

## **Pilot watersheds as a practical tool to reduce the harmful inflows into the Baltic Sea. (WATERCHAIN)**



Programme Priority: P2 Sustainable use of common resources

Programme Specific Objective: 2.4. Reduced nutrients, hazardous substances and toxins inflow into the Baltic Sea

Sub-programme: Central Baltic

Duration: 01.10.2015 - 30.09.2018

Total funding: 2.574.250 EUR

ERDF funding: 2.029.057 EUR ERDF

### Project Summary:

The project WATERCHAIN helps to reduce inflows of nutrients and hazardous substances to the Baltic Sea from all types of land-based sources by using pilot watersheds and environmental technology. The project tackles both highly developed intensely populated cities as well as less developed peripheral, sparsely populated rural and island regions in pilot watersheds.

The main actions are carried out in the pilot watersheds in each partner country with the practical actions targeted to sustainable impact. The sustainable use of common resources is based both on prevention of nutrients and hazardous substances inflow, as well as on water treatment of these harmful substances already entered the water bodies. During the project period, one to two sources of nutrients or hazardous substances recognized by river basin water management plans are identified and activities to reduce the substances in each pilot watershed are also initiated.

As a result of the project best practices with a common approach for sustainable development are launched in other geographical areas within the Central Baltic region and further all countries around the Baltic Sea. By year 2023, the pollution loads of nutrients and hazardous substances from targeted sources are reduced in pilot watersheds flowing into the Baltic Sea. Therefore, project results have a direct impact on the quality of living environment of local people and visitors to the area, especially on pilot watersheds.

## Map of Partners

### Partners

Lead Partner

#### Satakunnan ammattikorkeakoulu

Country: FI

[www.samk.fi](http://www.samk.fi) [1]

Partner budget: 479.350 EUR

Amount of ERDF funding: 359.512 EUR ERDF

Project Partners

#### Pyhäjärvi-instituuttisäätiö

Country: FI

[www.pji.fi](http://www.pji.fi) [2]

Partner budget: 288.900 EUR

Amount of ERDF funding: 216.675 EUR ERDF

#### Turun ammattikorkeakoulu

Country: FI

[www.tuas.fi](http://www.tuas.fi) [3]

Partner budget: 289.800 EUR

Amount of ERDF funding: 217.350 EUR ERDF

#### Kungliga Tekniska Högskolan

Country: SE

<https://www.kth.se/> [4]

Partner budget: 374.100 EUR

Amount of ERDF funding: 280.575 EUR ERDF

#### Tallinna Tehnikaulikool

**Country:** EE

<http://www.ttu.ee/> [5]

**Partner budget:** 262.375 EUR

**Amount of ERDF funding:** 223.019 EUR ERDF

### **Eesti Keskkonnauuringute Keskus**

**Country:** EE

<http://www.klab.ee/> [6]

**Partner budget:** 238.625 EUR

**Amount of ERDF funding:** 202.831 EUR ERDF

### **R?gas Tehnisk? universit?te**

**Country:** LV

[www.rtu.lv](http://www.rtu.lv) [7]

**Partner budget:** 207.300 EUR

**Amount of ERDF funding:** 176.205 EUR ERDF

### **Vides Risinājumu Instituts**

**Country:** LV

<http://www.videsinstituts.lv/> [8]

**Partner budget:** 275.400 EUR

**Amount of ERDF funding:** 234.090 EUR ERDF

### **Ålands Vatten**

**Country:** FI

<http://www.vatten.ax/> [9]

**Partner budget:** 158.400 EUR

**Amount of ERDF funding:** 118.800 EUR ERDF

## **Results**

---

## Expected results

## Achieved results

Project result in category - Reduction of nutrients, hazardous substances and toxins inflow into the Baltic

## Waterchain - prevention of nutrients inflows in the Baltic Sea

Project Waterchain tackled the prevention of water pollution by using spatial planning and source-specific cost-effective technological solutions for water treatment including both science-based ones as well as practical knowledge. The cross-border co-operation partnership set up in the framework of Waterchain project, enabled by the wide complementary expertise of Finnish (incl. Åland), Estonian, Latvian and Swedish partners within the fields of water treatment led to the successful development and implementation of several practical innovative actions to prevent and reduce nutrients and hazardous substances inflows into the Baltic Sea. The project, focused on the main local problems and considered the feedbacks of the local target groups.

The technological methods used to reduce the inflow of nutrients and hazardous substances from inland waters were implemented during the project in participating countries as pilot investments. Crucial hotspot areas for nutrient loading were identified in pilot watersheds. Reduction activities were carried out in hotspot areas by installing and implementing a small scale innovative nutrient reduction systems on the nutrients sources as pilot measures: 4 pilots in Finland and 2 in Latvia. The seventh pilot was carried out in a laboratory.

In addition, the project identified three groups of hazardous substances based on Environmental Quality Standards (EQS) Directive 39/2013/EU and Baltic Sea Action Plan: pharmaceutical residues, pesticides and perfluorinated compounds. Activities to reduce the inflows into the watershed were initiated with a pilot in Swedish and Estonian pilot watersheds.

Project page in database

[Pilot watersheds as a practical tool to reduce the harmful inflows into the Baltic Sea.](#) [10]

At a glance

- 3 groups of hazardous substances identified
- 7 pilots watersheds

Files



[Report Validation of Piloted Nutrient Removal Technologies](#) [11]

Tags

[Sustainable management of natural resources](#) [13]

[Water management](#) [14]

[Waterways lakes and rivers](#) [15]

## Project Visibility

## Social media links

[Project website](#) [16]

[Facebook](#) [17]

[Twitter](#) [18]

[Project YouTube channel](#) [19]

## **Other media visibility**

[A Cleaner Baltic Sea with Everyday Choices – Take WaterChain Toolbox in Use \(2018\)](#) [20]

[Lokala satsningar i vattenprojekt \(2018\)](#) [21]

[Modelling of the Effect of Drained Peat Soils to Water Quality Using MACRO and SOILN Models \(2018\) Research Article](#) [22]

[Promotion of the Environment -The planning and draft of the e-handbook for the Central Baltic WATERCHAIN project \(2017\)](#) [23]

[Ålands vatten märkt med Kranen \(2017\)](#) [24]

[Tutkimuksia, suojelua, siivoamista – Meremme tähden -tapahtumassa puhuttiin Itämeren tilanteen parantamisesta \(2017\)](#) [25]

[Kampanj ska lära musiker om Östersjön \(2017\) Rock the Baltic Sea!](#) [26]

[Ungas idéer belönades på Östersjöns dag \(2017\)](#) [27]

<https://ls24.fi/uutiset/huhtikuussa-katsotaan-pintaa-syvemmalle> (2017) [28]

[Asukkaat mukaan Itämeren ravinteiden vähentämiseen \(2016\)](#) [29]

[Eteläisen Satakunnan vesistöjä ja rantoja siivotaan roskatalkoilla \(2017\)](#) [30]

[Source apportionment of nitrogen in Estonian rivers \(2017\) Research Article](#) [31]

## **Project videos**

<https://www.youtube.com/watch?v=d5KBb28VMgM>

[https://www.youtube.com/watch?v=nykEbTnac\\_c&feature=youtu.be](https://www.youtube.com/watch?v=nykEbTnac_c&feature=youtu.be)

**Source URL:**<https://database.centralbaltic.eu/printview/8>

### Links

[1] <http://www.samk.fi> [2] <http://www.pji.fi> [3] <http://www.tuas.fi> [4] <https://www.kth.se/> [5] <http://www.ttu.ee/> [6] <http://www.klab.ee/> [7] <http://www.rtu.lv> [8] <http://www.videsinstituts.lv/> [9] <http://www.vatten.ax/> [10] <https://database.centralbaltic.eu/project/8> [11] <https://database.centralbaltic.eu/sites/default/files/CB50%20RESULTS%20Validation-report-nutrients%202018.pdf> [12] <http://waterchain.eu> [13] <https://database.centralbaltic.eu/tags/sustainable-management-natural-resources> [14] <https://database.centralbaltic.eu/tags/water-management> [15] <https://database.centralbaltic.eu/tags/waterways-lakes-and-rivers> [16] <http://waterchain.eu/> [17] <https://www.facebook.com/centralbalticwaterchain> [18] <https://twitter.com/WATERCHAIN> [19] [https://www.youtube.com/channel/UCz8GhExcENBWQYVkkpn\\_y3Q](https://www.youtube.com/channel/UCz8GhExcENBWQYVkkpn_y3Q) [20] <https://www.samk.fi/en/uutiset/a-cleaner-baltic-sea-with-everyday-choices-take-waterchain-toolbox-in-use/> [21] <https://alandsradio.ax/nyheter/lokala-satsningar-vattenprojekt> [22] <https://www.researchgate.net/publication/326754179> Modelling of the Effect of Drained Peat Soils to Water Quality Using MACRO and SOILN Models [23] <https://www.theseus.fi/handle/10024/129771> [24] <https://www.nyan.ax/nyheter/alands-vatten-markt-med-kranen/> [25] <https://ls24.fi/uutiset/tutkimuksia-suojelua-siivoamista-meremme-tahden-tapahtuma-kertoo-itameren-vesistojen-toiminnasta> [26] <https://www.nyan.ax/nyheter/kampanj-ska-lara-musiker-om-ostersjon/> [27] <https://alandsradio.ax/morgon-dag/ungas-ideer-belonades-pa-ostersjons-dag> [28] <https://ls24.fi/uutiset/huhtikuussa-katsotaan-pintaa-syvemmalle> [29] <https://ls24.fi/plus/asukkaat-mukaan-itameren-ravinteiden-vahentamiseen> [30] <https://www.satakunnankansa.fi/satakunta/art-2000007149120.html> [31] <https://iwaponline.com/aqua/article/66/7/469/38077/Source-apportionment-of-nitrogen-in-Estonian>