

IHO Work Programme for 2017
Reference: IHO CL 65/2016 dated 9 December 2016

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Alternate Manager	Key deliverables in 2017	Significant risk to delivery	Remarks / Dates / Venue
PROGRAMME 1 - CORPORATE AFFAIRS								
1 & 3	1.1	Co-operation with International Organizations and participation in relevant meetings				Objective / Deliverable: To maintain relationships with relevant international organizations in order to further the interests of the IHO by enlisting their support and cooperation and to participate in projects of common interest		
	1.1.1	Antarctic Treaty Consultative Meeting (ATCM)	SG	ADCS	ADCC	ensure HCA activities are recognised by ATCM, coordination and liaison		ATCM XL - CEP XX, Beijing, China, 22 May - 01 June
	1.1.2	Comité International Radio Maritime (CIRM)	DTech	ADSO	ADDT	present relevant IHO programmes, coordinate activities with OEMs, outreach, coordination and liaison		Singapore, 22-24 April Singapore to be requested to consider representing the IHO
	1.1.3	Council of Managers of National Antarctic Programs (COMNAP)	SG	ADCS	ADCC	present relevant IHO programmes, coordinate data acquisition activities with COMNAP, outreach, liaison		Brno, Czech Republic, 31 Jul - 2 Aug
	1.1.4	European Union Initiatives, including:	SG	ADCS	ADSO	ensure IHO activities are recognised and supported as appropriate by the EU, coordination and liaison		Up to 4 meetings in Europe
	1.1.4.1	INSPIRE	DTech	ADDT	ADCS	ensure that the maritime dimension of spatial data infrastructures is recognized in the Inspire framework		See also 1.1.14.4 and 1.1.20.5
	1.1.4.2	IHO-EU Network WG	DTech	ADCS	ADSO			
	1.1.4.3	European Maritime Day	SG	ADCS	ADSO			Poole, UK, 18-19 May?
	1.1.5	International Federation of Surveyors (FIG)	DCoord	ADCC	ADSO	present relevant IHO programmes, coordinate activities with FIG, outreach and liaison		FIG working week and General Assembly Helsinki, Finland, 29 May-2 Jun Consider local representation
	1.1.6	International Federation of Hydrographic Societies (IFHS)	SG	ADSO	ADCC	present relevant IHO programmes, outreach via annual HYDRO meetings		
	1.1.6.1	HYDRO17	SG	ADSO	ADCC	present relevant IHO programmes, outreach		Rotterdam, Netherlands, Nov 2017
	1.1.7	International Association of Antarctic Tour Operators (IAATO)	SG	ADCS	ADCC			No meetings anticipated

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	1.1.8	IALA, such as:	DTech	ADSO	ADCC			
	1.1.8.1	e-NAV Committee	DTech	ADSO	ADDT	present relevant IHO programmes, provide S-100 liaison activities		IALA HQ, St Germain-en-Laye, France eNav20, 13-17 Mar eNav21, 18-22Sep Coordinate IHO representation with S-100WG and NIPWG
	1.1.8.2	Annual secretariat liaison meeting	SG	ADSO	ADCC	coordinate programmes, particularly CB		Possibly meeting back-to-back with another meeting
	1.1.8.3	Workshops on IHO related issues	DTech	ADSO	ADCC			Local representation when possible
	1.1.9	International Association of Ports and Harbours (IAPH)	SG	ADDT	ADCC			No meetings anticipated
	1.1.10	International Cartographic Association (ICA) such as:	DTech	ADCC	ADCS	coordinate programmes, particularly in relation with GI and training standards		
	1.1.10.1	ICA Conference 28	DTech	ADCS	ADCC			Washington DC, USA, 2-7Jul
	1.1.10.2	ICA Commission on SDI and Standards	DTech	ADCC	ADDT			SDI 2017, Washington DC, USA, 1-2 Jul
	1.1.10.3	ICA Working Group on Marine Cartography	DTech	ADCS	ADCC			No meeting expected
	1.1.11	International Electrotechnical Commission (IEC) (such as IEC Technical Committee 80)	DTech	ADDT	ADCS	present relevant IHO programmes, coordinate S-100 and other IHO standards developments, liaison		TC80 plenary meeting, London, UK, 3 days (date and venue tbc)
	1.1.12	International Maritime Organization (IMO), including:						
	1.1.12.1	Assembly	SG	ADSO	ADCC	present relevant IHO programmes and activities, outreach and liaison		A-30, London, UK, 27 Nov-6 Dec tbc
	1.1.12.2	Council	SG	ADSO	ADCC	present relevant IHO programmes and activities, outreach and liaison		No IHO participation
	1.1.12.3	MSC	DTech	ADSO	ADCC	present relevant IHO programmes and activities, outreach and liaison		MSC98, London, UK, 7-16 Jun
	1.1.12.4.1	NCSR	DTech	ADSO	ADDT	present relevant IHO programmes and activities, outreach and liaison		NCSR4, London, UK, 6-10 Mar
	1.1.12.4.2	Intersessional meetings on e-Nav or other issues	DTech	ADSO	ADDT	present relevant IHO programmes and activities, outreach and liaison		IMO/ITU EG 13, London, UK, 10-14 Jul

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	1.1.12.5	TCC	DCoord	ADCC	ADSO	present relevant IHO programmes and activities, coordination with IMO TC, outreach and liaison		TCC67, London, UK, 26-28 Jun
	1.1.12.6	World Maritime Day – IMO HQ	SG	ADSO	ADCC			No IHO participation
	1.1.12.7	World Maritime Day – parallel event	SG	ADSO	ADCC			Panama, Nov?
	1.1.13	International Maritime Pilots' Association (IMPA)	SG	ADSO	ADCC			Not anticipating IHO attendance at IMPA Congress 2017
	1.1.14	Intergovernmental Oceanographic Commission (IOC) of UNESCO, including:	DCoord	ADSO	ADCC			
	1.1.14.1	Assembly in conjunction with 1.1.14.2.	DCoord	ADSO	ADCC	present relevant IHO programmes and activities, outreach and liaison		Assembly-29, Paris, France, 19-30 June
	1.1.14.2	Executive Council in conjunction with 1.1.14.1.	DCoord	ADSO	ADCC			EC50, Paris, France, back-to-back with 1.1.14.1
	1.1.14.3	IODE Committee	DTech	ADDT	ADCC	Promote the use of S-100 by the IOC, outreach and liaison		IODE-XXIV Kuala Lumpur, Malaysia, 27-31 March
	1.1.14.4	Specialized WGs -(such as GLOSS)	DTech	ADSO	ADCC	ensure appropriate levels of coordination with IHO work items related to tides and surface currents	MS may not have resources or technical background to participate	MS to be requested to represent IHO if IHO technical support required Include 2 nd International Conference on Marine/Maritime Spatial Planning MSP 2017, Paris, France, 15-17 March
	1.1.15	International Organization for Standardization (ISO), including:	DTech	ADDT	ADCS			
	1.1.15.1	ISO Technical Committee 211	DTech	ADDT	ADCS	present relevant IHO programmes and activities, coordinate IHO standards development with ISO programmes, outreach and liaison		44 th meeting, Stockholm, Sweden, 29 May – 2 Jun 45 th meeting Date and venue tbd (USA?)
	1.1.16	Joint Board of GIS (JB-GIS)	SG	ADCS	ADDT	present relevant IHO programmes and activities, outreach, coordination and liaison with other geospatial organisations		Normally undertaken as a short side trip from another meeting = very limited extra cost
	1.1.17	NATO geospatial bodies, such as:	DTech	ADDT	ADSO			

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	1.1.17.1	DGIWG	DTech	ADDT	ADSO	coordination and liaison with other geospatial organisations		UK to consider representing the IHO
	1.1.18	United Nations (UN), including:	SG	ADSO	ADCS			
	1.1.18.1	UN General Assembly	SG	ADSO	ADCS	present relevant IHO programmes and activities, outreach, recruitment of new IHO Member States		No IHO participation
	1.1.18.2	UNICPOLOS & SPLOS	SG	ADSO	ADCS	present relevant IHO programmes and activities, outreach, recruitment of new IHO Member States		No IHO participation
	1.1.18.3	UN High Level Conference on Oceans and Seas	SG	ADSO	ADCS	present relevant IHO programmes and activities, outreach, recruitment of new IHO Member States		New York, USA, 5-9 Jun
	1.1.18.4.1	UN-GGIM	SG	ADCC	ADCS	present relevant IHO programmes and activities in relation to UN-GGIM programme to ensure that hydrography is appropriately represented in doctrine being developed by UN-GGIM and adopted by UN		UNGGIM-7, New York, USA, August
	1.1.18.4.2	UN-GGIM High Level Forum	SG	ADCC	ADCS			5 th HLF, place?, date?
	1.1.18.5	UNISDR	SG	ADCC	ADCS	ensure that hydrography is appropriately accounted for in the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030		No participation anticipated in 2017
	1.1.18.6	UN Environment Assembly	SG	ADCC	ADSO	present relevant IHO programmes and activities in relation to UNEP programme to ensure that hydrography is appropriately represented in doctrine being developed by UNEA		3 rd UNEA Assembly, date and venue tbd (end of 2017)
	1.1.18.7	UN-GEGN	DCoord	ADCS	ADSO	ensure that IHO standards are compliant with UN resolutions on Standardization of Geographical Names, state of the art on Gazetteer databases, modelling		11 th UN Conference on the Standardization of Geographical Names/ UN GEGN 30, New York, USA, 7-18 Aug

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	1.1.19	World Meteorological Organization (WMO)	SG	ADSO	ADCC	ensure appropriate levels of coordination with IHO work items related to WWNWS and MSI delivery		No meetings anticipated, low level correspondence only	
	1.1.19.1	Participation at ETMSS, ETSI and other JCOMM meetings	DTech	ADSO	ADCC	ensure appropriate levels of coordination with IHO work items related to S-100 and to WWNWS and MSI delivery		ETMSS & ETSI Meetings, 20-31 Mar, Helsinki, Finland	
						See 3.8.3		JCOMM-5, Djakarta, Indonesia, 25-31 Oct	
									SOT-9, London, UK, 27-31 Mar
	1.1.20	Other organizations when their agendas have relevance to the programme of the IHO, such as : the Group on Earth Observation (GEO); the Scientific Committee on Antarctic Research (SCAR); Global Partnership for Oceans (GPO); the International Cable Protection Committee (ICPC), the International Seabed Authority (ISA); the Maritime Organizations of West and Central Africa (MOWCA); the Pan-American Institute of Geography and History (PAIGH); the Port Management Association West and Central Africa (PMAWCA)	Secretary-General or Director or AD responsible for the relevant RHC when appropriate			ensure IHO programmes and outcomes are recognised and coordinated with other organizations as appropriate		2 meetings (one Europe, one USA)	
	1.1.20.1	Asia Pacific Heads of Maritime Safety Agencies (APHoMSA)	SG	ADSO	ADCC	ensure IHO regional programmes are recognised and coordinated with APHoSMA regional programmes as appropriate		APHoMSA18, Langkawi, Malaysia 21-24 Mar Local MS to be invited to represent the IHO	
	1.1.20.2	Group on Earth Observation (GEO)	DTech	ADCS	ADSO	ensure IHO programmes and outcomes are recognised and coordinated with GEO as appropriate		GEO-XIV Plenary Meeting Washington DC, USA, Oct	
	1.1.20.3	International Seabed Authority	SG	ADSO	ADCS			ISA-23, Kingston, Jamaica, 31 Jul-18 Aug	
	1.1.20.4	International Harbour Masters Association (IHMA)	SG	ADSO	ADCS	present relevant IHO programmes and activities, outreach and liaison		Correspondence only	
	1.1.20.5	Our Ocean 2017	SG	ADCS	ADSO	present relevant IHO programmes and activities to ensure that hydrography is recognised as underpinning all activities in, on or under the sea		Malta, 5-6 Oct	
1 & 4	1.2	Information Management			Objective / Deliverable: To provide MS and IHO stakeholders with accurate and relevant information in a timely and accessible manner				

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	1.2.1	Compile and publish the following documents that are not allocated to a specific IHO body, including:						
	1.2.1.1	P-5 – IHO Yearbook	DTech	ADCC	MFA			
	1.2.1.2	P-7 – IHO Annual Report	DCoord	ADSO	MFA			
	1.2.1.3	S-11 Part B - Catalogue of INT Charts and ENC's	SG	ADCS	ADDT	S-11 database and auto-publisher		see 2.3.2.6
	1.2.1.4	M-3 – IHO Resolutions	SG	ADSO	MFA	Appropriateness and currency of Resolutions related to current WP items		
	1.2.2	Maintain and extend Admin IT infrastructure of the IHO Secretariat, including:	DTech	ADDT	ADCC			
	1.2.2.1	high volume printers and photocopiers	DTech	ADDT	ADCC			
	1.2.2.2	IT maintenance and development	DTech	ADDT	ADCC			
	1.2.2.3	IT equipment purchases	DTech	ADDT	ADCC			
	1.2.3	Communication between the IHO Secretariat and Member States through Circular Letters	SG	MFA	ADSO			
	1.2.4	Technical Library of the IHO Secretariat – incorporate new material	SG	ADSO	ADCC			
3	1.3	Public Relations				Objective / Deliverable: To raise awareness of the role of the IHO and its Member States and the importance of hydrography, particularly by government and in the user community		
	1.3.1	Maintain relationships with the Government of Monaco and the diplomatic corps accredited in Monaco	SG	MFA	ADSO			
	1.3.2	Compile and publish P-1 – International Hydrographic Review in collaboration with IHR editor	DCoord	ADCC	ADSO		Contribution of suitable papers from MS and others	
	1.3.3	World Hydrography Day, including:	DCoord	ADCC	ADSO			
	1.3.3.1	Preparation of support materiel	DCoord	ADCC	ADSO			
	1.3.3.2	Celebratory events in Monaco	DCoord	ADCC	ADSO			
	1.3.3.3	Celebratory events in Member States	DCoord	ADCC	ADSO			
	1.3.4	General Public Relation support. Representation expenses	SG	ADCC	ADSO	Raising levels of awareness of IHO and hydrography		
	1.3.4.1	Compile and publish International Hydrographic Bulletin	SG	MFA	ADSO			
1	1.4	Work Programme & Budget, Strategic Plan and Performance Monitoring				Objective / Deliverable: To ensure that the formulation and the execution of the IHO Work Programme and Budget is managed, monitored and executed efficiently to best meet the requirements of Member States and the interests of stakeholders. This Element focuses on the implementation of the IHO's Strategic Plan particularly with regard to risk assessment and performance indicators		
	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	SG	ADSO	MFA	Continuing development of processes to better monitor progress, execution and achievement of the IHO WP		included in the overall IT support budget

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	1.4.2	Execute the IHO Work Programme and Budget approved by the XVIIIth IHC, monitoring its progress and adopting the necessary adjustment according to the circumstances	SG	MFA	ADSO			Finance Committee Officers meetings, Monaco, -6 Apr -Oct-Nov (tbd) Finance Committee meeting, Monaco, 23 Apr, in conjunction with A-1	
	1.4.3	Conduct biennial IHO stakeholders' forums	DTech	as required according to topics	as required according to topics	Collect feedback from stakeholders on critical issues	Input from and participation of the relevant IHO Working Groups	No specific event anticipated in 2017	
	1.4.4	Initiate review of IHO Strategic Plan	SG	ADSO	ADCS				
1	1.5	Management of the IHO Secretariat				Objective / Deliverable: To ensure that the IHO Secretariat meets the requirements set by the Member States, by providing the best service (quality, opportunity, reasonable cost) within the resources available			
	1.5.1	Maintain, update and develop necessary procedures to facilitate and improve effectiveness of the general and permanent Finance and Administrative work.	SG	MFA	AAA				
	1.5.1.1	Staff training	SG	MFA	ADSO	Enhancement of staff skills to meet changing job requirements			
	1.5.2	Provide in-house translation service English/French and French/English in support of the IHO WP. Include Spanish translations as much as possible in accordance with relevant IHO Resolutions	SG	MFA	ADCS		Capacity of the staff of the IHO Secretariat		
	1.5.3	Engage contract support to provide on-off development or maintenance support beyond the resources or competence of the IHO Secretariat, including:	SG	MFA	AAA	Advancement of one-off tasks of the IHO Secretariat beyond the capability or resources of the Secretariat			
	1.5.3.1	Translation	SG	MFA	ADCS				
	1.5.3.2	Technical editing	DTech	As required according to topic	As required according to topic				
	1.5.4	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.	SG	MFA	PA				
	1.5.5	Maintain the premises of the IHO Secretariat as required as the occupant. Maintain furniture, carry out renovations or modifications as requirements arise	SG	MFA	AAA/BSA				
1 & 4	1.6	Assembly / Council				Objective / Deliverable: To ensure the successful functioning of sessions of the Assembly and of the Council so that they fulfil their top-level governance and decision-making functions in accordance with Convention and the other Instruments of the Organization			
	1.6.1	Organize Assembly A-1 in 2017	DCoord	ADCC	ADSO			Monaco, 23-28Apr	

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	1.6.2	Prepare and Organize 1 st IHO Council Meeting	SG	ADSO	ADCC			Monaco, 17-19 Oct (tbc)
PROGRAMME 2 - SERVICES AND STANDARDS								
2	2.1	Technical Programme Coordination				Objective / Deliverable: To monitor technical developments, oversee the development of IHO technical standards, specifications and publications through the coordination and interaction of relevant IHO Working Groups, and to make recommendations to Member States		
	2.1.1	Conduct annual meeting of HSSC	DTech	ADCS	ADDT	Implementation of HSSC Work Plan HSSC forward WP Performance statistics		HSSC-9, Ottawa, Canada, 6-10 Nov
	2.1.1.1	Chair briefing	DTech	ADCS	ADDT	Efficient running of HSSC-9		Monaco, Oct?
	2.1.2	Support the IHO Secretariat to implement the planning mechanism annually and at the end of each 5-year (3-year) cycle by:	DTech	ADCS	ADDT			
	2.1.2.1	Contributing to the IHO Annual Report.	DTech	ADCS	ADDT			
	2.1.2.2	Updating and implementing the HSSC Work Programme	DTech	ADCS	ADDT			
	2.1.2.3	Implementing the restructuring of HSSC Working Groups	DTech	ADCS	ADDT	Feedback at HSSC-9		
	2.1.3	Provide technical advice and guidance on IHO technical standards, specification and publications; including:	DTech	ADDT	ADCS			
	2.1.3.1	e-Nav Underway Conference - International	DTech	ADDT	ADCS	Promote uptake of S-100 and S-100 based product specifications		31Jan-2Feb, at sea Dep/Arr Copenhagen, Denmark
	2.1.3.2	e-Nav Underway Conference – North America	DTech	ADDT	ADCS			Consider local representation
	2.1.3.3	e-Nav Underway Conference – Asia-Pacific	DTech	ADDT	ADCS			Consider local representation
	2.1.3.4	5 th International Maritime-Port Technology and Development Conference (MTEC 2017) – E-navigation Seminar	DTech	ADDT	ADCS			Singapore , 26-28 Apr Consider local representation
3 & 4	2.2	Hydrographic Data Transfer Standards				Objective / Deliverable: To monitor developments related to transfer standards for digital hydrographic data, to develop and maintain the relevant IHO standards, specifications and publications, and to provide technical advice as appropriate		
	2.2.1	Conduct meetings of S-100 and ENC Standards Maintenance WGs	DTech	ADDT	ADCS	Implementation of HSSC Work Plan		Implementation of the new HSSC structure : S-100 WG & ENCWG
	2.2.1.1	S-100 WG-2	DTech	ADDT	ADCS			Genoa, Italy, 15-17 Mar
	2.2.1.2	ENCWG-2	DTech	ADDT	ADCS			Genoa, Italy, 20-22 Mar

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	2.2.2	Maintain and extend the relevant IHO standards, specifications and publications, using contract support assistance as appropriate, including:	DTech	ADDT	ADCS	Implementation of HSSC Work Plan		Funded from Special Projects and/or PL Fund according to funding availability and on a priority basis set by the HSSC Chair
	2.2.2.1	S-57 IHO Transfer Standard for Digital Hydrographic Data	DTech	ADDT	ADCS	Encoding Bulletins as required to keep S-57 fit for purpose		
	2.2.2.2	S-100 IHO Universal Hydrographic Data Model	DTech	ADDT	ADCS	Draft Edition 3.0.0 endorsed by HSSC		
	2.2.2.2.1	S-100 /S-101 Test bed	DTech	ADDT	ADCS	Support the end-to-end testing of S-101 and other S-10x specifications in compliance with IHO Resolution 2/2007		North America, Sep (tbc)
	2.2.2.3	S-101 ENC Product Specification	DTech	ADDT	ADCS	Edition 0.0.0 (draft) approved by Member States for test-bed purposes		
	2.2.2.4	S-102 Bathymetric Surface Product Specification	DTech	ADDT	ADCS			Revision may be required from task 2.7.5
	2.2.2.5	S-58 ENC Validation Checks	DTech	ADDT	ADCS	Implementation of Edition 5.0.0 in conjunction with new edition of IEC 61174		
	2.2.2.6	S-65 ENC Production Guidance	DTech	ADDT	ADCS			
	2.2.2.7	S-64 IHO Test Data Sets for ECDIS	DTech	ADDT	ADCS	Implementation of Edition 3.0.0 in conjunction with new edition of IEC 61174		
	2.2.2.8	S-61 Product Specification for Raster Navigational Charts	DTech	ADDT	ADCS			No action required
	2.2.2.9	S-99 Operational Procedures for the Organization and Management of the S-100 Geospatial Information Registry	DTech	ADDT	ADCS	Keep S-99 fit for purpose		
	2.2.2.10	S-66 Facts about Electronic Charts and Carriage Requirements	DTech	ADCS	ADSO			
	2.2.2.11	Participate in RENC Joint Technical Experts WG (JTEWG)	DTech	ADDT	ADCS			
	2.2.2.12	Appendix 1 to S-52 - Guidance on Updating the Electronic Navigational Chart	DTech	ADDT	ADCS	Keep S-52 Appendix 1 fit for purpose		
	2.2.2.13	S-52 and its accompanying Presentation Library - Specifications for Chart Content and Display Aspects of ECDIS	DTech	ADDT	ADCS	PB as required to keep S-52 fit for purpose		
	2.2.3	Develop and maintain as-yet undefined S-100-based Product Specifications	DTech	ADDT	ADCS	Template Product Specification for Marine Information Overlays (MIO)		funded from Special Projects and/or PL Fund according to funding availability and on a priority basis set by the HSSC Chair

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	2.2.4	Maintain and extend S-100 Registry	DTech	ADDT	ADCS	Keep the Registry fit for purpose	Dependent of continuing support from ROK, UK and USA and limited resources of the IHO Secretariat	
	2.2.5	Provide outreach and technical assistance regarding transfer standards	DTech	ADDT	ADCS			see 2.1.3
2	2.3	Nautical Cartography	Objective / Deliverable: To monitor developments related to nautical cartography for paper nautical charts and the colours, symbols and display rules used to show SENC information on ECDIS, to develop and maintain the relevant IHO standards, specifications and publications, and to provide technical advice as appropriate					
	2.3.1	Conduct meetings of Nautical Cartography Working Group	DTech	ADCS	ADDT	Implementation of HSSC Work Plan		NCWG3 Redlands, CA, USA, 16-19 May
	2.3.2	Maintain and extend the relevant IHO standards, specifications and publications, using contract support assistance as appropriate, including:	DTech	ADCS	ADDT			
	2.3.2.1	S-4 Chart Specifications of the IHO and Regulations for International (INT) Charts	DTech	ADCS	ADDT	Keep S-4 fit for purpose		Routine maintenance
	2.3.2.2	INT 1 - Symbols, Abbreviations and Terms used on Charts	DTech	ADCS	ADDT			
	2.3.2.3	INT 2 - Borders, Graduations, Grids and Linear Scales	DTech	ADCS	ADDT			
	2.3.2.4	INT 3 - Use of Symbols and Abbreviations	DTech	ADCS	ADDT			
	2.3.2.5	S-11 Part A - Guidance for the Preparation and Maintenance of INT Chart schemes	DTech	ADCS	ADDT			
	2.3.2.6	S-11 Part B - Catalogue of INT Charts and ENCs	DTech	ADCS	ADDT			See also 1.2.1.3
2	2.4	Digital Data Protection and Authentication	Objective / Deliverable: To monitor developments related to data protection and data authentication, to develop and maintain the relevant IHO standards, specifications and publications, and to provide technical advice as appropriate					
	2.4.1	Conduct meetings of Data Protection Scheme WG	DTech	ADDT	ADCS	Implementation of HSSC Work Plan		DPSWG12, Genoa, Italy, 20-22 Mar
	2.4.2	Maintain and extend the relevant IHO standards, specifications and publications, including:	DTech	ADDT	ADCS			
	2.4.2.1	S-63 IHO Data Protection Scheme	DTech	ADDT	ADCS	Keep S-63 fit for purpose	Lack of appropriate expertise	
	2.4.2.2	Data protection and authentication related elements of:	DTech	ADDT	ADCS			
	2.4.2.2.1	S-100 - IHO Universal Hydrographic Data Model	DTech	ADDT	ADCS	see 2.2.2.2		
	2.4.2.2.2	Data protection and authentication related elements of S-101 - ENC Product Specification	DTech	ADDT	ADCS	see 2.2.2.3		
2	2.5	Data Quality	Objective / Deliverable: To monitor developments related to methods of classifying and depicting the quality of hydrographic information, to develop and maintain the relevant IHO standards, specifications and publications, and to provide technical advice as appropriate					
	2.5.1	Conduct meetings of Data Quality WG	DTech	ADCS	ADDT	Implementation of HSSC Work Plan		DQWG12, The Hague, NL, 13-15 Jun
	2.5.2	Maintain and extend the relevant IHO standards, specifications and publications, including:	DTech	ADCS	ADDT			

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	2.5.2.1	Data quality related elements of S-57 - IHO Transfer Standard for Digital Hydrographic Data	DTech	ADCS	ADDT	see 2.2.2.1			
	2.5.2.2	Data quality related elements of S-100 - IHO Universal Hydrographic Data Model	DTech	ADCS	ADDT	see 2.2.2.2			
	2.5.2.3	Data quality related elements of:	DTech	ADCS	ADDT				
	2.5.2.3.1	S-52 - Specifications for Chart Content and Display Aspects of ECDIS	DTech	ADCS	ADDT	see 2.2.2.13			
	2.5.2.3.2	S-101 - ENC Product Specification and other S-100-based Product Specifications	DTech	ADCS	ADDT	see 2.2.2.3 & 2.2.3			
2	2.6	Nautical Publications				Objective / Deliverable: 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			
	2.6.1	Conduct meetings of Nautical Information Provision WG (NIPWG)	DTech	ADCS	ADDT	Implementation of HSSC Work Plan		NIPWG4 in conjunction with 2.6.1.1	
	2.6.1.1	NIPWG visualization workshop	DTech	ADCS	ADDT	Implementation of HSSC Work Plan		UNH, Durham, NH, USA, 22-26 May	
	2.6.2	Develop, maintain and extend S-10n - Nautical Information Product Specification	DTech	ADCS	ADDT	Draft Product Specification for Marine Protected Areas (S-122)			
	2.6.3	Maintain and extend the relevant IHO standards, specifications and publications, including:	DTech	ADCS	ADDT				
	2.6.3.1	IHO Resolutions in M-3 relating to Nautical Publications	DTech	ADCS	ADDT	Keep the Resolutions fit for purpose			
	2.6.3.2	S-12 Standardization of List of Lights and Fog Signals	DTech	ADCS	ADDT	Keep S-12 fit for purpose			
	2.6.3.3	S-49 Standardization of Mariners' Routeing Guides	DTech	ADCS	ADDT	Keep S-49 fit for purpose			
2	2.7	Tides and Water Levels				Objective / Deliverable: To monitor developments related to tidal and water level observation, analysis and prediction and other related information including vertical and horizontal datums, to develop and maintain the relevant IHO standards, specifications and publications, and to provide technical advice as appropriate			
	2.7.1	Conduct meetings of the Tides, Water Level and Currents WG (TWCWG)	DTech	ADSO	ADCC	Implementation of HSSC Work Plan		TWCWG2, Victoria, BC, Canada, 8-12 May	
	2.7.2	Maintain and extend the relevant IHO standards, specifications and publications, including:	DTech	ADSO	ADCC				
	2.7.2.1	Relevant IHO Resolutions in M-3	DTech	ADSO	ADCC	Keep the Resolutions fit for purpose			
	2.7.2.2	S-60 User's Handbook on Datum Transformations involving WGS 84	DTech	ADSO	ADCC			Publication frozen	
	2.7.2.3	Standard Tidal Constituent List	DTech	ADSO	ADCC	Keep the List fit for purpose			
	2.7.2.4	Inventory of Tide Gauges and Current Meters used by Member States	DTech	ADSO	ADCC	Keep the inventory current			
	2.7.3	Develop, maintain and extend a Product Specification for digital tide tables	DTech	ADSO	ADDT	Prepare draft Standard			

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Alternate Manager	Key deliverables in 2017	Significant risk to delivery	Remarks / Dates / Venue
	2.7.4	Develop, maintain and extend a Product Specification for the transmission of real-time tidal data (S-112)	DTech	ADSO	ADDT	Compare XML datasets to create common format aligned to INSPIRE and other developed formats in use		
	2.7.5	Develop, maintain and extend a Product Specification for dynamic tides in ECDIS	DTech	ADSO	ADDT	Meet the requirements of the E-Navigation Strategy Implementation Plan		
2	2.8	Digital Data Updating				Objective / Deliverable: To monitor developments in standardized processes for the updating of digital hydrographic data products, to develop and maintain the relevant IHO standards, specifications and publications, and to provide technical advice as appropriate		
	2.8.1	Maintain and extend the relevant IHO standards, specifications and publications, including:	DTech	ADCS	ADDT			
	2.8.1.1	Digital data updating related elements of S-65 - ENC Production Guidance	DTech	ADCS	ADDT	see 2.2.2.6		
	2.8.1.2	S-52 Appendix 1 - Guidance on Updating the Electronic Navigational Chart	DTech	ADCS	ADDT	see 2.2.2.12		
2	2.10	Hydrographic Data Acquisition and Processing				Objective / Deliverable: To monitor developments related to hydrographic data acquisition and processing, to develop and maintain the relevant IHO publications, and to provide technical advice as appropriate		
	2.10.1	Conduct meetings of Hydrographic Survey WG (if WG activated)	DTech	ADSO	ADCC			Subject to way forward agreed by HSSC-8 on the basis of the recommendations of the H2SPT
	2.10.2	Maintain and extend, when required, the relevant IHO standards, specifications and publications, including:	DTech	ADSO	ADCC			
	2.10.2.1	S-44 - IHO Standards for Hydrographic Surveys	DTech	ADSO	ADCC			
4	2.11	Hydrographic Dictionary				Objective / Deliverable: To develop, maintain and extend S-32 - Hydrographic Dictionary in English, French and Spanish and to provide technical advice as appropriate		
	2.11.1	Maintain and extend the IHO Hydrographic Dictionary in English, French and Spanish.	DTech	ADSO	ADCS	Implementation of HSSC Work Plan	more active participation of MS during definition development stage - especially Spanish speaking MS	For WP to progress, a face-to-face meeting is required
	2.11.2	Develop the new Wiki version of S-32	DTech	ADSO	ADCS			Task being addressed by seconded Officer from Peru in collaboration with Wikimedia Foundation
2 & 4	2.12	ABLOS				Objective / Deliverable: To monitor developments related to the hydrographic aspects of the UN Convention on the Law of the Sea, to develop and maintain the relevant IHO publications, and to provide technical advice as appropriate		
	2.12.1	Organize and prepare ABLOS annual business meeting	DTech	ADSO	ADCC	Implementation of HSSC Work Plan		BM24, Monaco, 9 and 12 Oct

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Alternate Manager	Key deliverables in 2017	Significant risk to delivery	Remarks / Dates / Venue
	2.12.2	Organize and prepare the biennial ABLOS Conference	DTech	ADSO	ADCC			ABLOS-9, Monaco, 10-11Oct
	2.12.3	Contribute to the revision of IHO publication C-51- TALOS Manual	DTech	ADSO	ADCC			
2	2.13	Surface Currents				Objective / Deliverable: To monitor developments related to surface current observation, analysis and prediction and other related information including vertical and horizontal datums, to develop and maintain the relevant IHO standards, specifications and publications, and to provide technical advice as appropriate		
	2.13.2	Maintain and extend the relevant IHO standards, specifications and publications, including:	DTech	ADSO	ADDT			
	2.13.2.1	Relevant IHO Resolutions in M-3	DTech	ADSO	ADDT	Keep the Resolutions fit for purpose		
	2.13.3	Develop, maintain and extend a Product Specification for the transmission of real-time surface current data	DTech	ADSO	ADDT	Create mature draft S-111 PS, including draft list of attributes and encoding	Limited WG expertise and OEM participation	
	2.13.4	Develop, maintain and extend a Product Specification for dynamic surface currents in ECDIS	DTech	ADSO	ADDT	Demonstrate test portrayal S-111 PS	Limited WG expertise and OEM participation	
PROGRAMME 3 - INTER REGIONAL COORDINATION AND SUPPORT								
1 & 2	3.0	Inter-Regional Coordination Committee (IRCC)				Objective / Deliverable: 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.		
	3.0.1	Conduct annual meeting of IRCC	DCoord	ADCC	ADSO	Implementation of IRCC WP IRCC forward WP Performance statistics		IRCC9, Paramaribo, Suriname, 12-14 June held back-to-back with CBSC15, see 3.3.1.1
	3.0.1.1	Chair briefing	DCoord	ADCC	ADSO	Efficient running of IRCC-9		Monaco, May?
	3.0.2	Support the IHO Secretariat to implement the planning mechanism annually and at the end of each 5-year (3-year) cycle by:	DCoord	ADCC	ADSO			
	3.0.2.1	Contributing to the IHO Annual Report.	DCoord	ADCC	ADSO			
	3.0.2.2	Updating and implementing the IRCC Work Programme	DCoord	ADCC	ADSO			
1 & 2	3.1	Cooperation with Member States and attendance at relevant meetings				Objective / Deliverable: To facilitate IHO MS coordination, cooperation and collaboration to improve hydrographic services and the provision of hydro-cartographic products through the structure of the RHCs		
	3.1.1	ARHC – Arctic Region Hydrographic Commission	SG	ADCS	ADCC			ARHC7, Ilulissat, Greenland, Denmark, 22-24 Aug
	3.1.2	BSHC - Baltic Sea Hydrographic Commission	DCoord	ADSO	ADCS			BSHC22, Rostock, Germany, Sep?

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Alternate Manager	Key deliverables in 2017	Significant risk to delivery	Remarks / Dates / Venue
	3.1.3	EAHC - East Asia Hydrographic Commission	SG	ADDT	ADSO			Steering Committee Meeting 4, Japan, 22-24 Feb
	3.1.4	EAtHC - Eastern Atlantic Hydrographic Commission	DTech	ADCS	ADDT			No meeting expected in 2017
	3.1.5	MACHC - Meso American and Caribbean Sea Hydrographic Commission	SG	ADCC	ADCS			MACHC18, place? date?
	3.1.6	MBSHC - Mediterranean and Black Seas Hydrographic Commission	DCoord	ADCS	ADCC			MBSHC-20, Montenegro, 4-6 Jul
	3.1.7	NHC - Nordic Hydrographic Commission	DTech	ADDT	ADSO			NHC61, Elsinore, Denmark, 6-8 Mar
	3.1.8	NIOHC - North Indian Ocean Hydrographic Commission	DCoord	ADSO	ADDT			NIOHC17, Goa, India , July
	3.1.9	NSHC - North Sea Hydrographic Commission	DTech	ADSO	ADDT			No meeting expected in 2017
	3.1.10	RSAHC - ROPME Sea Area Hydrographic Commission	DCoord	ADSO	ADCC			RSAHC7, Muscat, Oman, 20-22 Feb
	3.1.11	SAIHC - Southern Africa and Islands Hydrographic Commission	SG	ADDT	ADCC			SAIHC14, Mauritius (tbc), 4-8 Sep
	3.1.12	SEPRHC - South East Pacific Regional Hydrographic Commission	DTech	ADCC	ADCS			SEPRHC-13, Cartagenas, Colombia, 21-25 Aug
	3.1.13	SWAtHC - South West Atlantic Hydrographic Commission	DTech	ADCC	ADCS			CHAtSO11, Niteroi, Brazil, 6-7 Mar
	3.1.14	SWPHC - South West Pacific Hydrographic Commission	SG	ADCC	ADSO			No meeting expected in 2017
	3.1.15	USCHC - USA and Canada Hydrographic Commission	DCoord	ADDT	ADCC			USCHC-40, Galveston, TX, USA, 20-23 Mar in conjunction with attendance at US Hydro 2017
	3.1.16	HCA - Hydrographic Commission on Antarctica	SG	ADCS	ADCC			HCA15, Wellington, New Zealand, 20-22 Jun
	3.1.16.1	HCA to conduct a risk assessment for the Antarctic region and develop a Work Program to improve Antarctic charting	SG	ADCS	ADCC			
	3.1.17	WEND Working Group	DCoord	ADCS	ADCC			WENDWG7, Washington DC, USA, 31Jan-2Feb See also 3.6.2
	3.1.18	Industry participation in RHC meetings	Secretary-General or Director & AD responsible for relevant RHC					
	3.1.19	Contribute to improving the framework of IHO response to marine disasters	DCoord	ADSO	ADCC			

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Alternate Manager	Key deliverables in 2017	Significant risk to delivery	Remarks / Dates / Venue
1 & 3	3.2	Increase participation by non-Member States				Objective / Deliverable: 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		
	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.	SG	ADDT	ADSO			
	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	DTech	ADCS	ADDT			
	3.2.2.1	Maintain contact with pending applicants in the region to encourage the ratification of the IHO Convention	DTech	ADCS	ADDT	Ratification of the IHO Convention by Mauritania and Sierra Leone		
	3.2.2.2	Maintain contact with suspended Member State in the region to encourage its re-insertion in IHO	DTech	ADCS	ADDT	Re-integration of the Democratic Republic of Congo		
	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.	SG	ADCC	ADCS	MACHC OECS Project - to develop hydrographic services in the Eastern Caribbean: complete scoping study and seek donors		
	3.2.3.1	Caribbean MOU	SG	ADCC	ADSO	ensure national hydrographic obligations are recognised by Caribbean Maritime Administrations	Regional MS may not have resources to participate	Caribbean Senior Maritime Administrators' Meeting – Barbados, 7-8 Feb (tbc)
	3.2.3.2	Maintain contact with pending applicant in the region to encourage the ratification of the IHO Convention	SG	ADCC	ADCS	Ratification of the IHO Convention by Haiti		
	3.2.3.3	Maintain contact with suspended Member State in the region to encourage its re-insertion in IHO	SG	ADCC	ADCS	Re-integration of the Dominican Republic		
	3.2.4	MBSHC - Execute strategy to increase participation of non-Member States in IHO activities and advise them on how to comply with international regulations such as SOLAS V	DCoord	ADCS	ADCC			Target non-Member States: Albania, Bulgaria, Israel, Lebanon, Libya
	3.2.4.1	Maintain contact with pending applicants in the region to encourage the ratification of the IHO Convention	DCoord	ADCS	ADCC	Ratification of the IHO Convention by Bulgaria		
	3.2.4.2	Maintain contact with suspended Member State in the region to encourage its re-insertion in IHO	DCoord	ADCS	ADCC			
	3.2.5	NIOHC - Execute strategy to increase participation of non-Member States in IHO activities and advise them on how to comply with international regulations such as SOLAS V	DCoord	ADSO	ADDT			Target non-Member States: Djibouti, Eritrea, Jordan, Maldives, Seychelles, Somalia, Sudan, Yemen (side-visits as part of other programmes)

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Alternate Manager	Key deliverables in 2017	Significant risk to delivery	Remarks / Dates / Venue
	3.2.6	RSAHC - Execute strategy to increase participation of non-Member States in IHO activities and advise them on how to comply with international regulations such as SOLAS V	DCoord	ADSO	ADCC			Target non-Member State: Iraq
	3.2.7	SAIHC - Execute strategy to increase participation of non-Member States in IHO activities and advise them on how to comply with international regulations such as SOLAS V.	SG	ADDT	ADCC			Target non-Member States: Angola, Comoros, Kenya, Madagascar, Malawi, Namibia, Seychelles & Tanzania
	3.2.8	SEPRHC - Execute strategy to increase participation of non-Member States in IHO activities and advise them on how to comply with international regulations such as SOLAS V.	DTech	ADCC	ADCS			
	3.2.8.1	Continue the efforts to include Panama as Observer Country to the Commission.	DTech	ADCC	ADCS	Participation of Panama in SEPRHC		
	3.2.9	SWAIHC - Execute strategy to increase participation of non-Member States in IHO activities and advise them on how to comply with international regulations such as SOLAS V	DTech	ADCC	ADCS			Target non-Member States: Bolivia and Paraguay
	3.2.10	SWPHC - Execute strategy to increase participation of non-Member States in IHO activities and advise them on how to comply with international regulations such as SOLAS V	SG	ADCC	ADSO			
	3.2.11	RHCs to encourage the approval of pending applications for IHO membership	Secretary-General or Director & AD responsible for relevant RHC					
	3.2.12	IHO Convention:	Secretary-General or Director & AD responsible for relevant RHC					
	3.2.12.1	RHCs to encourage the ratification of the IHO Convention by coastal States.						
1 & 4	3.3	Capacity Building Management				Objective / Deliverable: To maintain an IHO Strategy on Capacity Building (CB), and the establishment of coordination, operational and control procedures directed to achieve effective and efficient interaction between all parties involved in the IHO CB effort		
	3.3.1	CBSC - Capacity Building Sub-Committee, including:	DCoord	ADCC	ADSO			
	3.3.1.1	Organize, prepare, conduct and report annual CBSC meetings	DCoord	ADCC	ADSO	Efficient running of CBSC15		CBSC15, Paramaribo, Suriname; 7-9 June held back-to-back with IRCC9, see 3.0.1
	3.3.1.2	Chair briefing	DCoord	ADCC	ADSO	Efficient running of CBSC15		Monaco, May?
	3.3.1.3	Follow-up the coordination required to execute the action lists agreed	DCoord	ADCC	ADSO			
	3.3.1.4	Maintain IHO publication M-2 - The Need for National Hydrographic Services	DCoord	ADCC	ADSO			
	3.3.1.5	Contribute to the development of MSDI	DCoord	ADCC	ADSO			
	3.3.2	Manage Capacity Building Fund	DCoord	ADCC, MFA	MFA			
	3.3.2.1	Develop and maintain a CB Management system	DCoord	ADCC	MFA			
	3.3.3	Meetings with other organizations, funding agencies, private sector and academia	DCoord	ADCC	ADSO	Increase the CB Fund		

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Alternate Manager	Key deliverables in 2017	Significant risk to delivery	Remarks / Dates / Venue
	3.3.3.1	Joint IHO/IMO/WMO/IOC/IAEA/IALA/FIG Capacity Building Meeting	DCoord	ADCC	ADSO			IALA, Paris, France, Oct?
	3.3.3.2	Capacity Building Stakeholders Forum	DCoord	ADCC	ADSO			
	3.3.4	IHO Capacity Building Strategy. CBSC to keep the IHO Capacity Building Strategy updated. At each CBSC meeting, the Sub-Committee is to review the Strategy in the light of new elements, update it accordingly and display it in the IHO website.	DCoord	ADCC	ADSO			
	3.3.5	Capacity Building Work Programme	DCoord	ADCC	MFA			
	3.3.5.1	CBSC to study the CB needs presented to the CBSC by the RHCs, to foster the sharing of lessons learned and to help RHCs to develop best practices	DCoord	ADCC	MFA			
	3.3.5.2	CBSC to develop and propose an annual IHO Capacity Building Work Program (CBWP) to be included in the general IHO WP	DCoord	ADCC	MFA			
	3.3.5.3	CBSC to maintain and control the execution of the approved CBWP	DCoord	ADCC	MFA			See CBWP 2017
	3.3.6	Follow-up of CB activities and initiatives, including:	DCoord					
	3.3.6.1	CBSC to follow-up the CB activities and initiatives, especially those for which the CB Fund and MSs have contributed	DCoord	ADCC	MFA			
	3.3.6.2	To study and install measures to improve the technical work with the Management Plan, i.e. developing a database, aiming at reducing the administrative work	DCoord	ADCC	MFA			
	3.3.7	IBSC - International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers	DCoord	ADCC	ADSO			
	3.3.7.1	Conduct and report annual IBSC meetings	DCoord	ADCC	ADSO			IBSC40, Wellington, NZ, 20-31 Mar
	3.3.7.2	Implement the IBSC Work Programme including	DCoord	ADCC	ADSO			
	3.3.7.2.1	IBSC Stakeholders' Seminar	DCoord	ADCC	ADSO			To be decided
	3.3.7.3	Manage the IBSC Fund and report to IHO	DCoord	ADCC	ADSO			
	3.3.8	Provide guidance to training institutions	DCoord	ADCC	ADSO			
	3.3.9	Maintain IBSC Publications (C-6, C-47, S-5, S-8)	DCoord	ADCC	ADSO		lack of availability of IBSC members	
	3.3.9.1	IBSC to develop a new Standards framework to separate competency requirements for Cat A and Cat B	DCoord	ADCC	ADSO			x IBSC meetings, to be decided
3 & 4	3.4	Capacity Building Assessment				Objective / Deliverable: To assess the hydrographic surveying, nautical charting and nautical information status of nations and regions where hydrography is developing. Provide guidelines for the development of local hydrographic capabilities taking into account the regional context and possibilities of support for shared capabilities. Identify regional requirements and study the possibilities for capacity building assistance and training from the CB Fund and other sources		
	3.4.1	Technical and advisory visits. RHCs, with the support of the CBSC Chair and IHO Secretariat, 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	Secretary-General or Director & AD responsible for relevant RHC					In accordance with the Agreed 2017 CB Work Programme (CBWP)

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Alternate Manager	Key deliverables in 2017	Significant risk to delivery	Remarks / Dates / Venue
	3.4.2	Enhance publication C-55. IHO Secretariat with the support of the RHCs, CBSC and GGC to develop a new framework for C-55	DCoord	ADCC	ADDT			
3 & 4	3.5	Capacity Building Provision				Objective / Deliverable: To undertake initiatives for the provision of general support, training and education to address identified CB shortcomings; identify aid agencies and other sources of funds; liaise with MS, other organizations and funding agencies for such provision and establish and participate in joint development projects		
	3.5.1	Raise Awareness on the Importance of Hydrography	DCoord	ADCC	ADSO			
	3.5.2	Technical Workshops, Seminars, Short Courses	Secretary-General or Director & AD responsible for relevant RHC					In accordance with the Agreed 2017 CB Work Programme (CBWP)
	3.5.3	IHO Secretariat, in conjunction with IBSC and CBSC, to encourage the development and delivery of new Hydrographic and Nautical Cartography Programs, including the establishment of new Hydrographic Schools where that regional capacity does not exist. Report to the IHO on the results	DCoord	ADCC	ADSO			
	3.5.4	On the Job Training (ashore / on board). CBSC, with support of the IHO Secretariat, to investigate "on-the-job training opportunities" ashore and on board (ships of opportunity)	Secretary-General or Director & AD responsible for relevant RHC					
	3.5.5	IHO Secretariat, 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	Secretary-General or Director & AD responsible for relevant RHC					
	3.5.6	CBSC to foster bilateral agreements in order to help satisfy SOLAS V/9	DCoord	ADCC	ADSO			
2	3.6	Coordination of Global Surveying and Charting				Objective / Deliverable: To facilitate the achievement of a world-wide quality nautical charting coverage to suit the needs of the mariner in support of safe and efficient navigation through the development of specifications and standards for the production, distribution and updating of cartographic products and supporting publications		
	3.6.1	C-55 Status of Hydrographic Surveying and Nautical Charting World-wide	DCoord	ADCC	ADSO			
	3.6.1.1	MS to provide annual updates to C-55	DCoord	ADCC	ADSO			
	3.6.1.2	IHO Secretariat to implement new framework for publication C-55	DCoord	ADCC	ADSO	C-55 GIS solution implemented	lack of funds for on-going support and maintenance of GIS software solution	
	3.6.1.3	IHO Secretariat to report periodically to IMO on limitations and requirements for improvements in global charting and associated services	DCoord	ADCS	ADSO			
	3.6.2	WEND WG to foster the implementation of the WEND principles, monitor progress and report to IRCC	DCoord	ADCS	ADCC			See also 3.1.17
	3.6.2.1	WG to facilitate the production, distribution and updating of ENC cartographic products ensuring uniform ENC quality and consistency	DCoord	ADCS	ADCC			

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Alternate Manager	Key deliverables in 2017	Significant risk to delivery	Remarks / Dates / Venue
	3.6.2.2	WG to facilitate the resolution of gaps and overlaps in ENC coverage	DCoord	ADCS	ADCC			
	3.6.2.3	WG to facilitate the promotion of RENC co-operation for the benefit of ENC end-users	DCoord	ADCS	ADCC			
	3.6.2.3.1	IC-ENC meeting	DCoord	ADCS	ADCC			IC-ENC-18, Cape Town, South Africa, 12-14 Sep
	3.6.2.3.2	Primar Advisory meeting	DCoord	ADCS	ADCC			PAC-24, Sweden, 14-15 Nov
	3.6.3	Maintain and coordinate ENC schemes, consistency and quality	DCoord	ADCS	ADCC			
	3.6.3.1	RHCs to develop ENC schemes in their regions and coordinate the production and maintenance of ENC	Secretary-General or Director & AD responsible for relevant RHC					
	3.6.4	Maintain and coordinate INT Chart Schemes and improve the availability of the INT Chart Series	DTech	ADCS	ADCC			
	3.6.4.1	RHCs to coordinate INT Chart Schemes and coordinate the production of INT Chart in their region	Secretary-General or Director & AD responsible for relevant RHC					
	3.6.5	Contribute to monitoring and improving the global status of hydrographic surveying	DCoord	ADCC	ADSO			
1 & 2	3.7	Maritime Safety Information				Objective / Deliverable: To facilitate the efficient provision of MSI to mariners through coordination and the establishment of relevant standards between agencies		
	3.7.1	WWNWS-SC - World-Wide Navigational Warning Service Sub-Committee. Organize, prepare, attend and report annual WWNWS-SC meetings	DCoord	ADSO	ADCC	Review customer survey results and development action plan to initiate identified service delivery improvements		WWNWS9, Cape Town, South Africa, 28 Aug-1 Sep
	3.7.2	WWNWS Document Review Working Group. Conduct annual meetings of the WWNWS Document Review WG	DCoord	ADSO	ADCC	Keep documentation fit for purpose		DRWG15, IMO HQ, 14-16 Mar held back-to-back with NCSR4
	3.7.3	Maintain and extend the following IHO standards, specifications and publications:	DCoord	ADSO	ADCC			
	3.7.3.1	relevant IHO Resolutions in M-3	DCoord	ADSO	ADCC	M-3 kept up to date		
	3.7.3.2	S-53 - Joint IMO/IHO/WMO Manual on Maritime Safety Information	DCoord	ADSO	ADCC	S-53 kept up to date by incorporating IMO decisions as required		
	3.7.4	Liaise with IMO and WMO on the delivery of MSI within the GMDSS	DCoord	ADSO	ADCC	Monitor GMDSS modernization programme to ensure maintenance of service delivery		
	3.7.5	Participate and contribute to the IMO work items on the modernization of the GMDSS and the development of the e-navigation implementation plan	DCoord	ADSO	ADCC	Monitor projects to ensure maintenance of service delivery at least at current levels, investigation areas for improvement		

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Alternate Manager	Key deliverables in 2017	Significant risk to delivery	Remarks / Dates / Venue
	3.7.6	Improve the delivery and exploitation of MSI to global shipping by taking full advantage of technological developments	DCoord	ADSO	ADCC	Progress development of S-124 PS to align with the development of e-navigation and GMDSS modernization		
1 & 2 & 3	3.8	Ocean Mapping Programme				Objective / Deliverable: To contribute to global ocean mapping programmes through the IHO/IOC General Bathymetric Chart of the Oceans (GEBCO) Project, the International Bathymetric Chart (IBC) Projects and other related international initiatives		
	3.8.1	Conduct meetings of relevant GEBCO bodies:	DCoord	ADSO	ADCS			
	3.8.1.1	Guiding Committee	DCoord	ADSO	ADCS	Strategic goals for the next decade		GGC34, Busan, ROK, 16-17 Nov
	3.8.1.2	TSCOM	DCoord	ADDT	ADSO			Joint meeting co-located with GGC34, Busan, ROK, 13-15 Nov
	3.8.1.3	SCRUM	DCoord	ADDT	ADSO			
	3.8.1.4	SCUFN	DCoord	ADCS	ADSO			SCUFN30, Genova, Italy, 2-6 Oct
	3.8.2	Ensure effective operation of IHO Data Centre for Digital Bathymetry (DCDB)	DCoord	ADDT	ADSO	Enhance DCDB interface for upload, ingest, discovery and download of bathymetric data Coordinate with IHO on Crowd Sourced Bathymetry project	Funds and resources	
	3.8.2.1	Encourage the contribution of bathymetric data to the IHO DCDB through GEBCO participation in RHC meetings	DCoord	ADDT	ADSO	GEBCO representatives participate in RHC meetings	Lack of MS willingness to provide data. No NF funds for NF Scholar alumni to travel to RHC meetings	Participation in RHC meetings according to GEBCO priority of regional mapping needs
	3.8.3	Prepare a new IHO publication on policy for trusted crowd-sourced bathymetry	SG	ADSO	ADDT	Draft guidance document submitted to IRCC9		
	3.8.3.1	Conduct meetings of CSBWG	DCoord	ADSO	ADDT	Implementation of CSB Work Plan	Efficient running of CSBWG	CSBWG4 UNH, Durham, NH, USA, 13-14 Feb See also 3.8.2 CSBWG5 (tbd)
	3.8.3.2	Participate in N. Atlantic seabed mapping programme meetings (Galway Statement)	DTech	ADSO	ADDT			Funded by EU
	3.8.4	Maintain IHO bathymetric publications, including:	DCoord	ADSO	ADCS			
	3.8.4.1	B-4 - Information concerning recent bathymetric data	DCoord	ADDT	ADCS			Primarily an activity of the IHO Secretariat
	3.8.4.2	B-6 - Standardisation of undersea feature names	DCoord	ADCS	ADSO			Primarily an activity of the IHO Secretariat
	3.8.4.3	B-7 - GEBCO guidelines	DCoord	ADSO	ADCS			Primarily an activity of the IHO Secretariat
	3.8.4.4	B-8 - Gazetteer	DCoord	ADCS	ADSO			Primarily an activity of the IHO Secretariat

Strategic Direction	Element / Task	Title	Principal Director	Principal Manager	Alternate Manager	Key deliverables in 2017	Significant risk to delivery	Remarks / Dates / Venue	
	3.8.4.5	B-9 - GEBCO digital atlas	DCoord	ADDT	ADSO			Primarily an activity of the IHO Secretariat	
	3.8.4.6	B-10 - The history of GEBCO	DCoord	ADSO	ADCC			Primarily an activity of the IHO Secretariat	
	3.8.4.7	B-11 - GEBCO Cookbook	DCoord	ADDT	ADSO			Primarily an activity of the IHO Secretariat	
	3.8.4.8	Develop the on-line function of B-4	DCoord	ADDT	ADCS			Primarily an activity of the IHO Secretariat	
	3.8.5	Contribute to outreach and education about ocean mapping. Increase understanding of the importance of hydrography and interest in following ocean mapping as a career through activities such as:	DCoord	ADSO	ADCC	Development of Roadmap for outreach and education Working Group Development of Education Materials			
	3.8.5.1	Development of outreach materials (paper maps, brochures, web-based presentations) and educational materials;	DCoord	ADSO	ADCC	Development of Roadmap for outreach and education Working Group		Funding under task 3.8.5	
	3.8.5.2	Printing of GEBCO World Map at various locations in MS	DCoord	ADSO	ADCC	Printing of GEBCO World Map in MS		Funding under task 3.8.5	
	3.8.6	GEBCO Web site kept current and updated regularly	DCoord	ADDT	ADCC	Content of GEBCO web site continually updated with news items; information about meetings and events and information about and links to new products			
	3.8.7	Develop short course and course material on compiling digital bathymetric models (DBMs) to be included in GEBCO from a heterogeneous bathymetric source database. Associated deliverables: -a course curriculum	DCoord	ADSO	ADCC	Course curriculum and schedule for first course occasion		No dates for venue established yet.	
	3.8.8	Update and enhance the GEBCO Gazetteer (B-8) for internet access	DCoord	ADCS	ADDT	Continuing enhancement and maintenance to incorporate new names from each SCUFN meeting			
2 & 4	3.9	Marine Spatial Data Infrastructures				Objective / Deliverable: To monitor developments related to the hydrographic component of Spatial Data Infrastructures, to develop and maintain the relevant IHO publications, and to provide technical advice as appropriate			
	3.9.1	Conduct meetings of MSDIWG	DCoord	ADCC	ADCS	Implementation of MSDI Work Plan		MSDIWG8, Vancouver, Canada, 31 Jan- 2 Feb	
	3.9.2	Maintain the relevant IHO standards, specifications and publications, including:	DCoord	ADCC	ADCS				
	3.9.2.1	C-17 Spatial Data Infrastructures: "The Marine Dimension" - Guidance for Hydrographic Offices	DCoord	ADCC	ADCS	Keep C-17 fit for purpose			
	3.9.3	Develop training syllabi for MSDI and associated learning subjects, including:	DCoord	ADCC	ADCS				
	3.9.3.1	Content for an "Introduction to MSDI" training course	DCoord	ADCC	ADCS	Content tested in experimental course(s)			