

**11<sup>th</sup> Meeting of the Nautical Information Provision Working Group (NIPWG)**  
**Gdynia, Poland**  
**24 – 27 September 2024**

**Contribution to the IHO Work Programme 2024**

Task 2.1.2.5	Organize, prepare and report meetings of NIPWG
Task 2.5.2	Support the development and implementation of Maritime Services
Task 2.8.1	Maintain S-12, as appropriate - Standardization of List of Lights and Fog Signals
Task 2.8.3	Maintain S-49, as appropriate - Standardization of Mariners' Routeing Guides

**High level summary:**

- After several years of complex conceptual and technical activities only (breakdown of the content of Nautical Publications<sup>1</sup> in paper format into data models, S-100-compliant product specifications, ...), NIPWG Members and RENCs shared their experience on testing and experimenting new S-100 based products and data services (S-12x series), as well as their interoperability.
- The benefits of implementing these new S-12x data services in Phase II of the S-100 Roadmap need to be consolidated (use cases) since national efforts will involve not only Hydrographic Offices. They must be explained and justified.
- High level expectations from NIPWG on the discussions to be held at IMO on a joint *Proposal for a new output to realize the full potential of the S-100 ECDIS* to be considered at MSC 109.
- S-128 – *Catalogue of Nautical Products* – a critical component of Phase I, on the right track for being submitted to the approval of IHO Member States, thanks also to the services offered by the RENCs to implement it on behalf of Member States.

**Details:**

The 11<sup>th</sup> meeting of the Nautical Information Provision Working Group (NIPWG) was held at the Klub Marynarki Wojennej Riwiera hosted by the Hydrographic Office of the Polish Navy (HOPN), in Gdynia, Poland from 24 to 27 September 2024.

The meeting was opened by Captain Dariusz Kolator, Chief of the HOPN, who stressed the importance of the activities of NIPWG paving the way for nautical publications, still produced by some hydrographic offices in paper format, towards the S-100 era with the electronic navigational data services (ENDS).

The meeting was chaired by Mr Eivind Mong (Canada), supported by Mr James Weston, Secretary (United Kingdom). Thirty-three delegates from 15 Member States (Australia, Canada, Denmark, Finland, France, Germany, India, Italy, Netherlands, Norway, Poland, Republic of Korea, Sweden, United

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<sup>1</sup> Sailing Directions in particular.

Kingdom and United States of America) and twelve expert contributors representing various stakeholders (IMO EGDH, IHMA, ICS, Furuno, Protected Seas, IIC Technologies, and PRIMAR)<sup>2</sup> attended the meeting. The IHO Secretariat was represented by Assistant Director Yves Guillam.

As last year, the NIPWG Chair opened the meeting, providing a clear statement on the objectives and priorities given by the HSSC, such as S-128 development since it is the only the S-100 based product under NIPWG listed in Phase 1 / Route Monitoring of the S-100 Roadmap. The progress made on the List of those Decisions and Actions from HSSC-16 affecting NIPWG was presented by the IHO Secretariat representative who also referred to the last documents available as part of the HSSC report to the 8<sup>th</sup> meeting of the Council.

IHMA supported by the Netherlands made a proposal for improving the portrayal of breasting<sup>3</sup> versus mooring<sup>4</sup> dolphins, to improve the safety of berth-to-berth navigation. This proposal aims to be included in the S-131 standard only - *Marine Harbour Infrastructure*, since it is not possible in S-101 as already discussed in the relevant ENCWG. Together with a proposal for improving the definition of “maintained depths”, the NIPWG recommended to consult the NCWG in November, before a decision is made on the way forward. An update on the *Guidelines for Harmonized Communication and Electronic Exchange of Nautical Data for Port Calls* and the associated interface for Exchange of Port Infrastructure Data was also provided by IHMA. The IHO Secretariat suggested that the *Guidelines* are simply but formally *endorsed* by NIPWG on behalf of the IHO (as it should be by the other supporting partners listed in the document, such as IMO), prior to the final formal *approval* by IHMA. Then, this document can be published on the IHO / NIPWG webpage or any other relevant IHO webpage.

Regarding S-131, in addition to the comments provided by China on the Product Specification that were reviewed, PRIMAR presented the outcome of an experimentation (supported by the Intelligent Ship Transport System project funded by the Norwegian Research Council) aiming to demonstrate how S-131 and S-421 – *Route Plan Exchange* - can be used for ship-shore communications between a harbour and a vessel. The test bed scenario was also an opportunity to demonstrate the use of common and unique MRN identifiers across products, showcasing the benefit of unique identification of features found or referenced in different products. NTOU<sup>5</sup> presented an online tool developed for the S-131 database project of the IHO-Singapore Lab, as well as experiences and feedback for S-131 tests in various aspects using the UN/LOCODE<sup>6</sup> in accordance with IMO MSC Guidance.

Following the complex technical and policy issues identified in 2023 regarding the MRN<sup>7</sup> concept itself, thanks to Germany, some use cases and clarifying examples were presented during the meeting. The Chair introduced the topic with different steps to be considered.

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<sup>2</sup> IMO/IALA/IHO Expert Group on Data Harmonization (EGDH), International Harbour Masters Association (IHMA), International Chamber of Shipping (ICS).

<sup>3</sup> Dolphin with fender.

<sup>4</sup> Dolphin with mooring

<sup>5</sup> National Taiwan Ocean University

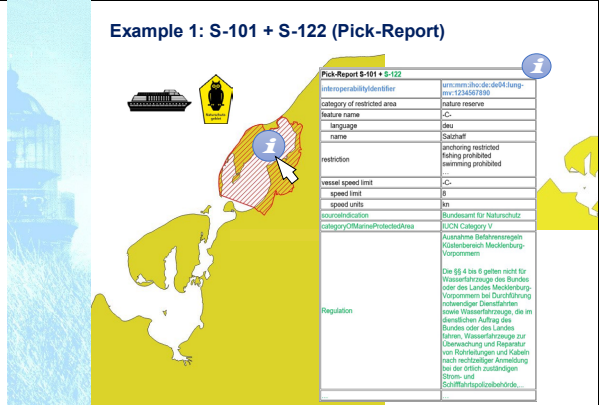
<sup>6</sup> United Nations Code for Trade and Transport Locations

<sup>7</sup> Maritime Resource Name (Useful Reference: IALA Recommendation R1023)

### MRN Status

- We have MRNs! In S-98 Annex C to represent IHO "organisations"
- We have MRNs! interoperabilityIdentifier
  - Needs some clarification on how they should "work" (and be encoded) in S-
  - Currently no one can encode them though, because no "MRN space" has been set up to any data producers other than IHO. We need to address this.
  - Included in most features in S-101, S-124 and S-129
  - Assumption is all the Phase 2 PS will include them as well.
- The next steps are:
  - To ensure data producers have guidance on how to use MRNs, define them
  - To define whatever is needed in the S-100 operational infrastructure for their use
  - To ensure all data producers (defined by agency) have an MRN "space" they can use (that ensures uniqueness).
- Which leads to the paper....

### Example 1: S-101 + S-122 (Pick-Report)



interoperabilityIdentifier	urn:mnr:iho:de:004:range:12456789
category of restricted area	nature reserve
nature name	-C-
language	deu
name	Satzflut
restriction	anchoring prohibited fishing prohibited swimming prohibited
vessel speed limit	-C-
speed limit	0
speed units	kn
source/indication	Bundesamt für Naturschutz
category:Oblivious/ProtectedArea	IHO-CA Category V
Regulation	Ausnahme Gefahrenzone Küstenschutz Mecklenburg-Vorpommern Die §§ 4 bis 6 gelten nicht für Wasserfahrzeuge des Bundes oder des Landes Mecklenburg-Vorpommern bei Durchführung notwendiger Dienstleistungen sowie Wasserfahrzeuge, die im öffentlichen Auftrag des Bundes oder des Landes fahren. Wasserfahrzeuge zur Überwachung und Reparatur von Rohrleitungen und Kabeln nach rechtzeitiger Anmeldung bei der örtlich zuständigen Strom- und Gasleitungsbehörde.

urn:mnr:iho:<ISO 3166>:<producer code>:<nationally managed namespaces>


- PL
- US
- CA
- DE
- ...


... in support of the development of the *Guidelines for the Implementation of Interoperability Identifier using Maritime Resource Name value*. Before assigning a MRN structure to the IHO Member States, some more work and testing was deemed necessary on this matter. Final recommendations are expected at the last VTC meeting of NIPWG in December.


The US on behalf of NIPWG submitted a new version of proposed amendments to the IHO Resolution 5/2002 on the *Content and General Arrangement* [for Digital Nautical Publications]. Several comments were made in session to improve the proposal, notably the need from the IHO Secretariat point of view, to include the ENDS and the associated diagram illustrating the relationship between S-100 products, the IMO Maritime Services and the SOLAS Regulations. Rather than focusing on the existing IHO Resolution, some participants suggested that time had come to supersede it by a brand new one. Decision will be made at the last VTC meeting of NIPWG in December.


An update was provided by the representative of the IMO EGDH.


He introduced the IMO Guidelines for setting up a Maritime Single Window (Doc. FAL.5/Circ.42/Rev.3 refers) and the newest version of the IMO Compendium on Facilitation and Electronic Business, inviting NIPWG to identify areas of common interest where harmonization might be needed.





  
 Port operations
 


  
 Reporting formalities


  
 e-Navigation
 

  
 A digital visit

  
 Services for reporting formalities

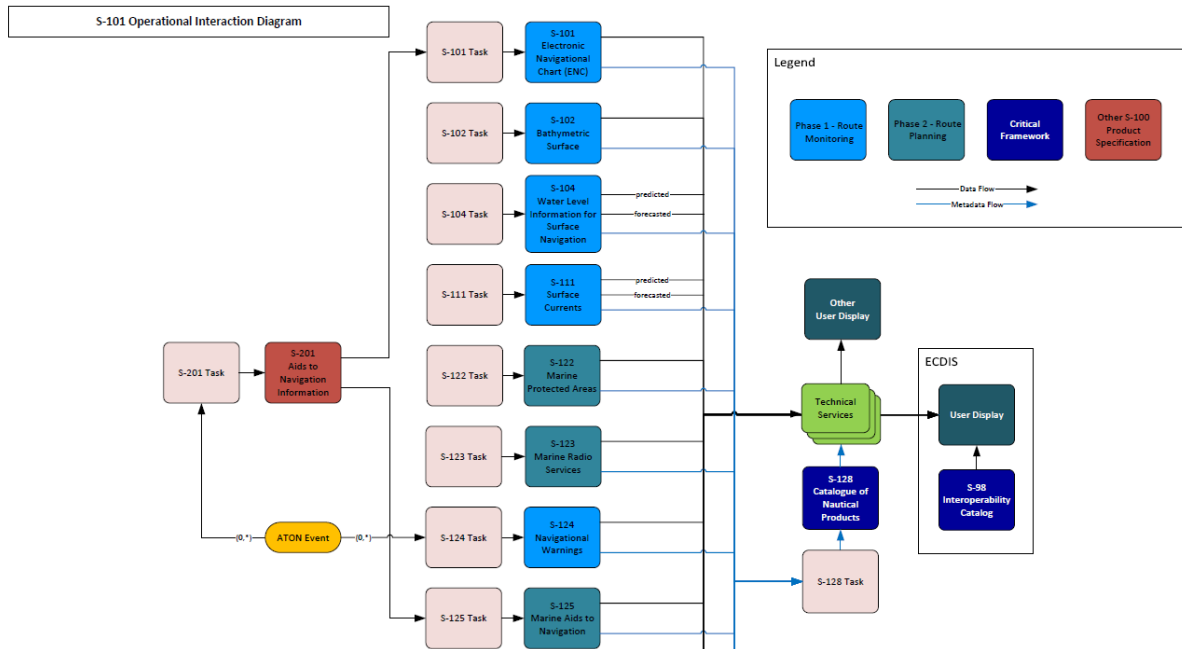
  
 Services for e-Navigation
 

  
 Services for port operations



The Chair allocated a full session on S-128, since the Ed. 2.0.0 of its Product Specification (PS), at the date of NIPWG-11, remains to be submitted to HSSC Members for their endorsement. Those last comments made by the S-128 Task Group Members on the proposed version of Ed. 2.0.0 of the PS which needed further discussion were reviewed in depth. PRIMAR completed the topic with a promising update on the S-128 implementation phase (Services & Interfaces, Dataflow Structure, ... and remaining Challenges). The Chair confirmed that the impact study of S-128 had been already completed by Denmark.

Good progress was reported by the US on the development supported by IALA of S-100 Operation Interaction Diagrams (global S-100, S-101 and S-201), a difficult HSSC task that had been on the agenda of NIPWG for more than three years. These diagrams are planned to be further developed, maintained and submitted to HSSC for endorsement. An example for S-101...



On the informative paper<sup>8</sup> submitted by Germany to HSSC-16 regarding data dissemination issues related to e-navigation, NIPWG noted the recommendations but agreed that it was much wiser, for the time being, to wait for the outcome of the discussions on Doc. [MSC 109/19/3](#)<sup>9</sup> in the agenda of MSC 109. These recommendations were not supported in general.

NIPWG invited its S-12x Task Groups to consider meeting once a month from now and using the GitHub platform in the future. Once GitHub is considered that it is the best way to proceed for managing their projects, soon after the completion of the transfer of NIPWG key documents, NIPWG will propose the decommissioning of the IHO NIPWG wiki worksite.

Several participants (DK, FI, NO, US, UK) shared their promising progress made on the testing and pre-implementation of S-100 in their countries, with a focus on NIPWG S-12x products.

In his conclusion, the Chair thanked NIPWG Members for all the efforts made and commended the industry subject matter experts for their indispensable and continuous high level technical support. He informed the group that he had to step down from his position as NIPWG Chair at the end of 2024, due to other national priorities. An election of NIPWG office bearers is to be arranged by correspondence prior to the deadline to ensure continuity, at a critical time for S-100.

<sup>8</sup> Doc. HSS16-07.1C and @HSSC16/96.

<sup>9</sup> Proposal for a new output to realize the full potential of the S-100 ECDIS submitted by Antigua and Barbuda, Australia, Bangladesh, Canada, Cook Islands, Ecuador, Georgia, Indonesia, Liberia, New Zealand, Türkiye, Ukraine, United Arab Emirates and BIMCO.

## Group Photo



## Upcoming meetings:

NIPWG will arrange its 3<sup>rd</sup> VTC (2024) meeting on the 4<sup>th</sup> of December. The 11<sup>th</sup> meeting of NIPWG is planned in Denmark from 16 to 19 September 2025 (dates and location to be confirmed, IHO Secretariat, Monaco, as a back-up).