

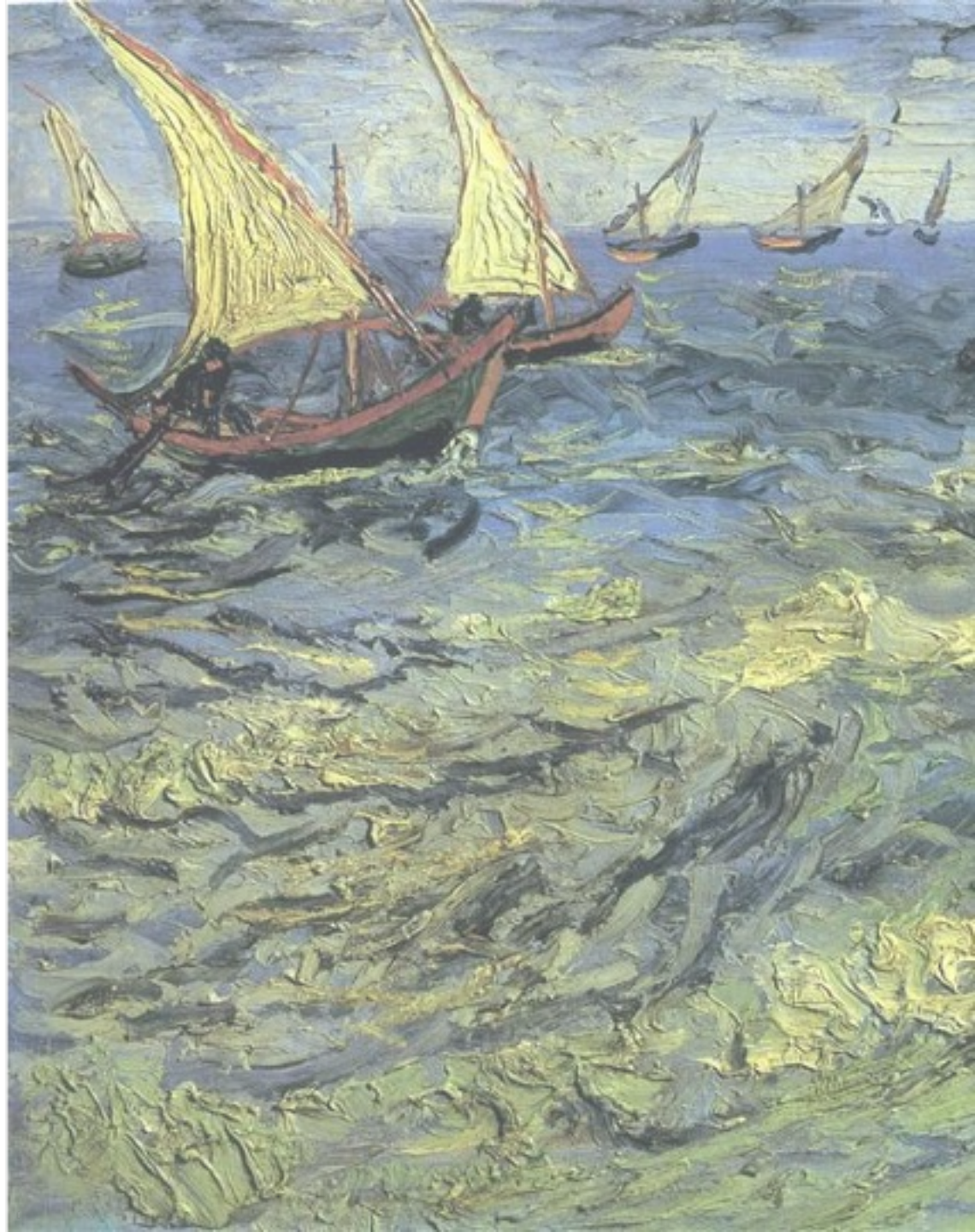


UNSW
SYDNEY

Fishing for ocean data - An industry and IMOS partnership

Véronique Lago

Moninya Roughan, Ian Knuckey, Russell Hudson



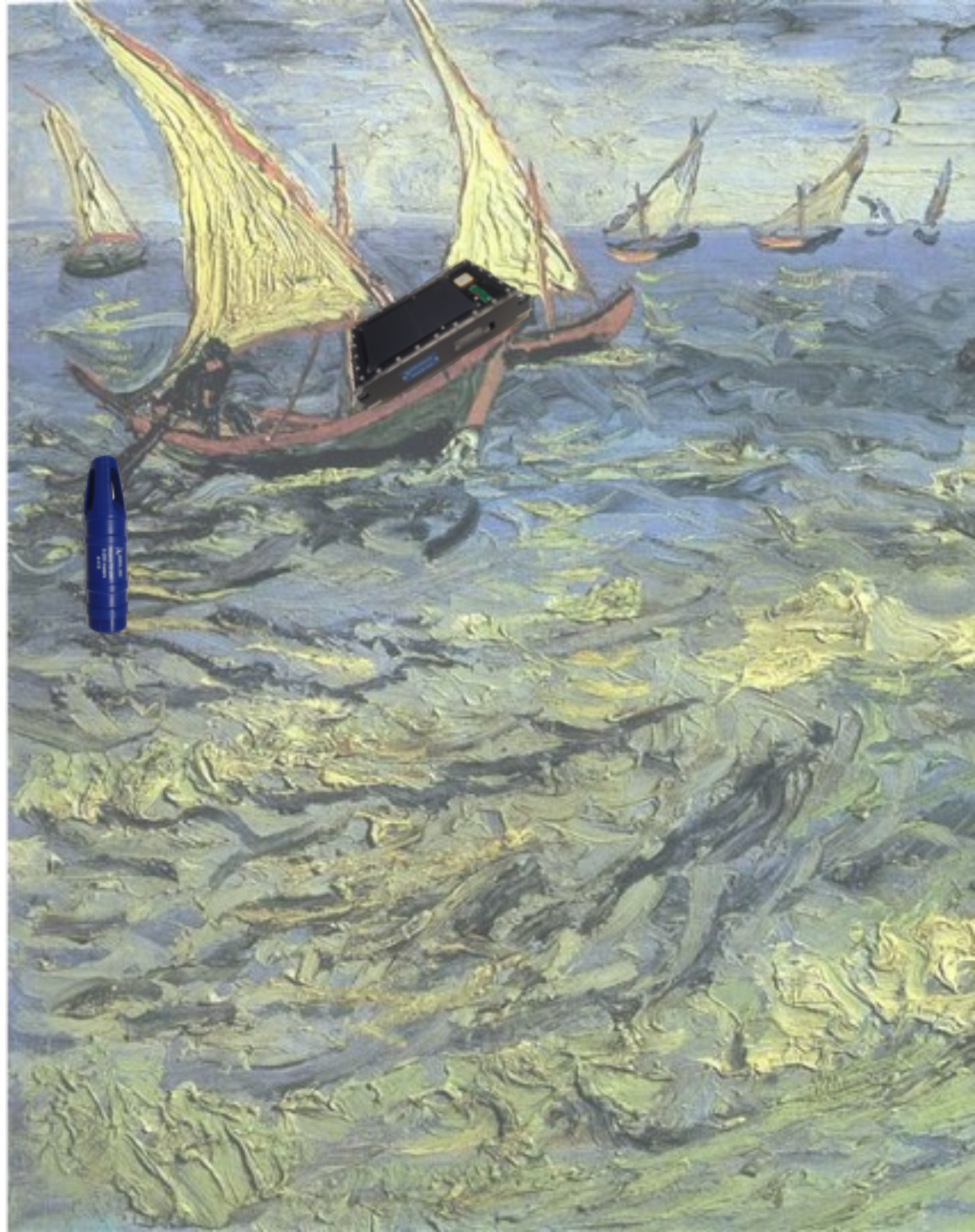


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FishSOOP Project Team



Moninya Roughan
Oceanographer



Véronique Lago
Ocean Data Scientist



Ian Knuckey
Fisheries Scientist



Russell Hudson
Fisheries Scientist



UNSW
SYDNEY



Ship Observations Team Organigram – 31 May 2023

IOC of UNESCO
 Intergovernmental Oceanographic Commission
 Ocean Observations and Services Section
 Albert Fischer (Head)
 Emma Heslop
 Ting (Julia) Yu

JCB
 Joint WMO-IOC Collaborative Board

WMO
 World Meteorological Organization
 Earth System Monitoring Division
 Dominique Berod (Head)
 Champika Gallage
 Mathieu Belbéoch

GOOS
 Global Ocean Observing System

OCG
 Observations Coordination Group
 Chair: David Legler

OceanOPS
 Mathieu Belbéoch (Manager)
 Technical Coordinator: Martin Kramp

SOT
 Ship Observations Team
 Chair: Huai-Min (John) Zhang
 Vice Chair: Elizabeth Kent

VOS Panel (VOSP)
 Chair: Henry Kleta
 Vice Chair: Joel Cabrie

SOOP Implementation Panel (SOOPIP)
 Chairs: Francis Bringas (DM), Tamaryn Morris (L&D)
 Vice Chair: Justine Parks

ASAP Panel (ASAPP)
 Chair: Rudolf Krockauer Vice Chair: Henry Kleta

Task Team on Recruitment, Promotion and Training (TT-RPT)
 Chair: Joel Cabrie Vice Chair: Mardene DeVilliers

Ad-hoc Task Team on VOS Delayed Mode Data (TT-VOS DM)
 Chair: Axel Andersson Vice Chair: Callum Stone(?)

Task Team on Metadata (TT-Metadata)
 Chair: Emma Steventon Vice Chair: Richard Cornes

Task Team on Instrument Standards and Satellite Communications Systems (TT-ISSC)
 Chair: Jean-Baptiste Cohuet Vice Chair: vacant

Task Team on Key Performance Indicators (TT-KPI)
 Chair: Elizabeth Kent Vice Chair: vacant

Task Team on Expansion of Independent Class Observations (TT-EICO)
 Chair: Darin Figurskey Vice Chair: vacant

Contacts

PMOs
 Port Meteorological Officers

SOT-NFPs
 (National Focal Points)

SOT/DBCP Liaison

For SOT Joel Cabrie

For DBCP Nelly Florida Riama



Beyond Australia : an International Vision



Salmon trolling
South East Alaska



Trawler
Long Island NY

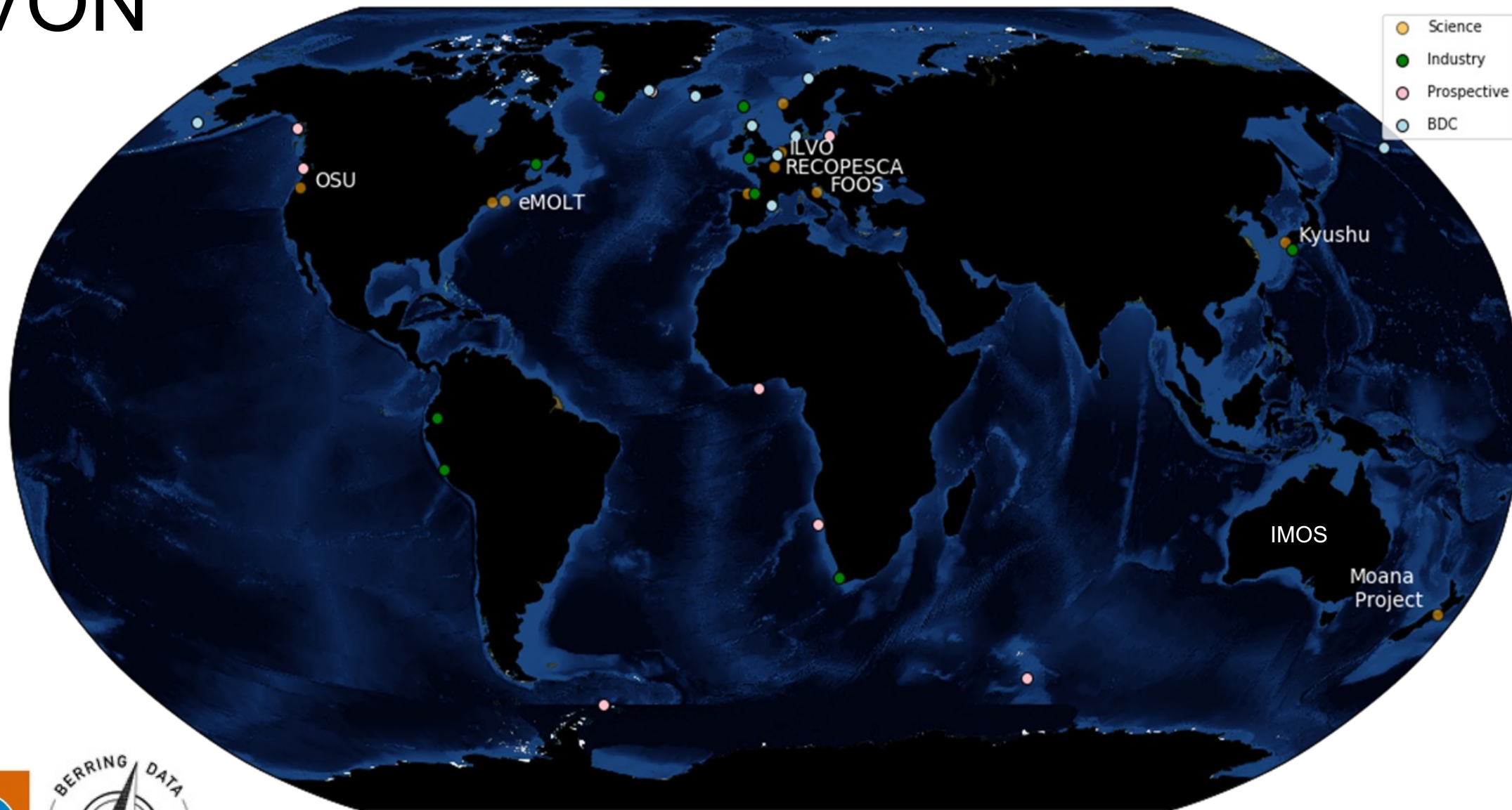


Fishing line
New Zealand



Trap
New Zealand

FVON



International effort

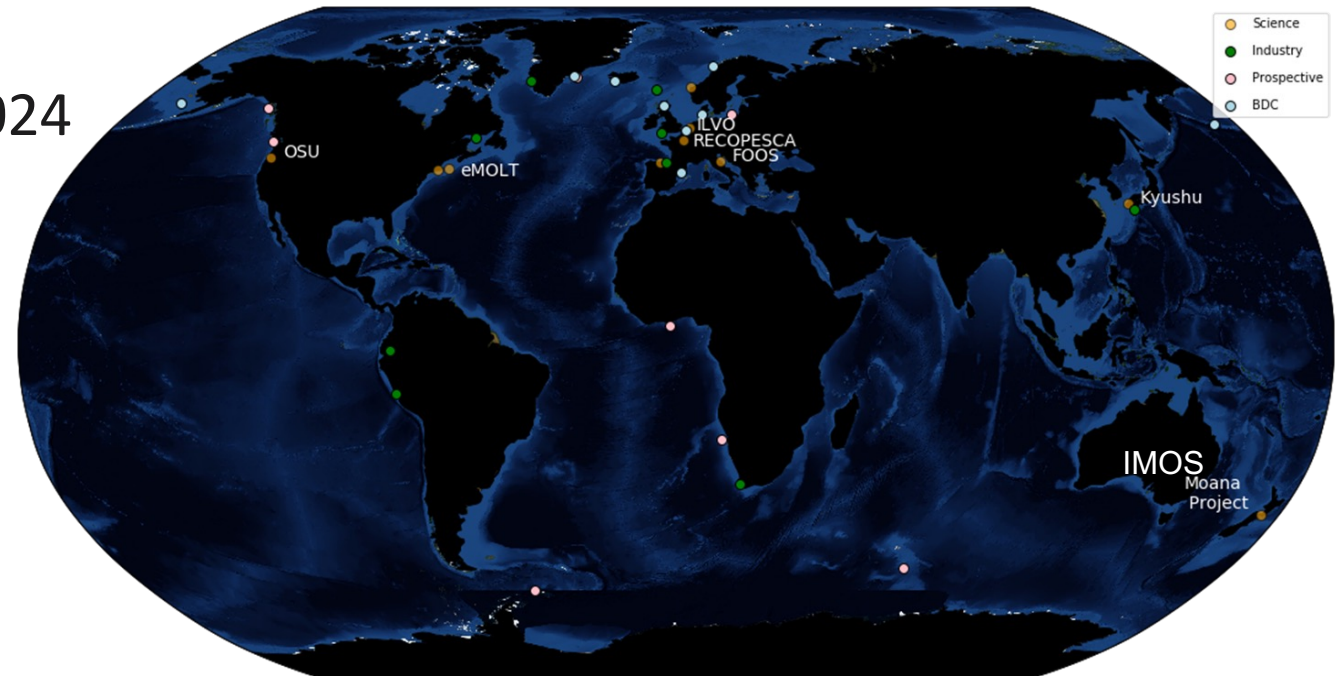
International workshop in Mallorca in July 2023

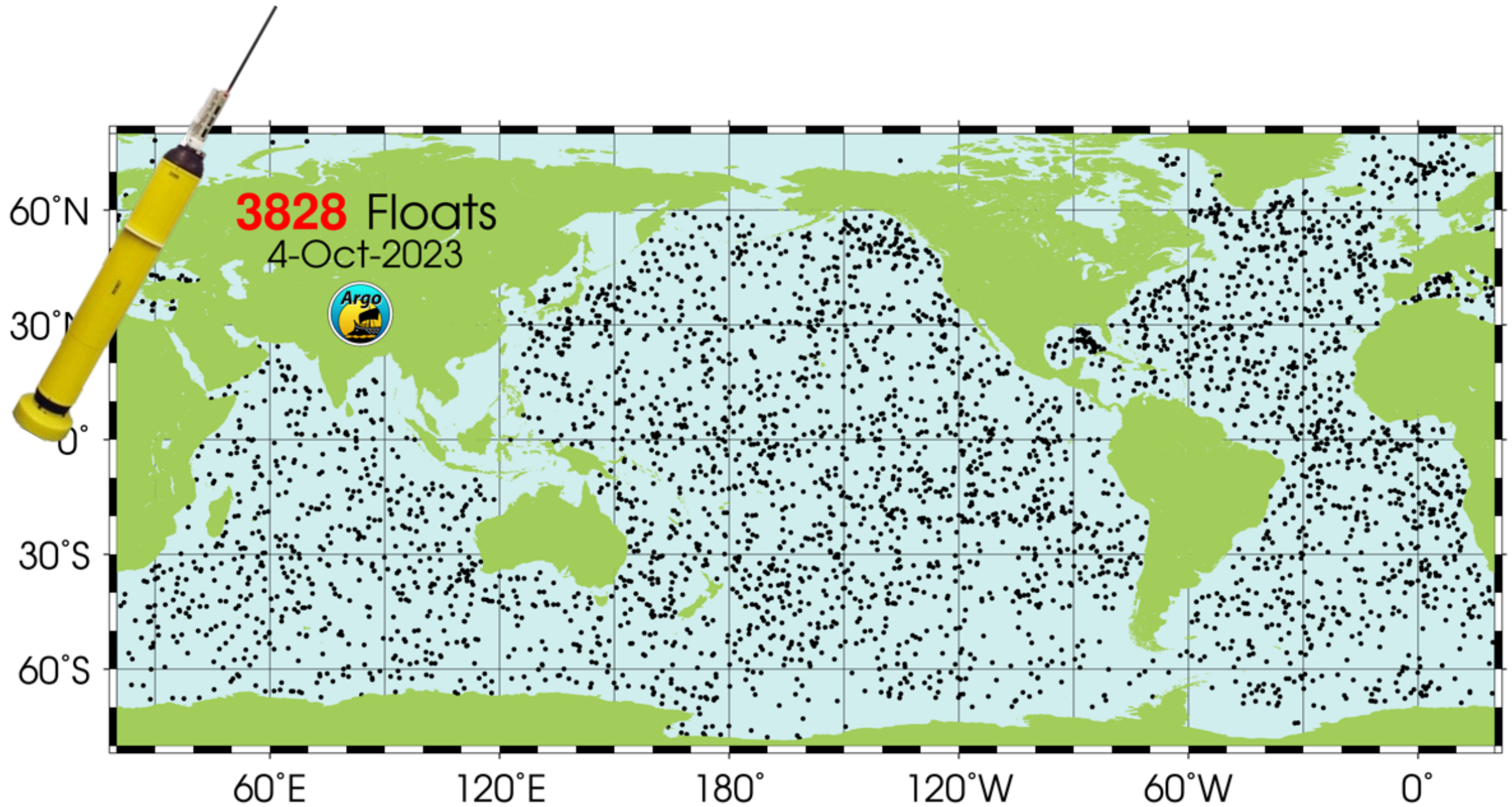
Applied for GOOS endorsement as an emerging network

Applied for endorsement as a UN Ocean decade project under coast predict (Model - Data integration)

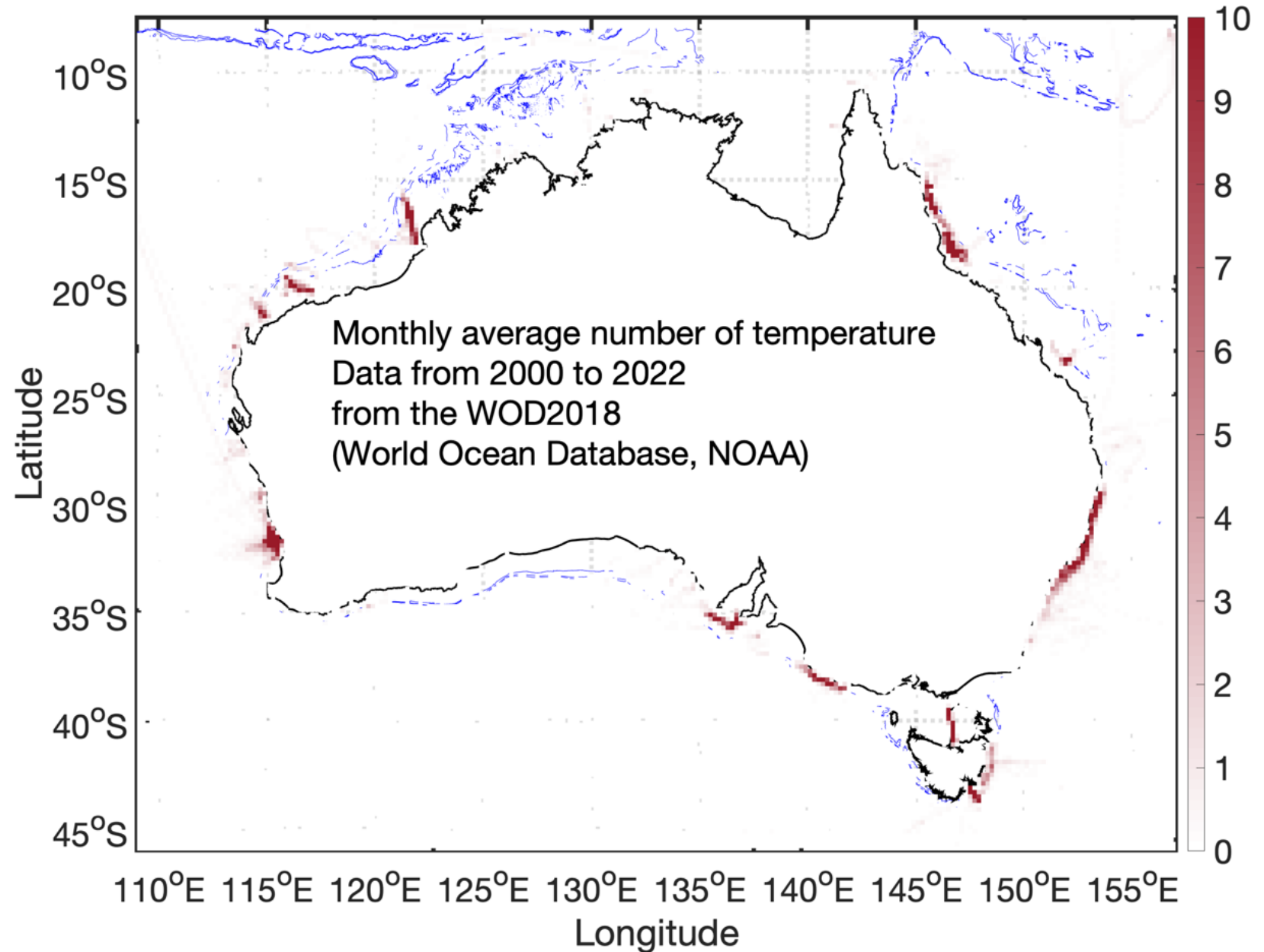
Special Session at Ocean Sciences 2024

Workshop in New Orleans after Ocean Sciences

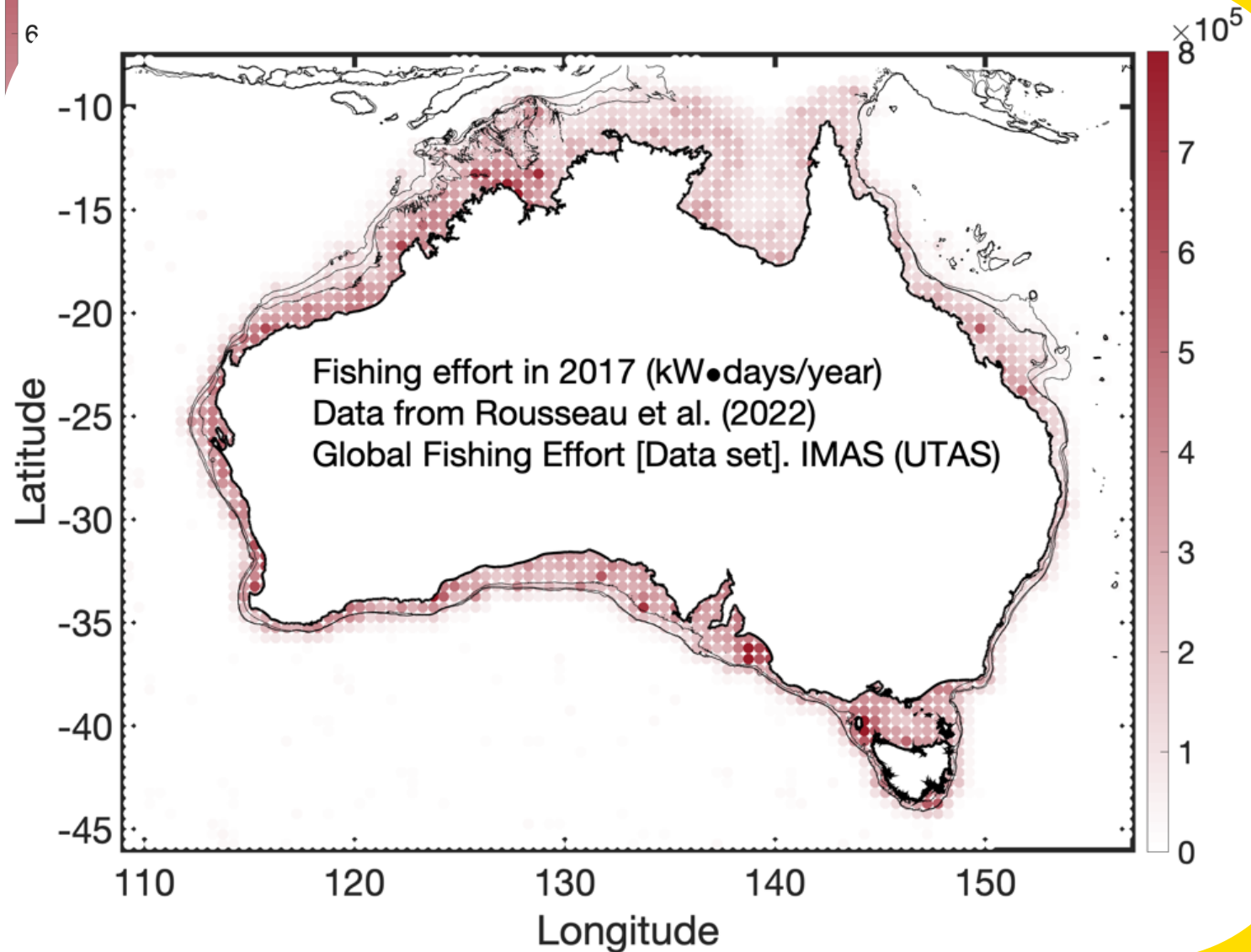
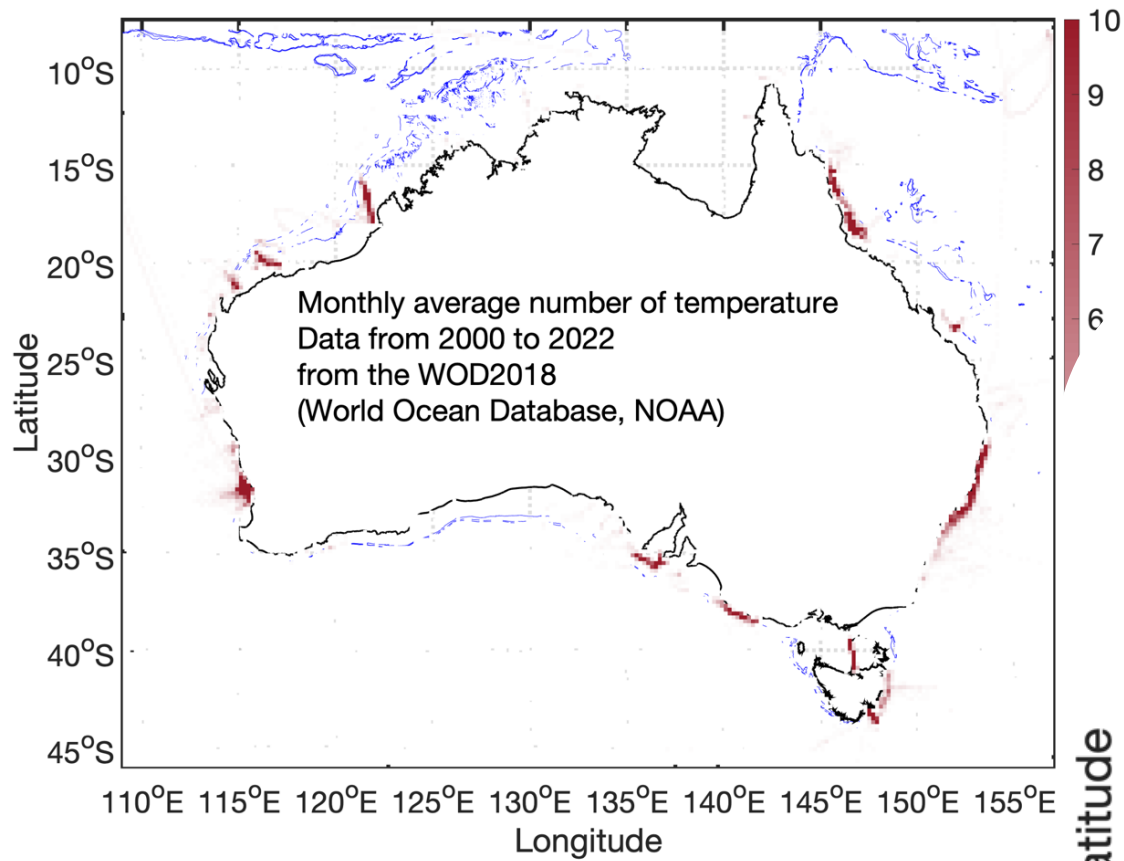




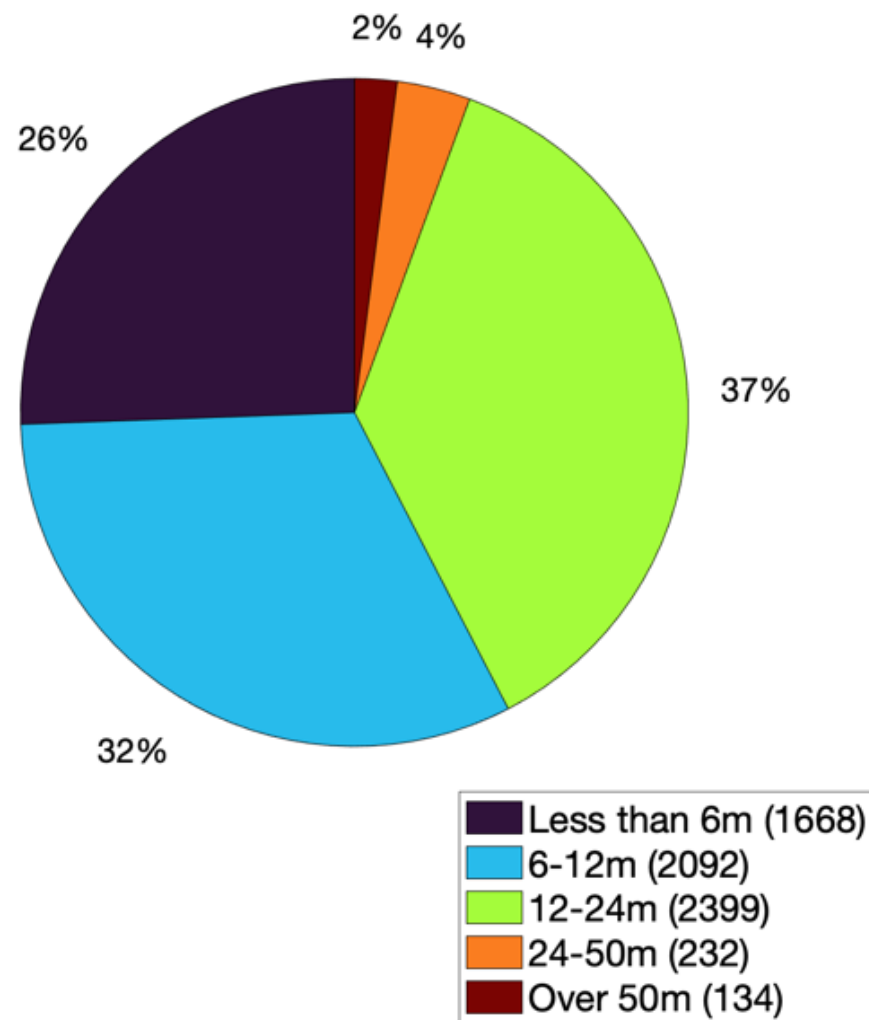
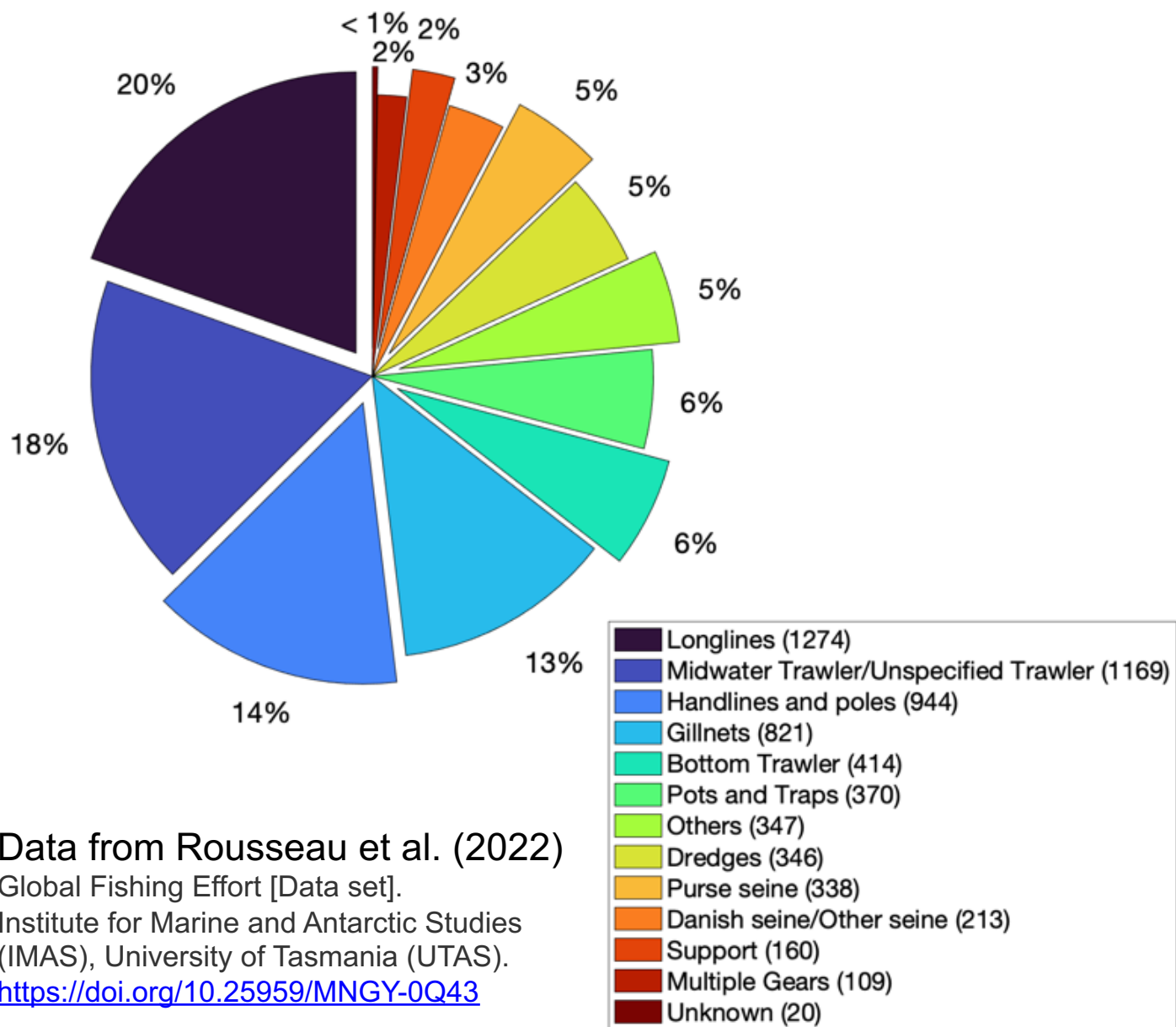
Current monthly temperature data available



Potential for crowdsourced shelf data



There was a total of 6524 Active Australian fishing vessels in 2017



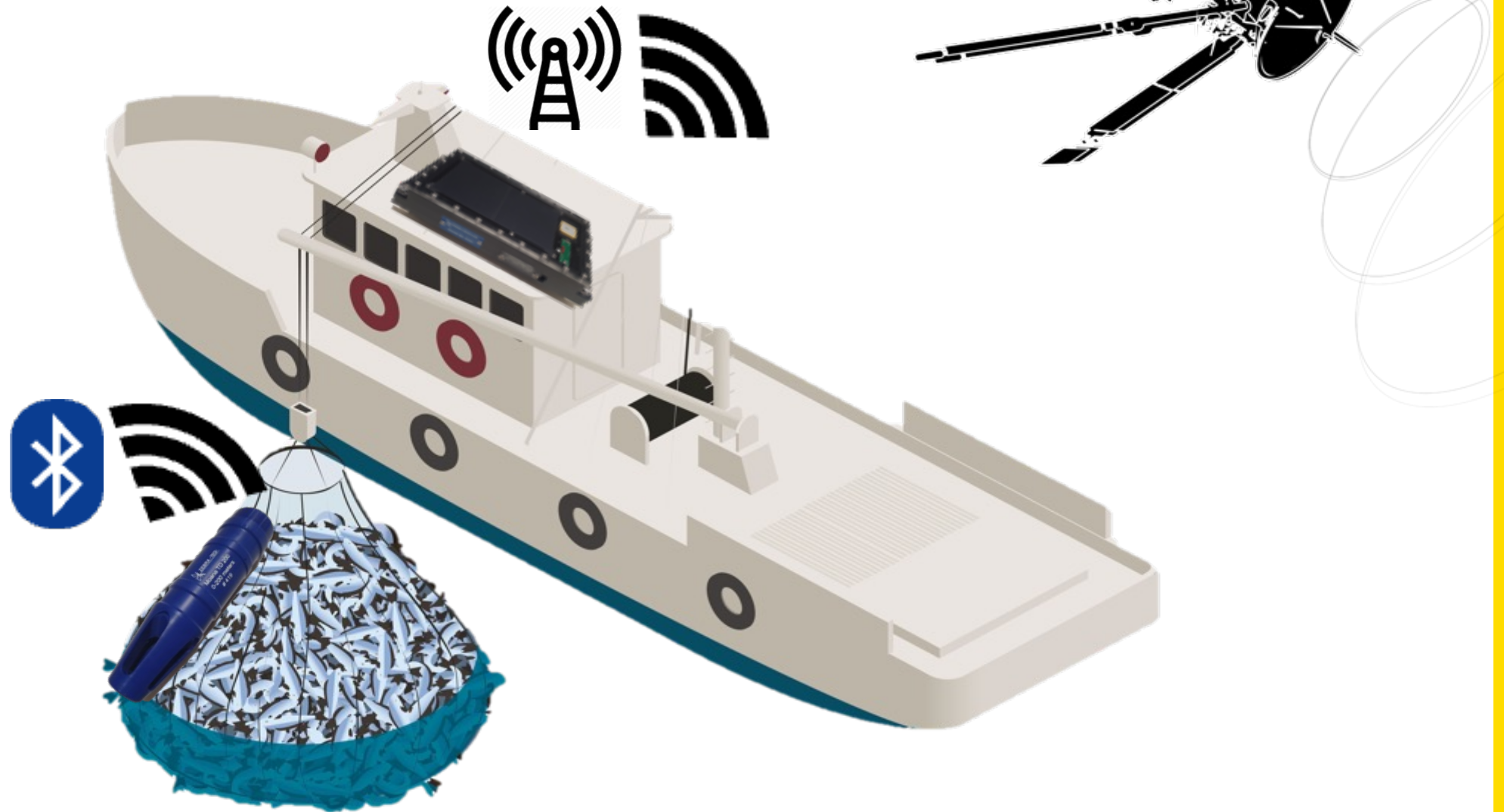
Data from Rousseau et al. (2022)

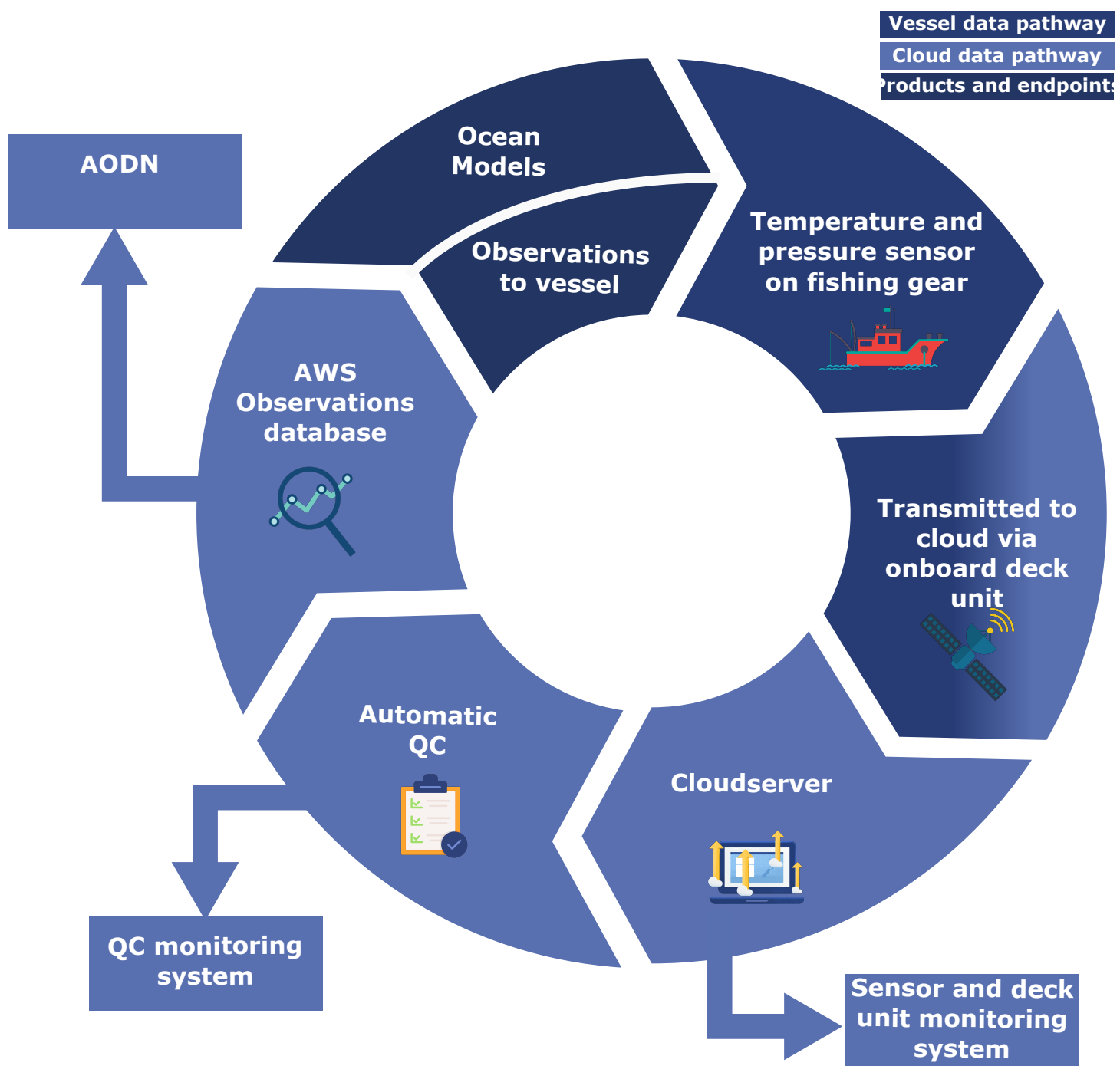
Global Fishing Effort [Data set].

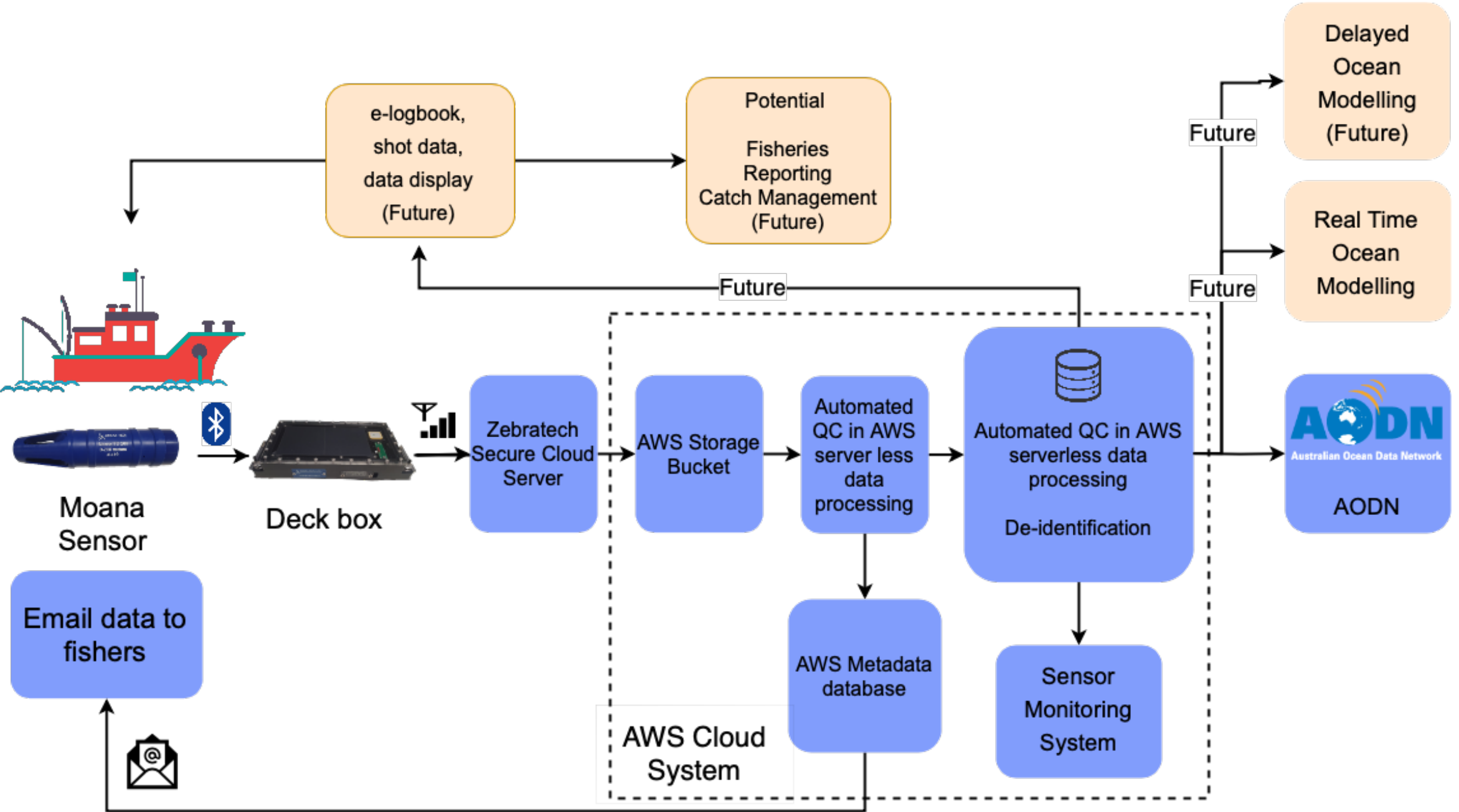
Institute for Marine and Antarctic Studies (IMAS), University of Tasmania (UTAS).

<https://doi.org/10.25959/MNGY-0Q43>

No human intervention,
direct transfer to the cloud





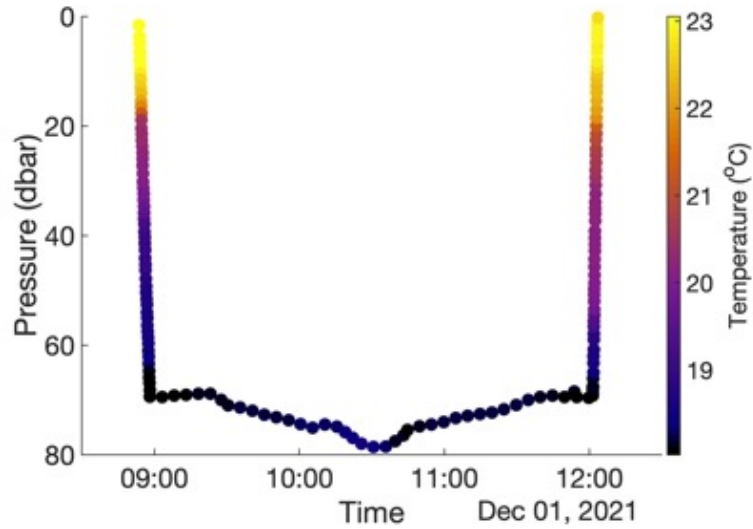


Our Moanas at work

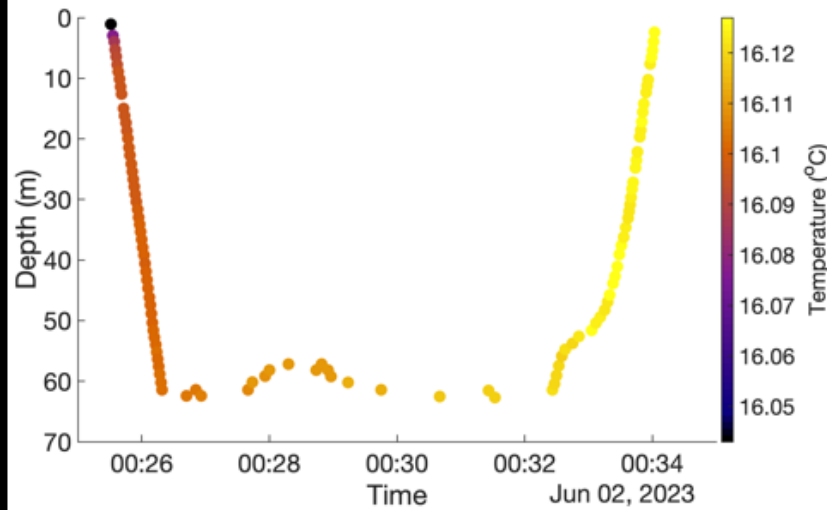




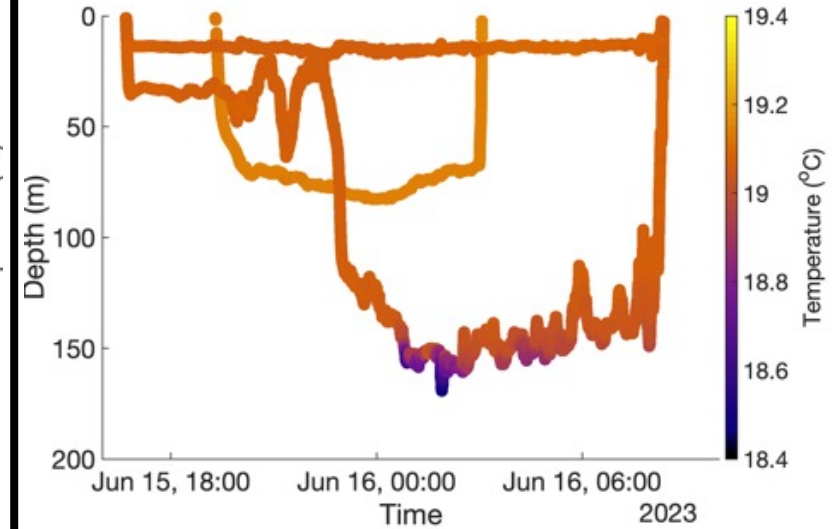
Data profiles for different gears



Fish trawl



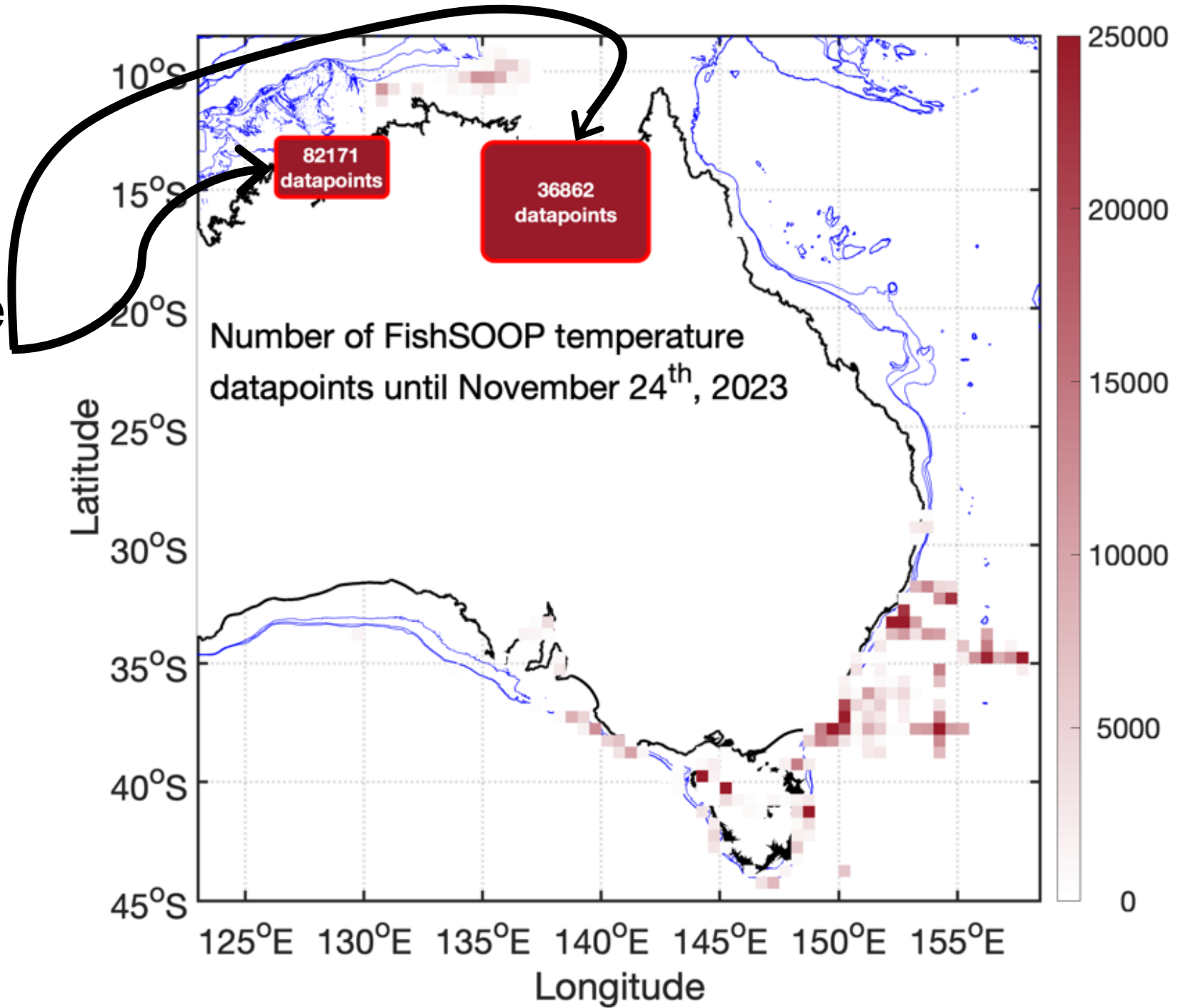
Scallop dredge



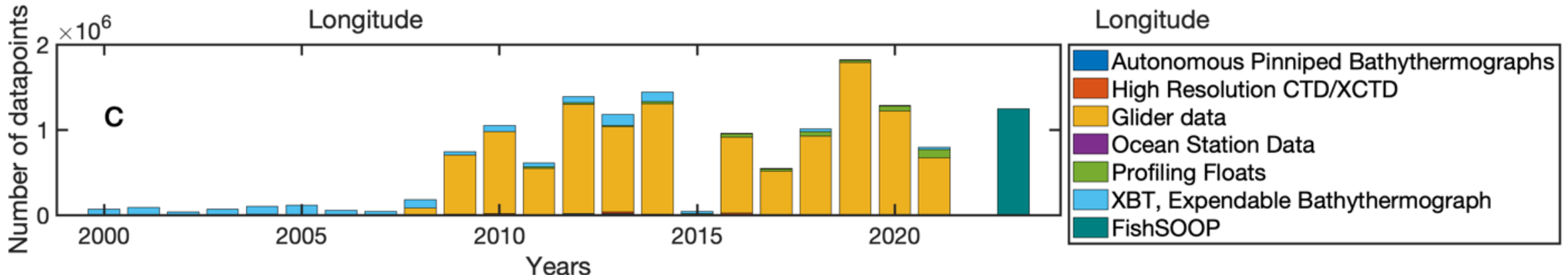
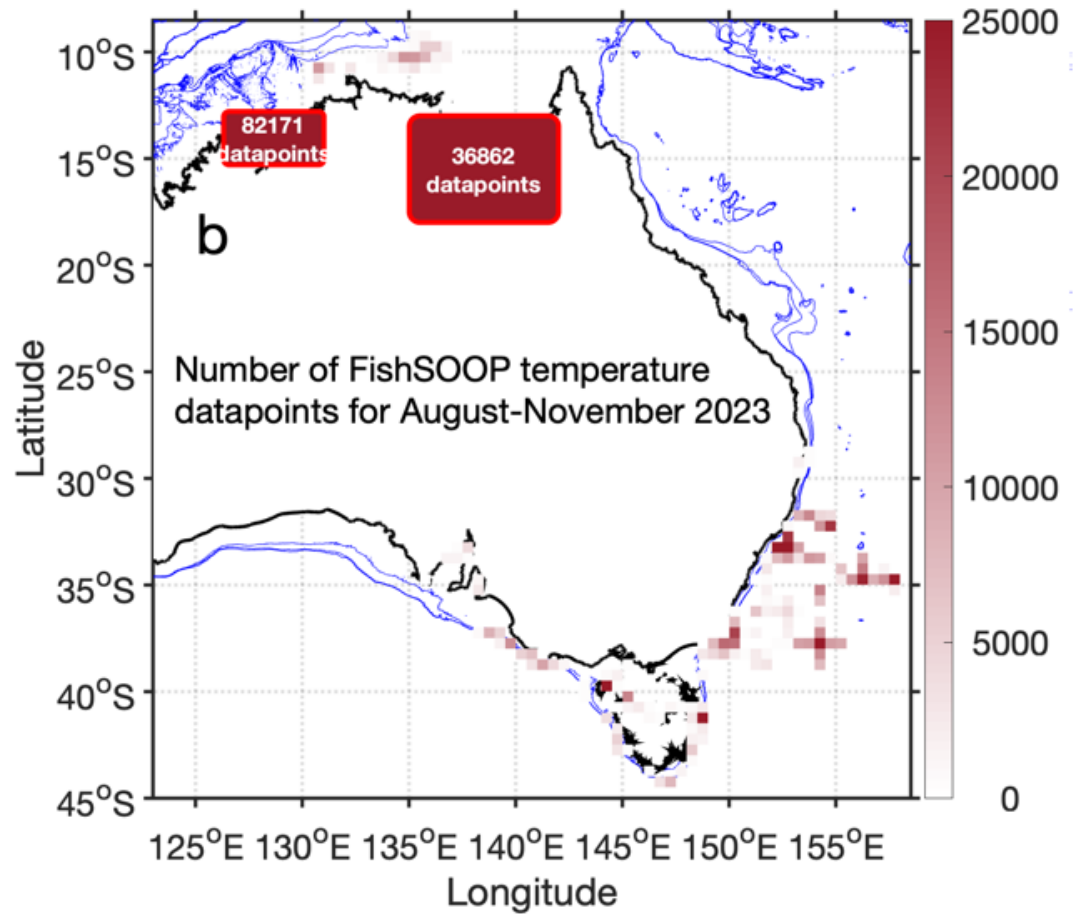
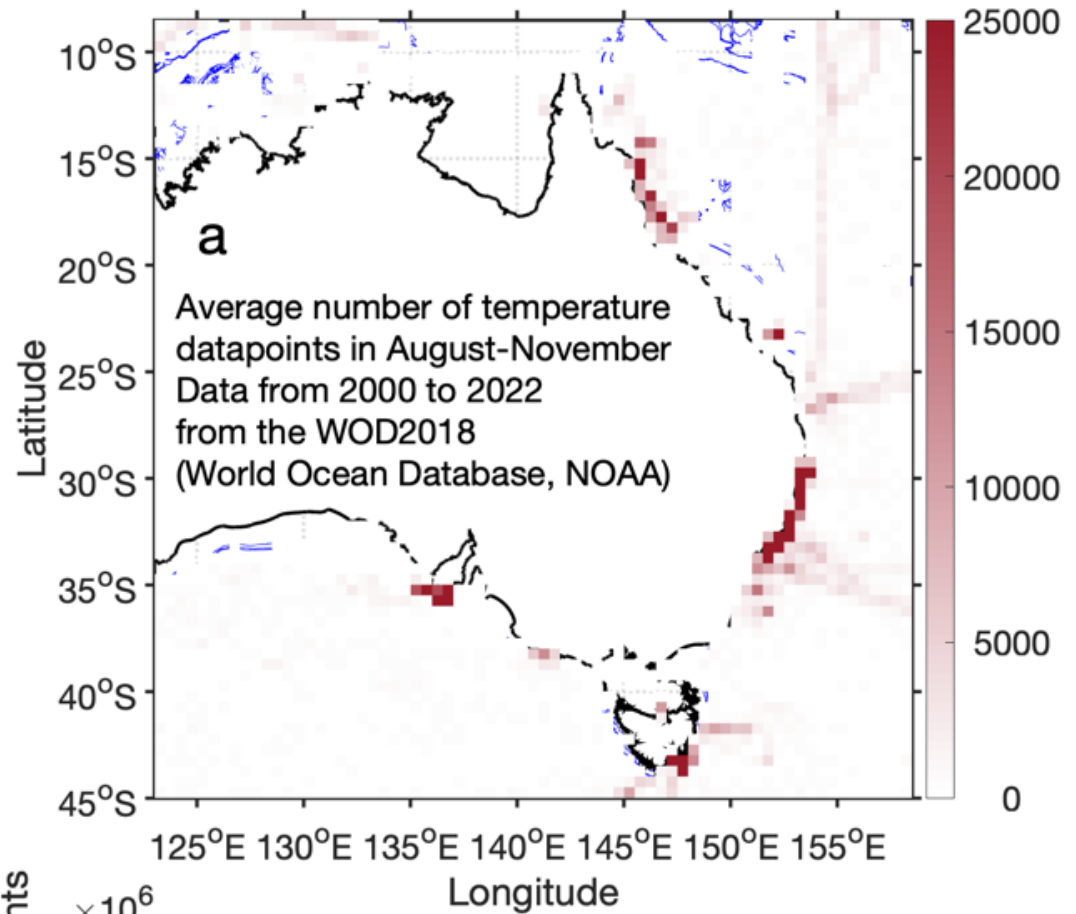
Tuna longline

Location available
in January 2024

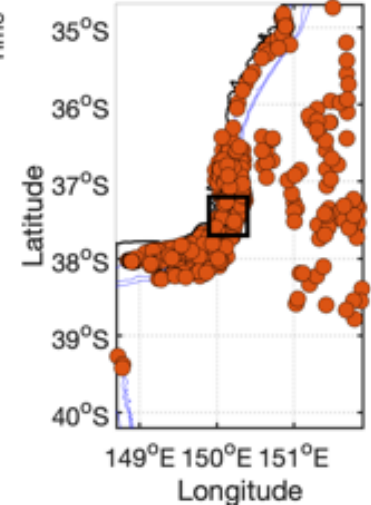
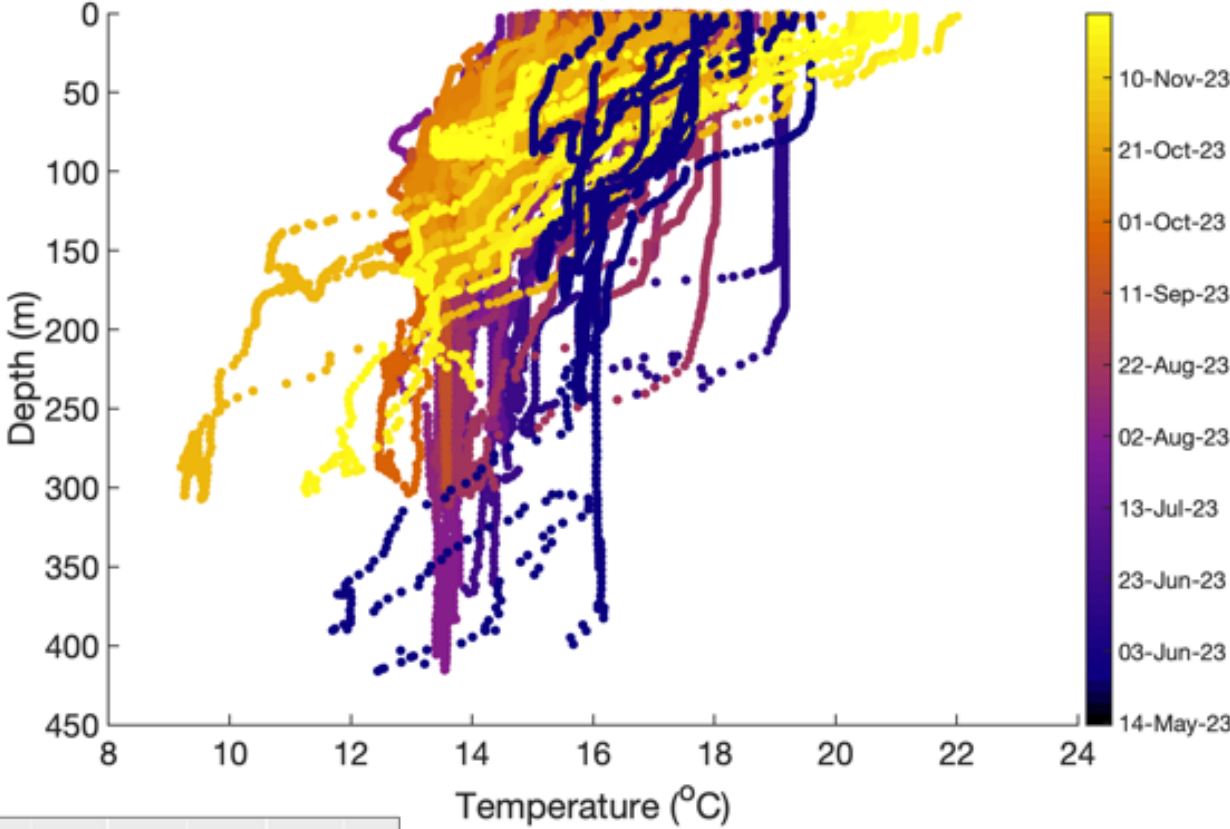
Quantity of
measurement
from 15 boats
signed for the trial



FishSOOP vs average monthly observations



Application – observing MHW where fishing occurs

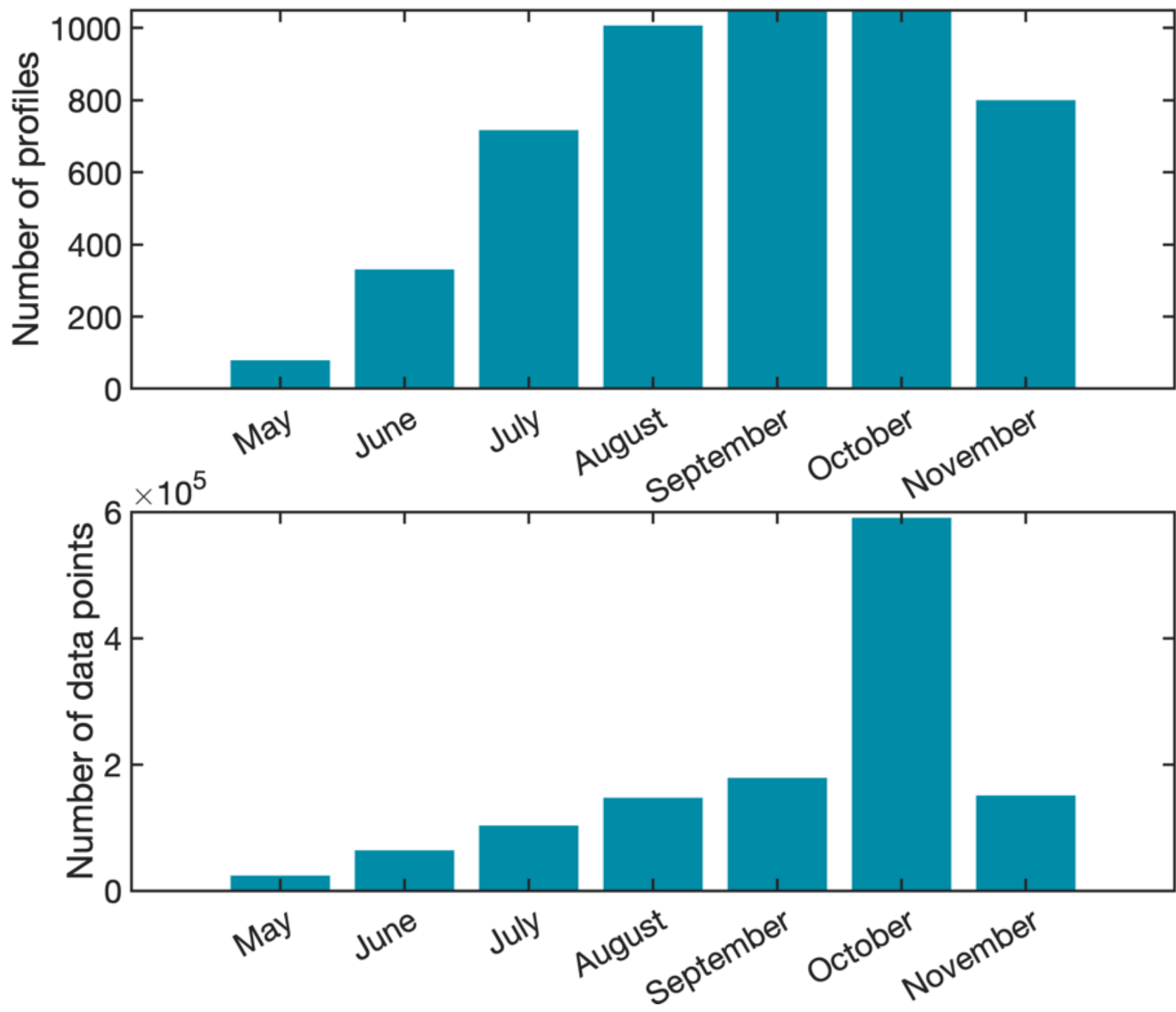


Lon: 150.125°E Lat: 37.625°S

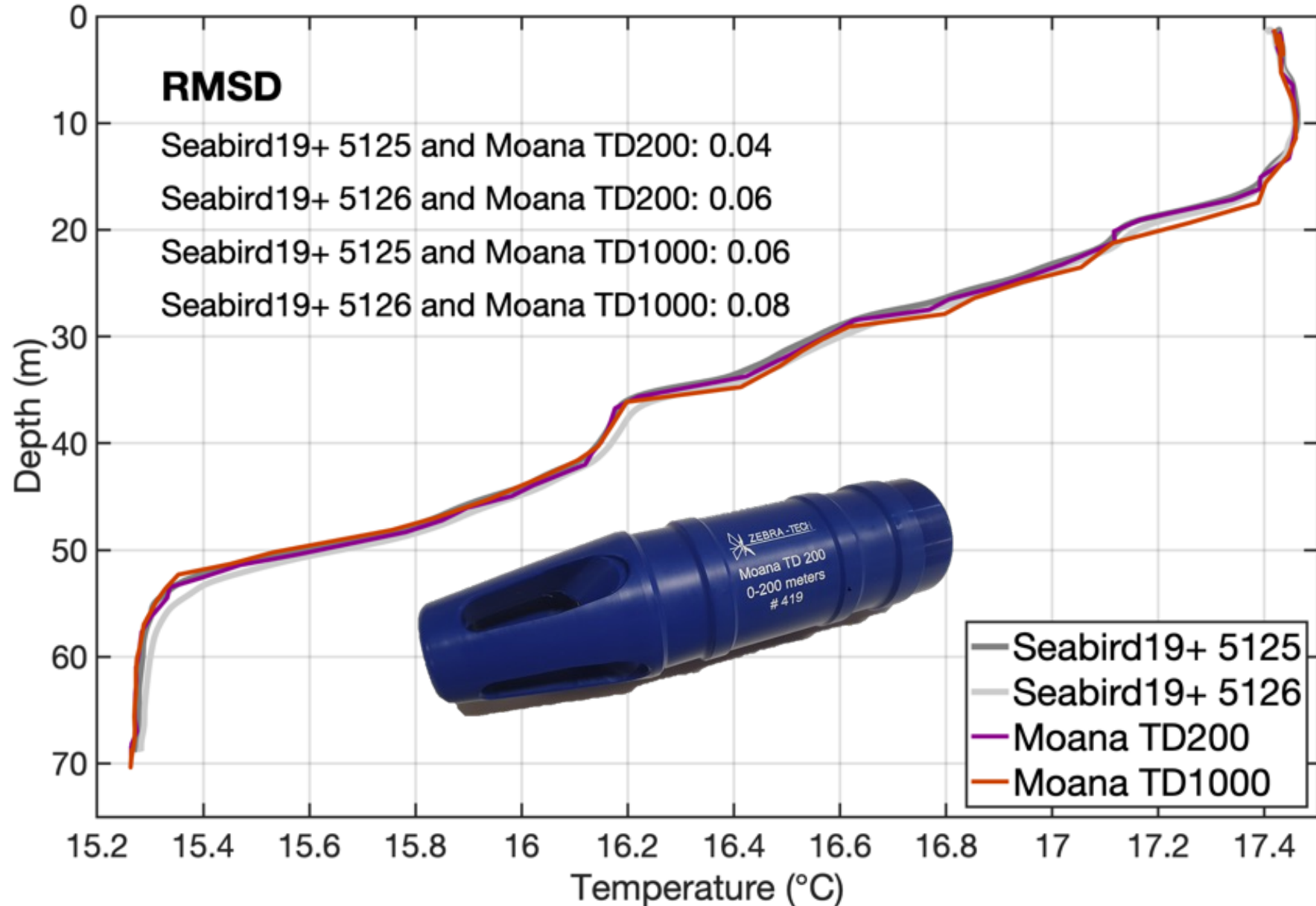


Source: marineheatwaves.org

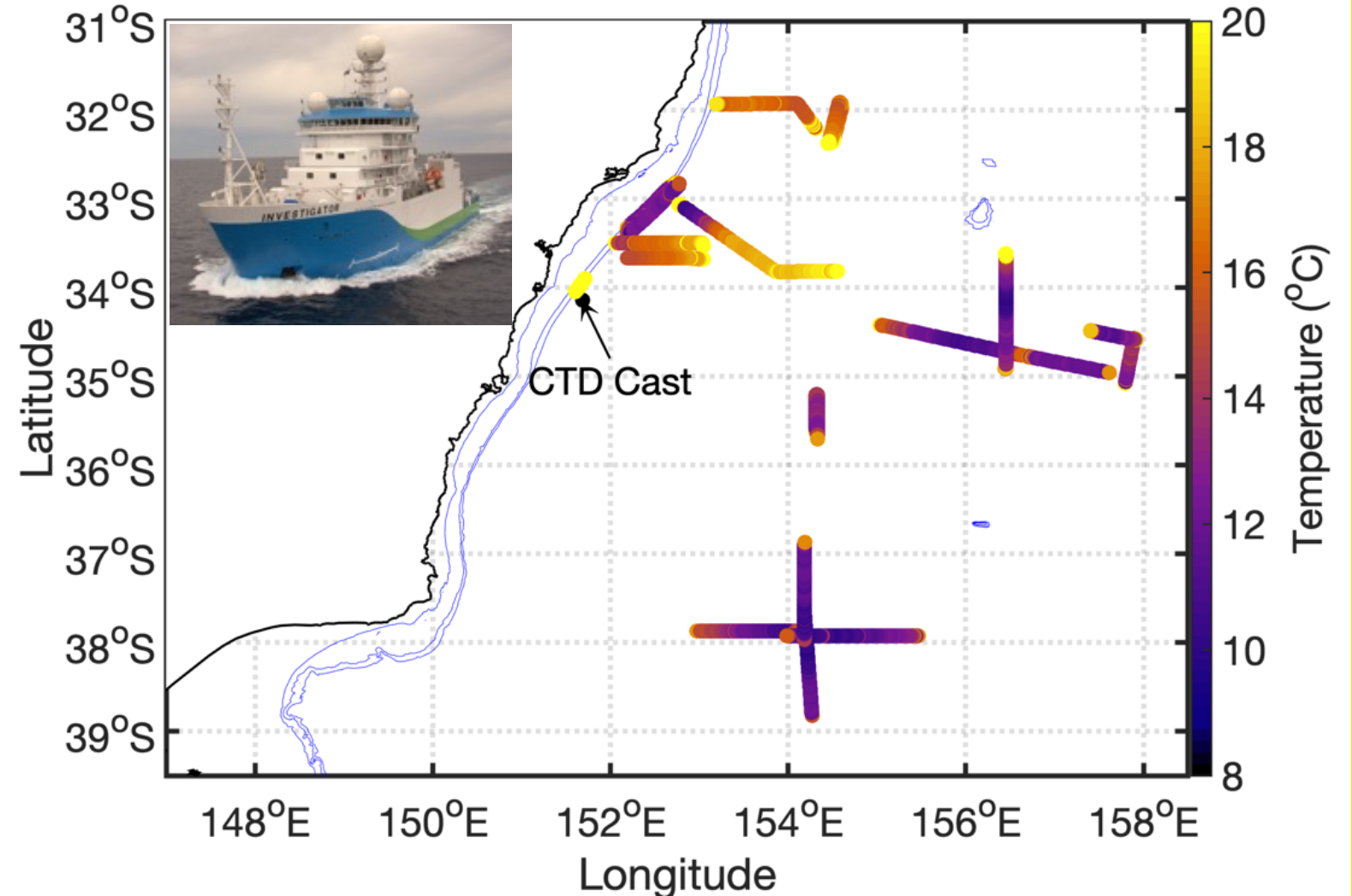
A growing project



Comparison with Seabird CTD

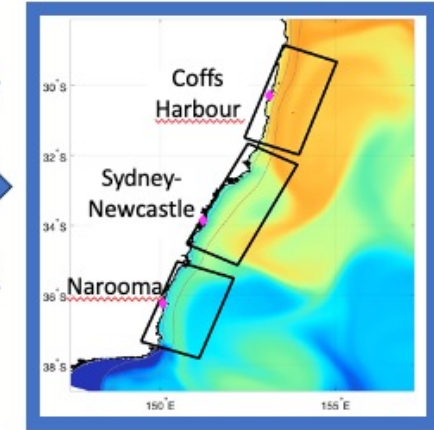
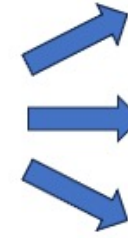
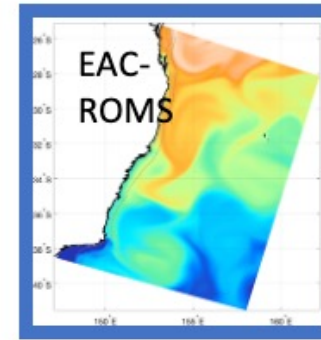
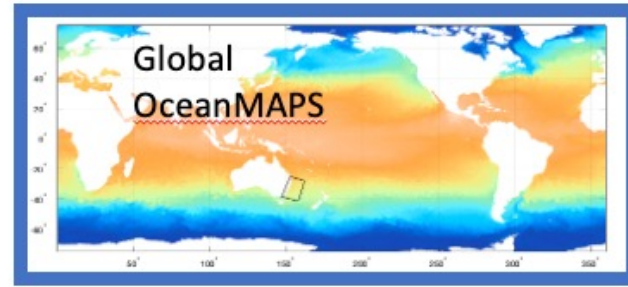


Trials on the RV Investigator

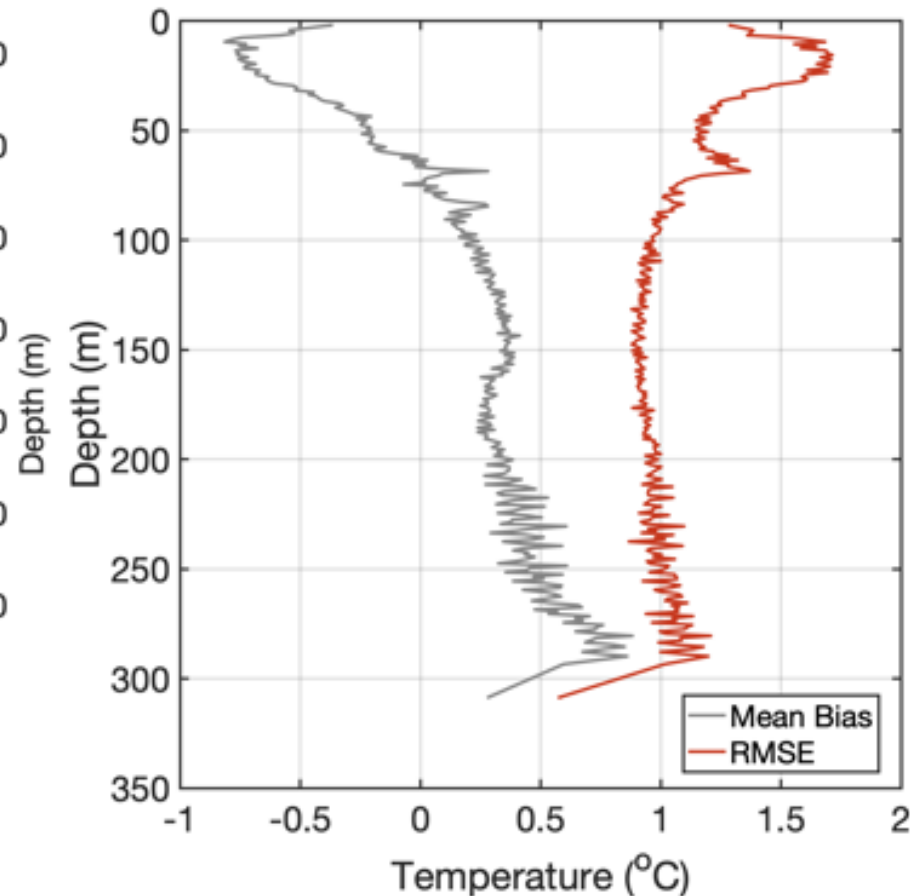
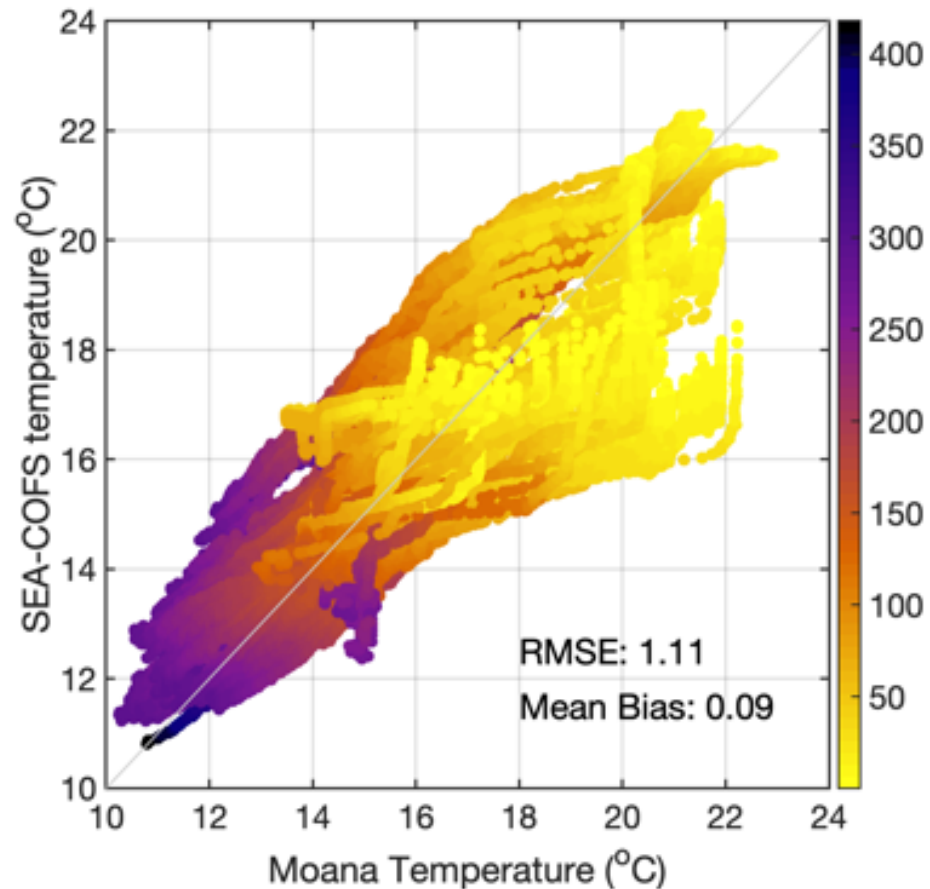


Potential for data assimilation in forecast models

SEA-COFS:
An EAC focused
forecast model

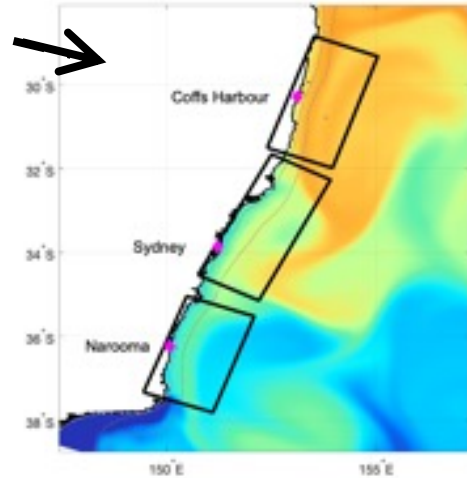
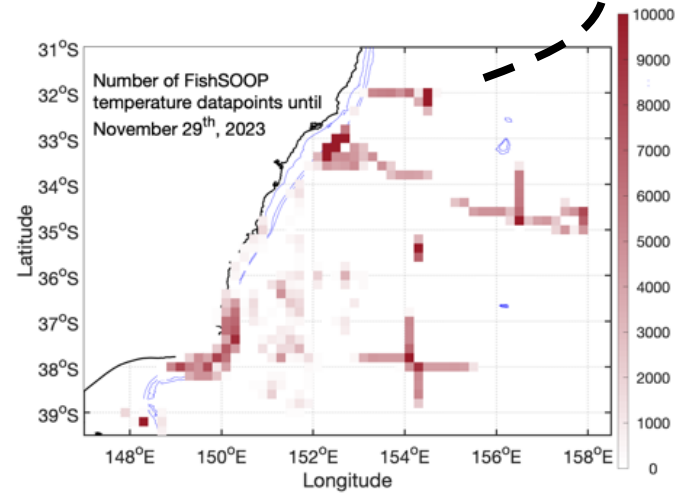


C. Kerry



Going forward

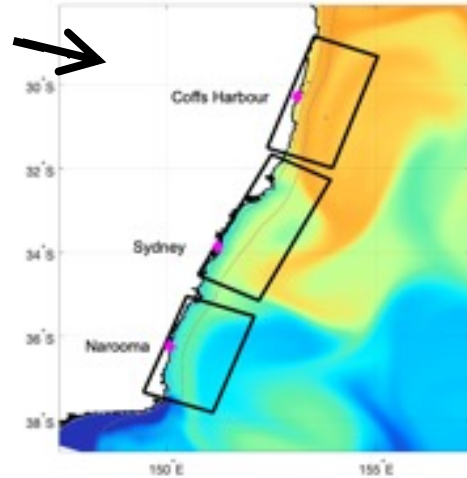
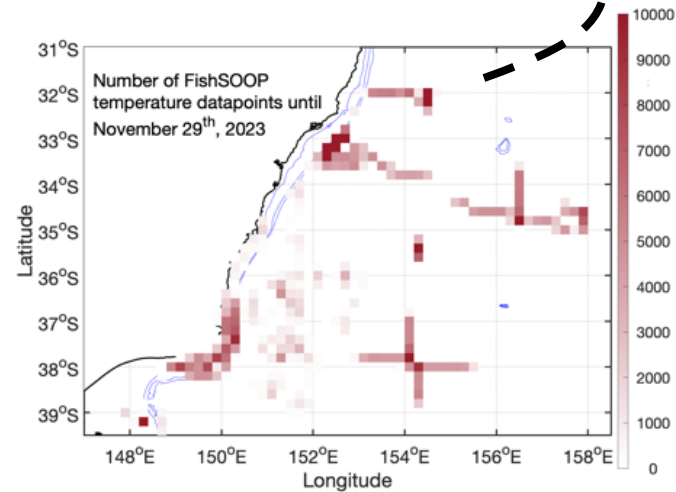
Assimilation in real time of FishSOOP data into the SEA-COFS forecast model



Going forward

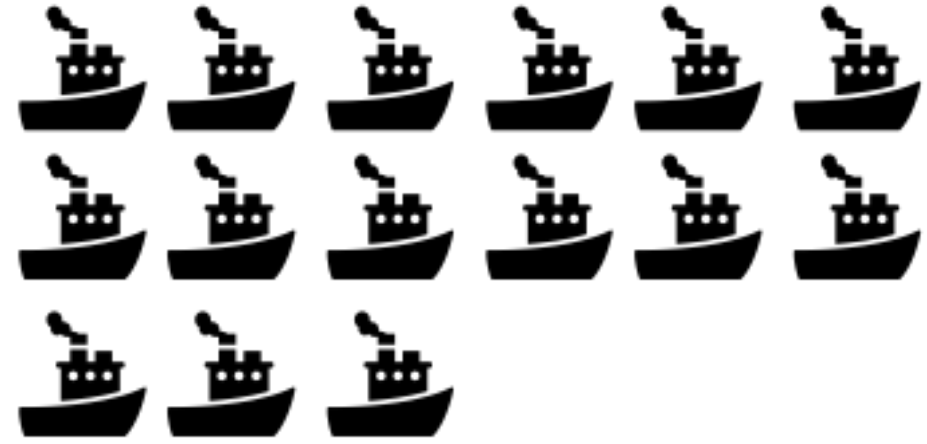
Assimilation in real time of FishSOOP data into the SEA-COFS forecast model

Future work with Coastal ocean modelling Commons (ACCESS-NRI)



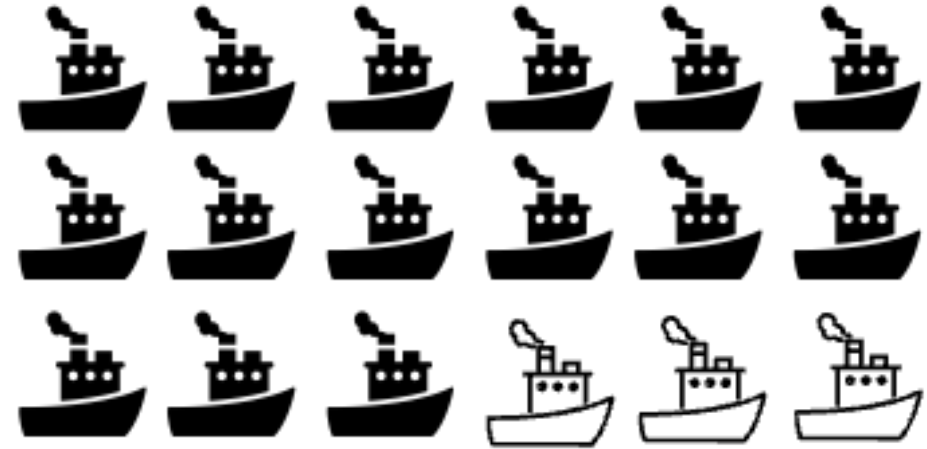
Going forward

Going forward



Going forward

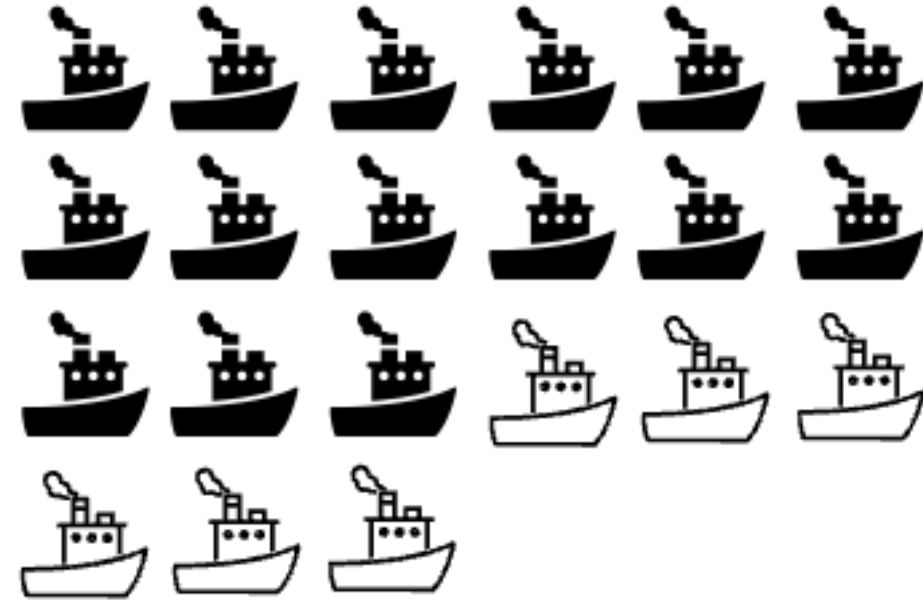
3 boats pending



Going forward

3 boats pending

3 boats for the Northern Territory

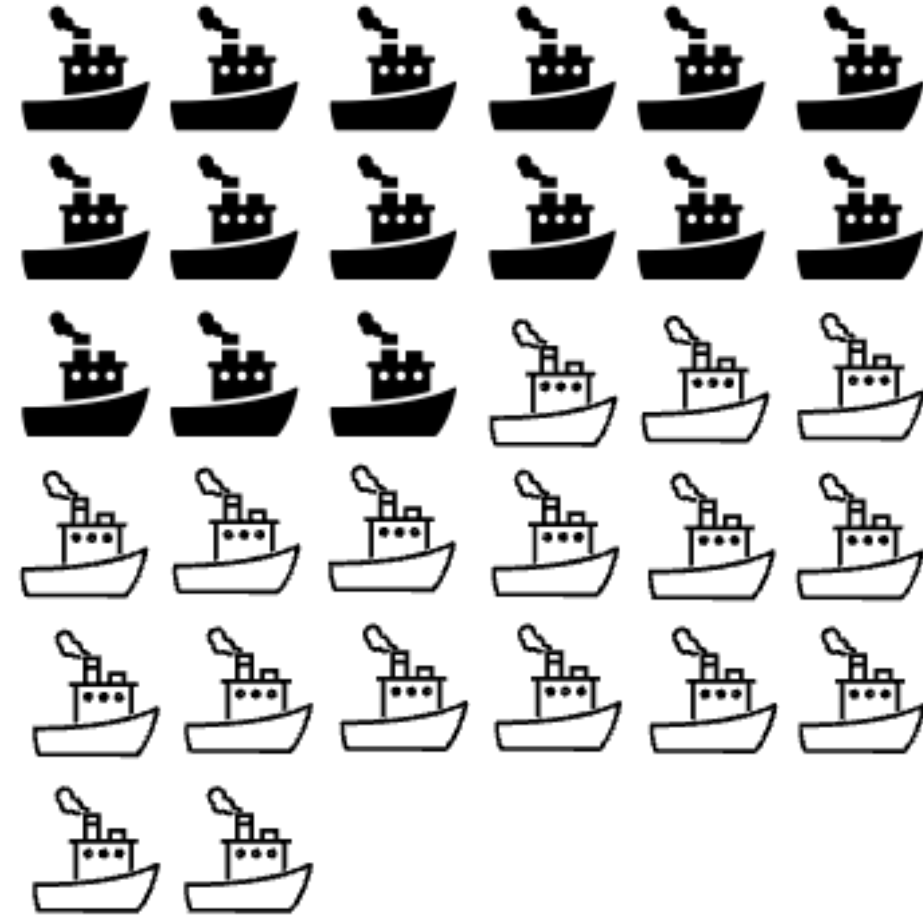


Going forward

3 boats pending

3 boats for the Northern Territory

11 boats for FRDC and AFMA



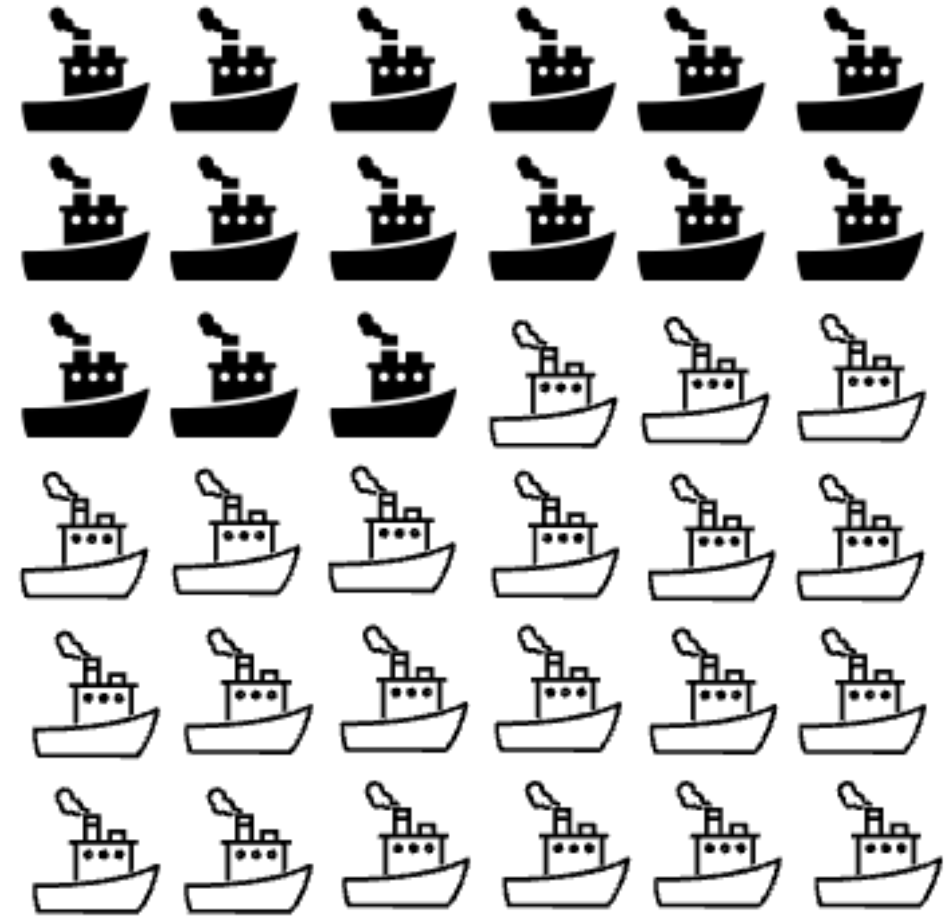
Going forward

3 boats pending

3 boats for the Northern Territory

11 boats for FRDC and AFMA

4 boats for University of Sunshine Coast,
Tuna Australia between Noosa and Eden



Going forward

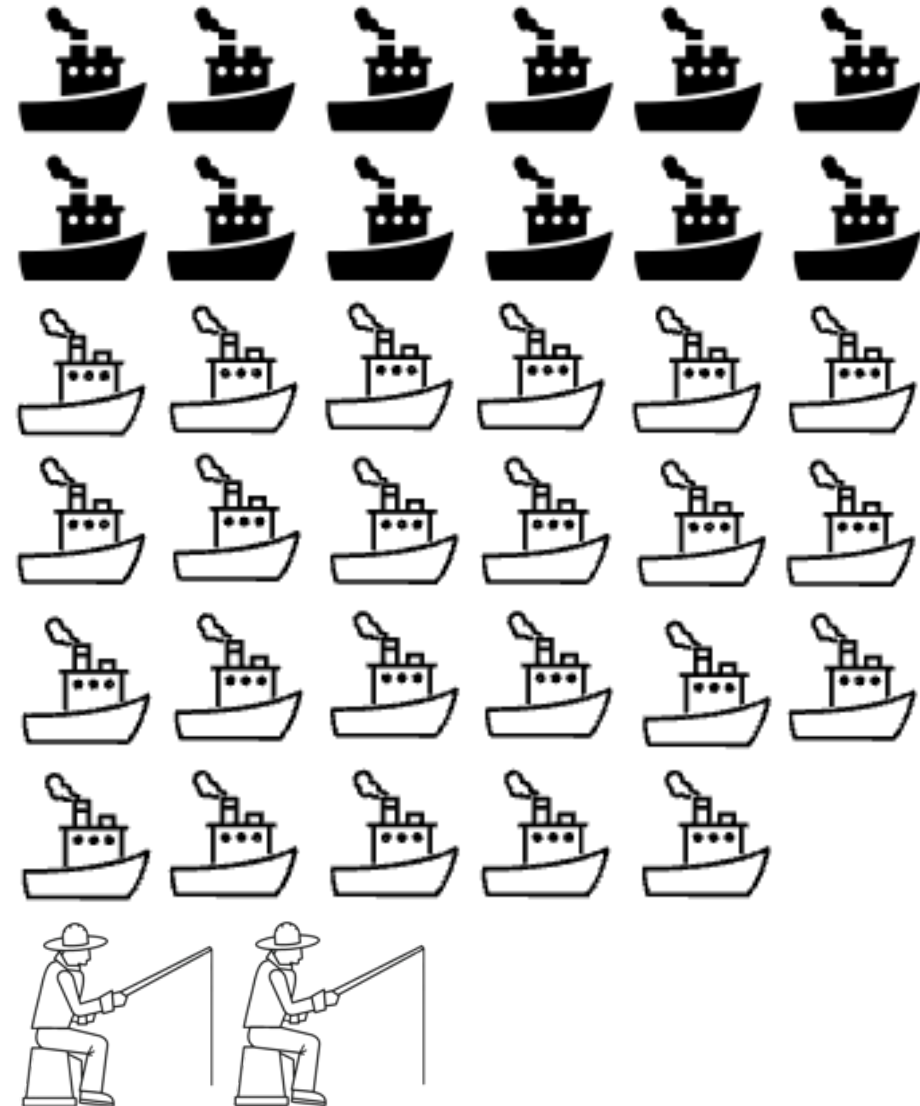
3 boats pending

3 boats for the Northern Territory

11 boats for FRDC and AFMA

4 boats for University of Sunshine Coast,
Tuna Australia between Noosa and Eden

Moanas purchased by Charles
Darwin University for Indigenous
Rangers in the NT on Tiwi Island



Going forward

3 boats pending

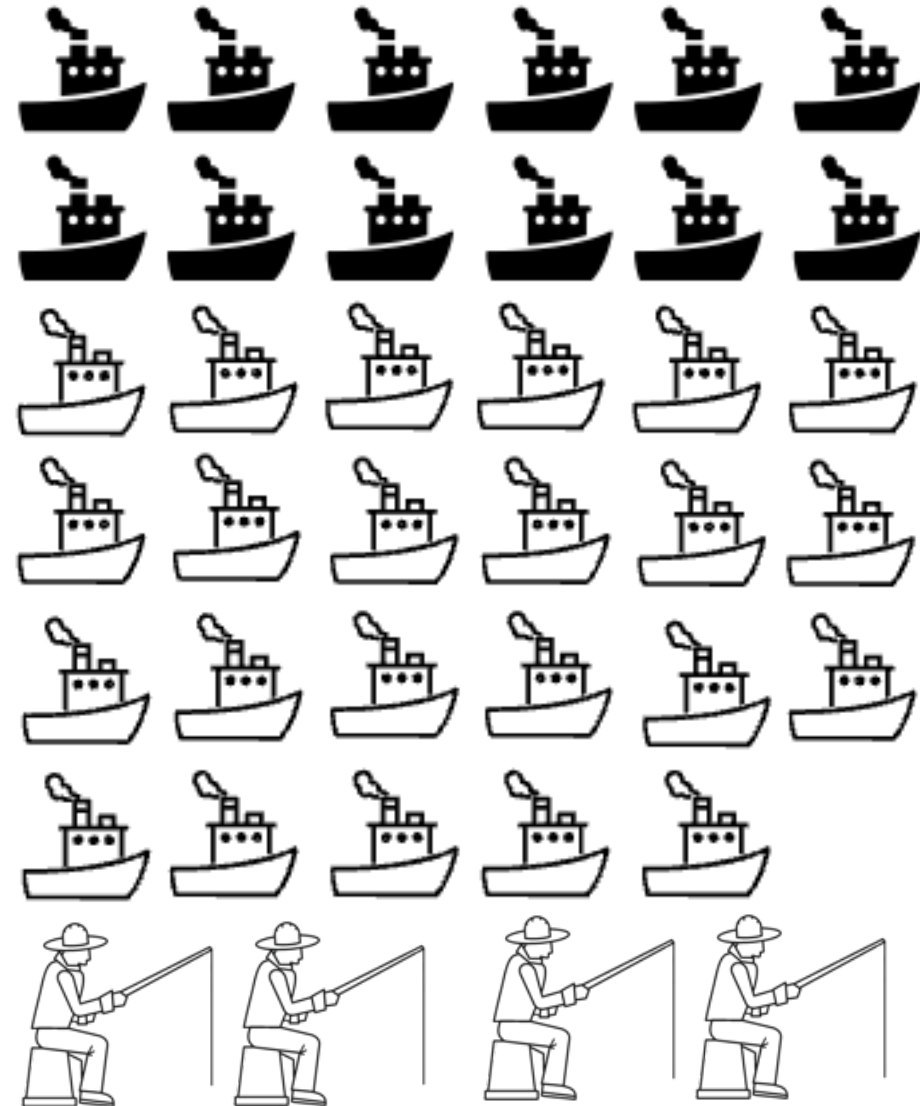
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Moanas purchased by Charles
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2 proposals sent for Marine Parks Australia
for Lord Howe Island and Tiwi Island



Going forward

3 boats pending

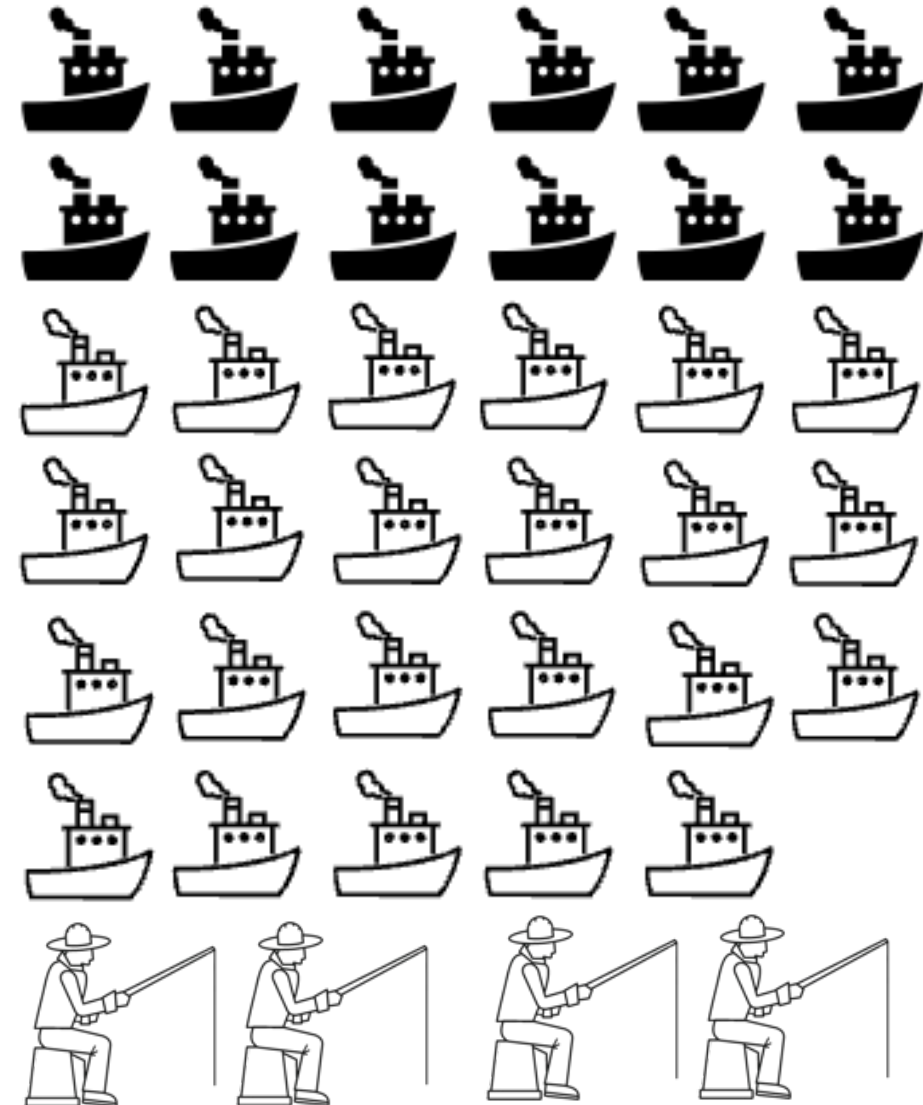
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Darwin University for Indigenous
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2 proposals sent for Marine Parks Australia
for Lord Howe Island and Tiwi Island



We are looking for an Honours student or PhD student to work between us and the NT group



Looking forward to continue building this Industry-Research collaborative international effort

