IMOS FishSOOP Newsletter #16 January 2025

IMOS Integrated Marine Observing System

Dear all,

Welcome to the first FishSOOP newsletter of 2025. We hope that those out fishing had a good period at sea, and that those of you able to take a break had a relaxing and enjoyable time. This newsletter includes an interesting case study in which a scallop dredger is harnessing their FishSOOP data to improve catch rate, information about new installations in Papua New Guinea, and insights from the January data.

Papua New Guinea fieldwork

Chief Investigator Prof. Moninya Roughan spent 11 days working with fishers in Papua New Guinea (PNG) to install FishSOOP equipment on 5 vessels. The collaboration, which is funded by the Pacific Community (SPC), aims to instrument vessels from several of the organisations' member states. The fieldwork was facilitated by the PNG National Fisheries Authority (NFA) and the PNG Fishing Industry Association (FIA).

Prof Moninya Roughan and colleagues from the Pacific Community meet with the PNG FIA in Port Moresby to explain the Moana Sensor concept and the FishSOOP program. (Photo credit: FishSOOP)

Prof Roughan said, "Instrumenting these 5x purse seining tuna vessels was an important first step in our work with SPC and one from which we learnt several valuable lessons".

The team from SPC, UNSW, NFA, and FIA meet with the team from Blue Catch - the operators of FV Queen MariLou 888 in Madang, PNG. (Photo credit: FishSOOP)

Data impact case study 2: Scallop dredger

Last year, we surveyed our fishers anonymously to find out what they liked about the programme and how it could be improved. This brought to light several interesting case studies in how fishers were using the data in novel and beneficial ways.

One such example came from a scallop dredger which was used the data to search for colder water, an indicator of upwelling from deeper water. Such upwellings often bring nutrients up from depth, thereby supporting the growth of plankton and other marine organisms on which filter feeders such as scallops depend for food. As such, the fisher used the temperature at depth data to locate more, larger, and higher quality scallops, thereby improving catch rate.

Watch this space for more examples of how fishers are using FishSOOP data to improve their processes and so fish smarter, not harder.

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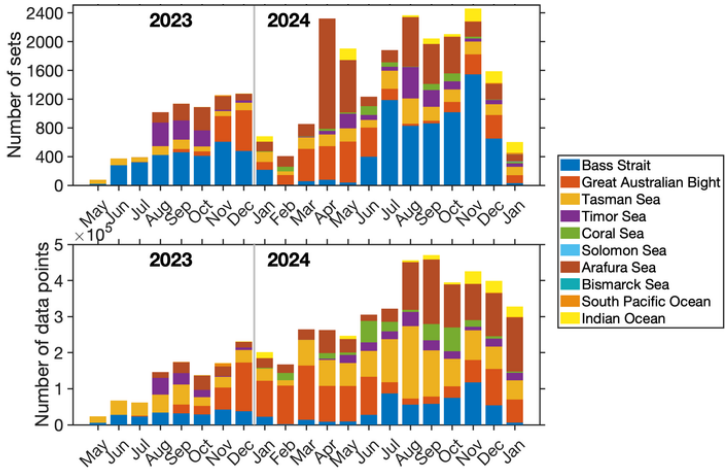
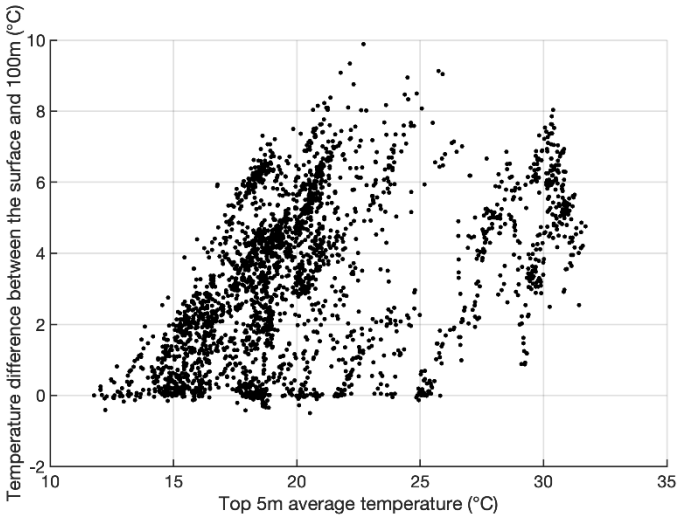
Data insights Jan 2025

Although January tends to be quieter for the project, with several fisheries off season, we still collected 323,113 datapoints from 606 sets, down to 853m.



Histograms of number of data sets and data points gathered by the FishSOOP project during January 2025, divided by geographical area (Credit: Dr. Véronique Lago, UNSW)

From the data we've received, we can see that the surface temperature does not provide information on the temperature sub-surface. This graph shows the difference between the surface temperature and the temperature at 100m for each set, against the corresponding surface temperature. There is up to 10˚C difference between the temperature at the surface and at 100m depth, with the difference increasing as the surface temperature increases.



Graph showing difference in temperature between surface and 100m depth based on FishSOOP data collected in Jan 25 around Australia (Credit: Dr. Véronique Lago, UNSW)

Feedback

Please provide your feedback and comments by emailing us. We are particularly keen to understand which elements of the data you receive are most useful and how we can improve.

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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.

Fair winds and following seas

Professor Moninya Roughan and the FishSOOP team.

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Partners

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

Delivery Partners

Australian Fisheries Management Authority (AFMA)
Parks Australia (Australian Marine Parks)
Charles Darwin University (CDU)
Coalition of Legal Toothfish Operators (COLTO)
Fisheries Research and Development Corporation (FRDC)
Fishwell Consulting
New South Wales Government (Office of Chief Scientist and Engineer)
Northern Territory Government (Fisheries)
University of the Sunshine Coast (USC)
University of New South Wales (UNSW)

International Collaborators

Papua New Guinea National Fisheries Authority
Papua New Guinea Fishing Industry Association
Pacific Community (SPC) - coinvested in the trial of the FishSOOP program across the Central and Western Pacific.

For more information, please see the FishSOOP website and/or email FishSOOP@unsw.edu.au

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.