

Munition dumping areas have an impact on benthic fauna

As part of the CONMAR project, Senckenberg am Meer is investigating the potential impact of dumped munition on the benthic ecosystem in the vicinity of munition objects. Various aspects of the impact of munition are currently being investigated, including the distribution of infauna around the munition dumping areas at a scale of ~100m based on quantitative grab sampling and the epifauna distribution on the munition objects based on ROV surveys.

Benthic fauna is an important component of marine ecosystems. Their composition, abundance, biomass and diversity can reflect climate change, pollution processes and other anthropogenic disturbances. Within the Lübeck Bay, a random forests model was applied to the data from the southern part of the 'Haffkrug' dumping area. Results show that proximity to munitions is an important factor. Here, an increased abundance and biomass of benthic fauna was observed in the immediate vicinity of munition. One possible reason for this is that munition casings and boxes form hard substrates, which are otherwise rare in the Lübeck Bay (stones were removed commercially from the Baltic Sea until the 1970s), but which various benthic organisms colonise. ROV images of the dumped V1 warheads showed dense populations of epifauna (hydrozoans, sea anemones, polychaetes and starfish) on the metal carcasses and casings with an abundance of

more than 43,000 individuals/m² (Fig. 1). Our investigations show that the number of epifaunal individuals on the munition objects and their surroundings is comparable to that on natural hard substrates, despite the known toxic effects of TNT and other munition compounds. It is therefore important that in the event of future clearance of dumped munition objects, these are replaced by other artificial and non-toxic hard substrates.

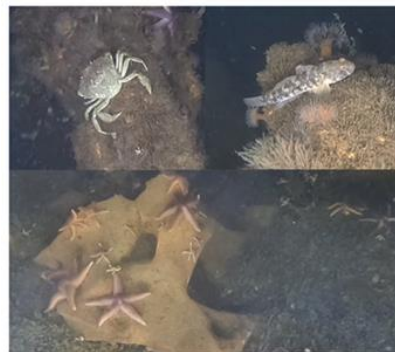


Fig. 1. Organisms found on dumped munition. Crab *Carcinus maenas* (upper left); fish *Gobius niger* (upper right); starfish *Asterias rubens* (below). © DeepSea Monitoring Group, GEOMAR Helmholtz Centre for Ocean Research, Kiel.

Contact: [Andrey Vedenin](mailto:andrey.vedenin@senckenberg.de)
andrey.vedenin@senckenberg.de

GEFÖRDERT VOM

Dialogue event: Munition in the Sea in Berlin

On 26 November 2024, the German Marine Research Alliance (DAM) and the NABU jointly hosted the dialogue event *'Munition in the sea - science, pilot clearance and what next?'* at the Futurium in Berlin to discuss with representatives of different parliamentary groups next steps after the pilot clearance. After a welcome addressed by Dr Monika Fischer (BMBF) and a greeting from Mr Dieter Janecek (Maritime Coordinator of the Federal Government for Maritime Economy and Tourism), two keynotes were addressed: Jens Greinert (CONMAR) gave insights into the latest results of the monitoring accompanying the pilot clearance. Kim Detloff (NABU) spoke about the expectations to politics and industry from

NABU's perspective. Various political representatives also took part in the subsequent panel discussion (see Fig. 2).



Fig. 2 From left to right: Dr K. Detloff (NABU), A. Damerow MdB (CDU), O. in der Beek MdB (FDP), StSIn Dr C. Rohleder (BMUV), Dr S. Schäfer MdB (Bündnis90/ Die Grünen), Dr J. Harms (DAM), Prof. Dr J. Greinert (GEOMAR), Dr M. Fischer (BMBF), L. Polter (moderator). @Photo Stephan Röhl

Contact: [Daniela Henkel dhenkel@geomar.de](mailto:Daniela.Henkel.dhenkel@geomar.de)

CONMAR „op Platt“ and at the ‚Night of the Profs‘

Jacqueline Lindemeyer CONMAR member working at the Institute of Toxicology, UKSH represented CONMAR with two presentations in Berlin and Kiel. On 7 November 2024, the Schleswig-Holstein State Representation hosted an evening with contributions from science and culture under the slogan 'Plattdüütsch allerbest'. Jacqueline spoke about 'Tunnen ünner de See - de giftige Weltkriegs-Arverschop' in plain German. On 15 November 2024, Jacqueline performed in a full packed auditorium as part of the Kiel University format 'Night of the Profs 2024' and informed the

audience about the topic of munitions in the sea - this time in standard German.



Fig. 3 At the meeting of the Schleswig-Holstein State Representation 'Plattdüütsch allerbest' in Berlin (left) and Night of the Profs 2024 (right).

Contact: [Jacqueline Lindemeyer lindemeyer@toxi.uni-kiel.de](mailto:Jacqueline.Lindemeyer@toxi.uni-kiel.de)