**7th Nautical Information Provision Working Group (NIPWG) Meeting**

**25 – 29 November 2019 – Tallinn, Estonia**

Annex A: List of Action items

Annex B: Agenda

Annex C: List of Attendees

Annex D: Updated NIPWG Work Plan

**1. Opening and administrative arrangements**

**1.1 Opening remarks**

Jens SCHRÖDER-FÜRSTENBERG opened NIPWG7 and by welcoming new and returning members.

Logistics and building safety were also discussed.

The NIPWG Chair welcomed the participants and thanked the Estonian Maritime Administration (EMA) for organising the meeting.

Kaidi KATUS, the Deputy Director General of EMA and head of Hydrography and Aids to Navigation Division, welcomed the participants. In her welcome speech, she highlighted the importance of the NIPWG work. She emphasized the importance of NIPWG work in providing products for the S-100 environment which may support the IMO e-Navigation concept.

**2. Adoption of NIPWG7 Agenda**

NIPWG agreed and adopted the NIPWG7 Agenda with slight modifications as circulated.

**3. Adoption NIPWG6 Minutes**

The meeting approved the Final Minutes of NIPWG6 with no modifications as circulated.

**3.1 Corrections**

None noted.

**3.2 Review of Action Items from NIPWG6**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Planned tasks for this Reporting Period** | | | | | | |
| Action Item | Actor | Task Description | Start Date | Target End Date | Percent Complete | Task Status |
| 5/27 | IB | Check why the only use of feature classes is not appropriate in S-128 and that information types should be implemented | 03/2018 | Nov 2019 | 100 | Will be covered by 6/16, 6/17 & 6/18 |
| 6/01 | JS-F | Inform HSSC on the renaming of S-123 to “Marine Radio Services” | 02/2019 | 15 March 2019 | 100 |  |
| 6/02 | JS-F | Seek HSSC approval for adding the term “Marine” to the remaining Product Specifications under the remit of NIPWG | 02/2019 | 15 March 2019 | 100 |  |
| 6/03 | KHOA | Submit change proposal to the S-100WG to add curved functions in S-100 based SVG | 02/2019 | Nov 2019 | On going | To be investiged to produce SVG symbols without the curved functions in S-100. Report to the NIPWG8 |
| 6/04 | KHOA | Develop and test S-126 symbols in night and dusk ECDIS modes | 02/2019 | Nov 2019 | On going | KHOA is developing general guidance for colours and symbols for S-100 PSs. Once it is completed, S-12X portrayal will be updated accordingly. Report to the NIPWG8 |
| 6/05 | JS-F | Submit a paper to NCWG requesting the template on the provision of symbols for portrayal | 02/2019 | 30 May 2019 | 100 |  |
| 6/06 | KHOA | Investigate the usefulness of the provision of S-126 symbols in ECDIS side menu and the viability of highlighting selected items by colour patterned areas on the chart that are presented on the screen. That includes keeping a list of use cases showing and testing inter alia complementary data sets | 02/2019 | Nov 2019 | On going | Refer to the action 6/04 comments |
| 6/07 | BS&WdT | Draft a description of S-126 (based on the proposed S-97 template) and to provide the first set of features which could be used | 02/2019 | Nov 2019 | 100 | Continuing of 5/14 and 5/15 |
| 6/08 | JS-F | Update for work plan to consider implementation issues | 02/2019 | Feb 2019 | 100 |  |
| 6/09 | JS | Change Dynamic and Static definitions to only include final sentences with no graphics | 02/2019 | 31 March 2019 | 100 |  |
| 6/10 | JS | Inform the S-129PT on outcome of Static and Dynamic discussions | 02/2019 | 31 March 2019 | 100 |  |
| 6/11 | JS | Provide the definitions to the HDWG using their drafted submission template and report back to NIPWG7 | 02/2019 | Nov 2019 | 100 | Continuation of 5/06 |
| 6/12 | MK | Provide a red line version of S-49 and to create initial draft of a NIPWG letter and send it to JS-F | 02/2019 | 31 July 2019 | 100 | Continuation of 5/07 |
| 6/13 | JS-F | Draft a paper/NIPWG letter outlining the “P” in NIPWG | 02/2019 | 15 Feb 2019 | 100 |  |
| 6/14 | NIPWG | Review letter and provide comments to JS-F | 16 Feb | 28 Feb 2019 | 100 |  |
| 6/15 | JS-F | Submit respective NIPWG submission to HSSC | 02/2019 | 15 Mar 2019 | 100 |  |
| 6/16 | KHOA | Update S-128 to S-100 ed. 4 | 02/2019 | Nov 2019 | 100 |  |
| 6/17 | NIPWG | Check S-128 for the usefulness of Catalogue items and report any issues detected to KHOA to improve the data model | 02/2019 | Aug 2019 | 100 |  |
| 6/18 | KHOA | Check S-128 for the usefulness of the Catalogue data for up-to-date synchronization of S-100 products | 02/2019 | Nov 2019 | 100 |  |
| 6/19 | JC&SV | Check the usefulness of S-124 in NIORD and include examples of challenges |  | Nov 2019 | 100 | Ex 5/19 |
| 6/20 | **Decision** | Prod Specs under the remit of NIPWG are under 2 year revision cycle |  |  |  |  |
| 6/21 | JS-F | Address the availability of S-122 datasets to HSSC and IRCC respectively | 02/2019 | 15 March 2019 | 100 |  |
| 6/22 | Spain, Canada, Netherlands and Germany (and other Countries as appropriate) | Provide comments on experiences made during the test of S-122/S-123 data production | 02/2019 | Nov 2019 | 100 |  |
| 6/23 | EA | Continue collecting feedback on both product specifications |  | permanent |  | Ex 5/08 |
| 6/24 | JS-F | Include in the NIPWG report to HSSC concerns about product specification/S-100 version conflicts and possible inconsistencies | 02/2019 | 15 March 2019 | 100 |  |
| 6/25 | JS-F | Reply to IALA that S-125 should only contain additional information to S-101 which is of navigational significance | 02/2019 | 28 Feb 2019 | 100 |  |
| 6/26 | BS | Review and contribute to S-97 as appropriate | 02/2019 | permanent |  |  |
| 6/27 | NIPWG | Monitor progressn on MRN developments | 02/2019 | permanent |  |  |
| 6/28 | JS-F | Invite NCWG to provide a set of SVG symbols for further use (textual description of each possible feature) | 02/2019 | 20 May 2019 | 100 |  |
| 6/29 | NIPWG | HOs are invited to consider the incorporation of ballast water management area information into their nautical publications if appropriate | 02/2019 | permanent |  |  |
| 6/30 | JS-F | Provide updated diagram to NIPWG for review | 02/2019 | 02/2019 | 100 |  |
| 6/31 | JS-F | Provide the consolidated NIPWG position to HSSC for further consideration | 02/2019 | 15 Mar 2019 | 100 | See also 6/15 |
| 6/32 | VZ | Re-evaluate potential interoperability and encoding concerns relative to S-122 and S-121 | 02/2019 | Permanent |  |  |
| 6/33 | JLE | Get back to JS-F with use cases on proposed S-101 data model amendments | 02/2019 | 30 March 2019 | 100 |  |
| 6/34 | JS-F | Provide a redline version to S-101 Project Team | 04/2019 | 30 April 2019 | 100 |  |
| 6/35 | JS-F | Provide redline version of M-3 amendment to HSSC | 02/2019 | 15 Mar 2019 | 100 |  |

**4 NIPWG status of work overview**

The meeting took note of the presentation on the status of the NIPWG work. This overview was initiated to familiarise new members and to refresh experienced members with the main objectives of the group and the current work status.

Discussion: There was a clarification of terminology offered by Dave LEWALD that members need to start using. NIPWG has traditionally talked about route planning or back of bridge” and operational use or “front of bridge”. The meeting agreed to use the IMO terms of Route Planning (for “back of bridge) and Route Monitoring (for front of bridge).

**6 Council and HSSC related information**

The meeting took note of the report.

**7 S-100 related information**

**7.1 Presentation of the outcome of the recent TSM meeting**

The Meeting took note of the presentation for the results of the Test Strategy Meeting.

Discussion: The meeting considered Data Naming Convention S-97 to enable multiple product exchange sets.

**5 Project and concepts**

The Meeting took note of the presentations.

**5.1 Digitised Norwegian SDs & Port Information**

The meeting took note of the report and discussed the potential reuse of the concept for provision of information in non-SOLAS environments.

**5.3 Taiwan University activities related to NIPWG work**

The Meeting took note of the report.

**21 S-12X (Harbour Infrastructure) discussions**

**21.1 S-12X Product Specification description**

NOAA introduced the motivation to initiate a discussion based on NIPWG Letter 6-2019 and its associated White Paper on starting the assessment of needed information to produce a potential product specification on Harbour Infrastructure.

Discussion: The Meeting took note of the discussion.

**21.2 IHMA discussion input papers**

The Meeting took note of the provided papers.

Discussion: Port facilities currently have a unique identifier established as a hierarchy of port, berth and position. Ports and terminals need to have an incentive to provide accurate standard information.

**Action Item 7/01 (BvS) – Ben will send completed IHMA standards to Jens. Dec. 2019.**

**Action Item 7/02 (JS-F) – Jens will send completed standards (see action item 7/01) to the WG as a NIPWG letter. Dec. 2019.**

**8 (S-126) Physical Environment**

The meeting took note and discussed the presentations.

Discussion: The history of S-126 was delivered. A request was made to take S-126 off of the hold status and the meeting agreed to approach HSSC with a recommendation to restart the work. Norway and Canada expressed an interest that the work should be restarted by NIPWG.

**9 Creating New Product Specifications**

The meeting took note of the paper and the solution developed by NOAA.

Discussion: The Meeting felt the recently proposed solution from the S-101PT to model MARPOL areas as an ADMARE will meet near-term requirements and that it was best to put this aside for the immediate future.

**23 Order of future Product Specification developments**

The meeting took note and discussed the papers for S-126 (Marine Physical Environment) and S-12X (Marine Harbor Infrastructure) provided in response to NIPWG letter 6/2019.

Discussion: The meeting concluded after extensive discussions and careful consideration of pros and cons that both Prod Specs should be developed in parallel. Once approved by HSSC, the focus will be on the development of the respective data models.

**Action Item 7/03 (JS-F) – Jens will send the report and recommendation to initiate the S-126 and Marine Harbour Infrastructure Product Specification parallel development process and to request a number for S-12X (Marine Harbour Infrastructure) to HSSC. Mar. 2020.**

**Action Item 7/04 (JS-F) – Jens will draft a NIPWG letter to address contributions of the Marine Harbour Infrastructure Product Specification data model to different NIPWG members. Jun 2020.**

**20 Provision of S-122 and S-123 based test data sets**

The meeting took note of the papers provided by member states testing the product specifications.

Discussion: The meeting noted that there were challenges meeting organizational responsibilities. The meeting also noted the different approaches using existing production system and GIS applications.

**Action Item 7/05 (WdT) will provide a paper on the approach to encode S-122 data in HPD ver 3.1. (Sep, 2020)**

**Action Item 7/06 (JS-F) Jens will provide a paper on the approach to encode S-122 data in HPD ver 4.X. (Sep, 2020)**

**Action Item 7/07 NIPWG member states to report on testing of the NIPWG Prod. Spec. data set production in their current production environment and to provide a short report on their activities to NIPWG 8. (Sep, 2020)**

**Action Item 7/08 (YG) Yves to provide the WEND WG with the German paper on the creation of the S-123 dataset for their consideration on the WENS principles. (Jan, 2020)**

**35 (S-125) Navigational Services**

The meeting took note of the paper.

Discussion: The meeting appreciates the IALA initiative to start the S-125 development in 2020.

**10 Catalogue of Nautical Products (S-128)**

The meeting took note of the papers provided.

Discussion: S-100 and IMO involvement. Mix of content contributions from various stakeholders. Appropriate management of the Catalogue of Nautical Information to ensure the most current information is in the Products Specifications. Have HSSC address the importance of the Prod. Spec. Use the capability to provide information on what Prod. Spec. is available along the intended route.

**Action Item 7/09 PRIMAR and the Canadian Coast Guard, in cooperation with FURUNO, to draft a paper to be provided to the IHO Secretariat to raise awareness of management issues for the following:**

1. **Maintaining currentness of products in the Catalogue.**
2. **Use of S-128 with respect to the S-100 Implementation Plan.**
3. **Possible impact on carriage requirements of S-100 based products to the WEND WG.**

**Jan, 2020.**

**Action Item 7/10 (JS-F) Jens will draft a NIPWG letter to inform the WG on the availability of the S-128 ver. 0.7.5 Prod. Spec. on the NIPWG website and require feedback to the Chair. Dec 2019.**

**Action Item 7/11 NIPWG will review the S-128 Prod. Spec. ver. 0.7.5 as provided to NIPWG 7. Feb. 2020.**

**Action Item 7/12 (EA) Elena will compile comments and provide the consolidated list to KHOA. The list will include additional items as described in the document, NIPWG 7-10.2. Mar. 2020.**

**Action Item 7/13 (WC) KHOA to provide the next version of S-128 for NIPWG endorsement through correspondence or by NIPWG 8. Jun. 2020.**

**Action Item 7/14 NIPWG members are requested to check S-128 against their catalog of products. Sep. 2020**

**11 (S-124) Navigational Warnings (WWNWS)**

The meeting took note of the papers provided.

Discussion: The meeting noted the clarification to be requested at NCSR 7 on portrayal limitations imposed by IMO guidelines. The meeting also took note of the portrayal investigations into features not visualized.

The meeting noted Denmark’s investigation on the usefulness of S-124 in their NIORD system and the problems they encountered regarding the transfer of the data into the NtM system that this is not an appropriate way to use S-124 data for NtM because of the different levels of detail.

**Action Item 7/15 (EM) – Eivind to report back the outcome of the S-124 portrayal investigations. Sep, 2020.**

**36 U.S. intention to discontinue paper chart production**

The meeting took note of the paper.

Discussion: The meeting discussed the potential use of the Waterway Concept to replace chart references in N-Pubs. With regard to issuing notice of changes to AtoN, the example of the List of Lights format wherein AtoN is associated with a geographic location vice a numbered chart was considered. Also of note is that Canada informed the group that it is looking into a similar approach to discontinue paper chart production.

**Action Item 7/16 (DL) – Dave to provide an update on the progress within the U.S. to discontinue paper chart production and provide an input paper to describe the dissemination of Marine Safety Information using the Waterway Concept. Sept, 2020.**

**38 Data quality for safe navigation**

The meeting took note and discussed the paper.

Discussion: The difficulty of this topic was recognized as well as the potential impact on the HO to provide values of bathymetric quality information for isolated dangers.

**Action Item 7/17 NIPWG to provide feedback to Jens on the DQWG presentation. End of Dec, 2019.**

**Action Item 7/18 (JS-F) – Jens to provide consolidated feedback on the DQWG presentation. Early Jan, 2020.**

**37 Marine Resource Names**

The meeting took note and discussed the paper.

Discussion: S-100 says to use MRNs. S-100 WG is drafting a guideline for the use of MRNs within IHO products and Prod. Specs.

**Action Item 7/19 (EM) – Update NIPWG on progress and status of the MRN usage guideline. Sep, 2020.**

**Action Item 7/20 (DL) – Inform NIPWG 8 on the development of IALA’s MRN domain management guideline (Ver 2.0). Sep, 2020.**

**41 IHO Registry**

The meeting took note of the presentation.

Discussion: The meeting received an update on the infrastructure development and the intended release of the new version.

**44 Report of and cooperation with various HSSC WG**

The meeting took note of the presentation and the report.

Discussion: The invitation of the NCWG to consider incorporation of emergency contact information in case of natural disasters will be covered as a meeting item 57.2.

**45 IMO’s e-Navigation**

The meeting took note of the presentation.

**43 Harmonisation of NtM XML Structure**

The meeting took note and discussed the papers.

Discussion: The Norwegian experience mapping the XML in accordance with the common XML developed during the XML workshop. The missing functionality of providing tables was successfully addressed.

**Action Item 7/21 (SE) – Initiate the continuation of the XML-based NtM generation. Jan, 2020.**

**46 Architectural display of S-100 related products**

The meeting took note and discussed the papers.

Discussion: It was confirmed that the diagram is a living document which can only reflect the latest status of the S-100 based product specification composition in ECDIS. The group decided the diagram should reflect the new terms Route Planning (formerly back-of-bridge) and Route Monitoring (formerly front-of-bridge).

**Action Item 7/22 (JS-F) – Update the “Architectural display of S-100 related products” diagram and contribute to the NIPWG review. Feb, 2020.**

**47 KHOA S-100 Portrayal Harmonization Project**

The meeting took note and discussed the papers.

Discussion: Recommendation for KHOA to conduct trials on screens that follow the minimum ECDIS performance standard for pixel size.

**Action Item 7/23 Member states to provide input on how they expect NIPWG Prod. Spec. data to be used within their national waters. Sep, 2020**

**Action Item 7/24 NIPWG members should prepare for a 1 day workshop (based on 7/23 use case information) during NIPWG 8. Sep, 2020.**

**Action Item 7/25 (HP & EM) Provide KHOA with feedback on display requirements related to the provision of S-100 based products on future ECDIS. Jan, 2020.**

**48 S-127 and S-101 data model harmonisation**

The meeting took note and discussed the papers.

Discussion: Proposed amendments to S-101 to harmonize data model components will be made through S-100 register.

**Action Item 7/26 (JS-F) – Insert amendments aiming to harmonise S-101 and S-127 data model elements to the register. Jan, 2020.**

**49 Revisions of resolutions and standards under the remit of NIPWG**

The meeting took note and discussed the papers.

Discussion: The new definitions for Underkeel Clearances were submitted using the new protocol. The NIPWG work on this is concluded.

The work on S-49 revision is complete. The red-line version is ready to be sent forward to HSSC for endorsement and consequently approval by member states.

**Action Item 7/27 (MK) – Provide the consolidated red-line version of amended S-49 to Jens. Jan, 2020.**

**Action Item 7/28 (JS-F) – Provide the red-line version of amended S-49 to HSSC 12 for endorsement. Mar, 2020**

**50 ToR review**

The Meeting reviewed and discussed the current ToR.

Discussion: The group agreed that no amendments are needed.

**53 Work plan for the NIPWG**

The Meeting reviewed and completed the NIPWG work plan.

**57 Any other business**

**57.1 Nomination and election of the Vice Chair**

Discussion: The group elected Stefan ENGSTRÖM to be Vice Chair of the NIPWG.

**57.2 Provision of Emergency contacts in NPUBS**

Discussion: The meeting noted that emergency information is provided in N-Pubs and there is no action required.

**Action Item 7/29 (JS-F) – To consider if it is appropriate to comment on the proposal submitted by the council to the Assembly on resolution 1/2005. Jan, 2020.**

**57.3 Survey of S-122/S-123 production (HSSC11/39)**

Discussion: The meeting is of the opinion that it is premature to conduct a survey.

**Action Item 7/30 (JS-F) – Chair to inform HSSC that a survey on S-122/S-123 data production is premature. Mar, 2020.**

**57.4 Review of draft minutes**

The meeting reviewed and adopted the draft Minutes of NIPWG7. The final Minutes will be prepared by the Secretary servicing this Meeting in close co-operation with all participants.

The meeting renewed the request to deliver the meeting papers at least 3 weeks before the meeting. Papers submitted after that deadline will be handled as Information (INF) papers. The meeting agreed that submitters of INF papers could not expect that the submitted topic will be discussed during that meeting. Exceptions due to papers discussing urgent matters are on Chair group’s decision.

**59 Date and place of next meeting**

NIPWG 8 will be held in Brest (France), 21 – 25 September 2020

**Annex A: List of Action Items**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Planned tasks for this Reporting Period** | | | | | | |
| Action Item | Actor | Task Description | Start Date | Target End Date | Percent Complete | Task Status |
| 7/001 | EA | Continue collecting feedback on both product specifications |  | Permanent |  | Ex 5/08, 6/23, see also 7/12 |
| 7/002 | VZ | Re-evaluate potential interoperability and encoding concerns relative to S-122 and S-121 | 02/2019 | Permanent |  | Ex 6/32 |
| 7/003 | KHOA | Submit change proposal to the S-100WG to add curved functions in S-100 based SVG | 02/2019 | September 2020 | On going | Ex 6/03  Be investigating to produce SVG symbols without the curved functions in S-100. Report to the NIPWG8 |
| 7/004 | KHOA | Develop and test S-126 symbols in night and dusk ECDIS modes | 02/2019 | September 2020 | On going | Ex 6/04  KHOA is developing general guidance for colours and symbols for S-100 PSs. Once it’s completed, S-12X portrayal will be updated accordingly. Report to the NIPWG8 |
| 7/005 | KHOA | Investigate the usefulness of the provision of S-126 symbols in ECDIS side menu and the viability of highlighting selected items by colour patterned areas on the chart that are presented on the screen. That includes keeping a list of use cases showing and testing inter alia complementary data sets | 02/2019 | September 2020 | On going | Ex 6/06  Refer to the action 6/04 comments (see above) |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| 7/01 | BvS | Send completed IHMA standards to Jens |  | December 2019 |  |  |
| 7/02 | JS-F | Send completed standards (see action item 7/01) to the WG as a NIPWG letter |  | December 2019 |  |  |
| 7/03 | JS-F | Send the report and recommendation to initiate the S-126 and Marine Harbour Infrastructure Product Specification parallel development process and to request a number for S-12X (Marine Harbour Infrastructure) to HSSC |  | March 2020 |  |  |
| 7/04 | JS-F | Draft a NIPWG letter to address contributions of the Marine Harbour Infrastructure Product Specification data model to different NIPWG members |  | June  2020 |  |  |
| 7/05 | WdT | Provide a paper on the approach to encode S-122 data in HPD ver 3.1 |  | September 2020 |  |  |
| 7/06 | JS-F | Provide a paper on the approach to encode S-122 data in HPD ver 4.X. |  | September 2020 |  |  |
| 7/07 | all | Report on testing of the NIPWG Prod. Spec. data set production in their current production environment and to provide a short report on their activities to NIPWG 8. |  | September 2020 |  |  |
| 7/08 | YG | Provide the WEND WG with the German paper on the creation of the S-123 dataset for their consideration on the WENS principles. |  | January 2020 |  |  |
| 7/09 | PRIMAR  CCG  FURUNO | PRIMAR and the Canadian Coast Guard, in cooperation with FURUNO, to draft a paper to be provided to the IHO Secretariat to raise awareness of management issues for the following:  1. Maintaining currentness of products in the Catalogue.  2. Use of S-128 with respect to the S-100 Implementation Plan.  3. Possible impact on carriage requirements of S-100 based products to the WEND WG. |  | January 2020 |  |  |
| 7/10 | JS-F | Draft a NIPWG letter to inform the WG on the availability of the S-128 ver. 0.7.5 Prod. Spec. on the NIPWG website and require feedback to the Chair |  | December 2019 |  |  |
| 7/11 | all | Review the S-128 Prod. Spec. ver. 0.7.5 as provided to NIPWG 7 |  | February 2020 |  |  |
| 7/12 | EA | Compile comments and provide the consolidated list to KHOA. The list will include additional items as described in the document, NIPWG 7-10.2. |  | March 2020 |  |  |
| 7/13 | WC | Provide the next version of S-128 for NIPWG endorsement through correspondence or by NIPWG 8 |  | June  2020 |  |  |
| 7/14 | all | Check S-128 against their catalog of products |  | September 2020 |  |  |
| 7/15 | EM | Report back the outcome of the S-124 portrayal investigations |  | September 2020 |  |  |
| 7/16 | DL | Provide an update on the progress within the U.S. to discontinue paper chart production and provide an input paper to describe the dissemination of Marine Safety Information using the Waterway Concept |  | September 2020 |  |  |
| 7/17 | all | Provide feedback to Jens on the DQWG presentation |  | December 2019 |  |  |
| 7/18 | JS-F | Provide consolidated feedback on the DQWG presentation |  | January 2020 |  |  |
| 7/19 | EM | Update NIPWG on progress and status of the MRN usage guideline |  | September 2020 |  |  |
| 7/20 | DL | Inform NIPWG 8 on the development of IALA’s MRN domain management guideline (Ver 2.0) |  | September 2020 |  |  |
| 7/21 | SE | Initiate the continuation of the XML-based NtM generation |  | January 2020 |  |  |
| 7/22 | JS-F | Update the “Architectural display of S-100 related products” diagram and contribute to the NIPWG review |  | February 2020 |  |  |
| 7/23 | all | Provide input on how they expect NIPWG Prod. Spec. data to be used within their national waters |  | September 2020 |  |  |
| 7/24 | all | Prepare for a 1 day workshop (based on 7/23 use case information) during NIPWG 8. |  | September 2020 |  |  |
| 7/25 | HP  EM | Provide KHOA with feedback on display requirements related to the provision of S-100 based products on future ECDIS |  | January 2020 |  |  |
| 7/26 | JS-F | Insert amendments aiming to harmonise S-101 and S-127 data model elements to the register. |  | January 2020 |  |  |
| 7/27 | MK | Provide the consolidated red-line version of amended S-49 to Jens |  | January 2020 |  |  |
| 7/28 | JS-F | Provide the red-line version of amended S-49 to HSSC 12 for endorsement |  | March 2020 |  |  |
| 7/29 | JS-F | Consider if it is appropriate to comment on the proposal submitted by the council to the Assembly on resolution 1/2005 |  | January 2020 |  |  |
| 7/30 | JS-F | Inform HSSC that a survey on S-122/S-123 data production is premature |  | March 2020 |  |  |

**Variance Details:**

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| Xxxxx |

**Corrective Actions:**

|  |
| --- |
| Xxxxx |

**Annex B: Agenda**

**Agenda (as conducted)**

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| **7th Meeting of the Nautical Information Provision Working Group (NIPWG)**  **25 – 29 November 2019, Tallin, Estonia** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | |  | |  |
| 1 | Opening and administrative arrangements | | JS-F  OH | |  |
|  | Opening address on behalf of the Estonian HO | | KK | |  |
| 2 | Agenda | |  | |  |
|  | Adoption of the Agenda | | JS-F | | 7-2 |
|  |  | |  | |  |
| 3 | Minutes of NIPWG6 | | TL | | 7-3 |
| 3.1 | Amendments to the minutes | | TL | |  |
| 3.2 | Review of Action Items from NIPWG6 | | TL | |  |
|  |  | |  | |  |
| 4 | NIPWG status of work (overview) | | JS-F | | 7-4 |
|  |  | |  | |  |
| 6 | Council and HSSC related information | |  | |  |
| 6.1 | General overview of Council and HSSC decisions affecting NIPWG (status of actions items assigned to NIPWG) | | YG | | oral |
| 6.2 | Discussion of Council | | JS-F | | Oral |
| 6.3 | Summary of the discussion at the Council on the Roadmap for the S-100 Implementation Decade (2020-2030) | | YG | | Doc. C3-03.6A  CL54\_2019\_EN\_v1 |
|  |  | |  | |  |
| 7 | S-100 related information | |  | |  |
| 7.1 | Outcome of the S-100WG TSM meetings | | HP | | 7-7.1 |
|  |  | |  | |  |
| 5 | Projects and concepts | |  | |  |
| 5.1 | Digitised NO SDs& Port Information | | BB | | 7-5.1  Annex |
|  |  | |  | |  |
| 5.3 | Taiwan University activities related to NIPWG work | | S-JC | | 7-5.3 |
|  |  | |  | |  |
| 21 | S-12x (Harbour Infrastructure) discussions |  | | |  |
| 21.1 | S-12x Product Specification description | TL | | | 7-21.1 |
| 21.2 | IHMA input paper | BvS | | | 7-21.2  7-21.2 a  7-21.2 b |
|  |  |  | | |  |
| 8 | S-126 (Marine Physical Environment) discussions | |  | |  |
| 8.1 | S-126 Product Specification description | | BS | | 7-8.1 |
| 8.2 | Status report S-126 symbol development | | WC | | 7-8.2 |
| 8.3 | Themes and development progress | | BS | | 7-8.3 |
| 8.4 | Discussion of the papers | | JS-F | |  |
|  |  | |  | |  |
|  | Visit of VTS Tallinn (during forenoon on Tuesday) | | OH | |  |
|  |  | |  | |  |
| 23 | Order of future Product Specification developments |  | | |  |
| 23.1 | Discussion of how to approach HSSC best | JS-F | | |  |
|  |  |  | | |  |
| 9 | Creating New Product Specifications | |  | |  |
| 9.1 | Discussion on the S-100WG paper concerning adding MARPOL information to the appropriate WG | | JS-F | | HSSC11-05.1G |
|  |  | |  | |  |
| 20 | Provision of S-122 and S-123 based test data sets |  | | |  |
| 20.1 | Collection of source material, Data model extension, Development of portrayal proposals | all | | | 7-20.1a  7-20.1b  7-20.1c  7-20.1d |
|  |  |  | | |  |
| 35 | (S-125) Navigational Services | |  | |  |
| 35.1 | Status of work and gap discussion | | EM | | 7-35.1 |
|  |  | |  | |  |
| 10 | (S-128) Catalogue of Nautical Products |  | | |  |
| 10.1 | Presentation of the work status | HC | | | 7-10.1  ProdSpec draft 0.0.1 |
| 10.2 | Completeness etc. of data sets possibly be provided by S-128 | HP | | | 7-10.2 |
| 10.5 | Discussion on the paper | JS-F | | |  |
|  |  |  | | |  |
| 11 | (S-124) Navigational Warnings (WWNWS) | |  | |  |
| 11.1 | WWNWS-Correspondence Group report | | EM | | 7-11.1 |
| 11.2 | Denmark Trial on S-124 for NtM/NIORD | | AJ | | 7-11.2 |
|  |  |  | | |  |
| 36 | US intention to discontinue paper chart production | |  | |  |
| 36.1 | Reference to Discontinued Nautical Charts in Maritime Publications | | DL | | 7-36.1  Annex |
|  | Discussions of effects on NIPWG work | | JS-F | |  |
|  |  | |  | |  |
| 38 | Data quality for safe navigation | |  | |  |
| 38.1 | Input paper from DQWG on simplified approach to provide data quality based navigational decisions | | JS-F | | 7-38.1  Comment form |
| 38.2 | Discussion on the paper | | JS-F | |  |
|  |  | |  | |  |
| 37 | Marine Resource Names | |  | |  |
| 37.1 | Discussion of the IALA guideline | | EM, DL | | 7-37.1 |
|  |  | |  | |  |
| 41 | IHO Registry | |  | |  |
| 41.1 | Status of the IHO Registry and intended revision | | JS-F | | oral |
|  |  | |  | |  |
| 44 | Report of and cooperation with various HSSC WG | |  | |  |
| 44.1 | DQWG, NCWG | | YG | | oral |
|  |  | |  | |  |
| 45 | IMO’s e-Navigation | |  | |  |
| 45.1 | Outcome of MSC101/ NCSR6 | | HP | | oral |
|  |  | |  | |  |
| 43 | Harmonisation of NtM XML Structure | |  | |  |
| 43.1 | NO Experiences in using NtM XML | | EH | | 7-43.1  Annex A  Annex B  Annex C |
| 43.2 | Discussion of potential benefits and way forward | | JS-F | | oral |
|  |  | |  | |  |
| 46 | Architectural display of S-100 related products | | JS-F | |  |
| 46.1 | Discussion of the developed structure | | JS-F | | 7-46.1 |
| 46.2 | Following discussion under item 6.3 and 7.1, roadmap for S-1xx under the remit of NIPWG (governance aspects, production and co-production aspects, qualification aspects, distribution…) | All | | |  |
|  |  |  | | |  |
| 48 | S-127 and S-101 data model | |  | |  |
| 48.1 | Outcome of S-101PT discussion on NIPWG’s data harmonisation submission | | JS-F | | 7-48.1 |
| 48.2 | S-127 generation from Nautical Textual Information | | BS | | 7-48.2  Annex |
|  |  | |  | |  |
| 47 | KHOA S-100 Portrayal Harmonization Project |  | | |  |
| 47.1 | KHOA S-100 portrayal harmonization project and discuss it for IHO symbols and colour guideline development | YB  (remotely) | | | 4-47.1 |
|  |  |  | | |  |
| 49 | Revisions of resolutions and standards under the remit of NIPWG | |  | |  |
| 49.1 | M-3 Resolutions revision | | JS-F | | oral |
| 49.2 | S-12 Standard revision | | JS-F | | oral |
| 49.3 | Update on the status of the new Underkeel Clearance definitions for the Hydrographic Dictionary (S-32) | | JS | | 7-49.3 |
| 49.4 | S-49 Mariners’ Routeing Guide | | MK | | 7-49.4  Annex A  Annex B  Presentation |
|  |  | |  | |  |
| 50 | ToR review | | | MK;  JS-F | See NIPWG website |
|  |  | | |  |  |
| 53 | Work plan for the NIPWG (status of HSSC11 action items) | | | JS-F |  |
| 53.1 | Prioritising of NIPWG work plan items (top three) | | | JS-F | oral |
| 53.2 | Items to be considered for the next Council / Assembly | | | JS-F | oral |
|  |  | | |  |  |
| 57 | Any other business | | |  |  |
| 57.1 | Nomination and election of the Vice Chair | | | JS-F | oral |
| 57.2 | Provision of Emergency contacts in NPUBS | | | JS-F | oral |
| 57.3 | Survey of S-122/S-123 production (HSSC11/39) | | | JS-F | oral |
| 57.4 | Review of Minutes | | | TL |  |
|  |  | | |  |  |
| 59 | Dates and places of next meeting(s) | | | JS-F |  |
|  | NIPWG8 21 – 25 September 2020 France/Brest  NIPWG9 India 2021 (**invitation expected**) | | |  |  |
|  |  | | |  |  |

Table of names

|  |  |
| --- | --- |
| AJ | Allan Jensen (DK) |
| BB | Bente Berggraf Ms. (NO) |
| BS | Briana Sullivan Ms. (U.S. / UNH) |
| BvS | Ben van Scherpenzeel (NL / IHMA) |
| DL | Dave Lewald (U.S./ Coast Guard) |
| EA | Elena Armanino (IT) |
| EH | Edvard Hands (NO) |
| EM | Eivind Mong (CA/ Coast Guard) |
| HC | HyunSoo Choi (ROK / KRISO) |
| HP | Hannu Peiponen (FI / FURUNO) |
| JS | Jason Strom (U.S. / NGA) |
| JS-F | Jens Schröder-Fürstenberg (GE) |
| KK | Kaidi Katus Ms. (EE) |
| MK | Mike Kushla (U.S. / NGA) |
| SE | Stefan Engström (FI) |
| S-JC | Shwu-Jing Chang Ms.(Taiwan / NTOU) |
| TL | Tom Loeper (U.S. / NOAA) |
| VZ | Virgil Zetterling (U.S. / Anthropocene Institute) |
| WC | Wonjin Choi (ROK / KHOA) |
| WdT | Wilfred den Toom (NL) |
| YB | Yong Baek (ROK / KHOA) |
| YG | Yves Guillam (IHO Secretariat) |

Table of Acronyms

|  |  |
| --- | --- |
| EAHC | East Asia Hydrographic Commission |
| HPD | Hydrographic Production Database |
| HSSC | Hydrographic Services and Standards Committee |
| M-3 | Resolutions of the International Hydrographic Organization |
| S-49 | Standardization of Mariners’ Routeing Guides |
| S-12 | Standardization of List of Lights and Fog Signals. |
| TSM | Test Strategy Working Group Meeting |

**Annex C: List of Attendees**

| Participant | Country | Organization |
| --- | --- | --- |
|  |  |  |
| Simon GITTINS | United Kingdom of Great Britain and Northern Ireland | UNITED KINGDOM HYDROGRAPHIC OFFICE |
| John Morten KLINGSHEIM | Norway | Norwegian Coastal Administration(NCA) |
| Bente BERGGRAF | Norway | NORWEGIAN HYDROGRAPHIC SERVICE |
| Clare LAIN | United Kingdom of Great Britain and Northern Ireland | UNITED KINGDOM HYDROGRAPHIC OFFICE |
| Stefan ENGSTRÖM | Finland | FINNISH TRANSPORT AGENCY HYDROGRAPHIC OFFICE |
| Briana SULLIVAN | United States of America | University of New Hampshire |
| Virgil ZETTERLIND | United States of America | Other |
| Eivind MONG | Canada | Other |
| Elena ARMANINO | Italy | ISTITUTO IDROGRAFICO DELLA MARINA |
| Wonjin CHOI | Republic of Korea | KOREA HYDROGRAPHIC AND OCEANOGRAPHIC AGENCY (KHOA) |
| Wilfred DEN TOOM | Netherlands | Hydrographic Service - Royal Netherlands Navy |
| Miguel angel LOBEIRAS DE LA CRUZ | Spain | INSTITUTO HIDROGRAFICO DE LA MARINA (IHM) |
| Yves LE FRANC | France | SERVICE HYDROGRAPHIQUE ET OCEANOGRAPHIQUE DE LA MARINE |
| Simon Tranbjerg Vammen | Denmark | DANISH GEODATA AGENCY - GEODATASTYRELSEN (GST) |
| Allan Idd JENSEN | Denmark | DANISH GEODATA AGENCY - GEODATASTYRELSEN (GST) |
| Kenji NAITO | Japan | HYDROGRAPHIC AND OCEANOGRAPHIC DEPARTMENT |
| Yoshitsugu ATSUMI | Japan | HYDROGRAPHIC AND OCEANOGRAPHIC DEPARTMENT |
| Gong-gu BACK | Republic of Korea | KOREA HYDROGRAPHIC AND OCEANOGRAPHIC AGENCY (KHOA) |
| Tom LOEPER | United States of America | Office of Coast Survey / National Ocean Service (OCS/NOS) |
| Hyunsoo CHOI | Republic of Korea | Korea Research Institute of Ships & Ocean Engineering |
| Hannu PEIPONEN | Finland | International Electrotechnical Commission |
| Gregor STEVENS | United Kingdom of Great Britain and Northern Ireland | International Chamber of Shipping |
| Olavi HEINLO | Estonia | ESTONIAN MARITIME ADMINISTRATION (EMA) (Aids to Navigation and Hydrography Division) |
| Michael KUSHLA | United States of America | NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY DEPARTMENT OF DEFENSE (NGA) |
| Jason STROM | United States of America | NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY DEPARTMENT OF DEFENSE (NGA) |
| Svein SKJAEVELAND | Norway | PRIMAR |
| David LEWALD | United States of America | USCG |
| SHWU-JING CHANG | Taiwan | National Taiwan Ocean University |
| Edward HANDS | Norway | NORWEGIAN HYDROGRAPHIC SERVICE |
| Yves GUILLAM | Monaco | Member of Staff |
| Jens SCHRÖDER-FÜRSTENBERG | Germany | BUNDESAMT FUR SEESCHIFFFAHRT UND HYDROGRAPHIE |

Annex D: **Updated NIPWG Work Plan**

# NIPWG WORK PLAN 2020-21 *(approved by HSSC11 and revised at NIPWG7)*

**Tasks**

|  |  |
| --- | --- |
| D | Maintain Publication S-12 “Standardization of List of Lights and Fog Signals” (IHO Task 2.8.1) |
| E | Maintain Publication S-49 “Recommendations concerning Mariners’ Routeing Guides” (IHO Task 2.8.3) |
| F | Establish and monitor, in liaison with the S-100WG, the project teams required to specify and develop nautical information layers for use in ECDIS (IHO Task 2.3) |
| G | Develop high level specifications for maritime services as defined by IMO in the context of e-navigation covering the provision of hydrographic services to mariners in accordance with the IMO e-navigation strategy implementation plan (IHO Task 2.5.2) |
| H | Develop a test and implementation plan for the development of the maritime services as defined by IMO (IHO Task 2.5.2) |
| I | Maintain IHO Resolutions in M-3 relating to Nautical Publications as required (IHO Task 2.1) |
| J | Liaise with other HSSC WGs and other IHO and international bodies (IHO Task 2.1.8) |
| K | Conduct the 2019 and 2020 meetings of the NIPWG and its sub-group(s) and project team(s) (IHO Task 2.1) |

**Work items**

| **Work item** | **Title** | **Priority**  H-high M-medium  L-low | **Next Milestone** | **Start Date** | **End Date** | | **Status**  P-Planned  O-Ongoing  C-Completed S-superseded | **Contact Person(s)** | **Related Pubs / Standard** | **Remarks** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| D.1 | Monitor and assess proposals for amending S- 12 | M | Next meeting | 2014 | Permanent | | O |  | S-12 | In close liaison with IALA; see J.5.1 |
| E.1 | Develop proposals for amending S-49 | M | Next meeting | 2019 | Permanent | | O |  | S-49 | Red-line version (Ver 2.1.0) to be provided to HSSC 12 for endorsement. |
| F.1 | Assess the progress and perspectives of developing specifications for NP data and propose the way forward for consideration by HSSC | H |  | 2015 | Permanent | | O |  |  | To be considered in the context of the IMO e-navigation strategy implementation.  NIPWG to consider establishing one or more project team(s) in liaison with S-100WG as required (see J.2), in particular to continue the development of Product Specifications currently assigned to the NIPWG. |
| F.2 | Investigate the interaction between Marine Protected Area Product and ENC in ECDIS | H | Next meeting | 2015 | Permanent | | O | Chair/Sec |  | In close liaison with the S-100 WG |
| F.3 | Model the NP data where required. | H | Next meeting | 2004 | Permanent | | O | Chair/Sec |  | S-100 related.  To be included in Hydro domain of the FCD Register. |
| F.4 | Review of objects and attributes.  Propose amendments to HYDRO domain of the FCD Register | H | Next meeting | 2004 | Permanent | | O | Chair/Sec |  | S-100 related.  Incorporate in FCD Register if appropriate. |
| F.8.1 | Develop S-12n - Nautical Information Product Specification |  |  |  |  | |  |  |  |  |
| F.8.1.2 | For Marine Navigational Services | L | next NIPWG meeting | 2013 |  | | P | Chair/Sec | S-125 | On Hold IALA offers to develop draft, NIPWG accept; see Action item NIPWG 6/25 |
| F.8.1.4 | For Marine Physical Environment | M | next NIPWG meeting | 2013 |  | | ~~P~~O | Chair/Sec | S-126 | Investigatory work initiated, see action 6/07 Investigatory work initiated, see action |
| F.8.1.5 | Catalog of Nautical Products | H | next NIPWG meeting | 2016 | 2021 | | O | Chair/Sec | S-128 | Development continued by KHOA |
| F.8.1.6 | For Marine Harbour Infrastructure | M | next meeting | 2019 |  | | ~~Oc~~ | Chair/Sec | S-12X | Investigatory work initiated, see action |
| F.8.2 | Draft Data Classification and Encoding Guides |  |  |  | |  |  |  |  | Document for NPs similar to Use of the Object Catalog |
| F.8.2.1 | For Marine Navigational Services | M |  | - | |  | P | Chair/Sec | S-125 | In close liaison with IALA, see J.5.1 |
| F.8.2.2 | For Marine Physical Environment | M | Next meeting | - | | - | P | Chair/Sec | S-126 |  |
| F.8.2.3 | For Digital Catalog of Nautical Product | H | Next meeting | 2016 | | 2021 | O | Chair/Sec | S-128 | In progress |
| F.8.2.4 | For Marine Harbour Infrastructure | M | Next meeting |  | |  | P | Chair/Sec | S-12x |  |
| F.8.2 | Monitor and Maintain NIPWG Product Specification | H | Next meeting | 2019 | 2021 | | O | Chair/Sec |  | S-122, S-123 and S-127 under 2 year revision cycle |
| G.1 | Monitor the requirements for, and provision of, nautical information in e-navigation test-beds  Produce NP1 sample data sets |  |  |  | |  | C |  |  | According to the tasks assigned by HSSC4. Collection of information to be modelled |
| G.3 | Rules and guidelines for displaying nautical information in ECDIS and in maritime services as defined by IMO |  |  |  | |  |  |  |  |  |
| G.3.1 | Develop basic display principles for NP data intended for use in ECDIS (NP3) | M |  | 2008 | |  | O | Chair/Sec |  | Close co-operation with NCWG and S-100WG required. Interoperability Spec to be considered. |
| G.3.2 | Monitor and contribute to the development of IMO guidelines showing how navigation information received by communications equipment can be displayed in a harmonized way and what equipment functionality is necessary. | M |  | 2015 | |  | O |  |  | e-nav IMO Strategy Implementation Plan, Task T13 (HSSC6-07.1A refers)  Output number 5.2.6.2 of NCSR biennial agenda 2016-17  Completion date is unknown and dependent on the maturity of interoperability and portrayal frameworks  For HSSC consideration |
| I.1 | Maintain and extend resolutions in M-3 relating to Nautical Publications | M | Next meeting | 2012 | | Permanent | O | Chair/Sec NIPWG | M-3 | A review is required due for the harmonization of M-3 information and potential ProdSpecs content |
| J.3 | Liaise with other HSSC WG | M |  | 2004 | | Permanent | O | Chair/Sec NIPWG |  |  |
| J.3.1 | Liaise with the NCWG | M |  |  | | Permanent | O | Chair/Sec NIPWG |  | Establish joint project teams as required and endorsed by HSSC. |
| J.3.2 | Liaise with the ENCWG | M |  |  | | Permanent | O | Chair/Sec NIPWG |  |  |
| J.3.3 | Liaise with the S-100WG | H |  |  | | Permanent | O | Chair/Sec NIPWG |  | Establish joint project teams as required and endorsed by HSSC. |
| J.4 | Liaise with IRCC |  |  |  | |  |  |  |  |  |
| J.4.1 | Liaise with WWNWS Sub-Committee | M |  |  | | Permanent | O | Chair/Sec NIPWG | S-124 | Monitor developments of S-124 Project Team |
| J.4.2 | Liaise with WENDWG | M |  | 2019 | | Permanent | O | Chair/Sec NIPWG |  |  |
| J.5 | Liaise with other international bodies which contribute to nautical information | H |  | 2015 | | Permanent | O | Chair/Sec NIPWG |  |  |
| J.5.1 | Liaise with IALA | H |  | 2013 | | Permanent | O | Chair/Sec NIPWG |  |  |
| J.5.2 | Liaise with International Harbor Masters’ Association (IHMA) | M |  | 2015 | | Permanent | O | Chair/Sec NIPWG |  | IHMA attended the NIPWG 7 |
| J.5.3 | Liaise with International Cable Protection Committee (ICPC) | L |  | 2016 | | Permanent | O | Chair/Sec NIPWG |  |  |

**Meetings** (Task K)

|  |  |  |
| --- | --- | --- |
| **Date** | **Location** | **Activity** |
| 21 – 25 Sept 2020 | Brest, France | NIPWG8 |
| Sept 2021 | India (invitation expected) | NIPWG9 |
| Sept 2022 | Niteroi, Brazil (invitation confirmed) | NIPWG10 |
| Sept 2023 | Monaco | NIPWG11 |
|  |  |  |
|  |  |  |

Chair: Jens Schröder-Fürstenberg, BSH, GE Email: [jens.schroeder-fuerstenberg@bsh.de](mailto:jens.schroeder-fuerstenberg@bsh.de)  
 Vice Chair: Stefan Engström, Traficom, FI Email: Stefan.engstrom@traficom.fi  
 Secretary: Thomas Loeper, NOAA, USA Email: Thom[as.Loeper@noaa.gov](mailto:Loeper@noaa.gov)

Top three work items:

* Initiate prototype implementation of existing S-12x products in an S-100 based environment to explore governance architecture and service delivery mechanism
* Develop S-12x nautical information Product Specifications
* Coordinate the IHO contributions to the definition and harmonisation of maritime services as defined by IMO within the remit of IHO