

## National Report of Iceland

### Executive summary

This report gives an overview of the work of the Hydrographic and Maritime Safety Department (HMSD) of the Icelandic Coast Guard (ICG) for the period from NHC66 in March 2023 to NHC67 in April 2024.

- A new Coastal chart published in June 2023. No. 45 Bjargtangar – Stigahlíð, scale 1:100.000
- Surveying started in Húnaflói in NW-Iceland in May 2023
- Work on implementation of the CARIS Bathy DataBASE (BDB) on hold, will commence in Q3 2024
- New Head of HMSD as of 1<sup>st</sup> of February 2024

### 1. Hydrographic Office / Service

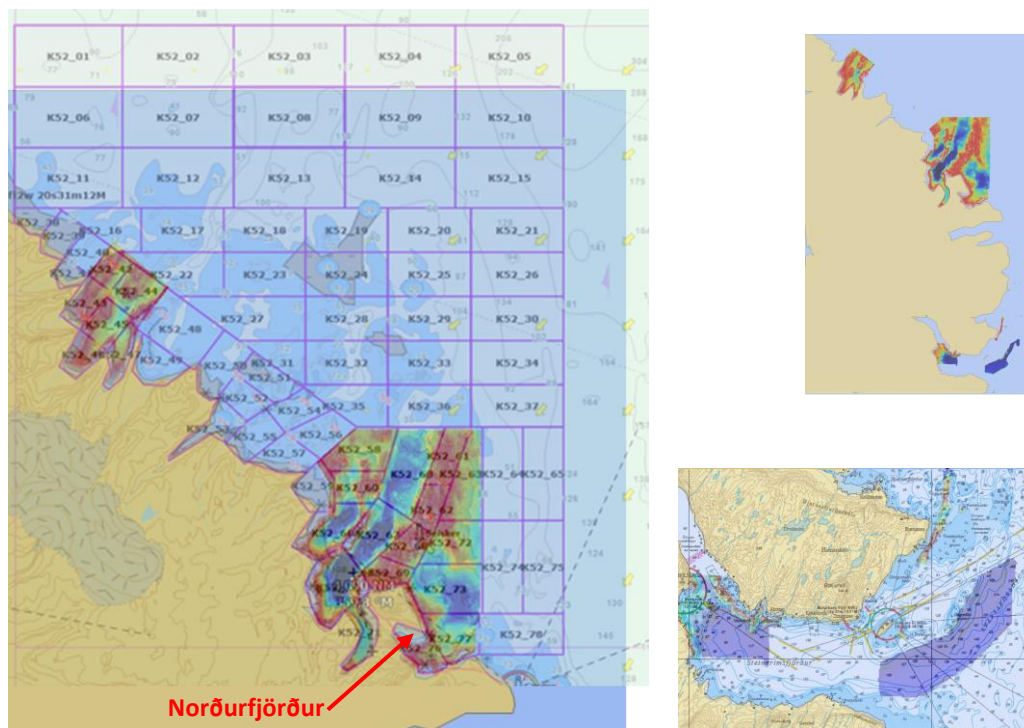
The Icelandic Coast Guard (ICG) is responsible for hydrographic surveying and nautical charting in the waters around Iceland. The Hydrographic and Maritime Safety Department (HMSD) carries out these tasks.

Currently the HMSD consists of eight staff members. In the summer of 2023 one experienced cartographer retired. A Cat-A hydrographic surveyor joined the team in October to strengthen MB data processing and work on the implementation of the bathy database. One employee has been on sick leave for a considerable part of the period which has affected the HMSD capacity.

Mr. Árni Þór Vésteinsson, HMSD head, decided to step down due to illness. On February 1<sup>st</sup>, 2024, Mr. Guðmundur Birkir Agnarsson was appointed Head of the Hydrographic and Maritime Safety Department. Mr. Árni Þór Vésteinsson will continue as a senior expert in nautical charting with the HMSD. The IHO Yearbook has been updated with these changes.

### Surveys

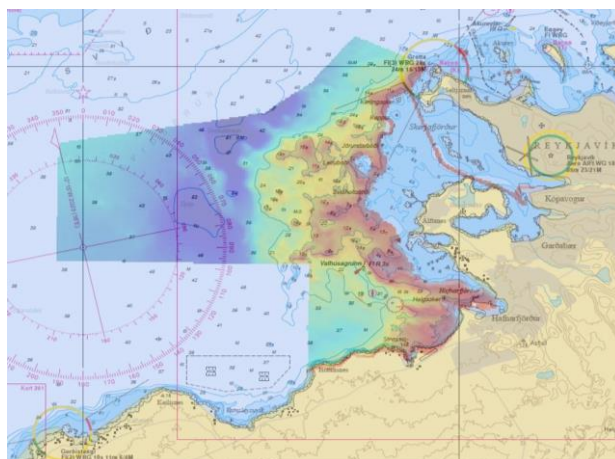
The 2023 survey season was scheduled with 86 survey days. In May 2023, survey vessel BALDUR commenced surveying in Húnaflói bay on the northwest coast of Iceland. The survey season was unusually long this year, but due to a failure in the multibeam echosounder system in the end of August, surveying had to be paused, but was completed in November. Surveying continued until mid-December, in Faxaflói bay, close to Reykjavík. The survey vessel was operated for total 87 days for surveying in Húnaflói bay and in Faxaflói bay.



*Fig. 1. Survey plan in Húnaflói and status of surveying in August 2023 and surveyed areas in Steingrímsfjörður, some distance south of the main survey area.*

In addition to scheduled survey activities, contract work was carried out for the Port Authorities in Reykjavík in relation to works in progress, dredging and key extensions.

In November 2023 a major natural disaster struck the fishing village of Grindavík on the south side of Reykjanes-peninsula in SW Iceland. Formation of a magma tunnel under the village caused intense earthquakes, surface cracks to open and faults to shift. The earth's surface between two faults, running through the entire village from north to south, sank by approximately a metre. The authorities requested a reconnaissance of the depth of the local harbour and as well to investigate if damages had occurred to port structures below sea level. Survey vessel BALDUR surveyed the area. The survey confirmed that depth in the harbour had increased.



*Fig. 2. Surveyed areas in Faxaflói, November-December 2023.*

## 2. New charts & updates

### ENCs

International Centre for ENCs (IC-ENC) distributes Icelandic ENCs. In 2023 8 new editions have been made and 22 updates. In 2024 so far 9 new editions have been made and 8 updates. One new ENC cell was published. Iceland now produces and maintains 74 ENC cells.

### National paper charts

Nine new editions have been published since last report in March 2023. Two new charts were published. The following tables list this.

New charts			
No.	Title	Scale	Pub.
45	Bjargtangar - Stigahlíð	1:100 000	06/2023
710	Borgarfjörður eystri	1:10 000	01/2024

New editions			
No.	Title	Scale	Pub.
362	Reykjavík	1:10 000	06/2023
712	Seyðisfjörður	1:10 000	09/2023
519	Sauðárkrókur	1:10 000	10/2023
417	Ísafjörður	1:10 000	01/2024
313	Þorlákshöfn	1:10 000	02/2024
412	Bíldudalur	1:10 000	02/2024
422	Ólafsvík	1:10 000	02/2024
714	Norðfjörður	1:10 000	02/2024
716	Reyðarfjörður	1:10 000	02/2024

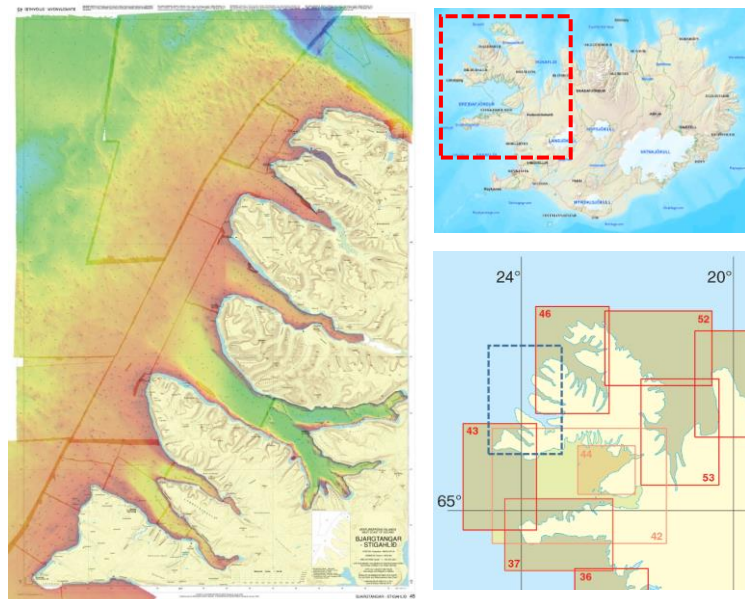


Fig. 3. A new chart, IS45 Bjargtangar – Stigahlíð, was published in June 2023. The chart fills a gap in the 1:100.000 Coastal chart series on the NW coast.

### New harbour charts planned

Nine new harbour plans are scheduled in 2024. Publication of these harbour plans will mark a milestone in the history of Icelandic harbour charts. Harbour charts size A3 will be then available for all medium size ports in Iceland and almost all small size ports. Overview below.

IS No.	Title	Scale	Planned
322	Arnarstapi	1:10.000	Q3-4 2024
517	Blönduós	1:10.000	Q3-4 2024
513	Dranganes	1:10.000	Q3-4 2024
525	Hrísey	1:10.000	Q3-4 2024
526	Árskógssandur	1:10.000	Q3-4 2024
527	Hauganes	1:10.000	Q3-4 2024
531	Grenivík	1:10.000	Q3-4 2024
536	Kópasker	1:10.000	Q3-4 2024
612	Bakkafjörður	1:10.000	Q3-4 2024

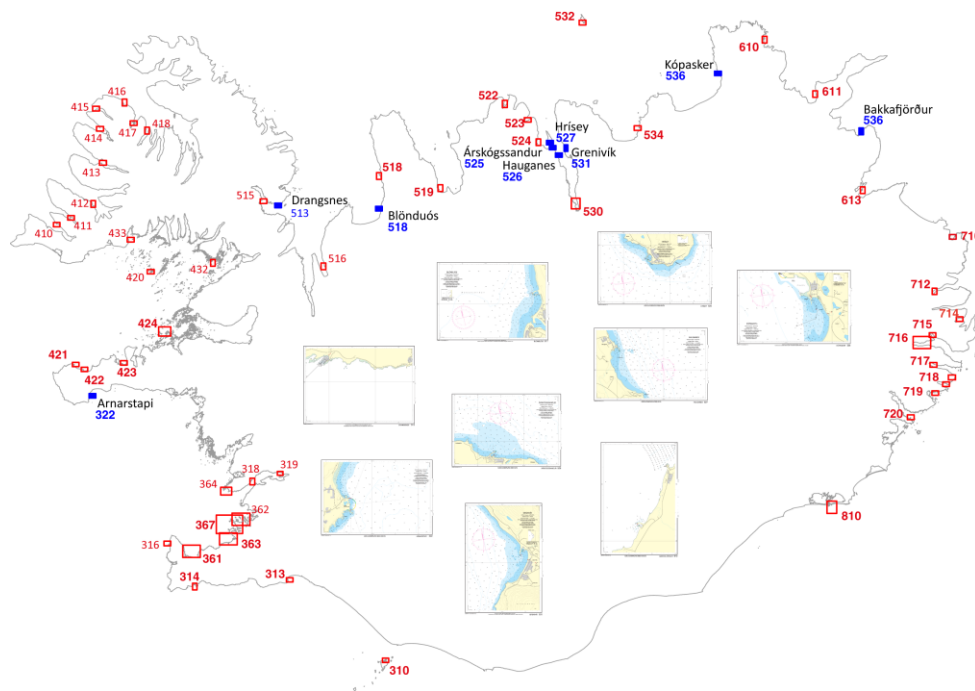


Fig. 4. Existing harbour charts, scale 1:10.000 (red) and planned ones (blue).

### 3. New publications & updates

The annual publications, *Tide Tables 2024*, and *Tide Almanac 2024* were issued in October 2023. The pdf-publications, *List of Lights* and *Catalogue of charts* have been updated. Both are available for download at the coastguard's website: [www.lhg.is](http://www.lhg.is). The *List of Lights* is published on behalf of the Road and Coastal Administration.

Twelve issues of *Notices to Mariners* were published in 2023, 80 NMs in total. Three issues of NMs have been published so far in 2024, total of 26 NMs. The pdf-publications are available for download at [www.lhg.is](http://www.lhg.is).

[List of Lights Catalogue of charts](#)

[Icelandic NMs](#)

[Cumulative list of NMs for Icelandic Charts](#)

#### 4. MSI

The Icelandic Coast Guard operates the Icelandic Maritime Traffic Service (MTS). MSI service is an integrated part of that operation. The MTS broadcasts NAVTEX messages for Iceland and the east coast of Greenland. NAVTEX messages for Iceland in 2023 were in total 13.684 (11.743 in 2022) and for Greenland 4.901 (4.525 in 2022). The figures include storm and ice warnings.

#### 5. C-55

Update of C-55 will be completed in 2024. Considerable time has been invested in the updating and organizing of the file-based data management system. The screen captures below show multibeam survey coverage (left) and combined multibeam and single beam coverage (right).

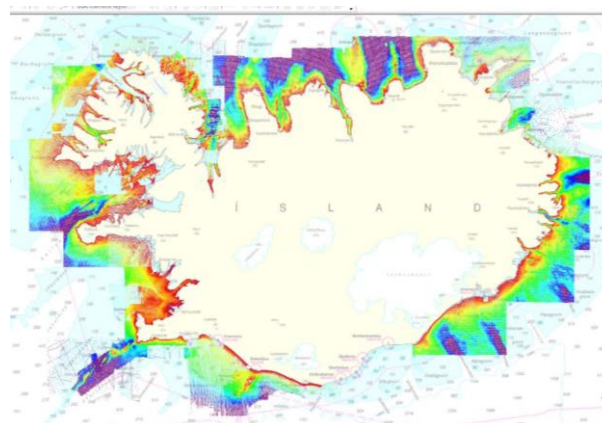


Fig. 5. Coverage of ICG multibeam surveys (left) and combined multibeam and single beam coverage (right).

#### 6. Capacity Building

A member of the staff is doing Cat-B Course at Skilltrade. The course has three stages, basic E-learning that has already started, Essential E-learning that will start in September and finally educational practical project, workshops and a comprehensive final field project that will take place in Ijmuiden, Holland. The course is fully approved by the FIG/IHO/ICA IBSC for Hydrographic Surveyors and Nautical Cartographers.

#### EMODnet Bathymetry

Iceland has delivered a dataset to EMODnet Bathymetry. The dataset contains all depth data used to compile Icelandic charts (processed data). The dataset, a collection of xyz export files from Icelandic charts in June 2019. Future updates will come from the *CARIS Bathy DataBASE* once it has been implemented.

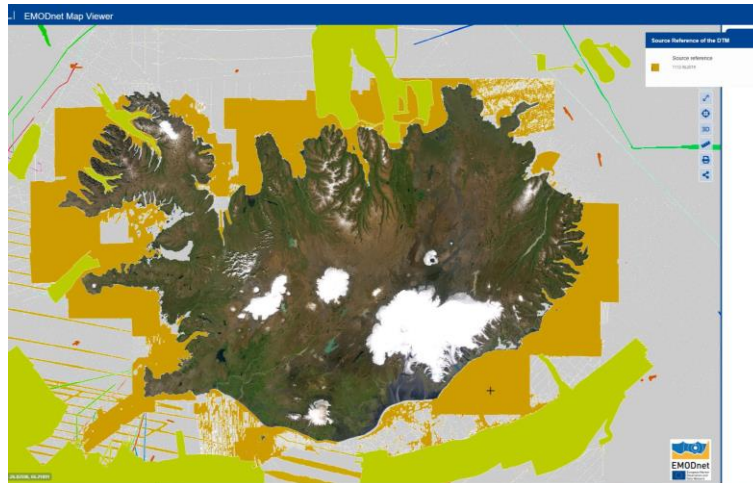


Fig. 6. Coverage of the Icelandic dataset as seen in [EMODnet Map Viewer](#).

## 7. Oceanographic activities

The project of surveying the entire EEZ of Iceland continues. The Marine & Freshwater Research Institute (MFRI) leads the project, with the ICG focussing on survey work approximately within the circular extent of the 200 m depth contour around Iceland. The area is somewhat larger than the area of the Territorial Waters (75.000 km<sup>2</sup>). Red line on the right image below shows the TW (12 NM) and the extent of ICG-HMSD single- and multibeam hydrographic surveys in red and blue.

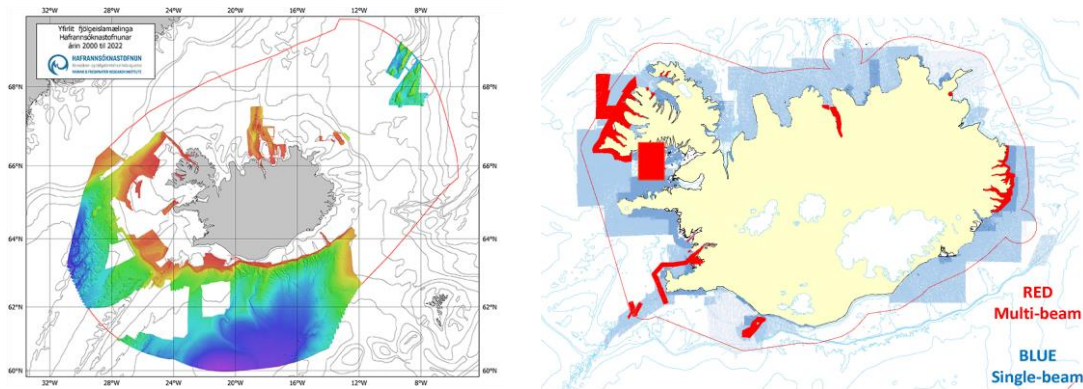


Fig.7. Status of surveying the EEZ of Iceland in 2023. The image on left shows data from MFRI. Image on right shows costal surveying by the ICG. Most recent multibeam surveys of the northern part of the Westfjords not shown.

The MFRI data is available for download at <https://www.hafogvatn.is/en/research/seabed-mapping>

## 8. Spatial data infrastructures

Awareness about the importance of Spatial data infrastructure and Marine spatial data infrastructure has grown in Iceland both at government and municipality level in recent years.

A web portal “Hafsjá” launched 2021. It was Icelandic only in the beginning, but users can now choose English as a second language. <https://atlas.lmi.is/mapview/?application=haf> The web portal offers data layers from several government institutes, with an ICG chart backdrop.

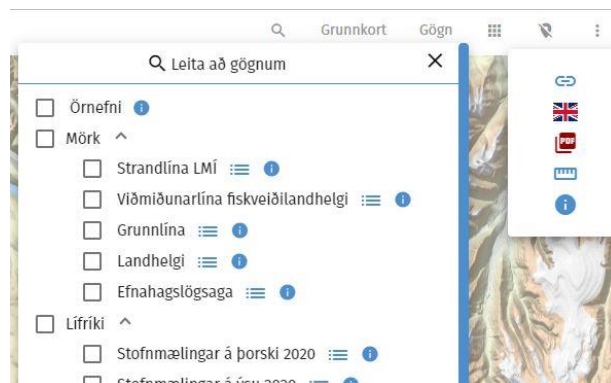


Fig. 8. The Icelandic Ocean Viewer “Hafsjá” offers now the possibility to switch to English.

## 9. Innovation

### CARIS BDB

Work on incorporating *CARIS Bathy DataBase (BDB)* into the Data management and Chart Production processes of the ICG-HMSD has been on hold for some time now. Implementation of BDB will however start again in the second half of 2024. Emphasis has been placed on improved data management to accelerate chart updates and, in part, to respond to an increase in request for data from both public and private users.

## 10. Other activities.

### IHO RHCs, WGs and other work

Representatives of ICG-HMSD participated in the following meetings or workshops held by IHO bodies:

- NHC65 in Aalborg, Denmark, in March 2023
- NSHC36, VTC, in March 2023
- IHO Assembly, in Monaco, in May 2023
- ARHC13 in Nuuk, Greenland, in September 2023
  
- NHC/NCPEG, VTC, in February 2024
- NHC/NSEG in Stavanger, in February 2024

### IC-ENC

Representatives of ICG-HMSD participated in IC-ENC Technical Committee meetings, TC23\_1 in March 2023 and TC23\_2 in October 2023 (VTC) and an IC-ENC Steering Committee meeting in July 2023 (SC24).

## 11. Conclusions:

This report highlights activities of the ICG-HMSD for the period from March 2023 to March 2024.