

## The horizontal distribution of pelagic microplastics around Japan

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Currently, microplastics (less than 5 mm plastic-debris pieces) are observed in the world's ocean, and are found to be ingested by various marine organisms. According to a previous study (Isobe et al., 2019), pelagic microplastics were found from the Antarctic Ocean to the seas around Japan. It was revealed that the number of microplastics in the North Pacific become one order of magnitude larger than the South Pacific.

We here attempt to elucidate the horizontal distribution of pelagic microplastics and its causes around Japan. First, using the field surveys conducted since 2014, we confirmed that high concentrate areas were located off the Sanriku coast, off Akita coast, south of Sikoku and around Kyushu using observation data. These intense convergence of pelagic microplastics were inconsistent with the convergence of surface ocean currents. We now try to establish a back-trajectory experiment of microplastics using a modeled field with the ocean currents directed to the opposite directions, and will introduce its accomplishments in the session.

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