

CHEMSEA Project

The CHEMSEA project, CHEMical Munitions Search and Assess, is a planned EU project within the Baltic Sea Region Programme 2007-2013. The aim of the project is to search for, localise and identify dumped chemical ammunition and chemical materials after World War II in official and unofficial dumping areas southeast of Gotland and in the Gdansk Deep. Previously found chemical ammunition and containers have been found corroded and the risk of toxic material spreading is imminent, which could constitute a navigational hazard and harm to environment and humans. The CHEMSEA project directly addresses a common concern, namely pressure on the use of marine resources. Baltic seafloor usage is an increasing issue – large scale hydro technical activities are located in the Baltic. In some cases, they can be situated close to contaminated sediments. There is a necessity to increase the safety of such activities, by defining special areas, where submarine activities should be restricted, or carried out with special care. The project also aims to provide maps of sea bottom areas contaminated with Chemical Warfare Agents (CWA) or CWA degradation products, and tools to assess environmental risk associated with eventual leakage of sunken chemical munitions, as well as guidelines and procedures developed for such sites.

Chemsea project partners are governmental administrations and agencies, universities and institutes from Poland, Finland, Germany, Lithuania and Sweden, see appendix 4. IO PAS Poland (Institute of Oceanology of the Polish Academy of Science) is the lead partner for the project. More information about CHEMSEA project can be found on its website, www.chemsea.eu.

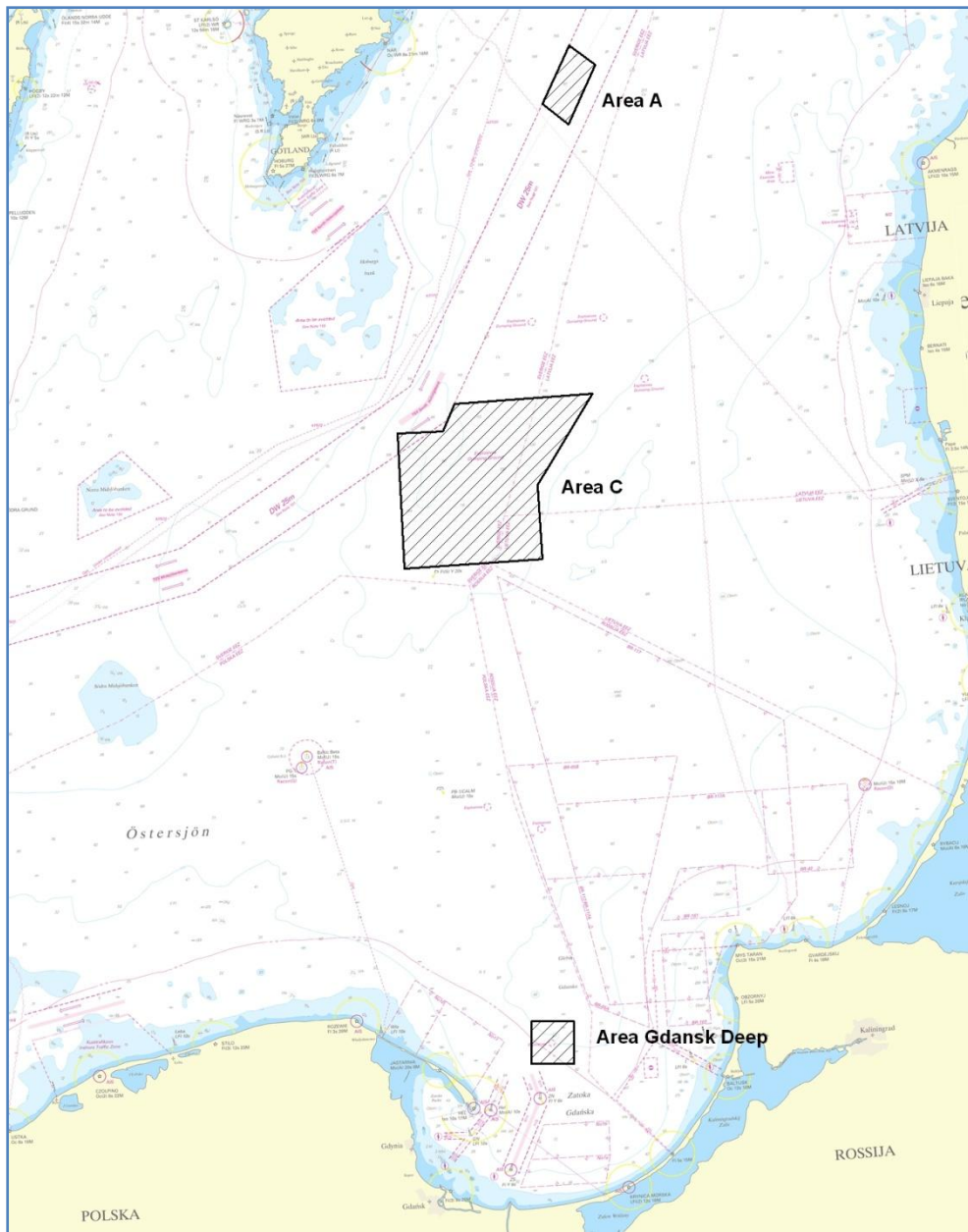
Survey is being executed by using modern technique such as Multibeamechosounder, SideScanSonar and Magnetometer. Parametric sonar and/or Chirp echosounder may be used for closer investigation. Detailed topographic maps shall be produced positioning the located CW's (chemical weapons) and in some cases identification and classification using ROV (Remotely Operated Vehicle). The result will form the basis for further investigation in identification, classification and extensive bottom and water sampling to produce models for dispersion of the toxic hazardous spreading.

The survey areas are located East and Southeast of Gotland and in the Gdansk Deep. The areas are attached as a picture in appendix 1.

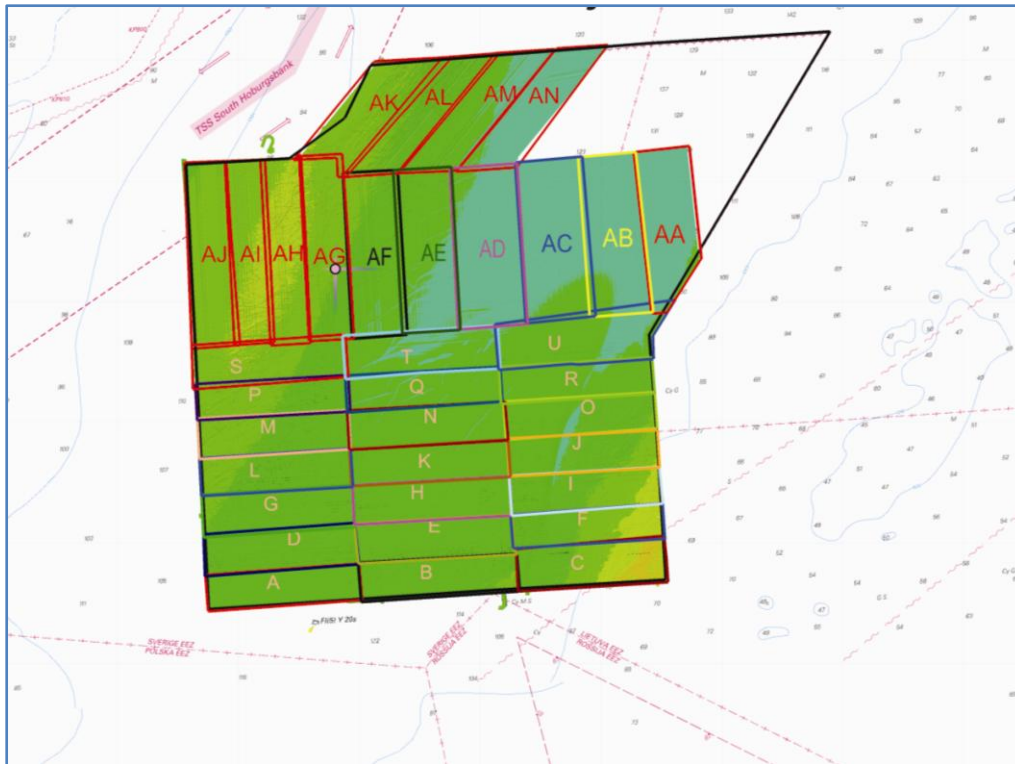
The survey commenced in the last quarter of 2011. The Field work is planned to be completed at the end of 2012. Field work includes hydrographical survey, ROV inspections, water and bottom sampling. The work proceeds as planned.

Until now about 90 % of the official dumping area, "Area C", is surveyed. 50% of the area is post processed and about 17.000 objects, divided in 5 classes, are found in 20 subareas, see appendix 2. About 12.000 objects are classified as potential dumped ammunition. ROV will be used to verify clusters of chemical ammunition, see appendix 3.

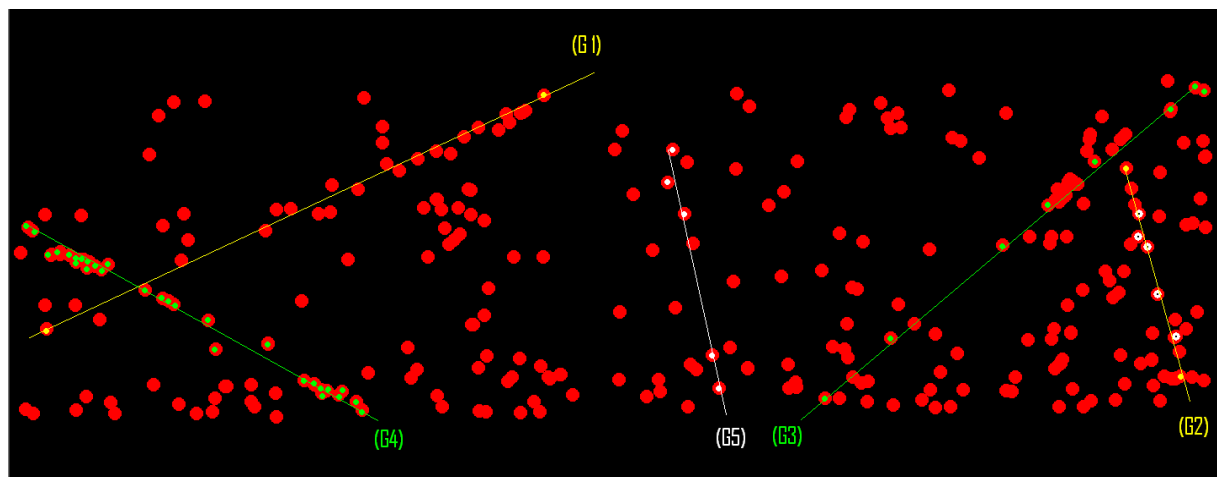
Appendix 1, Survey areas.



Appendix 2, Surveyed area and object classification.

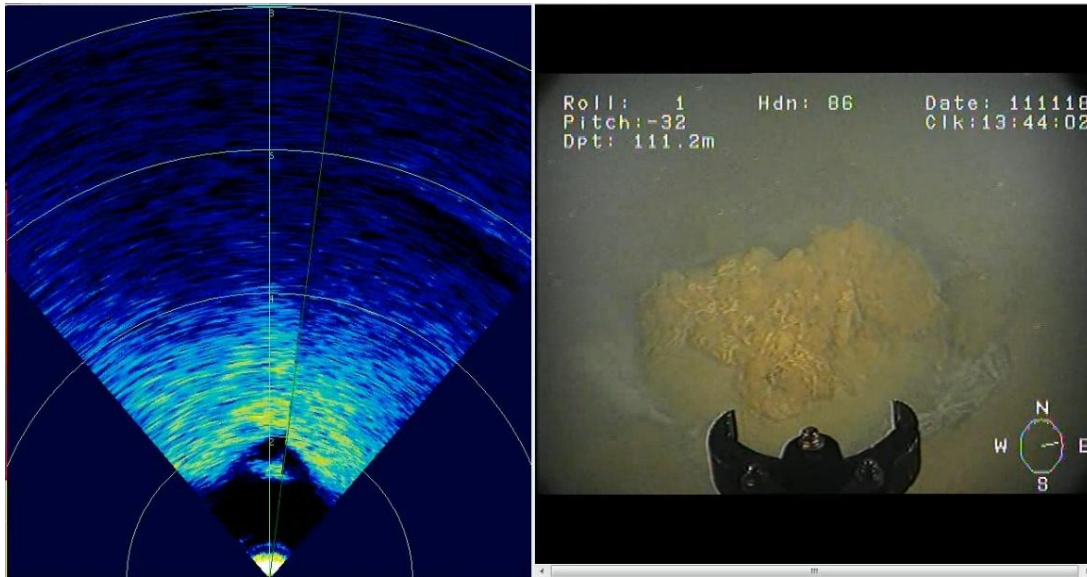


Progress in area C, 26 August 2012.



Objects in subarea G, total 310, 189 classified as potential dumped ammunition. Note possible dumping pattern with objects in clusters.

Appendix 3, Mustard gas.



ROV identified Mustard gas ammunition.

Appendix 4, Project Partners

- Poland: IOPAS; Institute of Oceanology of Polish Academy of Sciences; Project leader
MUT; Military University of Technology
PNA; Polish Naval Academy
- Finland: SYKE; Finnish Environment Institute
VERIFIN; Finnish Institute for Verification of the Chemical Weapon Convention
- Sweden: FOI; Swedish Defense Research Agency
SMA; Swedish Maritime Administration
CBRNE; Center for advanced Studies of Societal Security and Vulnerability of Umeå University
- Germany: AWI; Alfred Wegener Institute for Polar and Marine Research
vTi FOE; Johann Heinrich von Thunen- Institute, Federal Institute for Rural Areas, Forestry and Fisheries
- Lithuania: EPA; Lithuanian Environmental Protection Agency