

Report of the Tidal and Water Level Working Group

Submitted by:	Chairman, TWLWG
Related Documents:	Report of TWLWG2 meeting (available from IHO web site).
Related Projects:	None
Chair:	Stephen Gill, USA
Vice-Chair:	Lucia Pineau, France
Secretary:	Steve Shipman, IHB
Member States:	Australia, Brazil, Canada, Chile, China, Cuba, Denmark, Ecuador, Finland, France, Germany, India, Indonesia, Italy, Japan, Korea Rep of, New Zealand, Norway, Portugal, South Africa, Spain, UK, Uruguay, USA, Venezuela.
Expert Contributor Organisations:	Bohdan Pillich (Tidal Expert) IOC-GLOSS
<i>see Annex A for full details</i>	

Meetings Held During Reporting Period

TWLWG2 27 - 29 April 2010 Stavanger, Norwayl.

Next Meeting

TWLWG3 5 – 7 April, Jeju Island, Republic of Korea

Work Program

The 2nd meeting of the TWLWG took place in the offices of the Norwegian Hydrographic Service in Stavanger, Norway from 27 – 29 April 2010 and was attended by 16 representatives from 15 IHO Member States, the IHB and the IOC Global Sea Level Observing System (GLOSS).

The first stage of work on the Dynamic Application of Tides in ECDIS was completed and the results passed to TSMAD in advance of their meeting in May 2010. The preparation of the pages for Objects and Attributes is now in progress.

Assistance has been given to the translator of the French Manual of Tides and the proof reading of the first 4 chapters has been completed.

A preliminary review of the definitions of Mean Sea Level and their suitability for waters with little tidal variation was completed. Areas requiring further study were identified and are being progressed.

The outline of a short course in “Tides for Hydrography” was prepared and passed to the CBSC in advance of their June 2010 meeting.

A revised draft WP is attached at Annex B. The completion dates for some items have been extended to reflect a more realistic outcome.

Progress on HSSC Action Items

A new WP Item C.2 “Develop a Standard for the transmission of real-time tidal data” has been included in the TWLWG WP with a completion date of 2012.

Problems Encountered

N/A

Any Other Items of Note

N/A

Conclusions and Recommended Actions

N/A

Justification and Impacts

N/A

Action Required of HSSC

The HSSC is invited to:

- a. note this report
- b. endorse the work program at Annex B

Annex A to TWLWG Report to HSSC2

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Annex A to TWLWG Report to HSSC2

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Annex A to TWLWG Report to HSSC2

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1 TWLWG Work Plan

1.1 TWLWG Tasks

- A Maintain Standard Tidal Constituent List (IHO Work Programme 3.2.4 refers)
- B Prepare a Standard for Digital Tide Tables (IHOTC Report to the XVIIth IHC as adopted)
- C Liaise with TSMAD on tidal matters relevant to the Dynamic Application of Tides in ECDIS and develop a Standard of the transmission of real-time tidal data (Action HSSC1/18)
- D Monitor and assist in the preparation of English translation of the Tidal Manual prepared by the Institut Océanographique and SHOM (IHO funded the translation from French to English)
- E Review the various definitions of MSL and their relevance to Hydrographic Offices and review the IHO tidal resolutions to ensure that they are compatible with the requirements of non tidal areas such as the Baltic Sea.
- F Prepare and maintain an inventory of tide gauges used by Member States and to publish it on the IHO/TWLWG web site.
- G Prepare structure and contents for a short course (maximum 5 days) on “Tides for hydrography” for the Capacity Building Sub Committee

Task	Work item	Priority H-high M-medium L-low	Milestones	Start Date	End Date	Status P-planned O-ongoing C-completed	Contact Person(s) * indicates leader	Related Pubs/Standard
A.1	Maintain Standard Tidal Constituent List	H	No updates required in 2010	Continuous		O	Chris Jones* Lucia Pineau	
B.2	Prepare a Standard for Digital Tide Tables	H	Prepare draft Standard	2009	2012	O	Lucia Pineau* Stephen Gill Chris Jones Zarina Jayaswal Ian Halls	

Task	Work item	Priority H-high M-medium L-low	Milestones	Start Date	End Date	Status P-planned O-ongoing C-completed	Contact Person(s) * indicates leader	Related Pubs/Standard
C.1	Liaise with TSMAD on tidal matters relevant to the Dynamic Application of Tides in ECDIS	H	Review Objects and Attributes required for water levels and streams (Passed to TSMAD April 2010) Prepare draft pages for Objects and Attributes.	2009 2010	2011 2012	C O	Ian Halls* Zarina Jayaswal Steve Gill Lucia Pineau Chris Jones Juan Fierro Ruth Farre Dan Pillich	
C.2	Develop a Standard for the transmission of real-time tidal data	H		2009	2012	O	Steve Gill* Chris Jones Zarina Jayaswal Ian Halls Juan Fierro	
D.1	Provide advice to the translator preparing the English text of the Tidal Manual prepared by the Institut Océanographique and SHOM	H	Completion of translation into English. (April 2010 Work on Chapters 1 – 10 completed Annexes A to E remain)	2003	2011	O	Steve Shipman*	
D.2	Proof read the English translation of the Tidal Manual prepared by the Institut Océanographique and SHOM	H	Approval of the English text. (Chapters 1, 2, 3 and 4 complete)	2009	2011	O	Steve Shipman* Glen Rowe Ruth Farre Dan Pillich Zarina Jayaswal Juan Fierro Steve Gill Chris Jones Bill Mitchell Chris Andreasen	

Task	Work item	Priority H-high M-medium L-low	Milestones	Start Date	End Date	Status P-planned O-ongoing C-completed	Contact Person(s) * indicates leader	Related Pubs/Standard
E.1	Review the various definitions of MSL and their relevance to Hydrographic Offices and review the IHO tidal resolutions to ensure that they are compatible with the requirements of non tidal areas such as the Baltic Sea.	H	Reviewed at TWLWG2- Further work being undertaken.	2009	2012	O	Jukka Varonen* Tor Tørresen Lucia Pineau Steve Shipman Juan Fierro Jose Quijano Chris Jones Kwan Chang Lim	
F.1	Prepare and maintain an inventory of tide gauges used by Member States and to publish it on the IHO/TWLWG web site.	H	Initial inventory from TWLWG members available on IHO web site. CL36/2010 sent to Member States seeking wider input.	Continuous		O	Steve Shipman* Steve Gill	
G.1	Prepare structure and contents for a short course (maximum 5 days) on "Tides for hydrography"	H	Delivery of course structure to CBSC. (Passed to CBSC8 – June 2010)	2009	2010	C	Steve Gill* Steve Shipman	

1.2 TWLWG Meetings (IHO Task 3.1.11 refers)

Date	Location	Activity
27 – 29 April 2010	Stavanger, Norway	2 nd Meeting
5 – 7 April 2011	Jeju Island, Rep of Korea	3 rd Meeting
March/April 2012	To be decided	4 th Meeting

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