

Agenda Item 6.5.2: Review of new information on pollution, underwater sound and disturbance: Military, including munitions

Baltic Time Bomb – Ticking Away

Submitted by: Society for the Conservation of Marine Mammals (GSM)



NOTE:
**IN THE INTERESTS OF ECONOMY, DELEGATES ARE KINDLY REMINDED TO BRING
THEIR OWN COPIES OF THESE DOCUMENTS TO THE MEETING**

Note

During the 1940s and 1950s, large amounts of toxic and explosive ammunitions were dumped in ASCOBANS waters, especially in the Baltic Sea. Their existence as well as their disposal (by detonation) potentially pose a major threat to the wellbeing of harbour porpoises and other marine life.

Therefore, GSM has reviewed the extent of the threat and is pleased to provide the following document to the 14th Meeting of the Advisory Committee to ASCOBANS for the Parties' information and consideration.

Baltic Time Bomb – Ticking Away

On 30 and 31 March 2007, a symposium on the “Ecological Situation of the Baltic and North Seas“ took place in Berlin, Germany. The event was organized by the “International Institute of Ecological Safety for Baltic and Northern Seas e.V.” GSM was represented by Mr. Walter Karpf.

Approximately one quarter of the Baltic Sea is endangered by chemical weapons from WW II due to the fact that 300,000 tons of chemical agents and 1.5 million tons of conventional weapons were dumped in the Baltic after the war. This jeopardizes the lives of current and future generations, given that the 2 to 2.5 mm walls of the munitions containers are thinning by 0.1 to 0.15 mm every year and poison is already seeping into the sea and being absorbed by plankton. Exact information on the exact location of the dumps is not in a lot of the cases available and during the meeting it appeared that there there is a growing political awareness to solve or at least mitigate the problems. A worst case scenario could entail the death of thousands of people and contamination of the Baltic ecosystem, making fishery impossible for 250 years.

Such is the bottom line of the Berlin symposium. Why it was entitled “Ecological Situation of the Baltic and North Seas“ is anybody’s guess since the event focused almost exclusively on the Baltic and the munitions dumped there after WW II. The organizers, the “International Institute of Ecological Safety for Baltic and Northern Seas e.V.” too, are a bit of a mystery, as they are thus far unknown to anyone in ecologist circles. The speakers at the symposium comprised experts from the German armed forces (Bundeswehr), scientific experts, representatives of the industrial sector and a number of Russian participants apparently involved in the construction of the Baltic gas pipeline.

The ammunition dumps are to be found at depths between 10m and 200m and comprise all types of conventional and chemical warfare agents and all variants of Lost, Tabun, Phosgene, Cyclon B, Clark and Adamite. Some of the most important areas where munitions were dumped are:

- Lille Baelt (5,000 tons of Tabun and Phosgene);
- Bornholm Basin: 35,000 tons of Lost and other chemical substances;
- Skagerrak: 17,000 tons of munitions of which one half consists of poison gas and the other half of conventional munitions.

According to Marc Koch, of the University of Lüneburg’s Institute of Ecology and Environmental Chemistry, the long-term toxicological and eco toxicological effects are entirely unknown. The warfare agents are composed of up to 53 individual substances and nobody knows how they will react with one another in the environment. The risks of heavy metals and arsenic compounds, however, are clear.

When people come into contact with poison gas the consequences are hideous. Compared to Tabun, Lost is harmless. But even Lost penetrates clothing and comes in contact with the skin. The immediate effects are blisters of the facial skin and swollen eyelids. There is a danger of becoming blind. In places where the skin is moist and soft, such as the armpits or the crotch, Lost can enter the body most easily. Lost then attaches itself to DNA, causing

mutations that can lead to cancer. Long-term effects include, dry skin, dimmed eyesight and, finally, cancer. "There is no treatment for the effects of Lost," says Kai Kehe of the Institute of Pharmacology and Toxicology of the German Armed Forces. "All we can do is alleviate the symptoms.

Nobody is more threatened by this than fishermen, who might haul up an old poison gas grenade or a munitions container. If it breaks, Lost, which is bound to a chlorine compound can drip onto the ship's deck, contaminating the holds and the catch. "For this reason fishermen immediately toss the bombs back overboard if they find one in their nets." says Robert Zellermann, who headed the office for the disposal of warfare agents in Munster for twenty years. "As a result, the contaminated zone is enlarged by many kilometers." Zellerman adds: "Contrary to official information they did produce Sarin during WWII. We found 61 tons of it."

There were also cases after WWII when ships were loaded with warfare agents, taken out to sea and bombarded until they sank. Off Arendal, for instance, the Norwegians sank 15, possibly even 36 such ships. Nowadays, the water there contains Lost and arsenic compounds and their reaction products. In other cases, containers were simply thrown overboard. Navigation was not always reliable and as a result containers were not always disposed of in the exact places they were meant to. Often, ships dumped them far ahead of the place where they should have done so, in flat water inshore waters. Nowadays, divers find piles of containers of poison gas in the Baltic. The areas marked accordingly on maps are off limits to fishermen. Yet, traces on the seabed leave no doubt that fishing took place there. Many sunken ships and bunches of grenades are covered by nets that got caught. Frequently, bottom trawl nets drag the grenades apart and distribute them over a wider area.

In addition, there are tons of gas in the Baltic that are not registered anywhere and are found only by coincidence. Thus, 1.5 ccm containers of Tabun have been found that do not appear in any list.

According to Zellerman, "The problems only really start when the substances are lifted." The only thing that happens to a container of Phosgene resting on the Baltic seafloor at a temperature of 6.5°C is that its walls rot away. But once the container is recovered and exposed to higher temperatures the pressure inside rises and the poison sprays out through all the holes caused by corrosion and through taps that are no longer tight.

To date, mobile installations which could process the gas at sea do not exist. One possible option for recovering the bombs, grenades and containers is to freeze them to -170°C on the seafloor. Chemical processes within the containers would be reduced virtually to zero at this temperature and they would float to the surface to be recovered. "But then what do we do?" asks a German industry representative. "What about the meltwater, how do we handle leaks and how do you transport that stuff?"

These questions are of enormous importance to those seeking to conserve nature and animals and the context in which they are addressed is very relevant. This is why there is cause for concern if the environment protection dedication of the organizer of an event is doubtful, as in the present case. It is worrisome to note, also, that the president of the organization, Berlin

attorney Manfred Boese is never mentioned in the internet in connection with the ecologist movement but is mentioned repeatedly in connection with promotion of economic activities. One also wonders what a representative of the Russian gas company Gazprom and a Russian Vice-Minister for natural resources were doing at a symposium on the ecological situation of the North and Baltic Seas. Or, for that matter, an attorney from the legal department of "Nord-Stream", the Gazprom subsidiary building the Baltic Sea pipeline. Could the "International Institute of Ecological Safety for Baltic and Northern Seas" have been founded ad hoc and could Boese be a "hired gun" of "Nord Stream's", working to prepare the ground for "Nord Stream's" environmental policy under cover of a seemingly independent symposium?

The problem of the disintegrating munitions containers is becoming increasingly urgent and official government policy should finally show more concern for the health of humans, animals and the sea itself. Currently, 1,000 tons of munitions are found (on land or at sea) and disposed of annually in Germany. The several hundreds of thousands of tons of poison gas weapons possibly still lurking in the Baltic could keep those disposing of these finds busy for hundreds of years to come.