

Baltic Sea International Charting Coordination Working Group (BSICCWG)

BSICCWG Report to the 29th BSHC Conference

1. Status of the work of BSICCWG since BSHC 28th Conference

A BSICCWG10 meeting(face to face) was held in May 2023 (Stockholm, Sweden). All the member states except Lithuania (and Russia) took part in the meeting.

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

22th May: S-100 scheming and production plans in the Baltic Sea S-101, S-102

23th May: S-100 continuing, -INT charts + S-57 ENC's

The focus of the work has been shifted towards S-100 products.

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 BSICCWG:

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

Ms. Merili Lindpere (EE) and Mr. Teppo Kuusijärvi (FI) also took part in the BSICCWG10 meeting.

2. BSHC28 actions and decisions for BSICCWG

Permanent action. Action is in the constant operation.

—	<p><u>Provide</u> continuous updates to S-11 Part B for INT Region E through the INTtoGIS tool.</p> <p><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.</p>	BSICCWG Chair, BSICCWG representatives	Continuously	Permanent
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New/updated actions

BSHC28/18	D.8	DE to verify how long they can take a responsibility for production of the Baltic Sea overview ENC.	DE	Oct 2023
BSHC28/19	D.8	DE to deliver a copy of existing overview ENC to all MS.	DE	
BSHC28 /20	D.8	UK will consider to take responsibility for producing INT120 from the Baltic Sea area.	DE/UK BSICCWG Chair	Dec 2023

Done. Germany will maintain Baltic Sea overview ENC until the end of 2024.
UK will produce INT 120.

Decisions:

BSHC28/9	D.8	BSHC28 approved updated BSICCWG TORs.		
BSHC28/10	D.8	BSHC28 agreed that all MSs will produce their own overview ENC on their own region of responsibility.		
BSHC28/11	D.8	BSHC28 agreed that S-101 and S-102 harmonisation issues will be handled under umbrella of Baltic Sea eNav-project.		

Decision 9: Accepted BSICCWG TORs have been updated to the BSHC website [Link to BSHC/BSICCWG website](#)

Decision10: A precise timetable for the migration of Overview ENC from Germany to the Baltic Sea countries has been agreed (with the exception of the Russian region).

Decision 11: S-101 and S-102 harmonisation has been added to the BSeNav project work package.

3. BSICCWG10 Meeting in Stockholm in May 2024

3.1 S-100 coordination in the Baltic Sea area

As noted, the meeting focused on the S-100 (specifically S-101 and S-102) products readiness level including scheming plans, coverage, schedules- when member states are ready to start production. There were many fruitful discussions at the meeting and interesting presentations were heard containing status in each member state and also on the challenges involved in getting started. Reviewed report of the representative of the BSHC to WENDWG14, including WEND IGIF Matrix and Readiness Status of RHCs for the provision of S1xx datasets by 2026 (WENDWG CL1/2023).

The completion of the standards, which is one of the challenges, seems to be progressing well in the IHO working groups. There is also high dependency on software development (Caris/ESRI, D-kart, 7Cs). It will be important to get the necessary software updates done as quickly as possible.

In general, the readiness to start production, in the S-101 and S-102 in particular, in 2025 seems to be good in the Baltic Sea area.

3.2 S-101/S-102 Scheming and production plans

Summary:

- All the member states have started developing information systems with the aim of producing S-101 and S-102 according to the IHO target schedule.
- It seems that BS members are ready to start releasing S-100 products (especially S-101 and S-102) in 2026 (2025). More detailed annual and regional plans for coverage are still missing, but the working group agreed to start reporting annually for coverage plans in their area per the end of year 2025, 2026, 2027, and 2028 (BSICCWG10 action 3).

- The schedule is linked to the completion/approval of the standard. Production lines are strongly connected to the schedule of software manufacturers.
- There are BSICCWG10 actions to follow how the production and how implementation plans will be realized during 2024:
BSICCWG10 -Action #4: Chair to send questionnaire for the WG members about the status of the S-101 and S-102 implementation progress by the end of the year.
BSICCWG10 -Action #5. Member states to report how plans for the introduction of the S-101 and S-102 production during 2024 were realized.
- Training and exchange of knowledge/experience between states is required.

Denmark

Denmark is currently focusing on rescheming their S-57 ENC's with regular grid, that they will also use with S-101 ENC's. No concrete production plans yet because of so many uncertainties. No plans yet how much S-101 they will do at what time. Standards are not certain yet and software is also not ready. Right now, they try to learn, test samples and gather experience and hope that everything will be solved.

Denmark is using Esri platform and they've moved to ArcMap Pro. Denmark has simplified their workflow during experience from last few years and will soon be in stable mode. They have been gridding their ENC-data. This work will continue until the end of this year. They have not been cleaning or changing the data but just cutting the data differently. They will do planning and testing on how to migrate to S-101 until Q1 2025 and hopefully have a high knowledge at that point. Year 2025 is then used to migrate the data. Their aim is to have S-101 database where from S-57 and S-101 can be exported. Training will also be needed and testing of the dual-fuel system.

Estonia

Estonia has no plans to change their current S-57 grid. They will maintain the same grid for S-57 and S-101.

Estonia has no accurate production schedule at the moment.

Work is highly depended on software development (dKart Editor, Caris HPD, Esri ArcGIS)

Start producing S-101 from usage bands where BSCD2000 has been implemented – berthing, harbour etc. (approaches are in progress along with changing compilation scale from 45 000 to 22 000)

Aim is to deliver S-101 v2.0 and S-102 v3.0 early in 2025 and achieve full coverage for year 2029.

The scheme for S-102 has not been decided yet. Estonia has prepared some test areas from ports and fairways and will start S-102 production from the fairways and harbour areas. There are 38 areas selected and testing is in progress.

Finland

Finland will convert the current S-57+ database to S-101+ database. Finland is aiming to start production in summer 2025 and hopefully have a good coverage by 2026. A lot depends on the success of the source data conversion and paper chart and S-57 product lines. Finland will produce S-101 products in the same irregular grid scheme that they currently use for S-57. At some point the

S-57 and S-101 scheme will most likely start to deviate from each other since S-101 cells can be larger and cells can be merged.

Finland will be producing S-101 products only from the area it has done BSCD2000 change to. All source data is expected to be in BSCD2000 in 2025 (2026).

Finland has been trying to define the maximum permitted S-102 production area. The data is classified and only fairway areas, economic zone and inland waters are public. They decided that it's better to first get approvals from relevant bodies before the product scheming can be started. Allowed areas should be defined by the end of this year and after that the products can be defined. Products will cover the main ports, fairway areas, anchorage areas.

Basic idea with S-102 at the moment is to have one fairway on one S-102 product. But some longer fairways could be divided into several S-102 cells. S-102 cells and S-101 cells will not have the same limits.

Germany

Germany will start S-101 from most important harbours and approaches/fairways. They are now finishing S-57 rescheming and then use the same scheme with S-101 products.

Germany has no prepared schedule at the moment. Many things depend on the software. With S-101 DE needs to update Caris HPD 5.0. Several testing was undertaken and the readiness checks are used to improve the S-57 database before conversion.

Germany might reduce some HPD usage bands that are paper chart depended and maybe reduce some national paper charts.

When the database has been migrated to S-101, DE can produce new S-101 editions quite soon in principle. The schedule depends very much on the migration and how it goes.

DE plans to start producing S-102 from the same areas where they have bENCs at the moment. S-102 products can be produced soon as they are not HPD depended. Germany has no problems producing S-102 data.

Latvia

Latvia will use the same grid they have with S-57 also on S-101. General and coastal scales have already been gridded. Also S-57 Approach ENC's will be gridded. Grid dimensions not decided yet. S-101 will have the same coverage as S-57. More detailed roll out plan to be decided. Idea is to start with larger ports. LV will start production in 2025 but have not yet decided what coverage will be by the end of 2026.

Creation of S-102 datasets are in the testing phase. A preliminary plan for the start of production of the S-102 between 2025 and 2026 has been drafted. At the moment main focus is on new survey equipment and software.

Lithuania

Lithuania was not present, but they sent plan for S-101 coverage. The S-101 schedule is that band 5 is expected this year Q4. Band 4 Q2 2025, Band 3 Q4 2025. Band 1 and 2 2026. Those estimations are rough, as they expect new DB and the software based on S-101 data model from ESRI which could affect the production dates. The major software upgrade is expected at the end of this year.

The S-102 are not ready yet, the delay is due to software upgrade from ESRI.

Poland

Aim is to start S-101 conversion from areas that are most important for the mariners. S-101 will be based on S-57 scheming (non-regular grid). Updating S-101 and S-57 might cause problems and they want to gather experience from smaller areas first.

Poland will start production of S-101 from areas crucial for the safety of the navigation. Plan is to be ready with those cells by the end of 2026. They will do all scales at the same time.

With S-102 the focus is on main harbour Gdansk, Gdynia. Size of the S-102 grid system is yet to be decided. By the next BSICCWG meeting they expect to have actual plans and shapes. But they expect to start from main harbours and proceed seawards just like with S-101. S-102 will only be for harbour approaches and ship routes.

PL has not decided yet whether to have one or two databases or a mix. Many questions and challenges still ahead.

With S-102 they will try to cover Traffic Separation Schemes and approaches to main harbours and ports. Scheme will be irregular grid. How large area the products will cover is not yet known.

Sweden

Sweden plans to start S-101 production in 2025. They will migrate their database to S-101. If the migration goes fine the production line should work also. All scales will be produced simultaneously for each geographical area. BSCD2000 does not limit S-101 but it will limit the S-102 project since S-102 can only be produced from the areas in BSCD2000.

Sweden currently has an ongoing project with Caris. Their entire S-101 project is going parallel with Baltic Sea eNav-project. Internal plans on how to migrate the database. Testing in next autumn. Plan is to have a production database migration in summer 2025. Production of the S-101 from the S-101 database should not be a problem

Sweden is doing S-102 plans during this year and talking with military, which areas are allowed to be released in S-102. Priority is in the main fairways and important ports.

4. Paper charts - Updating of S-11 Part B, Region E

Even though we have to change the focus more and more in to S-100 issues, many vessels are still using paper chart as the only chart or as a backup chart. We have the responsibility to produce official paper charts. For example, for the navy paper charts are still important. The question is how to produce paper chart easier way with less resources.

Member states have been active to printed charts with InToGIS tool II. Latest database version is for Region E 4.0.64 (Apr 2024). [Link to IHO Web Chart Catalogue](#)

The tool and process are generally working well, but some challenges have been encountered:

- Multiple copies of some charts in INTOGIS
- Some charts are locked by another user
- Polish letters are not converting correctly to PDF.
- Missing/wrong information in ports

All of these were added into BSICCWG10 actions and they are in the process.

Germany has abandoned production of charts INT 1201 (Kattegat and Baltic Entrances, 1:150 000), and INT 1304 (Kattegat and Baltic Entrances, 1:200 000) and INT120 (Baltic Sea, 1:1 500 000).

Denmark has taken responsibility to produce INT1304 and Sweden to produce INT1201. New products were published..

UKHO has taken responsibility to produce INT120 (Baltic Sea). The New Edition of GB 259 was published.

Finland is going to withdraw INT 1130 (FI 935, 1:100 000) in the Archipelago Sea area (early 2025- depends on BSCD2000-project).

Latvia. New Baltic Sea overview chart 1 : 350 000 in compilation. Whether an INT number is applicable for this chart must be considered.

5. Baltic Sea S-57 ENC

Status now- future plans of coverage:

Gridding process in some member states (see S-101, chapter 3.2) No other changes reported.

Gaps and overlaps

The BSHC Overlap report (provided by IC-ENC) was reviewed. Nothing critical in the report.

There is a permanent action for members to reduce also minimum, technical ENC-overlaps, especially when creating new editions.

Reduction of ENC1100000 coverage

Germany will give up producing the Baltic Sea overview ENC by the beginning of 2025 (new date). All the members will produce their own overview cells from then on. It was decided that WG members should prepare their own overview cells by the end of October 2024 and then send them to the neighboring HOs for border comparison. Releasing of the new overview cells and cutting the German cell should be done on the same day 10th of January 2025. The case of Russian area in the German overview cell was not clear, but could remain in the DE cell if no other solution will be found.

6. INTToGIS III

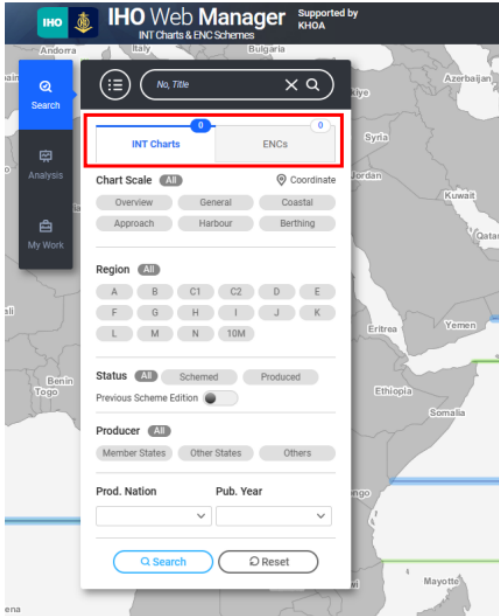
IHO Secretariat has requested INTToGIS to broaden its capabilities to include support for planning the S-100 products.

Since the 14th WENDWG meeting in February 2024, good progress has been made in the development of version III of INTToGIS, the version which aims to include an interface to plan, scheme and display S-101 ENCs, and S-100 products and Data Services (Phase I) in addition to the current products (INT Charts, S-57 ENCs).

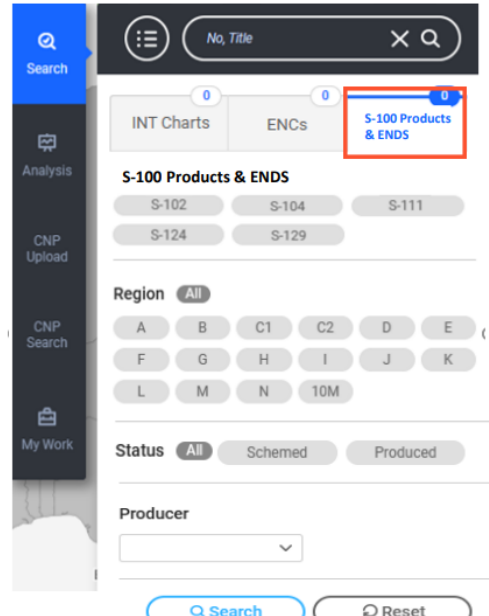
INTToGIS III will allow Member States to plan, scheme, display their new S-101 and S-100 products coverage over the existing layers (S-57, INT charts, traffic density, etc.). Same concept than before, same recipe for a smooth coordination within the RHCs, with additional products and symbology, geometries (point, polygons, circles,) for S-102, S-104, S-111, S-124, S-129.

The initial testing phase of INTOGIS III by regional coordinators is going on between 8 July and 1 September 2024. Baltic Sea is taking part to the testing.

AS-IS



TO-BE



7. 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).

8. Next BSICCWG-meeting

Lithuania has kindly agreed to organize the next BSICCWG meeting in Lithuania on May 21-22 2025.

9. Actions for the 29th BSHC Conference

- Note this report.
- Give further guidance on the coordination of S-101 and S-102, and in particular S-100 overall reporting.