



3rd Science for the Environment Conference
Aarhus Denmark 1-2 October 2015

MONITORING REMEDIATION IN THE EYES OF UNCERTAINTY AND RISK

Terrance Long

ABSTRACT

Underwater chemical and conventional weapons are commonly found in our lakes, rivers, seas and ocean in large quantities. Many are located in rich fishing grounds for cod, flounder, crab and lobsters and are the mainstay for many coastal communities. 4VN fishing grounds in Canada east coast contains more than 80,000 tons of conventional weapons while in fishing zones in Germany and Denmark fishermen regularly recover mustard gas and both the German and Danish people continue to consume potentially toxic fish without being properly educated on the sites and potential risk in the eyes of uncertainty.

Most commonly mistaken for remediation is the energetic disposal of underwater weapons which in most cases cause more harm than good. When underwater weapons are affected from environment factors these weapons can become more sensitive over time, but depending on the main constituents and hardeners and stabilizers that have been added for safe handling they can also become less sensitive.

Underwater weapons encounter will only increase as offshore exploration and development increases to keep-up with our demand for energy. The need to consider remediation should be based on both the energetic threat (that the weapons could explode) and environmental risk (taken into consideration that all weapons will eventually release their toxins over time). Remediation must be monitored and carried out in a systematic approach to ensure no additional harm will come to our environment. There are several technology and approaches to survey, detect, investigate, relocate, recover, recycle and dispose of underwater weapons. Some methods are more costly than others for remediation, but the most effective programs are well planned, funded and staff with experienced personnel in monitoring, explosive ordnance disposal, project execution, quality control and assurances to close-out.



AARHUS
UNIVERSITY

DCE - DANISH CENTRE FOR ENVIRONMENT AND ENERGY



3rd Science for the Environment Conference
Aarhus Denmark 1-2 October 2015



AARHUS
UNIVERSITY

DCE - DANISH CENTRE FOR ENVIRONMENT AND ENERGY