

Report of the Nautical Information Provision WG (NIPWG)

Submitted by:	Jens SCHRÖDER-FÜRSTENBERG, GE
Related Documents:	Minutes of the 3 rd NIPWG meeting, Busan https://www.iho.int/mtg_docs/com_wg/NIPWG/NIPWG3/NIPWG3%20Minutes_Final_clean.pdf Minutes of the 4 th NIPWG meeting, Durham, NH https://www.iho.int/mtg_docs/com_wg/NIPWG/NIPWG4/NIPWG4%20Minutes_final_3July2017.pdf
Related Projects:	

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Expert Contributor Organisations:	CARIS, Interschalt, C-Map, KRISO, NOVACO, Snowflake, University of New Hampshire, TRANSAS, Anthropocene Institute

Meetings Held During Reporting Period

NIPWG3, 5–9 December 2016, Busan, Republic of Korea

NIPWG4 in combination with the Workshop on Visualisation of Nautical Information, 22–26 May 2017, University of New Hampshire, Durham

Next Planned Meeting

13-16 March 2018, Genoa, Italy

Work Programme according to the HSSC Work Plan 2017-2018 for NIPWG and associated HSSC action items

Investigate the interaction between Marine Protected Area Product and ENC in ECDIS; Draft Product Specification for Marine Protected Areas (S-122) released in 2018 (NIPWG Work plan 2017-2018; F2)

The interaction of S-122 and ENC components is part of the S100WG's interoperability work.

The development of the Product Specification has been completed. The Product Specification will be provided at HSSC10 for endorsement.

Data Modeling (NIPWG Work Plan 2017-2018; F3)

A comprehensive catalogue of attributable features which are able to classify the whole range of text based nautical information has been created.

Features and attributes related to the developed Product Specifications S-122 (Marine Protected Area) and S-123 (Radio Services) are listed within the Geospatial Information (GI) Registry. Extensions and modifications of the data model will be considered by the WG as future Product Specification development requires.

The data harmonisation with the S-101 Data Classification and Encoding Guide (DCEG) has been completed.

The IHO Geospatial Information (GI) Registry, GI Registers (NIPWG Work Plan 2017-2018; F5 & F7), (HSSC7/07)

This work item has been completed.

Development of the Marine Protected Area (MPA) Product Specification (S-122) (NIPWG Work Plan 2017-2018; F.8.1.3.1)

This work item has been completed. The Product Specification will be provided at HSSC10 for endorsement.

Development of the Radio Services Product Specification (S-123) (NIPWG Work Plan 2017-2018; F.8.1.1)

This work item has been completed and the Product Specification will be provided at HSSC10 for endorsement.

Development of the Navigational Services Product Specification (S-125) (NIPWG Work Plan 2016-2017; F.8.1.2)

Considering the HSSC8 order to prioritise the order of NPUB Product Specification developments, the further development of the Navigational Services Product Specification (S-125) has been put on hold. Discussions between IALA and S100WG are ongoing to keep the widest possible harmonisation between the affected Product Specifications.

It has been recognised that S-101 and S-201 (AtoN data exchange) should be harmonised and that both need to make use of the IALA proposed Maritime Resource Naming (MRN) convention. If additional features are needed, S-201 could be enhanced with these features or the development of S-125 could be resumed.

Traffic Management Product Specification (S-127) (NIPWG Work Plan 2017-2018; F.8.1.3)

The test data sample is stable and the initial mapping to the data model content, and the development of an application schema draft has been conducted.

The Under Keel Clearance Management Project Team (UKMPT) approached NIPWG and suggested the provision of the availability of Under Keel Clearance Management Systems information in nautical publications. Although knowing that maritime administrations do not require the provision of this information in nautical publications yet, NIPWG decided to implement this information into the Traffic Management test data sample to be ready for future use.

NIPWG intends to contract out the completion of the S-127 (Traffic Management) (see document HSSC9-05.4B). Assuming the budget will be endorsed by HSSC9, and the contract could be signed without delay, the completion work will be scheduled for 2018 with a possible submission to HSSC11 in May 2019.

Development of the Physical Environment Product Specification (S-126) (NIPWG Work Plan 2017-2018; F.8.1.4)

The test data sample has been considered as ready for use. According to HSSC8/29, the further development of S-126 has been put on hold.

Product Specification "Catalogue of Nautical Products" (S-128) (NIPWG Work Plan 2017-2018; F.8.1.5)

This Product Specification is under development by KHOA. The basic work was assigned to a Korean company. The meta data set will consider other IHO Specifications.

In addition and related to (NIPWG Work Plan 2016-2017; section G), ref. HSSC7/35, the development work will be harmonised with the IALA and IMO e-nav activities to accommodate the future MSP development.

The first application draft was discussed within NIPWG and other stakeholders. KHOA will consider the feedback and intends to provide a revision to NIPWG5 in March 2018.

Development of the NPUB Product Specifications other than those listed above

The production schedules for the data samples for Marine Service, Harbour Infrastructure and Social/Political are undetermined for the time being. No S-10x numbers have been assigned to them yet. The NIPWG will be assisted by the International Harbour Master Association to identify data model components suitable for harbour information provision. As a response action, NIPWG provided feedback to the International Harbour Master Association on their draft of the Port Call Information Guide.

Maintenance of IHO Standards and Miscellaneous Publications (NIPWG Work Plan 2017-2018; D.1, E.1.1, IHO Task 2.6.3.1)

HSSC assigned the maintenance responsibility for the following IHO standards to NIPWG:

- S-12 (Standardization of List of Lights and Fog Signals),
- S-49 (Standardization of Mariners' Routeing Guide),
- M-3 (Resolutions of the IHO) IHO Programme2 Section 2.4.

Amendments to the M-3 section are under consideration and are planned to be provided at HSSC10. In general, the considered amendments of M-3 will reflect the currently used methods to gain permanently updated information.

A joint S100WG/NIPWG paper on the provision of an Annex to IHO Resolution 2/2007 will be discussed at the "**Other items of note**" section.

In addition, a possible future M-3 amendment to provide Under Keel Clearance Management Systems information is under consideration between the UKCMSPT and NIPWG.

The NIPWG stands ready to contribute to the following IHO standards on request or if considered necessary by the designated Working Groups:

- S-100 (IHO Universal Hydrographic Data Model),
- S-32 (Hydrographic Dictionary),
- S-64 (IHO Test Data Sets for ECDIS) Similar to chart content as part of the ENC test data, the NIPWG considers it beneficial to integrate NP3-type nautical publication content into the test data sets for the accessibility and reliability of the provided information.

NPUB and IMO e-Nav activities relating to Maritime Service Portfolios (MSP) (NIPWG Work Plan 2017-2018; section G and J), ref HSSC7/35 NIPWG to coordinate the contribution of the IHO for the development of guidelines for the harmonized display of navigation information and for the preparation of the output related to the development and implementation of MSPs, notably in liaison with the WWNWS-SC.

Discussions are ongoing to suggest a merger of MSP 11 (nautical chart service), MSP 12 (nautical publications service) and the relevant components of MSP 15 (real-time hydrographic and environmental information services) and MSP 5 (Maritime Safety Information (MSI) service) into one MSP named "Hydrographic Services".

The proposed joint MSP would consider the practice in data gathering and provision which are relevant for hydrography. Support from affected HSSC WGs have been sought and their feedback was considered at NIPWG4 to enhance the current draft of the MSP "Hydrographic Services".

It is still intended that the basic components of the MSP "Hydrographic Services" should be developed and ready to be drafted in the format and structure defined by the IMO in 2019/2020. An appropriate

paper presenting the latest discussion status is available on the NIPWG website, “e-Navigation - IMO Maritime Service Portfolio” section
https://www.iho.int/mtg_docs/com_wg/NIPWG/NIPWG_Misc/eNavMSP/NIPWG_eNavMSP.html

During the recent IMO Maritime Safety Committee meeting (MSC97), the establishment of the “Harmonisation Group on Data Modelling” (HGDM) was endorsed. NIPWG provided input to a common IALA-IHO paper and provided IHO discussion papers to the initial meeting and the Working Group was represented by one of our external contributors.

The first HGDM meeting will be in October 2017. Due to the time conflict a report on the outcome cannot be provided at this time.

Noting the importance of the IHO representation, Member States are invited to nominate experts who can attend the HGDM on a regular basis.

The NIPWG is part of the IMO correspondence group on developing the “Guideline for the harmonized display of navigation information received via communications equipment”.

The responsibility of the development of these guidelines is assigned to IMO. The NIPWG will invite other HSSC WGs to contribute to specific topics if appropriate and if considered necessary.

Various prototype services are likely to be developed within e-navigation projects such as EfficienSea2. NIPWG will monitor such projects to maintain awareness of issues and potential significance to the MSP development.

It is proposed to consider the creation of a separate e-navigation menu item on the IHO main page. This menu item can be used to provide the information which is currently on the NIPWG site and on the “ENCs, ECDIS&S-100” site.

Harmonised presentation of cable protection information (HSSC8/67 and NIPWG work Plan J5.3)

Based on the HSSC action item, the NIPWG and the ICPC (International Cable Protection Committee) developed a mutually agreed upon text block which provides information on the protection of undersea cables. Considering that NIPWG3 was conducted a month after HSSC8, and taking into account the time constraints for submissions to the Assembly in April 2017, the NIPWG discussed the most effective way to provide the M-3 amendment with the IHB. A proposal was developed which invited Germany to submit an appropriate M-3 amendment. The submission was provided on time and with slight modifications. The submission was endorsed by the Assembly and is now part of M-3.

From NIPWG perspective, this action item has been completed.

Progress on HSSC Action Items not assigned to the Work plan

Follow up HSSC1/8. Develop Marine Environment Protection Programme (MEPP) based on S-100.

According to HSSC8/29 (see further below), the development of a S-122 (Marine Protected Area) was prioritised. The various options to finalise S-122 were discussed at NIPWG3. Taking into account that the technical expertise of the NIPWG working group members is not sufficient to finalise the Product Specification, the outsourcing of the work was the best possible solution to fulfil HSSC8/29 in a timely manner.

Consequently, a contract was made with a scheduled completion date of August 2017. The first draft was discussed at NIPWG4 in May 2017 and the final version of S-122 was delivered by August 2017 as contracted.

The next steps are the submission of the S-122 Product Specification for HSSC10 endorsement and finally, for Council-2 endorsement and Member State approval in 2019.

The latest discussions raised concerns against the integration of the S-122 into the Traffic Management Product Specification (S-127). It seems to be inappropriate that eventually, the same information would be delivered by two products. Thus, the integration of S-122 content in a S-127 product is no longer favoured by NIPWG.

Considering the importance of the S-101 completion and considering the intended use of the S-101 as the underlying ENC, and further considering the intended interoperability between two or more Product Specifications, we decided, contrary to the statement made at HSSC8, that the S-122 (MPA) Product Specification should be delivered at the same time or earlier as S-101 (ENC) to provide appropriate test data.

MPA sample test data for the U.S. Hawaiian areas are being used by other HSSC WGs for testing purposes and they were also the basis for the visualisation discussions. The current web based provision can be accessed at: <https://mpa.protectedseas.net/north-america/hawaii>

Follow up HSSC4/26. Prepare a master plan for developing electronic nautical publications, with priority assigned to defining data models and product contents in order to coordinate the scheduling of deliverables with the implementation of S-101.

(S-122) Marine Protected Area and (S-123) Radio Services

A previously mentioned dependency on contributions by the DQWG and by the NCWG is no longer an issue.

Use case assessments demonstrate that a particular portrayal of NPUB information on ECDIS screens is not necessary and so, specific support from NCWG is not needed. Rather, currently existing ECDIS functions, such as the generation of indications in case of crossing feature boundaries, will be employed.

NPUB specific data quality components have been implemented in the developed Product Specifications. It is intended to submit the finalised Product Specifications Marine Protected Area (S-122) and Radio Services (S-123) to HSSC10 for endorsement and finally for Council-2 endorsement in September 2018 and Member State approval in 2019.

This schedule bases on discussions with the S-100WG to ensure that additional Product Specifications would be ready for the production of S-100 conformat products when the S-101 will be officially available for use.

Visualisation of Nautical Information (HSSC7/19)

This action item has been completed. A workshop was conducted in conjunction with NIPWG4. Participants from industry, external contributors and NCWG were present.

Options of nautical information portrayal in combination with S-101 next generation ENC and options for the portrayal of nautical information onboard were discussed.

Based on "Use Case" scenarios the position was developed that some information may activate indications that certain regulations/restrictions apply and/or that mariners' action is requested. No special portrayal instructions are needed for S-122 (Marine Protected Area) and S-123 (Radio Services).

HSSC8/04 (former HSSC7/20) For S-122, and assuming that sufficient information is available, NIPWG, in liaison with NCWG and S-100WG, to make use of test bed opportunities (e-navigation projects as appropriate).

An S-122 GML test data set is available. First tests have been conducted by SPAWAR and issues have been detected which require clarification on S-100. Appropriate notes have been provided to S-100WG. This work is ongoing.

HSSC8/15 S100WG, NIPWG to submit formal requests to the IHO Sec., through the HSSC Chair, for financial support from the IHO special project fund for the relevant items of their respective work plans.

This action item was completed on time. A contract has been awarded and was completed as scheduled; see also Follow up HSSC1/8.

HSSC8/29 HSSC endorsed the development schedules proposed by NIPWG with a high priority for S-122 (Marine Protected Areas) and S-123 (Radio Services).

This action item was completed. A contract was awarded (see HSSC8/15) and the development of the two Product Specifications have been completed.

HSSC8/30 HSSC decided not to proceed with the development of Product Spec. for Regulatory Information until another request from IMO.

This action item was completed. The decision was recognised by NIPWG and the stakeholder who raised the request was informed accordingly.

Any Other Items of Note

Wiki continuation

NIPWG is using a web based Wiki application as a discussion and development platform for the data model. The small Wiki subscription fee is being paid by the IHO on annual basis . NIPWG would appreciate it if HSSC can endorse the continuation of the payments until all data model components have been transferred to the IHO register HYDRO domain and until the IHO registry functions are in a useful condition.

Conduction of an impact study according to IHO Resolution 2/2007

Resolution 2/2007 requests the conduction of an impact study if the implementation of an IHO specification has significant effects on the resources. The transition from providing MPA and Radio Services information in NP1 (Printed paper publications) or NP2 (Digital publications based upon existing paper publications) styles toward an NP3 (Digital dataset(s) fully compatible with ECDIS that serve the purpose otherwise provided by NP1 or NP2) provision might require significant resources from those HOs that are willing to do so.

Part 3.2.2 of the said resolution indicates that such an impact study should be done before work begins. That is contrary to the work assigned to NIPWG by HSSC and probably contrary to the work on Product Specifications assigned to other HSSC WG as well.

It is assumed that the presentation of the NPUB Product Specification development in the NIPWG work plan indicates that these Product Specifications should be delivered and published. Once being an active specification, the development of a new edition might justify the need of the impact study before the work on a new edition should start.

Noting that no clear guidance is available on how an impact study should be conducted, and taking into account that the Assembly-1 has assigned a revision of Resolution 2/2007 to HSSC (Decision No. 12), NIPWG stands ready to provide input to the revision discussion of the said resolution. In preparation of this discussion, an appropriate common input paper (HSSC9-05.4C) has been developed by the S100WG and NIPWG.

The NIPWG intends to conduct an assessment on the effects on the producers, distributors and presenters of these potential products and intends to present the results together with the final submission of the S-122 (MPA) and S-123 (Radio Services) Product Specifications at HSSC10.

Lack of resources

Although the NIPWG recognised an increase in meeting participation and a better representation of industry during the meetings, the lack of resources which was mentioned at the last HSSC report remains.

Especially, the lack of technical knowledge becomes apparent as more technical details need to be added to a Product Specification draft. The current composition of the working group is not able to proceed with the technical development without external support.

NIPWG appreciates that the completion of S-122 and S-123 was financially supported by the IHO and is of the opinion that this is the only practical way to push the Product Specification developments.

The WG has real concerns that work cannot be continued with the expected progress without being contracted out. Generally, the Product Specification development will lose momentum if no sufficient additional support will be provided. That applies for the intended completion of S-127 (Traffic Management) Product Specification in particular.

e-Nav test bed is using NPUB features and attributes

The e-Nav test bed initiated by the Republic of Korea is using the MPA data model for their purposes.

Election of office bearer

NIPWG4 was the first meeting after the Assembly and the election of the office bearers was conducted during this meeting. The two current officer bearers were re-elected and will be pleased to service the Working Group for another election period.

Conclusions and Recommended Actions

- The NIPWG activities were focussed
 - on making progress with the S-100 compliant NPUB Product Specifications development,
 - on developing proposals to amend the M-3 parts pertaining to nautical publications,
 - on the coordination of the IHO contributions to the IMO e-nav strategy.

Action required of HSSC

HSSC9 is invited to endorse:

1. the continued activity of NIPWG.
2. the provision of the S-122 (Marine Protected Area) Product Specification as an independent Specification and not as an additional part of the S-127 (Traffic management) Product Specification
3. that the provision of Under Keel Clearance Management System Information in SOLAS compliant nautical publications is not within NIPWG's remit and depends on national authorities' requests

HSSC9 is further invited to confirm:

1. the amended development schedule for the Traffic Management Product Specification (S-127).
2. the provision of the budget for the outsourcing of the S-127 completion
3. the continuation of the subscription for the wiki server
4. the creation of a new e-navigation menu item on the IHO main website

HSSC9 is further invited to note this report and to endorse:

1. the continuance of the revised 2017-18 Work Plan as annexed.

ANNEX A to the NIPWG Report

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NIPWG WORK PLAN 2017-18 *(approved by HSSC8 and revised at NIPWG4)*

Tasks

D	Maintain Publication S-12 “Standardization of List of Lights and Fog Signals” (IHO Task 2.6.3.2)
E	Maintain Publication S-49 “Recommendations concerning Mariners’ Routeing Guides” (IHO Task 2.6.3.3)
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 2.6.2)
G	Develop high level specifications for a combined Marine Service Portfolio (MSP) covering the provision of hydrographic services to mariners in accordance with the IMO e-navigation strategy implementation plan
H	Develop a test and implementation plan for the development of the MSP “hydrographic services”
I	Maintain IHO Resolutions in M-3 relating to Nautical Publications as required (IHO Task 2.6.3.1)
J	Liaise with other HSSC WGs and other IHO and international bodies
K	Conduct the 2017 and 2018 meetings of the NIPWG and its sub-group(s) and project team(s) (IHO Task 2.6.1)

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.4
F.1	Assess the progress and perspectives of developing specifications for NP data layers in ECDIS 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	Draft Product Specification for Marine Protected Areas (S-122) released in 2018	2015	Permanent	O	Chair/Sec		In close liaison with the S-100 WG On target for endorsement by Council - 2.
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.

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
F.4	Review of objects and attributes	H	Next meeting	2004	Permanent	O	Chair/Sec		S-100 related.
F.5	Propose amendments to HYDRO domain of the FCD Register	H		2005	Permanent	O	Chair/Sec		S-100 related. To be included in the FCD register
F.8.1	Develop S-12n - Nautical Information Product Specification								
F.8.1.1	For Radio Services	H	next NIPWG meeting	2012	2019	O	Chair/Sec	S-123	
F.8.1.2	For Navigational services	L	next NIPWG meeting	2013		P	Chair/Sec	S-125	On Hold
F.8.1.3	For Traffic management	H	next NIPWG meeting	2013	2021	O	Chair/Sec	S-127	
F.8.1.3.1	For Marine Protected Areas	H	next NIPWG meeting	2011	2019	O	Chair/Sec	S-122	
F.8.1.4	For Physical environment	L	next NIPWG meeting	2013		P	Chair/Sec	S-126	On Hold
F.8.1.5	Catalog of nautical products	H	next NIPWG meeting	2016	2021	O	Chair/Sec	S-128	
G.1	Monitor the requirements for and provision of nautical information in e-navigation test-beds								According to the tasks assigned by HSSC4. Collection of information to be modelled

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
	Produce NP1 sample data sets								
G.1.1	For Radio Services	H	next meeting	2012	2017	C	Chair/Sec	S-123	
G.1.2	For Navigational services	H	next meeting	2012	2017	C	Chair/Sec	S-125	
G.1.3	For Traffic management	H	next meeting	2012	2018	O	Chair/Sec	S-127	
G.1.4	For Physical environment	L	next meeting	2013		O	Chair/Sec	S-126	
G.1.5	For Marine Protected Areas	H	next meeting	2013	2016	C	Chair/Sec	S-122	Action HSSC8/04
G.3	Rules and guidelines for displaying nautical information in ECDIS and in combined Marine Service Portfolios								
G.3.1	Develop basic display principles for NP data intended for use in ECDIS (NP3)	H		2008		O	Chair/Sec	S-52	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	M		2015	2019	O		S-52	e-nav IMO Strategy Implementation Plan, Task T13 (HSSC6-07.1A refers) Output number 5.2.6.2 of NCSR biennial agenda 2016-17

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
	way and what equipment functionality is necessary.								
G.4	Initiate consideration of the architecture of the MSP "hydrographic services"	M		2013		C	Chair NIPWG		To be considered in the context of the IMO e-navigation strategy implementation plan (subject to the outcome of MSC94) Draft e-nav IMO Strategy Implementation Plan, Task T17 (HSSC6-07.1A refers).
G.5	Contribute to considering the future of paper charts in the perspective of the establishment of MSPs	M		2014		O			Subject to request from NCWG
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 M3 information and potential ProdSpecs content
J.0	Liaise with the NCWG	M			Permanent	O	Chair/Sec NIPWG		Establish joint project teams as required and endorsed by HSSC.
J.1	Liaise with the ENCWG	M			Permanent	O	Chair/Sec NIPWG		
J.2	Liaise with the S-100WG	H			Permanent	O	Chair/Sec NIPWG		Establish joint project teams as required and endorsed by HSSC.
J.2.1	Draft Data Classification and Encoding Guides								Document for NPs similar to Use of the Object Catalog

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
J.2.1.1	For Marine Protected Areas	H	Next meeting	2011	2017	C	Chair/Sec	S-122	
J.2.1.2	For Radio Services	H	Next meeting	2015	2017	C	Chair/Sec	S-123	
J.2.3	Draft Product Specification								
J.2.3.1	For Radio Services	H		2014	2017	C	Chair/Sec	S-123	
J.2.3.2	For Navigational services	L		-		P	Chair/Sec	S-125	
J.2.3.3	For Traffic management	H		2011	2021	O	Chair/Sec	S-127	Depends on contract award
J.2.3.4	For Marine Protected Areas	H		2011	2017	C	Chair/Sec	S-122	
J.2.3.5	For Physical environment	L		-	-	P	Chair/Sec	S-126	
J.2.3.6	For Digital Catalog of Nautical Product		Next meeting	2016	2021	O	Chair/Sec	S-128	
J.3	Liaise with other HSSC WG	M		2004	Permanent	O	Chair/Sec NIPWG		
J.4	Liaise with IRCC								
J.4.1	Liaise with WWNWS Sub-Committee							S-124	Monitor developments of S-124 Correspondence Group
J.5	Liaise with other international bodies which contribute to nautical information	H		2015	Permanent	O	Chair/Sec NIPWG		

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
J.5.1	Liaise with IALA e-Nav Committee	H		2013	Permanent	O	Chair/Sec NIPWG		
J.5.2	Liaise with International Harbor Masters' Association	L		2015	Permanent	O	Chair/Sec NIPWG		See outcome HSSC8 Section 7.10 of the minutes
J.5.3	Liaise with International Cable Protection Committee (ICPC)	M	Dec. 2016	2016	2017	O	Chair/Sec NIPWG		MOU signed between IHO and ICPC

Meetings (Task K)

Date	Location	Activity
12–16 March 2018	Genoa, Italy	NIPWG5
Jan 2019	Rostock, Germany	NIPWG6
Nov 2019	St. Petersburg, Russian Federation – tbc (fallback Monaco)	NIPWG7
Sept 2020	Brest (tbc), France	NIPWG8

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