

Gaps in policy and practice for assessing the environmental risks of contaminated sediments in the Baltic Sea

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1 Contaminated sediments in the Baltic Sea: capacity building for better management and remediation (CONTAR)

Initiated by scientists from eight countries around the Baltic Sea region, aiming to:

- Synthesize existing data on sediment contamination and current risk assessments.
- Refine current approaches to Baltic risk assessment of contaminated sediment by analysing international state-of-the-art practices.
- Produce recommendations for improved management of contaminated sediments.

The ten main partners are research and governmental institutes from Finland, Russia, Sweden, Germany, Poland, Norway, Lithuania and Denmark.

Main partner institutes:

Finnish Environment Institute (SYKE), Geological Survey of Finland (GTK),
Zoological Institute of Russian Academy of Sciences (ZIN),
Geological Survey of Sweden (SGU), Stockholm University, Sweden (ACES),
Hamburg University of Applied Sciences, Germany (HAW),
Institute of Oceanology of the Polish Academy of Sciences (IOPAN),
Norwegian Geotechnical Institute (NGI), Klaipeda University, Lithuania (KU),
University of Southern Denmark (SDU).

Associated organisations include:

WWF Finland, Harbor Gdynia, Poland, Maritime offices of Szczecin and
Gdynia, Poland, Environmental ministries of Finland and
Schleswig-Holstein, Germany, Regional councils from Sweden and Finland,
Environmental protection departments of Sweden, Norway, Lithuania,
Administration for Hydrometeorology and Environmental Monitoring,
Russia, Federal Institute of Hydrology, Germany.

2 The Baltic Sea is the most polluted sea in the world¹

- Persistent levels of contaminants despite management at sources.
- Sediments now function as sources of persistent contaminants.
- Contaminated sediments are rarely managed with the aim to reduce adverse environmental effects.
- Low priority and lack of guidelines and standards hamper management of contaminated sediments.

5 How can systematic review aid the Baltic Sea region to manage contaminated sediments?

CONTAR aims to produce recommendations for harmonization and improvement of management of contaminated sediment in the Baltic Sea region.

How can systematic review be used to further understand:

- The state-of-the-art in environmental risk assessment of contaminated sediments.
- How to set appropriate limit values for negative effects from contaminants.
- What measurements of effects from contaminants that should be used to assess risks.
- How to integrate different measurement results into a risk assessment.

Additional activities within CONTAR aim to:

- Examine and map contaminant distribution in Baltic Sea coastal areas and establish a link to the current marine spatial planning processes
- Evaluate and compare management options.

3 Harmful effects of the contaminants

- Management is necessary to reduce the risks caused by persistent contaminants.
- Sediment contaminants in the Baltic Sea pose a risk to humans and aquatic organisms.²
- Contaminants leach out from sediments and accumulate in fauna.^{2,3}
- Local dietary recommendations advise against frequent consumption of several fatty fish species⁴ and the EU has banned exports of those fish.⁵

4 Need for management guidelines

- General lack of strategies and guidelines for management of contaminated sediments in the Baltic Sea region.⁶
- Low awareness of contaminated sediments among authorities responsible for marine planning.⁶
- Stakeholders in contaminated sediments request research and development for assessment and management.⁷

Stakeholder needs

In a survey with Swedish stakeholders risk assessors request:

- Guidance for how to measure and assess risk from contaminated sediments
- Recommendations and development of remediation and management techniques.
- Increased knowledge among regulatory agencies.

In the survey representants from regulatory agencies expressed similar requests in addition to experiencing a great variety in current management, making it difficult to assess and monitor quality and success.⁷

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