

**INTERNATIONAL HYDROGRAPHIC ORGANIZATION**



**5<sup>th</sup>**

**EXTRAORDINARY INTERNATIONAL  
HYDROGRAPHIC CONFERENCE**

**06 – 10 October**

**2014**

**M O N A C O**

**REPORT of PROCEEDINGS**



**INTERNATIONAL HYDROGRAPHIC ORGANIZATION**



**5th EXTRAORDINARY INTERNATIONAL  
HYDROGRAPHIC CONFERENCE**

**Monaco, 06 - 10 October 2014**

**REPORT OF PROCEEDINGS**

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# INTERNATIONAL HYDROGRAPHIC ORGANIZATION

## LIST OF MEMBER STATES (2014)

ALGERIA	MONACO
ARGENTINA	MONTENEGRO
AUSTRALIA	MOROCCO
<b>BAHRAIN**</b>	MOZAMBIQUE
BANGLADESH	<b>MYANMAR**</b>
BELGIUM	NETHERLANDS
BRAZIL	NEW ZEALAND
<b>CAMEROON**</b>	NIGERIA
CANADA	NORWAY
CHILE	OMAN
CHINA	<b>PAKISTAN**</b>
COLOMBIA	<b>PAPUA NEW GUINEA**</b>
CROATIA	PERU
CUBA	PHILIPPINES
<b>CYPRUS**</b>	POLAND
DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA	PORTUGAL
<b>DEMOCRATIC REPUBLIC OF THE CONGO*</b>	QATAR
DENMARK	REPUBLIC OF KOREA
<b>DOMINICAN REPUBLIC*</b>	ROMANIA
ECUADOR	RUSSIAN FEDERATION
EGYPT	SAUDI ARABIA
ESTONIA	<b>SERBIA*</b>
FIJI	SINGAPORE
FINLAND	SLOVENIA
FRANCE	SOUTH AFRICA
GERMANY	SPAIN
GREECE	SRI LANKA
<b>GUATEMALA**</b>	SURINAME
ICELAND	SWEDEN
<b>INDIA**</b>	<b>SYRIAN ARAB REPUBLIC**</b>
INDONESIA	THAILAND
IRAN (ISLAMIC REPUBLIC OF)	<b>TONGA**</b>
IRELAND	<b>TRINIDAD &amp; TOBAGO**</b>
ITALY	TUNISIA
<b>JAMAICA**</b>	TURKEY
JAPAN	UKRAINE
<b>KUWAIT**</b>	UNITED ARAB EMIRATES
LATVIA	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND
MALAYSIA	UNITED STATES OF AMERICA
MAURITIUS	<b>URUGUAY**</b>
MEXICO	VENEZUELA (BOLIVARIAN REPUBLIC OF)

\* *Rights of membership suspended*

\*\* *Not represented at the 5<sup>th</sup> Extraordinary  
International Hydrographic Conference*

Pending Member States: Brunei Darussalam, Bulgaria, Georgia, Haiti, Mauritania, Sierra Leone, Viet Nam.





**5TH EXTRAORDINARY INTERNATIONAL HYDROGRAPHIC CONFERENCE**  
**5ème CONFÉRENCE HYDROGRAPHIQUE INTERNATIONALE EXTRAORDINAIRE**







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# GENERAL INFORMATION



## **GENERAL INFORMATION**

### **GENERAL DESCRIPTION OF THE 5<sup>TH</sup> EXTRAORDINARY INTERNATIONAL HYDROGRAPHIC CONFERENCE**

The 5<sup>th</sup> Extraordinary International Hydrographic Conference was held in the Rainier III Auditorium in Monaco, from 6 to 10 October 2014.

It was attended by just under 300 representatives from 65 of the 82 Member States of the IHO, 2 pending Member States and 10 non-Member States. In addition, 30 representatives from observer international, regional or national organizations, including CIRM, FIG, IAATO, IALA, IAG and PAIGH, took part in the discussions. The Hydrographic Industry Exhibition, organized in parallel to the Conference, brought together almost 30 companies and organizations. An IHO Capacity Building Poster Exhibition presented an overview of Capacity Building activities and training programmes funded by the Nippon Foundation over 10 years.

Dr. Mathias JONAS, the Hydrographer of Germany, and Rear Admiral K.R. SRINIVASAN, representative of Saudi Arabia, were elected respectively President and Vice-President of the Conference.

The IHO was honoured by the presence of HSH Prince ALBERT II of Monaco who formally opened the Conference and the exhibitions on Monday 6 October. The President of the Directing Committee, Robert WARD, and the President of the Conference, Mathias JONAS, welcomed the participants and delivered opening addresses. The keynote speakers were Mr. Koji SEKIMIZU, Secretary-General of the International Maritime Organization and Mr. Mitsuyuki UNNO, Executive Director of the Nippon Foundation of Japan.

During the opening ceremony Montenegro, the latest country to join the IHO, presented its flag to the Organization.

The Conference examined seven proposals and three reports tabled either by Member States or the Directing Committee. The Vice-Chair of the Hydrographic Services and Standards Committee (HSSC), Mr. Mike PRINCE, and the Chair of the Inter-Regional Coordination Committee (IRCC), Rear Admiral Tom KARSTEN, presented interim reports on the activities of their Committees. A special "information session" was held over two consecutive half-days when invited stakeholders presented their views on a number of topical issues of relevance to the IHO, followed by a question and answer period. The Conference agreed 18 decisions including the approval of the IHO Finance Report for 2013 and the proposed Work Programme and Budget for 2015.

The Conference unanimously adopted a Resolution expressing the IHO's appreciation to HSH Prince Albert of Monaco and his Government for the support provided for the important event.

HMS Echo, a British naval survey ship, called at Monaco on the occasion of the Conference and delegates had the opportunity to visit her.

The Conference decided that the next ordinary Conference session, the XIX<sup>th</sup> International Hydrographic Conference, or the 1<sup>st</sup> IHO Assembly, subject to the entry in force of the amended Convention, will be convened either from 27 to 31 March or from 3 to 7 April 2017, exact dates to be confirmed.



**LIST OF PARTICIPANTS**  
*LISTE DES PARTICIPANTS*

**DELEGATES FROM MEMBER STATES**  
*DELEGUES DES ETATS MEMBRES*

**ALGERIA/ALGERIE**

Head of Delegation/Chef de délégation  
Colonel Abdelkader MENASRI

Alternate and Advisor/Adjoint et conseiller  
Commandant Mohamed AMERI  
Colonel Omar KHEDDAOUI

**ARGENTINA/ARGENTINE**

Head of Delegation/Chef de délégation  
Captain Fabian Alejandro VETERE

**AUSTRALIA/AUSTRALIE**

Head of Delegation/Chef de délégation  
Commodore Brett BRACE

Alternate and Advisor/Adjoint et conseiller  
Mr Mike PRINCE

**BANGLADESH**

Head of Delegation/Chef de délégation  
Rear Admiral Aurangzeb CHOWDHURY

Alternate and Advisor/Adjoint et conseiller  
Captain M. Nayeem Golam MUKTADIR, BN

**BELGIUM/BELGIQUE**

Head of Delegation/Chef de délégation  
Mr Guido DUMON

**BRAZIL/BRESIL**

Head of Delegation/Chef de délégation  
Vice Admiral Antonio Reginaldo PONTES LIMA, Junior

Alternate and Advisor/Adjoint et conseiller  
Captain Rodrigo De Souza OBINO  
Captain (Ret.) Carlos Augusto Medeiros de ALBUQUERQUE  
Captain (Ret.) Nickolás de Andrade ROSCHER

## **General Information - CONF.EX5/G/02**

### **CANADA**

Head of Delegation/Chef de délégation

Mr Denis HAINS

Alternate and Advisor/Adjoint et conseiller

Mr Michael BARTLETT

Lieutenant Commander Scott CRAWSHAW

Dr Kian FADAIE

### **CHILE/CHILI**

Head of Delegation/Chef de délégation

Rear Admiral Patricio CARRASCO

Alternate and Advisor/Adjoint et conseiller

Captain Hugo GORZIGLIA

### **CHINA/CHINE**

Head of Delegation/Chef de délégation

Captain Aiping CHEN

Alternate and Advisor/Adjoint et conseiller

Ms Jing CHEN

Mr Kai-hong CHAN

Mr Chun-ming CHAU

Ms Weng U LAO

Ms Congcong LIANG

Senior Captain Zhihao LIU

Mr Kwok-chu NG

Commander Bo YU

Ms Hui ZENG

### **COLOMBIA/COLOMBIE**

Head of Delegation/Chef de délégation

Captain Ricardo MORALES BABRA

Alternate and Advisor/Adjoint et conseiller

Lieutenant Commander Javier GÓMEZ TORRES

### **CROATIA/CROATIE**

Head of Delegation/Chef de délégation

Dr Nenad LEDER, PhD.

Alternate and Advisor/Adjoint et conseiller

Captain Zeljko BRADARIC, MSc.

### **CUBA**

Head of Delegation/Chef de délégation

Colonel Cándido Alfredo REGALADO Gómez

Alternate and Advisor/Adjoint et conseiller

Commander Ramón PADRÓN Díaz



## **General Information - CONF.EX5/G/02**

### **DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA/REPUBLIQUE POPULAIRE DEMOCRATIQUE DE COREE**

Head of Delegation/Chef de délégation

Rear Admiral In Sop REE

Alternate and Advisor/Adjoint et conseiller

Mr Gyong Hwan KIM

Captain Myong Chol O

Mr Kyong Jin RYU

### **DENMARK/DANEMARK**

Head of Delegation/Chef de délégation

Ms Anne-Sofie JENSEN

Alternate and Advisor/Adjoint et conseiller

Mr Anders CARLSEN

Commander Lars HANSEN

Mr Jens Peter HARTMANN

### **ECUADOR/EQUATEUR**

Head of Delegation/Chef de délégation

Captain-EM Humberto GÓMEZ PROAÑO

Alternate and Advisor/Adjoint et conseiller

Lieutenant Commander-EMT Carlos ZAPATA

### **EGYPT/EGYPTE**

Head of Delegation/Chef de délégation

Captain Dr Ashraf EL ASSAL

### **ESTONIA/ESTONIE**

Head of Delegation/Chef de délégation

Mr Taivo KIVIMÄE

Alternate and Advisor/Adjoint et conseiller

Dr Vaido KRAAV

Mr Tõnis SIILANARUSK

Mr Peeter VÄLING

### **FIJI/FIDJI**

Head of Delegation/Chef de delegation

Lieutenant Commander Gerard ROKOUA

Alternate and Advisor/Adjoint et conseiller

Sub-Lieutenant Warren THOMAS

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Mr Seppo MÄKINEN  
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Head of Delegation/Chef de délégation

Ingénieur Général de l'Armement (IGA) Bruno FRACHON

Alternate and Advisor/Adjoint et conseiller

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Ingénieur en chef (ICA) Michel EVEN

Ingénieur principal (IPETA) Eric LANGLOIS

Ingénieur général (2S) Jean LAPORTE

Ingénieur en chef (ICA) Laurent LOUVART

### GERMANY/ALLEMAGNE

Head of Delegation/Chef de délégation

Mr Thomas DEHLING

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Mr Stefan GRAMMANN

Prof. Dr Marketa POKORNA

**Dr Mathias JONAS, Conference President**

### GREECE/GRECE

Head of Delegation/Chef de délégation

Captain Dimitrios EVANGELIDIS, HN

Alternate and Advisor/Adjoint et conseiller

Vice Admiral Alexandros MARATOS, HN (Ret.)

Lieutenant Colonel (LegAd) Evangelia SIOTROPOU

### ICELAND/ISLANDE

Head of Delegation/Chef de délégation

Mr Georg LÁRUSSON

Alternate and Advisor/Adjoint et conseiller

Mr Hilmar HELGASON

### INDONESIA/INDONESIE

Head of Delegation/Chef de délégation

Captain TRISMADI

Alternate and Advisor/Adjoint et conseiller

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## **General Information - CONF.EX5/G/02**

### **ISLAMIC REPUBLIC OF IRAN/REPUBLIQUE ISLAMIQUE D'IRAN**

Head of Delegation/Chef de délégation

H.E. Mohammad SAEIDNEJAD

Alternate and Advisor/Adjoint et conseiller

Dr Alireza ARDALAN

Mr Essa CHALAN

Mr Hamid ENAYATI

Mr Alireza KHALEGI

Mr Gholamhossein MOTALLEB

Mr Saeid PARIZI

### **IRELAND/IRLANDE**

Head of Delegation/Chef de délégation

Captain Declan BLACK

### **ITALY/ITALIE**

Head of Delegation/Chef de délégation

Rear Admiral Andrea LIACI

Alternate and Advisor/Adjoint et conseiller

Commander Paolo LUSIANI

### **JAPAN/JAPON**

Head of Delegation/Chef de délégation

Mr Shigeru KASUGA, Chief Hydrographer

Alternate and Advisor/Adjoint et conseiller

Mr Tetsuya ITANI

Dr Kentaro KANEDA

Mr Hideki KINOSHITA

Mr Motoki KOBAYASHI

Mr Hideaki MIZUKOSHI

Mr Shigeru NAKABAYASHI

Dr Hideo NISHIDA

Dr Shin TANI (GEBCO)

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### **LATVIA/LETONIE**

Head of Delegation/Chef de délégation

Mr Jānis KRASTIŅŠ

Alternate and Advisor/Adjoint et conseiller

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### **MALAYSIA/MALAISIE**

Head of Delegation/Chef de délégation

Rear Admiral Zaaim bin HASAN

## **General Information - CONF.EX5/G/02**

### **MAURITIUS/MAURICE**

Head of Delegation/Chef de délégation

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### **MEXICO/MEXIQUE**

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### **MONACO**

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### **MOROCCO/MAROC**

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Captain (N) Marc VAN DER DONCK

Alternate and Advisor/Adjoint et conseiller

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### **OMAN/OMAN**

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Rear Admiral Hugo VERÁN Moreno

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Commander Augusto URUETA Gonzales

### **PHILIPPINES**

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Alternate and Advisor/Adjoint et conseiller

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Mr Jesus Enrique GARCIA II

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### **PORTUGAL**

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Alternate and Advisor/Adjoint et conseiller

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## General Information - CONF.EX5/G/02

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**Rear Admiral K.R. SRINIVASAN, Conference Vice-President**

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Mr Michel AMAFO

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Mr David ABIAMOFO

Mr Freddy DELCHOT

### **SWEDEN/SUEDE**

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Mr Patrik WIBERG

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Mr Ove ERIKSSON

Ms Annika KINDEBERG

Mr Ralf LINDGREN

### **THAILAND/THAÏLANDE**

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Rear Admiral Supote KLANGVICHIT

Alternate and Advisor/Adjoint et conseiller

Commander Natapong PHATTANAJONGRAK

### **TUNISIA/TUNISIE**

Head of Delegation/Chef de délégation

Commander Raouf LOUDHA

### **TURKEY/TURQUIE**

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Captain Erhan GEZGIN, PhD.

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Lieutenant Commander Eşref GÜNSAY

Lieutenant Commander Bülent GÜRSSES



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Head of Delegation/Chef de délégation

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Alternate and Advisor/Adjoint et conseiller

Mr Oleg MARCHENKO

Ms Alla MIAGKOVA

### **UNITED ARAB EMIRATES/EMIRATS ARABES UNIS**

Head of Delegation/Chef de délégation

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Alternate and Advisor/Adjoint et conseiller

Miss Eman AL FALASI

Mr Yaqoob ALHASHMI

Mr Mohammad ALKABI

Mr Shammo KHALED

Mr Abdullah AL MANSOORI

Mr Yousif AL MARZOOQI

Eng. Jasim AL MAZROUI

Mr Mohammed AL SAAD

### **UNITED KINGDOM/ROYAUME-UNI**

Head of Delegation/Chef de délégation

Mr Ian MONCRIEFF

Alternate and Advisor/Adjoint et conseiller

Mr Jeff BRYANT

Dr Paul CANHAM

Mr Sam HARPER

Mr Bob HOOTON

Dr Edward HOSKEN

Mr John HUMPHREY

Rear Admiral Tom KARSTEN

Captain Jamie McMICHAEL-PHILLIPS

Mr Andrew MILLARD

Mr Tim SEWELL

Ms Elinor SKELLEY

Mr Nigel SUTTON

Mr Chris THORNE

Mr George WALLACE

Mr Nick WEBB

Mr James WHITTAKER

### **UNITED STATES OF AMERICA/ETATS-UNIS D'AMERIQUE**

Head of Delegation/Chef de delegation

Rear Admiral Gerd GLANG

Alternate and Advisor/Adjoint et conseiller

Ms Jennifer BEAN

Ms Bree ERMENTROUT

Mr Erich FREY

**General Information - CONF.EX5/G/02**

Rear Admiral Tim GALLAUDET  
Mr Steven HARRISON  
Mr Stanley HARVEY  
Mr Jonathan JUSTI  
Captain John LOWELL  
Mr John NYBERG  
Ms Julia POWELL  
Mr Miroslav STAMENKOVICH  
Ms Rebecca WEBBER

**VENEZUELA**

Head of Delegation/Chef de délégation  
Captain Luis PIBERNAT

Alternate and Advisor/Adjoint et conseiller  
Mr Inyer BARRIOS  
Mr Ziadie DEL MORAL  
Mr Felix JIMENEZ

---

**OBSERVERS**  
*OBSERVATEURS*

**OBSERVERS FROM PENDING MEMBER STATES**  
*OBSERVATEURS DES ETATS EN ATTENTE DE LA QUALITE D'ETAT MEMBRE*

**GEORGIA/GEORGIE**

Mr Revaz BABILUA  
Mr Aleksandre DOLBAIA  
Mr Giorgi KARTVELISHVILI  
Mr Manana KIRTADZE

**VIET NAM**

Senior Captain Do Minh THAI  
Senior Captain Mai Tat THANG  
Lieutenant Dao Van NHIEM  
Mr Nguyen Anh DUNG

**OBSERVERS FROM NON-MEMBER STATES**  
*OBSERVATEURS DES ETATS NON MEMBRES*

**ANGOLA**

Ms Dorteia BONDA

**CONGO, REPUBLIC OF THE/CONGO, RÉPUBLIQUE DU**

Mr Martin Parfait Aimé COUSSOUD-MAVOUNGOU  
Mr Albert Jean Aicard ENKARI  
Mr Rivelino IBARA  
Mr Antoine MBAMA  
Mr Jean Félix MOUTHOU-D-CHIKAYA  
Mr Gaston MOMBO  
Mr Brice Wilfrid NAHOUTOUMA-SAMBA  
Mr Arsène Fidèle SAMBA  
Ms Marie Josée TCHIKAYA-MAKOSSO

**GHANA**

Mr George OWUSU-ANSAH, Port Hydrographic Surveyor, Ghana Ports and Harbours Authority

**GUINEA/GUINEE**

Mr Souleymane BAH

**GUINEA-BISSAU/GUINEE-BISSAU**

Mr Iatanin DAVYES  
Mr Carlos DA SILVA

**ISRAEL**

Mr Baruch PERETZMAN

## **General Information - CONF.EX5/G/02**

### **LEBANON/LIBAN**

Lieutenant Commander Mohamad Salim KOSSAIBATI

### **MALTA/MALTE**

Captain David BUGEJA  
Mr Joseph BIANCO, Malta Transport Centre

### **SENEGAL**

Captain Amadou NDIAYE, Director  
Mr Abdoulaye DIA, Head of Hydrographic Service

### **TOGO**

Ms Piyalo Abiré BILABINA d'ALMEIDA

<p style="text-align: center;"><b>OBSERVERS FROM INTERGOVERNMENTAL AND NON-GOVERNMENTAL ORGANIZATIONS <i>OBSERVATEURS D'ORGANISATIONS INTERGOUVERNEMENTALES ET NON GOUVERNEMENTALES</i></b></p>
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### **COMITE INTERNATIONAL RADIO-MARITIME (CIRM)**

Ms Frances BASKERVILLE

### **CHART & NAUTICAL INSTRUMENT TRADE ASSOCIATION (CNITA) / ASSOCIATION PROFESSIONNELLE DES CARTES ET INSTRUMENTS NAUTIQUES**

Mr Simon JACKSON

### **INTERNATIONAL FEDERATION OF SURVEYORS/FEDERATION INTERNATIONALE DES GEOMETRES (FIG)**

Mr Gordon JOHNSTON

### **HYDROGRAPHIC SOCIETY OF KOREA (HSK)/SOCIETE HYDROGRAPHIQUE DE COREE**

Dr Yunsoo CHOI  
Dr Hyunsoo KIM

### **INSTITUE OF MARINE ENGINEERING, SCIENCE & TECHNOLOGY (IMarEST)/INSTITUT D'INGENIERIE, DE SCIENCE ET DE TECHNOLOGIE MARINES**

Mr David LOOSLEY  
Ms Charlotte LORD

### **INTERNATIONAL ASSOCIATION OF ANTARCTICA TOUR OPERATORS (IAATO) / ASSOCIATION INTERNATIONALE DES ORGANISATEURS DE VOYAGES DANS L'ANTARCTIQUE**

Mr Stephen WILKINS

### **INTERNATIONAL ASSOCIATION OF GEODESY (IAG) / ASSOCIATION INTERNATIONALE DE GEODESIE**

Professor Sunil BISNATH, Chair, IHO/IAG ABLOS

### **INTERNATIONAL CENTRE FOR ENC'S (IC-ENC)/CENTRE INTERNATIONAL POUR LES ENC**

Mr James HARPER, General Manager  
Mr Richard FOWLE

**General Information - CONF.EX5/G/02**

**INTERNATIONAL ASSOCIATION OF MARINE AIDS TO NAVIGATION AND LIGHTHOUSE AUTHORITIES (IALA) / ASSOCIATION INTERNATIONALE DE SIGNALISATION MARITIME (AISM)**

Mr Gary PROSSER, Secretary-General

**INTERNATIONAL HARBOUR MASTERS' ASSOCIATION (IHMA)/ASSOCIATION INTERNATIONALE DES COMMANDANTS DE PORTS**

Ms Ingrid RÖMERS

**INTERNATIONAL MARITIME ORGANIZATION (IMO)/ORGANISATION MARITIME INTERNATIONALE (OMI)**

Mr Koji SEKIMIZU, Secretary-General

**INTERNATIONAL UNION OF GEODESY & GEOPHYSICS (IUGG)/UNION GÉODÉSIQUE ET GÉOPHYSIQUE INTERNATIONALE (UGGI)**

Dr Pierre HUBERT

**JAPAN HYDROGRAPHIC ASSOCIATION (JHA)/ASSOCIATION HYDROGRAPHIQUE DU JAPON**

Mr Tomotaka ITO

Dr Shigeru KATO

**KOREA OCEANOGRAPHIC AND HYDROGRAPHIC ASSOCIATION (KOHA)/ASSOCIATION HYDROGRAPHIQUE ET OcéANOGRAPHIQUE DE COREE**

Mr Oksoo KIM

**NIPPON FOUNDATION**

Mr Mitsuyuki UNNO, Executive Director, Nippon Foundation

**PAN AMERICAN INSTITUTE OF GEOGRAPHY AND HISTORY (PAIGH)/INSTITUT PANAMERICAIN DE GEOGRAPHIE ET D'HISTOIRE (IPGH)**

Mr Paul R. COOPER

**PRIMAR**

Ms Minika BJØRGE

Ms Celine BUISSON ROSVOLD

**PROFESSIONAL YACHTING ASSOCIATION/ASSOCIATION PROFESSIONNELLE DE YACHTING**

Mr Kenneth HIMSCHOOT

Mr Andrew SCHOFIELD

**RTCA**

Mr Michael BERGMANN

Mr Alex ZAKROFF

**SECRETARIAT OF THE PACIFIC COMMUNITY (SPC)/SECRETARIAT DE LA COMMUNAUTE DU PACIFIQUE**

Mr Jens KRUGER

**FORMER IHB DIRECTORS/ANCIENS DIRECTEURS DU BHI**

Rear Admiral Chris ANDREASEN (USA/*Etats-Unis*)

Rear Admiral Giuseppe ANGRISANO (Italy/*Italie*)



## LIST OF EXHIBITORS

Stand number	Company Name
12	Applanix Corporation
16 & 17	Atlas Hydrographic GmbH
26	Axys Technologies Inc
14	CARIS BV
4A	ECA Robotics and Triton Imaging Inc
15	EIVA
6	ESRI
19	Fugro
4B	Gardline Hydro
3	HYPACK
24	IC-ENC
11	IIC Technologies Inc
28	Innomar
10	IXBLUE SAS
21	Jeppesen
22	KESTI
2	Knudsen Engineering
7 & 8	Kongsberg Maritime
13	L-3 Communications ELAC Nautik
5	MMT/NetSurvey
27	NAVTOR
20	Pelydryn Ltd
25	PRIMAR
30	Reson
18	Teledyne Odom Hydrographic and ACTHYD
23	Teledyne TSS Ltd
1	UKHO





## CONFERENCE PROGRAMME

*Note: all events took place at the Conference Auditorium Rainier III  
except where indicated otherwise*

Saturday 4 October		
	All day	<b>Registration of Delegates</b>
Sunday 5 October		
	All day	<b>Registration of Delegates</b> (continued)
	18:30-19:30	<b>Meeting of Heads of Delegation (at the IHB)</b>
	From 19:30	<b>Wine &amp; Cheese at the IHB</b> <i>(Heads of Delegations of IHO Member States and Spouses only)</i>

Agenda Item	Day 1	Monday 6 October
	All day	<b>Registration of Delegates</b> (continued)
<b>1</b>	08:30-08:45	<b>Conference Administration</b>
<b>2</b>	09:00	<b>Arrival of HSH Prince Albert II of Monaco</b>
	09:00-09:30	<b>Opening Ceremony - Part 1</b>
	09:30-09:45	<b>HSH Prince Albert II Opens and Visits the Hydrographic Industry Exhibition and the Capacity Building Poster Exhibition</b>
	09:35-10:45	<b>Hydrographic Industry Exhibition and the Capacity Building Poster Exhibition open to delegates and guests</b>
<b>2</b>	10:45-11:30	<b>Opening Ceremony - Part 2</b>
<b>1</b>	11:30-12:00	<b>Conference Administration</b> (continued)
	12:00-12:15	<b>Official Photograph</b>
	12:15-14:00	<i>Lunch Break</i>
<b>3</b>	14:00-15:30	<b>Consideration of Reports and Proposals (Work Programme 1)</b>
	15:30-16:00	<i>Coffee Break</i>

**General Information - CONF.EX5/G/01**

	16:00-17:30	<b>Consideration of Reports and Proposals (Work Programme 1)</b> (continued)
	18:30-20:30	<b><i>Exhibitors' Reception in Exhibition area</i></b> <b><i>(All Conference Participants and Spouses)</i></b>

	<b>Day 2</b>	<b>Tuesday 7 October</b>
	09:00-10:30	<b>Consideration of Reports and Proposals (Work Programme 1)</b> (continued)
	10:30-11:00	<i>Coffee Break</i>
	11:00-12:30	<b>Consideration of Reports and Proposals (Work Programme 1)</b> (continued)
	12:30-14:00	<i>Lunch Break</i>
	14:00-15:30	<b>Presentations and Discussions on Topical Issues</b> <b><i>Theme 1: The Place of Hydrographic Data in a Geospatial World</i></b>
	15:30-16:00	<i>Coffee Break</i>
	16:00-17:30	<b>Presentations and Discussions on Topical Issues</b> <b><i>Theme 2: E-navigation - Its Impact on the IHO and Member States</i></b>
	18:30-20:00	<b><i>Reception on board HMS Echo</i></b> <b><i>(By invitation only)</i></b>
	<b>Day 3</b>	<b>Wednesday 8 October</b>
	09:00-10:30	<b>Presentations and Discussions on Topical Issues</b> <b><i>Theme 3: Technology Update</i></b>
	10:30-11:00	<i>Coffee Break</i>
	11:00-12:30	<b>Presentations and Discussions on Topical Issues</b> <b><i>Theme 4: Capacity Building</i></b>
	12:30-14:00	<i>Lunch Break</i>
<b>4</b>	14:00-15:30	<b>Consideration of Reports and Proposals (Work Programme 2)</b>
	15:30-16:00	<i>Coffee Break</i>

**General Information - CONF.EX5/G/01**

	16:00-17:30	<b>Consideration of Reports and Proposals (Work Programme 2)</b> (continued)
	18:00-19:00	<b><i>Reception offered by the Government of Monaco</i></b> <b><i>(All Conference Participants and Spouses) (Hotel Hermitage)</i></b>
	<b>Day 4</b>	<b>Thursday 9 October</b>
<b>5</b>	09:00-10:30	<b>Consideration of Reports and Proposals (Work Programme 3)</b>
	10:30-11:00	<i>Coffee Break</i>
	11:00-12:30	<b>Consideration of Reports and Proposals (Work Programme 3)</b> (continued)
	12:30-14:00	<i>Lunch Break</i>
	14:00-15:30	<b>Consideration of Reports and Proposals (Work Programme 3)</b> (continued)
	15:30-16:00	<i>Coffee Break</i>
	16:00-17:30	<b>Consideration of Reports and Proposals (Work Programme 3)</b> (continued)
	18:30-20:00	<b><i>Reception hosted by the Directing Committee in Exhibition Area (All Conference Participants and Spouses)</i></b>
	<b>Day 5</b>	<b>Friday 10 October</b>
<b>6</b>	09:00-10:30	<b>2015 Work Programme and Budget</b>
	10:30-11:00	<i>Coffee Break</i>
	11:00	<b>Hydrographic Industry Exhibition and Capacity Building Poster Exhibitions close</b>
<b>7</b>	11:00-12:30	<b>Closing Ceremony</b>
	12:30-14:00	<i>Lunch Break</i>
	pm	<b>Supplementary Meetings at the IHB (as required)</b>

## AGENDA FOR THE SESSIONS OF THE CONFERENCE

ITEM	DESCRIPTION	DOCUMENT
<b>1</b>	<b>CONFERENCE ADMINISTRATION</b>	
	Welcoming Remarks by the President of the Directing Committee  Confirmation of the Election of the President of the Conference  Election of the Vice-President of the Conference  Appointment of Rapporteurs  Adoption of the Programme and Agenda	CONF.EX5/G/01/Rev. 2
<b>2</b>	<b><u>OPENING CEREMONY - Part 1</u></b>	
	Address by the President of the Directing Committee  Conference Opening Address by HSH Prince Albert II of Monaco  Presentation of New Member State's Flag: - Montenegro	
	Opening of the Hydrographic Industry Exhibition and the Capacity Building Poster Exhibition by HSH Prince Albert II of Monaco	
<b>2</b>	<b><u>OPENING CEREMONY - Part 2</u></b>	
	Opening Address by the President of the Conference  Keynote Address by Mr Koji Sekimizu, Secretary-General of the IMO  Keynote Address by Mr Mitsuyuki Unno, Executive Director of the Nippon Foundation	
<b>3</b>	<b>WORK PROGRAMME 1: REPORTS AND PROPOSALS</b>	
	<b>a. Briefing by the Directing Committee on progress, issues and plans related to Work Programme 1</b>  <b>b. Report and recommendations from the Staff Regulations Working Group (SRWG) regarding its review of the IHB Staff Regulations</b>  <b>c. Report and recommendations from the Directing Committee concerning technical capacity within the IHB</b>	CONF.EX5/REP.01 & Add.1  CONF.EX5/REP.02

ITEM	DESCRIPTION	DOCUMENT
	<p><b>d. Proposals from Member States:</b></p> <p>PRO 1 - Revision of the conditions for the award of the Prince Albert 1st Medal for Hydrography</p> <p>PRO 2 - Seeking a new way forward for the S-23 issue</p> <p>PRO 3 - Amendment of the General Regulations of the IHO (not yet in force), Article 16 (b), to clarify the Council selection process</p> <p>PRO 5 - Improving the total cost estimate of the IHO tasks for the definition of a prioritized work programme</p>	CONF.EX5/G/03
4	<p><b>WORK PROGRAMME 2: REPORTS AND PROPOSALS</b></p>	
	<p><b>a. Briefing by the Vice-Chair of HSSC on progress, issues and plans related to Work Programme 2</b></p> <p><b>b. Proposals from Member States:</b></p> <p>PRO 4 - For a trusted crowd-sourcing policy and its cook book</p> <p>PRO 6 - Development of an IHO satellite-derived bathymetry and charting programme for remote areas</p>	CONF.EX5/G/03
5	<p><b>WORK PROGRAMME 3: REPORTS AND PROPOSALS</b></p>	
	<p><b>a. Briefing by the Chair of IRCC on progress, issues and plans related to Work Programme 3</b></p> <p><b>b. Consideration of proposals or recommendations from IRCC-6</b></p> <p><b>c. Report and recommendations from the Capacity Building Sub-Committee (CBSC) regarding the IHO CB Strategy</b></p> <p><b>d. Proposals from Member States:</b></p> <p>PRO 7 - There is no other alternative but the full implementation of the WEND Principles and its Guidelines</p>	<p>CONF.EX5/REP.03 &amp; Add.1</p> <p>CONF.EX5/G/03</p>
6	<p><b>2015 WORK PROGRAMME AND BUDGET</b></p>	CONF.EX5/REP.04
	<p><b>a. Introduction by the Directing Committee</b></p> <p><b>b. Consideration and approval of the draft financial report for 2013</b></p> <p><b>c. Consideration and approval of the 2015 Work Programme and Budget</b></p>	

**General Information - CONF.EX5/G/01**

<b>ITEM</b>	<b>DESCRIPTION</b>	<b>DOCUMENT</b>
7	Any Other Business Date of the Next Conference Seating Order at the Next Conference Closing Remarks by the President of the Conference	

## AGENDA FOR THE PRESENTATIONS AND DISCUSSIONS ON TOPICAL ISSUES

### **Theme 1: The Place of Hydrographic Data in a Geospatial World**

- Keynote Speech What is the Significance of Geospatial Data in the 21<sup>st</sup> Century?  
*Jan PIERCE, Deputy Chief Executive Location Information, LINZ*
- Presentation Where do Marine Spatial Data Infrastructures (MSDI) fit in?  
*John PEPPER, Secretary of the MSDI WG*
- Presentation Regional and national examples of SDIs  
*Jens Peter HARTMANN, Chair of the BSHC MSDI WG*  
*Ralf LINDGREN, Member of the BSHC MSDI WG*
- Presentation Supporting technologies  
*Rafael PONCE, Global Maritime Business Development Manager, ESRI*
- Questions and Answers

### **Theme 2: E-navigation – Its Impact on the IHO and Member States**

- Keynote Speech What is e-Navigation? What will it mean for the mariners, ship operators and Administrations?  
*John Erik HAGEN, Coordinator of the IMO e-Navigation Correspondence Group*
- Presentation The view from the ships  
*John MURRAY, Director Marine, International Chamber of Shipping*
- Presentation The view from industry  
*Michael BERGMANN, President of CIRM*
- Presentation Test bed experience and examples  
*Gary PROSSER, Secretary-General of IALA*
- Questions and Answers

### **Theme 3: Technology Update**

- Presentation ECDIS – Lessons learned at sea  
*Mark BROSTER, Managing Director, ECDIS Ltd*
- Presentation Satellite-derived bathymetry (SDB)  
*Dr Thomas HEEGE, CEO, EOMAP GmbH & Co.KG*
- Presentation Crowd-sourced bathymetry (CSB)  
*Robert WARD, President of the IHB Directing Committee*
- Questions and Answers

**Theme 4: Capacity Building**

Keynote Speech Where does the IHO Capacity Building Programme fit in?  
*Thomas DEHLING, Chair of the CBSC*

Presentation Industry participation in capacity building  
*Paul COOPER, Vice President, CARIS USA*  
*Don Ventura, Hydrographic Survey Manager, Fugro Pelagos*

Presentation Assessing hydrographic priorities – the New Zealand risk assessment methodology applied to the South West Pacific  
*Adam GREENLAND, National Hydrographer, New Zealand Hydrographic Authority, LINZ*

Presentation A view of capacity building from the recipients  
*Captain M. Nayeem Golam MUKTADIR, Director Hydrography, Bangladesh Navy Headquarters*

Questions and Answers



**OFFICERS OF THE  
5<sup>TH</sup> EXTRAORDINARY INTERNATIONAL  
HYDROGRAPHIC CONFERENCE**

**President of the Conference**

**Dr Mathias JONAS**

**Vice-President of the Conference**

**Rear Admiral K.R. SRINIVASAN**

**RAPORTEURS  
TO THE 5<sup>TH</sup> EXTRAORDINARY INTERNATIONAL  
HYDROGRAPHIC CONFERENCE**

6-10 October 2014

<b>PLENARY SESSION</b>	<b>ITEM</b>	<b>RAPORTEUR</b>
1 <sup>st</sup> Plenary Session	Administration & Opening	Mr Juha KORHONEN (Finland)
2 <sup>nd</sup> Plenary Session	WP1	Ms Annika KINDEBERG (Sweden)
3 <sup>rd</sup> Plenary Session	WP1	Commander Leonel MANTEIGAS (Portugal)
4 <sup>th</sup> Plenary Session	WP2	Mr Nigel SUTTON (UK)
5 <sup>th</sup> Plenary Session	WP3	Ms Jennifer BEAN (USA)
6 <sup>th</sup> Plenary Session	WP3	Dr Kian FADAIE (Canada)
7 <sup>th</sup> Plenary Session	2015 WP/Budget & Closing	Lieutenant Commander Eşref GÜNSAY (Turkey)
Topical Themes 1 & 2		IPETA Eric LANGLOIS (France)
Topical Themes 3 & 4		Mr Jamie CHEN (Singapore)



# **OPENING AND KEYNOTE ADDRESSES**



## **OPENING AND KEYNOTE ADDRESSES**

1. The President of the IHB Directing Committee, Mr Robert WARD
2. His Serene Highness Prince ALBERT II of Monaco
3. The President of the Conference, Dr Matthias JONAS
4. The Secretary-General of the IMO, Mr Koji SEKIMIZU
5. The Executive Director of the Nippon Foundation, Mr Mitsuyuki UNNO

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### **OPENING ADDRESS BY THE PRESIDENT OF THE IHB DIRECTING COMMITTEE Mr Robert WARD**

Your Serene Highness,

Distinguished Guests,

Distinguished Delegates and Observers,

Ladies and Gentlemen,

Your Serene Highness, all of us present at this Opening Ceremony of the 5<sup>th</sup> Extraordinary International Hydrographic Conference are extremely privileged and grateful that you have honoured us by agreeing to officially open our Conference. Your forebears have honoured the Organization by their presence at all of the Conferences held since the establishment of the International Hydrographic Bureau in the Principality of Monaco in 1921 at the kind invitation of your distinguished great-great-grandfather, Prince Albert 1<sup>st</sup>. May I, on behalf of the International Hydrographic Organization, thank you, Your Serene Highness, and your Government, for your continuing interest in and support of our Organization and also praise your personal efforts in tackling environmental issues that the world faces today, where hydrography plays an important role in maritime safety, the protection of the marine environment and mankind's increasing dependence on safe and healthy seas and oceans. You are acknowledged as one of the leaders in pursuing global initiatives for the protection of the environment, especially in the oceans and the Polar Regions.

On behalf of the Directing Committee, may I extend a warm welcome to nearly 300 delegates representing 65 of our 82 Member States and particularly to those who are here for the first time; to the Observers from those countries not yet Members of the Organization; to the Observers from many important International Organizations with whom we have fruitful and mutually beneficial cooperation, also to the Non-Governmental Organizations, to Members of past Directing Committees of the Organization and to the representatives of the companies who, at significant expense, have arranged exhibits of their latest products and services for use in hydrography, oceanography, data management, and cartography. I would especially like to welcome Ministers, members of the Government, Secretaries-General, Ambassadors, Consuls and dignitaries who are here with us at this Opening Ceremony. A special welcome to Mr Koji SEKIMIZU, Secretary-General of the International Maritime Organization and Mr Mitsuyuki UNNO, Executive Director of the Nippon Foundation, both will address the Conference during the morning.

## Opening and Keynote Addresses

Ladies and Gentlemen,

The purpose of this Extraordinary Conference is to consider the three specific reports that the last Ordinary Conference directed to be prepared.

It is also planned that we consider and adopt the Work Programme and Budget for next year, rather than deal with them by correspondence, as we normally do in the intersession between two ordinary Conferences.

In addition, four special information sessions have been included in the Conference programme. These sessions will allow selected stakeholders and representatives from our Observer Organizations to present their views and observations on a number of topical issues which are of interest and relevance. The presentations will include an overview of our Capacity Building Programme and how it works; we will hear mariners' views on ECDIS and ENC's; the significance and increasing role of spatial data infrastructures for the future of hydrographic offices; and the need to consider innovative ways of obtaining bathymetric data.

In addition to the regular Industry Exhibition, we have, for the first time, mounted an IHO Capacity Building Poster Exhibition. It provides an overview of IHO Capacity Building activities and results over the last 10 years. We also have with us at this Conference a number of alumni from the capacity building programmes, notably from the programmes that have been funded by the Nippon Foundation and the Republic of the Korea. Some of the alumni will explain the benefits that they have gained from the programmes during the information session dedicated to capacity building on Wednesday morning.

Ladies and Gentlemen, Dear Colleagues,

At this conference we also have the pleasure of welcoming Montenegro as the 82nd Member State of the Organization. I will call upon Mr Luka Mitrovic, the Hydrographer of Montenegro to present his country's flag to the Organization shortly.

In addition to Montenegro, Bulgaria, Haiti, Mauritania and Sierra Leone have all been accepted to become Members, but their governments have yet to submit their instruments of accession. We look forward to them joining soon.

Brunei Darussalam, Georgia and Viet Nam have applied to join the Organization and I am pleased to say that we are close to reaching the required majority of approvals for them to become Members. Unfortunately, the Government of Monaco has not yet received quite enough approvals to allow us to welcome them as Members today. So, I ask the distinguished delegates of those Member States that have yet to indicate their positions on these applications to encourage their governments to do so as soon as possible. Increasing our membership is an important issue that we will be discussing further during our agenda this week.

Of course, once we achieve the required majority of approvals for the Protocol of Amendments to the IHO Convention, applications from UN Member States will be accepted automatically without the need for formal voting. This will not only simplify the bureaucracy, but it is likely to encourage more States to apply for membership. In that context, I am pleased to report that we are now only seven short of the number of ratifications that we require for the amendments to the Convention to enter into force. The Directing Committee has continued to remind a number of those States that have yet to indicate their position by visiting their diplomatic missions in London or Paris and by raising the issue during high level visits to Member States.

One of the main goals of the Directing Committee over the last two years has been to promote the IHO and its activities in international meetings. Based on this experience, there are two specific observations that we would like to bring to your attention - and which we believe Member States should consider carefully. We observe an inevitable and unstoppable move by our land-based mapping counterparts who are moving away from map

## Opening and Keynote Addresses

production as the primary reason for their existence to the maintenance, management and operation of national spatial data infrastructures from which their maps (amongst other things) are then produced. Of particular significance is that the traditional government mapping agencies are changing from just being the provider of a specialist authoritative product (the map or the chart), to being the provider of a database from which authoritative map products, and various other services, can be derived. It is our view that HO's should take careful note of this in the context of nautical charts and marine spatial data infrastructures. Put very simply, our message is that if HO's do not already consider their bathymetric dataset as being their primary asset - rather than their charts, then perhaps your days are numbered.

Our second observation follows on from our first one, and concerns the fact that there is no bathymetric data available for much of our seas, oceans and navigable waterways. Yet, there are many potential users for bathymetric data out there who do not necessarily require the same accuracy or authority as that shown in our charts. Which leads us to say that perhaps we, as a community, need to decide not only whether we will be involved in spatial data infrastructures, but whether we want to be leaders by being the national managers and custodians of the best reference bathymetric dataset that should be at the heart of a Marine Spatial Data Infrastructure - or will we just continue to be chart makers? In that context, perhaps we need to be thinking more about collecting and managing "the best available data", even data that may not be good enough to be used in a nautical chart, rather than "only the data needed to make a chart". And this is where satellite derived bathymetry and crowd sourcing may have an important for us role.

Both of these topics will be covered during the information sessions on Tuesday afternoon and on Wednesday morning.

The information sessions, like much of the work of the IHO will benefit from the presence of our international observer organizations and Industry. I would therefore like to thank them, both those represented here today and those that participate in our work throughout the year, for their participation, support and contributions to both the technical and the capacity building activities of our Organization.

And finally, Your Serene Highness, on behalf of the IHO, I would like to express our gratitude to Your Government for the constant assistance and significant support that it provides to the IHO and to the Secretariat here in Monaco, in particular through the premises that are provided at no cost to the Organization. I would also like to thank your Department of External Relations and Cooperation for its work in handling the diplomatic procedures for the acceptance of new Member States and the ratification of the Protocol of Amendments to the IHO Convention.

Our thanks to you personally, Monseigneur, for your specific interest in hydrography, the needs and requirements of the Secretariat and the annual donation provided to the Organization to support and continue the GEBCO project that was started by your great-great-grandfather more than 100 years ago.

Mr President of the Conference, Dear colleagues, ladies and gentlemen, we have a busy week ahead of us. With effort and contribution by all, I am sure that appropriate and necessary decisions and actions will be agreed so that the Organization can respond effectively and efficiently to the demands and the challenges that we are facing.

Thank you

**OPENING ADDRESS BY HIS SERENE HIGHNESS  
PRINCE ALBERT II OF MONACO**

Your Excellencies,

Mr Secretary General,

Mr Executive Director,

Distinguished Delegates and Observers,

Ladies and Gentlemen,

Dear Friends,

As you know, since the creation of the « Hydrographers' Club » by my Great-Great-Grandfather in 1921 in Monaco, my country has continued to support the International Hydrographic Organization whose main aim is to ensure that all of the seas, oceans and navigable waters are surveyed and charted.

It is for that reason that I am particularly pleased to welcome you to Monaco for the 5th Extraordinary International Hydrographic Conference, held in addition to the normal cycle of the five-yearly ordinary Conferences.

This Conference is in anticipation of the new cycle which will become three-yearly when the Protocol of Amendments to the Convention on the IHO enters into force, which will most likely be before the end of the current five-year cycle, in 2017.

I would like to take this opportunity to thank the 41 States that have ratified the Protocol approved by the 2005 Conference, and encourage those Member States that have not already done so, to take the required action as soon as possible in order to reach the 48 ratifications required.

During this week, your work will focus on issues of great importance.

I am thinking in particular of the discussions that you will have on the adequacy of the technical capacity of the IHO as regards the present and future requirements of providing hydrographic services in a digital and connected world.

I am also thinking of another subject whose impact is of paramount significance: the revision of the Organization's strategy in terms of Capacity Building in order to assist States to reach a sustainable development, to improve their ability to respond to hydrographic, cartographic and maritime safety obligations in accordance with international instruments.

I can do no more than stress the importance of the development of hydrographic and charting capacities upon which all maritime activities in, on or under the sea rely.

So as to envisage a sustainable and appropriate development which also involves « blue growth », States must be able to rely on hydrographic and cartographic surveys in order for them to be aware of the possible constraints or opportunities of the surroundings, whilst at the same time taking into consideration the forecasts related to the consequences of climatic change.

I know there is a long way to go before we can ensure an adequate hydrographic coverage of our oceans, seas and coastlines and meet the ever increasing requirements.



## Opening and Keynote Addresses

Moreover, we have better maps of the moon and Mars than we do of the seabed. But I am happy to know that, during the Conference, there will be sessions specifically devoted to the state of progress and the new perspectives made possible by new, emerging technologies, such as crowd-sourcing and satellite bathymetry.

Finally, in echo of the theme for the 2014 World Hydrography Day - «Hydrography : much more than just nautical charts» - I note that priority is now moving from the compilation and provision of nautical charts for safe navigation to the building of geo-spatial data networks. These networks will not only be able to support navigation, but also maritime spatial data planning, the management of coastal zones and maritime boundaries, etc.

It is with immense pleasure that I note the large number of participants at this Conference which shows the importance of the topics to be discussed this week. No less than 300 participants, with almost 70 Member States represented, certain at ministerial level – whom I thank – but also many organizations as well as over 30 exhibitors from the industry sector - I am delighted by the level of interest shown.

Please allow me to welcome the presence of Mr Koji SEKIMIZU, Secretary General of the International Maritime Organization, and to note with satisfaction the close cooperation between the IHO and IMO.

This cooperation was reconfirmed at the end of 2013 through the signing of an agreement and through the hydrographic contribution to a « sustainable maritime transport system » via the creation of « e-navigation ».

I would also like to welcome Mr Mitsuyuki UNNO, Executive Director of the Nippon Foundation, and to underline the significant contribution made by the Foundation to the IHO Capacity Building Programme, as illustrated by the presence of many students as well as the Capacity Building display held alongside the Conference.

My dear friends, I declare this 5th Extraordinary International Hydrographic Conference open and I invite you all to conduct your work in the constructive and friendly tradition initiated by the “Hydrographers’ Club”.

It is with immense satisfaction that we welcome the permanent IHO contribution to a safer, more sustainable and better informed blue world.

Thank you for your attention.

**OPENING ADDRESS  
BY THE PRESIDENT OF THE CONFERENCE  
Dr Mathias JONAS**

Your Excellencies,  
Distinguished Guests,  
Distinguished Delegates and Observers,  
Ladies and Gentlemen,

I consider it a great honour to be your President of this important Conference and I thank you for the trust that you have placed in me. I am now looking forward to serving you and our Organization in this position of great responsibility.

Maritime affairs have been gaining in public attention all over the globe. Moreover, major activities relating to the oceans are not treated as purely national endeavours anymore. Instead, international alliances have been concluded in shipping, exploration and safeguarding which combine specific expertise across professions. The international community of hydrography - our community – is striving to respond to this development. One of the most important constituting cornerstones in this endeavour is the long-term steadiness of our working arrangements. For nearly a hundred years, the seat of our Organization has been in Monaco thanks to the generous support provided by the Sovereign Prince and his government. And in all that time, we have been honoured, as we were today, by the presence of the Prince at the opening of our Conferences.

Ladies and Gentlemen,

Before I lead you through the agenda of this Conference, beginning this afternoon, I would like to reflect on a few matters now.

The digital era in all its technical aspects, drives the rapid globalisation of all cooperative processes and the provision of hydrographic services beyond ships' navigation. Our transition to the digital age is well underway and we can be justifiably proud of what we have achieved. However, we are nowhere near the end of the road. This is reflected both directly and indirectly in a number of the items in our agenda. I will briefly mention some of them.

While we now have increasingly good ENC coverage around the World and a truly global implementation of the associated data standards, the flexible distribution of those ENCs, as envisaged under the WEND principles, is yet to be achieved.

IMO's decision to adopt our Universal Hydrographic Data Model S-100 as the foundation of e-navigation is another significant development worthy of our consideration. The wide use of S-100 provides an opportunity for us which we should not ignore - but we must closely examine our ability to support the standard - in terms of our Member States' capacity to participate in our technical working groups and also the Organization's ability to ensure the maintenance of the standard – even in view of its beneficiaries outside our IHO community.

And there is a growing number of them. This is not only because of the increase in activity at sea as mankind reaps the benefits that the seas and oceans can offer, but also because of the vulnerability of those seas and oceans if we do not use them sensibly and sustainably. And as we all know in this room, hydrography and an understanding of the nature and shape of the seafloor is a major contributing element to any human activity that takes place in the marine environment.

## Opening and Keynote Addresses

By tradition, our IHO view of hydrography has been more closely related to ship's navigation than to anything else. Many of you – like me – are looking back to a time of service at sea when our most popular methods of survey was ships and boats and echo sounders, and our most prominent products were nautical charts. For most of us, this is still the case today - but times are changing. The phrase “blue growth” has become a synonym for the expanding use of marine resources by a growing world population – and the providers of hydrographic data have to respond to by new provisions.

So, perhaps now is the time for us to carefully consider our role in a digital geospatial data world and our role in Spatial Data Infrastructures, which are intended to ensure that geospatial data is the great enabler of the 21<sup>st</sup> century.

The need for hydrographic data to support tsunami inundation modelling and the ongoing search for Malaysian aircraft flight MH370 have both illustrated the importance of and likewise the poor state of hydrographic data coverage in many areas and brought this to the attention of the public.

However, it seems to me that other agencies and organizations than hydrographic offices are now claiming this empty data domain as theirs and are filling the geo-information gap on our behalf. Are we happy with this situation? What should be the future role of the IHO and its Member State HO's in the maritime geodata world? Marine Spatial Data Infrastructures or MSDI offer us a chance to make hydrography more visible and, consequently, strengthen the position of our national hydrographic offices and eventually of our Organization - the IHO. We will hear more of this during the Conference.

So, these are just some of the many things for us to consider. Of course, our discussions should not only take place in the plenary sessions. Our Conference is also the opportunity for us to discuss our common issues informally and I encourage you all to do this. It can only assist us in the formal sessions!

Ladies and Gentlemen,

The long-term success of an organization like ours depends on the commitment and contribution of its members. I am confident that our Conference will, as always, be governed by this spirit. I will do my best to help make it so. Though the world may be a difficult place these days, international organizations such as ours are here to pursue common goals for the benefit of all that have a use for, or a dependence on the sea and all that it can offer, in an open atmosphere of mutual respect and willingness to compromise.

I conclude by quoting Jacques Cousteau, the famous French explorer, who describes the situation and provides an excellent motto for us:

*The sea, the great unifier, is man's only hope. Now, as never before, the old phrase has a literal meaning: we are all in the same boat.*

I am now pleased to invite Mr Koji SEKIMIZU, Secretary General of the International Maritime Organization to address the Conference.

**KEYNOTE ADDRESS**  
**BY THE SECRETARY GENERAL OF THE INTERNATIONAL**  
**MARITIME ORGANIZATION**  
Mr Koji SEKIMIZU

President of the Conference,  
Excellencies,  
President of IHO,  
Distinguished Delegates,  
Ladies and Gentlemen,

It is really a great pleasure to be with you here today at this fifth Extraordinary International Hydrographic Conference. Our Organizations, IMO and IHO, share a great deal in common, from our shared pursuit of safer seas and more reliable navigation, to the protection of the marine environment and sustainable maritime transportation.

It is no surprise, therefore, that we also share a long history of cooperation and working together. Indeed, the formal cooperation arrangement between IMO and IHO goes back to 1963 when the then Assembly of IMCO, as IMO was then called, at its third session, adopted a resolution on relations with the International Hydrographic Bureau.

In view of this long-standing relationship, it gave me great satisfaction to sign in December of last year – 2013 – an Agreement of Cooperation between our two Organizations which both reconfirm our strong bonds of the past and provides a clear framework for future cooperation.

The IMO Assembly, at its 28th session, endorsed my recommendation that IMO Members that are not yet members of IHO should consider joining it, given that its objectives with regard to the safety of navigation and protection of the marine environment are so closely related to those of IMO – and I hope that many will do so and do so, soon.

Ladies and gentlemen, in view of the common interests we share in so many areas of work, many of which you will doubtlessly touch upon during the course of this Conference this week, I should like to say just a few words about some of the most important issues.

In July of this year, the inaugural meeting of the new IMO Sub-Committee on Navigation, Communication, Search and Rescue (NCSR) endorsed a draft MSC circular on *ECDIS - Guidance for good practice*. After consideration of some of its technical provisions at other sub-committees, it will be forwarded to the Maritime Safety Committee for approval. This good practice guidance incorporates and updates previously issued circulars relating to ECDIS, including advice on addressing operating anomalies, maintenance and training. It will, I am sure, be very well received by the shipping industry and by manufacturers of marine electronics.

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Capacity building is a vital component of the efforts of both IMO and IHO to support our common objectives. I note that, like IMO, your organization IHO also maintains Country Profiles which assist in the assessment and analysis of countries' needs. It is becoming

## Opening and Keynote Addresses

increasingly important to focus on the genuine needs for beneficiaries. Without this, it is difficult to deliver capacity-building activities with maximum effect.

The idea of the Country Maritime Profiles for identifying technical cooperation needs was launched in 2012, shortly after I took up my new responsibility as Secretary-General. If you look at the history of IMO, technical cooperation has been a very important aspect. Traditionally the Secretariat assessed how to best provide technical cooperation. In order to ensure that the limited resources are prioritized and allocated according to the actual needs of developing countries, I thought it would be necessary for the developing countries to assess and identify their own technical cooperation needs – so that was why I proposed that every developing country should have a Country Maritime Profile. And, when the IMO Secretariat is considering which important issues to address, we are able to appropriately distribute our resources. In addition, all nations must establish its own national maritime transportation policy taking into account the future of individual countries. Without a national policy you cannot fill in the technical cooperation country maritime profile template, so a national maritime transportation policy is very important and I decided to increase the resources in the IMO Secretariat in order to handle this very important issue.

For the identification of technical cooperation and capacity building needs, in particular the fields of coastal States and port State responsibility, in my view, hydrographic survey and electronic navigational charts are some of the most urgent and important issues. ECDIS has been mandated and the availability of electronic navigational charts is crucial to ensure safety for the future.

The hydrographic survey and development of electronic navigational charts is a major field of capacity building and technical cooperation which entail resource requirements. If I look back again at the history of IMO for technical cooperation, we have allocated limited resources from the Technical Cooperation Fund for this field. Clearly the resources allocated have not been sufficient and you may also recall that IMO has generated the idea of the marine electronic highway – particularly in the straits of Malacca and Singapore. I personally put a lot of effort into this, and was able to ensure funding from the Global Environment Facility and we managed to implement the demonstration project of the Marine Electronic Highway. That was a good example. But in my view, I think we need to generate interest from the wider community – we, IHO and IMO, should refresh our joint efforts by approaching development agencies of United Nations, aid agencies of IMO/IHO Member states, and donor communities and philanthropic organizations. I would like to discuss this issue with the President, Robert Ward, exploring what we can do in the future and establish a joint strategy.

Development of hydrographic surveying and nautical charting capability is of fundamental importance and we, the two Organizations, have been delivering joint capacity-building activities over many years. Indeed I am pleased to note that a joint two-week regional training course for African Member States is being delivered in Maputo, Mozambique at this very moment. This is an excellent example of the work our two Organizations undertake together and which, I know, is very well appreciated by the recipient countries. I firmly believe that helping states achieve the capacity required to participate effectively in maritime activities makes an important contribution towards the sustainable maritime transportation system that we are all striving to realise.

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Changing the subject to the polar regions; the polar regions are becoming an increasing focus of hydrographic attention due to the intensified activity in these areas from shipping, tourism as well as other activities such as energy exploration and extraction. IMO is close to finalising its Polar Code, which will be a mandatory international code for ships operating in polar waters. The IHO has contributed to the safety considerations contained within the Polar

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Code, related specifically to the generally unsatisfactory state of the underlying hydrographic surveys from which existing nautical charts in the polar regions are derived.

Statistics show a lack of adequate hydrographic surveys in nearly 95% of the polar regions. This has obvious implications, not only for the safe operation of an increasing number of ships, but also for the continued protection of the environment and for the sustainable management of the polar regions in general. All activities in the maritime domain rely, in some way or another, on a knowledge of the depth of the sea and the nature of any hazards or obstacles that lie on the sea floor. In the case of the polar regions, much of this information simply does not exist. I know that this is a major concern and one that is shared by IHO; and I feel confident I can speak for both our Organizations when I say that we would encourage our Member States to address this issue as a matter of urgency.

Having said that, in August 2013, upon the kind invitation and excellent arrangements made by the Ministry of Transport of the Russian Federation, I navigated through the Arctic Ocean on board a Russian nuclear icebreaker. The length of the trip was spanning 1700 miles, and the voyage took 5 days. The reason for that mission, as Secretary-General of IMO, was to observe the Arctic Ocean and waters, recognize the state of melting ice, observe the efforts of the Russian Federation Government, experience polar navigation first hand, understand challenges of the future, in particular in what we call the Northern Sea Route and to highlight the importance of the activities of IMO trying to establish the Polar Code.

I was really impressed and astonished that over 1700 miles, 90% of the waterway was completely free of ice. Only 10% of the navigation route was covered by first year ice. First year ice on the surface is not thin, but the important point I took away was that 90% of the 1700 miles voyage was ice-free. There were no strong winds, no waves, therefore no pitching and rolling. If navigational charts are made available, navigation through the Arctic Ocean in the Northern Sea Route, in particular, is realistic – especially during the Summer time.

The Polar Code which we are aiming to adopt at the end of this year or, by the beginning of next year, will ensure that an international regulation and legal framework is established. But, adopting an international regulation is one thing - our challenge continues with implementing the regulations under the new framework. Implementation is the key and in that context, for example, search and rescue centres must be established, weather and other safety information should be provided and communication bases should be improved. Hydrographic surveys and electronic navigational chart development is, in my view, the biggest challenge and in that context I was delighted by the efforts made by the Government of the Russian Federation. I understand they have comprehensive plans for hydrographic surveys and I actually encountered one of the Russian hydrographic survey vessels operating there. I was really encouraged. I have just taken an example for the Arctic Ocean but the same applies for the Antarctic so we have big areas to handle in the coming years.

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I mentioned a few moments ago the new IMO Sub-Committee on Navigation, Communication, Search and Rescue (NCSR); this is one of several new sub-committees created within the restructuring process that I initiated shortly after becoming Secretary-General. This restructuring is part of a broad review and reform process designed to ensure IMO is properly able to meet current and future challenges as a forward looking, efficient and cost-conscious Organization. And I hope it will offer all participants in IMO's work, including our valued partner organizations such as IHO and IALA, a more effective mechanism through which to channel their contributions.

## Opening and Keynote Addresses

As its name suggests, NCSR will take over much of the work previously undertaken by the NAV and COMSAR Sub-Committees. As such, the input from IHO is likely to be the primary focus for the Sub-Committee – although, having said that, I should stress that IHO's views on any relevant matter, regardless of which body or subsidiary body may be discussing it, are always welcomed.

NCSR has, for example, taken on NAV's former role as the body with responsibility for the initial approval of ship routing and mandatory ship reporting systems. NCSR 1 approved ten new or amended ships' routing measures and one amended ship reporting system, for submission to the Maritime Safety Committee for adoption.

Such systems are a tangible reflection of the fine balance that needs to be maintained between environmental protection and safe navigation. I have asked IMO Member Governments to consider reviewing existing routing or reporting systems, particularly those that have been in place for a number of years.

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E-navigation is another topic that will be a major element of the new Sub-Committee's work in the immediate future. Again, carrying on the work of NAV, the first session of NCSR finalised the draft e-navigation Strategy Implementation Plan (SIP), which includes recommended tasks to progress the implementation of e-navigation, for submission to the MSC for approval.

The e-navigation concept aims to integrate existing and new navigational tools, in particular electronic tools, in an all-embracing system that will contribute to enhanced navigational safety while simultaneously reducing the burden on the navigator. The objective is to facilitate a holistic approach to the interaction between shipboard and shore-based users, under an over-arching e-navigation architecture.

This area has been under consideration by IMO for some eight years now, and I have no doubt that IMO Member States and the shipping industry are keen to see some real, tangible results of this lengthy deliberation.

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Ladies and gentlemen, I think the 21st century is the century of the ocean. I openly welcomed the report of the Global Ocean Commission lead by Mr Jose Maria FIGUERES. I have invited him to address IMO and our community during MEPC in London next Monday.

The report of the Global Ocean Commission provides a number of very important issues for our consideration. They touch upon drivers of decline, decline of the ocean and drivers of recovery, recovery of the ocean. Within the context of drivers of decline, issues like rising demand for resources, technological advances, decline of fishing stocks, climate change, biodiversity and habitat loss and weak high sea governance are discussed.

Under drivers of recovery, the report indicated, with hope, that the United Nations Sustainable development goals under development address stronger high sea governance and no more overfishing, combating illegal, unreported and unregulated fishing, proper control of offshore oil and gas activities and global ocean accountability mechanism. I appreciated that.

They called for consideration of a new United Nations body for oceans, which I have serious concerns about. My consideration is that rather than creating a new mechanism, we already have relevant United Nations bodies – for example: IMO, FAO, UNESCO, and UNEP. We

## Opening and Keynote Addresses

have our United Nations Organizations system but we have to recognise that there might be some gap areas between the Organization's mandates. My approach is that we should strengthen cooperation among the existing UN agencies dealing with the Ocean and I am now considering to invite all UN Ocean related agencies to come and consider this matter next year. I am also proposing to hold another session of the FAO/IMO Joint Working Group dealing with IUU Fishing at IMO HQ next year.

Next year's IMO theme for World Maritime day is "Maritime education and training" and we want to strengthen the financial basis of, for example, the World Maritime University. You may be aware that WMU is now moving into a new campus opening in May next year. We have many other important issues under the context of maritime education and training. In that context I would like to further seek collaboration between IMO and IHO in the field of "Maritime education and training" and in the field of ocean-related issues in an effort to support the activities of the United Nations to achieve the Sustainable Development Goals for Oceans.

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Ladies and gentlemen, IHO clearly has a significant role to play in meeting our challenges and achieving the objectives that we have set ourselves at IMO and the Rio+20 Conference in 2012. Based on our long history of collaboration and cooperation, I am confident that IHO will continue to have a strong voice within IMO, and I thank you in advance for that continuing contribution to activities to IMO within the United Nations System.

I also wish you every success in your own forthcoming proceedings, and thank you once again for the opportunity to participate in this Conference today.

Thank you.

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**KEYNOTE ADDRESS**  
**BY THE EXECUTIVE DIRECTOR OF THE NIPPON FOUNDATION**  
Mr Mitsuyuki UNNO

Ladies and Gentlemen,

Honored Guests,

Good morning,

It is a great honor to join you here today and share a few words. I would like to thank President Robert Ward for his kind invitation.

The oceans are changing constantly, with many complex and serious issues around them. The Nippon Foundation is trying to respond dynamically to such challenges.

Our focus is currently strategically set on human capacity building to pass on sustainable oceans to future generations.

In particular, we value the importance of wide-spanning multidisciplinary and global approaches. Our projects on hydrography and bathymetry with IHO and GEBCO are also designed in this principle.

On this occasion, please allow me to share the Nippon Foundation's thoughts and passion to these programs.

It all started ten years ago, when I had the pleasure to be invited to the Royal Institution in London by honorable members of the GEBCO Guiding Committee. They said they wanted to make a project proposal.

It turned out that the meeting was in fact a four-hour natural science lecture on basic oceanography and geology. It was a most luxurious private and intensive lesson, as I had seven distinguished professors teaching me everything about the mechanism of the oceans.

Unfortunately, many of the details went far beyond my understanding. Some of the professors are here today and I would like to thank them again. I am sorry that I pretended I understood everything then.

In that meeting, one thing became very clear to me: how Prince Albert the First was fascinated with the mysteries of the seafloor and why, after over one hundred years, this passion remained among the scholars.

At the end a professor confessed. "We were so focused on studying the bottom of the sea. One day, we looked up, saw each other and realized that we had all grown old. Can you work with us to pass our knowledge and passion to future generations?"

Ladies and gentlemen, after receiving a once in a lifetime lecture, how can I say NO. This was the real reason why the Nippon Foundation started the NF-GEBCO Fellowship Program in 2004. The program provides full support for young marine professionals to be trained in bathymetry at the University of New Hampshire for one year. Ten years have passed, and now there are over 60 alumni from 31 nations who have taken over the passion and knowledge about the ocean floor.

## Opening and Keynote Addresses

Our fellows broaden their scientific perspectives during the course and are encouraged to actively collaborate together after completing their studies.

From a conversation with a fellow, we realized the importance of integrating knowledge on the ocean floor with hydrographic information on the sea surface, the coastlines and the vast bodies of water.

This then inspired us to launch the NF-IHO CHART Program together with IHO in 2007. In this program, we support young professionals from governmental hydrographic offices and research institutes to be trained at UKHO. So far, 29 alumni from 23 nations have completed the fellowship.

The field of hydrography needs capacity building. Especially, it is important to assure that all countries are capable of producing accurate digital or paper nautical charts. We believe that the NF-IHO CHART Program will contribute to fulfill this fundamental need.

Furthermore, we hope to contribute to the progress of marine and earth science, including climate change control and the management of marine living resources. Therefore, we expect that this initiative can lead to more effective policies, regulations and other frameworks for sustainable oceans.

From seafloor to the surface and from maritime safety to climate change, issues related to our oceans are becoming increasingly complex but humans are isolating each of these challenges apart. We know that there is a limit to the solutions that can be achieved through the efforts of a single country or a single scientific field.

However, we often disregard that there is also a limit to only addressing the problems that are directly in front of us. I hope you can all agree that collaboration beyond each nation's immediate interests, while maintaining long-term perspectives is now ever more important.

That in mind, the Nippon Foundation expects its fellows to work with global and interdisciplinary perspectives and build inclusive networks. We also support their collaboration beyond sectors to share information and skills.

I would like to end my words by humbly requesting everyone here to share all of your knowledge and wisdom with our fellows and support in developing their potentials. With your strong and generous support, I believe we can pass down the vision of Prince Albert the First and the great passion of the GEBCO executives who carried it on, as well as rich sustainable oceans to the next generation.

Of course, if you would like to personally receive the four hour-lectures of passion and knowledge on the bottom of the ocean, please apply to our fellowship. I can assure you a life-changing experience.

Thank you.

**PROPOSALS SUBMITTED  
TO THE CONFERENCE**



## LIST OF PROPOSALS

Proposal N°	Object of the Proposal	Submitted by
1	Revision of the conditions for the award of the Prince Albert 1 <sup>st</sup> Medal for Hydrography	Monaco
2	Seeking a new way forward for the S-23 issue	Democratic People's Republic of Korea
3	Amendment of the General Regulations of the IHO (not yet in force), Article 16 (b), to clarify the Council selection process	USA
4	For a trusted crowd-sourcing policy and its cook book	France & USA
5	Improving the total cost estimate of the IHO tasks for the definition of a prioritized work programme	France
6	Development of an IHO Satellite-derived bathymetry and charting programme for remote areas	France
7	There is no other alternative but the full implementation of the WEND Principles and its Guidelines	France

**Note:** The specific topics agreed by the XVIII<sup>th</sup> International Hydrographic Conference are addressed in the relevant separate Reports.



**PRO 1      PROPOSAL TO REVISE THE CONDITIONS FOR THE AWARD OF THE  
PRINCE ALBERT 1<sup>ST</sup> MEDAL FOR HYDROGRAPHY**

**Submitted by: Monaco**

**Reference:** IHO Resolution 6/2009 - *International Hydrographic Review*. Clause 6 - *The Prince Albert 1<sup>st</sup> Medal for Hydrography*

**PROPOSAL**

- 1. The Conference is requested to agree to a new Resolution on The Prince Albert 1<sup>st</sup> Medal for Hydrography, as set out in the Appendix to this Proposal. If agreed the new Resolution will replace clause 6 of IHO Resolution 6/2009 - *International Hydrographic Review: The Prince Albert 1<sup>st</sup> Medal for Hydrography*. The new Resolution will be placed in Section 1.1 - *IHO Administration* in Publication M-3 - *Resolutions of the IHO*.**

**EXPLANATORY NOTE**

1. The Prince Albert 1<sup>st</sup> Medal for Hydrography was created in 1988 following discussions between the President of the Directing Committee and the Prince of Monaco. The medal was named the Prince Albert 1<sup>st</sup> Medal for Hydrography, acknowledging that Prince Albert 1<sup>st</sup> was one of the great navigators and explorers of his time. The medal is awarded to the author of the best article published in the *International Hydrographic Review* (IHR) and is always presented by The Prince of Monaco during the Opening Ceremony of ordinary International Hydrographic Conferences.

2. The *International Hydrographic Review* continues to be the principal reference that progressively records the significant developments being made in hydrography. However, the nature and scope of the work of the IHO has changed and is less often reflected in the IHR. Authors of papers published in the IHR now tend to come from academic institutions rather than from the participants that are active in fulfilling the aims of the IHO and its work programme, as was usually the case in the past. In this context, the significance of the award of the Prince Albert 1<sup>st</sup> Medal for Hydrography has changed also. In the past, the award of the medal could often be seen as a recognition of a significant contribution to hydrography under the auspices of the IHO; this is less clear nowadays.

3. Monaco proposes that in future the award of The Prince Albert 1<sup>st</sup> Medal for Hydrography be based on significant and long-lasting contributions made by an individual to the work of the IHO and its aims and objectives. The award should recognise those individuals that have by their actions contributed significantly to achieving the aims and objectives of the IHO. In simple terms, the award of The Prince Albert 1<sup>st</sup> Medal for Hydrography would be a recognition of the IHO's "*heroes of hydrography*".

4. It is proposed that the award should continue to be made on the occasion of the International Hydrographic Conference (to be replaced by Assembly, when the Assembly is established).

5. Current and former members of the IHB ("IHB" to be replaced by "former IHB or of the IHO Secretariat" when the Secretariat is established) would be ineligible for the award.

**Appendix to PRO 1**

**Proposed Text for an IHO Resolution on The Prince Albert 1<sup>st</sup> Medal for Hydrography**

Title	Reference	Last amendment (CL or IHC)	1st Edition Reference
The Prince Albert 1 <sup>st</sup> Medal for Hydrography	xx/2014		

**Introduction**

1. The Prince Albert 1<sup>st</sup> Medal for Hydrography was introduced in 1988 following discussions between the President of the Directing Committee and the Prince of Monaco. It was named the “Prince Albert 1<sup>st</sup> Medal for Hydrography” acknowledging that Prince Albert 1<sup>st</sup> was one of the great navigators and explorers of his time. The medal was to be awarded to the author of the best article published in the International Hydrographic Review (IHR). The Medal is always presented by the Prince of Monaco himself during the Opening Ceremony of the ordinary International Hydrographic Conferences. In 2014 at the 5<sup>th</sup> Extraordinary International Hydrographic Conference, Member States agreed to a proposal submitted by Monaco to amend the conditions of the award of the Medal to recognise individuals that have by their actions contributed significantly to achieving the aims and objectives of the IHO. In simple terms, the award of The Prince Albert 1<sup>st</sup> Medal for Hydrography is a recognition of the IHO’s “*heroes of hydrography*”.

**Nominations for the Award**

2. At the end of the year preceding an ordinary International Hydrographic Conference (to be replaced by “Assembly”, when the Assembly is established), Member States may submit up to two nominations for the award using the form shown at the Annex to this Resolution. One nomination may be for a citizen of the Member State, another nomination may be for a citizen of another State.

3. Current and former members of the IHB (“IHB” to be replaced by “former IHB or of the IHO Secretariat” when the Secretariat is established) are ineligible for the award.

**Selection Process**

4. The Directing Committee (“Directing Committee” to be replaced by “Secretary-General and Directors”, when the position of Secretary-General is established) in consultation with representatives of the Government of HSH The Prince of Monaco, will select the recipient of the award, taking into account at least the following:

- a. Specific examples of innovation, original work, exceptional achievement or exceptional devotion in the pursuit of the aims and objectives of the IHO.
- b. How the work or efforts of the nominee have improved global hydrography, hydrographic techniques or hydrographic capacity.



**Annex A to IHO Resolution xx/2014**

**NOMINATION FORM**

<b>Details of Person Being Nominated</b>	
Title	
Surname	
Given Names	
Awards or Honorifics	

**Reason and Justification for Nomination**

Provide details of how the nominee has made a significant contribution to pursuing the aims and objectives of the IHO, including any positions held or activities undertaken, together with relevant dates of service. Also, please include a statement in your own words about why you think the person should be singled out and recognised by the award of the Prince Albert 1<sup>st</sup> Medal for Hydrography.

As a guide, you may wish to consider some of the following questions:

- In what role(s) or area(s) has the nominee excelled?
- How has the nominee demonstrated service worthy of recognition?
- How has the nominee's contribution impacted on either a particular field, locality, group, community or humanity at large?
- Over what period of time has the nominee made a major contribution?
- Has the nominee's contribution been recognised elsewhere (for example; in the media, by other awards, professional or interest groups, or through government)?
- What makes this person stand out from others?

<b>Reason and Justification for Making this Nomination</b> (box will expand as you type)	
<b>Endorsement by Nominating Member State</b>	
Member State	
Signature	
<b>I certify that the information provided is, to the best of my knowledge, true. I am prepared to provide additional information and justification for this nomination, if requested.</b>	
Title	
Surname	
Given Names	
Position	

**MEMBER STATES' COMMENTS**

**BRAZIL**

Brazil partially supports this proposal. We strongly support the consensus for recognizing the IHO's "Heroes of Hydrography". Concomitantly, we believe that the papers published in IHR have the potential to be significant improvements for the development of Hydrography. For this reason, we would like to propose a new (second) category to award the "Prince Albert 1st Medal for Hydrography". In this new category, to be labeled as "Academic contributions for Hydrography", the criteria is to be kept: the medal is to be awarded to the author of the best article published in the International Hydrographic Review (IHR).

**CHILE**

- a) We support the principle that shall govern the award of the Medal, which is to recognize who has contributed to achieve the IHO's objectives.
- b) We propose that only IHB members in exercise at the time of the selection be ineligible to be awarded due to potential conflicts of interest.
- c) We propose to consider establishing a period to assess the contribution of potential applicants, for example: the last three years. Not defining a period might make the selection process very difficult, as comparisons between present and past contributions, in different scenarios may be almost impossible to homologate.

**FINLAND**

Is in favour of the proposal.

**FRANCE**

Whilst approving the proposal submitted by Monaco, France would however suggest expanding the evaluation criteria under the selection process (§ 4 of the new Resolution) to clarify the way in which these criteria might be assessed. The following text could be added after points a. and b.:

"In particular, the number and nature of publications (author or co-author) or the candidate's active participations in conferences or committees (organizer, lecturer, rapporteur, etc.) will be taken into account."

**UK**

The United Kingdom supports this proposal.

**USA**

The United States appreciates the attempt to open this award to a wider range of authors, which in more recent times tends to come primarily from academic institutions rather than from a broader range of nominees that are active in fulfilling the aims of the IHO. However, the United States does not agree with paragraph 5, making current and former members of the IHB ineligible. The United States agrees that current members of the IHO at the time of nomination and selection for the Award be ineligible, but does prefer that “former” members of the IHB be considered for eligibility. In many instances former members are, in fact, among the “heroes of hydrography” and should be considered for the award.

**PRO 2            SEEKING A NEW WAY FORWARD FOR THE S-23 ISSUE**

**Submitted by:    Democratic People's Republic of Korea**

**PROPOSAL**

- 2.    The 5<sup>th</sup> EIHC is requested to seek a new way forward to issue the new edition of IHO Special Publication S-23 "Limits of Oceans and Seas".**

**EXPLANATORY NOTE**

- Considering that Member States of the IHO express their anxiety for not having been issued the S-23 in spite of their effort including two meetings convened by the S-23 Working Group which were organized during the XVIIth I.H. Conference 2007,
- Recalling that Member States had a common understanding for the necessity of issuing a New Edition due to the 3<sup>rd</sup> Edition of S-23 being too out of date since its issue,
- Expressing our regret at non-progress of the subject, though the problem for S-23 was discussed at the XVIII IHC,
- Recognizing that the issue of S-23 New Edition is posed as an unextendable acute problem by IHO which is an Authorized International Organization,

The Democratic People's Republic of Korea formally suggests that the 5<sup>th</sup> EIHC would like to review the above proposal.

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**MEMBER STATES' COMMENTS**

**BRAZIL**

Brazil does not support this proposal. In our point of view, the new edition of S-23 is a more political than technical issue. The IHO is a technical and consultative body. For this reason, we believe that the IHO is not the appropriate forum to discuss this topic.

**JAPAN**

It is undeniable, indeed, that S-23 is a valuable document for the whole stakeholders including IHO and its Member States, but to be updated for remaining a very useful and practical publication of the Organization. However, in Japan's view, it is premature to reopen discussions on the S-23 issue at the 5<sup>th</sup> EIHC for the following reasons:

1. All priorities and initiatives on which IHO should focus in upcoming 5 years were incorporated in the IHO Five-Year Work Programme 2013-2017 and adopted at the 18<sup>th</sup> IHC. This means that for the accomplishment of the above-mentioned Work Programme, all resources have already been mobilized by the IHB as well as Member States.
2. Regarding the review of S-23, following initiative discussions made at the S-23 WG and the 18<sup>th</sup> IHC, "The Conference agreed not to take any further action on the revision of S-23" at the 18<sup>th</sup> IHC.

**PRO 3 AMEND GENERAL REGULATIONS OF THE IHO (NOT YET IN FORCE),  
ARTICLE 16 (b), TO CLARIFY THE COUNCIL SELECTION PROCESS**

**Submitted by: USA**

**References:** General Regulations of the International Hydrographic Organization (IHO), not yet in force, IHO Publication M-1.  
Draft (25 May 2005) of General Regulations of the International Hydrographic Organization (IHO), Article 14.  
Proceedings 3<sup>rd</sup> EHC, Appendix I, Report to the 3<sup>rd</sup> Extraordinary International Hydrographic Conference Monaco, April 2005.

**PROPOSAL**

- 3. It is proposed that a new paragraph be added to the General Regulations of the International Hydrographic Organization (IHO), not yet in force, to clarify the significance of Article 16 (b), iii that all Member States apply to an RHC to indicate their interest in serving on the Council and the implications (drawbacks) of failing to do so. This precludes Member States as noted in Article 16 (c), from attaining Council representation through mere inaction.**

It is proposed that a new paragraph to Article 16 (b) be added as follows:

**Article 16 (b), iv:**

***“If a Member State does not (fails to) apply to an RHC within the time limits set forth in Article 16 (b), it will be assumed that the Member State has no interest in serving on the Council and will therefore not receive consideration under the method described in paragraph (c), below.”***

The remaining paragraphs in Article 16 (b) are to be renumbered accordingly. The fully revised Article 16 is provided in the Appendix.

**EXPLANATORY NOTE**

At present, Article 16 of General Regulations of the IHO (not yet in force), which deals with Council selection, is not clear on the impact on Member States due to simple inaction. Specifically there is no guidance as to what happens if Member States do not respond to Article 16 (b), iii which states “a Member State must apply to the RHC for selection, copying its application to the Secretary-General, at least six months before an ordinary session of the Assembly;”. The United States has been a part of the SPWG proceedings which have led up to the drafting of the General Regulations of the IHO (not yet in force) since its inception. During the SPWG proceedings, it was clear that the primary route for a Member State to gain a Council seat was via the RHCs. This is supported by:

- An early draft (25 May 2005) of the General Regulations, where in Article 14 (b), it states: **“In the first instance, two-thirds of the seats are drawn from the RHCs.”** and
- The Report to the 3<sup>rd</sup> Extraordinary International Hydrographic Conference, Monaco, April 2005, paragraph 6.2, which states in part **“Two thirds of the Council seats are first selected on the basis of regional representation...”**

However because there were gaps in RHC coverage at that time and several Member States were unable to participate, a second “other” category was introduced for those Member States. As the South West Atlantic RHC was established, eliminating this gap in RHC coverage, the “other” category evolved into “the greatest interest in hydrographic matters” category described in Article 16 (c). (The South West Atlantic RHC was established in 2006 with its first meeting in April 2007, and the Arctic Regional Hydrographic Commission was formed in 2010, with its first meeting in October 2010).

## **Proposals - CONF.EX5/G/03**

Although not clear, the present Article 16 (b), iii, may be interpreted that “the top ten Member States with the greatest interest in hydrographic matters” could attain Council representation at present through mere inaction. Because “the greatest interest in hydrographic matters” is equivalent to national flag tonnage, the top ten Member States in tonnage will gain Council representation. This proposal seeks to clarify the consequences of non-compliance with Article 16 (b), iii.

However, the United States believes that when the General Regulations were developed, the intent of the SPWG was that all Member States first apply for Council representation via an RHC. Under this scenario, some Member States on the top ten list (those with the highest flag tonnage) will have already attained Council representation under an RHC (as described in Article 16 (b)). Those Member States will be removed from the top ten list (as noted in Article 16 (c)) to allow lower ranking Member States, numbers 11 and above, to move up into the top ten and gain Council representation considerations. This will allow certain Member States to gain representation that may otherwise be unable to do so. The United States believes that this was the intent of the SPWG when the General Regulations were developed.

**Appendix to PRO 3**

**ARTICLE 16**

The Council shall be composed of Member States. Its composition shall be determined in accordance with the following principles.

- (a) No Member State may hold more than one Council seat;
- (b) Two-thirds of Council seats shall be held by Member States selected by the RHCs. Each RHC shall be entitled to select at least one Member State, subject to the following:
  - (i) a Member State may only apply to be selected by a RHC of which it is a full member;
  - (ii) a Member State may only apply to be selected by one RHC;
  - (iii) a Member State must apply to the RHC for selection, copying its application to the Secretary-General, at least six months before an ordinary session of the Assembly;
  - (iv) “If a Member State does not (fails to) apply to an RHC within the time limits set forth in Article 16 (b), it will be assumed that the Member State has no interest in serving on the Council and will therefore not receive consideration under the method described in paragraph (c), below.”**
  - ~~(iv)~~(v) the number of seats allocated to each RHC shall be calculated by the Secretary-General based on the principle of a proportional representation in order to arrive at the required two-thirds of Council seats provided for in this sub-paragraph (b);
  - ~~(v)~~(vi) for the purpose of deciding how many Council seats are allocated to each RHC the Secretary-General shall ensure that every Member State is counted as a full Member of one, but not more than one, RHC.
  - ~~(vi)~~(vii) three months before the ordinary session of the Assembly, the Secretary-General shall inform all Member States of the number of seats allocated to each RHC and those Member States eligible for selection by each RHC; and
  - ~~(vii)~~(viii) each RHC shall declare to the Secretary-General, before the last day of each ordinary session of the Assembly, the Member States it has selected to take seats on the Council from among those eligible for selection.
- (c) The remaining one-third of Council seats shall be held by Member States that have the greatest interest in hydrographic matters and have not been selected under the procedure described in sub-paragraph (b) above. The definition of what constitutes an interest in hydrographic matters shall be reconsidered at the latest at the second Assembly meeting. Meanwhile, the scale by which an interest in hydrographic matters is measured shall be national flag tonnage. The table of national flag tonnages is derived in accordance with the procedures set forth in Articles 5 and 6 of the Financial Regulations. The Secretary-General shall determine which Member States will hold this one-third of Council seats by identifying them in descending order of their national flag tonnages, referring to the table of current national flag tonnages produced in accordance with Article 6(a) of the Financial Regulations, and by having ascertained the willingness of each of them to hold a seat on the Council.
- (d) Before the end of the ordinary session the Secretary-General shall submit the full list of Council members to the Assembly.
- (e) The Assembly shall review and endorse the selection process to ensure that these principles have been correctly followed.

## Proposals - CONF.EX5/G/03

- (f) In the event that a Member State holding a seat on the Council should be denied voting rights and benefits in accordance with Article XV of the Convention, that Member State shall immediately forfeit its seat and the Secretary-General shall initiate the appropriate procedure to replace it in accordance with this Article 16.



**MEMBER STATES' COMMENTS**

**BRAZIL**

Brazil supports this proposal. Taking this opportunity, we would like to propose the review of the definition of "greater hydrographic interest" by taking into account: the extent of shoreline and navigable waterways, capacity building, portfolio of nautical charts and amount of means used to collect bathymetric data, in each country.

**CHILE**

We support the proposal as it facilitates the selection and nomination process.

**FINLAND**

Is in favour of the proposal.

**FRANCE**

France approves this proposal but would nevertheless suggest a slight amendment to the wording of Article 16 (b), iv, in the French version, for it to more accurately reflect the spirit of the modification, as follows:

*“Si un Etat membre ne présente pas sa candidature à ~~une~~ aucune CHR (ou omet de le faire), dans les délais fixés à l'article 16 (b), on supposera que l'Etat membre en question n'est pas intéressé par un siège au Conseil et, par conséquent, il ne sera pas pris en considération dans le cadre de la procédure décrite au paragraphe (c), ci-dessous ».*

France notes that the English version of Article 16 (b) iv could also be amended as follows to bring it more in line with the proposed wording in French:

“If a Member State does not (fails to) apply to ~~an~~ any RHC within the time limits set forth in Article 16 (b), it will be assumed that the Member State has no interest in ~~servicing on~~ having a seat at the Council and will therefore not receive consideration under the method described in paragraph (c), below.”

**JAPAN**

Japan fully supports this proposal. As USA indicated there is no guidance as to what happens if Member States do not respond to Article 16 (b) and amendments by USA will resolve this problem.

**UK**

The United Kingdom does not support this proposal. However, it shares the view of the United States that IHO Member States taking seats on the Council should be Member States with an interest in doing so. The United Kingdom also acknowledges that application to a Regional Hydrographic Commission in accordance with Article 16(b) (iii) of the General Regulations (not yet in force) would be an indication that a Member State had an interest in taking a seat on the Council.

Against that, the United Kingdom considers that a Member State having a national flag tonnage in the top ten of worldwide national flag tonnages may be content (and perhaps expected) to refrain from seeking selection by a Regional Hydrographic Commission, on the basis that its national flag tonnage will anyway secure it a seat on the Council. The United Kingdom does not consider that refraining from seeking selection for this reason could be taken to indicate that such a Member State had no interest in serving on the Council, and suggests that for such Member States application to a Regional Hydrographic Commission may be an unwelcome administrative burden.

The United Kingdom supports the general principle that before they are selected in accordance with Article 16(c) of the General Regulations (not yet in force) Member States should be required to indicate that they are interested to serve on the Council. However, it does not believe that the proposal of the United States would make the position any clearer than it already is, for the following reasons:

- The proposed amendment of Article 16(b) would carry with it a risk that the qualifying provision suggested by the United States would be overlooked by a casual reader. Those seeking guidance from the General Regulations as to the position in relation to selection on the basis of interest in hydrographic matters would naturally be drawn to Article 16(c). They would not find there any cross-reference to the qualifying provision in Article 16(b) and it is thus foreseeable that they would overlook it.
- The text of Article 16(c) already provides an adequate safeguard: the Secretary General may only select on the basis of interest in hydrographic matters once s/he has ascertained the willingness of a Member State to hold a seat on the Council. There seems to the United Kingdom little, if any, difference between an indication of interest evidenced by an application to a Regional Hydrographic Commission in accordance with Article 16(b) and an indication of interest evidenced by a statement to the Secretary General that a Member State is willing to serve on the Council.
- Further safeguards to ensure that due process is followed are provided by Article 16(e).

**IHB COMMENTS**

In order to contribute to discussion of this proposal, the Directing Committee offers the following comments.

The Directing Committee invites the Conference to note that article 16 b (iv) of the new General Regulations stipulates that “the number of seats allocated to each RHC shall be calculated by the Secretary-General based on the principle of a proportional representation ...”

Furthermore article 16 b (v) indicates that “for the purpose of deciding how many Council seats are allocated to each RHC the Secretary-General shall ensure that every Member State is counted as a full Member of one, but not more than one, RHC.”

### **Proposals - CONF.EX5/G/03**

The implementation of these arrangements therefore requires that every Member State indicates for which RHC it wishes to be counted. The Conference may wish to consider what action the Secretary-General should take if a MS member of more than one RHC does not indicate its choice. For example, should the Secretary-General associate such a MS with the RHC to which it has been a member for the longest time, or are there other alternative proposals?

**PRO 4 FOR A TRUSTED CROWD-SOURCING POLICY AND ITS COOK-BOOK**

**Submitted by: France & USA**

**References:** Paper IRCC5-11B - *Crowd source bathymetry, a new source of data?*  
Hydro International, October 2013, Volume 7, "Crowd-sourced bathymetry, from concept to practice" - 3/12/2013 (by Rear Admiral Gerd Glang).

**PROPOSAL**

**4. The Conference is requested to consider and approve the following:**

- a. That the GEBCO Guiding Committee prepare a draft policy document providing principles and guidelines on the views of the IHO/IOC about crowd-sourcing bathymetry.**
- b. That the IRCC, followed by the IHO Member States, review this draft and prepare a new IHO publication on "trusted crowd-sourcing policy".**
- c. That the SCRUM/TSCOM, following the publication of the principles and guidelines about crowd-sourcing, prepare a "cook-book" for the use of HOs and potential "crowd-sourcers".**

**EXPLANATORY NOTE**

New technologies (satellite very accurate positioning, echo-sounders, and data recorders) can now be used by non-dedicated assets at sea (private boats, yachts, cargos, etc.). The increasing availability of vertical off-shore reference frames also makes the measurement of depths possible without being obliged to use accurate tidal measurements in conjunction with surveys. These factors lead to the development of open-sea-map behaviours. One could think that traditional HO responsibilities could be threatened by this important change in our environment. On the contrary, it seems important to support such initiatives, provided that the IHO shares and promotes a coherent policy in this domain.

Another issue is the quality of data collated by crowd-sourcers. Very often, HOs are unable to validate them for integration in their databases.

Rather than passively observing the uncoordinated development of private chart-makers as it was in the XVII<sup>th</sup> and the XVIII<sup>th</sup> centuries, it seems important for the IHO to show a positive attitude towards such initiatives to make sure that the IHO can monitor them, even drive them to optimize the work of crowd-sourcers. Gathering data collected by mariners has for a long time been a primary source for charting (the French *Dépôt des cartes et plans de la marine* was created for that purpose in 1720). The progress of hydrographic sciences, of instruments and techniques put the official national hydrographers well ahead of "normal" mariners as far as accuracy of soundings and positioning was concerned. Affordability of accurate GPS, MBES, extension of Cat. B and Cat. A training into the private sector is reducing this gap, and official hydrographers have to get back to the consideration of "conventional" mariners' work.

As the requirement for interoperable DB, products, QC etc. has greatly increased, HOs could not manage flowing input of crowd-source data if they did not respect some minimum standards. For this reason, it is suggested to agree on the principles and guidelines on crowd-sourcing and then to offer the possibility of using a cook-book sharing the best practices all around the world.

Towards a new model for GEBCO in the XXI<sup>st</sup> century?

**MEMBER STATES' COMMENTS**

**BRAZIL**

Brazil supports this proposal.

**CHILE**

We support the proposal as we consider that such data helps a lot at the time of planning hydrographic operations, even rescue operations and/or where there is no knowledge at all, particularly in remote areas.

**FINLAND**

Is in favour of the proposal.

**JAPAN**

Japan fully supports this proposal. Japan expects GEBCO's initiative in application of new technologies such as crowd-sourcing.

**UK**

The United Kingdom supports the concept of the GEBCO Guiding Committee preparing a draft policy document providing principles and guidelines on the views of the IHO/IOC about crowd-sourcing bathymetry and that IRCC and IHO Member States review the document and prepare a new IHO publication. To ensure that the review of the draft policy document fully considers the hydrographic survey standards component of the principles and guidelines we suggest that HSSC should also review the document and the preparations for a new IHO publication.

**IHB COMMENTS**

In order to contribute to discussion of this proposal, the Directing Committee offers the following comments.

Member States will be informed about progress in Crowd-Sourced Bathymetry (CSB) during the information sessions held during EIHC-5. Recent proof-of-concept trials conducted in collaboration with the Professional Yachting Association and various operational services provided by others will be described.

Noting the potential of CSB, the requirement to develop and adopt IHO guidelines on the collection, assessment and use of CSB will be an important step towards enabling CSB to be used confidently by HO's for certain charting purposes and by additional potential users of bathymetric data for other purposes.

This proposal, together with Proposal 6, should be considered, in the light of Decision No. 17 of the XVIII<sup>th</sup> International Hydrographic Conference about progressing whatever actions are required to improve the collection, quality and availability of hydrographic data worldwide.

## **PRO 5 IMPROVING THE TOTAL COST ESTIMATE OF THE IHO TASKS FOR THE DEFINITION OF A PRIORITIZED WORK PROGRAMME**

**Submitted by:** France

**References:** IHB Letter No S1/1001/WP dated 23 September 2005 (IHO WP 2008-2012).  
IHO CL 74/2013 dated 20 December 2013.

### **PROPOSAL**

**5. The Conference is requested to consider and approve the following:**

- a. That the Committees, Sub-Committees and WG be directed by the IHB to systematically evaluate the resources needed and available to meet their annual objectives and prioritize these objectives to those available resources;**
- b. That the Member States participating actively in the IHO Work Programme make an evaluation of their overall in-kind contribution (e.g. human resources devoted to WGs, travel expenses, national funding of actions directly contributing to the WP);**
- c. That the IHB consolidates and implements the results into a prioritized IHO Work Programme.**

### **EXPLANATORY NOTE**

In IHB Letter No S1/1001/WP dated 23 September 2005, when preparing the 5-year IHO Work Programme for 2008-2012, the IHB requested the Member States to provide an estimate of their direct contribution to the IHO Work Programme as the total budget of the IHO did not reflect the total cost of the IHO activities. At this time, the different groups and Member States were supposed to provide:

- Task identification (just a brief title)
- Short description of the activity (what and for what)
- Brief description of the associated deliverables (products, effects, results, etc.)
- Timing (when, that is to indicate in which year the activity should take place)
- Identification of indicators that could be used to assess effectiveness (parameter(s) that could be used to measure the level of success)
- Estimated resources from the regular IHO budget (this will be mainly determined by IHB based on historical records and input received)
- Estimated global resources from direct Member States' contributions (the total general cost of the activity for MS as a whole).

When approving the 2014 IHO Work Programme and Budget, again, some Member States requested some clarity on the expected contribution of the Member States to the activities of the WG, SC and Committees as reported in IHO CL 74/2013.

As a matter of fact, it seems that there is a general interest for the IHO Member States and the IHB to improve the total cost estimate of the IHO various tasks including the costs of direct contributions from the Member States, industry experts, donor agencies, with the objectives to be in a better position to establish a realistic prioritized Work Programme that the IHO can afford.

**MEMBER STATES' COMMENTS**

**BRAZIL**

Brazil supports this proposal.

**CHILE**

We support the idea of identifying the cost of the activities proposed to be included in the IHO work program. It is good for the IHO to know the financial impact that each activity has for each MS.

With regard to letter a) we suggest the following amended text:

a) That the Committees, Sub-Committees and WG be directed by the IHB to systematically evaluate the resources needed and available to meet the activities proposed to be included in their annual work programme objectives and prioritize these objectives to those available resources;

With regard to letter b) we suggest that an estimate be considered as an evaluation probably can only be made after the task has been completed. The text of b) might be:

b) That the Member States participating actively in the IHO Work Programme make an estimate of their overall in-kind contribution (e.g. human resources devoted to WGs, travel expenses, national funding of actions directly contributing to the WP);

With regard to letter c) we suggest the following amended text:

c) That the IHB consolidates and implements the results into a prioritized IHO Work Programme and Budget, for MSs approval, as established in G.R. Art.23 c).

**DENMARK**

**Considerations**

While there may be a general interest for the IHO Member States and the IHB to improve the total cost estimate of the various IHO tasks including the costs of direct contributions from the Member States, industry experts and donor agencies, the time may not be optimal for systematically evaluating the overall resources devoted to Committees, Sub-Committees and WGs.

The new HSSC organization of WGs is coming into force and a number of Member States may not yet have a comprehensive picture of the level of their future involvement;

- How Member States estimate the level of human resources, travel expenses and national funding of actions directly contributing to the WP tends to vary due to differences in funding, national distinctiveness and political structures behind the HOs;

**DENMARK (continuation)**

- A prioritized IHO work programme is in part dependent on the extent to which Member States are able to commit, but the de facto level of national commitment is liable to fluctuate beyond the scope of an IHO Work Programme;

- A number of Member States may feel compelled to redirect resources from expert contributions to administrative duties.

**Suggestions**

a) That a systematic evaluation of the resources needed to meet the annual objectives of the Committees, Sub-Committees and Working Groups await the development of the new HSSC organization;

b) That Member States participating in the IHO Work Programme of their own accord make an evaluation of their overall contribution to the WP. Experiences from such an evaluation may be passed to the rest of the IHO community at an appropriate point in time.

**FINLAND**

Is in favour of the proposal.

**FRANCE**

France's proposal has the same objective as the more detailed proposal submitted by the Directing Committee in their report on the technical capacity of the IHB (ref: CCL 08/2014, Annex B): improved efficiency of the IHO. France therefore suggests that the Conference should consider the Directing Committee's recommendations along with those contained in this PRO 5 as they are similar in nature (see in particular point 40 of Annex B).

**JAPAN**

Japan supports this proposal.

**UK**

The United Kingdom supports this proposal, but with the observation that the initial evaluation of resource availability must be conducted prior to the evaluation of resources needed. Any subsequent shortfall in WG resource requirement is to be reported to the relevant committee for consideration and potential re-prioritisation of work programmes across the range of WG activities.

The United Kingdom encourages a rigorous approach to ensure that work programmes are only approved on condition of providing evidence of commitment of the necessary resources. The United Kingdom suggests that this proposal is considered alongside the report and recommendation of the Directing Committee concerning technical capacity with the IHB at Annex B as part of the total picture of workloads and resource availability across both the IHB and Member States.



USA

The United States appreciates and supports the intention of this proposal to prioritize the IHO Work Programme so that scarce resources are allocated to the most important activities of the Organization. However, the United States believes that collecting and analyzing the proposed range of information from Member States, industry experts, donor agencies, among others will be very challenging, since it will be both time consuming and difficult to produce a final accurate, consolidated picture. For example, consider the challenges to derive purchasing power parity figures across the various Member States for diverse items such as salaries, contracting, research and development, outreach and communications and other direct and indirect support.

The United States suggests that this could potentially be accomplished in a more streamlined manner, such as requesting Member States to identify their top 3 priority activities from the IHO Work Programme. In general, those are likely to be the ones where the respective Member States are already most invested in terms of contributing staff time, travel and other levels of support.

**IHB COMMENTS**

In order to contribute to discussion of this proposal, the Directing Committee offers the following comments.

The Directing Committee reminds the Conference that the IHO Strategic Plan already contains the following directions to MS and the IHB regarding the formulation of the IHO Work Programme:

*Each item of the programmes identifies:*

- (a) *the strategic direction to which it refers,*
- (b) *any stakeholder outside the IHO that is affected,*
- (c) *the deliverables and associated milestones,*
- (d) *the lead authority and participants, if any*
- (e) *the estimated resources from the IHO budget,*
- (f) *other resources when significant,*
- (g) *the performance indicator(s) against which progress is monitored.*

*The Work Programme is reviewed annually under the supervision of the IHB, in consultation with the chairs of HSSC and IRCC (the IHB in consultation with the chairs of HSSC and IRCC to be replaced by the Council when the Council is established).*

Following the directions of EIHC-4 (Decision 7), the Directing Committee has attempted to follow the guidance provided in the Strategic Plan since early 2011. EIHC-5 document CONF.EX5/REP.02 - *Report on the Technical Capacity of the IHB* also supports the adoption of a resource-based approach to the development of the IHO Work Programme, as outlined in the Strategic Plan.

### **Proposals - CONF.EX5/G/03**

However, the Directing Committee has met with only limited success so far in obtaining the appropriate information from Member States via the relevant Committees, Sub-Committees and Working Groups, particularly in order to identify the deliverables and critical resources required to fulfill the Work Plan.

**PRO 6 DEVELOPMENT OF AN IHO SATELLITE-DERIVED BATHYMETRY AND CHARTING PROGRAMME FOR REMOTE AREAS**

**Submitted by:** France

**Reference:** IRCC5-11A – *Satellite derived bathymetry.*

**PROPOSAL**

**6. The Conference is requested to consider and approve the following:**

- a. That the IRCC be directed to assess and launch an inter-RHC satellite-derived bathymetry and reconnaissance charting operational programme for all relevant areas still uncharted or poorly charted.**

**EXPLANATORY NOTE**

Satellite-derived bathymetry (SDB) has been on the table of different RHCs, CBSC and IRCC for a couple of years. This issue was also raised by the IHB at IRCC-5 but nothing is done in practice at the IHO level.

Thanks to new technological developments and available sources of satellite information, SDB offers the possibility to assess in a reasonable time the quality of hydrography over large areas, poorly charted or charted a long time ago. Results would be of considerable value in giving Coastal States a clearer view of the status of hydrography in the waters under their responsibility, and for establishing a focused hydrographic programme based on priority requirements and objective rationale extracted from this reconnaissance charting.

In a capacity building perspective, this approach could be very relevant in countries where requirements for land surveying and environment monitoring have led to the development of remote sensing processing capabilities. Indeed, SDB should not be seen as an “all-in-one” solution, impeding the development of classic hydrographic surveying capabilities, even at the limited level required at least for critical areas and / or checking purposes. Nevertheless, the perspective of being able to collect, on a wide scale, a complete set of information usable for establishing a focused strategy of modernization of nautical charts, in a reasonable amount of time and for a foreseeable cost, can be a strong driver for motivating further funding of a regional programme of renovation of charts.

A scoping study could be launched on this basis to assess which areas around the world should be addressed, to define the objectives of a comprehensive reconnaissance SDB mapping programme, to promote the idea in order to raise funding (e.g. UN development funds, with results available to the UN-GGIM under open licenses) for launching an operational programme across the RHCs, sharing the best practices.

**MEMBER STATES' COMMENTS**

**BRAZIL**

Brazil supports this proposal.

**JAPAN**

Japan supports this proposal.

**UK**

The United Kingdom recognises Satellite-Derived Bathymetry (SDB) as a potential source of data for products and is currently assessing its uncertainty, limitations and reliability. We would welcome more clarity on the proposed satellite-derived bathymetry and charting programme in order to comment more fully. The United Kingdom suggests that Regional Hydrographic Commissions (RHCs) can be advised of the potential availability of SDB data in their region for charting use but since RHCs are independent bodies they cannot be directed by IRCC to assess or launch SDB Programmes.

**USA**

The United States supports this proposed scoping study on the use of Satellite-Derived Bathymetry (SDB) as a tool for assessing the quality of hydrography in poorly charted areas. The United States suggests that the study include an inventory of the existing platforms (LANDSAT, SPOT, Sea WiFs, MODIS Aqua, etc.), accessibility of such data (is it free or not) and areas of opportunity for using SDB as a tool which could lead to improved hydrographic products. It should also identify best practices and case studies, which do exist and offer good examples of how this tool has been usefully applied. The assessment of such a tool may be of considerable value when used in conjunction with risk assessment methodologies (identifying where greatest shipping traffic is in poorly charted areas, for example, to provide targeted focus for the use of SDB).

While we feel that this tool does offer considerable potential for capacity building and other purposes, it is a bit premature to "launch an inter-RHC SDB and Reconnaissance operational program" before the results of the assessment are available. We agree that the scoping study should define the objectives of such a program and recommend areas where it could best be applied for the IRCC (with its Capacity Building Committee and RHCs) to then determine the best way to execute it.

The United States views SDB as one of many non-traditional sources of hydrographic data available, such as Crowd Sourcing referenced in PRO 4 among others, that are very promising and useful. How to appropriately take advantage of these additional sources of hydrographic data, while understanding their limitations, is a larger strategic issue for the IHO. Further IHO involvement in this area to summarize best practices and develop Member State consensus on how to best utilize the spectrum of non-traditional sources of data should be considered for the future.

## **Proposals - CONF.EX5/G/03**

### **IHB COMMENTS**

In order to contribute to discussion of this proposal, the Directing Committee offers the following comments.

Member States will be informed about progress in Satellite-Derived Bathymetry (SDB) during the information sessions held during EIHC-5.

This proposal, together with proposal 4, should be considered, in the light of Decision No. 17 of the XVIII<sup>th</sup> International Hydrographic Conference about progressing whatever actions are required to improve the collection, quality and availability of hydrographic data worldwide.

**PRO 7            THERE IS NO OTHER ALTERNATIVE BUT THE FULL  
IMPLEMENTATION OF THE WEND PRINCIPLES AND ITS GUIDELINES**

Submitted by: France

**PROPOSAL**

7.     **The Conference is requested to consider and approve the following:**
- a.     **in relation to the IHO primary strategic objective which is to provide an ENC worldwide and seamless database, to ask IRCC to assess the concrete consequences of the non-full-implementation of the WEND Principles in the long term;**
  - b.     **if agreed that the situation is not acceptable, then IRCC to task the WEND-WG and its RENC Harmonization Sub-Group to further develop the additional technical and standardization measures that IHO ENC Producers and RENCs should comply with.**

**EXPLANATORY NOTE**

Not implementing the WEND Principles, in principle, gives the private sectors the factual responsibility of solving issues not resolved at the HOs' level and stemming from this situation. An analysis of the real extent of this move is necessary for IHO to monitor and better control this imperfect situation.

One could argue that, although the IMO decided that ECDIS carriage was mandatory from 2010 for high speed vessels and from July 2012 for other ship categories, the IHO has up to now failed in providing the so-called ENC worldwide and seamless database. The fact is that it is not possible to designate where this WEND database stands. This fact raises many questions: Where should it be located? In the RENCs? In the VARs? At the IHB? There are many examples showing that it is not possible for a mariner, a ship chandler or end-user service providers to find the most comprehensive and consistent WEND database in every RENC, even if these RENCs are part of the IHO toolbox. Would the IHO consider RENCs as useless in that perspective? In some regions, mariners or service providers have also to make their own choice between two or more ENCs at similar scale. Whereas this situation was quite acceptable in the paper chart world, it is not the foundation on which the ENC concept and the WEND principles were built for supporting electronic navigation. With the development of ENCs (which are INTERNATIONAL charts by construction), would the IHO accept to get back to the former uncoordinated paper chart system? What would be the consequences for the mariners, then for the HOs?

A lot of questions, that should drive IRCC, WEND and its RHSG to establish mandatory procedures and standards covering all the spectrum of the IHO ENC toolbox, from production to distribution, in order to make our seas much safer and the mariners much more confident in the products they use.

**MEMBER STATES' COMMENTS**

**BRAZIL**

Brazil supports this proposal.

**CHILE**

We agree with the principle of this proposal, nevertheless we consider that the WEND Principles and Guidelines are a tool and not an objective on their own. In our opinion the key question is Why MSs do not comply with the WEND Principles and Guidelines?

A pragmatic approach that we would like to suggest is as follows:

- MSs to report IHB before 31 December 2014 about the accomplishment of the WEND Principles and Guidelines, highlighting particularly the reasons that whole or part of them have not been accomplished.
- The IHB jointly with WEND WG, to analyze the replies, obtain conclusions and propose recommendations to the IRCC for discussion at IRCC7 (June 2015) and later report to MSs regarding recommended actions and rationality (July 2015).

**FINLAND**

Supports strongly full implementation of the WEND Principles and work for developing IHO WENC concept.

**GREECE**

Not having yet implemented the IHO's primary strategic objective for providing the so called ENC worldwide and seamless database is not pleasant for any member state. Though, we must not forget that the last decade the hydrographic community has taken considerable initiatives and achieved the production and distribution of ENCs in areas and maritime traffic roads of significant importance for the international maritime community.

According to IHO's charter document, the nature of any decisions made is recommendatory and should remain as such. Issuing documents of mandatory procedures and standards for implementing the WEND is beyond the authority of any of the IHO's committees and also not acceptable on our end. The WEND completion is a time consuming effort and we do not have to be pessimists but have patience.

Any analysis of this situation has to focus on the real problem: The WEND principles and its guidelines were issued in 2008 with a considerable delay. Before that, several HOs had already produced and disseminated their own ENCs to the market, creating a situation that is hardly reversible. Especially when the HOs have different interpretation of the production model of seamless ENC database they produce (some choose paper chart like ENCs while others gridded type cells). Within a few years, the lack of agreed ENCs schema and policies resulted to extended overlapping and allowing that to happen was a definite mistake. Instead of preventing it in the first place, we started discussing on how to eliminate the gaps and overlaps and how to come up with technical solutions to a problem that touches upon political issues. Before proceeding to any measure that could jeopardize the whole effort made so far, there are a few questions to be answered

**GREECE (continuation)**

- Are the WEND principles and guidelines complete and adequate tools focused to help/assist the NHOs to agree in a common cartographic boundary?
- Do we need to further improve them in order to offer more alternative solutions/ options?
- Why the cartographic boundary “should be as simple as possible”, when ENC’s are built on GIS platforms which provide us with the opportunity to have a cartographic boundary as much simple or complicated as needed? Technology is on our side on that. The most important of all is member states to agree on a boundary to clip their data.
- In a world characterized by the technological evolution, how is it possible ECDIS systems to have stability problems when data gaps or data overlapping occurs? Safety of navigation means we have to make ECDIS not to crash in any way.

**JAPAN**

Japan supports this proposal.

**UK**

The United Kingdom recognises and agrees with many of the issues identified by France in Proposal 7 that have culminated in the inability of the hydrographic community and the IHO to produce comprehensive ENC coverage.

The United Kingdom would support IRCC tasking the WEND WG to undertake a comprehensive analysis and identification of the factors that have contributed to this situation. The United Kingdom is therefore supportive of the involvement of the WENDWG to undertake the necessary analysis to better understand the underlying problems and develop a range of effective solutions.

Therefore, the United Kingdom believes that the development of additional technical and standardization measures would be premature at this stage and may not fully resolve the issues identified in Proposal 7.

We believe that a range of tangible solutions need to be identified and tested before any course of action is agreed and the United Kingdom would be pleased to be involved in such a project.

**USA**

The U.S. supports having this important discussion at the EIHC. Member States recently approved the revised WEND Implementation Guidelines (CL06/2014), highlighting their importance in achieving one of the most important objectives of the Organization. While great progress has been made in achieving adequate coverage of ENC’s, proactively eliminating gaps and overlaps between Member States and through RHC collaboration, it is appropriate to look now at the current accessibility and distribution of ENC’s. Member States should consider defining what the ENC “Worldwide and Seamless Database” is and determine what we collectively want from it in the best interest of the maritime customer.



## **Proposals - CONF.EX5/G/03**

### **IHB COMMENTS**

In order to contribute to discussion of this proposal, the Directing Committee offers the following comments:

The Directing Committee is aware of increasing disquiet from international organizations representing ENC users and distributors regarding the perceived failure of the WEND principles to ensure that the global collection of ENCs – the WEND – can be easily identified and accessed via flexible and competitive distribution channels. Meanwhile, the Directing Committee has received no specific adverse criticism from Observer and Stakeholder organizations about the quality, the coverage, gaps or overlaps in ENC coverage.



**DECISIONS OF THE CONFERENCE**

**Decisions**

<b>DECISIONS OF THE 5<sup>th</sup> EXTRAORDINARY I.H. CONFERENCE</b>	
<b>Decision No.</b>	<b>Description</b>
<b>1</b>	<p><b>Staff Regulations</b></p> <p>The Conference noted and endorsed the Report of the Staff Regulations Working Group (SRWG) concerning its review of the Staff Regulations.</p> <p>The Conference agreed to task the IHB Directing Committee to revise the IHO Publication M-7 (<i>Staff Regulations</i>) and to re-establish the Staff Regulation Working Group (SRWG) in accordance with document CONF.EX5/REP.01/PROSRWG.</p> <p>The Conference invited Member States to nominate representatives to the SRWG.</p> <p style="text-align: center;"><b>PRO SRWG</b></p> <p><b>Proposal on the re-establishment of the Staff Regulations Working Group (SRWG)</b></p> <p><b>Terms of Reference</b></p> <ol style="list-style-type: none"> <li>1. To receive from the Directing Committee (DC) and provide independent review and, if considered necessary, propose amendments or alternative options for the eventual consideration of Member States:             <ol style="list-style-type: none"> <li>a. Proposed Revised Staff Regulations;</li> <li>b. An implementation plan to bring the revisions into effect;</li> <li>c. Proposed job descriptions for the Secretary-General and the two subordinate Directors.</li> </ol> </li> <li>2. Ensure that all the recommendations and guidance agreed by Member States at the 5<sup>th</sup> Extraordinary International Hydrographic Conference are addressed in the revised version of the Staff Regulations to be presented to Member States</li> <li>3. Ensure that the proposed revision of the Staff Regulations is accompanied by a financial analysis of the implications of all proposed changes that can be reviewed by the Finance Committee.</li> <li>4. Ensure that a comparison of IHB staff salaries and equivalent grades in the comparator organisations (United Nations or Monaco Civil Service) is provided.</li> </ol> <p><b>Timing</b></p> <ol style="list-style-type: none"> <li>1. DC to prepare drafts by end of June 2015;</li> <li>2. SRWG to respond by end of August 2015;</li> <li>3. Finance Committee to review and comment on any financial implications by end of November 2015;</li> <li>4. Final drafts agreed and submitted to Member States by Circular Letter by end of December 2015.</li> </ol>

## Decisions

	<p>Note: If a solution to the health care issues that have been identified can be determined in advance of this timetable, this solution to be submitted to Member States, if required, as soon as practicable.</p> <p><b>Chair</b> Mr Andrew Millard (UK).</p> <p><b>Membership</b> The Working Group is open to all Member States. Member States wishing to participate should preferably provide representatives with relevant personnel administration experience.</p>
<p style="text-align: center;"><b>2</b></p>	<p><b>Technical Capacity of the International Hydrographic Bureau</b></p> <p>The Conference noted the Report on the Technical Capacity of the International Hydrographic Bureau and agreed:</p> <ol style="list-style-type: none"> <li>1. that the recruitment of new Member States should remain an important priority in the IHO Work Programme with a focus on the larger Flag States;</li> <li>2. that those Member States that have not yet ratified the Protocol of Amendments to the IHO Convention should do so as soon as possible, in order to facilitate the recruitment of new Member States;</li> <li>3. the revised amendment to IHO Resolution 12/1962 as amended: “... The language(s) of other IHO reference documents, guidelines and standards shall be at least one of the official languages decided on a case by case basis in the IHO Work Programme, taking into account the strategic priorities of the IHO, the intended use of the document, the resources of the Bureau and the assistance offered by Member States.”</li> <li>4. to task IRCC to review arrangements for the collection and examination of INT Charts currently regulated by Article 19 of the IHO General Regulation and IHO Resolution 1/1992 (Monitoring of INT Charts) and to consider the need to amend or develop relevant IHO Resolutions, taking into account the comments from the Conference,</li> <li>5. that the skills of the IHB staff should be adjusted through reskilling or natural attrition before redundancy schemes are considered.</li> <li>6. that the recruitment of an IHB staff member to undertake the duties of S-100 Registry Manager should be given priority as soon as an opportunity occurs.</li> <li>7. that the establishment of a “target model” for the IHB be considered with the revision of the IHO Strategic Plan, in accordance with the planning cycle defined in IHO Resolution 12/2002 as amended, at the next Conference or Assembly.</li> </ol>

## Decisions

<p><b>3</b></p>	<p><b>PRO5-Rev 1:</b></p> <p>The Conference approved the following:</p> <p>That the Conference reinforces the existing reporting requirements for committees, sub-committees, and WGs, and underlines the importance of submitting these reports in order to offer the IHB and Member States a tool to both estimate and provide the necessary resources as well as assess results and progress.</p> <p>That the chairs of committees, Sub-committees and WGs be directed by the IHB to, twice annually at year-end and mid-year, report on the overall status of their respective work programmes by completing a simple, two-part template that requests brief lists of 1) current goals and priorities, and 2) current or expected gaps and needs.</p> <p>That the IHB communicate these brief summary reports in a circular letter, as well as noting any groups that did not report, with a view to offering Member States a snapshot of the status of the work of the IHO. That in the same circular letter, the IHB requests contributions and/or volunteers to help meet any gaps or needs.</p> <p>That the IHB use these biannual reports to inform the drafting of the annual IHO Work Programme, as well as the 5-year Work Programme.</p> <p>That progress towards more results-based programming is important, and is supported by robust reporting on performance, including results and needs, as well as valid estimates of resource needs.</p> <p>That Member States will consider this issue in the context of the 2018 - 2021 Work Programme and Budget.</p>
<p><b>4</b></p>	<p><b>PRO 1</b></p> <p>The Conference adopted a new Resolution on the Prince Albert I<sup>st</sup> Medal for Hydrography as set out in the Appendix to PRO 1, as a replacement for clause 6 of the IHO Resolution 6/2009 (International Hydrographic Review), which is hereby cancelled.</p>
<p><b>5</b></p>	<p><b>PRO 2</b></p> <p>The Conference took note of the options, ideas and comments made by the Democratic People's Republic of Korea, Republic of Korea and Japan regarding the revision of S-23, but also recognized the resource constraints of the current Work Programme 2013-2017. The Conference agreed that the matter could be discussed again at the next Ordinary Conference/Assembly in 2017 if a proposal on the matter is made by any Member State.</p>

## Decisions

<p style="text-align: center;"><b>6</b></p>	<p><b>PRO 3</b></p> <p>The Conference agreed that the following guidelines will apply to the process by which the Secretary-General shall allocate the number of seats on the Council to each Regional Hydrographic Commission (RHC):</p> <ol style="list-style-type: none"> <li>1. All Member States that are full members of more than one RHC are expected to declare in which one, and only one, RHC they are to be counted as a full member.</li> <li>2. The declarations will be collected and publicized to all Member States by the Secretary-General, according to the following time sequence:             <ol style="list-style-type: none"> <li>a. Full members of any of the Arctic Regional Hydrographic Commission, Nordic Hydrographic Commission or US/Canada Hydrographic Commission;</li> <li>b. Other Member States that are full members of any of the Eastern Atlantic Hydrographic Commission, Southern Africa and Islands Hydrographic Commission, South-East Pacific Regional Hydrographic Commission or South-West Atlantic Hydrographic Commission;</li> <li>c. Other Member States that are full members of any of the other RHCs.</li> </ol> </li> <li>3. In the event that a Member State that is a member of more than one RHC fails to declare its choice, the Secretary-General will count that Member State in the RHC to which the Member State joined first as a full member. If this criterion is not selective, then the Secretary-General will count the Member State in the RHC with the smallest number of full members.</li> <li>4. The Conference agreed that this guidance will be reviewed by the first ordinary session of the Assembly as part of the review and endorsement of the selection process of Council members in accordance with Article 16 (e) of the IHO General Regulations (not yet in force).</li> </ol>
<p style="text-align: center;"><b>7</b></p>	<p><b>HSSC Report</b></p> <p>The Conference noted the HSSC Report and:</p> <ol style="list-style-type: none"> <li>1. supported the process of restructuring and future activities of the HSSC working groups through active participation and other in-kind contributions, and</li> <li>2. acknowledged the increasing and very important contribution being made by industry in their role as Expert Contributors, especially in the development of S-100 and its related applications, and in the maintenance of many other IHO technical standards.</li> </ol>



## Decisions

<p><b>No. 8</b></p>	<p><b>PRO 4 – Rev1</b></p> <p>The Conference tasked the IRCC to establish a Working Group to prepare a new IHO publication on policy for trusted crowd-sourced bathymetry, taking into account EIHC5 PRO4 and the comments during the Conference. The Working Group should comprise IHO Member States and invited Expert Contributors, including members of IHO-IOC TSCOM. The Working Group should seek advice and input from relevant HSSC Working groups as required.</p> <ol style="list-style-type: none"> <li>a. That the IRCC establishes a working group (WG) to prepare a new IHO Publication on policy for trusted bathymetry, taking into account the comments of the Conference on PRO4.</li> <li>b. The WG should comprise representatives of IHO Member States and invited expert contributors, including members of IHO-IOC TSCOM.</li> <li>c. The WG should seek advice and input from relevant HSSC Working Groups as required.</li> <li>d. That the IRCC and the HSSC, review the draft publication and seek approval of the IHO Member States through the Directing Committee of the IHB.</li> </ol>
<p><b>?</b></p>	<p><b>PRO 6</b></p> <p>The Conference agreed not to initiate a coordinated action on satellite-derived bathymetry.</p>
<p><b>No. 10</b></p>	<p><b>IRCC Report</b></p> <p>The Conference noted the IRCC interim report and:</p> <ol style="list-style-type: none"> <li>1. Encouraged the ongoing collaborative and cooperative work of the IRCC working groups through active participation and other in-kind contributions, and</li> <li>2. Acknowledged that the two continuing priorities of the IRCC will continue to be Capacity Building and ENC coverage together with related WENDWG issues.</li> </ol>
<p><b>No. 11</b></p>	<p><b>IHO Capacity Building Strategy</b></p> <p>The Conference adopted the revised IHO Capacity Building Strategy presented under CONF.EX5/REP.03/Rev1.</p>
<p><b>No. 12</b></p>	<p><b>PRO 7</b></p> <p>The Conference tasked the IRCC to assess the long term consequences of not achieving full implementation of the WEND Principles.</p>

## Decisions

<p><b>No. 13</b></p>	<p><b>Finance Report for 2013</b></p> <p>The Conference approved the Finance Report for 2013 and its recommendations concerning the disbursement of the budget surplus.</p>
<p><b>No. 14</b></p>	<p><b>Work Programme and Budget for 2015</b></p> <p>The Conference approved the Work Programme and Budget for 2015.</p>
<p><b>No. 15</b></p>	<p><b>Date of the next Conference</b></p> <p>The Conference agreed to convene the XIX<sup>th</sup> IHC (1<sup>st</sup> Assembly) either from 27 to 31 March or from 3 to 7 April 2017, exact dates to be confirmed.</p>
<p><b>No. 16</b></p>	<p><b>Seating order at the next Conference</b></p> <p>The Conference agreed that the seating order at the next Conference (Assembly) will start with the letter "Z".</p>
<p><b>No. 17</b></p>	<p><b>Resolution of Appreciation to the Government of Monaco</b></p> <p>The Conference adopted a Resolution expressing appreciation to the Government of Monaco:</p> <p>"The Conference:</p> <p>Recognizing the continued close association and significant support of His Serene Highness Prince ALBERT II and the Government of the Principality of Monaco in hosting the International Hydrographic Organization,</p> <p>Appreciating the kind generosity of His Serene Highness and the Government of the Principality of Monaco in providing premises for the Organization,</p> <p>Further appreciating the provision of the Auditorium RAINIER III in Monaco for the 5<sup>th</sup> Extraordinary International Hydrographic Conference and its associated Exhibitions,</p> <p>Further appreciating the provision of the Port Facilities of Monaco for the ship that was placed on exhibition during the 5<sup>th</sup> Extraordinary International Hydrographic Conference,</p> <p>Expresses its profound gratitude to His Serene Highness Prince ALBERT II and the Government of the Principality of Monaco for their graciousness and kind hospitality extended to the Organization, and</p> <p>Requests the delegation of the Principality of Monaco to convey to His Serene Highness and the Government of the Principality of Monaco the sincere sentiments of the Conference expressed above."</p>

# PLENARY SESSIONS



**PLENARY SESSIONS OF THE 5<sup>TH</sup> EXTRAORDINARY  
INTERNATIONAL HYDROGRAPHIC CONFERENCE**

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**Plenary Sessions**

## Plenary Sessions

### 5<sup>th</sup> EXTRAORDINARY INTERNATIONAL HYDROGRAPHIC CONFERENCE

#### SUMMARY RECORD OF THE FIRST PLENARY SESSION

6 October 2014

0830 - 1155

President: Dr Mathias JONAS (Germany)  
Vice-President: Rear Admiral K.R. SRINIVASAN (Saudi Arabia)  
Rapporteur: Mr Juha KORHONEN (Finland)

#### CONTENTS

- Confirmation of the election of the President and election on the Vice-President of the Conference
- Appointment of Rapporteurs
- Adoption of the programme and agenda
- Opening ceremony
- Flag presentation ceremony
- Opening ceremony (contd)
- Signing ceremony

#### **CONFIRMATION OF THE ELECTION OF THE PRESIDENT AND ELECTION OF THE VICE-PRESIDENT OF THE CONFERENCE**

The PRESIDENT OF THE DIRECTING COMMITTEE announced that Dr Mathias JONAS (Germany) had been elected President of the Extraordinary Conference in accordance with Rule 17 of the Rules of Procedure.

The election of Dr JONAS as President was confirmed by acclamation.

Mr MONCRIEFF (United Kingdom) and Rear Admiral GLANG (United States of America) nominated Rear Admiral SRINIVASAN (Saudi Arabia) as the Vice-President of the Conference.

Rear Admiral SRINIVASAN (Saudi Arabia) was elected Vice-President by acclamation.

Dr JONAS took the Chair and Rear Admiral SRINIVASAN the Vice-Chair.

#### **APPOINTMENT OF RAPPORTEURS**

Commander Leonel MANTEIGAS (Portugal), Lieutenant Commander Eşref GÜNSAY (Turkey), IPETA Eric LANGLOIS (France), Ms Jennifer BEAN (United States of America), Mr Jamie CHEN (Singapore), Dr Kian FADAIE (Canada) Ms Annika KINDEBERG (Sweden), Mr Juha KORHONEN (Finland) and Mr Nigel SUTTON (United Kingdom) were appointed Rapporteurs for the plenary sessions.

## **Plenary Sessions**

### **ADOPTION OF THE PROGRAMME AND AGENDA (CONF.EX5/G/01/Rev2)**

The Programme and Agenda were adopted, with the inclusion of two additional sub-items under Item 7: Resolution of Appreciation to the Government of Monaco and Review of the outcome and decisions of the Conference.

### **OPENING CEREMONY (Item 2 of the Agenda)**

His Serene Highness Prince ALBERT II of Monaco was escorted into the Hall and took his seat on the podium.

Mr David WYATT (IHB), speaking as the Master of Ceremonies on behalf of the Directing Committee, welcomed delegates to the Fifth Extraordinary IH Conference. He indicated that the Conference was being attended by almost 260 delegates from 66 Member States, 40 delegates from 12 pending or non-Member States, 35 observers from intergovernmental and nongovernmental organizations and almost 120 representatives from the 26 companies attending the Hydrographic Conference.

The PRESIDENT OF THE DIRECTING COMMITTEE delivered an address which is reproduced in these Conference Proceedings.

His Serene Highness Prince ALBERT II of Monaco delivered an address, also reproduced in these Conference Proceedings, declaring open the Fifth Extraordinary International Hydrographic Conference.

### **FLAG PRESENTATION CEREMONY**

Mr David WYATT (IHB) announced that the Organization now comprised 82 Member States. Since the Eighteenth International Hydrographic Conference in 2012, the Republic of Montenegro had become a full Member. In keeping with tradition, he invited the delegation of Montenegro to formally present its country's flag.

His Serene Highness Prince ALBERT II was then escorted from the Hall to the exhibition venue to open and visit the Industry Exhibition and the Capacity Building Exhibition.

### **OPENING CEREMONY (Item 2 of the Agenda) (Continued)**

The CONFERENCE PRESIDENT delivered his opening address, which is reproduced in these Conference Proceedings.

Mr Koji SEKIMIZU, Secretary-General of the International Maritime Organization, delivered a keynote address, which is reproduced in these Conference Proceedings.

Mr Mitsuyuki UNNO, Executive Director of the Nippon Foundation, also delivered a keynote address, reproduced in these Conference Proceedings.

### **SIGNING CEREMONY**

The CONFERENCE PRESIDENT invited the representatives of Denmark, Finland, Iceland, Norway and Sweden to come to the podium to sign the revised Statutes of the Nordic Hydrographic Commission, noting that this was the oldest Regional Hydrographic Commission.



**5<sup>th</sup> EXTRAORDINARY INTERNATIONAL HYDROGRAPHIC CONFERENCE**

**SUMMARY RECORD OF THE SECOND PLENARY SESSION**

6 October 2014  
1400-1730

**Rapporteur:** Ms Annika KINDEBERG (Sweden)

**CONTENTS:**

**CONSIDERATION OF REPORTS AND PROPOSALS (WORK PROGRAMME 1)  
(CONF.EX5/REP.01 & Add.1, CONF.EX5/REP.02, CONF.EX5/G/03)**

- Report of the Staff Regulations Working Group concerning its review of the Staff Regulations
- Report on the Technical Capacity of the International Hydrographic Bureau

**1. CONSIDERATION OF REPORTS AND PROPOSALS (WORK PROGRAMME 1)  
(CONF.EX5/REP.01 & Add.1, CONF.EX5/REP.02, CONF.EX5/G/03)**

The PRESIDENT OF THE DIRECTING COMMITTEE recalled that Work Programme 1, Corporate Affairs, included the significant activities undertaken by the Directing Committee and the Assistant Directors in relations between IHO and other intergovernmental and international organizations, and in promoting the profile of IHO. In that regard, he was pleased to report that, in addition to the recent accession of Montenegro as a Member State of IHO, applications to join from Brunei Darussalam, Georgia and Viet Nam were close to receiving the necessary approval, and a number of other countries, some represented at the conference as observers, were considering submitting applications in the near future. Only seven further ratifications were needed to ensure the entry into force of the amendments to the IHO Convention, after which applications from Member States of the United Nations would automatically be accepted. That would simplify the membership process and should encourage other countries to apply. The Directing Committee was continuing, through visits to missions and countries, to urge Member States that had not yet done so to ratify the amendments, and he requested representatives to encourage their countries to proceed to ratification.

Work Programme 1 also covered the various administrative functions of the Secretariat. The Secretariat was continuing to meet the ever-increasing obligations placed upon it over the previous decade relating to: the development of programme performance monitoring, analysis and reporting; the provision of technical outreach and support for the implementation of new standards; and IHO's representation at the highest intergovernmental levels, for example in the International Maritime Organization, the United Nations Initiative on Global Geospatial Information Management, the European Union and the Group on Earth Observations, as well as at various stakeholder outreach events.

Since 2000, the number of IHO Member States had increased by 20%, the number of IHO publications by 35%, and the number of international organizations invited to attend the Conference by 15%. Yet the IHO budget had remained roughly constant in real terms and the number of permanent IHB staff had decreased by 10%. As a consequence there was little flexibility remaining to accommodate further requirements and expectations.

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Although IHO was not at a crisis point, it would be timely for Member States to take stock and to consider the balance between the requirements of the entire IHO Work Programme and the resources available. While financial resources were obviously important, the recent reduction in in-kind resources provided by Member States was of equal if not greater concern. The volunteering capacity of Member States appeared to be diminishing, whereas the ability of the IHB to take up the slack was reducing. Faced with that dilemma, Member States might be tempted to request further reporting and accounting procedures in the hope of gaining efficiencies. Yet experience had shown that where such initiatives required Member States to provide more information, or participate more actively, either individually or through the relevant bodies of IHO, they were likely to falter. The difficulty in obtaining input and feedback for the 2015 Work Programme and Budget was a recent example. Responses to requests for information on perceived resource constraints, vulnerabilities or threats that might affect the implementation of the Work Programme had been received from only one of the 15 regional hydrographic commissions, only one of the three inter-organizational bodies and only two of the 14 relevant subcommittees and working groups. Moreover, the responses had failed to provide helpful comments on the resource implications for the activities of the body concerned. Obtaining performance monitoring data for the IHO annual reports in the previous two years had also proved difficult. Even responding to Circular Letters on time appeared to be problematic for more than half of the Member States.

Consideration of a flat-line budget or of budget cuts would also cause difficulties, since most of the expenses were related to fixed personnel costs, which increased with inflation, leaving little to finance the travel and office services that were vital to enable IHB and the Directing Committee to fulfill their functions.

At the same time, fewer representatives were being made available to lead committees and working groups, or act as secretary to one of the various IHO bodies. It appeared that work was being endorsed by higher committees even though the principal resources required – the active participation and input from Member States – were not available. The Work Programme of the Hydrographic Services and Standards Committee (HSSC) had achieved an implementation rate of only 20% in 2013 and, since its establishment, the Staff Regulations Working Group (SRWG) had struggled to attract more than two or three active participants.

The Directing Committee requested representatives of Member States to take those difficulties into account in their subsequent discussions, and to consider carefully the impact of proposals or measures that would have financial or human resource implications for the IHB or Member States. His cautionary words might make for uncomfortable listening, but they were intended to be constructive and to reflect current realities. It was essential to consider how IHO could maintain its high profile and reputation and its impressive Work Programme in the light of circumstances. Nevertheless, the Directing Committee would continue to do its best to implement the wishes of the Member States.

The PRESIDENT requested representatives to delay their comments on Work Programme 1 until all the reports and proposals on the item had been presented.

### **Report of the Staff Regulations Working Group concerning its review of the Staff Regulations (CONF.EX5/REP.01)**

Mr MILLARD (United Kingdom), Chairman of the SRWG, introduced the Group's report and thanked the members from Australia, Chile, Germany and the USA for their valuable contributions. He recalled the terms of reference of the SRWG, which had been established in 2007.

As indicated in the report, the SRWG had been unable to complete its work by 2012, and it had therefore been agreed that a reconstituted SRWG under the chairmanship of the United

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Kingdom should take the work further and report to the 5th Extraordinary Conference in 2014. It had also been agreed that the services of an independent expert should be enlisted to compare the Staff Regulations of IHB with those of the United Nations Common System and the Monaco Civil Service, as appropriate, and to make recommendations accordingly. The investigation had been undertaken by Ms Brzak-Metzler, former Chief of the Conditions of Service Section at the United Nations, as indicated in Annex A to the report.

He highlighted the principal findings and recommendations made by the consultant, which were set out in section 1.4 of the report. Her review had shown that, in general, current salaries of IHB staff compared favourably with those of the two comparator organizations. However, those of Categories B and C appeared low and were mostly aligned with those of step 1 of the Monaco Civil Service salary tables. The review had also encompassed salary progression, cost-of-living salary increases, family allowances and social security benefits, and possible procedures for drafting and implementing a revised version of the Staff Regulations, taking into account the impending transition from a Directing Committee comprising the President and two Directors, to a Secretary-General and two subordinate Directors. The consultant had made a number of recommendations in the areas covered, details of which were set out in the report.

The SRWG had further considered: health care arrangements, in view of the potential financial liabilities placed on IHO under the current arrangements; the need for amendments to the Staff Regulations to reflect the differences between internationally and locally recruited staff; and leave entitlements. It had made a number of recommendations in those areas, as set out in the report, including the need to undertake typographical and formatting adjustments to the existing text of the Staff Regulations to remove ambiguities and lend consistency to their implementation.

Given the findings and recommendations of the consultant and the SRWG, Member States were invited to approve the recommendations on changes to the Staff Regulations, set out in paragraph 40 of the report. They included instructions to the Directing Committee: to draft amendments to the Staff Regulations and other relevant regulations in accordance with the various recommendations for consideration by Member States no later than July 2015, or three months before the amendments to the IHO Convention entered into force, whichever came sooner; to draft job descriptions for the Directing Committee, and for the Secretary-General and the Directors under the new IHO structure; and to investigate ways to mitigate the potential liabilities for IHO arising from the current health-care arrangements, and to propose solutions for consideration at the same time as discussion of the proposed amendments to the Staff Regulations.

He thanked Canada, Greece, the United Kingdom and the United States of America for their written comments (CONF.EX5/REP.01/Add.1), which had generally supported the recommendations contained in the SRWG report. Canada had suggested that the Directing Committee should not prepare its own job descriptions. However, the Committee was best placed to prepare a first draft, which could then be reviewed by the SRWG, should its mandate be extended, and subsequently approved by Member States. Greece had proposed that the Conference should note the report and provide some preliminary comments to guide the SRWG – continuing with revised terms of reference – in considering the matter further, a decision being deferred until a full picture became available. The SRWG agreed with Greece that any decision should be made not through the Circular Letter procedure but through approval at the 2017 IHO Conference, or at a special meeting of the heads of hydrographic organizations: the formation of a Legal Expert Group to assist the procedure should not be necessary since ad hoc legal expertise could be called upon. The SRWG concurred with the United Kingdom that priority should be given to seeking a solution to the potentially severe health-care insurance liabilities. The SRWG also agreed with the United States of America on the desirability of bringing IHO Staff Regulations into line with those of the United Nations in respect of the items detailed in paragraph 26 of the report, and with the request of the

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United States and Greece for a detailed analysis of the cost implications of any such changes. The SRWG, in noting the comments by Greece concerning the length of time taken to revise the Staff Regulations, was recommending that the Directing Committee should take on the task of advancing the matter further, with guidance from Member States, and that the SRWG should be disbanded. However, given more active participation from Member States, a further role for the SRWG might be envisaged as an independent review body, to examine revisions to the Staff Regulations and a plan for the implementation of the revised Regulations prior to final approval by Member States.

### The Conference took note of the report.

The PRESIDENT invited Member States to comment on the recommendations contained in the report and, to provide guidance on whether the SRWG should be disbanded.

Mr JIN (Republic of Korea) thanked the members of the SRWG for their work and welcomed the detailed analysis undertaken by the consultant. He expressed partial support for the recommendations set out in the report. A long-term approach should be taken to the implementation of changes to the Staff Regulations, giving due consideration to the working environment of IHB staff.

Vice Admiral MARATOS (Greece) emphasized the importance and complex nature of the review of Staff Regulations, and reiterated Greece's concern at the slow progress of that process, especially given the relatively rapid success achieved in revising the IHO Convention and the General and Financial Regulations. The difference was perhaps a reflection of the more dynamic participation of Member States in relation to the latter. Perhaps the Staff Regulations should be included as part of the Basic Documents, alongside the other Regulations, to ensure that they were given due consideration.

Despite the efforts of the SRWG, several fundamental issues remained to be addressed. In that regard, he drew attention to a number of anomalies in the current Staff Regulations, relating particularly to the variations in allowances and benefits for the different categories of staff for different durations of service and different residence locations of retirees. It was invidious that similar staff members were receiving quite different privileges. Those areas required urgent clarification.

He proposed that the SRWG should continue, with revised terms of reference and increased participation of Member States, to review the Staff Regulations in detail, with the aim of drafting amendments for consideration by a future IHO Conference.

The PRESIDENT suggested that many of the detailed anomalies referred to by the previous speaker would be resolved should the recommendations in the report be approved.

The PRESIDENT said that inclusion of the Staff Regulations among the Basic Documents of the IHO was a matter likely to be considered by the next Assembly, in conjunction with any draft consolidated version of the principal findings and recommendations set out in the SRWG report, which essentially addressed the main concerns expressed during the present discussion, albeit in concise form. Measures relating to those concerns would be more precisely detailed in the drafting of any consolidated version.

IGA FRACHON (France) joined in commending the SRWG on its report, which exhaustively covered the immense financial and social issues at stake, bearing in mind that salaries and benefits accounted for 80 per cent of IHO operating costs. The work carried out by the independent external consultant had positively assisted the working group's formulation of its recommendations, for which he expressed support.

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Concerning the benchmarking exercise, he favoured as more appropriate for IHO purposes the recommendation of reviewing the IHO Staff Regulations in relation to those of the United Nations and, where applicable, the Monaco Civil Service. The recommended practice of freezing the salaries and allowances of existing staff until they were overtaken by increases, or phased out, was also the correct approach to follow.

Any amendment of the Staff Regulations must furthermore take into account the IHB comments set out in the addendum to the report, insofar as evidence of commitment to staff was vital to sustaining good personnel relations. An analysis of differing views would also serve as useful guidance for the Assembly in its consideration of the matter during its next ordinary session.

In short, the SRWG's recommendations provided a sound basis for the work of drafting amendments to the Staff Regulations, which should also be accompanied by an explanation of their impact. The development of options for addressing concerns expressed during the discussion would be the most pragmatic approach to ensuring compliance with the set time frame.

France supports the SRWG's recommendations, and the IHB's proposal to take into account, when they are relevant, comments of Category B and C staff, according to good practices in management. SRWG's recommendations are clear enough to be used by the IHB Directing Committee to prepare a revision of the Staff Regulations and submit them, with an impact study, at the next Assembly.

Ms WEBBER (United States of America) likewise joined in applauding the SRWG for the excellence of its work and in expressing support for the recommendations provided. Noting the IHB concerns, however, she looked forward to receiving clarification concerning any perceived inaccuracies in the report. Staff views were welcome during the development of any proposed text changes. The SRWG had now fulfilled its purpose of providing the essential information sought and IHB should therefore be instructed to proceed with implementation of the recommendations contained in the SRWG's report.

Rear Admiral. SRINIVASAN (Saudi Arabia) stated that, given the Directing Committee's intimate knowledge of the subject matter, the provision of information concerning its views would surely have enhanced understanding of the issues involved. He agreed that the Staff Regulations should be treated in a holistic manner. A comprehensive review should therefore be developed for consideration at future meetings.

Mr MONCRIEFF (United Kingdom) added his voice to the support expressed for the SRWG's work and recommendations, which should now be taken forward to a stage of sensitive implementation involving consultation with IHB staff. To that end, he proposed that the SRWG should be transformed into an implementation group for assisting, supporting and consulting with IHB staff through the proposed changes.

He endorsed the request, set forth in the appendix to the report, for an itemized analysis of the cost implications of bringing the IHO Staff Regulations into line with those of the United Nations, not least concerning such potential contingent liabilities as those associated with health care. He agreed that the Directing Committee was ably qualified to prepare its own job descriptions, subject to their ratification by any future implementation group prior to their consideration by Member States. He also suggested that the establishment of a legal expert group was redundant; the existing ad hoc legal advisory committee could be entrusted with providing any required legal advice. Lastly, a time frame should be set for the drafting process, in order to accelerate progress towards implementation.

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The PRESIDENT OF THE DIRECTING COMMITTEE recalled his opening statement to the Conference and the efforts to bring a pragmatic end to the work under discussion, which had thus far spanned seven years at a cost of 25,000 euros. If so instructed, the Directing Committee would form a drafting group with the aim of producing a consolidated text for approval, taking into account the SRWG's recommendations and all other available information of relevance, as well as issues raised during the present discussion. Aware of those issues and of the constraints entailed in implementing certain principles, the Directing Committee would be motivated in that task by the desire to realize the best interests of the Organization. It therefore looked forward to working in an expedient and pragmatic manner to develop a text for consideration as a whole by Member States.

The PRESIDENT, summing up the debate, said that the recommendations contained in the report had been generally well received. As he understood it, Member States were principally in agreement with the recommendations concerning the tasks to be assigned to the Directing Committee; wished to propose that the SRWG should continue to function as an independent review and implementation body with oversight of the drafting process; and, rather than the establishment of a legal advisory group to assist the SRWG, favoured the practice of seeking legal advice, as necessary, from willing and able Member States. As for a time frame for the drafting work, he suggested that the date of July 2015 mentioned in the recommendations was acceptable.

In the interest of expediency, the proposed draft could then be disseminated by circular letter, with a view to its approval for submission to the next Assembly meeting in ordinary session, which could additionally consider such matters as the incorporation of the Staff Regulations into the IHO body of basic documents and subsequent amendment of the IHO Convention. He added that the drafting work should necessarily be conducted in accordance with the principles set out in the recommendations concerning salaries and salary reviews.

Mr MONCRIEFF (United Kingdom) remarked that, in pursuit of the openness and transparency constituting the principles of good governance, the publication of salary grades compared with those applied in similar organizations would be a sensible move. With its overall purview of similar issues under debate in numerous forums, the International Labour Organization was also available to assist, as was perhaps the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) in the area of peer review. In short, it was a matter of drawing on best practices already in place elsewhere.

The PRESIDENT expressed confidence that those comments would be taken into account in the drafting of the new terms of reference for the SRWG. He underlined the importance of confining comparisons to those made with similar intergovernmental organizations of a global scope engaged in a similar quest for excellence in leadership.

In the absence of any objections to the arrangements he had outlined, he suggested that the SRWG Chair and interested parties should embark immediately on the task of redrafting the terms of reference of the SWRG.

It was so agreed.

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### **Report on the Technical Capacity of the International Hydrographic Bureau (CONF.EX5/REP.02)**

The PRESIDENT, noting the relevance to the agenda item of proposal 5 on improving the total cost estimate of the IHO tasks for the definition of a prioritized work programme, as set out in document CONF.EX5/G/03, suggested that the proposal be considered in conjunction with the report and recommendations concerning technical capacity with the IHB (CONF.EX5/REP.02).

It was so agreed.

The PRESIDENT OF THE DIRECTING COMMITTEE, introducing the report and recommendations produced by the Directing Committee in response to a request made at the 18<sup>th</sup> International Hydrographic Conference, outlined the information set out in the report on the basis of the IHB's current workload and output, staffing levels and funding levels. In so doing, he highlighted in particular matters concerning efficiencies achieved; contributing factors; limiting factors; possible courses of action; and options for increasing income. Lastly, he drew attention to the conclusions drawn and recommendations made on the strength of that information.

The PRESIDENT invited the Conference to consider the recommendations of the Directing Committee, as set out in paragraph 51 of its report. In the absence of any comments on the first two recommendations, he drew attention to the third, on the introduction of an improved, resource-based approach to the development of the Work Programme, pointing out that it was closely related to Proposal 5, submitted by France, on improving the total cost estimate of the IHO tasks for the definition of a prioritized work programme (CONF.EX5/G/03).

Dr HOSKEN (United Kingdom), supported by Mr HAINS (Canada), suggested that Member States should be requested to estimate their resource input to the task of developing the IHO Work Programme in terms of working days rather than salaries, as many States might find it difficult to provide a fully costed estimate, and salaries can be a sensitive issue; only the costs pertaining to travel and subsistence would be taken into account as actual costs.

The PRESIDENT, responding to a request by IGA FRACHON (France), invited him to provide a brief summary of Proposal 5.

#### **PRO 5 - IMPROVING THE TOTAL COST ESTIMATE OF THE IHO TASKS FOR THE DEFINITION OF A PRIORITIZED WORK PROGRAMME (CONF.EX5/G/03) (Agenda item 3(d))**

IGA FRACHON (France), introducing the Proposal, pointed out that the costs of developing the IHO Work Programme were not limited to the approved budget. They took account of the direct contributions made by Member States through participation in the Committees and Working Groups. In view of the difficulties in preparing a consolidated financial estimate of contributions, an effort should be made to avoid entering into financial details and to remain as simple as possible. France endorsed the suggestion made by the representative of the United Kingdom. He presented the recommendation of the PRO 5 (see CONF.EX5/G/03) that the IHO subordinate bodies systematically evaluate the resources needed and available and prioritize their annual objectives to those available resources, that the Member States participating actively in the IHO Work Programme make an evaluation of their overall in-kind contribution and that the IHB consolidates and implements the results into a prioritized IHO Work Programme.

Dr OEI (Singapore), expressing support for the proposal, said that a costed estimate was essential for mobilizing financial or technical support from Member States or international

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organizations. By way of an example, he drew attention to the funding mechanism for a proposed survey of critical areas of the Straits of Malacca and Singapore by the three littoral States and Japan, the details of which would be finalized by the end of the year.

Regarding the recommendation of a resource-based approach to the development of the Work Programme, he said that the necessary definition of what was required to implement the Programme called for consideration not only of capacity within the Organization, but also of the potential for outsourcing some of the heavier tasks.

Commander LÓPEZ CRUZ (Mexico), expressing support for the Proposal presented by the representative of France, said that calculating costs and available resources was crucial to the prioritization of activities and the effective use of those resources. The active participation of Member States was also needed, through exchanging information with a view to improving the quality of hydrographic products and services. The proposal should also cover the gathering and publication of statistical data through surveys of the hydrographic capacity of States, which would help to improve strategies, activities and decision-making within the Organization.

Mr JIN (Republic of Korea) welcomed the proposal, which provided an opportunity to discuss the question of prioritization and would contribute to the efficient management and implementation of the IHO Work Programme.

Ms WEBBER (United States of America) expressed support for the underlying intention of Proposal 5, which was to achieve the goals of increasing transparency and ensuring the allocation of scarce resources to the Organization's agreed priorities. However, she queried the effectiveness and efficiency of the proposed approach to collecting the required information. Endorsing the written comments submitted by Denmark and the suggestion made by the representative of the United Kingdom, she said that it might be useful, for a clearer understanding of the link between priorities and resources within the IHO, to continue discussing the prioritization methodology during the remainder of the current programme and budget cycle.

Captain (N) VAN DER DONCK (Netherlands) agreed that a priority and resource-based approach was the right way forward, but cautioned against postponing, and therefore prolonging, the discussion. The approach outlined in Proposal 5 would clearly involve several steps, and it was important to consider and approve the first step at the current meeting. To that end, he endorsed the idea of requesting Member States to calculate their resource input in terms of working days, as suggested by the United Kingdom. That would provide some insight into the other steps, which could then be elaborated at subsequent meetings.

The PRESIDENT OF THE DIRECTING COMMITTEE said that the Committee would continue striving to fulfil the wishes of Member States. However, he urged the Conference to consider carefully the feasibility and implications of what was being suggested. It was already difficult for the Organization to obtain a response to requests for information from Member States, some of which would find it just as problematic to calculate the number of working days to be devoted to IHO business. The Committees would also face the additional problem of validating the information provided and taking it into account in developing a priority Work Programme.

Mr MONCRIEFF (United Kingdom) responding to the comment by the President of the Directing Committee, stressed the importance of determining whether the resources available would suffice to deliver a work programme, and to prioritize activities accordingly. The chairs of the relevant technical committees should assist the endeavour.

Regarding the options for increasing the Organization's income, he requested clarification of the impact of the proposed increase in share value on the Work Programme.



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The PRESIDENT OF THE DIRECTING COMMITTEE, responding to the request for clarification, said that the increase in the Organization's income was related to its delivery of the Work Programme insofar as the operation of the Secretariat already formed part of the Programme. The significant input provided to the technical and capacity-building programmes was directly reflected in the operating budget, and part of that budget was already allocated to contract support.

The PRESIDENT urged the Conference to reconsider the suggestion of estimating resource inputs for the Work Programme in terms of the number of working days, given the practical difficulties in determining exactly how many days would need to be devoted to specific tasks, and calculating the extra hours attributed to personal dedication and commitment.

Mr DEHLING (Germany) said that the emphasis in developing any five-year work programme must be placed on ensuring that the prioritization approach was simple and flexible enough to account for changing circumstances over such a lengthy period. Greater precision could only be achieved for annual programmes.

Mr AMAFO (Suriname) expressed support in principle for Proposal 5. He agreed that the approach to implementing the Work Programme must be simple and executable.

Ms WEBBER (United States of America) stressed that more extensive discussion was required to determine precisely the objectives of a procedure aimed at evaluating resources or requesting inputs from Member States before agreement could be reached on how to achieve them. The first step should be to consider the matter informally at the current meeting.

Vice Admiral MARATOS (Greece), endorsing the comment made by the representative of the United States of America, requested further clarification as to how the evaluations of Member States' contributions would serve to improve the development of the Work Programme, and exactly what improvements were required. As for the option of increasing the share value, he said that the current financial circumstances would make it difficult to secure an agreement.

IGA FRACHON (France), pointing out that the IHO currently lacked any means of evaluating in-kind contributions to its working groups, said that the members of his organization's staff assigned to the working groups preparing the next meeting of the HSSC had requested that their working hours be taken into account in its own work programme. That information could easily be provided to the IHB at no extra cost.

Mr MONCRIEFF (United Kingdom), fully agreed with the observation by the representative of France. The information provided would be useful not only for resource budgeting and prioritization but also for presenting a positive picture of the IHO Work Programme once it had been completed.

Dr ARDALAN (Islamic Republic of Iran) agreed that further discussion was needed during the Conference, that being the only way to overcome the problems and reach agreement on the recommendation in question.

The PRESIDENT, in the absence of any objection, took it that the Conference wished to suspend its consideration of the recommendations of the Directing Committee until the following morning.

It was so agreed.

**5<sup>th</sup> EXTRAORDINARY INTERNATIONAL HYDROGRAPHIC CONFERENCE**

**SUMMARY RECORD OF THE THIRD PLENARY SESSION**

7 October 2014  
0905 - 1235

**Rapporteur:** Commander Leonel MANTEIGAS (Portugal)

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**WORK PROGRAMME 1: REPORTS AND PROPOSALS (continued)**

**Report on the Technical Capacity of the International Hydrographic Bureau (Conf.EX5/REP.02) (continued)**

The PRESIDENT recalled the decision of the Conference to establish an ad hoc drafting group, under the chairmanship of the United States, to determine which resources were needed and were available, from the perspective of Member States and the IHB, based on the existing IHO Strategic Plan.

Turning to the recommendation to reduce the scope of the translation work required from the IHB, he said that might require a further amendment to Resolution 12/1962, which would have to be agreed by a qualified majority including at least one-third of the Member States.

Captain FERNANDEZ (Spain) was willing to agree to a further amendment to Resolution 12/1962 hoping it did not result in a reduction in the use of Spanish. Spanish-speaking countries accounted for almost 15% of the total membership of the Organization, accounting for 9 million tonnes of gross tonnage.

Captain VETERE (Argentina) agreed with the comment made by Spain. He reaffirmed his willingness to continue to cooperate in translation projects, such as the Hydrographic Dictionary which had been useful for the Spanish speaking countries and not only.

Commander LÓPEZ CRUZ (Mexico) also mentioned the combined tonnage of the Spanish-speaking countries, noting the vast marine areas covered by the nautical charts of those countries. Technical personnel needed in-depth knowledge of IHO Resolutions in order to draw up nautical charts. The Organization should encourage a spirit of cooperation among all Member States, so that translations of documents would remain widely available to hydrographers. In Resolution 12/1962, emphasis should be placed on encouraging Member States to participate in the translation of technical documents.

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Dr OEI (Singapore) expressed concern that encouraging countries to produce their own translations could undermine consistency in the understanding and interpretation of standards.

Captain KAMPFER (South Africa) endorsed the comments made by previous speakers. It was essential that technical publications continue to be translated. He would be glad to know what portion of the budget would be affected, and whether an amendment of the kind proposed would make a substantive difference.

Mr CARANDANG (Philippines) supported the proposed amendment, suggesting that in order to minimize any possible adverse impact, assistance should be sought from Spanish-speaking Member States, in accordance with Resolution 12/1962.

IGA FRACHON (France) said that the wording of the proposed amendment to Resolution 12/1962, as amended, would pave the way for languages other than the official languages to be used in the publication of reference documents and standards, while failing to ensure their availability in one of the official languages. That might encourage Member States to undertake translations without consultation, and become even more resource intensive than completing them in-house. The proposed amendment needed clarification to ensure that technical documents would always be published in at least one official language. The proposed amendment could adversely affect hydrographic capabilities in certain areas, for example in Africa, where capacity building is badly needed, and where the availability of documents in French had proved to be a valuable tool for developing hydrographic capabilities. Therefore, the measures being considered by the IHB should only be temporary and the situation should be re-assessed at the XIX<sup>th</sup> International Hydrographic Conference. He recommended including a review of the documents requiring translation in the IHB's Work Programme, taking into account their usefulness in terms of the Organization's strategic objectives, in particular, capacity building.

Captain SHALNOV (Russian Federation) emphasized the need to produce technical publications in the official languages and also in Spanish.

Mr HAINS (Canada) shared the concern of previous speakers that fewer documents would be translated into the official languages, thereby undermining consistency. Capacity building should be given priority and should not be hampered by the proposed savings.

Mr NG (China) said that Chinese was not an official language used in the IHO, however in China all technical documents issued by the IHO were translated into Chinese, using internal resources.

Mr HUMPHREY (United Kingdom), referring to the question of charging for technical standards documents, pointed out that some organizations, such as the International Standards Organization, now charged non-members and the industry for access to standards. In the absence of clear information on the amount of the budget involved, might it not be advisable to reconsider such a solution?

The PRESIDENT said he believed that a decision on the matter was still pending.

The PRESIDENT OF THE DIRECTING COMMITTEE said that there was no cost saving to be made from the proposed amendment. Appendix 2 to CONF.EX5/REP.02 showed the status of the translations of the various IHO documents as at 31 January 2014. The table indicated that a significant number of the documents had not been translated into French or Spanish because of insufficient resources. The proposed amendment to the Resolution merely acknowledged a situation which had existed for some time.

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The PRESIDENT summed up the discussion. There appeared to be general support for adopting or amending the proposed amendment to Resolution 12/1962, as amended. He would endeavor to reach consensus on a form of words. Noting the comments by the Spanish-speaking delegates, he said that although the proposed amendment represented primarily an acknowledgment of the lack of resources, it offered an opportunity for the countries concerned to help clear the backlog of untranslated official documents. He welcomed the contribution made by Argentina to the Hydrographic Dictionary.

The proposed amendment to IHO Resolution 12/1962, as amended, was deferred.

Dr HOSKEN (United Kingdom), referring to the recommendation to remove the requirement for the IHB to examine all newly printed or adopted international (INT) charts, asked for clarification regarding the fate of IHO Publication S-11, and, in particular, Part B, which was already out of date.

The PRESIDENT said that the withdrawal of Resolution 1/1992 would not affect Publication S-11, which would be maintained under the auspices of the HSSC.

Dr HOSKEN (United Kingdom) asked for further clarification of the precise mechanism to be used. As matters stood, the Resolution requested Member States to submit their INT Charts to the IHB for examination. He did not believe that requirement was being fully met; his own country was a case in point, having failed to present all its new editions and INT Charts for examination. If new charts and new editions of INT charts were not being regularly reviewed, how could IHO publication S-11 be maintained efficiently?

IGA FRACHON (France) also requested clarification on the matter. The small number of INT Charts that had been reviewed by the IHO in recent years suggested that the resulting savings would be very small. The relevant IHO Resolutions therefore appeared to warrant adaptation, but any revision of INT Charts should be clearly described. It was essential to maintain a system that guaranteed a level of quality assurance for INT Charts. One suggestion was to have the review function carried out by the regional hydrographic commissions and their subsidiary bodies, with the possibility of referring exceptional cases to the IHO. He further suggested that Resolution 1/1992 should be withdrawn, and a new Resolution introduced along the following lines: that it had been decided that each regional hydrographic commission and the IHO Hydrographic Commission on Antarctica would examine all recently printed INT Charts, or those that had recently been adopted, and would provide comments to the Member States concerned. Any problems of compliance with IHO specifications in the INT Charts would be noted, in order to ensure the highest level of compliance. Such a review would be organized by the regional chart coordinator once that role had been defined. Commissions that did not have such a coordinator would draw up their own review procedures. The IHO might wish to consider such wording in drafting a resolution to replace Resolution 1/1992.

The PRESIDENT said that Publication S-11 was maintained by a dedicated working group under the auspices of the HSSC. The review of charts produced on the basis of that standard represented the mechanism that was intended, at least in theory, to maintain compliance with the applicable standards. However, such a systematic review was no longer being carried out by the IHB, which lacked both the necessary expertise and technical capacity. The suggestion to withdraw Resolution 1/1992 merely reflected reality. He therefore welcomed the suggestion put forward by the delegate of France to re-introduce quality assurance via the incorporation of the RHCs. A system of INT Chart coordination already existed within several RHCs, and could be brought together under the auspices of the Inter Regional Coordination Committee (IRCC). It might be unreasonable to expect a new Resolution to be adopted during the Conference; however, the ideas put forward could be incorporated in a decision for further consideration by the IRCC and then circulated and

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voted through a Circular Letter. He proposed, as a compromise, that Resolution 1/1992 should be retained pending completion of the negotiations on replacing it.

Captain KAMPFER (South Africa) agreed that the matter should be discussed by the IRCC. He confirmed that some RHCs already had INT Chart coordinating working groups, operating under the auspices of the IRCC. If the new Resolution were to be adopted, it would be a matter of adapting the terms of reference of those working groups. He would welcome a discussion on the subject at the IRCC.

Dr OEI (Singapore) questioned whether the issue of technical expertise in the IHB warranted such attention. In future, its role would not be to produce bathymetric soundings, but to manage the products derived from them. That question needed to be addressed, possibly under another agenda item.

The PRESIDENT welcomed those remarks, but said it would still be appropriate to retain the existing Resolution until a replacement had been drafted and voted upon by circular letter.

The PRESIDENT OF THE DIRECTING COMMITTEE spoke on the recommendations for adjusting the skills of IHB staff, the merits of attrition over redundancy, and giving priority to the recruitment of the S-100 Registry Manager. The comments in the Red Book expressed the views of Member States on whether the post of Registry Manager could be accommodated in house or should be filled through other mechanisms. For the Directing Committee, full accountability through the Secretariat was seen as the most appropriate way. However, resources had to be found. If Member States deemed a registry manager to be a priority and considered that the person concerned should be answerable to them through the Secretariat, an anticipated retirement among locally recruited staff within the next two years should make it possible to re-allocate duties among existing staff and free up a post that could become the post of registry manager. It might also be possible for the registry manager, to work remotely. Alternatively, if a Flag State with a large tonnage were to join the Organization, that would provide funding for a new staff member. Both solutions for the question of the registry manager were under consideration, as well as the questions of technical support and a help desk for S-100 and other IHO digital standards.

IGA FRACHON (France) expressed support for the first recommendation. With regard to the second, he recognized the strategic nature of S-100 and the difficulties involved for IHO and the Member States in the transition. The extra workload caused by the maintenance of the registry base, as well as any associated functions, must be recognized before recruitment began.

Dr HOSKEN (United Kingdom) endorsed the proposal to increase the technical capacity of the Organization with regard to Electronic Navigation Charts and the S-100 Geospatial Information Registry. In terms of improving staff skills, natural attrition alone was not sufficient. Reskilling should be an option before redundancy. What would be the role of staff members who did not have sufficient skills to take on additional duties? If they were seen as less productive than others, that might impact on team morale. Where such staff members were due to retire shortly, it might be preferable to make a redundancy payment rather than paying extra years of salary.

Rear Admiral SRINIVASAN (Saudi Arabia), welcoming the comments about skills improvement, said the issue raised by the representative of France was an important strategic point, and should be given increased priority.

The PRESIDENT, summarizing the discussion, suggested that the IHB should be given responsibility for implementing the recommendations contained in document CONF.EX5/REP.02, while taking into account the views and concerns expressed during the present meeting. Performance management and training should be sufficient to enable staff

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to adapt to changing roles. As for redundancy, many of the staff members in question were on time-limited contracts already.

Mr MONCRIEFF (United Kingdom) acknowledged the difficulty of resolving the problem. He emphasized the need to recruit an S-100 Registry Manager as a matter of priority. Moreover, with regard to technical skills, more information was needed about the long-term perspective of the IHB on the skills set needed. The decision on the recommendation in paragraph 51 (g) should be taken at a subsequent Conference, to enable the Secretariat to develop a Target Operating Model for the size, structure and skill-set of the Bureau.

The PRESIDENT suggested that the IHB should be tasked with developing an operating model adapted to the requirements of the IHO Five-Year Work Programme 2013-2017.

Mr PRINCE (Australia) expressed concern that such a model would take some time to develop and finalize. Meanwhile, there was a pressing need for an S-100 Registry Manager, and that should take precedence. For the time being it would be preferable and more feasible to redistribute duties among current staff members, to enable such a post to be created and filled.

Rear Admiral GLANG (United States of America) acknowledged the importance of filling the role of S-100 Registry Manager as soon as possible. Consideration should be given to the Secretariat's proposal that a current staff member could fill it. However, if that option were pursued, the relationship between the S-100 Registry Manager and the relevant working group of the Hydrographic Services and Standards Committee (HSSC) and the roles and responsibilities of the Registry Manager must be clearly delineated. That could be done by the HSSC itself.

The PRESIDENT suggested that the Directing Committee could also be requested to develop a target operating model focusing on the essential operations of the IHB.

The PRESIDENT OF THE DIRECTING COMMITTEE said that at the next Conference or Assembly, Member States would be invited to consider the strategic plan, and the issue of a target operating model could be addressed as part of those deliberations. That would enable all of the relevant bodies to provide their input on the matter.

The PRESIDENT suggested framing a recommendation on developing a target operating model, to be discussed in the context of deliberations on the strategic plan at the next IHO Conference. The recommendation in paragraph 51(g) should be amended to read as follows: "The skills of the IHB staff should be adjusted through reskilling before redundancy is considered; and ...". Did the Conference approve that amendment?

It was so agreed.

Returning to the issue of IHO Technical Capacity to translate documents, the PRESIDENT explained that the Secretariat had produced a revised amendment to Resolution 12/1962 as amended, based on comments received from the floor, particularly those made by the representative of France. The proposal read as follows:

"... The language(s) of the other IHO reference documents, guidelines and standards shall be at least one of the official languages decided on a case by case basis in the IHO Work Programme, taking into account the strategic priorities of the IHO, the intended use of the document, the resources of the Bureau and the assistance offered by Member States."

He took it that the Conference agreed to that proposal.

It was so decided.

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### Proposals from Member States (CONF.EX5/G/03) (Agenda item 3 (d)) (continued)

#### PRO 1 – REVISION OF THE CONDITIONS FOR THE AWARD OF THE PRINCE ALBERT 1ST MEDAL FOR HYDROGRAPHY

Ms ROUDAUT-LAFON (Monaco) explained that the aim of the proposal was to ensure that the award of the Prince Albert 1<sup>st</sup> Medal recognized and highlighted long-lasting and significant contributions by individuals to the achievement of the goals and aims of the IHO.

The proposal included a revised nomination and selection process.

The PRESIDENT recognizes the importance of the award and proposes to simply accept the proposal and congratulate the Principality. The IHB will make the corresponding amendment.

Rear Admiral SRINIVASAN (Saudi Arabia), welcoming the proposal, suggested that the selection criteria should be developed by the IHB.

Dr LEDER (Croatia) supported the proposal and commented that it should be permissible to nominate former IHB members, since there would be no conflict of interest, as could be the case with awarding the Medal to current IHB members.

The PRESIDENT took it that the Conference wished to approve the original proposal.

It was so decided.

#### PRO 2 – SEEKING A NEW WAY FORWARD FOR THE S-23 ISSUE

Rear Admiral REE (Democratic People's Republic of Korea) noted that the credibility of the IHO had been enhanced by the rapid development of the maritime science industry. The S-23 issue was a technical one, albeit one affected by policy. It was a sensitive and complex subject, as all Member States had equal rights and responsibilities. Although over 50 Member States supported the establishment of the S-23 Working Group, no progress had been made, and that could detract from the credibility of the Organization. He proposed three alternative solutions: the re-establishment of the S-23 Working Group, which would work on a case by case basis; the establishment of a permanent Sub-Committee on S-23; or the inclusion of the S-23 issue in the terms of reference of one of the existing subsidiary bodies. Given the contentious nature of the issue, a decision could be postponed until the XIX<sup>th</sup> International Hydrographic Conference. All parties should be encouraged to seek an accommodation between differing views, in order to resolve the issues preventing the publication of an updated report.

Vice Admiral PONTES LIMA (Brazil) said that the S-23 issue was more political than technical in nature. As such, it should be discussed in other relevant international forums rather than under the auspices of the IHO, which is a technical and consultative body.

Mr KASUGA (Japan) said that Japan believes that S-23 is a valuable document for IHO to achieve one of IHO's objectives "The greatest possible uniformity in nautical charts and documents". Therefore, it is desirable that S-23 be updated. However, it is premature to reopen discussions on the S-23 issue at this conference for the following reasons: firstly, the 18<sup>th</sup> IHC held in 2012 agreed not to take any further decision on the revision of S-23. In addition S-23 is not included in the IHO Five-Year Work Programme 2013-2017 approved at the 18<sup>th</sup> IHC. Secondly, a lot of resources will be needed to discuss S-23, while there are a lot of other important issues which need to be discussed. As for the S-23 WG, the present situation is not different from the time that we had the previous S-23 WG. For these reasons, Japan does not support the proposal to discuss this issue at this conference.

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Ms HONG (Republic of Korea) said the subject should be discussed at the next International Hydrographic Conference. Given the lack of success in the deliberations of the S-23 Working Group, consideration should be given to developing a different, more appropriate mechanism for discussing the S-23 issue. Her country intended to share its ideas on that concept at a later date. However, the Republic of Korea considered the S-23 report to be a technical rather than a political matter, since it formed part of standardization efforts.

Mr MIZUKOSHI (Japan) said the issue remained unresolved in spite of the lengthy debate at the last meeting of the S-23 Working Group. There had been no new developments since then, and it was not appropriate to discuss the establishment of another Working Group, either now or in the next five-year work programme.

Ms HONG (Republic of Korea) said that the decision taken by the XVIII<sup>th</sup> International Hydrographic Conference not to consider the matter any further applied solely to that Conference. In any case, S-23 was a standard-setting document, which meant that it could be discussed within the scope of the present five-year work programme.

Mr MIZUKOSHI (Japan) stated that there was no reason that we should make a decision in this conference on the establishment of a new working group on S-23.

Ms HONG (Republic of Korea) Korea was not necessarily proposing the establishment of a working group, but it was necessary to find an appropriate mechanism to address the issue.

Rear Admiral REE (Democratic People's Republic of Korea) said that, as the issue was still at the consultative stage, a constructive attitude was needed in order to resolve the matter.

The PRESIDENT took it that the Conference agreed not to adopt the S-23 issue in the current five-year work programme and the Conference agreed not to allocate further time to discuss the S-23 issue in this conference and to postpone discussion of the issue until its next regular Conference in 2017, on the understanding that the issue could be discussed at the next regular Conference if a proposal on the issue is made by the Member States.

It was so decided.



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### **PRO 3 - AMEND GENERAL REGULATIONS OF THE IHO (NOT YET IN FORCE), ARTICLE 16 (b), TO CLARIFY THE COUNCIL SELECTION PROCESS**

The PRESIDENT invited the representative of the United States of America, which had submitted the proposal, to introduce it. An explanatory presentation would then be given by the IHB.

Rear Admiral GLANG (United States of America) suggested that the presentation should be given first, to facilitate understanding of the issues involved.

Mr BESSERO (Director, IHB) gave a presentation explaining the practical implications of the proposal. The new General Regulations of the International Hydrographic Organization (IHO), which were not yet in force, provided for the allocation of Council seats to regional hydrographic commissions (RHCs). In accordance with Article VI of the amended IHO Convention, the Council would have 30 seats as long as the Organization had 120 Member States or fewer; thereafter, it would have a number of seats equal to one quarter of the number of Member States.

Under Article 16 of the General Regulations, two-thirds of the total number of Council seats were to be allocated to Member States selected by RHCs. Each RHC was entitled to at least one seat. Seats were to be allocated according to the principle of proportional representation, and every Member State would be counted as a full Member of only one RHC. Once seats had been allocated to the 15 recognized RHCs, five seats would remain for allocation on a proportional basis.

Of the 79 Member States that currently enjoyed voting rights, 20 were full members of more than one RHC. Given the distribution of RHC membership, only RHCs with at least five “core” members – that is, members belonging to no other RHC – were likely to receive an additional Council seat. Three RHCs had no “core” members. Exactly which RHCs received an extra seat would depend not only on the criteria selected for proportional representation, but also on the decisions of individual Member States. Although a Member State’s decision to apply for selection by one RHC rather than another would have a limited overall impact on the allocation of seats, it would disproportionately affect smaller RHCs with few or no “core” members.

For the initial allocation of Council seats, either the General Regulations could be applied as they stood, so as to assess how well they functioned, or guidance could be developed in advance to facilitate the process. In particular, consideration should be given to avoiding the possibility of there being no candidates for a seat. Possible elements for such guidance might include: confirmation that all Member States belonging to more than one RHC were expected to declare in which RHC they wished to be counted as a full member for the purposes of Article 16 (b) (v) of the General Regulations; setting an order of priority for such declarations, in order to ensure that all RHCs had at least one declared member; and establishing a procedure to be followed in the event that a Member State failed to make such a declaration.

The PRESIDENT invited the representative of the United States of America to comment.

Rear Admiral GLANG (United States of America) expressed appreciation of Mr Bessero’s informative presentation. The detailed analysis provided, and the suggested guidance, offered reassurance that the composition of the Council would take the principle of regional representation into account as far as possible, as originally intended. He therefore suggested that the General Regulations should initially be applied as they stood, with additional guidance to be developed as necessary. He withdrew the proposal to amend Article 16 (b) of the General Regulations.

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Mr HOOTON (United Kingdom) said failure by a Member State to declare full membership of a particular RHC should result in its not being counted as a full member of any RHC. What was established in Article 16 (b) was an entitlement, not an obligation, for each RHC to be allocated a seat.

Mr BESSERO (Director, IHB) pointed out that Article 16 (b) (v) required the Secretary-General to ensure that every Member State is counted as a full Member of one RHC, but not more than one.

Mr HOOTON (United Kingdom) said the issue presented a serious problem, and his delegation would reconsider its position.

The PRESIDENT OF THE DIRECTING COMMITTEE said he expected the Protocol of Amendments to the Convention to achieve the requisite number of approvals for its entry into force before the end of his current term. Under the Regulations, it would then be his responsibility, as Secretary-General, to declare which seats were available for RHCs to fill. Whether Member States wished to fill them was a separate matter. If a Member State belonging to more than one RHC failed to make a declaration, the Secretary-General might, for example, determine in which RHC it would be counted as a full member, according to the RHC it had first joined.

The PRESIDENT said that clarification would certainly be required before the first session of the Assembly provided for in the General Regulations. Did the Conference agree in principle to the elements suggested for inclusion in guidance on the allocation of Council seats?

Mr DEHLING (Germany), welcoming the clarification already provided, said the IHB seemed to be in a good position to pursue a regional approach, even if some details required further attention. He endorsed the suggestion that a Member State belonging to multiple RHCs should count as a full member of the one it had joined first, in the absence of a declaration to the contrary.

The PRESIDENT invited suggestions on how best to complete and formalize guidance on the allocation of Council seats.

Mr HOOTON (United Kingdom) requested more time to reflect on the implications of the various possible approaches. He suggested that the Conference should further consider the preparation of guidance at a later point.

The PRESIDENT asked whether the Conference preferred to approve the elements of guidance suggested in the presentation by Director Bessero, or to adopt the suggestion by the representative of the United Kingdom.

H.E. AL SHAHRANI (Saudi Arabia) and Captain TRAVIN (Russian Federation) said that they would prefer the second option, because they wanted more time to consider the matter.

Mr DEHLING (Germany) and Vice Admiral PONTES LIMA (Brazil) said they favoured the former approach.

As a compromise, the PRESIDENT proposed the preparation of a working paper on the subject, for consideration during the Conference.

It was so agreed.

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### 5<sup>th</sup> EXTRAORDINARY INTERNATIONAL HYDROGRAPHIC CONFERENCE

#### SUMMARY RECORD OF THE FOURTH PLENARY SESSION

8 October 2014  
1400-1730

**Rapporteur:** Mr Nigel SUTTON

#### CONTENTS:

Work Programme 1: Reports and Proposals (Agenda Item 3)

- Report and recommendations from the Staff Regulations Working Group (SRWG) regarding its review of the IHB Staff Regulations (CONF.EX5/REP.01 and Add.1)
- Proposal on the re-establishment of the Staff Regulations Working Group (SRWG) (CONF.EX5/REP.01/PROSRWG)

Work Programme 2: Reports and Proposals (Agenda Item 4)

- Briefing by the Vice-Chair of HSSC on progress, issues and plans related to Work Programme 2

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#### **Screening of a promotional film on the role and functions of the IHO**

Before resuming its work on the Agenda, the Conference was shown the English-language version of a short promotional film, produced by the Italian Hydrographic Office to raise public awareness of the role and functions of the IHO.

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#### **WORK PROGRAMME 1: REPORTS AND PROPOSALS (Agenda Item 3 (b)) (contd)**

#### **REPORT AND RECOMMENDATIONS FROM THE STAFF REGULATIONS WORKING GROUP (SRWG) REGARDING ITS REVIEW OF THE IHB STAFF REGULATIONS (CONF.EX5/REP.01 and Add.1, and CONF.EX5/REP.01/PROSRWG) (contd)**

The PRESIDENT drew attention to a proposal on the re-establishment of the Staff Regulations Working Group (SRWG), outlining the proposed terms of reference, timeline, chair and membership of the SRWG (CONF.EX5/REP.01/PROSRWG).

Ms WEBBER (United States of America) expressed her appreciation of the proposal, which reflected the points raised in the discussion during the first plenary session. She requested further clarification of the persons to whom the Bureau and Directing Committee would assign the tasks specified in paragraphs 3 and 4 of the terms of reference of the SRWG.

Mr AMAFO (Suriname) asked whether any of the IHB staff had the relevant competence in human resources management, or whether the SRWG would need to seek the assistance of an external consultant.

Mr HARTMANN (Denmark) suggested that paragraph 4 of the terms of reference should mention, as examples of comparator organizations, the International Maritime Organization (IMO) or the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA).

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Rear Admiral CARRASCO (Chile) endorsed the comments by the representative of the United States of America. As for the membership of the SRWG, the representatives nominated by Member States should possess not only relevant personnel administration experience, but also a working knowledge of the financial rules and regulations applied in the United Nations system and in the Monaco Civil Service.

Mr SOBOLEV (Russian Federation) asked whether Member States could only select representatives from the staff of their hydrographic offices.

Mr MILLARD (United Kingdom), responding as Chair of the Staff Regulations Working Group to the comments made on paragraphs 3 and 4 of the Group's proposed terms of reference, said the analysis and the comparisons in question would be undertaken by the Directing Committee. His role would be to act as an auditor, verifying the accuracy of the results. Concerning membership of the Group, it was unlikely that Member States would be able to nominate people possessing a working knowledge of both the rules and regulations within the United Nations system, and of those in the Monaco Civil Service. However, the necessary information was available on the websites of the two organizations, and further assistance could, if necessary, be obtained from one of the Group's regular consultants, or from IMO and IALA.

The PRESIDENT endorsed those remarks, and suggested that the mandate of the Chair of the SRWG should be extended to authorize him to seek any necessary assistance from an external consultant. As for the suggestion by the representative of Denmark, there was no need, in paragraph 4 of the terms of reference, for a reference to the IMO, which was a specialized agency of the United Nations and already subject to its rules and regulations. Nor should IALA be mentioned, because it was not an intergovernmental body on a par with the IHO.

In the absence of any further comments, he took it that the Conference wished to note the report and the revised terms of reference of the SRWG.

It was so agreed.

## **WORK PROGRAMME 2: REPORTS AND PROPOSALS (Agenda item 4(a))**

### **BRIEFING BY THE VICE-CHAIR OF HSSC ON PROGRESS, ISSUES AND PLANS RELATED TO WORK PROGRAMME 2**

The PRESIDENT invited the Vice-Chair of the Hydrographic Standards and Services Committee (HSSC) to present an interim progress report.

Mr PRINCE (Vice-Chair, HSSC) described the objectives of the HSSC and drew attention to the role of its technical working groups, each of which focused on both the maintenance and development of standards. Coordination between the groups had become essential, as almost all of the new services needed to meet e-Navigation and ECDIS requirements resulting from the integration of systems and information. The groups could no longer work in isolation, and a major restructuring plan had been prepared. Another key requirement was the active contribution of industry, particularly in relation to S-100, which would be critical to the future success of the IHO.

Standards had been reviewed, updated and restructured, taking into account the comments from mariners on inconsistencies between ENC's and concerns over ECDIS functional performance. HSSC had published new editions of, among others, S-58, "*ENC Validation Checks*", S-57, "*Use of Object Catalogue*", the S-52 display standard and S-64, "*IHO Test Data Sets for ECDIS*". Both of the latter were required to support a new edition of IEC 61174, due to be released in 2015. On the status of Maritime Safety Information (MSI)

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services, he said that while 41 of the 53 ENC-producing Member States provided the full range of notice services for paper charts, only 30 provided the same services for ENCs, and another five had indicated that they would be doing so by 2015. The other 18 were strongly urged to reconsider their position, as the ECDIS and ENCs were the most effective means of relaying information to mariners, and those services were integral to the IMO e-Navigation strategy.

Concerning the development and implementation of S-100, "*Universal Hydrographic Data Model*", a master plan in response to frequently asked questions about updating portrayal catalogues, software maintenance and other related matters had been published on the IHO website, together with a list of newly identified and initiated product specifications. A new edition of S-100, which would further support wider use of the standard, was due to be submitted to HSSC in November 2014. Meanwhile, good progress was being made on the feature catalogue and encoding guide for S-101, "*ENC Product Specification*", and the portrayal catalogue was due for completion in 2015. An annually updated roadmap for monitoring further progress was also available on the website. Furthermore, in order to address the inevitable question of legacy systems, the HSSC was considering options such as the derivation of S-57 ENC from S-101 ENC, and two converters were being developed to assist ENC producers in the initial transition. A key area of work at present was the integration of dynamic tides into the suite of S-100 product specifications. That however was a highly complex task, and industry support would be crucial in overcoming the significant challenges, such as the widely differing methods of tidal predictions used around the world, the differing quality and density of data from which predictions were generated, and the methods for applying those predictions to an underlying bathymetric dataset. Lastly, the implementation of S-100 and its derivatives would require the establishment and management of a geospatial information registry, whose structure and controls were detailed in the latest edition of S-99, "*The Procedures for the organization and management of the S-100 Geospatial Information Registry*".

In respect of coordination, concerns had been raised in 2012, at HSSC4, that the structure of HSSC working groups was no longer the most appropriate format for future activities. Some essential connections between working groups were maintained by only one or two individuals, and the shift from paper to electronic formats called for greater integration of technical capabilities, rather than the services of individuals with discrete areas of subject knowledge. It was also clear that the next generation of ENCs and related products could not be developed in isolation by a single working group, and that working groups must focus on activities affecting future navigational services, and avoid being side-tracked by issues of limited impact. Options for the restructuring of HSSC working groups had therefore been developed, and had been proposed at HSSC5 in 2013. Acknowledging the changing focus from paper-based to digital products and services, the proposals sought to make the best use of limited resources, and included a possible reduction in the number of standing working groups, with a switch to project teams with a limited mandate. After considerable debate, a correspondence group had been established to develop the proposals further and report back to HSSC6 in November 2014.

In response to a 2012 study of mariners' knowledge and understanding of data quality indicators, which had yielded somewhat disappointing results, a specific section within INT1 "*Chart Symbols and Abbreviations*" had been established to bring together all cartographic quality indicators, and efforts were now under way to develop more intuitive indicators for ENC data quality. The need for coordination was highlighted by the fact that those efforts would involve four separate working groups. The importance of integrating dynamic water levels into ECDIS was another factor.

Progress had been made in maintaining the Hydrographic Dictionary, but the task remained challenging and required contributions from multilingual experts. Clear and consistent definitions of terms were critical to the successful integration of different types of information in S-100 based systems and services. It should therefore be noted that any new definitions

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circulated would have been developed in consultation with experts in the relevant subject areas. The aim was to achieve definitions that would meet future requirements, and might therefore differ from some localised or older variations. Member States were requested to support that activity, and avoid unnecessary debate about insignificant differences of meaning. He drew attention to the new edition of the TALOS Manual (C-51) issued by IHO in June 2014.

HSSC was the natural IHO focal point for the IMO/IHO Harmonization Group on Data Modelling, which would be activated as part of the e-navigation Strategy Implementation Plan currently being finalized by IMO. There was a clear need for IHO to be involved in several of the tasks identified for the proposed IMO Maritime Service Portfolios.

The comprehensive IHO Work Programme for the period 2013–2017 laid out a direction and priorities for all IHO's technical activities. Although good progress had been made since 2012, the workload was challenging for the relatively small pool of technical experts available. He therefore invited the Conference: to note the interim report; to support the ongoing process of restructuring and the future activities of the HSSC working groups through active participation and other in-kind contributions; and to acknowledge the increasing and important expert contribution being made by industry, especially in the development of S-100 and its related applications, and in the maintenance of many other IHO technical standards.

Dr ARDALAN (Islamic Republic of Iran) suggested that in future it might not be necessary to include on electronic charts detailed information about dynamic tide and surface level data, because bathymetric data with respect to a reference ellipsoid plus positioning data, provided through coordinates within a global positioning framework, should be sufficient to indicate under-keel clearance.

Dr HOSKEN (United Kingdom) said that in the light of comments about the small pool of technical experts available, and the view that the adoption of S-100 was crucial for the future credibility of IHO, the Organization was probably at a turning point in relation to what it would be able to deliver on e-navigation and other initiatives. He requested feedback on the responses to Circular Letter 39/14 concerning the restructuring and contributions to HSSC Working Groups and Proposal 5, including the prioritization of tasks.

In reply, Mr PRINCE (Acting HSSC Chairman) said that changes to HSSC Working Groups were constantly under review, and it would be better to await the outcome of HSSC6 before commenting further on the terms of reference and structure of the Working Groups, and the prioritization of their Work Programmes.

Mr BESSERO (HSSC Secretary), endorsing remarks made earlier about the low level of responses to Circular Letters, added that a report on the responses was available on the HSSC6 webpage. He agreed that it was preferable to await the outcome of HSSC6 before reporting back further to Member States.

The PRESIDENT welcomed the suggestion by the representative of the Islamic Republic of Iran. However, that level of detail could be more appropriately discussed within the HSSC. Recalling the intense debate in respect of Work Programme 1, he urged Member States to bring greater dedication and passion, to their participation in HSSC deliberations, which were so crucial for the technical progress of IHO and the modernization of hydrography worldwide.

In reply to Rear Admiral SRINIVASAN (Saudi Arabia), Mr PRINCE (Acting HSSC Chairman) said that there was currently no plan for HSSC to develop guidelines for auditors competent to assess charting schemes, ahead of the entry into force of the IMO mandatory audit scheme in 2016. An addition could be made in due course to the HSSC Work Programme.

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The PRESIDENT reiterated his appeal to Member States to increase their support for HSSC Working Groups and for the proposed restructuring process.

The Conference noted the interim report of HSCC.

### Proposals from Member States (CONF.EX5/G/03) (Agenda item 4(b))

#### PRO 4 – FOR A TRUSTED CROWD-SOURCING POLICY AND ITS COOK-BOOK

IGA FRACHON (France), introducing Proposal 4 (PRO 4) submitted by France and the United States of America, recalled the decision made in 2012 to improve the collection of bathymetric data, for which there was increasing demand. However, that was an immense task, complicated by the varying capacities of the different providers and end users to evaluate data quality in electronic charts. Technology had completely changed the hydrography landscape. Although sophisticated equipment was still expensive, high-performance tools such as GPS had become readily available to a wide range of end users. The current dilemma for hydrographers was whether to use data whose quality had not been adequately assessed, or to ignore it, in spite of the possible threat to marine safety in doing so. As the President of the IHB had said at the previous meeting, the hydrographic community must examine the consequences, including potential liabilities for hydrographic offices (HOs) that failed to take into account external data indicating a hitherto unknown danger; and the implications of crowd-sourcing products designed for mariners without the involvement of HOs. He invited the Conference to consider and approve PRO 4, offering a possible solution to those difficulties.

Dr OEI (Singapore) expressed full support for the proposal, and drew attention to the importance of preparing a “cook-book”. He recalled his country’s experience following the events of December 2004, which had resulted in a catastrophic tsunami. It had taken some three months to ascertain why reports had been received at the time signalling dramatic changes in shoal depths in the North Malacca strait. Apparently, those reports resulted from the echo-sounder model being used, which was registering a second return from the seabed. The “cook-book” should therefore include guidelines on specific equipment and global positioning requirements, especially for use in areas where under-keel clearance was important.

Dr LEDER (Croatia) said that Croatia recognized the importance of reliable hydrographic data and information for the safety of navigation, and had passed legislation to regulate its hydrographic activity in 1998, before the entry into force of the SOLAS Chapter V Regulation 9 provisions concerning Member States’ obligations to collect hydrographic data. The regulatory framework had enabled his country to meet its obligations in charting its area of responsibility with paper and ENC charts. However, many of the charts available were based on a less-than-desirable level of detail and accuracy, because of limited capacity (especially financial capacity) for carrying out modern hydrographic surveys. Croatia would therefore welcome any initiative leading to the collection and availability of high quality data and information. It was aware that new technologies were opening up methods of data acquisition different from conventional methods conducted under the responsibility of hydrographic offices. It also recognized the risks associated with such methods of acquiring and using data and information, especially with regard to the quality of the data, and the liabilities arising from their use in official publications issued by national hydrographic offices.

In spite of those risks, Croatia supported the crowd-sourced bathymetry (CSB) concept and PRO 4. It also supported the proposal from the United Kingdom that HSSC should be involved in reviewing the draft policy document and preparing for a new IHO publication. He emphasized, however, that formal responsibility for data accuracy always rested with national hydrographic offices. The final decision on the possible use of CSB data in official

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navigational publications, or for other purposes, must therefore also rest with national hydrographic offices.

Mr LINDGREN (Sweden) supported PRO 4 and the proposal that HSSC should be involved in the process.

Rear Admiral SRINIVASAN (Saudi Arabia) supported PRO 4. He also supported the proposal by the representative of Singapore, since he too had had the experience of receiving equivocal data reports as a result of equipment problems and low voltage on ships. HOs must take into account the legal liabilities incurred by incorporating inadequately assessed data into their electronic charts.

Mr COOPER (Pan American Institute of Geography and History) expressed his support for PRO 4. It was crucial for IHO to be involved in developing policies and procedures for trusted crowd-sourced data, in order to ensure that the materials, which were bound to enhance survey capacities, benefited from IHO technical expertise. The sovereignty of Member States must be respected and taken into account in that process. Industry partners should be involved in the development of the “cook-book”.

Captain Dr EL ASSAL (Egypt) supported PRO 4. Almost 25% of the data incorporated in Egyptian charts were crowd-sourced, but they had been subjected to certain validation and quality control procedures. The Egyptian HO also offered technical advice to the providers as required.

Captain LOWELL (United States of America) said that the United States, as a co-sponsor of PRO 4, recognized that HOs needed to examine all possible information in order to improve their data, products and services. But their role was changing, with a growing focus on data management and the production of a suite of products and data services for an expanding consumer base. It was therefore essential to determine how best to incorporate, manage and use bathymetric data acquired by other than conventional means. There was also a need to develop appropriate principles and guidelines to make it clear that not all crowd-sourced bathymetry would meet IHO standards, and that it was not a substitute for systematic controlled measurements by qualified hydrographic surveyors. Any decision to use or refrain from using such data must of course remain with national HOs, but an agreed policy would facilitate understanding of best practice in their use. PRO 4 requested the GEBCO Guiding Committee to prepare a draft policy in that area and, given past experience, he had every confidence in its ability to undertake that task.

The PRESIDENT invited the GEBCO Guiding Committee Chairman to respond.

Dr TANI (Chair, GEBCO Guiding Committee) said that he would prefer to hear all the contributions from Member States first.

Mr HAINS (Canada) expressed support for PRO 4. Canada had identified the potential of crowd-sourced data in its Vision 2020 programme. His country faced a severe challenge in surveying and charting its Arctic waters. As explained at the previous meeting, Canada had just issued a report showing that many high-risk areas in those waters were inadequately covered, and that the capacity for the necessary work necessary was limited. Crowd-sourced bathymetry would be a useful addition. However, a trusted crowd-sourcing policy and “cook-book” were clearly needed. He supported the suggestion that HSSC should be involved in the implementation of PRO 4.

Mr SOBOLEV (Russian Federation) supported PRO 4. Many Russian ships were gathering data based on GIC, which meant that the data could also be used for purposes other than navigation. The concern was how best to validate the quality of the data. For that reason,



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Russia incorporated in its database only data that met IHO standards. PRO 4 should include a request to develop recommendations for an appropriate validation process.

Commander HANSEN (Denmark) supported PRO 4 in principle, but shared the concerns expressed by the previous speaker. He would follow future developments with interest.

Dr TANI (Chair, GEBCO Guiding Committee), welcoming the proposal, said that the GEBCO Guiding Committee comprised members with the necessary expertise for the proposed task. His reservation was, however, that under its current rules and procedures and terms of reference, GEBCO was not presently in a position to undertake the task. Accordingly, he urged Member States to communicate with their national IOC Committee or other appropriate body, with a view to expediting the IOC's pending decision on the proposed revision of the rules and procedures and terms of reference.

The PRESIDENT OF THE DIRECTING COMMITTEE said that active IOC support was proving difficult to obtain, and would probably remain on the agenda for the foreseeable future. In view of the overwhelming support expressed for the proposal, and in the light of GEBCO's reservation, he suggested as a short-term measure that IRCC should establish a working group, comprising GEBCO and IRCC members, which could convene on the sidelines of the respective meetings of those two bodies, if they were being held concurrently and in the same venue.

Dr TANI (Chair, GEBCO Guiding Committee) welcomed that suggestion. However, it would be more appropriate for GEBCO, given its area of activity, to work under HSSC and for SCRUM/TSCOM to create a workforce for such a standard-setting task.

The PRESIDENT OF THE DIRECTING COMMITTEE said it was a good suggestion, but the main lines of responsibility might become too blurred if it were acted upon. Crowd-sourced bathymetry could be placed in the same global context as Marine Spatial Data Infrastructure (MSDI), an area soon to be transferred from the HSSC remit to that of IRCC. Insofar as GEBCO was already familiar with the broader principles involved in collecting crowd-sourced data, and TSCOM had the necessary expertise, he continued to favour his earlier suggestion to set up a working group on the question. Another advantage of such a working group was the easier opportunity it would provide for representation of Member States and also of expert contributors, to whom GEBCO committees had no ready access.

Dr TANI (Chair, GEBCO Guiding Committee) concluded that the suggestion was acceptable, provided IHB assumed responsibility for any HSSC input. One of GEBCO's important strengths was its access to both IHO and IOC experts, and TSCOM, for its part, also comprised IOC members. The IOC decision-making process was protracted, however, and he was concerned to ensure that IHO was not left to cope alone with the proposed task, bearing in mind the constraints it was under.

He added that, according to IOC scientists who had carefully examined the relevant information available in the GEBCO database, crowd-sourced bathymetry contained few statistical errors and was therefore potentially usable.

The PRESIDENT, summing up the discussion, noted the overwhelming support for the proposal, but also the broad consensus in favour of establishing an IRCC working group to draft a policy on trusted crowd-sourced bathymetry for approval, taking into account the comments made. The working group should comprise representatives of Member States, as well as expert contributors, and should also seek HSSC advice and input, as required. On that understanding, he suggested that PRO 4 be redrafted accordingly for the consideration of the Conference.

It was so agreed.

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### **PRO 6: DEVELOPMENT OF AN IHO SATELLITE-DERIVED BATHYMETRY AND CHARTING PROGRAMME FOR REMOTE AREAS (CONF.EX5/G/03)**

IGA FRACHON (France), introducing the proposal, explained that it was intended to engage IHO in concrete action to enhance navigational safety, especially as new technologies now offered the opportunity for obtaining complete hydrographic information, including the possibility of developing a focused hydrographic programme in conjunction with such other techniques as risk assessment. Satellite-derived bathymetry (SDB) could also be synergized for capacity-building purposes with the development of land and environment remote-sensing. In addition, it could be a complementary tool in the elaboration of a targeted strategy for surveying and charting, which could in turn leverage additional funding. On that basis, France proposed the conduct of a scoping study for the purposes outlined in the explanatory note, with a view to studying its findings before proceeding further.

Mr HARPER (United Kingdom) supported the proposal in principle, but was concerned that a move towards an operational data collection programme might be premature. As well as the administrative issues, more work was needed to assess best practice for the collection of SDB and its representation on navigational charts. Indeed, there were still fundamental questions to be answered.

In conducting a recent trial comparing SDB solutions to high-accuracy high-resolution multibeam echosounder (MBES) data, the United Kingdom Hydrographic Office had observed significant variations in the quality of the results, with an obvious depth threshold beyond which SDB ceased to represent the real world. The fact that ground truth data had been needed to identify that threshold raised the question whether the use of SDB without ground-truthing was limited to reconnaissance and checking.

He reiterated the view that, in the absence of an agreed common approach for representing the quality of data collected by methods in which the measurement uncertainty or accuracy was difficult or impossible to model, the inherent variation in the quality of the data used across members' products would not be appropriately conveyed to the mariner. Furthermore, with regard to the zone of confidence (CATZOC) designation, producers of electronic navigational charts (ENCs) would be forced to use the lowest common denominator supported by the data. If included in United Kingdom ENCs, the data collected in the trial mentioned would receive a CATZOC D, suggesting that the data was less useful than it actually was.

In those circumstances, he suggested that the focus of any scoping study should be limited to identifying best practice for SDB collection, uncertainty estimation and data quality representation in navigational products.

Mr HAINS (Canada) said he favoured further assessment of SDB as a potentially valuable tool and source of hydrographic data. Areas that stood to benefit most from the technology should also be identified, as should a standardized methodology for data-processing, in keeping with the practices of hydrographic offices in all regions.

Dr LEDER (Croatia) said his country recognized SDB as a potential source of data, but was aware of the risks associated with the use of data collected by that method in official navigational publications issued by national hydrographic offices. While supporting the proposal in principle, Croatia expected more detailed clarification of the programme structure and content, which was essential for the purpose of full understanding and comment. His country also supported the proposal concerning the procedure and responsibility for the assessment or launch of SDB programmes.

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Mr DEHLING (Germany) said that SDB was an important tool, especially in remote areas. The required overview of urgent capacity-building needs could be obtained through risk assessments and country profiles, perhaps aided by the further development of IHO Publication C-55 on the Status of Hydrographic Surveying and Charting. In the context of phase 2 of the IHO Capacity-building Strategy, national plans for surveying could be usefully developed into regional plans.

Commander LÓPEZ CRUZ (Mexico) supported the proposal in general. Results obtained through SDB were sufficiently acceptable for it to serve as an option for use in particularly inaccessible or risky maritime areas. Any all-inclusive SDB programme must, however, take into account such factors as differing national hydrographic capacities and sovereign rights over territorial waters and remote areas in which SDB activities might be prohibited by law. The proposal would therefore benefit from being redrafted in order to address such wider issues.

Mr LEE (Republic of Korea), endorsing the proposal, said that his country's experience of using SDB to identify coastline changes and produce charts had proved beneficial, although the technology still had limitations in terms of quality and accuracy. His country was keen to participate in further work on the subject, including by sharing its own experience of SDB use.

Mr SOBOLEV (Russian Federation) said his country considered SDB a promising technology, but would defer the use of SDB data for producing navigational charts until their accuracy could be ascertained. At the present stage, discussion of the subject was premature.

Mr AL HARBI (Saudi Arabia) commented that horizontal and vertical inaccuracies had been detected in a comparison of Red Sea data collected using SDB with data collected through hydrographic surveying. Member States should therefore work more closely with satellite data providers in order to eliminate such inaccuracies, which rendered data unusable for producing nautical charts to standard, especially in view of considerations of legal liability. Industry must also be urged to improve algorithms and other relevant tools, in the interest of improved accuracy.

IGA FRACHON (France) expressed appreciation of the comments made and conceded that the development of such a programme was perhaps premature. SDB was nonetheless a growing field, and becoming involved in new technologies at the development stage was more satisfactory than remaining on the sidelines as observers.

Mr MONCRIEFF (United Kingdom) said the proposal was certainly a worthy subject for future discussion. The United Kingdom intended to remain engaged in SDB trials and other SDB-related activities, with a focus on refining the error budget and subsequently improving algorithms in the interest of enhancing mariner confidence. His delegation would certainly report on those activities at the next Conference. Once these refinements were matured, the key issue would be one of portraying these to the mariner in a clear and unambiguous way that would allow the mariner to make informed decisions in his navigation planning.

The PRESIDENT, summing up the debate, said that SDB appeared to be generally valued as a potential technique, but that the development of an IHO SDB and charting programme for remote areas was considered too ambitious a goal at the present time, given the various reservations about the technique. He therefore suggested that the matter be revisited at a later date, once SDB technology was more advanced and of more proven suitability for IHO purposes.

It was so agreed.

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### 5<sup>th</sup> EXTRAORDINARY INTERNATIONAL HYDROGRAPHIC CONFERENCE

#### SUMMARY RECORD OF THE FIFTH PLENARY SESSION

9 October 2014  
0900-1230

**Rapporteur:** Ms Jennifer BEAN (United States of America)

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- **Work Programme 1: Reports and Proposals (Item 3 of the Agenda)** (contd)
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- Work Programme 3: Reports and Proposals: Item 5 of the Agenda (contd)

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#### **PRO 5 (revised): Proposal 5 – Improving the total cost estimate of the IHO tasks for the definition of a prioritized Work Programme, Agenda item 5(d) (CONF.EX5/G/03/PRO5/Rev.1) (cont'd)**

The PRESIDENT explained that the decisions of the ad hoc working group established to revise the text of PRO 5 were reflected in document CONF.EX5/G/PRO5/Rev1.

IGA FRACHON (France) welcomed the revised text and recommended that the Conference adopt it.

Ms WEBBER (United States of America), replying to a question put by Captain VAN DER DONCK (Netherlands) explained that the word “biannual” in the fifth paragraph of document CONF.EX5/G/03/PRO5/Rev.1 meant twice a year, and that the intention was to provide Member States with regular updates on progress. The chairs of committees, sub-committees and working groups should submit a short report outlining areas where additional support might be needed.

Mr HARTMANN (Denmark) supported such a pragmatic solution, always bearing in mind the need for coordination among the bodies concerned.

PRO 5, as amended, was approved.

#### **WORK PROGRAMME 1: REPORTS AND PROPOSALS (Item 3 of the Agenda) (contd)**

#### **Draft Conference decision on guidelines related to the allocation of Council seats to Regional Hydrographic Commissions (CONF.EX5/WP1/COUNCIL)**

The PRESIDENT said that the IHB’s explanation of the new system for allocating Council seats was now before the Conference in document CONF.EX5/WP1/COUNCIL.

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Mr HARTMANN (Denmark) said that Denmark was a member of four Regional Hydrographic Commissions (RHCs), including the Arctic Regional Hydrographic Commission and the Nordic Hydrographic Commission. Its position in terms of membership of a single RHC, if the Proposal were accepted, was unclear. Given the detailed conditions governing the 15 Regional Hydrographic Commissions, the sequence in which the 10 Member States would be selected according to their tonnage, as well as the allocation of seats, should be clarified. There was a difference between representing a RHC and representing a country, so it was important to have clear rules for the allocation of the seats. In principle, all RHCs should nominate their seats at the same time. He suggested that the time sequence for the whole process should be clearly stated, and should encompass both the selection of seats on the basis of tonnage, and the allocation of the five remaining seats. He therefore recommended deleting subparagraphs 2 (a), (b) and (c).

Mr BESSERO (Director, IHB), replying to the comments by the delegate of Denmark, recalled that the matter had been discussed at length at the XVII<sup>th</sup> International Hydrographic Conference in 2007, and the proposal put forward by the Strategic Planning Working Group had been approved. It was clearly stated in the amended Convention, and reflected in the General Regulations, that the Conference had agreed on giving priority to regional representation, in a two-phase process beginning with the selection of 20 seats by the RHCs, and followed by the selection of the remaining 10, according to hydrographic interest, from among the Member States not already selected under the first phase. Unless delegates wished to amend the Convention, that order would have to be respected. The first phase, as outlined in Article 16 (b) of the General Regulations, set out the conditions for selection under the regional component. The complication arose from the fact that the 20 Member States that were members of more than one RHC would have to restrict their choice to one only if they wished to apply for a seat on the Council. The number of seats allocated to each RHC depended on the number of eligible Member States in each RHC. In practical terms, that meant that the 20 Member States which were members of more than one RHC, even if they did not wish to apply for a seat under the regional component, had to indicate which RHC they wished to be counted in, so that the Secretary-General could allocate the seats in accordance with Article 16. It was then up to the RHCs, based on the number of seats allocated from one to three, to decide how they would select their representatives and how they wished to interact with them. In that regard, the General Regulations merely indicated a procedure. Article 16 (c) described the procedure for selecting the remaining 10 seats. The Secretary-General, having identified which Member States would hold the remaining one-third of Council seats, would then approach them in descending order of national flag tonnage, after which it would be up to each Member State to decide whether it wished to accept the seat or not.

Mr HARTMANN (Denmark) said it was not his intention to change Article 16, merely to clarify how the process would work in practice.

Captain Dr EL ASSAL (Egypt) commented that if a Member State failed to declare the RHC of its choice, the Secretary-General should include it in the RHC with the largest number of Member States, because more seats would be allocated to that RHC.

Rear Admiral SRINIVASAN (Saudi Arabia) said that Member States belonging to more than one RHC would have to receive approval from their designated RHC. At present there appeared to be an imbalance in the distribution process, in that the majority of the Council would not be selected according to the geographical distribution of charting needs. More than two-thirds would come from RHCs that had more members, but represented a smaller area, rather than from those areas where there was a need to expand hydrographic activities.

The PRESIDENT said that in his view the Guidelines fulfilled their function of demonstrating the importance of ensuring a regional balance in the distribution of seats.

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The PRESIDENT OF THE DIRECTING COMMITTEE agreed with the representative of Saudi Arabia that some RHCs which covered extensive areas of the globe had relatively few Member States, thereby creating an imbalance. That could be addressed by ensuring that within those regions all coastal States were members of the IHO. Until that happened, and as Mr BESSERO had explained, the Strategic Planning Working Group had placed emphasis on the need for regional cooperation through the RHCs. In the meantime, within those regions that had relatively few IHO Member States, he advocated encouraging other coastal States to join the Organization.

Mr HOOTON (United Kingdom) expressed support for the Guidelines. The comments by the delegate of Denmark implied that Council members selected as a result of their nomination by RHCs might be representing those RHCs on the Council. He had understood that that they would represent their own countries, and would be members of the Council through nomination by an RHC, in order to ensure a global distribution. He asked for confirmation from the IHB.

The PRESIDENT confirmed that members of the Council would represent their own countries, not the RHC that had nominated them.

Rear Admiral SRINIVASAN (Saudi Arabia) said that the 10 Council seats in order of tonnage would probably go to the 10 countries with the largest tonnage. In addition, he understood that some RHCs would have more weight in the Council by virtue of numbers. The Council would therefore be weighted in favour of RHCs with more Member States and the largest tonnage, leading to a situation where two-thirds of its members had a higher level of hydrographic expertise, as well as the largest tonnage.

Mr SOBOLEV (Russian Federation) asked whether it would be compulsory for a Member State to apply to the RHC of which it was a member, or whether it could be considered on the basis of its tonnage.

The PRESIDENT replied that the United States had withdrawn PRO 3, and the Conference was now being invited to adopt the Guidelines.

Vice Admiral MARATOS (Greece) said that as a member of the Strategic Planning Working Group he had participated in lengthy discussions on the issues that had been raised, including whether members of the Council would represent RHCs or their own countries. It had been decided that Council members would represent their countries, but that RHCs could give advice on relevant matters before the Council. Article 16 described a simple procedure, but, in doing so, the end result had only been to complicate matters. His advice would therefore be to abandon the Guidelines and proceed with the selection process in accordance with Article 16. Thereafter, the Secretary-General would report on the outcome, and, if necessary, a set of guidelines could then be prepared, possibly under the auspices of the XIX<sup>th</sup> International Hydrographic Conference. If it was decided that they were needed, a further decision would have to be made on whether that would be done under Article 16 or another instrument.

Mr NG (China) pointed out that the new Convention had been ratified on the basis of clearly written documentation, without any need for guidelines. He was concerned that one set of guidelines might follow another. The explanations provided by previous speakers further enhanced the Conference's understanding of past discussions on the subject. Moreover, the summary record would confirm what had been said, and would provide guidance to the future Secretary-General in carrying out his work.

Mr AMAFO (Suriname) asked whether the selection process within RHCs had been defined.

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The PRESIDENT said that would be a decision for individual RHCs. The Guidelines were intended to make the process more transparent. However, if they were not acceptable he would suggest abandoning them, leaving any decision on whether they were needed to the XIX<sup>th</sup> International Hydrographic Conference.

Mr HAINS (Canada) supported the proposal and suggested to move forward.

Rear Admiral SRINIVASAN (Saudi Arabia) supported the proposal.

Mr HOOTON (United Kingdom) supported the proposal.

Captain GORZIGLIA (Chile) requested the RHC guidelines from the Secretary General before the next assembly.

Rear Admiral GLANG (United States of America) supported the proposal.

Mr DEHLING (Germany) supported the proposal.

Mr AMAFO (Suriname) supported the proposal, suggested to try it and see, the Article 16d General Regulations be kept as is and amend if needed.

The PRESIDENT reminded that Article 16b does say the names should be submitted 3 months before the next Assembly.

Captain GEZGIN (Turkey) supported the proposal.

Mr SOBOLEV (Russian Federation) supported the proposal.

Mr FLIER (Norway) supported the proposal.

Captain OBINO (Brazil) supported the proposal.

The PRESIDENT adopted the proposed guidelines and closed Work Programme 1.

The PRESIDENT then invited the Chair of the IRCC (Inter-Regional Coordination Committee) to present the IRCC Interim Report on progress and issues related to Work Programme 3.

Rear Admiral KARSTEN (UK), IRCC Chair provided an update on the activities of the IRCC since the 2012 I.H. Conference. He outlined the objectives of the IRCC, which had been established in 2009 to complement the work of the Hydrographic Services and Standards Committee (HSSC). The main role of the IRCC is to provide oversight, governance and direction to execute IHO Work Programme 3. The Committee is focused on issues such as enhancing cooperation in hydrographic activities on a regional basis, the delivery of Capacity Building programmes, the coordination of hydrographic surveying, charting activities and maritime safety information. To meet its objectives the IRCC comprises representatives of the Regional Hydrographic Commissions (RHC) together with representatives of the subordinate bodies of the Committee. Member States participate as Observers.

Rear Admiral KARSTEN reported that the last three meetings of the IRCC had been held in Singapore, Australia and France. Highlights from the 6<sup>th</sup> meeting of the IRCC held in Paris, France in May 2014 were:

RHC Activities. The 15 RHC and the Hydrographic Commission on Antarctica (HCA) reported to the IRCC. Most commissions meet annually to review hydrographic and charting issues and of particular note were the excellent examples of regional cooperation in the

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Baltic Sea and Meso American-Caribbean Sea areas, the lessons learned from the US-Canada trans-boundary (agreement) project, the planned sharing of MSI information in the EAHC region, sharing of experience in handling natural disasters in the EAHC region and the development of a GIS-based 'risk assessment tool' by New Zealand that can identify specific areas within a country that may require a high priority for survey and charting action.

Capacity Building (CB) Strategy. The IHO CB Programme is currently being funded by IHO funds, supplemented by additional support from the Nippon Foundation of Japan, and the Republic of Korea. The programme provides training and technical assistance seminars in hydrographic surveying and nautical charting, particularly aimed at developing countries. There is a growing demand for IHO CB activities and more funds and contributions are required for this important work. The draft revised CB Strategy, that is intended to be considered by the Conference aims to provide a better basis for the assessment and provision of technical assistance in the future. The draft was endorsed by the IRCC.

Revision of IHO Publications S-5 and S-8. The IRCC had endorsed revisions to S-5 and S-8 covering the standards of competence for hydrographic surveyors and nautical cartographers, respectively, which aimed to improve the quality of course submissions and take into account new modes of delivery such as e-learning.

Discussions on WEND Topics. The IRCC had approved a revision to the WEND Principles and the WEND Work Programme.

Marine Spatial Data Infrastructures (MSDI). The IRCC had concentrated its work on contributing to the policy and people components of MSDI. Spatial data infrastructures are a framework concept comprising key components: policy: how we share and exchange geographic information; and people and organizations: the cooperation required between various organizations. The IRCC had noted that the policy and people and organizations components required further development. The IRCC felt that it was best placed to undertake this work and tasked the IHB to facilitate a transfer of the MSDI WG from the HSSC to the IRCC. There had been significant developments in the BSHC and the MACHC to implement MSDI in their regions.

IHO-EU Network WG (IENWG). The IENWG had been established under the IRCC framework as a new subordinate body. The IENWG aims to provide a framework to ensure continuing liaison between the European Union (EU) and the IHO on activities in areas of common interest – surveillance activities, maritime spatial planning, integrated coastal zone management, implementation of the maritime strategy framework directive, marine research data standard. The ongoing liaison helps IHO to promote hydrographic standards in Europe and beyond, including promoting hydrography and the *blue economy*.

IRCC6 Recommendations. Rear Admiral KARSTEN drew attention to the endorsement of IRCC6 for the proposals on Crowd Sourced Bathymetry (PRO 4) and Satellite Derived Bathymetry (PRO 6). He also reported that there was unanimous agreement at IRCC6 that the IHO develop guidance that will provide access to hydrographic survey data collected by commercial surveys for the wider public benefit. The IRCC had endorsed a draft information paper for use as explanatory material to generate a greater understanding and to promote best practice and requested the EIHC to note the importance of developing the initiative further.

Future Plans. Rear Admiral KARSTEN reported an increase in IRCC activities, such that it had been agreed to extend the length of IRCC meetings from two-day duration to three days. IRCC7 is scheduled to be held in Mexico in June 2015, IRCC8 in Abu Dhabi in 2016 and IRCC9 in Suriname in 2017.

Achievements of the IRCC. Rear Admiral KARSTEN considered that the three annual meetings of the IRCC held since the 2012 I.H. Conference had provided a productive forum



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for cooperation over a wide range of activities, had added a valuable contribution to the RHC work plans for the next intersessional period and had assisted with the development of a common strategy to advance the objectives of the IHO. The IRCC had facilitated regional cooperation and coordination among Member States and non-Member States. This effort had also assisted in the potential recruitment of several countries as Member States of the IHO.

In conclusion, Rear Admiral KARSTEN said that there is much to applaud in IRCC activities and it is important to ensure that it continues to add value to its members. However, in spite of its achievements, there are several challenges remaining for the IRCC to address. Since the last IHC the engagement of RHCs has varied greatly from region to region; some RHCs are “beacons of excellence” in cooperation and engagement of activities whilst others could improve their level of activity. Input from RHCs to the Annual Report had been patchy and responses to IRCC Circular Letters were slow. There have been some problems with governance of the IHO-IOC GEBCO Project and the approval process to establish revised Terms of Reference and Rules of Procedure for the GEBCO Guiding Committee to help provide improvements is protracted.

Rear Admiral KARSTEN invited the Conference to note his interim report, to support the ongoing collaborative and cooperative work of the IRCC working groups through active participation and to acknowledge the two continuing priorities of the IRCC which are Capacity Building and addressing WENDWG issues including achieving appropriate and standardised global ENC coverage.

The PRESIDENT thanked Rear Admiral KARSTEN, IRCC Chair for his comprehensive report and opened the floor for any comments.

Mr HAINS (Canada) expressed his thanks to the IRCC Chair for his report and was pleased to announce that Canada had just recently signed an agreement on ENC overlap in the Beaufort Sea with the USA which effectively resolved the issue of the ENC overlap in the USCHC.

Rear Admiral ZAIM (Malaysia) commended the IRCC Chair for his excellent report which he fully supported. He further considered that it was timely to put the establishment of ENC production boundaries into practice now we have a definition for a cartographic boundary and asked what was the way forward in this respect.

Rear Admiral KARSTEN (UK), IRCC Chair replied that this point was covered under Item 2 of the WEND WG Programme, which was approved by IRCC. The aim was to finalize a paper on assessing and eliminating the problem of ENC overlaps which would be discussed at the next IRCC Meeting.

The PRESIDENT thanked Rear Admiral KARSTEN, IRCC Chair for this clarification and, since there were no further comments from the floor, said that the Conference duly noted the IRCC Report and congratulated the IRCC on the work achieved and looked forward to future developments.

He then invited the Chair of the Capacity Building Sub-Committee (CBSC) to present the CBSC Report.

**Report and recommendations from the Capacity Building Sub-Committee (CBSC) regarding the IHO CB Strategy (Agenda item 5 (c)) (CONF.EX5/REP.03/Rev1 and CONF.EX5/REP.03/Add.1)**

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Mr DEHLING (Germany), Chair of the Capacity Building Sub-Committee (CBSC), introduced the revised version of the IHO Capacity Building Strategy, contained in the annex to document CONF.EX5/REP.03/Rev1. Comments received from Member States were set out in document CONF.EX5/REP.03/Add.1. The Conference was invited to endorse the new Strategy.

Captain GORZIGLIA (Chile), Captain KAMPFER (South Africa), Captain Dr EL ASSAL (Egypt), IGA FRACHON (France), Mr KRASTIŅŠ (Latvia), Captain EVANGELIDIS (Greece) and Captain GEZGIN (Turkey) welcomed the revised Capacity Building Strategy and expressed support for its endorsement.

Rear Admiral GALLAUDET (United States of America) expressed strong support for the revised Capacity Building Strategy. His country contributed to hydrographic capacity building in various ways, including by organizing university training courses. He welcomed the support provided by the Republic of Korea and the Nippon Foundation to enable students to attend those courses.

Mr GARCIA II (Philippines) said that capacity building, as a core function of IHO, made the Organization more relevant for developing and least developed countries. In order to better align IHO capacity building work with the wider development framework, he suggested that the Capacity Building Strategy and accompanying publicity should refer specifically and prominently to IHO's role in promoting the post-2015 development goals being finalized under the auspices of the United Nations, particularly as they related to the conservation and sustainable use of oceans and seas for sustainable development. Drawing such a direct link would raise the profile of IHO.

Dr SHIM (Republic of Korea) expressed support for the revisions made to the Capacity Building Strategy, which clearly defined the principles, objectives and process of hydrographic capacity building. IHO policy on capacity building should reflect the needs of Member States. Being an indispensable part of the Organization's work, capacity building should be given priority. His country would continue to provide support for capacity building activities, and would endeavour to contribute to the development of the international hydrographic community. The IHO Capacity Building Fund should be used wisely for the support of relevant activities that would improve the capacity of developing countries, thereby enhancing hydrographic surveys and nautical chart production worldwide.

Commander URUETA (Peru) expressed full support for the revised Capacity Building Strategy. A capacity building workshop on river hydrography and charting, to be attended by 14 representatives of three Regional Hydrographic Commissions (RHCs), was to be held shortly in the Amazon region. Although IHO's primary focus was maritime hydrography, many Member States had significant inland waterways, for which different hydrographic techniques were required in order to deal with the specific challenges they presented, especially water turbidity. He acknowledged the support of IHO and the CBSC for the workshop, the results of which would be shared in due course.

Commander LÓPEZ CRUZ (Mexico) expressed support for the revised Capacity Building Strategy, and encouraged all Member States to make use of the opportunities it presented to increase capacity building activities. Mexico was involved in providing training for Member States in Spanish, working with industry and hydrographic offices.

Captain TRAVIN (Russian Federation), expressing full support for the revised Capacity Building Strategy, suggested that due consideration should be given to the work of other international organizations operating in the same field, such as the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA), which was very active in developing capacity building.

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Mr CHEN (Singapore) expressed support for the revised Capacity Building Strategy, and emphasized the need for continuous upgrading of skills, in order to keep pace with technological developments.

Capt MUKTADIR (Bangladesh) echoed the comments by the representative of Singapore. He added that recipient countries must feel motivated to use the capacity building programme to good effect. He supported the revised Capacity Building Strategy.

Mr KASUGA (Japan), warmly welcoming the revised Capacity Building Strategy, said his country would pursue its contribution to capacity building activities through the Nippon Foundation.

Mr BRYANT (United Kingdom) expressed full support for the revised Capacity Building Strategy. It was disappointing that limited funding had prevented the development of the C-55 database as a country profiling tool. An electronic version of the database using Geographic Information Systems (GIS) would more accurately reflect the current situation, and should be developed to support the work of Member States, RHCs and the IHB. The United Kingdom was keen to contribute by making all "category of zone of confidence" (CATZOC) indicators available, and he hoped that other countries would follow suit. He emphasized that the CBSC was not an exclusive body, and urged all interested States to participate in its work.

The PRESIDENT observed that the issue of CATZOC indicators was a sensitive one because it concerned the reliability of data.

Mr DEHLING (Germany), Chairman of the CBSC, responding to the points raised, said that there was a mention of the United Nations development goals in the first sentence of the revised Capacity Building Strategy, and various other organizations, including IALA, were mentioned in the second sentence. Although more could be done, cooperation with other regional and international organizations working in similar fields was improving. He acknowledged the importance of ensuring the sustainable transfer of skills and technology, in line with principle 3.2 of the Strategy, and also of improving the C-55 database. He welcomed the offer by the representative of the United Kingdom to provide metadata in the form of CATZOC indicators. That was important basic information that could be built upon. The CBSC would be glad to receive other input as it continued its work on improving capacity building as a central strategic issue for IHO.

The PRESIDENT expressed his appreciation to the Republic of Korea and Japan, as the two largest benefactors of capacity building, and noted the overwhelming support of the Conference for the work of the CBSC.

He took it that the Conference agreed to endorse the revised Capacity Building Strategy contained in the annex to document CONF.EX5/REP.03/Rev1.

It was so decided.

5<sup>th</sup> EXTRAORDINARY INTERNATIONAL HYDROGRAPHIC CONFERENCE

SUMMARY RECORD OF THE SIXTH PLENARY SESSION

9 October 2014  
1410-1630

**Rapporteur:** Dr FADAIE (Canada)

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Work Programme 3: Reports and proposals (Agenda item 3) (continued)

- Proposals from Member States (Agenda item 5(d))  
PRO 7 – There is no other alternative but the full implementation of the WEND Principles and its guidelines (CONF.EX5/G/03)

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**WORK PROGRAMME 3: REPORTS AND PROPOSALS (CONF.EX5/REP.03 &Add.1. CONF.EX5/G/03) (Agenda item 5) (contd)**

**Proposals from Member States (Agenda item 5(d))**

**PRO 7 – THERE IS NO ALTERNATIVE BUT THE FULL IMPLEMENTATION OF THE WEND PRINCIPLES AND ITS GUIDELINES (continued)**

IGA FRACHON (France) introduced PRO 7. He recalled decision 12, taken at IHC18 in 2012, in response to a proposal by the WEND Working Group on ways and means to enable IHO to fulfil its commitment to the provision of full ENC coverage. The decision emphasized the need for cooperation and for coherence and harmonization in ENC cells and services. It also emphasized the need to monitor changes in coverage needs and priorities, and to supply integrated services. Owing to incomplete implementation of the WEND Principles, there were some outstanding problems with ENCs produced by or under the responsibility of hydrographic offices (HOs). A solution might necessitate the intervention of private entities between HOs and end users, for example in making a choice between ENCs. However, the conditions for doing so were not clearly defined. It was not easy to identify the content of the WEND database, or how it could be accessed by the various users concerned. His country's view was that in spite of the difficulties, there was no alternative than to continue with the implementation of WEND Principles. Given the complexity and multiplicity of ENCs, IHO should remain firm in its implementation efforts. France was therefore submitting PRO 7 for consideration and approval by the Conference.

He thanked Member States for their written comments, which were set out in CONF.EX5/G/03. Some comments had addressed the limits to IHO's capacity to establish procedures and standards for implementing the WEND Principles. Others had noted historical developments, taking the view that the situation was likely to improve. It was recognized, however, that there was a need to analyse the factors contributing to the inability of the hydrographic community and IHO to produce complete ENC coverage. The view had been expressed that it was premature to consider additional technical and standardization measures. Progress had been made in improving ENC coverage and eliminating gaps and overlaps, but there was a need to examine the accessibility and distribution of ENCs and to define the worldwide and seamless ENC database.

Mr IPTES (Director, IHB) speaking in his capacity as Secretary to the IRCC, recalled IHO Resolution 1/1997, as amended, on the WEND Principles. The Resolution encouraged Member States to distribute their ENCs through a RENC, in order to share in common

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experience, reduce expenditure and ensure the greatest possible standardization, consistency, reliability and availability of ENC. In May 2014, IRCC-6 had discussed the implementation of WEND Principles, and had requested the IHB to issue a Circular Letter asking ENC producer nations whether they distributed their ENCs via the established system of RENCs, and, if not, to state their reasons. In response, IHO had issued an ENC distribution census as Circular Letter 59/2014, with a deadline of 30 September 2014 for responses. As of 8 October 2014, 56 of the 82 IHO Member States had responded, of whom 46 were ENC producers.

Mr GUILLAM (Assistant Director, IHB), speaking in his capacity as Secretary of the WEND Working Group, outlined the interim results of the ENC distribution census. Responses to Circular Letter 59/2014 were still being received and, as of 9 October 2014, 56 Member States had replied. Of the 46 ENC producers, 38 distributed all their ENCs through the RENCs, either as RENC members or through distribution agreements. Of those who did not, three did not yet distribute their ENCs, one had set up an “open” web-based distribution system; two were constrained by national regulations related to international agreements; and one distributed some ENCs outside the RENCs, in order to recoup costs. Of the non-producers, nine had indicated their primary charting authority; seven of those authorities did not distribute all of their ENCs through RENCs. No responses had been received from 10 ENC producers (including six RENC members) and 13 non-producers (including 2 RENC members). Comments on the factors influencing the choice of distribution and WEND Principle implementation had been received from 25 Member States, and would be discussed at the 5th meeting of the WEND Working Group.

Commander LOPEZ CRUZ (Mexico), speaking in his capacity as Co-Vice Chair of the International Centre for ENCs (IC-ENC), and Ms KINDEBERG (Sweden), representing PRIMAR, outlined the services offered by the two RENCs. IC-ENC had its headquarters in the United Kingdom and a regional office in Australia, and PRIMAR was based in Norway, and was hosted and operated by the Norwegian Hydrographic service. The objective of the RENCs was to assist HOs in the production, quality assurance and distribution of ENCs. Shared experiences, recommendations on best practice and economies of scale meant that RENCs contributed to safety at sea by enhancing ENC quality and accessibility in a consistent way. They also represented one element of the WEND Principles. The two RENCs had a total of 46 members across all continents.

The benefits of membership included the coordination and sharing of ENC knowledge and experience among HOs, so avoiding the duplication of effort and enhancing efficiency. ENCs distributed through the RENCs were available to the end users through a wide range of service providers, under harmonized terms and conditions, so driving high levels of customer service and innovation by the service providers. The RENCs provided detailed sales reports for each member, and managed the collection of revenue from Value Added Resellers and distributors, returning the appropriate amount to each HO. They also offered a number of additional services, including services for specific groups (navies, marine pilots, vessel traffic services, coastguard and search and rescue services, etc.), and training and succession planning for ENC production staff. The RENCs operated on a not-for-profit basis, operational costs being recovered by retaining a portion of each HO's ENC revenue. The member HOs of each RENC approved the financial arrangements. Further details on the two RENCs were available from their exhibition stand at the Conference and through their websites ([www.ic-enc.org](http://www.ic-enc.org) and [www.primar.org](http://www.primar.org)).

Dr OEI (Singapore) said that Singapore was not a RENC member, but distributed its data to the RENCs and recognized their value as distributors. He questioned the value of continuing the work of the WEND Working Group, since he considered it unlikely that solutions would be found to the problem of overlapping ENCs, especially in politically sensitive areas, and that technical measures would need to be adopted. He noted that the Directing Committee had received no adverse comments concerning ENC coverage or overlaps. It might therefore be

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more appropriate to give priority to improving the accessibility of ENC, a task that could well be done by the RENCs themselves or by other ENC distributors.

Captain VETERE (Argentina) supported the full implementation of the WEND Principles, in order to make available the largest number of tools for safe navigation and ensure effective ENC integration. Argentina had enjoyed positive experiences as a RENC member in terms of validation and cooperation, and he urged all Member States that had not yet done so to join one of the existing RENCs, or consider creating additional RENCs. With effective collaboration, it should be possible to achieve the essential aim of a unified harmonized database.

Captain FERNANDEZ (Spain) said that Spain was highly satisfied with its 10 years of RENC membership, which had proved the best means of accessing validated connected ENCs. Although it was proving difficult to secure the participation of all Member States in the implementation of the WEND Principles, that was currently the best solution available. Referring to PRO 7, he said it was important to distinguish between mandatory requirements and principles. IHO was a consultative organization, and not therefore in a position to set binding rules.

Mr PRINCE (Australia) said that while he understood the purpose of PRO 7, it covered a number of different factors that were not really interrelated. The second part (paragraph b) suggested that the WEND Working Group should develop additional technical and standardization measures. That is an HSSC matter. Moreover, such measures already existed, as S-57. The additional database managed on a shared basis by the RENCs was evolving to take account of lessons learned, and over time it should enable the appearance of ENCs to be harmonized. The database should be available to RENC and non-RENC members alike, and it would drive technical standardization.

PRO 7 also covered distribution. However, problems in that area were unlikely to be solved easily. One country had established bilateral agreements with numerous non-RENC members, with a view to achieving extensive worldwide coverage. That did not prevent others from making similar efforts and did not preclude the implementation of WEND Principles. Yet there appeared to be an underlying feeling that that was the case. While a WEND database of ENCs might be desirable, it would perhaps be better to start on a smaller scale, initially developing an index of ENCs - an ENC equivalent of S-11. IHO could not make rules to solve overlap problems of a political nature, but publishing the limits of ENCs would delineate the current position, prevent further accidental gaps and overlaps, and provide a stepping stone to the future. The best repository of existing ENC coverage was maintained at the United Kingdom's HO, and it might be advisable to ask whether that database could be made available on a worldwide basis or as a reference database for the IHB. It was perhaps better to seek practical solutions, rather than continuing in an effort to implement the WEND Principles.

Captain MUKTADIR (Bangladesh) said that Bangladesh is not yet ready to distribute its ENCs. It was currently in the process of establishing an ENC Division. Once that was fully operational, it hoped to join a RENC.

Mr CARANDANG (Philippines) supported the objectives of WEND, especially the distribution of ENCs through the RENCs. The Philippines had recently joined IC-ENC. However, he did not support limiting the choice of ENC producers to one distribution channel, namely the RENCs. That would run counter to section 1.3 of the WEND Principles, which "encouraged" such distribution but did not make it mandatory. HOs and ENC producers should have the flexibility, while complying with ENC standards, to use one or more channels, in the interests of more effective and efficient distribution.

Rear Admiral SRINIVASAN (Saudi Arabia) endorsed the spirit of PRO 7. However, the

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alleged plagiarism of ENC's by private operators was currently a major concern. Although there were some copyright safeguards, it was difficult for some countries to pursue litigation. He hoped the RENCs could provide support in that area.

Captain Dr EL ASSAL (Egypt) said that Egypt had joined the IC-ENC RENC recently, having completed ENC coverage of its waters, with a view to ensuring the consistency, reliability and availability of its ENC's and maintaining control of its data. He supported the WEND Principles but could not support changes that sought to dictate national policies.

Mr GREENLAND (New Zealand) supported PRO 7. However, he suggested setting up a new IRCC Working Group to conduct the work instead of the WEND Working Group, which already had a heavy workload. That would also permit a fresh assessment of the non-implementation of WEND principles. The WEND Working Group would, however, provide a valuable resource for the new Working Group.

Mr KASUGA (Japan) expressed support for the WEND Principles in general, but considered it important to bear in mind that the implementation of some elements, such as RENC and ENC overlapping, should be flexible and pragmatic, depending on regional characteristics and situations.

Mr LEE (Republic of Korea) also supported PRO 7. Although there had been significant progress in the extension of ENC coverage, concerns about overlapping remained. Further research was needed to identify appropriate technical solutions. For example, the East Asia Hydrographic Commission had attempted to resolve overlaps by producing and distributing common ENC's in the region. Different regional approaches would be needed rather than uniform implementation of the WEND Principles, and would provide a practical contribution to the key IHO goal of safe navigation.

Dr LEDER (Croatia) said that his country was fully aware of the problems stemming from the implementation of WEND Principles. Failure to solve those problems, which resulted in a failure to fulfil the IHO strategic objectives, was a worry to his country, and probably to other IHO members. The significant progress made in recent years in ENC coverage and availability, thanks to the commitment of Member States, the IHB, Working Groups, Hydrographic Commissions and the RENCs, boded well for solving the remaining problems and achieving the IHO strategic objectives in due time. Croatia was therefore in favour of relevant IHO bodies developing appropriate analyses to identify factors and mechanisms to contribute to the improvement of the current situation.

A broader perception of current problems related to the implementation of WEND Principles, and a possible solution had been advanced by his country in its responses to Circular Letters 4/2014 and 6/2014.

Mr PARIZI (Islamic Republic of Iran) said his country supported the WEND principles. He announced its recent production of ENC cells, and its membership of the PRIMAR Regional ENC Coordination Centre regime.

Captain TRAVIN (Russian Federation) expressed his country's support for the WEND principles. Given that their successful implementation relied on the prevalence of RENCs, more centres should be established, in line with the number of regional hydrographic commissions, to coordinate data and take account of the features specific to each region.

Rear Admiral GLANG (United States of America) said that since the global coverage of ENC data was now considered to be almost complete, it might be time to review the efficiency of navigational safety products and service delivery to the end user. The United States of America was therefore in favour of assessing the current implementation of the WEND principles. The outcome of such an assessment could direct efforts at improvement. The

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assessment should be independent, with a strict deadline for the submission of the final report, and the national concerns of Member States must be clearly acknowledged. It should include end users, Member States, RENCs and value-added re-sellers, among others, and assess the status of implementation, from the viewpoint of every component of the production and distribution systems, against the objectives of the principles. His country would welcome an opportunity to participate in that endeavour.

Captain OBINO (Brazil) expressed his country's support for, and commitment to, the WEND principles.

Captain TRISMADI (Indonesia) said that his country supported the WEND principles, but was still awaiting a solution to overlap issues in maritime boundary zones.

Mr FLIER (Norway) supported Proposal 7, and endorsed the comments by the representative of the United States of America. It was time to clarify the situation, through independent research conducted by bodies outside the hydrographic community.

Captain KAMPFER (South Africa) said his country supported the WEND principles, but still regarded them as recommendations, and disagreed with the idea of establishing new working groups or calling on external consultants. The technical issues should be examined by existing groups, with a view to determining which of the principles would have an impact on service delivery and product safety.

Captain EVANGELIDIS (Greece) said his country recognized the importance of the WEND principles and guidelines, and agreed with the comments by the representatives of Australia and Spain.

Mr HARTMANN (Denmark) said that although Denmark fully supported the WEND principles it was unable, for technical and political reasons, to adhere to them in their entirety. Denmark recommended the adoption of a pragmatic approach that allowed Member States to choose practical solutions for ensuring safety at sea.

Mr NG (China) described full implementation of the WEND principles as an ideal that could not realistically be achieved, partly because of overlap issues. As long as the data were not contradictory, and no threat was posed to navigational safety, such issues must realistically be accepted as inevitable. His country agreed that it was necessary to support some of the principles, but regarded others as problematic. Furthermore, while Member States in the South-East Asia region had been working together to establish a RENC and had produced and distributed small-scale ENCs covering sensitive areas, the main aim of their collective efforts had been to provide end users with the best quality products, not to implement the WEND principles. Their cooperation had, in fact, resulted from a degree of dissatisfaction with those principles. He did not however conclude that the ideal of achieving full implementation should be abandoned.

Captain GEZGIN (Turkey) said that his country supported the WEND principles, but believed that technical solutions to overlap issues must be found before they could be fully implemented.

Mr HARPER (International Centre for ENCs), speaking at the invitation of the PRESIDENT, said that the Member States of his organization actively supported the WEND principles by investing in efforts to improve its services, and he urged other States to join its steadily growing ranks. The remit of a RENC was to act as a node within the WEND framework for any States that chose to benefit from the infrastructure and services provided. His organization nevertheless respected the sovereign right of those that opted for other solutions.



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The PRESIDENT, summing up, noted that several speakers had expressed appreciation of the WEND principles and their role in attaining present-day levels of data coverage and availability, and the principles did not seem to need any further elaboration. However, in the light of the concerns raised about trends in mapping, overlap issues and illegal copying, as well as the suggestion for a world-wide ENC index, his conclusion was that the WEND Working Group should not be disbanded, but should continue with its work programme under the auspices of the Inter-Regional Coordination Committee (IRCC). The RENCs, for their part, were apparently seen in a positive light, but not as the most suitable solution in all cases. Furthermore, although Member States could work together to establish a RENC if they wished, the amount of expertise required would make it difficult, in his view, to establish as many RENCs as there were regional hydrographic commissions. On the other hand, the suggestion of assessing the current implementation status of the WEND principles had garnered enough support to warrant further consideration.

IGA FRACHON (France), responding to the debate at the invitation of the PRESIDENT, explained that Proposal 7 aimed neither to develop new principles nor to establish rules as strict as IHO resolutions. Secondly, France recognized the difficulties involved in implementing the WEND principles, as reflected in the request to the IRCC to “assess the concrete consequences of [their] non-full implementation”. That could not be considered unacceptable until the assessment had been completed. In reply to the representative of Australia, he said that the inherent nature of the proposed WEND global database had yet to be determined, and a good deal of thought was required to weigh up the many possibilities.

Mr MONCRIEFF (United Kingdom), taking up the point made by Australia noting that the catalogue of limits data was provided to IHB on a monthly basis, said that his team would continue to ensure that the information it contained was complete and accurate. As for the boundary between standards-related and other technical work, and work relating to the Principles, a wealth of information, including that from mariners, was readily available as guidance. One example was a recent report from the Baltic International Maritime Conference (BIMCO), which contained details of various user difficulties pertinent to the technical work of the present forum.

Capt VAN DER DONCK (Netherlands) said that the current situation, albeit not ideal, was tolerable, especially bearing in mind the efforts exerted to achieve the current ENC coverage. The objective of providing a worldwide and seamless ENC database was to assess progress and, more importantly, to identify the outstanding work to be done. While some ENCs were outside the WEND Principles for valid reasons, the encouraging steady progress now under way itself demonstrated the impact of the Principles.

He cautioned against embarking on the path of independent research, in view of the many issues it would raise. He favoured instead a pragmatic approach, aimed at resolving concrete issues in the interest of sustaining positive progress. In that context, the establishment of further working groups was not the way forward, insofar as their tasks could be superseded by events.

Mr JACKSON (Chart & Nautical Instrument Trade Association (CNITA)) agreed that progress was encouraging, and cited by way of example the fact that, in the case of paper charts and products, CNITA had dealt with 17 national providers over the past 12 months and with four in the case of ENCs, which was a promising development. He was heartened by the information provided in the joint presentation, and by the constructive measures being taken to improve the system further.

The CHAIR OF IRCC, replying to the debate, said that time was needed to reflect on the range of issues raised. They would be further discussed at the next IRCC meeting with the chairs of the various hydrographic commissions. He outlined the main conclusions he had drawn from the discussion: the overwhelming support for the WEND Principles and strong

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support for RENC activity in general; the appetite for flexibility and pragmatism rather than for the imposition of rules; the primary issue of overlaps in the context of resolving the inadequacies associated with the WEND Principles; and the need for analysis; to be discussed at the next IRCC meeting.

The fact that the WEND Working Group had not succeeded in drawing any firm conclusions was no reflection on its sterling efforts over many years to resolve difficult issues. IRCC was in a position to shape the activities of the Working Group and thus ensure coverage of the issues raised during the discussion, especially those relating to availability, consistency, coverage and quality. IRCC and the WEND Working Group were keen to achieve a solution to those issues, including the question of outside assistance. However, the capacity of the WEND Working Group to undertake the task would have to be determined.

He noted that the desire for regulation did not generally appear to act as a deterrent to RENC membership; the opposite was in fact the case. In conclusion, he proposed that the key elements set out in the proposal be taken up for reconsideration at the next IRCC meeting.

The PRESIDENT, summing up the proceedings, suggested on the basis of the discussion that the IRCC should be tasked with undertaking the assessment contemplated in the proposal. Such finer details as the independence of those carrying out the assessment would be determined in due course, taking into account the views expressed on that subject. IRCC would report to Member States on the outcome of its undertaking.

It was so agreed.

## Plenary Sessions

### 5<sup>th</sup> EXTRAORDINARY INTERNATIONAL HYDROGRAPHIC CONFERENCE

#### SUMMARY RECORD OF THE SEVENTH PLENARY SESSION

10 October 2014  
0900 – 1200

**Rapporteur:** Lieutenant Commander Eşref GÜNSAY (Turkey)

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- 2015 WORK PROGRAMME AND BUDGET (CONF.EX5/REP.04) (Agenda item 6)
  - Introduction by the Directing Committee
  - Consideration and approval of the draft financial report for 2013
  - Consideration of the 2015 Work Programme and Budget
- Resolution of Appreciation to the Government of Monaco
- PRO 4 – For a Trusted Crowd-Sourcing Policy and Its Cook Book
- Review of Decisions Taken by the Conference
- Closing Ceremony (Agenda item 7)
- Any Other Business
- Date of the next Conference
- Seating Order at the next Conference
- Closing remarks by the President of the Conference

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#### 2015 WORK PROGRAMME AND BUDGET (CONF.EX5/REP.04) (Agenda item 6)

##### a. Introduction by the Directing Committee

The PRESIDENT OF THE DIRECTING COMMITTEE invited the Conference to consider and approve the draft financial report for 2013 and the recommendations on the allocation of the small budget surplus, as well as the 2015 Work Programme and Budget. He outlined the key points contained in document CONF.EX5/REP.04. Turning to the draft financial report for 2013 and its recommendations, he noted that the statement of finances in the report had been presented in both a traditional French-based accounting presentation and in an international accounting format. However, in future, the intention was to present the accounts in the international format only, in order to avoid unnecessary duplication and extra work for the Secretariat. The audited accounts for 2013 showed a budget surplus of just over 91,000€, equivalent to 3% of the total annual income. There were certain significant contributions to this figure, specifically: lower than anticipated costs for personnel; lower than anticipated expenses for the maintenance of the building and equipment; several planned consultancy and contract support arrangements that were funded by the Special Projects

## Plenary Sessions

Fund instead of the operating budget; and some additional extraordinary income from interest on overdue contributions and administration fees.

### **b. Consideration and approval of the draft financial report for 2013**

The Directing Committee, with the endorsement of the Finance Committee Officers, proposed that the budget surplus for 2013 be allocated as follows: 50,000€ to be transferred to the Special Projects Fund to balance the funds that had been used for contract support; and the remaining 41,000€ to be transferred to the Internal Retirement Fund, in order to maintain the guaranty sum at about the same level as the anticipated pension liabilities.

Circular Letter 54/2014 invited Member States to provide comments on the Annual Report by 30 September 2014. Only five responses had been received from Member States, of which four indicated they had no specific comments on the recommendations, and one requested background information on the benefit of funding S-100-related developments from the Special Projects Fund. That information had now been given, both during the discussions on e-navigation in the information session, and in the brief on programme. Further clarification would be provided if required.

The draft financial report for 2013 was adopted.

### **c. Consideration and approval of the 2015 Work Programme and Budget**

The PRESIDENT OF THE DIRECTING COMMITTEE presented the Work Programme and Budget for 2015 in conjunction. The proposed Work Programme for 2015 had been based on the five-year Work Programme and Budget approved by the XVIII<sup>th</sup> International Hydrographic Conference. The Work Programme had been compiled in accordance with the guidance provided in IHO Resolution 12/2002, as amended. The proposed Work Programme for 2015 was arranged under the three IHO programmes. Where possible, it contained comments identifying the key deliverables expected in 2015, together with any significant risks to delivery. However, the information was incomplete because numerous IHO bodies had not provided the necessary input on certain items on the Work Programme. In drawing up the Work Programme, the Directing Committee had referred to the work programmes of the HSSC and IRCC, requesting additional input from the Chairs of those committees and all their subordinate bodies, as well as from the Chairs of RHCs and inter-organizational bodies. Input had also been sought from the various bodies of the IHO, in order to identify any perceived resource constraints, vulnerabilities or threats to the successful implementation of the Work Programme. Responses had been received from only one of the 15 RHCs, one of the three inter-organizational bodies and two of the 14 relevant subordinate working groups. Very few helpful comments had been provided on the resources required to implement the activities in the proposed programmes. Nevertheless, the Directing Committee had managed to provide at least some information in the Work Plan identifying the risks involved in completing some of the more important tasks. On the basis of the proposed Work Programme and the guidance provided in the Budget, the Directing Committee had drawn up a balanced budget for 2015, which had been forwarded to the Finance Committee for its comments and recommendations. Responses had been received from only three of the 17 Member States on the Finance Committee. These replies, together with additional explanations from the Directing Committee, had been included in document CONF.EX5/REP.04.

The share value of membership contributions, which set most of the Organization's income, had not changed since 2005. The proposed 2015 Budget assumed that the value would remain unchanged for a further year. An increase in the share value by 1% of the approved five-year budget was expected to take effect in January 2016. Some minor changes had been made to the proposed budget, resulting from an increase in the tonnage of one Member State and the settlement by another of its outstanding contribution. The resulting

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additional 32,000€ worth of spending power had been used to reduce the extent and severity of the cutbacks originally envisaged.

Overseas travel had been maintained at the same level as in 2014, in spite of anticipated increases in the cost of individual travel, because the IHO Secretariat had planned not to attend certain intergovernmental and other international meetings. In some cases, representatives of neighbouring Member States might be available and willing to represent the IHO.

The budget for 2015 made provision for potential bad debts by allowing for up to four Member States failing to pay their annual membership contributions during 2015, and for the likely suspension of another, with a consequent reduction in the budget.

Turning to the IHO funds, he said that, for the first time, the proposed budget statement provided a consolidated forecast of income and expenditure for the various funds operated by the Organization in accordance with IHO Resolution 1/2014. For the Special Projects Fund to be sustainable, an element of the operational budget previously allocated to contractor support was instead being allocated to the Fund for the provision of contractor support. The contractor support element remaining in the operating budget would be used only to support IHB work. With regard to the Internal Retirement Fund, as a result of stable but low rates of interest and relatively low rates of inflation, there had been no significant rise in the forecast liability for the Fund, and consequently, no allocation was being proposed for 2015.

The Directing Committee agreed that there was no reason to allocate additional monies to the Renovation and Enhancement Fund, the Relocation Fund or the Conference Fund in 2015. No allocation from the IHO budget to the ABLOS Fund was forecast in the 5-year budget, and none would be required in 2015. Expenditure from the Capacity Building Fund would be in accordance with the Capacity Building Programme for 2015. No up-to-date forecast of expenditure in 2015 had been made available for the GEBCO Fund.

In summary, the proposed budget of 3,062,403€ represented a balanced budget; the anticipated expenses for 2015 being only 1,803€ less than the expected income.

From the diagram he had presented at the second plenary session, it was clear that there was only limited scope for significant economies that would not have an impact on IHO and IHB functions and activities. The Directing Committee continued to improve the monitoring and allocation of the IHO budget, but the volume of the Organization's activities continued to rise while its income remained almost static.

For the future, there were several factors, especially the potential non-payment of subscriptions by some Member States, the progressive increase in the cost of salaries, associated personnel expenses, travel, and a greater reliance on contract support for some aspects of the technical programme, that would place an increasing strain on existing income. Fortunately, for 2015 most of the IHO funds were in a healthy position and would not require the annual allocation approved in the five-year budget. However, in future years, and notwithstanding the 1% rise in the share value to take effect in 2016, more severe cuts would be required in the scope of the IHO Work Programme unless its income increased or remained static instead of falling. In a financial climate where individual States would be unwilling to significantly increase their contributions, it must be a priority to recruit additional Member States and reduce the late or non-payment of annual contributions, in order to build upon the levels of activity and impact that had already been achieved.

The 2015 Work Programme and Budget were adopted.

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### RESOLUTION EXPRESSING GRATITUDE TO THE HOST COUNTRY

The PRESIDENT OF THE DIRECTING COMMITTEE read out a proposed resolution requesting the delegation of Monaco to convey to H.S.H. Prince ALBERT II and the Government of the Principality of Monaco the sincere gratitude of the Conference for the generous support provided to the Organization in so many ways. The resolution read as follows:

“The Conference:

Recognizing the continued close association and significant support of His Serene Highness Prince ALBERT II and the Government of the Principality of Monaco in hosting the International Hydrographic Organization,

Appreciating the kind generosity of His Serene Highness and the Government of the Principality of Monaco in providing premises for the Organization,

Further appreciating the provision of the Auditorium RAINIER III in Monaco for the 5<sup>th</sup> Extraordinary International Hydrographic Conference and its associated Exhibitions,

Further appreciating the provision of the Port Facilities of Monaco for the ship that was placed on exhibition during the 5<sup>th</sup> Extraordinary International Hydrographic Conference,

Expresses its profound gratitude to His Serene Highness Prince ALBERT II and the Government of the Principality of Monaco for their graciousness and kind hospitality extended to the Organization, and

Requests the delegation of the Principality of Monaco to convey to His Serene Highness and the Government of the Principality of Monaco the sincere sentiments of the Conference expressed above.”

The PRESIDENT took it that the Conference wished to adopt the resolution.

The resolution was adopted by acclamation.

### **WORK PROGRAMME 2: REPORTS AND PROPOSALS (CONF.EX5/G/03) (Agenda item 4) (contd)**

#### **Proposals from Member States (Agenda item 4 (b)) (contd)**

#### **PRO 4 – For a trusted crowd-sourcing policy and its cook book**

The PRESIDENT introduced a revised version of Proposal 4, amended in light of the comments made during the initial discussion of the proposal. The revised proposal, with the amendments, read as follows:

“The Conference is requested to consider and approve the following:

- a. That the IRCC establishes a working group (WG) to prepare a new IHO Publication on policy for trusted crowd-sourced bathymetry, taking into account the comments of the Conference on PRO4.
- b. The WG should comprise representatives of IHO Member States and invited expert contributors, including members of IHO-IOC TSCOM.
- c. The WG should seek advice and input from relevant HSSC Working Groups as required.

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- d. That the IRCC and the HSSC review the draft publication and seek approval of the IHO Member States through the Directing Committee of the IHB.

Dr TANI (GEBSCO) requested clarification of the contribution that would be expected by the proposed working group from the Technical Sub-Committee on Ocean Mapping (IHO-IOC TSCOM), given the removal of the reference to the GEBSCO Guiding Committee from the proposal. That Committee had already established a working group, 10 of its 27 members being IHO Member States, to develop a cookbook relating to bathymetry.

The PRESIDENT explained that the proposed working group would comprise IHO Member States and invited experts from a variety of relevant bodies, which could include members of both the GEBSCO Guiding Committee and of the IHO-IOC TSCOM.

Dr TANI (GEBSCO) asked why, in that case, the specific reference to the IHO-IOC TSCOM was necessary.

The PRESIDENT explained that it was intended to show particular appreciation of the experience of members of that Committee in that area.

Dr TANI (GEBSCO) said that the existing cook book had been developed by a working group rather than by the Committee itself.

IGA FRACHON (France) stressed the importance of not duplicating the work of the existing working group. It would be the responsibility of the IRCC to clarify the role of the GEBSCO Guiding Committee, in order to make the best possible use of skills and resources.

The PRESIDENT observed that during the deliberations on the original proposal, it had been repeatedly suggested that it would not be feasible for the GEBSCO Guiding Committee to take responsibility for the project. It had therefore been suggested that the establishment of a new working group would be the most logical step, and would enable the group to make best use of external expertise.

Captain GORZIGLIA (Chile), expressing support for the proposal, suggested that the text should also specify a specific timeframe for producing the first draft of the cook book. It would be ideal to have the first draft available in time for the XIX<sup>th</sup> IHO Conference in 2017.

Dr TANI (GEBSCO) explained that the GEBSCO Guiding Committee would be willing to undertake the work. The difficulty lay in the current Terms of Reference and Rules of Procedure, which did not permit the Committee to undertake a new task. However, both documents were in the process of being revised, and that would enable the work to be undertaken. The revision process would take approximately one year.

Mr SCHOFIELD (Professional Yachting Association) emphasized the urgent need for such a project, and encouraged the Conference to adopt the proposal.

The PRESIDENT welcomed the willingness of the GEBSCO Guiding Committee to participate in the work. However, given the urgent need for better quality data, it was vital for IHO to act as soon as possible.

Mr PRINCE (Australia) asked whether the existing cook book developed by the relevant IHO-IOC TSCOM working group could be used as a means for that Committee to provide input.

Dr TANI (GEBSCO) said that the existing cook book was only related to creating gridded bathymetry from random bathymetric data. The cook book had been created by the TSCOM

## **Plenary Sessions**

working group, overseen by the Guiding Committee and IHO-IOC TSCOM; consequently, that working group had the knowledge and experience to be able to create the cook book for crowd-sourced bathymetry.

Mr DEHLING (Germany) said that the current proposal seemed to be the best compromise, given the pressing nature of the issue.

The PRESIDENT said that the existing cook book only covered one element of the broader issue of crowd-sourced bathymetry. He suggested that the IRCC could be left to set the timetable for producing the cook book; developing the first draft prior to the next Ordinary IHO Conference should not be an issue. He took it that the Conference wished to adopt the draft proposal, as amended.

PRO 4, as amended, was adopted.

## **REVIEW OF DECISIONS TAKEN BY THE CONFERENCE**

The PRESIDENT invited the Conference to review the final text of the decisions it had taken, but requested delegates to avoid re-opening debate on substantive issues. The Conference had not previously conducted such a review, but doing so reflected the good practice in a number of other international organizations.

### **Staff Regulations**

In the absence of comments, the decision on Staff Regulations was confirmed.

### **Technical capacity of the International Hydrographic Bureau**

The PRESIDENT OF THE DIRECTING COMMITTEE said that, as discussed by the Conference, input would be sought from the Hydrographic Standards and Services Committee (HSSC) in defining the role and job description of a staff member to manage the S-100 Geospatial Information Registry.

On that understanding, the decision on the technical capacity of the International Hydrographic Bureau was confirmed.

### **PRO 5, PRO 1 and PRO 2**

In the absence of comments, the decisions on PRO 5, PRO 1 and PRO 2 were confirmed respectively.

### **PRO 3**

Mr HOOTON (United Kingdom) pointed out an apparent discrepancy in the length of the work programme. From the dates given, it was unclear whether it lasted three or five years.

The PRESIDENT OF THE DIRECTING COMMITTEE explained that the decisions before the Conference had been drafted in the expectation that there would be sufficient ratifications of the Protocol of Amendments to the IHO Convention to enable the Assembly to meet for the first time in 2017, at which point the work programme would transfer to a three-year cycle. If that did not occur, it would be a simple matter to adjust the time scales.

The PRESIDENT said that dates would be amended to clarify the matter.



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Mr HOOTON (United Kingdom) added that the wording of paragraphs 2 (a) and 2 (b) of the guidance for the allocation of Council seats should be altered, to avoid any ambiguity and ensure that the original intention was accurately expressed.

The PRESIDENT OF THE DIRECTING COMMITTEE suggested the addition of the words “any of” before the lists of Regional Hydrographic Commissions (RHCs) contained in the paragraphs in question.

Mr HOOTON (United Kingdom) agreed to that suggestion.

On that understanding, PRO 3, as amended, was confirmed.

### **HSSC Report**

In the absence of comments, the decision on the HSSC Report was confirmed.

### **PRO 4 and PRO 6**

In the absence of comments, the decisions on PRO 4 and PRO 6 were confirmed.

### **IRCC Report**

In the absence of comments, the decision on the IRCC Report was confirmed.

### **IHO Capacity Building Strategy**

Captain GORZIGLIA (Chile) pointed out that the document symbol referred to in the decision should be CONF.EX5/REP.03/Rev1.

On that understanding, the decision on the IHO Capacity Building Strategy, as amended, was confirmed.

### **PRO 7**

In the absence of comments, the decision on PRO 7 was confirmed.

### **Finance Report for 2013**

In the absence of comments, the decision on the Finance Report for 2013 was confirmed.

### **Work Programme and Budget for 2015**

The PRESIDENT said that a typographical error in the date specified in the decision would be corrected.

On that understanding, the decision on the Work Programme and Budget for 2015, as amended, was confirmed.

The PRESIDENT suggested that reviewing the final text of decisions taken by the Conference should become a regular feature of the Conference’s agenda.

### **CLOSING CEREMONY (Agenda item 7)**

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### **DATE OF THE NEXT CONFERENCE**

Mr BESSERO (Director, IHB) said that, given the due ratification of the Protocol of Amendments to the Convention on the IHO, the Directing Committee was proposing that the 1<sup>st</sup> IHO Assembly would be held towards the end of March or at the start of April 2017. The precise dates would be decided between the Directing Committee and the Government of Monaco, and would be communicated to the Member States.

It was so agreed.

### **SEATING ORDER AT THE NEXT CONFERENCE**

The letter “Z” was drawn, and the PRESIDENT noted that, since there were no Member States that started with the letter “Z”, the Republic of South Africa, the first country to start with the letter “A” in the French alphabetical list of country names, would be the first in the seating order in 2017.

### **CLOSURE OF THE CONFERENCE**

The PRESIDENT OF THE DIRECTING COMMITTEE announced that, during the Conference, the Directing Committee had been informed that Viet Nam had received the required number of approvals to permit it to join IHO. Following confirmation by the Government of Monaco and receipt by the Government of a letter of accession, Viet Nam would become a full Member State, bringing the total membership to 83. Georgia and Brunei Darussalam were also close to achieving the required number of approvals, and he urged representatives to encourage their governments, if they had not already done so, to consider their position in that regard.

He expressed thanks on behalf of the Conference to the President for the skillful way he had steered the deliberations, and presented him with a gift. He also thanked the Vice-President, and presented him with a gift. He then thanked all Member States for their participation and cooperation, which had enabled the Conference to achieve everything it had set out to achieve.

Following the customary exchange of courtesies, including a tribute to Mr Juha KORHONEN (Finland), who was retiring, for his years of service to the Organization, the PRESIDENT made his closing remarks and declared the 5<sup>th</sup> Extraordinary International Hydrographic Conference closed.

# **ANNEX TO PLENARY SESSIONS**



## 5<sup>th</sup> EXTRAORDINARY INTERNATIONAL HYDROGRAPHIC CONFERENCE

### PRESENTATIONS AND DISCUSSIONS ON TOPICAL ISSUES

#### **Theme 1: The Place of Hydrographic Data in a Geospatial World**

- Keynote Speech What is the Significance of Geospatial Data in the 21st Century?  
*Jan Pierce, Deputy Chief Executive Location Information, LINZ*
- Presentation Where do Marine Spatial Data Infrastructures (MSDI) fit in?  
*John Pepper, Secretary of the IHO MSDI WG*
- Presentation Regional and national examples of SDIs  
*Jens Peter Hartmann, Chair of the BSHC MSDI WG*  
*Ralf Lindgren, Baltic Sea Hydrographic Commission (BSHC)*
- Presentation Supporting technologies  
*Rafael Ponce, Global Maritime Business Development Manager, ESRI*
- Questions and Answers

#### **Theme 2: E-navigation - Its Impact on the IHO and Member States**

- Keynote Speech What is e-Navigation? What will it mean for the mariners, ship operators and Administrations?  
*John Erik Hagen, Coordinator of the IMO e-Navigation Correspondence Group*
- Presentation The view from the ships  
*John Murray, Director Marine, International Chamber of Shipping*
- Presentation The view from industry  
*Michael Bergman, President of CIRM*
- Presentation Test bed experience and examples  
*Gary Prosser, Secretary-General of IALA*
- Questions and Answers

#### **Theme 3: Technology Update**

- Presentation ECDIS - Lessons learned at sea  
*Mark Broster, Managing Director, ECDIS Ltd*
- Presentation Satellite-derived bathymetry (SDB)  
*Dr Thomas Heege, CEO, EOMAP GmbH & Co.KG)*
- Presentation Crowd-sourced bathymetry (CSB)  
*Robert Ward, President of the IHB Directing Committee*
- Questions and Answers

#### **Theme 4: Capacity Building**

- Keynote Speech Where does the IHO Capacity Building Programme fit in?  
*Thomas Dehling, Chair of the CBSC*
- Presentation Industry participation in capacity building  
*Paul Cooper, Vice President, CARIS USA*  
*Don Ventura, Hydrographic Survey Manager, Fugro Pelagos*
- Presentation Assessing hydrographic priorities - the New Zealand risk assessment methodology applied to the South West Pacific  
*Adam Greenland, National Hydrographer, New Zealand Hydrographic Authority, LINZ*
- Presentation A view of capacity building from the recipients  
*Captain Nayeem Golam Muktedir, Director Hydrography, Bangladesh Navy Headquarters*

## **Annex to Plenary Sessions**

### Questions and Answers

*Note: all presentation materials are available on the IHO website at [www.iho.int](http://www.iho.int) > Home > International Hydrographic Conference > CONFERENCE DOCUMENTS > List of Conference Documents > Documents during the Conference > Powerpoint Presentations*

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**PRESENTATIONS AND DISCUSSIONS ON TOPICAL ISSUES**

**7 October 2014**

**Rapporteur: Eric Langlois (France)**

CONTENTS – PART 1

*Theme 1: The Place of Hydrographic Data in a Geospatial World*

*Ceremony marking the impending application of the Republic of the Congo to IHO membership*

*Theme 2: E-navigation – Its Impact on the IHO and Member States*

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**Theme 1: The Place of Hydrographic Data in a Geospatial World**

Mr. Yves GUILLAM (Assistant Director) introduced the five speakers invited to make presentations on the first of the topical issues selected for discussion, namely the place of hydrographic data in a geospatial world:

- Ms. Jan Pierce, Deputy Chief Executive, Location Information, Land Information New Zealand (LINZ);
- Mr. John Pepper, Ocean Wise Ltd and Secretary of the Marine Spatial Data Infrastructure Working Group (MSDIWG);
- Mr. Jens Peter Hartmann, Danish Geodata Agency (GST), Chair of the Baltic Sea Marine Spatial Data Information Working Group (BSMSDIWG), and Mr. Ralf Lindgren, Hydrographic Office of Sweden, who would together make a joint presentation on behalf of the Baltic Sea Hydrographic Commission (BSHC);
- Mr. Rafael Ponce, Global Maritime Business Development Manager, Esri.

Keynote Speech \_\_\_\_\_ : What is the Significance of Geospatial Data in the 21st Century?

Ms. Jan PIERCE (LINZ) noted the rapidly increasing significance of location or geospatial information, including hydrographic and bathymetric data, as a valuable resource with the potential to contribute to economic growth. In that evolving climate, a multifunctional location agency such as LINZ was uniquely placed to respond to the challenges involved in managing New Zealand's location information.

Against that background, she outlined details of the agency's long-term strategic direction; its data centric approach; its award-winning online service providing authoritative and publicly accessible land and seabed free of charge data; and its work as a data steward and custodian, with particular reference to aerial photography and bathymetric research, all of which had a customer-based focus with the aim of contributing to the worldwide growth of open reusable location information and its power to drive growth and innovation.

Presentation: Where do Marine Spatial Data Infrastructures (MSDI) fit in?

Mr. John PEPPER (Ocean Wise Ltd and MSDIWG Secretary) spoke of the Marine Spatial Data Infrastructure (MSDI) in a global knowledge economy where geospatial information is now ubiquitous, and the access to publicly funded data is universally expected with data interoperability as the norm. He listed various fundamental geospatial datasets typically made widely available; socio-economic and other benefits of MSDI; and issues and challenges with respect to the key MSDI components of policy and governance, technical standards, information systems and geographical content.

## Annex to Plenary Sessions

Enumerating reasons for change, he said that cultural and organizational inertia was unsustainable in a modern world; hydrography was much more to do than with charting, and other organizations would certainly take the lead in MSDI if IHO failed to do so. After pointing out the fact that 95% of data acquired remains being locked away from users as not used in chart production, he spelled out potential uses of MSDI data in the area of asset management and decision support, he itemized his conclusions concerning data-related needs and difficulties, as well as the essential steps forward with respect to data management, distribution mechanisms, licensing conditions, MSDI awareness training and briefings, and regional MSDI initiatives. He concluded by urging participants to become a MSDIWG member,

### Presentation: Regional and national examples of SDIs

Mr. Jens Peter HARTMAN (GST and MSDIWG Chair), presenting the regional approach to MSDI, briefly profiled the responsibilities of GST, an agency attached to the Danish Ministry of the Environment, and recalled the role of the International Convention for the Safety of Life at Sea and the IHO in the traditional approach to hydrographic data. Encompassing the three components of MSDI that are data, functionality and governance, MSDI is now the key tool, however, to meet the increasing demands from multiple coordinated activities produced and current expectations for marine and maritime development. In that context, he gave an overview of the multiple datasets associated to MSDI and to marine spatial planning in Denmark, for which the storage, quality and harmonization of such huge amounts of data poses key challenges.

Mr. Ralf LINDGREN (BSHC), continuing the presentation from the Baltic perspective, highlighted the MSDI activities of the Finnish-chaired Baltic Sea Helcom Resurvey Monitoring Working Group, full details of which were available on its website (to be found through a search for “Helcom resurvey site”). He further outlined the Baltic Sea MSDI work plan produced by the Baltic Sea Bathymetry Database Working Group, which had also developed a dynamic and much-used website ([data.bshc.pro](http://data.bshc.pro)) offering data downloads and providing standard geospatial data services, including web mapping. Lastly, he drew attention to some of the landscape and other features of the Baltic Sea entrances, the Western Central Baltic Sea and the north and west of Estonia.

### Presentation: Supporting technologies

Mr. Rafael PONCE (Esri), speaking about the place of geographic information systems (GIS) in hydrography, said that GIS could effectively be harnessed by hydrographic offices in evolving from their traditional geospatial role to a data-centric ‘hydrospatial’ role providing new services and products than just charts. GIS is being transformed through web-based applications offering via such online mapping portals as ArcGis ([www.arcgis.com](http://www.arcgis.com)), from which were outlined the GIS benefits in information visualization and analysis for decision-making purposes with a view to perhaps enhancing navigational safety, mitigating climate change effects or dealing with environmental and other disasters. In short, web GIS is an increasingly important technological tool for integrating, organizing and sharing ‘hydrospatial’ data as an aid to tackling modern-day challenges.

### Questions and Answers

In response to questions from the floor, it was suggested that hydrographic offices, in order to move beyond from their traditional role of nautical chart producers in the SOLAS framework, should seek to capitalize on opportunities arising as part of a government forward-planning process, and promote interoperability within the current framework. Particular emphasis was placed on the need to re-evaluate the use of available resources and means; to ensure that the necessary infrastructure are in place to meet data requirements; and to have a regulatory framework capable of setting standards and harmonizing data exchange among countries at the European level and beyond.



## **Annex to Plenary Sessions**

Hydrographic offices are responsible for providing the best, most reliable and up-to-date data, and there are applications available to allow mariners, policy-makers and others to make proper use of the increasing amounts of complex geospatial data in circulation. For the benefit of encouraging more Member States to join the MSDIWG, it was pointed out that a larger membership in the working group would benefit Member States and increase the potential for knowledge-sharing and for enhancing the availability, visibility and use of the data, and would definitely help to maintain the relevance of the IHO.

### **Ceremony marking the impending application of the Republic of the Congo to IHO membership**

Mr. Gilles BESSERO (Director, IHB) announced that it was the intention of the Republic of the Congo to initiate the IHO membership application process. An official statement will indeed be sent to that effect to the Government of Monaco. He hoped that it would encourage other non-Member States belonging to the Maritime Organization for West and Central Africa (MOWCA) to follow the same path. Mr. Martin Parfait Aimé COUSSOUD-MAVOUNGOU, Minister for the Merchant Navy of the Republic of the Congo thanked the IHB Directing Committee for welcoming the delegation of the Republic of the Congo to this 5<sup>th</sup> Extraordinary I.H. Conference and encouraged the Member States to support his country's application.

This announcement was followed by an exchange of courtesies and symbolic gifts between Mr. Martin Parfait Aimé Coussoud-Mavoungou, Minister for the Merchant Navy of the Republic of the Congo, and the President of the Directing Committee, Mr. Robert Ward.

### **Theme 2: e-Navigation - Its Impact on the IHO and Member States**

Mr. GUILLAM introduced the guest speakers for the second part of the session, on the theme "e-Navigation – Its Impact on the IHO and Member States". They were as follows:

- Mr. John Erik Hagen, Chairman, IMO e-Navigation Correspondence Group;
- Mr. John Murray, Marine Director, International Chamber of Shipping (ICS);
- Mr. Michael Bergmann, Jeppesen and President, Comité International Radio-Maritime (CIRM); and
- Mr. Gary Prosser, Secretary-General, International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA).

Keynote speech: "What is e-Navigation? What will it mean for the Mariner, Ship Operators and Administrations?"

Mr. John Erik HAGEN (Norwegian Coastal Administration) provided an overview of the development and aims of e-navigation systems which, by minimizing errors and accidents, would enhance the efficiency, safety and security of maritime transport and help protecting the environment. While most ships currently carry global satellite navigation systems (GNSS), those systems have yet to be fully integrated and harmonized with existing systems on other vessels and ashore. A major goal is therefore to develop common maritime data structures for data access and information services under SOLAS, for which IHO S-100 had been approved as the baseline standard by the IMO MSC 90. With the International Maritime Organization (IMO) acting as the lead agency, the involvement of industry, together with the IHO cooperation and coordination will be crucial. The Organization is to play a role in, among other things, providing up-to-date chart information in the S-100 format, assisting the industry in adopting appropriate equipment, coordinating other organizations' activities and encouraging Member States to identify shore-based services as maritime service portfolios

## Annex to Plenary Sessions

(MSPs) covering areas such as maritime safety information, nautical charting and publications, ice navigation, real-time hydrographic and environmental information.

### Presentation: “E-Navigation: The View from Ships”

Mr. John MURRAY (International Chamber of Shipping) said that his organization was aware of the importance of hydrographic soundings datasets for successful e-navigation systems. ICS would welcome an opportunity to engage with experts in the IHO on key questions, such as the measures taken by Member States with jurisdiction over polar waters and other remote areas and to address the problem of unreliable charted information. Major concerns in that regard include the lack of a user-friendly mechanism for providing feedback to IHO to identify and bridge the gaps. Another key question to tackle was the requirement for ship navigation to use only official charts and publications, which was undermined by the complexity of electronic chart display and information systems (ECDIS), together with the fact that the released information have to acquire official status, which in turn calls for the coastal States to meet up their commitment under SOLAS through agreements and contracts to carry out appropriate hydrographic surveys. Lastly, it was important to improve communication among relevant stakeholders, including the shipping industry, through early engagement, shared awareness of the issues, and an emphasis on the need for simplicity and clarity.

### Presentation: The view from industry

Mr. Michael BERGMANN (Jeppesen, Comité International Radio Maritime) said that electronic innovation was expanding exponentially, and it was vital to ensure that the new tools now emerging were used wisely, in order to optimize the benefits. The maritime industry must therefore plan for the future rather than dwelling on past achievements.

He summarized developments in the ongoing transition from paper charts combining information and data, through the intermediate technology of pre-digested electronic navigational charts (ENCs) to full electronic chart display and information systems (ECDIS), and the use of navigational overlays. E-navigation systems are starting to integrate data streams to provide situation awareness in real time, for example, by permitting the addition of tidal data to charts at 15-minute intervals, to be used by both ship and shore support services, according to their different needs. Regional clusters of countries are already collaborating on test-bed operations regarding such developments and in due course it will be necessary to bring those activities together, in support of a comprehensive e-navigation worldwide system.

While the main focus of hydrographic office (HO) electronic products is on shipping operating under the International Convention for the Safety of Life at Sea (SOLAS), additional markets are also opening up, for example with products for non-SOLAS commercial fleets, fishing vessels, and recreational boat owners. However, industry can only build solutions if data is accessible. Access conditions must therefore be harmonized worldwide, and the restricted use of unclassified data should be eliminated. There is still, for example, ENC cells that are currently not available through RENC distribution. ENCs and other HO data should comply fully with data standards. The maritime industry should seek agreement on data access, similar to those achieved by the International Civil Aviation Organization (ICAO) for the aviation industry. Maritime Safety Information (MSI) open-access policies, such as INSPIRE, request access to MSI data layers, and the implementation of the Worldwide Electronic Navigational Database (WEND) Principles to be discussed later on during this Conference with Proposal 7 should certainly improve the situation.

In addition to improved access to unclassified data, future activities should include: the definition of standardized IHO data streams; the integration of data from different sources (for example under the control of HOs through the IMO/IHO Harmonization Group on Data Modelling); and the development and support of frameworks for sharing HOs' data streams.

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### Presentation: Test bed experience and examples

Mr. Gary PROSSER (International Association of Marine Aids to Navigation and Lighthouse Authorities) recalled that, since its establishment, IALA had succeeded in fulfilling its primary mandate of creating a unique maritime signalization system, collaborates with IHO, IMO and other relevant organizations in many areas concerning the safety of maritime navigation, including an extensive capacity-building programme. IALA membership has been growing, its activities increasing, and the organization is currently in discussions to change its status from a nongovernmental to an intergovernmental organization.

Through its Strategic Vision 2014–2016, and in collaboration with IHO and IMO, IALA was continuing its work to harmonize aids to navigation systems and related services, including e-navigation and vessel traffic services. E-navigation would clearly be a key contributor to sustainable maritime transport systems, improving both safety and efficiency. IALA was committed to improve e-navigation standards and guidance. In this framework, a dedicated IALA e-navigation committee was established in 2006, collaborating through relevant IMO committees and organizing numerous workshops and seminars on the subject. It has adopted IHO's S-100 and was engaged in S-100 domain management. IALA was also involved in international e-navigation projects, including the coordination of e-navigation test beds, which are now operational worldwide, and have produced numerous relevant recommendations and publications.

HOs have a key role to play in e-navigation developments, through the provision of main e-navigation building blocks such as ECDIS and bathymetry data. Maritime safety information services would certainly grow in tandem with advances in e-navigation, although it is hard to predict the layers of information that will be required for the various end users.

In closing, he drew attention to the IALA e-navigation portal ([www.e-navigation.net](http://www.e-navigation.net)), which provided a wealth of information and examples relating to IALA activities, test-bed operations and other developments on e-navigation worldwide. In that perspective, contributions to the portal are more than welcome.

### Questions and Answers

During the discussion on Theme 2, it was noted that access to e-navigation materials is currently fragmented, resulting in confusion and barriers to information exchange. The goal should be to secure systems that permitted unrestricted access, so that distributors and end users alike have a choice among all the available unclassified e-navigation materials, as it is the case with paper charts. Concerns were expressed about the lack of clarity related to the paper chart, ENC and ECDIS requirements in the scope of port state control inspections. However, efforts are under way to establish guidelines for interpreting the rules and regulations, and the situation should improve. Although progress in e-navigation has been initiated slowly, developments are now advancing rapidly, and once a decision on the e-navigation strategy implementation plan (SIP) will have been taken by IMO following MSC94, there will be a further increase in uptake. There is clearly a need to develop an awareness-raising plan and to increase training worldwide, in order to ensure adequate knowledge of those developments and the capacity to handle them.

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PRESENTATIONS AND DISCUSSIONS ON TOPICAL ISSUES

8 October 2014

Rapporteur: Mr. Jamie CHEN (Singapore)

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*Theme 3: Technology Update*

*Theme 4: Capacity Building*

**Theme 3: Technology Update**

Mr. GUILLAM introduced the guest speakers for the third part of the session, on the theme “Technology Update”. They were as follows:

- Mr. Mark Broster, Managing Director, ECDIS Ltd;
- Dr. Thomas Heege, CEO, EOMAP GmbH & Co.KG;
- Mr. Robert Ward, President of the IHB Directing Committee.

Presentation: Lessons Learned at Sea

Mr. Mark BROSTER (ECDIS Ltd) said that his aim was to describe how customers used IHO charts, the increasing complexity of electronic navigational systems and the possible future direction of the technology. Nowadays, typical ECDIS clients were Second and Third officers with an average age of 23 years and Captains aged between 38 and 40. Electronic Chart Display and Information Systems and ENC’s were used by many different types of companies and recent statistics showed there had been a dramatic surge in their use by the oil and gas industry. There had also been a shift from older to younger users. In reality, the theoretical benefits of such electronic systems, included increased spatial awareness and efficiency, fast, accurate planning, increased safety in dangerous conditions and automated, accurate and timely chart updates. However these were less clear in practice and were currently being rigorously assessed. He also questioned the appropriateness of placing complete reliance on electronic charts transmitted from the “head office” and disregarding the use of paper charts. It was certainly true, however, that shipping companies saw the use of latest technology as a cost effective tool.

At the same time, technology was changing and becoming more complex as there was growing ENC content, greater integration of sensors to ECDIS, need for new ECDIS symbologies and user-friendly interface. Hence there was a need for a wide range of training courses to train and prepare users to use such technology. In future, the key driver for ship operations was “zero down time” where mariners no longer remained with one ship, but were transferred to wherever they were needed and where they had to be competent with various electronic navigational systems.

In conclusion, the use of technology at sea would grow exponentially including remote vessel operations using unmanned ships. Hence there is a need for robust education and training, and sound governance.

Presentation: Satellite-Derived Bathymetry

Dr Thomas HEEGE (EOMAP) presented the spatial and temporal coverage of current satellite-derived bathymetry (SDB) technology using optical and multi-spectral satellite imagery, in particular the application to shallow water bathymetry. Although the global

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satellite imagery coverage was not complete, the method of deriving SDB was an established one. However, it has its limitations, where errors and uncertainties could arise in estimating the depth of the sea bed under varying conditions. As such, considerable research had been carried out in numerous locations to estimate levels of uncertainty associated with the use of SDB. As a result, it was now possible to quantify such errors, making it more likely that such information could be used to generate SDB based nautical charts. The advantages of SDB included its use in base-line mapping for seismic surveys and reconnaissance of large areas of sea space, including trans-national mapping for planning purposes. The method was especially useful in mapping remote areas, where SDB offered an independent and cost effective solution.

In conclusion, there was a need to increase awareness and acceptance of satellite-derived bathymetry, and to develop standards and symbology for SDB derived products.

### Presentation: Crowd-Sourced Bathymetry

Mr. Robert WARD (IHB), using a power-point presentation, said that the Directing Committee had been invited to identify ways and means of addressing the lack of hydrographic information covering some sea areas, for example, the Arctic region. He said there had been a paradigm shift from charts and maps to geospatial information and infrastructures, and the question was whether the IHO should take the lead in that direction. The main purpose of crowd-sourced bathymetry was to glean information from non-traditional hydrographic sources covering areas where the seabed was not adequately surveyed. The ultimate goal was to compile a global reference bathymetric data set. However, the data had to be credible, though it may not always be completely accurate, as was indeed the case with satellite-derived bathymetry. An IHO programme would be initiated to encourage crowd-sourced bathymetry where it would be a low-cost, high-impact activity that would be targeted at the large user community. The role of the IHO would be to bring crowd-sourcing mechanism under its ambit. In fact, an IHO crowd-sourced bathymetry programme already existed in the form of the GEBCO project, which provided open access material as a public good. In addition, the IHO Data Centre for Digital Bathymetry (DCDB) would be the ideal site for crowd-sourced bathymetry. In future, instead of crowd-sourcing from scientific cruises, which had traditionally provided data for the GEBCO project, it would be possible to harness the data from all vessels, provided they could be added to the DCDB collection. Crowd-sourced bathymetry was not intended as a replacement for surveys and charting, but as a way of plugging gaps in the existing data. The DCDB portal was currently being enhanced to accommodate a crowd-sourcing upload portal, with an improved data viewer and a download facility. Like the existing GEBCO database, it would be an open-source reference bathymetry database. The data that was uploaded to the DCDB would not be screened and users would have to assess and decide if it was fit for its intended purpose.

Proof of concept trials had begun in the summer of 2014 in cooperation with the Professional Yachting Association (PYA). The cooperation exercise had collected 24 000 route miles of survey data (acquiring about 20 million soundings), using ships' echo sounders and GPS. The ultimate aim was to have a simple logger that collected data from the echo sounder and GPS receiver in every professionally-crewed vessel in the world. In fact, the equipment that was supplied to each of the five yachts involved received a split feed from the echo sounder and the GPS receiver. The professionally-crewed vessels would have to conform to certain quality standards, thereby guaranteeing the reliability of the data. He outlined how he envisaged the programme would help relieve some burden on hydrographic offices. He said that the uploaded data would eventually be made available for viewing through a data viewer, and users could download data for their use.

The enriched DCDB would also provide another data source for hydrographic offices, as well as for other users, for example in tsunami inundation modelling. The role of the IHO would be to provide guidelines for assessing the quality of crowd-sourced bathymetry data, to examine

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ways of funding the development and maintenance of the programme. He added that the reaction of stakeholders had been universally positive.

### Questions and Answers

Participants from Indonesia, Iran, United Kingdom and IAATO voiced support for the discussion of the methods of bathymetric data collection through SDB and crowd-sourcing, in particular the development of a crowd-sourced bathymetry database and the role of the IHO in developing it. Such a database was particularly useful for areas where the bathymetric data was limited. It was noted that other bodies and organizations were undertaking similar projects with successful results. However, participants felt it was important to consider how the quality of the data could be assessed and be presented, particularly for crowd-sourced projects.

Mr. WARD (IHB), responding to questions from the floor, acknowledged that crowd-sourced data would be less accurate than that collected by bespoke recorders and systems. However, the proposed crowd-sourcing approach should not hinder interested parties from collecting better data. Moreover, it would enable mariners to collect data themselves without the need for expensive and sophisticated equipment. The higher cost of more accurate devices would limit widespread use, especially in IHO-funded programmes. Starting with a simple approach would allow further development in future. It was acknowledged that it was important to establish minimum requirements and guidelines for the acquisition of such data. This would be discussed at subsequent sessions of the Conference. Some participants expressed concerns on the legal implications of collecting data in territorial waters. Mr. WARD opined IHO's liability would be limited as it would only be providing a facility for uploading the information. If individual States wished to put in place mechanisms to restrict such data collection, it would then be a domestic matter.

Dr HEEGE, in response to a query from Russia, shared that satellite-derived bathymetry and the bathymetry assessment system developed by the Netherlands were complementary approaches used at different ranges of water depths. He drew attention to the different types of satellites and means used to collect such data and each satellite type yielded data of different degrees of accuracy.

## **Theme 4: Capacity Building**

Mr. GUILLAM introduced the guest speakers for the last part of the session, on the theme "Capacity Building". They were as follows:

- Mr. Thomas Dehling, Chair of the Capacity Building Sub-Committee (CBSC);
- Mr. Paul Cooper, Vice President, CARIS USA;
- Mr. Don Ventura, Hydrographic Survey Manager, Fugro Pelagos;
- Mr. Adam Greenland, National Hydrographer, New Zealand Hydrographic Authority, LINZ;
- Captain Nayeem Golam Muktadir, Director Hydrography, Bangladesh Navy Headquarters.

### Presentation: Where does the IHO Capacity Building Programme Fit in?

Mr. Thomas DEHLING (Germany), Chair of the Capacity Building Sub-Committee, said that capacity building in hydrography was crucial for responding to the changing environment as well as to growing user demands and the development of new technology. He emphasised that cooperation with Member States and other stakeholders, together with financial and training support, were crucial to ensure beneficial results. Drawing attention to the work of the Capacity Building Sub-Committee (CBSC), he explained that the aim of the IHO capacity

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building work was to assist Member States in achieving sustainable development and to improve their ability to fulfil their hydrographic, cartographic and maritime safety obligations. As such, the Capacity Building Strategy was developed in order to facilitate assessment of the status of hydrographic surveying, nautical charting and nautical information nationally and regionally; to establish close relationships with national agencies and international organizations in order to identify funding and technical assistance; and to cooperate with Regional Hydrographic Commissions.

As part of the strategy, three phases of development had been identified for hydrographic surveying and nautical charting capacity building. Phase 1 comprised the capacity to collect and circulate the nautical information necessary to maintain existing charts and publications. Countries now in that phase would have established a national hydrographic or maritime safety committee, taking steps to improve data collection infrastructure and strengthen links with their respective NAVAREA Coordinator for the dissemination of maritime safety information. Countries in Phase 2 would, inter alia, have the ability to conduct coastal and off-shore surveying activities, including port surveys, and would provide basic geospatial data via a Marine Spatial Data Infrastructure (MSDI). Those identified as in Phase 3 would have the capacity to independently produce paper and electronic nautical charts and publications. This would call for high levels of investment and further development of MSDI.

With the limited capacity building funds available, it was necessary to prioritize project funding allocation. The prioritization was based on a number of factors, including the number of States that would benefit; the phase the action was intended; the availability of external funding; the level of priority within the relevant Regional Hydrographic Commission; and the potential for success from an IHO viewpoint. Activities took a number of forms, such as high-level visits, technical visits, seminars, Category A and B courses and short courses.

As training played an important role in IHO capacity building activities, steps were taken to standardize training courses, investigate blended and e-learning approaches, and improve training for the trainers themselves. It should also be noted that the CBSC worked in close collaboration with a variety of stakeholders, including Member States such as the Republic of Korea and Japan; international and regional organizations; inter-governmental and non-governmental organizations, such as the International Maritime Organization, the International Association of Marine Aids to Navigation and Lighthouse Authorities and the International Federation of Surveyors; industry and academia. In future, more support would be needed due to the growing capacity building system and needs. In conclusion, he complimented all staff and stakeholders who have contributed to the IHO capacity building activities.

### Presentation: Industry Participation in Capacity Building

Mr. Don VENTURA (Fugro Pelagos) outlined the principal requirements for a successful capacity building programme: long-term programme design and strategic planning; long-term commitment from hosts and donors; and up-to-date technological input. Host nations should have recognized and stated requirements, sustainable resources, demonstrable contributions in the form of personnel, facilities and platforms, and, preferably, access to and permission to use existing national data. The host should also become the major stakeholder in its field.

He shared that such programmes were based on 3 “Ps”, namely Policy, Programme and Projects. Where the IHO should continue to lead at the policy level, the hydrographic industry could complement the project work. He added that it was important to ensure that project costs were covered, and a realistic approach should be taken. For example, once a country had identified capacity building as a national priority and had formulated policies, it could be supported by programmes and projects, where industry could facilitate various aspects of implementation, such as preparing solid funding estimates, promoting education,

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and training, generating organic capability, and ensuring sustainability. Distance learning could also be provided.

While mechanisms were in place to bid for enhanced funding, that avenue had yet to be fully exploited. The current funding and structure of CBSC were not intended to support collaboration between IHO and industry where separate and substantial funding from external sources must be sought. Success in capacity building could be measured through sustainability, which IHO could monitor according to the level of activity, the volume of output and the quality of hydrographic data contributions.

Mr. Paul COOPER (Caris) shared examples of successful capacity building programmes carried out in Saudi Arabia, the Republic of Korea, Tunisia, Morocco, Colombia and Ecuador. He highlighted that shared responsibility was vital to ensuring success.

### Presentation: Assessing Hydrographic Priorities – the New Zealand Risk Assessment Methodology Applied to the South West Pacific

Mr. Adam GREENLAND (LINZ), highlighted the importance of shipping, particularly the cruise tourism industry to countries in the South West Pacific, which were mainly small island developing States. The need to improve maritime safety in that region had prompted the New Zealand Hydrographic Authority to develop a new risk assessment methodology to assist in prioritizing charting improvements and resource allocation. The methodology used location information to identify high-risk areas, which were presented in the form of “heat maps”.

During tests in Vanuatu, the risk assessment had highlighted the poor state of charting which raised concerns from the main cruise operator. The results obtained had enabled the Government to engage with donors quickly and effectively, to seek funding for surveys and to leverage the expertise of the South West Pacific Hydrographic Commission. As a result, hydrographic surveys were completed in 2014 which formed the basis of a significant charting programme. Funding from the New Zealand Aid Programme had also enabled the Secretariat of the Pacific Community to complete a case study assessing the costs and benefits of hydrographic surveying and charting. The study had revealed a significant return on investment, so strengthening the economic case for hydrography. The same method had since been applied to Tonga and the Cook Islands, and further risk assessments were planned for other countries in the area.

Hydrographic risk assessment had been incorporated into the new IHO capacity building strategy for use by other Regional Hydrographic Commissions. The methodology, based on familiar and widely understood concepts, was evidence-based and objective, and had the potential for further development for cost-benefit analysis and forecasting. This method had proved successful in raising awareness among key stakeholders of the need to improve hydrographic and maritime infrastructure.

### Presentation: A view of capacity building from the recipients

Captain Nayeem Golam MUKTADIR (Bangladesh Navy Headquarters) said that updating charts was a great challenge for his country because of very high levels of sedimentation. Since the creation of the Bangladesh Navy Hydrographic Department (BNHD) in 1980, a range of capacity building activities had been carried out with the support of numerous donors. In 2012, a technical team from the IHB had visited Bangladesh to identify shortcomings in the BNHD and provided guidance for further organizational and human resource development. The team had made a number of recommendations which the BNHD had taken on board.

The current capacity building programme, though beneficial, was currently insufficient to meet demand, where countries were awaiting for the training they had requested. Moreover,



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courses were often too short, making it difficult for trainees to assimilate knowledge and subsequently transfer it. More funding was needed to ensure that capacity building was sustainable. He made a number of specific suggestions as to how the capacity building programme could be made more effective and pointed out that recipient countries should make the best use of trained staff in their respective organizations.

IHB's efforts under the capacity building programme were much appreciated and Bangladesh was particularly grateful for the assistance it had received in addressing shortcomings and making improvements within the BNHD.

### Questions and Answers

The Philippines raised a question concerning marine environmental protection, where safety and environmental issues were closely linked. In response, Mr. DEHLING said that priorities might vary among regions, but the CBSC was amenable to capacity building requests involving marine environmental matters.

In a reply to Mexico's query on the success rate of the capacity building programme, Mr. DEHLING acknowledged it was difficult to measure success quantitatively, but plans were made to develop and gather more in-depth country profiling, for example by enhancing the C-55.

In reply to Georgia's comment, Mr. VENTURA said that hydrographic services provided by commercial companies covered a large scope including assistance to coastal States when required. But it was emphasized that capacity building should be included in national hydrographic survey plans, and "calls for tender" should include requirements for capacity building activities. Attention was drawn to the importance of taking account of recipient countries' experiences of capacity building, especially if they made suggestions for further improvement.

The floor expressed support for the newly developed risk assessment methodology, especially for an "off-the-shelf" and open-source approach. It was felt that the current tailor-made version might not be sustainable in the long term.

In reply to the question from Senegal, Mr. GREENLAND said that there was potential for the methodology to be used to evaluate the results of decisions made arising from the risk assessment. He added that further work had to be carried out. But ultimately, States or Clients had to be responsible for the decisions made.

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**REPORTS SUBMITTED TO THE  
5<sup>TH</sup> EXTRAORDINARY  
INTERNATIONAL HYDROGRAPHIC CONFERENCE**



## REPORT OF THE STAFF REGULATIONS WORKING GROUP CONCERNING ITS REVIEW OF THE STAFF REGULATIONS

**Submitted by:** Staff Regulations Working Group

### Introduction

1. In 2007 the XVIIth International Hydrographic Conference (IHC) established the Staff Regulations Working Group, by Decision No. 18 (PRO 19), with the following Terms of Reference:

- Conduct a holistic review of the existing Staff Regulations.
- Propose any changes to the Staff Regulations necessary to administer the IHB effectively using consistent and internationally accepted procedures.
- Propose any additional changes to the Staff Regulations that would be necessary upon implementation of the new Secretariat organization.
- Provide a Report on its work by Circular Letter to Member States in 2009.

2. The Directing Committee reported to the XVIII<sup>th</sup> IHC in 2012 that the SRWG had been unable to complete its work. As a result, the XVIII<sup>th</sup> IHC agreed that the SRWG be reconstituted under the chairmanship of UK and that it should report back to the 5<sup>th</sup> Extraordinary International Hydrographic Conference in 2014. This report is submitted in accordance with that instruction.

3. The reconstituted SRWG has conducted all its work by correspondence and telephone conference. The current membership is as follows:

Chair: Mr Andrew MILLARD (UK)

Members: Ms Rebecca CUSACK (Australia)

Rear Admiral Patricio CARRASCO (Chile)

Dr Kai TRUMPLER (Germany)

Commander Manuel Ricardo LOPEZ CRUZ (Mexico)

Captain Vadim SOBOLEV (Russian Federation)

Ms Stephanie McFADDEN O'NEILL (United States of America)

This report represents the views and input of the members of the working group from Australia, Chile, Germany, UK, and USA. No input was received from the representatives of Mexico or the Russian Federation.

4. In order to bring the findings of the SRWG to a conclusion and to provide a report to the 5<sup>th</sup> EIHC in 2014, the SRWG agreed to enlist the services of an independent expert to carry out a comparison between the staff regulations of appropriate third party international organizations and those of the IHB and to recommend changes as appropriate.

5. The Officers of the Finance Committee and the Directing Committee met on 31 October 2012 and agreed that, subject to the support of the SRWG and the development of an appropriate justification statement and contract definition, such activity could be considered as a special project or as consultancy support and paid for under the existing IHO budget framework.

6. As an intergovernmental organization, the IHO Staff Regulations currently use UN salary scales and conditions of service as the benchmark for Directors, translators and internationally recruited staff, in combination with the conditions of service of Monaco Civil

Servants for locally recruited staff. There is therefore an obvious logic for any benchmarking exercise to include a comparison with the existing arrangements under the UN Common System.

7. Two options were considered:

Option 1: To carry out a wide ranging review of the IHO Staff Regulations by comparison with similar regulations of other international government-to-government and international trade associations.

Option 2: To carry out a more focused review of the IHO Staff Regulations in relation to those of the United Nations and, where applicable, the Monaco Civil Service.

8. Indicative costs were sought for these two options which suggested that Option 1 would cost in the region of €56,500 plus expenses and Option 2 would cost approximately €17,500 plus expenses.

9. The SRWG considered that Option 2 that involved a comparison with United Nations and, where applicable, the Monaco Civil Service conditions of service represented better value for money. In coming to this decision, the SRWG took a pragmatic view that the UN Common System and the Monaco Civil Service were already established benchmark organizations as far as the IHO is concerned and, in any case, a much wider and more expensive comparison with more organizations would be of limited value. This was because any recommendations involving a reduction in current benefits to the existing Staff would be difficult to implement and would involve buying out existing benefits with a lump sum which would increase short term IHO costs in favour of longer term savings and the identification of any other comparator organizations that indicated an increase in remuneration was appropriate would, in any case, be unaffordable for the IHO.

10. Following some delay in finding a suitable expert, a contract was let with Ms Marianne Brzak-Metzler. Ms Brzak-Metzler was Chief of the Conditions of Service Section at the United Nations until she retired in 2010. Since then she has carried out consultancy work similar in nature to that required by the IHO, for the International Tribunal for the Law of the Sea, the Office for Information Communications Technology at the United Nations, UN Women, the International Maritime Organization (IMO), the United Nations Population Fund (UNFPA), the International Civil Aviation Organization (ICAO), and the International Civil Service Commission (ICSC).

11. The terms of reference for the consultancy work are set out in Annex A. In summary, the Consultant was tasked to:

Phase 1:

- Review the adequacy of the job descriptions of the International Hydrographic Bureau (IHB) to confirm adequacy for UN/Monaco Civil Service comparison purposes.
- Provide a comparison of the principal benefit levels, by grade between the IHB staff, UN and Monaco Civil Service.
- Provide comments and advice where differences exist.
- Provide suggestions for a more equitable process for applying grade increments.
- Provide advice on how to apply social benefits in certain circumstances.
- Provide advice on options to transition.
- Provide recommended updates to the Staff Regulations.
- Provide recommended updates to the Staff Regulations to reflect impending new structure of Secretary-General (S-G) and subordinate Directors.

Phase 2:

- Undertake a classification review and evaluation in the IHB and evaluate them against the classification standards of the International Civil Service Commission (ICSC).
- Prepare job descriptions for the Directing Committee and evaluate them against the classification standards of the ICSC.
- Prepare job descriptions for the Secretary-General and Directors under the new IHO structure.

## **Current IHO Salary and Benefits Regulations**

12. The salaries of Directors, Category A Staff and Translators (Category B-Translator (BT)) are aligned with various UN pay scales on initial appointment:

- a. the alignment of Directors is at the UN D-1 level;
- b. the alignment of Category A Staff is at the UN P-4 level or other level as appropriate; and
- c. the alignment of Translators (BT) is at the UN P-1 level.

13. In the case of Category B (except BT) and C Staff, their pay scales are aligned with similar posts in the Monaco Civil Service.

14. All IHB salaries follow the cost of living adjustments applied to the basic salary of the permanent Civil Servants in Monaco.

15. The existing financial allowances and benefits provided to IHB Staff are generally aligned in a similar way to salaries, such that the financial allowances and benefits for Directors and Category A staff are aligned with UN arrangements; whereas the financial allowances and benefits for Category B and Category C staff are aligned with the corresponding arrangements in the Monaco Civil Service.

## **Comparison Methodology**

16. Prior to making a site visit to Monaco, the Consultant was provided with up to date job descriptions for all personnel employed at the IHB together with draft job descriptions for the Secretary-General and the Directors, which may be applicable after the revised Convention on the IHO enters into force. During the site visit, a representative from the Department of Human Resources of the Monaco Civil Service attended and provided advice in relation to comparisons with the Monaco Civil Service. The Consultant subsequently provided the report and recommendations summarised below.

## **Principal Findings and Recommendations of the Consultant**

### **General**

17. Finding 1. Based on a review comparing the salaries of staff in the IHB with those of staff in the Monaco Civil Service and the United Nations Common System, the Consultant concluded that the current salaries of staff in the IHB are very competitive with the comparator organizations.

### **Directors, Category A Staff and Translators (BT)**

18. Finding 2. The Consultant concluded that the salary and allowance package of the IHB for the Directors, Category A and BT staff provides for salaries and allowances that are very closely aligned with the salary and allowance package for staff in the Professional and higher categories of the United Nations Common System.

**Consultant's Recommendation:** No change required to the salary and allowance packages for staff in these categories.

However the SRWG felt that an overriding principle should be applied to the Staff Regulations that salary and benefit packages should not exceed – all other circumstances being equal (for example, experience) - the comparable grade within the UN Common System for acceptable levels of performance. A comparison of each relevant position should be undertaken regularly as part of the process detailed in IV 1.1 (f): *“All salaries will be reviewed at the midpoint between the Conferences and the results reported to the Conference 6 months before”* in order to confirm this.

### **Category B (except BT) and C Staff**

19. Finding 3. Based on the information provided relating to salary levels of the Monaco Civil Service, the Consultant was unable to make any substantive comments or draw any particular conclusions as to how the Monaco salary levels compare to current salaries of the Category B and C staff of the IHB as there was no information available on the number of steps and the duration of years spent at each step and the level of the applicable indices. Accordingly, it was not possible to determine exactly where the IHB salaries lie on the salary index tables of the Monaco Civil Service. The Consultant reported that they seem low which would infer that the IHB salaries are those to be found at step 1 of the respective salary tables.

**Consultant's Recommendation:** The Consultant considered that no change was required to the salary and allowance packages for staff in these categories.

However the SRWG felt that an overriding principle should be applied to the Staff Regulations that salary and benefit packages should not exceed - all other circumstances being equal (for example, experience) - the comparable grade within the Monaco Civil Service for acceptable levels of performance. Therefore a comparison of each relevant position should be undertaken regularly as part of the process detailed in IV 1.1 (f): *“All salaries will be reviewed at the midpoint between the Conferences and the results reported to the Conference 6 months before”* in order to confirm this.

20. Finding 4. The Consultant noted that the SRWG had previously discussed revised salary progression arrangements whereby for Category B and C staff, recruited after a certain date, progression would not be dictated primarily by length of service but by performance. This is based on the principle that a Staff Member should reasonably be expected to meet the full requirements of the role within five years, or sooner depending on prior knowledge and experience. At that point a member of staff should be paid the Target (market) Rate for that role, with increases beyond that Rate restricted to performance above that normally expected. However, the SRWG agrees that existing Monaco practice may be followed, even if this practice entails the salary increases based mainly on length of service, being aware that the increases may continue throughout the length of service.

**Consultant's Recommendation:** The Consultant noted that if it is the intention to implement such new arrangements they should apply only to newly recruited staff who are recruited as of a certain date. There could potentially be an issue of existing staff claiming acquired rights with respect to the level of salary. In that context, in the United Nations Common System it is the practice to maintain the salaries of existing staff until they are overtaken by increases in any revised scales and to only implement revised salary scales for newly recruited staff.

The SRWG considers that the salaries and salary progression of Category B and C Staff should follow the principles that are applied to the Monaco Civil Service such that salaries and benefits should not exceed those that apply to the Monaco Civil Service.



### **All categories of staff**

21. Finding 5. Basic salaries are adjusted twice a year based on movements in the cost of living as determined by the Government of the Principality of Monaco. Adjustments to the salaries of IHB staff follow local practice and are adjusted much more frequently than those of staff in the United Nations Common System.

**Consultant's Recommendation:** The Consultant commented that with regard to modifications to the salaries, while following the Monaco Civil Service system of salaries, IHB could give consideration to revising the current salary tables to increase time spent at step. Since the movement of outside salaries do not necessarily follow movements in cost-of-living, consideration could be given to granting a percentage of the cost-of-living movement versus granting the full amount, i.e. 90%. This could apply to Category A, BT, B and C Staff. Adjustments to salaries could be made less frequently, perhaps once a year.

The SRWG considers that the salaries and salary progression of Category B and C Staff should follow the principles that are applied to the Monaco Civil Service such that salaries and benefits should not exceed those that apply to the Monaco Civil Service.

### **Allowances & Benefits**

22. Finding 6. The Consultant noted that the family allowances and social security benefits for Category B and C staff are generally in conformity with those found in the Monaco Civil Service. The allowances available to Professional Staff mirror those found in the United Nations Common System.

**Consultant's Recommendation:** The Consultant considered that there is no need to make any changes to any of these allowances and social benefits. The retirement schemes seem well suited to the needs of the IHB.

### **Recommended updates and comments on IHO Staff Regulations**

23. Finding 7. The Consultant found that the Staff Regulations should be amended to reflect the impending transition from a Directing Committee comprising the President and two Directors to a Secretary-General and two subordinate Directors.

**Consultant's Recommendation:** The Consultant recommended that references to the "President", "Director" and "Directing Committee" should be revised to take account of the anticipated top-level of the management structure of the IHO Secretariat consisting of the Secretary-General and two sub-ordinate Directors.

24. Finding 8. The Consultant reported that the responsibilities of the Secretary-General should be defined.

**Consultant's Recommendation:** The Consultant recommended the following for inclusion in Chapter 1 to replace the current language under para.1.2: *"Responsibilities of the Secretary-General: The Secretary-General, as the chief administrative officer of the Organization and Head of the Secretariat, shall be responsible for ensuring that all personnel employed in the Bureau comply with these Regulations, which are designed to facilitate the work of the Bureau whilst at the same time safeguarding the welfare of the Staff."*

25. The Consultant provided advice on how the UN Common System defines "recognized home", "same-sex partnerships" and "dependant spouse". The Consultant's advice is comprehensive but does not make any recommendations for changes in the IHO Staff Regulations.

**Consultant's Recommendation:** The Consultant provided advice but did not recommend any particular changes.

However, the initial SRWG (2007-2012) highlighted that the terms “*recognized home*”, “*same-sex partnerships*” and “*dependant spouse*” should be clarified in the Staff Regulations. The SRWG recommends that these terms be defined and brought into line with the UN policies for internationally recruited staff, and with the Monaco Civil Service for locally recruited staff.

26. The Consultant also provided an outline response on the treatment of Education Grants, Rental Subsidy, Special Leave, Social Security, Retirement and Separation from Service under the UN Common System.

**Consultant’s Recommendation:** The Consultant provided advice but did not recommend any particular changes.

However, the initial SRWG (2007-2012) highlighted that the policies on Education Grants, Rental Subsidy, Special Leave, Social Security, Retirement and Separation from Service were out of step with the comparable organizations. The SRWG recommends that these policies are brought into line, as far as possible, with the UN Common System for internationally recruited staff and with the Monaco Civil Service for locally recruited staff.

### **Implementing Changes to Staff Regulations**

27. The Consultant was asked to advise on how the UN implements changes to Staff Regulations. In those cases where the General Assembly has decided to revise an allowance to a lower amount, the Consultant reported that the practice has been to approve the revised allowances as of a certain date and to “grandfather” the higher allowances for those eligible staff until they are overcome by increases or phased out. Eligible staff joining after the specific date would only be entitled to the revised allowance.

**SRWG Recommendation:** The SRWG recommends that the IHB should also adopt this approach to the introduction of any allowances to avoid existing staff, who may have acquired rights, from being affected detrimentally. New policies and allowances would apply immediately to staff starting after the implementation date.

### **Other considerations from the SRWG**

#### **Health Care Arrangements**

28. The current SRWG, like its predecessor, is concerned over the potential financial liability placed on the IHO due to the existing current healthcare arrangements for staff and retirees.

29. Currently, the health care arrangements of all existing staff together with retirees resident in Monaco or France are covered by the IHO. The cover provided is roughly equivalent to the health care available to members of the Monaco Civil Service.

30. The IHB has been unable to join any intergovernmental health scheme (UN, for example) or the Monaco CCSS. The IHB has asked both organizations and been refused. The French social security system is not available to IHB staff because they do not and cannot make financial contributions to the French social security system during their period of employment with the IHO. This is the reason that locally recruited retirees continue to receive IHO health cover during their retirement. However, it does not explain why this arrangement covers internationally recruited personnel that choose to spend their retirement in Monaco or France rather than their country of origin. This particular benefit appears to have been included in the first edition of the Staff Regulations (1974). The application of the benefit to Directors as well as to other internationally recruited staff was introduced in the third edition (1988) of the Staff Regulations.

31. In recent times, the Directing Committee has attempted to minimise the exposure of the IHO to significant medical claims by requiring all newly recruited staff to make a declaration at the time of joining that neither they nor their dependents are suffering from any chronic illnesses or medical complaints. This is in addition to the staff member undergoing a medical examination in accordance with the current Staff Regulations. However, thereafter, if a serious medical condition arises, then the IHO will nevertheless be liable for medical expenses in accordance with the Staff Regulations.

32. In about 1997, the IHB sought medical insurance cover to guard against large claims that might occur in any particular year. Up until that time, all medical claims had been met directly from the annual operating budget. Only very recently, the Directing Committee has discovered that because of the nature of the Organization and the need to obtain cover for its staff AND its retirees, the only medical insurance schemes to which it can subscribe do not operate as normal health insurance schemes. In the case of the IHO, the level of the medical insurance premiums is adjusted annually according to the claims history. This means that overall the IHB is never reimbursed for the full value of its premiums. In the last seven years, the IHB has only recovered an average of 67% of its premiums. In this context, the use of such insurance schemes is questionable.

**SRWG Recommendation:** The SRWG recognises that further investigation is required to identify suitable options. The SRWG recommends, if possible, the adoption of the UN practice of providing a subsidy towards a personal healthcare policy that is taken out by eligible staff members. However, suitable arrangements must also be identified for the current and future retirees. In any event, the outcome must seek to minimise the potential financial liability on the IHO budget.

In addition the SRWG notes that currently healthcare support is available for internationally recruited retired staff that continue to live in Monaco or France. The SRWG considers that this is inconsistent and is an erroneous entitlement that should not be available for internationally staff recruited in the future.

Recommendations that seek to address these issues should be presented to Member States when the revised Staff Regulations are submitted to Member States for approval.

 ***Amending the current Staff Regulations to reflect the differences between internationally recruited staff and locally recruited staff***

33. The SRWG felt that it would aid clarity if the Staff Regulations were re-formatted in such a way to clearly reflect the differences between internationally recruited staff and locally recruited staff.

**SRWG Recommendation:** The SRWG recommends that the Staff Regulations be re-formatted and presented in such a way to show separately and clearly the differences between internationally recruited staff and locally recruited staff thereby making it clear that internationally recruited staff are aligned with the UN regulations and locally recruited staff are aligned with the regulations of the Monaco Civil Service.

***Leave entitlements***

34. Clause III.6 of the current Staff Regulations indicates that a list of official holidays to be observed will be promulgated each year by way of a Staff Memorandum. Records show that this list has always been based on the official holidays promulgated by the Government of Monaco. However, the list of official holidays promulgated by the Directing Committee for IHB staff currently includes up to four days not included in the Monaco Civil Service entitlement. In addition to the official holidays and the annual leave entitlement, IHB staff have been receiving additional paid leave during the period when the IHB is closed between Christmas and the New Year holidays. This practice has been in effect since at least 1928.

35. The SRWG considers that the current, albeit long standing practice, for staff to receive the days off between Christmas and New Year as paid leave in addition to their normal leave allowance is out of line with similar international organizations. The granting of this extra leave represents an average of 4.5 additional days. This difference may be compensated, totally or partially by different working conditions (including annual leave regime and flexible working hours) in the Monaco Civil Service.

36. The SRWG considers that the principle of using paid leave in the UN and the Monaco Civil Service for comparison and benchmarking purposes should be maintained. While it is acknowledged that long standing practice may be considered an assumed entitlement, the SRWG considers that the Directing Committee should investigate ways to remove any significant deviation.

37. The SRWG notes that the current Staff Regulations allow for flexible working hours on an individual basis. The SRWG considers that this represents a system of modern working practice that could perhaps provide a mechanism to help address any deviation from the current regime of leave entitlements for the Monaco Civil Service.

**SRWG Recommendation:** The SRWG recommends that the Directing Committee propose ways to harmonize paid leave practices with the Monaco Civil Service, while being particularly mindful of the fact that granting an additional 4.5 days of paid leave to staff between Christmas and New Year's deviates from the standard practice of using paid annual leave during that time at other international organizations. The DC may wish to explore ways of phasing out this practice.

 **Drafting of a revised version of the Staff Regulations**

38. In 2007 the Directing Committee submitted a marked-up copy of the existing Staff Regulations to the SRWG. This version contained changes proposed by the Directing Committee to remove some ambiguities and to address inconsistencies. This version was progressively modified during the early work of the first SRWG. The work has now been supplemented by the Consultant's Report and the observations and recommendations of the SRWG contained in this Report.

39. The SRWG proposes that the Directing Committee completes the drafting work, taking into account the work done earlier, together with the input from the report of the Consultant and the observations made by the current SRWG and develops a proposed text for consideration by Member States no later than July 2015 or three months before the amended Convention on the IHO enters force, whichever is the earlier. All proposed changes should be properly justified.

**Recommendations**

40. Member States are invited to:

- a. **Note and Approve** this Report,
- b. **Agree** that the IHO should adopt the overriding principle that salary and benefit packages awarded to Staff at the beginning and over the course of their service to the Organization should not exceed, for acceptable levels of performance, the comparable grade within the UN Common System for internationally recruited staff and the equivalent grade in the Monaco Civil Service for locally recruited staff.
- c. **Agree** that a comparison between the salaries and allowances for each IHB position and the relevant comparator Organization (UN Common System or Monaco Civil Service) should be undertaken regularly as part of the process detailed in clause IV 1.1 (f) of the current Staff Regulations to confirm that salary and benefit packages do not exceed, for acceptable levels of performance, the comparable grade.

- d. **Agree** that where the salary and/or any allowances for a particular Staff position exceeds the value of the comparator, the salary and/or allowances should then be frozen until such time as the comparator salary and/or allowances exceeds the IHB level.
- e. **Agree** that any changes to salary levels, or terms and conditions are adopted with effect from a certain date. Where any salaries or allowances are reduced, the salaries and allowances for existing staff will be frozen until they are overtaken by increases or phased out. Revised salaries and allowances will be effective for all Staff recruited after the effective date of any changes.
- f. **Agree** that various consequential changes to the Staff Regulations are required to reflect the impending transition from a Directing Committee comprising the President and two Directors to a Secretary-General and two subordinate Directors.
- g. **Agree** that various non-substantive typographical and formatting adjustments are required to the existing text of the Staff Regulations to remove ambiguities, aid clarity and understanding and to assist in the consistent implementation of the Regulations in the future.
- h. **Instruct** the Directing Committee to draft amendments to the Staff Regulations and other relevant regulations relating to conditions of employment of the IHB staff taking into account the earlier work done, together with input from the report of the Consultant and the observations and recommendations made in this Report and to develop a proposed text for consideration by Member States no later than July 2015 or three months before the amended Convention on the IHO enters force, whichever is earlier. All proposed changes to be properly justified.
- i. **Instruct** the Directing Committee to prepare job descriptions for the Directing Committee and for the Secretary-General and Directors under the new IHO structure.
- j. **Instruct** the Directing Committee to investigate ways to mitigate the potential liability as a result of healthcare claims and the use of group insurance policies and/or subsidised individual insurance policies and make a recommendation to Member States at the same time that the revised Staff Regulations are presented to Member States for approval.
- k. **Instruct** the Directing Committee to redraft the Staff Regulations in such a way as to show separately and clearly the differences between internationally recruited staff and locally recruited staff thereby making it clear that internationally recruited staff are aligned with the UN regulations and locally recruited staff are aligned with the regulations of the Monaco Civil Service
- l. **Instruct** the Directing Committee propose ways to harmonize paid leave practices with the Monaco Civil Service.

## ***Annex A***

### **Letter of Agreement dated 19 July 2013 Consultant: Ms Marianne Brzak-Metzler**

#### **1. Summary of the task:**

Carry out a review and comparison of the existing IHO Staff Regulations with reference to the corresponding conditions applicable in the United Nations and the Monaco Public Service, including a site visit. Provide a report and recommendations that addresses those tasks described in section 2 below.

#### **2. Detailed requirements of the tasks:**

##### Phase 1:

- Review adequacy of job descriptions of the International Hydrographic Bureau (IHB) to confirm adequacy for UN/Monaco Public Service comparison purposes;
- Provide a comparison of the principal benefit levels, by grade between the IHB staff, UN and Monaco Civil Service;
- Provide comments and advice where differences exist;
- Provide suggestions for a more equitable process for applying grade increments;
- Provide advice on how to apply social benefits in certain circumstances;
- Provide advice on options to transition;
- Provide recommended updates to IHO Staff Regulations;
- Provide recommended updates to the IHO Staff Regulations to reflect impending new structure of Secretary-General (S-G) and subordinate Directors.

##### Phase 2:

- Undertake a classification review and evaluation in the IHB and evaluate them against the classification standards of the International Civil Service Commission (ICSC);
- Prepare job descriptions for the Directing Committee and evaluate against the classification standards of the ICSC;
- Prepare job descriptions for the Secretary-General and Directors under the new IHO structure.

#### **3. Timetable:**

The following timetable shall apply:

- 1 October 2013: Commence review of existing regulations and job descriptions;
- 14-18 October 2013: On site visit to IHB in Monaco;
- 2 December 2013: Draft report of phase 1 to the Chair of the SRWG;
- 16 December 2013: Draft report of phase 2 to the Chair of the SRWG;
- 31 December 2013: Final Report to the Chair of the SRWG.

**4. Value of Contact:**

A total payment of 25,500 Euro shall cover all expenses, outgoings and expenditures related to conducting and successfully completing the work described in section 2. No other payment is envisaged for this work.

Payment schedule:

- 25% will be paid within 10 days of this letter being signed by consultant and returned to the IHB.
- 75% after the Chair of SRWG submits an acceptance report to the IHB.

***ADDENDUM1 to CONF.EX5/REP.01***

**MEMBER STATES' COMMENTS**

**CANADA**

Canada would like to thank the Staff Regulations Working Group for their efforts in producing this report.

Canada, in general, accepts the recommendations presented subject to the following comment:

Para. 40 i. – Canada recommends that the IHO explores other options for preparing the job descriptions for the Directing Committee (and future Secretary-General and Directors). Even though the Member States would be given the opportunity to evaluate and approve the job description, it would be preferable if the Directing Committee is not given the task of writing their own job descriptions.

**GREECE**

Greece regrets that after more than seven years, since the XVIIth IHC in 2007, no significant progress has been made to produce a revised text of the SR, in accordance with its Decision No. 18 and Decision No. 2 of the 2012 IHC.

Greece is of the opinion that the 5<sup>th</sup> EIHC must be a very good opportunity for various important issues to be discussed and the SRWG to note and be benefited from the comments that will be presented by the participants in progressing a holistic review of the SR.

Salary levels of the Directors and staff compared to corresponding salaries of the UN based on the mission and structure of the two organizations, the medical care, the social benefits after retirement, the need to continue the supplementary retirement benefits not foreseen in any other international organization and from which only the Directing Committee has been excluded, the progression tables, the disability and occupational benefits, the definitions of the internationally and locally recruited staff, are some of the important topics contained in the consultant's and SRWG reports, that should be discussed.

Although Greece agrees in principle with the various items in the last part of the SRWG report, it is of the opinion not to take any decision at this stage, as we do not have a consolidated text of the amended SR and a full picture of what finally will be proposed and amended. It will be better to note the report and provide some preliminary views on the various topics that will help the SRWG to progress its work.

SR is a very important document as it sets the administrative and financial relationship between the Organization and the Directors and staff. Every clause of it touches upon financial issues. It will probably be true if we would say that the SR includes and affects 90% of the budget of the Organization and consequently the contribution of Member States. To this effect Greece is of the opinion that the SR must not be approved through the Circular Letter procedure; instead, when the final amended text is concluded, this is to be examined in a similar way that the amended Convention and General and Financial Regulations were examined and approved. This can be done during the next IHC in 2017 or in a special meeting of the Heads of HOs.



Due to the importance of the SR and the various topics that includes, Greece proposes the examination of the necessity of establishment of a Legal Expert Group (LEG) to help the SRWG to clear, from the legal point of view, the various amendments. Such a group had been established and helped the Strategic Planning WG in amending the Convention and the General and Financial Regulations.

Finally Greece proposes that every proposed amendment to be followed by a positive or negative cost estimate, in order that Member States will have a clear picture of the financial consequences of the amendments.

## **UK**

The United Kingdom fully supports the recommendations made by the Staff Regulations Working Group and would like to see them enacted.

In particular, it supports the adoption of the overriding principle that salary and benefit packages awarded to Staff should not exceed the comparable grade of the UN Common System for internationally recruited staff and the equivalent grade in the Monaco Civil Service for locally recruited staff.

We also believe that there is an urgency to enact the particular recommendation relating to the Health Insurance Liability which, if left unresolved, could lead to a liability that would prove to be a severe draw on IHO funds. This has to be a financial risk on the IHB risk register.

However, and accepting that this was not within the scope of the SRWG report, the United Kingdom feels that the IHB has perhaps been immune to the economic pressures felt by all of the other member states who have faced staff cuts, pay freezes and increased pension contributions. Manpower represents a very high fixed cost of the IHB and draws on a high proportion of the memberships subscriptions that meet running costs. At a time when there continue to be significant downward economic pressures globally, it is imperative to focus on reducing costs. The United Kingdom would therefore like to see a period of at least 3 years, where costs of the IHB are, as a minimum, capped and, as appropriate, reduced. It is accepted that this may result in some prioritization of the work that the IHB can support which it is suggested should be on core technical advisory work. However, it is noted that the consultant supporting the SRWG report found that salaries of the IHB staff are “very competitive”, which we understand means “exceed” those of comparator organizations.

## **USA**

The United States has carefully reviewed the Staff Regulations Working Group report. We are pleased with the work that has been accomplished and appreciate the degree to which this report reflects Member State recommendations.

However, we want to point out that item 26 notes the IHO Staff Regulations are out of step, and we would like to request an analysis of the cost implications – item by item – of bringing the IHO Regulations in line with those of the United Nations.

## IHB COMMENTS

The IHB Category B and C Staff have forwarded detailed observations on the Report and recommendations of the SRWG, and the associated comments received from Member States, to the Directing Committee through their representatives on the Joint Staff Consultative Committee, constituted in accordance with Chapter XII of the Staff Regulations.

The comments of the Category B and C Staff highlight a number of areas where they consider that the findings of the Consultant are inaccurate. Their comments cover Findings 1 to 6, health care arrangements, leave entitlements, and the value of the current pension entitlements. The Category B and C staff also question if there are any other comparable intergovernmental organizations that operate with a secretariat of such a small size as the IHB.

Recommendation 40h of the Report proposes that the Conference instructs the Directing Committee to draft amendments to the Staff Regulations and other relevant regulations relating to conditions of employment of the IHB Staff taking into account the earlier work done, together with input from the report of the Consultant and the observations and recommendations made in the Report and develop a proposed text for consideration by Member States. Subject to the approval of this recommendation by the Conference, and following common best personnel management practice, the Directing Committee proposes to also take into account the views of the Staff, including the submission from the Category B and C Staff, when developing a proposed text for the subsequent consideration by Member States.

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## REPORT ON THE TECHNICAL CAPACITY OF THE INTERNATIONAL HYDROGRAPHIC BUREAU

Submitted by: The Directing Committee

### Introduction

1. In response to PRO 2 submitted by UK, Decision 6 of the 18<sup>th</sup> International Hydrographic Conference (IHC-18) requested that the Directing Committee, in consultation with HSSC, *“develop proposals to ensure that there is appropriate technical capacity within the Bureau to support the Organization through a period of significant change resulting from the transition to digital navigation and, where these can be met within the existing budget, encourage them to be acted on, and to report back to the 5<sup>th</sup> EIHC”*.
2. The Conference suggested *“identifying priorities as well as the technical resources that would be required, including the involvement of other stakeholders, in the management of the S-100 registry and the possibility of certain levels of financial support”*.
3. This report and its recommendations are submitted in response to the request of IHC-18.

### Discussion

#### *Workload and Output*

4. The scope and intensity of work undertaken by the IHB has progressively increased over time as shown in the various statistics illustrated in Appendix 1. Examples include:
  - an increased number of Member States,
  - more Regional Hydrographic Commissions (RHCs),
  - RHCs now meet more regularly,
  - the IHB now provides the secretary in a significant majority of IHO bodies,
  - a significant increase in the management and implementation of the IHO Capacity Building Programme,
  - the maintenance of the IHO documentation which has become comprehensive,
  - the maintenance of the IHO website which is now very extensive and continues to grow in size,
  - the introduction of programme performance monitoring,
  - the Directing Committee is involved in more outreach activities and representational duties, including the active recruitment of new Member States,
  - implementation issues related to ECDIS,
  - participation in the development of the IMO e-navigation strategy,
  - IHO representation in a number of new intergovernmental initiatives, such as the Group on Earth Observations (GEO), United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM), and European Union (EU) geospatial and maritime programmes.
5. In general, whenever new obligations have been placed on the IHB, there has been no compensating reduction in existing requirements.

### **Staffing Levels**

6. The HB comprises 19 salaried personnel. Eight senior members (three Directors, four Assistant Directors (ADs) and a Manager of Finance and Administration (MFA)). The Directors and Assistant Directors are drawn from around the world on fixed terms of employment. The MFA is recruited locally as are the 11 support and administrative staff that are, in effect, permanent employees. The turnover rate for the locally recruited staff is very low, which means that the ability to introduce significant new skills such as expertise in GIS or other new information and communication technologies among the permanent staff is limited. At the same time, the Directing Committee and the ADs are increasingly involved in more demanding outreach, administrative and secretariat roles.

7. In recent years, the IHB staff has been supplemented by officers seconded from Japan and the Republic of Korea. These officers have been employed almost exclusively on project related activities in support of the IHO technical programme. They have purposely not been employed on core IHB tasks so as not to build a dependency on seconded officers in positions that may not be filled on a continuous basis and who can be withdrawn and not replaced at any time.

### **Funding Levels**

8. While the value of subscriptions to most if not all other intergovernmental organizations has risen steadily, the rate of subscriptions for IHO Member States has not increased since 2005. Fortuitously, increases in tonnages in some States and the addition of new Member States joining the Organization over the period has meant that the real value of the IHO income has approximately matched the rate of inflation until now. From 2005 to 2014, the IHO budget in current Euros increased by 16.8% while the salary index for civil servants in Monaco increased by 16.9%. During the same period, the IMO budget in current pounds increased by 41%.

9. The budget for 2013-2017 approved by IHC-18 forecasts a rise in the share value by 1% in 2016 and a further rise of 1% in 2017.

10. The development of the Capacity Building (CB) programme has benefited from significant additional voluntary contributions from Member States, namely Japan, through the Nippon Foundation since 2004, and the Republic of Korea, since 2006. This has resulted in a steady increase in CB activities and a resultant increase in administration (see graph in Appendix 1). To assist in meeting the increase in administration and management, the CB Sub-Committee approved at its 11<sup>th</sup> meeting (2013) the allocation of up to 13% of the CB Funds (up to a limit of 40,000 Euros) to cover administrative tasks and project management. This provision has enabled the IHB to employ a temporary part-time administrative assistant on a contractual basis to provide assistance with the administration of the CB programme.

11. The work of the FIG-IHO-ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers (IBSC) is supported by a fee levied on course submissions. This was introduced in 2011.

### **Current Performance**

12. Against the background of an increase in the volume and scope of its activity, the IHB has not received any feedback from Member States or from other IHO Stakeholders that indicates any areas of specific concern. It must therefore be concluded that the current service being provided by the IHB is at least satisfactory, albeit with some shortcomings. Nevertheless, the IHB now sometimes finds it difficult to fulfil all of its commitments or meet certain deadlines, such as the timely publication of reports.

13. Two areas of concern where the lack of capacity is impacting on current services are the ability to translate all IHO documents into the official languages of the Organization and the systematic review of all newly printed or adopted international (INT) Charts.

14. Until now, the additional workload to meet new requirements and obligations placed on the IHB through various decisions and through the approval of the IHO Work Programme by Member States has been absorbed through a combination of adjustment to work procedures, the recruitment of replacement staff with relevant skills, through some contracted support when funds are available, and through progressively increased working hours by senior staff. While there is always scope for more efficiencies, there is now little room to make further significant gains with the current structure.

15. It is likely that the implementation of a Council, under the amended terms of the IHO Convention, will, at least initially, create an additional workload both for the IHB and for Member States.

16. The Directing Committee is well aware that Member States are facing similar problems with resources and are facing ever tighter constraints which limit their capacity to participate actively in the IHO Work Programme.

17. Another issue of specific concern is the shortage of candidates willing to hold positions on committees, sub-committees and working groups caused, apparently, by reduced funding from their employers for the associated travel requirements.

#### ***Shortfalls in the Technical Programme***

18. In accordance with Decision 6 of IHC-18, the Directing Committee sought the input of the HSSC in helping to identify any emerging requirements or existing shortfalls that could exceed the current resources. The Directing Committee submitted to HSSC-4, in September 2012, a paper (HSSC4-04.2A) inviting HSSC to:

- a. initiate a review of critical areas of the technical programme of the IHO where current resources may be inadequate to fulfil the associated tasks, and to
- b. initiate an investigation of alternatives to address shortcomings, if any.

19. HSSC agreed that there is a need for an IHO-wide approach that encompasses both the technical capacity of the IHB and the additional resources required to implement the IHO technical programme and invited WG chairs to provide their initial assessment of the critical areas when presenting their report to the Committee. The following critical elements were identified:

- a. completion of the S-100 portrayal model;
- b. development of various S-100 based product specifications; and
- c. the future composition and chairmanship of working groups, such as the Hydrographic Dictionary Working Group (HDWG).

20. The Directing Committee observes that as a result of the transition from paper to digitally-based hydrographic products and services, Member States increasingly appear to lack the specialist expertise and/or the resources to devote to the development and maintenance of some IHO technical standards. As a result, the IHO, through its WGs and the IHB, is relying increasingly on voluntary industry expertise and increasing levels of contract support.

21. The Directing Committee also observes that the use of S-100 for the next generation of Hydrographic Office (HO) products and services, such as ENC, and the increasing and enthusiastic uptake of the S-100 standard by other organizations, including IMO, as the baseline data transfer standard for e-navigation services has placed a significant responsibility and obligation on the IHO to ensure that S-100 is successfully implemented and managed and is fit for purpose.

22. There is an expectation from users and prospective users that the S-100 standard will be regularly and promptly maintained and extended and that the underpinning S-100 Registry will be managed such that it meets the needs of all its users.

23. To ensure reliability and an appropriate level of support to users, the maintenance and day to day management of the S-100 Registry requires a dedicated registry manager. Since its inception, the S-100 Registry has been managed by the Chair of the Transfer Standard Maintenance and Application Development (TSMAD) WG on a part-time basis, through the generous and continuing support of UK.

24. Failure in performance of the Registry or of the S-100 standard and its dependent and associated standards will now have a serious impact on the reputation of the IHO and its participating Member States. The delays in drafting S-52 edition 6.1.0, its associated components, and edition 2.0 of S-100, reported to HSSC-5 in November 2013, illustrate the fragility of the current situation.

### **Summary of Limitations**

25. The IHB is now experiencing difficulties in fully supporting the current and anticipated requirements of the existing IHO Work Programme and the other obligations that are placed upon it. The present situation has developed progressively and cumulatively and cannot be attributed to a single event or activity. The limiting factors can be summarised as follows:

- The level of activity across all areas of work undertaken by the IHB, with the exception of CB activities (see paragraph 9), has increased progressively without any increase in staff numbers or the provision of additional resources. There is now little or no additional scope available for further efficiency gains within the current arrangements.
- While the activities of the IHB have progressively increased, the real value of the IHO income has remained approximately constant for nearly a decade. Significant improvements in productivity have enabled this to occur.
- A number of IHB activities can no longer be achieved, at least in part. These include: French and Spanish translation, the timely production of records of meetings and other documentation, and the review of INT charts.
- The implementation of the IHO Council is likely to result in at least an initial increase in workload for the IHB and for participating Member States.
- There is a reducing number of Member State representatives willing to hold positions on IHO committees, sub-committees and working groups. This appears to be caused by reductions in the levels of funding and support that is available from their parent organizations for the associated travel requirements.
- The transition from paper to digitally-based hydrographic products and services has placed a greater dependence on specialist contract support providers for expertise in the development and maintenance of IHO standards and guidelines.
- The maintenance and development of the S-100 standard has become a critically important task but it is under-resourced.

### **Possible Courses of Action**

26. In order to ensure that there is an appropriate level of technical and other administrative capacity within the Bureau to support the Organization now and in the future, there are a number of courses of action that can be considered either individually or in combination to mitigate the limitations identified above.

These are:

- a. reduce the level or scope of some activities required of the IHB,

- b. recruit IHB staff with different skills upon the redundancy or retirement of existing staff,
  - c. increase the capacity of the IHB through additional volunteer support from Member States or through additional contract support or by increasing staff numbers, and
  - d. subsidise travel expenses for committee and WG officers from the IHO Budget to assist Member States in making their staff available.
27. A number of these options will require an increase in the IHO income. This could be achieved by any or a combination of:
- a. increasing the annual contribution of Member States,
  - b. seeking regular and reliable financial contributions from industry and other organizations,
  - c. levying fees and charges for IHO publications, standards and use of the IHO S-100 Registry, and
  - d. recruiting new Member States.

## Analysis

### *Increase the IHO Budget*

28. Raising the share value above the very moderate increases forecast in the approved 5-year budget are unrealistic in the current economic climate when most if not all Member States are subject to either no growth or a reduction in government spending. In 2014, a 1% increase in the share value would yield an additional 30 k€.

The Directing Committee does not anticipate that Member States will support raising the share value significantly beyond the agreed levels shown in the 5-year budget.

29. Seeking financial contributions or donations from industry to supplement the operating budget would set a precedent for an intergovernmental organization such as the IHO. In any case, the IHO already receives very generous in-kind support from various sectors of industry, particularly in support of the technical programme and the capacity building programme. Seeking monetary donations to supplement the operating budget of the IHO would be problematic and could easily lead to either a compensating reduction or a withdrawal of the in-kind support already provided by industry participants.

The Directing Committee does not consider that it is appropriate to seek direct financial contributions or donations from industry to supplement the IHO operating budget.

### *Levying Fees and Charges for IHO Publications and Services*

30. Levying fees and charges for IHO publications, standards and use of the IHO S-100 Registry provides a possibility to raise some additional income. A fee to help cover the maintenance of the IHO Presentation Library for ECDIS (which has been maintained under contract) has always been levied. The principal users of the Presentation Library are commercial software and equipment manufacturers. Access to the S-63 Data Protection Scheme could be treated in a similar way since it is relied upon primarily by commercial suppliers of software, equipment and services. Fees could be imposed on access to the S-100 Registry to defray some of the costs of providing the facility.

31. The scope and impact of imposing a charging regime on the use of S-100 or other IHO standards should be considered carefully, in particular during the current first implementation and development phase. Levying charges to access and use IHO standards may be counter-productive and impose barriers to full implementation and widespread use.

This is particularly the case for S-100 and the S-100 Registry function, for which there is already significant interest from users outside the IHO community.

32. If user fees were imposed on access to some of the IHO standards, income might typically be about 30k€/year for a fee of 100€/year per commercial participant in the IHO Data Protection Scheme.

If Member States see merit in levying fees and charges for some IHO publications and services, the Directing Committee recommends that an impact study be conducted under the aegis of HSSC, in liaison with IMO, IALA and the relevant professional organizations.

### ***Recruiting New Member States***

33. Increasing the income of the IHO through the recruitment of new Member States is an attractive option. In addition to furthering the objectives of the Organization by ensuring that all coastal States belong to the IHO, the addition of a number of the larger Flag States would have a significant beneficial effect on income. At present, the annual contribution for States with a declared tonnage over 29 million is 107k€. Five States in this category are not yet members of the IHO (Bahamas, Liberia, Malta, Marshall Islands, and Panama). An additional annual contribution of 107k€ would fund one additional member of staff at the IHB or enable various activities to be outsourced under contract, such as some translation tasks or support of S-100 activities.

34. The Directing Committee has taken every opportunity to reach out to those States that are not members of the IHO and will continue to do so. Larger Flag States have been a particular priority but in general they lack awareness of hydrographic and charting issues and it is not easy to convince them of the benefits of joining the IHO. Additionally, under the current rules of the IHO Convention, it can take two to three years to obtain the necessary agreement of a majority of the existing Member States. This is a particularly strong reason for adopting the revised Convention.

The Directing Committee considers that the recruitment of new Member States should remain an important priority in the IHO Work Programme.

The Directing Committee encourages those Member States that have not yet indicated their agreement to the revised Convention to do so as soon as possible.

### ***Reducing the Extent and Scope of Some Activities***

35. Reducing the extent and scope of certain activities will reduce the workload of the IHB. This in turn will enable other tasks to be completed in a more timely and satisfactory manner. Certain changes could result in the release of manpower and capacity. However, it may not necessarily enable more complex activities to be undertaken without recruiting replacement staff with different skills.

36. There is a significant backlog of IHO publications that are not available in the French language. A table showing the status of translations at the beginning of the year is provided in Appendix 2. A reduction in the number and type of documents that are currently translated into the official languages and Spanish would enable the current backlog to be addressed and may, in the future, reduce the requirement for two French translators - thereby providing the ability to re-recruit replacement personnel for new tasks, such as the S-100 Registry Manager.

37. Changing the translation requirement would require the agreement of Member States through the amendment of IHO Resolution 12/1962 as amended.

38. IHO General Regulation 19 requires Member States to forward their new international (INT) charts, electronic charts, as well as any nautical publications to the IHB. IHO Resolution 1/1992 instructs the IHB to endeavour to examine all newly printed or adopted INT Charts, and to provide the concerned Member States with comments on any points of non-compliance with the Chart Specifications of the IHO for INT Charts. The IHB has only



carried out three systematic reviews of new INT charts in the last ten years due to other higher priorities. However, the receipt of INT charts contributes significantly to keeping IHO Publication S-11 Part B - *Catalogue of INT Charts* current.

39. Removing the requirement in IHO Resolution 1/1992 for the IHB to review INT charts would acknowledge the fact that the IHB no longer has the resources to conduct such reviews. It should be noted that the requirements of General Regulation 19 to forward new INT charts to the IHB has not been carried forward to the revised version of the General Regulations that will enter into force with the revised Convention. However, this is still required in order to properly maintain IHO Publication S-11 Part B.

The Directing Committee considers that IHO Resolution 12/1962 should be amended so as to reduce the number and type of documents that are required to be translated into the official languages and Spanish. The text of a proposed amendment is shown in Appendix 3.

The Directing Committee considers that IHO Resolution 1/1992 should be withdrawn so as to remove the requirement for the IHB to review and comment on new INT charts.

The Directing Committee considers that General Regulation 19 obliging Member States to forward new INT Charts to the IHB should be carried forward as a new Resolution, so as to ensure that IHO Publication S-11 Part B can continue to be maintained after the revised General Regulations of the IHO enter into force with the revised Convention. The text of a proposed Resolution is shown in Appendix 3.

40. The scope of other activities in the IHO Work Programme might be reduced if Member States, through the relevant bodies of the Organization, adopted a more critical resource-based programming methodology, as outlined in the IHO Strategic Plan. This would mean placing greater emphasis on matching the likely resources available (both money, and IHB and Member State personnel) before committing to work items and activities. Although the HSSC has had resource assessment criteria in place for some time, it is only recently that they have begun to be exercised. It is worthy of note that the 5-year Work Programme was adopted by IHC-18 with no debate or discussion by Member States on the resource implications at all.

The Directing Committee recommends the consideration of implementing an improved, resource-based approach to the preparation of the next pluri-annual Work Programme. This would be a further development of performance monitoring, and in accordance with the guidance provided in the IHO Strategic Plan.

However, the Directing Committee considers that a more rigorous process would place an additional workload not only on the IHB but also on those Member States that participate in the HSSC and IRCC. Noting also that much of the execution of the IHO programme relies on the voluntary efforts of Member States and others, a full resource-based approach would be difficult and unrealistic to achieve unless Member States are prepared to commit, in advance, to providing in-kind contributions and support of personnel to the relevant parts of the IHO Work Programme.

### ***Replacement of Existing Staff***

41. Until recently, there has been no change in the 11 locally recruited IHB Staff, most having been recruited 15 to 20 or more years ago. However, the IHB is now entering a decade of change. In the last three years, the Directing Committee has taken the opportunity of the retirement of two members of staff to re-allocate some duties and adjust the priority of the different tasks. This enabled the creation of the two new posts of Website and Publications Editor and Information Technology Officer.

42. Five of the existing locally recruited staff will reach retirement age within the next seven years, including one French Translator who will retire next year. Some of these retirements would allow for further internal adjustments and changes in priority to be made

that would provide scope to adapt the technical capacity of the IHB, in order to address particularly the S-100 Registry management tasks and the increasing IT and GIS requirements. These changes could possibly be advanced if suitable redundancy or early retirement schemes were implemented.

43. However, any redundancy or early retirement schemes, whether compulsory - through the abolition of an existing post or voluntary - through early retirement, would have significant financial implications for the IHO budget. Redundancies will incur a cost of at least 12 months' salary per individual plus full medical cover for the same period.

44. In addition, unlike all other employees in France and Monaco, any IHB staff member affected by early retirement or redundancy will not qualify for full unemployment or sickness benefits until they reach the national retirement age, which is currently 65 years. Their period of service in the IHB will not count towards their entitlements. For longer serving staff, this will result in only the most basic of social benefits entitlements. In the absence of any suitable compensation arrangements provided by the IHO, this would result in significant social and financial consequences for the individuals concerned. The current inability of redundant or retired staff to claim full State benefits as a result of their previous service at the IHB might also lead to legal challenges against the IHO in the case of compulsory redundancies. At the time of writing this report, the Directing Committee is unaware whether the Staff Regulations Working Group will address the disparity over eligibility for unemployment or other social benefits in France or Monaco for those leaving the IHB before retirement age as part of its review of the existing conditions of service for the IHB Staff.

45. There is no scope to fund redundancies or early retirement schemes from the operating budget. However, subject to the approval of Member States and appropriate amendments to the relevant regulations, redundancy payments could, in the short term, be met from the Retirement Fund (IRF), however, the resultant deficit in assets against pension liabilities would require repayment over the longer term.

In the circumstances, the Directing Committee considers that compulsory redundancy is not a viable option as a way of introducing new competences. However, if enough funds were made available, voluntary early retirement could be offered to some staff. This could create opportunities for reorganization sooner than will otherwise be the case. Yet, it appears unlikely that existing staff would take up such an offer unless it accounted for the loss of social benefits and was significantly more than the equivalent of 12 months' salary.

#### ***Supplement Staff with Personnel Seconded from Member States***

46. The capacity of the IHB may be improved through additional volunteer support from Member States. However, care must be taken to avoid building any dependency on seconded personnel to fulfil core activities.

47. Experience has shown that officers on short-term secondment - two years or less, impose a significant administrative load on the IHB because of the need to assist in domestic arrangements, assimilation in the local community and orientation on arrival.

48. Relying on volunteers rather than a formal staff selection process would introduce a significant risk that officers may not have the relevant skills or background, including language, to carry out core IHB functions.

The Directing Committee considers that core IHB duties should not rely on volunteer officers seconded to the IHB.

#### ***Supplement Staff with New Recruits or Contracted Support***

49. The capacity of the IHB could be increased through the use of additional contract support or by increasing staff numbers. This would require an increase in the operating budget. By way of example, the average budgetary cost of a staff member, including salary and pension and other social entitlements is 100k€ per year. The typical cost of translating a

100 page publication from English into French is 7k€. As discussed earlier, a real increase in the operating budget is unlikely to occur until such time as there are more IHO Member States or there is a significant increase in the share value.

The Directing Committee notes that increasing staff numbers or contracting out more work would require that the operating budget be increased in real terms.

### ***Subsidise Travel Costs of Office Bearers***

50. Providing a subsidy for the travel expenses of office bearers of IHO organs may assist Member States in making their staff available. This would require an increase in the operating budget. The average cost for inter-continental travel for one delegate to attend a meeting lasting five days would be around 5k€. Member States' representatives currently occupy the Chairs of 19 bodies of the Organization plus the Conference.

The Directing Committee notes that subsidising the travel expenses of the office bearers of IHO bodies would require that the operating budget be increased in real terms.

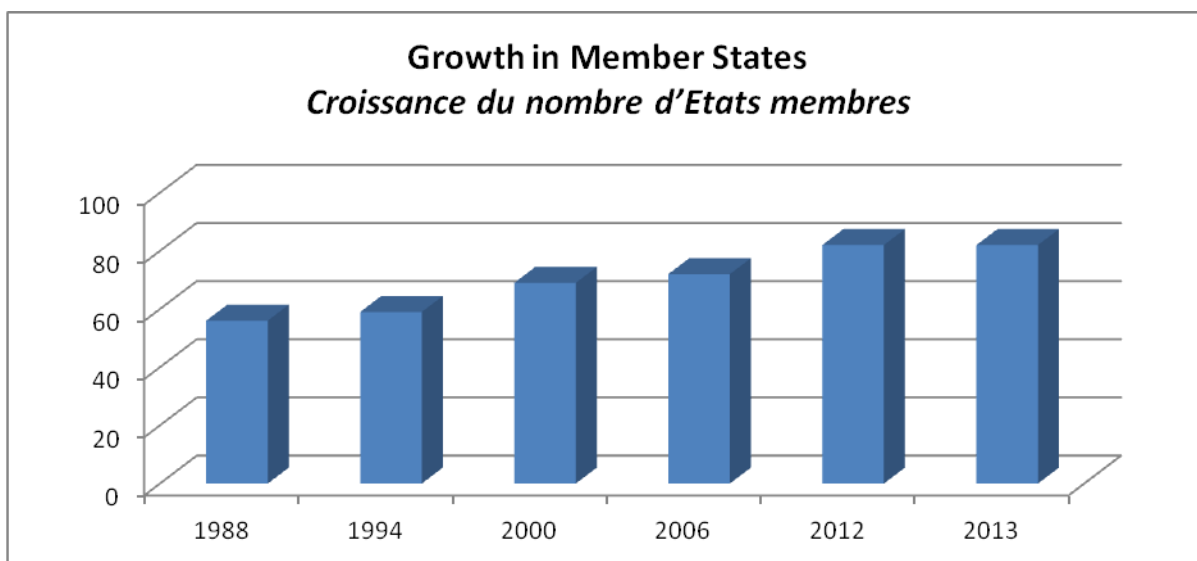
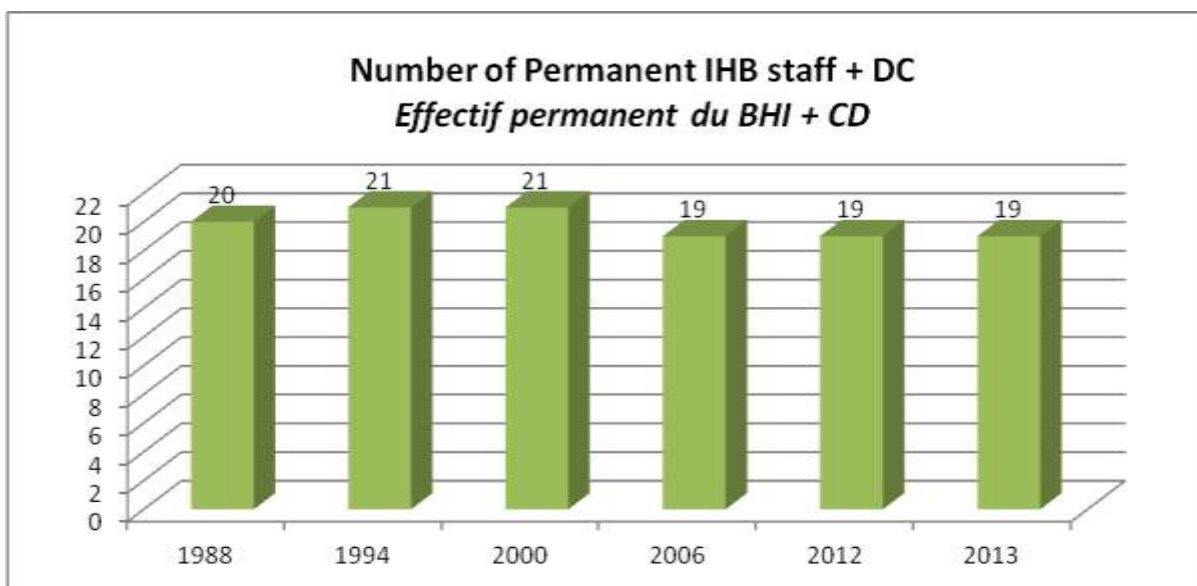
### **Recommendations**

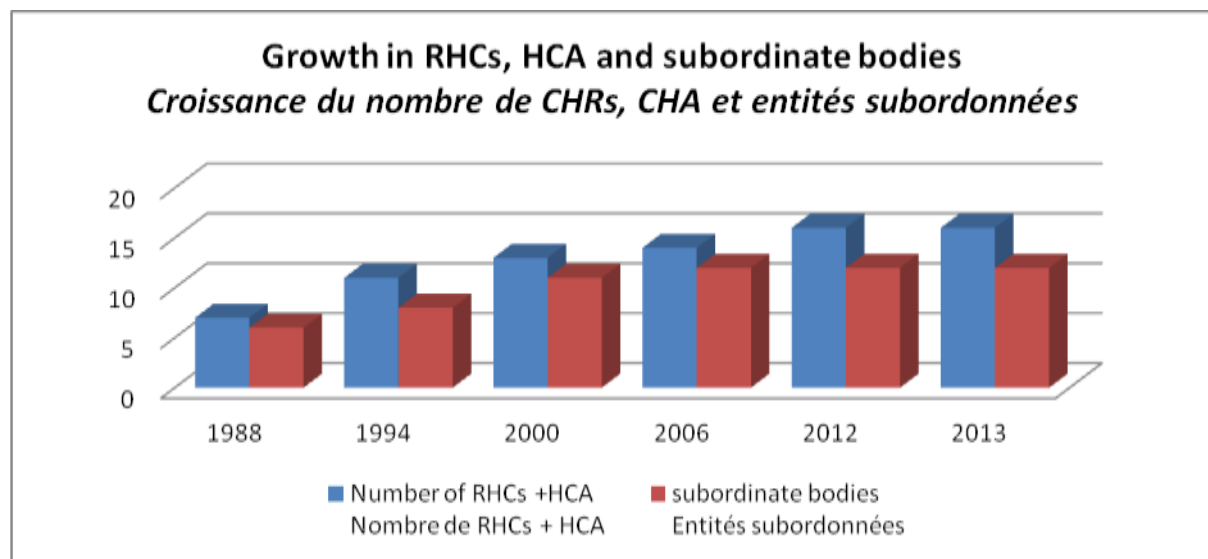
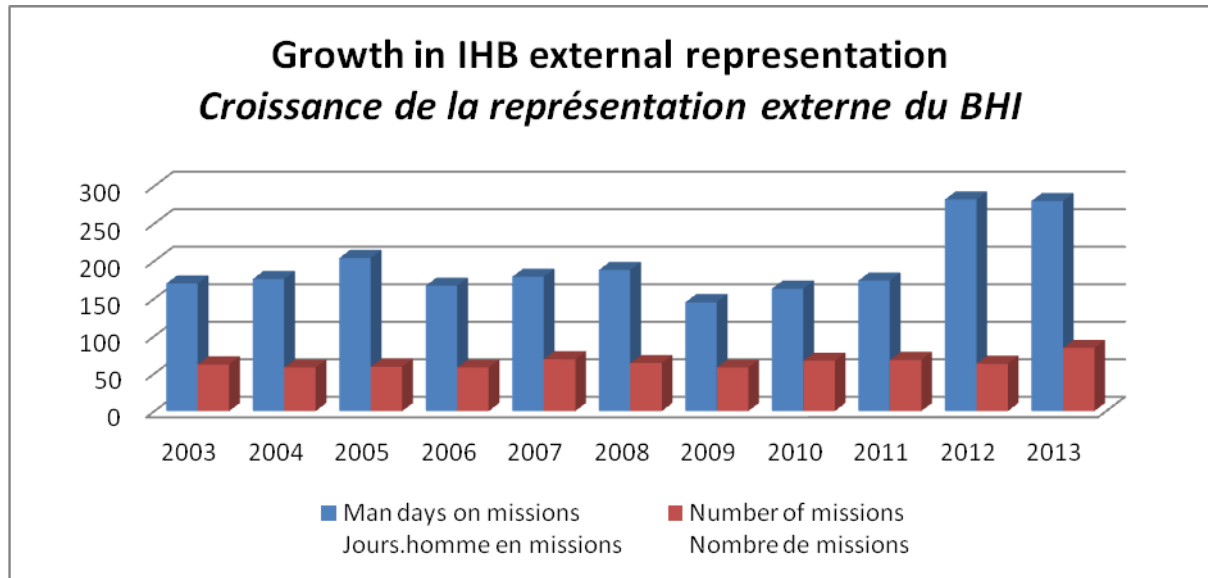
51. Based on the previous analysis, the Directing Committee recommends the following measures:

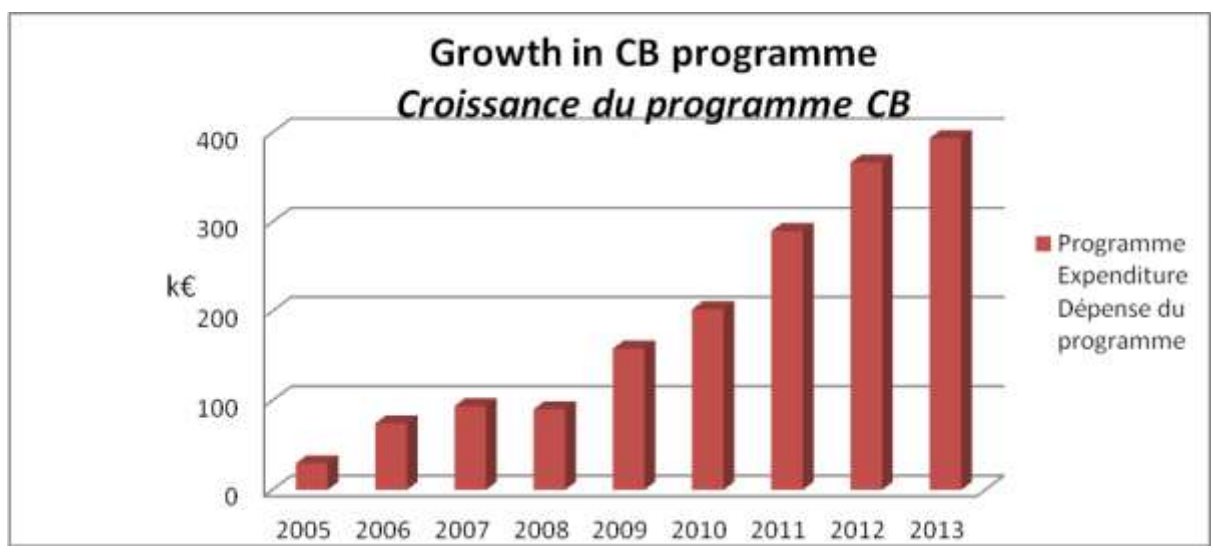
- a. The recruitment of new Member States should remain an important priority in the IHO Work Programme with a focus on the larger Flag States;
- b. Those Member States that have not yet ratified the Protocol of Amendments to the IHO Convention should do so as soon as possible, in order to facilitate the recruitment of new Member States;
- c. An improved, resource-based approach to the development of the Work Programme should be introduced, first in the next work plans of HSSC and IRCC and then in the subsequent edition of the IHO pluri-annual Work Programme, including considering the implementation of the increase in the share value contemplated in the current IHO five-year budget;
- d. The scope of the translation work required from the IHB should be reduced by limiting the number of publications provided in both official languages or offset by additional assistance from Member States. IHO Resolution 12/1962 should be amended as shown in Appendix 3;
- e. The requirement for the IHB to examine all newly printed or adopted International (INT) Charts should be discontinued. IHO Resolution 1/1992 should be withdrawn as a consequence;
- f. The requirement for Member States to forward copies of their new INT charts to the IHB under the terms of Article 19 of IHO General Regulations should be reflected in a new IHO Resolution as shown in Appendix 3;
- g. The skills of the IHB staff should be adjusted through natural attrition rather than through a redundancy scheme; and
- h. The recruitment of an IHB staff member to undertake the duties of S-100 Registry Manager should be given priority as soon as an opportunity occurs.

APPENDIX 1

**IHB OUTPUT STATISTICS**







## APPENDIX 2

## STATUS OF TRANSLATION OF IHO DOCUMENTS

## 1. References

## IHO Convention

**Article XII**

*The official languages of the Organization shall be English and French.*

## Rules of Procedure for International Hydrographic Conferences

**Rule 38**

*a) All supporting documents to agenda items of the Conference and its subsidiary bodies and summary records shall be issued in the official languages of the Organization, English and French.*

*b) All reports, resolutions, recommendations and decisions of the Conference and its subsidiary bodies shall be drawn up in one of the official languages and translated into the other.*

## IHO Resolutions

**Resolution 12/1962 as amended**

*It is resolved that the IHB shall publish the reports and publications referred to in Articles 32 to 35 of the General Regulations<sup>1</sup> in either bilingual (English/French) or in separate English and French versions. In addition, the Bureau should (without increasing for this reason the present number of Category B Staff) publish at least its Annual Report (Parts 1 and 2) and the periodic I.H. Bulletin in Spanish and should also seek the assistance of Spanish-speaking countries in the preparation and production of other IHO publications in Spanish.*

**Resolution 13/1962 as amended**

*1. It is resolved that the Bureau should publish its Circular Letters in English, French and Spanish.*

(...)

## 2. Status as of 31 January 2014

Category	Sub-category	Number	EN <sup>2</sup>	FR <sup>3</sup>	SP <sup>4</sup>	Comments
Circular Letters (CL, CCL, FCCL)		80 to 120 / year	Yes	Yes	Yes	SP versions may be delayed. FCCL are provided in FR and EN only.
Yearbook		Continuous update	Yes	Yes	Yes	Included in Periodic Publications.

<sup>1</sup> The publications listed in the IHO General Regulations are :

- the annual report (article 32),
- the Yearbook (article 33),
- the International Hydrographic Bulletin (article 34),
- "special publications on technical subjects" (article 35).

<sup>2</sup> EN: English.

<sup>3</sup> FR: French (including bilingual EN/FR or trilingual EN/FR/SP versions).

<sup>4</sup> SP: Spanish (including bilingual EN/SP or trilingual EN/FR/SP versions).

Category	Sub-category	Number	EN <sup>2</sup>	FR <sub>3</sub>	SP <sub>4</sub>	Comments
Annual Report		1 / year	Yes	Yes	Yes	Included in Periodic Publications. Only Part 1 is available in SP. Part 2 is bilingual EN/FR. The FR and SP versions of Part 1 may be delayed.
IH Bulletin		Continuous update	Yes	Yes	Yes	The FR and SP versions may be delayed.
Conference Proceedings		1 or 2 vol. / session	Yes	Yes	No	Included in Periodic Publications. The FR version may be delayed.
Publications <sup>5</sup>	Bathymetry	7	7	2	1	B-1 (GEBCO 5 <sup>th</sup> Edition) not counted.
	Capacity Building	8	8	3	2	C-16 (National Hydrographic Regulations) compiles regulations in their original language.
	Miscellaneous	5	5	5	3	
	Periodic	4	4	4	3	Only the abstracts of P-1 (IH Review) are provided in FR and SP <sup>6</sup> . Only Part 1 of P-7 (Annual Report) is available in SP.
	Standards and Specifications	24 <sup>7</sup>	24	9	3	The French version of S-4 (IHO Chart Specifications) is maintained by France. The Spanish version of S-4 is maintained by Spain.
	<i>Total</i>		<i>48</i>	<i>48</i>	<i>23</i>	<i>12</i>

Note: the IHO website, introduced in 1996, is maintained in the two official languages.

<sup>5</sup> As listed in the IHO Catalogue of Publications (Home > Standards & Publications > Click here for the IHO Publications Catalogue).

<sup>6</sup> The discontinuation of the French version of the IH Review was agreed in 2000 by Member States (refer to IHO CL17 and 25/2000).

<sup>7</sup> Only the main publications are considered: separate annexes and appendices are not included in the count.



## APPENDIX 3

## PROPOSED AMENDMENTS TO IHO INSTRUMENTS

Existing IHO Resolution 12/1962 as amended

Title	Reference	Last amendment (CL or IHC)	1 <sup>st</sup> Edition Reference
Documentation	12/1962	72/2009	T1.5

It is resolved that the IHB shall publish the reports and publications referred to in Articles 32 to 35 of the General Regulations in either bilingual (English/French) or in separate English and French versions. In addition, the Bureau should (without increasing for this reason the present number of Category B Staff) publish at least its Annual Report (Parts 1 and 2) and the periodic I.H. Bulletin in Spanish and should also seek the assistance of Spanish-speaking countries in the preparation and production of other IHO publications in Spanish.

Proposed amendment to IHO Resolution 12/1962 as amended:

Title	Reference	Last amendment (CL or IHC)	1 <sup>st</sup> Edition Reference
Documentation	12/1962	---	T1.5

It is resolved that the IHB shall publish its Annual Report (Parts 1 and 2), the IHO Yearbook and the periodic I.H. Bulletin in either bilingual (English/French) or in separate English and French versions. In addition, the Bureau should (without increasing for this reason the present number of Translator Staff) endeavour to publish at least its Annual Report (Part 1) and the periodic I.H. Bulletin in Spanish. The language(s) of other IHO reference documents, guidelines and standards shall be decided on a case by case basis in the IHO Work Programme, taking into account the intended use of the document, the resources of the Bureau and the assistance offered by Member States.

**Existing Article 19 of General Regulations of the IHO**

(will be withdrawn when the amendments to the Convention on the IHO enter into force)

**ARTICLE 19**

To enable the Bureau to achieve its purpose, the Hydrographic Offices of Member Governments shall forward copies of their new international (INT) charts, electronic charts (raster and vector), as well as any nautical publications.

**Proposed IHO Resolution**

**(to be included in section 2.3.3 *INT Charts of M-3 Resolutions of the IHO*)**

Title	Reference	Last amendment (CL or IHC)	1st Edition Reference
Provision of new INT paper charts, digital charts and publications to the Secretariat of the IHO for reference purposes	xx/2014	---	---

1. To enable the Secretariat of the IHO to achieve its purpose, the Hydrographic Offices of Member Governments shall forward copies of their new international (INT) charts, electronic charts (raster and vector), as well as any nautical publications.

2. Any paper charts, digital charts or publications provided to the secretariat by the Hydrographic Offices of Member Governments under the terms of this Resolution shall be used for internal reference purposes only. They shall not be duplicated, distributed or provided to any other organization, entity or individual without the express permission of the publishing Hydrographic Office.

**MEMBER STATES' COMMENTS****CHILE**

Chile thanks the DC for the Report and in principle approves the recommendations offered. Chile hopes that the Report will generate a valuable and positive discussion at the Conference to reinforce the recommendations and to amend them as necessary and required.

**FINLAND**

Finland thanks the Directing Committee on this report and is in favour to the most of the recommendations.

**FRANCE**

France suggests that the Conference should consider the Directing Committee's recommendations along with those contained in this PRO 5 as they are similar in nature (see in particular point 40 of Annex B).

As regards the specific recommendations made by the Directing Committee, and subject to further inputs being given at the Conference, France provides the following preliminary views:

<b>IHB Recommendations</b>	<b>Preliminary view</b>
CCL8, Annex B, para. 51.a	Very much in favour
CCL8, Annex B, para. 51.b	Very much in favour
CCL8, Annex B, para. 51.c	In favour, + include France's recommendations in PRO5 (assessment of the means available before passing a new task to WGs, including voluntary contributions in terms of human or financial resources from the Member States).
CCL8, Annex B, para. 51.d	The new wording proposed for Resolution 12/1962, as amended, opens up the possibility of introducing new languages (other than English, French and Spanish) for the publication of reference documents, guidelines and standards. The advantages and disadvantages (e.g. risk that an IHO document would not be available in English) are for debate. SHOM will contact the Secretary of State for the promotion of the French language to identify sources of additional assistance.
CCL 8, Annex B, para. 51e	The small number of INT charts reviewed at the IHB in these last ten years seems to imply that the potential manpower that would be released through this measure would be limited. Nevertheless it seems that we need to adapt the IHO Resolutions to the reality of this situation, whilst clarifying how the review of the INT charts would be implemented by the IHO. Indeed, it appears essential to maintain a procedure which guarantees the stakeholders a minimum of quality assurance on the INT charts. France proposes that this review task be carried out by the RHC and their subsidiary bodies, with the possibility of seeking help from the IHB in exceptional cases.
CCL8, Annex B, para. 51.f	In favour, subject to modifying the proposed resolution on electronic charts (replacement by a WMS data transfer from the RENCs, for example)

IHB Recommendations	Preliminary view
CCL8, Annex B, para. 51.g	Very much in favour. France is opposed to a redundancy scheme.
CCL8, Annex B, para. 51.h	France recognizes the strategic nature of the S-100, and the difficulty involved in this transition for the IHO and the Member States. The workload generated by the maintenance of the registry base must be clearly defined, as well as possibly any other related tasks that might be assigned to this post.

## JAPAN

Japan basically supports the recommendations, understanding they are not based on the premise to increase annual contribution of Member States.

## UK

The United Kingdom supports:

- (a) and (b) relating to recruitment of new member states;
- (c) a resourced based approach – linked to Proposal 5 on total cost estimating
- (d) and (e) relating to reduction in IHB workload
- (f) a new resolution for INT charts

The United Kingdom does not support:

- (g). IHB staff skills must be suitable for the tasks required. This should be achieved through re-skilling, performance management, and redundancy, as necessary to achieve the required outcome, which should be in line with the 'IHB Target Operating Model' for the next five years, if available.
- (h) the S-100 Registry Manager need not be a member of IHB staff and could be funded by the savings made in the reduction in scope of the translation service.

In addition, the United Kingdom suggests that:

- (i) as recognition of their significant workload and responsibility, WG chairs have their T&S subsidised;
- (ii) fees are levied from non-IHO members for IHO publications;
- (iii) charges are levied from non-IHO members for the use of the S-100 registry;
- (iv) the ISO and National Standards Body (e.g. BSI) membership regime and certification scheme are reviewed for consideration as models for the IHO.
- (v) greater acknowledgement is given to the contribution of MS by listing their WG activities on the IHO web site (in a similar way to the ISO site).

## **REPORT AND RECOMMENDATIONS FROM THE CAPACITY BUILDING SUB-COMMITTEE (CBSC) REGARDING THE IHO CB STRATEGY**

### **1. Revision**

The 18th International Hydrographic Conference tasked the CBSC to present a revised Capacity Building Strategy at the 5<sup>th</sup> Extraordinary Conference. The revision of the CB Strategy has been finalized and the current version 2 has been adopted by the CBSC at their 12<sup>th</sup> meeting in May 2014. The Chairs of IBSC joined the revision process at the last two CBSC meetings and provided valid input. The new version provides a clearer overview and eases the work of the IHO Capacity Building. Some amendments and changes have been agreed upon. The vision and strategy in general are still effective, the main focus was to define the details of CB assessment and provision and to describe them more clearly.

In March this year a CB stakeholder seminar was held at the IHB. In two days there were very open and fruitful discussions. It started with the provision of information related to CB from the CBSC, from the industry and other stakeholders and from trainees. The draft new CB strategy of the IHO has been presented and some very valid input has been provided by the audience. About 60 participants joined the seminar, which has been broadcasted as a live-stream via internet. The inputs from the participants have been taken into account in the revised Strategy and the IHO CB work.

### **2. New Edition**

The complete new version 2 of the CB Strategy can be found as an annex to this report.

The vision behind this policy paper is to provide strategic guidance for IHO capacity building to ensure the optimum contribution to safety of life at sea, to the protection of the environment, and to national economic development.

The revised strategy is based on the following 10 principles:

1. Individual national needs for infrastructure, together with a nation's capacity for infrastructure development, should be assessed firmly against the 3 phases of development as defined in M-2;
2. Skill and technology transfers must result in solutions which are appropriate and sustainable;
3. Wherever possible, capacity building projects should be coordinated regionally and be supported through regional cooperation;
4. The national administration of a State with developing hydrographic services must embrace and support the concept of capacity building as being in its national interest;
5. The focus should be on achieving enduring output which will benefit safe navigation, safety of life at sea, protection of the marine environment and economic development, rather than on creating enabling infrastructure per se;
6. Funding of Non MS is generally limited to technical visits and Phase 1 projects (this will include an overall assessment of the status of hydrography and information of relevant authorities). Exceptions to this have to be reflected against the resources provided, the expected output and the situation in the country;
7. Funding of equipment shall be limited to those cases, where it is embedded into a comprehensive programme requesting such equipment to remain in-country to complete the project, and insuring a sustainable effect and ongoing support. Whenever possible, external funds should be included, taking into account the

relatively high costs of equipment and assuring a reasonable cost-benefit-ratio for the improvement of the hydrographic capacity;

8. Comprehensive programmes may be supported by start-up funds to allow participation in, or preparation of, externally funded projects, especially when substantial additional funds can be expected;
9. The use of consultants will be permitted if this supports the vision and the objectives of this strategy;
10. CB funds may be allocated for administrative purposes (the amount/percentage to be agreed by the CBSC).

The willingness of the IHO to assist capacity building has been expressed in terms of short and long term objectives, providing a clear signal of the desired effect which the Organization is seeking. These objectives also constitute guidance for the work of the CBSC in implementing this strategy.

### **3. Conclusion**

Although not changed in the general focus, the revision process led to a much more practical application of the strategy. The revised version reflects the ideas and aims more clearly and clarifies some details which have formerly been formulated too vague.

- The revised version has been developed very openly and with the contribution from a broad variety of stakeholders.
- The success will depend on the strict compliance of the Capacity Building programmes with the CB Strategy.
- The CBSC formed a drafting group to develop a Public Relation Paper to publicize the revised IHO CB Strategy.
- The CBSC will monitor the Strategy on an annual basis to ensure that new developments will be considered.

### **4. Proposal for adoption by the 5 E.I.H. Conference:**

The Conference is invited to endorse the new CB Strategy.

Annex: Capacity Building Strategy 2.0 dated 15 May 2014

## ANNEX

### Capacity Building Strategy 2.0 dated 15 May 2014

#### References:

- IHO CBSC Terms of Reference
- M-2 “The Need for National Hydrographic Services”
- C-55 “Status of Hydrographic Surveying and Nautical Charting Worldwide”
- Safety of Life at Sea Convention (SOLAS), Chapter V
- United Nations Convention on the Law of the Sea (UNCLOS)
- UN General Assembly Resolution A/RES/58/240 dated 23 December 2003
- IHO CB Coordinator Terms of Reference

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  - 1. The IHO and Capacity Building
  - 2. Vision Statement
- II. PRINCIPLES AND OBJECTIVES
  - 3. Principles
  - 4. Objectives
- III. PROCESS
  - 5. The Process and Management
  - 6. Review and updates

## **I. INTRODUCTION**

### **1. The IHO and Capacity Building**

Capacity building is a vital component of the efforts of intergovernmental technical organizations to support the development goals of the United Nations (UN). The IHO is committed to matching its efforts to those of the International Maritime Organization (IMO), the Intergovernmental Oceanographic Commission (IOC), the International Association of Lighthouse Authorities (IALA), the International Federation of Surveyors (FIG) and other organizations working in allied fields.

In the IHO, capacity building is defined as the process by which the organization assesses the status of current arrangements and assists States to achieve sustainable development and improvement in their ability to meet hydrographic, cartographic and maritime safety obligations with particular reference to recommendations in UNCLOS, SOLAS, and other international instruments. The scope encompasses all hydrographic needs as it underpins every other activity associated with the sea, including safety of navigation, protection of the marine environment, national infrastructure development, coastal zone management, marine exploration, marine resource exploitation (minerals, fishing, etc.), maritime boundary delimitation, maritime defence and security, and coastal disaster management.

The IHO Capacity Building Committee (re-designated a Sub-Committee in 2009) was established in 2003 to coordinate this effort, and the members developed a strategy paper drawing on the experience of the former FIG/IHO Technical Assistance and Coordination Committee (TACC). That strategy paper has been updated several times. The XVIIIth International Hydrographic Conference in 2012 tasked the Capacity Building Sub-Committee (CBSC) to review the CB Strategy and report back to the next Conference. This version has been reviewed and amended by the CBSC in liaison with the IRCC and the industrial and academic sectors. It will be presented at the 5th Extraordinary International Hydrographic Conference in 2014 for endorsement.

### **2. Vision Statement**

The vision behind this policy paper is to provide strategic guidance for IHO capacity building to ensure the optimum contribution to safety of life at sea, to the protection of the environment, and to national economic development.

## **II. PRINCIPLES AND OBJECTIVES**

### **3. Principles**

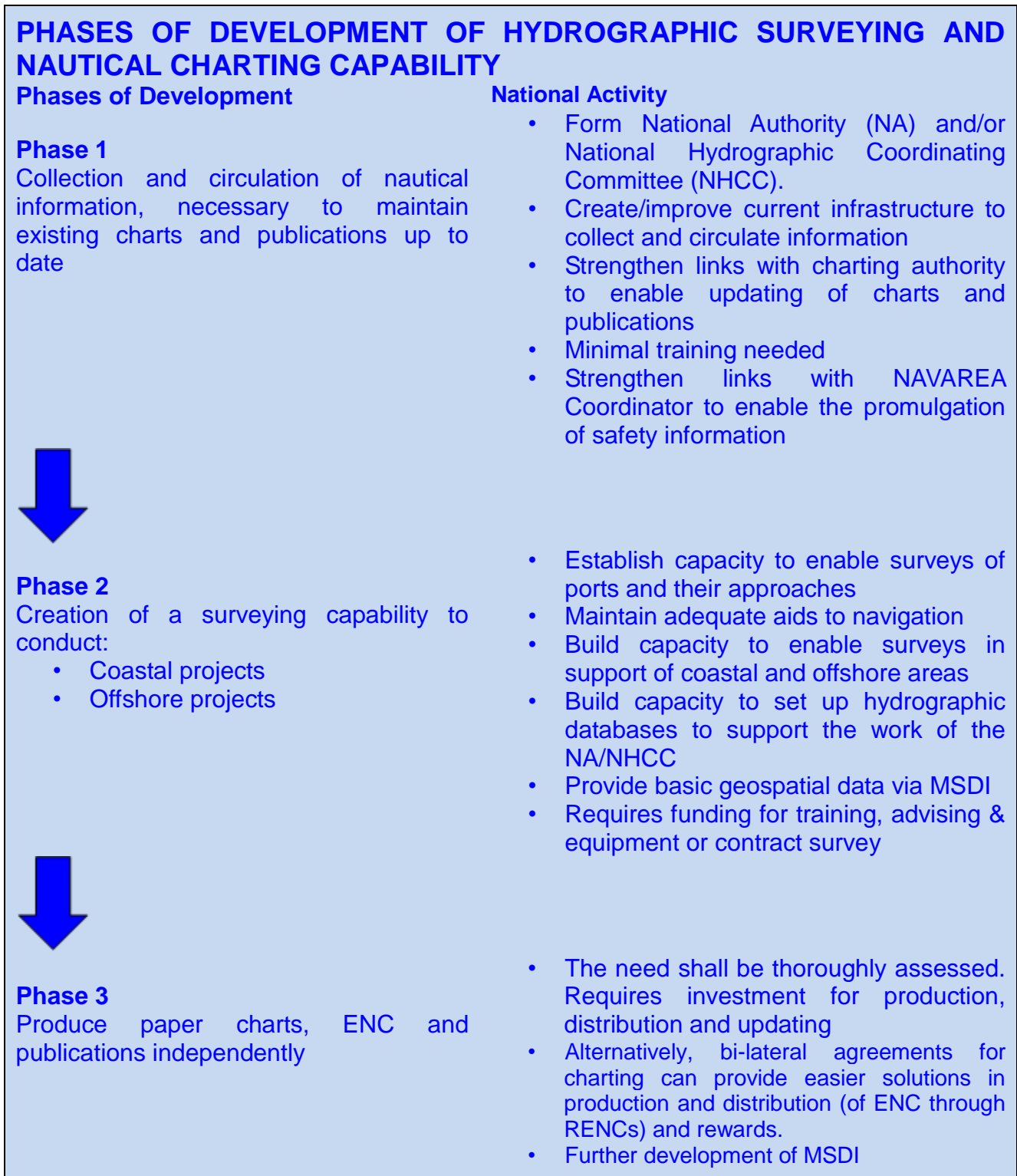
The strategy and its implementation will be consistent with the following principles:

- 3.1 Individual national needs for infrastructure, together with a nation's capacity for infrastructure development, should be assessed firmly against the 3 phases of development as defined in M-2 and shown in Figure 1.
- 3.2 Skill and technology transfers must result in solutions which are appropriate and sustainable.
- 3.3 Wherever possible, capacity building projects should be coordinated regionally and be supported through regional cooperation.
- 3.4 The national administration of a State with developing hydrographic services must embrace and support the concept of capacity building as being in its national interest.
- 3.5 The focus should be on achieving enduring output which will benefit safe navigation, safety of life at sea, protection of the marine environment and economic development, rather than on creating enabling infrastructure per se.



- 3.6 Funding of Non MS is generally limited to technical visits and Phase 1 projects (this will include an overall assessment of the status of hydrography and information of relevant authorities). Exceptions to this have to be reflected against the resources provided, the expected output and the situation in the country.
- 3.7 Funding of equipment shall be limited to those cases, where it is embedded into a comprehensive programme (see Chapter 5) requesting such equipment to remain in-country to complete the project, and insuring a sustainable effect and ongoing support. Whenever possible, external funds should be included, taking into account the relatively high costs of equipment and assuring a reasonable cost-benefit-ratio for the improvement of the hydrographic capacity;
- 3.8 Comprehensive programmes (see Chapter 5) may be supported by start-up funds to allow participation in, or preparation of, externally funded projects, especially when substantial additional funds can be expected;
- 3.9 The use of consultants will be permitted if this supports the vision and the objectives of this strategy;
- 3.10 CB funds may be allocated for administrative purposes (the amount/percentage to be agreed by the CBSC);

Figure 1



#### **4. Objectives**

The willingness of the IHO to assist capacity building has been expressed in terms of short and long term objectives, providing a clear signal of the desired effect which the Organization is seeking. These objectives also constitute guidance for the work of the CBSC in implementing this strategy.

##### **4.1 Long Term Objective**

- To enable all states which have navigable waters to achieve Phase 1 of development (i.e. timely collection and promulgation of hydrographic information for their national waters), and to develop a national plan to put in place appropriate elements of Phases 2 and 3 or alternative cooperative regional or bilateral arrangements.
- In conjunction with the IMO's Technical Cooperation Committee and IALA's World Wide Academy a series of 'country profiles' will be developed to accurately measure the state of hydrography in every coastal state.

##### **4.2 Short/Medium Term Objectives**

- To implement a programme of events to raise awareness of the importance of hydrography at all relevant levels.
- To establish a GIS-based electronic version of C-55 presenting an accurate picture of the status of hydrographic services world-wide, as available to mariners.
- To enable the IHO to present clear priorities for capacity building action to the UN and subordinate technical organizations and funding agencies, and to national governments.
- To enable Regional Hydrographic Commissions (RHCs) to establish a suite of capacity building initiatives and a prioritisation process for regional cooperative efforts.
- To enable RHCs, where significant progress is required, to develop a holistic approach to capacity building, designed to deliver wide ranging assistance with sustainable outcomes. This would include training, technical cooperation, organizational and structural advice which may be part of a donor programme.
- To implement appropriate management of an IHO Capacity Building Fund.
- To produce and maintain an auditable IHO Capacity Building Management Plan.

### **III. PROCESS**

#### **5. The Process and Management**

##### **5.1 The 4 steps in the process**

The capacity building process is built around 4 steps: awareness, assessment, analysis and action (the 4 As of Capacity Building).

The IHO CBSC recognises that the first step must be the raising of awareness of the significance and impact of hydrography on maritime safety, at the highest political levels in each country, and in the UN and subordinate technical organizations, regional maritime associations and funding agencies. Without this, adequate resources will not be secured and sustained for the implementation of the strategy. Assessment is underway on a permanent basis through the revision and update of C-55 and through technical visits. The subsequent steps of analysis, including prioritisation and identification of actions, and then the management and implementation of appropriate actions, require more detailed development within this policy paper and are itemised below. The degree of engagement required from each contributor to the process is suggested in the following table.

	IHO	CBSC	RHC	Country
<b>Awareness</b>	XXX	XXXX	XX	X
<b>Assessment</b>	X	XXX	XXXX	XX
<b>Analysis</b>	XXXX	XXX	XX	X
<b>Action</b>	X	XX	XXX	XXXX

**Table 1: Degree of engagement (X = Low, XX = Medium-low, XXX = Medium-high, XXXX = High)**

The process will require development of the following elements:

1. Intensification of efforts to raise awareness of hydrography and to provide reference documents on the minimum requirements for national hydrographic services in accordance with SOLAS Chapter V Regulation 9.
2. Implementation and management of a CB fund.
3. Completion of the revision of the C-55 database to identify key deficiencies.
4. Development of assessment criteria to determine appropriate and sustainable national capacity.
5. Implementation of effective RHC processes for analysis and prioritisation of capacity building needs within the region.
6. Definition of an Action Plan to address selected goals within specific timescales, and to identify and manage funding.

In some RHCs, it may be appropriate to consider a comprehensive, multi-year, programme of work, including multiple projects. This may include precise assessment of the first priority requirements, definition of the target capacity, identification of complementary funding, installation and coaching of an organization, training, delivery of some equipment etc. These actions should be conducted in a strongly integrated way, in order for each project to contribute as a part of a holistic programme. A rigorous project methodology should be applied, to ensure successful implementation in terms of scope/budget/timeframe and monitoring/reporting to ensure the expected benefits are realised.

RHCs may also consider the adoption of a CB maturity model where the aspirations of nations can be assessed against each of the 3 CB Phases of development as defined in M-2 and shown in Figure 1. Such a model would identify the appropriate training/assistance/funding required to provide a clear pathway and action plan for a nation to achieve each CB Phase in a sustainable and enduring manner. The model may be used by RHCs to monitor and record a nation's progress towards the creation of a national hydrographic service. This information could become part of a comprehensive country profile as mentioned in Chapter 4.1.

The successive steps in the process are outlined in the paragraphs which follow. The CB Procedures approved by the CBSC contain the detailed information necessary to plan and execute the CB Projects, and are published in the IHO website ([www.iho.int](http://www.iho.int) > Capacity Building).

## 5.2 Raising Awareness

The IHB should continue the campaign for the establishment of the hydrographic services required to meet obligations under UNCLOS and SOLAS. The high profile which the IHB has sustained in the UNICPOLOS process, and within the IMO, should assist the CBSC to implement specific actions to target subordinate international and regional agencies. Very significant progress has been made in IMO, and the imminent inclusion of the C-55 database

in the IMO Member State Audit Scheme (VIMSAS) will provide effective leverage to commit governments to resource the arrangements required under SOLAS V Regulations 4 and 9.

The Marine Spatial Data Infrastructure (MSDI) provides a framework for the provision of hydrographic information beyond the traditional field of surface navigation. The IHO/CBSC should contribute to raising the consciousness among the HO's of the importance of hydrographic data in order to drive "The Blue Economy" and all it signifies, in terms of economic and socio-economic development.

The CBSC should continue to explore the best means of raising awareness of the importance of hydrography to the funding agencies. The urgency of this task is underlined by increasing evidence of international and regional investment in hydrographic equipment for either marine scientific research or protection of the marine environment, without adequate awareness of measurement criteria for data to support safe navigation.

Raising awareness may be efficiently supported by a risk assessment process, based on the status of hydrographic knowledge, the main characteristics of maritime activities, including shipping, and of their evolution, and an impact study of the consequences of insufficient hydrographic knowledge or services.

M-2 is available, free of charge, together with a general IHO Information Brochure and IHO PowerPoint presentation, on the IHO website ([www.iho.int](http://www.iho.int)). These are important tools for meetings at ministry level during technical advisory visits, and are continuously updated.

### **5.3 Assessment and Analysis of Needs**

#### **5.3.1 Country profile**

A further developed C-55 as a "country profile" will play an even more important role in Capacity Building;

The C-55 data-base on the IHO website contains tables of MSI, survey and charting information for each coastal state or state with hydrographically significant waters. The standard formats for the agendas of the IHO RHCs, and for the National Reports presented to them, provide for the regular review of this information and for the discussion of capacity building initiatives to improve the situation in each country. The main deficiencies in complying with SOLAS V Regulation 4 and 9 in many coastal states are as follows:

- No effective organization for the promulgation of information of importance to safe navigation and the protection of the maritime environment, either as navigational warnings or as inputs to NAVAREA Coordinators and those hydrographic offices with responsibility for charting;
- Outstanding actions to implement the GMDSS;
- No capacity to plan and implement a prioritised survey programme, including a re-survey component;
- Failure to apply IHO S-44 criteria in Marine Scientific Research and offshore industrial surveys;
- The lack of measures to ensure scientific & commercial survey data being incorporated in national bathymetric database;
- Lack of chart information on datum transfer parameters for GPS navigation;
- Lack of INT paper charts and ENC to support international navigation, especially in dangerous and VTS areas.

### 5.3.2 Technical Visits

Technical visits provide a powerful means of working with local administrators and experts to determine the arrangements for delivering SOLAS V obligations which are appropriate and sustainable for their country. Follow up visits may be required to support the recipient of the technical visit to implement the recommendations to establish hydrographic services.

### 5.3.3 Risk Assessment

A risk assessment provides a robust basis for prioritising a national/regional charting programme. The risk analysis methodology is evidence-based and objective against set criteria. It includes AIS traffic analysis and an economic assessment. The main output is a risk heat map which allows governments, charting authorities and other interested parties to come to a conclusion about the nature and scope of charting improvements and related maritime safety initiatives. A GIS is used for the analysis and to display the results. This allows complex data to be easily accessed and understood by key stakeholders to aid decision making and presents a compelling case for action.

## 5.4 Mechanisms for Action

The following mechanisms are available for capacity building action:

### 5.4.1 Contact with decision-makers and advice to national experts:

- IHO input to projects championed by IMO and other organizations;
- IHB advisory visits;
- RHC Visit Teams;
- Technical Workshops.

### 5.4.2 Technical assistance

IHO and RHC assistance in coordination of regional survey, charting and MSI projects, including advice on liaison with funding agencies and with industry.

### 5.4.3 Bilateral assistance by other IHO MS, by MOU, or on contract or aid-funded basis:

- provision of SOLAS-compliant hydrographic services by other MS through legal administrative arrangement;
- loan of skilled staff;
- training, including options in region;
- output-based project assistance, with out-sourcing fully evaluated and exploited;
- appropriate and sustainable skill and technology transfer, including advice on organization and planning as well as support for practicing hydrography.

Specific regional comprehensive programmes, as mentioned in Chapter 5, may be prepared by a study, possibly outsourced, on the feasibility of building a generic multi-year CB programme, taking into account sustainable expected progress, funding sources and their availability, possible synergies with complementary international cooperation programmes, languages issues and the level of commitment of concerned nations.

## 5.5 Management of Capacity Building Action

The CBSC has established an IHO Capacity Building Fund (CB Fund). All transactions are transparent. Any donor may pledge funding for a particular purpose or project if desired.

The disbursement of the IHO CB Fund is controlled by using a costed Management Plan to derive annual Work Programmes. It enables the CBSC to assess and prioritise proposals submitted through the RHCs, and to approve appropriate responses for which costs and benefits have been balanced. Further details are given in the relevant Procedures.

## **5.6 Training methodologies and cooperation**

Training is a very important part of the IHO CB. The methodologies and the means of cooperation with training facilities play an important role in the success of funded trainings. The following list encompasses the main rules and fields of work for the capacity building efforts of the IHO:

- Maritime Safety Information (MSI) will be given priority in order to achieve the first long term objective of this Strategy, based on a multi-year MSI CB Plan to be developed jointly by the CBSC and World-wide Navigational Warning Service Sub-Committee (WWNWS);
- CAT A and B – Depending on funding, consideration will be given to using IHO funds for CAT A and B survey training and CAT B cartography training for candidates from MS only.
- Training for the trainer (TFT), to improve the availability of trainers within a region or country.
- Standardization of trainings beyond CAT A and B where feasible, providing a structure of training possibilities for certain topics.
- MSDI training – MSDI Courses will be developed to cater for the different requirements of the various phases of Hydrographic development.
- Ensuring that syllabi of trainings are widely available, preferably in different languages.
- Investigation of the practical benefit and a possible implementation of blended and e-learning.

## **5.7 Cooperation with Stakeholders**

The CBSC works closely together with stakeholders, such as Nations, international and regional organizations and Non-Governmental Organizations (NGOs) to find a broad basis for the cooperation for the benefit of the IHO CB Strategy.

# **IV. PERIOD IN FORCE**

## **6. Review and updates**

The first version of the IHO Capacity Building Strategy Paper was approved by the members of the CBSC on 30 November 2006 and has been updated since then. This updated version was approved by the CBSC in May 2014. It remains in force until withdrawn by that sub-committee. It will be reviewed at each annual meeting of the CBSC. The date of the most recent approval will be shown at the head of the document.

***ADDENDUM1 to CONF.EX5/REP03***

**MEMBER STATES' COMMENTS**

**CANADA**

Canada would like to thank the Capacity Building Sub-Committee for their efforts in producing this report.

Canada, in general, accepts the recommendations presented.

**UK**

The United Kingdom fully supports the revision of the Capacity Building Strategy, which is a measured and pragmatic enhancement to the first version of the IHO Capacity Building Strategy Paper approved by the members of the CBSC on 30 November 2006.

Noting that funding for the IHO Capacity Building programme remains limited, it is disappointing that the development of C-55 as a "country profile" (paragraph 5.3.1 of the revised strategy refers) remains elusive, even though IRCC4 (Singapore, 2012) gave clear guidance that it needed to be modernized/improved through the use of GIS.

The UK believes that a GIS-based electronic version of C-55 is a key presentational tool, which more accurately portrays the status of hydrographic services world-wide and requires development to more efficiently support the work of IHO Member States, Regional Hydrographic Commissions and the IHB itself.

**USA**

The United States congratulates the Capacity Building Sub-Committee (CBSC) for the effort on the Capacity Building Strategy. We kindly offer the following observations for consideration when finalizing the document.

- Adjust the Vision of the CBSC by describing the desired future state of IHO capacity building.
- Link outcomes to each Phase (page 4) of the MS development effort, including unambiguous metrics to track/identify success at each phase.
- Separate out Goals and Objectives. Use Goals as the end state, with Outcomes as steps to reach them. Attempt to identify measurable objectives, and estimate the resources needed to ensure that the outcome is realized.
- As a strategy document, consider a separation of the implementation ("how to" processes) from the strategy. The result being a document pair consisting of the CB Strategy over a longer period, linked to a CB Strategy Implementation Plan that is updated as needed.

The United States is committed to assisting the IHO and other Member States with the critical need for Capacity Building. We look forward to working with other MS and develop our collective ability to deliver Safety of Navigation products and services.



**APPROVAL OF THE DRAFT FINANCIAL REPORT  
FOR 2013**

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**APPROVAL OF THE PROPOSED IHO WORK PROGRAMME AND  
BUDGET FOR 2015**

**Submitted by: The IHB Directing Committee**

**INTRODUCTION**

In normal circumstances, the approval of the draft financial report of the Organization for the previous year and the approval of the Work Programme and the Budget for the following year are conducted by correspondence and voting via Circular Letter.

However, given that, for the first time, the IHO Member States are meeting in Conference in the latter part of the year and as indicated in CL 54/2014 - *Annual Report of the IHO* and FCCL 2/2014 - *Proposed IHO Work Programme and Budget for 2015*, the Directing Committee has taken the opportunity to avoid the usual protracted postal voting process and additional administration by presenting the relevant documents for consideration and approval by the Conference.

The final draft financial report for 2013 and the recommendations of the Directing Committee and the Finance Committee Officers for the disbursement of the budget surplus for 2013 together with explanatory notes are presented in Annex A for the consideration of Member States.

The proposed Work Programme and Budget for 2015, together with explanatory notes, are provided in Annex B for the consideration of Member States.

**FINAL DRAFT FINANCIAL REPORT FOR 2013 AND RECOMMENDATIONS FOR  
THE DISBURSEMENT OF THE BUDGET SURPLUS FOR 2013****Submitted by: The Directing Committee****PROPOSAL**

The Directing Committee, with the endorsement of the Finance Committee, seeks:

- a) The approval of the final draft financial report for 2013;
- b) The approval of its recommendations for the disbursement of the budget surplus for 2013 of 91,296.20€, as follows:
  - 50,000€ to be allocated to the Special Projects Fund, and
  - 41,296.20€ to be allocated to the Internal Retirement Fund.

In accordance with Article 19 of the Financial Regulations of the IHO, approval of the final draft financial report requires the two-thirds majority agreement of Member States present.

**EXPLANATORY NOTES**

The following text was originally presented to Member States as the Foreword to Part 2 of the Annual Report of the IHO for 2013 (see IHO Circular Letter 54/2014 dated 4 August). It is repeated here for ease of reference.

**Foreword to the Finance Report for 2013****Introduction**

1. The Directing Committee is pleased to present the statement of the finances and accounts of the IHO for 2013 in accordance with Article 19 of the Financial Regulations of the IHO.

**Presentation of Results**

2. As has been the case for the last 15 years, the statement of the finances and accounts are submitted in two formats: a traditional French-based accounting presentation and an international accounting presentation. The international presentation was first introduced in 1999 to provide a standardized and more familiar report that would enable a better understanding of the status of the IHO finances. IHO records show that it was intended that appropriate changes would be made to the accounting software used by the IHB and to the Finance Regulations so that the Finance Report would in the future be presented in accordance with International Accounting Standards only. However, this has not occurred so far.

3. As a result there continues to be significant extra effort required to support two significantly different methods of presentation, particularly as the accounting software used at the IHB does not provide outputs in line with the international presentation. The Directing Committee is now investigating what procedural and software changes will be required to enable the IHO to complete the move started in 1999 to adopt full international accounting standards for the annual presentation of the finances and accounts.

**Result for the year**

4. The audited financial statement indicates a positive result for 2013 of 91,296.20€ (see table "Total Operating Statement"). The positive result represents a 3.2% underspend of the approved budget.

5. The most significant contributions to the positive result were:
- a. less than anticipated personnel costs,
  - b. less than anticipated expenses for maintenance of the building and equipment,
  - c. a number of planned consultancy and contract support arrangements were funded by the Special Projects Fund rather than the operating budget, and
  - d. additional extraordinary income from interest on overdue contributions and administration fees.
6. However, as has been the case for a number of years, maintenance of the guaranty sum in the Internal Retirement Fund (IRF) was not included as part of the approved budget for 2013, nor was any provision made for the potential non-payment of annual contributions from some Member States. As indicated in the submission of the proposed budget for 2014 to Member States, these liabilities are now accounted for in the annual budget.
7. Further offsetting the positive result, the cost of travel, together with general expenses, continued to rise. Of particular concern is the increase in the cost of providing medical cover for current and retired members of staff. This is being caused by a combination of an overall increase in the number of retired staff and their replacements being covered under the scheme and a consequent increase in the cost of the partial reimbursement insurance cover taken out in 1983 to protect against large claims that might occur in any particular year, together with a steady increase in medical costs generally.
8. The contribution from personnel costs comprised a salary bill that was slightly lower (-1.3%) than the estimate that was based on the best figures available in 2011, and lower than anticipated claims for home leave and education grants. Measures are now being put in place to provide a more accurate estimate of the salary bill for future budget proposals.
9. The Directing Committee was unable to spend a significant part of the budget allocated for consultancy and contract support. This was because the majority of the contracted commercial support assistance provided in 2013 was related to activities that qualified under the purposes of the Special Projects Fund.

### **Capacity Building Fund**

10. In 2013 the Capacity Building Fund provided direct support to training activities as well as supporting the attendance of participants at various technical workshops and seminars. The fund received an additional 269k€ in external support from the Republic of Korea. Despite an increase in CB spending, by the end of the year, the balance in the CB Fund was at an all-time high.

### **Shortfall in Internal Retirement Fund**

11. The Internal Retirement Fund (IRF) is necessary in order to support the IHO's long-established independent retirement plan (pension scheme) for a number of the longer serving and retired members of the IHB staff. The pensions of eight retired members and two current members of staff are covered by the IRF. Staff who were recruited after 31 August 1987 are covered by more recent commercially-based Personal Retirement Plans that place much less of a long-term financial burden on the IHO.

12. The IRF is purposely maintained in low-risk investment accounts. In recent years these accounts have provided a much lower rate of interest than previously due to a general decrease in global interest rates. Taking into consideration the lower rates of interest and the progressive increase in liability for the two current staff members as they accrue more years of service before they retire (most likely in 2015 and 2018), the investment sum required to meet the liabilities of the IRF at the end of 2013 increased from 3,028,394€ to 3,106,509€. If the fund is to match its liabilities, there is now a 4.2% shortfall of 130,872€. However, this will be reduced to 65,489€ (2.1% shortfall) with the proposed transfer of the

balance of the discontinued IHO Printing Fund to the IRF (CL 5/2014 - *Proposed IHO Resolution on Guiding Principles for IHO Funds* refers).

13. Given the likelihood of continuing low interest rates in the next few years, it is likely that the liability on the IRF will continue to increase. This will therefore require a modest annual contribution to continue to be made to the IRF. Although this has not been done in the past, the Directing Committee intends to reflect this requirement in the annual budget forecast in future. From 2018 onwards, when all the current staff members in the IRF have retired, the rate of increase in the IRF requirement should reduce and the IRF may become self-sufficient if the difference between interest and inflation rates remains similar to today.

#### **Other Funds**

14. **Conference Fund and Directors and Category A Staff Relocation Fund.** The Conference Fund and the Directors and Category A Staff Relocation Fund are in a healthy position and should be able to meet all anticipated expenditure over the next few years without any adjustment to the budget forecast. The contribution to the Conference Fund from the annual budget may need to be reviewed when the new Convention on the IHO enters force because there will then be a requirement for an annual meeting of the IHO Council. There may be unforeseen additional administration and hosting expenses associated with the meetings of the Council and the Assembly, compared to the current regime.

15. **Special Projects Fund.** At the end of the year, the value of the Special Projects Fund was 13,399€. In 2013 the Fund was used to support a number of commercial contracts in support of development work on an S-100 Portrayal Catalogue Builder. The use of contract support is increasing - especially to support S-100 activities and associated developments. While a provision for contract support is included in the 5-year budget, the increasing cost for new work now being proposed by the working groups indicates that the budget must be managed carefully during the remainder of the budget period.

#### **Member States' Subscriptions**

16. At the end of 2013, 90% of the value of Member States' contributions had been received. This figure was 3% higher than the previous year.

17. Until the approved 2014 budget, the annual budget has not included an estimate for the non or late-payments of contributions by Member States caused by geo-political or other factors. At the end of the year, five Member States were in arrears. For the first time, those States in arrears that are considered to be a high risk of non-payment have been taken into account in calculating the final results. This avoids using a false (higher) value for income than is really the case.

#### **Recommendations**

18. Now that the IHO Special Projects Fund exists, the Directing Committee and the Finance Committee Officers consider that it is more appropriate that one-off contract work that is directly in support of the IHO technical and the inter-regional coordination and support work programmes, previously financed from the operational budget, should be financed from the Special Projects Fund. This happened in 2013 - resulting in an underspend in the operational budget, but a corresponding reduction in the balance of the Special Projects Fund.

19. A number of very significant S-100 related development activities will require contract support assistance in the next few years, including the further enhancement of the S-100 Registry, the development of S-100 catalogue builders, and the development of the S-101 ENC Product Specification together with test-bed applications to ensure that the IHO S-100-based standards are robust and fit for purpose. It is recommended that 50k€ of the surplus

be transferred to the Special Projects Fund in order to maintain a balance that will be able to meet these and other significant requirements.

20. The Directing Committee and the Finance Committee Officers consider that the policy of maintaining the capital sum in the IRF at approximately the same value as the current actuarial assessment of the liability should be continued in order to ensure that the pensions of retirees are not compromised now or in the future and also to protect the Organization from additional significant expenses. It is recommended that the remainder of the budget surplus should be transferred to the IRF so that the capital sum in the IRF is almost the same value as the actuarial assessment of the pension liability.

### **Proposals for 2013 Budget Surplus**

21. The Directing Committee, with the endorsement of the Finance Committee Officers, proposes that the budget surplus for 2013 of 91,296.20€ be allocated as follows:

- 50,000€ to the Special Projects Fund, and
- 41,296.20€ to the IRF.

### **Future Budget Estimates**

22. As a general rule, funds in the Contract Support chapter of the operational budget are meant for non-periodic, exceptional expenses, whereas contract support from the Special Project Funds is used in a long term objective. From 2015 the Directing Committee intends to reduce the allocation for contract support in the proposed budget and to include a compensating allocation to the Special Projects Fund.

23. As was done in the proposed budget for 2014, the Directing Committee will continue to forecast any requirement to increase the IRF and to include a provision in the proposed budget in advance, if required, rather than relying on achieving a budget surplus at the end of the year to maintain the fund at appropriate levels.

### **Conclusion**

24. The Directing Committee is continuing to implement measures that will enable even better monitoring and allocation of the IHO budget. This is increasingly important because the scope of IHO activity continues to rise whereas the income is almost static. As a result, several factors, including non-payment of subscriptions by some Member States, the rising cost of providing medical cover for staff and retirees and increasing travel costs are beginning to place a strain on the annual budget. These matters will be highlighted at the Fifth Extraordinary International Hydrographic Conference to be held in 2014. Nevertheless, the Directing Committee remains confident in the financial situation of the Organization and its ability to meet all its obligations.

## APPROVAL OF THE WORK PROGRAMME AND BUDGET FOR 2015

Submitted by: The Directing Committee

### PROPOSAL

In accordance with IHO Resolution 12/2002 as amended - *Planning Cycle*, the Directing Committee, with the endorsement of the Finance Committee, seeks:

- a) approval of the proposed Work Programme for 2015;
- b) approval of the associated Budget for 2015.

According to Rules 50 and 51 of the Rules of Procedure for International Hydrographic Conferences, approval of the annual Work Programme requires the simple majority agreement of Member States present.

According to Article 8b of the Financial Regulations of the IHO, the approval of the Budget for 2015 requires the two-thirds majority agreement of Member States present.

### EXPLANATORY NOTES

1. The proposed Work Programme for 2015 is shown in Appendix 1 to this Annex. The proposed operating Budget for 2015 is shown in Appendix 2. In addition a forecast of incomes and expenditures for the various IHO funds in accordance with IHO Resolution 1/2014 - *Guiding Principles for IHO Funds* is provided in Appendix 3.

#### Work Programme

2. The proposed Work Programme for 2015 has been drawn up based upon the 5-year Work Programme and Budget approved by the XVIII<sup>th</sup> International Hydrographic Conference in April 2012. Compilation of the Work Programme has followed, as far as practicable, the guidance provided in IHO Resolution 12/2002 as amended - *Planning Cycle*.

3. In drawing up the Work Programme, the Directing Committee has referred to the work programmes of the principal committees (HSSC and IRCC) and sought additional input from the Chairs of those committees and all subordinate bodies, the Chairs of Regional Hydrographic Commissions and the Chairs of Inter-Organizational bodies. The Directing Committee sought details of new and completed tasks, and particularly any that might affect the IHO budget.

4. The proposed Work Programme for 2015 is shown in Appendix 1 to this Annex. It is arranged under the three IHO programmes. For each element of the Work Programme, the most relevant strategic directions are shown. The proposed Work Programme also contains, where possible, remarks identifying the key deliverables expected in 2015, together with any significant risks to delivery. However, this information is incomplete because a significant number of the IHO bodies have not provided the necessary input related to various Work Programme items.

5. In order to assist in balancing available resources against requirements, the Directing Committee specifically sought input that identified any perceived resource constraints, vulnerabilities or threats to the successful implementation of activities to be included in the Work Programme. Regrettably, the response rate was particularly low in all respects - responses were received from one of the 15 RHCs, one of the three inter-organizational bodies and two of the 14 relevant subordinate working groups. There has been little or no helpful comment provided by the relevant IHO bodies on the availability or criticality of the resources required to implement activities in the programme.

## **Budget**

6. The draft Work Programme, together with the supporting budget proposal for 2015, was subsequently forwarded to the Finance Committee for comment and its recommendation. Responses were received from three of the 17 Member States in the Finance Committee. The responses and additional explanations from the Directing Committee are included in these notes.

7. distance travel is anticipated to rise at least in line with inflation, the proposed allocation for 2015 Following the submission of the proposed budget to the Finance Committee, the Directing Committee was informed of an increase in the tonnage of one Member State which increased the total number of shares for 2015 by one share. In addition, another Member State began to pay off its contribution debt, thereby allowing the provision for bad debts to be reduced in the budget. The overall effect of this provides an additional 32,000€ in the budget. This additional sum has been incorporated in the budget presented in Appendix 2. The additional funds have been used to reduce the size and therefore the severity of the cutbacks in IT maintenance, medical premiums and refunds, home leave payments, office stationery and contract support that were originally presented in the proposed budget forwarded to the Finance Committee.

8. The proposed operating budget for 2015 shown in Appendix 2 is based on implementing the proposed 2015 Work Programme shown in Appendix 1 to this Annex and fulfilling the various other obligations placed on the IHO as an organization.

9. In proposing the budget for 2015, the Directing Committee has continued to seek real savings in all areas where there is flexibility to do so. This includes seeking savings in medical insurance premiums, and office stationery, building maintenance and travel expenses. Although the cost of long remains the same as for 2014.

## **Income**

### **Member States' contributions**

10. The share value for membership contributions (3,984.48€) has not changed since 2005. The budget being proposed for 2015 assumes that this value will remain unchanged for another year, as forecast in the approved 5-year Budget 2013-2017. An increase in the share value of 1% is anticipated in the approved 5-year Budget to take effect in January 2016.

11. The income for 2015 takes into account a net increase in shares compared to the number of shares forecast in the 5-year Budget (715 rather than 694), but a decrease in shares compared to 2014 (716 in 2014). This is due to changes in declared tonnages, the potential suspension of one more Member State due to the political situation in that country and their likely inability to pay membership contributions for the current and previous years, and the addition of one new Member State not forecast in the 5-year Budget. The forecast contribution income for 2015 is therefore 2,848,903€.

### **Interest on bank accounts**

12. The interest rates on bank accounts during the past years have remained low due to economic circumstances. The Directing Committee anticipates similar circumstances in 2015. For this reason, the estimated yearly income from the interest on bank accounts remains the same as for 2014 (40,000€).

13. Taking into account all forms of income, the total forecast income for 2015 is 3,062,403€.

## Expenditure

### Travel

14. The overseas travel component has been maintained at the same level as 2014 despite anticipated increases in costs of travel. This has been achieved by the IHO secretariat planning not to attend several intergovernmental and other international meetings in which the IHB has participated in the past. In some cases, it may be possible that Member States where the relevant meeting takes place may be available and willing to represent the IHO, though this practice has not always been successful in the past. If not, the IHO will not be represented.

### Medical Cover for Staff and Retirees

15. The costs associated with medical cover for Staff and retirees are an estimate based on the figures used for 2014. As indicated in the Report of the Staff Regulations Working Group to be considered at the 5th Extraordinary International Hydrographic Conference, the Directing Committee has concerns over the costs and benefits associated with the insurance policy that provides partial reimbursement of medical expenses. The Directing Committee is investigating alternatives and has very recently managed to secure a lower premium and a higher rate of reimbursement from the existing policy. The records show that since 2002 the IHB has only been reimbursed for 55% of its outlay in insurance premiums.

### Bad Debts

16. The proposed budget assumes that up to four Member States will be unable to pay their annual membership contributions during 2015. This is in addition to the suspension of one Member State forecast in paragraph 11.

## IHO Funds

17. Allocations to the various funds were included in the approved 5-year plan but no indication of the planned expenditures from the funds was provided. Subsequently, IHO Resolution 1/2014 - *Guiding Principles for IHO Funds* was adopted. The Resolution indicates that expenditures (from the Funds) are normally planned by the IHB together with the five-year Budget ("five-year" to be replaced with "three-year" when the Protocol of Amendments to the Convention comes into force) and reviewed with each annual budget. As a result of the adoption of Resolution 1/2014, the Directing Committee presents proposed expenditures from the funds for 2015 as part of the annual budget. These are included in the statement in Appendix 3 to this Annex.

18. **Special Projects Fund.** In order to conform to the spending guidance for the Special Projects Fund now contained in IHO Resolution 1/2014, an element of the budget allocated to contractor support in previous years will be allocated to the Special Projects Fund from now on to meet the expenses in the IHO Work Programme associated with supporting the work of IHO bodies. The contractor support element remaining in the operating budget will be used to support only those work items under the responsibility of the IHB.

19. **Internal Retirement Fund (IRF).** The Directing Committee maintains a close watch on the actuarial forecast of the ability of the IRF to meet its obligations of paying pensions to retirees and the few remaining active members of staff still eligible under the scheme. Stable, albeit low, rates of interest and relatively low rates of inflation mean that there has been no significant rise in the forecast liability on the fund. Accordingly, no allocation to the IRF is proposed for 2015.



20. **Renovation and Enhancement Fund, Relocation Fund, Conference Fund.** The value of the Renovation and Enhancement Fund, the Relocation Fund and the Conference Fund is healthy. Taking into account the anticipated expenditure requirements from these funds over the next few years and notwithstanding the allocations forecast in the approved 5-year Budget, the Directing Committee considers that there is no requirement to allocate additional monies to these funds in 2015.

21. **ABLOS Fund.** The ABLOS Fund supports the biennial ABLOS Conference. It is maintained directly from the attendance fees levied for ABLOS Conferences. No allocation from the IHO Budget was forecast in the 5-year Budget and none is required in 2015.

22. **Capacity Building Fund.** Expenditure from the Capacity Building Fund will be in accordance with the Capacity Building Programme for 2015 that was formulated by the Capacity Building Sub- Committee and approved by the Inter Regional Coordination Committee. The Capacity Building programme for 2015 is available on the IHO website at:

Home > Capacity Building / Provision / CB Work programme.

23. **GEBCO Fund.** Unfortunately, to date, no work programme or budget estimate has been provided by the GEBCO Guiding Committee. As a result, no up to date forecast of expenditure in 2015 is available for the GEBCO Fund.

### Budget Proposal for 2015

24. Given a forecast total income for 2015 of 3,062,403€, the Directing Committee proposes a budget expenditure of 3,060,600€, as indicated below:

		<i>Forecast in 5-Year budget</i>	<i>Approved budget for 2014</i>	<b><i>Proposed for 2015</i></b>	<i>Remarks</i>
<i>Chapter I</i>	<i>Personnel Costs</i>	2,303,184	2,287,835	<b>2,319,000</b>	Increase in salaries and allowances due to cost-of-living indexation and salary progression
<i>Chapter II</i>	<i>Current Operating Costs</i>	541,400	640,900	<b>579,100</b>	Increase in travel expenditure due to escalating costs 30k€ contract support funds in support of IHO bodies included in Special Projects Fund
<i>Chapter III</i>	<i>Capital Expenditure</i>	63,200	39,300	<b>34,300</b>	

<i>Chapter IV</i>	<i>Asset allocation</i>		25,000	<b>25,000</b>	
<i>Chapter V</i>	<i>Allocation to funds</i>	83,700	73,200	<b>103,200</b>	30,000€ allocated to Special Projects Fund to support IHO bodies No allocation to IRF, or to renovation and relocation funds in 2015
<b>Total Expenditure</b>		2,991,484€	3,066,235€	<b>3,060,600€</b>	

25. The proposed budget of 3,062,403€ is, in effect, balanced; the anticipated expenses for 2015 being only 1,803€ less than the expected income.

### Long Term Outlook

26. Several factors, particularly the potential non-payment of subscriptions by some Member States, the progressive increase in the cost of salaries and associated personnel expenses, travel and a greater reliance on contract support for some aspects of the technical programme are placing an increasing strain on the budget. Fortunately, for 2015 a number of IHO funds are currently in a healthy position and do not require the annual allocation approved in the 5-year Budget. However, in future years, and notwithstanding the 1% rise in the share value to take effect in 2016 as agreed as part of the 5-year Budget, more severe cuts will be required in the scope of the IHO Work Programme unless the IHO income rises rather than falls.

27. The recruitment of additional Member States and a reduction in the late or non-payment of annual contributions from existing Member States must be a priority.

## COMMENTS FROM MEMBERS OF THE FINANCE COMMITTEE

### CHILE

We have no objections to the 2015 IHO Budget submitted attached to the FCCL N° 2/2014, but we have a couple of comments.

We feel that it is a valuable and workable alternative to invite – when the circumstances so merit it – any IHO Member State to represent the IHO if resources are limited or not available. Probably the way to ensure the success of such a representation is to provide the relevant Hydrographer with full information on the objectives of the mission he/she is invited to accomplish. In our opinion the fact that some past experiences have not been successful should not preclude using this option, as a matter of policy and as and when required.

Our second comment refers to the closure of the Printing Fund. It is indicated that the Printing Fund was closed in 2014 and that 65,382.73 € have been transferred to the IRF. Nevertheless the amount available at the beginning of 2014 was 3,213,188.00 € and the forecasted expenditure for 2014 is 100,000.00 €; therefore at the end of 2014 there will be an availability of 3,113,188.00 €, not being evident the transfer from the Printing Fund. Is it that the initial value of the IRF in 2014 already considers the transference from the Printing Fund? I would appreciate any clarification.

**IHB COMMENTS**

We welcome your comments on inviting IHO Member States to represent the IHO when appropriate. We are on the same line of thoughts and do intend to use that option as much as possible while providing the IHO Member State with the appropriate background information and guidance, subject, of course, to the willingness and availability of the relevant HO to participate in the event!

As regards your second comment on the closure of the Printing Fund, we confirm that the initial value of the IRF in 2014 (3,213,188.00 €) does include the transfer of 65,382.73 € from the Printing Fund.

**FRANCE**

Following receipt of the proposed Budget for 2015 attached to your email message, I am pleased to comment as follows:

- Overall, the balance in the draft 2015 budget does not call for any remark on my part as it is obtained in a sensible manner as explained in the covering letter signed by Robert Ward;
- With respect to a very minor point, it is noted in Table 2 (income) of the draft 2015 budget that the income from the sales of publications amounts to 0 € in 2015 (whereas the five-year budget and the 2014 budget forecasted an income of 1500 €). In itself this reduction to 0 € of the income from sales of publications does not call for any comment but I note, in parallel, that the publication costs appearing in Chapter II of Table 3 (detailed expenditure) does not decrease between 2014 and 2015 (they are maintained at 11 600 €). This situation calls for two comments on my part:
  - Either the IHO will continue in 2015 to print the same number of publications as in 2014, but those which were on sale will, henceforth, be distributed free of charge. In that case it would be helpful to note in the “Comments” column of Table 2 that the publications which had previously been on sale would now be available free of charge;
  - Or the IHO will no longer print publications for sale in 2015. In that case the publications costs appearing in Chapter II of Table 3 should slightly decrease.

**IHB COMMENTS**

The IHO publications policy was revised in 2008 leading to the adoption in 2009 (see IHO CL39/2009) of the amended versions (currently in force) of IHO Resolutions 03/1957 and 10/1937 on IHO publications.

As indicated in the Five-Year Finance Report 2007-2011, approved by the 2012 Conference, the decrease in printing costs was applied as from 2008. The budgeted amounts since that date correspond to the costs of publications for the internal requirements of the IHO (contract of the Editor of the I.H. Review; printing of documents distributed free of charge to the MS such as the Annual Report or Circular Letters).

**SWEDEN**

Sweden supports the proposal and has no comments on the Budget for 2015.

Proposed Work Programme for 2015

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
<b>PROGRAMME 1 - CORPORATE AFFAIRS</b>								
1 & 3	1.1	Co-operation with international Organizations and participation in relevant meetings.			Objective / Deliverable: To maintain relationships with relevant international organizations in order to further the interests of the IHO by enlisting their support and cooperation and to participate in projects of common interest			
	1.1.1	Antarctic Treaty Consultative Meeting (ATCM)	Pres	ADCS	ensure HCA activities are recognised by ATCM, coordination and liaison			1 Director, Bulgaria, June, 5 working days + travel time
	1.1.2	Comité International Radio Maritime (CIRM)	DTech	ADSO	present relevant IHO programmes, coordinate activities with CEMs; outreach, coordination and liaison			1 Director, Cyprus, 2 working days + travel time
	1.1.3	Council of Managers of National Antarctic Programs (COMNAP)	Pres	ADCS	present relevant IHO programmes, coordinate data acquisition activities with COMNAP, outreach, liaison		No meetings anticipated, low level correspondence only	
	1.1.4	European Union Initiatives, including:	Pres	ADCS	ensure IHO activities are recognised and supported as appropriate by the EU; coordination and liaison			
	1.1.4.1	INSPIRE	DTech	ADDT	ensure that the maritime dimension of spatial data infrastructures is recognized in the Inspire framework		could be up to 4 meetings - only 2 are funded	1 Director, possibly 2 meetings in Brussels, 1 working day each + travel time
	1.1.4.2	IHO-EU Network WG	DTech	ADCS				

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
	1.1.5	International Federation of Surveyors (FIG)	DCoord	ADCC	present relevant IHO programmes, coordinate activities with FIG, outreach and liaison		representation not considered essential for FIG working week 2015	
	1.1.6	International Federation of Hydrographic Societies (IFHS)	Pres	ADSO	present relevant IHO programmes, outreach via annual HYDRO meetings			
	1.1.6.1	HYDRO15			present relevant IHO programmes, outreach		SA to be requested to represent IHO	
	1.1.7	International Association of Antarctic Tour Operators (IAATO)	Pres	ADCS			No meetings anticipated	
	1.1.8	IALA, such as:	DTech	ADSO				
	1.1.8.1	e-NAV Committee	DTech	ADDT	present relevant IHO programmes, provide S-100 liaison activities			1 AD, 2 meetings in Paris, April and October, 2 working days each + travel time
	1.1.8.2	Annual secretariat liaison meeting	Pres	ADSO	coordinate programmes, particularly CB		Possibly meeting back-to-back with another meeting	
	1.1.9	International Association of Ports and Harbours (IAPH)	Pres	ADDT			No meetings anticipated	
	1.1.10	International Cartographic Association (ICA) (such as ICA Commission on Geoinformation Infrastructures and Standards)	DTech	ADCC	coordinate programmes, particularly in relation with GI and training standards		BR has agreed to represent IHO	
	1.1.11	International Electrotechnical Commission (IEC) (such as IEC Technical Committee 80)	DTech	ADDT	present relevant IHO programmes, coordinate S-100 and other IHO standards developments, liaison		no participation unless review of IEC 61174 requires IHO participation	

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
	t.1.12	International Maritime Organization (IMO), including:						
	t.1.12.1	Assembly	Pres	ADSO	present relevant IHO programmes and activities, outreach and liaison			1 Director or AD, London, 4 working days + travel time
	t.1.12.2	Council	Pres	ADSO	present relevant IHO programmes and activities, outreach and liaison			
	t.1.12.3	MSC	Pres	ADSO	present relevant IHO programmes and activities, outreach and liaison			1 Director, 1 AD, London, 10 working days + travel time
	t.1.12.4.1	NCSR	DTech	ADSO	present relevant IHO programmes and activities, outreach and liaison			1 Director, 1 AD, London, 5 working days + travel time 9-13 March
	t.1.12.4.2	NCSR interessional meeting on e-Nav	DTech	ADSO	present relevant IHO programmes and activities, outreach and liaison			1 Director or AD, London, 3 working days + travel time
	t.1.12.5	TCC	DCoord	ADCC	present relevant IHO programmes and activities, coordination with IMO TC, outreach and liaison			1 Director, 1 AD, June, London, 3 working days + travel time
	t.1.13	International Maritime Pilots' Association (IMPA)	Pres	ADSO			No meetings anticipated, low level correspondence only	
	t.1.14	Intergovernmental Oceanographic Commission (IOC) of UNESCO, including:	DCoord	ADSO				
	t.1.14.1	Assembly 28	DCoord	ADSO	present relevant IHO programmes and activities, outreach and liaison			1 Director, June, Paris, 3 working days + travel

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
	1.1.14.2	Council	DCoord	ADSO			No participation anticipated	
	1.1.14.3	IOOE Committee	DTech	ADDT	Promote the use of S-100 by the IOC, outreach and liaison		EE or other nearby MS to be requested to represent IHO	
	1.1.14.4	Specialized WGs (such as GLOSS)	DTech	ADSO	ensure appropriate levels of coordination with IHO work items related to tides and surface currents	MS may not have resources or technical background to participate	MS to be requested to represent IHO if IHO technical support required	
	1.1.15	International Organization for Standardization (ISO), including	DTech	ADDT				
	1.1.15.1	ISO Technical Committee 211	DTech	ADDT	present relevant IHO programmes and activities, coordinate IHO standards development with ISO programmes, outreach and liaison			1 AD, 2 meetings, 1 in Europe, one in USA, x 5 working days each + travel time
	1.1.16	Joint Board of GIS (JB-GIS)	Pres.	ADCS	present relevant IHO programmes and activities, outreach, coordination and liaison with other geospatial organisations		normally undertaken as a short side trip from another meeting = limited extra cost	1 Director, venue unknown, 1 working day
	1.1.17	NATO geospatial bodies, such as	DTech	ADDT				
	1.1.17.1	OGING	DTech	ADDT	coordination and liaison with other geospatial organisations		suitable volunteer MS to represent IHO	
	1.1.18	UN, including	Pres.	ADCS				

Strategic Director	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
	1.1.18.1	UNOPOLOS	Pres	ADSO	present new edition of TALOS manual to the relevant UN body and assist Monaco Ambassador to UN in recruiting new MS to IHO			1 Director, New York, 1 meeting x 4 working days + travel time
	1.1.18.2.1	UN-GGIM	Pres	ADCS	present relevant IHO programmes and activities in relation to UN-GGIM programme to ensure that hydrography is appropriately represented in doctrine being developed by UN-GGIM and adopted by UN			1 Director, New York, August, 1 meeting x 4 working days + travel time
	1.1.18.2.2	UN-GGIM High Level Forum						1 Director, venue and date unknown, 1 meeting x 4 working days + travel time
	1.1.18.3	UNISDR	Pres	ADSO	ensure that hydrography is appropriately accounted for in the post-2015 DRR framework to be adopted in 2015		JP will represent the IHO at 3rd World Conference on Disaster Risk Reduction	
	1.1.19	World Meteorological Organization (WMO)	Pres	ADSO	ensure appropriate levels of coordination with IHO work items related to WWWS and MSI delivery		No meetings anticipated, low level correspondence only.	
	1.1.19.1	Participation at ETMS, ETSI and other JCDMM meetings	DTech	ADSO	ensure appropriate levels of coordination with IHO work items related to WWWS and MSI delivery		see 2.1.4	unknown



Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
	1.1.20	Other organizations when their agendas have relevance to the programme of the IHO, such as : Group on Earth Observation (GEO), Pan-American Institute of Geography and History (PAIGH), Port Management Association West and Central Africa (PMAWCA) & Maritime Organizations of West and Central Africa (MOCWA), the Scientific Committee on Antarctic Research (SCAR), Global Partnership for Oceans (GPO)	Pres or Director and AD responsible for the relevant RHC when appropriate		ensure IHO programmes and outcomes are recognised and coordinated with other organizations as appropriate		Funding only available to attend up to 2 meeting. Local MS will be requested to represent IHO at other meetings as required.	1 Director, venues unknown, up to 2 meetings, 3 working days each + travel time (GEO confirmed in 2015)
	1.1.20.1	Asia Pacific Heads of Maritime Safety Agencies (APHoMSA)	Pres	ADSO	ensure IHO regional programmes are recognised and coordinated with APHoMSA regional programmes as appropriate		Local MS will be requested to represent IHO at other meetings as required	
	1.1.20.2	International Steering Committee for Global Mapping (ISCGM)	Pres	ADCS	ensure IHO programmes and outcomes are recognised and coordinated with ISCGM as appropriate	MS may not have resources or technical background to participate	Local MS will be requested to represent IHO at other meetings unless meeting held back-to-back with other event attended by IHO	no cost option
	1.1.21	Shallow Survey 2015	Pres	ADSO	present relevant IHO programmes, outreach			1 Director or 1 AD, Plymouth, 14-16 Sept. + travel time
1 & 4	1.2	Information Management			Objective / Deliverable: To provide MS and IHO stakeholders with accurate and relevant information in a timely and accessible manner			

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
	1.2.1	Compile and publish the following documents that are not allocated to a specific IHO body, including:						
	1.2.1.1	P.5 – IHO Yearbook	Dtech	ADDT				
	1.2.1.2	P.7 – IHO Annual Report	DCoord	ADCC				
	1.2.1.3	S.11 Part B - Catalogue of INT Charts	Pres	ADCS	S-11 database and auto-publisher		see 2.3.2.6	
	1.2.1.4	M3 – IHO Resolutions	Pres	ADSO	Appropriateness and currency of Resolutions related to current INP items			
	1.2.2	Maintain and extend IHB Admin IT infrastructure, including:	Pres	ADDT				
	1.2.2.1	high volume printers and photocopiers						
	1.2.2.2	IT maintenance and development						
	1.2.2.3	IT equipment purchases						
	1.2.3	Communication between the IHB and Member States through Circular Letters	Pres	ADSO				
	1.2.4	IHB Technical Library – incorporate new material	Pres	ADSO				
3	1.3	Public Relations			Objective / Deliverable: To raise awareness of the role of the IHO and its Member States and the importance of hydrography, particularly by government and in the user community			
	1.3.1	Maintain relationships with the Government of Monaco and the diplomatic corps accredited in Monaco	Pres	MFA				
	1.3.2	Compile and publish P-1 – International Hydrographic Review in collaboration with IHR editor	DCoord	ADCC		Contribution of suitable papers from MS and others		
	1.3.3	World Hydrography Day, including:	DCoord	ADCC				
	1.3.3.1	Preparation of support material	DCoord	ADCC				
	1.3.3.2	Celebratory events in Monaco	DCoord	ADCC				
	1.3.3.3	Celebratory events in Member States	DCoord	ADCC				

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
	1.3.4	General Public Relation support, Representation expenses	Pres	ADCC	Raising levels of awareness of IHO and hydrography			
	1.3.4.1	Compile and publish International Hydrographic Bulletin	Pres	ADSO				
1	1.4	Work Programme & Budget, Strategic Plan and Performance Monitoring			<p>Objective / Deliverable: To ensure that the formulation and the execution of the IHO Work Programme and Budget is managed, monitored and executed efficiently to best meet the requirements of Member States and the interests of stakeholders. This Element focuses on the implementation of the IHO's Strategic Plan particularly with regard to risk assessment and performance indicators</p>			
	1.4.1	Implement and administer processes for programme management, performance monitoring and risk assessment, including the acquisition and operation of suitable business software tools	Pres	ADCC	Continuing development of processes to better monitor progress, execution and achievement of the IHO WP.		included in the overall IT support budget	
	1.4.2	Execute the IHO Work Programme and Budget approved by the XVIIIth IHC, monitoring its progress and adopting the necessary adjustment according to the circumstances	Pres	MFA				
	1.4.3	Conduct biennial IHO stakeholders' forums	DTech	as required according to topics	Collect feedback from stakeholders on critical issues	Input from and participation of the relevant IHO Working Groups		If held in conjunction with HSSC-7 cost is 1 extra working day for 1 Director + 2 ADs
1	1.5	IHB Management			<p>Objective / Deliverable: To ensure that the IHB meets the requirements set by the Member States, by providing the best service (quality, opportunity, reasonable cost) within the resources available</p>			

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
	1.5.1	Maintain, update and develop necessary procedures to facilitate and improve effectiveness of the general and permanent Finance and Administrative work.	Pres	MFA				
	1.5.1.1	Staff training	Pres	MFA	Enhancement of staff skills to meet changing job requirements			
	1.5.2	Provide in-house translation service English/French and French/English in support of the IHO WP. Include Spanish translations as much as possible in accordance with relevant IHO Resolutions.	Pres	ADSO		IHB staff capacity		
	1.5.3	Engage contract support to provide on-off development or maintenance support beyond the resources or competence of the IHBs, including:	Pres	MFA	Advancement of one-off IHB tasks beyond the capability or resources of IHB			
	1.5.3.1	Translation	Pres	ADSO				
	1.5.3.2	Technical editing	DTech	As required according to topic				
	1.5.3.3	Cataloguing the IHO working document archive	Pres	ADSO				
	1.5.4	Monitor and maintain the Staff Regulations and the Job Descriptions of the IHB Staff in step with the evolution of the IHO work programme and IHO requirements.	Pres	MFA				
	1.5.5	Maintain the IHB premises as required as the occupant. Maintain furniture, carry out renovations or modifications as requirements arise	Pres	MFA				

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
1 & 4	1.6	International Hydrographic Conference			Objective / Deliverable: To ensure the successful functioning of Conferences or Assemblies so that they fulfil their top-level governance and decision-making functions in accordance with Convention and the other Instruments of the Organization			
	1.6.1	Organize IHC-19 / Assembly-1 in 2017	DCoord	ADCC				
	1.6.1.1	P-6 - Compile and publish Report on EHC-6	DCoord	ADCC				
<b>PROGRAMME 2 - SERVICES AND STANDARDS</b>								
2	2.1	Technical Programme Coordination			Objective / Deliverable: 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			
	2.1.1	Conduct annual meeting of HSSC	DTech	ADCS	Implementation of HSSC WP HSSC forward WP Performance statistics		no host identified therefore Monaco assumed as venue - venue other than Monaco will incur additional costs to IHO budget - meeting to include stakeholders forum etc	1 Director, 2 ADs, Monaco etc
	2.1.1.1	Chair briefing	DTech	ADCS	Efficient running of HSSC-7			Travel cost for Chair traveling from Rosbck

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
	2.1.2	Support the IHB to implement the planning mechanism annually and at the end of each 5-year (3-year) cycle by	DTech					
	2.1.2.1	Contributing to the IHO Annual Report.	DTech	ADCS				
	2.1.2.2	Updating and implementing the HSSC Work Programme	DTech	ADCS				
	2.1.2.3	Implementing the restructuring of HSSC Working Groups	DTech	ADCS	Feedback at HSSC-7			
	2.1.3	Provide technical advice and guidance on IHO technical standards, specification and publications	DTech	ADDT	Promote uptake of S-100 and S-100 based product specifications		Includes participation in a Navigation underway conference in support of 2.2.5	1 Director or 1 AD, possibly 2 or 3 meetings, 2-3 working days each + travel time
3.5.4	2.2	Hydrographic Data Transfer Standards				Objective / Deliverable: 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		
	2.2.1	Conduct meetings of relevant HSSC WGs dealing with hydrographic data transfer standards	DTech	ADDT	Implementation of HSSC Work Plan		Implementation of the new HSSC structure - S-100 WG & ENCMWG	4 to 6 meetings; venue unknown, 1 AD, 5 working days + travel time for each meeting
	2.2.2	Maintain and extend the relevant IHO standards, specifications and publications, using contract support assistance as appropriate, including:	DTech	ADDT	Implementation of HSSC Work Plan		funded from Special Projects Fund according to funding availability and on a priority basis set by HSSC	
	2.2.2.1	S-57 IHO Transfer Standard for Digital Hydrographic Data	DTech	ADDT	Encoding Bulletins as required to keep S-57 fit for purpose			
	2.2.2.2	S-100 IHO Universal Hydrographic Data Model	DTech	ADDT	Edition 2.0.0 approved by MS			

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
	2.2.2.1	S-100 IS-101 Testbed	DTech	ADDT	Support the end-to-end testing of S-101 and other S-10x specifications in compliance with IHO Resolution 2/2007			1AD venue unknown, 3 working days + travel time
	2.2.2.3	S-101 ENC Product Specification	DTech	ADDT	Edition 0.0.0 (draft) approved by Member States for test bed purposes			
	2.2.2.4	S-102 Bathymetric Surface Product Specification	DTech	ADDT			Revision may be required from task 2.7.5	
	2.2.2.5	S-68 Recommended ENC Validation Checks	DTech	ADDT	Implementation of Edition 5.0.0 in conjunction with new edition of IEC 61174			
	2.2.2.6	S-65 ENC Production Guidance	DTech	ADDT				
	2.2.2.7	S-64 IHO Test Data Sets for ECDIS	DTech	ADCS	Implementation of Edition 3.0.0 in conjunction with new edition of IEC 61174			
	2.2.2.8	S-61 Product Specification for Raster Navigational Charts	DTech	ADDT			No action required	
	2.2.2.9	S-99 Operational Procedures for the Organization and Management of the S-100 Geospatial Information Registry	DTech	ADDT	Keep S-99 fit for purpose			
	2.2.2.10	S-66 Facts about Electronic Charts and Carriage Requirements	DTech	ADCS	Draft Edition 2.0.0 submitted to HSSC		task conducted by correspondence	
	2.2.2.11	Participate in RENC Joint Technical Experts WG (JTEWG)	DTech	ADDT				

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations	
	2.2.3	Develop and maintain as-yet-undefined S-100-based Product Specifications	DTech	ADDT	Template Product Specification for Marine Information Overlays (MIO)		Funded from Special Projects Fund according to funding availability and on a priority basis set by HSSC		
	2.2.4	Maintain and extend S-100 registry	DTech	ADDT	Keep the Registry fit for purpose	Dependent of continuing IHO support and limited IHB resources			
	2.2.5	Provide outreach and technical assistance regarding transfer standards	DTech	ADDT			see 2.1.3		
2	2.3	Nautical Cartography				<p>Objective / Deliverable:                      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</p>			
	2.3.1	Conduct meetings of relevant HSSC WGs dealing with nautical cartography	DTech	ADCS	Implementation of HSSC Work Plan				
	2.3.1.1	Chart Standardization and Paper Chart Working Group	DTech	ADCS			CSPCWG merged into NIPWG	1 AD, Postock, April, 5 working days + travel time	
	2.3.1.2	Digital Information Portrayal Working Group	DTech	ADCS			DIPWG likely to be disbanded		
	2.3.2	Maintain and extend the relevant IHO standards, specifications and publications, using contract support assistance as appropriate, including:	DTech						
	2.3.2.1	S-4 Chart Specifications of the IHO and Regulations for International (IIT) Charts	DTech	ADCS	Keep S-4 fit for purpose		Routine maintenance		



Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
	2.2.3	Develop and maintain as-yet undefined S-100-based Product Specifications	DTech	ADDT	Template Product Specification for Marine Information Overlays (MIO)		Ended from Special Projects Fund according to funding availability and on a priority basis set by HSCC	
	2.2.4	Maintain and extend S-100 registry	DTech	ADDT	Keep the Registry fit for purpose	Dependent of continuing UKHO support and limited IHB resources		
	2.2.5	Provide outreach and technical assistance regarding transfer standards	DTech	ADDT			see 2.1.3	
2	2.3	Nautical Cartography			Objective / Deliverable: 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			
	2.3.1	Conduct meetings of relevant HSCC WGs dealing with nautical cartography	DTech	ADCS	Implementation of HSCC Work Plan			
	2.3.1.1	Chart Standardization and Paper Chart Working Group	DTech	ADCS			CSPCWG merged into NIPWG	1 AD, Postock, April, 5 working days + travel time
	2.3.1.2	Digital Information Portrayal Working Group	DTech	ADCS			DIPWG likely to be disbanded	
	2.3.2	Maintain and extend the relevant IHO standards, specifications and publications, using contract support assistance as appropriate, including:	DTech					
	2.3.2.1	S-4 Chart Specifications of the IHO and Regulations for International (INT) Charts	DTech	ADCS	Keep S-4 fit for purpose		Routine maintenance	

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
	2322	INT 1 - Symbols, Abbreviations and Terms used on Charts	DTech	ADCS	New edition(s) in 2015-2016			
	2323	INT 2 - Borders, Graduations, Grids and Linear Scales	DTech	ADCS				
	2324	INT 3 - Use of Symbols and Abbreviations	DTech	ADCS				
	2325	S-11 Part A - Guidance for the Preparation and Maintenance of INT Chart schemes	DTech	ADCS	Keep S-11 fit for purpose			
	2326	S-11 Part B - Catalogue of INT Charts	DTech	ADCS	Keep S-11 Part B current		See also 1.2.4.4	
	2327	S-40 Standardization of Mariners' Routing Guides	DTech	ADCS	Keep S-40 fit for purpose			
	2328	Digital data updating related elements of						
	23281	Appendix 1 to S-52 - Guidance on Updating the Electronic Navigational Chart	DTech	ADCS	Keep S-52 Appendix 1 fit for purpose			
	23282	S-52 and its accompanying Presentation Library - Specifications for Chart Content and Display Aspects of ECDIS	DTech	ADCS	FB as required to keep S-52 fit for purpose			
	23283	Portrayal related elements of S-101 - ENC Product Specification and other S-100-based Product Specifications	DTech	ADCS	see 2.2.3			
2	2.4	Digital Data Protection and Authentication			Objective / Deliverable: To monitor developments related to data protection and data authentication, to develop and maintain the relevant IMO standards, specifications and publications, and to provide technical advice as appropriate			
	2.4.1	Conduct meetings of relevant HSSC WGs dealing with Data Protection and Authentication	DTech	ADDT				1 AD, 1 meeting in Europe, 5 working days + travel time

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
	2.42	Maintain and extend the relevant IHO standards, specifications and publications, including:	DTech					
	2.42.1	S-63 IHO Data Protection Scheme		ADDT	Keep S-63 fit for purpose	Lack of appropriate expertise		
	2.42.2	Data protection and authentication related elements of:		ADDT				
	2.42.2.1	S-100 - IHO Universal Hydrographic Data Model		ADDT	see 2.2.2.2			
	2.42.2.2	Data protection and authentication related elements of S-101 - ENC Product Specification		ADDT	see 2.2.2.3			
2	2.5	Data Quality				Objective / Deliverable 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.		
	2.5.1	Conduct meetings of relevant HSSC WG dealing with data quality	DTech	ADCS	Implementation of HSSC Work Plan			1 AD, 1 meeting, venue unknown, 5 working days + travel time
	2.5.2	Maintain and extend the relevant IHO standards, specifications and publications, including:	DTech					

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
2	2.7	Tides and Water Levels			Objective / Deliverable 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			
	2.7.1	Conduct meetings of relevant HSSC WGs dealing with tides and water levels	DTech	ADSO	Implementation of HSSC Work Plan		TWL WG expanded into TWCWG	1 AD, 1 meeting, venue USA, 5 working days 21-24 April + travel time
	2.7.2	Maintain and extend the relevant IHO standards, specifications and publications, including:	DTech					
	2.7.2.1	Relevant IHO Resolutions in M-3	DTech	ADSO	Keep the Resolutions fit for purpose			
	2.7.2.2	S-80 User's Handbook on Datum Transformations involving WGS 84	DTech	ADSO			Publication frozen	
	2.7.2.3	Standard Tidal Constituent List	DTech	ADSO	Keep the List fit for purpose			
	2.7.2.4	Inventory of Tide Gauges used by Member States	DTech	ADSO	Keep the inventory current			
	2.7.3	Develop, maintain and extend a Product Specification for digital tide tables	DTech	ADSO	Prepare draft Standard	Lack of WG expertise and OEM participation		
	2.7.4	Develop, maintain and extend a Product Specification for the transmission of real-time tidal data	DTech	ADSO	Compare XML datasets to create common format aligned to INSPIRE and other developed formats in use	Lack of WG expertise and OEM participation		

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations	
	2.7.5	Develop, maintain and extend a Product Specification for dynamic tides in ECDIS	DTech	ADSO	Meet the requirements of the E- Navigation Strategy Implementation Plan	Lack of WG expertise and OEM participation			
2	2.8	Digital Data Updating				<p>Objective / Deliverable: 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</p>			
	2.8.1	Maintain and extend the relevant IHO standards, specifications and publications, including:	DTech						
	2.8.1.1	Digital data updating related elements of S-65 - ENC Production Guidance	DTech	ADCS	see 2.2.2.6				
	2.8.1.2	S-52 Appendix 1 - Guidance on Updating the Electronic Navigational Chart	DTech	ADCS	see 2.3.3.8.1				
2 & 4	2.9	Marine Spatial Data Infrastructures				<p>Objective / Deliverable: 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</p>			
	2.9.1	Conduct meetings of relevant HSSC WG dealing with MSDI	DTech	ADOC	Implementation of HSSC Work Plan		likely to be transferred to programme 3 at request of IRCOB and subject to agreement of HSSCB	1 AD, 1 meeting, February, London, 5 working days + travel time	
	2.9.2	Maintain the relevant IHO standards, specifications and publications, including:	DTech						

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
	2.9.2.1	C-17 Spatial Data Infrastructures: 'The Marine Dimension' - Guidance for Hydrographic Offices	DTech	ADCC	Keep C-17 fit for purpose			
	2.9.3	Develop training syllabi for MSDI and associated learning subjects, including:	DTech					
	2.9.3.1	Content for an 'introduction to MSDI' training course	DTech	ADCC	Draft submitted to HSSC			
2	2.10	Hydrographic Data Acquisition and Processing			Objective / Deliverable 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			
	2.10.1	Conduct annual meetings of relevant HSSC WG dealing with hydrographic data acquisition and processing (currently S-44WG) (when WG required)	DTech	ADSD				
	2.10.2	Maintain and extend, when required, the relevant IHO standards, specifications and publications, including:	DTech					
	2.10.2.1	S-44 - IHO Standards for Hydrographic Surveys	DTech	ADSD	WG dormant			
4	2.11	Hydrographic Dictionary			Objective / Deliverable To develop, maintain and extend S-32 - Hydrographic Dictionary in English, French and Spanish and to provide technical advice as appropriate			

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations	
	2.11.1	Maintain and extend the IHO Hydrographic Dictionary in English, French and Spanish.	DTech	ADSO	Implementation of HSSC Work Plan	more active participation of MS during definition development stage - especially Spanish speaking MS	For WP to progress, a face-to-face meeting is required, but has not been planned due to lack of active participants in WG		
	2.11.2	Develop the Spanish language Wiki version of S-32 with commercial contract support.	DTech	ADSO		Lack of IHO resources	Officer from Peru may take on task, if seconded and suitable		
2 & 4	2.12	ABL05				Objective / Deliverable: 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.			
	2.12.1	Organize and prepare ABL05 annual business meeting	DTech	ADSO	Implementation of HSSC Work Plan		Meeting in Monaco in conjunction with ABL05 Conference		
	2.12.2	Organize and prepare the biennial ABL05 Conference	DTech	ADSO			Next ABL05 Conference in 2015		
	2.12.3	Contribute to the revision of IHO publication C-51-TALOS Manual	DTech	ADSO					
2	2.13	Surface Currents				Objective / Deliverable: To monitor developments related to surface current 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.			
	2.13.1	Conduct meetings of relevant HSSC WGs dealing with surface currents	DTech	ADSO	Implementation of HSSC Work Plan		See TWCWG + project team	1 AD, 1 meeting, Tokyo, 13-15 May + travel time	

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
	2.13.2	Maintain and extend the relevant IHO standards, specifications and publications, including:	DTech					
	2.13.2.1	Relevant IHO Resolutions in M-3	DTech	ADSO	Keep the Resolutions fit for purpose			
	2.13.2.2	S-80 User's Handbook on Datum Transformations involving WGS 84	DTech	ADSO			Publication frozen	
	2.13.3	Develop, maintain and extend a Product Specification for the transmission of real-time surface current data	DTech	ADSO	Create mature draft S-111 PS, including draft list of attributes and encoding	Limited WG expertise and OEM participation		
	2.13.4	Develop, maintain and extend a Product Specification for dynamic surface currents in ECDIS	DTech	ADSO	Demonstrate test portrayal S-111 PS	Limited WG expertise and OEM participation	held in conjunction with 2.13.1.	
<b>PROGRAMME 3 - INTER REGIONAL COORDINATION AND SUPPORT</b>								
1&2	3	Inter-Regional Coordination Committee (IRCC)	<p>Objective / Deliverable:</p> <p>To promote and coordinate those activities that might benefit from a regional approach:</p> <ul style="list-style-type: none"> <li>- establish, coordinate and enhance cooperation in hydrographic activities amongst States on a regional basis, and between regions;</li> <li>- establish co-operation to enhance the delivery of capacity building programs;</li> <li>- monitor the work of specified IHO Inter-Organizational Bodies engaged in activities that require inter-regional cooperation and coordination.</li> </ul>					
	3.0.1	Conduct annual meeting of IRCC	DCoord	ADCC	Implementation of IRCC WP IRCC forward WP Performance statistics			Pres (HCA chair), 1 Director, 1 AD, Mexico, June, 3 working days + travel time
	3.0.1.1	Chair briefing	DCoord	ADCC	Efficient running of IRCC-7			May, Monaco, Travel cost for Chair traveling from UK
	3.0.2	Support the IHB to implement the planning mechanism annually and at the end of each 5-year (3-year) cycle by:	DCoord					



Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
	3.0.2.1	Contributing to the IHO Annual Report	DCoord	ADCO				
	3.0.2.2	Updating and implementing the RCC Work Programme	DCoord	ADCO				
1 & 2	3.1	Cooperation with Member States and attendance at relevant meetings			Objective / Deliverable: To facilitate IHO MS coordination, cooperation and collaboration to improve hydrographic services and the provision of hydro-cartographic products through the structure of the RHCs			
	3.1.1	ARHC – Arctic Region Hydrographic Commission	Pres	ADCS				1 Director, September, venue Russian Federation, 4 working days + travel time
	3.1.2	BSHC - Baltic Sea Hydrographic Commission	DCoord	ADSO				1 Director, venue St. Petersburg, RF, 3 working days + travel time
	3.1.3	EAHC - East Asia Hydrographic Commission	Pres	ADDT			Steering Committee Meeting	1 Director, venue EA region, 3 working days + travel time
	3.1.4	EAIHC - Eastern Atlantic Hydrographic Commission	DTech	ADCS			No meeting planned in 2015	
	3.1.5	MACHC - Meso American and Caribbean Hydrographic Commission	Pres	ADCO				1 Director, 1 AD, venue MACHC region, 5 working days each + travel time
	3.1.6	MESHHC - Mediterranean and Black Seas Hydrographic Commission	DCoord	ADCS			including BASWG	1 Director, 1 AD, September, Batumi, Georgia, 3 working days + travel time
	3.1.7	NHC - Nordic Hydrographic Commission	DTech	ADDT				1 Director, 1 meeting, Reykjavik, Iceland, April, 3 working days + travel time
	3.1.8	NIHC - North Indian Ocean Hydrographic Commission	DCoord	ADSO				1 Director, 1 AD, 15-18 March (TBD), Muscat, Oman, 3 working days + travel time
	3.1.9	NSHC - North Sea Hydrographic Commission	DTech	ADSO			No meeting planned in 2015	

Strategic Direction	Element /Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
	3.1.10	RSAHC - ROPME Sea Area Hydrographic Commission	DCoord	ADSO				1 Director, 1 AD, 4 days 8-11 February, Abu Dhabi, UAE, 4 working days + travel time
	3.1.11	SAIHC - Southern Africa and Islands Hydrographic Commission	Pres	ADDT				1 Director, venue SAIHC region, 4 working days + travel time
	3.1.12	SEPRHC - South East Pacific Regional Hydrographic Commission	DTech	ADOC				1 Director, 1 meeting, Guayaquil, Ecuador, June, 3 working days + travel time
	3.1.13	SWAIHC - South West Atlantic Hydrographic Commission	DTech	ADOC				1 Director, 1 meeting, Uruguay, March, 3 working days + travel time
	3.1.14	SWPHC - South West Pacific Hydrographic Commission	Pres	ADOC				1 Director, February, Cook Is, 5 working days + travel time
	3.1.15	USOHC - USA and Canada Hydrographic Commission	DCoord	ADDT				1 Director, March, USA, 1 working day + travel time (Consider in conjunction with USHYDRO2015 Conference)
	3.1.16	HCA - Hydrographic Commission on Antarctica	Pres	ADCS				1 Director, 1 AD, Ecuador, 5 working days + travel time
	3.1.16.1	HCA to conduct a risk assessment for the Antarctic region and develop a Work Program to improve Antarctic charting	Pres	ADCS				
	3.1.17	WEND Working Group	DCoord	ADCS			See also 3.6.2	1 Director, 1 AD, March, Singapore, 3 working days + travel time
	3.1.18	Industry participation in RHC meetings	Director & AD responsible for relevant RHC					

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
	3.1.19	Contribute to improving the framework of IHO response to marine disasters	DCoord	ADSO				
1 & 3	3.2	Increase participation by non-Member States			<p><i>Objective / Deliverable:</i>                      To raise awareness in non-Member States of the importance of hydrography and nautical charting services and their related products. Give advice to Coastal States on how to comply with international regulations such as SOLAS Chapter V and highlight the importance of coordinated efforts in providing for safety of navigation and protection of the marine environment. Stress the importance of becoming an IHO Member State and of integration in the work of the RHCs</p>			
	3.2.1	EAHC - Execute strategy to increase participation of non-Member States in IHO activities and advise them on how to comply with international regulations such as SOLAS V.	Pres	ADDT				
	3.2.2	EAHC - Execute strategy to increase participation of non-Member States in IHO activities and advise them on how to comply with international regulations such as SOLAS V.	DTech	ADCS				
	3.2.2.1	Maintain contact with pending applicants in the region to encourage the ratification of the IHO Convention	DTech	ADCS	Ratification of the IHO Convention by Mauritania and Sierra Leone			
	3.2.2.2	Maintain contact with suspended Member State in the region to encourage its re-insertion in IHO	DTech	ADCS	Re-integration of the Democratic Republic of Congo			
	3.2.3	MAHC - Execute strategy to increase participation of non-Member States in IHO activities and advise them on how to comply with international regulations such as SOLAS V.	Pres	ADCC				
	3.2.3.1	Maintain contact with pending applicant in the region to encourage the ratification of the IHO Convention	Pres	ADCC				

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
	3.2.3.2	Maintain contact with suspended Member State in the region to encourage its re-insertion in IHO.	Pres	ADCC				
	3.2.4	MBSHC - Execute strategy to increase participation of non-Member States in IHO activities and advise them on how to comply with international regulations such as SOLAS V	DCoord	ADCS			Target non-Member States: Albania, Bulgaria, Israel, Lebanon, Libya, Malta	
	3.2.4.1	Maintain contact with pending applicants in the region to encourage the ratification of the IHO Convention	DCoord	ADCS	Ratification of the IHO Convention by Bulgaria			
	3.2.4.2	Maintain contact with suspended Member State in the region to encourage its re-insertion in IHO.	DCoord	ADCS				
	3.2.5	NIOHC - Execute strategy to increase participation of non-Member States in IHO activities and advise them on how to comply with international regulations such as SOLAS V	DCoord	ADSO			Target non-Member States: Jordan, Sudan, Maldives, Seychelles, Yemen, Eritrea, Djibouti, Somalia	1 Director, 4 days, (side-visits as part of other programmes)
	3.2.6	RSAHC - Execute strategy to increase participation of non-Member States in IHO activities and advise them on how to comply with international regulations such as SOLAS V	DCoord	ADSO			Target non-Member State: Iraq	
	3.2.7	SAIHC - Execute strategy to increase participation of non-Member States in IHO activities and advise them on how to comply with international regulations such as SOLAS V	Pres	ADOT			Target non-Member States: Angola, Comoros, Kenya, Madagascar, Malawi, Namibia, Seychelles & Tanzania	

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
	3.2.8	SEPRHC - Execute strategy to increase participation of non-Member States in IHO activities and advise them on how to comply with international regulations such as SOLAS V	DTech	ADCC				
	3.2.8.1	Continue the efforts to include Panama as Observer Country to the Commission	DTech	ADCC	Participation of Panama to SEPRHC-12			
	3.2.9	SWAHC - Execute strategy to increase participation of non-Member States in IHO activities and advise them on how to comply with international regulations such as SOLAS V	DTech	ADCC			Target non-Member States: Bolivia and Paraguay	
	3.2.10	SWPHC - Execute strategy to increase participation of non-Member States in IHO activities and advise them on how to comply with international regulations such as SOLAS V	Pres	ADCC				
	3.2.11	RHCs to encourage the approval of pending applications for IHO membership	Director & AD responsible for relevant RHC					
	3.2.12	IHO Convention	Director & AD responsible for relevant RHC					
	3.2.12.1	RHCs to encourage the ratification of the IHO Convention by approved applicants						
	3.2.12.2	Secure the ratification of the Protocol of Amendments to the IHO Convention						
1 & 4	3.3	Capacity Building Management			Objective / Deliverable: To maintain an IHO Strategy on Capacity Building (CB), and the establishment of coordination, operational and control procedures directed to achieve effective and efficient interaction between all parties involved in the IHO CB effort			
	3.3.1	CBSC - Capacity Building Sub-Committee, including:	DCoord	ADCC				

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
	3.3.1.1	Organize, prepare, conduct and report annual CBSC meetings	DCoord	ADCC	Efficient running of CBSC13		held back-to-back with IROC7, so per diem only see 3.0.1	1 Director, 1 AD, May, Mexico, 3 working days (held back-to-back with IROC7)
	3.3.1.2	Chair briefing	DCoord	ADCC	Efficient running of CBSC13			April, Monaco, Travel cost for Chair traveling from Rostock
	3.3.1.3	Follow-up the coordination required to execute the action lists agreed	DCoord	ADCC				
	3.3.1.4	Maintain IHO publication M-2 - The Need for National Hydrographic Services	DCoord	ADCC				
	3.3.1.5	Contribute to the development of MSDI	DCoord	ADCC				
	3.3.2	Manage Capacity Building Fund	DCoord	ADCC, MFA				
	3.3.2.1	Develop and maintain a CB Management system	DCoord	ADCC				
	3.3.3	Meetings with other organizations, funding agencies, private sector and academia	DCoord	ADCC	Increase the CB Fund			1 Director, 2 follow-on visits, venue TBD, dates TBD
	3.3.3.1	Joint IHO/IOC/IAEA/ALAF/IG Capacity Building Meeting	DCoord	ADCC				1 Director, 1 AD, venue West Europe, November, 2 working days+ travel time
	3.3.3.2	Capacity Building Stakeholders Forum	DCoord	ADCC			No meeting planned in 2015	
	3.3.4	IHO Capacity Building Strategy. CBSC to keep the IHO Capacity Building Strategy updated. At each CBSC meeting, the Sub-Committee is to review the Strategy in the light of new elements, update it accordingly and display it in the IHO website.	DCoord	ADCC				
	3.3.5	Capacity Building Work Programme	DCoord	ADCC				

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
	3.3.5.1	CBSC to study the CB needs presented to the CBSC by the RHCs, to foster the sharing of lessons learned and to help RHCs to develop best practices	DCoord	ADOC				
	3.3.5.2	CBSC to develop and propose an annual IHO Capacity Building Work Program (CBWP) to be included in the general IHO WP	DCoord	ADOC				
	3.3.5.3	CBSC to maintain and control the execution of the approved CBWP	DCoord	ADOC			See Annex	
	3.3.6	Follow-up of CB activities and initiatives, including:	DCoord					
	3.3.6.1	CBSC to follow-up the CB activities and initiatives, especially those for which the CB Fund and MSs have contributed	DCoord	ADOC				
	3.3.6.2	To study and install measures to improve the technical work with the Management Plan, i.e. developing a database, aiming at reducing the administrative work	DCoord	ADOC				
	3.3.7	IBSC - International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers	DCoord	ADOC				
	3.3.7.1	Conduct and report annual IBSC meetings	DCoord	ADOC				1 AD, April, Niteroi, 5 working days+ travel time
	3.3.7.2	Implement the IBSC Work Programme including	DCoord	ADOC				
	3.3.7.2.1	IBSC Stakeholders' Seminar	DCoord	ADOC			In conjunction with 3.3.7.1	1AD, April, Niteroi, 1 working day, TBD
	3.3.7.3	Manage the IBSC Fund and report to IHO	DCoord	ADOC				

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
	3.3.8	Provide guidance to training institutions	DCoord	ADCC				
	3.3.9	Maintain IBSC Publications (C-6, C-47, S-5, S-8)	DCoord	ADCC		Lack of availability of IBSC members		
	3.3.9.1	IBSC to develop a new Standards framework to separate competency requirements for Cat A and Cat B	DCoord	ADCC			5 BSC meetings, TBD	Venues and dates TBD
3.6.4	3.4	Capacity Building Assessment			<p>Objective / Deliverable: To assess the hydrographic surveying, nautical charting and nautical information status of nations and regions where hydrography is developing. Provide guidelines for the development of local hydrographic capabilities taking into account the regional context and possibilities of support for shared capabilities. Identify regional requirements and study the possibilities for capacity building assistance and training from the CB Fund and other sources.</p>			
	3.4.1	Technical and advisory visits. RHCs, with the support of the CBSC Chair and IHB, to establish appropriate teams of experts and to schedule and undertake Technical and Advisory Visits to assess the status of hydrography, cartography and aids to navigation in accordance with the IHO CBWP	Director & AD responsible for relevant RHC				See CB WP Annex	In accordance with the Agreed 2015 CB Work Programme (CBWP)
	3.4.2	Enhance publication C-55. IHB with the support of the RHCs, CBSC and GGC to develop a new framework for C-55.	DCoord	ADCC				
	3.5	Capacity Building Provision			<p>Objective / Deliverable: To undertake initiatives for the provision of general support, training and education to address identified CB shortcomings; identify aid agencies and other sources of funds; raise with MS, other organizations and funding agencies for such provision and establish and participate in joint development projects.</p>			
	3.5.1	Raise Awareness on the Importance of Hydrography	DCoord	ADCC				



Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
	3.5.1.1	Revise M-2- The Need for National Hydrographic Services	Pres	ADOC				
	3.5.2	Technical Workshops, Seminars, Short Courses	DCoord	ADOC			See CB WP Annex	In accordance with the Agreed 2015 CB Work Programme (CBWP)
	3.5.3	IHB, in conjunction with IBSC and CBSC, to encourage the development and delivery of new Hydrographic and Nautical Cartography Programs, including the establishment of new Hydrographic Schools where that regional capacity does not exist. Report to the IHO on the results	DCoord	ADOC				
	3.5.4	On the Job Training (ashore / on board): CBSC, with IHB support, to investigate "on-the-job training opportunities": ashore and on board (ships of opportunity)	DCoord	ADOC				
	3.5.5	IHB, with the support of CBSC and RHCs, to ensure awareness of multilateral or bilateral projects with hydrographic and/or cartographic components, and to provide advice to governments, project managers and funding agencies on the importance of including a hydrographic Capacity Building Component. Report to IHO annually on the results obtained	DCoord	ADOC				
	3.5.6	CBSC to foster bilateral agreements in order to help satisfy SOLAS V/9	DCoord	ADOC				

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
2	3.6	Coordination of Global Surveying and Charting			Objective / Deliverable To facilitate the achievement of a world-wide quality nautical charting coverage to suit the needs of the mariner in support of safe and efficient navigation through the development of specifications and standards for the production, distribution and updating of cartographic products and supporting publications			
	3.6.1	C-55 Status of Hydrographic Surveying and Nautical Charting World-wide	DCoord	ADCC				
	3.6.1.1	MS to provide annual updates to C-55	DCoord	ADCC				
	3.6.1.2	IHB to implement new framework for publication C-55	DCoord	ADCC	C-55 GIS solution implemented	Lack of funds for ongoing support and maintenance of GIS software solution		
	3.6.1.3	IHB to report periodically to IMO on limitations and requirements for improvements in global charting and associated services	DCoord	ADCS				
	3.6.2	WEND WG to foster the implementation of the WEND principles, monitor progress and report to IRCC	DCoord	ADCS			See also 3.1.17	
	3.6.2.1	WG to facilitate the production, distribution and updating of ENC cartographic products ensuring uniform ENC quality and consistency	DCoord	ADCS				
	3.6.2.2	WG to facilitate the resolution of gaps and overlaps in ENC coverage	DCoord	ADCS				
	3.6.2.3	WG to facilitate the promotion of RENC co-operation for the benefit of ENC end-users	DCoord	ADCS				
	3.6.3	Maintain and coordinate ENC schemes, consistency and quality	DCoord	ADCS				
	3.6.3.1	RHCs to develop ENC schemes in their regions and coordinate the production and maintenance of ENC	DCoord	ADCS				

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
	3.6.4	Maintain and coordinate INT Chart Schemes and improve the availability of the INT Chart Series	DTech	ADCS				
	3.6.4.1	RHCs to coordinate INT Chart Schemes and coordinate the production of INT Chart in their region	DTech	ADCS				
	3.6.5	Contribute to monitoring and improving the global status of hydrographic surveying	DCoord	ADCC				
1 & 2	3.7	Maritime Safety Information			Objective / Deliverable: To facilitate the efficient provision of MSI to mariners through coordination and the establishment of relevant standards between agencies			
	3.7.1	WWNWS-SC - World-Wide Navigational Warning Service Sub-Committee. Organize, prepare, attend and report annual WWNWS-SC meetings	DCoord	ADSO	Review customer survey results and development action plan to initiate identified service delivery improvements			24-29 August, Monaco
	3.7.2	WWNWS Document Review Working Group. Conduct annual meetings of the WWNWS Document Review WG	DCoord	ADSO	Keep documentation fit for purpose		held back-to-back with NCSR2, so pending only	1 AD, London, 5 working days
	3.7.3	Maintain and extend the following IHO standards, specifications and publications:	DCoord	ADSO				
	3.7.3.1	relevant IHO Resolutions in M-3	DCoord	ADSO	MB kept up to date			
	3.7.3.2	S-53 - Joint IMO/IHO/WMO Manual on Maritime Safety Information	DCoord	ADSO	S-53 kept up to date by incorporating IMO decisions as required			
	3.7.4	Liaise with IMO and WMO on the delivery of MSI within the GMDSS	DCoord	ADSO	Monitor GMDSS modernization programme to ensure maintenance of service delivery			
	3.7.5	Participate and contribute to the IMO work items on the modernization of the GMDSS and the development of the e-navigation implementation plan	DCoord	ADSO	Monitor projects to ensure maintenance of service delivery at least at current levels, investigation areas for improvement			

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
	3.7.6	Improve the delivery and exploitation of MSI to global shipping by taking full advantage of technological developments	DCoord	ADSO	Progress development of S-100 NWPS to align with development of e-navigation and GMDSS modernization			
1 & 2 & 3	3.8	Ocean Mapping Programme			Objective / Deliverable: To contribute to global ocean-mapping programmes through the IHO/IOC General Bathymetric Chart of the Oceans (GEBCO) Project, the International Bathymetric Chart (IBC) Projects and other related international initiatives			
	3.8.1	Conduct meetings of relevant GEBCO bodies:	DCoord					
	3.8.1.1	Guiding Committee	DCoord	ADSO			meetings to be held consecutively	1 Director, 1 AD, Kuala Lumpur 8-9 Oct, 2 days + travel time
	3.8.1.2	TSCOM	DCoord	ADDT				1 AD, Kuala Lumpur 5-7 Oct, 3 days + travel time
	3.8.1.3	SCRUM	DCoord	ADDT				
	3.8.1.4	SOUFN	DCoord	ADCS			IHB activity. No Action required by GEBCO	1 AD, Rio, Brazil, October, 5 days + travel time
	3.8.2	Ensure effective operation of IHO Data Center for Digital Bathymetry (DCDB)	DCoord	ADDT	Enhance DCDB interface for upload, ingest, discovery and download of bathymetric data  Coordinate with IHO on Crowd Sourced Bathymetry project	Funds and resources		

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
	3.8.3	Encourage the contribution of bathymetric data to the IHO DODB	DCoord	ADDT	GEBCO representatives participate in RHC meetings	Lack of MS willingness to provide data. No NF funds for NF Scholar alumnae to travel to RHC meetings	Task 3.8.3 @ 5K\$ /year to pay for GEBCO travel. Also, NF Scholars have GEBCO funds to participate	Participation in RHC meetings to be decided in 2015 according to priority regional mapping needs
	3.8.3.1	Identify priority areas for regional mapping.	DCoord	ADSO	Definition of priority areas.			
	3.8.3.2	Promote data contribution through GEBCO participation in RHCs meetings	DCoord	Relevant AD	Prioritize RHC meetings to attend		See 3.8.3	Attend RHC meetings relevant to regional bathymetric map compilations 2 meetings @ 3 days +travel
	3.8.4	Maintain IHO bathymetric publications, including:	DCoord					
	3.8.4.1	B-4 - Information concerning recent bathymetric data	DCoord	ADDT			Primarily an IHB activity	
	3.8.4.2	B-6 - Standardisation of undersea feature names	DCoord	ADCS			Primarily an IHB activity	
	3.8.4.4	B-7 - GEBCO guidelines	DCoord	ADSO			Primarily an IHB activity	
	3.8.4.4	B-8 - Gazetteer	DCoord	ADCS			Primarily an IHB activity	
	3.8.4.5	B-9 - GEBCO digital atlas	DCoord	ADDT			Primarily an IHB activity	
	3.8.4.6	B-10 - The history of GEBCO	DCoord	ADSO			Primarily an IHB activity	
	3.8.4.7	B-11 - GEBCO Cookbook	DCoord	ADDT			Primarily an IHB activity	
	3.8.4.8	Develop the on-line function of B-4.	DCoord	ADDT			Primarily an IHB activity	
	3.8.5	Contribute to outreach and education about ocean mapping. Increase understanding of the importance of hydrography and interest in following ocean mapping as a career through activities such as:	DCoord	ADSO	Development of Roadmap for outreach and education Working Group Development of Education Materials			

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Key deliverables in 2015	Significant risk to delivery	Any other remarks	Dates / Venue / Budget considerations
	3.8.5.1	Development of outreach materials (paper maps, brochures, web-based presentations) and educational materials.	DCoord	ADSO	Development of Roadmap for outreach and education Working Group		Funding under task 3.8.5	
	3.8.5.2	Printing of GEBCO World Map at various locations in MS	DCoord	ADSO	Printing of GEBCO World Map in MS		Funding under task 3.8.5	
	3.8.6	GEBCO Web site kept current and updated regularly	DCoord	ADOT	Content of GEBCO web site continually updated with news items, information about meetings and events and information about and links to new products			
	3.8.7	Develop short course and course material on compiling digital bathymetric models (DBMs) to be included in GEBCO from a heterogeneous bathymetric source database. Associated deliverables: -a course curriculum	DCoord	ADSO	Course curriculum and schedule for first course occasion			No dates for venue established yet.
	3.8.8	Update and enhance the GEBCO Gazetteer (B-8) for internet access	DCoord	ADCS	Continuing enhancement and maintenance to incorporate new names from each SCUFN meeting			

**Proposed Operating Budget for 2015**

**TABLE 1**  
PROPOSED IHO BUDGET DETAILS FOR 2015  
SUMMARY

PROPOSED BUDGET FOR 2015  
PROJET DE BUDGET POUR 2015

**TABLEAU 1**  
PROJET DETAILLE DE BUDGET DE L'OHI POUR 2015  
RECAPITULATIF

5-Year Budget (2015)	Chapters and Items	Approved budget 2014	Proposed budget 2015	Difference 2015 - 2014
Budget quinquennal	Chapitres et postes budgétaires	Budget approuvé	Budget révisé	Différence
	Number of shares - Nombre de parts	722	726	4
	Provision for suspended Member States Provision pour Etats membres suspendus	-6	-11	-5
694	Final number of shares Nombre de parts définitif	716	715	-1
<hr/>				
<u>(Euro)</u>		<u>(Euro)</u>	<u>(Euro)</u>	<u>(Euro)</u>
2 991 507	Income - Revenu	3 066 899	3 062 403	-4 496
2 991 484	Net Expenditure - Dépenses nettes	3 066 235	3 060 600	-5 635
	23 Budget Excess/Deficit - Excédent/Déficit budgétaire	664	1 803	1 139
	23 Effect on capital - Effet sur le capital	664	1 803	1 139
*****		*****	*****	

**TABLE 2**  
**INCOME**

**TABEAU 2**  
**REVENUS**

5-Year Budget (2015)	Chapters and Items	Approved budget 2014	Proposed budget 2015	Difference 2015-2014	Commentaires	Comment
Budget quinquennal	Chapitres et postes budgétaires	Budget approuvé	Budget révisé	Différence		
(Euros)		(Euros)	(Euros)	(Euros)		
2 765 229	CONTRIBUTIONS Contributions	2 862 888	2 848 903	-3 985	hypothèse que 4 Etats membres seront suspendus	assuming 4 suspended Member States
1 500	SALES OF PUBLICATIONS Ventes de publications	1 500		-1 500	1 nouvel Etat membre : le Montenegro base : sur l'historique des revenus 2012-2013	1 new MS: Montenegro based on historical income in 2012-2013
40 000	INTEREST ON BANK ACCOUNTS Intérêts sur comptes en banques	40 000	40 000	0		
8 200	EXTRAORDINARY INCOME Revenus exceptionnels				La dotation du gouvernement de Monaco alimente directement le fonds pour le GEBCO	The allocation of the Government of Monaco goes directly to the GEBCO Fund
175 578	INTERNAL TAX Imposition interne	172 500	173 500	1 000	augmentation des voir salaires	increase due to salary indexing
<b>2 991 507</b>		<b>3 066 888</b>	<b>3 062 403</b>	<b>-4 485</b>		



**TABLE 3**  
**DETAILED EXPENDITURE**

**TABEAU 3**  
**DETAIL DES DEPENSES**

5-Year Budget	Chapters and Items	Approved budget	Proposed budget	Difference		
(2015)		2014	2016	2015-2014	Commentaires	Comment
Budget quinquennal	Chapitres et postes budgétaires	Budget approuvé	Budget révisé	Différence		
<b>Chapter 1 - Personnel Costs</b>						
<b>Chapitre 1 - Dépenses de personnel</b>						
<u>(Euros)</u>		<u>(Euros)</u>	<u>(Euros)</u>	<u>(Euros)</u>		
471 590	Salaries - Directing Committee - Salaires - Comité de direction	467 000	474 000	7 000	variation due à l'augmentation du coût de la vie	variation due to cost of living increase and to
608 047	- Category A - Personnel de catégorie A	573 000	575 000	2 000	et à la progression des membres du personnel	the progression of staff members on the salary
140 949	- Translators - Personnel de traduction	214 000	220 000	6 000	dans l'échelle de salaires	scales
472 008	- General Services (B & C) - Services généraux (B & C)	413 000	425 000	12 000		
6 100	Overtime for B & C Categories - Heures supplémentaires pour les catégories B et C	6 100	6 500	400		
<b>Costs dependent on Salaries - Coûts liés aux salaires</b>						
39 334	Annual Bonus (B & C Categories) - Gratification annuelle (catégories B & C)	33 000	33 500	500		
345 996	Payment to Retirement schemes - Cotisation patronale de retraite	341 735	352 000	10 265	augmentation liée aux salaires	increase due to salary indexing
16 260	Insurances based on wages - Assurances basées sur salaires	17 000	17 000	0		
70 000	Medical (GAN premiums) - Primes médicales versées au GAN	90 000	80 000	-12 000	réduction de 20% des primes d'assurance de remboursement partiel des dépenses médicales	20% reduction due to reduced premium for partial medical reimbursement insurance
11 000	Family Allowances - Allocations familiales	18 000	18 000	0		
35 000	Education Grants - Allocations pour frais d'études	25 000	25 000	0		
<b>Costs independent of Salaries - Autres charges indépendantes des salaires</b>						
85 000	Medical claims paid - Remboursements de soins	85 000	85 000	0	réduction basée sur l'historique des remboursements en 2012 et 2013	reduction based on historical refunds in 2012 and 2013
-35 000	Medical refunds from GAN - Remboursements médicaux du GAN	-35 000	-30 000	5 000	augmentation du coût de la vie	increase due to cost of living increase
	Home rental - Indemnité de logement	12 000	13 000	1 000		
15 000	Home Leave - Congés dans les foyers	15 000	15 000	0		
12 000	Miscellan. Personnel Expenses - Autres dépenses de personnel	2 000	2 000	0		
<b>Controllable Personnel costs - Coûts de personnel modulables</b>						
2 000	Salaries - Temporary staff - Personnel temporaire	1 000	1 000	0		
8 000	IHB Staff training - Formation du personnel du BHI	8 000	7 000	-1 000	réduction basée sur l'historique de dépenses en 2012 et 2013	reduction based on historical expenditure in 2012 and 2013
<b>2 303 184</b>	<b>TOTAL CHAPTER I - TOTAL CHAPITRE I</b>	<b>2 287 835</b>	<b>2 319 000</b>	<b>31 165</b>		

5-Year Budget	Chapters and Items	Approved budget	Proposed budget	Difference		
(2015)		2014	2015	2015-2014	Commentaires	Comment
Budget quinquennal	Chapitres et postes budgétaires	Budget approuvé	Budget révisé	Différence		
<b>Chapter II - Current Operating Costs</b>						
<b>Chapitre II - Dépenses de gestion courante</b>						
<b>Maintenance, communications, etc - Entretien, communications, etc</b>						
<u>Euros</u>		<u>Euros</u>	<u>Euros</u>	<u>Euros</u>		
50 000	Maintenance of building - Entretien des locaux	45 000	42 000	-3 000	réduction basée sur l'historique de dépenses en 2012 et 2013	reduction based on historical expenditure in 2012 and 2013
2 700	Multirisik insurance - Assurance multirisques	2 700	3 000	300		
50 000	Maintenance of IT equipment - Entretien des équipements	50 000	50 000	0		
10 000	Office Stationery - Fournitures de bureaux	10 000	10 000	0		
40 000	Postage, telephone, telexes - Courrier, télécommunications	37 000	34 000	-3 000	réduction basée sur l'historique de dépenses en 2012 et 2013	reduction based on historical expenditure in 2012 and 2013
3 300	Local Travel - Déplacements locaux	2 600	1 900	-1 100	réduction basée sur l'historique de dépenses en 2012 et 2013	reduction based on historical expenditure in 2012 and 2013
6 000	Bank Charges - Frais bancaires	6 000	6 000	0		
60 000	Contract support - Support contractuel	55 000	25 000	-30 000	30M précédemment alloués au support contractuel transférés au Fonds pour les Projets Spéciaux en support des GTS conformément à la résolution 1/2014. Réduction du support contractuel du BH basée sur l'historique des dépenses en 2012 et 2013	30M in contract support in previous years transferred to Special Projects Fund to support WGs in accordance with Resolution 1/2014. IHB contract support reduced based on historical expenditure in 2012 and 2013
4 400	Auditors fees - Honoraires de commissaire aux comptes	6 000	6 000	0		
15 000	Public Relations - Relations publiques	12 000	12 000	0		
1 000	Miscellan. Operating Expenses - Autres charges d'exploitation	1 000	1 000	0		
<b>Travel costs - Frais de déplacements</b>						
50 000	Technical Assistance (CB) - Assistance technique (CB)	50 000	50 000	0	conformément aux engagements du programme de travail CB 2015	based on 2015 CB work programme commitments
265 000	Long Distance - Grands déplacements	265 000	265 000	0	conformément aux engagements du programme de travail 2015	based on 2015 work programme commitments
<b>Publications costs - Frais de publications</b>						
12 000	I.H. Review - Revue hydrographique internationale	10 000	10 000	0		
2 000	Other publications - Autres publications	1 600	1 600	0		
	Provision for bad debts - Provisions pour créances douteuses	75 000	50 000	-25 000	basée sur l'historique récent de non-paiement de contributions	estimate based on recent non-payment history
<b>541 400</b>	<b>TOTAL CHAPTER II - TOTAL CHAPITRE II</b>	<b>640 900</b>	<b>579 100</b>	<b>-61 800</b>		

TABLE 3A  
SUMMARY OF EXPENDITURE

TABLEAU 3A  
RECAPITULATIF DES DEPENSES

5-Year Budget (2015)	Chapters and Items	Approved budget 2014	Proposed budget 2015	Difference 2015-2014	Commentaires	Comment
Budget quinquennal (Euro)	Chapitres et postes budgétaires	Budget approuvé (Euro)	Budget révisé (Euro)	Différence (Euro)		
	<b>PERSONNEL COSTS</b>					
	<i>DEPENSES DE PERSONNEL</i>					
2 303 164	Salaries Directing Committee - Salaires Comité de direction Salaries Other staff - Salaires autres membres du personnel Social charges - Charges sociales Benefits and Pensions - Prestations de retraite Controllable Personnel cost - Coûts de personnel modulables	2 287 636	2 319 000	31 366	progression des salaires et du coût de la vie partiellement compensée par l'arrivée de personnel en bas de l'échelle salariale	increase due to salary progression and cost of living increments partially offset by new staff entering at lower level on salary scale
541 400	<b>CURRENT OPERATING COSTS</b>	640 900	579 100	-61 800	réduction basée sur l'historique de dépenses en 2012 et 2013 - transfert de 30k€ du support contractuel au Fonds pour les projets spéciaux	reduction based on historical expenditure in 2012 and 2013 - 30k€ transferred from contract support to the Special Projects Fund
	<i>DEPENSES DE GESTION COURANTE</i>					
	Maintenance, communications, etc. - Entretien et communications Contract support - Support contractuel Travels - Déplacements Publications - Publications					
63 200	<b>CAPITAL EXPENDITURE</b>	39 300	34 300	-5 000	diminution des dépréciations due au vieillissement des immobilisations	reduction of depreciation due to ageing of assets
	<i>DEPENSES DE CAPITAL</i>					
	<b>ASSET ALLOCATION</b>					
	<i>IMMOBILISATIONS</i>					
	<b>ALLOCATIONS TO FUNDS</b>					
	<i>DOTATIONS AUX FONDS DEDIES</i>					
8 200	GERCO Fund - Fonds pour le GERCO	8 200	8 200	0		
3 000	Renovation and Enhancement Fund - Fonds de rénovation et d'amélioration	0	0	0	pas de demande d'allocation à ce fond en 2015	no requirement to add to fund in 2015
20 000	Conference Fund - Fonds pour les conférences	20 000	20 000	0		
7 500	Relocation Fund - Fonds pour les déménagements	0	0	0	pas de demande d'allocation à ce fond en 2015	no requirement to add to fund in 2015
45 000	Capacity Building Fund - Fonds pour le renforcement des capacités	45 000	45 000	0		
	Special Projects Fund - Fonds pour les projets spéciaux		30 000	30 000	transfert de 30k€ du support contractuel au Fonds pour les projets spéciaux conformément à la résolution 1/2014	transfer of 30k€ from contract support to Special Projects Fund in accordance with Resolution 1/2014
<b>2 991 484</b>	<b>Net Expenditure - Dépenses nettes</b>	<b>3 066 235</b>	<b>3 066 800</b>	<b>-5 635</b>		

### Proposed Budget for IHO Funds in 2015

## ANNEX - FUNDS / ANNEXE - FONDS

V - FUNDS V - FONDS	Amount available beginning of 2014 Montant disponible début 2014	Forecast Expenditure 2014 Prévisions de dépenses 2014	Amount available at end 2014 Montant disponible fin 2014	Allocation 2015	Forecast Expenditure 2015 Prévisions de dépenses 2015	Amount remaining at end of 2015 Solde disponible fin 2015	Commentaires	Comments
GEBCO FUND FONDS POUR LA GEBCO	85 152,61	15 000,00	70 152,61	16 500,00	9 000,00	77 652,61	L'allocation inclut la subvention reçue de Monaco. Budget 2015 pas encore présenté par le comité directeur GEBCO - dépenses estimées sur la base des années précédentes.	Allocation includes the contribution from Monaco. 2015 budget not yet submitted by GEBCO Guiding Committee - expenditure based on previous years.
ABLIS CONFERENCE FUND FONDS POUR LA CONFERENCE ABLIS	6 407,88	0,00	6 407,88	6 000,00	0,00	407,88	Conférence Ablas reportée en 2015.	ABLIS Conference delayed to 2015.
PRINTING FUND FONDS D'IMPRESSION	65 382,73	65 382,73	0,00	0,00	0,00	0,00	Fonds clôture en 2014 et transféré au FRF.	Fund closed in 2014 and transferred to the FRF.
RENOVATION AND ENHANCEMENT FUND FONDS DE RENOVATION ET D'AMELIORATION	80 469,46	0,00	80 469,46	0,00	0,00	80 469,46	Pas de besoin de dotation en 2014 et 2015.	No requirement to add to fund in 2014 and 2015.
CONFERENCE FUND FONDS POUR LES CONFERENCES	471 951,42	150 000,00	321 951,42	20 000,00	0,00	341 951,42	Conférence de l'Assemblée en 2017.	Conference or Assembly in 2017.
RELOCATION FUND FONDS POUR LES DEMENAGEMENTS	311 047,31	62 800,00	288 447,31	0,00	0,00	288 447,31	Pas de besoin de dotation en 2014 et 2015.	No requirement to add to fund in 2014 and 2015.
INTERNAL RETIREMENT FUND FONDS DE RETRAITE INTERNE	3 013 186,00	800 000,00	3 113 186,00	0,00	100 000,00	3 013 186,00	Les montants d'ouvert et de fin de période tiennent compte des pensions versées aux retraités, des contributions de personnel en activité et des intérêts sur le capital.	Opening and closing balances take into account pension payments to retired staff, contributions by active staff and interest on capital sum.
SPECIAL PROJECTS FUND FONDS POUR LES PROJETS SPECIAUX	69 599,09	67 800,00	599,09	30 000,00	30 000,00	599,09		
CAPACITY BUILDING FUND - IHO FUNDED FONDS POUR LE RENFORCEMENT DES CAPACITES - FINANCEMENT OMI	370 612,00	270 388,00	100 424,00	45 000,00	141 795,00	3 706,00	Dépenses basées sur le programme de travail CB approuvé par l'IRCC.	Expenditure based on CB work programme approved by IRCC.
CAPACITY BUILDING FUND - EXTERNAL FUNDING FONDS POUR LE RENFORCEMENT DES CAPACITES - FINANCEMENT EXTERNE	1 479 375,36	408 700,00	1 070 675,36	0,00	636 375,00	434 301,36	Dépenses basées sur le programme de travail CB approuvé par l'IRCC.	Expenditure based on CB work programme approved by IRCC.
<b>TOTAL</b>	<b>6 162 206,96</b>	<b>1 988 670,73</b>	<b>5 062 236,13</b>	<b>111 600,00</b>	<b>803 091,00</b>	<b>4 269 745,13</b>		