

SEA-DUMPED CHEMICAL WEAPONS UNDER THE CWC – MORE QUESTIONS THAN ANSWERS?

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I. Introduction

The year 2007 is the tenth anniversary of the Chemical Weapons Convention (CWC) entry into force. The drafters of the Convention correctly focussed both on the importance of destroying the chemical weapons declared by States Parties and on ensuring the prohibition of any future chemical weapons.

In many areas the CWC is covering we have after ten years of lifetime a better understanding on the efficiency of the treaty regime. On the one side it is obvious that there are certain deficits in the Convention regime, however, there are other areas where the CWC can clear proof its effectiveness.

Frequently the aspects of dumped CW, especially sea-dumped CW, are facing public attention and often criticism pops up that the CWC does not adequately covers the legal aspects but also the responsibilities for theses disposed weapons from the past.

The questions raised are very much related to debates on environmental threats resulting from the sea-dumped CW, potential harms to fishermen and requests for making certain States Parties responsible to conducts recover and cleaning operations.

General speaking, public is questioning the way the CWC covers responsibilities for sea-dumped CW. Demands for a more strict regime to make States Parties responsible for recovery, destruction and disposal of these munitions are openly discussed. Hereby the wishes to apply for certain dumping areas clearing solutions, by involving the former dumping States Parties, are mixed up with the reality as outlined under the CWC and other international agreements.

II. CWC and sea-dumped CW

Than the CWC was drafted the main focus was to assure that States Parties having declared chemical weapons are destroying these weapons regarding the treaty related time-schedule and that now and in the future a general prohibition of chemical weapons is secured.

Besides these main targets the CWC had also to cope with aspects of CW remaining from the past. Here the Convention contains certain provisions under Article II (Definitions), Article

III (Declarations) and Article IV (Chemical Weapons) which define clearly the exceptions from the general definition of Chemical Weapons and the resulting destruction regime. Article II defines the main categories under the CWC, such as “chemical weapon”, “toxic chemical”, “Precursor”, “Key Component of Binary or Multicomponent Chemical Systems”, etc. Besides that Article II is defining two categories of CW related items from the past:

"Old Chemical Weapons" means:

- (a) Chemical weapons which were produced before 1925; or
- (b) Chemical weapons produced in the period between 1925 and 1946 that have deteriorated to such extent that they can no longer be used as chemical weapons.

"Abandoned Chemical Weapons" means:

“Chemical weapons, including old chemical weapons, abandoned by a State after 1 January 1925 on the territory of another State without the consent of the latter.”

For these two categories under Articles III and IV clear provisions for declaration and destruction are defined. However, comparing with “normal CW”, as defined under the CWC, “old” and “abandoned” CW are treated differently.

Besides that special regime for CW from the past, Articles III and IV contain two exemptions which are related to past “disposal” activities: (a) land disposed CW, (b) sea-disposed CW.

The CWC uses in Article III and IV the following phrase for the exemptions:

“The provisions of this Article and the relevant provisions of Part IV of the Verification Annex shall not, at the discretion of a State Party, apply to chemical weapons buried on its territory before 1 January 1977 and which remain buried, or which had been dumped at sea before 1 January 1985.”

Important to note the use of the word “remain” in connection to the buried CW. In case of CW dumped at sea this is not explicitly mentioned, because it could be assumed that the negotiators in Geneva have regarded that these CW are dumped without any intention to be recovered.

In general the definition exempts all CW which are “sea-dumped” before 1985 or “land-buried” before 1977 from declarations under Article III and follow-up obligations under Article IV and under Part IV of the Verification Annex, as long as they remain “buried” and by assumption “sea-dumped”.

In addition, it is important to note the meaning of “at the discretion of a State Party”. If a State party to the CWC declares sea-dumped or land-buried CW, such a declaration would be a voluntary measure, not an obligatory one.

Any recovery of dumped CW and their respective destruction following the terms under Verification Annex, Part IV (A) would add nothing to the security of States Parties. Because of that these dumped munitions are exempted from destruction obligations.

However, as already pointed out by Krutzsch and Trapp,¹ the necessity of such a destruction undertaking in terms of ecological security is a total different matter, which was intentionally kept outside the scope of the CWC.

The exemption from declarations under Article III for sea-dumped CW cannot be easily explained, however, certain historical aspects might have led to that compromise, such as:

- (1) history of CW disposal operations;
- (2) common understanding that after World War II the situation for munitions disposal and especially chemical munitions, was one which doesn't comply with nowadays understanding of munitions disposal;
- (3) the understanding that the States Parties, having conducted disposal operation after World War II, couldn't made responsible after 60 years to recover these munitions;
- (4) some of the processors of the after World War II dumped CW don't exist any longer in terms of the definition of a State Party.

However, on other declaration obligations, such as the declarations of past transfer of CW, the Convention requires clear detailed declarations. In return the question which might emerge: Why could states which had possessed CW in the past and later sea-dumped these munitions not declare such dumping activities?

The cut-off date of 1 January 1985 is also not very clear. This date was included in the text at the very last moment, without ever being publicly explained. However, one simple explanation is that any date earlier would have affected at least one State Party.

III. The Scope of the Problem

There are certain geographical areas where dumping operations after World War II have been conducted. Generally speaking, these areas are in close connection to the locations of the key-processors of CW from that time² or their Allies.

The Baltic Sea Problem

One particular area of concern is the Baltic Sea area. Here the Allies dumped major amounts of captured CW. The states around the Baltic Sea and North Sea formed under the umbrella of the Baltic Marine Environment Protection Commission, also know as Helsinki Commission (HELCOM) an Ad Hoc Working Group on Dumped Munitions (CHEMU) in 1993. The findings of this HELCOM CHEMU are compiled in the 1995 Final Report.^{3 4}

¹ Krutzsch, W. and Trapp, R., "A Commentary on the Chemical Weapons Convention", Martinus Nijhoff Publishers, Dordrecht, Boston, London, 1994, p. 58.

² These areas are: (1) North Sea, between Scotland and Norway; (2) Baltic Sea, between Norway and Denmark, south-east of Gotland, east of Bornholm and south of Little Belt, (3) before Italy, (4) before France, (5) before Pakistan, (6) Gulf of Bengal, (7) before the Philippines, (8) around Japan, (9) around Australia and (10) before New Caledonia. In addition, 9 locations are closely related to the territory of the USA.

³ HELCOM (1995), "Final report on the ad hoc working group on dumped chemical munition, submitted to the Baltic Sea Environment proceedings No. 60".

⁴ For a summary of the recommendations from HELCOM CHEMU see also: Stock, T., "Sea-dumped Chemical Weapons and the Chemical Weapons Convention", in Kaffka, A.V. (ed), "Sea-Dumped Chemical Weapons: Aspects, Problems and Solutions" pp. 49-66, 1996 Kluever Academic Publishers, NATO ASI Series, 1. Disarmament Technologies – Vol. 7.

Dumping sites

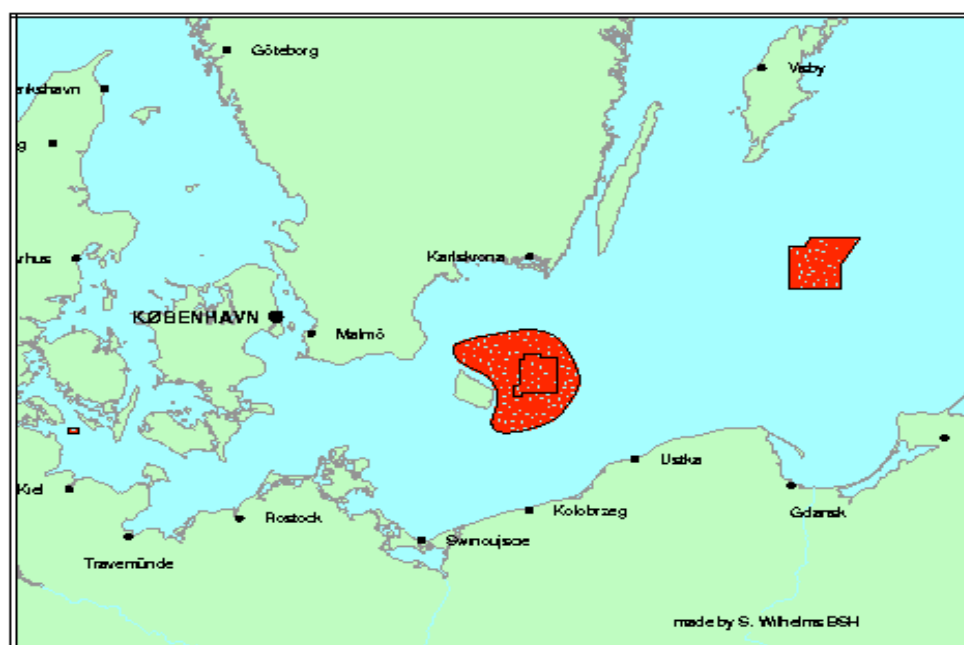
The location of dumped munitions is nowadays more or less well known. The main dumping areas are south-east of Gotland (south-west of Liepaja), east of Bornholm and south of Little Belt. During transport to the dumping areas east of Bornholm and south-east of Gotland munitions have been thrown overboard while ships were en route.

Chemical Weapon Dumping in the Baltic Sea			
Location	Munitions Quantity	Chemical Agent Quantity	Chemical Agent Type
Bornholm basins	35,300 to 43,399 tons	5,300 to 6,500 tons	mustard, Clark I, Clark II, Adamsite, chloroacetophenone, phosgene, nitrogen mustards, Tabun
Southwest of Bornholm	Up to 15,000 tons	2,250 tons	unknown
Gotland basin	2,000 tons	300 tons	unknown

Table: 1 Compilation of confirmed dumping areas and the amount of dumped munitions

As some munitions were dumped in wooden cases some have drifted outside the area where they were dumped. However, a relocation of munitions by hydrographic conditions such as currents is unlikely. Therefore, a threat to coastal areas of the Helsinki Convention Area from residues of warfare agents or chemical munitions washed ashore is not very likely, as also outlined by HELCOM.

Figure 1: Dumping areas confirmed in the Baltic Sea



However, there is still a netting of chemical munitions by fishermen. The following compilation from Denmark might illustrate the problem. The fishing activities in the Baltic Sea do obviously keep aspects of sea-dumped CW a lively issue, also keeping in mind that the dumping areas contain sometimes more fish than other areas.

Year	Numbers of incidents	Weight of active gas in kg
1995	6	40
1996	10	210
1997	9	184
1998	5	290
1999	3	185
2000	11	512
2001	11	514
2002	10	345
2003	25	1110
2004	4	160
2005	4	105

Table: 2 Denmark's reporting on chemical munitions netting

Effects on the marine environment

Chemical warfare agents break down at varying rates into less toxic, water-soluble substances. Some CW compounds, however, show an extremely low solubility and slow degradability (e.g. viscous mustard gas, Clark I and II, and Adamsite). These compounds cannot occur in higher concentrations in water, so wide-scale threat to the marine environment from these dissolved chemical warfare agents can be ruled out.

IV. How to cope with sea-dumped CW in the future?

In the recent years in relation to some new "pipelining" projects the issue of CW sea-dumped is brought up and heavily debated.⁵ Hereby questions related to past dumped munitions and their impact on the aquatic system as well any kind of long-term responsibilities of former dumping states are discussed. The effectiveness of CWC is questioned.

However, based on the approach chosen under the CWC for sea-dumped CW, by exempting these weapons from the declaration obligations and respectively destruction obligations, the drafters of the Convention have chosen a wise approach.

In addition, by moving the cut-off date for any responsibilities on dumped CW to the year 1985, State Parties do not have to show any kind of responsibility for such munitions they have dumped until then.

⁵ See here the discussion with respect to the planned new Baltic Sea gas-pipeline from Russia to Germany. There is under construction also a pipeline from a Norwegian gas-field to the U.K. which might pass sensitive dumping areas.

Nevertheless, there are certain aspects resulting from the definition of a chemical weapon under the CWC and the special treatment for sea-dumped CW under the Convention which should result in applying the following basic principles for dumped CW:

- (1) Any recovered sea-dumped CW should remain under the responsibility of the State Party having recovered it; hereby it doesn't matter if recovered in territorial waters or international waters;
- (2) Based upon the exemption from the declaration requirement, as of Article III, Paragraph 2, there should be no way to transfer recovered sea-dumped CW under the umbrella of the definition chemical weapons under the convention, which would bring this material under the strict destruction and verification obligations, as of Verification Annex IV (A) or Annex IV (B).
- (3) Technically the sea-dumped weapons material, if recovered, might be so heavily corroded that any further processing, including transportation, is quite dangerous and should be under responsibility of the State Party having recovered the material.
- (4) A State Party recovering from international as well territorial waters dumped CW should make a very general declaration to OPCW on the recovery by reporting on quantities, type of material as far as possible. This reporting should be voluntary and not result in any follow-up verification obligations.
- (5) With recovering sea-dumped CW a State Party cannot be regarded as a possessor State Party, as per definition under the CWC.
- (6) The disposal of recovered sea-dumped chemical weapons material should be performed under the same principles as applied for "toxic wastes", if this material meets the non-usability criterion, as outlined under Verification Annex IV (B), Paragraph 6 for "old chemical weapons" before 1925.

The knowledge and the understanding about the behaviour and possible threats resulting from sea-dumped CW have been increasing over the last 10 years. Quite intensive examinations on corrosion of munitions and degradation of chemical agents in aquatic media have led to better perceptions on the possible threats resulting from sea-dumped CW.⁶ On the other side, the understanding that any kind of economical activities in territorial/international waters "polluted" with dumped CW should be minimized to the extent possible, before not having a practicable solution for possible required recoveries of these dangerous munitions material, is growing.

As already identified by HELCOM CHEMU more than 10 years ago, the following topics need more thoroughly investigations:⁷

- (a) locations of dumped munitions;

⁶ See here as an example: OSPAR CONVENTION FOR THE PROTECTION OF THE MARINE ENVIRONMENT OF THE NORTH-EAST ATLANTIC, A framework for developing national guidelines for fishermen on how to deal with encounters conventional and chemical munitions, (Reference number 2004-9); Adopted by BDC 2004 (BDC 2004 Summary Record – BDC 04/, §§ 5.15 – 5.19) and endorsed by OSPAR 2004; Annica Waleij, "Dumpade C-stridsmedel i Skagerrak och Östersjön en uppdatering", FOI-R--0148—SE, September 2001, ISSN 1650-1942, FOI, TOTALFÖRSVARETS FORSKNING SINSTITUT.

⁷ For a more actual overview see also: OSPAR Commission, 2005, "Overview of Past Dumping at sea of Chemical Weapons and Munitions in the OSPAR Maritime Area". (OSPAR: Convention for the Protection of the Marine Environment of the North-East Atlantic was opened for signature at the Ministerial Meeting of the former Oslo and Paris Commissions in Paris on 22 Sept. 1992. The Convention entered into force on 25 March 1998.

- (b) ecological and eco-toxicological effects of chemical warfare agents;
- (c) presence of chemical warfare agents in various marine compartments, especially the presence of the more persistent and poorly soluble agents in sediment and biota;
- (d) elaboration of national guidelines for fishermen on how to deal with chemical munitions;
- (e) guidelines on how to deal with incidents⁸;
- (f) compile information on the state of corrosion of munitions.

The CWC doesn't provide one general solution for recovery and destruction of sea-dumped CW. The magnitude of that problem was and is too large and contains historically many conflicting aspects. Based upon the international legal framework, which is not only limited to the CWC, there is no possibility to use any international agreement⁹ in force to push a State Party to conduct recovery and destruction operations on sea-dumped CW, it dumped before 1985, or to pay for such undertakings.

The only way to cope with the possible threats resulting from sea-dumped CW in certain territorial/international waters is to enhance co-operation among concerned states and to look for solution really practicable.

We should keep always in mind that sea-dumped CW are already down at the bottom of the sea for many decades; bringing them up will increase the potential dangers and threats these remnants from war might still pose. The more years the dumped material will stay at the bottom of the sea the more time will be added to the deterioration process on-going.

Without having the resources available to destroy recovered sea-dumped CW material immediately a state should not perform such recovery operations; storage of the recovered material is not a practical solution, because it creates more problems.

Looking back into the first decade of the CWC in force, the solution applied for sea-dumped CW under the Convention was more or less a practical one. Besides increasing debates no major recovery operations have been performed. If there should be real need to conduct such recovery operations on sea-dumped CW in the future, the concerned states should have clarified all necessary aspects: technically, cost-wise and legally, before starting the recovery and destruction operation.

Only publicly demanding a solution for clearing areas from former sea-dumped CW, without having the practical tools available, doesn't contribute to the process.

⁸ See also here: HELCOM, 1995, "Final Report of the ad hoc Working Group on Dumped Chemical Munitions. Attachment III HELCOM Guidelines to be used by the Contracting Parties when elaborating National Guidelines for fishermen on how to deal with caught chemical weapons – Fisheries and Warfare Agents, Preventive Measures and First Aid." (HELCOM CHEMU) HELCOM 16/10/1.

⁹ Such as: 1974 Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea Area and the 1972 Oslo Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft and the 1982 Law of the Sea Convention.