TITLE	Reference	Last amendment (CL or IHC)	1st Edition Reference
DATUMS AND BENCH MARKS	3/1919 as amended	19/2008	A2.5

1 It is resolved that the datum of tide/water level observations and predictions for mariners shall be the same as chart datum (datum for sounding reduction).

2 It is resolved that chart datum and other tidal/water level datums used should be clearly stated on charts and all other navigational products.

3 It is resolved that chart datums (datums for sounding reduction), the datums of tide/water level prediction and other tidal/water level datums shall always be connected with the general land survey datum, and, in addition, with a prominent and permanent fixed mark in the neighbourhood of the tide gauge, station, observatory etc.

4 It is resolved that ellipsoidal height determinations of the vertical reference marks used for ~~tidal~~ tidal/water level observations should be made, in order to support the production of seamless data sets; i.e. to allow the translation between data sets with differing vertical datums. It is further resolved that such observations should relate to a geocentric reference system, preferably the International Terrestrial Reference System (ITRS) or one of its realizations e.g. the World Geodetic System 1984 (WGS84).

Where the tidal range is appreciable (>30cm)

5 It is resolved that heights on shore, including elevations of lights, should be referred to a HW datum.

6 It is resolved that the Lowest Astronomical Tide (LAT), or as closely equivalent to this level as is practically acceptable to Hydrographic Offices, be adopted as chart datum. Alternatively the differences between LAT and national chart datums may be specified in nautical documents. If low water levels in a specific area frequently deviate from LAT, chart datum may be adapted accordingly.

7 It is resolved that Highest Astronomical Tide (HAT) be adopted as the datum for vertical clearances. Alternatively the differences between HAT and national datums for vertical clearances may be specified in nautical documents. If high water levels in a specific area frequently deviate from HAT, the datum for vertical clearances may be adapted accordingly.

Note: LAT (HAT) is defined as the lowest (highest) tide level which can be predicted to occur under average meteorological conditions and under any combination of astronomical conditions. It is recommended that LAT and HAT be calculated either over a minimum period of 19 years using harmonic constants derived from a minimum of one year's observations or by other proven methods known to give reliable results. Tide levels should, if possible, reflect the estimated uncertainty ~~error~~ values obtained during the determination of these levels.

Where the tidal range is negligible (<30cm)

8 It is resolved that depths ~~datums~~, and all other navigational information ~~heights on shore, including elevations of lights, and vertical clearances~~ should be referred to Mean Sea Level (MSL) or other level as closely equivalent to this as is practically acceptable to Hydrographic Offices. ~~The datum used should be clearly stated on charts.~~

Note: The adopted level may be a well-defined geodetic datum as used for heights in land survey applications or an observed local Mean Sea ~~Water~~ Level (MS~~W~~L) based on long series of water level observations.

9 In order to support other non-navigational applications as UNCLOS and also to indicate the characteristics in the area, it is recommended to adopt the mean of yearly lowest/highest water levels observed over a long time period.

Inland Waters

Comment [VJ1]: J.Varonen had this version as a reference in his message 14 April 2013

Comment [VJ2]: Why this comment

Comment [R3]:

Comment [AHO4]: Added for consistency

Comment [R5]:

Comment [AHO6]: Deleted last sentence because it is now Point 2.

Comment [R7]: .Dear Jukka what other applications besides those on Paragraph 8?
I'm in doubt if it would to refer to in land waters

10 It is resolved that depths, and all other navigational information should be referred to an appropriate level practically acceptable to Hydrographic Offices or if needed LW as a reference level for depths and HW for vertical clearances. The selection of which one of the alternatives to be used is a difficult issue which can only be determined locally and which will be largely dependent on seasonal hydrological conditions. LW and HW are defined as the mean of lowest/highest water levels observed during navigational seasons over a long time period.

10 ~~It is resolved that heights on shore, including elevations of lights, should be referred to a HW datum.~~

~~*Note: An appropriate long term range of low/high water observations means at least 10 years of continuous observations and ideally 40 years.*~~

11 ~~It is resolved that data shown on charts and publications should be referred to an appropriate low water datum. The selection of the datum to be used is a difficult issue which can only be determined locally and which will be largely dependent on seasonal hydrological conditions; however in order to allow the development of regional solutions, it is recommended that an appropriate long term range of low/high water definitions of the upper/lower 6-0 percentile or the mean of yearly lowest water levels observed over a long time period or other level as closely equivalent to these level as is practically acceptable to Hydrographic Offices, may be adopted as the chart datum.~~

12 ~~It is further resolved that an appropriated high water HW datum be used for vertical clearances. In order to allow the development of regional solutions, it is recommended that an appropriate long term range of low/high water definitions of the lower/upper 94-100 percentile or the mean of yearly highest water levels observed over a long time period or other level as closely equivalent to this level as is practically accepted to Hydrographic Offices, may be adopted as the datum for vertical clearances.~~

Comment [R8]: It was missed if we accept "an appropriate low water"

Comment [R9]:

Comment [R10]: