

## CONSOLIDATED HSSC WORK PLAN 2015-2016

Current Version 12 January 2015

*Notes: a/ This final version of the consolidated work plan (WP) has been compiled from the reports submitted to HSSC, from the decisions/comments made during the HSSC-6 meeting and editorial comments received since HSSC-6 meeting.*

*b/ Quick links:*

<a href="#">§3. S-100WG Work Plan</a>	<a href="#">§4. NIPWG Work Plan</a>	<a href="#">§5. ENCWG Work Plan</a>
<a href="#">§6. DPSWG Work Plan</a>	<a href="#">§7. TWCWG Work Plan</a>	<a href="#">§8. NCWG Work Plan</a>
<a href="#">§9. DQWG Work Plan</a>	<a href="#">§10. IRCC/MSDI Work Plan</a>	<a href="#">§11. HDWG Work Plan</a>
<a href="#">§12. ABL0S Work Plan</a>	<a href="#">§13. S-66 PT Work Plan</a>	<a href="#">§14. COORD Work Plan</a>

### 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 Datums
- Element 2.8 Digital Data Updating
- Element 2.9 Marine Spatial Data Infrastructures
- 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

### 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 Conferences/Assemblies.

### Monitoring:

In accordance with Decision No. 3 of the 5<sup>th</sup> 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."*

### 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 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) 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	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 annual and biennial meetings of relevant HSSC WGs dealing with hydrographic data transfer standards	2013-17	
Task 2.2.2	Maintain and extend the relevant IHO standards, specifications and publications, using contract support assistance as appropriate, including: - S-57 IHO Transfer Standard for Digital Hydrographic Data - S-100 IHO Universal Hydrographic Data Model - 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 - RENC Joint Technical Experts WG	2013-17	Contract support: 15K€ each year
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 relevant HSSC WGs dealing with nautical cartography	2013-17	
Task 2.3.2	Maintain and extend the relevant IHO standards, specifications and publications, using contract support assistance as appropriate, including: <ul style="list-style-type: none"> <li>- S-4 Chart Specifications of the IHO and Regulations for International (INT) Charts <ul style="list-style-type: none"> <li>INT 1 - Symbols, Abbreviations and Terms used on Charts</li> <li>INT 2 - Borders, Graduations, Grids and Linear Scales</li> <li>INT 3 - Use of Symbols and Abbreviations</li> </ul> </li> <li>- S-11 Part A - Guidance for the Preparation and Maintenance of INT Chart schemes</li> <li>- S-11 Part B - Catalogue of INT Charts</li> <li>- S-49 Standardization of Mariners' Routeing Guides</li> <li>- Digital data updating related elements of Appendix 1 to S-52 - Guidance on Updating the Electronic Navigational Chart</li> <li>- S-52 and its accompanying Presentation Library - Specifications for Chart Content and Display Aspects of ECDIS</li> <li>- Portrayal related elements of S-101 - ENC Product Specification and other S-100-based Product Specifications</li> </ul>	2013-17	Contract support: 15K€ each year

### 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 relevant HSSC WGs dealing with data protection and authentication	2013-17	
Task 2.4.2	Maintain and extend the relevant IHO standards, specifications and publications, including: <ul style="list-style-type: none"> <li>- S-63 IHO Data Protection Scheme</li> <li>- Data protection and authentication related elements of S-100 - IHO Universal Hydrographic Data Model and</li> <li>- S-101 - ENC Product Specification</li> </ul>	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 relevant HSSC WG dealing with data quality	2013-17	
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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
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### 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 relevant HSSC WG dealing with nautical publications	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	2013-17	no significant IHO expense anticipated

### Element 2.7 Tides and Datums

**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 relevant HSSC WG dealing with tides and water levels	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 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	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
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### Element 2.9 Marine Spatial Data Infrastructures

**Objective:** To monitor developments related to the hydrographic component of Spatial Data Infrastructures, to develop and maintain the relevant IHO publications, and to provide technical advice as appropriate.

Task 2.9.1	Conduct meetings of relevant HSSC WG dealing with MSDI	2013-17	
Task 2.9.2	Maintain the relevant IHO standards, specifications and publications, including: - C-17 Spatial Data Infrastructures: "The Marine Dimension" - Guidance for Hydrographic Offices	2013-17	no significant IHO expense anticipated
Task 2.9.3	Develop training syllabi for MSDI and associated learning subjects		

### 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 annual meetings of relevant HSSC WG dealing with hydrographic data acquisition and processing (currently S-44WG)	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.

2.13.1	Conduct meetings of relevant HSSC WGs dealing with surface currents	2013-17	
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 2015-16

#### 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 2015 and 2016 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	Develop S-100 Edition 2.0.0	H		2010	2014	C	Barrie Greenslade (UKHO)		

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.2	Investigate a suitable grid referencing system for S-100	L		2010		P	Tony Pharaoh (IHB)		
A.3	Develop a guide book for using S-100 product specifications	M		2010	2014	C	Barrie Greenslade (UKHO)/Julia Powell (NOAA)		
A.4	Develop and maintain S-100 Portrayal Component	H		2006		C	[DIPWG]	S-100 Portrayal Register	
A.5	Develop an S-10X product specification for Auxiliary Informational Layer Integration.	M	See S-100 Edition 2.0.0	2010	2014	C	Julia Powell (NOAA)		
D.1	Review the S-100 Master Plan annually	M	HSSC-7 & 8	2014	Permanent	O	Barrie Greenslade (UKHO)	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-7 & 8	2013	Permanent	O	Julia Powell (NOAA)	S-101	
D.2bis	Develop a template Product Specification for Marine Information Overlays (MIO)	M	HSSC-7	2010	2015	O	Barrie Greenslade (UKHO)		

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	Develop 1 <sup>st</sup> draft of S-101 ENC product specification	H		2006	2015	O	Julia Powell (NOAA)		S-100 WG to consider whether a S-101 Project Team should be established
D.4	Monitor the implementation of the 1 <sup>st</sup> draft of S-101 ENC product specification	H		2015		P			
D.5	Develop an S-100/S-101 Test Strategy and Test Bed	H		2013			Julia Powell (NOAA)		
D.6	Maintenance of S-101 Portrayal Component and Portrayal Catalogue	H						S-101 S-100 Portrayal Register	
D.7	Investigate enhancing the appearance of existing traditional paper chart symbols used in ECDIS by modifying their size, shape and colour.	L						S-52  S-100 Portrayal Register	DIPWG has decided to focus this effort on changes that would be implemented in S-101. If practical, these new symbols may be considered for inclusion in S-52 as well Interaction with NCWG and ENCWG to be considered
D.8	Develop Edition 2.0.0 of S-102 Bathymetric Content Specification.	H	S-102 Published  April 2012	2014	2016	P	Wade Ladner (NAVO)		

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	Monitor the development of other related international standards	M				P			
F.1	Liaise with IHO subsidiary bodies and subordinate organs, e.g. WWNWS-SC, NIPWG, ENCWG, etc.								Establish joint project teams as required
F.2	Liaise with non-IHO constituents, e.g. IALA E-nav Committee, IEHC, JCOMM Expert Teams, DGIWG, ISO, marine navigation and GIS industry, etc.	H		2004	Permanent	O	Barrie Greenslade (UKHO)/Julia Powell (NOAA)		
G.1	Maintain the S-100 section of the IHO website	H		2003	Permanent	O	Jeff Wooton (AHS)		

### Meetings (Task H)

Date	Location	Activity
31 Mar-4 Apr 2014	Sydney, Australia	TSMAD-28 / DIPWG 6
2-6 Feb 2015	Ottawa, Canada	S-100WG-1
2016 (TBD)	TBD	S-100WG-2

Chair: TBD  
Vice Chair: TBD  
Secretary: TBD

Email:  
Email:  
Email:

#### 4. NIPWG WORK PLAN 2015-16

##### 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 2.3.2.7)
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 2015 and 2016 meetings of the NIPWG and its sub-group(s) and project team(s) (IHO Tasks 2.3.1 and 2.6.1)

##### Work items

Work item <sup>1</sup>	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	12/2014	2014	Permanent			S-12	In close liaison with IALA; see J.4

Work item <sup>1</sup>	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	Assess the progress and perspectives of developing specifications for NP data layers in ECDIS and propose the way forward for consideration by HSSC	H							To be considered in the context of the IMO e-navigation strategy implementation plan (subject to the outcome of NCSR 1).  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 SNPWG.
F.2	Investigate the interaction between Marine Protected Area Product and ENC in ECDIS	M		2015	Permanent		Chair/Sec		In close liaison with the S-100 WG (if founded) or TSMAD
F.3	Model the NP data where required.	H		2004	Permanent	O	Chair/Sec		S-100 related. To be included in NPUBS domain of the FCD Register
F.4	Review of objects and attributes	H	12/2014	2004	Permanent	O	Chair/Sec		S-100 related. According to the tasks assigned by HSSC4
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



Work item <sup>1</sup>	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.6	Propose amendments to AtoN domain of the FCD Register	H	08/2014	2014	2014	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								Liaise with WWNWS-Sub committee
F.8.1.1	For Radio Services	H	12/2014	2012	2016	O	Chair/Sec	S-123	
F.8.1.2	For Navigational services	H	12/2014	2013	2016	O	Chair/Sec	S-125	
F.8.1.3	For Traffic management	H	12/2014	2013	2016	O	Chair/Sec	S-127	
F.8.1.3.1	For Marine Protected Areas	H	12/2014	2011	2015	O	Chair/Sec	S-122	Awaiting completion of S-100 Edition 2 and Feature Catalogue Builder
F.8.1.4	For Physical environment	H	12/2014	2013	2016	O	Chair/Sec	S-126	
G.1	Monitor the requirements for and provision of nautical information in e-navigation test-beds  Produce NP1 sample data sets	M							According to the tasks assigned by HSSC4. Collection of information to be modelled

Work item <sup>1</sup>	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
G.1.1	For Radio Services	H	12/2014	2012	2014	O	Chair/Sec	S-123	
G.1.2	For Navigational services	H	12/2014	2012	2015	O	Chair/Sec	S-125	
G.1.3	For Traffic management	H	12/2014	2012	2015	O	Chair/Sec	S-127	Marine Protected Area Part was completed in 2012
G.1.4	For Physical environment	H	12/2014	2013	2015	O	Chair/Sec	S-126	
G.2	Set up a test bed ECDIS	M		-	-	P	Chair/Sec		To be considered in liaison with S-100WG
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	2015*	O	Chair/Sec	S-52	Close co-operation with [DIPWG] required  *end date depends on [DIPWG] schedule

Work item <sup>1</sup>	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
G.3.2	Develop guidelines showing how navigation information received by communications equipment can be displayed in a harmonised way and what equipment functionality is necessary.	M		2015	2019	P		S-52	Draft e-nav IMO Strategy Implementation Plan, Task T13 (HSSC6-07.1A refers).
G.4	Initiate consideration of the architecture of the MSP "hydrographic services"	M		2013		P	Chair NIPWG		To be considered in the context of the IMO e-navigation strategy implementation plan (subject to the outcome of MSC 94)  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					
I.1	Maintain and extend resolutions in M-3 relating to Nautical Publications	M	12/2014	2012	Permanent	O	Chair/Sec NIPWG	M-3	A review is scheduled due to harmonization of M3 information and potential ProdSpecs content
J.0	Liaise with the NCWG				Permanent until step2	O	Chair/Sec NIPWG		Establish joint project teams as required

Work item <sup>1</sup>	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.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
J.2.1	Draft Data Capture and Encoding Guides								Document for NPs similar to Use of the Object Catalogue
J.2.1.1	For Marine Protected Areas	H	12/2014	2011	2015	O	Chair/Sec	S-122	To be harmonized with S-101 DCEG;  Awaiting next S-100 version
J.2.1.2	For Radio Services	M		2015	2015	P	Chair/Sec	S-123	Depends on modelling progress
J.2.3	Draft Product Specification								
J.2.3.1	For Radio Services	H	12/2014	2014	2015	O	Chair/Sec	S-123	
J.2.3.2	For Navigational services	H	12/2014	-	-	P	Chair/Sec	S-125	
J.2.3.3	For Traffic management	H	12/2014	2011	2016	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	12/2014	2011	2015	O	Chair/Sec	S-122	Depends on progress of next S-100 version allowing GML data use
J.2.3.5	For Physical environment	H	12/2014	-	-	P	Chair/Sec	S-126	

Work item <sup>1</sup>	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 IALA e-Nav Committee	H		2013	Permanent	O	Chair/Sec NIPWG		As advised by HSSC4 (in liaison with S-100WG).

#### Meetings (Task K)

Date	Location	Activity
7-11 Apr 2014	Rostock, Germany	SNPWG 17
1-4 Dec 2014	Cadiz, Spain	SNPWG 18
2015 (TBD)	TBD	NIPWG-1
2016 (TBD)	TBD	NIPWG-2

Chair: TBD  
Vice Chair: TBD  
Secretary: TBD

Email:  
Email:  
Email:

## 5. ENCWG WORK PLAN 2015-16

### 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 (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 2015 and 2016 meetings of ENCWG 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
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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	Colby Harmon Tom Mellor	S-52	
B.1	Resolve any problems or errors identified in the current edition of S-57	H		2011		O			
B.2	Study the possibility to encode information features as New Objects (see S-57 supplement) to avoid caution area objects (CNTARE) in some cases, e.g. to encode T&Ps”	M		2014	2015	O	Richard Fowle (IC-ENC)		
C.1	Monitor the implementation of the new edition of S-58 and keep the recommended checks up to date	H		2003		O	Richard Fowle (UKHO)		
C.2	Resolve any problems or errors identified in the current edition of S-58	H		2003	Permanent	O	Richard Fowle (UKHO)		

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 5.0.0 June 2014	2012	2014	C	Richard Fowle (IC-ENC)		
E.1	Resolve any problems or errors identified in the current edition of S-64	H							
E.2	Investigate expanding S-64 to improve its usefulness for both OEMs and type approval authorities	H	Edition 4.0.0	2012	2014	C	Tom Richardson/Tom Mellor (UKHO)		
F.1	Monitor and assess proposals for amending S-65	L			Permanent	O			
H.1	Liaise with the NIPWG	H							



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
I.1	Maintain the ENC production and portrayal sections of the IHO website, and support FAQ and Encoding Bulletins	H		2003	Permanent	O	Jeff Wooton (AHS) Barrie Greenslade Colby Harmon IHB ADCS		Include posting EBs and PBs

#### Meetings (Task J)

Date	Location	Activity
31 Mar-4 Apr 2014	Sydney, Australia	TSMAD-28 & DIPWG-6
2-6 Feb 2015	Ottawa, Canada	ENCWG-1
2016 (TBD)	TBD	ENCWG-2

Chair: TBD  
Vice Chair: TBD  
Secretary: TBD

Email:  
Email:  
Email:

## 6. DPSWG WORK PLAN 2015-16

A	Maintain and extend Publication S-63
B	Provide S-63 technical and operational support to Data Servers and OEMs
C	Develop a more detailed work plan for future standards relating to Data Protection and Security of ENC data
D	Engage stakeholders in drafting of new edition of S-63 to support S-101 development
E	Support transition to latest edition of S-63 (1.1)

### Meetings

Date	Location	Activity
13-15 May 2014	IHB, Monaco	DPSWG-10
2015 (TBD)	TBD	TBD

Chair: Jonathan PRITCHARD

Vice Chair: Robert SANDVIK

Secretary: Tony PHARAOH

Email: jonathan.pritchard@ukho.gov.uk

Email: robert.sandvik@ecc.no

Email: addt@iho.int

## 7. TWCWG WORK PLAN 2015-16

### Tasks

A	Maintain the list of standard tidal constituents (IHO Task 2.7.2.3)
B	Develop and maintain a standard for digital tide tables (IHO Task 2.7.3)
C	Prepare and maintain an inventory of tide gauges used by Member States and publish it on the IHO/TWLWG web site (IHO Task 2.7.2.4)
D	Compare the tidal predictions generated as a result of analysis of a common data set using different analysis software
E	Review feedback of on-line real time water level observation document
F	Develop and maintain a standard for the transmission of real-time tidal data (IHO Task 2.7.4)
G	Develop and maintain a product specification for the transmission of real-time surface current data (S-111 - IHO Task 2.13.3)
H	Develop and maintain a product specification for dynamic application of navigationally significant surface currents in ECDIS (IHO Task 2.13.4)
I	Develop and maintain a product specification for dynamic application of tides in ECDIS (IHO Task 2.7.5)
J	Liaise with industry experts on the development of product specifications for tides and currents (IHO Tasks 2.7.2 and 2.13.2)
K	Liaise with S-100WG on tidal and current matters relevant to ECDIS and GIS applications (IHO Tasks 2.7.4, 2.7.5, 2.13.3 and 2.13.4)
L	Maintain IHO Resolutions in M-3 relating to tides, water levels and currents as required (IHO Tasks 2.7.2.1 and 2.13.2.1)
M	Develop and maintain material for course on tides and tidal streams
N	Conduct the 2015 and 2016 meetings of TWCWG and its sub-group(s) and project team(s) (IHO Tasks 2.7.1 and 2.13.1)

## 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 the list of standard tidal constituents	H	Review current list of published tidal constituents	-	Permanent	O	Chris Jones*		
B.2	Prepare a Standard for Digital Tide Tables	H	Prepare draft Standard	2009	2015	O	Stephen Gill* Chris Jones Zarina Jayaswal		
C.1	Prepare and maintain an inventory of tide gauges 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.
D.1	Compare the tidal predictions generated as a result of analysis of a common data set using different analysis software.	H			Permanent	O	Stephen Gill* All		Select Common data set Analyze using different software Predict common set of tides Compare results
D.2	The study of long term data sets for the determination of global sea level rise.	H			Permanent	O	Stephen Gill* All		
F.1	Develop and maintain a standard for the transmission of real-time tidal data	H		2009	2015	O	Chris Jones* All		Liaise with S-100WG (see K.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
G.1	Develop and maintain a product specification for the transmission of real-time surface current data (S-111)	H	Include section on real-time data in the PS	2014	2017	O	Maltais*, Kammerer		Liaise with S-100WG (see K.1)
			Liaise with TWLWG on standards and methods	2014	2017	O	Hess*, Jan, Pronost		
G.2	Establish formats for the transmission and display of real-time current data	H	Prepare test data sets for transmission	2014	2017	O	Kammerer*, Maltais		
			Test the portrayal of real-time current data	2014	2017		Weaver*, Sullivan, Kammerer		

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	Develop and maintain a product specification for dynamic application of navigationally significant surface currents in ECDIS	H	Develop and review the initial outline of the PS	2013	2014	C	Maltais*, All		Liaise with S-100WG (see K.1)
			Revise initial outline of PS	2013	2015	O	Maltais*, All		
			Develop initial draft of PS that includes portrayal, schema, and encoding	2014	2015	O	Maltais*, Sullivan, Hess, Mong, All		
H.2	Establish formats for the transmission and display of data from historical observations, astronomical predictions, and forecasts of total surface current	M	Prepare test data sets for transmission	2014	2015	O	Kammerer*, Maltais, Pronost, Kuilman, Byun		
			Test the portrayal of surface current vectors	2014	2015	O	Weaver*, Opdyke, Sullivan, Kammerer		

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
I.1	Develop and maintain a product specification for dynamic application of tides in ECDIS	H	Prepare draft Product Specifications (S-1**) for tidal data in S-100.	2010	2015	O	Zarina Jayaswal* Glen Rowe Bill Mitchell Kwang-nam Han		Liaise with S-100WG (see K.1)
		H	Prepare draft portrayal model for tidal data in S-100.	2012	2015	O	Stephen Gill* Bill Mitchell Zarina Jayaswal		S-100, S-102

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.1	Liaise with industry experts on the development of product specifications for tides and currents	M	Contact appropriate product developers	2014	2017	O	All		
			Receive feedback on the specifics of portrayal and data transmission	2014	2017	O	Hess*, Sullivan, Kammerer, Weaver, Opdyke		
			Receive feedback on the specifics of portrayal and data transmission	2014	2017	P	Maltais*, Hess, Weaver, Sullivan, Anderson, All		
			Revise standards according to feasibility	2014	2017	P	Maltais*, Hess, Weaver, Sullivan, Anderson, All		
K.1	Liaise with S-100WG on tidal and current matters relevant to ECDIS applications	H			Permanent	O	Gwenaële Jan Kurt Hess		Establish joint project teams as 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
K.2	Liaise with TSMAD, DIPWG and TWLWG on surface current matters relevant to the Dynamic Application of Surface Currents in ECDIS	H	Prepare and discuss scoping and technical requirements	2013	2015	O	Hess*, All		
			Prepare Product Specification (S111) for surface current data in S-100 for review and acceptance	2014	2016	P	Hess*, All		
L.1	Relevant IHO Resolutions in M-3	H	Keep the Resolutions fit for purpose		Permanent	O			
L.2	S-60 User's Handbook on Datum Transformations involving WGS 84	M			Permanent	O			

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
L.3	Review the various definitions of MSL and their relevance to Hydrographic Offices and review the IHO tidal resolutions to ensure that they are compatible with the requirements of non-tidal areas such as the Baltic Sea.	H	IHO Resolution 3/1919, as amended, approved by HSSC 5. Required reviewed of definitions of MSL and LAT for submission to HDWG	2009	2014	C			IHO Resolution 3/1919 as amended
		H	Review wording of IHO Resolution 3/1919, as amended, in light of revised definitions for MSL and LAT	2014	2015	O			
M.1	Develop and maintain material for course on tides and tidal streams	H	Adapt currently available course material to create a course suitable for delivery in support of CBSC requests.	2013	2015	O	Stephen Gill* Bill Mitchell Ruth Farre		

## Meetings (Task N)

Date	Location	Activity
25-28 Mar 2014	Wollongong, Australia	TWLWG-6
3-5 Jun 2014	Quebec City, Canada	SCWG-2
21-24 Apr + 13-15 May 2015	Silver Spring, US + Tokyo, Japan	TWCWG-1 = TWLWG7 + SCWG3
2016 (TBD)	TBD	TWCWG-2

Chair: Gwénaële Jan

Vice Chair: Christopher Jones

Secretary: David Wyatt

Email: [gwenaele.jan@shom.fr](mailto:gwenaele.jan@shom.fr)

Email: [Christopher.jones@ukho.gov.uk](mailto:Christopher.jones@ukho.gov.uk)

Email: [adso@iho.int](mailto:adso@iho.int)

## 8. NCWG (ex-CSPCWG) WORK PLAN 2015-16

### 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)
F	Maintain and extend Publication S-49 'Recommendations concerning Mariners' Routeing Guides' (IHO Task 2.3.2)
G	Conduct annual meetings of NCWG (IHO Task 2.3.1)

### 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)	Affected Pubs/Standard	Remarks
A.11	Clarify guidance on dredged/maintained areas	M	Responses to WG Ltr 09/14	2011	2015	O	Sec NCWG	S-4, INT1	CSPCWG9 Action 43 CSPCWG10 Action 10. WG Ltr 09/14
A13	Provide guidance on charting maximum authorized draught	M	Responses to WG Ltr 09/14	2012	2015	O	Sec NCWG	S-4, INT1	Draft guidance approved by WG but on hold pending development of symbol, D34 refers. WG Ltr 09/14
A16	Initiate consideration of the „future of the paper chart“	M	Discussion paper by AU / CA / SE NCWG reps	2014		P O	Chair NCWG	tbd	CSPCWG10 Action 36
A17	Provide guidance on charting wind farms under construction at sea	M	Responses to WG Ltr 10/14	2014	2015	O	Sec NCWG	S-4 B-445	CSPCWG10 Action 20 WG Ltr 10/14

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)	Affected Pubs/Standard	Remarks
A18	Provide guidance on charting covered berths	M	Responses to WG Ltr 10/14	2014	2015	O	Sec NCWG	S-4 B-300	CSPCWG10 Action 21 WG Ltr 10/14
A19	Provide additional guidance on charting AIS where on most AtoN in region	M	WG letter with draft specification	2014	2015	O	Sec NCWG	S-4 B-489	CSPCWG10 Action 28
A20	Provide guidance on use of QR codes	M	WG letter with draft specification	2014	2015	O	Sec NCWG	S-4 B-200?	CSPCWG10 Action 38
A21	Provide guidance on adding reminder about T & P NMs on charts	M	WG letter with draft specification	2014	2015	O	Sec NCWG	S-4 B-200?	CSPCWG10 Action 41
A22	Consider standardization issues related with additional information overlay services and provide recommendations as appropriate	H	NCWG-1	2014	2015	P	tbd	S-4 B-170 tbc	HSSC6-05.5 refers
B.3	Develop guidelines for preparation & maintenance of small / medium scale ENC schemes.	H	2 <sup>nd</sup> draft by NSEHWG	2009	2015	O	Vice Chair NCWG	S-11A	Draft by NSEHWG; keep WENDWG engaged
D32.4	Reinstate (simplified) symbol for light vessels	M	CL for MS approval	2012	2015 <sup>3</sup>	O	Sec NCWG	S-4 / B-474, INT1	CSPCWG9 Action 18; CSPCWG10 Action 16
D34	Devise new symbol for 'Maximum authorized draught'	M	Responses to WG Ltr 09/14	2014	2015	P	Sec NCWG	S-4 / B-400	CSPCWG10 Action 12; see also A13. WG Ltr 09/2014
D35	Dangerous cargo berth	M	Responses to WG Ltr 10/14	2014	2015	P	Sec NCWG	S4 / B-300	CSPCWG10 Action 18 WG Ltr 10/2014

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)	Affected Pubs/Standard	Remarks
E.1	Maintain official INT 1s		Planning for next editions by INT1 sub-WG (following Cadiz meeting July 2013)	2013	2015?	O	DE: S Spohn FR: S Guillou ES: A Guitart	INT 1	English version 2011 (Ed 7) French version 2012 (Ed 5) Spanish version 2011 (Ed 4)
E.4	Symbols for vacant entries in INT 1	L		2014		P	Sec NCWG	INT 1, S-4 part B	Consider subsuming into E8 Not subsumed
E8	Reorganize INT1 to exclude composite symbols	L	<del>Next round of NEs of INT1? Discuss at WG10 (11.2)</del>	2013	2015?	⊖ P	INT1 sub-WG	INT1	Not to be progressed at present; use CSPCWG10-11.2A when progressed.
E9	Develop new section V for INT1 for 'data quality'	M	Draft to WG	2014	2016	O	Chair NCWG	INT1	CSPCWG10 Action 35

### Meetings (Task G)

Date	Location	Activity
21-24 Jan 2014	Wellington, New Zealand	CSPCWG 10
28-30 April 2015	Rostock, Germany	NCWG-1 (CSPCWG 11)

Chairman: Peter Jones (UK) until 31/03/14

Email: [peter.jones@ukho.gov.uk](mailto:peter.jones@ukho.gov.uk)

Chairman: Jeff Wootton (AU) from 01/04/14

Email: [jeff.wootton@defence.gov.au](mailto:jeff.wootton@defence.gov.au)

Vice Chairman: Jeff Wootton (AU) until 31/03/14

Email: [jeff.wootton@defence.gov.au](mailto:jeff.wootton@defence.gov.au)

Vice Chairman: Chris Thorne (UK) from 01/04/14

Email: [chris.thorne@ukho.gov.uk](mailto:chris.thorne@ukho.gov.uk)

Vice Chairman: Nick Webb (UK) from 01/09/14

Secretary: Andrew Heath-Coleman (UK)

Email: [nick.webb@ukho.gov.uk](mailto:nick.webb@ukho.gov.uk)

Email: [andrew.coleman@ukho.gov.uk](mailto:andrew.coleman@ukho.gov.uk)

## 9. DQWG WORK PLAN 2015-16

### 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

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 / Standards	Remarks
A.1	Review ISO 19113, 19114, 19115 and 19157 and make recommendations for inclusion in S-100	M		2010	Permanent	O	NCWG	S-100	Ongoing task to keep S-100 data quality in line with ISO standards.
B.4	Develop the hierarchy approach by formalizing the hierarchy and the algorithm that drive the display	H	HSSC-7	2013	2015	O	Mike Prince	S-101	To be finalized for submission to HSSC-7.



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 / Standards	Remarks
C.4	Investigate possible methods for how to educate practicing mariners on data quality issues.	H	DQWG9		Permanent	O	DQWG		Investigate in liaison with training institutions the adequacy of existing HOs' documentation on the quality aspects of the practical use of ENC's. IHO CL 51/2013 issued on this topic. To include the recommendations of HSSC5-INF4, interface with IMO/HTW (Action HSSC5/45 refers).
E.1	Develop logic for indicators in current and proposed approaches.	H	DQWG9	2010	2014	O	Mike Prince	-	To be completed for submission to TSMAD29 ?.
E.2	Demonstrate methods to mariners.	H	Follows S-100 demonstrator	2012	2014	O	DQWG	S-101	Build possible methods into ENC and ECDIS to demonstrate effectiveness.
E.3	Demonstrate methods to mariners	H	Follows E.1	2014	2015	P	C Howlett		Consider using the Singapore Strait Marine Electronic Highways (MEH) project as a test case (Action HSSC5/47 refers).
F.1	Investigate areas of quality concern (other than survey / bathymetry)	M	DQWG9	2010	Permanent	O	Eivind Mong	-	SNPWG has responded, liaison is ongoing.
H.1	Establish contact with other working groups to investigate scope of data quality items for the S-10x standards (e.g. TSMAD for S-102)	M		-	-	P			To specifically seek contact and collaboration with the TWLWG to include data quality elements into dynamic tide / water levels (Action HSSC5/46 refers).

#### Meetings (Task I)

Date	Location	Activity
25-27 Mar 2014	Wollongong, Australia	DQWG 8
5-7 Nov 2014	Poole, UK	DQWG 9

7-9 July 2015	Brest, France	DQWG 10
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Chair: Chris HOWLETT, UK

Vice-Chair: Antti CASTREN, Finland

Secretary: Eivind MONG, Jeppesen

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## 10. MSDIWG WORK PLAN 2015-16

### Tasks

A	Identify and promote national and regional best practices: - for land-sea integration - for cross-border integration
B	Review the appropriateness of existing standards for the provision of the maritime components of spatial data infrastructures
C	Develop content for an MSDI training course
D	Maintain MSDI reference documentation on the IHO website
E	Maintain and extend Publication IHO MSDI C-17 (IHO Task 2.9.2 refers)
F	Conduct annual meetings of MSDIWG, arranged back to back with 1-day MSDI Open Forum (IHO Task 2.9.1 refers)
G	Ensure that MSDI is a standing agenda item for RHCs' meetings (IHO Res 2/1997, as amended, refers)

### Work items

Ref	Task	Activities	Priority H-high M-med L-low	Actions	Start Date	End Date	Status P-planned O-ongoing C-completed	Responsible / contact person(s)	Related Pubs / Standard	Remarks
A	Identify and promote national and regional best practices:	To consider the impact of the UN- GGIM initiative, taking into account the items identified in paragraph 11 of HSSC5-05.7B	H	Land-sea integration  Cross-border integration	Mar 2014	2016	P	GeoSci (Aus), DK, FR, JP, SP, US	GGIM -3. UNITED NATIONS E/C.20/2013 /10/Add.1	<a href="http://ggim.un.org/ggim_committee.html">http://ggim.un.org/ggim_committee.html</a>

Ref	Task	Activities	Priority H-high M-med L-low	Actions	Start Date	End Date	Status P-planned O-ongoing C-completed	Responsible / contact person(s)	Related Pubs / Standard	Remarks
A.1		Create relevant use cases, from potential users of MSDI	H	1.1. Provide examples of generic providers of relevant data  1.2 Provide examples about user requirements	Jun 2014	Feb 2015	P	GeoSci (Aus), DK, FR, JP, SP, US		Report to MSDIWG-6
A.2		Set up a survey to establish current position in respect of benefits and challenges faced by MS's role in NSDI and/ or MSDI	M	2.1. Prepare questionnaire to investigate challenges and benefits in relation to MSDI 2.2. Circulate questionnaire to MS 2.3 Analyse results and use to update C-17 and on-line resources (Ref: Task D)	Apr 2014  May 2014 July 2014	May 2015 June 2015 Aug 2015	P	GeoSci (Aus), DK, FR, JP, SP, US		Report to HSSC-6. Nov 2014
A.3		Monitor and report on national, regional and international MSDI activities and report to enable increased visibility of hydrographic importance	H	3.1 Identify relevant initiatives  3.2 Engage with relevant initiatives	Apr 2014	Feb 2018	O	GeoSci (Aus), DK, FR, JP, SP, US		Report to MSDIWG-6

Ref	Task	Activities	Priority H-high M-med L-low	Actions	Start Date	End Date	Status P-planned O-ongoing C-completed	Responsible / contact person(s)	Related Pubs / Standard	Remarks
B/B.1	Review the appropriateness of existing standards for the provision of the maritime components of spatial data infrastructures	Liaise with TSMAD regarding level of S-100 understanding and use in support of SDI activities (e.g. INSPIRE)	H	B.1.1 Identify new S-1XX data specifications for datasets in MSDI  B.1.2 Determine and log any issues of concern in WG regarding new standards and obtain feedback from TSMAD on them	Feb 2014  Feb 2014	Feb 2018	O	NL, NO, UK Caris,Envitia,	INSPIRE, Draft EC Directive on MSP and ICM	Report to MSDIWG-6
C	Develop content for MSDI training course(s)		H		Mar 2014	Jan 2018	O	Esri, USA, OceanWise		Report to MSDIWG-6
C.1	Identify the need for education and training among the Member States and report to WG Chair C.1.1 Develop and deliver training and education events as required C.1.2 Investigate the possibilities to arrange an IHO INSPIRE Workshop with EC-JRC	Determine which HOs in Europe (via Poll) are interested to have training involving EC-JRC (INSPIRE) & DG MARE (MSP Directive) <ul style="list-style-type: none"><li>Harness the relationship between IHO and JRC</li><li>Gain greater working understanding/knowledge of EC INSPIRE and Marine Data Governance</li></ul>	H	Prepare a short paper and questionnaire for IHB to send out to the EC MS. Assuming positive response, produce a programme 1.5 day workshop arranged by IHB	Mar 2014  Mar 2014	Feb 2015  July 2014	O  O			

Ref	Task	Activities	Priority H-high M-med L-low	Actions	Start Date	End Date	Status P-planned O-ongoing C-completed	Responsible / contact person(s)	Related Pubs / Standard	Remarks
C.2	Establish a MSDI training syllabus for use across IHO community aimed at: Senior Managers (i.e. Directors, Hydrographers, HR Managers); Practitioners (i.e. Hydrographic Surveyors, Cartographers, Oceanographers, IT specialists)	C.2.1 Develop topic areas (vice syllabus) for various levels:	H	<ul style="list-style-type: none"> <li>• Senior Managers (1 day)</li> <li>• Middle Managers (2 day)</li> <li>• Tech Staff (5 day)</li> </ul>	Mar 2014	Oct 2014	O	Esri, USA, OceanWise	IHO Pub: C-17	
		C.2.2 Prepare proposal for IHB on Website On-line training resource capability	M	To include provision of training opportunities, short training sessions, links with on-line resources, case studies, technical reports)	May 2014	Aug 2014	O	Esri, USA, OceanWise		
		C.2.3 Provide input to IHB for the design and development of the Website for virtual training	M	Link to Task D.1.3	Oct 2014	Feb 2015	P	Esri, USA, OceanWise		
D/D.1	Maintain MSDI reference documentation on the IHO website	D.1.1 Prepare a proposal to MSDIWG on re-structuring the MSDIWG page on the IHO website.	H	Deliver to MSDIWG6	June 2014	Feb 2015	P	Esri,IHB,DK		
		D.1.2 Request relevant MSDI information from IHO Member States.	H	CL sending questionnaire	Oct 2013	Feb 2015	P			
		D.1.3 Collect education information relating to MSDI, in coordination with sub-group C.	M	On Completion of task C.2.	Oct 2014	Feb 2015	P			

Ref	Task	Activities	Priority H-high M-med L-low	Actions	Start Date	End Date	Status P-planned O-ongoing C-completed	Responsible / contact person(s)	Related Pubs / Standard	Remarks
E	Maintain and extend Publication IHO MSDI C-17 (IHO Task 2.9.2 refers)		H		Mar 2014	Oct 2015	P	GeoSci (Aus), USA, FR, NL, RO	CBSC MSDI Syllabus, INSPIRE, OGC, ISO, IHO, RHC reports, MSDIWG MS inputs	
E.1	Conduct a review of MSDI that includes conceptual descriptions of the four sub-areas of MSDI as	E.1.1 Technical issues E.1.2 Governance E.1.3 Standards and specifications E.1.4 Content (data)	H	Review C-17 for updating/restructuring/additions/modernizing <ul style="list-style-type: none"> <li>• Alignment with OGC</li> <li>• Provide changes as a result of the MS survey in Task A</li> <li>• Update information</li> <li>• Provide case studies – see Task A</li> <li>• Best practice guidelines defined – see Task A</li> <li>• Define publishing mechanism for sharing data</li> </ul> <p>Ref Task A: Assist with questionnaire development for MS survey based on the review of C-17</p> <p>Ref Task A: Update C-17 Annex A, SDI References (consider using survey to assist in update)</p>	Mar 2014	Feb 2015	P			Discuss and review survey results at MSDIWG6 to determine next steps

Ref	Task	Activities	Priority H-high M-med L-low	Actions	Start Date	End Date	Status P-planned O-ongoing C-completed	Responsible / contact person(s)	Related Pubs / Standard	Remarks
E.2	Monitor technical developments in relation to MSDI	E.2.1.Review GGIM and OGC Oil Spill Results for relevance to C-17  E.2.2 Chair to request WG Members to notify twice yearly about developments that have occurred or are coming that may affect MSDI and/or C-17	H	Define the scope of the work related to interoperability  Monitor developments  Provide status report to MSDIWG including recommendations on how to proceed  Standing WG Agenda item	Jun 2014	Feb 2018	P	GeoSci (Aust), USA, FR, NL, RO	TSMAD	
E.3	Determine hydrographic data set(s) that should be included in MSDI	E.3.1 Prepare MS survey questionnaire based on WG responses (Top 10 list), requesting MS to prioritize and add any new ones  E.3.2 Publish priority list of top data layers on IHO Website	H	Prioritize data layers by usefulness to non-navigational sectors  Identify priority order of importance (High, medium, low)  Identify "core" reference datasets for MSDI  Establish top 10 list  Define publishing mechanism for sharing data	Mar 2014	Feb 2015	P	Geo-Sci (Aus), USA, FR, NL, RO		



Ref	Task	Activities	Priority H-high M-med L-low	Actions	Start Date	End Date	Status P-planned O-ongoing C-completed	Responsible / contact person(s)	Related Pubs / Standard	Remarks
F	Conduct annual meetings of MSDIWG, arranged back to back with 1-day MSDI Open Forum (IHO Task 2.9.1 refers)				Sept 2013	Feb 2018	O	UK, Esri, OceanWise, IHB		
F.1	Organise Open Forum and MSDIWG6	F.1.1 Identify HO to host WG6 and Open Forum	H	Confirm venue, dates and agenda, logistics	Mar-2014	June-2014	⊖			UKHO to host
		F.1.2 Form task team to develop content for Open Forum 2015	H	Plan programme and topic areas, Invite speakers and stakeholders	July 2014	Sept 2014	O			
		F.1.3 Arrange MSDIWG Agenda, Workshop programme and task group topics	H	Review Action Plan and report Develop agenda and circulate	Sept 2014 Nov 2014	Oct 2014 Nov 2014	O O	Chair, Vice-Chair and Secretary		

Ref	Task	Activities	Priority H-high M-med L-low	Actions	Start Date	End Date	Status P-planned O-ongoing C-completed	Responsible / contact person(s)	Related Pubs / Standard	Remarks
G	Ensure that MSDI is a standing agenda item for RHCs' meetings (IHO Res 2/1997 as amended)		H		Feb 2014	Feb 2018	O	UKHO, Esri OceanWise		HSSC, IRCC, CBSC
G.1	Provide position paper to IRCC 2014 on MSDI and its importance to IHO	G.1.1.First draft for circulation	H	Circulated to HSSC Chair for comment by end March	Mar 2014	March 2014	C			
		G.1.2 Include comments and prepare final version	H	Submit to IRCC secretary	Apr 2014	Apr 2014	C			
		G.1.3 Present to IRCC 2014 on the value and benefit to be derived by HO from MSDI	H	Aim is to reinforce the need for all RHC's to place MSDI as a standing agenda item	May 2014	May 2014	C		Hydro Int Feb 2014 article by M. Bergmann	
		G.1.4 Provide a discussion paper on the role of HO's in the provision of e-navigation services	H	Reinforcement of importance of MSDI as an enabler to e-Navigation services	Mar 2014	Apr 2014	O			
G.2	Coordinate and collate all MSDI inputs and actions from RHC's to MSDIWG	G.2.1. MSDIWG to appoint a coordinator to collate MSDI status reports from RHC's	H	Coordinator appointed	June 2014	May 2018	P			
		G.2.2.Coordinator to ensure status reports feed into MSDIWG review of current practise	H	All reports delivered and collated as inputs to MSDIWG Action Plan	April 2014	2018	P			

### Meetings (Task F)

Date	Location	Activity
4-7 Feb 2014	Silver Spring, Ma, USA	MSDI Open Forum + MSDIWG 5

4-6 Mar. 2015	London, UK	MSDI Open Forum + MSDIWG 6
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Vice-chair: Ellen VOS, Netherlands

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## 11. HDWG WORK PLAN 2015-16

### Tasks

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

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) * indicates leader	Related Pubs / Standard	Remarks
A.2	Review all terms currently included in S-32 for their relevance in accordance with the S-32 Business Rules and propose which definitions should be removed from S-32	M	a. Terms a – d b. Terms e – l c. Terms m – r d. Terms s – z	2012 2012 2013 2013	2015 2015 2016 2016	P P P P	All	S-32	
A.3	Review the approved definitions of Altitude, Elevation and Height	H		2012	2014	O		S-32	Alternative definitions to be submitted by HDWG to TSMAD27 (Dec 2013) and CSPCWG10 (Jan 2014) before endorsement

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) * indicates leader	Related Pubs / Standard	Remarks
B.8	TWLWG - Mean sea level	H	HSSC6	2011	2014	C	All	S-32, IHO Resolution 3/1919	See Annex C of HSSC6-05.9A.
B.12	UKHO - Bathymetry	M	HSSC6	2012	2014	P	All	S-32	
B.13	TWLWG	H	Water Level Station	2014	2014	C	All	S-32, IHO Resolution 3/1919	See Annex C of HSSC6-05.9A.

### Meetings (IHO WP task 3.1.8)

No meetings have taken place. At HSSC5, the HSSC confirmed the need for a face to face meeting and invited the WG to act accordingly. Tbc in 2015.

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## 12. ABLOS WORK PLAN 2015-16

### Tasks

A	Organise the 8 <sup>th</sup> ABLOS Conference in 2015 (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)
E	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)
F	Organise and prepare the annual business meetings of ABLOS (IHO Task 2.12.1)

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
A.1	Organise 8 <sup>th</sup> ABLOS Conference	H	Begin advertising	2013	2015	0	All members of ABLOS through Niels Andersen*	N/A	
			Identify key note speaker	2013		0			
			Attract presentation abstracts	2014	2015	0			
B.1	Prepare draft 6th Edition of C-51 (TALOS Manual) for adoption by Member States	M		2013	2016	P	Chris Carleton*	IHO Publication C-51	
		H	Generate draft new structure for chapter 3	2014	2015	O			
		H	Review contents of chapters and identify areas requiring revision	2014	2015	O			
C.1	Deliver standard training programmes for the CBSC	H		2011	Continuous	O	John Brown*		Workshops planned in 2015 in the CBSC Work Plan.

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
E.1	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 & F)

Date	Location	Activity
21 – 23 Oct 2014	Copenhagen, Denmark	ABLOS 21
19 & 23 Oct 2015	IHB, Monaco	ABLOS 22 and 8 <sup>th</sup> ABLOS Conference
Oct 2016	Korea (venue tbc)	ABLOS 23

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13. S-66 PROJECT TEAM WORK PLAN 2015-16

**Tasks**

A	Revise IHO Publication S-66 – “ <i>Facts about electronic charts and carriage requirements</i> ”.
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*Draft in preparation*



## 14. COORDINATION WORK PLAN 2015-16

### 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	Provide technical advice and guidance on IHO technical standards (IHO Task 2.1.2)
C	Conduct the 2015 and 2016 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

### Meetings (Task C)

Date	Location	Activity
5-8 Nov 2013	Shanghai, China	HSSC-5
11-14 Nov 2014	Valparaiso, Chile	HSSC-6
Nov 2015 (TBD)	Busan, Republic of Korea	HSSC-7
Nov 2016 (TBD)	IHB, Monaco	HSSC-8
Nov 2017 (TBD)	TBD, Canada	HSSC-9

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