

Status of Argo Norway, March 2016

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1. The status of implementation

Argo Norway is the Norwegian contribution to the Euro-Argo European research infrastructure (ERIC) and to the global Argo programme.

Argo Norway has in total purchased and deployed 25 floats. Floats are mainly deployed in the Norwegian Sea. Three floats were deployed in 2002, six floats in 2003, two floats in 2006 that included oxygen and fluorescence sensors, and four floats in 2010 that also included oxygen and fluorescence sensors. In 2013 two floats were deployed in the Norwegian Sea that included oxygen and fluorescence sensors, in 2014 six floats were deployed, two in the Irminger Sea that include oxygen and four in the Norwegian Sea that included oxygen and fluorescence sensors. In 2016 two floats have already been deployed in the Norwegian Sea where one float included oxygen and fluorescence sensors. All floats are APEX floats and the last years these had only Iridium telemetry. At present Argo Norway have seven active floats. Figure 1 shows the number of Argo floats deployed in the Nordic Seas for the different years and number of profiles taken each year. Numbers of deployed floats each year have been irregular, ranging from 2 to nearly 30. Numbers of profiles taken each year have been steady around 1600-1800 the last years.

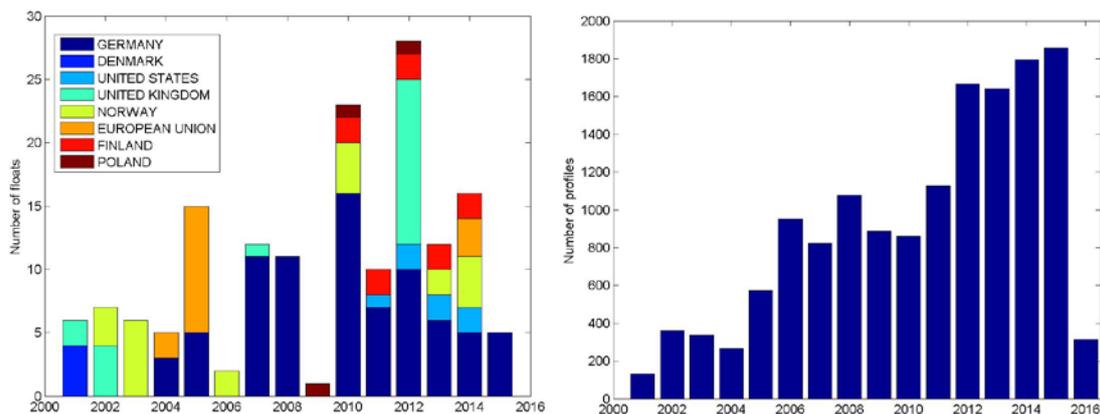


Figure 1. Left: Number of Argo floats deployed in the Nordic Seas. Right: Number of taken profiles in the Nordic Seas (updated 1. March 2016).

Delayed mode quality control

Regarding the “Delayed mode” Argo Germany do delayed mode quality control for all floats in the Nordic Seas including our floats.

2. Present level of and future prospects for national funding for Argo

The funding was self-financed (i.e. funded by our institute) until 2012. In 2012 IMR received funding from the Norwegian Research Council (NRC, Ministry of Education and Research) for funding of three Argo floats per year the next three years (2013-2015). The future funding of Argo is uncertain, but Argo Norway will in 2016 submit a new proposal to the Norwegian Research Council for long-term funding of Argo floats.

3. Summary of deployment plans

In 2016 we have deployed two Argo (APEX) floats in the Norwegian Sea; one standard and one including dissolved oxygen and fluorescence+backscatter sensors. Additional one APEX Electro Magnetic (EM) float will be deployed summer 2016 in the Norwegian Sea. Estimates of future deployments (from 2017) are three floats per year in the Nordic Seas. Some of these floats might include additional sensors (e.g., oxygen and fluorescence sensors) dependent on the funding.

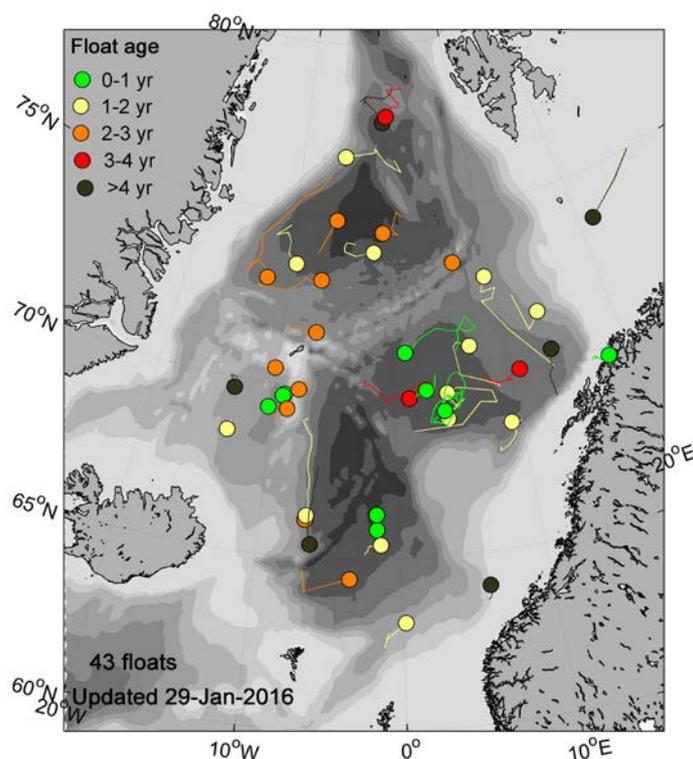


Figure 2. Active Argo floats within the Nordic Seas, updated 29th January 2016. The colours indicate age in years while the thin lines (for some floats) are the drift over the last 2 months.

4. Summary of national research and operational uses of Argo data

Argo Norway focuses on both research topics and marine climate monitoring of the Nordic Seas. Approximately 3 scientists in 3 projects are directly involved in Argo Norway but also other people contribute with technical expertise, data management, ship time for deployments, and processing and analysing the data. There is an increasing interest in using Argo data in Norway, and two climate centres are now using the data operationally in climate models.

The present scientific topics are mainly within the Nordic Seas (Norwegian, Iceland and Greenland Seas) and include:

- Studies of the deep ocean circulation in the Nordic Seas. These studies have so far brought new insights in the circulation of the Nordic Seas.
- Water mass changes and also in relation with biological activities. This topic is also one of the reasons that we have included oxygen and fluorescence+backscatter sensors on the Argo floats.
- Studies that involve changes in the mixed layer.

5. Issues we wish to be considered and resolved

At the moment we have no suggestion.