Argo National Data Management Report – Norway 2020

Institute of Marine Research (IMR), Norway

1. Status

- **Data acquired from floats**

Presently there are **29 operative Norwegian floats,** all in the Nordic Seas/Barents Sea. In 2020, **2767 profiles** were acquired (DM: 1209; DM-pending: 417). The left figure below shows the latest Argo locations while right figure shows the number of deployments in the Nordic Seas/Barents Sea/Arctic Ocean (north of Svalbard). Argo Norway deployed 13 floats in 2020.
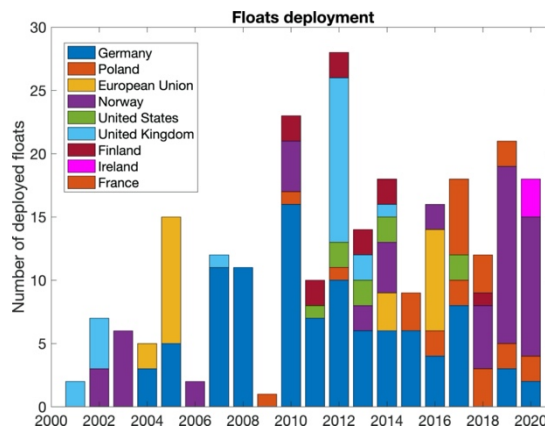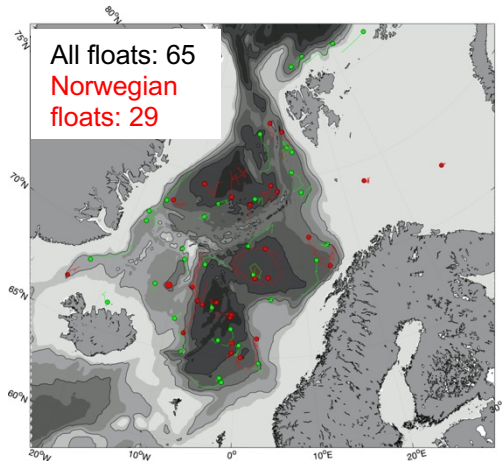
Data from all operational floats are available from the GDACs. Since 2002 Norway has in total deployed 57 Argo floats.

The 29 operative floats consist of:
- 4 BGC floats (all 6 variables)
- 7 Bio floats (4 variables: DO, chla, bbp, irradiance)
- 6 Deep floats with DO.
- 12 core floats

- **Data issued to GTS**

All Norwegian floats are processed in real-time by Coriolis and delivered to GTS.

- **Data issued to GDACs after real-time QC**

All profiles from Norwegian floats are processed in real-time by Coriolis and exchanged with GDACs.

- **Data issued for delayed QC**

At present (24.11.2020) the Norwegian Argo fleet comprises 57 floats. According to Argo Information Center the floats have so far sampled 6059 profiles with 4417 DM-profiles and 501 DM-pending profiles. In 2020 (1. Jan - 24. Nov), **2767 profiles** were acquired (DM: 1209; DM-pending: 417).

- **Delayed data sent to GDACs**

BSH (Germany) has done the Quality Control of core data from Norwegian floats deployed in 2018 and earlier, and the D-files are submitted to Coriolis with a short summary and diagnosis figures. Norway will do DMQC of floats deployed in 2019 and later.

- **Web pages**

A web page for NorArgo (https://norargo.hi.no) has been developed that IMR updates. The web page has a link to daily updates of all operational Argo floats in the Nordic Seas and Arctic Ocean (see figure) and profiles can be visualized.
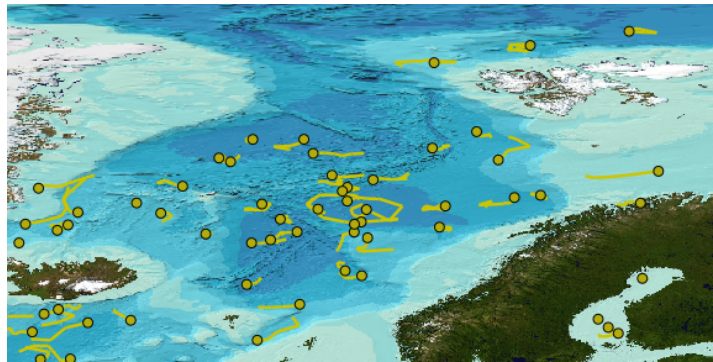
- **Statistics of Argo data**

IMR uses the data as part of the monitoring program for the marine environment in Norwegian waters. The NERSC routinely assimilates the data into their TOPAZ4 model and assimilation system for operational monitoring and forecast of the ocean climate. The data are used in many research projects and in master and Dr. thesis.

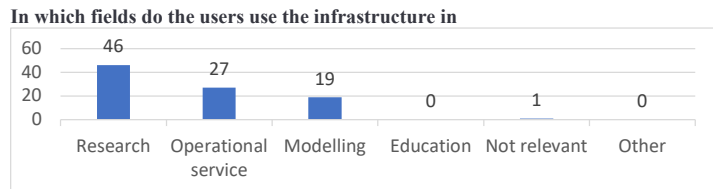We perfomed a user survey in Norway, and some of the results are shown in the table.

In which fields do the users use the infrastructure in

Table 3. Number of users for different fields (several choices can be ticked).
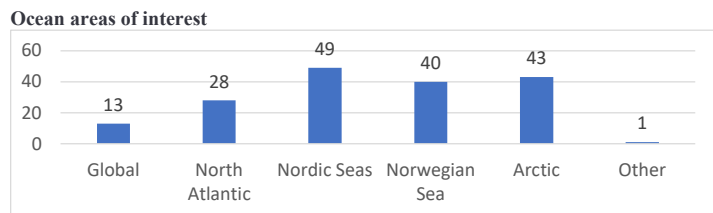

Ocean areas of interest

Table 4. Number of users in which the infrastructure are used for in different ocean areas (several choices can be ticked).

- **Products generated from Argo data**

The ocean heat and fresh water updated.

2. Delayed Mode QC

BSH has adopted older floats from Norway for DMQC (see report for Germany). Norway will do DMQC of 26 floats deployed in 2019 and 2020.

There are **1421 profiles for these 26 floats with 0 DM and 362 DM-pending.** Most of the floats have been QC and the delay is due to issues with producing the D-files. It is expected that D-files will be produced within this year (IMR).

BGC-variables:
DMQC has been performed on the oxygen (NORCE) for 8 Argo floats, in total 626 profiles. We expect to do DMQC for pH (NORCE) and nitrate (IMR) for 3 BGC-floats this year, and DMQC on the other BGC-variables (IMR) next year.

3. GDAC Functions

4. Regional Centre Functions

5. References