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BOOK OF ABSTRACTS

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Microplastics and microfibres in marine environments: characteristics and concentrations in submerged sediments

Bellopede R. , Balestra V. *, Bortun G.

Politecnico di Torino - Department of Environment, Land and Infrastructure Engineering (DIATI), Italy

*corresponding e-mail: rossana.bellopede@polito.it

ABSTRACT

Marine environments are constantly threated by anthropogenic activities and litter, especially along the coasts. Microplastics (MPs) and microfibers (MFs) are pervasive pollutants of anthropogenic origin in marine environments worldwide. These anthropogenic microparticles (AMPs) pollute water and threat habitats and species. While microplastics are monitored in different environments, very few studies focus specifically on microfibers, even if recent studies highlighted that natural and regenerated MFs can have abundances of up to 4 times greater than synthetic ones. Coastal areas are more vulnerable to pollution due to their location between terrestrial and marine environments and human activities. In this study, AMPs occurrence frequency in submerged sediments was investigated in the Sanremo Port, Italy. Fibres and fragments were the most present shapes. From a first comparison between the water matrices and the solid ones of the submerged sediment samples, the concentration of fragments is higher in the solid ones. Our results enhance understanding of microparticle pollution in coastal environments and its deposition and retention in submerged sediments. Future research is essential to deepen knowledge of microparticle dynamics and ecological impacts in marine systems.

KEYWORDS: microplastics; microfibers; pollution; marine environments

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