

## Baltic Sea International Charting Coordination Working Group (BSICCWG)

# BSICCWG Report to the 28<sup>th</sup> BSHC Conference

### 1. Status of the work of BSICCWG since BSHC 27<sup>th</sup> Conference

A BSICCWG9 meeting was held in May 2022 (Rostock, Germany). This was a first face-to-face meeting in 3 years. All the member states except Lithuania (and Russia) took part to the meeting.

The meeting agenda was divided by different parts, for two separate days as follows:

24<sup>th</sup> May: INT charts+ S-57 ENCs

25<sup>th</sup> May: S-100 product plans in the Baltic Sea S-101, (S-102).

The focus of the work is being shifted towards S-100 products. It was noted that paper charts and S-57 ENCs cannot be completely forgotten either. However, they are still official products for several years. However, doing them should be made with information systems and automation as low as possible resource-consuming.

*Mr Jarmo Mäkinen* has acted as the Chair of the BSICCWG. *Mr Jukka Helminen* has acted as a secretary in the BSICCWG.



The membership of the WG:

Denmark	Mr Kell Torp Jensen Mr Nikolaj Møller
Estonia	Ms Gabriela Kotsulim Ms Maris Akkerman
Finland	Mr Jarmo Mäkinen (Chairman) Mr Jukka Helminen
Germany	Ms Sylvia Spohn
Latvia	Ms Linda Purina Ms Ilze Driksne
Lithuania	Mr Norman Duksis Mr Mindaugas Zakarauskas Mr Emilis Tertelis Ms Alla Bira
Poland	Mr Jacek Kijakowski Mr Adam Klosinski
Russia	Capt Sergey Egorov
Sweden	Ms Elisabeth Farrington Mr Stefan Cederberg

## 2. BSHC27 actions for BSICCWG

The list of permanent actions was updated at the BSHC27 Conference. Action is in the constant operation.

—	<u>Provide</u> continuous updates to S-11 Part B for INT Region E through the INTOGIS tool. <u>Implement</u> the procedure depicted in IHO CL 64/2015 for the review and monitoring of INT charts and <u>define</u> approved ENC Schemes.	BSICCWG Chair, BSICCWG representatives	Continuously	Permanent
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### New/updated actions for S-100:

BSHC26 / D.2	BSHC26/12	BSICCWG tasked to <u>coordinate</u> the work with an S-101 scheme for the Baltic Sea.	BSICCWG	Continuously; report at BSHC28	Ongoing
BSHC26 / D.3	BSHC26/15	BSICCWG tasked to <u>work</u> specifically with S-101 and S-102 coordination.	BSICCWG	Continuously	Ongoing

BSHC27 / D.7	BSHC27/14	BSICCWG Chair to aggregate a BSHC answer to the WEND100-IGIF Matrix request.	BSICCWG Chair assisted by WENDWG vice chair	15 December 2022	New
BSHC27 / D.8	BSHC27/15	SE to <u>report</u> back to BSICCWG on the possibility to assume responsibility for producing INT120 and corresponding overview ENC over the entire Baltic Sea.	SE representative in BSICCWG	May 2023	New

All these actions were handled at the BSICCWG9 meeting in Rostock.

When the Baltic Sea E-nav project has now been approved, many of these actions will be the part of the project's work.

### 3. BSICCWG9 Meeting in Rostock in May 2023

#### 3.1 Paper charts - Updating of S-11 Part B, Region E

Focus is more and more on the electronic charts/products but in some cases paper chart is still the only official product for smaller vessels in many countries. We still need to continue monitoring paper chart production. However, the focus of using limited resources must be directed to digital products and specially to S-100 products.

There was also a discussion about electronic plotter data, differences on quality and the challenges that users face.

Updates to printed charts with InToGIS tool II are going very well. Latest database version is for Region E 4.0.6 (May 2023)

Some challenges were identified;

- Polish letters are not converting correctly to PDF.
- Some Swedish charts are locked by another user.
- Missing/wrong information in port-information

All of these were made into actions and they are in the process.

#### Denmark:

No new charts planned at the moment in Denmark region. Only the one (INT 1304) to take over from Germany in 2023. Six new charts from Greenland every year until the end of 2026.

#### Estonia:

Estonia has been working on national charts. This year new editions EE827 INT1795 (Paldiski LNG terminal) and EE305 INT1215

#### Finland:

Focus of resources is in BSCD2000 change (in Gulf of Bothnia). Considering giving up INT 1130 (Archipelago Sea).

#### Germany:

Germany is discontinuing production of INT120. Sweden will reconsider taking the responsibility to produce INT120.

#### Latvia:

Main focus is on transition to BSCD2000 at the moment.

#### Poland:

Next year two new approach INT charts, INT 12191 and INT 12192.

#### Sweden

After few years with less chart releases, now more new chart editions. Production times have been analysed and they have done improvements to the processes to make them more effective. Sweden estimates it takes 40 hours of work to make a new edition.

Sweden will take responsibility of German INT1201 (Jan 2024) and reconsider to make INT120.

### 3.2 Baltic Sea S-57 ENC

Germany has released new ENC cells in gridded coverage. Old ENC scheme was based on paper charts. The amount of ENC cells is increasing. Germany is giving up the production of Baltic Sea overview cell by the end of 2023. Sweden can re-investigate the possibility of making Baltic overview ENC. Denmark has already decided to make their own overview cell from their own waters.

Denmark is planning to change their ENC coverage to regular grid in the future.

Latvia is planning to extend the approach coverage in the future, maybe in the parallel of S-101 implementation.

Poland is planning one new approach and berthing cell in this year, possibly as high definition ENC.

Sweden has no plans to expand ENC coverage at the moment.

Currently in the process of designing a possible S-102 implementation project where Gothenburg has been suggested as a test area. If this is the case, then the current BSCD2000 implementation project will have to prioritize this region. Possible risks and consequences of reprioritizing regions in the BSCD project are being discussed."

There are currently no significant changes to current ENC coverage in other countries.

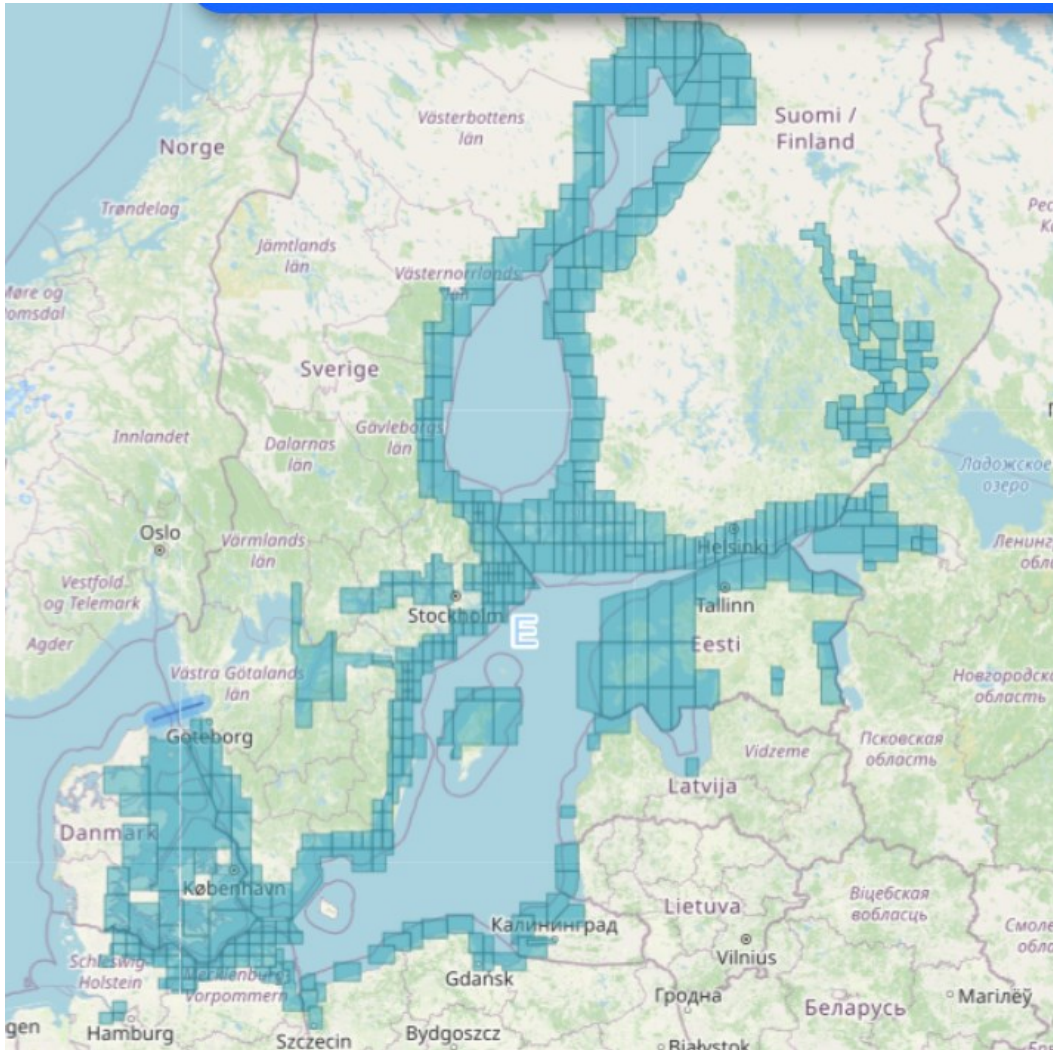
#### Gaps and overlaps

Overlaps were discussed. The BSHC Overlap report (provided by IC-ENC) was reviewed. There are some thin overlaps just over the 5m tolerance. These minor, more like technical overlaps do not cause any risk for navigation.

Denmark, Poland and Germany will check the identified overlaps. Overlap issues will be resolved during the scheming/gridding process by the end of 2023 at the latest.

The few gaps in the Baltic Sea ENC coverage were reviewed. These small gaps are in the waters, where responsibility belongs to Russia.





ENC scheme (approach)

### 3.4 S-100 coordination in the Baltic Sea area

WEND IGIF-matrix was discussed and reviewed. The matrix was seen a bit complicated and not very easy to understand. The aim of the matrix was to combine two things together, investigating and implementing of S-100 products. BSHC status will be reported to WEND by BSHC WEND representative (BSICCWG chair)

As previously noted, the focus of BSICCWG's work is shifting in the direction of coordination of S-100 products. Especially for coordinating products S-101 and S-102. What does coordination mean in practice? Scheming plans, harmonisation, timeframe and the coordination of where and when these new products will be released is definitely part of BSICCWG work, remembering IMO DI 2026. Also including monitoring a technical capacity for production in the Baltic Sea area. S-101 will be in first priority.

There was a discussion about the topics that would be included in BSICCWG. Is there enough technical expertise among the members for all the possible topics? There was an agreement that working groups (BSICCWG and others) will help in exchange of experiences and share of knowledge when adopting S-

100 products. Nobody knows enough about the new issues because they are all in development phase. But we can learn things from each other and benefit from changing ideas.

It was noted that the work of the International Charting Coordination Working Groups is based on IHO publication S-11 and its annexes. WENDWG will propose a new S-11 part A section, specific to S-100, to IRCC and HSSC/NCWG

The draft of the new BSICCWG TORs (from Baltic Sea Strategic Correspondence Group) were not available during the meeting. The draft of the new BSICCWG TORs was circulated after the meeting for comments. See **Annex 1**- draft BSICCWG TORs.

### 3.5 S-101 Scheming

S-101 ENC scheming has been discussed in WENDWG and WEND S-101 scheming sub-group.

From WENDWG13 minutes: *"there will be no global common grid for S-101 ENCs and other S-100 products as such. Fruitful opposite experiences were shared at the meeting on this matter and it is now obvious that Member States will develop their own approach, their own grid, hoping that the end result will be seamless and harmonized for end-users"*.

WENDWG13 tasked the WENDWG Members/RHCs Reps to report, for each Charting Region, on their S-101 ENC planned Schemes (for every band scales equivalent to UB1 until UB4 (no need for UB5&UB6 equivalent), using INTOGIS III, if available by 30 September.

### 3.6 S-101 Scheming plans in member states

#### Denmark

Denmark has used regular grid in Greenland ENCs and is planning to use regular grid with S-101, also in Danish waters. No timetable yet. Grid-size and naming not decided yet. Denmark sees regular grid as a good way to communicate with other organizations in the future of many different kind of S-100 products.

#### Estonia

Estonia has no plans to change current scheming method, unless good reason arises. Estonia is not using regular grid.

#### Finland

Finland has negative experiences with previously using regular grid. Main reason for giving up regular grid was production efficiency reason.

Finland will start S-101 with the same scheme they use with S-57 ENCs and then later on probably start doing adjustments to it. Larger size-limit with S-101 makes it possible to merge more cells.

Finland currently uses grid, but not a regular grid.

#### Germany

Germany has decided to use regular grid scheming. They presented their new regular grid scheme which has already been used in the North Sea area and the Baltic Sea area and is under work. Germany believes automation will reduce the maintenance work in the future.

#### Latvia

Latvia has not decided the scheme yet.

### Lithuania

No information.

### Poland

Poland will stay in their existing ENC scheme with S-101. They use a grid that is not a regular grid. They will study the effects of moving to regular grid but so far have not found benefits in it.

### Sweden

Sweden has no plans to change their somewhat regular grid at the moment. Sweden has a regular grid where cells can be split to four if the cells are too large.

## **3.7 S-101, production plans/time schedule**

### Denmark

Denmark is working on many S-100 products but mainly on S-101 at the moment. They are considering DGA taking S-100 coordinator role in Denmark. They have done test conversions to their data and try to be as ready as possible with the data that they currently have. They have attended a lot of IHO meetings regarding the standards and having ongoing communication with Esri on implementation.

### Estonia

Estonia does not have exact S-101 production plans yet. Plans depend on the tools and software available. Estonia has made test conversions from S-57 to S-101. They have not made changes to the data based on these test results. They believe they will be ready to start production in 2026. No exact plans for coverage.

No S-102 plans yet.

### Finland

Finland will aim for S-101+ catalog/database (S-101 with extensions) from where S-101, S-57- and paper chart products will be created from. There will be no conversions between S-101 and S-57 products. Waiting for Caris HPD version where full database conversion from S-57 to S-101 can be done. Hoping to do full production database conversion 2024 and start maintaining the data in S-101+ and release S-101, S-57 and paper chart-products from there.

### Germany

Exact plans not yet clear. Germany hoped that all countries could start thinking the areas where S-101 products could be first produced in 2026.

Germany has tested several conversion software and deal with the S-101 readiness check results produced by the validation tools. Besides they improve the data base to avoid manual conversion. Germany has a member in the S-57 to S-101 Conversion Subgroup who has prepared a conversion table for each S-57 object class. Tools, conversion and data base software are still being improved before they can be used for production.

### Latvia

Latvia has attended Primar Task Force Project. They have tested conversions. Planning to use Caris HPD S-100 module for conversion and testing S-101 dataset production possibilities. Many challenges ahead before S-101 production so timetable may vary

### Lithuania

No information.

### Poland

Poland has set the priority to S-101. They have used Caris Composer and several converters. Several cells converted. Big task is with validation tools. They can make conversions but not sure about the results without validation tools. Poland has also focused on training this and last year. They have been in close contact with Caris team. Plan is to move database eventually to S-101. They will probably start with main ports from the west and move to the east.

### Sweden

Sweden has taken part in the Primar Conversion Task force project. They have cleaned up their database. Goal is to start producing S-101 Q2 2025 and have a full coverage in 2026. The order of the project is not clear year. Possibly starting from the west coast. Many things depend on Caris and their tool development. At the moment it's not possible to convert full database. With S-102 they are currently working with the project framework. No schedule yet. They will probably first focus on the high traffic areas and ports. Testing is currently prevented by Gothenburg BSCD2000 implementation.

## **3.8 S-102 production plans/time schedule**

Many member states have technical readiness for S-102 but no exact time schedules yet. Waiting for adoption of final S-102 standard (HSSC 2024). There are restrictions in releasing S-102 products from certain areas.

## **3.9 Need for the new harmonization recommendations of S-101 and S-102 in the Baltic Sea?**

Back in 2007 a harmonization working group (BSEHWG) was formed by BSHC12 that made 17 recommendations for harmonization of S-57 ENCs in Baltic Sea area.

BSEHWG report can be a starting point and new areas of harmonization can be added to the recommendation list. Previous recommendations can also be adjusted to fit the S-101 environment. With new standard S-102 there can also be things to harmonize and have conversations between HOs before everyone is going into separate ways in production.

Sweden proposed project teams for S-101 and S-102 with virtual meetings and possible physical meeting. Project teams would report their recommendations for endorsement by BSICCWG10 in May 2024 and approval by BSHC29 in September 2024 (**see annex 2**).

Monitoring and reporting of harmonisation S-101 (S-102) recommendations would be the task of BSICCWG in the future (as it was the S-57 harmonisation in relation to the recommendations. However, more technical expertise than the existing BSICCWG would be needed to develop harmonisation recommendations.

Majority of the members supported the idea of at least S-101 harmonization project team but since there was no consensus, this topic will be sent to BSHC to decide whether to form a project teams.

## **4. INTOGIS III**

New version will be tool for managing and monitoring also the catalogues/scheme of the S-101 ENCs and other S-1xx products. Route monitoring products first (S-101, S-102, S-104, S-111, S-124, S-129). Connection to S-128 product Catalogue. INTOGIS III will be ready to provide the world wide coverage of S-100 based products by end 2023 ( Sept 2023?)

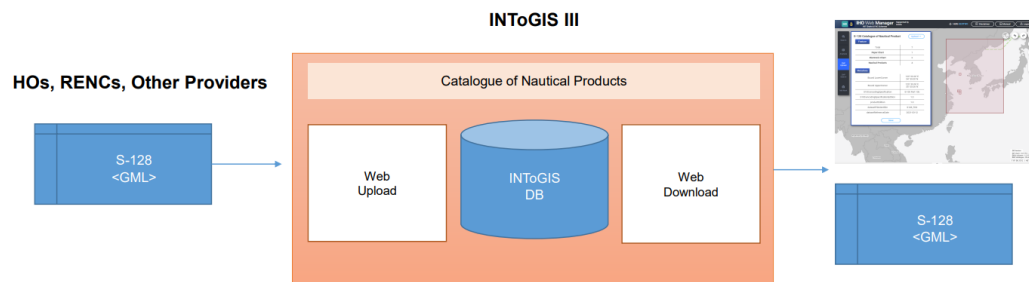




## IHO INTOGIS III – S-128 DEMO VERSION

International  
Hydrographic  
Organization

- S-100 products catalogues in INTOGIS by S-128



### 5. Future work of BSICCWG

- To monitor INT charts and ENC coverage in the Baltic Sea and maintain and adopt ENC schemes in Baltic Sea (IHO CL64/2015)
- To provide continuous updates to S-11 Part B for INT Region E through the INTOGIS II (III) tool.
- To analyze gaps and overlaps and report to BSHC and WENDWG.
- To provide updates to World Port Index.
- To develop and maintain an integrated international chart scheme for the region for ENCs (S-57 and S-101) and INT charts.
- To harmonize similar content of S-102 Bathymetry products in the Baltic Sea.
- To work and coordinate other S-100 -products in the Baltic Sea.
- To study issues related to nautical charting of the region, in particular overarching S-100 coordination (gathering plans from Member States and reporting as WEND representative of the BSHC).

### 6. Next BSICCWG-meeting

The next BSICCWG (face to face) meeting is planned to take place in Sweden 22.-23.5.2024.

### 7. Actions for the 28<sup>th</sup> BSHC Conference

- Note this report.
- Approve the proposal for the new TORs for BSICCWG (annex 1).
- Endorse and discuss the need for the S-101 and S-102 harmonisation Project Teams (annex 2).
- Give further guidance on the coordination of S-101 and S-102, and in particular S-100 overall reporting.

#### Annexes:

- Annex 1. The draft Terms of Reference and Rules of Procedure for BSICCWG
- Annex 2: Proposal for S-101 and S-102 project teams



## Baltic Sea Hydrographic Commission/BSICCWG

Approved by the BSHC 23<sup>rd</sup> Conference, 27-29 August 2018

Amendments for adoption at BSHC 28<sup>th</sup> Conference, 19 – 21 September 2023

### **Draft** TERMS OF REFERENCE AND RULES OF PROCEDURE for the **BALTIC SEA INTERNATIONAL CHARTING COORDINATION WORKING GROUP (REGION E)**

#### 1. Background

1.1 The *Baltic Sea* Hydrographic Commission recognizes the need to actively develop and maintain official nautical charts, in both paper and digital formats, that support ships engaged on international voyages in its region. Accordingly, it appoints and directs a working group to undertake this task. The working group shall be named the *Baltic Sea* International Charting Coordination Working Group (BSICCWG).

1.2 The BSICCWG is a subsidiary body of the *Baltic Sea* Hydrographic Commission. It shall conduct its work in accordance with these Terms of Reference and Rules of Procedure. The Baltic Sea Hydrographic Commission may clarify or amend these generic Terms of Reference and Rules of Procedure for the BSICCWG in order for these to be made specifically relevant and applicable to its region. Its work is subject to the Hydrographic Commission's approval.

#### 2. Terms of Reference

2.1 To study issues related to nautical charting of the region, in particular overarching S-100 coordination (gathering plans from Member States and reporting as WEND representative of the BSHC). To specifically coordinate of S-101 ENC's and S-102 Bathymetry as well as to coordinate production of paper charts (INT charts) and S-57 ENC's, that support ships engaged on international voyages.

2.2 To develop and maintain an integrated international chart scheme for the region for ENC's (S-57 and S-101) and INT charts.

2.3 To harmonize similar content of S-102 Bathymetry products in the Baltic Sea.

2.4 To reach decisions on the maintenance and updating of the documents for which it is responsible.

2.5 To provide advice on chart schemes to individual Member States, in order to encourage adherence to IHO charting regulations, specifications and standards, and to promote and coordinate the production of international (INT) charts, ENC's (S-57, S-101), S-102 Bathymetry and applicable additional S-100 layers for navigation in accordance with the WEND-100 Principles.

2.6 To develop proposals for new or amended chart schemes to meet evolving user needs (for example, the introduction of new or amended routing measures, the confirmed developments of international ports).

2.7 To coordinate the development and maintenance of ENC schemes, by regional

agreement, to ensure consistent parameters are used in the compilation of ENC. To report on an annual basis to the BSHC of the implementation of ENC harmonization actions needed for the consistent implementation of S-101 ENCs in the region.

To act as the custodian and maintainer of official version-controlled catalogues, depicting the status of published and planned charts, subject to formal review and approval by Member States of the Baltic Sea Hydrographic Commission. However, the ENC catalogues may be maintained by RENCs subject to *Baltic Sea* Hydrographic Commission's approval. Also to maintain the IHO Online Catalogue for ENCs and INT Charts in the region and to provide advice to the IHO Secretariat on any amendments required.

To provide advice to the IHO Secretariat on any amendments required to maintain S-11 Part B: INTernational Chart Web Catalogue (for example, scale, limits, numbering) and, as appropriate, any corresponding ENC catalogue.

2.8 To provide advice to Chair NCWG and IHO Secretariat on any amendments required to maintain S-11.

2.9 To undertake professional consideration of new information of interest to the BSICCWG which may impact its business and responsibilities.

### **3. Rules of Procedure**

3.1 Membership is open to all members and associate members (Member States) of the Baltic Sea Hydrographic Commission wishing to be represented. Each Member State shall be represented through a single point of contact. Noting the technical nature of the Group's work, participation should be limited to representatives of Hydrographic Offices concerned with nautical charting.

3.2 The Coordinator will monitor membership to encourage active participation by all chart-producing Member States within the Region.

3.3 Non-Governmental International Organizations recognized by the IHO may participate as observers in BSICCWG activities, where matters of special interest to the NGIO concerned are being considered (IHO Resolution 5/1957 as amended, rule 6.c refers).

3.4 The Coordinator role shall be held by a Member State participating in the BSICCWG. The election of the Coordinator, or the reconfirmation of the existing Coordinator, shall be decided by the *Baltic Sea* Hydrographic Commission at an ordinary meeting or, where a meeting is not convened, by correspondence. Election shall be determined by a simple majority of Member States present and voting (or responding, where determined by correspondence).

3.5 Normally, a Vice-Coordinator is not required to be appointed. However, if a Vice-Coordinator is appointed by the Baltic Sea Hydrographic Commission:

- Election to the post will be by the same method as for the Coordinator;
- The Vice-Coordinator shall act as the Coordinator, with the same powers and duties, in the event that the Coordinator is unable to carry out the duties;
- The Coordinator and Vice-Coordinator will decide between them the organization of the work entailed in these posts, or these may be defined by the Baltic Sea Hydrographic Commission.

3.6 Conduct of business will be primarily by correspondence and meetings. If meetings are required, these should be planned with due regard to efficiency and obtaining the fullest membership support (for example, by holding meetings in association with other working group meetings of the Baltic Sea Hydrographic Commission. All members shall inform

the Coordinator in advance of their intention to attend meetings of the BSICCWG. The working language shall be English.

3.7 Draft proposals will be circulated for review and comment to:

- All members of the BSICCWG and, where appropriate, all members of the Baltic Sea Hydrographic Commission;
- Coordinators of adjoining regional ICCWG, if the scheme impacts on those regions (for example, to ensure consistency and coherence of coverage across regional boundaries, for the allocation of chart numbers);
- Hydrographic Offices producing or printing charts of the Region;
- Chair NCWG, if independent advice is required.

3.8 Decisions shall be made by consensus.

3.9 Where required, a Work Plan should be developed and maintained. This should include task priorities and the expected time frames for progressing tasks. The Baltic Sea Hydrographic Commission may delegate tasks to the BSICCWG as it sees fit; it is also available to provide guidance on request (for example, in respect of priorities).

3.10 The Coordinator will report progress to meetings of the Baltic Sea Hydrographic Commission and at other reasonable times, on request. Reports shall include but are not limited to:

- An updated Regional INT Chart Catalogue;
- An update of the ENC Catalogue relevant to the Region (if not undertaken by RENCs);
- Changes made to the scheme of INT Charts for the Region, approved by the BSICCWG since the last report, together with a summary of reasons;
- Changes made to the ENC scheme for the Region, approved by the BSICCWG since the last report, together with a summary of reasons;
- To report overarching S-100 coordination (gathering plans from Member States and reporting as WEND representative of the BSHC)
- To report on an annual basis to the BSHC of the implementation of ENC harmonization actions needed for the consistent implementation of S-101 ENCs and S-102 in the region.
- An updated Work Plan (if used).

3.11 All participants, including Baltic Sea Hydrographic Commission members and associate members where not directly represented in the BSICCWG, shall keep the Coordinator informed of any information relevant to the BSICCWG. This may include:

- Submitting proposals for new INT Charts, or amendments (for example, to limits, scale of portrayal) to existing INT Charts, in the Region;
- Requesting new INT Chart numbers for new charts that are planned;
- Reporting the status of production of international charts (INT Charts and ENC).

3.12 BSICCWG members shall respond in a timely manner to all reasonable requests for advice from the Coordinator (for example, requests for updating the Catalogue of the INT Charts of the Region, change in points of contact), abiding by all reasonable stated deadlines.

3.13 The work shall be done in accordance with:

- IHO Resolution 1/1997 as amended: 'Principles of the Worldwide Electronic Navigational Chart Database (WEND)', to ensure a world-wide consistent level of high-quality, updated ENC's;
- S-57: 'IHO Transfer Standard for Digital Hydrographic Data';
- S-11 Part A: 'Guidance for the Preparation and Maintenance of International (INT) Charts and ENC Schemes';
- S-11 Part B- INTernational Chart Web Catalogue.
- S-4: 'Chart Specifications of the IHO and Regulations for International (INT) Charts', which provides the internationally-agreed product specification for both national and international (INT) charts;
- S-65 : 'Electronic Navigational Charts (ENCs) "Production, Maintenance and Distribution Guidance"'.  
- S-101: ENC Product Specification  
- S-102: Bathymetric Surface Product Specification  
- IHO S-100 Roadmap



Paper for Consideration by BSICCWG  
2023-05-10

2

<b>Submitted by:</b>	Sweden
<b>Executive Summary:</b>	It is proposed to task two project teams to update recommendation for harmonisation of ENC's and, if needed, create recommendation for harmonisation of S-102 across the hydrographic offices around the Baltic Sea.
<b>Related Documents:</b>	S-101, S-102, Report of BSEHWG [2008], IHO WEND principles, IHO WEND-100 principles, Dual fuel concept for S-100 ECDIS
<b>Related Projects:</b>	Baltic Sea e-nav (if approved)

### Introduction / Background

When the first ENC's were published, there were no guidelines on how to harmonise the data across national borders. The knowledge at that time was not sufficient enough to foresee all implications that un-harmonised data creates for mariners. Therefore, in 2007, BSHC12 established the Baltic Sea ENC Harmonisation Working Group to study harmonisation of ENCs across the Baltic Sea. The working group presented 17 recommendations in a report for BSHC13 in 2008. The BSICCWG was then tasked to supervise the activities that were recommended. Most of the recommendations are now implemented by the hydrographic offices, which has led to much more harmonised ENC's in favour for the mariners.

### Analysis/Discussion

Compared to the situation when production of the first S-57 ENC's was started, the knowledge and experience is today much higher. With the implementation of the new S-100 products the upcoming years, it is both important and more efficient to ensure that the products are as harmonised as possible from the beginning, rather than dedicating many resources to harmonise the products afterwards.

The BSEHWG report is a good starting point for the harmonisation of S-101 ENC's. Many of the recommendations are still relevant for S-101 while some of them need an update or have become irrelevant.

Since S-101 ENC's must operate smoothly side-by-side with current S-57 ENC's, it is important that the effects of planned dual-fuel capabilities in an S-100 ECDIS be taken into consideration when planning for the rollout of the S-101 ENC's. When updating the harmonisation framework for the Baltic Sea, it is important to consider possible new harmonisation measures so as to create the best possible ENC's for mariners.

For S-102, it is important to study how different decisions by the producing agencies affect the use of the product in an ECDIS. By doing that, it will be clearer if any harmonisation measures need to be taken to avoid inconsistencies when the products are used by the mariners.

### Recommendations

1. Establish a Baltic Sea ENC Harmonisation Project Team to update the recommendations on harmonisation of ENC's in the Baltic Sea to also include S-101 ENC's.
2. Establish a Baltic Sea S-102 Harmonisation Project Team to investigate and, if needed, create recommendations on harmonisation of S-102 products in the Baltic Sea.
3. Both Project Teams shall work by correspondence, VTC or physical workshops (maximum 2 as decided by the project team leads) and report their recommendations for endorsement by BSICCWG9 in May 2024 and approval by BSHC29 in September 2024.

### Action Required of S-101PT

The BSICCWG is invited to:

1. Discuss this proposal
2. Agree on the recommendations
3. Select leads for the respective project team