

## 37<sup>th</sup> North Sea Hydrographic Commission Meeting (NSHC)

8<sup>th</sup> to 10<sup>th</sup> April 2024

### Report of North Sea International Charting Co-ordination Working Group (NSICCWG)

Submitted by: Ashley Hawkins - NSICCWG Chairman: March 2024

Related Documents: [Minutes of NSHC36 March 2023](#), [NSHC36 List of Actions](#)

#### 1. Background

1.1 The North Sea International Chart Committee (NSICC) devised the original scheme of International Charts of the North Sea. Details were set out as Appendix F to the NSICC Report to the XI<sup>th</sup> International Hydrographic Conference (1977)

1.2 After discontinuation of the NSICC in 1983 the North Sea International Chart Sub-Committee (NSICSC) succeeded this group (Conclusion 43 of the 14<sup>th</sup> NSHC Conference).

1.3 The NSICSC, in turn, was disbanded in 1988 (Conclusion 52 of the 17<sup>th</sup> NSHC-Conference), but an Ad-Hoc Working Group on INT Charts was established at the same meeting (Conclusion 53)

1.4 In 1989 (18<sup>th</sup> NSHC Conf.) the Ad-Hoc group was replaced by the NSHC INT Chart Scheming Group (Conclusion 56); the Chairman was provided by the Netherlands.

1.5 During the 20<sup>th</sup> NSHC Conference it was concluded to change the name into North-West European Charting Group (Region D) because the charts covered a larger area than the North Sea.

1.6 The Netherlands provided the Chairman/Coordinator, Hans Ferwerda, for the North-West European Charting Group (Region D) until June 2004. The United Kingdom has provided the Chairman since then.

1.7 At the NSHC 29<sup>th</sup> Conference in September 2010 (Conclusion 85), the NSHC Members agreed to change the name of the NW European Charting WG to the North Sea International Charting Co-ordination Working Group (NSICCWG) The NSHC 29<sup>th</sup> Conference also established the North Sea ENC Harmonization Working Group (NSEHWG) which reported for the first time at the 30<sup>th</sup> Conference.

1.8 The NSEHWG was disbanded at the NSHC 32<sup>nd</sup> Conference in June 2016 (NSHC decision 11/2016) because the ENC scheme in the region had reached maturity with few if any issues. The decision was taken to incorporate the remaining relevant tasks of the NSEHWG, as well as ENC coordination in the region, into the new ToR for the NSICCWG this was done at the to align it with the ToRs of other regional ICCWGs. At the 33<sup>rd</sup> Conference, the new NSICCWG ToR were agreed. Additional adjustments to the ToR were agreed at NSHC 34.

#### 2. Overview

##### 2.1 Meetings during reporting Period

VTC – 6<sup>th</sup> February 2024, hosted by UK.

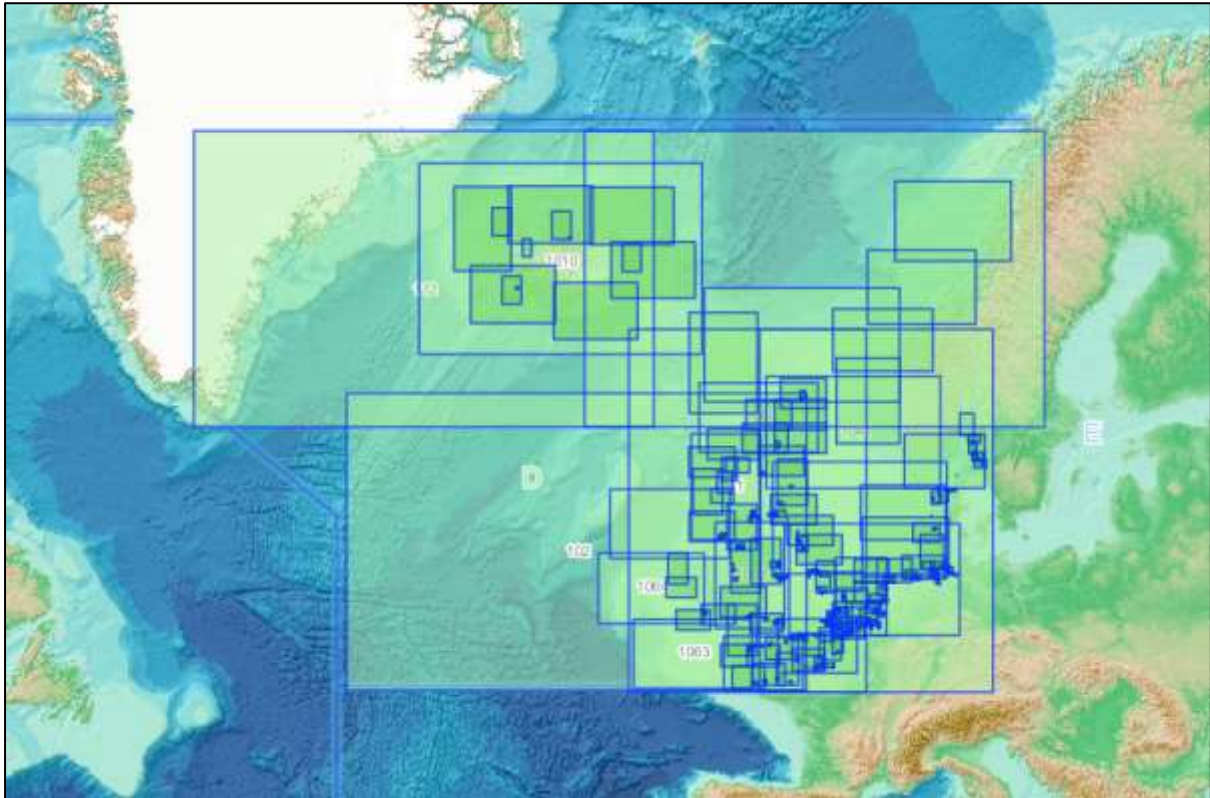
##### 2.2 Revised management review and monitoring of INT charts (IHO CL64/15 and 89/15 refer)

In 2015, IHO CLs 64/15 and 89/15 detailed the new procedures for the management review and monitoring of INT charts. The main elements of the new process are as follows:

- All new INT Charts to be submitted to Regional INT Chart Coordinator (ICCWG) for review.
- INT Chart Coordinator (ICCWG) to verify chart's compliance with IHO standards and to provide feedback to the Producer Nation.
- Modernisation of IHO Publication S-11 Part B by implementation of the new INT Chart web catalogue (INToGIS). Responsibility for updating the INToGIS system for chart updates now lies with member states rather than the INT Chart Coordinator.

All of the above have been implemented in Area D. There are, however, still a few member states who have yet to update the web catalogue for changes to their INT charts despite reminders. We urge members to ensure the web catalogue is updated so that it remains authoritative.

### 2.3 INT Charting overview



#### REGION D INT CHART PANELS BY USAGE

Overview	17	General	12
Coastal	63 (including plans)	Approach	66 (including plans)
Harbour	239 (including plans)	Berthing	17 (including plans)
<b>Total</b>	<b>414 (including plans)</b>		

*Note: Figures this year remove those panels captured for title panels on sheets of plans.*

#### REGION D INT CHARTS BY PRODUCER NATION

BE	3 charts	(10 panels)
DE	15 charts	(28 panels)
DK	8 charts	(27 panels)
FR	24 charts	(42 panels)
GB	125 charts	(232 panels)
IS	14 charts	(15 panels)
NL	18 charts	(34 panels)
NO	6 charts	(6 panels)
SE	5 charts	(20 panels)
<b>Total</b>	<b>220 Charts</b>	<b>(418 panels)</b>

*Note: GB Charts includes those covering Ireland.*

#### CO-PRODUCED REGION D INT CHARTS

DE & GB	14 Charts (27 panels)
FR & GB	4 Charts (4 panels)
GB & NL	16 Charts (32 panels)

There are now 218 full INT Charts containing 414 navigational panels in the region. There has been a decrease of two charts and four panels in the last year. Region D has a mature INT chart scheme compared to other INT Regions and changes continue to be relatively few in number. More members are considering their paper chart schemes, which will in turn impact the INT scheme as they look to balance cost and demand and to enable production of the S-1XX products.

Nevertheless there have been some changes and developments to the INT charting scheme and ENC coverage since NSHC36 in 2023. Details are given in sections 4 and 5 below.

## **2.4 S-100 Coordination**

NSICCWG was given overall S-100 implementation coordination by NSHC36 (Decision 4/2023 C2). To this effect the NSICCWG will report an overall summary to NSHC, with more detailed updates on S-101 and S-102 (see section 7 below).

NSHC TWG and NSMSIWG will provide reports on progress of S-104, S-111 and S-124 implementation to NSICCWG for high level inclusion in the NSICCWG report but will provide full details of their work in their usual WG reports. In addition to the S-1XX Questionnaire results, Status of S-104, S-111 and S-124 as provided by the NSHC TWG and NSMSIWG are summarized here:

### **S-104 & S-111**

The current works in the MS cover aspects such as

- a) establishing national S-100 working groups
- b) developing production roadmaps/timelines or
- c) producing test data sets.

The regional cooperation, coordination and harmonization of implementation were also discussed. First ideas for cooperation include the comparisons of national products at the maritime boundaries and the exchange of software.

The test datasets for S-104 and S-111 will be made available for cross-national comparisons in order to explore and collaborate on how to reduce any differences.

### **S-124**

Most members are aware of the standards and are planning to have a service in operation by 2026. Issuing of Navigation Warnings differs between members, and in many cases the Hydrographic Office is not responsible for issuing, so there are additional bureaucratic hurdles for some members to overcome in addition to operational and coordination issues.

## **3. Actions from NSHC36**

### **3.1 NSHC36 Action 3/2023 C.2 NSICCWG ToR**

Revised ToR for NSICCWG were drafted by the Chair and circulated to members ahead of NSICCWG VTC in Feb 2024. The proposed ToR were accepted by the WG members and are put forward to NSHC.

Proposed ToR are included at Annex A below.

Generally, the requirement to coordinate, monitor and report on S-100, S-101 and S-102 has been added in addition to the existing INT Chart Series and S-57 ENC tasks throughout the TOR. The existing TOR were very similar to the TOR for the BSICCWG, of which some of you are also members. I have continued this theme so that the S-100 additions are also aligned within the two ICCWGs.

A few minor updates/amendments have also been included to bring the TOR up to date for the latest standards. On more significant change is the removal of the line stating that each member state shall be represented

through a single point of contact. The group had naturally expanded to cater for specific expertise in Paper Charts and S-57 and inclusion of functional emails for distribution. With S-100 now also under the groups remit, is important each member state representatives can cover relevant competence in all areas – making further expansion of the group likely.

### **3.2 NSHC36 Action 4/2023 C2 S-1XX Questionnaire**

NSICCWG developed the S-100 questionnaire compiled by Belgium for NSHC 36. The questionnaire was circulated to members in autumn 2023. The results from the questionnaire were also used by NSHC WENDWG rep to submit combined NSHC response to the WENDWG S-100 Questionnaire (WENDWG 01/2023 letter). Our Questionnaire has also been shared with other RHCs.

Full report of results can be found in Annex B below.

From the questionnaire, the conclusions are:

- Reduced confidence (from last year) on delivery of all S-1XX in 2025 ahead of vessels using from 2026. But increased confidence in delivery timescales for S-101 and S-102.
- Availability of standards, production tools and manpower are common concerns impacting ability to follow IHOs timeline.
- Expecting to have a significant S-101 and S-102 offering across the NSHC area by 2026.
- S-104 and S-111 are less positive across the region – likely to be gaps in coverage.
- S-124 – NAVAREA coordinators (UKHO and SHOM) expecting to be operational in 2026, responsibility of other departments in most other NSHC countries.
- Members are keen to collaborate both to improve S-1XX offerings and to work towards common regional goals.

### **3.3 NSHC36 Action 5/2023 C2 NSICCWG Membership**

Member States are already expanding their representation within NSICCWG to provide more S-100 related competence. This was in evidence at the VTC in February with almost all nations having two or more representatives. The ToR have also been amended to enable this.

## **4. REGION D INT Chart changes since 2023**

### **4.1 Denmark**

Denmark has not made significant changes to their INT coverage this year, but it is worth noting that planned new editions of INT Charts include changes to Datum and conversion to Lowest Astronomical Tide (LAT) in Limfjorden and Esbjerg. Denmark are currently double checking their LAT model, potentially to change all depths in LAT model by 0.15m. Not a large amount but can mean a lot for some harbours and especially in dredged areas.

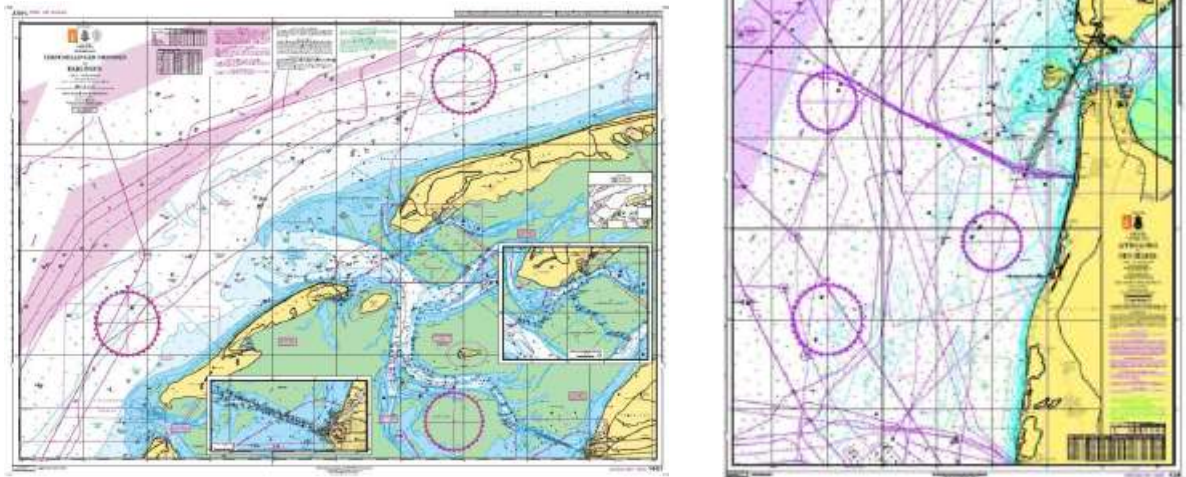
### **4.2 France**

France will be reviewing cartography via the Unified Cartographic Source (presented to NSHC 36). This will lead to revisions in the chart schemes produced by France in 2024 and 2025.

### **4.3 Netherlands**

Netherlands have withdrawn 4x INT charts from their series on 1<sup>st</sup> March 2024. Two of these were co-produced INT Charts by NL and UK (INT 1464 Terschellinger Gronden to Harlingen and INT 1468 Approaches to Den

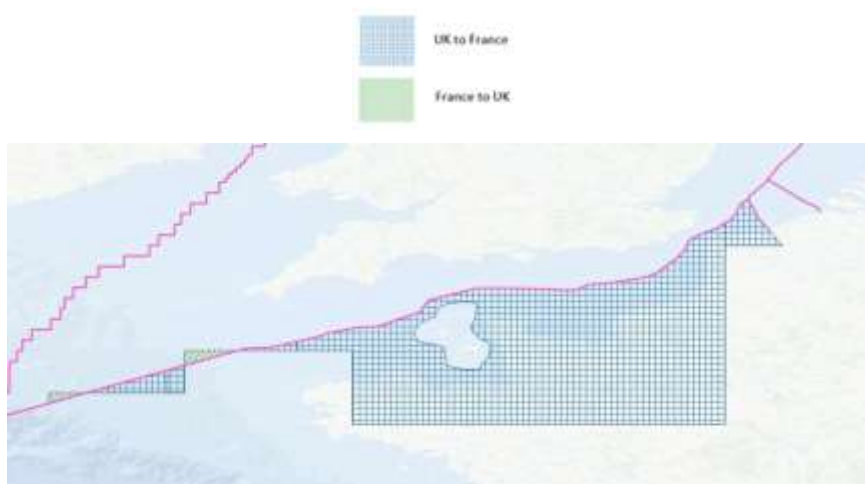
Helder – shown below) and two of these were NL as printer of INT charts produced by Germany (INT 1461 and 1462). Adequate coverage remains available of these areas either via remaining INT Charts or by using the 1800 national chart series.



## 5. ENC Rescheming since 2022

### 5.1 France

France and United Kingdom are continuing to work together to re-scheme ENC coverage of the Channel at Usage Band 2 and the Channel Islands at Usage Bands 3 and 4. This will improve producer consistency through the scale Bands with each maintaining national coverage within their own waters in place of the existing arrangement with producer based on usage band.



### 5.2 Netherlands

Netherlands are currently developing High Density ENCs in the Caribbean, and will consider a possible test area in the North Sea.

### 5.3 United Kingdom

United Kingdom continues to work on ENC gridding, with the program picking up pace in 2024. Currently several areas have been gridded at Usage Bands 4 and 5. Work has just started on gridding at Usage Band 3. The gridding program is proving challenging in areas of regular new data, as it takes the production database out of action for a number of weeks per location. NM updates continue to be applied to ENCs whilst an area is being gridded.



Rather than produce additional HD ENCs, UK is focussing on including areas of supplementary contouring (at 1m or 0.5m intervals) within the gridded ENCs. These are treated on a case by case basis, but generally focus on port approaches and confined channels to provide better safety contour representation of usable water.

### 6. S-57 ENC Overlaps and gaps

No ENC overlaps deemed medium or high risk (as per RENC risk assessment) or gaps greater than 1mm at compilation scale are currently found within Region D. However, the latest report shared with the group has highlighted some new or previously unreported overlaps, including some at Usage Band 4. Although these are very small, members are investigating and will look to amend as required. S-100 will likely use similar boundaries for national limits, so getting them corrected in S-57 will make S-100 smoother.

### 7. S-100 National Updates

#### 7.1 Belgium

As Belgium currently have only 7 ENCs, initially thought make these directly into S-101s. Now looking to use same gridding as UK and NL. Testing with S-101 and converting ENC to S-101 product and then later creating S-101 from DB in 2025 or 2026.

S-102, currently testing along with pilot ENC production, goal to go in production 2025 and 2026.

S-104 and S-111, aim to start testing 2024 or 2025. They have a small piece of area to cover so are ideally looking for some regional cooperation as on larger scales its not so useful to make a new model, if other local models (UK FR NL) are different.

## **7.2 Denmark**

Current focus is on S-101 and S-102, mainly on S-101 and the conversion.

Working with ESRI software to transform to a new platform. Cleaning up data ahead of conversion and looking at some point in 2025 to go into a dual fuel system where S-57 and S-101 ENC's are created from a S-101 database.

S-104 and S-111 is not within the Danish Hydrographic Office but trying to coordinate with other bodies and move forward to be presented at some point in the future.

## **7.3 France**

Strategy is to be ready when the first ECDIS will be compliant with S-100 products, so 2026.

France aim to keep the same schemes for S-57 and S-101 during the dual fuel period.

Agree with WEND principle saying the producer of the S-101 should be the same as S-102, S-104 and S-111.

Have a portal for Nautical Information that will be operational this year (2024) and will support S-124. The code of the portal is open source and other nations have started to use the code for their own platforms.

## **7.4 Germany**

Focus on S-101 and S-102. S-104 and S-111 is produced by other departments in BSH.

Trialing S101 and S102 conversions in test areas, though more in the Baltic Sea and working with Sweden on the E-NAV project.

Plan to convert S-57 to S-101 but it is not yet complete. Tidying up datasets before conversion, readiness checks.

Some trials and test data on S-131 sent to IC-ENC, using cooperation with Bremerhaven and Rostock Ports.

## **7.5 Netherlands**

Netherlands have created trial data for S-101, 102, 104 and 111. Test data is available, but through IC-ENC.

Currently trialing S101 / S102 in the Westerschelde area (area is dynamic bathymetry) in cooperation with IC-ENC. Converted from a current ENC, maintaining and keeping up to date as dual fuel. Plan to maintain in HPD Production database next year.

Have developed an API to create S-104 and S-111 data, however developed for Data coding formats 1 and 8, but as standard develops it looking like data coding format 2 is likely to be mandatory, so this may require a redesign.

## **7.6 Norway**

S-102, Production ongoing already, 90 datasets available in PRIMAR so far.

S-101, Testing is ongoing, but limited by resource and by security and capacity issues at the software supplier.

S-111, Cooperation with Norwegian Metrological Institute (NMI) established, and S-111 production will be based on data from NMI.

S-104, Priority for establishing in 2024.

S-131, GAP analysis between S-131 and Norwegian Mapping Authority Harbour data, with potential test dataset in 2024.

## **7.7 Sweden**

Plan to focus on S-101, starting production in Q2 2025 and looking to have full coverage of S-101 in 2026. Rollout plan for the order of the cells is still to be decided and Sweden would be keen to harmonise with other Member States.

Sweden are looking to start rollout of S-102 in 2026.

More co-ordination is needed with other national agencies who are the data owners for S104 and S111, but hopeful of production within their set times.

Sweden are working with backwards conversion to create S-57 from S-101.

## **7.8 United Kingdom**

UK plan to create a full stack (S101 / S102 / S104 / S111) for 5 ports in the UK initially. This will create around 100 ENCs with the aim for these to be available by the end of 2026.

The aim is to create and maintain S-101 ENCs through a S-101 database, using backwards conversion to create S-57 ENCs from the same data.

## **7.9 General S-100 Discussions**

The group had some good discussions on S-100, largely following some great questions from Denmark. Topics covered included:

1. Areas of focus for S-102 coverage? These were generally agreed to be harbours and fairways, though this also prompted discussion on source data and how dynamic the areas were. Close collaboration with ports is essential and although data may be owned by the port/harbour it is of mutual interest to show the latest and best data on navigational products. Dredged areas were also discussed, and the relevance of S-102 in these areas as well as challenges such as navigable mud.
2. Consistency between S-57, S-101 and S-102 was discussed. Whilst this is desirable, the general feeling was that S-102 would be updated more quickly and regularly than S-57 and S-101.
3. Concerns were raised over potential impacts on S-102 due to Military constraints especially in sensitive harbours such as those with military significance. Several members reported similar items being discussed nationally, but the general feeling was that safe navigation takes priority and that S-102 at a lower resolution (5m 10m?) would alleviate concerns.

## **8. NSICCWG Future work**

NSICCWG will continue to cover INT Chart and S-57 responsibilities, whilst furthering experience sharing and coordination of S-100, including continuation of annual S-1XX readiness questionnaire. Whilst the VTC in Feb 2024 was the first meeting for some time, the group will endeavour to meet twice a year virtually, as a minimum and will also investigate a physical meeting to further promote collaboration between members.



**9. The NSHC is invited to:**

- a. Approve the amendments to the NSICCWG ToR in Annex A.
- b. Note the results and conclusions of the NSICCWG S-1XX Questionnaire in Annex B.
- c. Note the status of the INT Chart schemes via IHO INToGIS and ENC Chart Catalogue links.

Annex A: Proposed NSICCWG ToR.

Annex B: NSICCWG S-1XX Questionnaire Report

Ashley Hawkins - NSICCWG Chairman.

March 2024

## **TERMS OF REFERENCE AND RULES OF PROCEDURE FOR THE NORTH SEA INTERNATIONAL CHARTING COORDINATION WORKING GROUP (NSICCWG)**

### **Document control.**

Version 1: Andrew Hinton dated 25/10/2017

Version 2: Andrew Hinton dated 26/01/2018

Version 3: Andrew Hinton dated 13/02/2020

Version 4: Ashley Hawkins dated 06/02/2024

### **1. Background**

**1.1** The North Sea Hydrographic Commission recognizes the need to actively develop and maintain official nautical charts, in both paper and digital formats, to 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 North Sea International Charting Coordination Working Group (NSICCWG).

**1.2** The NSICCWG, is a subsidiary body of the North Sea Hydrographic Commission. It shall conduct its work in accordance with these Terms of Reference and Rules of Procedure. The North Sea Hydrographic Commission may clarify or amend these generic Terms of Reference and Rules of Procedure for the NSICCWG 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 (INT Area D), in particular **overarching S-100 coordination (gathering plans from member states and reporting to NSHC). To specifically coordinate production of S-101 ENCs, S-102 Bathymetry, S-57 ENCs and paper charts (INT Charts),** that support ships engaged on international voyages.

**2.2** To develop and maintain an integrated scheme **of ENCs (S101 and S-57) and paper charts (INT Charts) scheme for the region.**

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

**2.4** 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 **ENCs (S-101 and S-57), S-102 Bathymetry and paper charts (INT charts).**

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

**2.6** To coordinate the development and maintenance of small and medium scale ENC schemes (Usage Bands 1, 2 and 3) and, if required, resolve any outstanding ENC consistency or coverage issues with or between members, by regional agreement, to ensure consistent parameters are used in the compilation and scheming of ENCs. Where member states share a common boundary at Usage Band 4 then these ENC cells should also be included. **To report annually to NSHC on actions needed for consistent implementation of S-101 ENCs in the region.**

**2.7** 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 North Sea Hydrographic Commission. However, the ENC catalogues may be maintained by RENCs subject to North Sea Hydrographic Commissions 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.**

**2.8** To provide advice to IHO Secretariat on any amendments required to maintain S-11 Part B: International Charts Web Catalogue INTOGIS with for example, scale, limits, numbering.

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

**2.10** To undertake professional consideration of new information of interest to the NSICCWG that may impact its business and responsibilities.

**2.11** To manage the review of **new publications** of INT charts, to check their compliance with IHO standards and to report at every forthcoming North Sea Hydrographic Commission Conference.

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

**3.1** Membership is open to all members and associate members (Member States) of the North Sea Hydrographic Commission wishing to be represented. 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 NSICCWG 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 NSICCWG. The election of the Coordinator, or the reconfirmation of the existing Coordinator, shall be decided by the North 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 North 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 North Sea Hydrographic Commission.

3.6 Conduct of business will be primarily by email correspondence. 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 meetings of the North Sea Hydrographic Commission). All members shall inform the Coordinator in advance of their intention to attend meetings of the NSICCWG. The working language shall be English.

**3.7** New INT chart and/ or ENC proposals, subject to NSICCWG approval, shall be submitted to the Coordinator by email correspondence or during NSICCWG meetings.

- Proposals should include details of the changes, the impact on the INT chart/ ENC scheme, the reasons why the changes are being made and any issues that may result. They should be accompanied by relevant graphics.

- The Coordinator, in agreement with the proposer, will decide whether the proposal is significant enough for circulation for review and comment by NSICCWG Members.
- A reasonable stated deadline for NSICCWG members to reply will be set by the Coordinator for all circulated proposals.
- Comments, if any, must be provided before the deadline specified by the Coordinator.
- If one NSICCWG Member wishes to reject a proposal, it needs to provide the Coordinator with a comment on why it is to be rejected.
- If a NSICCWG Member does not respond to the Coordinator it will be deemed as an acceptance of the proposal.
- The Coordinator will circulate the outcome of each proposal to NSICCWG Members.

Draft proposals will be circulated for review and comment to:

- All members of the NSICCWG and, where appropriate, all members of the North Sea Hydrographic Commission;
- Coordinators of adjoining regional NSICCWG, 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 if required.
- The Chair NSCWG if independent advice is required.

**3.8** Consensus is required prior to implementation of any decision. Every decision can be reconsidered providing valid technical arguments are presented. All decisions made at any NSICCWG meetings will be disseminated to NSHC Member States afterwards.

**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 North Sea Hydrographic Commission may delegate tasks to the NSICCWG 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 North 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 NSICCWG since the last report, together with a summary of reasons;
- Changes made to the ENC scheme for the Region, approved by the NSICCWG since the last report, together with a summary of reasons.
- To report overarching S-100 coordination (gathering plans from member states and related NSHC WGs)
- To report annually to NSHC on actions needed for consistent implementation of S-101 ENCs and S-102 in the region.
- An updated Work Plan (if used).

**3.11** All participants, including North Sea Hydrographic Commission members and associate members where not directly represented in the NSICCWG, shall keep the Coordinator informed of any information relevant to the NSICCWG. 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) **three months prior to every North Sea Hydrographic Commission Conference.**
- **Report the status of S-101 ENC and S-102 Bathymetry production.**

**3.12** NSICCWG 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, NSICCWG emails), 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 ENCs;

- S-57: IHO Transfer Standard for Digital Hydrographic Data;

- S-11 Part A: 'Guidance for the Preparation and Maintenance of International (INT) Chart 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**

## Annex B NSICCWG S-1XX Questionnaire Report

NORTH SEA HYDROGRAPHIC COMMISSION

### North Sea International Chart Co-ordination Working Group (NSICCWG)

#### S-100 Implementation Questionnaire

**Submitted by:** UK (NSICCWG Chair)

**Executive Summary:** This paper reports on the outcomes of a S-100 questionnaire completed by the NSICCWG member states.

At the 36th meeting of the North Sea Hydrographic Commission 29 – 30 March 2023, it was decided that the NSICCWG will develop a questionnaire to identify and monitor regional progress with S-1XX products. This builds on the work by Belgium prior to NSHC 36 in identifying in addition to S-101 which other S-1XX products can be available for production, maintenance, and service provision by MS as part of a regional package.

The questionnaire will help us:

- a. to identify and refine the scope of the initial package (e.g., S-101, S-104, S-111, ...)
- b. to identify and refine a regionally aligned delivery timeline.

The results of the questionnaire are summarised in this report.

All member states of the NSICCWG who submitted responses are thanked for their input.

80% of the NSICCWG member states completed the questionnaire.

#### **S-1XX Planning Timeline**

100% (8 of 8) of responding member states have an overall plan of S-1XX which they are working towards. Up from 62.5% last year.

#### **S-1XX Prioritisation**

100% (8 of 8) of responding member states agreed with implementing the latest IHO S-100 Product Specification Development and Timeline prioritization within the North Sea Hydrographic Commission region. Some concerns were however raised that there was a risk of delay within the timeline and that it may not be possible for all nations to meet the timelines for all Route Monitoring standards initially.

87.5% (7 of 8) of responding member states agreed that S-129 should be omitted from the NSHC prioritisation. The other nation did not comment. There is expectation that S-129 will be developed by other bodies (commercial/government/ports).

#### **S-1XX Implementation**

75% (6 of 8) of responding members considered a regular native production of S-101 capability as achievable in 2025. This was noted as during 2025 (not 1/1/25) and also a dependency on availability of S-101 2.0.0 compliant software being available on time. Of those 2 nations responding No, reasons were the status of standards and availability of production software. 2026 was felt to be more achievable.

#### **S-1XX Production**

For priority S-1XX datasets the timescale given for developing each S-1XX product is given below. For each product the year selected by the majority is in orange. Where a member specified a year prior to that selected by the majority it is shown in green, with specified years after the majority shown in red. No specified date or N/A is shown in grey.

	S-101	S-102	S-104	S-111	S-124	S-128	S-129
Belgium	2025	2025	No Date	No Date	No Date	IC-ENC	No Date
Denmark	2025	2025	No Date	No Date	No Date	2025	No Date
France	2026	2026	2026	2026	2026	2026	No Date
Germany	2026	2026	2026	2026	No Date	2025	N/A
Netherlands	2025	2025	2025	2025	No Date	2025	No Date
Norway	2025	2025	2025	2025	2026	2025	No Date
Sweden	2025	2026	2027	2028	2027	2025	No Date
UK	2025	2025	2025	2025	2025	2025	N/A

#### Summary:

- S-101 – 75% of members plan to begin production in 2025, with the remaining two in 2026.
- S-102 – 62.5% of members plan to begin production in 2025 with the remaining three in 2026.
- S-104 – 37.5% of members plan to begin production in 2025. 2 members in 2026 and 1 in 2027. The remaining two members do not have a planned date.
- S-111 - 37.5% of members plan to begin production in 2025. 2 members in 2026 and 1 in 2028. The remaining two members do not have a planned date.
- S-124 – 25% of members plan to begin production in 2026. 1 member ahead of this in 2025 and one after in 2027. 50% of members do not have a planned date. One of those with no planned date indicated this was due to S-124 being produced by another national organisation.
- S-128 – 87.5% of members expect to begin production in 2025. France expects 2026 in line with their other S-100 products.
- S-129 – As expected following responses to Q2c, all members indicated no date or N/A for S-129 as the expectation is this will be developed by other bodies.

#### S-124 Distribution

62.5% (5 of 8) of responding members have not identified a preferred distribution method for S-124. 3 of these members reported that responsibility for delivering S-124 is through another government organisation.

37.5% (3 of 8) responding members have identified their distribution method for S-124. France has developed a portal for the sharing of Nautical Information, which will allow French Authorities and NAVAREA II (SHOM) to produce S-124 Nav Warnings. Sweden indicated that the PRIMAR distribution system will be used to deliver S-124.

#### S-1XX Common Approach and Collaboration

62.5% (5 of 8) of responding members indicated their organisations experiencing capacity, capability or technical development issues. Training and limited human resources were generally highlighted as concerns. More specifically some members indicated concerns over test data, conversion checks, readiness checks and capacity and capability to verify hydrodynamic models.

25% (2 of 8) responding nations highlighted RHC collaboration to be important to help their organisation develop S-1XX though harmonisation of products (share models/scripts to avoid large differences in models where members areas adjoin and coordination of distribution). 25% (2 of 8)

responding nations highlighted sharing and learning, not just via RHC but via participation in ENC technical conferences and IHO working groups.

Trial Datasets:

	S-101	S-102	S-104	S-111	S-124	S-128	S-129
Responding members with trial datasets	100%	75%	37.50%	50%	12.5%*	12.50%	0%

*\* SHOM will have S-124 available from 2024.*

100% (8 of 8) responding members are willing to share results of their S-1XX trial with other NSHC member states. 100% (8 of 8) are also interested in developing further S-1XX collaboration trials.

All responding member states are involved in some S-1XX project teams or working groups (not all involvement was listed), most common teams/groups listed include:

S-101PT (87.5%)  
 S-100WG (62.5%)  
 S-102PT (62.5%)  
 TWCWG (50%)  
 NIPWG (37.5%)  
 ENCWG (25%)

Other groups NSHC members are involved in include:

S-100 Infrastructure Centre Establishment PT, S-100 Validation Sub working group, S-100SSPT (Security Scheme), S-101 Test Strategy WG, S-121 (on hold), S-124 PT, S-124 Correspondence Group, S-128 PT/WG, S-129 PT, S-130, S-131, S-164/S-98 Sub working group, IALA ARM (S-125 and S-201), MASS PT, ECS PT, S-100 Online Platform PT

**Additional Comments:**

SE “We need a joint regional roadmap for the S-1XX development.”

BE “Because navigation to ports around the North Sea region requires travel through waters of different MS, collaboration and alignment in product development is essential. We should aim to give the end users a complete regional set of products.

We have found IC-ENC technical workshops with a focus on S-1xx very useful. In the past NSHC (with BSHC) have organised more technical meetings (e.g. Workshop on bathymetric data processing for nautical products – April 2019). NSHC may want to consider such workshops to assist S-1xx development in NSHC region.

If NSHC commits to develop a regionally complete set of S-1xx products by a certain date, more frequent communication will be needed to allow knowledge sharing, etc. and keep the minds focussed to achieve the result.”

**Conclusions:**

Common Themes:

- Reduced confidence (from last year) on delivery of S-1XX in 2025 ahead of vessels using in 2026. But increased confidence in delivery timescales for S-101 and S-102.
- Availability of standards, production tools and manpower are common concerns impacting ability to follow IHOs timeline.
- Expecting to have a significant S-101 and S-102 offering across the NSHC area by 2026.
- S-104 and S-111 are less positive across the region – likely to be gaps in coverage.



- S-124 – NAVAREA coordinators (UKHO and SHOM) expecting to be operational in 2026, responsibility of other departments in most other NSHC countries.
- Good involvement across all NSHC members on IHO PT and WGs for S-1XX.