

Status, Challenges and Options for Unexploded Munitions in the Baltic Sea

Colloquium The Challenges of
Unexploded Munitions

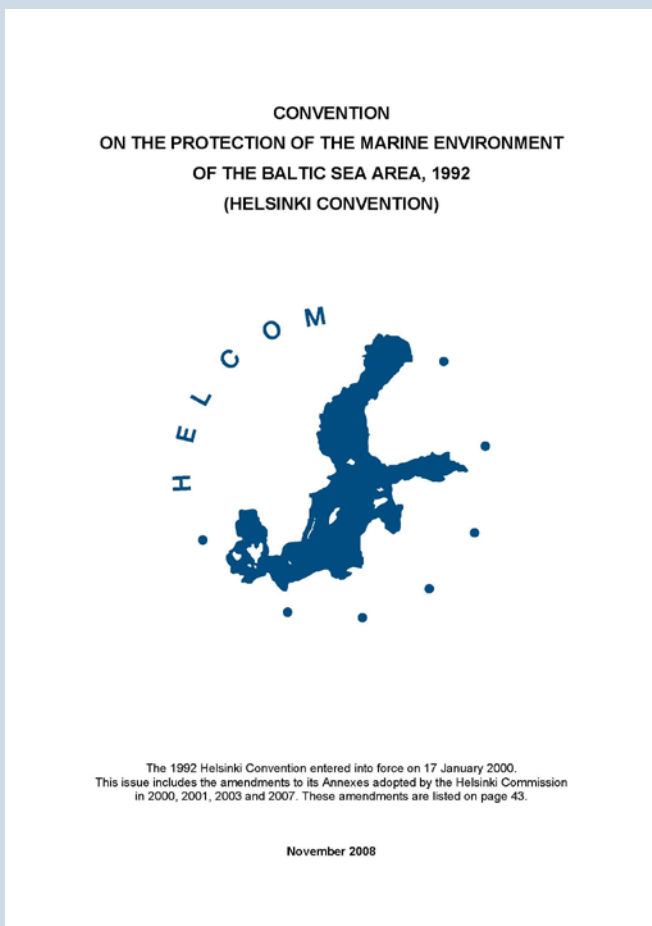
Brussels 20 February 2019

Monika Stankiewicz, HELCOM Executive Secretary



HELCOM

Convention on the Protection of the Marine Environment of the Baltic Sea Area



- Signed originally 1974 (in force 1980), Revised 1992 (in force 2000)
- Ratified by all nine Baltic Sea coastal states and the EU
- HELCOM governing body
- Over 50 official HELCOM Observers

Submerged hazardous objects in the Baltic Sea

1. Submerged warfare materials

- discarded military material (DMM) & unexploded ordnance (UXO)
- conventional and chemical munitions

2. Polluting wrecks

3. Historic dumping of industrial and radioactive waste

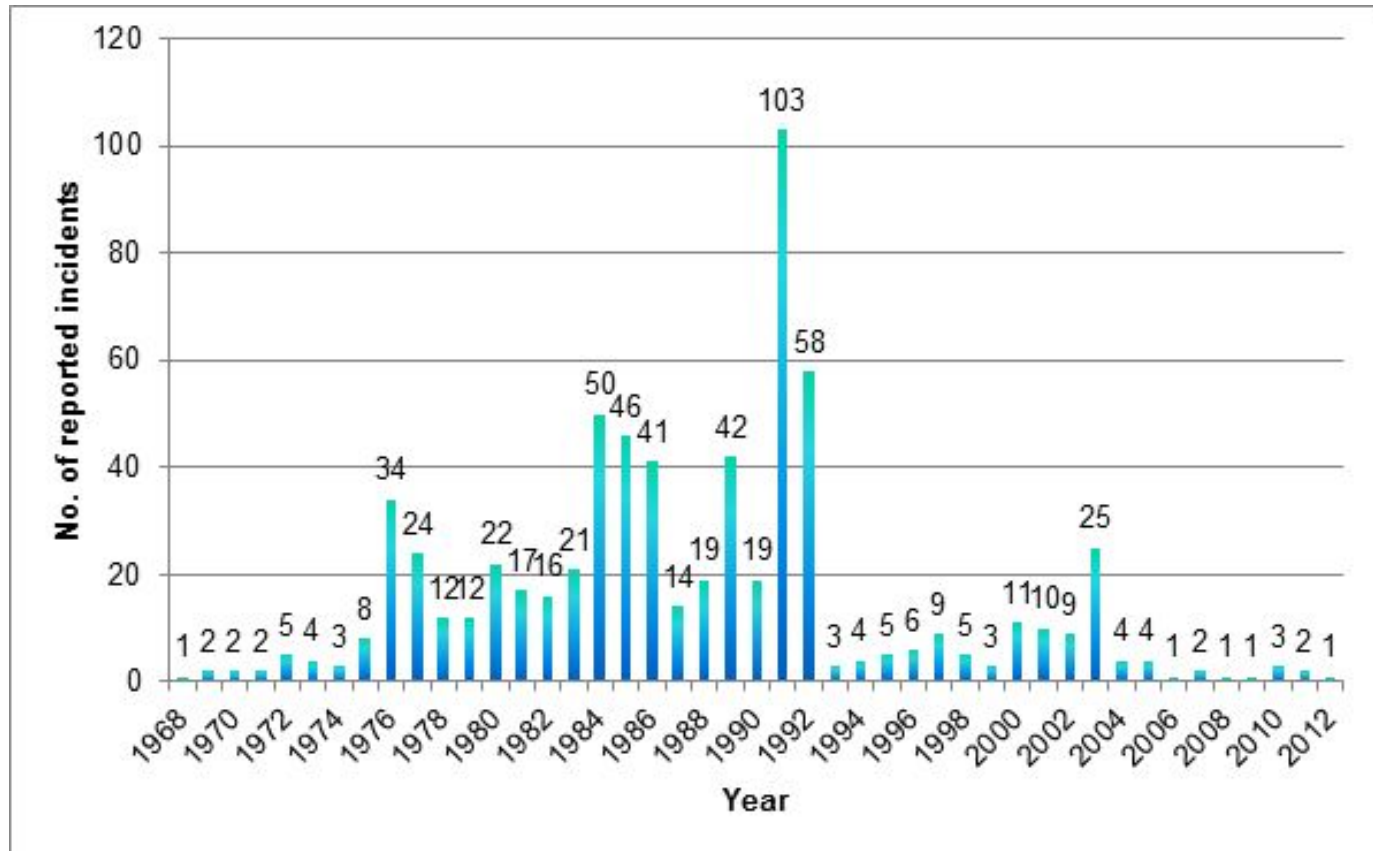
1. Submerged warfare materials - dumped chemical munition

Approx. 40,000 tonnes of chemical warfare materials were dumped in the Baltic Sea at the end or immediately after World War II.



Figure 21: A basket filled with 10.5 cm Tabun shells is heaved on board from the wreck of the 1,000 tonnes barge in 1959/1960, which had been scuttled on behalf of the Germany Navy before the end of the war in 1945 (Kinder 1960).

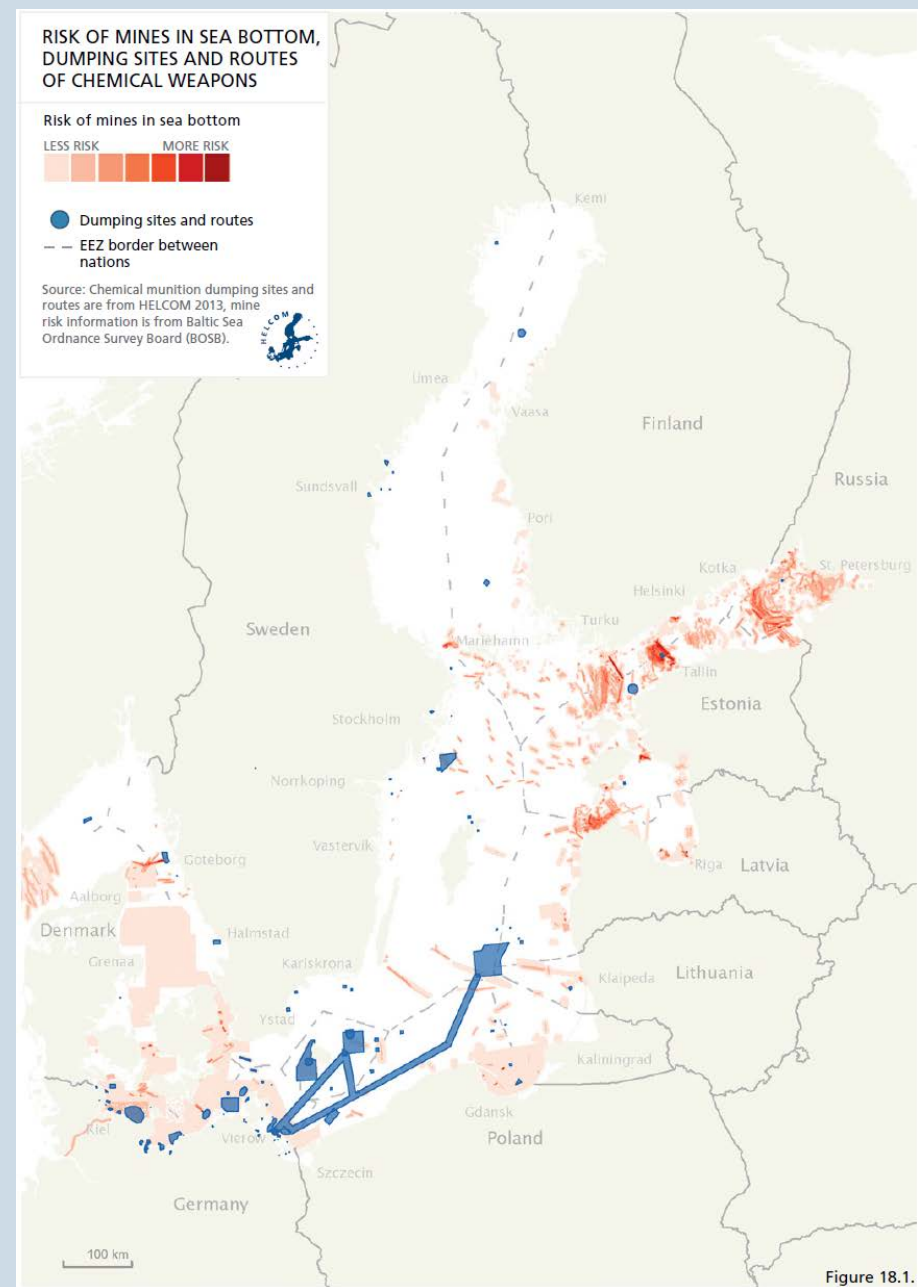
Number of reported incidents of trawled up chemical warfare materials in the Baltic Sea the years 1968-2012



1. Submerged warfare materials - mines laid to the Baltic Sea

- 180 000 mines were laid in 2 200 mine fields between 1848 and 1945
 - Of these 35 000 to 50 000 mines have been swept and removed

*A combined map of
a) former munition dumping
grounds (conventional and chemical
munitions) and
b) the present risk to encounter a sea-
mine on the sea bed of the Baltic Sea
(HELCOM Maritime Assessment 2018)*

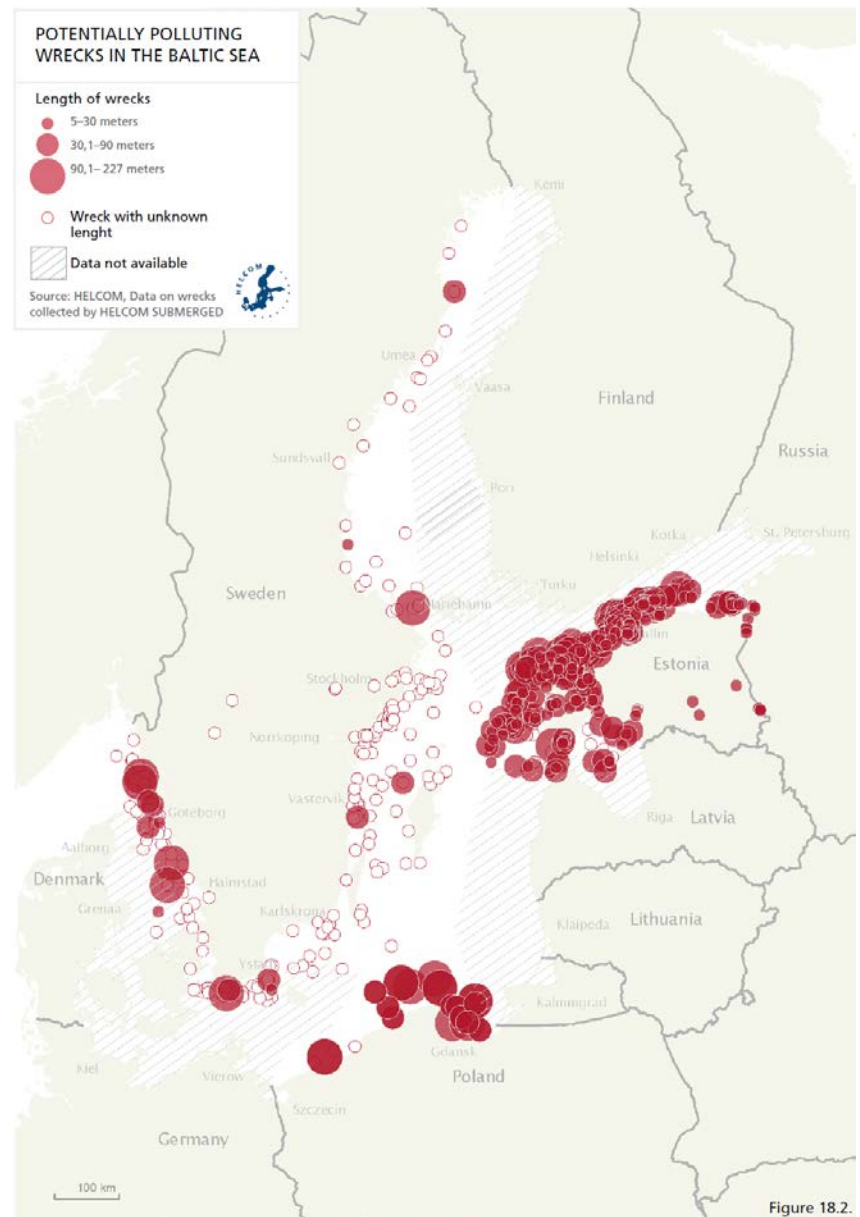


Environmental effects of dumped warfare materials

- Both dumped chemical weapons and conventional munitions contain large amounts of substances
- Sulphur mustard is the most abundant chemical warfare agent in the dumped munitions
- Smaller pieces of White Phosphorous washes ashore and appears like amber but causes severe burns and is highly toxic

2. Polluting wrecks in the Baltic Sea

(HELCOM Maritime Assessment 2018)



3. Historic dumping of industrial and radioactive waste

- Before 50s the sea legal disposal side for waste
- much of this dumping is very poorly documented
- One example: more than 20 000 barrels containing hazardous substances with 10 tonnes of mercury during 50s and 60s in the Bothnian Bay

HELCOM activities regarding dumped chemical munitions

- **1992:** establishment of *ad hoc* Working Group on Dumped Chemical Munitions (HELCOM CHEMU) - lead by of Denmark
- **1994 & 1995:** Reports by HELCOM CHEMU
- **1995:** Guidelines for fishermen (Annex 3 of the final report of the HELCOM CHEMU, 1995)
- **1995-2009:** Annual report: Numbers of incidents reported where chemical munitions have been caught by fishermen
- **2010:** establish an *ad hoc* HELCOM Expert Group to update and review the existing information on dumped chemical munitions in the Baltic Sea (HELCOM MUNI) - lead by Germany and Poland
- **2013:** Report by HELCOM MUNI

2013 HELCOM recommendations on chemical munition



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Recommendations - Investigate

- **Historical Research** - The Contracting Parties are encouraged to carry out, support and facilitate historical research in national and international archives, especially to undertake efforts to get access to still classified documents of relevance e.g., in the archives of the WWII Allies.
- **Technical Research** - The Contracting Parties are recommended to carry out, support and facilitate technical research, e.g. within international projects, in known and suspected areas using technology specifically suitable for the task to obtain precise, site-specific data on the types, quantities, status and spreading of sea-dumped warfare materials and their constituents in the Baltic Sea. .
- **Research Transfer** - The Contracting Parties are recommended to share detailed information on the findings both within and outside the Baltic Sea region. Furthermore, it is advisable to investigate dumpsites bordering the Helsinki Convention Area, e.g. the dumpsite off Måseskär.



Source: Bureau of Public Relations, War Department, Washington



Source: G. Garnaga



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Recommendations - Manage

- **Analytical Capability** –The Contracting Parties are recommended to support and facilitate the development of suitable analytical methods and improving analytical capabilities.
- **Periodical Surveys** - The Contracting Parties are recommended to support and facilitate the development of suitable guidelines for carrying out surveys and testing methods (necessary in order to establish trends and foresee possible changes in the environment in these areas).
- **Risk Assessments** - The Contracting Parties are recommended to support and facilitate the development of suitable instruments and methods for site-specific risk assessments.
- **Intentional Recovery** - with regard to the increasing use of the seafloor, the intentional recovery of chemical warfare materials, where applicable, might no longer be excluded as a site-specific management option in accordance with nationally accepted guidelines or the results of risk assessments, as seen in other areas for chemical munitions dumping. The Contracting Parties are recommended to transfer procedures and experiences for intentional recovery that exist under the provisions of current international legal instruments.
- **Unintentional Catches** - The Contracting Parties are recommended that response teams should be deployed and that on their advice relocation of caught chemical warfare material may be considered as an acceptable emergency measure.



Recommendations - Inform

- **Document Updating** - Contracting Parties are recommended to consider this report as a step in an on-going process and to establish a working process for periodical updates after significant new information becomes available.
- **Public Awareness** - Contracting Parties are recommended to support and facilitate the development and operation of such information portals and other relevant measures to increase public awareness.
- **Knowledge Provision** - Contracting Parties are recommended to support and facilitate such national centers or organizations responsible for the collection of information on sea-dumped warfare materials, the coordination of response and training activities for the decontamination of vessels and equipment, as well as the treatment of affected people are necessary.
- **New Guidelines** - Contracting Parties are recommended to carry out, support and facilitate the update and development of suitable guidelines for all potentially affected groups. When active in the vicinity of areas with known or suspected contamination by chemical warfare materials, contingency measures for dealing with both chemical and conventional warfare materials should be in place.
- **Up-to-date Charts** - Contracting Parties are recommended to update sea charts to reflect the extensions of primary and secondary dumpsites, and to ensure that no information is lost on nautical charts when the transition to Electronic Nautical Charts is made.



New group HELCOM SUBMERGED 2013-2020

– ToRs (1)

- Produce a one off HELCOM thematic assessment on environmental risks of hazardous submerged objects covering contaminated wrecks, lost or dumped dangerous goods (e.g. containers), chemical munitions and other objects;
- Seek cooperation with OSPAR with objects located close to HELCOM area
- Compile and maintain statistics of reported incidents with lost cargoes, contaminated wrecks and dumped munitions or hazardous waste, as well as review and adjust the reporting and information system for incidents

HELCOM SUBMERGED – ToRs (2)

- Check the validity and update previously issued conclusions & recommendations;
- Check and facilitate the implementation of previously issued recommendations;
- Issue updated information when new significant findings become available
- Develop, maintain, and monitor application of a HELCOM toolbox for assessment of site-specific environmental risks related to potential abandonment, relocation and intended recovery or clean-up of dumped munitions and contaminated wrecks

HELCOM SUBMERGED – ToRs (3)

- Update previously issued Guidelines or develop new Guidelines for all potentially affected groups, as deemed necessary, taking into account existing national guidelines and contingency plans;
- Develop and maintain procedures for training of crews of response vessels that can be engaged in emergency response actions involving dumped munitions;
- Develop and maintain a knowledge collection of best available technologies on dealing with lost packed chemical cargoes, dumped munitions and contaminated wrecks and dangerous waste;
- Follow and interact with national and international (research) projects and ensure transfer of knowledge and products (e.g., with the CHEMSEA and follow up projects and IDUM)

Baltic Sea Environment Proceedings No. 142



Baltic Marine Environment Protection Commission

Chemical Munitions

Dumped in the Baltic Sea

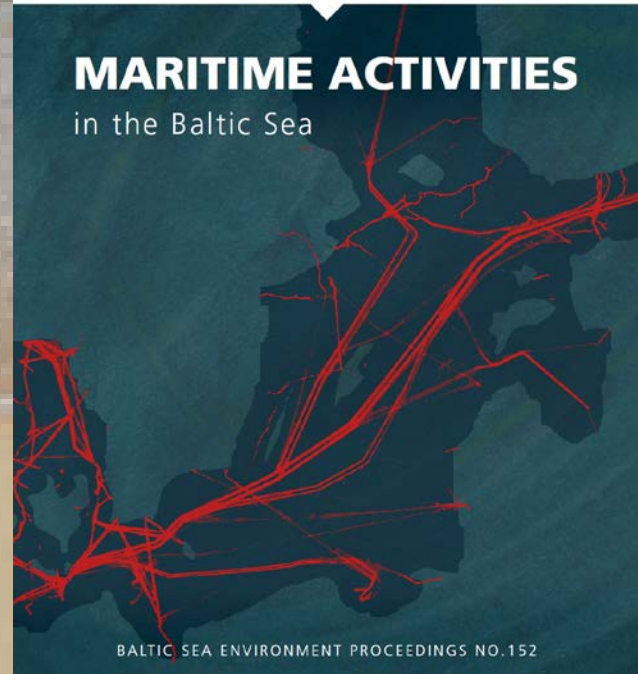


HELCOM MARITIME ASSESSMENT 2018



MARITIME ACTIVITIES

in the Baltic Sea



BALTIC SEA ENVIRONMENT PROCEEDINGS NO.152

THANK YOU



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