

Argo National Data Management Report 2018

- BSH (Federal Maritime and Hydrographic Agency), Germany

1. Status

(Please report the progress made towards completing the following tasks and if not yet complete, estimate when you expect them to be complete)

- Data acquired from floats
Presently there are 154 active/operational German floats which all belong to BSH. 30 floats have been deployed in 2018 to date and 22 more will follow until the end of the year. Data from all presently active floats are available from the GDACS.
- Data issued to GTS
All German floats are processed in real-time by Coriolis and immediately inserted into the GTS.
- Data issued to GDACs after real-time QC
All profiles from German floats are processed by Coriolis following the regular quality checks and are routinely exchanged with the GDACs.
- Data issued for delayed QC
At present (25.10.2018) the German Argo fleet comprises 879 floats which have sampled 70778 profiles. 62466 profiles of all eligible files are already available as D-files and 6386 are still pending. The total rate of eligible D-files provided to the GDACs is 88% and has increased from last year's value of 86%.
- Delayed data sent to GDACs
The D-files are submitted by email to Coriolis together with the diagnostic figures and a short summary of the DMQC decision taken and are inserted into the GDAC after format testing.
- Web pages
BSH is maintaining the Argo Germany Web site. The URL for the Argo Germany is: <http://www.german-argo.de/>. It provides information about the international Argo Program, the German contribution to Argo, Argo array status, data access and deployment plans. It also provides links to the original sources of information.
- Statistics of Argo data usage
Currently no statistics of Argo data usage are available. The German Navy uses Argo data on a regular basis for the operational support of the fleet and uses their liaison officer at BSH to communicate their needs. The SeaDataNet portal uses German Argo data operationally for the Northwest European Shelf. Argo data are routinely assimilated in the GECCO reanalysis, which is used for the initialisation the decadal prediction system MiKlip. At BSH the data are used within several projects such as KLIWAS, RACE, MiKlip, ICDC and Expertennetzwerk BMVI. Data are also used in various research groups at universities.
- Products generated from Argo data
A quality screened subset of float data in the Atlantic has been created on the yearly basis and has been exchanged with the universities.

2. Delayed Mode QC

(Please report on the progress made towards providing delayed mode Argo data, how it's organized and the difficulties encountered and estimate when you expect to be pre-operational).

The overall percentage of D-files from all German programs is increasing again and has reached a quota of 88%. BSH had adopted floats from all German universities (except for the AWI) and had performed the DMQC on these. In this year we have also offered to do DMQC also for the yet unprocessed AWI floats. The AWI had issues with their decoders and had re-decoded all their files in 2017 in close communication with Coriolis to improve the technical information, meta data and solve some problems with the timing information of under-ice profiles. The decoding at Coriolis has nearly been finished and it is expected to have new files ready by beginning of November. At the moment 7388 profiles are available from the 187 AWI floats and only 49% are available as D-files. We hope to get this up to 100% as soon as Coriolis releases the new files. For all other floats (692 floats) the DMQC quota has remained at 93%. Additionally some time was spend to update file formats to V3.1, particular for old floats from the universities with BGC sensors with format inconsistencies in the older formats.

BSH has also adopted floats from Finland (28 floats), the Netherlands (87 floats), Norway (31 floats) and Poland (23 floats) for DMQC and is performing DMQC on parts of floats from the MOCCA fleet (42 floats) from the European Union. The progress in these programs providing D-files is good for MOCCA, the Netherlands and Poland with only small numbers of pending D-files. The number of D-files for floats from Norway could be increased considerably from last year when files had been reformatted by Coriolis in the process of moving to file-format 3.1. The DMQC has been repeated after the new files became available and the remaining pending 1387 profiles should be finished this year. There is a remaining issue with floats from Finland and Poland, which are operating in the Baltic and will receive their DMQC decisions from regular laboratory calibrations performed when floats are recovered annually. The system for the DMQC is set-up within the EuroArgo ERIC and will cover these floats.

Some data archeology has been performed to retrieve missing CTD-serial numbers for older floats in the German fleet. The updated information has been exchanged with Coriolis and will be included in the meta-files.

Checks have been performed on the CTDs with serial numbers between 6000-7100 which were suspicious of showing large salinity drifts. The sample of floats from BSH covers 165 floats with deployments ranging from 2013-2016. All floats within the list have been in run through dmqc and are either finished or have their next half-yearly dmqc scheduled within a few months. For 18 floats out of this set the dmqc had showed large positive salinity drift and therefore negative

corrections, two other have received positive corrections and 9 had malfunctioning salinity sensors too bad to be repaired sometimes during their life.

3. GDAC Functions

(If your centre operates a GDAC, report the progress made on the following tasks and if not yet complete, estimate when you expect them to be complete)

- National centres reporting to you
- Operations of the ftp server
- Operations of the www server
- Data synchronization
- Statistics of Argo data usage : Ftp and WWW access, characterization of users (countries, field of interest : operational models, scientific applications) ...

4. Regional Centre Functions

(If your centre operates a regional centre, report the functions performed, and in planning)

5. References