expanded material. As a result, it is often used to produce energy or landfilled. Its lightness means EPS is easily blown from garbage bins and landfills. It is not biodegradable and tends to fragment, with small pieces travelling long distances. It can become marine litter and break down into microplastics that persist in the marine environment and contaminate the food chain. Thus, particles are commonly found in the marine environment of the Atlantic coast and ocean. It is of particular concern because of the large quantities found on beaches and the potential hazard it poses to marine environment. OceanWise aims to jointly develop a set of long-term measures to reduce the impact of EPS in the North-East Atlantic Ocean. Tangible solutions will be set by addressing the entire life-cycle of EPS products to achieve transnational sound management of EPS marine litter in the Atlantic. This challenge will be address by developing knowledge to reduce the impacts of EPS items and by raising the ability of competent authorities and key sectors across the Atlantic region to implement more sustainable management options.

Keywords: Expanded polystyrene, Plastic pollution, Atlantic sea, impacts of EPS, sustainable management

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Plastic fluxes toward the oceans, contribution of the Schelde River (Belgium).

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Plastic waste in coastal areas and the expanding “Plastic Soup” in our oceans are a growing threat for the marine environment. In recent years the role of rivers as a potential main contributor to marine plastic pollution has been suggested. Yet, the scale of such input remains to be systematically quantified. Also the understanding of seasonality remains poorly studied. If high contributions can be determined, considering the vastness of oceans and seas and the great depth of some, the feasibility of projects removing plastic in rivers might be better than those in which plastic is removed from the open oceans. Therefore, the University of Antwerp (ECOBE & SPHERE) will study the potential contribution of the Schelde river to the worldwide “Plastic Soup”. The aim is to quantify the plastic flux for the entire Schelde basin. Are there areas where plastic is retained? What are the biggest sources? What is the retention time? In this study we will only focus on macroplastics (≥2.5cm). For this fraction it is still realistic to design removal strategies, which eventually is the ultimate goal of this project. Also, a large fraction of microplastics originate from disintegration of macroplastics. Therefore this project is thought to have a beneficial impact in

microplastic pollution as well. To answer the above mentioned questions, in 2018 a monitoring network is set-up. Fluxes will be determined by point measurements. Different monitoring techniques will be used, for instance: the use of fyke nets, a fishing technique called anchor netting, the use of a specially designed mobile sampler and a number of Trash Interceptors that will be placed in the Schelde and its main tributaries. Additionally a 'Citizen Science' project is set-up to analyze plastic waste that ends-up on the riverbank. This might yield vital information on its sink function.

Keywords: Schelde, River, Estuary, Freshwater, Plastic Fluxes, Macroplastic, Catchment

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The Baltic Sea in the microplastic research map: a model from sources to sinks

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The Baltic Sea is the largest Brackish Sea worldwide, displaying a unique salinity gradient and sensitive ecosystem. It is under severe anthropogenic pressure, including the pollution by plastics. At the Leibniz Institute for Baltic Sea Research Warnemünde (IOW), a number of projects are currently investigating plastic and microplastic (MP) pollution dynamics and increase the prominence of the Baltic Sea in the global MP research map. MP sources are being investigated, such as wastewater treatment plants, including those that use fine-scale filtration as potential trappers of MP loads (Plastrat project). Diffuse MP sources (i.e. agricultural soils) are being explored in a large project (MicroCatch Balt), focusing on the Warnow as an exemplary river system. Multiple efforts are being taken to sample, isolate, and model dynamics of MPs in the riverine/estuarine ecosystem; resulting models potentially being comparable to other systems globally. When MPs reach the sea, the BONUS MICROPOLL project is then assessing a multitude of research questions towards MP and associated pollutants. What plays an important role here is MP-biofilm dynamics, a research area that initially established the IOW in the MP research map. All projects are facing the associated methodological challenges of extracting MPs from notoriously