

Toxic Legacies of War – North Sea Wrecks Symposium

Den Helder (Netherlands) at The Dukdalf/MBSOV

April 19-20, 2023

Should we be concerned about war remnants in the North Sea and other oceans? What knowledge do we have about the hazards that war wrecks, underwater munition (UXO) and chemicals such as TNT in the water may pose? Are we to be more concerned about this environmental problem?

In the North Sea Wrecks project, we explored these questions and investigated the extent to which munitions in the sea pose a threat to the environment and the marine food chain. In this project, financed by the EU Interreg North Sea program, nine institutions from five countries have cooperated to gather more knowledge about that problem. After 4.5 years of work, we want to present our results so far and discuss with scientists, politicians and the interested public how we want to deal with this challenge in the future and demonstrate the risk assessment tool developed in the project.

For registration and information: www.dsm.museum/nsw_symposium2023

Deadline for registration: February 10, 2023

On this webpage you will always find an updated program, directions and hotel information.

North Sea Wrecks (NSW) project partners:



German Maritime Museum –
Leibniz Institute for Maritime
History (DSM)



north.io GmbH



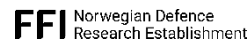
Alfred-Wegener-Institute –
Helmholtz Centre for Polar
and Marine Research (AWI)



Periplus Consultancy BV



Aarhus University –
Department of Geoscience
(AU)



Norwegian Defence
Research Establishment
(FFI)



Flanders Marine Institute
(VLIZ)



University Medical School
Schleswig-Holstein,
Institute of Toxicology and
Pharmacology (UKSH)



NHL Stenden University of
Applied Sciences, Maritime
Institute Willem Barentsz (NHL)

DAY 1 – Wednesday, April 19, 2023

- 9.00 Reception open
- 10.00 **Greetings and Organizational Remarks:**
Ruth Schilling (Managing Director of German Maritime Museum/DSM);
Representative of Dukdalf/MBSOV
- 10.30 **Keynote I: Alex Souchen** (University of Guelph, Canada):
*“What Can History Tell Us About Underwater Munitions? Methods, Meaning,
and Missing Records”*; Chair: Sven Bergmann (DSM)
- 11.15 Short Coffee Break
- 11.30 **Keynote II: Guilherme Lotufo** (US Army Engineer Research and Development
Center): *“Underwater Munitions as an Environmental Hazard”*; Chair: Edmund
Maser (UKSH)
- 12.15 Lunch Break
- 13:45 **North Sea Wrecks (NSW) – Presentation of the central topics and results of the
project**, led by the experts of the NSW project, moderated by Welmoed van
der Velde (NHL Stenden):
- Overview and Conceptual Approach of NSW
 - From the Archive to the Wreck Site: Research and Data Collection
 - Biomonitoring, Toxicological Analyses and First Results
 - Risk Assessment and Policy Recommendations
 - Follow-up, Transnational Cooperation and Raising Public Awareness
- 15.45 **Coffee Break & Exhibition Space**
- Demonstration of Wreck Risk Assessment Tool (north.io)
 - Data Repository/Uxo Warehouse (Periplus Consultancy)
 - Travelling exhibition “Toxic Legacies of War – North Sea Wrecks”
- 16:45 **Round Table Discussion: (Different) European Perspectives on Munition at
Seas and Transnational Efforts, with:**
- **Andrea Klomp** (Dutch Ministry of Education, Culture and Science,
Cultural Heritage Agency)
 - **Polly Hill/Matthew Skelhorn** (UK Ministry of Defence)
 - **Anita Künitzer** (German Environment Agency)
 - **Marnix Pieters** (Flanders Heritage Agency)
- moderated by **Jens Sternheim** (NSW Advisory Board)
- 18.00 Buffett and Get-together

Day 2 – Thursday, April 20, 2023: Scientific Workshops

- 9:00 **Keynote III: Lex van der Kraan** (Group Captain of the Royal Netherlands Navy Mine Counter Measure Group): *“Current state of Mine and Ordnance Clearance in the North Sea”*, Chair: Jennifer Strehse (UKSH)
- 9.45 **Workshop Session 1: Alterations of Wrecks on the Seafloor**
- Effects of Geological/Seafloor Processes and Risks for War Wrecks – Insights From Two Wrecks in the Danish North Sea (Katrine Juul Andresen, Aarhus University)
 - The Corrosion Rate of Steel Wrecks in the Belgian North Sea, an In Situ Research (Kris De Baere, Antwerp Maritime Academy)
 - N.N.
- 10.30 Coffee Break
- 11.00 **Workshop Session 2: Effects on Organisms**, Chair: N.N.
- Long-term Blue Mussel Samples From the German Environmental Specimen Bank Show First Evidence of Munition Contaminants Uptake (Jennifer Strehse, Tobias Bünning, Edmund Maser, UKSH)
 - Microbial Community Responses to a Wartime Wreck: the John Mahn Case Study (Maarten De Rijcke, VLIZ)
 - Measuring Biological Effects in the Field and Laboratory and Translating Them into Risk Monitoring (Matthias Brenner, AWI; Simon van der Wulp, north.io)
- 12:30 Lunch Break
- 13.30 **Keynote IV: Jacek Bełdowski** (Institute of Oceanology, Polish Academy of Sciences): *“A Decade of Chemical Munitions Studies in the Baltic Sea and New Perspectives”*, Chair: Matthias Brenner (AWI)
- 14.15 **Workshop Session 3: Consequences and Dealing with Disaster**
- Communicating Slow Disasters as a Matter of Concern in Transdisciplinary Research – Experiences in NSW and Other Projects (Sven Bergmann, DSM)
 - Consequences from a Total Collapse of a Shipwreck in Skagerrak Filled with Chemical Ammunition (John Aa. Tørnes, FFI)
 - Munitions in the Sea – Chemical Analyses Alongside (Underwater) Blast in Place Operations (Edmund Maser, Tobias Bünning, Jennifer Strehse, UKSH)
- 15.00 Short Coffee Break
- 15.15 **Wrapping Up and Final Discussion**
- 16.00 **End of Symposium**, opportunity to visit the Marinemuseum