

North Sea Wrecks – a future decision support tool for blue growth activities

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Throughout history, all kinds of military operations played out on, near or above the North Sea. As a result, the North Sea is littered with remnant wrecks and munitions from naval and air battles, munition dumps, minefields, aerial bomb ditching, training maneuvers, and shipping accidents. The presence of toxicants, such as the chemical constituents of explosives and hazardous cargo such as bunker fuel, left inside these deteriorating objects may endanger both the environment and citizens working on or living near the sea. With the growing number of economic activities in various parts of the North Sea, interactions with wrecks and munitions are expected to increase. During operations at sea, like dredging, cable laying or pile-driving etc., there may be a risk of encountering munitions or inadvertently damaging shipwreck compartments that hold hazardous cargo through direct and indirect contact (e.g. vibrations). This can also affect the heritage value of certain shipwrecks. Yet, despite these hazards and the transnational nature of the blue growth activities in the North Sea, there is currently no universal strategy or approach to assess and mitigate the risks posed by wrecks and (associated) munitions. To date, only fragmented risk mitigation actions exist at the national level.

The North Sea Wrecks project, which is being funded under priority 3 of the Interreg North Sea Region program, intends to develop and provide new tools to marine spatial planners, response organizations, economic actors and other stakeholders to assess and propose solutions for risks related to wrecks and munitions in the North Sea. Nine partners from five North Sea bordering countries - assisted by an advisory board of public authorities for maritime safety and planning, scientists and private companies dealing with wrecks and UXO (Unexploded Ordnance) - have committed to (1) investigate and describe nationally fragmented data sources on wrecks, cargo and munitions, (2) develop a comprehensive risk assessment methodology for wrecks and munitions in the North Sea, based on VRAKA – a probabilistic risk assessment method for potentially polluting wrecks in the Baltic (Landquist et al., 2016) – , and (3) deliver recommendations to policy makers and Blue Growth entrepreneurs as a first stepping stone towards improved transnational collaboration. The project will combine archival research with in situ hazard and exposure assessments, toxicological studies, and (GIS-based) ecosystem impact assessments. A travelling exhibition will present results of the project and will contribute to the sensibilisation campaign.

Keywords: Wrecks; Munitions; Pollution; Risk assessment