

## Sailing towards a plastic-free ocean - promotion of marine observation and ocean literacy on international yacht race

\*Sanae Chiba<sup>1</sup>, Holly Griffin<sup>2</sup>

1. JAMSTEC, 2. UNEP-WCMC

The ocean is vast. It is impossible for the current ocean observing community to conduct surveys at a global scale with the needed temporal and spatial resolutions. To establish global ocean observation network and provide society and policy with useful information for better decision making to sustain “the ocean for the future we want”, participation of ship-of-opportunities, such as ferry boats and tanker ships, in ocean observing is indispensable. Collaboration with the pleasure boat communities particularly is attracting a much attention for its potential to increase of public awareness on changing ocean environments and motivate society to protect them

(<https://en.unesco.org/news/science-sets-sail-new-partnership-between-unescos-ioc-and-imoca-class-singapore-paris>). Having the opportunity to collaborate with the organizer of the Japan-Palau Goodwill Yacht Race and supported by YAMAHA Motor Co., Ltd and Mitsui O.S.K. Lines, Ltd., JAMSTEC carried out marine plastics observation on the race escort vessel, tall ship MIRAIE from December 29th, 2019 to January 14<sup>th</sup>, 2020 (<http://www.jamstec.go.jp/spfo/e/>). Along the cruise track of over 3000 km, we collected surface microplastics samples using a Newton net and semi-automated microplastic sampler. As the microplastic sampler is designed to fit to the small boat cruising in rough sea condition, we set the same sampler onto one of the racing yacht TREKKEE. The samples are to be analyzed at JAMSTEC and the preliminary result will be informed in a couple of months. Besides the scientific research, the project goal is to promote ocean literacy. Collaborating with the UNEP World Conservation Monitoring Centre (UK), we carried out the ocean literacy programme for Palau children and their families, and Japanese sailing trainees who participated in the cruise on MIRAIE. They had the series of classes on marine environments and ecosystems on board, which subjects ranges from natural science, e.g. marine food web to management issues, e.g. marine protected areas and industrial fishing. They also learned how to collect and handle microplastics samples, microscopic observation and creative thinking toward the solution of marine environmental problems. Upon the success of the project, we see the effectiveness of multiple sectors collaboration among research organization, sailing yacht community and private sector to promote ocean science and literacy at an international level. This project is aimed to contribute to SDG 14.1: reduction of marine pollution, SDG 17: partnerships, and SDG 5: gender equality as the project is led by all women team to encourage female ocean scientists in Japan where its gender balance is far below the international standard.

Keywords: multiple sector engagement, microplastics, ocean literacy, ship of opportunity, citizen science, SDGs (14, 5, 17)