

Micro- and nanoplastics from sea to spoon: an overview

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Plastic is ubiquitous in our life, and its durability and end of life represents a great problem for public health and the environment. Several studies reported the occurrence of plastic litter in different environmental compartments and, consequently, numerous efforts are currently focused on how improving its recycling process and produce environmentally friendly solutions. The BIOPLAST4SAFE project, funded by the Italian Ministry of Health – PNC, focuses on potential adverse effects of micro- and nanoplastics (MNPs) in a one health perspective. Plastic particles can enter in living organisms, including humans, primarily through ingestion and inhalation. Their biological effects depend on their size, chemical composition, and the characteristics of substances that later absorb these particles. An estimate of the ingestion rate is not yet available as well as the identification of the exact route of entrance. Seas and oceans are not only the final sink of MNPs, but also a source of food that can vehiculate MNPs to humans thus increasing public health concerns. An overview of the main potential hot spot of MNPs exposure will be investigated.