Presentation from 2015 World Water Week in Stockholm

www.worldwaterweek.org

© The authors, all rights reserved



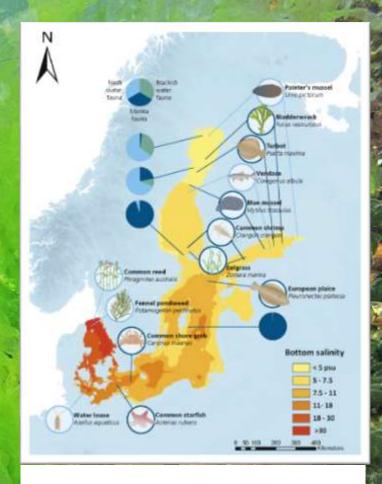
Status report on pharmaceuticals in the Baltic Sea region



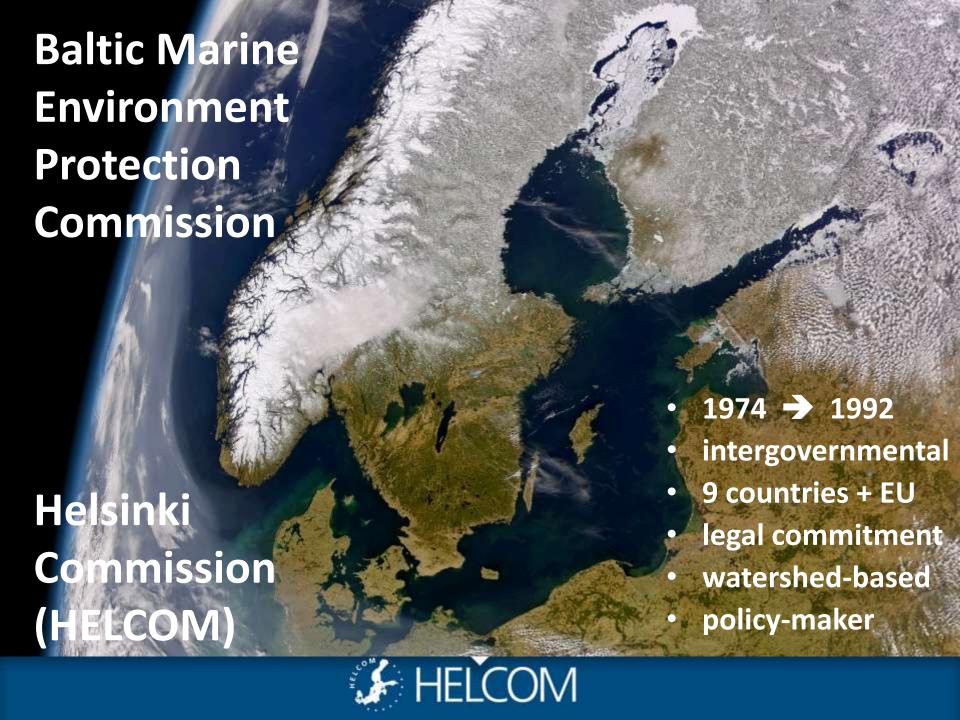
HELCOM

Baltic - a sea like no other

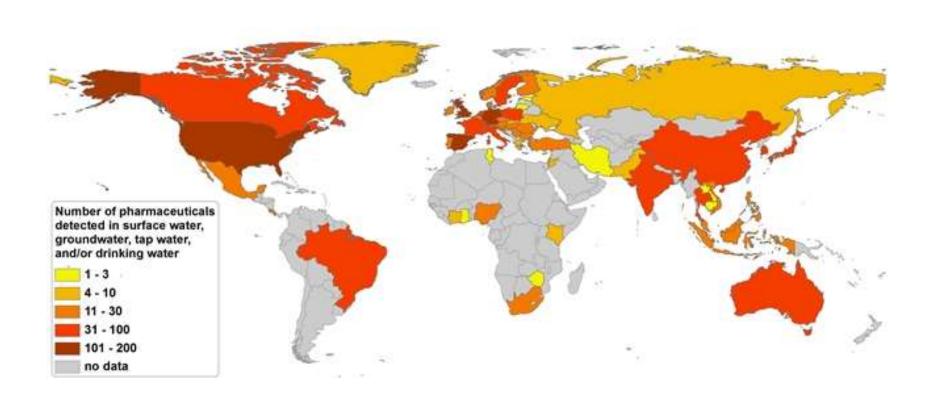








Pharmaceuticals globally



Source: Pharmaceuticals in the environment – the global perspective. Occurrence, effects, and potential cooperative action under SAICM. German Federal Environmental Agency (UBA), 2014

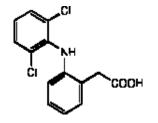


Pharmaceuticals in the Baltic Sea region?

Diclofenac

- Concentration in effluents varies from 355 ng/L to 550 ng/L which is about 400 kg per year;
- More then 30 WWTP in Finland, Sweden and Germany were monitored the highest published concentration in effluent water reaches 3900 ng/l.





Concentrations observed in selected rivers <u>triple exceeds</u>
 <u>the boundary of good environmental status (10 ng/l)</u> even at distance about 2 km from WWTP's discharges.

Residues of more then 15 pharmaceutical substances — antibiotics, analgesics, estrogens were detected in the environment of different parts of the Baltic region.

THERE IS NO REGIONAL COMPREHENSIVE ASSESSMENT



HELCOM policy

– 2010 HELCOM Ministerial Declaration:

further assess the environmentally negative impacts of pharmaceuticals and other substances that are not monitored regularly;

– 2013 HELCOM Ministerial Declaration:

to collect information on pharmaceuticals and assess the status of contamination of pharmaceuticals and their degradation products in the marine environment;

Diclofenac concentration as HELCOM indicator under development



EU policy

- EU directive 2013/39/EU:
 - The contamination of water and soil with pharmaceutical residues is an emerging environmental concern;
 - Article 8b Watch list: Diclofenac (CAS 15307-79-6), 17-beta-estradiol (E2) (CAS 50-28-2) and 17-alpha-ethinylestradiol (EE2) (CAS 57-63-6);
 - Article 8c specific provisions for pharmaceutical substances.
- Policy Area Hazards of the EU Strategy for the Baltic Sea Region (EUSBSR): increased attention to the topic of pharmaceuticals in the Baltic environment in 2015-2017.



Status report on pharmaceuticals in the Baltic Sea

The first comprehensive assessment of input of pharmaceutical substances to the Baltic Sea and the status of contamination of the Baltic Sea marine environment



Based on compilation of existing information available through publications at national and regional level

Scope of the Status report

- Assessment of the state of contamination of the Baltic
 Sea environment:
 - Concentrations observed in biota, water and sediment;
 - Observed environmental effects of pharmaceuticals in the region.
 - Assessment of the pressure on the Baltic Sea environment:
 - Consumption of pharmaceuticals medicine, veterinary;
 - Sources WWTP, agriculture, medical wastes, etc.;
 - Pathways ground water, rain water, surface water, etc.



Milestones

Date	Activity
June 15	 Collect information about data availability and data sources from HELCOM Contracting Parties
July 15	 Develop and send out template for collecting data on concentrations & effects
August 15	 Develop and send out template for collecting data on sources & pathways
October 15	 Discussion on sources & pathways at HELCOM Pressure Group meeting
November 15	 Discussion on concentrations & effects at HELCOM State&Conservation Group meeting
November 15	 Draft report on concentrations & effects Workshop/Stakeholders conference (PA Hazard - HELCOM) Progress report to UNESCO
February 16	 Final status report on pharmacueticals in the Baltic Sea environment Final report to UNESCO
March 16	 Presentation of the status report at annual HELCOM meeting.



Thank you

Marta Ruiz
Marta.Ruiz@helcom.fi
http://helcom.fi/action-areas/waste-waterlitter/pharmaceuticals/



