Technologies for observing and monitoring plastics in the oceans

An IEEE OES event
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The event will assess the potential for science and technology to address the mounting global plastic challenge. The workshop will bring together experts investigating the sources of plastics in the ocean and scientists and engineers focusing on existing and new observation technologies to detect and quantify plastics in the ocean. The outcome will be recommendations to major institutions and funding agencies for future technology initiatives.

Recognizing targets for ocean plastic and related indicators, the workshop will examine observation techniques and their potential for deployment. Indeed, the UN Environment Program is interested in finding support for their efforts to develop the methodology for monitoring marine debris along with producing some test cases (indicator 14.1.1 of SDG 14). Considering the amount of plastic already present, the immediate need is to explore downstream solutions for assessing the sources and presence of plastics, as well as to detect plastics in the ocean through a range of observation means (underwater, satellite-borne, in situ, ... sensors). Another aim is to perform quantitative as well as qualitative measurements, and to track the circulation of plastics in the ocean and at the coastal level.

An increasing number of experts and leading societal thinkers see plastic pollution in the ocean and on land as a threat to our future, comparable to climate change, land use changes, and species extinction. Science and technology can quantify the extent of plastic pollution and understand the impact of reducing the stock of plastics in the ocean. The workshop will deliver recommendations through a technology roadmap.

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1 Index of coastal eutrophication and floating plastic debris density