

Argo National Report 2023: Ireland

1) The status of implementation (major achievements and any issues in 2023):

a) Irish Argo float Overview

In 2023, although Ireland did not deploy any Argo floats, Ireland procured six floats through Euro-Argo ERIC for deployment in 2024

The Marine Institute had intended to deploy a TWR/APEX BGC float, WMO:6901936 in Q.4 of 2023. The float was sent to TWR in early 2022 for overhaul and re-calibration of its sensors. Once the float was received after this overhaul in November 2022 it failed its pre-deployment tests. On further investigation it was discovered that there was likely a hardware issue with the floats CTD sensor. This issue was not present prior to the float being shipped from TWR after the maintenance and calibration work carried out. The float was shipped back to TWR for repair in February 2023. A repair was carried out to the float CTD and was returned to TWR in December of 2023. Unfortunately, as of March 2024 the float has yet to be returned as it has once again failed its pre-deployment testing in TWR.

Marine Institute Argo Float Overview (2023)					
Operational Floats (2023)					
Float	WMO #	Float Identifier	Make/ Model	Deployed	Status
1	6901921	7243	TWR/APEX	23/03/2016	OPERATIONAL
2	6901922	7242	TWR/APEX	14/04/2016	OPERATIONAL
3	6901924	7240	TWR/APEX	10/02/2017	OPERATIONAL
4	6901925	7841	TWR/APEX	11/02/2017	OPERATIONAL
5	6901926	7842	TWR/APEX	20/05/2017	OPERATIONAL
6	6901928	7844	TWR/APEX	12/02/2018	OPERATIONAL
7	6901929	AI2600-17EU001	NKE/ARVOR	12/02/2018	OPERATIONAL
8	6901930	AI2600-17EU002	NKE/ARVOR	27/03/2018	OPERATIONAL
9	6901931	AI2600-17EU003	NKE/ARVOR	06/12/2019	OPERATIONAL
10	6901932	AI2600-17EU004	NKE/ARVOR	29/05/2019	OPERATIONAL
11	6901933	AI2632-18EU038	NKE/ARVOR + (O2)	28/05/2019	OPERATIONAL
12	6901934	AI2600-18EU030	NKE/ARVOR	31/08/2020	Under Ice
13	6901935	AI2600-18EU032	NKE/ARVOR	10/09/2020	OPERATIONAL
14	6901937	AI2600-18EU031	NKE/ARVOR	05/09/2020	OPERATIONAL
15	6901938	AI2600-18EU029	NKE/ARVOR	07/03/2021	OPERATIONAL
16	6901939	AI2632-18EU039	NKE/ARVOR	08/03/2021	OPERATIONAL

Floats to be deployed in 2024					
Float	WMO #	Float Identifier	Make/ Model	Deployed	Status
1	TBC	AI3500-23EU008	NKE ARVOR RBR	TBC	TBC
2	TBC	AI3500-23EU009	NKE ARVOR RBR	TBC	TBC
3	TBC	AI3500-23EU010	NKE ARVOR RBR	TBC	TBC
4	6901936	8350	TWR/APEX BGC	TBC	REGISTERED



b) Technical problems encountered and solved

An issue with a TWR APEX BGC float earmarked for deployment precluded it from being deployed in 2022 and 2023. The float issue is currently being investigated by TWR.

c) Status of contributions to Argo data management

Carried out by BODC for the Marine Institute (Ireland). Carried out by BODC for the Marine Institute (Ireland). In the case of new RBR version ARVOR floats this will be carried out through Coriolis.

d) Status of delayed mode quality control process

Carried out by BODC for the Marine Institute (Ireland). In the case of new RBR version ARVOR floats this will be carried out through Coriolis.

2) Present level of, and future prospects for; national funding for Argo including a summary of the level of human resources devoted to Argo.

Ireland continues to be a committed member of the Euro-Argo ERIC. Ireland, via the Marine Institute National level funding has been received to procure 3 core floats per year on an ongoing basis. The Marine Institute has received 3 RBR ARVOR floats, procured through the Euro-Argo ERIC, for deployment in 2024 with another 3 RBR ARVOR floats on order through Euro-Argo ERIC. The Marine Institute will procure/deploy additional floats where funding allows and will also assist the ERIC in deploying project specific floats where appropriate.

3) Summary of deployment plans (level of commitment, areas of float Deployment, low or high resolution profiles, extra sensors, Deep Argo) and other commitments to Argo (data management) for the upcoming year and beyond where possible.

The Marine Institute deployment plans for 2024 consist of the deployment of 3 core ARVOR floats with RBR CTD sensors in the North East Atlantic with the first earmarked for a cruise to the Rockall Trough in April. These 3 floats will be the first RBR ARVOR floats deployed by the Marine Institute. If the ongoing issues with the TWR APEX BGC float can be resolved, this float will also likely be deployed in 2024.

4) Summary of national research and operational uses of Argo data as well as contributions to Argo Regional Centres. Please also include any links to national program Argo web pages to update links on the AST and AIC websites.

Argo data is primarily used to validate ROMS models in the Oceanographic Services section of the Marine Institute. Argo data will also be utilised by a number of PhD students within the Marine Institute and 3rd level institutes across Ireland. Irish deployed Argo float data may also be used by researchers on an international level as all data is open and freely available.

Irish Argo National Webpage (hosted by the Marine Institute):

<https://www.marine.ie/Home/site-area/infrastructure-facilities/marine-research-infrastructures/argo-network>

Irish Argo Float Data*:

<https://www.digitalocean.ie/>

*May not visualise correctly via Internet Explorer web browser

5) Issues that your country wishes to be considered and resolved by the Argo Steering Team regarding



the international operation of Argo. These might include tasks performed by the AIC, the coordination of activities at an international level and the performance of the Argo data system. If you have specific comments, please include them in your national report.

N/A. Any issues are dealt with via the Euro-Argo ERIC office.

- 6) To continue improving the quality and quantity of CTD cruise data being added to the reference database by Argo PIs, it is requested that you include any CTD station data that was taken at the time of float deployments this year. Additionally, please list CTD data (calibrated with bottle data) taken by your country in the past year that may be added to the reference database. These cruises could be ones designated for Argo calibration purposes only or could be cruises that are open to the public. To help CCHDO track down this data, please list the dates of the cruise and the PI to contact about the data.

No CTD data are uploaded to the CCHDO website.

- 7) Keeping the Argo bibliography (Bibliography | Argo (ucsd.edu)) up to date and accurate is an important part of the Argo website. This document helps demonstrate the value of Argo and can possibly help countries when applying for continued Argo funding. To help me with this effort, please include a list of all papers published by scientists within your country in the past year using Argo data, including non-English publications.

There is also the thesis citation list (Thesis Citations | Argo (ucsd.edu)). If you know of any doctorate theses published in your country that are missing from the list, please let me know. Finally, if you haven't already sent me a list of Argo PIs in your country, please do so to help improve the statistics on how many papers are published including an Argo PI vs no Argo PIs.

N/A.

- 8) How has COVID-19 impacted your National Program's ability to implement Argo in the past year? This can include impacts on deployments, procurements, data processing, budgets, etc.

N/A

- 9) Does your National Program have any deployment plans for RBR floats in the next couple years? If so, please indicate how many floats will you be buying in 2023 and 2024 (if known) and where they might be deployed.

The Marine Institute procured 6 RBR ARVOR floats in 2023 through Euro-Argo ERIC and intend to procure another 3 RBR ARVOR floats through Euro-Argo ERIC in 2024.