

Estimation of contamination area during potential leakage of dumped chemical munitions in the Baltic Sea.

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After World War II approximately 60 thousand tons (the exact amount is not known and some sources estimate it as more than 200000 tons) of chemical munitions were dumped in the Baltic Sea. The precise dumping areas are not known either, but based on the past investigations and information it is possible to select some main regions of dumping: Skagerrak, Bornholm Deep, Gdansk Bay and Gotland Basin (see figure). Dumped munitions can be dangerous in the event corrosion and potential leakage. Since there is no tool for estimating the influence of the leakage of dangerous material on the benthos and the bottom areas, two methods was implemented for assessment of contamination of potential leakage. The first one is analysis of spreading of passive tracer implemented in the hydrodynamic model of the Baltic Sea. The second one is based on Lagrangian tracking with random disturbance, also adapted in Baltic Sea model. Based on performed simulations spatial and temporal scales of the pollution has been estimated.



Locations of the dumping sites (confirmed and unconfirmed)