

Encounters with Chemical and Conventional Munitions 2013



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Policy Issue: OSPAR Framework for Reporting Encounters with conventional and chemical munitions in the OSPAR maritime area (OSPAR Recommendation 2010/20).

Policy Objective: To promote the reporting of encounters with conventional and chemical munitions by fishermen and other users of the sea in order to make informed decisions on the management of dumpsites

Background

Following World Wars I and II large amounts of munitions were dumped in the OSPAR maritime area. Dumped munitions included conventional munitions such as bombs, grenades, torpedoes and mines as well as phosphorus incendiary devices and chemical munitions containing, for example, mustard gases. Dumped chemical and conventional munitions are causing environmental and safety concerns in many parts of the world, including in the OSPAR maritime area. Historical records on the quantities of munitions dumped and their location are limited and of dubious accuracy.

What is the Problem?

Encounters with conventional or chemical munitions pose a great threat to human health, as well as a potential threat to aspects of the marine environment. In 2005, three fishermen lost their lives in the southern part of the North Sea when a World War II bomb exploded on board their fishing vessel after having been hauled aboard in their nets. Chemical agents are composed of a variety of substances. Potential for persistence, bioaccumulation and/or toxicity (PBT) are of particular concern in the marine environment. Marine dumped chemical munitions react differently in water depending on the agent they contain. Nerve agents and many other agents hydrolyze, or break down and dissolve once they come into contact with water, and are therefore rendered harmless in a relatively short period of time. Mustard gas, however, is insoluble in water and most injuries have occurred when fishermen have come into contact with mustard gas. Phosphorous devices also present long term problems. If disturbed, these positively buoyant devices may float to the surface and represent a real risk to the seafarers and to the general public should they be washed ashore.

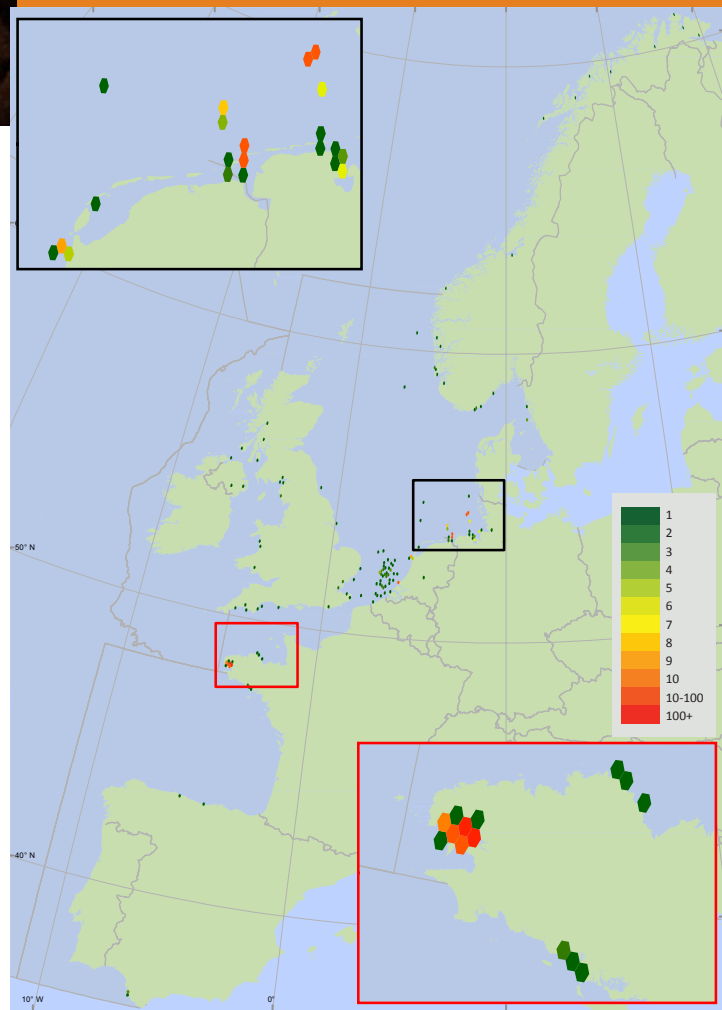


Figure 1 : Clustering of munition encounters in 2013

Implications

Dumped munitions, and in particular the disturbance of dumped munitions by seabed activities are an important issue and should be addressed. It is essential that details of the locations of all munitions dumpsites, and areas where clusters of encounters are detected on the seabed be identified. There are serious safety risks associated with the clean-up of dumpsites, as well as increased risk of dispersing hazardous substances. The most common management practice is to leave munitions on the seabed and allow them to disintegrate naturally. However, where clusters have been identified Contracting Parties should consider whether any other management options are appropriate. The decision to permit marine based activities such as sand and gravel extraction, pipe and cable laying and windfarm construction should consider information about the location of known dumpsites and the density of munitions encounters. Where appropriate, risk assessments should be carried out.



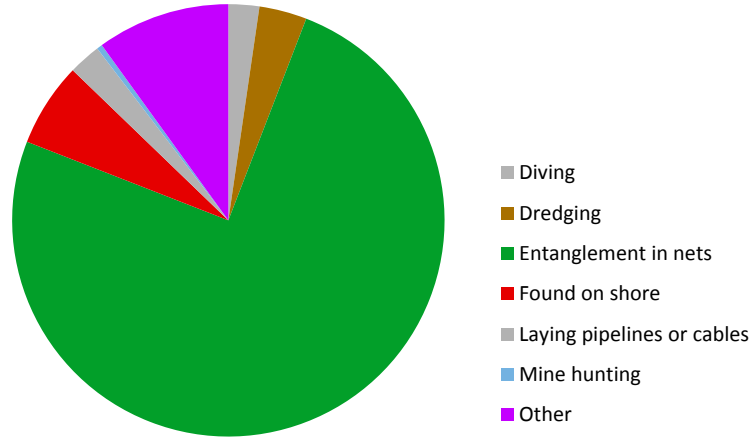
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Encounters with Munitions

More than 4600 encounters with munitions have been reported between 1999 and the end of 2013 in line with Recommendation 2010-20; nearly 2500 of these since the last assessment was reported in 2009. There were 954 encounters in 2013, with entanglement in nets by far the most common type of encounter (Figure 2). There is no obvious trend in the number of encounters reported over time; however there is a worrying increase in numbers of encounters reported since 2011, most of which have been in Brest Harbour.

Figure 2: Encounters by Type, 2013



Munition Clusters

The clustering of munitions encounters in 2013, as shown in Figure 1, highlights two main areas with clusters where further analysis is required: Brest Harbour, and to a lesser extent in the German Bight. Figure 3 details the German Bight area highlighting the clustering and the individual encounter locations. The vast majority of the encounters in this region related either to “laying pipelines or cables” (23) and “other” (95), mostly seabed investigations for offshore projects. Figure 3 shows the overlap of offshore windfarm developments and encounters highlighting that these were the source of the encounters.

Figure 4 outlines the cluster in Brest Harbour where there were 657 encounters in 2013, more than double the 305 in 2012. The majority of these encounters were through entanglement in nets from the local shellfish fishery. The significant rise in the number of encounters plus the potential for injury to fishermen is a cause for concern. As demonstrated in Figure 4 there are two conventional munition dumpsites within the harbour, which are likely to be the main source of munitions, although the area also received significant historic bombing.

Further Actions

The high incidence of entanglement of munitions in nets in Brest Harbour, which have doubled in the last year, should be investigated to see if any management measures are needed. As the majority of encounters were entanglement in nets, Contracting Parties should ensure that national guidelines on how to deal with encountered conventional and chemical munitions are in place to help reduce the risk to fishermen.

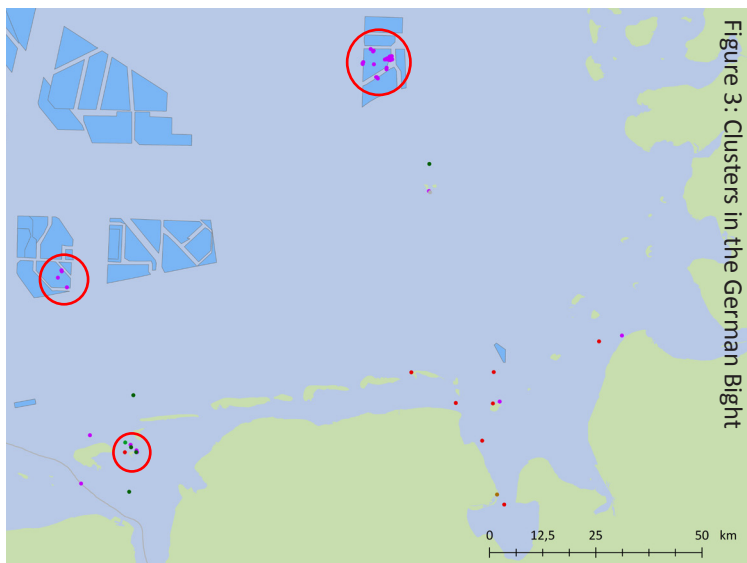


Figure 3: Clusters in the German Bight

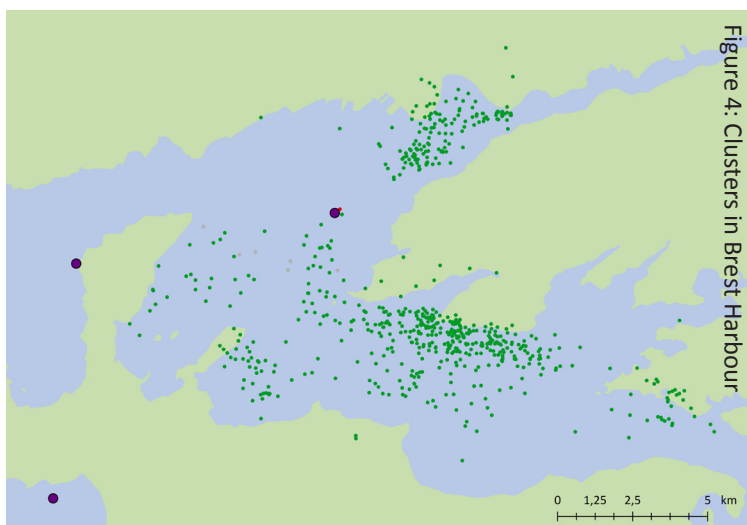
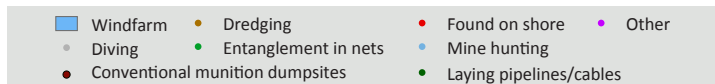


Figure 4: Clusters in Brest Harbour

Sources of data and information :

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