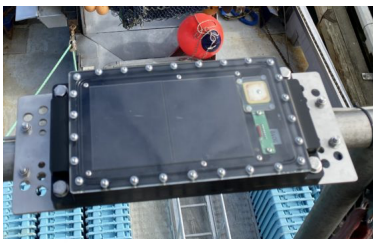
FishSOOP Hardware installation instructions

Thank you for agreeing to participate in the FishSOOP project, an IMOS Fisheries Ships of Opportunity sub-Facility operated through the University of New South Wales and the Sydney Institute of Marine Science (SIMS; an IMOS partner). We hope that you find the data useful in your fishing operations. The data you collect will greatly assist with our understanding of how the sea temperature is changing, where marine heatwaves are occurring, and improve our abilities to provide accurate marine and land weather forecasts.

What's in the box?



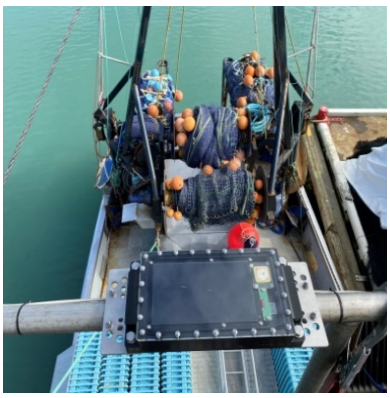
Deck Unit. This is attached to the vessel. It is solar charged and fully self-contained. The Deck Unit receives data from the Moana sensor and transmits it to our secured cloud server.

Moana sensor. The blue sensor attaches to your fishing gear either with or without a yellow protective cover. It is fully automatic, and measures water depth and temperature very accurately.

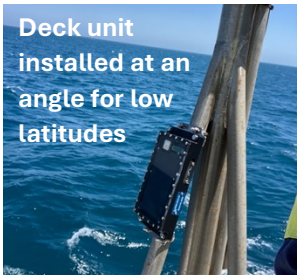
Installation of the deck unit

The deck unit must be installed so that it:

a. Has clear sky view for solar charging and GPS reception
b. Is within 20 meters of the working deck
c. Has a clear line of sight with the working deck



For low latitudes (less than ~25 degree), to prevent overheating, the deck unit should be installed at a 45° angle.


Deck unit installed at an angle for low latitudes

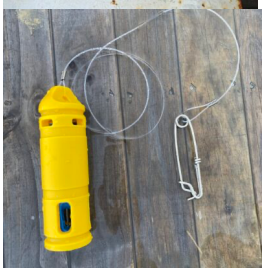
Installation of the Moana sensor

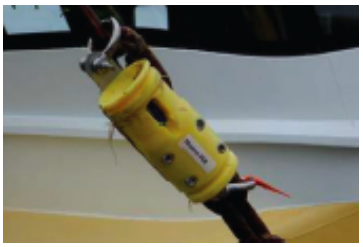
Your Moana sensor will be supplied with the appropriate mounting hardware for your fishing method. Please refer to the images below.

Trawl



Line/Jig





Net


Pot/ Trap



Operating Instructions

Once installed, the system requires minimal intervention. Keep the deck unit solar panel clean in order for the unit to charge. When the sensor gets out of the water, make sure it stays within direct line of sight of the deck unit for at least 30 seconds. When the sensor is due for calibration (at least every 2 years), the FishSOOP team will contact you to arrange a replacement.

Deck Unit Flashing lights

The Deck Unit has flashing lights on the top. These are labelled GPS, Bat, Data.

Bat flash	GPS flash	Meaning
Green	Green	Operating normally
Yellow	Green	Battery getting low
Red	Green	Battery critically low
Red	Red	Low battery shutdown

Data	Meaning
Blue flash	Data has not yet been uploaded
Solid blue	The Deck Unit has connected to the sensor and is offloading data

Can you get the data?

Fishers receive the data collected by the Moana sea temperature sensor by email if they want to. It may take up to 24 hours for the data to arrive, or longer depending on cellular coverage, but you will receive the data soon after connection is established and we receive the data. Make sure you sign the vessel agreement by scanning the QR code.

Feedback and questions

Please send your questions and feedback to us via FishSOOP@unsw.edu.au. We are particularly keen to understand which elements of the data you receive are most useful and how we can improve the program.

Thank you

Thank you for your continued support of the FishSOOP program - the data that you help us gather is extremely valuable to the wider community. It will help us improve weather and ocean forecasting models daily, allow us to monitor changes in the oceans, and enable a better understanding of the risks and impacts of climate change, while also contributing to operational decision making at sea, and fisheries stock assessment and research

Professor Moninya Roughan

Chief Investigator

Partners

IMOS Fisheries Ships of Opportunity sub-Facility is operated through the University of New South Wales and the Sydney Institute of Marine Science (SIMS) an IMOS partner.

Operating Institution

University of New South Wales as a partner in the Sydney Institute of Marine Science

About IMOS

The Integrated Marine Observing System (IMOS) operates a wide range of observing equipment throughout Australia's vast and valuable coastal and open ocean estate.

IMOS makes all of its data openly and freely accessible to the marine and climate science community, other stakeholders and users, and international collaborators.

IMOS is enabled by the National Collaborative Research Infrastructure Strategy (NCRIS). It is operated by a consortium of institutions as an unincorporated joint venture, with the University of Tasmania as Lead Agent.

NCRIS
National Research Infrastructure for Australia
An Australian Government Initiative

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IMOS acknowledges the Traditional Custodians and Elders of the land and sea on which we work and observe, and recognise their unique connection to land and sea. We pay our respects to Aboriginal and Torres Strait Islander people past and present.