

The environmental pollution caused by hazardous submerged objects such as wrecks and dumped ammunitions

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Abstract

The Baltic Sea forms one of the dense water routes between the ports of the surrounding Baltic Sea States and the rest of the Europe. It also forms a natural access to the rest part of the world's ports and terminals through the shallow and narrow Danish Straits. Due to the fact the Baltic Sea area has had its importance as a sailing route for hundreds of years, there are also thousands of wrecks and underwater objects with a different mode of impact to the nature: older wrecks and archeologic objects seldom have any environmental impact at all, but there are wrecks and dumped waste originated in the modern era causing a special threat for the aquatic environment. All modern wrecks having oil on board pose a risk when the oil or other toxic substance will be released through the corroded plates of the ship to the water column or to the sea bottom.

This paper gives an overview on the joint international co-operation among the Baltic Sea countries to compile and assess information about all kinds of hazardous objects, including contaminated wrecks, dumped hazardous waste, munitions and warfare materials which may affect the environment and other activities in the Baltic Sea. This work was officially started in 2014 under the supervision of HELCOM (Helsinki Commission) by the formal expert group on environmental risks of hazardous submerged objects. This paper will summary the current data of the wrecks and dumped warfare materials received, highlights some of the main vectors to cause the environmental pollution and finally describes selected oil removal cases conducted in the target area.

Biography

Mr. Jorma Rytkönen works as a Development Manager in the Division of the Marine Research Center / Marine Pollution Unit of SYKE. He has more than 30 years background in R&D sector of maritime safety and operations, oil pollution response and risk assessment type of projects. During his career he has been involved with several oil recovery design and testing aspects including the subjects "oil bioremediation, mechanical oil recovery and oil-in-ice". He has been working actively in the Baltic Sea area assisting both maritime and environmental governmental bodies in a co-operation within the other Baltic Sea countries. He has been involved within the development of the mandatory ship reporting and management system (GOFREP) between Finland, Estonia and Russia. He has also been the Finnish delegate in the expert group for the Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic. He has also been the head of the oil combating authority of Finland. Currently he is in charge of a governmental wreck oil removal project as a part of the Finnish Water Protection Programme for the years 2019 – 2021.