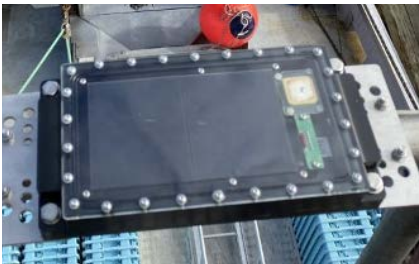


Hardware Installation Instructions

Thank you for agreeing to participate in the IMOS Fishing Vessels as Ships of Opportunity sub-Facility operated through 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:

- Has clear sky view for solar charging and GPS reception
- Is within 20 meters of the working deck
- 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.



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.

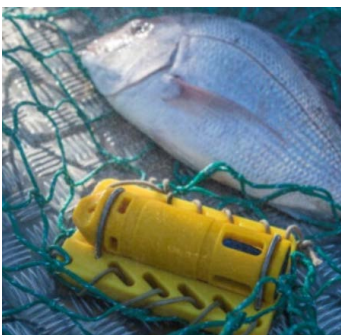
Trawl



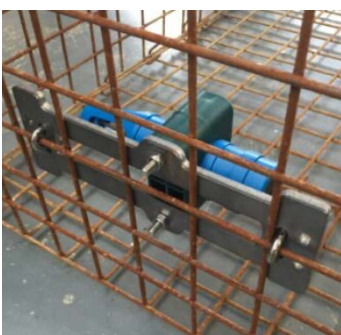
Line/Jig



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 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.

Please complete and sign the online vessel agreement below.

Vessel agreement



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 IMOS Fishing Vessels as Ships of Opportunity sub-Facility - 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

IMOS sub-Facility Leader

