

National Report of Iceland

Executive summary

This report gives an overview of hydrographic activities for nautical charting by the Hydrographic and Maritime Safety Department (HMSD) of the Icelandic Coast Guard (ICG) for the period from NHC EO1 in April 2020 to NHC64 in April 2021.

1. Hydrographic Office

The “Hydrographic Office” in Iceland is a department within the ICG. According to law is the ICG responsible for hydrographic surveying and nautical charting in the waters around the island. The HMSD carries out the work involved in executing these tasks.

2. Surveys

As mentioned in last report in April 2020 a decision was taken to shift survey focus from Breiðafjörður to the northern part of Vestfirðir. The plan is to survey unsurveyed areas close to coast at the northern tip of Vestfirðir and in the many fjords in Ísafjarðardjúp.

The survey vessel Baldur left home port in May and returned to Reykjavík in September. Before heading to the Vestfirðir survey area first weeks of the 2020 season were spent on surveying the approach to Reykhólar, a small port in the eastern part of Breiðafjörður.

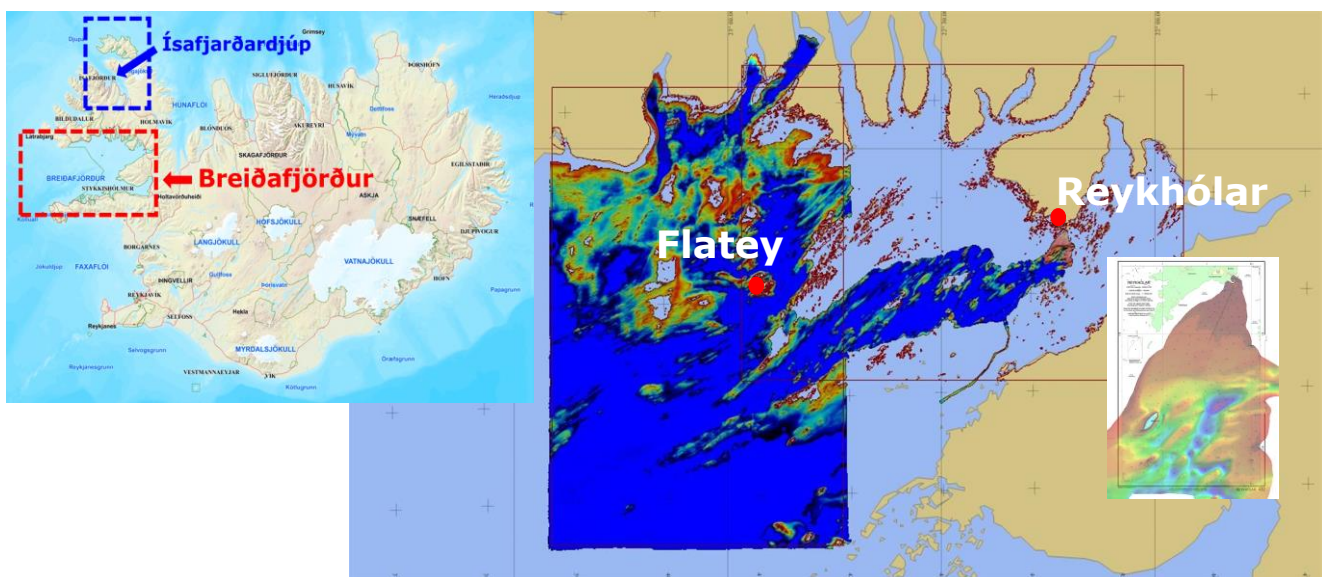


Fig. 1 Approach to Reykhólar in Breiðafjörður surveyed in 2020 and coverage of the 2017-2019 surveys.

The volume of traffic to Reykhólar is small. The port is occasionally visited by a freighter of considerable size fetching algae meal for export, produced by a factory there. The available data before this survey work includes old single beam surveys and lead line surveys. From a navigational safety point of view charts covering the area must be updated. A new chart is therefore high on the list of priorities. The survey work included the port itself and the shallows in the immediate vicinity and a dredged entrance channel.

In 2020 Iceland began to use GNSS RTK positioning for surveying and height models for vertical correction of sea level. Before that the correction was made with tide gauge data. The lesson learned by initiating surveying using GNSS RTK positioning and height models is that vertical height models used for surveying either on land or at sea in Iceland need to be re-established for optimal outcome. The National Land Survey of Iceland (NLSI), Icelandic Road and Coastal Administration (IRCA) are planning projects to do so and the ICG is willing to join forces with the two institutions.

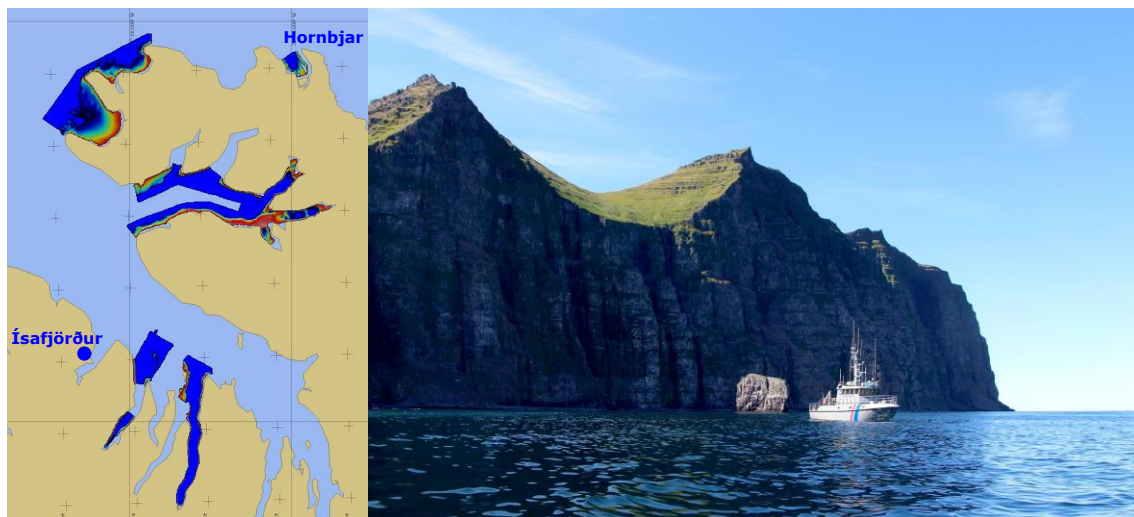


Fig. 2 Surveyed areas in Ísafjarðardjúp and north of Vestfirðir. Photo shows Baldur in front of Hornbjarg (534 m).

The years from 2017 to 2020 saw the number of staff in the department fall below 10 people. The survey section was particularly badly hit and as a consequence a considerable backlog did build during the period. Now that the survey section has two hydrographic surveyors and a surveyor to be the future looks brighter. Current plans thought forecast that it will be some 3 years until the survey section will be on top of things regarding processing of survey data.

In addition to the above-mentioned survey activities some contract work was carried out for the Port Authorities in Reykjavík in relation to works in progress like dredging and key extensions.

3. New charts & updates

ENCs

International Centre for ENC (IC-ENC) distributes Icelandic ENC. New editions and updates were 6 and 6 in 2020. In 2021, Three new editions have been made and 2 updates. Iceland produces and maintains 73 ENC cells.

National paper charts

Five new editions have been published since last report was given. The table below lists new editions published the past 12 months and planned new editions in 2nd quarter of 2021.

National No.	Title	Scale	Pub. month
534	Húsavík	1:10000	07/2020
611	Þórshöfn	1:10000	07/2020
422	Ólafsvík	1:10000	01/2021
423	Grundarfjörður	1:10000	01/2021
316	Sandgerði	1:10000	03/2021
362	Reykjavík	1:10.000	Planned Q2
530	Akureyri	1:10000	Planned Q2
810	Höfn í Hornafirði	1:10000	Planned Q2
46	Ísafjarðardjúp	1:100.000	Planned Q2

Publication of several new charts is planned during 3rd and 4th quarter of 2021. One of those will fill a gap in the Coastal chart series on the NW coast. The chart is no. 45, and its title is Tálkni – Stigahlíð.

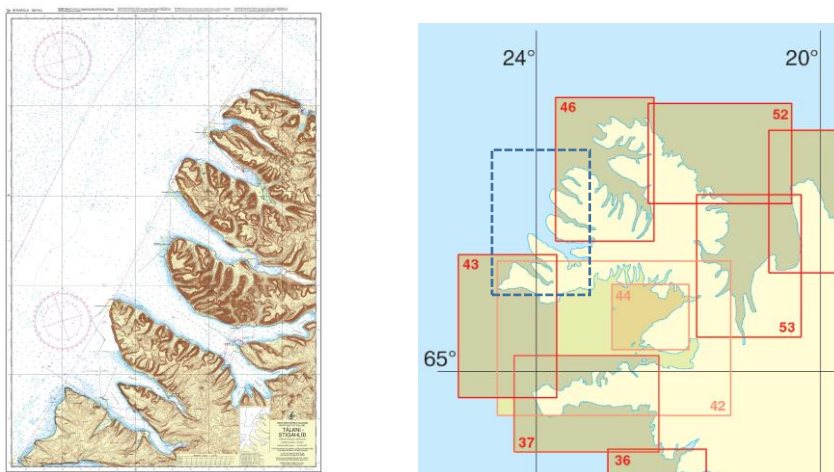


Fig. 3 A new chart, 45 Tálkin – Stigahlíð, in the Coastal chart series will be published in 2021.

Ten new harbour plans at size A3 have been in the making for some time now. All the ten harbour plans are approaching the state of being ready for publication. The harbours in question are: 322 Arnarstapi, a small port on the north coast of Faxaflói. 432 Reykhólar and 433 Brjánslækur, small ports in Breiðafjörður. 517 Blönduós, on the north coast in Húnaflói. 525 Hrísey, 526 Árskógssandur, 527 Hauganes and 531 Grenivík in Eyjafjörður on the north coast. The two remaining are 536 Kópasker in Axarfjörður and 710 Borgarfjörður eystri, in a fjord bearing the same name on the east coast.

4. New publications & updates

The annual nautical publications, *Tide Tables 2021*, and *Tide Almanac 2021*, were published in printed form in the autumn of 2020.

The pdf-publication, *List of Lights* was updated in December 2020 and *Catalogue of charts* was updated in March 2020. Both are available for download at www.lhg.is. The List of Light is published on behalf of the Road and Coastal Administration.

Three issues of *Notices to Mariners* were published in 2020, 29 NMs in total. One issue of NMs has been published so far in 2021, total of 18 NMs. In connection with NMs 1/2021 a new form of the *Cumulative list of Notices to Mariners for Icelandic Charts* was launched.

5. MSI

The Icelandic Coast Guard runs VTS. MSI service is an integrated part of that operation. The ICG VTS services Iceland and Greenland. NAVTEX messages in 2020 were in total 11.748 for Iceland and 5.063 for Greenland. The figures include storm and ice warnings.

6. C-55

Iceland hasn't updated C-55 for some years now. Last update made in November 2016. Update will have to be moved higher on list of priorities.

7. Capacity Building

The years from 2017 to 2020 saw the number of staff fall below 10 people. The department has consequently had to deal with considerable backlog that did build during the period. It was therefore a very welcomed addition when new members of staff joined the department in 2020. Prospective hydrographic surveyor in April and nautical cartographer to be in June.

The staff of the department received training in use of *CARIS BASE Editor* (BE) in June 2020 and for the setup and initialization of *CARIS Bathy DataBase* (BDB) in March 2021. In preparation of BDB implementation in Iceland members of staff had VTC meetings with people from the HydroTeam at the Danish Geodata Agency on their experience in running the *CARIS Bathy DataBase*.

In February 2021 Iceland had an online meeting with representatives of the Faroese Environment Agency which deal with navigation charts and nautical publications.

Head of the department was invited to observe the EMODnet Bathymetry–High Resolution Seabed Mapping 2020 – 2022 (HRSM3) in March 2021. Iceland is considering whether to join EMODnet Bathymetry. A decision has not yet been taken.

8. Oceanographic activities

The project of surveying the EEZ of Iceland, which the *Marine & Freshwater Research Institute* (MFRI) leads, and ICG takes part in, continues. The focus of ICG-HMSD lies approx. within the circular extent of the 200 m contour, which is somewhat larger than the area of the Territorial Waters. Red line on the image on the right below shows the TW (12 NM) and the extent of ICG-HMSD modern hydrographic surveys.

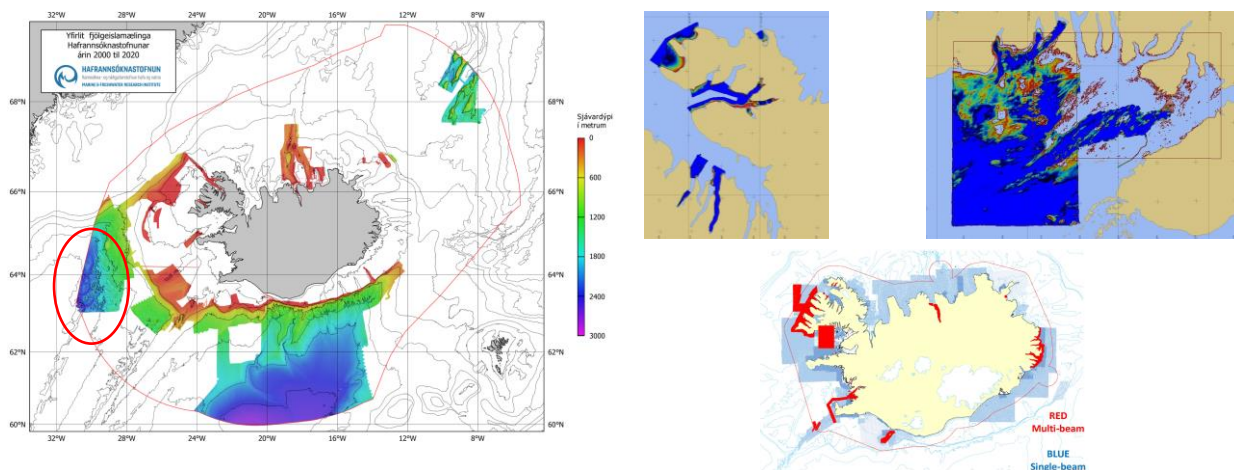


Fig. 5 Status of surveying the EEZ of Iceland. The image on left shows data from MFRI. New data circled in red. Images on right show nearshore and offshore surveying by the ICG.

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

9. Spatial data infrastructures

The ICG HMSD has good relations with the National Land Survey of Iceland (NLSI) which is responsible for SID in Iceland. Iceland has on and off in the past taken part in the work of the ARHCs ARMSDIWG and has a representative in the WG. The department does for the time being not have the capacity to put more than minimal effort in MSDI matters. MSDI deserves thought to be higher on the list of priorities.

10. Innovation

The plan for the second half of 2021 is to incorporate *CARIS Bathy DataBase* (BDB) into the Data management and chart production processes.

POD service will be launched on June 1st, 2021. Icelandic paper charts updated according to latest NMs will be available in POD from that time. Conventional printing for stock will be terminated. Work in preparing pdfs of charts for the POD will finish this month.

11. Other activities.

IHO RHCs, WGs and other work

Representatives of ICG-HMSD participated in the following: **a)** ARHC Intersessional VTC-01 in April 2020 **b)** ARCH10 (VTC) in August 2020 **c)** IRCC12 (VTC) in October 2020 **d)** IHO A2 Virtual Assembly in Nov. 2020.

IC-ENC held the following VTCs: IC-ENC 4th Technical Conference in October 2020 and IC-ENC Steering Committee meeting in November 2020.

Maritime Administration in Iceland

The tasks and obligations of a Maritime Administration in Iceland is divided between two government agencies. The *Icelandic Road and Coastal Administration (IRCA)* and *Icelandic Transport Authority (ICETRA)*.

IRCA takes care of all harbour and lighthouse operations and responsibilities including surveying of ports. POCs at ICG and IRCA exchange information and data on a regular basis.

ICETRA is responsible for the administration and supervision of aviation, maritime and road traffic safety and the safety and supervision of transport infrastructure and navigation systems. POCs at ICG and ICETRA exchange information and data as and when needed.

12. Conclusions:

This report highlights activities of the Hydrographic and Maritime Safety Department of the Icelandic Coast Guard for the period from April 2020 to April 2021.