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Macroplastics Pollution in the Southern North Sea – Sources, Pathways and Abatement Strategies

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Since 2016, an interdisciplinary consortium at the Carl von Ossietzky University in Oldenburg has been funded by the Lower Saxony Ministry for Science and Culture in order to provide solid, scientific knowledge of the sources, pathways and accumulation zones of plastic litter. This team consists of physical oceanographers, geoecologists, biologists and environmental planners.

Using simple wooden drifters, GPS-drifters and high resolution, numerical modelling, the consortium studied the dispersal of floating macroplastics (i.e. visible plastic fragments and objects) and accumulation areas within the German Bight and the Wadden Sea. Furthermore, coastal sensors and observation systems were employed to gather data of hydrodynamic parameters. In addition, the general public has actively participated in the collection of litter data via a web-based registration system for reporting the findings of wooden drifters.

In this presentation we will highlight some of the most important results of the project amongst them the surprising observation of a complete reversal of the circulation in the southern North Sea in March 2018, supported by drifter reports from citizen scientists from Britain. We will also shortly shed light on the heavy workload involved with presentations to the public (Radio, TV, print media, presentations to various stakeholder groups) which future projects should anticipate already at the planning stage.