

Argo Germany 2011 Report to the Argo Steering Team

Birgit Klein & Marek Stawarz
BSH

1. The status of implementation (major achievements and problems in 2011)

- floats deployed and their performance

Most of the floats deployed by Germany are operated by BSH but additional funding has been acquired by various research institutes, e.g. IFM-GEOMAR in Kiel and Alfred-Wegener-Institut (AWI) in Bremerhaven. Problems in the float procurement in 2010 could be solved and deployments in 2011 were well on target with regard to the planned long-term Germany contribution to the Argo global array at the level of about 60-70 floats per year. Until the end of 2011 the deployments have reached 48 floats: 40 floats in the Northern, tropical and Southern Atlantic and 8 floats in the tropical Pacific Ocean. The deployments in polar regions of the Southern Ocean which have started in 2010 were continued also in 2011.

Germany currently has 183 active floats distributed across the Atlantic Ocean. 17 floats deployed by the IFM-GEOMAR operate in the tropical Pacific Ocean.

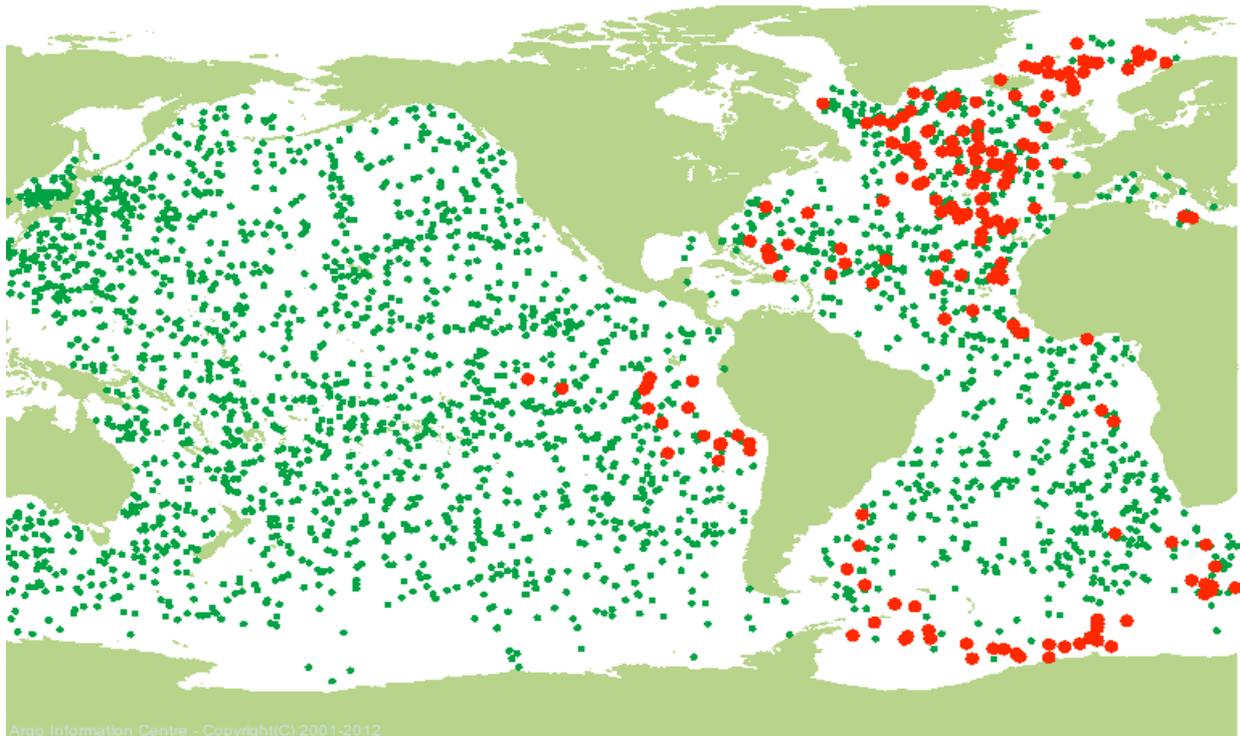


Fig. 1: Locations of active German floats (red) with active international floats (green) (Argo Information Centre, January 2012).

- technical problems encountered and solved

No major technical problems were encountered in 2011. Software problems associated with new firmware in NEMO floats encountered in the past seem to be solved.

- status of contributions to Argo data management (including status of pressure corrections, technical files, etc)

The pressure corrections for all German floats, including floats operating in the Southern Ocean, have been finished. BSH has adopted most orphaned floats in the Nordic Seas belonging to the national programmes from Denmark, Norway, Finland and Poland. The pressure corrections for these floats have also been performed. BSH has also adopted floats from the German research community from research projects for which funding has ceased. DMQC for these floats has been performed.

- status of delayed mode quality control process

The delayed quality control process is well underway and no major delays have been encountered. About 80% of the eligible files has been processed and submitted in delayed-mode.

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

The German Argo Project has been receiving its operational funding by the Ministry of Transportation from 2008 onwards. Overall the level of support is indicated in the table below. It is anticipated to contribute 40-50 floats per year to the global array by Germany, but the exact amount will depend on the actual purchase conditions. The research community has also secured funding for floats in the order of 20 floats per year for the next 3 years which will mostly be used for regional enhancements.

Float purchases in 2011 were marked by an increase in prices which can only be adjusted in the operational budgets after 2012. Funding from the Ministry of Transportation covers only costs related to float procurement and transmission costs, personnel will be provided by BSH. This will consist of 1 scientist and 1 technician.

Year	Float related costs	Manmonth/Year
2008	550k€	24
2009	600k€	24
2010	600k€	24
2011	600k€	24
2012	600k€	24
2013	650k€	24

Table 1. Previous and future operational funding for German Argo.

3. 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.

The deployment plans for 2012 will comprise 66 floats. The main goal is to support the global array in the Atlantic Ocean and will focus on data sparse regions, specifically in the southern Atlantic. A map of the expected deployment positions is given below.

Planned German deployments in 2012: 66

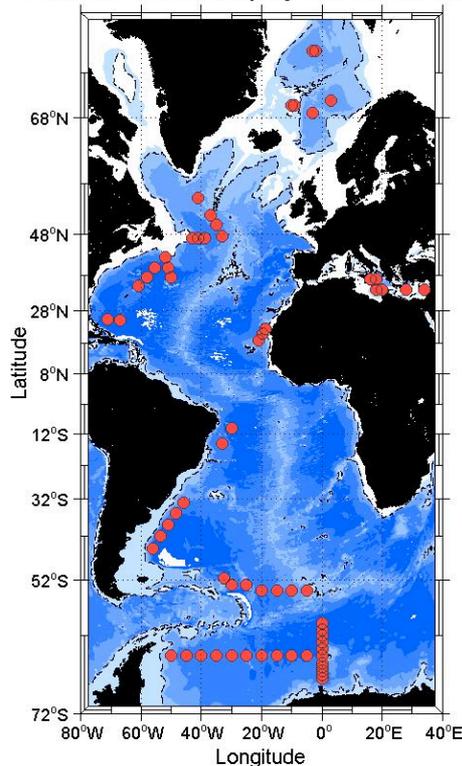


Fig. 2: Location (red dots) of planned German deployments in 2012.

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

Argo data are being used by many researchers in Germany to improve the understanding of ocean variability (e.g. circulation, heat storage and budget, and convection), climate monitoring and application in ocean models (assimilations, boundary conditions).

Germany contributes to the NARC and contributes recent CTD data to the Argo climatology.

5. Issues to be considered:

The data transmission for almost all German floats is still using ARGOS. The few tests with Iridium floats showed mixed results probably due to antenna problems. It would be useful to receive continued updates about the technical progress with Iridium transmission from other programmes. A detailed cost analysis showing costs for the different Iridium transmission options (SBM, Rudics server) would be welcome.

6. Improve the CTD data base

A request has been send to the research community to list the recent CTD data uploaded to CCHDO.

7. Keeping the Argo bibliography

A request has been send out to the our national mailing list to update the Argo bibliography.

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