

17th CHRIS MEETING
Rostock, Germany, 5-9 September 2005

CHRIS WORK PLAN
Version 1.5 - September 2005

Objective:

To ensure efficient project resource management and alignment, progress monitoring and to provide a communication utility with internal and external parties.

Rationale:

The justification for the CHRIS Workplan are in conformance with the IHO Strategic Plan, and mainly related to the following elements of the IHO Work Programme – 2003/07:

- 3.1. Nautical Cartography
- 3.4. Data for Geomatic Applications

Revisions:

Chairs of each Working Group, along with the CHRIS Chair, will meet prior to each CHRIS meeting to review progress, and to harmonize the Workplan.

Approval:

Once revised, the workplan will be approved by the CHRIS plenary at each annual meeting. CHRIS Chair could seek committee members interim approval for emerging issues between meetings.

Communications:

The CHRIS Workplan will be posted on the IHO website, and a progress summary will be provided at IHO Conferences.

Project Numbering:

Each task will be given a sequential number independent of related Working Group. The related IHO Work Programme Element number and the specific CHRIS meeting that approved the inclusion of the task will be identified in the CHRIS Work Plan summary. Each WG SubTasks will be numbered using an alphanumeric sequence, “An,Bn,Cn..”

Priorities:

Three Levels of Priorities (H, M, and L) will be assigned by CHRIS using the Guidelines on the Evaluation of Proposals in the Work of CHRIS and Subsidiary Bodies.

1. CHRIS relevant elements of IHO Work Programme 2003-2007

1.1 IHO Programme 3. Element 3.1 Nautical Cartography

O 3.1.1 Continuation of the co-operative work on development of ECDIS services, particularly:

3.1.1.1 On-going refinement and expansion of specifications and standards through the CHRIS and its working groups, with links to the CSPCWG, IEC and ISO. **[HP]**

3.1.1.3 Participation in the regulatory, testing and certification aspects of ECDIS through the IMO/IHO HGE and IEC/TC80 in matters concerning ECDIS, RCDS, and ECS. **[HP]**

3.1.1.4 Develop contacts with the international bodies representing private industry [umbrella organizations], to reduce potential conflicts and to maximize quality and availability of adequate digital nautical products, by inviting their participation in appropriate IHO forums, and through IHO participation in non-government activities such as Open ECDIS Forum [OEF]. **[HP]**

O 3.1.2 Participation in the development of standards for cartography and geographic information in association with groups such as DGIWG, ICA, IEC and ISO, in order to ensure that the interests of IHO members receive attention in the formulation of standards. **[HP]**

O 3.1.3 Development of the international [paper] chart series through the relevant committees and bodies. **[MP]**

3.1.3.1 Development of new symbology for ship routing, including archipelagic sea lanes, vessel traffic services, environmentally sensitive areas, etc. **[MP]**

3.1.3.2 Progress of the work of the Committee on the Standardization of Nautical Publications, (i.e. Sailing Directions and other nautical publications) and monitor the development of standard formats for Notices to Mariners. **[MP]**

3.1.3.3 Resolution of issues concerning the extension of the INT chart scheme to include large scale charts. **[MP]**

Tasks

T 3.1.1 Revise, develop, and maintain the following publications:
S-52, S-57 New Editions **[by 2006]**, M-4, M-11, **[by 2003]**

1.2 IHO Programme 3. Element 3.4 Data for Geomatics Application

O 3.4.1 Assist Member States to optimize and extend the use of their hydrographic data sets for purposes other than navigation through:

3.4.1.1 Development of generic product and service specifications. Investigate, through the Subgroup of TSMAD for Hydro Survey Data and Exchange, how to include these data as a part of S-57. **[HP]**.

Tasks

T 3.4.2 Complete harmonization of IHO spatial data standards with ISO standards. **[by 2006]**

CHRIS Workplan - Summary Table

CHRIS WG	Task	IHO W.P.	CHRIS Meeting	Projects	Priority*	Start Date	End Date	Remarks
TSMAD	A	T3.4.2	17	Develop S-100 based on ISO TC211 geo-spatial standards.	H	2001	2007	No product specifications shall be developed unless specifically directed
TSMAD	B	O3.1.1	14	Keep S-58 Recommended ENC validation checks up to date	H	2002	Cont	
TSMAD	C	O3.1.1	14	Support FAQ and encoding advice sections of IHO web site up to date	H	2002	Cont	
TSMAD	D	T3.4.2	17	Develop S-57 Ed. 3.1.1 and revise ENC Product Specification	H	2005	2006	
C&SMWG	A	T3.1.1	14	Develop S-52 App. 2 "Colours and Symbols Specifications for ECDIS", Edition 4.2 and its Annex A "Presentation Library", Edition 3.3	H		2004	
C&SMWG	B	O3.1.1	14	Contribute to IEC TC80/WG13 symbol harmonizing work	H		2004	
C&SMWG	C	T3.1.1	14	Examination of S-52 main documents and annexes for redundant operational aspects of ECDIS	M		2004	
C&SMWG	D	O3.1.1	14	Introduce new website based recommendation service for good application practice of S-52	M		na	
C&SMWG	E	O3.1.1	14	Contribute to harmonised rules for ENC loading strategy, use of SCAMIN and overscale indication	M		2004	
C&SMWG	F	T3.1.1	14	Assess the impact on S-52 C&S regulations of other IHO standards	M		2004	
DPSWG	A	O3.1.1		Complete IHO S-63 Data Protection Scheme documentation	H	2003	2004	
DPSWG	B	O3.1.1		Publish IHO S-63 and provide support	H	2003	2006	
DPSWG	C	O3.1.1		Monitor and support industry transition from Primar Security Scheme to IHO S-63	H	2003	2006	
CSPCWG	A	T3.1.1	14	Revise M-4	M	2001	2007	Being revised by Sections
CSPCWG	B	T3.1.1	14	Revise M-11			2005	Integrate S-48. IHB to incorporate in M-11. IHO CL 37/2005 refers.
CSPCWG	C	O3.1.3.2	15	Review requirement for standardization of International Notices to Mariners			2004	Requirement reviewed. Include within item A
CSPCWG	D	O3.1.3.1	15	Development of new symbology (including depiction of Fairways, AIS-equipped AtoN)	M	2004	2006	Fairway submission to CSPCWG 2

* H = High, M = Medium, L = Low

CHRIS WG	Task	IHO W.P.	CHRIS Meeting	Projects	Priority *	Start Date	End Date	Remarks
CSPCWG	E	O3.1.1	14	Revise supplementary documents to M-4 (INT 1, 2, 3)	M	2003	2006	New edition of INT 1 published in 2005
SNPWG	A	O3.1.1	15	Decide on the Data Format of digital NPs intended for use in ECDIS.	H			
SNPWG	B	O3.1.1	15	Define the content requirements of digital NPs intended for use in ECDIS.	M			
SNPWG	C	O3.1.1	15	Develop display rules for digital NPs intended for use in ECDIS.	M			
SNPWG	D	O3.1.1	15	Draft guidance documents and revised technical resolutions.	M			
SNPWG	E	O3.1.1	15	Liaise with other CHRIS WG's and other IHO and international bodies.	M			
HGMIO	A	O3.1.1	15	For each MIO category, describe the current status of development efforts (e.g., data or display-related)	M			
HGMIO	B	O3.1.1	15	For each MIO category, assess level of completion and further development required	L			
HGMIO	C	O3.1.1	15	Recommend to TSMAD and C&SMWG MIO-related matters that warrant consideration for inclusion in next editions of S-57 and S-52	L			

2. TSMAD Work Plan

[Any remarks relevant to the understanding of the plan to be inserted here]

2.1 TSMAD Tasks

- A Develop S-100 based on ISO TC211 geo-spatial standards (IHO T3.4.2 refers)
- B Keep S-58 Recommended ENC validation checks up to date (IHO O3.1.1 refers)
- C Support FAQ and encoding advice sections of IHO web site up to date (IHO O3.1.1 refers)
- D Develop S-57 Ed. 3.1.1 and revise ENC Product Specification

Task	Work item	Priority *	Milestones	Start Date	End Date	Status **	Contact Person(s)	Affected Pubs/Standard	Remarks
A.1	Develop S-100 Object Catalogue.	H		2001	Feb 06	O	Holger Bothien bo@sevens.com		
A.2	Develop S-57 Edition 4.0 ENC product specification	L		2001	Jun.06	O	Chris Roberts Chris.Roberts@defence.gov.au		
A.3	Develop S57 Edition 4.0 Imagery and Gridded data models.	H		2001	Feb.06	O	Don Vachon VachonDon@dfo.mpo.gc.ca		
A.4	Develop S-57 Edition 4.0 Time varying and 3-D data.	H		2001	Oct.04	O	Jim Radice JRadice@navcen.uscg.mil		
A.5	Develop S-57 Edition 4.0 Expansion of meta data contents.	H		2001	Jul.06	O	Tony Pharaoh apharaoh@ihb.mc		
A.6	Review of S-57 base documents.	H		2001	Feb.06	O	Barrie Greenslade Barrie.Greenslade@ukho.gov.uk		
A.7	Develop S-57 Edition 4.0 Bathymetric Content Specification.	H		2001		O	Lee Alexander Lee.Alexander@unh.edu		
A.8	Develop S-57 Edition 4.0 Portrayals (Data Depiction).	H		2001		P	Tony Pharaoh apharaoh@ihb.mc		Not Activated
A.9	Develop S-57 to paper chart functionality and Print-on-Demand (POD) file transfer guidelines.	M		2003		P	Cameron McLeay cameron.mcleay@caris.com		Not Activated
A.10	Liaise with Non-IHO Constituents, e.g. Inland ECDIS, Marine Navigation Industry, DGIWG, AML, WMO Ice, and GIS Industry.	H		2004	-	O	Lee Alexander lee.Alexander@unh.edu		

* H = High, M = Medium, L = Low

** P = Planned, O = Ongoing, C = Completed

Task	Work item	Priority *	Milestones	Start Date	End Date	Status **	Contact Person(s)	Affected Pubs/Standard	Remarks
B.1	Keep S-58 Recommended Validation Checks up to date	H		2003	-	O	Guy Uguen Guy.uguen@shom.fr		
C.1	Support FAQ and Encoding Bulletins	H		2003	-	O	Jeff Wooton jeff.wooton@defence.gov.au		
D	Develop S-57 Ed. 3.1.1 and revise ENC Product Specification	H		2005	2006	O			

TSMAD

Date	Location	Activity
29 Sep – 3 Oct 03	Wollongong, Australia	10th Meeting
11-12 November 04	IHB, Monaco	11 th Meeting
10-11 November 05	Wollongong, Australia	12 th Meeting

TSMAD Sub-WG

Date	Location	Activity
25-29 April 05	Univ. of NH, USA	8th Meeting
7-9 November 05	Wollongong, Australia	9 th Meeting

3. C&SMWG Work Plan

[Any remarks relevant to the understanding of the plan to be inserted here]

3.1 C&SMWG Tasks

- A Develop S-52 App. 2 “Colours and Symbols Specifications for ECDIS”, Edition 4.2 and its Annex A “Presentation Library”, Edition 3.3 (IHO T3.1.1 refers).
- B Contribute to IEC TC80/WG13 symbol harmonizing work (IHO O3.1.1 refers).
- C Examination of S-52 main documents and annexes for redundant operational aspects of ECDIS (IHO T3.1.1 refers).
- D Introduce new website based recommendation service for good application practice of S-52 (IHO O3.1.1 refers).
- E Contribute to harmonised rules for ENC loading strategy, use of SCAMIN and overscale indication (IHO O3.1.1 refers).
- F Assess the impact on S-52 C&S regulations of other IHO standards (IHO T3.1.1 refers).
- G Improving ENC Consistency/loading strategies
- H Harmonisation of pick report presentation
- I Develop Symbols for object and attribute enhancements of S-57 Edition 3.1.1
- J Harmonisation with SPCWG
- K Built a CSMWG bulletin and FAQ section on the IHO website

Task	Work item	Priority *	Milestones	Start Date	End Date	Status **	Contact Person(s)	Affected Pubs/Standard	Remarks
F.2	Consideration of the implications of future S100/S101 on S-52 C&S regulations	M		2003		O	Mathias Jonas Sven Herberg	S-52, App.2 S-57, Vers. 4.0	
F.3	Identify methods to incorporate symbolization into the S100 registry	M		2005		P	Mathias Jonas Pol Lebihan Sven Herberg	S-52, App. 2 S100	
G.1	Contribute and attend to a loading strategy workshop organized by ECDIS industry	M		2005		P	Mathias Jonas	S-52, App.2	
H.1	Contribute to common work of SNPWG and UNH, for NP3 presentation.	M		2005		P	Mathias Jonas	S-52, App.2	
I.1	Liase with TSMAD for symbols for new e 3.1.1 attributes.	H		2005	2006	P	Mathias Jonas	S-52, App.2 Annex A	
J.1	Liase with CSPCWG	M		2005		O	Mathias Jonas	S-52, App.2 Annex A	
K.1	Establish links at IHB server	M		2005		P	Michel Huet	S-52, App.2 Annex A	

Date	Location	Activity
18-20 May 03	Ottawa, Canada	14 th Meeting
2-4 May 05	Rostock, Germany	15 th Meeting
29-31 May 06	IHB Monaco	16th Meeting

* H = High, M = Medium, L = Low
** P = Planned, O = Ongoing, C = Completed

4. DPSWG Work Plan (April 2004)

4.1 DPSWG Tasks

- A Complete IHO S-63 Data Protection Scheme documentation (IHO O3.1.1 refers).
- B Publish IHO S-63 and provide support (IHO O3.1.1 refers).
- C Monitor and support industry transition from Primar Security Scheme to IHO S-63 (IHO O3.1.1 refers).

Task	Work item	Priority*	Milestones	Start Date	End Date	Status**	Contact Person(s)	Affected Pubs/Standard
A.1	Complete S-63 Test Data	H			31.07.03	C	Jonathan Pritchard, UKHO	S-63
A.2	Review S-63 Confidentiality Agreement	H			31.07.03	C	Tony Pharaoh, IHB	
A.3	Handover of S-63 to IHB	H			31.07.03	C	Robert Sandvik, Primar Stavanger	S-63
B.1	Publish S-63	H		01.08.03	01.09.03	C	Michel Huet, IHB	
B.2	Provide S-63 technical support	H		01.08.03		O	Robert Sandvik, Primar Stavanger	
C.1	OEM S-63 transition guidelines and support	H		01.08.03		C	Robert Sandvik, Primar Stavanger	
C.2	Review feedback from industry/users on transition guidelines and agree support activities and work plans	H		22.06.04	23.06.04	P	Robert Sandvik, Primar Stavanger	

Date	Location	Activity
22-23 June 04	IHB, Monaco	Meeting scheduled to discuss feedback from industry and users and agree specific support activities. Review feedback on current S-63 documentation.

* H = High, M = Medium, L = Low
 ** P = Planned, O = Ongoing, C = Completed

5. CSPCWG Work Plan

- *Tasks and Work Items are pursued in accordance with IHO Work Programme 2003-2007, Programme 3 (Techniques and Standards Support), Element 3.1 Nautical Cartography. In particular, the objectives: 3.1.1.1 the refinement and expansion of specifications and standards; 3.1.2 the development of standards for cartography and geographic information; 3.1.3 the development of the international [paper] chart series, including development of new symbology (3.1.3.1) and the extension of the INT chart scheme (3.1.3.3); task 3.1.1 the revision, development and maintenance of publications, including M-4 (Chart Specifications of the IHO) and M-11 (Catalogue of INT Charts).*
- *The focus is on maintaining and enhancing the cartographic standards in paper charts to suit the needs of the modern mariner in support of safe navigation, whilst drawing together, wherever possible, common issues of paper/digital charting.*
- *As a Plan it will and should evolve; accordingly, contributions from WG members and others are welcomed at any time. This version has evolved from that agreed at CHRIS 15; it shows progress since that plan, and includes plans (next milestones and dates) for continuing the work.*

5.1 CSPCWG Tasks

- A Revise, develop and maintain Publication M-4 “Chart Specs and Regulations for INT Charts”, including creation of digital Version (IHO T3.1.1 refers) – *Revised digital version developed by UK and available on IHO website (April 2005).*
- B Revise, develop and maintain Publication M-11 “Catalogue of INT Charts” (IHO T3.1.1 refers) -
- *Part A produced by CSPCWG and available on IHO website (April 2005). New format and content for M-11 agreed with IHB.*
- C Review requirement for standardization of International Notices to Mariners (IHO O3.1.3.2 refers)
- *Completed. Follow-on work item at A.8.*
- D Development of new symbology (IHO O3.1.3.1 refers) –
- E Maintenance of M-4 supplementary publications INT 1, 2 & 3.

Task	Work item	Priority*	Next Milestone	Start Date	End Date	Status**	Contact Person(s)	Affected Pubs/Standard	Remarks
A.2	Revise M-4 Part B Section 100		Publish	2004	2005	C	Sec CSPCWG	M-4 / B-100	IHO CL 57/2005 (30 May 05)
A.3	Revise M-4 Part B Section 200	H	Include M/S feedback	2004	2005	O	Sec CSPCWG	M-4 / B-200	IHO CL 40/2005 (deadline for responses 22 Jul 05)

Task	Work item	Priority*	Next Milestone	Start Date	End Date	Status**	Contact Person(s)	Affected Pubs/Standard	Remarks
A.4	Revise M-4 Part B Section 400	H	Include M/S feedback	2005	2006	O	Sec CSPCWG	M-4 / B-400	CL 06/2005 – 1 st draft B-400-429; section divided for manageability
A.5	Revise M-4 Part B Section 300	L	Completion of A.4	2006		P	Sec CSPCWG	M-4 / B-300	Start after A.4 completed
A.6	Revise M-4 Part B Section 500	L	Completion of A.5			P	Sec CSPCWG	M-4 / B-500	Start after A.5
A.7	Revise M-4 Part B Section 600			2004	2005	C	Sec CSPCWG	M-4 / B-600	Lattice charts obsolescent. Removed from M-4. IHO CL 41/2005 refers (25 Apr 05)
A.8	New specification for Chart Maintenance section	L	Receipt of responses to CSPCWG 1 Action 15			P	Sec CSPCWG	M-4	Position in M-4 to be determined. To include NM criteria, print dates, thumb labels etc (B -252 round II comments refer)
B.1	Review S-48 and amalgamate within M-11	L	IHB to incorporate in M-11	2004	2004	C	IHB – M. Huet	M-11	CSPCWG action complete – IHO CL 37/2005. IHB to incorporate in M-11 and add to IHO web-site
C.1	Review requirement for the standardization of International Notices to Mariners;				2004	C	Chair CSPCWG		Consultation completed; no requirement for INT NMs. See new action A.8
D.1	Review and develop depiction of ESSAs (including PSSAs & ATBAs)			2003	2004	C	Sec CSPCWG	M-4 /B-437, INT 1	IHO CL 01/2005 (4 Jan 05)
D.2	Develop new symbology: ASLs			2003	2004	C	Sec CSPCWG	M-4/B-432, 434-436, INT 1	IHO CL 01/2005 (4 Jan 05)
D.3	Vessel Traffic Services guidance	L	Review of B -480	2005	2006	O	Sec CSPCWG	M-4 /B-435 & 488	Requirement from IHC XVI, include review under A.4
D.4.1	Review and develop depiction of offshore wind farms (and other offshore renewables)			2004	2005	C	Sec CSPCWG	M-4, INT 1	IHO CL 14/2005 (2 Feb 05)

Task	Work item	Priority*	Next Milestone	Start Date	End Date	Status**	Contact Person(s)	Affected Pubs/Standard	Remarks
D4.2	Review symbology for Restricted Areas (inc Activities Inadvisable)			2004	2004	C	Sec CSPCWG	M-4, INT 1	IHO CL 01/2005 for Entry Prohibited (4 Jan 05). CL 13/04 summarised views on other proposals, none to be progressed at present; new work item required if re-submitted.
D.5	Review requirement for Fairway symbology	M	Discuss at CSPCWG 2	2004	2006	O	Vice Chairman CSPCWG	M-4, INT 1	New submission from FI May 2005 for review at CSPCWG 2
D.6	Review Wreck depth definitions	M	Review of sub-section B -420 – see A.4	2005	2005	O	Sec CSPCWG	M-4, INT 1	NL previously supplied suggested wording to CSC, included in B-420 draft revision; item A.4
D.7	Charted limits: styles, hierarchies, multi-feature lines	L	Draft by AU	2005	2006	P	C Roberts, AU	M-4B-439	CSPCWG 1 Action 21
D.8	Develop symbols for AIS-equipped AtoN	H	MS responses to IHO CL75/2005	2005	2005	O	Sec CSPCWG	M-4, INT 1	Proposed, developed and circulated to MS; IHO CL 75/2005 refers
E.1	New edition INT 1			2003	2005	C	S Spohn, DE	INT 1	Completed 18 Feb 05
E.2	New edition INT 2	M	Publication B-200	2005	2006	P	M de Graaf, NL	INT 2	CSPCWG 1 Action 33 – input required from WG members
E.3	New edition INT 3	M	Publication by UK	2005	2006	O	Sec CSPCWG	INT 3	NE in preparation by UK
E.4	Symbols for vacant entries in INT 1	L				P	Sec CSPCWG	INT 1, M-4 part B	
E.5	Small craft symbols	L				P	Sec CSPCWG	INT 1, M-4 part B	

Date	Location	Activity
3-5 November 04	Monaco	1 st WG Meeting
19-21 October 05	Monaco	2 nd WG Meeting

Secretary: Andrew Heath-Coleman. **Email:** coleman.andrew@ukho.gov.uk

6. SNPWG Work Plan

[Any remarks relevant to the understanding of the plan to be inserted here]

6.1 SNPWG Tasks

- A Decide on the Data Format of NP-data intended for use in ECDIS (NP3).
- B Define the content requirements of NP-data intended for use in ECDIS (NP3).
- C Develop basic display rules for NP-data intended for use in ECDIS (NP3).
- D Draft guidance documents
- E Revise technical resolutions as required
- F Liaise with other CHRIS WG's and other IHO and international bodies.

Task	Work item	Priority [*]	Milestones	Start Date	End Date	Status ^{**}	Contact Person(s)	Affected Pubs/Standard
A.1	Decide on the Data Structure of NPs-Data intended for use in ECDIS (NP3)	H	Decision for a Data Structure (June 2004)	2003	2004	C	Chair/Sec SNPWG	NP3 Data should be encoded as S57-objects which were modeled in UML
A.2	Look at existing systems on the market	H	June 2004	2003	2004	C	Chair/Sec SNPWG	
A.3	Evaluate the pros and cons	H	June 2004	2003	2004	C	Chair/Sec SNPWG	
B.1	Examine the content of traditional NPs	M	Content Specs (June 2004)	2004	2005	C	Chair/Sec SNPWG	Which NPs and NP data type should be included in NP3
B.2	Proposal discovery and distribution (BSH etc.)	M	Open- No deadline	2004		O	Chair/Sec SNPWG	Post discovery information on website
B.3	Draft Content Specs	H	2006	2004	2006	O	Chair/Sec SNPWG	In time to be included in S57 Ed4
B.4	Review Data Models	M	2006	2004	2006	O	Chair/Sec SNPWG	
B.5	Prepare Proposal for TSMAD	H	2006	2005	2006	P	Chair/Sec SNPWG	In time to be included in S100
C.1	Develop basic display rules for NP-data intended for use in ECDIS (NP3)	M	2007	2005	2007	P	Chair/Sec SNPWG	S52. Close Co-operation with CSMWG required.

^{*}H = High, M = Medium, L = Low

^{**}P = Planned, O = Ongoing, C = Completed

Task	Work item	Priority *	Milestones	Start Date	End Date	Status **	Contact Person(s)	Affected Pubs/Standard
D.1	Data Capture Guidance	M	2007	2006	2007	P	Chair/Sec SNPWG	S100. Document like Use of the Object Catalogue for NPs
E.1	Revised Technical Resolutions, as required	M	2007	2007	2007	P	Chair/Sec SNPWG	Technical Resolutions
F.1	Liase with the CSMWG for the development of the display rules	M	2007	2005	2007	O	Chair/Sec SNPWG	S52
F.2	Liase with TSMAD	M	2007	2004	2007	O	Chair/Sec SNPWG	S57
F.3	Liase with other relevant WGs	M	2007	2004	2007			

Date	Location	Activity
7-9 June 04	NOAA, Silver Spring, MD, USA	3 rd Meeting
1-3 March 05	IHB, Monaco	4 th Meeting
24-28 October 05	Copenhagen, Denmark	5 th Meeting

7. DQWG Work Plan

This WG is currently dormant

8. HGMIO Work Plan

As a technical liaison Working Group that is a subsidiary of two Committees (IHO CHRIS and IEC TC80), the primary purpose of HGMIO is to harmonize the activities of IHO and IEC related to the provision and display of supplemental chart- and navigation-related information on ECDIS. As agreed at HGMIO 2 (on 14 June 2003), the primary focus will be to assess the current status of previously developed or proposed IHO S-57 objects/attributes and display aspects for:

- Ice Information;
- Tides and Water levels;
- Oceanographic;
- Meteorological;
- Marine Environmental Protection;
- Aids to Navigation Status

Other potential topics for future investigation could include:

- Current Flow;
- Right Whales

8.1 HGMIO Tasks

- A For each MIO category, describe the current status of development efforts (e.g., data or display-related), and assess level 1 further development required.
- B Recommend to TSMAD and C&SMWG MIO-related matters that warrant consideration for inclusion in next editions of S-57 and S-52.

Task	Work item	Priority *	Milestones	Start Date	End Date	Status **	Contact Person(s)	Affected Pubs/Standard
A.1	Ice Information	M	Work Item agreed at HGMIO 2	Fall 03	Mar 06	P	Canadian Hydrographic Service (Ottawa) John Falkingham, Ice Services Canada	S-57 & S-52
A.2	Meteorological	L	Work Item agreed at HGMIO 2	Fall 03	Unkn.	P	Michel Huet (IHB) and Dan Pillich (SevenCs)	S-57 & S-52
A.3	Tides/Water Levels	L	Work Item agreed at HGMIO 2	Fall 03	Unkn.	P	Lee Alexander (Univ. of NH)	S-57 & S-52
A.4	Oceanographic	L	Work Item agreed at HGMIO 2	Fall 03	Unkn.	P	Max van Norden (US Naval Oceanographic Office)	S-57 & S-52

* H = High, M = Medium, L = Low

** P = Planned, O = Ongoing, C = Completed

Task	Work item	Priority *	Milestones	Start Date	End Date	Status **	Contact Person(s)	Affected Pubs/Standard
A.5	Current Flow	L	No tasking or volunteer	-	-	-	TBD	-
A.6	Aids to Navigation Status	M	Work Item agreed at HGMIO 3	Jul 05	Dec 07	O	Michel Huet	S-57 & S-52
A.7	Marine Environmental Protection	M	Work Item agreed at HGMIO 3	Jan 05	Jan 08	O	Julia Powell	S-57 & S-52
B.1	Recommend to TSMAD MIO -related matters that warrant consideration for inclusion in next edition of S-57	L	Work Item agreed at HGMIO 2	Jan 04	Unkn.	O	Lee Alexander (Univ. of NH)	S-57 Ed. 4.
B.2	Recommend to C&SMWG MIO -related matters that warrant consideration for inclusion in next edition of S-52	L	Work Item agreed at HGMIO 2	Jan 04	Unkn.	O	Lee Alexander (Univ. of NH)	S-52 App.2, Ed. 4

Date	Location	Activity
14 June 03	IHB, Monaco	2 nd Meeting
27 June 05	IHB, Monaco	3 rd Meeting

* H = High, M = Medium, L = Low

** P = Planned, O = Ongoing, C = Completed