

**THIS CIRCULAR LETTER REQUIRES YOU TO VOTE**

**IHO File No. S3/8151/S-100**

**CIRCULAR LETTER 39/2024  
28 October 2024**

**S-100-BASED PRODUCT SPECIFICATIONS  
PHASE 1 – S-101, S-102, S-104, S-111, S-129  
CALL FOR APPROVAL**

References:

- A. IHO CL 27/2024 (Rev1) – *Adoption of Edition 5.2.0 of IHO Publication S-100 – IHO Universal Hydrographic Model.*
- B. IHO CL 43/2023 - *IHO Timelines for the Approval Phase of Edition 2.0.0 of S-100 based product specifications (Phase 1 / Route Monitoring).*
- C. HSSC CL 02/2024 – *Call for HSSC Endorsement of S-100 Based Product Specifications Phase 1 - S-101, S-102, S-104, S-111, S-129*
- D. IHO Resolution 2/2007 - *Procedures for making changes to IHO Technical Standards and Specifications.*

1. Dear Hydrographer, With the adoption of Edition 5.2.0 of S-100 in June 2024 (Reference A), a critical milestone has been reached, enabling the HSSC endorsement and subsequent adoption process of the Operational Editions of S-100 based Product Specifications (Phase 1 / Route Monitoring)<sup>1</sup> in 2024 as announced in Reference B (paragraph 4).

2. Thanks to the significant work of the concerned HSSC bodies, these Operational Editions were submitted in a timely manner for endorsement by the HSSC Members by correspondence, as part of the S-100 Phase 1 package (Reference C).

3. The HSSC Chair/Secretariat thanks the following 30 HSSC Members who responded to Reference A, in particular the 28 HSSC Members who endorsed the Operational Editions of S-101, S-102, S-104, S-111 and S-129 Product Specifications: Australia, Belgium, Brazil, Canada, Chile, China, Croatia, Denmark, Estonia, Finland, France, Germany, Greece, India, Indonesia, Italy, Japan, Netherlands, New Zealand, Norway, Poland, Portugal, Republic of Korea, Romania, Singapore, South Africa, Spain, Sweden, United Kingdom, and United States of America.

<sup>1</sup> See [S-100 Implementation Strategy](#).

4. Ten HSSC Members (Australia, Brazil, Estonia, Greece, Indonesia, Netherlands, Sweden, Türkiye, United Kingdom, and United States of America) offered comments in addition to their responses. These comments and the outcome of their review by the Working Group and Project Team Chairs/HSSC Chair/Secretariat are provided in Annex A to this Circular Letter.

5. Noting the excellent progress made by the concerned HSSC bodies to prepare these draft Operational Editions, which now include amendments requested during the endorsement phase by the HSSC as adjudicated in Annex A, the consolidated draft Product Specifications have been made available for approval in the IHO Geospatial Information (GI) Registry > Test Bed > [Product Specifications](#) repository (S-101, S-102, S-104, S-111 and S-129). A link to the Product Specifications for approval has also been placed on the IHO website > Publications > [Draft Publications](#) > Draft Publications awaiting approval by Member States. Member States are now invited, in accordance with Reference D, to approve the Operational Editions of S-100 based product specifications (Phase 1 / Route Monitoring) **no later than 13 December 2024** using any of the following methods:

- the IHO Online Form accessible through the following link (**recommended**) :

[https://IHO.formstack.com/forms/cl\\_39\\_24](https://IHO.formstack.com/forms/cl_39_24)

- the IHO Voting Form (see Annex B), to be sent back by email ([cl-lc@iho.int](mailto:cl-lc@iho.int)),

On behalf of the Secretary-General

Yours sincerely,



John NYBERG  
Director

Annex A: HSSC Members' responses to HSSC CL 02/2024 and comments from the WG/PT Chair/HSSC Chair and Secretariat (*in English only*)

Annex B: Voting Form

**HSSC MEMBERS' RESPONSES TO HSSC CL 02/2024 AND COMMENTS  
FROM THE WORKING GROUP and PROJECT TEAM CHAIRS, HSSC CHAIR /  
SECRETARIAT**

<b>S-101, Ed. 2.0.0</b>	<b>Operational Product Specification</b>
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**BRAZIL** (Vote for endorsement = YES)

[S-101 Main document] On page 2, item "1.2 References", the statement "S-100 IHO Universal Hydrographic Data Model, Edition 5.0.0" should be replaced by "S-100 IHO Universal Hydrographic Data Model, Edition 5.2.0".

Comments by the S-101PT Chair and HSSC Chair/Secretariat:

The S-100WG Chair/HSSC Chair/Secretariat thank Brazil for their comment. This is agreed. The correction has been applied for the final operational draft Edition 2.0.0 of S-101 to be submitted to the Member States for adoption.

**GREECE** (Vote for endorsement = NO)

In S-101 Annex A paragraph 2.5.5 we prefer the following wording:

In areas which include neighbouring producer nations, Hydrographic Offices should ensure no data overlap within Navigational Purposes. Where the elimination of overlapping ENC data cannot be resolved and its continued existence presents a demonstrable risk to the safety of navigation, the procedures described in IHO Resolution 1/2018 as well as in section 1.7 of the Guidelines for the Implementation of the WEND Principles should be applied.

Comments by the S-100WG Chair and IHO Secretariat:

The S-100WG Chair/HSSC Chair/Secretariat thank Greece for their comment. After consideration, it has been decided that this change will not be made for S-101 Edition 2.0.0, as the text is consistent with the corresponding guidance in S-57.

**INDONESIA** (Vote for endorsement = YES)

S-101 Edition 2.0.0 is an update to the S-101 standard which focuses on the exchange and use of ENCs. This edition includes improvements to the data model, enhancing interoperability and usability for maritime navigation systems. Key feature may include updated metadata standards, improved visualization capabilities and enhancements for better integration with other marine data. It's also more accurate and user friendly.

Comments by the S-101PT Chair and HSSC Chair/Secretariat:

The S-100WG Chair/HSSC Chair/Secretariat thank Indonesia for their comment.

**SWEDEN** (Vote for endorsement = YES)

Comment 1:

Table 3-1, in the S-101 Main Document should be amended.:

“NULL (only allowed on minimum display scale where the optimum display scale = 10,000,000)” is wrong as no data will be displayed if the MSVS is smaller than minimum display scale for the smallest scale ENC. The minimum display scale must be able to be null for the smallest scale ENC so an ENC can be displayed in the ECDIS for all MSVS. The text mentioned above should be replaced with “NULL (only allowed on minimum display scale (data will continue to be displayed at all smaller scales))”

Comment 2:

In S-101 Annex B, the clauses 5.1.1, 6.1.1 and 7.1.1 is not updated with the current version numbers for all standards in the ENED, PRSP and PRED subfields.

Comments by the S-101PT Chair and HSSC Chair/Secretariat:

The S-100WG Chair/HSSC Chair/Secretariat thank Sweden for their comments.

This is agreed. The corrections have been applied for the final operational draft Edition 2.0.0 of S-101 to be submitted to the Member States for adoption.

**TÜRKIYE** (Vote for endorsement = No vote submitted)

Current Text	Our Proposed Text	Remarks/Comments
<p><b>S101 – Draft for Edition 2.0.0- Annex A</b></p> <p><i>16.2.1 Maritime jurisdiction areas in dispute</i></p> <p>In accordance with Article 55 of the United Nations Convention on the Law of the Sea (UNCLOS – 10 December 1982), a Coastal State’s Territorial Sea Area and Exclusive Economic Zone must not overlap. Occasionally, small areas at the boundary of two or more Coastal States may be in dispute regarding the establishment of maritime jurisdiction, which may result in a small section of Territorial Sea overlapping an EEZ in the disputed area.</p> <p>Where issues of maritime jurisdiction between two or more Coastal States are in dispute, the proposed Territorial Sea (Territorial Sea Area) of one Coastal State may overlap the proposed EEZ (Exclusive Economic Zone) of another Coastal State. In this case, the disputed area should be encoded with separate Territorial Sea Area and Exclusive Economic Zone features, with Boolean attribute in dispute set to True and the mandatory attribute nationality populated with the country codes (conforming to ISO 3166) of the disputing states (see clause 27.135).</p>	<p>S101 – Draft for Edition 2.0.0- Annex A</p> <p>16.2.1 Maritime jurisdiction areas in dispute</p> <p><del>In accordance with Article 55 of the United Nations Convention on the Law of the Sea (UNCLOS – 10 December 1982), a Coastal State’s Territorial Sea Area and Exclusive Economic Zone must not overlap. Occasionally, small</del> <b>Some</b> areas at the boundary of two or more Coastal States may be in dispute regarding the establishment of maritime jurisdiction, which may result in a <del>small section of Territorial Sea</del> <b>maritime jurisdiction area</b> overlapping a <del>EEZ</del> <b>maritime jurisdiction area</b> in the disputed area.</p> <p>Where issues of maritime jurisdiction between two or more Coastal States are in dispute, the proposed <b>maritime jurisdiction area</b> <del>Territorial Sea (Territorial Sea Area)</del> of one Coastal State may overlap <b>maritime jurisdiction area</b> <del>the proposed EEZ (Exclusive Economic Zone)</del> of another Coastal State. In this case, the disputed area should be encoded with separate Territorial Sea Area and Exclusive Economic Zone features, with Boolean attribute in dispute set to True and the mandatory attribute nationality populated with the country codes (conforming to ISO 3166) of the disputing states (see clause 27.135).</p>	<p>Türkiye does not agree that safety of navigation requires having no overlapping charts in complex and disputed seas. When the waters of national jurisdiction are identified and agreed on to the extent of maritime jurisdiction areas, it is certainly possible to share the survey responsibilities between the neighbouring countries. When that is not the case, overlapping is indispensable.</p> <p>Türkiye clearly reiterated many times in the past years that <i>“Standards should be set for ECDIS manufacturers to display overlapping data and overlapping data should not be afraid of. Because it is believed that in most cases conducting a technical activity like aligning data can reduce the impact/risk of overlapping data”</i>.</p> <p>It is also crucial to remind that Türkiye is one of the countries that has not ratified UNCLOS.</p> <p>In the light of all the points made above, Türkiye suggest making changes as pointed out in the proposed text.</p>

Comments by the HSSC Chair/Secretariat:

The S-100WG Chair/HSSC Chair/Secretariat thank Türkiye for their comment.

After discussion within the S-101PT and HSSC Chair Groups and the IHO Secretariat, it has been determined that this change will not be applied for S-101 Edition 2.0.0.

## **UNITED KINGDOM** (Vote for endorsement = YES)

The UK proposes that the S-101 Product Specification B-6.1.14 is amended from C3DI to C3IT to be consistent with S-100 5.2.0. Consequentially reference to C3DI should be removed in S-100 5.2.0 at 10a-6.2.2.2 or amended to reference C3IT and C3FT at the next opportunity.

The UK would like to propose a correction to Annex B of the S-101 1.5.0 Main Document where version product edition 1.2 is referenced this should read 1.5, this applies at clauses B-5.1.1, B-6.1.1 and B-7.1.1.

The UK would like to note the importance of the corresponding S-158 validation checks being available once S-101 2.0.0 is published (assuming HSSC endorsement and MS approval) in support of successful and timely implementation of this specification. Additionally, we note the need for the evolution of DCEG content post edition 2.0.0 so that producing agencies have guidance which is adequately clear and concise.

### Comments by the S-101PT Chair and HSSC Chair/Secretariat:

The S-100WG Chair/HSSC Chair/Secretariat thank the United Kingdom for their comments. This is agreed. The corrections have been applied for the final operational draft Edition 2.0.0 of S-101 to be submitted to the Member States for adoption, noting that the proposed change applied at clauses B-5.1.1, B-6.1.1 and B-7.1.1 has been applied as 2.0 to reflect S-101 Edition 2.0.0.

The comment related to S-158 is noted and through the S-100WG the IHO will seek to publish a draft Edition of S-158:101 to be implemented for S-101 Edition 2.0.0.

## **UNITED STATES OF AMERICA** (Vote for endorsement = YES)

S-101, S-102, S-104, and S-111 S100\_DatasetDiscoveryMetadata Harmonization.

- a) S100\_ProductSpecification inconsistencies and the following suggestions for harmonisation
  - a. **name:** Observation on **S-111** Surface Currents Product Specification - "Product Specification" not required, however this is how it has been registered in IHO GI PS Register, so not able to change.
  - b. **version:** Clarity required as different format example shown in **S-102** "030000", whereas S-101, S-104, and S-111 all show "2.0.0"
  - c. **date multiplicity:** Inconsistency, as S-101 and S-102 show Mandatory (Exactly one) and S-104 and S-111 show Optional (zero or one)
  - d. **number:** Remarks show no example for S-101, "199" for S-102, and "0" for S-104 and S-111, mandatory
  - e. **complianceCategory:** Multiplicity for **S-102** shown as Optional (zero or one) whereas S-101, S-104, and S-111 all show Mandatory (Exactly one)
  - f. **complianceCategory:** Observation, S-101 and S-102 show allowable values of 3 and 4, and S-104 and S-111 show allowable value 4
- b) **S-104** and **S-111** do not use optional attribute **otherLocale**, therefore, to avoid confusion suggest remove this from the table in 12.2.4
- c) **datasetID** is shown as Mandatory in S-104 and S-111 and optional in S-101 and S-102
- d) **producerCode** is shown as Mandatory in S-101 and optional in S-102, S-104, and S-111

- e) **classification** is shown as Mandatory in S-101 and optional in S-102, S-104, and S-111
- f) **navigationPurpose** Multiplicity is shown as “1..3” in **S-102**, suggest that this is “1”
- g) **S-102** Number spelt incorrectly in Remarks in Table 14

Comments by the S-101PT Chair and HSSC Chair/Secretariat:

The S-100WG Chair/HSSC Chair/Secretariat thank the United States for their comments. The S-101PT Chair Group have reviewed the inconsistencies identified and consider that no change is required to S-101 at this time. US is invited to submit proposals to the S-101PT if it is considered that S-101 requires amendment.

<b>S-102 Ed. 3.0.0</b>	<b>Operational Product Specification</b>
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**ESTONIA** (Vote for endorsement = YES)

As described by IHO GI Registry and Draft Publications list HSSC members are endorsing S-102 Edition 3.0.0

Comments by the S-102PT Chair and HSSC Chair/Secretariat:

The ENCWG Chair/HSSC Chair/Secretariat thank Estonia for their comments. This is agreed. Consequently, the present call of approval presents the S-102 product specification under its rightful 3.0.0 version as appropriate.

**INDONESIA** (Vote for endorsement = YES)

This edition enhances the framework for representing and exchanging high-resolution bathymetric data, improving its usability for application like maritime navigation, resource management and environmental monitoring. Key improvements in this version include Data Model Enhancements, Interoperability, Performance Optimizations and quality Control Measures. This edition aims to provide a more robust framework for user needing detailed and accurate bathymetric information.

Comments by the S-102PT Chair and HSSC Chair/Secretariat:

The ENCWG Chair/HSSC Chair/Secretariat thank Indonesia for their comment.

**UNITED KINGDOM** (Vote for endorsement = YES)

The UK assumes the above statement should read 'endorse version 3.0.0 of S-102' and approves this version.

Comments by the HSSC Chair/Secretariat:

The ENCWG Chair/HSSC Chair/Secretariat thank the United Kingdom for their comments.

This is agreed. Consequently, the present call of approval presents the S-102 product specification under its rightful 3.0.0 version as appropriate.

**UNITED STATES OF AMERICA** (Vote for endorsement = YES)

S-101, S-102, S-104, and S-111 S100\_DatasetDiscoveryMetadata Harmonization.

- a) S100\_ProductSpecification inconsistencies and the following suggestions for harmonisation
  - a. **name:** Observation on **S-111** Surface Currents Product Specification - "Product Specification" not required, however this is how it has been registered in IHO GI PS Register, so not able to change.
  - b. **version:** Clarity required as different format example shown in **S-102** "030000", whereas S-101, S-104, and S-111 all show "2.0.0"
  - c. **date multiplicity:** Inconsistency, as S-101 and S-102 show Mandatory (Exactly one) and S-104 and S-111 show Optional (zero or one)
  - d. **number:** Remarks show no example for S-101, "199" for S-102, and "0" for S-104 and S-111, mandatory
  - e. **complianceCategory:** Multiplicity for **S-102** shown as Optional (zero or one) whereas S-101, S-104, and S-111 all show Mandatory (Exactly one)
  - f. **complianceCategory:** Observation, S-101 and S-102 show allowable values of 3 and 4, and S-104 and S-111 show allowable value 4
- b) **S-104** and **S-111** do not use optional attribute **otherLocale**, therefore, to avoid confusion suggest remove this from the table in 12.2.4
- c) **datasetID** is shown as Mandatory in S-104 and S-111 and optional in S-101 and S-102
- d) **producerCode** is shown as Mandatory in S-101 and optional in S-102, S-104, and S-111
- e) **classification** is shown as Mandatory in S-101 and optional in S-102, S-104, and S-111
- f) **navigationPurpose** Multiplicity is shown as "1..3" in **S-102**, suggest that this is "1"
- g) **S-102** Number spelt incorrectly in Remarks in Table 14

Comments by the S-102PT Chair and HSSC Chair/Secretariat:

The S-102PT Chair/HSSC Chair/Secretariat thank the United States for their comments. The S-102PT Chair Group have reviewed the inconsistencies identified and consider that no change is required to S-102 at this time. US is invited to submit proposals to the S-102PT if it is considered that S-102 requires amendment.

<b>S-104 Ed. 2.0.0</b>	<b>Operational Product Specification</b>
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**INDONESIA** (Vote for endorsement = YES)

This edition aims to enhance the usability and interoperability of water level information for application such as navigation, environmental monitoring and coastal management. Key

updates in this version include Data Model Enhancements, Interoperability, Improved Metadata and Quality Assurance.

Comments by the TWCWG Chair and HSSC Chair/Secretariat:

The TWCWG Chair/HSSC Chair/Secretariat thank Indonesia for their comment.

**UNITED KINGDOM** (Vote for endorsement = YES)

The draft S-104 Edition 2.0.0 draft allows "bilinear" interpolation as well as "nearestneighbor" (Table 12-2 in clause 12.3.2).

If water level adjustment in S-98 Annex C will not use bilinear interpolation, then it should be removed as an option for **interpolationType** in Table 12.-2 for the sake of full alignment between S-98 Annex C and S-104.

Note: This is not a recommendation for interpolation to be used by the data producer, but rather by an application reading S-104 data.

Comments by the TWCWG Chair and HSSC Chair/Secretariat:

The TWCWG Chair/HSSC Chair/Secretariat thank the United Kingdom for their comments. This is agreed, with the following actions to be taken by the Working Group:

- Noting that the most recent draft of S-98 (1.6.0) Water Level Adjustment clause C-5.2 says "As with S-102, each S-104 point is assigned a rectangular extent with nearest neighbour interpolation." - bilinear interpolation will be removed as described.
- The Note will be added in the Remarks column.

**UNITED STATES OF AMERICA** (Vote for endorsement = YES)

S-101, S-102, S-104, and S-111 S100\_DatasetDiscoveryMetadata Harmonization.

- a) S100\_ProductSpecification inconsistencies and the following suggestions for harmonisation
  - a. **name**: Observation on **S-111** Surface Currents Product Specification - "Product Specification" not required, however this is how it has been registered in IHO GI PS Register, so not able to change.
  - b. **version**: Clarity required as different format example shown in **S-102** "030000", whereas S-101, S-104, and S-111 all show "2.0.0"
  - c. **date multiplicity**: Inconsistency, as S-101 and S-102 show Mandatory (Exactly one) and S-104 and S-111 show Optional (zero or one)
  - d. **number**: Remarks show no example for S-101, "199" for S-102, and "0" for S-104 and S-111, mandatory
  - e. **complianceCategory**: Multiplicity for **S-102** shown as Optional (zero or one) whereas S-101, S-104, and S-111 all show Mandatory (Exactly one)
  - f. **complianceCategory**: Observation, S-101 and S-102 show allowable values of 3 and 4, and S-104 and S-111 show allowable value 4
- b) **S-104** and **S-111** do not use optional attribute **otherLocale**, therefore, to avoid confusion suggest remove this from the table in 12.2.4
- c) **datasetID** is shown as Mandatory in S-104 and S-111 and optional in S-101 and S-102
- d) **producerCode** is shown as Mandatory in S-101 and optional in S-102, S-104, and S-111



- e) **classification** is shown as Mandatory in S-101 and optional in S-102, S-104, and S-111
- f) **navigationPurpose** Multiplicity is shown as "1..3" in **S-102**, suggest that this is "1"
- g) **S-102** Number spelt incorrectly in Remarks in Table 14

Comments by the TWCWG Chair and HSSC Chair/Secretariat:

The TWCWG Chair/HSSC Chair/Secretariat thank the United States for their comments. The TWCWG Chair Group have reviewed the inconsistencies identified and agrees on the following course of actions:

- a. S100\_ProductSpecification inconsistencies
  - a. The name of the Product Specification ("Surface Currents Product Specification") will be amended to "Surface Currents" since that is what the GI Registry uses for Ed. 2.0.0.
  - b. No action in S-104 and S-111
  - c. No action for S-104 and S-111. S-104 and S-111 are compliant with S-100 5.2.0 in using exactly the same multiplicity as S-100 Ed. 5.2.0 (namely, 0..1).
  - d. No action in S-104 and S-111.
  - e. Both S-104 and S-111 comply with S-100 and add a note about what to do before the PS is formally published: "From the Product Specification Register in the IHO Geospatial Information Registry Encode as "0" until this Edition is added to the GI Registry and receives a Registry number. Do not use the number of any other Edition. The Registry number is not definite until formal publication of the approved PS in the Product Specification Register. The extended remark in S-104 and S-111 addresses the question of what should be encoded in sample or test exchange catalogues prepared before formal publication of the PS in the Product Specification Register.
  - f. No action in S-104 and S-111
  - g. No action planned for S-104 and S-111. Phase 1 Product Specifications are all intended for use on ECDIS. If a particular dataset is not intended for ECDIS, the attribute **notForNavigation** should be used to indicate this instead of **complianceCategory**.
- b. TWCG agrees with the fact that the optional attribute **otherLocale** is not used in S-104 and should be removed from the 12.2.4 table.
- c. No action planned for S-104 and S-111. Both intentionally made datasetID mandatory. Discussions with S-101 and S-102 whether this should be a universal requirement postponed until later.
- d. S-104 and S-111 use the same multiplicity as S-100 5.2.0. Remark will be added recommending its use for datasets intended for use on ECDIS.
- e. S-104 and S-111 use the same multiplicity as S-100 5.2.0. Remark will be added recommending its use for datasets intended for use on ECDIS.
- f. Not applicable to S-104 and S-111
- g. Not applicable to S-104 and S-111

**INDONESIA** (Vote for endorsement = YES)

This edition aims to enhance the usability and interoperability of current data, facilitating better decision-making in marine environments. Key updates in this version include Data Model Enhancements, Interoperability, Improved Metadata and Quality Assurance.

Comments by the TWLCWG Chair and HSSC Chair/Secretariat:

The TWLCWG Chair/HSSC Chair/Secretariat thank Indonesia for their comment.

**UNITED STATES OF AMERICA** (Vote for endorsement = YES)

S-101, S-102, S-104, and S-111 S100\_DatasetDiscoveryMetadata Harmonization.

- a) S100\_ProductSpecification inconsistencies and the following suggestions for harmonisation
  - a. **name**: Observation on **S-111** Surface Currents Product Specification - "Product Specification" not required, however this is how it has been registered in IHO GI PS Register, so not able to change.
  - b. **version**: Clarity required as different format example shown in **S-102** "030000", whereas S-101, S-104, and S-111 all show "2.0.0"
  - c. **date multiplicity**: Inconsistency, as S-101 and S-102 show Mandatory (Exactly one) and S-104 and S-111 show Optional (zero or one)
  - d. **number**: Remarks show no example for S-101, "199" for S-102, and "0" for S-104 and S-111, mandatory
  - e. **complianceCategory**: Multiplicity for **S-102** shown as Optional (zero or one) whereas S-101, S-104, and S-111 all show Mandatory (Exactly one)
  - f. **complianceCategory**: Observation, S-101 and S-102 show allowable values of 3 and 4, and S-104 and S-111 show allowable value 4
- b) **S-104** and **S-111** do not use optional attribute **otherLocale**, therefore, to avoid confusion suggest remove this from the table in 12.2.4
- c) **datasetID** is shown as Mandatory in S-104 and S-111 and optional in S-101 and S-102
- d) **producerCode** is shown as Mandatory in S-101 and optional in S-102, S-104, and S-111
- e) **classification** is shown as Mandatory in S-101 and optional in S-102, S-104, and S-111
- f) **navigationPurpose** Multiplicity is shown as "1..3" in **S-102**, suggest that this is "1"
- g) **S-102** Number spelt incorrectly in Remarks in Table 14

Comments by the TWCWG Chair and HSSC Chair/Secretariat:

The TWCWG Chair/HSSC Chair/Secretariat thank the United States for their comments. The TWCWG Chair Group have reviewed the inconsistencies identified and agrees on the following course of actions:

- a. S100\_ProductSpecification inconsistencies

- a. The name of the Product Specification ("Surface Currents Product Specification") will be amended to "Surface Currents" since that is what the GI Registry uses for Ed. 2.0.0.
  - b. No action in S-104 and S-111
  - c. No action for S-104 and S-111. S-104 and S-111 are compliant with S-100 5.2.0 in using exactly the same multiplicity as S-100 Ed. 5.2.0 (namely, 0..1).
  - d. No action in S-104 and S-111.
  - e. Both S-104 and S-111 comply with S-100 and add a note about what to do before the PS is formally published: "From the Product Specification Register in the IHO Geospatial Information Registry Encode as "0" until this Edition is added to the GI Registry and receives a Registry number. Do not use the number of any other Edition. The Registry number is not definite until formal publication of the approved PS in the Product Specification Register. The extended remark in S-104 and S-111 addresses the question of what should be encoded in sample or test exchange catalogues prepared before formal publication of the PS in the Product Specification Register.
  - f. No action in S-104 and S-111
  - g. No action planned for S-104 and S-111. Phase 1 Product Specifications are all intended for use on ECDIS. If a particular dataset is not intended for ECDIS, the attribute **notForNavigation** should be used to indicate this instead of **complianceCategory**.
- b. TWCWG agrees with the fact that the optional attribute **otherLocale** is not used in S-104 and should be removed from the 12.2.4 table.
  - c. No action planned for S-104 and S-111. Both intentionally made datasetID mandatory. Discussions with S-101 and S-102 whether this should be a universal requirement postponed until later.
  - d. S-104 and S-111 use the same multiplicity as S-100 5.2.0. Remark will be added recommending its use for datasets intended for use on ECDIS.
  - e. S-104 and S-111 use the same multiplicity as S-100 5.2.0. Remark will be added recommending its use for datasets intended for use on ECDIS.
  - f. Not applicable to S-104 and S-111
  - g. Not applicable to S-104 and S-111

<b>S-129 Ed. 2.0.0</b>	<b>Operational Product Specification</b>
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**AUSTRALIA** (Vote for endorsement = YES)

The following change to the S-129 Product Specification document is suggested:

1. Clarification on whether S-129 information should trigger alarms or indications.

It is proposed that the following change be made to the S-129 Feature Catalogue:

2. Removal of value range constraint from *distanceAboveUKCLimit* attribute  
It is true that *distanceAboveUKCLimit* attribute values should be positive real numbers for *UnderKeelClearanceAlmostNonNavigableArea* features. However, for

*UnderKeelClearanceControlPoint* features, *distanceAboveUKCLimit* could be either positive or negative. Therefore, the current value range constraint (larger than zero) should be removed.

3. Removal of text pattern constraint from *interoperabilityIdentifier* attribute

The *interoperabilityIdentifier* attribute is of URN value type, and the currently included text pattern constraint of “*urn:mrn:[Organisational ID]:.....*” in the S-129 Feature Catalogue is incorrect.

Thus, it should be removed, similarly to the S-101 Feature Catalogue.

4. Correct Feature Catalogue name

The S-129 Feature Catalogue currently shows:

```
<S100FC:name>Feature Catalogue for S-129</S100FC:name>
```

This name is incorrect, and should be corrected to:

```
<S100FC:name>Under Keel Clearance Management</S100FC:name>
```

Any changes to the S-129 Feature Catalogue, as listed above, should also be reflected in the S-129 Product Specification, where applicable.

The following changes to the S-129 Portrayal Catalogue are proposed:

5. Removal of *UnderKeelClearanceControlPoint* positional offset

Currently, *offsetX* and *offsetY* of -15 and 10, respectively, are being applied in the rule file for *UnderKeelClearanceControlPoint* portrayal. These offsets appear unnecessary, as they result in the *UnderKeelClearanceControlPoint* symbols being displayed away from their actual geographic positions at different zoom levels.

6. Correct allowance of multiple Viewing Groups for *UnderKeelClearanceNonNavigableArea* portrayal rule

Currently, the rule file for *UnderKeelClearanceNonNavigableArea*, and its underlying template for symbol fill, do not correctly define two separate Viewing Group parameters to enable the intended display and toggling of the symbol fill.

Two different parameters need to be defined, so that two Viewing Groups can be assigned to the *UnderKeelClearanceNonNavigableArea*'s symbol fill portrayal.

7. Transparency in symbol fill for *UnderKeelClearanceNonNavigableArea*

The symbol fill for *UnderKeelClearanceNonNavigableArea* is intended to be toggled and displayed in Night mode display. To achieve this, the S-129 Portrayal Catalogue seemingly intends to apply transparency to the associated color token for Day and Dusk modes.

However, this does not appear to be implemented correctly. Transparency should be applied to the Day and Dusk mode stylesheets (.CSS) so that transparency can be applied to the symbol fill portrayal as intended.

8. Use of SVG style properties in symbol files

The symbol SVG files currently used specifically in the S-129 Portrayal Catalogue (EMUKCARE.svg, UKCCONPT.svg) appear to be using inline styling to apply opacity and stroke widths. This method does not accord with S-100 Part 9 Annex B, and therefore need to be updated to utilise appropriate SVG style properties instead.

Any changes to the S-129 Portrayal Catalogue, as listed above, should also be reflected in the S-129 Product Specification, where applicable.

Comments by the S-129PT Chair:

The S-129PT thanks Australia for their comment.

The S-129PT agrees with the suggested corrections and improvements to the S-129 FC, PC, and the Product Specification as suggested by Australia. The corresponding changes have been applied for S-129 Edition 2.0.0 to be submitted to the Member States for adoption.

**INDONESIA** (Vote for endorsement = YES)

This edition focuses on the exchange and management of Maritime Safety Information (MSI). Key updates in this version include Data Model Enhancements, Interoperability, Improved Metadata and Quality Assurance.

**NETHERLANDS** (Vote for endorsement = YES)

Although I endorse I do have two remarks:

Remark 1: The document states that "S-129 datasets are generally intended for use with ENC, and optionally with S-102 bathymetric surface datasets". It is noted that the document text does not refer to the possible use of S-104. Suggest to mention this, as this important component for calculating the available water column is also part of phase 1 of the roadmap.

Remark 2: The document states that "S-129 datasets are generally intended for use with ENC". Suggest to narrow this to "S-101 ENC".

Comments by the S-129PT Chair

The S-129PT thanks the Netherlands for their comments.

This is agreed. Furthermore, it is recognised that S-111 may also be optionally used with S-129. The corresponding changes have been applied in the S-129 Edition 2.0.0 to be submitted to the Member States for adoption.

**TÜRKIYE** (Vote for endorsement = No vote submitted)

<b>Current Text</b>	<b><i>Our Proposed Text</i></b>	<b>Remarks/Comments</b>
<u>S129 Edition 1.3.0</u> 17.9 Data overlap S-129 datasets must not overlap temporally but may spatially overlap other S-129 datasets.	---	The most important thing herein for data is the accuracy of the data. If the data is accurate temporally & spatially, then data overlap for S129 should not be a problem for safety of mariners. That is why we think this article (17.9) should be revised/reconsidered.

Comments by the S-129PT Chair:

The S-129PT thanks Türkiye for their comments.

It is agreed that S-129 datasets may temporally overlap. For example, concurrent display of S-129 datasets for different vessels may have overlapping voyage times and/or sailing windows. Furthermore, S-129 replacement/update datasets may temporally overlap preceding S-129 datasets corresponding to the same voyage plan. Thus, it is unnecessary for the S-129 Product Specification to prevent temporal overlaps between S-129 datasets. The corresponding changes have been applied in the S-129 Edition 2.0.0 to be submitted to the Member States for adoption.

IHO File No. **S3/8151/S-100**

**CALL FOR APPROVAL OF S-100-BASED PRODUCT SPECIFICATIONS  
PHASE 1 – S-101, S-102, S-104, S-111, S-129**

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**VOTING FORM**

to be returned to the IHO Secretariat **no later than 13 December 2024**

E-mail: [cl-lc@iho.int](mailto:cl-lc@iho.int) - Fax: +377 93 10 81 40

**Member  
State:**

**Contact:**

**E-mail:**

All proposed draft Editions are available at: <https://iho.int/en/draft-publications>.

**1-Do you approve the draft proposed Edition 2.0.0 of S-101?**

YES

NO

Please provide any comments in the section below.

**2- Do you approve the draft proposed Edition 3.0.0 of S-102?**

YES

NO

Please provide any comments in the section below.

**3- Do you approve the draft proposed Edition 2.0.0 of S-104?**

YES

NO

Please provide any comments in the section below.

**4- Do you approve the draft proposed Edition 2.0.0 of S-111?**

YES

NO

Please provide any comments in the section below.

**5- Do you approve the draft proposed Edition 2.0.0 of S-129?**

YES

NO

Please provide any comments in the section below.

**Date :**

**Signature :**
