

Status of Argo Norway, March 2017

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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 and several of these included oxygen and fluorescence sensors. In 2016 two floats were 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.

In total, independent of country, nearly 20 000 Argo profiles have been taken in the Nordic Seas since the start of deployment in 2001. Figure 1 shows the numbers of Argo profiles taken each year for all floats located in the Nordic Seas. The numbers have been around 1800-2000 the last three years.

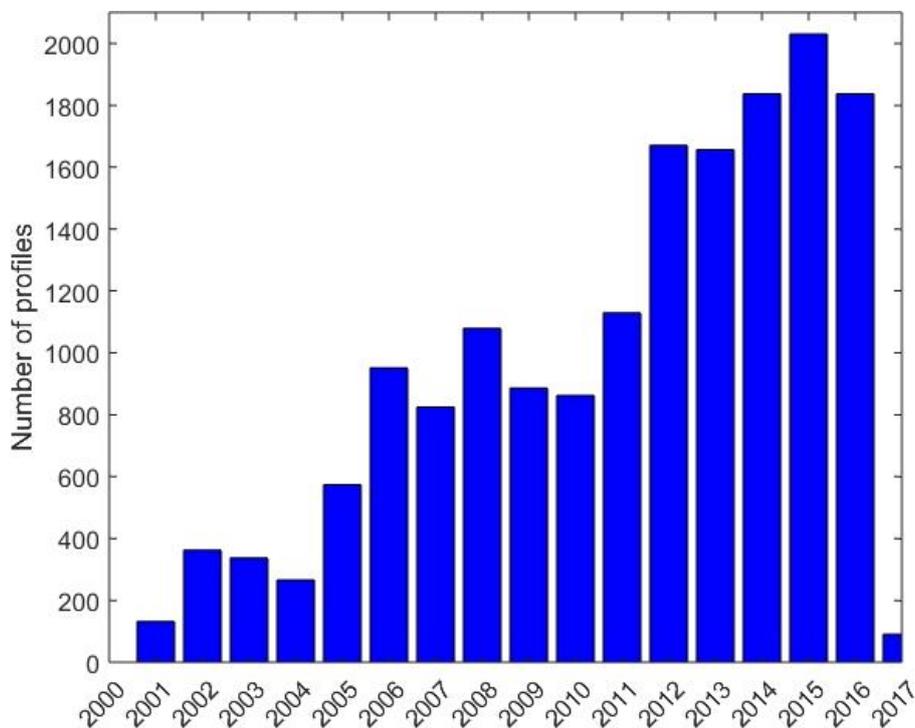


Figure 1. Number of taken profiles in the Nordic Seas (updated 9. March 2017).

At present (9th March 2017) there are 44 operational floats in the Nordic Seas (figure 1). Argo Norway have ten operational floats.

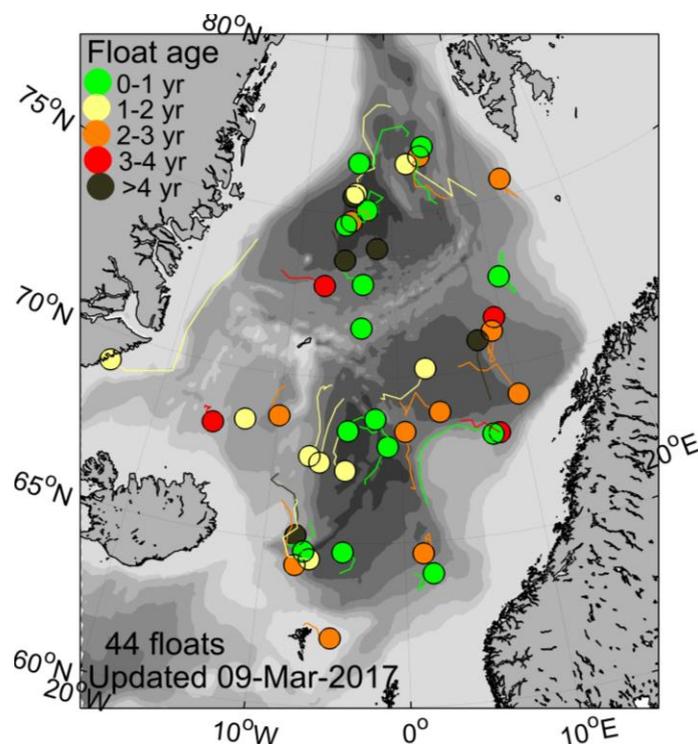


Figure 2. Active Argo floats within the Nordic Seas, updated 9th March 2017. The colours indicate age in years while the thin lines are the drift over the last 2 months.

Delayed mode quality control

Regarding the “Delayed mode” Argo Germany have been doing the 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 has been 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 in October 2016 Argo Norway have submitted a new proposal to the Norwegian Research Council for long-term funding of Argo floats.

3. Summary of deployment plans

In 2016 we deployed two Argo (APEX) floats in the Norwegian Sea; one standard and one that includes dissolved oxygen and fluorescence+backscatter sensors. Additional one APEX Electro Magnetic (EM) float will be deployed spring 2017 in the Norwegian Sea. Estimates of future deployments (from 2018) depends on the outcome of the proposal to the Norwegian Research Council. If the proposal is successful Norway will the next 5 years deploy ~20 floats per year. This includes ~2 BGC floats, 2-3 equivalent BGC floats, ~1 deep float, and ~4 core floats.

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.