IRCC 13 Report from the Baltic Sea Hydrographic Commission (BSHC)
VTC, 23-25 June 2021

IRCC13-06.1F

1. **Chair:**
Mrs. Pia Dahl Højgaard (Denmark); from 29 August 2018

Captain Andrzej Kowalski (Poland); from 12 September 2019

Captain Dariusz Kolator (Poland); from 14 October 2019

Mr. Magnus Wallhagen (Sweden) from 22 September 2020

Vice-chair:
Captain Andrzej Kowalski (Poland); from 29 August 2018

Mr. Patrik Wiberg (Sweden) from 12 September 2019

Mr. Rainer Mustaniemi (Finland) from 22 September 2020

2. **Membership**

Member States:	Denmark, Estonia, Finland, Germany, Latvia, Poland, Russian Federation, Sweden
Associate Member:	Lithuania
Observers:	United Kingdom, USA

3. **Meetings:**

23rd BSHC: Aalborg (Denmark); 28-29 August 2018

24th BSHC: Gdańsk (Poland); 10-12 September 2019

25th BSHC: VTC; 22 September 2020

Next meeting:

26th BSHC: Stockholm (Sweden); 21 – 23 September 2021

4. **BSHC Working Groups:**

- Re-Survey Monitoring Working Group (MWG)
- Chart Datum Working Group (CDWG)
- Baltic Sea Bathymetry Database Working Group (BSBDWG)
- Baltic Sea North Sea Marine Spatial Data Infrastructure Working Group (BSNSMSDIWG)
- Baltic Sea MSI (Maritime Safety Information) Working Group (BSMSIWG)
- Baltic Sea INT Chart Coordination Working Group (BSICCWG)

5. Agenda Items:

IHO-EU Network WG (IENWG)

Sweden is the BSHC representative in IENWG. Also several other BSHC member states have been actively participating in the working group since its inception in 2012. As an important outcome several Baltic Sea HOs have been partners in a consortium, coordinated by SHOM in France, with the objective to develop one of the European Commission's flagship maritime projects the European Marine Observation and Data Network (EMODnet) Bathymetry Portal. Bathymetry for all European waters is made available from EMODnet Bathymetry and this data is also subsequently reused by GEBCO and in the Seabed 2030 project.

The possible implications of the expected EU Open Data Directive (ODD), which is expected to supersede the existing Public Sector Information (PSI) directive, is under supervision in IENWG as well as within BSHC MS. There is a risk that HOs' business models could be affected as a consequence of the ODD. To discuss the effects of the coming directive, a separate BSHC VTC was arranged during this year, with participation from most BSHC MS.

Hydrographic Re-survey Monitoring and coordination and cooperation with HELCOM

The Baltic Sea is a vulnerable sea basin with extensive impact from human activities. A regional platform for environmental policy making, HELCOM, was established already in 1974 to protect the marine environment of the Baltic Sea from all sources of pollution. HELCOM, the Baltic Marine Environment Protection Commission (also known as the Helsinki Commission) is an Intergovernmental Organization (IGO) and a Regional Sea Convention in the Baltic Sea area. HELCOM has identified that it is of uttermost importance that the MS perform hydrographic surveying in the Baltic Sea to avoid groundings due to shipping activities and establish a reliable source of knowledge of the seabed of the sea basin. The BSHC has been identified as the trusted organization to propose hydrographic survey plans to be adopted and agreed upon by HELCOM MS through the Baltic Sea Action Plan. The Re-Survey plan is also an EU Strategy for the Baltic Sea Region (under EU REGIO) Flagship-project, which in that sense provides an important and recognized political support for hydrographic actions in the Baltic Sea.

BSHC maintains this hydrographic re-surveys plan for the Baltic Sea, through the Re-Survey Monitoring Working Group (MWG) and reports on an annual basis to HELCOM. Planned and performed surveys are being updated in a web based interface maintained and operated by the Swedish Maritime Administration. See https://helcomresurvey.sjofartsverket.se/. Surveys are also being regularly coordinated between neighboring MS. The BSHC MWG liaises as well with the similar North Sea Hydrographic Commission (NSHC) Re-Survey Working Group.

Until 2020 focus on hydrographic surveying in the re-survey plan has been surveying of areas used for commercial shipping. Now most of these areas in the Baltic Sea are surveyed according to the IHO S-44 Standard for Hydrographic Surveys. Following an agreement at BSHC 25 in September 2020 it has been proposed by BSHC and agreed upon by HELCOM to also include all other, mostly shallower, areas in the Re-Survey plan with an associated timetable. Thus it will be a total surveying plan, with timetables, for all waters of the Baltic Sea. This full re-survey plan will be included in the new version of the HELCOM Baltic Sea Action Plan which is expected to be agreed upon and signed at a ministerial meeting in November 2021.

Harmonized Chart Datum in the Baltic Sea

BSHC developed the Baltic Sea Chart Datum 2000 (BSCD 2000) as a common Chart Datum and a Vertical Reference Frame for all waters within the Baltic Sea. It is based on the European Vertical Reference Frame (EVRF) and has been agreed upon by the BSHC MS to be implemented in all hydrographic products and services. The first specification of BSCD 2000 was completed in 2016. Since BSCD 2000 is based on EVRF, which is also used as the vertical height reference on land in all Baltic Sea countries, it can directly be used in GNSS applications for vertical determination. BSCD 2000 is also registered in the IHO GI Registry.

The Chart Datum Working Group (CDWG) is monitoring and gives guidance for the implementation of BSCD 2000. BSHC MS are committed to implement BSCD 2000 in form of new editions of ENCs and paper charts as well as introducing BSCD 2000 as a new reference for water level information and implementation is already finalized in many areas. However, a lot of implementation activities are still ongoing and the full implementation is expected to be finalized at least five years from now. To improve the geoid model further in the Baltic Sea, also gravity measurements and geoid computations are performed in cooperation between HOs, land survey authorities and academia.

Baltic Sea Bathymetric Database

Sweden operates a cross border bathymetry database and a geoportal, the Baltic Sea Bathymetry Database (BSDB) - data.bshc.pro, on behalf of the Commission. BSHC Member States are providing gridded bathymetry information. Data density differs between the Member States and has a minimum resolution of 500 m. The website is fairly widely used and the portal is running smoothly. It is possible to view, download data or use the WMS service provision. Sweden plans to release a new version of the bathymetry model before BSHC 26.

The BSHC bathymetry database is recognized by GEBCO as a Regional Mapping Project. At the same time BSBD uses the GEBCO dataset for areas where no data has been provided by the national HO of the region. BSBD was initially used as a basis for data contribution in the Baltic Sea to the EMODNet Bathymetry portal. Under supervision of the BSDBWG the ambition is to keep the two portals updated with the same data. This will secure that bathymetry data from the Baltic Sea is available for GEBCO, the Seabed 2030 project and a wide range of other stakeholders. Upon request from the Seabed 2030 project and the IHO CSBWG Chair, the BSBDWG Chair has been appointed as the BSHC coordinator for Seabed 2030 and the BSNSMSDIWG Chair is appointed as the BSHC coordinator for crowdsourced bathymetry.

Marine Spatial Data Infrastructure (MSDI)

MSDI provides hydrographic information to stakeholders beyond the classic field of surface navigation. The two neighboring hydrographic commissions BSHC and NSHC have seen the importance to deal with MSDI as a regional corporate approach and have established the joint BSHC and NSHC Baltic Sea North Sea Marine Spatial Data Infrastructure Working Group (BSNSMSDIWG). This WG reports to both Commissions and cooperate also closely with the IHO MSDIWG. An ambition is to establish a project to test the usage of the new IHO standard for Marine Protected Areas (S-122) for MSDI purposes.

Maritime Safety Information (MSI)

The Baltic Sea is a Sub-area of NAVAREA I (NE Atlantic) and the Sub-area is coordinated by Sweden. To facilitate that the GMDSS MSI services in the Sub-area are arranged in compliance with the applicable regulations and recommendations the Baltic Sea MSI

Working Group has been established by BSHC. The WG is monitoring and resolves possible transmitting and interference problems and also exchange information about major planned operations at sea that are expected to affect international shipping in coastal waters of the Baltic Sea. UK as the NAVAREA I coordinator participates also in the WG.

IHO WENDWG and coordination of INT-charts and ENCs

BSHC is regularly represented in the IHO WENDWG by Finland and FI reports annually to the Commission, including review of the progress on the work items of WEND, the WEND principles and the development of the new WEND-100 principles. Technical issues such as resolving gaps and overlaps, ENC distribution, harmonization of ENCs and ENC coverage status are prepared by the Baltic Sea INT Chart Coordination Working Group (BSICCWG).

The working group also coordinates the coverage and the numbering of INT paper charts and is monitoring that the IHO Chart Web Catalogue is updated over the region. BSHC member states agreed on unlimited internal use of the small scale Overview ENC covering the whole Baltic, kindly provided by Germany as the responsible producer.

The boundary between charting region D (North Sea) and charting region E (Baltic Sea) has been refined to correspond to the limit as laid out in IHO S-23 and for usage in digital applications. This also refine the definition of the limits between the sea areas Skagerrak and Kattegat. BSHC has coordinated this refinement with NSHC and at the NSHC meeting in April 2021 NSHC agreed upon this amendment. Applicable IHO-standards (S-4 and S-11/IHO Chart Web Catalogue) has also been amended to reflect the refined boundary.

At the coming BSHC 26 meeting in September 2021 the need to coordinate the S-100 implementation in the region will be discussed.

Capacity Building

Activities in CB are monitored within BSHC. Germany is the CB Coordinator for the BSHC.

BSHC Website

BSHC has developed a website; www.bshc.pro. It is operated by Sweden. Information on the BSHC sub-WG is available as well as minutes from their meetings. Further MS information and useful links to other services such as the BSBD portal and the Re-Survey plan are available as well.

Amended BSHC Statutes

At BSHC 26 a proposal on amended BSHC Statutes will be on the agenda. The proposed amended statutes states that the Commission is established in conformity with the IHO Resolution 2/1997 as amended, regarding the Establishment of Regional Hydrographic Commissions. It also reflects the possibilities to arrange meetings by VTC if necessary.

6. Difficulties encountered and challenges yet to be addressed:

The Russian Federation is a very important member of BSHC, but they have unfortunately not participated in BSHC conferences since 2016 and very rarely in sub-WG meetings.

The Covid-19 pandemic has forced the Commission to arrange all meetings as VTC since April 2020. Most actions have been executed, but as new MS representatives are being appointed there is an increased need to arrange face-to-face meetings. Hoping that regional travelling is allowed and that most of the MS representatives are fully vaccinated in September 2021, Sweden as the BSHC Chair and host is preparing the BSHC 26 meeting 21 – 23 September as a physical meeting with hybrid possibilities to also be able to participate virtually. However, the

development of restrictions will be surveyed carefully and a final decision on if it is possible to arrange a physical meeting will be taken in mid-August.

7. Achievements/outputs/conclusions

The cooperation within the BSHC is very productive. Corporate projects have led to joint databases and portals such as the Baltic Sea Bathymetry Database, EMODNet Bathymetry and the Re-Survey plan portal, which are updated continuously. The outreach of the hydrographic work in the region and beyond improves further. The MS participate also actively in the BSHC sub-WGs.

Member states have continued to contribute extensively to the work of the IHO and have been active participants in IHO working groups and Committees.

There has been substantial cooperation between the Commission member states and other European States and the EU on information sharing and shared projects.

The inclusion of the BSHC Re-survey plan in the HELCOM Baltic Sea Action Plan, with a timetable for the surveying of all waters of the Baltic Sea, is considered to be a great success and will establish an important political foundation for the hydrographic surveying of the Baltic Sea waters.

8. Actions required of the Assembly:

Take note of the Report of the Baltic Sea Hydrographic Commission.