

ARGO National Report Ireland

Authors: Sheena Fennell, Kieran Lyons, Fiona Grant

The status of implementation (major achievements and problems in 2008)

In 2008, Ireland deployed the first four floats of the Irish Argo programme. An ERDF (European Regional Development Fund) grant was used to procure 12 floats - four floats will be deployed each year over the lifetime of Euro Argo PP.

The first four floats were deployed in the Rockall Trough in March 2008 from the R.V. Thalassa in conjunction with the Marine Climate Change team, headed by Glenn Nolan.

Floats deployed and their performance

Four floats were deployed from the R.V. Thalassa during March 2008 at the following locations.

Float ID	Deployment Date	Latitude	Longitude
6900647	2/3/2008	54.11	-14.45
6900648	2/3/2008	54.39	-15.69
6900649	29/2/2008	53.00	-15.51
6900650	29/2/2008	53.60	-16.58

Their tracks throughout the year can be seen from the diagrams below.

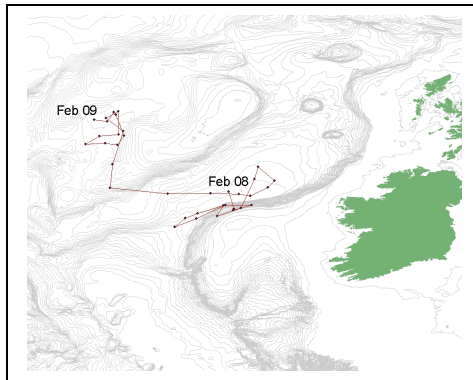


Figure 1: WMO 6900647

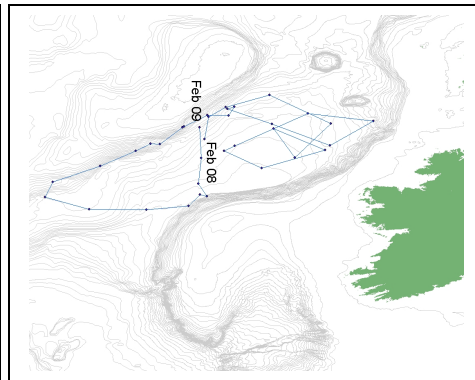


Figure 2: WMO 6900648

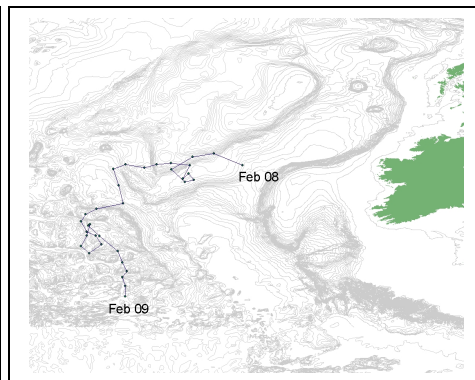
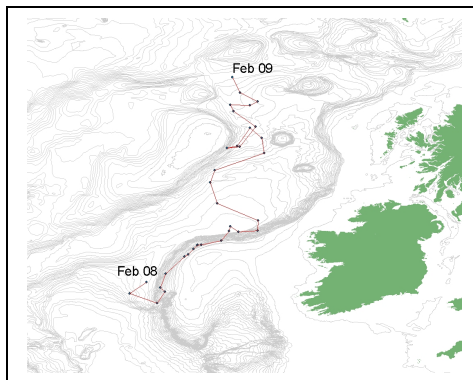


Figure 3: WMO 6900649

Figure 4: WMO 6900650

Technical problems encountered and solved

Float	Technical Problem	Resolution
6900647	During August it was noticed that the salinity data was not comparing well with the model output developed in the Marine Institute.	BODC placed the float on the grey list until the 27/12 when it was reinstated.

Status of contributions to Argo data management

The MI have secured agreement from the BODC to facilitate the delivery of 'real-time' Argo data and validate the 'delayed-mode' data from the Irish floats. The cost of the data delivery and processing is currently being provided by the Marine Climate Change programme in the MI. The Climate Change Programme is in place for a period of two years (until September 2009).

Status of delayed mode quality control process

While there is an agreement with BODC for perform delayed mode processing on the Irish Argo floats, this has not yet been completed due to a backlog of work within BODC.

Present level of and future prospects for national funding for Argo including a summary of the level of human resources devoted to Argo

The Irish Argo programme is managed by the Marine Institute (MI). During the Euro-Argo PP, MI staff will be lobbying to secure longer term funding for the infrastructure. The MI are WP leaders for Implementation Strategies in the [ESONET NoE](#) project and are WP leaders for the Business Planning and Legal Work aspects of [EMSO PP](#). It is envisaged that mechanisms to leverage additional funding for large scale infrastructures may be identified in these projects which may also benefit the case for Euro-Argo.

The Marine Institute requested a budget for Argo floats as part of the Marine Climate Change programme 2009-2013 for continuation of the Euro Argo programme as part of the GCOS component of the UN IPCC. The budget request was for ~6 floats per year over the five year period. This went to cabinet in September/October for approval, but December 2008, the MI received news that this funding would not be forthcoming.

At the same time the MI has been in contact with GMES national representatives and important updates were supplied to the Higher Education Authority in Ireland. The MI submitted a response describing current Irish involvement in the projects on the ESFRI Roadmap and the likely scale of resources involved, should Ireland decide to participate in the construction and implementation of these projects in the years ahead.

In January 2009, the MI contacted national representatives for the FP7 (Space) committee in relation to a proposed call for funding in 2010. We have received confirmation that this initiative has been prioritised for Ireland, and is supported by our ESFRI national delegates who are interested in how funding can be secured for the construction of research infrastructures on the ESFRI Roadmap.

We continue to keep a watching brief for any national funding opportunities specifically relating to Euro-Argo.

One section manager (Glenn Nolan), one team leader (Fiona Grant) and two Science and Technical Officers (Kieran Lyons and Sheena Fennell) are responsible for the delivery of the

Euro Argo programme in Ireland. The programme is overseen by the Director of Ocean Science Services, Michael Gillooly.

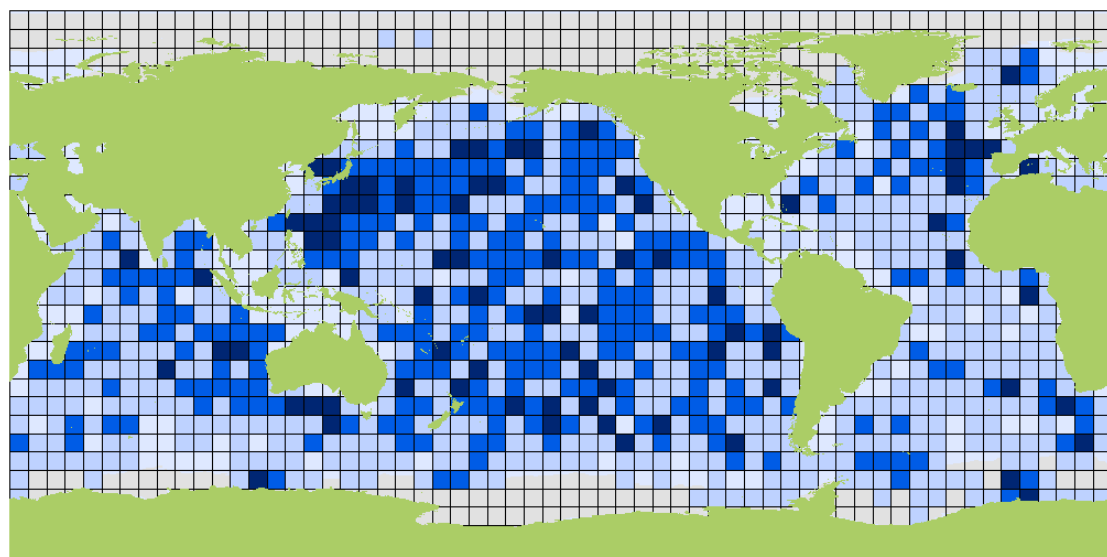
Summary of deployment plans (level of commitment, areas of float deployment) and other commitments to Argo (data management) for the upcoming year and beyond where possible.

During 2009 four more Argo floats were deployed during the standard section ICES cruise on the R.V. Celtic Explorer at the following locations.

Float ID	Deployment Date	Latitude	Longitude
6900651	11/2/2009	55.59	-13.95
6900652	12/2/2009	54.81	-11.84
6900653	8/2/2009	52.99	-15.63
6900654	9/2/2009	53.93	-16.89

Prior to deployment, the MI consulted the Argo Network Age (6x6) and Argo Network Density (6x6) maps to get a better indication of where a deployment could better contribute to the global array.

From the map below, we identified that there was less than 75% coverage of the array in the Rockall Trough for floats returning good data.



2926 Argo Floats
Not Grey Listed
Not Beached
#Profiles GDACs > 0

November 2008

□ 0 □ < 75% □ 75 - 150% □ > 150%



MI staff have been requested to reference the deployment planning tools prior to identifying cruises for future deployments. Four floats remain to be deployed in 2010. No funding for floats beyond this timeframe has yet been secured. Given the current economic uncertainties in Ireland and abroad, we think it unlikely that Ireland will be able to secure significant national funding for the array in the short to medium term.

BODC are continuing to provide data management support for the Irish Argo floats.

Summary of national research and operational uses of Argo data as well as contributions to Argo Regional Centers.

As part of WP5, a project was developed to routinely compare Argo profiles with the Marine Institute North Eastern Atlantic ROMS Model. On a weekly basis, the ARGO temperature and salinity profiles are compared with model temperature and salinity profiles from the same

location and closest time stamp. Profile plots and validation metrics are created (bias, skewness and RMS of difference; correlation coefficient). These are all available on <http://www.marine.ie/home/services/operational/oceanography/ModelValidation.htm>

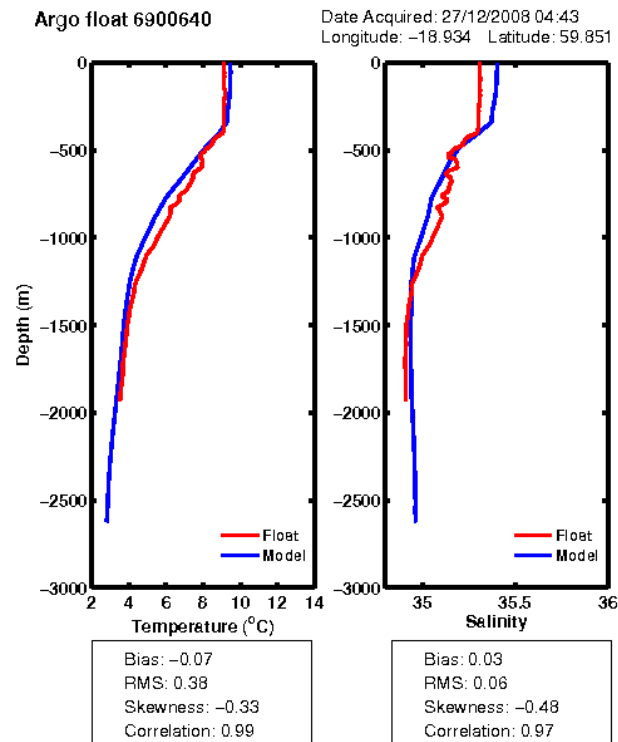


Figure 1: ARGO profile vs. model comparison

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.

The relevant issues for Ireland are being addressed through Euro-Argo.

As part of an action item from AST-9 aimed to improve CTD cruise data being added to the reference database by Argo PIs, it is requested that you include the number and location of CTD cruise data uploaded by PIs within your country to the CCHDO website in the past year. These cruises could be used for Argo calibration purposes only or could be cruises that are open to the public as well.

The MI will be submitting all available CTD cruise data to ICES in spring 2009 (March-April). The AST could seek to update the CCHDO database by liaising directly with ICES to collect CTD data from multiple countries at one source.