

Where and why did it start, what are we aiming for?

BEST – Better Efficiency for Industrial Sewage Treatment

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Finding the context – Regulations, recommendations and programmes

- EU Urban Waste Water Directive, EU directive on Industrial Emissions and Best Available Techniques reference documents, as well as the Water Framework Directive and Marine Strategy Directive.
- **HELCOM Baltic Sea Action Plan**, recommendations on nutrient removal at municipal WWTPs, treatment of industrial effluents and emissions and sludge management
- EU Strategy for the Baltic Sea Region 2009and Interreg Baltic Sea Region Programme 2014-2020





EUROPEAN REGIONAL DEVELOPMENT FUND EUROPEAN UNION



Source: Interreg Baltic Sea Region (interreg-baltic.eu)

Finding the context – former and ongoing projects

Former municipal waste water treatment related projects

COHIBA (2009-2012) <u>http://helcom.fi/helcom-at-work/projects/completed-projects/cohiba</u> Interreg BSR, Identifying most important hazardous substances and developing controls **PURE (2009-2012)** <u>www.purebalticsea.eu</u>, Interreg BSR, Phosphorus removal in municipal waste water treatment

PRESTO (2011-2014) <u>www.prestobalticsea.eu</u>, Interreg BSR, Phosphorous removal in municipal wastewater treatment plants, sludge handling

Projects within the Baltic Sea Challenge network

Cities for the Healthier Sea (2010-2012) <u>www.itamerihaaste.net/en/cities_for_a_healthier_sea</u>, Interreg Central Baltic **CITYWATER (2012-2015)** <u>www.citywater.fi/</u>, EU LIFE+, Reducing nutrient load through water quality measures among stakeholders

Ongoing municipal waste water treatment related projects

IWAMA (2016-2019) <u>www.iwama.eu</u>, Interreg BSR, Implementing pilot investments to increase energy efficiency and advance sludge handling

CWPharma (2017-2020)

http://www.syke.fi/enUS/Research __Development/Research _and _development _projects/Projects/C lear waters from pharmaceuticals __CWPharma Interreg BSR, ways to reduce emissions of active pharmaceutical ingredients

Main challenges

One of the key challenges remining is **inadequately treated industrial wastewater that enter municipal wastewater treatment plants**.

- Operational problems for treatment plants and thus increased pollution load to water courses
- Need for detailed information on sources, contents and sludge utilisation
- Treatment solutions and cooperation practices among the water utilities, industrial companies and authoroties responsble for permits and monitoring









- BEST is tackling industrial waste water treatment at municipal waste water treatment plants – a gap not been targeted in previous projects
- BEST acknowledged as a Flagship **project** for the implementation of the EU Strategy for the Baltic Sea **Region Policy Area Nutri.**







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Project BEST – Key facts

Aim: To develop more efficient cooperation and co-treatment methods for management of industrial waste waters discharged to municipal waste water treatment plants

- Duration: 1/10/2017-30/9/2020
- Total budget: 3,6 milj.€
- Funding: Interreg Baltic Sea Region 2014-2020

(Priority 2 Natural resources, Specific objective 2.1 Clear waters)







Activities



WP5 Guidelines for management and treatment of industrial wastewaters





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Main outcomes

Background report on the current situation and feasible methods of industrial waste water management nationally and in the Baltic Sea Region

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Increased capacity to develop industrial waste water management locally

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BSR relevant guidelines with national and regional annexes

New technical solutions and cooperation models for management of industrial waste water locally and in BSR





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Partners!

Municipalities

- City of Helsinki (lead partner)
- Doruchow municipality
- City of Warsaw

Universities

- Riga Technical University (WP2 lead)
- Tallinn University of Technology

Industries

- Limited company E-Piim Tootmine
- Latvijas Piens LTD

Wastewater treatment plants

- Municipal water supply and sewerage company with limited liability (Leszno)

- Helsinki Region Environmental Services Authority (HSY)
- MUE "Vodokanal" of Gatchina
- Põltsamaa Varahalduse limited company

Expert organisations

- Gdansk Water Foundation (WP3 lead), John Nurminen Foundation (WP5 lead)
- Estonian Waterworks Association (EVEL)
- State Autonomous Institution of Kaliningrad region Environmental Center "ECAT Kaliningrad",
- Regional Environmental Centre for Central and Eastern Europe, Country Office Poland (REC Poland)



Associated partners

Ministries, interest groups and NGOs, WWTPs, educational and research institutions from

Sweden, Lithuania, Germany, Estonia, Latvia, Russia, Poland and Finland

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AO 28 Water utility of Sosnovy Bor (Leningrad region) SMUP Vodokanal Sosnovy Bor Image: Region of the structure and public service provider AO 29 Water utility of Sovetsk (Leningrad region) MPPU Vodokanal Sovetsk Image: Region of the structure and public service provider AO 30 Water utility of Vyborg (Leningrad region) OAO Vyborg Vodokanal Image: Region of the structure and public service provider	AO 27	Company of water utilities in Leningrad region	GUP Vodokanal Leningrad region	📕 RU	Infrastructure and public service provider
AO 29 Water utility of Sovetsk (Leningrad region) MPPU Vodokanal Sovetsk ■ RU Infrastructure and public service provider AO 30 Water utility of Vyborg (Leningrad region) OAO Vyborg Vodokanal ■ RU Infrastructure and public service provider	AO 28	Water utility of Sosnovy Bor (Leningrad region)	SMUP Vodokanal Sosnovy Bor	💻 RU	Infrastructure and public service provider
AO 30 Water utility of Vyborg (Leningrad region) OAO Vyborg Vodokanal 🔳 RU Infrastructure and public service provider	AO 29	Water utility of Sovetsk (Leningrad region)	MPPU Vodokanal Sovetsk	📕 RU	Infrastructure and public service provider
	AO 30	Water utility of Vyborg (Leningrad region)	Q4O Vyborg Vodokanal	💻 RU	Infrastructure and public service provider

Steering group organisations outside the partnership

FINNISH WATER UTILITIES ASSOCIATION

FINNISH MINISTRY OF THE ENVIRONMENT

CENTRE FOR ECONOMIC DEVELOPMENT, TRANSPORT AND THE ENVIRONMENT

COOPERATION!

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