HSSC5-10A rev1 (draft)

DRAFT HSSC WORK PLAN 2014-2015

October 2013

<u>Note</u>: This draft WP has been compiled from the WG reports to HSSC-5, plus the ABLOS report. Decisions from HSSC-5 will be taken into account when compiling a consolidated WP 2014-2015. Changes to the previous edition (HSSC Work Plan 2013-2014) are highlighted in track change mode.

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

Revisions:

Chairs of each working group, along with the HSSC Chair, will meet prior to each HSSC meeting to review progress, and to harmonize the work plan.

Approval:

Once revised, the work plan will be approved by the HSSC plenary at each annual meeting. WG Chairs will present an updated WP on the last day of HSSC meetings, incorporating the agreed changes discussed during that meeting. Completed work items should be removed from WPs after they have been reported at a subsequent HSSC meeting. A revised consolidated HSSC Work Plan (WP) incorporating all approved additional WP 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.

Project Numbering:

Each task will be given a sequential number independent of related working group. 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 WG 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 programme 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 program?
 - 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 programme 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 programs raised by WG Chairs 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 Working Group Chairs. 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) 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 2013-17 standards, specification and publications

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 2013-17 WGs dealing with hydrographic data transfer standards

| 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 | 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 annual 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: - 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 - S-49 Standardization of Mariners' Routeing Guides - Digital data updating related elements of Appendix 1 to S-52 - Guidance on Updating the Electronic | 2013-17 | Contract support: 15K€ each year |
| | | | |

Navigational Chart

- S-52 and its accompanying Presentation Library -Specifications for Chart Content and Display Aspects of ECDIS
- Portrayal related elements of S-101 ENC Product Specification and other S-100-based Product Specifications

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 annual meetings of relevant HSSC WG dealing | 2013-17 |
|------------|---|---------|
| | with digital data protection and authentication | |

| Task 2.4.2 | Maintain and extend the relevant IHO standards, | 2013-17 | no significant IHO |
|------------|---|---------|---------------------|
| | specifications and publications, including: | | expense anticipated |

- 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

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 annual meetings of relevant HSSC WG dealing with data quality | 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 annual meetings of relevant HSSC WG dealing | 2013-17 | |
|------------|---|---------|--------------------|
| | with nautical publications | | |
| Task 2.6.2 | Develop, maintain and extend S-10n - Nautical Information | 2013-17 | no significant IHO |
| | Product Specification | e | xpense anticipated |

- Task 2.6.3 Maintain and extend the relevant IHO standards, specifications and publications, including:
- 2013-17 no significant IHO expense anticipated
- IHO Resolutions in M-3 relating to Nautical Publications
- S-12 Standardization of List of Lights and Fog Signals

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 annual meetings of relevant HSSC WG dealing with tides and datums | 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 | 2013-17 | no significant IHO expense anticipated |
| | involving WGS 84 - Standard Tidal Constituent List and Inventory of Tide Gauges used by Member States | | |
| 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, | 2013-17 | no significant IHO |
|------------|---|---------|---------------------|
| | specifications and publications, including: | | expense anticipated |
| | - Digital data updating related elements of S-65 - ENC | | |
| | Production Guidance | | |
| | - S-52 Appendix 1 - Guidance on Updating the Electronic | | |
| | Navigational Chart | | |
| | | | |

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 annual 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 |

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 when WG required | 2013-17 | no meetings planned at present |
|-------------|---|---------|--------------------------------|
| 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 20 | 013-17 | no significant IHO |
|-------------|---|--------|---------------------|
| | English, French and Spanish | | expense anticipated |
| Task 2.11.2 | Develop the Spanish language Wiki version of S-32 with 20 | 013-14 | contract support: |
| | commercial 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 | Organise and prepare ABLOS annual business meetings | 2013-17 | |
|-------------|---|---------|---------------------|
| Task 2.12.2 | Organise and prepare the biennial ABLOS Conferences | 2014-16 | self-funding |
| Task 2.12.3 | Contribute to the revision of IHO publication C-51- TALOS | 2013-17 | no significant IHO |
| | Manual | | expense anticipated |

3. TSMAD WORK PLAN 2014-15

3.1 TSMAD Tasks

| Α | Maintain and extend S-100 "IHO Universal Hydrographic Data Model" (IHO Task 2.2.2 refers) and related projects: |
|---|---|
| | 1. S-99 "Operational Procedures for the Organization and Management of the S-100 Geospatial Information Registry" (IHO Task 2.2.2 refers) |
| | 2. S-101 "ENC Product Specification" (IHO Task 2.2.2 refers) |
| | 3.2. S-102 "Bathymetric Surface Product Specification" (IHO Task 2.2.2 refers) |
| В | Maintain and extend-S-58 Recommended ENC validation checks (IHO Task 2.2.2 refers) |
| С | Support FAQ and encoding bulletin sections of IHO web site up to date (IHO Task 2.2.2 refers) |
| D | Maintain and extend-S-64 IHO Test Data Sets for ECDIS (IHO Task 2.2.2 refers) |
| Е | Maintain and extend-S-57 IHO Transfer Standard for Digital Hydrographic Data (IHO Task 2.2.2 refers) |
| F | Maintain and extend-S-65 ENCs: Production, Maintenance and Distribution Guidance (IHO Task 2.2.2 refers) |
| G | Maintain and extend S-61 Product Specification for Raster Navigational Charts (IHO Task 2.2.2 refers) |
| Ħ | Develop and maintain as-yet undefined S-100-based Product Specifications (IHO Task 2.2.3 refers) |
| 1 | Maintain and extend S-100 registry (IHO Task 2.2.4 refers) |
| Ą | Provide outreach and technical assistance regarding transfer standards (IHO Task 2.2.5 refers) |
| K | Conduct the 2013 and 2014 meetings of TSMAD and its sub-group(s) (IHO Task 2.2.1 refers) |

| Task | Work item | Priority H-high M-medium L-low | Next milestone | Start Date | Date | Status P-planned O-ongoing C-completed | Contact Person(s) | Related Pubs / Standard | Remarks |
|----------|--|---|-----------------------------|---------------|----------------------|---|-----------------------------|----------------------------|---------|
| <u>A</u> | <u>S-100</u> | <u>H</u> | S-100 Published Apr 2010 | <u>2001</u> | <u>2010</u> | <u>C</u> | Barrie Greenslade (UKHO) | | |
| A.1 | Develop a template Product Specification for Marine Information Overlays (MIO) | M | | 2010 | 2015 | 0 | Barrie Greenslade (UKHO) | | |
| A.2 | Develop 4st draft of S-101 ENC product specification | M | | 2006 | 2013 <u>20</u> 14 | 0 | Julia Powell (NOAA) | | |
| A.3 | Conduct an S-101 Impact Study | Н | | 2012 | 2013 <u>20</u> 12 | <u>⊖C</u> | Laurent Louvart (SHOM) | | |

| 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) | Related Pubs / Standard | Remarks |
|-------------|---|---|-------------------------------|---------------|-----------------|---|---|----------------------------|--|
| A.4 | Investigate a suitable grid referencing system for S-100 | L | | 2010 | ???? | 0 | Tony Pharaoh (IHB) | | Work item to be reconsidered at TSMAD 25. |
| <u>A.5</u> | Investigate expanding S-64 to improve its usefulness for both OEMs and type approval authorities | <u>M</u> | | 2012 | 2013 | <u>O</u> | Tom Richardson (UKHO) | | |
| <u>A.6</u> | 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. | <u>M</u> | | 2012 | 2013 | <u>C</u> | Richard Fowle(UKHO) Tom Richardson (UKHO) | | |
| <u>A.7</u> | Develop S-100 Bathymetric Content Specification. | <u>H</u> | S-102 Published April 2012 | <u>2001</u> | 2012 | <u>C</u> | Wade Ladner (NAVO) | | |
| A.8 | Develop S-100 Portrayal Component | Н | | 2006 | 2013 | 0 | DIPWG | | |
| A.9 | Develop an S-10X product specification for Auxiliary Informational Layer Integration. | М | 1st Draft 2010 | 2010 | ???? | <u> </u> | Lynn Patterson (CHS) | | 1st Draft 2010. End date to be discussed at TSMAD 25. |
| A.10 | Liaise with Non-IHO Constituents, e.g. Inland ECDIS, Marine Navigation Industry, DGIWG, AML, WMO Ice, and GIS Industry. | Н | | 2004 | - | 0 | | | |
| <u>A.11</u> | 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" | <u>M</u> | | | | <u>O</u> | | | |
| A.12 | Produce a readmap guiding the implementation of S-101 | Ħ | | 2012 | 2013 | P | | | |

| 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) | Related Pubs / Standard | Remarks |
|----------------|---|--------------------------------|----------------|-----------------|-------------|---|--|----------------------------|---|
| B.1 | Keep S-58 Recommended Validation Checks up to date | Н | | 2003 | - | 0 | Richard Fowle (UKHO)Guy Uguen (SHOM) | | |
| B.2 | 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. | M | | 2012 | 2013 | Đ | Guy Uguen (SHOM) Tom Richardson (UKHO) | | Former task A.6. |
| C.1 | Support FAQ and Encoding Bulletins | Н | | 2003 | - | 0 | Jeff Wooton (AHS) | | Includes the development of an Encoding Bulletin that describes how to encode Virtual AIS Aids to Navigation in ENCs. |
| D.1 | Keep S-64 IHO Test Data Sets for ECDIS up to date | H | | 2003 | - | Ð | Barrie Greenslade (UKHO) | | |
| D.2 | Investigate expanding S 64 to improve its usefulness for both OEMs and type approval authorities | M | | 2012 | 2013 | θ | Tom Richardson (UKHO) | | Former task A 5. |
| E.1 | 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 | | | | 0 | | | Former task A.11. |

3.2 TSMAD Meetings (Task K)

| Date | Location | Activity |
|--------------------|-------------------------|--------------|
| 29 Sep - 3 Oct 03 | Wollongong, Australia | 10th Meeting |
| 11-12 November 04 | IHB, Monaco | 11th Meeting |
| 10-11 November 05 | Wollongong, Australia | 12th Meeting |
| 18-22 September 06 | Wellington, New Zealand | 13th Meeting |

| 4-8 June 07 | <u>UKHO, Taunton</u> | 14th Meeting |
|-------------------|-------------------------|--------------|
| 14-18 January 08 | IHB, Monaco | 15th Meeting |
| 5-9 May 08 | Cape Town, South Africa | 16th Meeting |
| 8-12 September 08 | Seattle, USA | 17th Meeting |
| 4-8 May 09 | Ottawa, Canada | 18th Meeting |
| 26-30 Oct 09 | Sydney, Australia | 19th Meeting |
| 3-7 May 10 | Rostock, Germany | 20th Meeting |
| 29 Nov-3 Dec 10 | Victoria, Canada | 21st Meeting |
| 16-20 Jan 2012 | Wellington, New Zealand | TSMAD 23 |
| 7-11 May 2012 | Monaco | TSMAD 24 |
| 15-18 Jan 2013 | Tokyo, Japan | TSMAD 25 |
| 10-14 Jun 2013 | Silver Spring, MD, USA | TSMAD 26 |
| 2-6 Dec 2013 | IHB, Monaco | TSMAD 27 |
| 31 Mar-4 Apr 2014 | Sydney, Australia | TSMAD 28 |
| • | | |

TSMAD S-100 Sub-WG

| <u>Date</u> | Location | <u>Activity</u> |
|--------------------|-------------------------|-------------------------|
| 25-29 April 05 | Univ. of NH, USA | 1st Meeting |
| 7-9 November 05 | Wollongong, Australia | 2 nd Meeting |
| 15-19 May 06 | Brest, France | 3rd Meeting |
| 18-22 September 06 | Wellington, New Zealand | 4th Meeting |
| 27-1 December 06 | Silver Spring, USA | 5th Meeting |
| 23-27 April 07 | Ottawa, Canada | 6th Meeting |
| 17-21 September 07 | Hamburg, Germany | 7 th Meeting |
| 2-4 September | Taunton, UK | 8th Meeting |

Chair: Barrie GREENSLADE, UK

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Email: anthony.pharaoh@iho.int Vice Chair: Julia POWELL, USA Secretary: Anthony PHARAOH, IHB

4. DIPWG WORK PLAN 2014-15

4.1 DIPWG Tasks

| Α | Maintain and extend S-52 "Specifications for Chart Content and Display Aspects of ECDIS" and its associated "Presentation Library" (IHO Task 2.3.2 refers) |
|---|--|
| В | Contribute to IEC TC80/WG13 symbol harmonizing work (IHO Task 2.3.2 refers) |
| С | Monitor Relevant International Standards (New Task) (IHO Task 2.3.2 refers) |
| D | Introduce new website based recommendation service for good application practice of S-52 (IHO Task 2.3.2 refers) |
| Е | Contribute to harmonised rules for ENC loading strategy, use of SCAMIN and overscale indication (IHO Task 2.3.2 refers) |
| F | Assess the impact of other IHO standards on S-52 C&S regulations (IHO Task 2.3.2 refers) |
| G | Improving ENC Consistency/Loading strategies (IHO Task 2.3.2 refers) |
| Н | Harmonisation of pick report presentation (IHO Task 2.3.2 refers) |
| J | Harmonisation with CSPCWG (IHO Task 2.3.2 refers) |
| K | Maintain the DIPWG bulletin and FAQ section on the IHO website (IHO Task 2.3.2 refers) |
| L | Investigate enhancing the appearance of existing traditional paper chart symbols used in ECDIS by modifying their size, shape and colour (IHO Task 2.3.2 refers) |
| М | Provide technical assistance on Portrayal for S-10x related product specifications (IHO Task 2.3.2 refers) |
| N | Conduct the 2013 and 2014 meetings of DIPWG (IHO Task 2.3.1 refers) |

| Task | Work Item | Priority H-high M-med L-low | Next mile- stone | Start Date | End Date | Status P-planned O-ongoing C-completed | Contact Person | Related Pubs / Standard | Remarks |
|------|---|-----------------------------|------------------------|-----------------|-------------|--|----------------------------|-------------------------------|--|
| A.1 | Resolve any problems or errors identified in S-52 and its Presentation Library as appropriate | Н | | 2009 | - | 0 | Colby Harmon Tom Mellor | S-52 | Continuing Work Item This addresses the routine maintenance of S-52. |
| A.4 | Issue Maintenance Document No. 9 of S-52. | M | | 2011 | | P | Colby Harmon | S 52 | DIPWG intends using Maintenance Document 9 to promulgate an optional deferred amendment for the standardization of pick reports, which may take manufacturers awhile to develop and implement. |

| Task | Work Item | Priority H-high M-med L-low | Next mile- stone | Start Date | End Date | Status P-planned O-ongoing C-completed | Contact Person | Related Pubs / Standard | Remarks |
|------|--|-----------------------------|------------------------|-----------------|------------------|--|--|---|---|
| A.5 | Develop new Presentation Library Version 3.5 and coordinate with TSMAD for appropriate changes to S-64. | ₩. | | 2012 | 201 4 | P | Colby Harmon | S 52 | Continuing Work Item DIPWG has issued two maintenance documents against the current Presentation Library 3.4. DIPWG continues to develop a new version of the Presentation Library that will incorporate the existing maintenance documents and include any additional new changes as deemed appropriate. This will increase uniformity among ECDIS implementations and ease the transition of the Presentation Library into S-100/S-101. |
| C.1 | Monitor Relevant International Standards | L | | 2011 | - | 0 | Colby Harmon Julia Powell | S-52 S-100 Portrayal Register | Continuing Work Item With the increased inter dependencies between various International Standards, such as IEC 61174, IEC 62288 and the ISO 19100 series of standards, it is vital that DIPWG monitor the activities of these standards bodies and to advise HSSC if there is a need to update the relevant IHO standards to incorporate changes from external standards bodies. |
| F.2 | Maintain S-100 Portrayal | Н | | 2005 | - | 0 | Colby Harmon Tom Mellor Julia Powell | S-52 S-100 Portrayal Register | Continuing Work Item This work item will refine and expand the initial development of Portrayal and Symbol Models by incorporating clarifications, corrections, and extensions as needed for the community of users that have implemented the S-100 data model. |
| F.3 | Assist TSMAD in identifying which aspects of S-52 should be incorporated into S-100 and S-101 Specification. | Н | | 2009 | 2013 | 0 | Colby Harmon Tom Mellor Julia Powell | S-100 S-101 | Continuing Work Item Develop the S-100 Portrayal Section, the S-101 Portrayal Section and the associated S-101 Portrayal Catalogue. This includes incorporating relevant portions of S-52. |
| F.4 | Maintenance of S-101 Portrayal Component and Portrayal Catalogue | Н | | 2012 | - | 0 | Colby Harmon Tom Mellor Julia Powell | S-101 S-100 Portrayal Register | Continuing Work Item Maintain S-101 Portrayal by incorporating clarifications, corrections, and extensions as needed for the community of users that have implemented S-101. |

| Task | Work Item | Priority H-high M-med L-low | Next mile- stone | Start Date | End Date | Status P-planned O-ongoing C-completed | Contact Person | Related Pubs / Standard | Remarks |
|------|---|-----------------------------|------------------------|---------------|-------------|--|-------------------------------------|--|--|
| J.1 | Liaise with CSPCWG | М | | 2009 | - | 0 | Colby Harmon Jeff Wootton | S-52 S-100 Portrayal Register | Continuing Work Item This work item is to review and address, as appropriate, any changes in paper chart portrayal standards, in close coordination with TSMAD. |
| K.2 | Maintain Chart Presentation Bulletins on the DIPWG page of IHO website | M | | 2008 | - | 0 | Colby Harmon Alberto Costa Neves | | Continuing Work Item This work item addresses the routine posting of CPBs on the IHO website. |
| K.3 | Review and revise other informational pages on the DIPWG page of IHO website | | | 2008 | - | 0 | Colby Harmon Alberto Costa Neves | | Continuing Work Item This work item addresses the continual improvement of the DIPWG page on the IHO website. |
| L.1 | Investigate enhancing the appearance of existing traditional paper chart symbols used in ECDIS by modifying their size, shape and colour. | L | | 2009 | - | 0 | Colby Harmon | S-52 S-100 Portrayal Register | Continuing Work Item Enhancing existing S-52 symbology to take better advantage of modern ECDIS display capabilities. |
| M.1 | Provide technical assistance on Portrayal for S-10x related product specifications. | М | | 2009 | - | 0 | Colby Harmon | | Continuing Work Item Increasing-The use of S-100 by both IHO and non-IHO working groups hasentities called calls for DIPWG providing to provide technical assistance to these groups on the development of portrayal catalogues for S-100 based product specifications. Currently, DIPWG is assisting SNPWG in the development of S-10x Marine Protected Area portrayal. |

4.2 DIPWG Meetings (Task N)

| Date | Location | Activity |
|-------------------|------------------------|----------|
| 7-11 May 2012 | IHB, Monaco | DIPWG 4 |
| 10-14 Jun 2013 | Silver Spring, MD, USA | DIPWG 5 |
| 31 Mar-4 Apr 2014 | Sydney, Australia | DIPWG 6 |

Chairman: Colby HARMON, USA
Vice Chairman: Tom MELLOR, UK
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5. **DPSWG WORK PLAN 2014-15**

• Objectives, Tasks and Work Items are pursued in accordance with IHO Work Programme 2013-2017, Programme 2 (Services and Standards):

• The focus is

- o Support for existing scheme including upgrade to latest version
- Development of new standard
- As a Plan it will and should evolve; accordingly, contributions from WG members and others are welcomed at any time.

5.1 DPSWG Tasks

| А | Provide technical and operational support to Data Servers and OEMs developing or operating systems or services compliant with S-63 (IHO Task 2.4.2 refers) |
|---|--|
| В | Maintain and extend S-63 "IHO Data Protection Scheme" and produce new edition of S-63 to complement S-101 (IHO Task 2.4.2 refers) |
| С | Maintain and extend data protection and authentication related elements of S-100 "IHO Universal Hydrographic Data Model" (IHO Task 2.4.2 refers) |
| D | Maintain and extend data protection and authentication related elements of S-101 "ENC Product Specification" (IHO Task 2.4.2 refers) |
| E | Conduct the 2013 meeting of DPSWG (Task 2.4.1 refers) |

| 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) | Related Pubs / Standard | Remarks |
|--------------|--|---|-----------------------------|---------------|-----------------------------|---|-------------------|----------------------------------|---------|
| <u>A</u> | Maintain and extend Publication S- 63 | <u>H</u> | | | = | <u>O</u> | | <u>S-63 S-64</u> | |
| A.1 <u>B</u> | Provide S-63 technical and operational support to Data Servers and OEMs | Н | | 01.08.03 | - | 0 | DPSWG members | S-63 edition 1.0/1.1 | |
| <u>B.1D</u> | Engage stakeholders in drafting of new edition of S-63 to support S-101 development | | Working draft Sept. 2013 | 01.09.10 | ???? Feb 2014 | 0 | DPSWG members | DPSWG WorkplanS- 63, S-101 | |
| B.2 <u>C</u> | Develop a more detailed work plan for future standards relating to Data Protection and Security of ENC data. | | | 01.10.08 | March 2013Feb 2014 | 0 | DPSWG members | S-63, S-101 | |
| <u>E</u> | Support transition to latest edition of S-63 (1.1) | <u>H</u> | | | 1 Jan 2014 | <u>O</u> | | _ | |

5.2 DPSWG Meetings (Task E)

| Date | Location | Activity |
|----------------|------------|-------------------------|
| 17-18 Feb 2011 | IHB Monaco | S-63 Workshop + DPSWG 8 |
| 18-20 Feb 2013 | IHB Monaco | DPSWG 9 |
| Feb 2014 | IHB Monaco | DPSWG 10 |
| | | |

Chairman: Jonathan PRITCHARD, UK
Vice Chairman: Robert SANDVIK, Norway
Secretary:Anthony PHARAOH, IHB

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6. CSPCWG WORK PLAN 2014-15

- Objectives, Tasks and Work Items are pursued in accordance with IHO Work Programme 2013-2017, Programme 2 (Services and Standards):
 - o Element 2.3. Nautical Cartography:
 - Task 2.3.1 Conduct annual meetings of relevant HSSC WGs dealing with nautical cartography.
 - Task 2.3.2 Maintain and extend the relevant IHO standards, specifications and publications.
- The focus is on maintaining and enhancing cartographic standards and specifications for nautical charts to suit the needs of the modern mariner in support of safe navigation and protection of the marine environment.
- As a Plan it will and should evolve; accordingly, contributions from WG members and others are welcomed at any time.

6.1 CSPCWG 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 refers)

B Maintain and extend Publication S-11 Part A 'Guidance for the Preparation and Maintenance of INT Chart schemes' (IHO Task 2.3.2 refers)

D Development of new (and revised) symbology (IHO Task 2.3.2 refers)

E Maintenance of S-4 supplementary publications INT 1, 2 & 3 (IHO Task 2.3.2 refers)

F Maintain and extend Publication S-49 'Recommendations concerning Mariners' Routeing Guides' (IHO T2.3.2 refers)

G Conduct the 2013 and 2014 annual meetings of CSPCWG (IHO Task 2.3.1 refers)

| No | 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) | Related Pubs / Standard | Remarks |
|-------------|--|--------------------------------|----------------------------------|---------------|----------------------|---|-------------------|----------------------------|---|
| A.5.1 | Revise S-4 Part B Section 300-330 | H | IHO CL for M/S approval | 2010 | 2013 | <u> </u> | Sec CSPCWG | S-4 / B-300 | Edition 4.4.0 published Sep 2013 CL 55/2013WG Ltr 9/12 |
| A.5.2 | Revise S-4 Part B Section 340-390 | M | IHO CL for M/S approval | 2011 | 2013 | <u> </u> | Sec CSPCWG | S-4 / B-300 | Edition 4.4.0 published Sep 2013 CL 55/2013WG Ltr 9/12 |
| A.6 | Revise S-4 Part B Section 500 | <u>LM</u> | IHO CL for M/S approvalWG Ltr | 2012 | 2013 <u>20</u> 14 | 0 | Sec CSPCWG | S-4 / B-500 | Final draft in preparation WG Letter 14/2013Draft in prep |
| A.11 | Clarify guidance on dredged/maintained areas | М | WG Ltr 10 item 8.1 | 2011 | 2013 <u>20</u> 14 | 0 | Sec CSPCWG | S-4, INT1? | CSPCWG9 Action 43CSPCWG8-08-9A & Action 15. In discussion with Aus HO |
| <u>A.12</u> | Provide guidance on charting toroidal shaped buoys | | | 2012 | <u>2013</u> | <u>C</u> | | S-4 / B-462.5 | Edition 4.4.0 published Sep 2013 CL55/2013 |

| <u>A13</u> | Provide guidance on charting maximum authorized draught | <u>M</u> | Draft to WG10 item 8.2 | <u>2012</u> | 2014 | <u>O</u> | | | CSPCWG9 Action 36 |
|--------------|---|----------|--|-------------|----------------------|----------|----------------------|---|--|
| <u>A14</u> | Provide guidance on updating large scale charts first | <u>M</u> | IHO CL for M/S approval | 2012 | 2014 | <u>O</u> | Sec CSPCWG | <u>S-4 / B-100.5</u> | <u>CSPCWG9 Action 46</u> <u>CL58/2013</u> |
| <u>A15</u> | Provide guidance on charting underwater volcanic activity | | | 2012 | <u>2013</u> | <u>C</u> | | S-4 / B-355.1 & 428.4 | Edition 4.4.0 published Sep 2013 CL55/2013 |
| <u>A16</u> | Initiate consideration of the 'future of the paper chart' | M | Discussion paper by AU / CA / SE CSPCWG reps WG10 item 13.1 | 2013 | | <u>P</u> | Vice chair CSPCWG | <u>tbd</u> | CSPCWG9 Action 53 |
| B.3 | Develop guidelines for preparation & maintenance of small / medium scale ENC schemes. | Н | NSEHWG reviewWG Ltr to NSEHWG & ICCWG | 2009 | 2013 <u>20</u> 14 | 0 | Chair CSPCWG | S-11 <u>A</u> (or S- 65?)S-65 ? | Draft by NSEHWG; keep WENDWGTF engagedTo be developed in liaison with NSEHWG and WEND WG. |
| D 27 | Revise guidance on Marine Farm limits | Ħ | IHO CL for M/S approval | 2011 | 2013 | <u> </u> | Sec CSPCWG | S-4 <u>/B-447.6</u> , INT1 | Edition 4.4.0 published Sep 2013 CL55/2013WG Ltrs 6 & 11/12 |
| D 28 | Revise guidance on FPSO safety zones | M | IHO CL for M/S approval | 2011 | 2013 | <u> </u> | Sec CSPCWG | S-4 <u>/B-445.6</u> | Edition 4.4.0 published Sep 2013 CL55/2013WG Ltrs 6 & 11/12 |
| D 29 | Clarify guidance on safe vertical clearances | M | IHO CL for M/S approval | 2011 | 2013 | <u> </u> | Sec CSPCWG | S-4 / section B- 300 | Edition 4.4.0 published Sep 2013 CL55/2013WG Ltr 9/12 |
| D 30 | Guidance for post-disaster highlighting of new surveys | M | IHO CL for M/S approval | 2011 | 2013 | <u> </u> | Sec CSPCWG | S-4 <u>/B-293.8,</u> 297.2, 417.8 | Edition 4.4.0 published Sep 2013 CL55/2013WG Ltrs 6 & 11/12 |
| D 31 | Analysis of DQWG user questionnaire on quality indicators & symbols | M. | Further discussion at CSPCWG9 | 2012 | 2013 | <u> </u> | Chair CSPCWG | S-4, INT 1 | Analysis of paper chart DQ indicators completed at CSPCWG9 CSPCWG9 Actions 28 & 31: dedicated INT1 section for further discussion at CSPCWG10 Also note IHO CL51/2013WG Ltrs 7 & 12/12 |
| <u>D32.1</u> | Lights: Major lights, Direction lights, Highlighting | M | IHO CL for M/S approval | 2012 | 2014 | <u>O</u> | Sec CSPCWG | S-4 / section B- 470 | CSPCWG9 Actions 10, 12 & 17 CL58/2013 |

| <u>D32.2</u> | Lights: Interrupted lights | <u>M</u> | Advice from IALA | 2012 | 2014 | <u>O</u> | Sec CSPCWG | <u>S-4 / section B-470</u> | CSPCWG9 Action 13 |
|--------------|--|----------|--|----------------------|-------------|------------|---|----------------------------|---|
| D32.3 | Lights: Generic light flare | | | | | <u>C</u> | | S-4 / B-470.4.a | Edition 4.4.0 published Sep 2013 CL55/2013 |
| <u>D32.4</u> | <u>Lights: Reinstate (simplified)</u> <u>symbol for light vessels</u> | <u>M</u> | CSPCWG10 item 8.4 | 2012 | 2014 | <u>O</u> | Sec CSPCWG | <u>S-4 / B-474, INT1</u> | CSPCWG9 Action 18; paper to CSPCWG10 |
| <u>D33</u> | Footbridges / bridges on small scale charts | | | <u>2012</u> | <u>2013</u> | <u>C</u> | | <u>S-4 / B-300</u> | Edition 4.4.0 published Sep 2013 CL55/2013 |
| E.1 | Maintain official INT 1s | | Planning for next editions by INT1 sub-WG (following Cadiz meeting July 2013)Next editions when planned | 2013 | ~2015 | <u>O</u> | DE: S Spohn FR: S LannuzelGuillouO Parvillers ES: A Guitart | INT 1 | English version 2011 (Ed 7) French version 2012 (Ed 5) Spanish version 2011 (Ed 4) No new edition planned before 2015 |
| E.4 | Symbols for vacant entries in INT 1 | L | Review when A6A5.2 completed | 2013 <u>201</u> 4 | | Р | Sec CSPCWG | INT 1, S-4 part B | INT1 subWG to review Consider subsuming into E8next meeting |
| E8 | Reorganize INT1 to exclude composite symbols | L | CSPCWG10 item 11.2Next round of NEs of INT1 (E1 refers) | 2013 | 2014 | P <u>O</u> | INT1 subWG | INT1 | Dependent on outcome of CSPCWG9 Action 31& INT1 subWG July 13CSPCWG8-11.1A & Action 29 |

6.2 CSPCWG Meetings (Task G)

| Date | Location | Activity |
|---------------------|------------------------|----------|
| 03-05 Nov 04 | IHB, Monaco | CSPCWG 1 |
| 19-21 Oct 05 | IHB, Monaco | CSPCWG 2 |
| 22-24 Nov 06 | IHB, Monaco | CSPCWG 3 |
| <u>13-15 Nov 07</u> | IHB, Monaco | CSPCWG 4 |
| <u>18-21 Nov 08</u> | Sydney, Australia | CSPCWG 5 |
| 01-03 Dec 09 | IHB, Monaco | CSPCWG 6 |
| 23-26 Nov 10 | Simon's Town, S Africa | CSPCWG 7 |

29 Nov–02 Dec 2011 Turku, Finland CSPCWG 8
13-16 Nov 2012 Seoul, Rep of Korea CSPCWG 9
2021-24 January 2014 Wellington, NZ CSPCWG 10
2015 Rostock, Germany CSPCWG 11

Chairman: Peter JONES, UK
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7. **SNPWG WORK PLAN 2014-15**

7.1 SNPWG Tasks

| Α | Decide on the Data Structure of NPs-Data intended for use in ECDIS (NP3) (IHO Task 2.6.2 refers) |
|---|--|
| В | Define the content requirements of NP data intended for use in ECDIS (NP3) (IHO Task 2.6.2 refers) |
| С | Develop test data (IHO Task 2.6.2 refers) |
| D | Develop basic display rules for NP data intended for use in ECDIS (NP3) (IHO Task 2.6.2 refers) |
| Е | Draft guidance documents (IHO Task 2.6.2 refers) |
| F | Maintain and extend IHO resolutions in M-3 relating to Nautical Publications as required (IHO Task 2.6.3 refers) |
| G | Liaise with other HSSC WG's and other IHO and international bodies (IHO Task 2.6.2 refers) |
| Н | Develop, maintain and extend S-10n - Nautical Information Product Specification (IHO Task 2.6.2 refers) |
| I | Conduct the 2013 and 2014 meetings of SNPWG (IHO Task 2.6.1 refers) |

| 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 | Related Pubs / Standard | Remarks |
|-------------|---|---|--------------------|---------------|-------------|--|--------------------|-------------------------------|---|
| B2 | Model the data where required. | Н | | 2004 | Open | 0 | Chair/Sec SNPWG | S-100 | To be included in NPUBS domain of the FCD register |
| В3 | Review of objects and attributes | Н | 04/201411/ 2012 | 2004 | Open | 0 | Chair/Sec SNPWG | S-100 | According to the tasks assigned by HSSC4 |
| B4 | Propose amendments to HYDRO domain of the FCD Registerfor Hydro register to TSMAD | Н | | 2005 | Open | 0 | Chair/Sec SNPWG | S-100 | To be included in the <u>FCD</u> H ydro register |
| В6 | Populate the NPUBS domain of the FCD Register | Н | | 2006 | Open | 0 | Chair/Sec SNPWG | S-100 | |
| C1 | Produce NP1 data sampletest data set | Н | | 2009 | Open | 0 | Chair/Sec SNPWG | | According to the tasks assigned by HSSC4 Collection of information to be modeled |
| <u>C1.1</u> | For Radio Services | <u>H</u> | 04/2014 | <u>2012</u> | <u>2014</u> | <u>0</u> | Chair/Sec SNPWG | | |
| <u>C1.2</u> | For Navigational services | <u>H</u> | 04/2014 | <u>2012</u> | <u>2014</u> | <u>0</u> | Chair/Sec SNPWG | | |
| <u>C1.3</u> | For Traffic management | <u>H</u> | 04/2014 | <u>2012</u> | <u>2014</u> | <u>0</u> | Chair/Sec SNPWG | | |

| C1. <u>3.</u> 1 | For Marine Protected Areas | Н | 04/201406/ 2013 completion | <u>2011</u> | 2013 2012 | 0 <u>C</u> | Chair/Sec SNPWG | | |
|-----------------|---|----------|----------------------------------|--------------------------|-----------------------------|-----------------------|---------------------|-------|--|
| <u>C1.4</u> | For Physical environment | <u>H</u> | 04/2014 | <u>2013</u> | <u>2014</u> | <u>O</u> | Chair/Sec SNPWG | | |
| C1.x | To be completed (see Note) | H | | | | | Chair/Sec SNPWG | | According to the tasks assigned by HSSC4 |
| C2 | Set up a test bed ECDIS | М | | Open 20 09 | <u>Open</u> 2012 | Р | Chair/Sec SNPWG | | |
| D1 | Develop basic display rules for NP data intended for use in ECDIS (NP3) | M | | 2008 | Open | 0 | Chair/Sec SNPWG | S-52 | Close co-operation with DIPWG required |
| E1 | Draft Data Capture and Encoding Guide | Н | | 2008 | Open | 0 | Chair/Sec SNPWG | | Document for NPs similar to Use of the Object Catalog |
| E1.1 | For Marine Protected Areas | Н | 04/201406/ 2013 completion | <u>2011</u> | 2013 <u>Open</u> | 0 | Chair/Sec SNPWG | | To be harmonized with S101 DCEG; Awaiting next S-100 version |
| E1.x | To be completed (see Note) | Ħ | | | | | Chair/Sec SNPWG | | According to the tasks assigned by HSSC4 |
| <u>E1.2</u> | For Radio Signals | <u>M</u> | | <u>2014</u> | <u>Open</u> | <u>P</u> | Chair/Sec SNPWG | | Depends on modeling progress |
| <u>E2</u> | <u>Draft Sample Product</u> <u>Specification</u> | <u>H</u> | | <u>2008</u> | <u>2009</u> | <u>C</u> | Chair/Sec SNPWG | | Development of: a) a SNPWG profile of S-100 Part 11 Prod Spec; b) a draft sample for Pilotage; c) a draft sample for Waterways. |
| E3 | Draft Product Specification | Н | | 2010 | 2013 <u>Open</u> | 0 | Vice Chair SNPWG | S-10X | Drafted in phases; |
| <u>E3.1</u> | For Radio Services | <u>H</u> | 04/2014 | <u>Open</u> | <u>Open</u> | <u>P</u> | Chair/Sec SNPWG | | |
| <u>E3.2</u> | For Navigational services | <u>H</u> | 04/2014 | <u>Open</u> | <u>Open</u> | <u>P</u> | Chair/Sec SNPWG | | |
| <u>E3.3</u> | For Traffic management | <u>H</u> | 04/2014 | <u>2011</u> | <u>Open</u> | <u>O</u> | Chair/Sec SNPWG | | |
| E3. <u>3.</u> 1 | For Marine Protected Areas | Н | 04/2014 12/ 2013 | <u>2011</u> | <u>2012</u> | <u>O</u> | Chair/Sec SNPWG | | Depends on progress of S100 version allowing GML data use |
| €3.x | To be completed (see Note) | Ħ | | | | | Chair/Sec SNPWG | | According to the tasks assigned by HSSC4 |
| <u>E3.4</u> | For Physical environment | Н | 04/2014 | <u>Open</u> | <u>Open</u> | <u>P</u> | Chair/Sec SNPWG | | |

| F1 | Resolutions in M-3 relating to Nautical Publications | М | 04/2014 | 2012 | Open | 0 | Chair/Sec SNPWG | M-3 | A review is scheduled due to harmonization of M3 information and potential ProdSpecs content |
|----------------|---|------------|--------------------------------|--------------------------|-------------|-----------|--------------------|------|--|
| F2 | S-12 | L | | Open 20 12 | Open | <u> </u> | Chair/Sec SNPWG | S-12 | If considered necessary |
| G1 | Liaise with the DIPWG for the development of the display rules | Н | | 2005 | Open | 0 | Chair/Sec SNPWG | | |
| G2 | Liaise with the TSMAD | Н | | 2004 | Open | 0 | Chair/Sec SNPWG | | |
| G3 | Liaise with other groups | Н | | 2004 | Open | 0 | Chair/Sec SNPWG | | Including DIPWG, DPSWG, DQWG, TWLWG, MIO's, AML, ICE, Inland ECDIS |
| <u>G4</u> | <u>Liaise with IALA e-Nav</u> <u>Committee</u> | <u>H</u> | | <u>2013</u> | <u>Open</u> | <u>O</u> | Chair/Sec SNPWG | | As advised by HSSC4 |
| <u>H1</u> | Develop, maintain and extend S-10n - Nautical Information Product Specification | <u>H</u> | 04/2014 | <u>2009</u> | <u>Open</u> | <u>0</u> | Chair/Sec SNPWG | | Liaise with WWNWS-Sub committee |
| <u>H1.1</u> | For Radio Services | <u>H</u> | 04/2014 | <u>2012</u> | <u>Open</u> | <u>O</u> | Chair/Sec SNPWG | | |
| <u>H1.2</u> | For Navigational services | <u>H</u> | 04/2014 | <u>2013</u> | <u>Open</u> | <u>O</u> | Chair/Sec SNPWG | | |
| <u>H1.3</u> | For Traffic management | <u>H</u> | 04/2014 | <u>2013</u> | <u>Open</u> | <u>O</u> | Chair/Sec SNPWG | | |
| H1 <u>.3.1</u> | For Marine Protected Areas | <u>₩</u> H | 04/2014 12/ 2013 | 2013 <u>201</u> 1 | Open | <u>PO</u> | Chair/Sec SNPWG | | When received final status |
| <u>H1.4</u> | For Physical environment | <u>H</u> | 04/2014 | <u>2013</u> | <u>Open</u> | <u>O</u> | Chair/Sec SNPWG | | |
| H2 | To be completed (see Note) | М | | 2014 | Open | ₽ | | | investigate potential PredSpec candidates; see E3.x |

Note: SNPWG has been tasked to prepare a master plan for developing electronic nautical publications from which the milestones and end dates of the different tasks will be derived (action HSSC4/25).

7.2 SNPWG Meetings (Task I)

| Date | Location | Activity |
|----------------|------------------------|----------|
| 13-17 Feb 2012 | IHB, Monaco | SNPWG 14 |
| 12-16 Nov 2012 | Helsinki, Finland | SNPWG 15 |
| 17-21 Jun 2013 | Silver Spring, MD, USA | SNPWG 16 |

7-11 Apr 2014 Rostock, Germany

Chairman: Jens SCHRÖDER-FÜRSTENBERG, Germany

Vice-chairman: Mr. Thomas LOEPER, USA Secretary: Pelle AAGAARD, Denmark

SNPWG 17

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8. DQWG WORK PLAN 2014-15

8.1 DQWG 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 refers) |
|---|--|
| В | Monitor and further develop quality indicators for hydrographic data (IHO Task 2.5.2 refers) |
| С | 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 refers) |
| 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 refers) |
| 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 refers) |
| F | Propose new data quality topics and other applications for consideration by HSSC (IHO Task 2.5.2 refers) |
| G | Maintain and extend data quality related elements of S-100 "IHO Universal Hydrographic Data Model" (IHO Task 2.5.2 refers) |
| Н | 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 refers) |
| Ĺ | Conduct the 2013 and 2014 meetings of DQWG (IHO Task 2.5.1 refers) |

| 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) | Related Pubs / Standards | Remarks |
|------------|--|--------------------------------|-------------------|---------------|-------------|--|----------------------|--------------------------------|--|
| A | Review ISO 19113, 19114, 19115 and 19157 and make recommendations for inclusion in S-100 | M | | 2010 | | 0 | DQWG | S-100 | Ongoing task to keep S-100 data quality in line with ISO standards |
| B.3 | Draft S-101 data quality | Н | DQWG7 | | 2013 | <u> </u> | USM | S-101 | Assess USM input to DQWG7 for impacts on model. |
| <u>B.4</u> | Develop the hierarchy approach by formalizing the hierarchy and the algorithm that drive the display | H | TSMAD 27 | 2013 | 2014 | <u>O</u> | Mike Prince | <u>S-101</u> | To be completed for submission to TSMAD 28. |

| 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) | Related Pubs / Standards | Remarks |
|------|--|--------------------------------|--|---------------|----------------------|--|----------------------|---|--|
| C.4 | Investigate possible methods for how to educate practicing mariners on data quality issues | Н | DQWG7DQW G8 | 2010 | | 0 | DQWG | | Investigate in liaison with training institutions the adequacy of existing HOs' documentatipn on the quality aspects of the practical use of ENCs. IHO CL 51/2013 issued on this topic. |
| E.1 | Develop logic tree for indicatorsalarms in current and proposed approaches. | Н | DQWG7DQW G8 | 2010 | <u>2014</u> | <u>PO</u> | USMMike Prince | - | To be completed for submission to TSMAD 28.Logic to be discussed following USM input to DQWG7. |
| E.2 | Demonstrate methods to mariners | Н | Follows S- 100 demonstrato rUSM stage 1. | 2012 | 2013 <u>2</u> 014 | P | USMDQWG | S-57, S- 100 <u>S-101</u> | Build possible methods into ENC and ECDIS to demonstrate effectiveness. |
| F.1 | Investigate areas of quality concern (other than survey / bathymetry) | M | DQWG8 | 2010 | - | 0 | Eivind Mong | - | SNPWG has responded, liaison is ongoing. Investigate the merit of supplying quality attributes to other elements of ENC and other publications e.g. sailing directions. |

DQWG Meetings (Task I) 8.2

| Date | Location | Activity |
|----------------|------------------------------------|----------|
| 24-26 Jul 2012 | Silver Spring, MD, USA | DQWG 6 |
| 16-18 Jul 2013 | Fredericton, New Brunswick, Canada | DQWG 7 |
| 25-27 Mar 2014 | Sydney/Wollongong, Australia | DQWG 8 |

Chairman: Chris Howlett, UK Email: Chris.Howlett@ukho.gov.uk

Vice-chairman: Leendert DORST, Netherlands

Email: LL.Dorst@mindef.nl
Email: Eivind.Mong@jeppesen.com Secretary: Eivind MONG, Jeppesen

9. MSDIWG WORK PLAN 2014-15

9.1 MSDIWG Tasks (Initiatives)

| A <u>(1)</u> | MSDI - Review of progress across Marine Sector Investigate methods for IHO to support MS' capability development in MSDI (IHO Task 2.9.2 refers) |
|--------------|--|
| B <u>(2)</u> | MSDI and Member States – review and status report Monitor national and international marine SDI activities and liaise to increase visibility (IHO Task 2.9.2 refers) |
| C_(3) | What needs to be done – A practical approach to MSDI implementation! Identify and recommend possible solutions to significant technical issues related to interoperability (IHO Task 2.9.2 refers) |
| D <u>(4)</u> | Supporting MSDI Implementation - Training and Communications Maintain and extend Publication C-17 "Spatial Data Infrastructures: The Marine Dimension - Guidance for Hydrographic Offices" (IHO Task 2.9.2 refers) |
| E | Conduct the 2013 and 2014 meetings of MSDIWG (IHO Task 2.9.1 refers) |

| Task | Work item | Priority H-high M-med L-low | Next mMilestones | Start Date | End Date | Status P-planned O-ongoing C-completed | Persons responsible inc: main Ccontact Person(s) | Related Pub <u>lication</u> s/ Standard <u>s/WG/</u> Organisations |
|-------------|---|--------------------------------------|--|------------------------------------|----------------------|---|--|--|
| Initiativ | re 1: MSDI - Review of progress across N | Marine Sect | or | | | | | |
| 1.1 | Conduct a review of MSDI that includes conceptual descriptions of the four sub-areas of MSDI as per 1.1a-d. | M | Fundamentals of MSDI (i.e. content, governance, ICT and standards) Making the case for MSDI; business case development. | Jan 2013 | Oct 2015 | Planned | MSDIWG Chair/Vice Chair, | C-17/CBSC MSDI Syllabus |
| <u>1.1a</u> | Technical issues Data harmonisation (i.e. Land-Sea) | <u>M</u> | Define standards for interoperability | Jan 2014 | Oct 2015 | Planned | MSDIWG Chair, M. Osborne (OceanWise - UK); J. Rapaport (Caris -Canada); R. Ponce (Esri -USA) | C-17, INSPIRE |
| | Data sharing and publishing | <u>H</u> | Mechanisms in place for publishing data | Sept 2013 | Mar 2015 | Planned | | |
| <u>1.1b</u> | Governance Change management | <u>H</u> | Define key challenges in respect of: Identify organisational attitudes | Jan 2013 | Mar 2016 | Ongoing | MSDIWG Chair/Vice Chair, IHB representative | www.creativecom mons.org |
| | Intellectual property Copyright and licensing | | Resolve IP issues in data Define release mechanisms | <u>Jan 2013</u> <u>Jan 2013</u> | Mar 2016 Mar 2016 | Ongoing Ongoing | | |

| | User requirements | | Understand user needs | <u>Jan 2013</u> | Mar 2016 | Planned | | |
|-------------|---|----------|--|---|-------------------------------|-------------------------|--|--|
| <u>1.1c</u> | Standards and specifications | <u>M</u> | Status of adopted technical standards Status of new IHO data specifications | Jan 2013 | Feb 2015 | Ongoing | E. Vos (WG Vice Chair -Netherlands); All WG Members | INSPIRE, OGC, ISO, IHO |
| <u>1.1d</u> | Content (data) | <u>H</u> | Report in –"Is data fit for purpose for inclusion in SDI" | <u>Jan 2013</u> | Feb 2015 | Ongoing | MSDIWG Member States | RHC reports MSDIWG MS inputs |
| 1.2 | Liaison with other organisations to identify new uses for data. Identify value of HO data to economic development (e.g. MEIP) | <u>M</u> | EC, UNESCO, IOC, IMO, ISO, OGC, FIG | Jan 2013 | Jan 2018 | Ongoing | MSDIWG Chair, Vice Chair, IHB representative, G. Homes (Australia) | UN, World Bank, Regional Dev Funds |
| 1.3 | Establishing an IHO MSDI community Wiki | <u>L</u> | Develop website c/w add, modify, or delete content capability via a web browser) Create software in collaboration Develop content management system | June 2014 | Dec 2015 | Planned | Wiki Task Group, Chair t.b.c A. Fernandez Ros (Spain) | |
| 1.4 | Maintain and extend Publication IHO MSDI C-17 | <u>H</u> | Update information Provide case studies Best practice guidelines defined | <u>Sept 2014</u> | July 2015 | Planned | C-17 Task Group; Chair t.b.c R. Rios (Argentina), R. Ponce (Esri - USA) | |
| 1.5 | Identify and recommend possible solutions to significant technical issues related to interoperability | <u>H</u> | Define the scope of the work related to interoperability Monitor developments Provide status report to MSDIWG including | <u>June 2014</u> <u>Aug 2014</u> <u>June 2013</u> | June 2015 Jan 2018 Feb 2014 | Planned Planned Planned | E. Vos (Vice Chair) | TSMAD |
| | | | recommendations on how to proceed Standing WG Agenda item | | | Ongoing | | |
| <u>1.6</u> | Provide updated information on all European Marine/Maritime initiatives | <u>M</u> | Provide WG paper defining MS' INSPIRE obligations from a Hydrographic perspective Identify and report on parallel programmes in EC (e.g. EMODNet, SeaDataNet, | June 2013 | Jan 2018 | <u>Planned</u> | EC Task Group; Chair t.b.c. C. Texier (France), E. Vos (Netherlands), J.P. Hartmann (WG Chair & Baltic & North Sea RHC MSDIWG), M. Halliwell | INSPIRE, Draft EC Directive on MSP and ICM |

| | | | MSFD) | | | | (UK) |
|-----------|--|------------|--|-----------------|---------------------|---------|--|
| Initiativ | ve 2: MSDI and Member States - review | and status | report | | | • | |
| 2.1 | Prepare an MSDI review and status report, that identifies examples of MSDI best practise. This activity is a standing MSDIWG Agenda item | <u>H</u> | MS report to each MSDIWG annual meeting listings successes and challenges and ways of overcoming them | Sept 2013 | Jan 2018 | Planned | Initiative 2 Sub Group required: Chair/Vice Chair, C. Texier (France), P. Valing (Estonia) |
| 2.2 | Set up Review Group to audit MS's to establish current position in respect of benefits and challenges faced by MS's role in NSDI and/ or MSDI | H | Review 2008 survey and determine gain from a second survey. Prepare updated questionnaire Re-issue 2008 questionnaire (if appropriate) Audit status of MS Gather evidence Analyze/report results | June 2014 | <u>June</u> 2015 | Planned | Sub group of Initiative 2 MSDIWG Chair/Vice Chair, P. Valing (Estonia), J. Pepper (OceanWise - UK) plus other MS invitees? |
| 2.3 | Monitor and report on national and international MSDI activities and report to increase visibility of hydrographic importance (as MSDIWG Standing agenda item) | <u>M</u> | Engage with relevant initiatives Report level of MS involvement (if any) | April 2013 | Mar 2018 | Ongoing | Sub group of Initiative 2 A. Fernandez Ros (Spain), C. Texier (France) MSDIWG Chair/Vice Chair |
| 2.4 | Create relevant use cases, from potential users of MSDI. | Н | Identify and report success stories at sector, national or regional level | <u>Jan 2014</u> | <u>June</u> 2015 | Planned | Sub group of Initiative 2 R. Ponce (Esri - USA) , S. Grammann (Germany), IHB representative, MSDIWG Chair/Vice Chair |
| Initiativ | ve 3: What needs to be done – A practical | l approach | to MSDI implementation! | | | | |
| 3.1 | Develop an MSDI WG strategy and revise work plan as necessary | <u>H</u> | Produce a SWOT and GAP analysis Define key strategic objectives | <u>Jan 2013</u> | Jan 2018 | Planned | WG Management Group |

| | | | Produce work plan c/w | | | | | |
|------------|---|----------|--|-----------------|------------------|----------------|---|--|
| | | | timelines, owners and | | | | | |
| 0.0 | B 11. (4 | | <u>outcomes</u> | E 1 0044 | 1 0045 | D | MODUMO OL : NE | |
| <u>3.2</u> | Build a "template" business case for MSDI (including economic and socio | <u>H</u> | Cost benefit analysis | Feb 2014 | <u>June 2015</u> | <u>Planned</u> | MSDIWG Chair/Vice Chair, G. Homes | |
| | economic benefits) | | Identify efficiency savings | | | | (Australia), OceanWise | |
| | | | Making the case for MSDI to budget holder | | | | (UK) | |
| 3.3 | Create or facilitate development of pilot MSDI projects with Member States | <u>M</u> | Identify methods by which IHO can support MS' capability development in MSDI | Feb 2014 | <u>Jan 2018</u> | Planned | A. Fernandez Ros (Spain), R. Ponce (Esri - USA), MSDIWG Chair/Vice Chair, IHB | |
| | | | Provide "hands on" practical support to MS where necessary Provide IHO funding for the | | | | representative To be completed | |
| | | | purpose | | | | | |
| 3.4 | Liaise with TSMAD regarding level of S-100 understanding and use in support of SDI activities (e.g. INSPIRE) | M | Determine and log any issues of concern in WG regarding new standards Obtain feedback from TSMAD on MSDIWG groupestablished topics Identify new S-1XX data specifications for datasets use in MSDI | <u>Jan 2013</u> | <u>Jan 2018</u> | Ongoing | E. Vos (Netherlands), J. Rapaport (Caris – Canada), C. Texier (France) To be completed | INSPIRE, Draft EC Directive on MSP and ICM |
| 3.5 | Launch an IHO "discovery" meta database, based on open-source technology which allows harvesting of information from IHO MS at regional level | <u>L</u> | Set up metadata framework Define content Identify data that is linkable Create view service | June 2014 | June 2016 | Planned | Open Source Task Group Chair - C. Texier (France), J. Rapaport (Caris – Canada), R. Ponce (Esri - USA), R. Rios (Argentina) | |
| 3.6 | Determine hydrographic data set(s) that should be included in MSDI | 土 | Prioritize data layers by usefulness to non- navigational sectors Identify priority order of importance (High, medium, low) Establish top 10 list | <u>Jan 2013</u> | <u>Jan 2015</u> | Ongoing | Core Data Task Group Chair - Mike Osborne (OceanWise), P. Valing (Estonia), G. Homes (Australia), C. Texier (France), A. Fernandez Ros (Spain), R. Rios (Argentina), S. | |

| 3.7 | Develop understanding of e- Navigation, its constituents and the role of MSDI as an enabler | M | Identify "core" reference datasets for MSDI Define publishing mechanism for sharing data Develop pilot e-Navigation framework | June 2014 | <u>June 2017</u> | Planned | e-Navigation Task Force Chair – M. Osborne (OceanWise, UK), P. Schwarzberg (Caris - BV), R. Ponce (Esri - USA), A. Fernandez Ros (Spain), C. Texier (France), S. Grammann (Germany) |
|------------|---|-------------|---|--------------------|---------------------------------|-----------------|---|
| Initiativ | re 4: Supporting MSDI Implementation - 1 | Fraining an | d Communications | | | | |
| 4.1 | Identify the need for education and training among the Member States and report to WG Chair | <u>H</u> | Develop training events as required Deliver an INSPIRE Workshop with EC-JRC | Oct 2013 Dec 2013 | <u>Jan 2018</u> <u>Apr 2014</u> | Ongoing Planned | MSDIWG Chair & Secretary. IHO CBSC in collaboration with MSDIWG |
| 4.2 | Establish a MSDI training syllabus for use across IHO community | H | technical support Senior Managers (i.e. Directors, Hydrographers, HR Managers) Practitioners (i.e. Hydrographic Surveyors, Cartographers, Oceanographers, IT specialists) | Oct 2013 | Jan 2014 | Ongoing | Syllabus Task Group R. Ponce (Esri -USA), A. Hoggarth (Caris - Canada), J. Pepper (OceanWise - UK), MSDIWG Chair, IHB representative. HO members to be confirmed. |
| 4.3 | Organise Annual MSDIWG 1-day conference/open forum, as back to back arrangements with MSDIWG Annual Workshop (if possible) | M | Date and venue defined Logistics in place Conference programme defined | <u>Sept 2013</u> | Jan 2018 | Planned | MSDIWG Management Group (Chair/Vice Chair, Secretary, IHB representative) |
| 4.4 | Host country Organise and deliver 2- day Annual Workshop of MSDIWG | II | 2-day workshop to be run Q1 of each year; o 2014 NOAA, Washington DC o 2015-18 tbc Develop Workshop programmes | Sept 2013 Oct 2013 | Feb 2014 Jan 2014 | <u>Planned</u> | MSDIWG Management Group (Chair/Vice Chair, Secretary, IHB representative) |
| <u>4.5</u> | Provide MSDI educational content to | <u>H</u> | Set up schedule for | Oct 2013 | <u>2018</u> | Planned | Syllabus Task Group |

| 4.6 | Develop external communications programme to promote the work of the WG (e.g. to Maritime Press; IMO, IOC/IODE/FIG/EC) and internal communications programme using IHO website (Ref 4-5) and e-mail blasts for MSDI news and related hot topics | Н | presentations/papers from MSDIWG members/others to be uploaded to Web site. Identify and make available MS Web sites/papers that address technical issues such as datums, WMS, WFS for chartingdata Poll MSDIWG members for input work, with IHB to post on IHO Web site Poll MS via questionnaire (if reissued) Prepare an MSDIWG paper to IMO dealing with Enavigation and MSDI from a Hydrographic approach Prepare technical and organisational articles to wider stakeholder communities On-line publishing | Aug 2013 | Jan 2018 | through workplan lifecycle | Communications Task Group MSDIWG Chair, Vice- Chair & Secretary, C. Texier (France) Plus other members from Task Groups | |
|-----|---|----------|--|-----------|----------------------------|----------------------------------|---|---------------------|
| 4.7 | Ensure IHO (Res 2/1997 as amended) is upheld at all RHC's in that MSDI is a standing reporting agenda item | <u>H</u> | MSDIWG paper to IRCC restating importance of RHC's placing MSDL as an agenda item at RHC meetings MSDI inputs and actions from RHC's fed back to MSDIWG | July 2013 | <u>June</u> <u>2014</u> | Ongoing | MSDIWG Chair/Vice Chair | HSSC, IRCC, CBSC |

9.2 MSDIWG Meetings (Task E)

DateLocationActivity2-3 Apr 2009IHB, MonacoMSDIWG 38 & 13 Sep 2011Conference Calls30 Jan – 01 Feb 2013Copenhagen, DenmarkMSDI Open Forum + MSDIWG 45-7 Feb 2014Silver Spring, Ma, USAMSDI Open Forum + MSDIWG 5

Chair: Jens Peter HARTMANN, Denmark Vice-chair: Ellen Vos, Netherlands Secretary: John PEPPER, OceanWise

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10. TWLWG WORK PLAN 2014-15

10.1 TWLWG Tasks

| Α | Maintain and extend Standard Tidal Constituent List (IHO Task 2.7.2 refers) |
|---|---|
| В | Prepare a Standard Develop, maintain and extend a Product Specification for Digital Tide Tables (IHO Task 2.7.3 refers) |
| С | Liaise with TSMAD on tidal matters relevant to the Dynamic Application of Tides in ECDIS and develop, maintain and extend a Product Specification for Dynamic Application of Tides in ECDIS (IHO Task 2.7.5 refers) and a Standard Product Specification for the transmission of real-time tidal data (IHO Task 2.7.4 refers) |
| E | Review the various definitions of MSL and their relevance to Hydrographic Offices and review the IHO tidal resolutions in M-3 to ensure that they are compatible with the requirements of non-tidal areas such as the Baltic Sea (IHO Task 2.7.2 refers) |
| F | Prepare and maintain an inventory of tide gauges used by Member States and to publish it on the IHO/TWLWG web site (IHO Task 2.7.2 refers) |
| Н | Compare the tidal predictions generated as a result of analysis of a common data set using different analysis software (IHO Task 2.7.2 refers) |
| I | Review and provide feedback of On-line real time water level observation document (IHO Task 2.7.2 refers) |
| A | Conduct the 2013 and 2014 meetings of TWLWG (IHO Task 2.7.1 refers) |

| 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 |
|------|---|---|---|---------------|-------------|---|---|-------------------------------|---------|
| A.1 | Maintain Standard Tidal Constituent List | <u>₩</u> | No updates required in 2012 | Continuous | | 0 | Chris Jones* | | |
| A.2 | Compare the tidal predictions generated as a result of analysis of a common data set using different analysis software. | ₩ <u>H</u> | Select Common data set Analyse using different software Predict common set of tides Compare results | Continuous | | 0 | Stephen Gill* | | |
| B.2 | Prepare a Standard for Digital Tide Tables | <u>₩</u> H | Prepare draft Standard | 2009 | 2013 | 0 | Stephen Gill* Chris Jones Zarina Jayaswal | | |

| | 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 |
|---|------|--|---|--|---------------|------------------------------|--|--|-------------------------------|---------|
| | C.1 | Liaise with TSMAD and DIPWG on tidal matters relevant to the Dynamic Application of Tides in ECDIS | Н | Prepare draft pages for Objects and Attributes. Prepare draft Product Specifications (S1**) for tidal data in S-100. | 2010 | 2012 2013 2013 | 0 | ZarinaJayaswa* Stephen Gill Chris Jones Juan Fierro Ruth Farre Dan Pillich | | |
| | C.2 | Develop a Standard for the transmission of real-time tidal data | <u>MH</u> | | 2009 | 2013 | 0 | Stephen Gill* Chris Jones Zarina Jayaswal Juan Fierro | | |
| | E.1 | 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. | <u>₩</u> | Reviewed at TWLWG2- Further work undertaken at TWLWG3 and TWLWG4. Definition of MSL approved for submission to HDWG. Work on the IHO resolutions ongoing. | 2009 | 2013 | 0 | Jukka Varonen* Tor Tørresen Phil MacAulay Stephen Shipman Chris Jones Stephen Gill | | |
| | F.1 | Prepare and maintain an inventory of tide gauges used by Member States and to publish it on the IHO/TWLWG web site. | <u>₩</u> | Initial inventory from TWLWG members available on IHO web site. CL36/2010 sent to Member States seeking wider input. | Continuous | | 0 | David Wyatt* Stephen Gill | | |
| | H1 | The study of long term data sets for the determination of global sea level rise. | <u>₩</u> | | 2011 | 2014 | 0 | Chris Jones Salvador Moreno Stephen Gill Tor Tørresen Gwenaële Jan Do-Seong Byun | | |
| I | I1 | On-line real time water level observation document | ₩ <u>H</u> | Review and feedback by 1 August 2012 | 2012 | 2013 | 0 | David Wyatt | | |

TWLWG Meetings (Task J) 10.2

| Date | Location | Activity |
|----------------|-------------------------|----------|
| 8-10 May 2012 | Fish Hoek, South Africa | TWLWG 4 |
| 14-16 May 2013 | Helsinki, Finland | TWLWG 5 |
| 7-11 Apr 2014 | Wollongong, Australia | TWLWG 6 |

Chair: Gwenaële JAN, France

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Email: adso@iho.int Vice-Chair: Christopher JONES, UK Secretary: David WYATT, IHB

11. HDWG WORK PLAN 2014-15

11.1 HDWG Tasks

| Α | Maintain and extend the definitions in the IHO Dictionary in French, English and Spanish (IHO Task 2.11.1 refers) |
|---|---|
| В | Liaise with other IHO bodies preparing publications containing glossaries (IHO Task 2.11.1 refers) |
| С | 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) |

| 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 | Consider proposals from Greece for inclusion of 3 new terms related to the Coast. | Н | a. Terms 1 – 3 | 2011 | 2012 2013 | Р | All | <u>S-32</u> | |
| A2 | 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 | М | a. Terms a – d b. Terms e – l c. Terms m – r d. Terms s – z | 2012 2012 2013 2013 | 20132015 20132015 20142016 20142016 | P P P | All | <u>S-32</u> | |
| A3 | Review the approved definitions of Altitude, Elevation and Height | Н | | 2012 | 2013 2014 | | | <u>S-32</u> | Alternative definitions to be submitted by HDWG to TSMAD27 (Dec 2013) and CSPCWG10 (Jan 2014) before endorsement |
| B6 | Aquaculture – proposal from CSPCWG | Н | a. Aquaculture | 2011 | 2012 2013 | Р | All | <u>S-32</u> | |
| B7 | CSPCWG | Н | Phase of a navigational light | 2011 | 2012 2013 | Р | All | <u>S-32</u> | |

| 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 |
|------|-----------|---|-------------------------------|---------------|----------------------|---|--------------------------------------|-----------------------------------|---|
| B8 | TWLWG | Н | Mean sea level | 2011 | 2012 2013 | P | All | S-32, IHO Resolution 3/1919 | New definition considered too long. See Annex D |
| В9 | SNPWG | Н | Underkeel clearance/allowance | 2011 | 2012 2013 | Р | All | <u>S-32</u> | |
| B10 | IHB | Н | Single Beam Echo Sounder | 2011 | 2012 2013 | Р | All | <u>S-32</u> | |
| B11 | UKHO | М | Seafloor | 2012 | 2013 2014 | Р | All | <u>S-32</u> | |
| B12 | UKHO | М | Bathymetry | 2012 | 2013 2014 | Р | All | <u>S-32</u> | |

11.2 HDWG Meetings (IHO WP Task 3.1.8 refers)

No meetings have taken place. HDWG is invited to consider face-to-face meeting in 20132014.

Chair: Jean LAPORTE, France Email: <u>jlaporte@shom.fr</u>

Vice-Chair: Vacant Email:

Secretary: David WYATT, IHB Email: adso@iho.int

12. SCWG WORK PLAN 2014-15

12.1 SCWG Tasks

| <u>A</u> | Define user requirements (IHO Task 2.13.4 refers) |
|----------|---|
| <u>B</u> | Create specification outline and prototype (IHO Task 2.13.4 refers) |
| <u>C</u> | <u>Liaise with Industry experts on the development of a Product Specification for Dynamic Application of Navigationally Significant Surface Currents in ECDIS (IHO Task 2.13.4 refers)</u> |
| D | <u>Liaise with TSMAD on surface current matters and develop, maintain and extend a Product Specification for Dynamic Application of Navigationally Significant Surface Currents in ECDIS (IHO Task 2.13.4 refers) and a Product Specification for the transmission of real-time surface current data (IHO Task 2.13.3 refers)</u> |
| <u>F</u> | Conduct the 2014 and 2015 meetings of SCWG (IHO Task 2.13.1 refers) |

| Task | Work item | Priority H-high M-medium L-low | <u>Milestones</u> | Start Date | End Date | Status P-planned O-ongoing C-completed | Contact Person(s) * indicates leader | Related Pubs/Standard |
|------------|---|--------------------------------|--|---------------|-------------|--|---------------------------------------|-----------------------|
| <u>A.1</u> | Develop a user survey on needs for surface currents | <u>H</u> | Complete final draft | 2013 | 2013 | <u>O</u> | *de Lange Boom All | IHO Resolution 2/2007 |
| <u>A.2</u> | Publish user survey | <u>H</u> | Advertise survey through IHO circular letter | 2013 | 2013 | <u>P</u> | *de Lange Boom All | IHO Resolution 2/2007 |
| | | | Convert draft to survey monkey | 2013 | 2013 | <u>P</u> | *Hess | |
| <u>A.3</u> | Analyse user needs based on survey | <u>H</u> | Produce report with summary of results | 2014 | 2014 | <u>P</u> | *Kuilman, Hess, Moreno | |
| <u>B.1</u> | Create spec outline | <u>H</u> | Create initial outline | 2013 | 2014 | <u>P</u> | *Maltais, Ives, Stone, Pronost | |
| | | | Get SCWG feedback | <u>2013</u> | <u>2014</u> | <u>P</u> | All | |
| | | | Make appropriate revisions and produce final outline | 2013 | 2014 | <u>P</u> | *Maltais, Ives, Stone, Pronost | |

| Task | Work item | Priority H-high M-medium L-low | <u>Milestones</u> | Start Date | End Date | Status P-planned O-ongoing C-completed | Contact Person(s) * indicates leader | Related Pubs/Standard |
|------------|---|--------------------------------|---|---------------|-------------|--|---------------------------------------|-----------------------|
| <u>B.2</u> | Build prototype | <u>H</u> | Develop dynamic mock- up of possibilities | 2013 | 2014 | <u>P</u> | *Maltais, Ives | |
| | | | Demonstrate mock-up to TSMAD and DIPWG | 2014 | 2015 | <u>P</u> | *Maltais, Ives | |
| | | | Develop dynamic prototype of possibilities | <u>2015</u> | <u>2017</u> | <u>P</u> | *Maltais, Ives | |
| C | Liaise with industry experts | M | Contact appropriate product developers | 2013 | 2017 | <u>P</u> | All | |
| | | | Receive feedback | 2013 | 2017 | <u>P</u> | | |
| | | | Revise standards according to feasibility | 2013 | 2017 | <u>P</u> | | |
| D | Liaise with TSMAD and DIPWG on surface current matters relevant to the Dynamic Application of Surface | <u>H</u> | Prepare draft scoping requirements. | 2013 | 2013 | <u>P</u> | *Hess, All | |
| | Currents in ECDIS | | Prepare draft Product Specifications (S10x) for surface current data in S- 100. | 2013 | 2016 | <u>P</u> | <u>All</u> | |

SCWG Meetings (Task F) 12.2

Location Date Activity Silver Spring, USA 29 – 31 May 2013 1st Meeting June/July 2014 Quebec City, Canada 2nd Meeting

Chair: Kurt Hess Email: kurt.hess@noaa.gov

Email: Louis.maltais@dfo-mpo.gc.ca

Vice-Chair: Louis Maltais Secretary: David Wyatt Email: adso@iho.int

13. ABLOS WORK PLAN 2014-15

13.1 ABLOS Tasks

| A | Organise the 8th ABLOS Conference in 2015 (IHO Task 2.12.2) |
|---|--|
| В | Maintain IHO Publication C-51 "Technical Aspects of the Law of the Sea (TALOS) Manual" (IHO Task 2.12.3) |
| С | Deliver a standard training program on the hydrographic aspects of maritime delimitation. (IHO Task 3.5.2) |
| Е | 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 ABLOS business meetings in 2013 and 2014 (IHO Task 2.12.1) |

| 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 8th ABLOS Conference | Н | Finalize title by BM 20Title agreed by 31 Dec 2012 | 2012 2013 | 2015 | <u>€0</u> | All members of ABLOS through Niels Andersen* | N/A | | |
| | | | Organizing committee formed by BM 20 | <u>2013</u> | | <u>P</u> | | | | |
| | | | Dates confirmed by BM 20 Begin advertising | <u>2013</u> | | <u>P</u> | | | | |
| | | | | <u>2013</u> | | <u>L</u> | | | | |
| B1 | Prepare draft 5th Edition of C-51 (TALOS Manual) for adoption by Member States | Н | Review chapters 3 & 5 by 15 Nov 2012 | 2011 | 2012 2013 | <u> </u> | Chris Carleton*, Sunil Bisnath, John Brown, Shin | IHO Publication | | |
| | | | Review full draft edition by 31 Dec 2012 | 2012 | 2013 | <u>C</u> | Tani and I Made Andi Arsana | C-51 | | |
| | | | Complete all amendments by 31 Jan 2013 | <u>2013</u> | 2013 | <u>C</u> | | | | |
| | | | Pass to HSSC for endorsement by 15 Feb 2013 | <u>2013</u> | <u>2013</u> | <u>o</u> | | | | |
| | | | | CL to MS for approval 1 May 2013 | <u>2013</u> | <u>2013</u> | <u>P</u> | | | |
| | | | Circulate to IAG 1Jul 2013 | <u>2013</u> | <u>2014</u> | <u>P</u> | | | | |
| B2 | Review C-51 5 th Edition for any necessary updating. | Н | Identify areas requiring updating by BM 20 | 2013 | 2015 | Р | Chris Carleton*, Sunil Bisnath, John Brown, David Wyatt | IHO Publication C-51 | | |

| 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 |
|-----------|---|---|----------------|---------------|-------------|---|--|-------------------------------|---|
| <u>B3</u> | Prepare draft 6th Edition of C-51 (TALOS Manual) for adoption by Member States | M | | 2013 | 2015 | <u>P</u> | Chris Carleton*, Sunil Bisnath, John Brown | IHO Publication C-51 | |
| C1 | Deliver standard training programmes for the CBSC | Н | | 2011 | Continuous | 0 | John Brown* | | Workshops planned in 2013, 2014, 2016 and 2017 in the CBSC Work Plan. |
| E1 | Provide advice and guidance on the technical aspect of the Law of the Sea | Н | | Continuous | | 0 | All members of ABLOS through the Chair | | |

13.2 ABLOS Meetings (Tasks A & D)

Date Location Activity

1&6 Oct 2012 IHB, Monaco ABLOS 19 and 7th ABLOS Conference

 28-29 Oct 2013
 Muscat, Oman
 ABLOS 20

 October 2014
 ABLOS 21

2015 IHB, Monaco ABLOS 22 and 8th ABLOS Conference

Chair: Sunil BISNATH Email: sbisnath@yorku.ca
Vice-Chair: John BROWN Email: john.brown@ukho.gov.uk

Secretary: David WYATT Email: adso@iho.int