

# WORK PROGRAMME 1

## CORPORATE AFFAIRS

### Concept:

Programme 1 covers the provision of the services provided by the Secretariat of the IHO and, through the Secretary-General and the Directors, the management and fostering of relations with intergovernmental and other international organizations. Work Programme 1 is directed primarily by the Secretary-General. It is integral to the achievement of all the Strategic Directions; some directly, others indirectly.

Element 1.1	Cooperation with International Organizations and participation in relevant meetings
Element 1.2	Information Management
Element 1.3	Public Relations and Outreach
Element 1.4	Work Programme & Budget, Strategic Plan and Performance Monitoring
Element 1.5	Secretariat Services
Element 1.6	IHO Council and Assembly

**Element 1.1 Co-operation with International Organizations and participation in relevant meetings**

**Objective:** Maintain relationships with relevant international organizations in order to further the interests of the IHO by enlisting their support and cooperation, and participate in projects of common interest. Represent the IHO and participate in international forums dealing with matters of relevance to the objectives of the IHO and the IHO WP, including:

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
1.1.1	Maintain relationships with the Government of Monaco and the diplomatic corps accredited in Monaco	1.1 1.2 1.3 1.5 2.3 3.1 3.2 3.3 3.4 4.4			Continuous	Secretariat			
1.1.2	Maintain relationship with the Antarctic Treaty Consultative Meeting (ATCM)	1.1 1.2 1.3 1.4 1.5 3.1 3.2 3.3	3.2	Mariners, Ship operators, Marine scientific community	continuous	Secretariat	1 meeting annually Travel cost for SG or Dir		

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
1.1.3	Maintain relationship with the Comité International Radio Maritime (CIRM)	1.1 1.2 1.3 1.4 1.5 3.1 3.2 3.3	1.2	Navigation equipment manufacturers	continuous	Secretariat	1 meeting annually Travel cost for 1 SG/Dir/AD		
1.1.4	Maintain relationship with European Union Initiatives (such as INSPIRE and EMODnet)	1.1 1.2 1.3 1.4 1.5 3.1 3.2 3.3	3.2		continuous	Secretariat IENWG	2 meetings annually. Travel cost for 1 SG/Dir/AD per meeting		
1.1.5	Maintain relationship with the Group on Earth Observation (GEO)	1.1 1.2 1.3 1.4 1.5 3.1 3.2 3.3	2.3		continuous	Secretariat at GEBCO GC MSDIWG	1 meeting annually. Travel cost for 1 SG/Dir/AD		

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
1.1.6	Maintain relationship with the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA ) including the IALA e-NAV Committee and IALA World Wide Academy	1.1 1.2 1.3 1.4 1.5 3.1 3.2 3.3 4.4	3.1	Aids to Navigation authorities, e- Navigation data service providers, maritime community	continuous	Secretariat HSSC WGs CBSC	2 meetings annually.  Travel cost for 1 SG/Dir/AD per meeting		
1.1.7	Maintain relationship with the International Electrotechnical Commission (IEC), including:  IEC Technical Committee 80	1.1 1.2 1.3 1.4 1.5 3.1 3.2 3.3	1.1	Equipment manufacturers Type approval bodies	continuous	Secretariat  HSSC WGs	1 meeting annually.  Travel cost for 1 Dir/AD		

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
1.1.8	Maintain relationship with the International Maritime Organization (IMO), including:  Assembly, Council, MSC, NCSR, TCC	1.1 1.2 1.3 1.4 1.5 3.1 3.2 3.3 4.4	1.1 3.1	Mariners, Ship Operators  Maritime Administrations	continuous	Secretariat	5 meetings annually,  Travel cost for each meeting for 1 SG/Dir + AD or 1 AD.		
1.1.9	Maintain relationship with the Intergovernmental Oceanographic Commission (IOC) of UNESCO, including:  Assembly Council Specialized WGs	1.1 1.2 1.3 1.4 1.5 3.1 3.2 3.3	3.2	Marine scientific community	continuous	Secretariat GEBCO GC MSDIWG	2 meetings annually.  Travel cost for 1 SG/Dir/AD		

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
1.1.10	Maintain relationship with the International Organization for Standardization (ISO), including: ISO Technical Committee 211	1.1 1.2 1.3 1.4 1.5 2.5 2.6 3.1 3.2 3.3	1.1 1.2		continuous	Secretariat	2 meetings annually. Travel cost for 1 Dir/AD		
1.1.11	Maintain relationship with the Joint Board of Geospatial Information Societies (JB-GIS)	1.1 1.2 1.3 1.4 1.5 2.6 3.1 3.2 3.3	1.1		annual	Secretariat	1 meeting annually if coinciding with other meetings. No significant additional cost		

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
1.1.12	<p>Maintain relationship with United Nations (UN) organizations based in New York, including:</p> <p>the UN Committee of Experts on Global Geospatial Information Management (UN-GGIM) and its Working Group on Marine Geospatial Information (WGMGI)</p> <p>the UN Division on Ocean Affairs and Law of the Sea (UN-DOALOS)</p> <p>the UN Group of Experts on Geographical Names (UNGEGN)</p>	1.1 1.2 1.3 1.4 1.5 2.5 2.6 3.1 3.2 3.3	2.3	Marine geospatial data providers and users	<p>continuous</p> <p>Standardization in toponymic matters</p>	Secretariat MSDIWG ABLOS	<p>3 meetings annually.</p> <p>Travel cost for 1 SG/Dir</p> <p>Travel cost for 1 AD (on case-by-case basis)</p>		

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
1.1.13	Maintain relationship with the World Meteorological Organization (WMO)	1.1 1.2 1.3 1.4 1.5 2.5 3.1 3.2 3.3		Mariners, Ship operators, Maritime Administrations	continuous	Secretariat	1 meeting annually. Travel cost for 1 SG/Dir/AD		
1.1.14	Maintain relationship with the Open Geospatial Consortium, including the Marine Domain Working Group (Marine DWG)	1.1 1.2 1.3 1.4 1.5 2.5 3.1 3.2 3.3	1.1 2.3	Mariners Oil and Gas industry UN-GGIM UN-WGMGI	continuous	Secretariat MSDIWG	1 meeting annually if coinciding with other meetings. No significant additional cost		



Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
1.1.15	Maintain relationships with other international and observer organizations when their agendas have relevance to the programme of the IHO	1.1 1.2 1.3 1.4 1.5 2.5 2.6 3.1 3.2 3.3	3.2		continuous	Secretariat	Participation to be determined on an annual basis, subject to the agenda of the organization and its significance to the IHO WP  Up to 10 meetings annually  Travel cost for 1 SG/Dir/AD per meeting		

## Element 1.2 Information Management

**Objective:** Provide Member States and IHO stakeholders with accurate and relevant information in a timely and accessible manner.

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
1.2.1	Maintain and extend the IHO website	1.1 1.2 1.4 1.5 2.1 2.2 3.2 3.3 4.1	3.3		continuous	Secretariat	Use of commercial contract support Maintenance included in 1.2.4		
1.2.2	Maintain and extend the IHO GIS, webserver and web mapping services in support of RHCs, ENC production coordination, INT chart coordination, C-55 and other related activities	1.1 1.2 1.4 1.5 2.2 2.6 3.2 3.3 3.4 4.2	3.3		continuous	Secretariat	Use of commercial contract support Maintenance included in 1.2.3		

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
1.2.3	Maintain and extend the Secretariat Admin IT infrastructure, including in- house publishing facilities	1.1 1.2 1.3 1.4 3.3 4.1	3.3		continuous	Secretariat	80k€ annually (includes hardware, software and contract maintenance support)		
1.2.4	Maintain the IHO reference library collection including the incorporation of new material	1.5 3.2 3.3 3.4			continuous	Secretariat	1K€ annually		
1.2.5	Implement and maintain online forms for the input from Member States to the IHO databases and in response to circular letters	2.1 3.4 4.1 4.2			continuous	Secretariat	1K€ annually		

**Element 1.3 Public Relations and Outreach**

**Objective:** Raise awareness of the role of the IHO and the value and importance of hydrography and nautical charting services. Provide advice and guidance on States obligations under international regulations such as SOLAS Chapter V and highlight the importance of coordinated efforts in providing for safety of navigation, protection of the marine environment and the sustainable management and development of the oceans, seas and waterways. Stress the importance of becoming an IHO Member State.

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
1.3.1	Promote the IHO through publicity and public relations initiatives	1.5 2.6 3.1 3.2 3.3	3.3		Continuous Preparation of the centenary of the establishment of the IHB in 2021	Secretariat Member States	10k€ annually		

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
1.3.2	Encourage new membership of the IHO	2.3 2.4			Participation of non- Member States in RHC and IHO activities  New Member States	Secretariat  RHC Chairs (except: ARHC, NHC, NSHC, USCHC)	Visits normally undertaken as side-trips in conjunction with travel to other meetings  Some high-level visits funded by Capacity Building Fund  (see programme 3)		
1.3.3	Celebrate World Hydrography Day including the preparation of information to support the themes	1.5 2.6 3.1 3.2 3.3	3.3		annual	Secretariat  Member States	10K€ annually		

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
1.3.4	Compile and publish P-1 – International Hydrographic Review with the assistance of a paid editor	1.5 2.6 3.1 3.2 3.3	3.3		continuous	Secretariat  Member States	10K€ annually		Lack of suitable papers provided by MS and other contributors
1.3.4.1	Maintain a digital repository for the overall collection of P-1 available for worldwide access	1.5 2.6 3.1 3.2 3.3	3.3		continuous	Secretariat  Member States	1K€ annually		

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

**Objective:** 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	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
1.4.1	Execute the IHO Work Programme and Budget approved by the 2 <sup>nd</sup> Session of the Assembly, monitoring its progress and proposing or implementing any necessary adjustments according to the	All SDs	All Goals & Targets		continuous	Secretariat Council			
1.4.2	Develop and propose future IHO Work Programme, Budget and Strategic Plan		All Goals & Targets		continuous	Secretariat Council Assembly			

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
1.4.3	Conduct biennial IHO stakeholders' forums	1.2 1.3 1.4 1.5 2.6 3.1 3.2 3.3 3.4 4.4	2.2  3.1		2022	Secretariat	1 meeting every 2 years back-to-back with another meeting  Cost subject to the venue	Travel cost, per diem. and working hours for MS and other representatives to prepare for and attend the	



**Element 1.5 Secretariat Services**

**Objective:** Ensure that the Secretariat meets the requirements set by the Member States, by providing the best service within the resources available.

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
1.5.1	Maintain formal communication between the Secretariat and the Member States through Circular Letters	2.2 4.1 4.2 4.3 4.4	3.3		continuous	Secretariat			
1.5.2	Maintain, update and develop procedures to facilitate and improve the effectiveness of the finance and administrative work of the Secretariat	All SDs			continuous	Secretariat			

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
1.5.3	<p>Provide in-house translation services English/French and French/English in support of the IHO WP</p> <p>Include Spanish translations as much as possible in accordance with the relevant IHO Resolutions</p>	2.2 4.1 4.3 4.4			continuous	Secretariat		MS encouraged to volunteer to translate lower priority IHO publications from EN to FR and SP	Translation workload exceeds the translating capacity of the existing number of staff
1.5.4	Engage contract support to supplement the maintenance and development of IHO publications beyond the resources or competence of the Secretariat or the IHO WGs, including:	3.3 4.1			continuous	Secretariat	10k€ each year		

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
1.5.5	<p>Compile, maintain and publish IHO publications that are not allocated to a specific IHO body, including:</p> <p>P-5 – IHO Yearbook</p> <p>P-7 – IHO Annual Report</p> <p>P-6 – Proceedings of the Assembly and of the Council</p> <p>M-3 –Resolutions of the IHO</p>	1.2 3.3 4.1			As required	Secretariat			
1.5.6	Secretariat Staff training	1.1 4.1					7k€ each year		

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
1.5.7	Monitor and maintain the Staff Regulations and the Job Descriptions of the Staff of the IHO Secretariat in step with the evolution of the IHO Work Programme and IHO requirements	4.1			continuous	Secretariat			
1.5.8	Maintain the premises and facilities of the IHO Secretariat as required as the occupant, including renovations or modifications as requirements arise	4.1			continuous	Secretariat	62K€ each year		

**Element 1.6 IHO Council and Assembly**

**Objective:** Ensure the successful functioning of sessions of the Council and the Assembly so that they fulfil their top-level governance and decision- making functions in accordance with the Convention and the other basic documents of the Organization.

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Othe resources	Significant risk to delivery
1.6.1	Prepare and conduct the 3 <sup>rd</sup> Session of the IHO Assembly	2.1 2.2 4.1 4.4				Secretariat	Funded by the Conference Fund	Travel cost, per diem. and working hours for MS and other representatives to prepare for and attend the Assembly	
1.6.2	Prepare and conduct annual meetings of the IHO Council	2.1 2.2 4.1 4.4			annual	Secretariat	15K€ each year Travel for minimum of SG, 2 Dir, 2AD if session held outside Monaco	Travel cost, per diem. and working hours for MS and other representatives to prepare for and attend a meeting of the Council	

# WORK PROGRAMME 2

## HYDROGRAPHIC SERVICES AND STANDARDS

### Concept:

Programme 2 focuses on the implementation of component 1.4 of Strategic Direction (SD) 1: “*developing, improving, promulgating and promoting clear, uniform, global hydrographic standards to enhance safety of navigation at sea, protection of the marine environment, maritime security and economic development*”.

Element 2.1	Programme Coordination
Element 2.2	Foundational Nautical Cartography Framework
Element 2.3	S-100 Framework
Element 2.4	S-57 Framework
Element 2.5	Support the implementation of e-navigation and Marine Spatial Data Infrastructures (MSDI)
Element 2.6	Hydrographic Surveying
Element 2.7	Hydrographic aspects of UNCLOS
Element 2.8	Other technical standards, specifications, guidelines and tools

## Element 2.1 Programme Coordination

**Objective:** Monitor and implement Programme 2 through the Hydrographic Services & Standards Committee and its subordinate organs.

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
2.1.1	Organize, prepare, and report annual meetings of HSSC	1.1 1.2 1.3 1.4 2.1	1.1 1.2		Monitor and approve HSSC Work Programme - Annual	HSSC Chair WG Chairs Secretariat	Travel cost for 1 Dir + 1 AD  Travel cost and per diem for pre-meeting briefing of Chair	Travel cost, per diem. and working hours for MS and other representatives to prepare for and attend the meeting	Inability of MS and others to participate in meetings
2.1.2	Organize, prepare and report meetings of HSSC working groups	1.4	1.1 1.2		As defined in the HSSC Work Programme	WG Chairs  Secretariat	Travel cost, per diem and working hours 1 AD / meeting	Travel cost, per diem. and working hours for MS and other participants to prepare for and attend the meeting	Inability of MS and others to participate in meetings

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
2.1.3	Prepare for and represent HSSC at meetings of the Council	1.1			Submit report and recommendations - Annual	HSSC Chair Secretariat	Travel cost and per diem for HSSC Chair		
2.1.4	Prepare for and represent HSSC at 3rd session of the IHO Assembly	1.1			Submit reports and recommendations (through the Council)	HSSC Chair Secretariat			
2.1.5	Monitor the development of related international standards, specifications and guidance	1.2	1 . 1 1 . 2	IALA IEC IMO ISO OGC	Identify and attend relevant meetings and activities and report outcome - as required (see also programme 1)	HSSC Chair Group  Secretariat			
2.1.6	Provide technical outreach, advice and guidance in relation to IHO standards, specifications and guidance	4.1	1.1 1.2		Identify and attend relevant meetings and activities and report outcome - as required	HSSC Chair Group  Secretariat	3 meetings per year  Travel cost 1 Dir/AD per meeting		



<b>Task</b>	<b>Description</b>	<b>SD</b>	<b>G&amp;T</b>	<b>Notable stakeholder(s) outside the IHO</b>	<b>Notable deliverables / milestones and timing</b>	<b>Lead authority / Participants</b>	<b>Notable specific resources from the IHO budget</b>	<b>Other resources</b>	<b>Significant risk to delivery</b>
2.1.7	Maintain and extend IHO Resolutions (M-3) related to technical issues	1.1	1.1 1.2		Draft proposed amendments for the consideration of the Council	HSSC & All WGs			

## Element 2.2 Foundational Nautical Cartography Framework

**Objective:** Develop, maintain and promote the foundational standards, specifications, guidelines and services related to nautical cartography to meet the requirements of the stakeholders.

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
2.2.1	Maintain S-4 <i>(Regulations for International (INT) Charts and Chart Specifications of the IHO)</i> and related publications (INT 1/2/3)	1.4	1.1 1.2			NCWG			Way forward and Maintenance of INT 1 to be decided
2.2.2	Maintain S-11 Part A - <i>Guidance for the Preparation and Maintenance of International Chart Schemes and Catalogue of International (INT) Charts</i>	1.4	1.1 1.2			NCWG			

<b>Task</b>	<b>Description</b>	<b>SD</b>	<b>G&amp;T</b>	<b>Notable stakeholder(s) outside the IHO</b>	<b>Notable deliverables / milestones and timing</b>	<b>Lead authority / Participants</b>	<b>Notable specific resources from the IHO budget</b>	<b>Other resources</b>	<b>Significant risk to delivery</b>
2.2.3	Maintain the INTtoGIS infrastructure	1.1	1.1			NCWG Secretariat		Support of the Republic of Korea	
2.2.4	Implement the decisions made following the report on the Future of the Nautical Paper Chart	1.4	1.1			NCWG			

## Element 2.3 S-100 Framework

**Objective:** Develop, maintain and promote the S-100 framework in order to meet the requirements of the stakeholders.

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
2.3.1	Maintain and extend the S-100 GI Registry	1.4	1.1 1.2			S-100WG Secretariat		Support of the Republic of Korea	
2.3.2	Maintain and extend S-100 - <i>IHO Universal Hydrographic Data Model</i>	1.4	1.1 1.2			S-100WG			Inability of MS and others to participate in the work
2.3.3	Develop and maintain S-99 - <i>Operational Procedures for the Organization and Management of the S-100 Geospatial Information Registry</i>	1.4	1.1 1.2			S-100WG			

<b>Task</b>	<b>Description</b>	<b>SD</b>	<b>G&amp;T</b>	<b>Notable stakeholder(s) outside the IHO</b>	<b>Notable deliverables / milestones and timing</b>	<b>Lead authority / Participants</b>	<b>Notable specific resources from the IHO budget</b>	<b>Other resources</b>	<b>Significant risk to delivery</b>
2.3.4	Develop and maintain S-10x Product Specifications and engage on S-100 Implementation Strategy	1.4	1.1 1.2	ECDIS OEM GIS Community Data providers		Project teams  Relevant WGs	Contract support funded by the Special Projects Fund		Inability of MS and others to participate in the work
2.3.5	Provide advice and guidance to other organizations developing S-100 based Product Specifications	1.2 1.3	1.1 1.2			S-100WG Secretariat	2 meetings per year  Travel cost 1 AD	Travel cost and working hours MS Rep.	Limited expertise available

## Element 2.4 S-57 Framework

**Objective:** Maintain the S-57 framework fit for purpose.

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
2.4.1	Maintain S-52 - <i>Specifications for Chart Content and Display Aspects of ECDIS</i>	1.4	1.1 1.2	ECDIS OEM		ENCWG			
2.4.2	Maintain S-57 - <i>IHO Transfer Standard for Digital Hydrographic Data</i> ,  including ENC Product Specification	1.4	1.1 1.2	ECDIS OEM Data servers		ENCWG			Inability of MS and others to participate in the work
2.4.3	Maintain S-58 - <i>ENC Validation Checks</i>	1.4	1.1 1.2	RENCs		ENCWG			Inability of MS and others to participate in the work
2.4.4	Maintain S-61 - <i>Product Specification for Raster Navigational Charts (RNC)</i>	1.4	1.1	ECDIS OEM Data servers	No action expected	ENCWG			

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
2.4.5	Maintain S-63 - <i>IHO Data Protection Scheme</i>	1.4	1.2			ENCWG			Inability of MS and others to participate in the work
2.4.6	Maintain S-64 - <i>IHO Test Data Sets for ECDIS</i>	1.4	1.1 1.2			ENCWG			
2.4.7	Maintain S-65 - <i>ENCs: Production, Maintenance and Distribution</i>	1.4	1.1 1.2			ENCWG			
2.4.8	Maintain S-66 - <i>Facts about Electronic Charts and Carriage Requirements</i>	1.4	1.1			ENCWG			

**Element 2.5 Support the implementation of e-navigation and Marine Spatial Data Infrastructures (MSDI)**

**Objective:** Provide technical support to the development of new services and functionalities required by the implementation of e-navigation and MSDI.

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
2.5.1	Monitor and assess requirements related to data flow, data security, data quality, backup arrangements, time-varying information, etc.	1.1 2.5	1.2		Implementation of S-100 Security Scheme	Secretariat			Inability of MS and others to participate in the work
2.5.2	Support the development and implementation of Maritime Services in relation to e-Navigation	1.1 2.5	1.1	IALA IMO	Maintenance of Maritime Service descriptions	NIPW G NCWG ENCWG TWCWG WWNWS- SC			Inability of MS and others to participate in the work



**Element 2.6 Hydrographic Surveying**

**Objective:** Maintain S-44 and related IHO documents fit for purpose.

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
2.6.1	Maintain and extend S-44 - <i>IHO Standards for Hydrographic Surveys</i>	1.4	1.1 2.2			HS PT / HSWG (to be confirmed)			

**Element 2.7 Hydrographic aspects of UNCLOS**

**Objective:** Monitor developments related to the hydrographic aspects of UNCLOS and maintain the relevant IHO publications fit for purpose.

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
2.7.1	Organize the biennial ABLOS Conference	1.3 4.1			ABLOS Conferences			Self-funding	Lack of participation or insufficient volunteers to present papers
2.7.2	Maintain C-51 - <i>Manual on Technical Aspects of the UN Convention on the Law of the Sea</i>	1.4							

**Element 2.8 Other technical standards, specifications, guidelines and tools**

**Objective:** Maintain technical standards, specifications, guidelines and tools not included in the previous elements fit for purpose.

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
2.8.1	Maintain S-12 - <i>Standardization of List of Lights and Fog Signals</i>	1.4	1.2		Revision as appropriate No action expected	NIPWG			
2.8.2	Maintain S-32- <i>Hydrographic Dictionary</i>	1.4	1.2		Database version to be expanded with multiple languages	HDWG Secretariat			Inability of MS and others to participate in the work
2.8.3	Maintain S-49 - <i>Standardization of Mariners' Routeing Guides</i>	1.4	1.2		Revision as appropriate	NIPWG			
2.8.4	Maintain the list of standard tidal constituent	1.4	2.2		Continuous	TWCWG			
2.8.5	Maintain the inventory of national tide gauges and current meters	1.1	2.2		Continuous	TWCWG			

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
2.8.6	Ensure that data quality aspects are addressed in an appropriate and harmonized way for all relevant standards	1.4	1.2		Continuous	DQWG			

# WORK 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 Work 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 3.1	Programme Coordination
Element 3.2	Regional Hydrographic Commissions and the HCA
Element 3.3	Capacity Building
Element 3.4	Coordination of Global Surveying and Charting Coverage
Element 3.5	Maritime Safety Information
Element 3.6	Ocean Mapping Programme
Element 3.7	Marine Spatial Data Infrastructures
Element 3.8	International Standards for Hydrographic Surveyors and Nautical Cartographers

### **Element 3.1 Programme Coordination**

**Objective:** 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 cooperation to enhance the delivery of the Capacity Building Work Programme;
- 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 (including: HCA, GGC, CBSC, IBSC, WWNWS-SC, WEND-WG).

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
3.1.1	Organize, prepare and report annual meetings of IRCC	1.1 1.2 1.4 1.5 2.1 2.2 2.3 2.4 2.5 2.6 3.1 3.2 3.3 3,4 4.1 4.2 4.3 4.4	3.1		Monitor and approve IRCC Work Programme – Annual	IRCC Chair RHC Chairs Chairs of the IRCC Bodies Secretariat	Travel cost for 1 Dir + 1 AD Travel cost and per diem for pre-meeting briefing of Chair		Inability of MS and others to participate in meetings
3.1.2	Prepare for and represent IRCC at meetings of the Council	1.1			Submit report and recommendations - Annual	IRCC Chair Secretariat	Travel cost and per diem for IRCC Chair		
3.1.3	Prepare for and represent IRCC at 3 <sup>rd</sup> session of the IHO Assembly	1.1			Submit reports and recommendations (through the Council)	IRCC Chair Secretariat			

<b>Task</b>	<b>Description</b>	<b>SD</b>	<b>G&amp;T</b>	<b>Notable stakeholder(s) outside the IHO</b>	<b>Notable deliverables / milestones and timing</b>	<b>Lead authority / Participants</b>	<b>Notable specific resources from the IHO budget</b>	<b>Other resources</b>	<b>Significant risk to delivery</b>
3.1.4	Maintain and extend IHO Resolutions (M-3) related to coordination issues	1.1	3.1 3.2		Draft proposed amendments for the consideration of the Council	IRCC			



### Element 3.2 Regional Hydrographic Commissions and the HCA

**Objective:** Facilitate regional coordination, cooperation and collaboration to improve hydrographic services and the provision of hydro-cartographic products through the structure of the Regional Hydrographic Commissions and of the Hydrographic Commission on Antarctica.

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
3.2.1	Prepare for and report meetings of the Regional Hydrographic Commissions (RHC): ARHC – Arctic Regional Hydrographic Commission BSHC - Baltic Sea Hydrographic Commission EAHC - East Asia Hydrographic Commission EAtHC - Eastern Atlantic Hydrographic Commission	2.1 2.2 2.3 2.5 2.6 3.2 3.3 4.3	3.1 1.3		Submit report and recommendations – normally Annually	RHC Chairs  Secretariat	Most Commissions meet annually  Travel cost for SG or Dir to each meeting. An AD also attends several of the RHC meetings – particularly the larger Commissions and those with significant CB requirements		Inability of MS and others, particularly non-IHO MS, to participate in meetings

3.2.1	MACHC - Meso American and Caribbean Hydrographic Commission MBSHC - Mediterranean and Black Seas Hydrographic Commission NHC - Nordic Hydrographic Commission NIOHC - North Indian Ocean Hydrographic Commission NSHC - North Sea Hydrographic Commission RSAHC - ROPME Sea Area Hydrographic Commission SAIHC - Southern Africa and Islands Hydrographic Commission SEPRHC - South East Pacific Regional Hydrographic Commission	2.1 2.2 2.3 2.5 2.6 3.2 3.3 4.3	3.1 1.3		Submit report and recommendations – normally Annually	RHC Chairs Secretariat	Most Commissions meet annually  Travel cost for SG or Dir to each meeting. An AD also attends several of the RHC meetings – particularly the larger Commissions and those with significant CB requirements		Inability of MS and others, particularly non-IHO MS, to participate in meetings
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Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
3.2.1	<p>SWAtHC - South West Atlantic Hydrographic Commission</p> <p>SWPHC - South West Pacific Hydrographic Commission</p> <p>USCHC - USA and Canada Hydrographic Commission</p>	2.1 2.2 2.3 2.5 2.6 3.2 3.3 4.3	3.1 1.3		Submit report and recommendations – normally Annually	RHC Chairs  Secretariat	<p>Most Commissions meet annually</p> <p>Travel cost for SG or Dir to each meeting. An AD also attends several of the RHC meetings – particularly the larger Commissions and those with significant CB requirements</p>		Inability of MS and others, particularly non-IHO MS, to participate in meetings
3.2.2	Organize, prepare for and report meetings of Hydrographic Commission on Antarctica (HCA)	2.1 2.2 2.5 2.6 3.2 3.3 4.3	3.2	COMNAP IAATO SCAR IALA	Submit report and recommendations	HCA Chair Observers Secretariat	<p>2 meetings between two Assemblies</p> <p>Travel cost for SG or Dir +1 AD (on case by case basis)</p>		Inability of Members and others to participate in meetings

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
3.2.3	Contribute to improving the framework of IHO response to marine disasters	3.3	3		Improve the relevant guidelines for disaster risk reduction.  Continuous	RHC Chairs  Secretariat			
3.2.4	Maintain and enhance the underlying database and IHO Publication C-55 – <i>Status of Hydrographic Surveying and Nautical Charting Worldwide</i>	4.4	3.1 2.2		Develop a new framework for the input, presentation and assessment of the survey and nautical cartography status in C-55	Secretariat			

### Element 3.3 Capacity Building

**Objective:** 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.

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
3.3.1	Organize, prepare and report annual meetings of the Capacity Building Sub- Committee (CBSC)	2.3 2.4 3.3 3.4 4.4	3.1 1.3	IMO IALA	Monitor and approve CB Work Programme (CBWP)  Annual	CBSC Chair  CB Coordinators  Secretariat	Travel cost for 1 Dir + 1 AD  Travel cost and per diem for pre-meeting briefing of Chair		

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
3.3.2	Manage the IHO Capacity Building Fund	4.4	3.1 1.3			CBSC Chair Secretariat			
3.3.3	Develop and maintain a Capacity Building Management System	4.4	3.1 1.3		Support the implementation of CBWP Continuous	CBSC Chair Secretariat			
3.3.4	Review and maintain the IHO Capacity Building Strategy	4.4	3.1 1.3		Up to date CB Strategy Annually	CBSC Chair Secretariat			
3.3.5	Develop, monitor and update the Capacity Building Work Programme (CBWP), including:  Reviewing and updating CB procedures  Monitoring and assessing the progress and success of CB activities and initiatives as approved in the annual IHO CBWP	4.4	3.1 1.3		Develop and propose an annual CBWP to be included in the IHO WP  Annually. Considered in conjunction with task 3.3.1	CBSC Chair  Secretariat			

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
3.3.6	Organize, prepare and report on meetings with other organizations, funding agencies, private sector and academia, including: the Joint IHO/IMO/WMO/IOC/IAEA/IALA/FIG/IMPA Capacity Building Coordination meeting	4.3 4.4	3.1 1.3	World Bank UNDP UNEP  Donor agencies	Investigate the new opportunities for CB activities  Increase the CB Fund Annually	Secretariat	2 meetings annually  Travel cost for 1 Dir or 1 AD		Budget constraints
3.3.7	Organize, prepare and report on a Capacity Building and IBSC Stakeholders' Forum	4.4	3.1 1.3	IMO IALA IOC WMO FIG ICA Academy	Obtain lessons learned from CB training activities Review the future of the IHO CB Work Programme and CB Strategy  2021, as part of the Centenary Celebrations	Secretariat CBSC Chair IBSC Chair	No significant cost expected		

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
3.3.8	Maintain IHO publication M-2 - <i>National Maritime Policies and Hydrographic Services</i>	3.1 3.2	3.3 2.2		Continuous	Secretariat			
3.3.9	Plan, administer and implement Capacity Building activities, including: Technical and advisory visits, Technical Workshops, Seminars, Short and long courses On the Job Training (ashore / on board)	2.3 2.4 3.3 3.4 4.4	3.1 1.3		Assess the status of hydrography, cartography and aids to navigation in developing States  Provide the basic technical knowledge and to jointly explore initiatives to achieve a minimum level of response to national, regional and international obligations	CBSC Chair RHC Chairs Secretariat	In accordance with annual CBWP Funded by the CB Fund.		



Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
3.3.10	Investigate and Develop Regional Hydrographic /Maritime Projects	2.3 2.4 3.3 3.4 4.4	3.1 2.1 2.2	IMO IALA IOC UN Agencies World Bank  Funding Institutions	Ensure awareness of multilateral or bilateral projects with hydrographic and/or cartographic components, and to provide advice to governments, project managers and funding agencies  Develop and support the Outline/Scope Studies on Regional Projects	CBSC Chair RHC Chairs Secretariat			
3.3.11	Develop and maintain an online repository of training material and references	2.3 2.4 3.3	3.1 3.3	Member States and other States RHCs Academia	Ensure all training material and references are available	CBSC Chair Secretariat			

### Element 3.4 Coordination of Global Surveying and Charting Coverage

**Objective:** 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.

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
3.4.1	Organize, prepare and report annual meetings of the WEND Working Group	2.1 2.2 2.6	1.1	CIRM RENC management	Foster the implementation of the WEND /WENS (to be confirmed) principles, monitor progress and report to IRCC  Annually	WEND WG Chair  Secretariat	1 meeting annually.  Travel cost for 1 Dir+AD or 1 AD		Component of the S-100 Implementation Strategy (to be confirmed)
3.4.2	Maintain liaison with RENCs	2.1 2.2 2.6	1.1	RENC management  RENC MS	Facilitate the promotion of RENC cooperation for the benefit of ENC end-users  Annually	WEND WG Chair  Secretariat	2 meetings annually.  Travel cost for 1 Dir or 1 AD		

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
3.4.3	Maintain and coordinate ENC and INT schemes, including coverage, consistency, quality and availability	2.1	2.2 3.3		Develop ENC schemes in the regions and coordinate the production and maintenance of ENC  Maintain INT Chart schemes and coordinate the production of INT Chart in the regions, in line with ENC production	RHC Chairs  Secretariat			Lack of appropriate surveys or re-surveys in areas where there is no satisfactory coverage.  Overlapping products in the same area.

**Element 3.5 Maritime Safety Information**

**Objective:** Facilitate the efficient provision of Maritime safety Information (MSI) to mariners through coordination and the establishment of relevant standards between agencies.

Improve the coordination of NAVAREAs in liaison with the RHCs and relevant international organizations.

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
3.5.1	Organize, prepare and report annual meetings of the World-Wide Navigational Warning Service Sub-Committee (WWNWS-SC)	1.2 2.1 4.3	1.1	IMO IALA IMSO	Monitor and guide the IHO/IMO World-Wide Navigational Warning Service including NAVAREA and coastal warnings  Annual	WWNWS-SC Chair Secretariat	1 meeting annually  Travel cost for 1 AD		Lack of engagement of NAVAREA Coordinators or partner organizations to maintain service
3.5.2	Conduct annual meetings of the WWNWS-SC Document Review Working Group	1.2 2.1	1.1	IMO IALA IMSO WMO	Maintain the IMO/WWNWS documents  Annual	WWNWS-SC Chair Secretariat	1 meeting annually  Per diem for 1 AD		Lack of engagement of NAVAREA Coordinators or partner organizations to maintain service

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
3.5.3	Maintain and extend the following IHO standards, specifications and publications:  relevant IHO Resolutions in M-3 - <i>Resolutions of the IHO</i> ,  S-53 - <i>Joint IMO/IHO/WMO Manual on Maritime Safety Information</i>	1.2 2.1 3.3	1.2	IMO IMSO WMO	Provide update to WWNWS documentation.  Continuous	WWNWS-SC Chair  Secretariat			
3.5.4	Liaise with IMO and WMO on the delivery of MSI within the GMDSS	1.2 2.1 3.3		IMO WMO IMSO IALA	Ensure maintenance of service delivery. Continuous	WWNWS-SC Chair  Secretariat	1 meeting, 2 days per year within Europe (London/Genève/Monaco)		Lack of engagement of national MSI Coordinators with the relevant NAVAREA Coordinator

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
3.5.5	Participate and contribute to the IMO work items on the modernization of the GMDSS and the development of the e-navigation implementation plan	1.2 2.1 2.5	1.2	IMO WMO IMSO IALA	Monitor projects to ensure maintenance of service delivery at least at current levels, investigation areas for improvement Continuous	WWNWS-SC Chair  Secretariat			Inability of current providers to maintain service due to increased costs in a multi-system environment
3.5.6	Improve the delivery and exploitation of MSI to global shipping by taking full advantage of technological developments	1.2 2.1 2.5	1.1	IMO WMO IMSO IALA	Progress development of S-124 PS to align with the development of e-navigation and GMDSS	WWNWS-SC Chair			

### Element 3.6 Ocean Mapping Programme

**Objective:** 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.  
Improve the availability of shallow water bathymetry for purposes other than nautical charting.

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
3.6.1	Organize, prepare and report annual meetings of the GEBCO Guiding Committee (GGC) and associated bodies including TSCOM, SCRUM, GEBCO Science Day and SCUFN	1.5 2.6 3.4	3.2	IOC	Implementation of the GGC Work Programme  Contribute to global ocean mapping programmes  Improve the availability of shallow water bathymetry  Implement the strategic goals for the next decade. Annual	GGC Chair  Secretariat	4 meetings annually  Travel cost for 1 Dir + 2 AD  Travel cost for 1 AD (for SCUFN)	Travel cost, per diem. and working hours for MS and other representatives to prepare for and attend the meetings	Lack of support from coastal states to progress GEBCO activities

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
3.6.2	Ensure effective operation of the IHO Data Centre for Digital Bathymetry (DCDB)	1.5 2.6	3.2		Enhance the DCDB for upload, ingest, discovery and download of bathymetric data and associated information, such as the gazetteer of undersea feature names	Director, DCDB CSBWG Chair GEBCO GC Secretariat	10k€ annually to support maintenance and development	Operation of the DCDB is funded primarily by US (NOAA)	Inability of sole funder to continue current level of support
3.6.3	Encourage the contribution of bathymetric data to the IHO DCDB	1.5 2.2 2.6	3.2	Academia and Industry	GEBCO representatives participate in RHC meetings  Continuous	GGC Chair RHC Chairs Secretariat			Lack of MS willingness to provide data
3.6.4	Develop general guidelines on the use and collection of Crowd Sourced Bathymetry (CSB)	2.6	2.2 3.2			CSBWG Chair Director, DCDB Secretariat	1 meeting annually.  Travel cost for 1 AD	Travel cost, per diem. and working hours for MS and other representatives to prepare for and attend the meetings of the CSBWG	



Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
3.6.5	Support cooperative bathymetric data gathering programmes, including; the Atlantic Ocean Research Alliance (AORA)	2.6	3.2		Contribute to global and regional ocean mapping programmes  Annual	CSBWG Chair  Secretariat	2 meetings annually  1 AD	Funded by EU	

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
3.6.6	Maintain IHO bathymetric publications, including: B-4 - <i>Information Concerning Recent Bathymetric Data</i> B-6 - <i>Standardization of Undersea Feature Names</i> B-8 - <i>Gazetteer of Geographical Names of Undersea Features</i> B-9 - <i>GEBCO Digital Atlas</i> B-10 - <i>The History of GEBCO</i> B-11 - <i>IHO-IOC GEBCO Cook Book</i> B-12 – <i>Guidance on Crowd source Bathymetry</i>	2.6	3.2 3.3	IOC	Maintain publications updated	GGC Chair Secretariat			

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
3.6.7	Contribute to outreach and education about ocean mapping. Increase understanding of the importance of hydrography and interest in following ocean mapping as a career	1.5 2.6 3.4	3.2	IOC	Development of Roadmap for Outreach and Education Working Group.  Development of Education Materials.  Printing of GEBCO World Map in MS  Continuous	GGC Chair  Secretariat		GEBCO Fund - 8200 Euros	
3.6.8	Maintain GEBCO Website	1.5 2.6 3.4	3.2 3.3	BODC	Content of GEBCO web site continually updated with news items; information about meetings and events and information about and links to new products  Continuous	GGC Chair  Secretariat		GEBCO Fund - 5000 Euros annually	

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
3.6.9	Develop short course and course material on compiling digital bathymetric models (DBMs) to be included in GEBCO from a heterogeneous bathymetric source database	1.5 2.6 3.4	3.1 3.2			GGC Chair Secretariat			GEBCO Fund
3.6.10	Update and enhance the GEBCO Gazetteer (B-8) for internet access	1.5	3.2 3.3		Continuing enhancement and maintenance to incorporate new names from each SCUFN meeting: Annual	GGC Chair Director, DCDB Secretariat		Contract support funded by GEBCO Fund - 10,000 Euros	

### Element 3.7 Marine Spatial Data Infrastructures

**Objective:** 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	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
3.7.1	Organize, prepare and report annual meetings of the Marine Spatial Data Infrastructures Working Group (MSDIWG)	2.5	2.1 2.3	OGC SPC Academia Industry UN-GGIM UN-WGMGI	Continuous	MSDIWG Chair  Secretariat	1 meeting annually.  Travel cost for 1 AD	Travel cost, per diem. and working hours for MS and other representatives to prepare for and attend the meeting	
3.7.2	Maintain the relevant IHO standards, specifications and publications on MSDI, including C-17	2.5	2.1 2.3	OGC Academia Industry		MSDIWG Chair  Secretariat			
3.7.3	Develop and maintain training syllabi and material for MSDI and associated learning subjects	2.5	2.1 3.1	OGC Academia Industry	Course material for standardised MSDI training course	MSDIWG Chair  Secretariat			

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
3.7.4	Meeting of the OGC Marine Domain Working Group	2.5	2.1 2.3	OGC Academia Industry	Coordination of the relevant activities	MSDIWG Chair Secretariat			

**Element 3.8 International Standards for Hydrographic Surveyors and Nautical Cartographers**

**Objective:** Establish minimum standards of competence for hydrographic surveyors and nautical cartographers.

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
3.8.1	Organize, prepare and report annual meetings of the International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers (IBSC)	1.1 1.4	2.2	FIG ICA Academia Industry	Recognition of new submissions and maintenance of guiding tools and references  Continuous	IBSC Chair  Secretariat	1 meeting annually.  Travel cost for 1 AD	Travel cost, per diem. and working hours for Members and other representatives to prepare for and attend the meeting	Availability of Board members to undertake an increasing intersessional workload  Capacity of Secretariat to provide full support to the Board

Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
3.8.2	Fulfil the functions of the IBSC	1.4	2.2	FIG ICA	Provide guidance to training institutions  Continuous	IBSC Chair  Secretariat			Availability of Board members to undertake an increasing intersessional workload  Capacity of Secretariat to provide full support to the Board
3.8.3	Manage the IBSC Fund	4.4		FIG ICA	Management of the IBSC Fund effectively and report to the IHO Secretariat  Continuous	IBSC Chair  Secretariat			



Task	Description	SD	G&T	Notable stakeholder(s) outside the IHO	Notable deliverables / milestones and timing	Lead authority / Participants	Notable specific resources from the IHO budget	Other resources	Significant risk to delivery
3.8.4	<p>Review the IBSC standards and maintain IBSC Publications,</p> <p>including:</p> <p><i>C-6 - Reference Texts for Training in Hydrography</i></p> <p><i>C-47 - Training Courses in Hydrography and Nautical Cartography</i></p> <p><i>S-5A and B - Standards of Competence for Hydrographic Surveyors</i></p> <p><i>S-8A and B - Standards of Competence for Nautical Cartographers</i></p>	1.4	2.2	<p>FIG</p> <p>ICA</p> <p>Academia</p> <p>Industry</p>	<p>Monitor, control and update of the IBSC Standards in S-5A/B and S-8A/B and Publications</p> <p>Continuous</p>	<p>IBSC Chair</p> <p>Secretariat</p>	<p>Support to IBSC on review and update of Standards of Competence</p> <p>10K€ annually</p>		<p>Availability of Board members to undertake an increasing intersessional workload</p> <p>Capacity of Secretariat to provide full support to the Board</p>

