

OCCURRENCE OF MICROPLASTICS IN THE BELGIAN COASTAL ZONE

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Marine litter has been an issue of concern for decades. However, recently international attention has increased due to the fact that the annual global production of plastics keeps rising and the buildup of these materials in our environment has become problematic.

Under influence of UV-light and mechanical forces, plastics also tend to break down into smaller particles in the size range of 1mm and smaller. While no clear adverse effects of these so-called microplastics on marine organisms have been reported, they have been detected in the water column and sediments at high concentrations. Moreover, uptake of these particles has been observed in mussels, sea cucumbers, barnacles and other organisms, and as plastics have a high affinity for hydrophobic chemicals there is a risk of pollutant transfer from ingested microplastics to the food chain.

This poster presents the results of a study in which microplastic concentrations in sediments of Belgian beaches, harbours and the Belgian seafloor were determined. The results revealed high concentrations of plastic fibres, spherules and grains in sediments of all these areas. Moreover, despite international efforts to reduce the amount of marine litter, the analysis of sediment cores taken on the beaches suggests that microplastic concentrations are increasing with time.