



IHB File No. S3/8151/HSSC

CIRCULAR LETTER 37/2009
15 June 2009

**1ST MEETING OF THE IHO HYDROGRAPHIC SERVICES AND STANDARDS COMMITTEE (HSSC),
22-24 OCTOBER 2009, SINGAPORE**

References:

- 1) IHB Circular Letter 89/2008 dated 13 November : *Regional Coordination of ENC Compilation Parameters – Recommendation of BSHC model*
- 2) IHB Circular Letter 90/2008 dated 13 November : *French Study Group on the Standardisation of the length of coastlines*
- 3) IHB Circular Letter 91/2008 dated 13 November : *Invitation to join the RTCA Correspondence Group on Data Supply Chain Certificate*
- 4) IHB Circular Letter 92/2008 dated 14 November : *CHRIS ENC Updating Working Group*
- 5) IHB Circular Letter 93/2008 dated 17 November : *Review of IHO Technical Resolutions by CHRIS*
- 6) IHB Circular Letter 94/2008 dated 18 November : *IHO Structure starting 01 January 2009*
- 7) IHB Circular Letter 106/2008 dated 15 December : *20th CHRIS Meeting, Niteroi, Rio de Janeiro, Brazil, 3-7 November 2008*
- 8) IHB Circular Letter 5/2009 dated 15 January : *IHO Publication S-64 “ECDIS Test Data Sets”, New Edition 1.1, December 2008*
- 9) IHB Circular Letter 11/2009 dated 17 February : *Review of IHO Technical Resolutions by CHRIS - Group 1 of 4*
- 10) IHB Circular Letter 12/2009 dated 17 February : *Review of IHO Technical Resolutions by CHRIS - Group 2 of 4*
- 11) IHB Circular Letter 21/2009 dated 31 March : *3rd International ECDIS Conference and Exhibition, Singapore, 19-21 October 2009*
- 12) IHB Circular Letter 24/2009 dated 14 April : *Accreditation of the Inland ENC Harmonization Group (IEHG) as an NGIO Observer to the IHO*
- 13) IHB Circular Letter 29/2009 dated 28 April : *Review of IHO Technical Resolutions by CHRIS - Group 2 of 4*
- 14) IHB Circular Letter 30/2009 dated 29 April : *Review of IHO Technical Resolutions by CHRIS - Group 3 of 4*
- 15) IHB Circular Letter 32/2009 dated 12 May : *IHO S-57 Supplement 2 – Announcement of Document Release*
- 16) IHB Circular Letter 34/2009 dated 19 May : *S-52 – Specifications for Chart Content and Display Aspects of ECDIS – Draft 6th Edition – Request for Stakeholder Feedback*

Dear Hydrographers,

1 The 1st meeting of the IHO Hydrographic Services and Standards Committee (HSSC-1) will take place from **22-24 October 2009 in Singapore**. HSSC-1 will immediately follow the 3rd International ECDIS Conference (see www.ecdis09.com) which will be held on 19-21 October at the same location. An HSSC Chair Group meeting, comprising all the chairs of HSSC WGs will take place on the afternoon of 21 October.

2 HSSC was formed on 1 January 2009 under the new committee structure of the IHO. The HSSC has, in effect, taken on an expanded role formerly undertaken by the Committee on Hydrographic Requirements for Information Systems (CHRIS). The 20th and final meeting of CHRIS took place in October 2008. This letter provides information on the current status of actions arising from the 20th CHRIS meeting (Niteroi, RJ, Brazil, 3-7 November 2008); and further proposes a draft agenda for HSSC-1.

3 Venue and Accommodation. Both HSSC-1 and the ECDIS Conference will be held at the Regent Hotel (see www.regenthotels.com/singapore). Hotel information and a registration form for HSSC-1 have been posted on the HSSC section of the IHO website (www.iho.int → Committees & WGs → HSSC). They are also provided at **Annexes A and B**, respectively. Attendees should make their own hotel arrangements as soon as possible. HSSC-1 Registration forms should be submitted **by 30 August 2009**.

4 Actions arising from CHRIS-20. The status of all actions arising from CHRIS-20 have been summarized in **Annex C**. Some actions are still pending. Those nominated for actions that remain outstanding are kindly requested to take action as necessary and report the status to the Secretary of HSSC at mhuet@ihb.mc as soon as possible.

5 Draft Agenda for HSSC-1. A provisional agenda for HSSC-1 is provided in **Annex D**. Associated documents, where known, have been listed. Member States are kindly requested to review the draft agenda and provide any comments or proposals for new agenda items to the Secretary, copy to the Chairman at vaughan.nail@UKHO.gov.uk, by **31 July 2009**. A revised draft agenda will then be prepared and published on the IHO website.

6 Submission Deadline for HSSC-1 Documents. Documents intended for consideration at HSSC-1 should be submitted to the Secretary in accordance with the "[Instructions for the Submission of Reports and Proposals for Consideration by HSSC](#)".

7 All documents will be placed on the IHO website as and when they are received.

	Submission Deadline
Papers in support of Agenda items (including reports from WG chairs and proposals for new work programme items)	By 3 September 2009 (7 weeks before commencement of the meeting)
Papers providing comments or proposed amendments to proposals contained in meeting papers <u>Such supplementary submissions should contain a maximum of 4 pages</u>	no later than 1 October 2009 (3 weeks before commencement of the meeting)

Documents received after 1 October 2009 will be treated as information documents only.

8 The current list of HSSC members and observers is provided in **Annex E**. Any proposed amendments should be forwarded to the Secretary at the earliest opportunity.

9 On behalf of HSSC and the IHB, the Directing Committee would like to express its appreciation to the *Maritime and Port Authority* of Singapore for hosting HSSC-1.

On behalf of the Directing Committee
Yours sincerely,



Captain Robert WARD
Director, IHB

Copy to : Accredited Non-Governmental International Organizations
Chairs of HSSC WGs

Annexes (English only)

- A. Hotel Accommodation
- B. HSSC-1 Registration Form
- C. List of Actions from CHRIS-20 and Status Report
- D. Draft Agenda and Timetable
- E. HSSC - List of Members and Observers

**1st IHO-HSSC Meeting
The Regent Hotel, Singapore, 22-24 October 2009**

HOTEL ACCOMMODATION

[Form to be sent asap to the selected hotel. See websites below. Please indicate "for HSSC-1" on your sending.]

Hotel choice	Website	Room Type	Single / Twin
The Regent Hotel ⁽¹⁾	www.regenthotels.com/singapore	Deluxe	S\$ 265 ++
Hotel Grand Central ⁽²⁾	www.grandcentral.com.sg	Premium	S\$ 170 ++
Garden Hotel ⁽²⁾	www.gardenhotel.com.sg	Deluxe	S\$ 120 ++

⁽¹⁾ Place of HSSC-1

⁽²⁾ Supporting Hotel

Note: The boxes will expand as you type your answers

Guest Particulars

Name (Prof. / Dr. / Capt. / Mr. / Ms.)

**Designation
Organization**

Mailing Address

Tel

Fax

Email

Reservation details

Hotel

Type of Room : Single / Twin

No. of Nights

**Check-in Date
Check-out Date**

**Arrival Flight / Time
Departure Flight / Time**

Payment Declaration

I wish to pay by

Annex

Visa

Master

Card No.

Expiry Date

Cardholder's Name

Signature

Date

Terms and Conditions

1. All reservations will be subjected to availability and on a first-come-first-served basis.
2. Rates quoted are subjected to 7% Goods and Services Tax and 10% Service Charge.
3. Cancellations must be made in writing. No cancellation charge will be levied for cancellation, made before 1 September 2009. For cancellations after 1 September 2009 charge for one room-night will be imposed.

**1st IHO-HSSC Meeting
The Regent Hotel, Singapore, 22-24 October 2009**

REGISTRATION FORM

*[Please send this via e-mail to "Ms Petrina Tay" <Petrina_Tay@mpa.gov.sg>
copy to "Michel Huet" <mhuet@ihb.mc> by 30 August 2009]*

Note: The boxes will expand as you type your answers

**Member State /
Organization**

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1. Contact Details:

Head or Member
Rank of Title
Last Name (Family Name)*
First Name
Position / Job title / Role
Nationality
Telephone
E-mail
Accompanying person(s)

* Underline the name generally used in case of doubles surnames as in Spanish-speaking countries

2. Travel Details (for administrative purposes only; participants are expected to make their own travel arrangements):

Your Arrival at Singapore
International Airport

Date	
Flight Number	
Airline	
Arrival Time	

Your Departure from Singapore
International Airport

Date	
Flight Number	
Airline	
Departure Time	

3. Hotel Information (for administrative purposes only; participants are expected to make their own accommodation arrangements)

	Yes or No?	
Selected Hotel	1. The Regent Hotel	
	2. Hotel Grand Central	
	3. Garden Hotel	
	4. Other	Name of other hotel

Comments
Date

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LIST OF ACTIONS FROM CHRIS-20 AND STATUS REPORT

AGENDA ITEM	SUBJECT	ACTION No.	ACTIONS (in bold, action by)	STATUS (Jun. 09)
4.2	ECDIS software maintenance	20/1	IHB to submit a supporting paper to NAV55 on the relevance of software maintenance in ECDIS (based on the previous submission to NAV53)	Not done. Noting IHO paper already submitted to earlier meetings, IHB advised to make verbal interventions at NAV55 as required and to participate in any drafting groups.
4.3	Use of ISO standards	20/2	IHB to seek confirmation from ISO that relevant ISO standards can be used in relation to S-100 without copyright restrictions.	In progress. ISO require an estimate of the amount of ISO copyright material contained in S-100. This information is not available until S-100 documentation is approved.
4.5	IEC 62376 & ECS standards	20/3	IHB to invite MS to consider contacting their IEC representatives and providing input to the consideration / acceptance of IEC 62376 - ECS Standard.	The closing date for final voting on IEC62376 was 5 December 2008. This was too soon after CHRIS-20 for IHB to release a CL and expect HOs to react and provide any meaningful input to their respective standards organizations. Therefore a CL was not issued.
4.6	Length of coastline	20/4	France to further study the feasibility of a standardised approach to the determination of the length of coastlines and report to HSSC-1.	In progress
4.6	Length of coastline	20/5	IHB to invite MS to participate in the study led by France on the determination of the length of coastlines.	Done: CL 90/08.
5.1	Dynamic tides in ECDIS	20/6	TSMAD in consultation with TWLWG, CSMWG and other relevant HO bodies to develop proposals to enable the use of tidal and water height information to adjust charted depths in S-57 based ECDIS equipment for consideration by HSSC-1.	In progress
5.1	Data Supply Chain Certification	20/7	IHB to encourage MS to participate in the RTCA Correspondence Group on Data Chain Certification Concept.	Done: CL 91/08.
5.1	Data Supply Chain Certification	20/8	RTCA Correspondence Group to liaise with DPSWG.	Done. Chair DPSWG is member of the corresp. group
5.1	Data Supply Chain Certification	20/9	RTCA Correspondence Group Leader to report on progress to HSSC-1.	Progress report provided to IRCC-1, 5 June 09
6.1	Product Specification for digital paper charts	20/10	IHB to invite the Nordic Hydrographic Commission (NHC) to report to HSSC-1 on the results of the Improved Data Exchange Working Group and the possible need for an S100-based data exchange standard for paper charts.	Not known
6.1	S-57 temporal attribution	20/11	IHB to issue a "warning" CL to MS and NGIOs regarding issues relating to S-57 temporal attribution and "master / slave" relationships, taking into account CHRIS20-WP1.	Done. Addressed through issue of CL32/2009
6.1	S-57 temporal attribution	20/12	TSMAD to issue an encoding bulletin regarding issues relating to S-57 temporal attribution and "master / slave" relationships, based on CHRIS20-WP1.	Done: EB24 (Apr 09) on IHO website.
6.1	S-57 temporal attribution	20/13	TSMAD to urgently consider by correspondence revisions to S-57 temporal attribution and "master / slave" relationships, taking into account CHRIS20-WP1.	Done: See CL 32/09

AGENDA ITEM	SUBJECT	ACTION No.	ACTIONS (in bold, action by)	STATUS (Jun. 09)
6.1	S-57 temporal attribution & CATZOC	20/14	As soon as practicable and subject to no adverse findings from TSMAD, volunteer MS's may wish to submit a late proposal to 4EIHC seeking approval for an amending Supplement to S-57 (S-57 3.1.2) containing revisions to S-57 temporal attribution and "master/slave" relationships which would also include amendments to CATZOC parameters and definitions (see Action 20/25).	Done by correspondence: See CL 32/09.
6.1	Geospatial Information Registry	20/15	IHB to develop a proposal to the 4 th EIHC for the long-term support and governance of the GII, taking into account CHRIS20-WP3 (to be combined with Action 20/16).	Deferred with agreement of Chairman; matter to be considered further at HSSC-1.
6.1	Adoption of S-100	20/16	IHB to develop a proposal for consideration by the 4 th EIHC to adopt S-100 as a live standard.	Being addressed by correspondence.
6.1	T & P Notices for ENC updating	20/17	IHB to issue CL inviting MS to participate in the ENC Updating Working Group (EUWG), based on CHRIS20-WP2.	Done: CL 92/08.
6.1	ENC consistency	20/18	TSMAD to review S-65 Appendix A – <i>Recommendations for Consistent ENC Data Encoding</i> and revise as necessary to take into account the practical experience of Canada and the BSHC (see CHRIS20-06.1D and CHRIS20-06.1F) regarding the regional implementation of the guidelines.	In progress by IC-ENC
6.1	ENC consistency	20/19	IHB to draw MS attention to the BSHC regional model for the implementation of S-65 Appendix A - <i>Recommendations for Consistent ENC Data Encoding</i> and the endorsement of WEND and CHRIS regarding this approach.	Done: CL 89/08.
6.3	Linear depth areas	20/20	TSMAD to release an Encoding Bulletin on discontinuing the encoding of linear depth areas from 1 January 2009.	Done: EB23 (Dec 08) on IHO website.
6.3	Revision of S-52	20/21	DIPWG to undertake a revision of S-52, including all annexes.	Done: See CL 34/09.
6.3	Pick report	20/22	DIPWG to further develop pick report as proposed in HSSC1-06.3A.	Will be undertaken when NP information modelling by SNPWG is completed.
6.5	INT chart coordinators	20/23	CSPCWG to develop ToR / RoP for INT Chart Coordinators.	TBD
6.5	Small/medium ENC schemes	20/24	CSPCWG to develop guidelines for preparation & maintenance of small / medium scale ENC schemes.	TBD
6.6	CATZOC definitions	20/25	IHB and Chair TSMAD to bring amended CATZOC definitions into force through a supplement to S-57. (See also Action 20/14)	Done: See CL 32/09.
6.7	MSDI at EIHC-4	20/26	IHB to prepare a proposal for the 4 th EIHC based on the MSDIWG report and CHRIS20-WP4.	Done: See CCL5
6.8	Inland waters at EIHC-4	20/27	IHB to prepare a proposal for the 4 th EIHC based on the HCIWWG report and CHRIS20-WP5.	Done: See CCL5
6.8	Definition for 'navigable inland waters'	20/28	Hydrographic Dictionary WG to consider developing a definition for "navigable inland waters".	Done. Ready for HSSC consideration.
7.1	Hydro-related MIO register	20/29	TSMAD to further develop the infrastructure described in CHRIS20-06.1B Annex A for the governance and management of the GII, to decide if a hydro-related MIO register is to be created, and report to HSSC-1.	In progress
7.1	OEF Orphan S-57 objects / attributes	20/30	TSMAD in consultation with OEF to propose arrangements to HSSC-1 that accommodate the "miscellaneous" S-57 objects currently registered on the OEF	In progress

AGENDA ITEM	SUBJECT	ACTION No.	ACTIONS (in bold, action by)	STATUS (Jun. 09)
7.1	Outreach functions	20/31	IHB and Chair TSMAD to review ToRs and RoPs for TSMAD to ensure that the proposed TSMAD outreach functions outlined in CHRIS20-07.1C are addressed.	TSMAD Chair has determined that there are no amendments required .
8.1	Revision of M-3 TRs	20/32	IHB to circulate all CHRIS recommendations on M-3 Technical Resolutions to MS for approval.	In progress: See CLs 93/08, 11/09, 12/09, 29/09 & 30/09.
9.1	ToRs / RoPs & WP for HDWG	20/33	Hydrographic Dictionary WG to propose ToRs, RoPs and Work Plan to HSSC-1.	Done. Ready for HSSC consideration.
9.1	WP for TWLWG	20/34	Tidal and Water Level WG to propose Work Plan to HSSC-1.	Done. Ready for HSSC consideration.
11	Maintenance of S-66	20/35	IHB to invite the PRIMAR / IC-ENC Joint Information WG (JIWG) to maintain S-66 <i>Facts about Electronic Charts and Carriage Requirements</i> on behalf of HSSC as owner of S-66.	Done. Letter sent to leader of JTEWG in Jan 09
12	Next meeting	20/36	IHB to confirm and promulgate arrangements for HSSC-1.	Done: Singapore, 22-24 October.

1st IHO-HSSC Meeting
The Regent Hotel, Singapore, 22-24 October 2009

DRAFT AGENDA AND TIMETABLE

Wednesday 21 Oct	HSSC CHAIR GROUP
1400	Chair Group meet at The Regent Hotel Lobby
1405 - 1700	HSSC Chair Group Meeting (HSSC Chairs only)
Thursday 22 Oct	DAY 1 of HSSC-1
0900	<p>1. Opening and Administrative Arrangements <i>Docs: HSSC1-01A List of Documents</i> <i>HSSC1-01B List of Participants</i> <i>HSSC1-01C HSSC – Members and Observers List</i> <i>HSSC1-01D Terms of Reference for HSSC and related Working Groups</i></p>
0915	<p>2. Approval of Agenda <i>Docs: HSSC1-02A Agenda and Timetable</i></p>
0930	<p>3. Matters arising from Minutes of 20th CHRIS Meeting <i>Docs: HSSC1-03A Minutes of CHRIS-20</i> <i>HSSC1-03B Status of Actions List from CHRIS-20 (IHB)</i></p>
1030	Coffee Break
1100	<p>4. Decisions of other bodies affecting HSSC 4.1 4th Extraordinary International Hydrographic Conference <i>Docs: HSSC1-04.1A Outcomes from the 4th Extraordinary International Hydrographic Conference, Monaco, 2-5 June 2009 (IHB)</i></p>
	<p>4.2 IMO <i>Docs: HSSC1-04.2A Report on IMO activities affecting HSSC (IHB)</i></p>
	<p>4.3 ISO-TC211 (Geographic Information-Geomatics) <i>Docs: HSSC1-04.3A Report on ISO-TC211 activities affecting HSSC (B. Greenslade)</i></p>
	<p>4.4 NATO-DGIWG (Digital Geographic Information W.G.) <i>Docs: HSSC1-04.4A Report on IHO Liaison with DGIWG (B. Greenslade)</i></p>
	<p>4.5 IEC-TC80-WG7 (ECDIS and ECS) <i>Docs: HSSC1-04.5A Report on IEC-TC80-WG7 activities affecting HSSC (Secretary TC80)</i></p>

1200	5. Liaison with External Stakeholders
	5.1 Open ECDIS Forum Docs: HSSC1-05.1A <i>Progress Report on the migration of IHO functions currently operated on the OEF, to other IHO-sponsored servers (L. Alexander, USA-UNH and M. Huet, IHB)</i>
1230	Lunch
1400	6. Reports by HSSC Working Groups 6.1 Transfer Standard Maintenance and Application Development (TSMAD) Docs: HSSC1-06.1A <i>Report and Recommendations of TSMAD (B. Greenslade, UK, Chair)</i>
1530	Official Photograph
1540	Coffee Break
1600	6.1 Transfer Standard Maintenance and Application Development (TSMAD) (continued)
1730	END OF DAY 1
Friday 23 Oct	DAY 2 of HSSC-1
0900	6.2 Data Protection Scheme (DPSWG) Docs: HSSC1-06.2A <i>Report and Recommendations of DPSWG (J. Pritchard, UK, Chair)</i>
0930	6.3 Digital Information Portrayal (DIPWG) Docs: HSSC1-06.3A <i>Report and Recommendations of DIPWG (C. Harmon, USA-NOAA, Chair)</i>
1000	6.4 Standardization of Nautical Publications (SNPWG) Docs: HSSC1-06.4A <i>Report and Recommendations of SNPWG (D. Acland, UK, Chair)</i>
1030	Coffee Break
1100	6.5 Chart Standardization and Paper Chart (CSPCWG) Docs: HSSC1-06.5A <i>Report and Recommendations of CSPCWG (P. Jones, UK, Chair)</i>
1130	6.6 Data Quality (DQWG) Docs: HSSC1-06.6A <i>Report and Recommendations of DQWG (C. Howlett, UK, Chair)</i>
1200	6.7 Marine Spatial Data Infrastructure (MSDIWG) Docs: HSSC1-06.7A <i>Report and Recommendations of MSDIWG (Chair)</i> HSSC1-06.7B <i>MSDI Guidance Document</i>
1230	Lunch
1400	6.8 Tidal and Water Level (TWLWG) Docs: HSSC1-06.8A <i>Report and Recommendations of TWLWG (S. Gill, USA-NOAA, Chair)</i>
1430	6.9 Hydrographic Dictionary (HDWG) Docs: HSSC-06.9A <i>Report and Recommendations of HDWG (J. Mills, USA-NOAA, Chair)</i>
1500	6.10 ENC Updating (EUWG) Docs: HSSC-6.10A <i>Report and Recommendations of EUWG (Y. Le Franc, France, Chair)</i>
1530	Coffee Break

1600	7. Inter-Organizational Bodies 7.1 Inland ENC Harmonization Group (IEHG) <i>Docs: HSSC1-07.1A Status Report on IEHG activities (Denise LaDue, USA, Co-Chair IEHG)</i>
1630	7.2 Harmonization Group on Marine Information Overlays (HGMIO) <i>Docs: HSSC1-07.2A Status Report on HGMIO activities (L. Alexander, USA-UNH, Chair)</i>
1700	7.3 IHO-IAG Advisory Board on the Law Of the Sea (ABLOS) <i>Docs: HSSC1-07.3A Status Report on ABLOS activities (C. Rizos, Australia, Chair)</i>
1730	END OF DAY 2
Saturday 24 Oct	DAY 3 of HSSC-1
0900	8. Other HSSC Business 8.1 Review of M-3 <i>Docs: HSSC1-8.1A Status Report on Revision of M-3 "IHO Resolutions" (IHB)</i>
0930	9. Review and Endorsement of HSSC Work Plan <i>Docs: HSSC1-09A Consolidated HSSC Work Plan (IHB)</i>
1000	10. HSSC Administration <i>Docs: HSSC1-10A Scheduling of HSSC and WG meetings (IHB)</i>
1030	Coffee Break
1100	11. Review of Information Papers <i>Docs: HSSC1-INF1 Status Report on IHO Standards and Specifications (IHB)</i>
o/c	12. Date and Location of Next Meeting
1230	Lunch
1400-1630	SPARE
o/c	13. Closure of the Meeting
not later than 1630	END OF DAY 3

HSSC - LIST OF MEMBERS AND OBSERVERS

(June 2009)

Member States	Name	Email
Argentina	Cdr Fabian Alejandro VETERE	fveter@hidro.gov.ar
Australia	Mr Mike PRINCE	international.relations@hydro.gov.au
Brazil	Capt Alberto P. COSTA NEVES Capt (Ret.) Wesley W. CAVALHEIRO	costaneves@ig.com.br wesley.cavalheiro@lumen-assessoria.net
Canada	<i>To be nominated</i>	
Chile	Capt Patricio CARRASCO	pcarrasco@shoa.cl
China	Mr ZHENG Hepping	hydro@msa.gov.cn
Cuba	Eng J.C. MARANTE Cabrera	internacional@geocuba.co.cu
Denmark	Mr Jens Peter HARTMAN	jepha@kms.dk
Ecuador	TNFG Marcos SANTOS CATAÑEDA	msantos@inocar.mil.ec
Estonia	Mr Tõnis SIILANARUSK	tonis@vta.ee
Finland	Mr Juha KORHONEN	Juha.Korhonen@fma.fi
France	Ing en chef Jean-Luc DENIEL Mr Yves LE FRANC	deniel@shom.fr yves.le.franc@shom.fr
Germany	Dr. Mathias JONAS (HSSC Vice Chair)	mathias.jonas@bsh.de
Greece	Mr. Alexis HADJANTONIOU	dcd@hnhs.gr
India	Shri Rajesh KUMAR	incho@dataone.in
Indonesia	<i>no name provided</i>	infohid@indo.net.id
Italy	LtCdr Alessandro NOBILI	iim.crt@marina.difesa.it
Japan	Mr Toru KAJIMURA	ico@jodc.go.jp
Korea, Rep. of	Director, Nautical Charts Division	info@nori.go.kr
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Norway	Ms Lynn KOLBEINSON	lynn.kolbeinson@statkart.no
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Russian Federation	Capt EGOROV	main@gunio.ru
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South Africa	Capt Abri KAMPFER	hydrosan@iafrica.com
Spain	Cdr Angel CHANS	ihmesp@fn.mde.es
Sweden	Mr Åke MAGNUSSON	ake.magnusson@sjofartsverket.se
UK	Capt Vaughan NAIL (HSSC Chair) Mr Chris SMITH Mr Peter JONES (CSPCWG Chair) Mr Barrie GREENSLADE (TSMAD Chair) Mr David ACLAND (SNPWWG Chair) Mr John PEPPER (MSDIWG Chair) Mr Chris HOWLETT (DQWG Chair)	vaughan.nail@ukho.gov.uk chris.smith@ukho.gov.uk peter.jones@ukho.gov.uk barrie.greenslade@ukho.gov.uk david.acland@ukho.gov.uk john.pepper@ukho.gov.uk chris.howlett@hydro.gov.uk

USA	RAdm Christian ANDREASEN Mr Jim MCGAUGHRAN Mr Dave ENABNIT Mr Jerry MILLS (HDWG Chair) Mr Stephen GILL (TWLWG Chair) Mr Colby HARMON (DIPWG Chair) Mr Max VAN NORDEN Mr Jim RADICE Mr Tony NILES Ms Denise LADUE	christian.andreasen@nga.mil james.mcgaughran@nga.mil dave.enabnit@noaa.gov jerry.mills@noaa.gov stephen.gill@noaa.gov Colby.Harmon@noaa.gov maxim.vannorden@navy.mil James.T.Radice@uscg.mil Anthony.R.Niles@erdc.usace.army.mil Denise.R.LaDue@usace.army.mil
IHB	Name	Email
	Capt Robert WARD Ing en chef Michel HUET (Secretary)	robert.ward@ihb.mc mhuet@ihb.mc
Observers	Name	Email
DGIWG	<i>no name provided</i>	
IC - ENC	Mr Graham SAUNDERCOCK	graham.saundercock@ic-enc.org
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