



S-130PT3

2022-06-13

Opening and Welcome

S130PT3-1



Meeting Protocol

Meeting participants are kindly requested to note the following meeting protocols:

- Please keep your camera and microphone turned **off** if you are not talking or presenting.
- If you want to make an intervention, **please turn your camera and microphone on and raise (and wave) your hand** to indicate that you wish to speak. (Please turn your camera and microphone off when finished)
- Don't forget to turn your microphone **on** before speaking, and **off** when finished.
- Please use the **Chat** function to communicate any text information to the meeting.
- It is intended to record the meeting for internal purpose only – please inform the secretary if you have an objection to this.
- If you have problems connecting using Firefox or other browser – please try using Chrome.

Approval of Agenda

S130PT3-2

https://iho.int/uploads/user/Services%20and%20Standards/HSSC/Project%20Team%20S-130/S130PT03/S130PT03_01_2022_EN_Agenda_draft.pdf

Annex A S130PT3 Draft Agenda

13 June 2022, (13:00 – 15:00, UTC+2, CEST) / VTC Event

DRAFT AGENDA v4

Agenda item	Title	Lead	Remarks
1. Opening and Administrative Arrangements			
S130PT3-1	Opening and Welcome	Chair	
2. Approval of Agenda			
S130PT3-2	Agenda	Chair	
S130PT3-2.1	Status of List of Actions and Decisions from S-130PT2	IHO Sec.	
3. Matters Arising from the PT and Others			
S130PT3-3	Review decisions and actions from HSSC related to the work of the PT	IHO Sec.	
4. Work Items			
S130PT3-4.1	Approval of S-130 Product Specification Description	Chair	
S130PT3-4.2	Discussion on use of S-23 as source document for delimitation coordinates	Chair	
S130PT3-4.3	Input for start of Application Schema Sub-Group	Chair	
5. Any Other Business (AOB)			
S130PT3-5.1	AOB	IHO Sec.	
S130PT3-5.2	Group Photo	Chair	
6. Date and Venue of Next Meeting			
7. Review Action Items			
S130PT3-7	Review Action items	Sec.	
Close			

Status of List of Actions and Decisions from S-130PT2

S130PT3-2.1



List of Actions and Decisions from S-130PT2

Action	Status
[Action 2/01] S-130PT are invited to update the list of members of the S-130PT and contact details.	Ongoing
[Action 2/02] S-130PT Chair will submit the work plan to HSSC-14 to review and endorse.	Completed
[Action 2/03] S-130 Product Specification Description Sub-Group is invited to draft the Product Specification Description utilizing the IHO S-130PT GitHub by 30 April 2022.	Completed
[Action 2/04] S-130PT are invited to supply the Sub-Group with feedback concerning the draft Product Specification Description by 31 May 2022.	Completed
[Action 2/05] S-130 Application Schema and Sample Data/Final Dataset Sub-Groups are invited to look into the CRS for the Product Specification taking into account the notes made at the S-130PT2.	To be started



List of Actions and Decisions from S-130PT2

- [Decision 2/01] S-130PT2 approved the agenda as presented at the meeting.
- [Decision 2/02] S-130PT2 approved the proposed timeline and work plan as presented to be submitted to HSSC14.
- [Decision 2/03] S-130PT2 agreed to appoint B.Lonneville (Belgium) to lead the “Product Specification Description” Sub-Group.
- [Decision 2/04] S-130PT2 agreed to appoint S.Oh (Republic of Korea) to lead the “Application Schema” Sub-Group.
- [Decision 2/05] S-130PT2 agreed to appoint B.Lonneville (Belgium) to lead the “Sample Data/Final Dataset” Sub-Group.
- [Decision 2/06] S-130PT2 agreed to a plan as proposed during the meeting for the Product Specification Description Sub-Group. The proposed deadlines can be reconsidered by the S-130PT Chair if necessary.
- [Decision 2/07] S-130PT2 approved to use GML as S-130 Data Format.
- [Decision 2/08] S-130PT2 agreed to use the IHO GitHub Repository for developing and sharing S-130PT work.
- [Decision 2/09] S-130PT2 agreed to hold the next S-130PT meeting (S130PT3) as a virtual meeting on 13 June 2022 (13:00-15:00, UTC+1, CET).

Matters Arising from the PT and Others

S130PT3-3



3rd Meeting of S-130 Project Team

Report of the HSSC14 Decision and Actions related to the S-130PT

Agenda Item 3.3

**IHO**

HSSC14 DECISIONS & ACTIONS

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AGENDA ITEM	SUBJECT	ACTION No.	ACTIONS (in bold, action by)	TARGET DATE/EVENT	STATUS (at 31 May 2022)
5.1A	S-100 Ed. 5.0.0	HSSC14/10	<p>HSSC endorsed the framework of the proposed Ed. 5.0.0 of S-100, (pending finalization of xml schemas)</p> <p>IHO Secretariat to issue an IHO CL calling for the <i>approval</i> of Ed. 5.0.0 by IHO Member States, once the schemas are finalized according to the UML in S-100 Edition 5.0.0.</p>	August 2022	

**IHO**

HSSC14 DECISIONS & ACTIONS

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5.1A, 5.1B	S-99, IHO GI Registry	HSSC14/16	HSSC endorsed Ed. 2.0.0 of S-99 <i>- Operational procedures for the organization and management of the S-100 GI registry.</i> IHO Secretariat to issue an IHO CL calling for the approval of Ed. 2.0.0 by IHO Member States.	End of June 2022	Decision
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AGENDA ITEM	SUBJECT	ACTION No.	ACTIONS (in bold, action by)	TARGET DATE/EVENT	STATUS (at 31 May 2022)
5.10	S-130 PT	HSSC14/76	HSSC noted the progress made by the Project Team and the different milestones (Ed. 1.0.0 in 2023, Ed. 2.0.0 and dataset in 2024).	HSSC-15/-16	

**IHO**

HSSC14 DECISIONS & ACTIONS

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9. Date & Location of the next meetings					
9	HSSC-15, HSSC-16	HSSC14/102	<p>Noting that the next meeting will take place just after A-3 (end of April 2023), HSSC welcomed the confirmation from Finland to host HSSC-15 in Helsinki, 8-12 May 2023 (1 day for a Stakeholder session, 2 days plenary).</p> <p>HSSC welcomed also the offer by Japan, for hosting HSSC-16 in May 2024. This meeting will include an Open Stakeholders' Session.</p>	Go no-go / hybrid format/ postponement decision by 31 January	<u>Decision</u>
9	HSSC and WGs Office Bearers	HSSC14/103	<p>The IHO Secretariat reminded the Office Bearers that according the ROPs of HSSC and WGs, elections of Chair and Vice-Chair are decided at the 1st meeting after ordinary sessions of the Assembly. Calls for nominations need to be issued in advance of the events.</p>	HSSC-15	



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ACTIONS REQUESTED FROM S-130PT3

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1. **Note** the report of the HSSC14 decisions and actions
2. Discuss the issue related to the PT if appropriate.

Approval of S-130 Product Specification Description

S130PT3-4.1

Discussion on use of S-23 as source document for delimitation coordinates

S130PT3-4.2



Source documents

- Are there any other documents similarly in the public domain which could potentially contribute?

Input for start of Application Schema Sub-Group

S130PT3-4.3



3rd Meeting of S-130 Project Team

Input for start of Application Schema Sub-Group

S-130 PT3, VTS, 13 June 2020 / 13:00 – 15:00
(UTC+2/CEST)



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STEPS IN MODEL DEVELOPMENT OF S-97

- Step 1 - Determine whether the data product is coverage or vector data
- Step 2 - Identify the concepts in the application domain
- Step 3 - Search for existing concepts using key words (classes, attributes and relationships) in the IHO GI Registry which can be re-used
- Step 4 - Develop new concepts only for those that do not yet exist in the IHO GI Registry
- Step 5 - Define the classes and attributes that describe the domain and are relevant to the data product



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STEPS IN MODEL DEVELOPMENT OF S-97

- Step 6 - Define the relationships between the classes
- Step 7 - Specify any constraints applicable to the classes, attributes, and relationships
- Step 8 - Prepare one or more UML class diagrams describing the domain model
- Step 9 - Prepare supporting text explaining the overall structure of the Application Schema



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BASELINE FOR S-130 APPLICATION SCHEMA

International Hydrographic Organization

- Sea area/named water area in the S-57 data model

Object: Sea area/named water area	Attribute: Category of sea area
Acronym: SEAARE	Acronym: CATSEA
Code: 119	Code: 59

Geometric primitives: P, A

Set Attribute_A: (!?)[CATSEA](#); [NOBJNM](#); (!?)[OBJNAM](#);

Set Attribute_B: [INFORM](#); [NINFOM](#); [NTXTDS](#); [SGAMAX](#); [SCAMIN](#); [TXTDSC](#);

Set Attribute_C: [REGDAT](#); [REGIND](#); [SORDAT](#); [SORIND](#);

Definition:

A geographically defined part of the sea or other navigable waters. It may be specified within its limits by its proper name.

References

INT 1: not specified;

S-4: not specified;

Remarks:

Each sea area is defined independent of any other. Smaller sea areas may be located within larger sea areas.

Distinction:

depth area; seabed area;

ID	Meaning	INT 1	S-4
1	sea-area-in-general		
2	gat		
3	bank		
4	deep		
5	bay		
6	trench		
7	basin		
8	mud flats		
9	reef		
10	ledge		
11	canyon		



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BASELINE FOR S-130 APPLICATION SCHEMA

International Hydrographic Organization

• Sea area/named water area in the S-101 data model

<p>IHO Definition: SEA AREA/NAMED WATER AREA. A geographically defined part of the sea or other navigable waters. It may be specified within its limits by its proper name. (S-57 Edition 3.1, Appendix A – Chapter 1, Page 1.151, November 2000).</p>				
<p>S-101 Geo Feature: Sea Area/Named Water Area (SEAARE)</p>				
<p>Primitives: Point, Surface</p>				
<p><i>Real World</i></p>		<p><i>Paper Chart Symbol</i></p>		<p><i>ECDIS Symbol</i></p>
<p>S-101 Attribute</p>	<p>S-57 Acronym</p>	<p>Allowable Encoding Value</p>	<p>Type</p>	<p>Multiplicity</p>
<p>category of sea area</p>	<p>(CATSEA)</p>	<p>2 : gat 3 : bank 4 : deep 5 : bay 6 : trench 7 : basin 8 : mud flats 9 : reef 10 : ledge 11 : canyon 12 : narrows 13 : shoal 14 : knoll 15 : ridge 16 : seamount 17 : pinnacle 18 : abyssal plain 19 : plateau 20 : spur 21 : shelf 22 : trough 23 : saddle 24 : abyssal hills 25 : apron 26 : archipelagic apron 27 : borderland 28 : continental margin 29 : continental rise 30 : escarpment 31 : fan 32 : fracture zone 33 : gap 34 : guyot 35 : hill 36 : hole 37 : levee 38 : median valley 39 : moat 40 : mountains 41 : peak 42 : province 43 : rise 44 : sea channel 45 : seamount chain</p>	<p>EN</p>	<p>0,1 †</p>

		<p>46 : shelf-edge 47 : sill 48 : slope 49 : terrace 50 : valley 51 : canal 52 : lake 53 : river 54 : reach 55 : intertidal cay 56 : submarine volcano</p>		
feature name			C	0,* †
display name			(S) BO	0,1
language		ISO 639-2/T	(S) TE	0,1
name	(OBJNAM) (NOBJNM)		(S) TE	1,1
scale minimum	(SCAMIN)	See clause 2.5.9	IN	0,1
information		See clause 2.4.6	C	0,*
file locator			(S) TE	0,1
file reference	(TXTDSC) (NTXTDS)		(S) TE	0,1 †
headline			(S) TE	0,1
language		ISO 639-2/T	(S) TE	0,1
text	(INFORM) (NINFORM)		(S) TE	0,1 †

† At least one of the attributes **category of sea area** or **feature name** must be populated.
For each instance of **information**, at least one of the sub-attributes **file reference** or **text** must be populated.

INT 1 Reference:

9.1.1 Sea areas (see S-4 – B-550)

Undersea features and sea areas in general, including intertidal areas, may be identified by their names and may be delimited by the spatial types used by other geo features (for example depth contours, coastlines). If it is required to encode these areas, this must be done using the feature **Sea Area/Named Water Area**.

Remarks:

- This feature has a use similar to that of the feature **Land Region** (see clause 5.11), but for the sea.
- A **Sea Area/Named Water Area** feature of type surface should be bounded, if possible, by existing curves used by other features (for example **Depth Contour**, **Coastline**). If necessary, however, this surface may be bounded by other curves created to close the surface, or to describe a new surface.
- **Sea Area/Named Water Area** features of type surface may overlap.
- Inactive submarine volcanoes must be encoded, if required, as **Sea Area** with category of sea area = 56 (submarine volcano). Active submarine volcanoes must be encoded, if required, using an **Obstruction feature** (see clause 13.6).
- For additional guidance on encoding geographic names, see clause 2.5.8.

Distinction: Administration

Feature/Feature associations:

Updated Information; Text Association

Feature/Information associations:

Additional Information

Spatial/Information association:

Spatial Association



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IDENTIFICATION OF CONCEPT/TERM

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- Pro 1.9 at A2
 - provision of **digital coordinates** for limits of oceans and seas
 - requirements of contemporary geographic information systems
 - by a system of **unique numerical identifiers**
 - allocation and display of attributes of sea areas
 - modern geoinformation services
 - web technology, **global collection** of limits
 - modernization of the **information carrier** to get ready for digital dissemination
 - Compatibility with the S-100, Geospatial Information Registry
 - purpose of the IMO's **e-Navigation concept**
 - Provision for the variety of Geospatial Information Systems (GIS)



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IDENTIFICATION OF CONCEPT/TERM

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- Pro 1.9 at A2 (Cont.)
 - **Marine Spatial Data Infrastructures (MSDI)**; and the **respective national reporting obligations** within the framework of UNCLOS
 - Higher resolution of the standardized limits of the oceans and seas by means of **vectorized chain-node topology**
 - Greater flexibility offered to users and systems for geographical names
 - **Customization of displayed information** about the limits according to regional and national priorities; and end user requirements
 - Expansion of attributes assigned to the limits on demand
 - Preparedness for the application of **future voice command functionality** of GIS applications; **application of artificial intelligence**; and **“deep learning” on marine geoinformation**
 - Support of **machine-to-machine communication** for the facilitation of **autonomous shipping**



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IDENTIFICATION OF CONCEPT/TERM

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- Pro 1.9 at A2 (Cont.)
 - designated by a unique and unambiguous numerical feature object identifier
 - digital evolution of the analogue S-23
 - marine application of the **URI (Uniform Resource Identifier) paradigm**
 - **Machine to Machine communication**
 - in various orientations, projections and scales
 - **Symbology**
 - the **Uniform Resource Identifier (URI) approach**
 - joint standardization and service activities of IHO and other adjacent domains
 - support the **e-Navigation concept of the IMO**



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PRELIMINARY WORK FOR DEVELOPING APPLICATION SCHEMA

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- As in S-97, an important step in developing an application schema is to identify the concept/term for the domain
- In order to clearly identify the S-130 concept,
- it is possible through discussion of the purpose of the S-130 data and how it is used (use case)
- In this regard, it is requested to prepare answers to the following questions prior to the S-130 application schema meeting



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PRELIMINARY WORK FOR DEVELOPING APPLICATION SCHEMA

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- Q1. Who are the producer and users of the S-130 data?
 - Q2. What is the main purpose of the S-130 data?
 - Q3. What information must be included in the application schema to support the purpose of the S-130 data?
 - Q4. In what way is the S-130 data distributed after it is produced?
 - Q5. What is the need and frequency of updating S-130 data?
-
- The questions will be surveyed by the Gitbub and proposed questions might be added)

Any Other Business

S130PT3-5.1

Group photo

S130PT3-5.2

Date and Venue of Next Meeting

S130PT3-6

Review Action Items

S130PT3-7