

Best Practice Sustainability Education & Engagement Microplastics Surveys – engaging northern Sydneysiders through science and action

A project by Northern Sydney Environmental Educators Network

Visit www.aaeensw.org.au to learn more about this project



This project engaged 80 educators, students and community members on the issue of microplastics, empowering them to run five citizen science microplastic surveys and litter clean ups along beaches and rivers in northern Sydney.

In early 2018 the Australian Marine Educators Network and Northern Sydney Environmental Education Network trialled a training workshop for environmental educators to run their own community microplastic surveys. Held at the Coastal Environment Centre on Narrabeen Lagoon, there were 24 participants from councils, environmental education centres, schools and a non-government organisation.

The workshop began with a presentation by the Department of Environmental Sciences at Macquarie University on microplastics, followed by an explanation of the scientific field survey methodology for conducting a microplastic survey. Participants then split into groups and went to the lagoon shore, where they were mentored by Brewongle Environmental Education Centre and Macquarie University to set up a transect, explore that area for macroplastics and collect and record these findings along with geographical data.

“The supportive attitudes of the stakeholders definitely helped to reach project outcomes and the collaborative practices required as part of best practice significantly strengthened these outcomes for all involved.”

Kate Keary, Brewongle Environmental Education Centre.

“The engagement and running of the microplastic training program with professionals in the environmental education space has helped to form solid collaborative associations that will lead to ongoing activity and road test and improve the program overall.”

Dr Scott Wilson, Macquarie University



“It’s wonderful to see our network members go on to run their own microplastic citizen science activities and nice knowing we have contributed to a growing wider community understanding of microplastic issues.”

Lena Hamond, Northern Sydney Environmental Education Network

Sediment was collected and washed through sieves, then examined in trays for small pieces of hard plastic and microfibrils suspended in water. Further examination was done indoors with iPads loaded with a microscope app, while a Micro-Eye microscope connected to a large screen allowed for finer analysis. Educators from Take 3 showed participants how to identify the microplastics and upload the data to the Australian Marine Debris Initiative database.

Pre and post surveys on the day indicated that participants advanced their knowledge and especially skills in microplastic survey methods. Most gained a high degree of confidence to undertake their own microplastic investigation and felt confident to organise microplastics community activities.

Follow-up of training participants demonstrated that in the four months following the workshop, four (16%) held microplastics surveys with a total of 56 people on Sydney Harbour and the Lane Cove River. The litter clean ups undertaken during these and the training survey removed a total of 2 shopping bags and 5 larger Clean Up Australia Day bags of pollution from northern Sydney waterways.

This project also helped inform the development of the Australian Microplastics Assessment Project (AUSMAP), a new national initiative on microplastic citizen science coordinated by the Total Environment Centre.



MACQUARIE
University



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