

FINAL CONSOLIDATED HSSC WORK PLAN 2017-18

Version 24 January 2017

Notes:

a/ This draft consolidated work plan (WP) has been compiled from the reports submitted to HSSC-8.

b/ Quick links:

§3. S-100WG Work Plan	§4. NIPWG Work Plan	§5. ENCWG Work Plan
§6. <i>Left blank intentionally</i>	§7. TWCWG Work Plan	§8. NCWG Work Plan
§9. DQWG Work Plan	§10. HDWG Work Plan	§11. ABLOS Work Plan
§12. COORD Work Plan	Annex A. HS PT Work Plan	

Objective:

This work plan aims at ensuring efficient project resource management and alignment, progress monitoring and to provide a communication utility with internal and external parties.

Rationale:

The justification for the HSSC Work Plan is in conformance with the IHO Strategic Plan, and mainly related to the following elements of the IHO Work Programme – 2013-2017:

- Element 2.1 Technical Programme Coordination
- Element 2.2 Hydrographic Data Transfer Standards
- Element 2.3 Nautical Cartography
- Element 2.4 Digital Data Protection and Authentication
- Element 2.5 Data Quality
- Element 2.6 Nautical Publications
- Element 2.7 Tides and Water Levels
- Element 2.8 Digital Data Updating
- Element 2.10 Hydrographic Data Acquisition and Processing
- Element 2.11 Hydrographic Dictionary
- Element 2.12 Hydrographic Aspects of UNCLOS
- Element 2.13 Surface Current

Activities continuing beyond 2017 are subject to the IHO Work Programme for 2018-2020 that will be considered by the first session of the IHO Assembly in April 2017.

Procedure:

The HSSC work plan covers a rolling two year period and is revised annually. Each subordinate body proposes in its report to the annual meeting of HSSC a revised work plan for the next biennium. Completed work items should be removed from work plans after they have been reported at a subsequent HSSC meeting. The Chairs of the subordinate bodies, along with the HSSC Chair, will meet prior to each HSSC meeting to review progress, and to harmonize the proposed work plans. The proposed work plans for the next biennium will be considered by the plenary with the report of each subordinate body. The draft consolidated HSSC work plan for the next biennium will be reviewed on the last day of the HSSC meeting, incorporating the agreed changes discussed during that meeting. A revised consolidated HSSC work plan incorporating all approved additional work items will be circulated to participants of the meeting for final comment at the same time as the draft minutes of the meeting. HSSC Chair could seek committee members' interim approval for emerging issues between meetings.

Communications:

The HSSC Work Plan will be posted on the IHO website, and a progress summary will be provided at IHO Assemblies.

Monitoring:

In accordance with Decision No. 3 of the 5th Extraordinary International Hydrographic Conference (EIHC-5), the HSSC Chair and the Chairs of subordinate bodies will be invited "to report, twice annually at year-end and mid-year, on the overall status of their respective work programmes by completing a simple, two-part template that requests brief lists of a) current goals and priorities, and b) current or expected gaps and needs." (Note: decision to be made at the 1st Session of the Assembly in April 2017, on the monitoring system. As a consequence, no year-end report for 2016 is requested prior to the 1st Session of the Assembly).

Project Numbering:

Each task will be given a sequential number independent of related subordinate body. The related IHO Work Programme Element number and the specific HSSC meeting that approved the inclusion of the task will be identified in the HSSC Work Plan summary. Each sub task will be numbered using an alphanumeric sequence, "An, Bn, Cn.."

Priorities:

Three Levels of Priorities (H, M, and L) will be assigned by HSSC using the "Guidelines for the Evaluation of Proposed New Work Items for HSSC and its Subordinate Bodies" (see section 1 hereafter).

1. GUIDELINES FOR THE EVALUATION OF PROPOSED NEW WORK ITEMS FOR HSSC AND ITS SUBSIDIARY BODIES

Introduction

- 1.1 In order to best use the limited resources available to HSSC and its subordinate bodies, it is necessary to evaluate and prioritise proposed new work items. These guidelines are based on the principles originally agreed at CHRIS/13 and CHRIS/15 and revised and enhanced at CHRIS/18. They are intended to provide a uniform basis for evaluation and prioritisation.
- 1.2 Evaluation should be done as a two-stage process:
- a. general consideration leading to acceptance or rejection; and if accepted,
 - b. establishment of priorities.

General acceptance

- 1.3 Before deciding to include a new item in the work plan of HSSC and its subordinate bodies, the following factors should be taken into account:
- a. is the subject addressed by a proposal considered to be within:
 - (1) the scope of IHO objectives?
 - (2) the current IHO work programme?
 - b. has a need for the measure proposed been identified (for example, client demand, internal improvements)?
 - c. do adequate industry standards or solutions exist or are they being developed thereby reducing the need for action through HSSC and its subordinate bodies?
 - d. is the objective achievable in the existing HSSC and its subordinate bodies' work plan taking into account a realistic estimates of resources needed and available?
 - e. what are the envisaged deliverables?

Establishment of priorities

- 1.4 Priorities for accepted work items should normally be assigned based on consideration of the following factors:
- a. measures aimed at substantially preventing maritime casualties, marine pollution incidents or enhancing maritime security
 - b. measures to overcome identified deficiencies in existing IHO standards and technical resolutions;
 - c. measures needed to align IHO standards and resolutions with those of other relevant international standards and recommendations;
 - d. measures required to take into account the introduction of new technologies and methods in maritime operations;
 - e. measures required to take into account new techniques in data acquisition, processing and management, and production techniques in hydrography;
 - f. measures leading to increased Hydrographic Office efficiency.
- 1.5 Follow up actions in response to specific requests from the International Hydrographic Conference/Assembly or other international and intergovernmental organisations should be evaluated in light of paragraph 1.4 above unless specifically identified as urgent matters.

General remarks

- 1.6 When setting priorities, certain flexibility should be provided to allow for initiatives that could not be foreseen.
- 1.7 Once a decision has been made on the basis of the above for a new work item to be included in the work plan of HSSC and its subordinate bodies, an appropriate target completion date should be established, taking into

account the urgency of the matter concerned.

- 1.8 In general, proposals for new work items as well as the revised work plans presented by Chairs of subordinate bodies as part of their annual reports should include a proposed priority for each work item, based on the guidelines above.
- 1.9 Wherever possible, proposed priorities for work items will be considered ahead of a meeting by a “Chair Group” comprising Chair, Vice-Chair, Secretary and all available Chairs of subordinate bodies. Final endorsement of work item priorities will rest with HSSC and be considered at the respective meeting.

2. HSSC RELEVANT ELEMENTS OF IHO WORK PROGRAMME 2013-2017

All elements described below (taken from IHC XVIII document CONF.18/REP/01 and updated in accordance with EIHC-5 document CONF.EX5/REP.04 - Annex B - Appendix 1) and with the approved IHO Work Programme for 2015 relate to Programme 2 “Hydrographic Services and Standards”, which *seeks to develop, maintain and extend technical standards, specifications and guidelines to enable the provision of standardised products and services that meet the requirements of mariners and other users of hydrographic information.*

Element 2.1 Technical Programme Coordination

Objective: To monitor technical developments, oversee the development of IHO technical standards, specifications and publications through the coordination and interaction of relevant IHO Working Groups, and to make recommendations to Member States.

Task 2.1.1	Conduct annual meetings of HSSC	2013-17	
Task 2.1.2	Support the IHO Secretariat to implement the planning mechanism annually and at the end of each 5-year (3-year) cycle	2013-17	
Task 2.1.3	Provide technical advice and guidance on IHO technical standards, specification and publications	2013-17	

Element 2.2 Hydrographic Data Transfer Standards

Objective: To monitor developments related to transfer standards for digital hydrographic data, to develop and maintain the relevant IHO standards, specifications and publications, and to provide technical advice as appropriate.

Task 2.2.1	Conduct meetings of S-100 and ENC Standards Maintenance WGs	2013-17	
Task 2.2.2	Maintain and extend the relevant IHO standards, specifications and publications, using contract support assistance as appropriate, including: <ul style="list-style-type: none"> - S-57 IHO Transfer Standard for Digital Hydrographic Data - S-100 IHO Universal Hydrographic Data Model - S-100/S-101 Testbed - S-101 ENC Product Specification - S-102 Bathymetric Surface Product Specification - S-58 Recommended ENC Validation Checks - S-65 ENC Production Guidance - S-64 IHO Test Data Sets for ECDIS - S-61 Product Specification for Raster Navigational Charts - S-99 Operational Procedures for the Organization and Management of the S-100 Geospatial Information Registry - S-66 Facts about Electronic Charts and Carriage Requirements 	2013-17	Contract support: 30K€ each year

	- RENC Joint Technical Experts WG - Appendix 1 to S-52 - Guidance on Updating the Electronic Navigational Chart - S-52 and its accompanying Presentation Library - Specifications for Chart Content and Display Aspects of ECDIS		
Task 2.2.3	Develop and maintain as-yet undefined S-100-based Product Specifications	2013-14	
Task 2.2.4	Maintain and extend S-100 registry	2013-17	no significant IHO expense anticipated
Task 2.2.5	Provide outreach and technical assistance regarding transfer standards	2013-17	

Element 2.3 Nautical Cartography

Objective: To monitor developments related to nautical cartography for paper nautical charts and the colours, symbols and display rules used to show SENC information on ECDIS, to develop and maintain the relevant IHO standards, specifications and publications, and to provide technical advice as appropriate.

Task 2.3.1	Conduct meetings of Nautical Cartography Working Group	2013-17	
Task 2.3.2	Maintain and extend the relevant IHO standards, specifications and publications, using contract support assistance as appropriate, including: - S-4 Chart Specifications of the IHO and Regulations for International (INT) Charts INT 1 - Symbols, Abbreviations and Terms used on Charts INT 2 - Borders, Graduations, Grids and Linear Scales INT 3 - Use of Symbols and Abbreviations - S-11 Part A - Guidance for the Preparation and Maintenance of INT Chart schemes - S-11 Part B - Catalogue of INT Charts	2013-17	

Element 2.4 Digital Data Protection and Authentication

Objective: To monitor developments related to data protection and data authentication, to develop and maintain the relevant IHO standards, specifications and publications, and to provide technical advice as appropriate.

Task 2.4.1	Conduct meetings of Data Protection Scheme WG	2013-17	
Task 2.4.2	Maintain and extend the relevant IHO standards, specifications and publications, including: - S-63 IHO Data Protection Scheme - Data protection and authentication related elements of: - S-100 - IHO Universal Hydrographic Data Model and - S-101 - ENC Product Specification	2013-17	no significant IHO expense anticipated

Element 2.5 Data Quality

Objective: To monitor developments related to methods of classifying and depicting the quality of hydrographic information, to develop and maintain the relevant IHO standards, specifications and publications, and to provide technical advice as appropriate.

Task 2.5.1	Conduct meetings of Data Quality WG	2013-17	
Task 2.5.2	Maintain and extend the relevant IHO standards, specifications and publications, including: - Data quality related elements of S-57 - IHO Transfer Standard for Digital Hydrographic Data - Data quality related elements of S-52 - Specifications for Chart Content and Display Aspects of ECDIS - Data quality related elements of S-100 - IHO Universal Hydrographic Data Model and - S-101 - ENC Product Specification and other S-100-based Product Specifications	2013-17	no significant IHO expense anticipated

Element 2.6 Nautical Publications

Objective: To monitor developments related to the preparation of nautical publications, to develop and maintain the relevant IHO standards, specifications and publications, and to provide technical advice as appropriate.

Task 2.6.1	Conduct meetings of Nautical Information Provision WG	2013-17	
Task 2.6.2	Develop, maintain and extend S-10n - Nautical Information Product Specification	2013-17	no significant IHO expense anticipated
Task 2.6.3	Maintain and extend the relevant IHO standards, specifications and publications, including: - IHO Resolutions in M-3 relating to Nautical Publications - S-12 Standardization of List of Lights and Fog Signals - S-49 Standardization of Mariners' Routeing Guides	2013-17	no significant IHO expense anticipated

Element 2.7 Tides and Water Levels

Objective: To monitor developments related to tidal and water level observation, analysis and prediction and other related information including vertical and horizontal datums, to develop and maintain the relevant IHO standards, specifications and publications, and to provide technical advice as appropriate.

Task 2.7.1	Conduct meetings of Tides, Water Levels and Currents WG	2013-17	
Task 2.7.2	Maintain and extend the relevant IHO standards, specifications and publications, including: - Relevant IHO Resolutions in M-3 - S-60 User's Handbook on Datum Transformations involving WGS 84 - Standard Tidal Constituent List - Inventory of Tide Gauges and Current Meters used by Member States	2013-17	no significant IHO expense anticipated
Task 2.7.3	Develop, maintain and extend a Product Specification for digital tide tables	2013-17	no significant IHO expense anticipated
Task 2.7.4	Develop, maintain and extend a Product Specification for the transmission of real-time tidal data (S-112)	2013-17	no significant IHO expense anticipated
Task 2.7.5	Develop, maintain and extend a Product specification for dynamic tides in ECDIS	2013-17	no significant IHO expense anticipated

Element 2.8 Digital Data Updating

Objective: To monitor developments in standardized processes for the updating of digital hydrographic data products, to develop and maintain the relevant IHO standards, specifications and publications, and to provide technical advice as appropriate.

Task 2.8.1	Maintain and extend the relevant IHO standards, specifications and publications, including: - Digital data updating related elements of S-65 - ENC Production Guidance - S-52 Appendix 1 - Guidance on Updating the Electronic Navigational Chart	2013-17	no significant IHO expense anticipated
------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------	----------------------------------------

Element 2.10 Hydrographic Data Acquisition and Processing

Objective: To monitor developments related to hydrographic data acquisition and processing, to develop and maintain the relevant IHO publications, and to provide technical advice as appropriate.

Task 2.10.1	Conduct meetings of Hydrographic Survey WG(if WG activated)	2013-17	no meetings planned at present (when WG required)
Task 2.10.2	Maintain and extend, when required, the relevant IHO standards, specifications and publications, including: S-44 - IHO Standards for Hydrographic Surveys	2013-17	no meetings planned at present

Element 2.11 Hydrographic Dictionary

Objective: To develop, maintain and extend S-32 - Hydrographic Dictionary in English, French and Spanish and to provide technical advice as appropriate.

Task 2.11.1	Maintain and extend the IHO Hydrographic Dictionary in English, French and Spanish	2013-17	no significant IHO expense anticipated
Task 2.11.2	Develop the Spanish language Wiki version of S-32 with commercial contract support	2013-14	contract support: 20K€

Element 2.12 Hydrographic Aspects of UNCLOS

Objective: To monitor developments related to the hydrographic aspects of the UN Convention on the Law of the Sea, to develop and maintain the relevant IHO publications, and to provide technical advice as appropriate.

Task 2.12.1	Organize and prepare ABLOS annual business meeting	2013-17	
Task 2.12.2	Organize and prepare the biennial ABLOS Conference	2014-16	self-funding
Task 2.12.3	Contribute to the revision of IHO publication C-51- TALOS Manual	2013-17	no significant IHO expense anticipated

Element 2.13 Surface Current

Objective: To develop standards for the delivery and presentation of navigationally relevant current information.

2.13.2	Maintain and extend the relevant IHO standards, specifications and publications, including:	2013-17	
2.13.2.1	Relevant IHO Resolutions in M-3	2013-17	no significant IHO expense anticipated

2.13.3	Develop, maintain and extend a Product Specification for the transmission of real-time surface current data	2013-17	no significant IHO expense anticipated
2.13.4	Develop, maintain and extend a Product Specification for dynamic surface currents in ECDIS	2013-17	no significant IHO expense anticipated

3. S-100WG WORK PLAN 2017-18

Tasks

A	Maintain and extend S-100 "IHO Universal Hydrographic Data Model" (IHO Task 2.2.2.2)
B	Maintain and extend S-99 "Operational Procedures for the Organization and Management of the S-100 Geospatial Information Registry" (IHO Task 2.2.2.9)
C	Maintain and extend the S-100 GI Registry (IHO Task 2.2.4)
D	Supervise/Advise and support the development and maintenance of S-100-based product specifications
E	Monitor the development of other related international standards
F	Provide outreach and technical assistance regarding the implementation of S-100 (IHO Task 2.2.5)
G	Maintain the S-100 section of the IHO website (IHO Task 2.2.2)
H	Conduct the 2017 and 2018 meetings of the S-100WG and its sub-group(s) and project team(s) (IHO Task 2.2.1)

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
A.1	Maintain and Extend S-100	H	HSSC 10	2010	Permanent	O	Julia Powell (NOAA)		draft Ed. 4.0.0 submitted to HSSC-10 in May 2019
A.2	Development of an S-100 Interoperability Specification	H	HSSC 9	2015	2017	O	Julia Powell (NOAA)		Draft Edition 1.0.0 submitted at HSSC-9 in Nov. 2017
A.3	Develop the protection scheme (S-63 equivalent component, S-100 Part 14) of S-100 based-products	M	HSSC 9	2016	?	P	Jonathan Pritchard (UKHO)		Progress report and proposed timeline submitted at HSSC-9.
B.1	Update S-99 and the S-100 Registry pages for the registration of S-100 product specifications in accordance with HSSC6-05B rev1	M	HSSC 9	2015	2017	P	Julia Powell (NOAA)		
B.2	Establish: - a Cross-Domain Control Body and an Executive Control Body for the IHO Registry - and an Expert Group for the HYDRO domain	M	S-100WG-2	2016	2017	P	Julia Powell (US)		Action HSSC8/14 (membership and TORs)

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
C.1	Update S-100 GI Register to edition 2.0.0 and re-build the web-interfaces	H	HSSC 9	2015	Permanent	O	Yong Baek (KHOA)		
C.2	Connect the S-100 Feature Catalogue Builder to the S-100 GI Register	H	HSSC 9	2015	Permanent	O	Yong Baek (KHOA)		
C.3	Develop web-interfaces to propose new symbology to the S-100 Portrayal Register	H	HSSC 9	2015	Permanent	O	Yong Baek (KHOA)		
C.4	Update and Maintain the Portrayal Catalogue Builder	H	HSSC-9		Permanent	O	IHO Secretariat		Action HSSC8/62
D.1	Review the S-100 Master Plan annually	M	HSSC 9	2014	Permanent	O	Julia Powell (NOAA)	S-100	Include monitoring the need to revise existing S-100-based PS (e.g. S-102) and or to develop new S-100-based PS.
D.2	Review the S-101 Value Added Roadmap annually	H	HSSC 9	2013	Permanent	O	Julia Powell (NOAA)	S-101	

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.3	Finalization of S-101 ENC Product Specification	H	HSSC 9	2015	2018 ?	O	Julia Powell (NOAA)		Draft Edition 1.0.0 submitted to HSSC-9 in May 2018
D.4	Monitor the implementation of the 1 st draft of S-101 ENC product specification	H	S-100WG-2	2015		P			Action HSSC8/19 (Impact on IMO Performance Standards ?)
D.5	Develop an S-100/S-101 Test Strategy and Test Bed	H	HSSC 9	2013	2018	O	Julia Powell (NOAA)		
D.6	Develop Edition 2.0.0 of S-102 Bathymetric Content Specification.	H	HSSC 9	2014	2018	P	Dave Brazier (NAVO)		Submit draft Edition 2.0.0 to HSSC-9 (Nov. 2017)
D.7	Develop S-129 Product Specification for Underkeel Clearance Management (UKCM) Information.	M	HSSC-9	2016	2018	P	Nick Lemon (AMSA)		Decision HSSC8/17
D.8	Develop S-121 Product Specification for Maritime Limits and Boundaries	H	HSSC 9	2016	2017 ?	O	Mark Alcock (Geoscience Australia)		Action HSSC8/16 Submit draft Edition 1.0.0 to HSSC-9
E.1	Monitor the development of other related international standards	M			Permanent	O	Julia Powell (NOAA)		

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
E.2	Monitor and coordinate interactions with OGC and IOGP, to ensure proper harmonization in the development of standards.	M		2016	Permanent	P			Standards such as IOGP SSDM SeabedML (Action HSSC6/37)
E.3	Monitor the development of the IMO guidance on maritime cyber security and advice on possible future actions	L	HSSC 9	2016	Permanent	P	Jonathan Pritchard (UKHO)		
F.1	Liaise with IHO subsidiary bodies and subordinate organs, e.g. WWNWS-SC, NIPWG, ENCWG, SCUFN, etc.	H			Permanent	O	Julia Powell (NOAA)		Establish joint project teams as required and support the UFN Project Team, see Doc. HSSC8-07.1C INF3
F.2	Liaise with non-IHO constituents, e.g. IALA E-nav Committee, IEHC, JCOMM Expert Teams, DGIWG, ISO, ICPC, marine navigation and GIS industry, etc.	H		2004	Permanent	O	Julia Powell (NOAA)		Clarification of the relations between IALA and IHO product specifications (e.g. sector lights modelling, encoding and portrayal in S-101 and S-201) Actions HSSC8/58, HSSC8/66
G.1	Maintain the S-100 section of the IHO website	H		2003	Permanent	O	Tony Pharaoh (IHO Sec.)		

Meetings (Task H)

Date	Location	Activity
14-18 March 2016	Tokyo, Japan	S-100WG-1
13-16 Sept 2016	Rostock, Germany	S-100 TSM-4
15-18 March 2017	Genoa, Italy	S-100WG-2
Sept 2017	Tbd (North America)	S-100 TSM-5
2018	Tbd	S-100WG-3
2018	Tbd	S-100 TSM-6

Chair: Julia Powell, NOAA
Vice Chair: Yong Baek, KHOA
Secretary: Vacant

Email: julia.powell@noaa.gov
Email: ybaek@korea.kr
Email:

4. NIPWG WORK PLAN 2017-18

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	P			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	M	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 Awaiting portrayal specification from NCWG and data quality specification from DQWG.
F.3	Model the NP data where required.	H	Next meeting	2004	Permanent	O	Chair/Sec		S-100 related. To be included in NPUBS domain of the next version of the FCD Register when available

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.6	Propose amendments to AtoN domain of the FCD Register	H	Next meeting	2014	2018	O	Chair/Sec	S-125	To improve the current definitions and attribute values at the FCD register
F.7	Populate the NPUBS domain of the FCD Register	H		2006	Permanent	O	Chair/Sec		S-100 related. Awaiting Registry improvements
F.8.1	Develop S-12n - Nautical Information Product Specification								
F.8.1.1	For Radio Services	H	NIPWG 4	2012		O	Chair/Sec	S-123	Liaise with WWNWS-Sub Committee
F.8.1.2	For Navigational services	H	NIPWG 4	2013		O	Chair/Sec	S-125	
F.8.1.3	For Traffic management	H	NIPWG 4	2013		O	Chair/Sec	S-127	
F.8.1.3.1	For Marine Protected Areas	H	NIPWG 4	2011	2018	O	Chair/Sec	S-122	Awaiting completion Feature Catalogue Builder, data model harmonization between S-101 and S-122, portrayal and quality parts

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.8.1.4	For Physical environment	H		2013		O	Chair/Sec	S-126	
F.8.1.5	Catalogue of nautical products	H	NIPWG 4	2016		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
G.1.1	For Radio Services	H	NIPWG 4	2012	2017	O	Chair/Sec	S-123	
G.1.2	For Navigational services	H	NIPWG 4	2012	2017	O	Chair/Sec	S-125	
G.1.3	For Traffic management	H	NIPWG 4	2012	2017	O	Chair/Sec	S-127	
G.1.4	For Physical environment	H		2013		O	Chair/Sec	S-126	
G.1.5	For Marine Protected Areas	H	NIPWG 4	2013	2017	O	Chair/Sec	S-122	Action HSSC8/04
G.2	Set up a test bed ECDIS	M		-	-	P	Chair/Sec		To be considered in liaison with S-100WG. Contribute to test bed strategy
G.3	Rules and guidelines for displaying nautical information in ECDIS and in combined Marine Service Portfolios								
G.3.1	Develop basic display rules for NP data intended for use in ECDIS (NP3)	M		2008	2017*	O	Chair/Sec	S-52	Close co-operation with NCWG and S-100WG required

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
									*end date depends on NCWG schedule
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	2019	P		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
G.4	Initiate consideration of the architecture of the MSP "hydrographic services"	M		2013		O	Chair NIPWG		To be considered in the context of the IMO e-navigation strategy implementation plan 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					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

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.0	Liaise with the NCWG				Permanent	O	Chair/Sec NIPWG		Establish joint project teams as required and endorsed by HSSC.
J.1	Liaise with the ENCWG	H			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 Catalogue
J.2.1.1	For Marine Protected Areas	H	Next meeting	2011	2018	O	Chair/Sec	S-122	To be harmonized with S-101 DCEG
J.2.1.2	For Radio Services	M		2015		P	Chair/Sec	S-123	Depends on modelling progress
J.2.3	Draft Product Specification								
J.2.3.1	For Radio Services	H	NIPWG-4	2014		O	Chair/Sec	S-123	
J.2.3.2	For Navigational services	H		-		P	Chair/Sec	S-125	
J.2.3.3	For Traffic management	H		2011		O	Chair/Sec	S-127	The start date is in-line with the MPA ProdSpec development
J.2.3.4	For Marine Protected Areas	H	Next meeting	2011	2017	O	Chair/Sec	S-122	
J.2.3.5	For Physical environment	H		-	-	P	Chair/Sec	S-126	
J.2.3.6	For Digital Catalogue of Nautical Products	H		2016	2018	P	Chair/Sec	S-128	

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.3	Liaise with other HSSC WG	H		2004	Permanent	O	Chair/Sec NIPWG		Including DPSWG, DQWG, TWCWG, etc.
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 contributes to nautical information	H		2015	Permanent	O	Chair/Sec NIPWG		
J.5.1	Liaise with IALA e-Nav Committee	H		2013	Permanent	O	Chair/Sec NIPWG		As advised by HSSC4 (in liaison with S-100WG).
J.5.2	Liaise with International Harbour Masters' Association	H		2015	Permanent	O	Chair/Sec NIPWG		Considering AVANTI development
J.5.3	Liaise with International Cable Protection Committee (ICPC)	M		2016	2017	O	Chair/Sec NIPWG		MOU signed between IHO and ICPC. Action HSSC8/66&67

Meetings (Task K)

Date	Location	Activity
21-24 March 2016	IHB, Monaco	NIPWG-2
5-9 Dec. 2016	Busan, Republic of Korea	NIPWG-3
22-26 May 2017	University of New Hampshire, Durham, USA	NIPWG-4 (incl. Visualization of Nautical Information Workshop)
12-16 March 2018 (tbc)	Genoa, Italy	NIPWG-5
January 2019	Rostock (tbc), Germany	NIPWG-6

Chair: Jens Schröder-Fürstenberg, BSH, GE

Vice Chair: Edward Hosken, UKHO, UK

Secretary: Thomas Loeper, NOAA, USA

Email: jens.schroeder-fuerstenberg@bsh.de

Email: Edward.Hosken@UKHO.gov.uk

Email: Thomas.Loeper@noaa.gov

5. ENCWG WORK PLAN 2017-18

Tasks

A	Maintain S-52 “Specifications for Chart Content and Display Aspects of ECDIS” and its associated “Presentation Library” (IHO Task 2.3.2)
B	Maintain S-57 “IHO Transfer Standard for Digital Hydrographic Data” (IHO Task 2.2.2)
C	Maintain S-58 “Recommended ENC validation checks” (IHO Task 2.2.2)
D	Maintain S-61 “Product Specification for Raster Navigational Charts” (IHO Task 2.2.2)
E	Maintain S-64 “IHO Test Data Sets for ECDIS” (IHO Task 2.2.2)
F	Maintain S-65 “ENC Production, Maintenance and Distribution Guidance” (IHO Task 2.2.2)
G	Assess the impact of other IHO standards on S-52 display specifications
H	Liaise with the NIPWG and the NCWG (IHO Task 2.3.2)
I	Maintain the ENC production and portrayal sections of the IHO website (IHO Task 2.2.2 & 2.3.2)
J	Conduct the 2017 and 2018 meetings of ENCWG and its sub-group(s) and project team(s) (IHO Task 2.2.1)
K	Maintain S-66 “Facts about electronic charts and carriage requirements – (IHO Task 2.2.2.10)
L	Consider the development of high density contour lines related to ENCs
M	Maintain and monitor the existing S-63 standard

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
A.1	Resolve any problems or errors identified in the current editions of S-52 and its Presentation Library	H		2009	Permanent	O	Thomas Mellor	S-52	
B.1	Resolve any problems or errors identified in the current edition of S-57	H		2011	Permanent	O	Thomas Mellor	S-57	
C.1	Monitor the implementation of the new edition of S-58 and keep the recommended checks up to date	H		2003	Permanent	O	Richard Fowle		
C.2	Resolve any problems or errors identified in the current edition of S-58	H		2003	Permanent	O	Richard Fowle		

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
C.3	1. Restructure S-58 to provide a more logical means of data validation. 2. Investigate how the new version of S-58 can be used to implement a minimum validation standard for all ENCs.	H	Edition 6.0.0 Subject to completion of C.2	2012	2017	O	Richard Fowle		HSSC8/24
E.1	Resolve any problems or errors identified in the current edition of S-64	H			2017				
F.1	Monitor and assess proposals for amending S-65	L	HSSC-9		Permanent	O			HSSC8/23 HSSC8's request to clarify the assignment of navigational purposes to scale ranges in S-65 <i>versus</i> those already listed in S-66 for the purpose of providing references to S-11 Part A.
G.1	Liaise with IEC TC80 to ensure that future changes to S-52 and to the Presentation Library are compatible with Ed. 4 of IEC 61174	H		2015	2017	P	Thomas Mellor (UKHO)	S-52, IEC 61174	

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
H.1	Liaise with the NIPWG and the NCWG	H							
I.1	Maintain the ENC production and portrayal sections of the IHO website, and support FAQ and Encoding Bulletins	H		2003	Permanent	O	Jeff Wootton (AHS) IHO Sec. (ADDT)		Include posting EBs and PBs
K.1	Maintain S-66	M?	Ed. 1.1.0		2017	O	Thomas Mellor (UKHO)	S-66	HSSC8/23 Stage 2 to be considered, proposal to be made at HSSC-9?
K.2	Prepare a single educative IHO authoritative document addressing the issue of "equivalent" T&P NMs for ENCs, in view of its distribution to HOs, Port State Control authorities and mariners after approval.	M	ENCWG-2, (NCWG-3)	2016	2017	P	Thomas Mellor (UKHO) and NCWG Chair	S-66 Stage 2?	HSSC8/28 Consider any adjustment to the UOC that may be required in accordance with action HSSC5/03.
L.1	Prepare recommendations on the provision of high density contour lines with ENCs	H	HSSC 10	2016	2018	P	Germany	S-57/S-52/S-64/S-1xx?	Consider the Additional Bathymetric Layer concept (HSSC8-05.3C) and other alternatives HSSC8/27

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
M.1	Maintain and monitor the existing S-63 protection scheme	M	HSSC 9	2016	Permanent	O	Jonathan Pritchard (UKHO)	S-63	HSSC8/21

Meetings (Task J)

Date	Location	Activity
14 – 18 March 2016	Tokyo, Japan	ENCWG-1
20-22 March 2017	Genoa, Italy	ENCWG-2
2018	Tbd	ENCWG-3

Chair: Thomas Mellor, UK

Vice Chair: Mikko Hovi, FI

Secretary: AD Anthony Pharaoh, IHO Sec.

Email: tom.mellor@ukho.gov.uk

Email: mikko.hovi@liikennevirasto.fi

Email: addt@iho.int

6. Left blank intentionally

Tasks

A	
B	
C	

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
A									
B									
C									

Meetings

Date	Location	Activity

Chair:

Vice Chair:

Secretary:

7. TWCWG WORK PLAN 2017-18

Tasks

A	Maintain the list of standard tidal constituents (IHO Task 2.7.2.3)
B	Compare the tidal predictions generated as a result of analysis of a common data set using different analysis software
C	Develop, maintain and extend a Product Specification for digital tide tables (IHO Task 2.7.3)
D	Develop, maintain and extend a Product Specification for the transmission of real-time tidal data (IHO Task 2.7.4)
E	Develop, maintain and extend a Product Specification for the transmission and portrayal of navigationally significant current surface data (S-111 - IHO Task 2.13.3)
F	Develop, maintain and extend a Product Specification for dynamic tides in ECDIS (IHO Task 2.7.5)
G	Liaise with S-100WG on tidal and current matters relevant to ECDIS applications
H	Liaise with industry experts on the development of product specifications for tides and currents
I	Prepare and maintain an inventory of tide gauges and current meters used by Member States and publish it on the IHO/TWLWG web site (IHO Task 2.7.2.4)
J	Review feedback of on-line real time water level observation document
K	Maintain and extend the relevant IHO standards, specifications and publications as required (IHO Tasks 2.7.2 and 2.13.2)
L	Conduct the 2016 and 2017 meetings of TWCWG and its sub-group(s) and project team(s) (IHO Tasks 2.7.1 and 2.13.1)
M	Develop and maintain material for course on Tides, Water Levels and Currents

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
A.1	Maintain the list of standard tidal constituents	M		-	Permanent	O	Chris Jones*		Review current list of published tidal constituents
B.1	Compare the tidal predictions generated as a result of analysis of a common data set using different analysis software.	M		-	Permanent	O	Hilda Sande * All		Select Common data set Analyze using different software Predict common set of tides Compare results
C.1	Develop, maintain and extend the standard for digital tide and tidal current tables	H	Prepare draft Standard	2009	2017	O	Peter Stone* Chris Jones Zarina Jayaswal		
D.1	Develop and maintain a standard for Dynamic Water Level Data Transfer (S-112)	H		2009	2018	O	Chris Jones* All		Establish joint project teams as required. Liaise with S-100WG (see H.1) Liaise with industry experts (see I.1) HSSC8/41
E.1	Develop and maintain a product specification for the transmission of surface current data (S-111)	H	Create mature draft S-111 PS, including draft list of attributes and encoding	2013	2018	O	Kurt Hess* Louis Maltais		Establish joint project teams as required. Liaise with S-100WG (see H.1) Liaise with industry experts (see I.1)
E.2	Develop and maintain a product specification for the portrayal of navigationally significant surface currents	H	Demonstrate test portrayal S-111 PS	2013	2018	O	Louis Maltais* Kurt Hess		Establish joint project teams as required. Liaise with S-100WG (see H.1) Liaise with industry experts (see I.1)

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.1	Develop and maintain a product specification for dynamic application of tides in ECDIS	H	Prepare draft Product Specifications IHO S-104 <i>Water Level Information for Surface Navigation</i> . Prepare draft Portrayal model for tidal data in S-100.	2009	2018	O	Zarina Jayaswal* Glen Rowe Jimin Ko Peter Stone* Zarina Jayaswal	S-104	Establish joint project teams as required. Liaise with S-100WG (see H.1) Liaise with industry experts (see I.1) HSSC8/41
G.1	Liaise with S-100WG on tidal and current matters relevant to ECDIS applications	H		-	Permanent	O	Gwenaële Jan Kurt Hess Louis Maltais		Establish joint project teams as required.
H.1	Liaise with industry experts on the development of product specifications for tides and currents	H		-	Permanent	O	All		Including consideration of the need to develop applications of water level and current products for non-navigation purposes (former Action HSSC6/32).
I.1	Maintain an inventory of tide gauges and current meters used by Member States and publish it on the IHO/TWCWG web site.	H		-	Permanent	O	David Wyatt* All		Initial inventory from TWCWG members available on IHO web site.
J.1	Review feedback of on-line real time water level observation document	L		-	Permanent	O	Zarina Jayaswal* All		

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
K.1	Maintain and extend the relevant IHO standards, specifications and publications	M M	Review wording of IHO Resolution 3/1919, as amended, in light of revised definitions for MSL and LAT	- 2014	Permanent 2016	O O	Gwenaële Jan	IHO Resolutions in M-3 S-60 User's Handbook on Datum Transformations involving WGS 84	
M.1	Develop and maintain material for course on Tides and Currents	H		-	Permanent	O	Ruth Farre* Louis Maltais Peter Stone Zarina Jayaswal		Adapt currently available course material to create a course suitable for delivery in support of CBSC requests

Meetings (Task N)

Date	Location	Activity
25-29 April 2016	Brazil	TWCWG-1
8-12 May 2017	Victoria, BC, Canada	TWCWG-2
2018	Tbd	TWCWG-3

Chair: Gwénaële Jan, FR
Vice Chair: Louis Maltais, CA
Secretary: David Wyatt, IHO Sec.

Email: gwenaële.jan@shom.fr
Email: Louis.maltais@dfm-mpo.gc.ca
Email: adso@iho.int

8. NCWG WORK PLAN 2017-18

Tasks

A	Maintain and extend Publication S-4 'Chart Specifications of the IHO & Regulations of the IHO for INT Charts' (IHO Task 2.3.2)
B	Maintain and extend Publication S-11 Part A 'Guidance for the Preparation and Maintenance of INT Chart schemes' (IHO Task 2.3.2)
D	Development of new (and revised) symbology (IHO Task 2.3.2)
E	Maintenance of S-4 supplementary publications INT 1, 2 & 3 (IHO Task 2.3.2)
G	Conduct meetings of NCWG (IHO Task 2.3.1)
H	Provide technical assistance to other IHO working groups and support regarding the implementation of S-100 (IHO Task 2.2.5)

Tasks and numbers from IHC XVIII Conf.18/Rep/01 and updated in accordance with EIHC-5 document CONF.EX5/REP.04 - Annex B - Appendix 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	Contact Person(s)	Affected Pubs/Standard	Remarks
A16	Consideration of the future of the paper chart	H	NCWG3	2014	2017	O	Chair NCWG	tbd	CSPCWG10 Action 36 NCWG1 Action 54. Meeting following NCWG2. Report at HSSC9
A24	Provide guidance on the use of seals of non- IHO members on INT charts	M	Clarification to prevent non-HO seals and logos being included on INT charts	2014	2017	P	Sec NCWG	S-4	HSSC6-05.5C & F refer NCWG1 Action 46 WG Ltrs 02 & 08/2015. Included in S-4 4.6.0 NCWG2 Action 36, further clarification needed
A26	Portrayal subWG	H	Initiate subWG and decide protocol for considering portrayal requirements	2016		O	Chair NCWG		HSSC7 Action 18 NCWG2 Actions 5, 22, 30-32
A27	Provide guidance on charting Sub-surface floating pipelines	M		2016	2017	C	Sec NCWG	S-4	NCWG Ltrs 05, 09/2016 Endorsed at HSSC-8 (Action HSSC8/33 refers)
A28	Future of S-4	M	NCWG3			P	Chair NCWG	S-4	NCWG2 Agenda Item 13.2
A29	Consider ICPC submission on charting submarine cables taking into account deep sea mining	L	NCWG3			P	Chair NCWG	S-4	HSSC8/68 (pending submission from ICPC)
A30	Check the impact of the IHO Resolution 3/1919 as amended on S-4 when it is approved	L		2016	?	O		S-4, INT1, S-32	Ref. IHO CL 27/2016 and CL xx/2016

Work item	Title	Priority H-high M-medium L-low	Next Milestone	Start Date	End Date	Status P-Planned O-Ongoing C-Completed	Contact Person(s)	Affected Pubs/Standard	Remarks
B.3	Develop guidelines for preparation & maintenance of small / medium scale ENC schemes.	H		2009	2017	C	Sec/Chair NCWG IHO Sec.	S-11A	HSSC7 Action 22 NCWG2 Action 37 Endorsed at HSSC-8 (Action HSSC8/35 refers)
B.4	Prepare a "basic quality assurance check-list template" for use by INT Chart Coordinators/ICCWG in support of the review of new INT charts.	M	Feedback from coordinators due 31/03/2017	2016	2017	P	IHO Sec. NCWG Chair/Sec		IHO CL 64/2015 NCWG2 Actions 38, 39
D36	User activated AtoN	M		2015	2017	C	Sec NCWG	S-4, INT1	NCWG2 Action 10 NCWG Ltrs 05, 09/2016. Endorsed at HSSC8 (Action HSSC8/33 refers)
D37	Seagrass	M		2016	2017	C	Sec NCWG	S-4, INT1	NCWG2 Action 23, 24 NCWG Ltrs 05, 09/2016 Endorsed at HSSC8 (Action HSSC8/33 refers)
D38	Bubbler	M		2016	2017	C	Sec NCWG	S-4, INT1	NCWG2 Action 43, 44 NCWG Ltrs 05, 09/2016. Endorsed at HSSC8 (Action HSSC8/33 refers)
E.1	Maintain official INT 1s			2013	Permanent	O	DE: S Spohn FR: S Guillou ES: F. Yanguas	INT 1	English version 2015 (Ed 8) French version 2012 (Ed 5) Spanish version 2015 (Ed 5)

Work item	Title	Priority H-high M-medium L-low	Next Milestone	Start Date	End Date	Status P-Planned O-Ongoing C-Completed	Contact Person(s)	Affected Pubs/Standard	Remarks
E.4	Symbols for vacant entries in INT 1	L	Add INT abbrs. Fm(s) to S-4 B-122.1. Remove agreed vacant entries and populate B48 & F29.2 next editions INT1.	2016	2019?	O	INT1subWG, Chair	INT 1, S-4 part B	NCWG1 Action 14. NCWG2 Actions 41-44
E9	Develop new section V for INT1 for 'data quality'	M	Draft to WG	2014	2017	O	Chair NCWG	INT1	CSPCWG10 Action 35
E10	Symbol library	L		2016	?	O	Sec NCWG US (C Harmon)	S-4, INT1	NCWG Actions 45, 46
H1	Liaise with IHO subsidiary bodies and subordinate organs, e.g. WWNWS-SC, NIPWG, ENCWG, SCUFN, etc.	L		2016	?	O		S-4, INT1, S-32	Support the UFN Project Team, see Doc. HSSC8-07.1C INF3
H2	Prepare a single educative IHO authoritative document addressing the issue of "equivalent" T&Ps for ENCs, in view of its distribution to HOs, Port State Control authorities and mariners after approval.	M	NCWG-3, (ENCWG-2)	2016	2017	P	NCWG Chair and ENCWG Chair	S-66 Stage 2?	HSSC8/28
H3	Consider the paper on the "visualization of bathymetric uncertainties data in S-101" (Doc. HSSC8-05.6B INF6) and develop appropriate recommendations on the way forward.	M	NCWG-3	2016	2017	P	NCWG Chair	S-101	HSSC8/39

* Allowing for approval via HSSC (in accordance with Resolution 2/2007) before MS and publication.

Meetings (Task G)

Date	Location	Activity
26-29 April 2016	IHB, Monaco	NCWG2
16-19 May 2017	Redlands, CA, USA	NCWG3
2018	Tbd	NCWG4

Chairman: Mikko Hovi (FI) from 08 Sep 2016

Vice Chairman: Vacant

Secretary: Andrew Heath-Coleman (UK)

Email: mikko.hovi@liikennevirasto.fi

Email:

Email: andrew.coleman@ukho.gov.uk

9. DQWG WORK PLAN 2017-18

Tasks

A	Review ISO 19113, Geographic Information-Quality Principles, ISO 19114, Geographic Information-Quality Evaluation Procedures, and ISO 19115, Geographic Information - Metadata and propose relevant enhancements and amendments for incorporation in S-100 "IHO Universal Hydrographic Data Model" (IHO Task 2.5.2)
B	Monitor and further develop quality indicators for hydrographic data (IHO Task 2.5.2)
C	Maintain and extend as needed existing quality indicators in S-57 "IHO Transfer Standard for Digital Hydrographic Data", including the education of both the mariner and the cartographer, and the development of documentation (IHO Task 2.5.2)
D	Maintain and extend as needed the presentation of data quality, as provided in S-52 "Specifications for Chart Content and Display Aspects of ECDIS" and its Presentation Library (IHO Task 2.5.2)
E	Investigate ways of ensuring that ECDIS displays provide a clear warning or indication to the mariner on the quality of the underlying survey data, through appropriate use of the attribute CATZOC and/or improvement of the existing display capabilities (IHO Task 2.5.2)
F	Propose new data quality topics and other applications for consideration by HSSC (IHO Task 2.5.2)
G	Maintain and extend data quality related elements of S-100 "IHO Universal Hydrographic Data Model" (IHO Task 2.5.2)
H	Maintain and extend data quality related elements of S-101 "ENC Product Specification" and other S-100-based Product Specifications (IHO Task 2.5.2)
I	Conduct the annual meetings of DQWG (IHO Task 2.5.1)

Work items

Task	Work Item	Priority H-high M-medium L-low	Milestones	Start Date	End Date	Status P-planned O-ongoing C-Completed	Contact Person	Affected Pubs/Standard	Remarks
A.1	Review ISO 19113, 19114, 19115 and 19157 and make recommendations for inclusion in S-100	H	DQWG12	2010	2017	O	Rogier Broekman, Sean Legeer	S-100	Keeping S-100 data quality in line with ISO standards requires periodical revisiting in the future.
C.4	Investigate possible methods for how to educate practicing mariners on data quality issues.	M	DQWG12	2010	2017	O	Rogier Broekman, Mike Prince		Investigate in liaison with training institutions the adequacy of existing HO documentation on the quality aspects of the practical use of ENCs. IHO CL 51/2013 issued on this topic. To include the recommendations of HSSC5-INF4, interface with IMO/HTW (Action HSSC5/45 refers).
G.1	Create and maintain general guidelines regarding data quality within IHO	H						S-100, S-10x	Included in A.1

Task	Work Item	Priority H-high M-medium L-low	Milestones	Start Date	End Date	Status P-planned O-ongoing C-Completed	Contact Person	Affected Pubs/Standard	Remarks
H.1	Liaise with other working groups and create road map with timeline for data quality items within S-10x	H	DQWG12	2015	2017	O	Antti Castrén	S-10x	This roadmap will also have impact on organizing method of the data quality work. The liaison includes also various smaller issues.
I.1	Conduct the annual meeting of DQWG	H	DQWG12	2015	?	O	Antti Castrén		Conduct annual meeting in late spring each year.

Meetings (Task I)

Date	Location	Activity
10-12 May 2016	Silver Spring, USA (tbc)	DQWG11
13-15 June 2017	The Hague, Netherlands	DQWG12

Chair: Antti CASTREN, FI

Vice-Chair: Sean LEGEER, US

Secretary: Vacant

Email:

Email: antti.castren@fta.fi

Email: sean.legeer@noaa.gov

10. HDWG WORK PLAN 2017-18

Tasks

A	Maintain and extend the definitions in the IHO Dictionary in French, English and Spanish (IHO task 2.11.1 refers)
B	Liaise with other IHO bodies preparing publications containing glossaries (IHO task 2.11.1 refers)
C	Liaise with other organizations developing dictionaries and/or glossaries (IHO task 2.11.1 refers)
D	Develop the Spanish language Wiki version of S-32 with commercial contract support (IHO task 2.11.2 refers)

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	Contact Person(s) * indicates leader	Related Pubs / Standard	Remarks
A3	To investigate options (scope, format / content management system, languages, cross-references, maintenance regime, ...) and associated resource requirements and timeline to produce [and maintain] a reference edition of S-32	H	HSSC-9	HSSC-7	2017	P	Chair	S-32	Actions HSSC8/43, HSSC8/44
	Develop a multilingual a Wiki crowdsourcing demonstrator for the Hydrographic Dictionary.		HSSC-9	2016	2017		Chair		HSSC8/45

Work Item	Title	Priority H-high M-medium L-low	Next milestone	Start Date	End Date	Status P-planned O-ongoing C-completed	Contact Person(s) * indicates leader	Related Pubs / Standard	Remarks
B1	Provide support to NCWG, ABLOS, SCUFN	L	HSSC-9	2016	Permanent	P	Chair	S-32	Actions HSSC8/46, HSSC8/51

Meetings (IHO WP task 3.1.8)

Date	Location	Activity
September 2016	IHB, Monaco	A3
Early 2017	IHO Sec., Monaco	

Chair: Jean LAPORTE, France
Vice-Chair: Vacant
Secretary: David WYATT, IHO Sec.

Email: jlaporte@shom.fr
Email:
Email: adso@iho.int

11. ABLOS WORK PLAN 2017-18

Tasks

A	Organise the 9 th ABLOS Conference in 2017 (IHO Task 2.12.2)
B	Maintain IHO Publication C-51 “Technical Aspects of the Law of the Sea (TALOS) Manual” (IHO Task 2.12.3)
C	Deliver a standard training program on the hydrographic aspects of maritime delimitation (IHO Task 3.5.2)
D	Provide advice and guidance on the technical aspect of the Law of the Sea to relevant organizations, bodies and Member States (IHO Task 2.12.3)
E	Organize and prepare ABLOS business meetings in 2017 and 2018 (IHO Task 2.12.1)

Work items

Task	Work item	Priority H-high M-medium L-low	Next milestone	Start Date	End Date	Status P-planned O-ongoing C-completed	Contact Person(s) * indicates leader	Related Pubs / Standard	Remarks
A1	Organise 9 th ABLOS Conference	H	Begin advertising	2015	2017	O	All members of ABLOS through Niels Andersen*	N/A	
			Identify key note speaker	2015	2016	C			
			Attract presentation abstracts	2015	2017	O			
B1	Prepare draft 6 th Edition of C-51 (TALOS Manual) for adoption by Member States	M	Generate draft new structure for chapter 3	2013	2017	P	Chris Carleton*	IHO Publication C-51	
		H		2014	2016	C			
		H		2014	2017	O			

Task	Work item	Priority H-high M-medium L-low	Next milestone	Start Date	End Date	Status P-planned O-ongoing C-completed	Contact Person(s) * indicates leader	Related Pubs / Standard	Remarks
C1	Deliver standard training programmes for the CBSC	H		2011	Continuous	O	John Brown*		Workshops planned in 2017 in the CBSC Work Plan.
D1	Provide advice and guidance on the technical aspect of the Law of the Sea	H			Continuous	O	All members of ABLOS through the Chair		

Meetings (Tasks A & E)

Date	Location	Activity
26-28 October 2016	Seoul, Korea	ABLOS 23
9 - 12 October 2017	IHO Sec., Monaco	ABLOS 24 and 9 th ABLOS Conference
2018	Tbd	Tbd

Chair: John BROWN

Email: john.brown@cooley.com

Vice-Chair: Niels ANDERSEN

Email: na@space.dtu.dk

Secretary: David WYATT

Email: adso@iho.int

12. COORDINATION WORK PLAN 2017-18

Tasks

A	As required, establish Working Groups to fulfil the Committee Work Plan, monitor their work and review annually the continuing need for each Working Group previously established by the Committee (HSSC TOR)
B	Support the IHO Secretariat to implement the planning mechanism annually and at the end of each 3-year cycle (including preparation of next session of the IHO Assembly)
C	Provide technical advice and guidance on IHO technical standards (IHO Task 2.1.2)
D	Conduct the 2017 and 2018 meetings of HSSC (IHO Task 2.1.1)

Work items

Work item	Task	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
A2	Monitor and guide the work of the Standards for Hydrographic Surveys Project Team	H	HSSC-9	HSSC-8	?	P		S-44	HSSC8/40. See Annex A.
C1	Consider the relevance of IHO Resolution 2/2007	M		HSSC-7	IHO-A1	P	Gilles Bessero	All, S-4 in particular	See PRO 6 from Republic of Korea and Annex A to PRO9 from IHO Secretariat to IHO-A1 in ACL 10/2016 HSSC8/09

Meetings (Task D)

Date	Location	Activity
June 2016	Paris, France	Inputs to Strategic Plan/ 3-years programme of work
Nov 2016	IHO Sec., Monaco	HSSC-8
Nov 2017	Ottawa, Canada	HSSC-9
May 2018	Rostock, Germany	HSSC-10

HSSC Chair: Mathias JONAS, Germany

HSSC Vice Chair: Mike PRINCE, Australia

HSSC Secretary: Gilles BESSERO, IHO Sec.

HSSC Assistant Secretary: Yves GUILLAM, IHO Sec.

Email: Mathias.Jonas@bsh.de

Email: mike.prince@defence.gov.au

Email: detch@iho.int

Email: adcs@iho.int

Annex A STANDARDS for HYDROGRAPHIC SURVEYS PROJECT TEAM (HS PT) WORK PLAN 2017-18

Tasks

A	Review the existing edition of S-44 (5 th edition) and identify any deficiencies in either the standards or explanatory content.
B	Identify Orders of Surveys (in terms of horizontal and vertical uncertainty requirements, feature detection requirements, and statistical confidence levels), which are required to meet certain user requirements, noting that user requirements include, but are not limited to, the differing levels of CATZOC (S-57) / Quality of Bathymetric Data (S-10X).
C	DEFINE, if and as appropriate, a relationship between survey orders in the IHO S-44 Publication and CAT ZOC used in S-57 ENC and Quality of Bathymetric Data in S-101 ENC.
D	Following review, update the content and structure of S-44 to the extent identified during the review, with the intention of publishing revisions as a sixth edition of S-44.
E	Identify any other emergent requirements not addressed within the scope of tasks A to D, and develop a proposal and recommendations on whether the Hydrographic Survey Project Team should close, continue working on specific tasks, or be migrated to a standing Working Group with an expanded Work plan.
F	On completion of publication of a sixth edition of S-44, submit a proposal and recommendation to HSSC on whether the Project Team should continue as a standing Working Group and, if so, what tasks have been identified to justify transition to a standing Working Group.

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
A.1	Review the existing edition of S-44 (5 th edition) and identify any deficiencies in either the standards or explanatory content.	H	HSSC-9	2016	2017	P	CHAIR		
B!	Identify Orders of Surveys (in terms of horizontal and vertical uncertainty requirements, feature detection requirements, and statistical confidence levels), which are required to meet certain user requirements, noting that user requirements include, but are not limited to, the differing levels of CATZOC (S-57) / Quality of Bathymetric Data (S-10X).	H	HSSC 9	2017	2017	P	Chair / MS		

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
C-1	DEFINE, if and as appropriate, a relationship between survey orders in the IHO S-44 Publication and CAT ZOC used in S-57 ENC and Quality of Bathymetric Data in S-101 ENC.	M	HSSC 9 & 10	2017 2018	2017 2018	P	MS / Experts	S-57	
C-2	DEFINE, if and as appropriate, a relationship between survey orders in the IHO S-44 Publication and S-5 in order to mitigate the human element factor	M	HSSC 9 & 10	2017 2018	2017 2018	P	MS / Experts	S-5	
D.1	Following review, update the content and structure of S-44 to the extent identified during the review, with the intention of publishing revisions as a sixth edition of S-44.	H	HSSC 10	2018	2018	P	MS / Experts / IHO Bodies		

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
E-1	Identify any other emergent requirements not addressed within the scope of tasks A to D, and develop a proposal and recommendations on whether the Hydrographic Survey Project Team should close, continue working on specific tasks, or be migrated to a standing Working Group with an expanded Work plan.	H	HSSC 10	2018	2018	P	Chair / MS		
F-1	On completion of publication of a sixth edition of S-44, submit a proposal and recommendation to HSSC on whether the Project Team should continue as a standing Working Group and, if so, what tasks have been identified to justify transition to a standing Working Group.	H	HSSC 9	2017	2018	P	MS/HSSC Bodies		
G-2	Star the discussion on the way forward.	H	HSSC-10	2018	2018	P	MS/HSSC		

Meetings

Date	Location	Activity

PT Chair:

Email:

PT Vice Chair:

Email: