Meso-American - Caribbean Sea Hydrographic Commission (MACHC)

Report of the Hydrographic Services and Standards Committee (HSSC9)

DIRECTORATE OF HYDROGRAPHY AND NAVIGATION/BR

AGENDA ITEM 2.3 / DOC MACHC 18-02.3

International Hydrographic Organization
Organisation Hydrographique Internationale

MACHC18, Varadero, Cuba 27Nov – 02 December 2017

Principal activities and achievements

- Election for HSSC Chair and Vice-Chair:
  - Nominations were: For the position of Chair: **Captain Luigi Sinapi (Italy)**. For the position of Vice-Chair: Captain Ayodeji Olumide Olugbode (Nigeria), **Mr. Mike Prince (Australia)** and Mr. Louis Maltais (Canada).

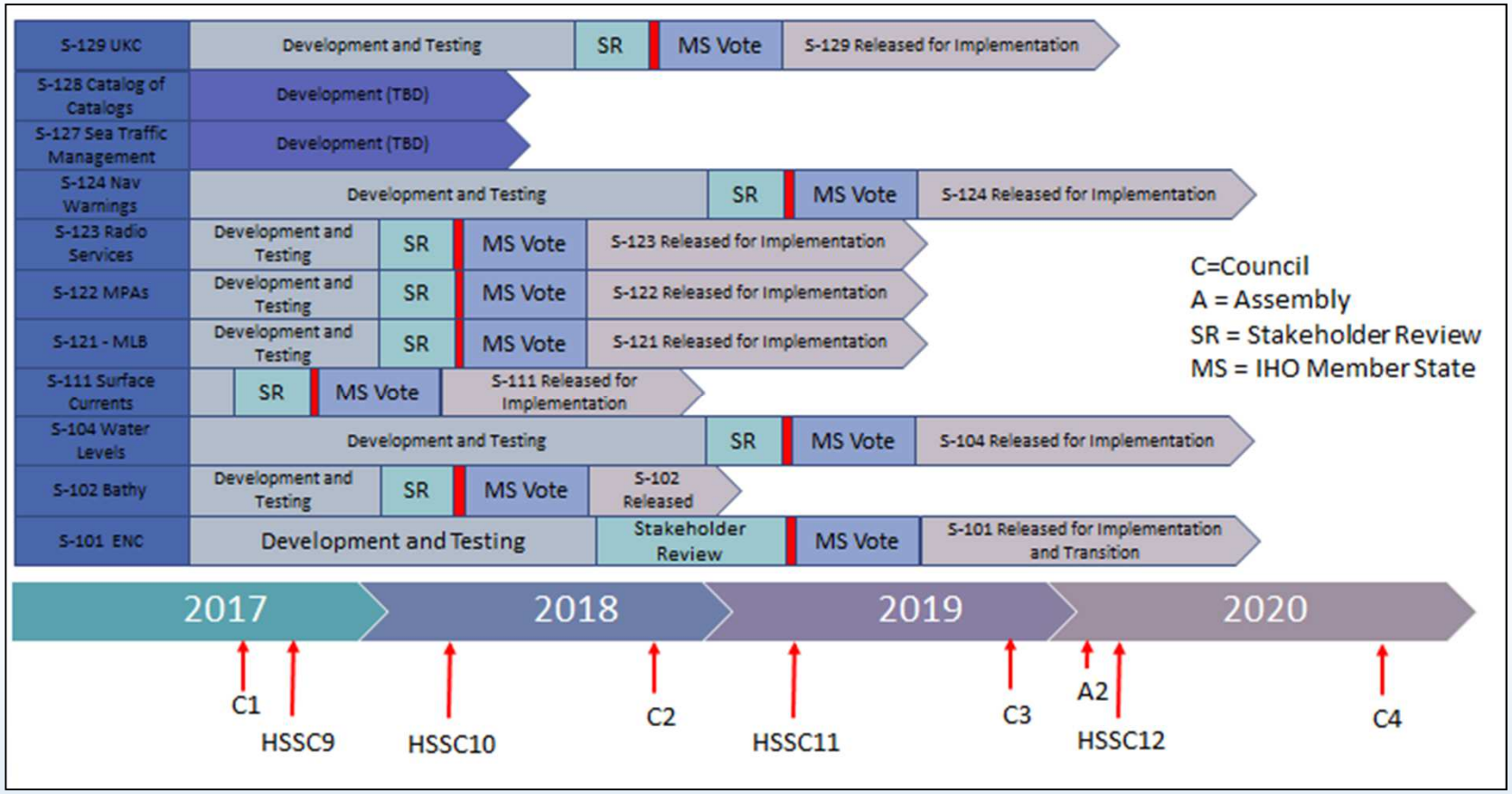
Principal activities and achievements

- S-100 Working Group (S-100WG):

Month/Year	Action	Notes
April 2018	Final Consideration of proposals for the next edition of S-100	S100WG3
May 2018	Notification to HSSC10 of a new edition of S-100	
Early 2019	Publication of next edition of S-100	Edition 4.0.0 (have proposals that extend S-100)
March/April 2020	Final Consideration of proposal for next edition	
May 2020	Notification to HSSC12 of a new edition of S-100	
Early 2021	Publication of the next edition of S-100	

Principal activities and achievements

- S-100WG:



Principal activities and achievements

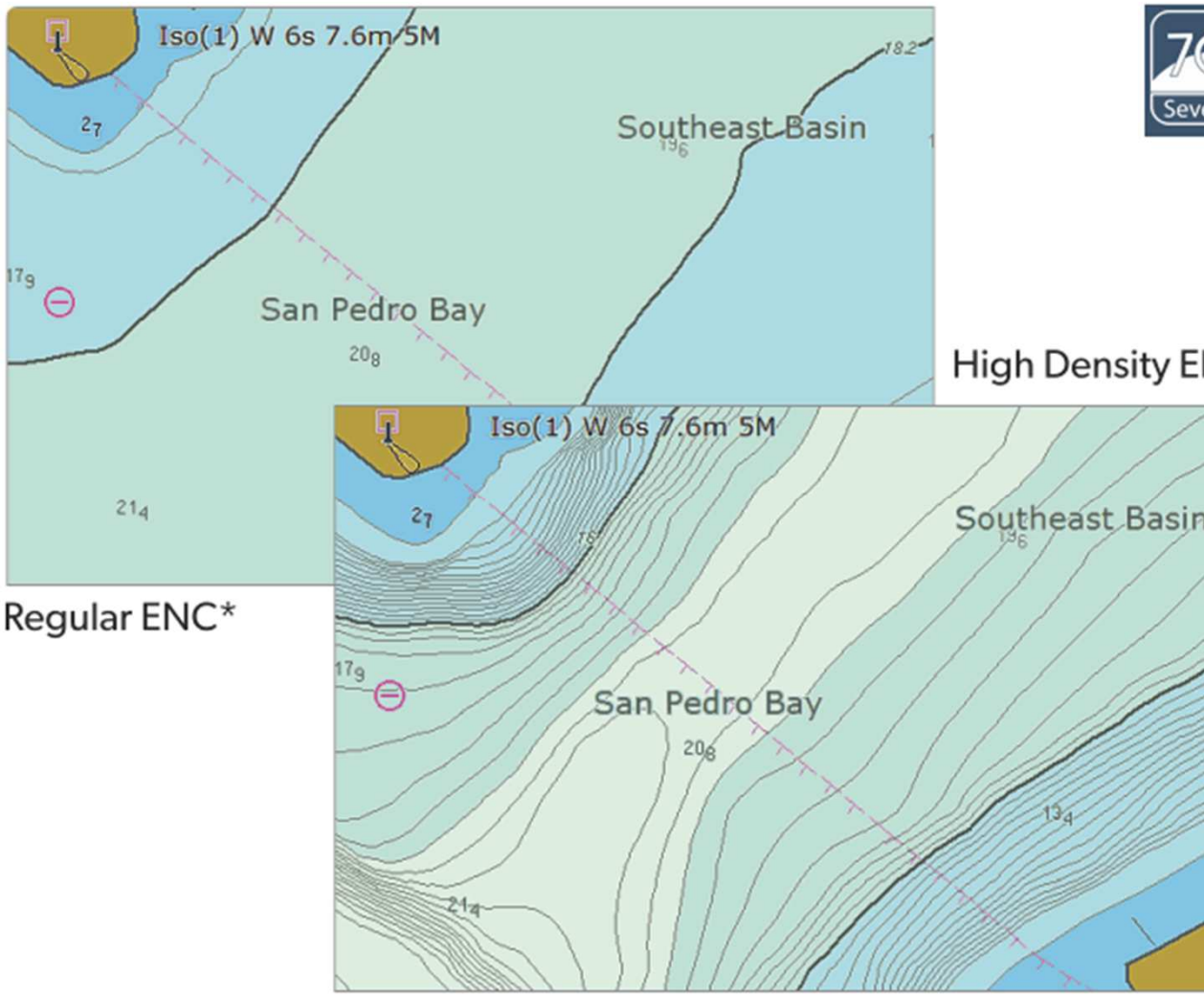
- ENC Standards Maintenance Working Group (ENCWG):
  - S-52 Specifications for Chart Content and Display Aspects of ECDIS ed. 4.0.2, published July 2017 / S-58 ENC Validation Checks ed. 6, published May 2017 / S-64 Test Data Sets (TDS) for Electronic Chart and Display Information System (ECDIS) ed. 3.0.2, published July 2017 / S-65 Test Data Sets (TDS) for Electronic Chart and Display Information System (ECDIS) ed. 2.1.0, published May 2017. Seeking approval: S-57 Use of the Object Catalogue, ed. 4.1.0 (CL 61/2017), S-66 Facts about Electronic Charts and Carriage Requirements, ed. 1.1 (CL 60/2017).

Principal activities and achievements

- ENCWG:
  - Development of Bathymetric ENC: the integration of high-density bathymetry into electronic navigational charts (ENCs) has become a major issue (users requirement). For this purpose, after acquiring, cleaning and modelling the hydrographic survey data, contours at metre (or sub-metre) intervals are generated. The contouring results are then converted into S-57 (the IHO exchange format for ENCs) and encoded accordingly. The next step is the definition and attribution of depth areas, i.e. areas enclosed by adjacent contour lines. The result is a sort of electronic fair-sheet containing bathymetric data in S-57 format.

Principal activities and achievements

- ENCWG:
  - Discussion over the issue of S-57 ENC Prod Spec could support HR bathymetry. Further investigation needed.



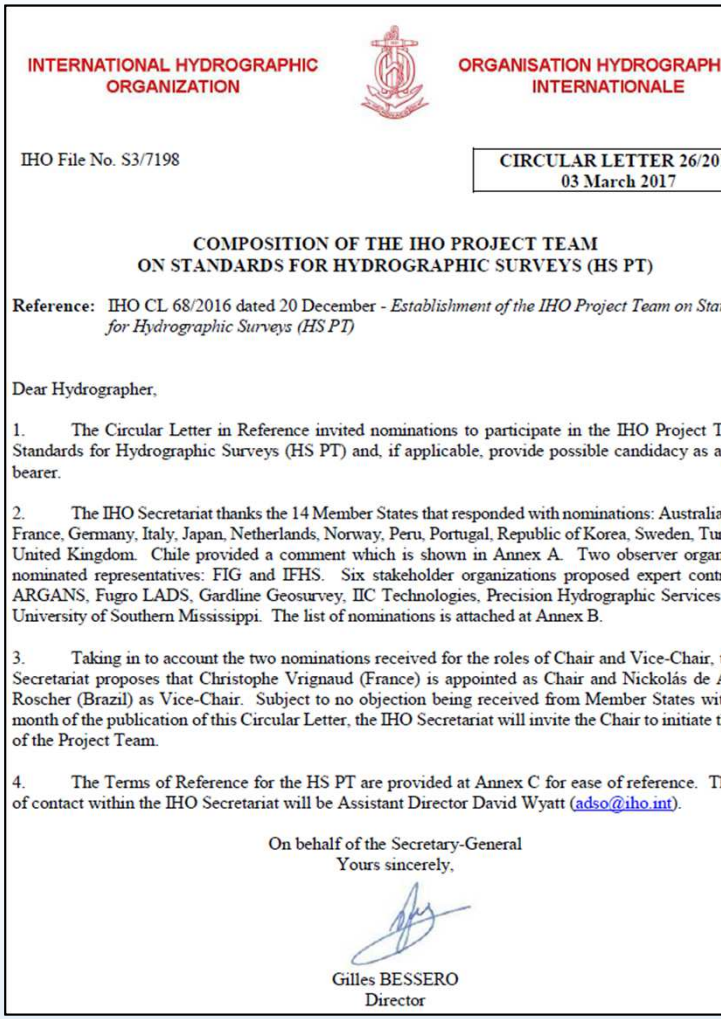
Principal activities and achievements

- Nautical Cartography WG (NCWG):
  - Maintain and extend S-4, Development of new (and revised) symbology. Edition 4.7.0 published, July 2017.
  - Future of the paper chart.
  - Maintain and extend S-11 Part A - Guidance for the Preparation and Maintenance of International (INT) Chart and **ENC Schemes**:
    - Edition 3.0.0 published, June 2017
    - Edition 3.1.0 ready for MS approval (CL 59/2017) [B4]
    - Introduces the 'Basic quality assurance check-list for review of INT charts'

Principal activities and achievements

- Hydrographic Surveys Project Team (HSPT):
  - Circular Letter 26/2017 March 2017: HSPT is tasked by the IHO HSSC "…review the existing edition (5th) of the IHO publication S-44 Standards for Hydrographic Surveys, identify deficiencies…" and "…when undertaking this task, to consider, as a minimum,…" the need to prepare a draft for the 6th ed. "…in support of safety of navigation data products and services…" (HSPT TORs).

44 members (16 States + Observers + Expert Contributors + IHO)



INTERNATIONAL HYDROGRAPHIC ORGANIZATION

ORGANISATION HYDROGRAPH INTERNATIONALE

IHO File No. S3/7198

CIRCULAR LETTER 26/20
03 March 2017

COMPOSITION OF THE IHO PROJECT TEAM
ON STANDARDS FOR HYDROGRAPHIC SURVEYS (HS PT)

Reference: IHO CL 68/2016 dated 20 December - *Establishment of the IHO Project Team on Sta for Hydrographic Surveys (HS PT)*

Dear Hydrographer,

1. The Circular Letter in Reference invited nominations to participate in the IHO Project T Standards for Hydrographic Surveys (HS PT) and, if applicable, provide possible candidacy as a bearer.

2. The IHO Secretariat thanks the 14 Member States that responded with nominations: Australia France, Germany, Italy, Japan, Netherlands, Norway, Peru, Portugal, Republic of Korea, Sweden, Tu United Kingdom. Chile provided a comment which is shown in Annex A. Two observer organ nominated representatives: FIG and IFHS. Six stakeholder organizations proposed expert cont ARGANS, Fugro LADS, Gardline Geosurvey, IIC Technologies, Precision Hydrographic Services University of Southern Mississippi. The list of nominations is attached at Annex B.

3. Taking in to account the two nominations received for the roles of Chair and Vice-Chair, Secretariat proposes that Christophe Vrignaud (France) is appointed as Chair and Nickolás de A Roscher (Brazil) as Vice-Chair. Subject to no objection being received from Member States wi month of the publication of this Circular Letter, the IHO Secretariat will invite the Chair to initiate t of the Project Team.

4. The Terms of Reference for the HS PT are provided at Annex C for ease of reference. T of contact within the IHO Secretariat will be Assistant Director David Wyatt (adso@iho.int).

On behalf of the Secretary-General
Yours sincerely,

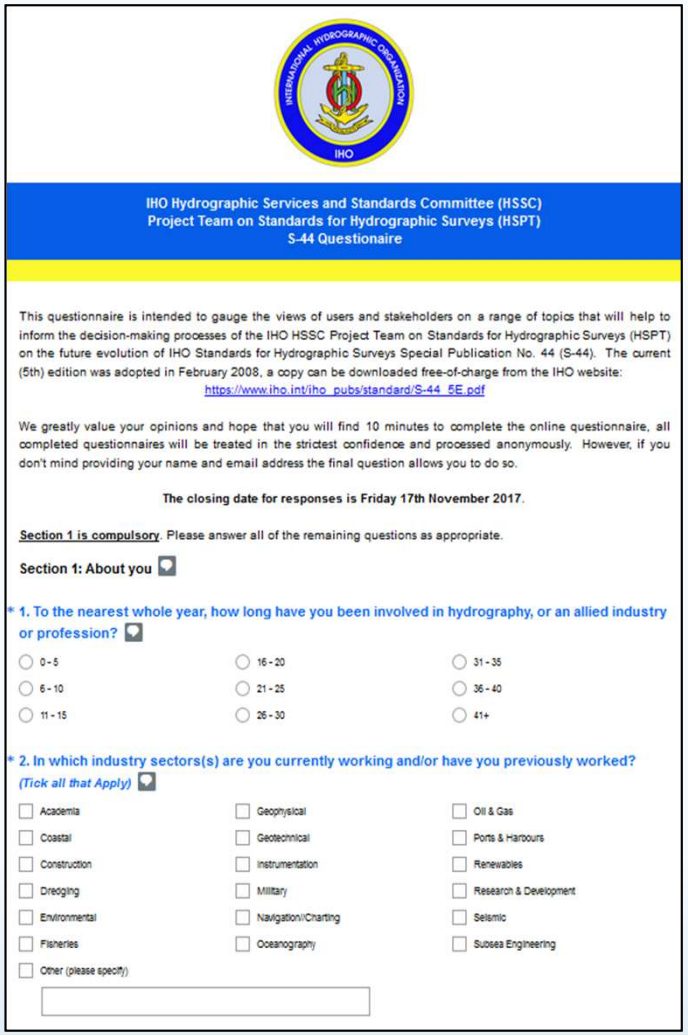
Gilles BESSERO
Director

Principal activities and achievements

- HSPT: discussions about S-44 limitations:
  - Does the S-44 have to deal exclusively with safety of navigation or take into account other hydrographic needs?
  - Questionnaire (available at IHO homepage until end NOV): designed to gauge the views of S-44 users, stakeholders and the wider hydrographic community on a range of topics. By 8th November → 251 replies (62% involved in Navigation and Charting sector).

Principal activities and achievements

- HSPT:



IHO Hydrographic Services and Standards Committee (HSSC)
Project Team on Standards for Hydrographic Surveys (HSPT)
S-44 Questionaire

This questionnaire is intended to gauge the views of users and stakeholders on a range of topics that will help to inform the decision-making processes of the IHO HSSC Project Team on Standards for Hydrographic Surveys (HSPT) on the future evolution of IHO Standards for Hydrographic Surveys Special Publication No. 44 (S-44). The current (5th) edition was adopted in February 2008, a copy can be downloaded free-of-charge from the IHO website:
https://www.iho.int/iho_pubs/standard/S-44_5E.pdf

We greatly value your opinions and hope that you will find 10 minutes to complete the online questionnaire, all completed questionnaires will be treated in the strictest confidence and processed anonymously. However, if you don't mind providing your name and email address the final question allows you to do so.

The closing date for responses is Friday 17th November 2017.

Section 1 is compulsory. Please answer all of the remaining questions as appropriate.

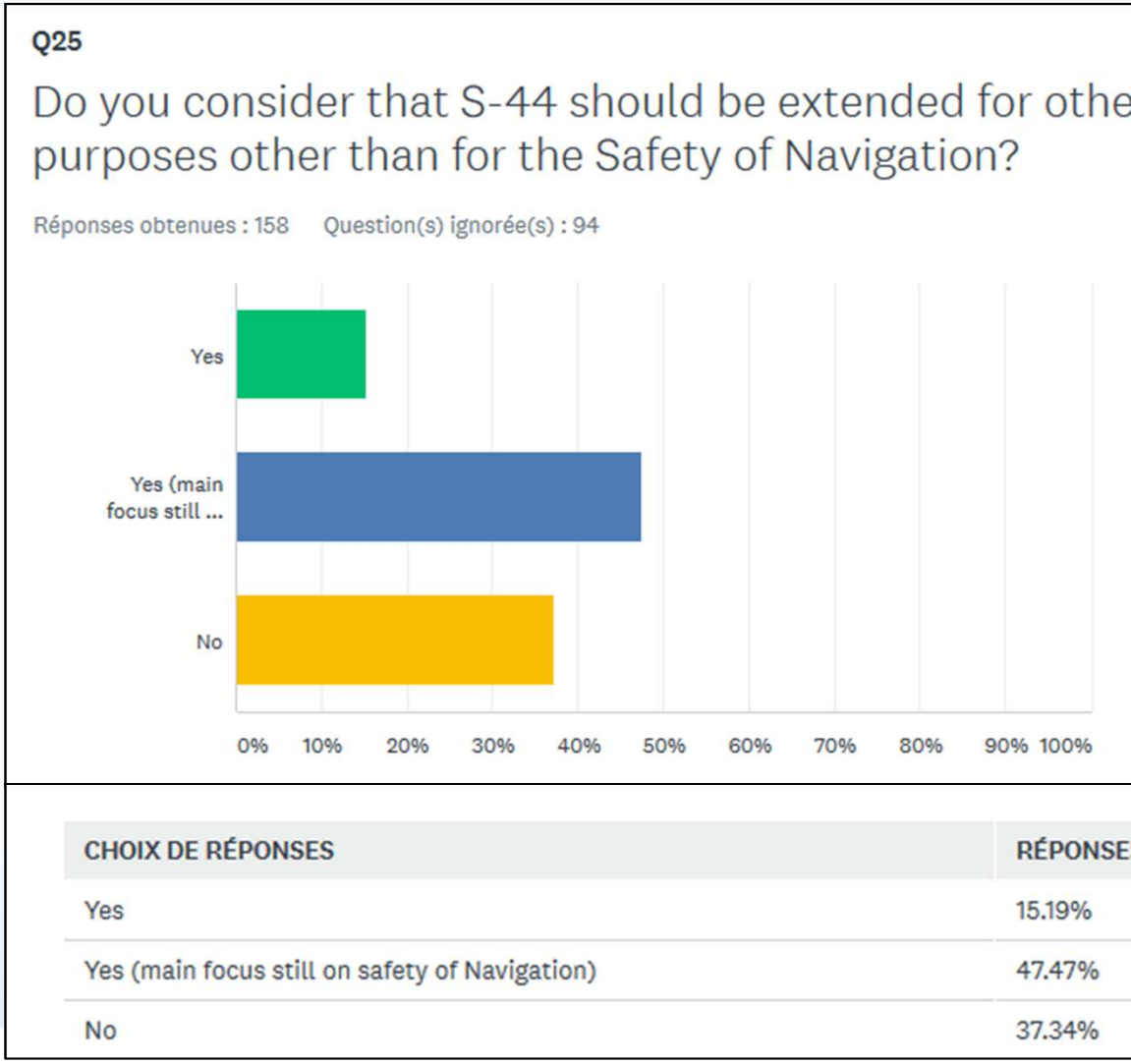
Section 1: About you

* 1. To the nearest whole year, how long have you been involved in hydrography, or an allied industry or profession?

0 - 5 | 6 - 10 | 11 - 15 | 16 - 20 | 21 - 25 | 26 - 30 | 31 - 35 | 36 - 40 | 41+

* 2. In which industry sectors(s) are you currently working and/or have you previously worked? *(Tick all that Apply)*

Academia | Coastal | Construction | Dredging | Environmental | Fisheries | Geophysical | Geotechnical | Instrumentation | Military | Navigation/Charting | Oceanography | Oil & Gas | Ports & Harbours | Renewables | Research & Development | Seismic | Subsea Engineering | Other (please specify)



CHOIX DE RÉPONSES	RÉPONSE
Yes	15.19%
Yes (main focus still on safety of Navigation)	47.47%
No	37.34%

Principal activities and achievements

- HSPT:

riteria	Special	1a	1b	2
scription	UKC critical	Areas <100m UKC required	Areas <100m UKC not required	Areas >100m
ntal Uncertainty (m)	2.0	5+5% depth	5+5% depth	20+10% depth
al Uncertainty (m)	a = 0.25 b=0.0075	a = 0.5 b=0.013	a = 0.5 b=0.013	a = 1.0 b=0.023
Detection (m^3)	1.0	2 or 10% Depth after 40m depth	NA	NA
erage / Line Spacing	100%	100%	3 x average depth or 25 meters	4 x average depth
g of Fixed Aids (m)	2	2	2	5
g of Coastline & graphy (m)	10	20	20	20
avigation Aids (m)	10	10	10	20

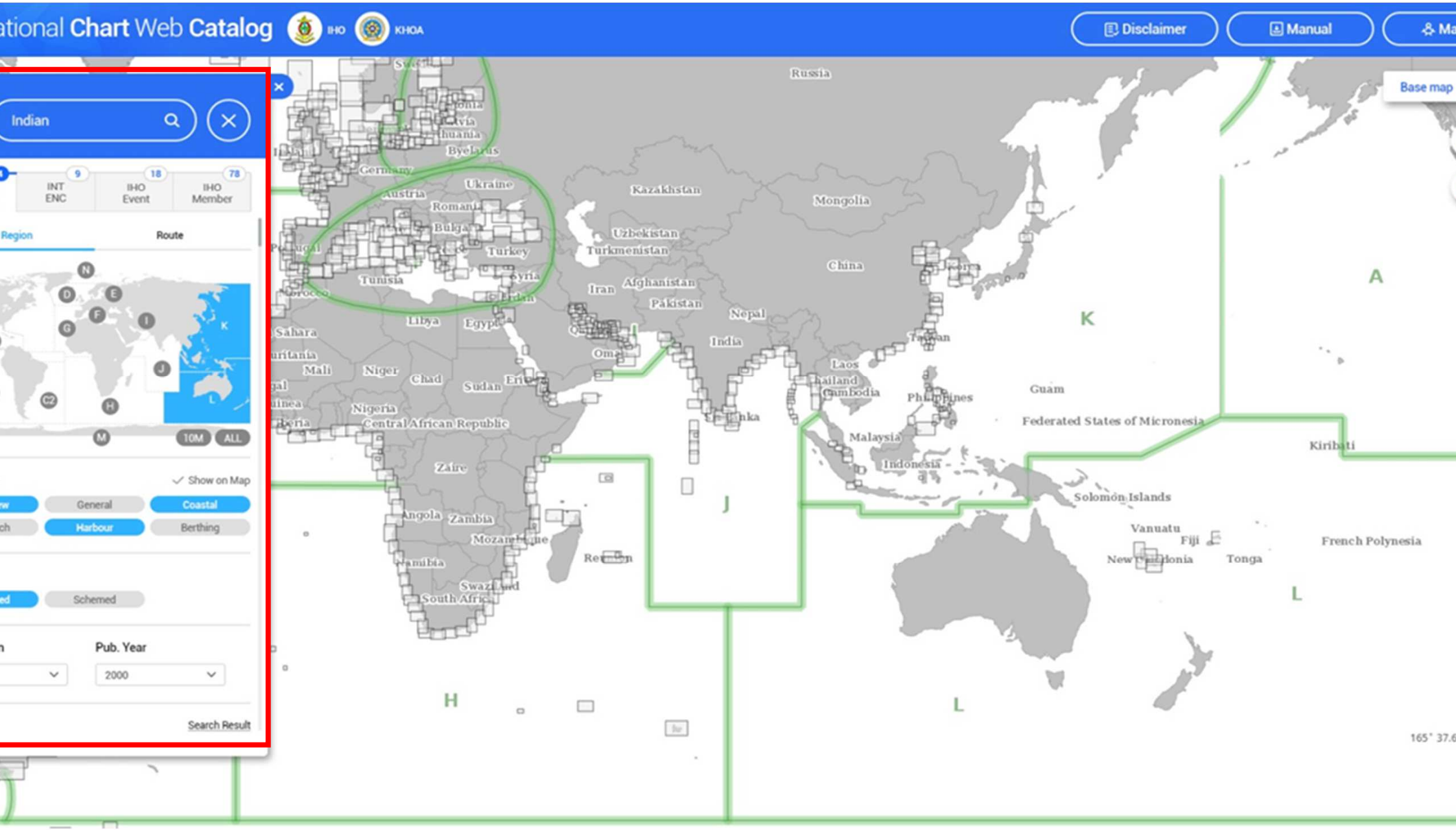
		A	B	C	D	E	F	G	H	I	J
1	Total Horizontal Uncertainty (m)	?	?	?	?	2.0	?	?	?	?	5+5% depth
2	Total Vertical Uncertainty (m)	?	a = 0.15 b=0.0075	a = 0.25 b=0.0075	a = 0.5 b=0.013	a = 1.0 b=0.013	a = 1.0 b=0.023	?	?	?	?
3	Feature Detection (m^3)	?	0.25	?	1.0	2.0	?	?	?	10% depth beyond 40m	?
4	Seafloor Coverage / Line Spacing	?	?	100%	?	?	?	?	3 x average depth or 25 meters	4 x average depth	?
5	Positioning of Fixed Aids (m)	?	?	?	?	?	2.0	?	5.0	?	?
6	Positioning of Coastline & Topography (m)	?	?	?	?	10.0	?	20.0	?	?	?
7	Floating Navigation Aids (m)	?	?	?	10.0	?	20.0	?	?	?	?
8	Structure Heights (m)	?	?	?	?	?	?	?	?	?	?
9	Point Cloud Grid Res. (m)	?	?	?	?	?	?	?	?	?	?
10	oud Density (pts/cell)	?	?	?	?	?	?	?	?	?	?
11	ent (speed/direction)		0.1knot / 10°								
12	Seafloor characterization	Mandatory									

Principal activities and achievements

- Crowd Sourcing Bathymetry (CSBWG):
  - Draft edition 1.0.0 of B-12 - IHO Guidance Document on CSB - available on IHO website for review and comments. MS, observers and stakeholders are invited to review/provide comments on CL 49/17 to IHO Secretariat by 24 Nov2017.
- International Cable Protection Committee (ICPC):
  - ICPC supports the principle of CSB collected as part of cable route surveys. However, bathymetric data collected during a cable route survey is a proprietary information and requires the consent of the cable owner for it to be included in a crowd sourced data set (jurisdictional waters → HO). Opinions during last ICPC Plenary indicates that some cable owners would approve the release of data after cable installation.

Future work programme

- Improvement on S-11 Part B (KHOA/IHO):
  - Base map for Polar regions (Artic & Antarctic)
  - ENC scheme management procedures (S-11)
  - Additional layers for 500 world ports and AIS traffic information
  - Connection between IHO ENC catalogue and INToGIS systems
  - Improve the chart display functions
  - User Feedbacks from HO, regional coordinator
  - And other improvements …
- Tests will be conducted until JAN2018. Operational: early 2018.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IHO
KHOA
Disclaimer
Manual
Base map
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INT ENC
IHO Event
IHO Member
Region
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General
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Harbour
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Search Result
Russia
Kazakhstan
Mongolia
China
Uzbekistan
Turkmenistan
Afghanistan
Pakistan
Iran
India
Nepal
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Romania
Turkey
Tunisia
Libya
Egypt
Sahara
Mali
Niger
Chad
Sudan
Nigeria
Central African Republic
Zaire
Angola
Zambia
Namibia
South Africa
Malaysia
Indonesia
Guam
Federated States of Micronesia
Solomon Islands
Vanuatu
Fiji
Tonga
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Future work programme

- Next HSSC subsidiary WG meetings:

	Month (2017)												Month (2018)										
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11
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Future work programme

- Next HSSC meetings:
  - HSSC-10 (2018, Rostock, Germany)
  - HSSC-11 (2019, Cape Town, South Africa)
  - HSSC-12 (2020, Taunton, UK).

Action requested of MACHC

- Note this report;
- Encourage Member States to participate in HSSC meetings;
- Encourage Member States to participate in HSSC subsidiary WG.