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# IHO FIVE-YEAR WORK PROGRAMME 2013 – 2017

## Adopted by the 18<sup>th</sup> International Hydrographic Conference

### PREAMBLE

In accordance with Article 23 (c) of the IHO General Regulations, the Directing Committee, taking into consideration the work of the Committees and Working Groups, is required to present to each International Hydrographic Conference a proposal containing the Work Programme to be carried out during the following period (in this case 2013-2017) together with the financial implications related to it.

For the preparation of the Work Programme 2013-2017, the Directing Committee requested the Chairmen of all IHO bodies to contribute to this process by providing input thereby making the IHO Work Programme document as complete as possible with regard to the activities that the Organization plans to undertake in the next five-year period.

As you are aware, the IHO has defined three Programmes to meet its goals:

- *Programme 1 “Corporate Affairs”* under the principal responsibility of the International Hydrographic Bureau (to be replaced by the Secretary General when the revised IHO Convention enters into force);
- *Programme 2 “Hydrographic Services and Standards”* under the principal responsibility of the relevant Hydrographic Services and Standards Committee (HSSC);
- *Programme 3 “Inter Regional Coordination and Support”* under the principal responsibility of the Inter Regional Coordination Committee (IRCC).

The document provided here follows that structure.

Under each programme there are various elements, with a clearly stated objective for each, followed by the tasks (actions). In identifying the tasks, the input from the Chairs of the relevant IHO bodies together with other information held by the IHB have been taken into account.

Annex A provides the Capacity Building Work Programme for the period of 2013-2017.

Annex B provides a cross reference between the 2013-2017 IHO Budget Chapters and the Work Programme.

Annex C lists all tasks with an indication of the timeframe in which each task is expected to be executed. This layout will serve as the basis and guide for the preparation of the yearly work programmes during the period.

A table of graphs is also provided, illustrating for each Programme the resources allocated from the different Chapters of the budget.

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# WORK PROGRAMME No. 1 CORPORATE AFFAIRS

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**Note:** Please note that the IHO Budget for the period 2013-2017 is presented separately.

## PROGRAMME 1 - “CORPORATE AFFAIRS”

**Concept:** This Programme seeks to ensure the effectiveness of the IHO, promote its roles and objectives and ensure that it operates efficiently and effectively.

### Element 1.1 Cooperation with International Organizations and participation in relevant meetings

**Objective:** 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. Represent IHO and participate in international forums dealing with matters of relevance to the IHO WP, including:

Task 1.1.1	Antarctic Treaty Consultative Meeting (ATCM)	1 meeting annually – 1 Dir
Task 1.1.2	Comité International Radio Maritime (CIRM)	1 meeting annually- 1 Dir/PA
Task 1.1.3	Council of Managers of National Antarctic Programs (COMNAP)	1 meeting annually, if found appropriate based on its Agenda. 1 Dir/PA
Task 1.1.4	European Union Initiatives (such as INSPIRE)	2 meetings annually. 1 Dir/PA per meeting
Task 1.1.5	International Federation of Surveyors (FIG)	1 meeting every 2 years. 1 Dir/PA
Task 1.1.6	International Federation of Hydrographic Societies (IFHS)	1 meeting annually. 1 Dir/PA
Task 1.1.7	International Association of Antarctic Tour Operators (IAATO)	1 meeting annually, if found appropriate based on its Agenda. 1 Dir/PA
Task 1.1.8	IALA (such as the e-NAV Committee)	2 meetings annually. 1 Dir+PA per meeting.
Task 1.1.9	International Association of Ports and Harbours (IAPH)	1 meeting every 2 years. 1 Dir
Task1.1.10	International Cartographic Association (ICA) (such as ICA Commission on Geoinformation Infrastructures and Standards)	1 meeting every 2 years. 1 Dir+ PA
Task1.1.11	International Electrotechnical Commission (IEC) (such as IEC Technical Committee 80)	2 meetings annually. 1 Dir/PA
Task1.1.12	International Maritime Organization (IMO) Assemblies, Councils, COMSAR, MSC, NAV, TCC.	7 meetings annually. 1 Dir + PA or 1 PA
Task1.1.13	International Maritime Pilots’ Association (IMPA)	1 meeting annually, if found appropriate based on its Agenda. 1 Dir /PA
Task1.1.14	Intergovernmental Oceanographic Commission (IOC) of UNESCO, Assemblies, Councils or specialized WGs.	2 meetings annually. 1 Dir/PA
Task1.1.15	International Standards Organization (ISO) (such as ISO Technical Committee 211)	2 meetings annually. 1 Dir/PA
Task1.1.16	Joint Board of Geospatial Information Societies (JB-GIS)	1 meeting annually if coinciding with other meetings. 1 Dir/PA
Task1.1.17	NATO (such as DGIWG)	1 meeting annually. 1 Dir/PA
Task1.1.18	UN (such as UNICPOLOS, CGGIM)	2 meetings annually. 1 Dir
Task1.1.19	World Meteorological Organization (WMO)	1 meeting annually. 1 Dir/PA

Task1.1.20	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) or the Scientific Committee on Antarctic Research (SCAR).	Participation to be defined based on their Agendas and significance to the IHO WP. 1 Dir/PA to be defined.
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**Note: For planning purposes an average of 30 meetings each year with an average cost of 3K for each meeting has been assumed. That is to say, 90K annually. This amount includes travel and allowances.**

### Element 1.2 Information Management

**Objective:** To provide MS and IHO stakeholders with accurate and relevant information in a timely and accessible manner.

Task 1.2.1	Maintain and extend the IHO website using commercial contract support.	2013-17	2013: 20K 2014 to 2017: 10K annually
Task 1.2.2	Develop IHO GIS and webserver and web mapping services in support of RHCs, ENC availability, INT chart coordination, C-55 and other related activities, including using commercial contract support.	2013-17	2013: 25K 2014 to 2017: 10K annually
Task 1.2.3	Develop and maintain IHB desk-top and in-house publishing facilities	2013-17	7.5K annually
Task 1.2.4	Compile and publish the following documents that are not allocated to a specific IHO body: P-5 – IHO Yearbook P-7 – IHO Annual Report P-6 – Reports of IHC M-3 – Technical and Administrative Resolutions	As required	no significant IHO expense anticipated
Task 1.2.5	Maintain and extend IHB Admin IT infrastructure	2013-17	60K annually (includes hardware, software and contract maintenance support)
Task 1.2.6	Communication between the IHB and Member States through Circular Letters	2013-17	no significant IHO expense anticipated
Task 1.2.7	IHB Technical Library – incorporate new material	2013-17	2.0K annually

### Element 1.3 Public Relations

**Objective:** 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.

Task 1.3.1	Maintain relationships with the Government of Monaco and the diplomatic corps accredited in Monaco	2013-17	no significant IHO expense anticipated
Task 1.3.2	Compile and publish P-1 – <i>International Hydrographic Review</i> in collaboration with IHR editor	2013-17	15K annually
Task 1.3.3	World Hydrography Day – Preparation of the theme's material and social celebration event in Monaco	2013-17	5K annually
Task 1.3.4	General Public Relation support. Representation expenses	2013-17	3K annually

## Element 1.4 Work Programme & Budget, Strategic Plan and Performance Monitoring.

**Objective:** 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.

Task 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.	2013-17	10K annually (estimates to be confirmed)
Task 1.4.2	Execute the IHO Work Programme and Budget approved by the XVIII <sup>th</sup> IHC, monitoring its progress and adopting the necessary adjustment according to the circumstances.	2013-17	no significant IHO expense anticipated
Task 1.3.3	Conduct biennial IHO stakeholders' forums	2013 2015 2017	1 meeting every 2 years, at least 1Dir + 2PA per meeting

## Element 1.5 IHB Management

**Objective:** 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.

Task 1.5.1	Maintain, update and develop necessary procedures to facilitate and improve effectiveness of the general and permanent Finance and Administrative work.	2013-17	no significant IHO expense anticipated
Task 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.	2013-17	no significant IHO expense anticipated
Task 1.5.3	Engage contract support to supplement maintenance and development of technical standards beyond the resources or competence of the IHB or the IHO WGs, including: - Translation - Technical editing - Cataloguing the IHO working document archive	2013-17	40K each year
Task 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.	2013-17	no significant IHO expense anticipated
Task 1.5.5	Maintain the IHB premises as required as the occupant. Maintain operational hardware, software and furniture, carry out renovations or modifications as requirements arise.	2013-17	30K each year

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## Element 1.6 International Hydrographic Conferences or Future Assemblies

**Objective:** 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.

Task 1.6.1	Organize the 5 <sup>th</sup> Extraordinary International Hydrographic Conference or Extraordinary International Hydrographic Assembly in the event the Protocol of Amendment to the IHO Convention has entered into force.	2014	Decided by the XVIII IHC  Funded by the Conference Fund
Task 1.6.2	Organize the XIX <sup>th</sup> International Hydrographic Conference or IHO Assembly in the event the Protocol of Amendment to the IHO Convention has entered into force.	2017	Funded by the Conference Fund

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# **WORK PROGRAMME No. 2 HYDROGRAPHIC SERVICES AND STANDARDS**

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## PROGRAMME 2 - "HYDROGRAPHIC SERVICES AND STANDARDS"

**Concept:** This Programme seeks to develop, maintain and extend technical standards, specifications and guidelines to enable the provision of standardised products and services that meet the requirements of mariners and other users of hydrographic information.

### Element 2.1 Technical Programme Coordination

**Objective:** To monitor technical developments, oversee the development of IHO technical standards, specifications and publications through the coordination and interaction of relevant IHO Working Groups, and to make recommendations to Member States.

Task 2.1.1	Conduct annual meetings of HSSC	2013-17	1 meeting per year, 1 Dir + 2PA per meeting
Task 2.1.2	Provide technical advice and guidance on IHO technical standards, specification and publications	2013-17	= 0.25 D/PA man-years

### Element 2.2 Hydrographic Data Transfer Standards

**Objective:** To monitor developments related to transfer standards for digital hydrographic data, to develop and maintain the relevant IHO standards, specifications and publications, and to provide technical advice as appropriate.

Task 2.2.1	Conduct annual and biennial meetings of relevant HSSC WGs dealing with hydrographic data transfer standards	2013-17	3 meetings per year, 1 PA per meeting
Task 2.2.2	Maintain and extend the relevant IHO standards, specifications and publications, using contract support assistance as appropriate, including: <ul style="list-style-type: none"> <li>- S-57 IHO Transfer Standard for Digital Hydrographic Data</li> <li>- S-100 IHO Universal Hydrographic Data Model</li> <li>- S-101 ENC Product Specification</li> <li>- S-102 Bathymetric Surface Product Specification</li> <li>- S-58 Recommended ENC Validation Checks</li> <li>- S-65 ENC Production Guidance</li> <li>- S-64 IHO Test Data Sets for ECDIS</li> <li>- S-61 Product Specification for Raster Navigational Charts</li> <li>- S-99 Operational Procedures for the Organization and Management of the S-100 Geospatial Information Registry</li> <li>- S-66 Facts about Electronic Charts and Carriage Requirements</li> </ul>	2013-17	Contract support: 15K each year
Task 2.2.3	Develop and maintain as-yet undefined S-100-based Product Specifications	2013-14	1 meeting per year, 1 PA per meeting
Task 2.2.4	Maintain and extend S-100 registry	2013-17	no significant IHO expense anticipated
Task 2.2.5	Provide outreach and technical assistance regarding transfer standards	2013-17	1 meeting per year, 1 Dir + 1PA per meeting

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### Element 2.3 Nautical Cartography

**Objective:** To monitor developments related to nautical cartography for paper nautical charts and the colours, symbols and display rules used to show SENC information on ECDIS, to develop and maintain the relevant IHO standards, specifications and publications, and to provide technical advice as appropriate.

Task 2.3.1	Conduct annual meetings of relevant HSSC WGs dealing with nautical cartography	2013-17	2 meetings per year, 1 PA per meeting
Task 2.3.2	Maintain and extend the relevant IHO standards, specifications and publications, using contract support assistance as appropriate, including: - S-4 Chart Specifications of the IHO and Regulations for International (INT) Charts INT 1 - Symbols, Abbreviations and Terms used on Charts INT 2 - Borders, Graduations, Grids and Linear Scales INT 3 - Use of Symbols and Abbreviations - S-11 Part A - Guidance for the Preparation and Maintenance of INT Chart schemes - S-11 Part B - Catalogue of INT Charts - S-49 Standardization of Mariners' Routeing Guides - Digital data updating related elements of Appendix 1 to S-52 - Guidance on Updating the Electronic Navigational Chart - S-52 and its accompanying Presentation Library - Specifications for Chart Content and Display Aspects of ECDIS - Portrayal related elements of S-101 - ENC Product Specification and other S-100-based Product Specifications	2013-17	Contract support: 15K each year

### Element 2.4 Digital Data Protection and Authentication

**Objective:** To monitor developments related to data protection and data authentication, to develop and maintain the relevant IHO standards, specifications and publications, and to provide technical advice as appropriate

Task 2.4.1	Conduct annual meetings of relevant HSSC WG dealing with digital data protection and authentication	2013-17	1 meeting per year, 1 PA per meeting
Task 2.4.2	Maintain and extend the relevant IHO standards, specifications and publications, including: - S-63 IHO Data Protection Scheme - Data protection and authentication related elements of S-100 - IHO Universal Hydrographic Data Model and - S-101 - ENC Product Specification		no significant IHO expense anticipated

## Element 2.5 Data Quality

**Objective:** To monitor developments related to methods of classifying and depicting the quality of hydrographic information, to develop and maintain the relevant IHO standards, specifications and publications, and to provide technical advice as appropriate.

Task 2.5.1	Conduct annual meetings of relevant HSSC WG dealing with data quality	2013-17	1 meeting per year, 1 PA per meeting
Task 2.5.2	Maintain and extend the relevant IHO standards, specifications and publications, including: <ul style="list-style-type: none"><li>- Data quality related elements of S-57 - IHO Transfer Standard for Digital Hydrographic Data</li><li>- Data quality related elements of S-52 - Specifications for Chart Content and Display Aspects of ECDIS</li><li>- Data quality related elements of S-100 - IHO Universal Hydrographic Data Model</li><li>- S-101 - ENC Product Specification and other S-100-based Product Specifications</li></ul>		no significant IHO expense anticipated

## Element 2.6 Nautical Publications

**Objective:** To monitor developments related to the preparation of nautical publications, to develop and maintain the relevant IHO standards, specifications and publications, and to provide technical advice as appropriate.

Task 2.6.1	Conduct annual meetings of relevant HSSC WG dealing with nautical publications	2013-17	1 meeting per year, 1 PA per meeting
Task 2.6.2	Develop, maintain and extend S-10n - Nautical Information Product Specification		no significant IHO expense anticipated
Task 2.6.3	Maintain and extend the relevant IHO standards, specifications and publications, including: <ul style="list-style-type: none"><li>- IHO Resolutions in M-3 relating to Nautical Publications</li><li>- S-12 Standardization of List of Lights and Fog Signals</li></ul>		no significant IHO expense anticipated

## Element 2.7 Tides and Datums

**Objective:** To monitor developments related to tidal and water level observation, analysis and prediction and other related information including vertical and horizontal datums, to develop and maintain the relevant IHO standards, specifications and publications, and to provide technical advice as appropriate.

Task 2.7.1	Conduct annual meetings of relevant HSSC WG dealing with tides and datums	2013-17	1 meeting per year, 1 PA per meeting
Task 2.7.2	Maintain and extend the relevant IHO standards, specifications and publications, including: <ul style="list-style-type: none"><li>- Relevant IHO Resolutions in M-3</li><li>- S-60 User's Handbook on Datum Transformations involving WGS 84</li><li>- Standard Tidal Constituent List Inventory of Tide Gauges used by Member States</li></ul>	2013-17	no significant IHO expense anticipated
Task 2.7.3	Develop, maintain and extend a Product Specification for digital tide tables	2013-17	no significant IHO expense anticipated
Task 2.7.4	Develop, maintain and extend a Product Specification for the transmission of real-time tidal data	2013-17	no significant IHO expense anticipated
Task 2.7.5	Develop, maintain and extend a Product specification for dynamic tides in ECDIS	2013-17	no significant IHO expense anticipated

## Element 2.8 Digital Data Updating

**Objective:** To monitor developments in standardized processes for the updating of digital hydrographic data products, to develop and maintain the relevant IHO standards, specifications and publications, and to provide technical advice as appropriate.

Task 2.8.1	Maintain and extend the relevant IHO standards, specifications and publications, including: - Digital data updating related elements of S-65 - ENC Production Guidance - S-52 Appendix 1 - Guidance on Updating the Electronic Navigational Chart	2013-17	no significant IHO expense anticipated
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## Element 2.9 Marine Spatial Data Infrastructures

**Objective:** To monitor developments related to the hydrographic component of Spatial Data Infrastructures, to develop and maintain the relevant IHO publications, and to provide technical advice as appropriate.

Task 2.9.1	Conduct annual meetings of relevant HSSC WG dealing with MSDI	2013-17	1 meeting per year, 1 PA per meeting
Task 2.9.2	Maintain the relevant IHO standards, specifications and publications, including: - C-17 Spatial Data Infrastructures: "The Marine Dimension" - Guidance for Hydrographic Offices	2013-17	no significant IHO expense anticipated

## Element 2.10 Hydrographic Data Acquisition and Processing

**Objective:** To monitor developments related to hydrographic data acquisition and processing, to develop and maintain the relevant IHO publications, and to provide technical advice as appropriate.

Task 2.10.1	Conduct annual meetings of relevant HSSC WG dealing with hydrographic data acquisition and processing when WG required	2013-17	no meetings planned at present
Task 2.10.2	Maintain and extend, when required, the relevant IHO standards, specifications and publications, including: S-44 - IHO Standards for Hydrographic Surveys	2013-17	no meetings planned at present

## Element 2.11 Hydrographic Dictionary

**Objective:** To develop, maintain and extend S-32 - Hydrographic Dictionary in English, French and Spanish and to provide technical advice as appropriate.

Task 2.11.1	Maintain and extend the IHO Hydrographic Dictionary in English, French and Spanish.	2013-17	no significant IHO expense anticipated
Task 2.11.2	Develop the Spanish language Wiki version of S-32 with commercial contract support	2013-14	contract support: 20K

## Element 2.12 Hydrographic Aspects of UNCLOS

**Objective:** To monitor developments related to the hydrographic aspects of the UN Convention on the Law of the Sea, to develop and maintain the relevant IHO publications, and to provide technical advice as appropriate.

Task 2.12.1	Organise and prepare ABLOS annual business meetings	2013-17	1Dir + PA at each meeting in 2013, 2015, 2017
Task 2.12.2	Organise and prepare the biennial ABLOS Conferences.	2014-16	self-funding
Task 2.12.3	Contribute to the revision of IHO publication C-51- TALOS Manual.	2013-17	no significant IHO expense anticipated

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# **WORK PROGRAMME No. 3 INTER REGIONAL COORDINATION AND SUPPORT**

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Element 3.7	Maritime Safety Information
Element 3.8	Ocean Mapping Program

### PROGRAMME 3 - “INTER REGIONAL COORDINATION AND SUPPORT”

**Concept:** This programme refers primarily to the Organization’s strategic direction “*Facilitate global coverage and use of official hydrographic data, products and services*” through enhancing and supporting cooperation on hydrographic activities among the IHO Member States (MS) under the aegis of the Regional Hydrographic Commissions (RHCs). It also contributes to the strategic direction “*Assist Member States to fulfil their roles*” through the IHO capacity-building programme in supporting MS as well as non Member States to build national hydrographic capacities where they do not exist and to contribute to the improvement of the already established hydrographic infrastructure. The programme includes major topics that require a regionally coordinated approach, such as ENC adequacy, availability, coverage and distribution, maritime safety information and ocean mapping.

#### Element 3.0 Inter Regional Coordination Committee (IRCC)

**Objective:** To promote and coordinate those activities that might benefit from a regional approach:

- establish, coordinate and enhance cooperation in hydrographic activities amongst States on a regional basis, and between regions;
- establish co-operation to enhance the delivery of capacity building programs;
- monitor the work of specified IHO Inter-Organizational Bodies engaged in activities that require inter-regional cooperation and coordination.

The IRCC will foster coordination between all RHCs and other bodies that have a global/regional structure (i.e.: HCA, GGC, CBSC, IBSC, WWNWS-SC, WEND-WG). Also it will provide advice to the IHB on the implementation of the IHO planning mechanisms agreed at the 4<sup>th</sup> EIHC. One IHB Director and two Professional Assistants (PAs) are directly involved in this activity.

Task	Title	Activities / Deliverables	Comments	SD <sup>1</sup>	SPI <sup>2</sup>
3.0.0	IRCC - Inter Regional Coordination Committee.	A) Organize, prepare, attend and report (annual) IRCC meetings.  B) Report to the Conference (Council).  C) Support the IHB to implement the planning mechanism annually and at the end of each 5-year (3-year) cycle.  D) Contribute to the IHO Annual Report.  E) Update and implement the IRCC Work Programme.	2013 to 2017 annually  2017 (annually when the Council is established) 2013 to 2017 annually  2013 to 2017 annually Permanent.	2	

#### Element 3.1 Cooperation with Member States and attendance at relevant meetings

**Objective:** 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.

Priorities depend on regional circumstances but RHC should first assess the adequacy, availability and consistency of coverage by nautical publications including paper charts and ENCs against international shipping requirements (risk assessment), identify difficulties and develop mechanism for solving them, including assisting members in bilateral or multilateral discussions, as necessary, with the support of other relevant IHO bodies. This element is largely accomplished through the meetings of the RHCs. The frequency of meetings varies from one every year to one every three years. These meetings have increased in importance and will continue to do so as the RHCs are increasingly involved in the overall planning, execution and assessment of the IHO Work Programme and the development of the IHO Strategic Plan, through the IRCC. These two to four-day meetings - often held in conjunction with a workshop, a seminar or a capacity building initiative - constitute the best opportunity for countries in a region, whether Member States or not, to discuss accomplishments, identify initiatives and develop regional positions on IHO issues. More and more accredited NGOs and representatives from hydrographic industry participate in these events offering a unique opportunity to developing countries to keep updated on the technological developments and training opportunities. Attendance varies according to region, but is usually in the order of 20 to 50

<sup>1</sup> SD: Strategic Direction.

<sup>2</sup> SPI: Strategic level Performance Indicator.

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participants at each event. A Director, sometimes accompanied by a PA, represents the IHB at the meetings, providing guidance and assistance on IHO matters. Also the nominated Director monitors the follow-up of the actions agreed at each RHC meeting.

<b>Task</b>	<b>Title</b>	<b>Activities / Deliverables</b>	<b>Comments</b>	<b>SD<sup>3</sup></b>	<b>SPI<sup>4</sup></b>
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<sup>3</sup> SD: Strategic Direction

<sup>4</sup> SPI: Strategic level Performance Indicator.

3.1.1	ARHC – Arctic Region Hydrographic Commission.	Organize, prepare, attend and report (annual) ARHC Conferences.	2013 to 2017 annually	2	
3.1.2	BSHC - Baltic Sea Hydrographic Commission.	Organize, prepare, attend and report (annual) BSHC Conferences.	2013 to 2017 annually	2	
3.1.3	EAHC - East Asia Hydrographic Commission.	Organize, prepare, attend and report: -Coordinating Meetings,  -ENC Task Group Meetings,  -EAHC Conferences.	2013 to 2017 annually  2013 to 2017 annually  2015	2	
3.1.4	EAtHC - Eastern Atlantic Hydrographic Commission	Organize, prepare, attend and report EAtHC Conferences.	2014, 2016	2	
3.1.5	MACHC - Meso American and Caribbean Hydrographic Commission.	Organize, prepare, attend and report (annual) MACHC Conferences.	2013 to 2017 annually	2	
3.1.6	MBSHC - Mediterranean and Black Seas Hydrographic Commission	Organize, prepare, attend and report MBSHC Conferences.	2013-2015-2017	2	
3.1.7	NHC - Nordic Hydrographic Commission.	Organize, prepare, attend and report (annual) NHC Conferences.	2013 to 2017 annually	2	
3.1.8	NIOHC - North Indian Ocean Hydrographic Commission.	Organize, prepare, attend and report (annual) NIOHC Conferences.	2013 to 2017 annually	2	
3.1.9	NSHC - North Sea Hydrographic Commission	Organize, prepare, attend and report NSHC Conferences.	2014, 2016	2	
3.1.10	RSAHC - ROPME Sea Area Hydrographic Commission	Organize, prepare, attend and report RSAHC Conferences.	2013, 2015, 2017	2	
3.1.11	SAIHC - Southern Africa and Islands Hydrographic Commission	Organize, prepare, attend and report (annual) SAIHC Conferences.	2013 to 2017 annually	2	
3.1.12	SEPHC - South East Pacific Hydrographic Commission	Organize, prepare, attend and report SEPHC Conferences and working group meetings.	2013, 2015, 2017	2	
3.1.13	SWAtHC - South West Atlantic Hydrographic Commission.	Organize, prepare, attend and report (annual) SWAtHC Conferences.	2013 to 2017 annually	2	
3.1.14	SWPHC - South West Pacific Hydrographic Commission.	Organize, prepare, attend and report SWPHC Conferences.	2013, 2015, 2016	2	
3.1.15	USCHC - USA and Canada Hydrographic Commission.	Organize, prepare, attend and report (annual) USCHC Conferences.	2013 to 2017 annually	2	

3.1.16	HCA - Hydrographic Commission on Antarctica.	A) Organize, prepare, attend and report (annual) HCA meetings. B) HCA to conduct a risk assessment for the Antarctic region and develop a Work Program to improve Antarctic charting. C) HCA through IHB to submit to ATCM the risk assessment conducted by HCA for the Antarctic Region together with a proposed HCA work program to improve Antarctic charting, for consideration, endorsement and support from ATCM.	2013 to 2017 annually  2013-2014  2015	2	
3.1.17	WEND Working Group	Report on the work by correspondence and when necessary prepare, attend and report WEND WG meetings.	2013 to 2017 annually	2	
3.1.18	Industry participation in RHC meetings.		To be considered on a case by case basis in conjunction with tasks 3.1.1 to 3.1.15.	1	

### Element 3.2 Increase participation by non Member States

**Objective:** 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.

The importance of increasing the participation by non Member States is recognized by the General Assembly of the United Nations (UN) and by the International Maritime Organization (IMO). This activity is coordinated at the regional level by RHC Chairs and monitored and supported by the IHB Director and PA assigned to the relevant RHC. This element also includes activities to encourage the reinstatement of suspended Member States, approval of applications and deposit of instruments of accession, as appropriate. Different channels may be activated for these purposes, including relations with the relevant entities in concerned countries and their representatives in international organizations to which they are Parties to.

<b>Task</b>	<b>Title</b>	<b>Activities / Deliverables</b>	<b>Comments</b>	<b>SD<sup>5</sup></b>	<b>SPI<sup>6</sup></b>
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.		To be considered in conjunction with tasks 3.1.3 and 3.3.5.	2	SPI 7
3.2.2	EAtHC - 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.	A) Maintain contact with pending applicants in the region to encourage the ratification of the IHO Convention. B) Maintain contact with suspended Member State in the region to encourage its re-insertion in IHO.	To be considered in conjunction with tasks 3.1.4 and 3.3.5.	2	SPI 7
3.2.3	MACHC - 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.	Contact suspended Member State in the region to encourage its re-insertion in IHO.	To be considered in conjunction with tasks 3.1.5 and 3.3.5.	2	SPI 7
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.		To be considered in conjunction with tasks 3.1.6 and 3.3.5.	2	SPI 7
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		To be considered in conjunction with tasks 3.1.8 and 3.3.5.	2	SPI 7

<sup>5</sup> SD: Strategic Direction.

<sup>6</sup> SPI: Strategic level Performance Indicator.

	as SOLAS V.				
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.		To be considered in conjunction with tasks 3.1.10 and 3.3.5.	2	SPI 7
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.		To be considered in conjunction with task 3.1.11 and 3.3.5.	2	SPI 7
3.2.8	SEPHC - 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.	Continue the efforts to include Panama as Observer Country to the Commission.	To be considered in conjunction with task 3.1.12 and 3.3.5.	2	SPI 7
3.2.9	SWAtHC - 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.		To be considered in conjunction with task 3.1.13 and 3.3.5.	2	SPI 7
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.		To be considered in conjunction with tasks 3.1.14 and 3.3.5.	2	SPI 7

3.2.11	RHCs to encourage the approval of pending applications for IHO membership.	Notification of approval within 12 months of the application.	Permanent.	2	SPI 6
3.2.12	RHCs to encourage the ratification of the IHO Convention by approved applicants.	Ratification of the IHO Convention within two years of the approval of the application.	Permanent.	2	SPI 6

### Element 3.3 Capacity Building Management

**Objective:** 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.

This element includes the activities of the CB Sub-Committee (CBSC) and the joint FIG-IHO-ICA International Board on Standards of Competence for hydrographic surveyors and nautical cartographers (IBSC).

- With regard to the CBSC, this element contains various tasks focused on the need to optimize the IHO CB structure by improving coordination with the RHCs, increasing the control over the projects / initiatives agreed, following the procedures developed to help the management of the CB Fund. Priority is being given to developing first and second phase hydrographic capabilities in developing countries. ENC production capabilities are also included. All possibilities of developing efficiently the IHO strategy on CB will be explored, including considering setting up shared regional capacities. A Director and a PA are involved for about 30% of their overall time in the execution of this activity. The IHB Finance personnel also contribute to this element. The IHB and the CBSC Chair will maintain coordination with the secretariats of IMO, IOC, IALA, WMO and any other relevant organizations in respect of CB matters aiming at improving the effectiveness of the capacity building effort in these organizations' areas as they relate to hydrography, nautical cartography and marine safety information. A Director and a PA are involved.

- With regard to the IBSC, the intention is to develop a new standards framework to separate competency requirements for Cat A and Cat B hydrographers and nautical cartographers by developing two discrete parts in the standards S-5 and S-8 and update their content to comply with the scientific and technological developments in the fields of hydrography and nautical cartography. In the process of the new standards framework the IBSC will also consider:

- (i) modular learning over a limited time period to achieve a full Cat A or Cat B curriculum;
- (ii) modern approaches in offering courses i.e. e-learning;
- (iii) the increasing role that the private sector plays in educational activities.

The IBSC will continue to review the syllabi of programmes and individual recognition schemes submitted by Hydrographic Offices, institutions and learned bodies taking into account comments and recommendations received from National Focal Points and other authorities. The IBSC work will be supported by a special fund administered by FIG.

Task	Title	Activities / Deliverables	Comments	SD <sup>7</sup>	SPI <sup>8</sup>
3.3.1	CBSC - Capacity Building Sub-Committee.	A) Organize, prepare, conduct and report annual CBSC meetings.  B) Follow-up the coordination required to execute the action lists agreed.  C) Keep IHO publication M-2 "National Maritime Policies and Hydrographic Services" duly updated.	2013 to 2017 annually 1 Dir + 1 PA per meeting (annual). Permanent.  Permanent.	4	SPI 4 & 4bis
3.3.2	Capacity Building Fund (CB Fund) Management.	IHB to administer the CB Fund in conformity with IHO Resolutions 4 to 7/2004 as amended and report to MSs on its use and status through the IHO Annual Report.	Permanent. Development and maintenance of a CB Management system: 80K for 5 years.	4	

<sup>7</sup> SD: Strategic Direction.

<sup>8</sup> SPI: Strategic level Performance Indicator.

3.3.3	Meetings with other organizations, funding agencies, private sector and academia.	IHB or CBSC Chair to participate in coordination meetings with international organizations such as IMO, IOC, FIG, WMO, IALA and others; with funding agencies, the private sector and academia, related to initiatives with a capacity building component aimed at developing hydrographic capabilities in developing countries, informing MSs of results.	2013 to 2017 annually 1 Dir + 1 PA per meeting (biannual).	1	
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.	To be considered in conjunction with task 3.3.1.	4	

The IBSC activities involve a Director, a PA and representatives of four MSs.

3.3.5	Capacity Building Work Programme.	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. CBSC to develop and propose an annual IHO Capacity Building Work Program (CBWP) to be included in the general IHO WP. CBSC to maintain and control the execution of the approved CBWP.	To be considered in conjunction with task 3.3.1.	4	
3.3.6	Follow-up of CB activities and initiatives.	CBSC to follow-up the CB activities and initiatives, especially those for which the CB Fund and MS have contributed. 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.	To be considered in conjunction with task 3.3.1.	4	
3.3.7	IBSC - International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers.	A) Prepare, attend and report annual IBSC meetings.  B) Update and implement the IBSC Work Programme. C) Manage the IBSC Fund and report to IHO	2013 to 2017 annually 1 PA per meeting (annual).	1 & 4	

### Element 3.4 Capacity Building Assessment

**Objective:** 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.

This element includes technical and advisory visits to selected countries identified by RHCs. The visits will be made by teams of experts from the respective region supported by staff from the IHB or MS as appropriate. The CBSC will continue reviewing the procedures established for assessing the effectiveness of individual

3.3.8	Provide guidance to training institutions.		As required.	4	
3.3.9	Maintain IBSC Publications (C-6, C-47, S-5, S-8).	IBSC to develop a new Standards framework to separate competency requirements for Cat A and Cat B hydrographers and nautical cartographers by developing two discrete parts in the standards S-5 and S-8 and update their content to comply with the scientific and technological developments in the fields of Hydrography and Nautical Cartography.	2013-2017 Support to IBSC on the complete development of new set of Standards of Competence: 60 k€ for 5 years.	1 & 4	

CB projects. The IHB and RHCs will assist in assessing in-country follow-up actions in relation to any recommendations included in technical visit reports. This task involves a Director and a PA.

Task	Title	Activities / Deliverables	Comments	SD <sup>9</sup>	SPI <sup>10</sup>
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<sup>9</sup> SD: Strategic Direction.

<sup>10</sup> SPI: Strategic level Performance Indicator.

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.	Permanent. According to CBSC Work Programme and CB Fund. Detailed information on the technical and advisory visits expected so far are provided in the attached "CB requirements".	4	
3.4.2	Review existing CB procedures and develop new ones.	CBSC to maintain and improve where necessary the CB procedures to be used by RHCs when assessing hydrographic, cartographic and safety of navigation status.	As required.	4	
3.4.3	Enhance publication C-55	IHB with the support of the RHCs, CBSC and GGC to develop a new framework for C-55.	2013-2015 Develop the framework for the input, presentation and assessment of the survey and nautical cartography status: 60 k€ for 3 years.	2	

### Element 3.5 Capacity Building Provision

**Objective:** 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; liaise with MS, other organizations and funding agencies for such provision and establish and participate in joint development projects.

Several tasks are included under this element, including raising awareness of the importance of hydrography during visits requested by governments. Technical workshops and short courses are programmed in accordance with the priorities identified by the relevant RHCs. The CBSC studies and assesses all requests and determines the level of support that will be provided by the CB Fund. This element also includes the monitoring of several marine projects. The follow-up and coordination of all CB activities absorbs close to 50% of the time of a Director and a PA.

<b>Task</b>	<b>Title</b>	<b>Activities / Deliverables</b>	<b>Comments</b>	<b>SD<sup>11</sup></b>	<b>SPI<sup>12</sup></b>
3.5.1	Raise Awareness on the Importance of Hydrography.	IHB, RHC Chairmen and individual National Hydrographers in cooperation with CBSC to provide the Governmental Authorities of the Developing Countries with the necessary information required to raise the awareness of the importance of Hydrography and its contribution to socio-economic development.	According to CBSC Work Programme.	3	
3.5.2	Technical Workshops, Seminars, Short Courses.	RHCs in conjunction with CBSC and with the support of IHB, to organize Technical Workshops, Seminars and Short Courses with a view to highlighting the responsibilities of Coastal States (SOLAS V); to provide the basic technical knowledge and to jointly explore initiatives to achieve a minimum level of response to national, regional and international obligations.	According to CBSC Work Programme and CB Fund. Detailed information on the technical workshops, seminars, short courses expected so far are provided in the attached "CB requirements".	4	
3.5.3	Hydrographic and Nautical Cartography Courses.	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.	According to CBSC Work Programme and CB Fund. Detailed information on the courses expected so far are provided in the attached "CB requirements".	4	
3.5.4	On the Job Training (ashore / on board).	A) CBSC, with IHB support, to investigate "on-the-job training opportunities" ashore and on board (ships of opportunity). B) To study and develop a procedure to take advantage of this innovative training tool and report the results to the IHO proposing the adoption of an IHO resolution on the subject.	According to CBSC Work Programme.	4	
			2014		
3.5.5	Marine/Maritime Projects.	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.	According to CBSC Work Programme.	2	

<sup>11</sup> SD: Strategic Direction.

<sup>12</sup> SPI: Strategic level Performance Indicator.

3.5.6	CBSC to foster bilateral agreements in order to help satisfy SOLAS V/9.		According to CBSC Work Programme.	2	SPI 3
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### Element 3.6 Coordination of Global Surveying and Charting

**Objective:** 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.

The WEND WG will monitor progress on implementing the WEND principles, in accordance with the relevant decisions of the Conference and in liaison with RHCs. This WG will also assist the IHB in the preparation of reports to IMO and other relevant organizations on availability of ENC. The maintenance of ENC and INT chart schemes and the monitoring or the associated production of ENC and INT charts are also included. The new framework for publication C-55 on the status of hydrographic surveying and nautical charting world-wide will be implemented together with other actions agreed by the Conference to improve the collection, quality and availability of hydrographic data world-wide, monitor and rectify possible deficiencies and shortcomings, cooperate with other international organizations and stakeholders as necessary, and to keep MS informed on progress on this issue. One Director and a PA are involved in the components of this element.

Task	Title	Activities / Deliverables	Comments	SD <sup>13</sup>	SPI <sup>14</sup>
3.6.1	C-55 Status of Hydrographic Surveying and Nautical Charting World-wide.	A) MS to provide annual update.	Permanent.	2	SPI 3
		B) IHB to implement the new framework for publication C-55 to improve the collection, quality and availability of hydrographic data world-wide, monitor and rectify possible deficiencies and shortcomings, cooperate with other international organizations and stakeholders as necessary, and to keep MS informed on progress on this issue.	To be considered in conjunction with task 3.4.3.		
		C) IHB to report periodically to IMO (NAV and MSC) on the impact of poor bathymetric data availability, datum mis-adjustment problems, and other relevant factors governing the limitations and requirements for improvements in global charting and associated services.	Permanent.		
3.6.2	WEND WG to foster the implementation of the WEND principles, monitor progress and report to IRCC.	A) WG to facilitate the production, distribution and updating of ENC cartographic products ensuring uniform ENC quality and consistency	2013 to 2017 annually	2	SPI 1 SPI 2
		B) WG to facilitate the resolution of gaps and overlaps in ENC coverage	2013 to 2017 annually		
		C) WG to facilitate the promotion of RENC co-operation for the benefit of ENC end-users.	2013 to 2017 annually		

<sup>13</sup> SD: Strategic Direction.

<sup>14</sup> SPI: Strategic level Performance Indicator.

3.6.3	Maintain and coordinate ENC schemes, consistency and quality.	RHCs to elaborate and maintain adequate ENC schemes in their regions and progress the production and maintenance of ENC.	In accordance with Element 3.1	2	SPI 8
3.6.4	Maintain and coordinate INT Chart Schemes and improve the availability of the INT Chart Series.	RHCs to maintain INT Chart Schemes and progress the production of INT Chart in their regions, in line with ENC production.	Permanent.	2	

### Element 3.7 Maritime Safety Information

**Objective:** To facilitate the efficient provision of MSI to mariners through coordination and the establishment of relevant standards between agencies.

Included under this element are the annual meetings of the WWNWS Sub-Committee and the continuous improvement of coordination of NAVAREAs in liaison with the RHCs and relevant international organizations. In particular, the Sub-Committee will participate and contribute to the IMO work items on the modernization of the GMDSS and the development of the e-navigation implementation plan. Routine review and maintenance of the relevant publications such as S-53 are also included. Members of the WWNWS-SC will contribute to the delivery of the MSI component at relevant courses under the CB programme. One Director and one PA are involved in monitoring this activity.

Task	Title	Activities / Deliverables	Comments	SD <sup>15</sup>	SPI <sup>16</sup>
3.7.1	WWNWS-SC - World-Wide Navigational Warning Service Sub-Committee.	Organize, prepare, attend and report annual WWNWS-SC meetings.	2013 to 2017 annually	2	
3.7.2	WWNWS Document Review Working Group.	Conduct annual meetings of the WWNWS Document Review WG.	2013 to 2017 annually	2	
3.7.3	Maintain and extend the following IHO standards, specifications and publications: -relevant IHO Resolutions in M-3, -S-53.	Provide up-to-date WWNWS documentation.	Permanent.	1	
3.7.4	Liaise with IMO and WMO on the delivery of MSI within the GMDSS.	Ensure the timely provision of adequate MSI to global shipping.	Permanent.	1	
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.	Improve the delivery and exploitation of MSI to global shipping by taking full advantage of technological developments.	Permanent.	1	

<sup>15</sup> SD: Strategic Direction.

<sup>16</sup> SPI: Strategic level Performance Indicator.

### Element 3.8 Ocean Mapping Programme

**Objective:** 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.

This element includes the meeting of the Guiding Committee and its three sub-committees (SCRUM, SCUFN, TSCOM). Improving the availability of shallow water bathymetry continues to be a high priority in this element. Gathering existing dispersed bathymetric data of Antarctica and the Arctic region is also a key activity to progress. Other tasks include the enhancement and maintenance of the associated publications (B-4, B-6, B-7, B-8, B-9, B-10). GEBCO matters are handled by a Director, three PAs and as many as ten MS representatives who participate in the GEBCO Guiding Committee and its Sub-Committees.

Task	Title	Activities / Deliverables	Comments	SD <sup>17</sup>	SPI <sup>18</sup>
3.8.1	GEBCO Guiding Committee and associated bodies.	Organize, prepare, attend and report annual meetings of relevant GEBCO bodies (including GC, TSCOM, SCUFN, SCRUM and Science Day).	2013 to 2017 annually	1 & 2	
3.8.2	IHO Digital Bathymetry Data Center (DCDB).	Ensure effective operation of the IHO DCDB through monitoring and advising the IHO DCDB operators.	Permanent.	2	
3.8.3	Encourage the contribution of bathymetric data to the IHO DCDB.	A) Identify priority areas for regional mapping.	Permanent.	2 & 4	
		B) Promote data contribution through GEBCO participation in RHCs meetings.			
3.8.4	Maintain IHO bathymetric publications (B-4, B-6, B-7, B-8, B-9, B-10)	A) Develop the on-line function of B-4	Permanent.	1 & 2	
		B) Publications kept current and updated.			
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: 1) Development of outreach materials (paper maps, brochures, web-based presentations) and educational materials; 2) Production of GEBCO Globes; 3) Printing of GEBCO World Map at various locations in MSs.	Permanent.	3	
3.8.6	GEBCO Web site.	GEBCO Web site kept current and updated regularly.	Permanent.	2 & 3	

<sup>17</sup> SD: Strategic Direction.

<sup>18</sup> SPI: Strategic level Performance Indicator.

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 -two one-week workshops held during 2013, where potential course teachers are invited to take part in developing the curriculum. One week in Stockholm, Sweden and one at NGDC in Boulder, Colorado, USA.	2013	2	
3.8.8	Update and enhance the GEBCO Gazetteer (B-8) for internet access.	A) Provide the GEBCO Gazetteer as a web service via a geospatially enabled database.	2013-2015	1 & 2	
		B) Develop and make available public and management on-line interfaces to the Gazetteer.			

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ANNEX A

***“CAPACITY BUILDING REQUIREMENTS”***  
*(based on information received from the  
RHCs)*

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## INTRODUCTION

The following pages are intended to capture the training and development needs for the region in support of the international capacity building initiative. There are a range of programmes and courses available that provide opportunities for hydrographic organizations and their employees. The information provided will enable the IHO Capacity Building Sub-Committee to make informed decisions on training requirements and enable the appropriate training and development opportunities to be appropriately planned. The information provided will help inform future decisions and planning but do not ensure future attendance and acceptance onto a programme. Other training and development needs maybe identified which cannot be matched to the courses listed. These needs can be identified in textual form under "Other" on the following pages so as to ensure all training requirements are articulated and understood.

### CBWP 2013

#### 1.- Technical and Advisory Visits

- a) High level technical visit to governmental authorities

RHC	MACHC	NIOHC	RSAHC	SWAtHC	SWPHC
Countries	Dominica and St Vincent & Grenadines. Panama	Sudan and Eritrea	Iraq	Bolivia	Samoa, Tonga

- b) Technical assessment and advice visit

RHC	EAHC	SWPHC
Countries	Brunei and DPRK	Kiribati, Vanuatu

#### 2.- Technical Workshops, Seminars, Short Courses

RHC	EAHC	MACHC	NIOHC	RSAHC	SAIHC	SWPHC
Phase 1 Skills: MSI course (3 days) plus introduction to the assessment and promulgation of navigationally significant data (2 days)	X	X			X	
Basic Hydrographic Survey Course (10 days)	X	X			X	X
Basic ENC and ENC Production course (10 days)	X		X	X		
Law of the Sea Workshop (5 days)		X			X	
MSDI and Database Management (5 days)	X	X			X	
Seabed Classification workshop (5 days)	X					

Module 1 - Marine Cartography of the CAT B Cartographic Course (5 weeks)	X					
Module 2 - Hydrographic Data Processing of the CAT B Cartographic Course (5 weeks)	X					X
Module 3 - Electronic Navigational Charts (ENC) of the CAT B Cartographic Course (5 weeks)	X					

### 3.- Other

	EAHC	SEPHC	SWATHC	SWPHC
Technical Workshops on HDP		X	X	
Technical Workshop on S-100	X	X		
Representation at Pacific Islands Maritime Administration (PacMA)				X
National Hydrographic Capability Development				Solomon Islands

### CBWP 2014

#### 1.- Technical and Advisory Visits

##### c) High level technical visit to governmental authorities

RHC	MACHC	NIOHC	SAIHC	SWATHC
Countries	Nicaragua & Panama	Jordan	Repeat visits of selected coastal states	Paraguay

##### d) Technical assessment and advice visit

RHC	EAHC
Countries	Vietnam & Cambodia

#### 2.- Technical Workshops, Seminars, Short Courses

RHC	EAHC	MACHC	NIOHC	RSAHC	SAIHC	SWPHC
Phase 1 Skills: MSI course (3 days) plus introduction to the assessment and promulgation of navigationally significant data (2 days)	X		X	X		
Basic Hydrographic Survey Course (10 days)	X		X	X		
Basic ENC and ENC Production course (10 days)	X	X			X	
Law of the Sea Workshop (5 days)	X		X			
MSDI and Database Management (5 days)			X	X		
Tides and water level workshop (5 days)	X					X
Module 1 - Marine Cartography of the CAT B Cartographic Course (5 weeks)	X					X

Module 2 - Hydrographic Data Processing of the CAT B Cartographic Course (5 weeks)	X					
Module 3 - Electronic Navigational Charts (ENC) of the CAT B Cartographic Course (5 weeks)	X					X

### 3.- Other

RHC	EAHC	SEPHC	SWATHC	SWPHC
Technical Workshops on Hydro /Carto River Survey		X		
Technical Workshop on Print on Demand			X	
Technical Workshop on S-100	X			
Representation at Pacific Islands Maritime Administration (PacMA)				X
Hydrographic Administration Training Placements within Regional HO				X
National Hydrographic Capability Development				Vanuatu

### CBWP 2015

### 1.- Technical and Advisory Visits

e) High level technical visit to governmental authorities

RHC	MACHC
Countries	Repeat visits of selected coastal states

f) Technical assessment and advice visit

RHC	EAHC	SWATHC	SWPHC
Countries	Brunei and DPRK	Bolivia	Samoa & Tonga

### 2.- Technical Workshops, Seminars, Short Courses

RHC	EAHC	MACHC	NIOHC	RSAHC	SAIHC	SEPHC	SWPHC
Phase 1 Skills: MSI course (3 days) plus introduction to the assessment and promulgation of navigationally significant data (2 days)	X	X			X		
Basic Hydrographic Survey Course (10 days)	X	X			X		
Basic ENC and ENC Production course (10 days)	X		X	X			
Port and Shallow Water Survey Course (5days)							X
MBES Processing (5 days)						X	

MSDI and Database Management (5 days)	X	X			X		
Tsunami inundation mapping workshop (5 days)	X						
Seabed Classification workshop (5 days)	X						
Module 1 - Marine Cartography of the CAT B Cartographic Course (5 weeks)	X						
Module 2 - Hydrographic Data Processing of the CAT B Cartographic Course (5 weeks)	X						X
Module 3 - Electronic Navigational Charts (ENC) of the CAT B Cartographic Course (5 weeks)	X						

3.- **Other**

RHC	SWAtHC	SWPHC
Technical Workshop on LAT & Dynamical application of Tides to ECDIS	X	
Representation at Pacific Islands Maritime Administration (PacMA)		X
National Hydrographic Capability Development		Cook Islands, Kiribati

**CBWP 2016**

1.- **Technical and Advisory Visits**

g) High level technical visit to governmental authorities

RHC	NIOHC	RSAHC	SAIHC
Countries	Repeat visits of selected coastal states	Repeat visits of selected coastal states	Repeat visits of selected coastal states

h) Technical assessment and advice visit

RHC	EAHC	SWAtHC
Countries	Vietnam & Cambodia	Paraguay

2.- **Technical Workshops, Seminars, Short Courses**

RHC	EAHC	MACHC	NIOHC	RSAHC	SAIHC	SWAtHC	SWPHC
Phase 1 Skills: MSI course (3 days) plus introduction to the assessment and promulgation of navigational significant data (2 days)	X		X	X			
Basic Hydrographic Survey Course (10 days)	X		X	X			X
Basic ENC and ENC Production course (10 days)	X	X			X		

Law of the Sea Workshop (5 days)	X			X			
MSDI and Database Management (5 days)	X		X	X		X	
Tides and water level workshop (5 days)	X						
Module 1 - Marine Cartography of the CAT B Cartographic Course (5 weeks)	X						
Module 2 - Hydrographic Data Processing of the CAT B Cartographic Course (5 weeks)	X						
Module 3 - Electronic Navigational Charts (ENC) of the CAT B Cartographic Course (5 weeks)	X						X

**3.- Other**

RHC	SEPHC	SWATHC	SWPHC
Technical Workshops on Coastal Survey with Lidar	X		
Technical Workshop on S-100		X	
Representation at Pacific Islands Maritime Administration (PacMA)			X
National Hydrographic Capability Development			Tonga

CBWP 2017

**1.- Technical and Advisory Visits**

i) High level technical visit to governmental authorities

RHC	MACHC	NIOHC
Countries	Repeat visits of selected coastal states	Repeat visits of selected coastal states

j) Technical assessment and advice visit

RHC	EAHC
Countries	Brunei & DPRK

**2.- Technical Workshops, Seminars, Short Courses**

RHC	EAHC	MACHC	NIOHC	RSAHC	SAIHC	SWPHC
Phase 1 Skills: MSI course (3 days) plus introduction to the assessment and promulgation of navigationally significant data (2 days)	X	X			X	X
Basic Hydrographic Survey Course (10 days)	X	X			X	
Basic ENC and ENC Production course (10 days)	X		X	X		

Law of the Sea Workshop (5 days)					X	
MSDI and Database Management (5 days)		X			X	
Tsunami inundation mapping workshop (5 days)	X					
Tides and water level workshop (5 days)	X					X
Seabed Classification workshop (5 days)	X					
Module 1 - Marine Cartography of the CAT B Cartographic Course (5 weeks)	X					
Module 2 - Hydrographic Data Processing of the CAT B Cartographic Course (5 weeks)	X					
Module 3 - Electronic Navigational Charts (ENC) of the CAT B Cartographic Course (5 weeks)	X					

3.- **Other**

RHC	SEPHC	SWAtHC	SWPHC
Technical Workshops on Offshore Survey	X		
Technical Workshop on role of HOs on e-Navigation strategy		X	
Representation at Pacific Islands Maritime Administration (PacMA)			X
National Hydrographic Capability Development			Samoa

Note: Programs highlighted in Green all together constitute the IHO Cat "C" Course.

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## ANNEX B

### *CROSS REFERENCE BUDGET CHAPTERS V/S PROGRAMMES, ELEMENTS AND TASKS*

**ANNEX B**

<b>CROSS REFERENCE BUDGET CHAPTERS V/S PROGRAMMES, ELEMENTS AND TASKS</b>				
<b>CHAPTER I</b>	<b>ITEM</b>	<b>PROGRAMMES</b>	<b>ELEMENT</b>	<b>TASKS</b>
<b>PERSONNEL COSTS</b>	a	1 to 3	All	All
	b	1 to 3	All	All
	c	1 to 3	All	All
	d	1 to 3	All	All
	e	1 to 3	All	All
	f	1 to 3	All	All
	g	1 to 3	All	All
	h	1 to 3	All	All
	i	1 to 3	All	All
	j	1 to 3	All	All
	k	1 to 3	All	All
	m	1 to 3	All	All
	n	1 to 3	All	All
	o	1	1,5	1.5.2.
p	1	1,5	1.5.1.	
<b>CHAPTER II</b>	<b>ITEM</b>	<b>PROGRAMMES</b>	<b>ELEMENT</b>	<b>TASKS</b>
<b>CURRENT OPERATING COSTS</b>	a	1	1.2-1.5	1.2.5/1.5.5.
	b	1 to 3	All	All
	c	1 to 3	All	All
	d	1 to 3	All	All
	e	1 to 3	All	All
	f	1 to 2	1.2-1.4-1.5	1.2.1.-1.2.2.-1.2.3/1.4.1/1.5.3
			2.2-2.3-2.11	2.2.2-2.2.3/2.3.2/2.11.2
	g	1 to 3	All	All
	h	1	1.3-1.4	1.3.3.-1.3.4/1.4.3.
	i	1 to 3	All	All
	j	3	3.3/3.4/3.5	All
	k	1 to 2	1,1	1.1.1-1.1.2-1.1.3-1.1.4-1.1.5-1.1.6-1.1.7 1.1.8-1.1.9-1.1.10-1.1.11-1.1.12-1.1.13 1.1.14-1.1.15-1.1.16-1.1.17-1.1.18-1.1.19
			2.1-2.2-2.3-2.4-2.5	2.1.1-2.2.1-2.2.5/2.3.1/2.4.1/2.5.1
			2.6-2.7-2.9-2.12	2.6.1/2.7.1/2.9.1/2.12.1
3.0-3.1			3.0.0/3.1.1-3.1.2-3.1.3-3.1.4-3.1.5-3.1.6- 3.1.7-3.1.8-3.1.9-3.1.10-3.1.11-3.1.12 3.1.13-3.1.14-3.1.15-3.1.16-3.1.17-3.1.18	
l	1	3.7-3.8	3.7.1-3.7.2/3.8.1-3.8.2	
m	1 - 3	1,3	1.3.2.	
		1.2/3.7	1.2.3-1.2.4-1.2.7/3.7.3	
<b>CHAPTER III</b>	<b>ITEM</b>	<b>PROGRAMMES</b>	<b>ELEMENT</b>	<b>TASKS</b>
<b>CAPITAL EXPENDITURE</b>	a	1	All	All
	b	1	All	All
	c	1	All	All
	d	1	All	All
<b>CHAPTER IV</b>	<b>ITEM</b>	<b>PROGRAMMES</b>	<b>ELEMENT</b>	<b>TASKS</b>
<b>ALLOCATION TO FUNDS</b>	a	3	3,8	3.8.3-3.8.4-3.8.5-3.8.6-3.8.7-3.8.8
	b	1	All	All
	c	1	1,6	1.6.1-1.6.2
	d	1	All	All
	e	3	3.3/3.4/3.5	3.4.1-3.4.3/3.5.1-3.5.2-3.5.3-3.5.4
	f	1	All	All

ANNEX C  
*LIST OF TASKS AND TIMEFRAME*



PROGRAMME 1 - "CORPORATE AFFAIRS"

Element 1.1 Cooperation with International Organizations and participation in relevant meetings

Task 1.1.1	Antarctic Treaty Consultative Meeting (ATCM)	2013	2014	2015	2016	2017
Task 1.1.2	Comité International Radio Maritime (CIRM)	2013	2014	2015	2016	2017
Task 1.1.3	Council of Managers of National Antarctic Programs (COMNAP)	2013	2014	2015	2016	2017
Task 1.1.4	European Union Initiatives (such as INSPIRE)	2013(2)	2014(2)	2015(2)	2016(2)	2017(2)
Task 1.1.5	International Federation of Surveyors (FIG)	2013	-----	2015	-----	2017
Task 1.1.6	International Federation of Hydrographic Societies (IFHS)	2013	2014	2015	2016	2017
Task 1.1.7	International Association of Antarctic Tour Operators (IAATO)	2013	2014	2015	2016	2017
Task 1.1.8	IALA (such as the e-NAV Committee)	2013(2)	2014(2)	2015(2)	2016(2)	2017(2)
Task 1.1.9	International Association of Ports and Harbours (IAPH)	2013	-----	2015	-----	2017
Task1.1.10	International Cartographic Association (ICA) (such as ICA Commission on Geoinformation Infrastructures and Standards)	2013	-----	2015	-----	2017
Task1.1.11	International Electrotechnical Commission (IEC) (such as IEC Technical Committee 80)	2013(2)	2014(2)	2015(2)	2016(2)	2017(2)
Task1.1.12	International Maritime Organization (IMO) Assemblies, Councils, COMSAR, MSC, NAV, TCC.	2013(7)	2014(7)	2015(7)	2016(7)	2017(7)
Task1.1.13	<b>International Maritime Pilots' Association (IMPA)</b>	2013	2014	2015	2016	2017
Task1.1.14	Intergovernmental Oceanographic Commission (IOC) of UNESCO, Assemblies, Councils or specialized WGs.	2013(2)	2014(2)	2015(2)	2016(2)	2017(2)
Task1.1.15	International Standards Organization (ISO) (such as ISO Technical Committee 211)	2013(2)	2014(2)	2015(2)	2016(2)	2017(2)
Task1.1.16	Joint Board of Geospatial Information Societies (JB-GIS)	2013	2014	2015	2016	2017

Task1.1.17	NATO (such as DGIWG)	2013	2014	2015	2016	2017
Task1.1.18	UN (such as UNICPOLOS, CGGIM)	2013(2)	2014(2)	2015(2)	2016(2)	2017(2)
Task1.1.19	World Meteorological Organization (WMO)	2013	2014	2015	2016	2017
Task1.1.20	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) or the Scientific Committee on Antarctic Research (SCAR).	-----	-----	-----	-----	-----

#### Element 1.2 Information Management

Task 1.2.1	Maintain and extend the IHO website using commercial contract support.	2013	2014	2015	2016	2017
Task 1.2.2	Develop IHO GIS and webserver and web mapping services in support of RHCs, ENC availability, INT chart coordination, C-55 and other related activities, including using commercial contract support	2013	2014	2015	2016	2017
Task 1.2.3	Develop and maintain IHB desk-top and in-house publishing facilities	2013	2014	2015	2016	2017
Task 1.2.4	Compile and publish the following documents that are not allocated to a specific IHO body: P-5 – IHO Yearbook P-7 – IHO Annual Report P-6 – Reports of IHC M-3 – Technical and Administrative Resolutions	2013	2014	2015	2016	2017
Task 1.2.5	Maintain and extend IHB Admin IT infrastructure	2013	2014	2015	2016	2017
Task 1.2.6	Communication between the IHB and Member States through Circular Letters.	2013	2014	2015	2016	2017
Task 1.2.7	IHB Technical Library – incorporate new material.	2013	2014	2015	2016	2017

### Element 1.3 Public Relations

Task 1.3.1	Maintain relationships with the Government of Monaco and the diplomatic corps accredited in Monaco.	2013	2014	2015	2016	2017
Task 1.3.2	Compile and publish P-1 – <i>International Hydrographic Review</i> in collaboration with IHR editor	2013	2014	2015	2016	2017
Task 1.3.3	World Hydrography Day – Preparation of the <b>theme’s material and social celebration event in Monaco</b>	2013	2014	2015	2016	2017
Task 1.3.4	General Public Relation support. Representation expenses.	2013	2014	2015	2016	2017

### Element 1.4 Work Programme & Budget, Strategic Plan and Performance Monitoring

Task 1.4.1	Implement and administer processes for program management, performance monitoring and risk assessment, including the acquisition and operation of suitable business software tools	2013	2014	2015	2016	2017
Task 1.4.2	Execute the IHO Work Program and Budget approved by the XVIII <sup>th</sup> IHC, monitoring its progress and adopting the necessary adjustment according to the circumstances.	2013	2014	2015	2016	2017
Task 1.4.3	Conduct biennial <b>IHO stakeholders’ forums</b>	2013	-----	2015	-----	2017

### Element 1.5 IHB Management

Task 1.5.1	Maintain, update and develop necessary procedures to facilitate and improve effectiveness of the general and permanent Finance and Administrative work.	2013	2014	2015	2016	2017
Task 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.	2013	2014	2015	2016	2017

Task 1.5.3	Engage contract support to supplement maintenance and development of technical standards beyond the resources or competence of the IHB or the IHO WGs, including: - Translation - Technical editing - Cataloguing the IHO working document archive	2013	2014	2015	2016	2017
Task 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.	2013	2014	2015	2016	2017
Task 1.5.5	Maintain the IHB premises as required as the occupant. Maintain operational hardware, software and furniture, carry out renovations or modifications as requirements arise.	2013	2014	2015	2016	2017

Element 1.6 International Hydrographic Conferences or Future Assemblies

Task 1.6.1	Organize the 5 <sup>th</sup> Extraordinary International Hydrographic Conference or <b>IHO Assembly</b> in the event the Protocol of <b>Amendment to the IHO Convention</b> has entered into <b>force</b> .	----	2014	----	----	----
Task 1.6.2	Organize the XIX <sup>th</sup> International Hydrographic Conference or IHO Assembly in the event the Protocol of Amendment to the IHO Convention has entered into force.	----	----	----	2016	2017

PROGRAMME 2 - **“HYDROGRAPHIC SERVICES AND STANDARDS”**

Element 2.1 Technical Programme Coordination

Task 2.1.1	Conduct annual meetings of HSSC	2013	2014	2015	2016	2017
Task 2.1.2	Provide technical advice and guidance on IHO technical standards, specification and publications	2013	2014	2015	2016	2017

Element 2.2 Hydrographic Data Transfer Standards

Task 2.2.1	Conduct annual and biennial meetings of relevant HSSC WGs dealing with hydrographic data transfer standards	2013	2014	2015	2016	2017
Task 2.2.2	Maintain and extend the relevant IHO standards, specifications and publications, using contract support assistance as appropriate, including: - S-57 IHO Transfer Standard for Digital Hydrographic Data - S-100 IHO Universal Hydrographic Data Model - S-101 ENC Product Specification - S-102 Bathymetric Surface Product Specification - S-58 Recommended ENC Validation Checks - S-65 ENC Production Guidance - S-64 IHO Test Data Sets for ECDI - S-61 Product Specification for Raster Navigational Charts - S-99 Operational Procedures for the Organization and Management of the S-100 Geospatial Information Registry - S-66 Facts about Electronic Charts and Carriage Requirements	2013	2014	2015	2016	2017
Task 2.2.3	Develop and maintain as-yet undefined S-100-based Product Specifications	2013	2014	-----	-----	-----
Task 2.2.4	Maintain and extend S-100 registry	2013	2014	2015	2016	2017
Task 2.2.5	Provide outreach and technical assistance regarding transfer standards	2013	2014	2015	2016	2017

Element 2.3 Nautical Cartography

Task 2.3.1	Conduct annual meetings of relevant HSSC WGs dealing with nautical cartography	2013	2014	2015	2016	2017
Task 2.3.2	Maintain and extend the relevant IHO standards, specifications and publications, using contract support assistance as appropriate, including: - S-4 Chart Specifications of the IHO and Regulations for International (INT) Charts INT 1 - Symbols, Abbreviations and Terms used on Charts INT 2 - Borders, Graduations, Grids and Linear Scales INT 3 - Use of Symbols and Abbreviations - S-11 Part A - Guidance for the Preparation and Maintenance of INT Chart schemes - S-11 Part B - Catalogue of INT Charts - S-49 Standardization of Mariners' Routeing Guides - Digital data updating related elements of Appendix 1 to S-52 - Guidance on Updating the Electronic Navigational Chart - S-52 and its accompanying Presentation Library - Specifications for Chart Content and Display Aspects of ECDIS - Portrayal related elements of S-101 - ENC Product Specification and other S-100-based Product Specifications	2013	2014	2015	2016	2017

#### Element 2.4 Digital Data Protection and Authentication

Task 2.4.1	Conduct annual meetings of relevant HSSC WG dealing with digital data protection and authentication	2013	2014	2015	2016	2017
Task 2.4.2	Maintain and extend the relevant IHO standards, specifications and publications, including: <ul style="list-style-type: none"> <li>- S-63 IHO Data Protection Scheme</li> <li>- Data protection and authentication related elements of S-100 - IHO Universal Hydrographic Data Model and</li> <li>- S-101 - ENC Product Specification</li> </ul>	2013	2014	2015	2016	2017

#### Element 2.5 Data Quality

Task 2.5.1	Conduct annual meetings of relevant HSSC WG dealing with data quality	2013	2014	2015	2016	2017
Task 2.5.2	Maintain and extend the relevant IHO standards, specifications and publications, including: <ul style="list-style-type: none"> <li>- Data quality related elements of S-57 - IHO Transfer Standard for Digital Hydrographic Data</li> <li>- Data quality related elements of S-52 - Specifications for Chart Content and Display Aspects of ECDIS</li> <li>- Data quality related elements of S-100 - IHO Universal Hydrographic Data Model</li> <li>- S-101 - ENC Product Specification and other S-100-based Product Specifications</li> </ul>	2013	2014	2015	2016	2017

#### Element 2.6 Nautical Publications

Task 2.6.1	Conduct annual meetings of relevant HSSC WG dealing with nautical publications	2013	2014	2015	2016	2017
Task 2.6.2	Develop, maintain and extend S-10n - Nautical Information Product Specification	2013	2014	2015	2016	2017

Task 2.6.3	Maintain and extend the relevant IHO standards, specifications and publications, including: <ul style="list-style-type: none"> <li>- IHO Resolutions in M-3 relating to Nautical Publications</li> <li>- S-12 Standardization of List of Lights and Fog Signals</li> </ul>	2013	2014	2015	2016	2017
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Element 2.7 Tides and Datums

Task 2.7.1	Conduct annual meetings of relevant HSSC WG dealing with tides and datums	2013	2014	2015	2016	2017
Task 2.7.2	Maintain and extend the relevant IHO standards, specifications and publications, including: <ul style="list-style-type: none"> <li>- Relevant IHO Resolutions in M-3</li> <li>- S-60 User's Handbook on Datum Transformations involving WGS 84</li> <li>- Standard Tidal Constituent List Inventory of Tide Gauges used by Member States</li> </ul>	2013	2014	2015	2016	2017
Task 2.7.3	Develop, maintain and extend a Product Specification for digital tide tables	2013	2014	2015	2016	2017
Task 2.7.4	Develop, maintain and extend a Product Specification for the transmission of real-time tidal data	2013	2014	2015	2016	2017
Task 2.7.5	Develop, maintain and extend a Product specification for dynamic tides in ECDIS	2013	2014	2015	2016	2017

Element 2.8 Digital Data Updating

Task 2.8.1	Maintain and extend the relevant IHO standards, specifications and publications, including: <ul style="list-style-type: none"> <li>- Digital data updating related elements of S-65 - ENC Production Guidance</li> <li>- S-52 Appendix 1 - Guidance on Updating the Electronic Navigational Chart</li> </ul>	2013	2014	2015	2016	2017
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Element 2.9 Marine Spatial Data Infrastructures

Task 2.9.1	Conduct annual meetings of relevant HSSC WG dealing with MSDI	2013	2014	2015	2016	2017
Task 2.9.2	Maintain the relevant IHO standards, specifications and publications, including: - C-17 <b>Spatial Data Infrastructures: “The Marine Dimension”</b> - Guidance for Hydrographic Offices	2013	2014	2015	2016	2017

Element 2.10 Hydrographic Data Acquisition and Processing

Task 2.10.1	Conduct annual meetings of relevant HSSC WG dealing with hydrographic data acquisition and processing when WG required	2013	2014	2015	2016	2017
Task 2.10.2	Maintain and extend, when required, the relevant IHO standards, specifications and publications, including: S-44 - IHO Standards for Hydrographic Surveys	2013	2014	2015	2016	2017

Element 2.11 Hydrographic Dictionary

Task 2.11.1	Maintain and extend the IHO Hydrographic Dictionary in English, French and Spanish.	2013	2014	2015	2016	2017
Task 2.11.2	Develop the Spanish language Wiki version of S-32 with commercial contract support	2013	2014	2015	2016	2017

Element 2.12 Hydrographic Aspects of UNCLOS

Task 2.12.1	Organise and prepare ABLOS annual business meetings	2013	2014	2015	2016	2017
Task 2.12.2	Organise and prepare the biennial ABLOS Conferences.	-----	2014	-----	2016	-----
Task 2.12.3	Contribute to the revision of IHO publication C-51-TALOS Manual.	2013	2014	2015	2016	2017

PROGRAMME 3 - "INTER REGIONAL COORDINATION AND SUPPORT"

Element 3.0 Inter Regional Coordination Committee (IRCC)

Task 3.0.0	IRCC - Inter Regional Coordination Committee.	2013	2014	2015	2016	2017

Element 3.1 Cooperation with Member States and attendance at relevant meetings

Task 3.1.1	ARHC – Arctic Region Hydrographic Commission.	2013	2014	2015	2016	2017	
Task 3.1.2	BSHC - Baltic Sea Hydrographic Commission.	2013	2014	2015	2016	2017	
Task 3.1.3	EAHC - East Asia Hydrographic Commission. - Coordinating Meetings - ENC Task Group Meetings - EAHC Conferences.	2013	2014	2015	2016	2017	
		2013	2014	2015	2016	2017	
		-----	-----	2015	-----	-----	
Task 3.1.4	EAtHC - Eastern Atlantic Hydrographic Commission	-----	2014	-----	2016	-----	
Task 3.1.5	MACHC - Meso American and Caribbean Hydrographic Commission.	2013	2014	2015	2016	2017	
Task 3.1.6	MBSHC - Mediterranean and Black Seas Hydrographic Commission	2013	-----	2015	-----	2017	
Task 3.1.7	NHC - Nordic Hydrographic Commission.	2013	2014	2015	2016	2017	
Task 3.1.8	NIOHC - North Indian Ocean Hydrographic Commission.	2013	2014	2015	2016	2017	

Task 3.1.9	NSHC - North Sea Hydrographic Commission	-----	2014	-----	2016	-----	
Task 3.1.10	RSAHC - ROPME Sea Area Hydrographic Commission	2013	-----	2015	-----	2017	
Task 3.1.11	SAIHC - Southern Africa and Islands Hydrographic Commission	2013	2014	2015	2016	2017	
Task 3.1.12	SEPHC - South East Pacific Hydrographic Commission	2013	-----	2015	-----	2017	
Task 3.1.13	SWAtHC - South West Atlantic Hydrographic Commission.	2013	2014	2015	2016	2017	
Task 3.1.14	SWPHC - South West Pacific Hydrographic Commission.	2013	-----	2015	-----	2017	
Task 3.1.15	USCHC - USA and Canada Hydrographic Commission.	2013	2014	2015	2016	2017	
Task 3.1.16	HCA - Hydrographic Commission on Antarctica.	2013	2014	2015	2016	2017	
Task 3.1.17	WEND Working Group	2013	2014	2015	2016	2017	
Task 3.1.18	Industry participation in RHC meetings.	2013	2014	2015	2016	2017	

### Element 3.2 Increase participation by non Member States

Task 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.	2013	2014	2015	2016	2017
Task 3.2.2	EAtHC - 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.	2013	2014	2015	2016	2017
Task 3.2.3	MACHC - 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.	2013	2014	2015	2016	2017

Task 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.	2013	2014	2015	2016	2017
Task 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.	2013	2014	2015	2016	2017
Task 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.	2013	2014	2015	2016	2017
Task 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.	2013	2014	2015	2016	2017
Task 3.2.8	SEPHC - 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.	2013	2014	2015	2016	2017
Task 3.2.9	SWAtHC - 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.	2013	2014	2015	2016	2017
Task 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.	2013	2014	2015	2016	2017
Task 3.2.11	RHCs to encourage the approval of pending applications for IHO membership.	2013	2014	2015	2016	2017
Task 3.2.12	RHCs to encourage the ratification of the IHO Convention by approved applicants.	2013	2014	2015	2016	2017

Element 3.3 Capacity Building Management

Task 3.3.1	CBSC - Capacity Building Sub-Committee.	2013	2014	2015	2016	2017
Task 3.3.2	Capacity Building Fund (CB Fund) Management.	2013	2014	2015	2016	2017
Task 3.3.3	Meetings with other organizations, funding agencies, private sector and academia.	2013(2)	2014(2)	2015(2)	2016(2)	2017(2)
Task 3.3.4	IHO Capacity Building Strategy.	2013	2014	2015	2016	2017
Task 3.3.5	Capacity Building Work Programme.	2013	2014	2015	2016	2017
Task 3.3.6	Follow-up of CB activities and initiatives.	2013	2014	2015	2016	2017
Task 3.3.7	IBSC - International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers.	2013	2014	2015	2016	2017
Task 3.3.8	Provide guidance to training institutions.	2013	2014	2015	2016	2017
Task 3.3.9	Maintain IBSC Publications (C-6, C-47, S-5, S-8).	2013	2014	2015	2016	2017

Element 3.4 Capacity Building Assessment

Task 3.4.1	Technical and advisory visits.	2013	2014	2015	2016	2017
Task 3.4.2	Review existing CB procedures and develop new ones.	2013	2014	2015	2016	2017
Task 3.4.3	Enhance publication C-55	2013	2014	2015	-----	-----

### Element 3.5 Capacity Building Provision

Task 3.5.1	Raise Awareness on the Importance of Hydrography.	2013	2014	2015	2016	2017
Task 3.5.2	Technical Workshops, Seminars, Short Courses.	2013	2014	2015	2016	2017
Task 3.5.3	Hydrographic and Nautical Cartography Courses.	2013	2014	2015	2016	2017
Task 3.5.4	On the Job Training (ashore / on board).	2013	2014	2015	2016	2017
Task 3.5.5	Marine/Maritime Projects.	2013	2014	2015	2016	2017
Task 3.5.6	CBSC to foster bilateral agreements in order to help satisfy SOLAS V/9.	2013	2014	2015	2016	2017

### Element 3.6 Coordination of Global Surveying and Charting

Task 3.6.1	C-55 Status of Hydrographic Surveying and Nautical Charting World-wide.	2013	2014	2015	2016	2017
Task 3.6.2	WEND WG to foster the implementation of the WEND principles, monitor progress and report to IRCC.	2013	2014	2015	2016	2017
Task 3.6.3	Maintain and coordinate ENC schemes, consistency and quality.	2013	2014	2015	2016	2017
Task 3.6.4	Maintain and coordinate INT Chart Schemes and improve the availability of the INT Chart Series.	2013	2014	2015	2016	2017

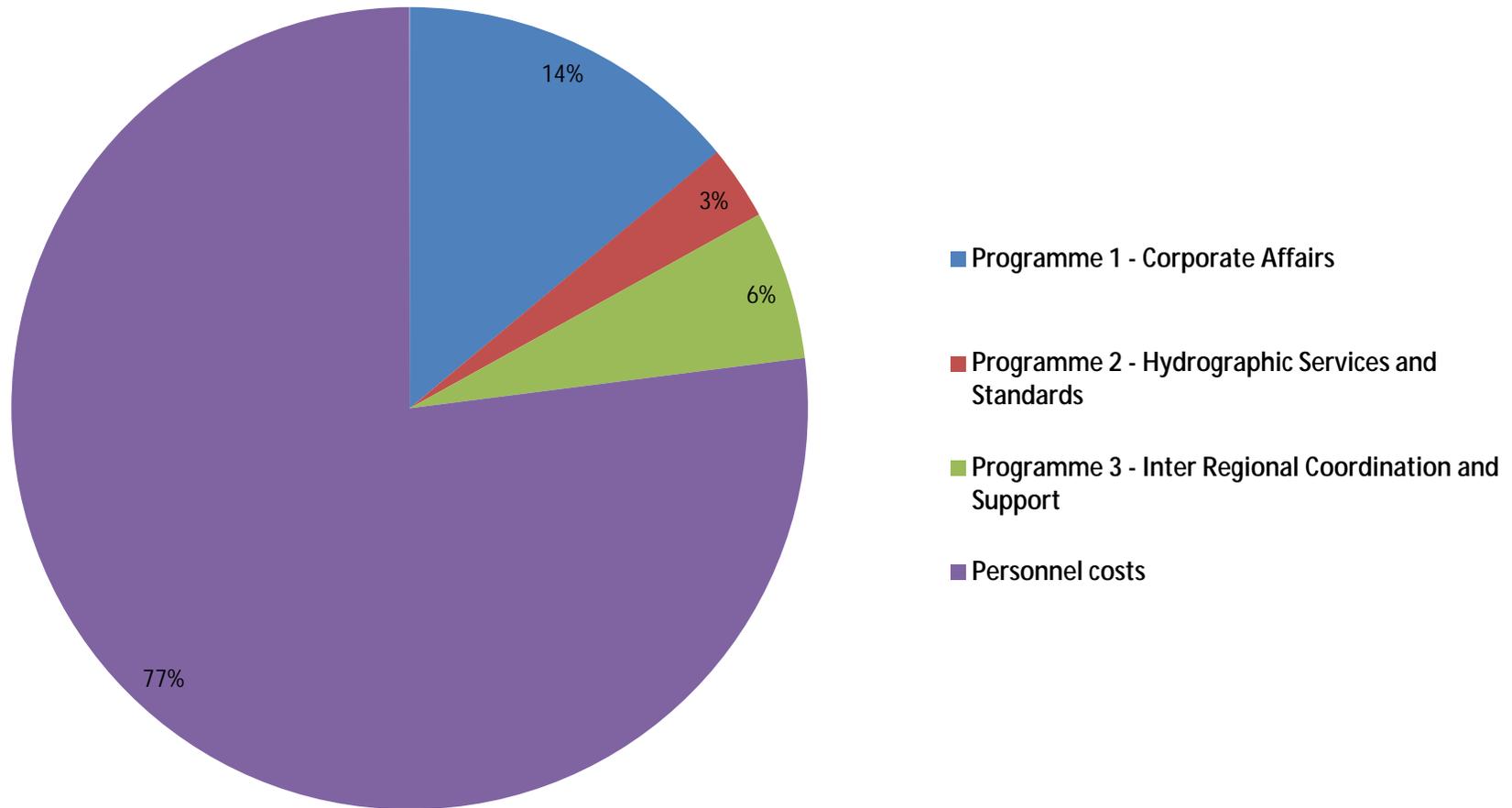
Element 3.7 Maritime Safety Information

Task 3.7.1	WWNWS-SC - World-Wide Navigational Warning Service Sub-Committee.	2013	2014	2015	2016	2017
Task 3.7.2	WWNWS Document Review Working Group.	2013	2014	2015	2016	2017
Task 3.7.3	Maintain and extend the following IHO standards, specifications and publications: -relevant IHO Resolutions in M-3, -S-53.	2013	2014	2015	2016	2017
Task 3.7.4	Liaise with IMO and WMO on the delivery of MSI within the GMDSS.	2013	2014	2015	2016	2017
Task 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.	2013	2014	2015	2016	2017

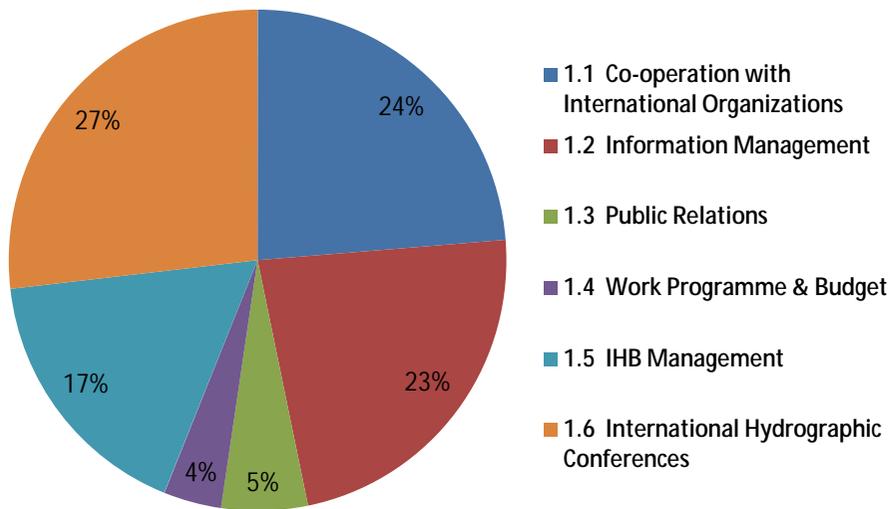
Element 3.8 Ocean Mapping Programme

Task 3.8.1	GEBCO Guiding Committee and associated bodies.	2013(3)	2014(3)	2015(3)	2016(3)	2017(3)
Task 3.8.2	IHO Digital Bathymetry Data Center (DCDB).	2013	-----	2015	-----	2017
Task 3.8.3	Encourage the contribution of bathymetric data to the IHO DCDB.	2013	2014	2015	2016	2017
Task 3.8.4	Maintain IHO bathymetric publications (B-4, B-6, B-7, B-8, B-9, B-10)	2013	2014	2015	2016	2017
Task 3.8.5	Contribute to outreach and education about ocean mapping.	2013	2014	2015	2016	2017
Task 3.8.6	GEBCO Web site.	2013	2014	2015	2016	2017
Task 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.	2013	-----	-----	-----	-----
Task 3.8.8	Update and enhance the GEBCO Gazetteer (B-8) for internet access.	2013	2014	2015	-----	-----

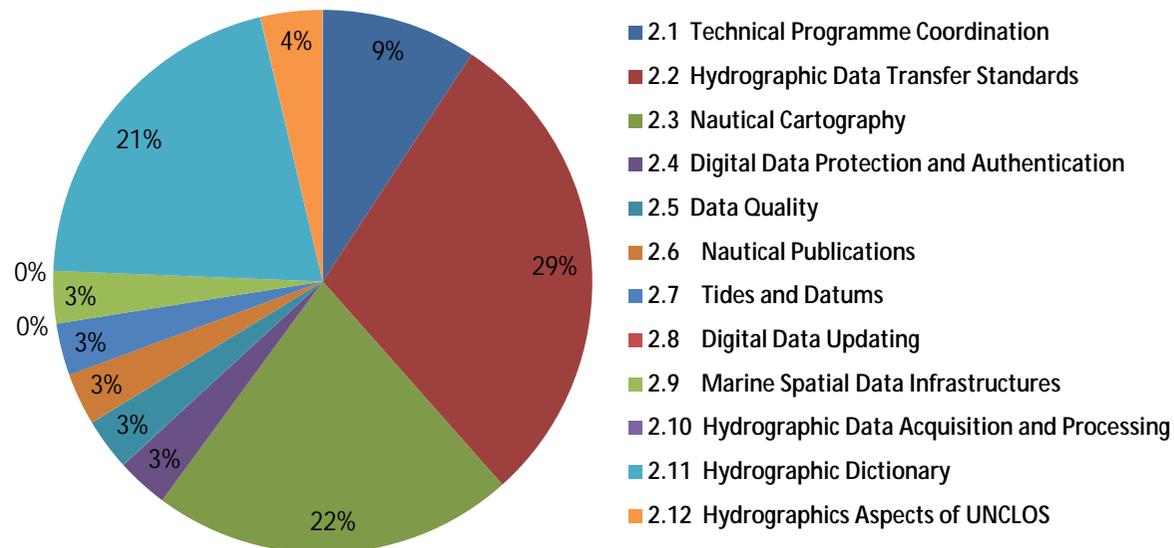
**TOTAL EXPENDITURE**  
**15 035 597**



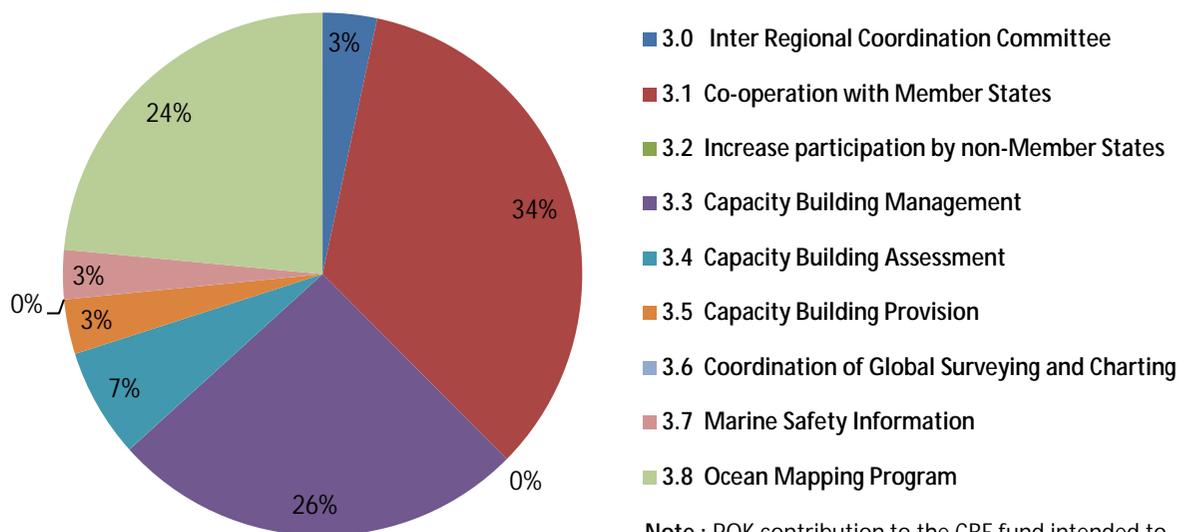
### Programme 1 - Corporate Affairs



### Programme 2 - Hydrographic Services and Standards



### Programme 3 - Inter Regional Coordination and Support



Note : ROK contribution to the CBF fund intended to support programmes 3.4 and 3.5 has not been included