



IHB File N° S1/1001/WP

CIRCULAR LETTER 14/2016
15 March 2016

**REPORT ON THE OVERALL STATUS OF THE IHO WORK PROGRAMME
END OF 2015**

References:

- A. EIHC-5 - Decision No. 3 (*PRO. 5 - Improving the total cost estimate of the IHO tasks for the definition of a prioritized Work Programme*);
- B. IHO Circular Letter 17/2015 dated 24 February - *Report on the overall status of the IHO Work Programme - end of 2014*;
- C. IHO Circular Letter 66/2015 dated 2 September 2015 - *Report on the overall Status of the IHO Work Programme - mid-year 2015*.

Dear Hydrographer,

Background

1. Decision No. 3 of the 5th Extraordinary International Hydrographic Conference (EIHC-5) introduced a six-monthly reporting regime to help assess the progress of the IHO Work Programme (see Reference A). The status reports at the end of 2014 and at mid-year 2015 were circulated to Member States in February and September 2015 (see References B and C). This Circular Letter provides a report for the next reporting point - second semester of 2015.

2. On 1 February 2016, the Directing Committee invited the Chairs of Regional Hydrographic Commissions, Committees, Sub-Committees and Working Groups and the Director of the IHO Data Centre for Digital Bathymetry (DCDB) to report by 01 March 2016 on the overall status of their respective work programme. A reporting template was provided to achieve this.

Outcome at the end of 2015

3. 19 of 41 Chairs provided a report for the period July to December 2015. This represents a response rate of about 46%, significantly lower than the response rates for the two previous reporting periods. The inventory of the responses to the three biannual surveys is provided in Annex A.

4. As directed by EIHC-5, the Directing Committee is providing in Annex B a brief summary of the reports received. The reports themselves are reproduced in Annex C (*in English only*).

Main areas of concern reported

5. Based on the reports received, the Directing Committee notes that the limited expertise available to the relevant working groups may hinder progress in addressing portrayal and data protection issues related to the development of the S-100 framework. Also, further delays in revising Edition 5.0.0 of IHO Publication S-58 - *ENC Validation Checks* may affect the implementation of mandatory checks to ensure that ENCs do not contain any critical errors.

6. No significant shortcomings have been reported in the execution of the IRCC work programme.

Feedback

7. Seven Member States provided comments in response to Reference C: Argentina, Chile, Mauritius, Nigeria, Spain, Sweden and United Kingdom. Their responses are provided in Annex D.

8. Noting the small number of comments and the mix of opinions on the usefulness and frequency of the reports that they reflect, the Directing Committee invites further feedback from Member States on the reporting process at their earliest convenience and **not later than 31 May 2016**. The comments from the Member States will be collated by the Directing Committee to inform the re-consideration of the reporting process by the next IHO Conference/Assembly in 2017, as provided by the Conference Decision at Reference A.

Next Reporting Period

9. In accordance with the Conference Decision at Reference A, the Directing Committee will issue its next request for six-monthly reports in July 2016.

On behalf of the Directing Committee
Yours sincerely,



Robert WARD
President

Annexes:

- A. Inventory of the responses to the three bi-annual surveys
- B. Compilation of the Status Reports from IHO bodies and inter-organizational bodies involving the IHO - End of 2015
- C. Status Reports received (*in English only*)
- D. Responses from Member States to IHO CL 66/2015

Copy (by e-mail):

- Chairs and Vice-Chairs of IHO bodies
- Chairs and Vice-Chairs of inter-organizational bodies involving the IHO

INVENTORY OF THE RESPONSES TO THE THREE BI-ANNUAL SURVEYS

IHO bodies and inter-organizational bodies	Reports at end of 2014	Reports at mid-2015	Reports at end of 2015	Comments
HSSC	Yes	Yes	Yes	
S-100WG	Yes	Yes	Yes	
ENCWG	Yes (DIPWG)	Yes	Yes	
DPSWG	Yes	Yes	Yes	
NIPWG		Yes	Yes	
NCWG	Yes	Yes	Yes	
DQWG	Yes	Yes	No report	
TWCWG	Yes (SCWG)	Yes	No report	
HDWG	No report	Yes	Yes	
ABLOS	No report	(late submission)	No report	
IRCC	Yes	Yes	No report	
HCA	Yes	Yes	No report	
WWNWS-SC	Yes	Yes	Yes	
CBSC	Yes	No report	No report	
WEND-WG	Yes	Yes	Yes	
IENWG	Yes	Yes	Yes	
MSDIWG	Yes	No report	No report	
CSBWG	Not Applicable	Not Applicable	No report	CSBWG established by IRCC7 (June 2015)
IBSC	No report	No report	No report	
GEBCO-GC	Yes	Yes	No report	
TSCOM	Yes	Yes	Yes	Joint reports
SCRUM				
SCUFN	Yes	Yes	Yes	
DCDB	No report	No report	No report	
NHC	No report	No report	No report	
NSHC	Yes	Yes	Yes	
MBSHC	No report	No report	No report	
BSHC	No report	No report	No report	
USCHC	No report	No report	No report	
EAHC	No report	No report	No report	
EAtHC	Yes	Yes	Yes	
SEPRHC	No report	No report	No report	
SWPHC	No report	No report	No report	
MACHC	Yes	Yes	Yes	
SAIHC	Yes	Yes	Yes	
NIOHC	Yes	No report	Yes	
RSAHC	No report	No report	No report	
SWAtHC	No report	No report	No report	
ARHC	No report	No report	No report	
FC	Yes	Yes	No report	
SRWG	Yes	Yes	Yes	

**COMPILATION OF THE STATUS REPORTS FROM IHO BODIES AND
INTER-ORGANIZATIONAL BODIES INVOLVING THE IHO - END OF 2015**

Number of responses

1. The Chairs of 19 bodies responded to the IHB request by 1 March 2016. The following 22 bodies did not provide any report:

- subsidiary bodies:
FC
- subordinate organs of HSSC:
DQWG, TWCWG
- subordinate organ of IRCC:
IRCC, HCA, CBSC, CSBWG, MSDIWG, DCDB
-
- Regional Hydrographic Commissions:
ARHC, BSHC, EAHC, MBSHC, NHC, RSAHC, SEPRHC, SWAtHC, SWPHC, USCHC
- Inter-organizational bodies: ABLOS, IBSC, GEBCO GC.

Status of the work programme of the HSSC

2. The development of S-100 and the evolution of the S-100 Registry have benefited from additional dedicated support kindly provided by the Republic of Korea and the USA. However, the limited expertise available may hinder progress in addressing S-100-related portrayal and data protection issues.

3. The report of the ENC Standards Maintenance Working Group (ENCWG) identifies a new technical issue which may delay the preparation of Edition 5.1.0 of IHO Publication S-58 - *ENC Validation Checks*. The implementation of mandatory checks ensuring that ENCs do not contain any critical errors is dependent on the completion of the revision of S-58, Edition 5.0.0.

4. It is likely that both the Vice-Chair and the Chair of the Nautical Cartography Working Group (NCWG) will have to be replaced successively following their expected retirement. Nominees for the election of the new Vice-Chair at the next NCWG meeting (April 2016) should stand ready to assume the role of Chair in the near future.

5. The development through the Wikipedia Foundation of a multi-language Wiki Demonstrator seems to be a promising prospect for supporting the on-line Hydrographic Dictionary S-32.

Status of the work programmes of the Regional Hydrographic Commissions

6. Only five out of the 15 RHCs provided a report.

7. Lack of awareness and the under-development of hydrographic capabilities are the main issues reported.

Status of the work programme of the IRCC

8. No significant issue is reported.

STATUS REPORTS RECEIVED – END OF 2015

Contents:

- HSSC
- S-100WG
- ENCWG
- DPSWG
- NIPWG
- NCWG
- HDWG

- NSHC
- EAHC
- MACHC
- SAIHC
- NIOHC

- WWNWS-SC
- WEND-WG
- IENWG
- TSCOM & SCRUM
- SCUFN

- SRWG

HSSC REPORT

Overall status of the work programme of **Hydrographic Standards and Services Committee (HSSC)**

Compiled by Dr Mathias Jonas - e-mail address: mathias.jonas@bsh.de

Current goals and priorities	Current or expected gaps and needs	Comments
Maintenance of current ECDIS standards: implementation of the new editions of S-52, S-52 Presentation Library, S-58, S-63 and S-64	Coordination with IEC and IMO	Request of industry to extend by one year, until 31 August 2017, the transition period for upgrading existing ECDIS systems to meet the revised set of IHO and IEC standards which came into force on 31 August 2015 for new ECDIS systems
	Creation of edition 2.0 of S-63 for S-10x data Products behind schedule	Planned for a draft to be circulated prior to meeting in March 2016.
Development of S-100 and S-100 based product specifications	Due to IT reasons reengineering of the registry structure and the register interface required	NOAA and ROK work on it
	Delayed completion of the portrayal catalogue builder for S-101	Pending completion of the reengineering of the registry structure and interface but lack of funding as well. Need to explore the use of the S-52 Presentation Library funds of the IHO special project funds.
	S-102 still needs to establish both a feature and portrayal catalogue for machine readability. It also needs to propose the encoding that will be used for this product to S-100 edition 2.1.0	Pending completion of the reengineering of the registry structure and interface (see above)

S-100WG REPORT

Overall status of the work programme of the **S-100 Working Group**

Compiled by Julia Powell - e-mail address: Julia.Powell@noaa.gov

Current goals and priorities	Current or expected gaps and needs	Comments
Develop an S-100 Interoperability Guidebook	Currently this project is on track.	Have secured funding via a Korea-NOAA agreement to provide the initial scope of work.
Publish edition 3.0.0 of S-100	After the S100WG01 meeting in March plan needs to be developed for the review and finalization of S-100 ed. 3.0.0	Edition 3.0.0 will include a new encoding format and proposed corrections and clarifications as a result of the S-100 test bed activities.
Prepare a New Edition of S-102	S-102 still needs to establish both a feature and portrayal catalogue for machine readability. It also needs to propose the encoding that will be used for this product to S-100 edition 2.1.0	
Update the S-100 Portrayal Catalogue Builder (PCB)	The PCB has not been used to develop S-100 based portrayal catalogues as the focus has been on updating the other pieces of S-100 infrastructure. Because of the lack of extensive testing and some changes to the S-100 Register infrastructure the PCB may need to have some additional upgrades and functionality added.	Need to explore the use of the S-52 Presentation Library funds of the IHO special project funds.

ENCWG REPORT

Overall status of the work programme of **Electronic Navigational Chart WG (ENC WG)**

Compiled by: **Thomas Mellor** - e-mail address: Thomas.Mellor@ukho.gov.uk

Current goals and priorities	Current or expected gaps and needs	Comments
S-52 Presentation Library - Clarify issues reported by OEMs during recent type approval tests.	On track	S-52 Presentation Library edition 4.0.1 was issued in June 2015. A number of comments have been received from OEMs taking ECDIS through type approval with the new standards. These will be addressed at a meeting in Monaco (8-10 Feb 2016) with final approval by the ENCWG in March.
S-64 Clarify issues reported by OEMs during recent type approval tests	On track	A number of comments have been received from OEMs taking ECDIS through type approval with the new standards. These will be addressed at a meeting in Monaco (8-10 Feb 2016) with final approval by the ENCWG in March.
S-58 - 5.1.0 revision currently underway	Caris have identified issues with ISO terms and definitions used to describe spatial operators in 19125-1. ENCWG will have to decide to either define our own definitions for spatial operators, accept them as defined or lobby ISO to update their definitions.	The task will not be able to proceed until this issue with S-58 spatial operator definitions is agreed. This will be considered at ENCWG1 (March 2016)
S-65 review to ensure alignment with the WEND Principles.	Not started	Task group to be established at ENCWG1 (March 2016)
S-66	On track	Since HSSC7 the review of S-66 has been the responsibility of ENCWG. The current draft document and comment form will be reviewed at ENCWG1 (March 2016)

DPSWG REPORT

Overall status of the work programme of **DPSWG**

Compiled by: **Jonathan Pritchard** - e-mail address: jonathan.pritchard@ukho.gov.uk

Current goals and priorities	Current or expected gaps and needs	Comments
Creation of edition 2.0 of S-63 for S-10x data products	Behind schedule. Planned for a draft to be circulated prior to meeting in March 2016. The goal of that meeting is the production of a draft.	A drafting group and DPSWG meeting is scheduled for March 2016 in Tokyo alongside S-100 and S57 WG meetings. This should provide the opportunity to turn the current document into a workable draft. The current document has been circulated to DPSWG members for comment and update. Resource constraints for authoring S-63 are the only issue as most technical elements are now present.
Support to data protection scheme administrators and end users (including ECDIS OEMs)	On track	A reactive function for the DPSWG group. A mixture of simple queries and issues of policy which are progressed with IHB staff. Some discussion over the use of data for non-navigational purposes and licence agreements will be tabled at the DPSWG meeting in Tokyo.
Input into other IHO work groups on S-63 2.0 structure.	On track	Papers clarifying responsibilities and metadata updates to S-100 will be presented at S-100WG meeting in Tokyo. This reflects structural agreements made by DPSWG in previous meetings and provides a framework for completion of the draft 2.0.

NIPWG REPORT

Overall status of the work programme of NIPWG

Compiled by: **Jens Schröder-Fürstenberg** - e-mail address: jens.schroeder-fuerstenberg@bsh.de

Principal goals or priorities for your group	Current or expected gaps and needs that may prevent completion of tasks on time	Any amplifying comments
Populate the NPUBS domain of the FCD Register (work item F.7)	[NEED] improvement of the registry handling	The registry is under construction and improvement comments based on the testing phase experience have been provided
Develop S-122–Marine Protected Area Product Specification (work item F 8.1)	[GAP] portrayal and data quality parts missing [NEED] harmonization with S-101 data model, feature catalogue builder	Portrayal part is under consideration by the involved WGs, quality model was forwarded to the DQWG for further consideration. The harmonization discussion between the S-100WG/S-101 Project Team and NIPWG is ongoing, the feature catalogue builder is not available
Draft Data Capture and Encoding Guides for Marine Protected Area Product Specification (work item J.2.1.1)	[NEED] harmonization with S-101 data model	Both the S-101 and the S-122 data models should be harmonized to the widest possible extent. The next phase is to await the next S-100WG meeting where the DCEG improvements will be discussed
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)	[NEED] specification of the intended operation of/between different product specifications	The issue is under consideration by the S-100WG, Unique identifier proposals are under consideration

Principal goals or priorities for your group	Current or expected gaps and needs that may prevent completion of tasks on time	Any amplifying comments
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	[GAP] MSP specification	MSPs in their current status of development have not been accepted by the IMO. Further improvements and clarifications are requested and should be provided by mid-2016.
Develop a test and implementation plan for the development of the MSP “hydrographic services” (Work item H)	[GAP] MSP specification	MSPs in their current status of development have not been accepted by the IMO. Further improvements and clarifications are requested and should be provided by 2016. A MSP named “hydrographic services” doesn’t exist at the time when this report was been compiled.

NCWG REPORT

Overall status of the work programme of the **Nautical Cartography Working Group (NCWG)**

Compiled by **Jeff Wootton** - e-mail address: jeff.wootton@defence.gov.au

Principal goals or priorities for your group	Current or expected gaps and needs that may prevent completion of tasks on time	Any amplifying comments
(A) Maintain and extend Publication S-4 'Chart Specifications of the IHO & Regulations of the IHO for INT Charts' (IHO Task 2.3.2) and Maintenance of S-4 supplementary publications INT 1, 2 & 3 (IHO Task 2.3.2).	Issue with requirement to conform to IHO Resolution 2/2007 for S-4 and coordination of publication of associated (IHO adopted) national INT1 publications (DE, FR, ES).	Raised at HSSC7 (November 2015). Will be further discussed in association with NCWG detailed procedures at NCWG2 (April 2016) and at the HSSC Chair Group meeting (June 2016).
(B) Consideration of the future of the paper chart (NCWG Work Item A.16)	Likely retirement of the WG Chair may stall discussions.	Top priority work item assigned at HSSC7. Correspondence Group identified but little correspondence to date due to conflicting priorities of WG Chair. Discussion paper to be presented at NCWG2. It is hoped that the succeeding Chair* of the WG will be able to continue to progress this item.
(C) Maintain and extend Publication S-11 Part A, Guidance for the Preparation and Maintenance of INT Chart Schemes (IHO Task 2.3.2).	None.	Revised draft based on decisions and actions from HSSC7 to be presented at NCWG2.
(D) Development of new (and revised) symbology (IHO Task 2.3.2).	Actions HSSC7/18 and HSSC7/20 relate to ECDIS portrayal. The NCWG is in the early stages of transitioning from a focus almost exclusively on symbology for paper charts to providing subject matter expertise related to presentation and portrayal for all nautical charting products. This expertise in regard to ECDIS may take some time to build, and accessibility to S-100 test beds and test data will be required.	To be discussed at NCWG2. Liaison with other HSSC Working Groups such as the S-100WG, ENCWG and NIPWG; and consultation with expert contributors such as OEMs, is considered essential.

* NOTE: The current Vice-Chair of the WG will be retiring end of March 2016, and it is expected that the Chair of the WG will be retiring in the latter half of the year. A new Vice-Chair will be elected at the NCWG2 meeting (April 2016), with an expectation that the newly elected Vice-Chair will assume the role of Chair of the WG on retirement of the current Chair, in line with HSSC procedures.

HDWG REPORT

Overall status of the work programme of **HDWG**

Compiled by: **Jean Laporte, HDWG Chairman** - e-mail address: JLaporte@argans.co.uk; jlaporte@shom.fr

Current goals and priorities	Current or expected gaps and needs	Comments
<p>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</p>	<p>Thanks to the secondment of a Peruvian officer, and the Wikipedia initiative explained below, the future of the Hydrographic Dictionary, which was lagging abominably, is suddenly looking much brighter</p>	<p>Since August 2015, Captain Luis Hernandez, Peruvian Navy, has been seconded to the IHO to work on the Hydrographic Dictionary, in particular to generate an up to date searchable digital Spanish version to be published on the IHO website. He has brought a Word version up to date with all the changes from before 2000, removed the English references and sorted it into Spanish alphabetical order, the unique reference numbers have been maintained.</p> <p>He is now tackling the duplicate words and identifying terms which he considers are not hydrographic terms or not in usage any longer; and which should eventually be removed.</p>
<p>Review the approved definitions of Altitude, Elevation and Height</p>	<p>Task delayed due amongst other circumstances to the changes affecting the new TWCWG and NCWG. It had been agreed with the 2 previous chairmen that they should propose a common definition, but the issue has not been addressed</p>	<ol style="list-style-type: none"> 1. The new TWCWG chair lady has been approached and hopefully, the definition will be mentioned at the TWCWG April 2016 meeting and the issue revived 2. It is envisaged to enter the S-100 unambiguous definition in the S-32 under a special caption, so as not to alter the traditional definitions, which are still used by non-S-100 lesser mortals.

Current goals and priorities	Current or expected gaps and needs	Comments
To investigate options (scope, format / content management system, languages, cross-references, maintenance regime, ...) and associated resource requirements and timeline to produce [and maintain] a reference edition of S-32	The tentative draft TO and Business rules upgrade are ready and could be finalised during a meeting in Monaco at a date still to be agreed (May 2016 would be ideal)	<p>1. Thanks to Wikipedia, a major change is about to occur with synoptic presentations in many languages against the unique approved IHO reference and the reintroduction of much regretted index numbers.</p> <p>2. A report will be prepared to explain the changes that could take place, after a thorough examination of the Wiki Demonstrator which, so far, is most impressive.</p>

NSHC REPORT

Overall status of the work programme of NSHC

Compiled by: **Leendert Dorst, Hydrographic Service of the Royal Netherlands Navy** - e-mail address: LL.Dorst@mindef.nl

Current goals and priorities	Current or expected gaps and needs	Comments
shared European contacts and projects	None	in cooperation with other European RHCs in the IENWG
shared progress to reach an up to date bathymetric coverage of the North Sea	<ol style="list-style-type: none"> 1. limited survey capacity; 2. lack of a basin-wide risk assessment 	<ol style="list-style-type: none"> 1. resurvey strategies for dynamic areas and emerging survey methods (LIDAR, SDB, CSB) are taken into account 2. value of a basin-wide risk assessment, as well as the feasibility of the associated tasks, need to be re-evaluated at NHSC32
shared experiences relating to Marine Spatial Data Infrastructures	none	through establishing a BSHC/NSHC MSDI Working Group
shared progress on the establishment of vertical reference frames	lack of an international initiative to establish a consistent set of references for the entire North Sea area	<ol style="list-style-type: none"> 1. includes national Chart Datums, references suitable for the coastal zone, and Ellipsoidally Referenced Surveying 2. task is coordinated by the NSHC Tidal WG 3. the current situation will be described by the Coastal Mapping project of the European Commission (DG Mare), action item "assess consistency of the existing vertical datums"
online publication of the North Sea Bathymetry Database at the new web site of NSHC		This results in: (a) a contribution to the further development of EMODNet, (b) assistance in survey prioritization, and (c) data availability to society in line with the PSI Directive.

EAtHC REPORT

Overall status of the work programme ofEAtHC.....

Compiled by ... **CV A.DIHAJI (DHOC, MOROCCO)** - e-mail address: **affairmar.dhoc@gmail.com**

Principal goals or priorities for your group	Current or expected gaps and needs that may prevent completion of tasks on time	Any amplifying comments
Continue to engage coastal states of the region to apply to IHO membership.	//	Republic of Congo is a new pending to approval by IHO member States to IHO membership (CL 67/2015)
Cooperation with a regional organizations in the region	//	CL about cooperation between the Maritime Organization of West and Central Africa (MOWCA) and IHO was submitted for Member States to provide comments by correspondence procedure.
Raising the awareness of the importance of hydrography in the Region and promoting capacity building.	Deficiency of awareness of political deciders in the region on the importance of hydrography for the governance of their maritime space by increasing maritime co-activities, which leads to a lack of funding and government support.	For example: - Technical visit to Liberia postponed to 2016; - High level visit to MOWCA postponed to 2016; -To suggest to consider including special session on hydrographic capacity as an agenda item for discussion at 38th Annual Council Port Management Association of West and Central Africa (PMAWCA) in 2016, (A letter from Chair of EAtHC was sent to PMAWCA to attend to 37th Annual Council in 2015, without answer) .
Monitoring and improving the status of nautical information, surveys, and charting, developing and implementing INT chart and ENC schemes.	-The need to enhance the data available in the region, for the benefit of national planning or for other applications, such as marine disasters prevention. -Lack of feedback regarding NAVAREA II	

Principal goals or priorities for your group	Current or expected gaps and needs that may prevent completion of tasks on time	Any amplifying comments
	<p>Points of Contacts, and no points of contact at all for some coastal States.</p> <p>-Ports non-covered by large scale ENCs.</p>	
<p>Interest to develop regional hydrographic courses, based on existing African maritime academy.</p>	<p>A few coastal States have national hydrographic organizations. They mainly consist in hydrographic cells under the main port authority.</p>	<p>We note that some actions taken by Côte d'Ivoire to develop its capabilities in hydrography and nautical charting by creation of a Coordination Center of marine Hydrography and Cartography.</p>
<p>Regional Training Course in Hydrographic Field Operator for Francophone Africa</p>		

MACHC REPORT

Overall status of the work programme of MACHC

Compiled by: **Leendert Dorst, Hydrographic Service of the Royal Netherlands Navy** - e-mail address: LL.Dorst@mindef.nl

Current goals and priorities	Current or expected gaps and needs	Comments
increase membership and regional cooperation	developments on the use of Spanish needed	<ol style="list-style-type: none"> 1. Membership is growing. The MACHC welcomed the Dominican Republic as an associate member in December. 2. Strong participation of industry during the MACHC Conferences.
shared progress to reach an up to date bathymetric coverage of the MACHC area	<ol style="list-style-type: none"> 1. limited survey capacity; 2. lack of a basin-wide risk assessment 	<ol style="list-style-type: none"> 1. emerging survey methods (LIDAR, SDB, CSB) are taken into account 2. developments on risk assessment methodologies are followed closely
achieve full ENC coverage	None	<ol style="list-style-type: none"> 1. coordinated by the MACHC Integrated Charting Committee. 2. of the 799 current and planned ENCs required to meet WEND principles for adequate ENC coverage, 685 are currently published and available (86%). The number is growing steadily.
ensure all coastal states reach CB Phase 1 status.	None	<ol style="list-style-type: none"> 1. coordinated by the MACHC CB Committee. 2. The requirement to deliver capacity building activities in Spanish is being met. 3. Annual Hydrographic Awareness Seminars are organized in conjunction with MACHC meetings to raise awareness in the region.
contribute to a regional marine SDI through the Marine Environmental Infrastructure Programme (MEIP) of MACHC.	None	<ol style="list-style-type: none"> 1. coordinated by the MACHC MEIP WG. 2. The MACHC ENC Online database will be available without password protection.

SAIHC REPORT

Overall status of the work programme ofSAIHC.....

Compiled by ...**Captain Abri Kampfer** - e-mail address: hydrosan@iafrica.com

Principal goals or priorities for your group	Current or expected gaps and needs that may prevent completion of tasks on time	Any amplifying comments
<p>Promote technical co-operation in the domain of hydrographic surveying, marine cartography, and nautical information within the Region</p>	<p>Majority of Associate Member States in region have still not achieved Phase 1 hydrographic development.</p>	<p>Shortcomings have been identified during technical visits within the region and are being addressed through the SAIHC Capacity Building Strategy. National reports presented at the SAIHC Conference allow the opportunity for Associate Member States to provide feedback on progress and request specific support. Next ICCWG and SAIHC Conference scheduled to be held in Cape Town from 29 to 31 August 2016.</p>
<p>Stimulate all countries within the Region to widen hydrographic activity in the area and to encourage them to seek technical advice and assistance from the IHB in establishing and strengthening their hydrographic capabilities in order to promote safe navigation and create an environment within which economic development may take place</p>	<p>Lack of funding and government support. High level interaction required to inform decision makers at the political levels of Government to create awareness and garner support for in-country officials.</p>	<p>Visits by IHB President identified as a SAIHC Capacity Building priority. CBSC 13 approved a SAIHC requirement for a High level visit to Tanzania by IHB President and SAIHC Chair for 2016. CB Coordinator in process to establish most suitable date.</p>
<p>Facilitate the exchange of information concerning surveys, research or scientific and technical developments, to aid in the planning and organisation of hydrographic activities</p>	<p>The lack of functioning hydrographic offices and National Hydrographic Committees create some difficulty to obtain information.</p>	<p>SAIHC Conference and SAIHC ICCWG are used to communicate the requirements and obtain information from delegates. Between scheduled conferences there is only communication with INT Chart producers and no feedback from Associate Member countries</p>

Principal goals or priorities for your group	Current or expected gaps and needs that may prevent completion of tasks on time	Any amplifying comments
Conduct Capacity Building projects as approved by CBSC	One training event, the Phase 1 Skills Course, transferred from 2015 to 2016 due to difficulty to find a suitable host country	The Technical Aspects of Maritime Boundaries and Baselines Workshop was successfully conducted in Fish Hoek, South Africa and a report has been submitted. Difficulty experienced with the hosting of the Phase 1 Skills Course, but there is confidence to still execute the course in June 2016 in Namibia. Two events planned for 2016 execution is the High Level Visit to Tanzania and MBES setting to work project for Mozambique.

NIOHC REPORT

Overall status of the work programme of.....**NIOHC**

Compiled by: **Commodore Mahmudul Hassan**

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Current goals and priorities	Current or expected gaps and needs	Comments
NICCWG Production and maintenance of INT chart and ENC schemes for the NIOHC region.	None	Ongoing Will be updated at the next NICCWG meeting in March 16
NIOHC CB CB plan revised annually at the NIOHC meeting as per MS requirements. CB events planned and undertaken.	None	Ongoing Will be updated at the next NIOHC meeting in March 16
Other IHO bodies Responding to actions and reports as required by other IHO bodies eg. IRCC, WEND-WG	None	Ongoing

WWNWS-SC REPORT

Overall status of the work programme of: **WWNWS-SC**

Compiled by: **Peter Doherty – Chairman WWNWS-SC** - e-mail address: peter.m.doherty@nga.mil

Current goals and priorities	Current or expected gaps and needs	Comments
Maritime Safety Information Training Course	Travel expense for 2 Instructors, anticipated via CB funding.	2 courses per year, 2 instructors per course
Maritime Safety Information Document Review Work Group	None expected.	WG supports review and standardization of IMO, WMO, IHO common MSI documents. Chairman supports through IMO NCSR. Conclusion of IHO/WMO MoU expected to increase WMO participation.
S-124 Working Group	None at this time. WG has the right mix of National MSI authorities and Industry Partners.	WG contributes to the modernization of GMDSS via e-navigation. Longer term engagement of MS in S-124 development considered fragile and could retard S delivery. Harmonization with IALA e-navigation initiative considered vital.
Review of the Iridium proposal as a GMDSS Satellite Service Provider	None expected.	Review of Iridium proposal and various documentation via WWNWS-SC meetings interaction with IMO and WMO. Longer term challenges for NAVAREA coordinators' service delivery via two satellite providers to be considered and explored with IMO.

WEND-WG REPORT

Overall status of the work programme of **WEND-WG**

Compiled by: **Mark Halliwell (for Capt Jamie McMichael-Phillips)** - e-mail address: mark.halliwell@ukho.gov.uk

Current goals and priorities	Current or expected gaps and needs	Comments
Overlapping ENC Issues	None	Four main items, all of which are complete (including establishment of document repository on IHO website), or are in progress.
RENC Harmonization and Distribution	None	Joint RENC report on benefits of joining a RENC published on IHO website.
ENC Coverage	None	UKHO continues to provide up-to-date statistics on ENC coverage and a list of ports and moorings.
IHO Performance Indicators, IHO ENC Catalogue	None	Updated Programme of Work published on IHO website. Other items are in progress.
The Full Implementation of the WEND Principles	None	A report of the correspondence group has been completed and is available on the IHO website. It will be discussed at WENDWG6 in March.
Admiralty Information Overlays	None	Status Report by UKHO and Proposals paper by other MSs have been published. Will be discussed at WENDWG6 in March.

IENWG REPORT
26 January 2016 (last IENWG meeting held in St-Mandé 18-19 January 2016)

Overall status of the work programme of **IHO-EC network WG**

Compiled by **Laurent Kerléguer** - e-mail address: laurent.kerleguer@shom.fr

Principal goals or priorities for your group	Current or expected gaps and needs that may prevent completion of tasks on time	Any amplifying comments
To monitor the outcome of the EC call for tender “Coastal mapping”		<p>The European Commission’s Directorate-General for Maritime Affairs and Fisheries (DG Mare) has awarded a contract on coastal mapping call MARE/2014/10 to the 18 partners’ consortium led by SHOM. Duration of the contract is 36 months.</p> <p>Kick-off meeting June 2015 in Saint-Mandé.</p> <p>Overall aims of the project are:</p> <ul style="list-style-type: none"> - Assess the current availability of digital coastal maps in the EU - Disseminate this information by EMODnet - Share experience of coastal mapping in the EU - Develop standards for best practices - Propose how a future JECMaP could operate <p>The coastal mapping portal was opened on December 2015.</p>
To prepare the position of European HOs about the future phase of EMODNet, the long term marine data initiative from the European Commission		<p><i>After consulting European HOs of the RHC concerned, IENWG HOs have defined a common strategy relative to the future EMODNET 3 call for tender.</i></p> <p>Still waiting for EMODNET Bathymetry call to be issued by DG MARE.</p>
To improve cooperation with the European Commission, by promoting amongst its entities and with decision makers the role of the hydrographic offices in development of EU maritime policies.		IENWG considering how it could be represented in the Maritime Spatial Planning Expert Group.

Principal goals or priorities for your group	Current or expected gaps and needs that may prevent completion of tasks on time	Any amplifying comments
To monitor European directives, calls for tenders and proposals, projects, events, etc., potentially impacting HOs and to define actions to be conducted in accordance		<p>IENWG considering how EU Directive on Marine Equipment could foster the requirement that software-based equipment such as ECDIS be updated to the latest version of the relevant standards.</p> <p>HOs of EU/EEA have liaised with their relevant administration to make sure that the question of ECDIS maintenance is at the agenda of the next Maritime Equipment Expert Group (http://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetail&groupID=2653). This question has not yet been raised at the MED expert group.</p>

SCRUM/TSCOM REPORT

Overall status of the work programme of**SCRUM/TSCOM**

Compiled by ...**Martin Jakobsson, Karen Marks**... - e-mail address:... Martin.Jakobsson@geo.su.se, Karen.Marks@noaa.gov

Principal goals or priorities for your group	Current or expected gaps and needs that may prevent completion of tasks on time	Any amplifying comments
Request Scripps Oceanographic Institution to release SRTM15 to GEBCO for incorporation into the GEBCO Grid. (GGC32-07) Jakobsson, Tani	In progress	
Appoint new Science Day convener GGC32-23	Completed	Tim Kearns and Jaya Roperez accepted Joint Appointment
Appoint a Vice-Chair for the TSCOM GGC32-10 Marks	In progress	
Release article for GEBCO_2014	Completed	Published in AGU's Earth and Space Science, Aug. 2015, DOI: 10.1002/2015EA000107
Post formal recognition and thanks to Science Day Convener on GEBCO website GGC32-25 Marks, Weatherall	Completed	Formal recognition of Paul Elmore posted on GEBCO website under News and Events
Joint TSCOM/SCRUM Meeting Oct. 2015	Completed	Held in Kuala Lumpur, Malaysia, Oct. 2015
Joint TSCOM/SCRUM Meeting Oct. 2016	Organize meeting and preparation	Valparaiso, Chile Oct. 2016
GEBCO Science Day 2015	Completed	Held in Kuala Lumpur, Malaysia, Oct. 2015
Planning of Arctic and Antarctic mapping meeting in Monaco, June 12-13	Ongoing	Meeting/workshop potential participants are invited. This is a coordinated IBCAO/IBCSO activity

SCUFN REPORT

Overall status of the work programme of**GEBCO/SCUFN**

Compiled by ...**Hans Werner Schenke** - e-mail address: hwschenke@t-online.de

Principal goals or priorities for your group	Current or expected gaps and needs that may prevent completion of tasks on time	Any amplifying comments
Conducting the annual SCUFN-Meeting	None Membership monitoring.	12 – 16 Oct 2015 Niteroi, SCUFN-28 Report is available
Development of S-100 Product Specification for UFN	Coordination between stakeholders and subject matter experts. Need to establish a realistic roadmap prior to any UFN database modelling.	Should be put on the agenda SCUFN-29. Canada volunteered to lead the action.
Maintenance and improvement of the GEBCO Gazetteer	Under work by IHB and NOAA/NCEI. Maintenance of the Gazetteer interface in the future to be discussed at SCUFN-29 as NOAA/NCEI not sure to be able to continue its support.	Definition of the geometric primitives for all undersea feature, monitoring of pending names, quality control of the database, interface with other geospatial portals.
Promotion on SCUFN-activities in international periodicals	Publication is under prep.	Publication of new developments and web-applications in undersea feature nomenclature
Development of an experimental fast-track procedure to review “already-chartered and named” undersea features	Role and responsibilities of national geographical boards in their waters under national jurisdiction.	none

SRWG REPORT

Overall status of the work programme of **SRWG**

Compiled by: **Andrew Millard** - e-mail address: andrew.millard@ukho.gov.uk

Current goals and priorities	Current or expected gaps and needs	Comments
In accordance with ToR of the SRWG:		
Review proposed revised draft regulation Review implementation plan Review proposed job descriptions for directors under new structure	Revised draft regulations received from the President on 22 November 2015. SRWG met by telephone conference and provide our comments back to the President on 4 January 2016. We are waiting to hear back on these comments. The President informed me on 30 January 2016 that travel commitments was causing a delay in his response but hopefully we will be able to move to an agreed regulation document and job descriptions by the end of April 2016 in accordance with the revised timetable agreed between the President and SRWG	

MEMBER STATES' RESPONSES TO IHO CL 66/2015

ARGENTINA

In this regard, we agree with the need to realize periodic analysis with the identification of priority areas, but due to the working dynamic work of this Hydrographic Office, we believe that it is not convenient to require status reports on a biannual basis. Those WG and CHR wishing to provide information that they consider important could do so at their discretion, notwithstanding the current annual cycle.

CHILE

We appreciate very much the decision of the IHB DC to circulate the comments we offered as an answer to CL 7/2015, comments that we strongly continue to support, particularly after considering again the low level of response and the content of the Reports.

Other information provided in the Reports, do not necessarily identify gaps and problems or needs or do not offer any information requiring action from MSs. Therefore the value doesn't seem to be contributing to improve the management of the IHO.

MAURITIUS

Mauritius is agreeable to the report on the overall status of the IHO work programme mid- year 2015.

NIGERIA

The Office (NNHO) is of the opinion that quarterly reporting process should be adopted which is to be followed up with monthly reminder through mail so that Member States will make it a top priority.

SPAIN

The IHM supports the usefulness of biannual reports on Hydrographic Commissions, Committees, Sub-Committees and Working Groups, as we consider that close monitoring on their activities is required for them to be successful.

SWEDEN

In general we agree with the conclusion made by Chile and their analysis on the low rate of responses in regard to the increased workload.

However, we would like to look at this from a slightly different point of view.

The RHCs often have their own work plans and meetings once per year or every second year. At the RHC meetings MS as well as the RHC working groups report the progress within the RHC. Many of the activities in the RHCs, which Sweden is a part of, are reported at the RHC meetings. Considering the few inputs received from RHCs to the IHO Directing Committee, we find that many answers describe long term issues and often in general terms. This could be a sign that a biannually reporting regime might be to overdo it - in the case of RHCs.

However, we believe that the bodies within IHO, that addresses common challenges and follow common decided work plans with clear milestones of strategic interest for every MS, could benefit of the biannually reporting regime (IRCC and HSSC with their Sub organs, GEBCO, ABLOS, etc.).

Sweden therefore proposes:

- that RHCs report annually
- that IHO bodies and sub organs report biannually

UNITED KINGDOM

The UK supports the suggestion by Canada for IHO deadlines to be included in the IHO Calendar of Events posted on the IHO web site. We are concerned that only 4 of the 15 Regional Hydrographic Commissions responded to the Report. Highlighting IHO deadlines in the IHO Calendar of Events will help to improve the engagement by Regional Hydrographic Commissions but further suggestions for improvements to RHC engagement from Member States and the IHB would also be of benefit.