



Northwest Atlantic
Fisheries Organization

Environmental Observations in the NAFO Convention Area – 2024



Fisheries and Oceans Canada Pêches et Océans Canada

Marine Environmental Data Section
Ocean Sciences Branch

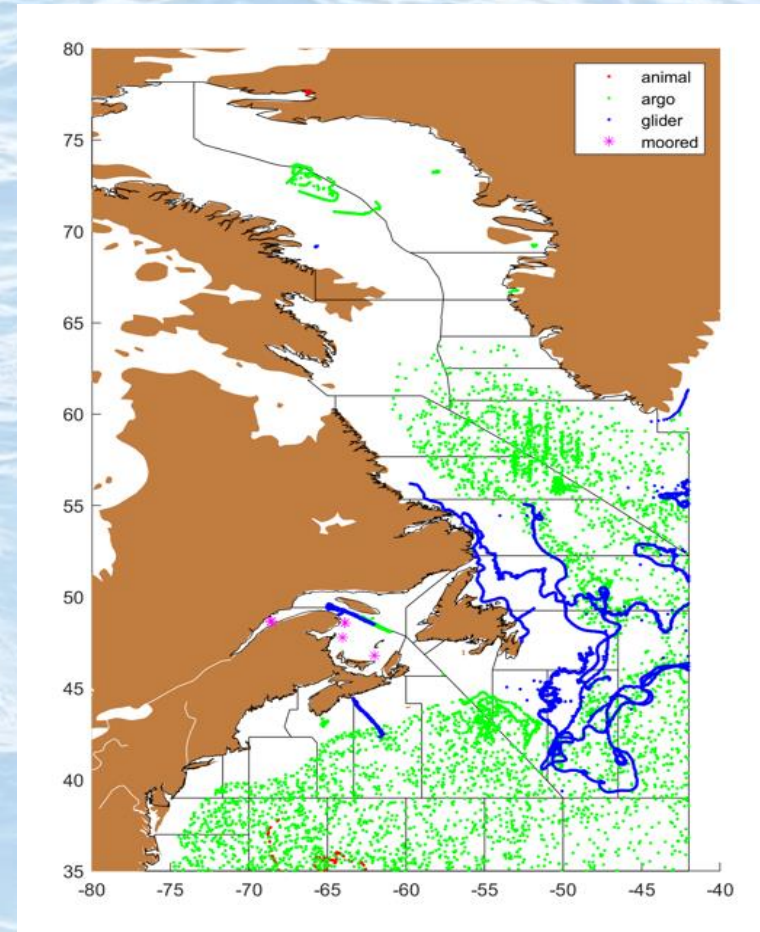
Who We are

- Marine Environmental Data Section (**MEDS**) is the Canada's National Oceanographic Data Center (CNODC) under the International Oceanographic Data and Information Exchange.
- **MEDS** is responsible for acquiring, quality control, disseminating and preserving ocean data collected by DFO.
- Reported annually to **NAFO** (formerly ICNAF) since 1963
- **NAFO's** Regional Environmental Data Center since 1973
- Transmission of near real-time data on the Global Telecommunication System of WMO of operational oceanography
- Mixed data center: *centralized* databases (ocean profiles, tides and water levels, waves, Argo, drifting Buoys, gliders) + data management *coordination* (moorings, Viking buoys)

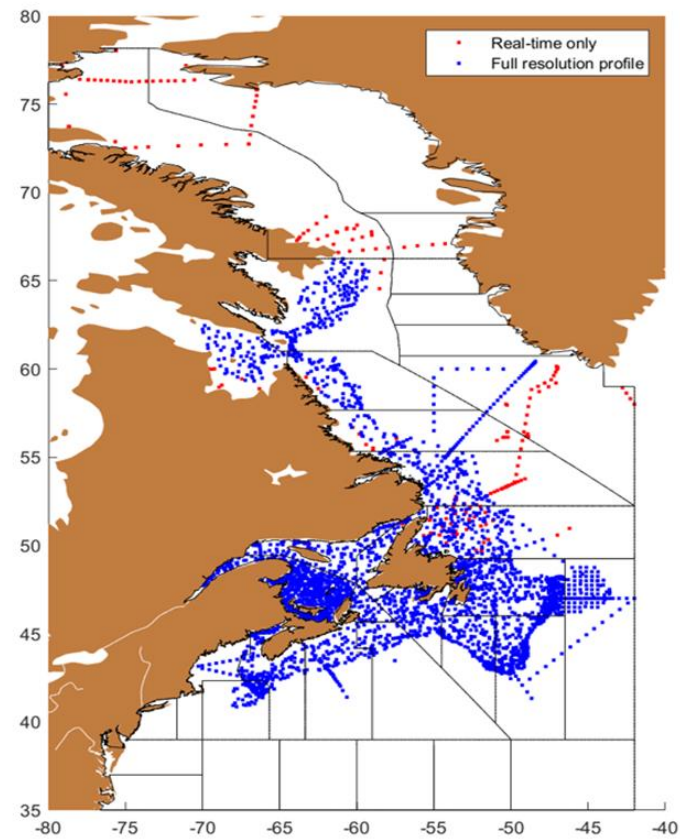


2024- Autonomous Platforms observations

Data Type	Platform Type	Counts (2024 year)	Counts (2023 year)
Oceanographic profiles	Argo (Canada, USA, Germany, France, UK, USA, Ireland, Norway)	5334* profiles from 179 platforms	4965* profiles from 174 platforms
	Moorings - Canada (Viking)	1307* profiles from 4 platforms**	776* profiles from 6 platforms**
	Gliders (Canada)	7951* profiles from 8 platforms	13403* profiles from 9 platforms
	Marine mammals (Sea Mammal Research Units of U. St. Andrew, Scotland)	212* profiles from 2 animal tags	1018* profiles from 5 animal tags



2024 Ship Observations



Data Type	Platform Type	Counts (2024)	Counts (2023)
Oceanographic profiles	Ship (74 CAN ship missions, 3 Spain, 2 France)	8896 profiles 4970 CTD; 1239 CTD RT*; 2352 Bottle; 197 XBT; 138 XBT RT*	8704 profiles 4599 CTD; 1347 CTD RT*; 2390 Bottle; 188 XBT; 180 XBT RT*



Ship observations prior to 2024

Data Type	Platform Type	Counts (2024)	Counts (2023)
Oceanographic profiles	Ship	4148 profiles 3963 CTD; 185 bottle; (from 73 cruises)	12376 profiles 9513 CTD; 2402 bottle; 461 XBT profiles (from 329 cruises)

Data processed in 2024/2025

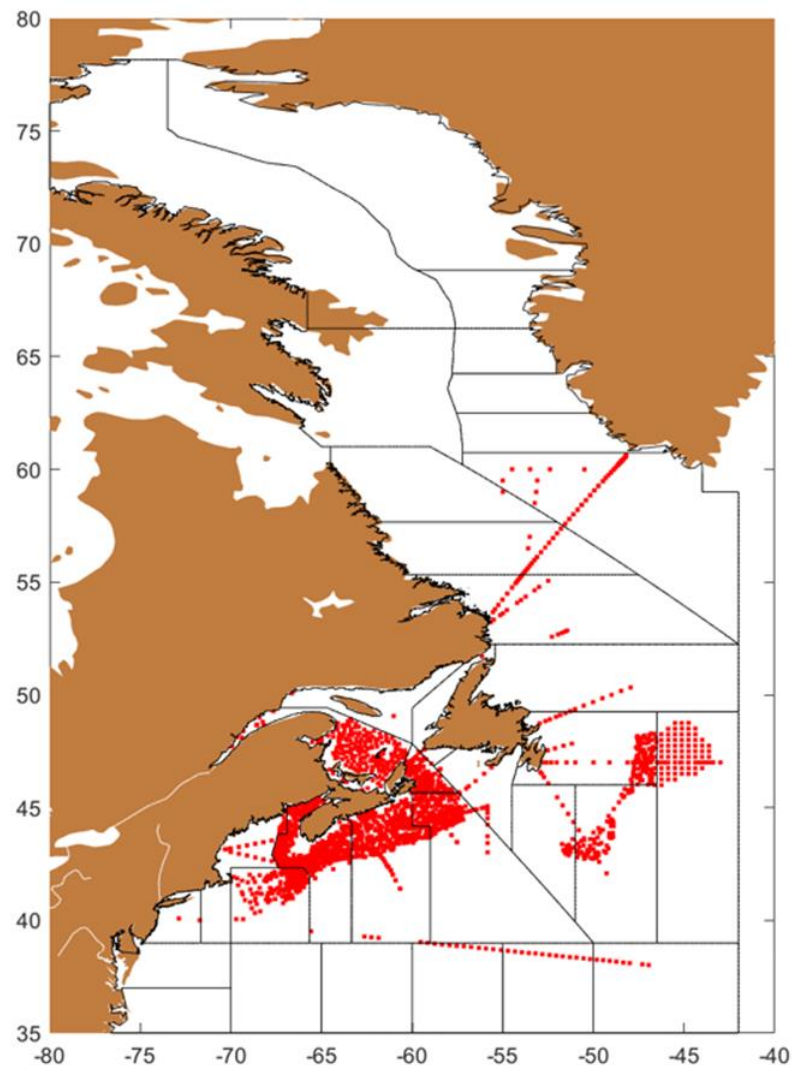


Figure 3: Positions of profiles sampled by ships before 2024 and acquired/processed in 2024/2025

2024 Surface/near-surface observations

Surface/near-surface observations	Platform Type	Counts (2024 year)	Counts (2023 year)
	Ship (thermosalinograph)	65167 obs. from 13 ships	70689 obs. from 11 ships
	Drifting buoys	263717* obs. from 136 buoys	282106* obs. from 122 buoys
	Moored buoys	727954* obs. from 30 buoys	601583* obs. from 21 buoys
	Fixed platforms	90610* obs. from 3 platforms	100364* obs. from 3 platforms
	Water level gauges	35 sites, 1 year each	35 sites, 1 year each

*Data formatted for real-time transmission on the GTS

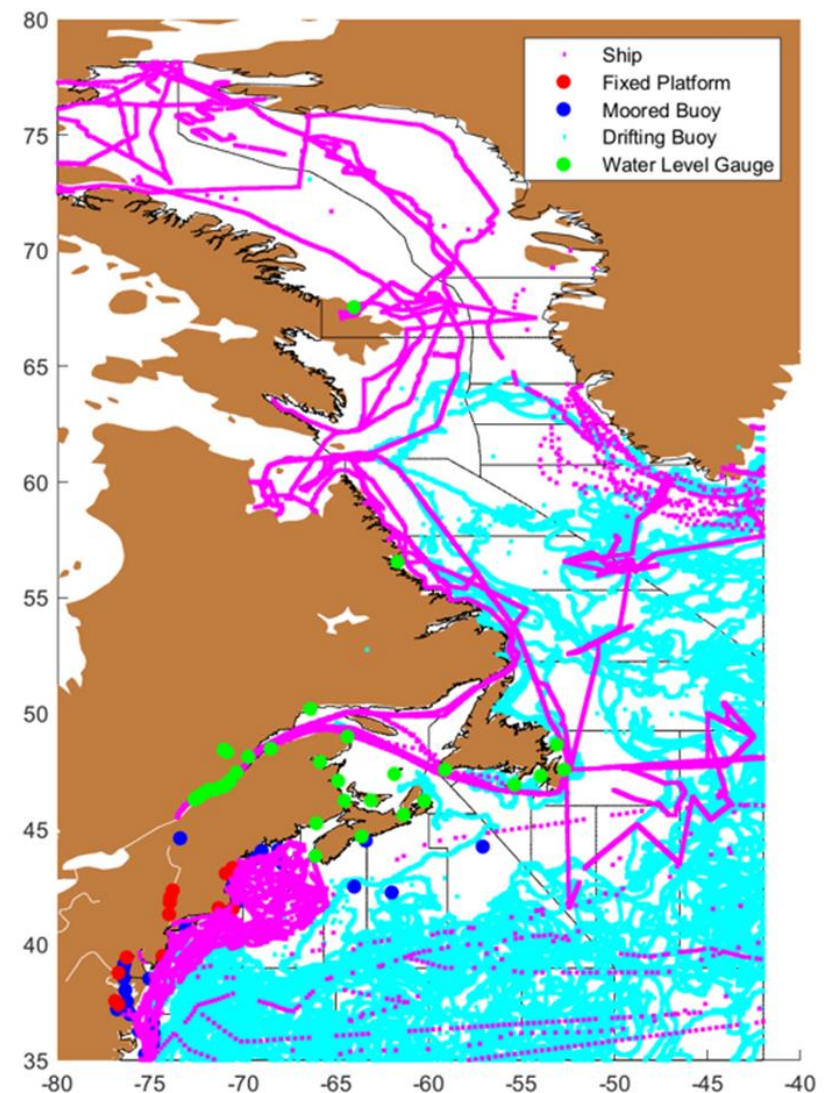
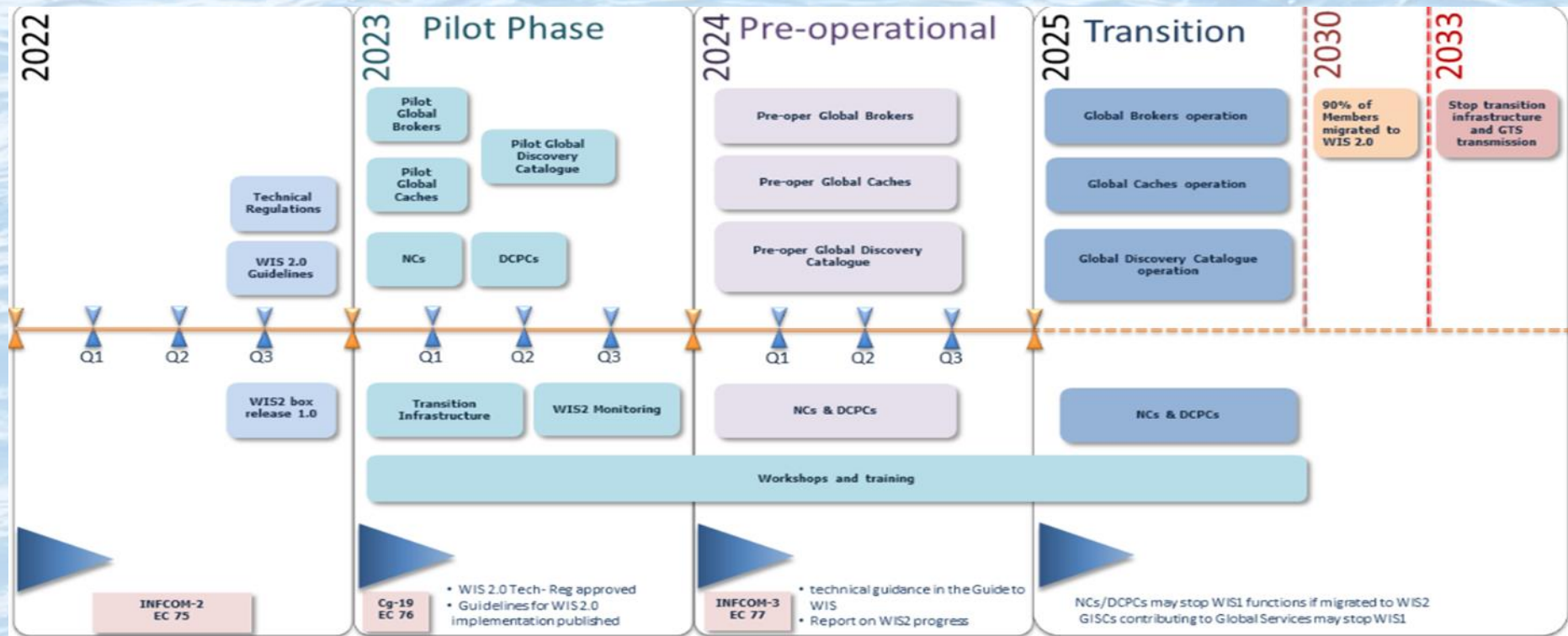


Figure 4: Positions of near surface observations made in 2024

Modernization efforts

WIS 2.0 – WMO information System,

https://community.wmo.int/en/GTS_WIS2_Transition_Guidance



Highlights

- In general, the number of oceanographic profiles collected by autonomous platforms (Argo, Mooring) and ship (CTD, XBT) **increased** in 2024.
- Surface and near-surface observations from ships, drifting buoys, and fixed platforms **decreased**, except for observations from moored buoys.
- The number of water level gauges remained **unchanged**.
- Data Access:
- <https://www.meds-sdmm.dfo-mpo.gc.ca/isdm-gdsi/program/index-eng.html>
- <https://cioosatlantic.ca/data-tools/>





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Chiu, J. 2025. Inventory of Environmental Data in the NAFO Convention Area – Report 2024. Scientific Council Research Document, SCR Doc. 25/015: 1-27.