:** RU and BY organisations Environmental Center “ECAT-Kaliningrad”, Scientific Research Center for Ecological Safety of Russian Academy of Sciences, WWTPs of Minsk and Slonim; the “Forerunner” WWTPs of Turku, Lahti, Kalmar, Luebeck, Rostock, Kolding; Polish Water and Wastewater Operators Association; Baltic Sea Challenge initiative



## ***Challenges to address***

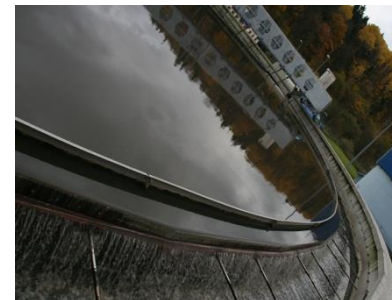
IWAMA focuses on three main areas in the municipal WWT sector where gaps have been recognized through work in previous EU funded projects PRESTO and PURE:

1. the need for **increased capacity/structured lifelong learning** among WWT operators and experts in the region
2. the need to operate the WWTPs more resource-efficiently, in particular to develop and improve **energy management**
3. the need to develop and improve **sludge management**.

Greater **stakeholders involvement** – to promote using best available technology BSR needs more water sector forerunners implementing voluntary actions that go beyond the legal requirements.

## ***Focus of project***

- Project aims to improve the **resource efficiency** in wastewater management in the BSR by ***capacity development of waste-water treatment (WWT) operators*** and implementation of ***pilot investments*** which will **result in reduced nutrient inflows to the Baltic Sea.**
- While advanced technology solutions are continuously becoming available, their integration at WWTPs is often challenging and inefficient. The project will increase capacity of WWT operators in choosing cost-effective technologies in nutrient removal, smart sludge and energy management and build structured models to support lifelong learning in WWT sector.





## ***IWAMA supports PA Nutri (EUSBSR)***

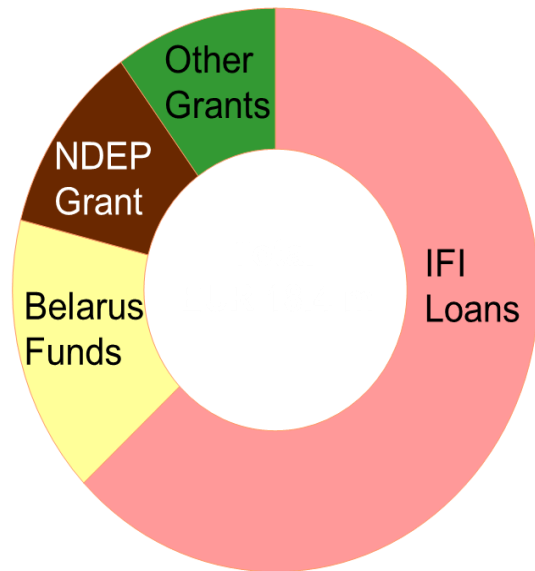
- **Managing nutrients more efficiently** – through performing energy and sludge audits, collecting and evaluating energy and sludge key figure in relation to N and P removal; optimized plants' performance after the pilot investments (especially optimized oxygen regulation) for higher nitrogen removal potential;
- **Improving waste water treatment** – through promoting cost- and energy-efficient nutrient removal and sustainable sludge handling at urban WWTPs e.g.:
  - audits and investments resulting in optimized energy performance,
  - better managing reflux of phosphorous from the sludge treatment contributing to the phosphorous balance in the plants,
  - improved sludge water treatment contributing to the reduced nitrogen effluent loads,

# ***IWAMA supports PA Nutri and HA Neighbour***



- **Improve nutrient load data** - benchmarking for energy demand and sludge handling in relation to the nutrient removal, collection and evaluation of key figures in energy and sludge, audit concept for smart energy and sludge management
- **Investigate cost-efficient nutrient reduction mechanisms** - pilot investments for improved energy efficiency and enhanced nutrient removal (enhanced nitrogen control) at operating WWTPs, pilot investments to improve sludge management quality and enhance nutrient removal through sludge water treatment and new solutions for sludge hygienisation, stabilisation and drying.
- **Cooperate with non-EU Member States** – involving associated partners from Russia and Belarus (WWTPs of Minsk and Slonim, environmental center EKAT Kaliningrad and St Petersburg Academy of Science)

# **Brest Wastewater Treatment Project**



Comprehensive modernization  
of the plant to reach HELCOM  
standards

Phosphorous load to be cut by  
217 t/a and nitrogen by 921 t/a

Cross border benefits for Poland  
via the Western Bug River

NDEP Grant of EUR 2 million  
has been used to leverage  
NIB and World Bank  
loans of EUR 11.5 million

# Grodno Wastewater Treatment Project

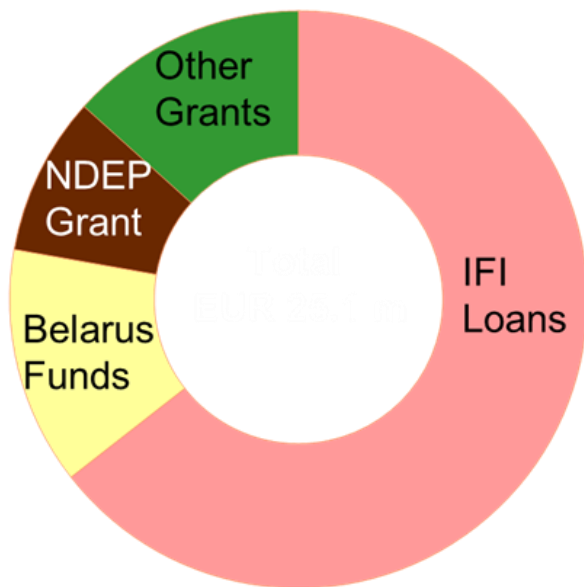


Comprehensive modernization  
of the plant to reach HELCOM  
standards

Phosphorous load to be cut by  
51 t/a and nitrogen by 476 t/a

Cross border benefits for Lithuania  
and Russia via the Neman  
(Nemunas) River

NDEP Grant of EUR 2 million has  
been used to leverage NIB and  
World Bank loans of  
EUR 14.7 million



# Vitebsk Wastewater Treatment Project

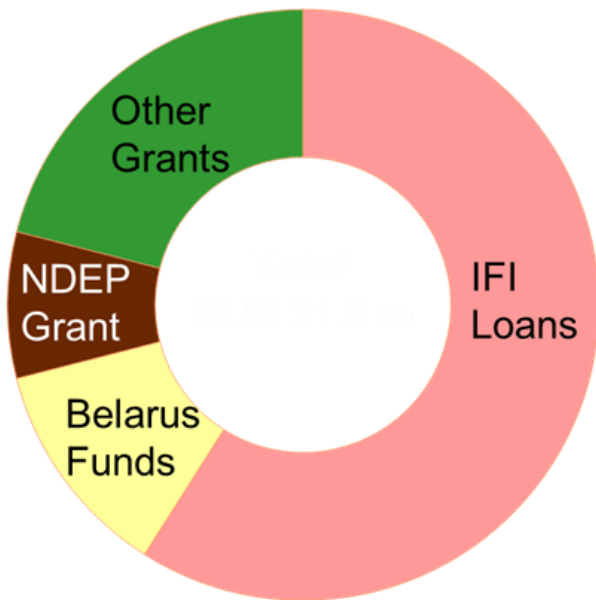


Comprehensive modernization  
of the plant to reach HELCOM  
standards

Phosphorous load to be cut by  
68 t/a and nitrogen by 183 t/a

Cross border benefits for Latvia  
via the Western Dvina River

NDEP Grant of EUR 2 million  
has been used to leverage EBRD  
loan of EUR 12.5 million





Vitebsk Vodokanal

EBRD AND NIB LOANS FOR WASTEWATER TREATMENT PROJECTS  
IN VITEBSK, GRODNO AND BREST WERE SIGNED ON 10.12.2012



Grodno Vodokanal





**NDEP GRANT AGREEMENTS FOR  
VITEBSK, GRODNO AND BREST WERE SIGNED ON 26.03.2013**



# ***Keys to successful actions for better state of the Sea***



**Strategic and long term goals  
and Activity Plan connected  
to EUSBSR and Flagships**

Involving all the Baltic Sea  
Region countries including  
Russia & Belarus.

Working with relevant  
Stakeholders.

