Marine and Coastal

National Environmental Science Program

Field Manuals for Marine Sampling to Monitor Australian waters: **Version 3.0**

Ocean best practices are crucial to collaboration, efficiency, and data reliability in marine research and management. We have developed a suite of best practices to ensure that marine data collected at different times and places across Australia are comparable.

These field manuals are endorsed by researchers, managers, and technicians from multiple agencies with a variety of experience and subject-matter expertise. Since Version 1 was released in 2018 there has been strong uptake across diverse sectors including applied science, offshore industry, and academic research.

- survey design
- multibeam echosounders
- autonomous underwater vehicles
- benthic and pelagic baited remote underwater video
- towed imagery
- sleds and trawls
- grabs and box corers
- remotely operated vehicles

Three new practices added in 2024

Microplastics

Methods for sampling design, sample collection, processing and laboratory procedures and characterisation for microplastics (1 µm – 5 mm) in water, sediment, biota and air.

Benthic observation survey system (BOSS)

A method to use a remote wide-field drop camera system to collect benthic imagery that can be annotated for spatial and predictive modelling, and ground truthing of habitat maps.

Knowledge, attitude and practice

A method to better understand the activities and perspectives of people who use the marine environment. These surveys provide pressure data required for management reviews.

Main image: University of Western Australia; above left to right: Nina Wootton, University of Western Australia, CSIRO

Why should I use the field manuals?

The *Marine Sampling Field Manuals for Monitoring Australia's Marine Waters* support the national scale monitoring and observing of Australia's marine environment. They provide consistent, defensible methods to ensure that the data you collect can be compared with other regional and national collections. This will increase your data's relevance to others and offer expanding national datasets to you.

DEFENSIBLE: created by researchers through an inclusive, iterative and internationally recognised process.

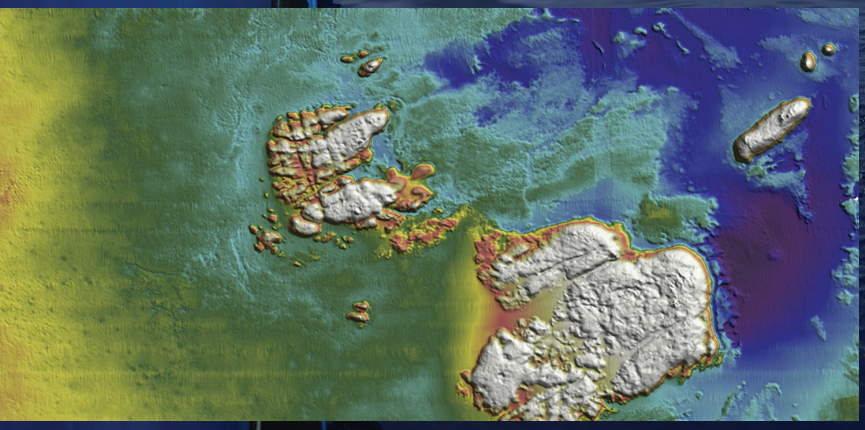
PRACTICAL: step-by-step instructions are given for pre-survey planning, gear use and troubleshooting, and data management.

COLLABORATIVE: more than 228 people from 76 agencies contributed to these field manuals.

DYNAMIC: the manuals have been updated regularly to include new technological and scientific developments, including those related to data discoverability and accessibility.

RESPONSIVE: feedback is encouraged from potential users and stakeholders.

GLOBAL REACH: endorsement and use have been widespread, ranging from national agencies such as Parks Australia to international bodies including the Global Ocean Observing System.



Access the *Field Manuals for Marine Sampling to Monitor Australian Waters* here: https://marine-sampling-field-manual.github.io

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Contact
Dr Rachel Przeslawski
rachel.przeslawski@scu.edu.au

www.nespmarinecoastal.edu.au

Main image: Geoscience Australia;
Inset anticlockwise from top:
Asher Flatt/CSIRO, NESP-IMAS, Parks Australia/CSIRO, Geoscience Australia, Marine Futures Lab UWA

This research is supported with funding by the Australian Government under the National Environmental Science Program.