



Hydrographic Services and Standards Committee

Report of the TWLWG

to HSSC4

September 2012

Principal activities and achievements

- ✦ The 4th meeting of the TWLWG took place at the Calders Hotel & Conference Centre, Fish Hoek, South Africa from 8 – 10 May 2012 and was hosted by the South African Hydrographic Office (SAHO). The meeting was attended by 14 representatives from 12 IHO Member States and the IHB; representatives from Namibia and Mozambique attended as observers.



Principal activities and achievements

- ✦ TWLWG was briefed on UKHO activities involved with the Permanent Service for Mean Sea Level and information available on the website (www.psmsl.org/products/anomalies). US explained how Climate Change research on sea level used the data and the importance of a common datum to this research. It was highlighted the records of long term tidal observations and sea level data, including older analogue traces, were of particular value in Tsunami research and for flooding studies. TWLWG has previously endorsed member states to support, where possible, the long-term operation of tide and water level stations.



Principal activities and achievements

- ✦ For purposes of understanding the impacts of global sea level rise, it has been postulated that the increased volume of water in some ocean basins could have an effect on the tidal hydrodynamics. It was agreed Member States should take long term records of their best quality data to conduct a series of one year harmonic analyses to detect any long-term trends in the amplitudes and phases of the fundamental tidal constituents.



Problems or outstanding issues

- ✦ During discussion on the inventory of tide gauges used by IHO Member States, the Chairman encouraged all to check their data listings and to approach cooperating and non-IHO member states to provide information to increase the geographical spread of the information held. In addition TWLWG were encouraged to provide tide gauge sampling rates and web links for inclusion in the Inventory on the IHO website.



Problems or outstanding issues

- ★ During discussion on the Dynamic Application of Tides in ECDIS the work already completed was highlighted and it was agreed a descriptive document should be produced in which the challenges and problems which needed to be overcome should be articulated. It was agreed these issues and boundaries need to be identified and passed to HSSC for further comment and direction.



Problems or outstanding issues

- ★ TWLWG discussions regarding its review of IHO resolution 3/1919 as amended, (Datums and Benchmarks) and the definitions of Low Water, Mean Water and High Water concluded this work required the input of other WGs reporting to HSSC, in particular CSPCWG, and the text should separate tidal and non-tidal waters and appropriate wording should be submitted to HSSC for approval. A draft revision of this resolution is being developed for HSSC endorsement and subsequent submission to Member States for adoption next year.



Problems or outstanding issues

- ✦ During discussions regarding the exchange of harmonic constants/predictions the IT challenge of using XML data format was highlighted and the need to develop the capability to use this data format for future ease of data exchange.
- ✦ It was suggested there was a need to review the Technical Resolution on Times Zones due to the differences between the ISO standard (ISO 8601) format and that used by mariners in respect of S-100 and nautical publications.



Future work programme

- ✦ Discussion on the Standard Constituent List (Task A) considered it to be of merit to carry out a study of Tidal Predictions generated as a result of analysis of a “common data set” by different analysis software. Preliminary analysis performed to date show good comparison amongst participating member states. A continuing task A.2 is included in the draft work plan at Annex B to include additional member states.
- ✦ Activities undertaken in determining the ellipsoidal height of MSL and Chart Datum at the coast were highlighted. This is accomplished by obtaining GPS observations at tidal bench marks at tide stations. This also supports development of hydrographic surveying “on – the - ellipsoid”. It was agreed this should be progressed and expanded to cover the entire globe. The connection with the GLOSS programme was emphasised. It was agreed this should be considered for inclusion in the TWLWG WP by HSSC.



Future work programme

- ✦ The TWLWG was asked to review a proposal from Chris Andraesen to create and implement an Actual Tides On-Line Link (ATOL) which lists the URLs for all locations to access real-time tide and water level data. The draft listing is being disseminated for TWLWG review and will be considered as an active resource link on the TWLWG web-site similar to the existing Inventory of tide and water level gauges used by member states.



Action requested of HSSC

- a. note the TWLWG report;
- b. re-appoint the TWLWG to continue its work under its current Terms of Reference;
- c. endorse the draft Work Plan, as set out in Annex B to the report;

