



THIS CIRCULAR LETTER REQUIRES YOU TO VOTE

IHB File No. S3/7050

CIRCULAR LETTER 11/2012
31 January 2012

HYDROGRAPHIC DICTIONARY (S-32)

References: a) CL 87/2007 dated 28 September 2007
b) Document HSSC3-05.9A

Dear Hydrographer,

1 The Hydrographic Dictionary Working Group (HDWG) has prepared new or revised definitions for a total of 72 terms for inclusion in S-32 – *Hydrographic Dictionary*, as follows:

- 11 new and 7 amended definitions which were originally included in S-52 Appendix 3 - *Glossary of ECDIS related terms* but which were not included in S-32 Appendix 1 - *Glossary of ECDIS related terms* (See Reference A);
- 11 new and 31 amended definitions following a proposal from TSMAD to ensure alignment with definitions in IHO Publication S-57 - *IHO Transfer Standard for Digital Hydrographic Data*; (During its deliberations on these definitions HDWG noted that S-57 referred to “Land elevation” whereas S-32 defined “elevation”. HDWG reviewed the definition of “elevation” and in so doing concluded that the definitions of “height” and “altitude” also required amendment. This matter was discussed with the Chairs of the TWLWG and CSPCWG. HDWG has attempted to provide 3 consistent, yet distinct, definitions.); and
- 8 new and 4 amended definitions based on proposals from the Chair of WWNWS Sub-Committee. (During its deliberations on these definitions HDWG took note of the revised definitions included in S-53 “Joint IMO/IHO/WMO Manual on Maritime Safety Information”; the IMO International SafetyNET Manual; and the IMO NAVTEX Manual, all of which have been prepared by the WWNWS Sub-Committee and approved by IHO Member States and the IMO. All new / amended definitions are in alignment with the definitions included in these publications although in some cases a sentence, considered to be very specific to WWNWS operations has been omitted from the proposed S-32 definition.)

2 These definitions were submitted to the third meeting of HSSC (See Reference B) which was held at the IHB from 8 – 10 November 2011. HSSC3 endorsed the work of the HDWG and invited the IHB to circulate the 72 definitions to Member States for adoption. The definitions are included at Annex A.

3 The HDWG also prepared a draft set of “Business Rules” as set out in Annex B, which will provide guidance on entries which are appropriate for inclusion in S-32 and the way in which these entries are managed. The description of terms to be included in S-32 is a slightly simplified version of the guidance circulated to Member States in CL 2/1986 and adopted by decision 42 of the XIIIth IHC in 1987. HDWG proposed that the business rules should be included in the “Preface” to the on-line WIKI. HSSC3 endorsed this proposal and invited the IHB to circulate the “Business Rules” to Member States for adoption.

4 You are invited to complete the voting form at Annex C and return it to the IHB by 13 March 2012.

On behalf of the Directing Committee
Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Robert Ward', with a stylized flourish at the end.

Robert WARD
Director

Annex A: Definitions for adoption and inclusion in S-32
Annex B: Business Rules for the operation of S-32
Annex C: Voting Form

Definitions for adoption and inclusion in S-32

*Note: Throughout the following definitions: all text that currently exists in S-32 is shown in black upright; new text is shown in **italic red**; text which is proposed for deletion is shown in ~~strikethrough~~; and terms which are themselves defined in S-32 are shown in UPPER CASE.*

Terms from S-52 ECDIS Glossary, not included in S-32 Appendix 1

aid to navigation: ~~BUOYS, BEACONS, FOG SIGNALS, LIGHTS, RADIO BEACONS, LEADING MARKS, radio position fixing systems, and generally any charted or otherwise published device serving the interests of safe NAVIGATION. See NAVIGATIONAL AID~~ *A visual, acoustical, or RADIO device designed to assist in determining a safe COURSE or a vessel's POSITION, or to warn of dangers and/or OBSTRUCTIONS. Aids to navigation usually include BUOYS, BEACONS, FOG SIGNALS, LIGHTS, RADIO BEACONS, LEADING MARKS, RADIO position fixing systems and GNSS which are chart-related and are essential to safe NAVIGATION.*

***AIS:** See AUTOMATIC IDENTIFICATION SYSTEM.*

***ARPA:** See AUTOMATIC RADAR PLOTTING AID.*

***Automatic Identification System:** (AIS) An automatic communication and identification system intended to improve the safety of NAVIGATION by assisting the efficient operation of VESSEL TRAFFIC SERVICES, (VTS), ship reporting, and ship-to-ship and ship-to-shore operations.*

***Automatic Radar Plotting Aid:** (ARPA) A system wherein RADAR targets are automatically acquired and tracked and collision situations computer assessed and warnings given.*

compilation: *In CARTOGRAPHY, the selection, assembly, and graphic presentation of all relevant information required for the preparation of a MAP or CHART, or a NEW EDITION thereof. ~~the production of a new or improved MAP or CHART (or portion thereof)~~ Such information may be derived from other existing MAPS or CHARTS, AERIAL PHOTOGRAPHS, SURVEYS, new DATA, and other sources. In PHOTOGRAMMETRY, the production of a MAP (or portion of a MAP) from AERIAL PHOTOGRAPHS and geodetic control data, by means of photogrammetric instruments. Sometimes called stereo compilation.*

***DGPS:** See DIFFERENTIAL GPS*

electronic chart: *A very broad term to describe the DATA, the SOFTWARE, and the electronic system, capable of displaying CHART information. An electronic CHART may or may not be equivalent to the paper NAUTICAL CHART required by SOLAS. ~~An integrated, interactive, navigation information system, with which the user can display the hydrographic and positional information that is required to conduct the safe navigation of his vessel. It comprises hydrographic and cartographic databases containing information useful for navigation.~~*

***Global Navigation Satellite System:** (GNSS) The standard generic term for satellite NAVIGATION systems ("satnav") that provide autonomous geo-spatial positioning with global coverage. As of 2011, GPS and GLONASS are the only operational systems with new systems (for example the E.U's Galileo and China's Beidou) expected by 2020.*

Global Positioning System: (GPS). A satellite-based NAVIGATION system ~~intended~~ *designed* to provide highly accurate POSITION and velocity information in three dimensions and precise time and time interval on a global basis continuously. *GPS is operated by the United States Government. GPS to which differential corrections have been applied is known as DIFFERENTIAL GPS (DGPS). See also GLOBAL NAVIGATION SATELLITE SYSTEM.*

GLONASS: *A space-based, radio-positioning, NAVIGATION and time-transfer system operated by the Government of the Russian Federation. GLONASS to which differential corrections have been applied is known as Differential GLONASS (DGLONASS). See also GLOBAL NAVIGATION SATELLITE SYSTEM.*

GNSS: *See GLOBAL NAVIGATION SATELLITE SYSTEM*

heading: ~~The direction in which the longitudinal axis of a vessel or craft is pointed, usually expressed as an angular distance in DEGREES from NORTH (TRUE, MAGNETIC OR COMPASS) clockwise through 360 DEGREES.~~

INTI: *The compendium of symbols, abbreviations and terms to be used on NAUTICAL CHARTS, for use principally as a reference by mariners, as derived from the "Regulations of the IHO for International (INT) Charts and Chart Specifications of the IHO" (IHO S-4).*

International Electrotechnical Commission: *(IEC) A non-governmental organization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote standardization and international cooperation on all questions concerning standardization in the electrical and electronic fields.*

International Maritime Organization: *(IMO) A specialized agency of the United Nations whose primary role is to develop and maintain a comprehensive regulatory framework for shipping. Its remit includes safety, environmental concerns, legal matters, technical co-operation, maritime security and the efficiency of shipping. IMO was formerly called the Inter-Governmental Maritime Consultative Organization (IMCO).*

nautical chart:

1. A CHART specifically designed to meet the requirements of MARINE NAVIGATION, showing DEPTHS of water, NATURE OF BOTTOM, ELEVATIONS, configuration and characteristics of COAST, dangers and AIDS TO NAVIGATION. Also called marine chart, hydrographic chart, or simply CHART.
2. *(From SOLAS Chapter V) A special-purpose MAP or a specially compiled database from which a MAP is derived, that is issued officially by or on the authority of a Government, authorized Hydrographic Office or other relevant government institution and is designed to meet the requirements of MARINE NAVIGATION.*

NAVAREA: ~~The short title of an for a geographical sea area in the WORLD-WIDE NAVIGATIONAL WARNING SERVICE.~~ *(may include inland seas, lakes and waterways navigable by sea-going ships) established for the purpose of coordinating the broadcast of navigational warnings. The term NAVAREA followed by a roman numeral may be used to identify a particular sea area. The delimitation of such areas is not related to and shall not prejudice the delimitation of any boundaries between States.*

Terms from S-57

anchor berth: *A designated area of water where a single vessel, seaplane, etc. may anchor.*

beacon: *A fixed artificial NAVIGATION MARK that can be recognised by its shape, colour, pattern, TOPMARK or light character, or a combination of these. It may carry various additional AIDS TO NAVIGATION. This term is not commonly used when the NAVIGATION MARK can be classified as a LIGHTHOUSE.* ~~A prominent specially constructed object forming a conspicuous MARK as a fixed AID TO NAVIGATION, or for use in HYDROGRAPHIC SURVEY. Also called day beacon or DAYMARK.~~

calling-in point: Point at which vessels are required to report to a traffic control center. *Also called reporting point or radio reporting point.*

canal: *An artificial WATERWAY with no FLOW, or a controlled flow, used for NAVIGATION or for draining or irrigating land (ditch). An artificial watercourse. A long narrow arm of the sea extending inland between islands, or between islands and the mainland.*

cardinal buoy: ~~A buoy used to indicate that the best navigable water is to be found in one particular of the quadrants that are bounded by the four bearings NW, NE, SE and SW taken from the position of the mark. See CARDINAL MARK.~~

cardinal mark: In the IALA Maritime Buoyage System a NAVIGATION MARK used in conjunction with the COMPASS to indicate where the mariner may find the best NAVIGABLE WATER. It is placed in one of the four QUADRANTS (North, East, South and West) bounded by inter-cardinal BEARINGS from the point marked.

careening grid: ~~A timber~~ structure in the INTERTIDAL ZONE serving as a support for vessels at low stages of the TIDE to permit work on the exposed portion of the vessel's hull. *Also called gridiron.*

caution area: An area to which a CAUTIONARY NOTE applies where the mariner needs to be aware of special circumstances influencing the safety of NAVIGATION.

coast guard station: ~~SEE LIFE SAVING STATION.~~ *A station at which a visual/RADIO/RADAR MARINE watch is kept either continuously or at certain times only.*

coastline: The line where SHORE and water meet. Although the terminology of coasts and shores is rather confused, shoreline and coastline are generally used *synonymously* as synonyms.

continental shelf:

1. A zone adjacent to a CONTINENT (or around an ISLAND), extending from the low water line to the DEPTH at which there is usually a marked increase of slope to greater DEPTH. See SHELF.
2. *In UNCLOS Article 76:- The continental SHELF of a coastal State comprises the SEA BED and subsoil of the submarine areas that extend beyond its TERRITORIAL SEA throughout the natural prolongation of its land territory to the outer edge of the CONTINENTAL MARGIN, or to a distance of 200 nautical miles from the BASELINES from which the breadth of the TERRITORIAL SEA is measured where the outer edge of the CONTINENTAL MARGIN does not extend out to that distance.*

control point:

1. *A point on the ground whose position (horizontal and vertical) is used as a base for a dependent survey. Also referred to as control station.*
2. In photogrammetry, any *point station* in a horizontal and vertical control system that is identified on a photograph and used for correlating the data shown on that photograph. More specific terms are photo-control point, picture control point and ground control point.

~~control station: A point on the ground whose position (horizontal and vertical) is used as a base for a dependent survey. Also referred to as control point. See CONTROL POINT.~~

dock: ~~The space between two piers.~~ *An artificially enclosed area within which ships may moor and which may have gates to regulate water level.* Also called slip.

dumping ground: ~~See SPOIL GROUND.~~ *A sea area where dredged material or other potentially more harmful material e.g. explosives, chemical waste, is deliberately deposited. See also SPOIL GROUND.*

elevation:

1 The vertical distance of a POINT or a LEVEL, ~~on or affixed to~~ the surface of the EARTH, measured from *a specified vertical DATUM usually MEAN SEA LEVEL.* The term elevation is sometimes used synonymously *confused* with ALTITUDE which in modern use refers particularly to the distance of POINTS or objects above the EARTH's surface. *For paper NAUTICAL CHARTS, this term is often synonymous with HEIGHT.*

2 *For navigational lights, such as lighthouses, the vertical distance of the focal point of the light measured from a specified vertical DATUM.*

3 An area higher than its surroundings, as a hill.

height:

1 The vertical distance of a LEVEL, a point, or *the top of* an object *affixed to the surface of the EARTH,* considered as a point, measured from a specified DATUM *usually a High Water datum.*

2 The vertical dimension of an object. *Also called vertical length.*

altitude:

1 The vertical distance of a LEVEL, a POINT or an object considered as a POINT (*but not affixed to the surface of the EARTH*), measured from a given DATUM, usually MEAN SEA LEVEL. See also ELEVATION *and HEIGHT.*

2 In ASTRONOMY, the vertical angle between the plane of the HORIZON and the line to a CELESTIAL BODY. See also ANGLE OF DEPRESSION and ANGLE OF ELEVATION.

fairway: ~~The main travelled part of a waterway.~~ *That part of a RIVER, HARBOUR etc. where the main NAVIGABLE CHANNEL for vessels of larger size lies. It is also the usual course followed by vessels entering or leaving harbours and sometimes called "ship channel".*

hulk: Usually refers to an unrigged hull of a wrecked or condemned ship *which is MOORED in a permanent position or grounded.*

isolated danger mark: ~~A navigation mark used alone to indicate a danger, e.g. a reef or shoal.~~ *In the IALA Maritime Buoyage System a NAVIGATION MARK erected on, moored over, or placed immediately adjacent to an isolated danger of limited extent, which has NAVIGABLE WATER all around it.*

landmark:

1 Any monument or fixed object used to mark a boundary on the ground.

2 Any PROMINENT OBJECT *at a fixed location* on LAND which can be used in determining a location or a DIRECTION. ~~See also MARK.~~

lateral buoy: ~~A buoy used to indicate a lateral limit of navigable water.~~ See *LATERAL MARK*.

lateral mark: *In the IALA Maritime Buoyage System a NAVIGATION MARK used to indicate the PORT or STARBOARD side of the ROUTE to be followed. They are generally used for well defined CHANNELS and are used in conjunction with a conventional direction of BUOYAGE. See also LATERAL SYSTEM.*

life saving station: A place where equipment for saving life at SEA is maintained. Also called ~~Coast Guard~~ *rescue* station.

navigation mark: *An artificial or natural object of easily recognisable shape or colour, or both, situated in such a POSITION that it may be identified on a CHART or related to a known navigational instruction. Alternative term for visual AID TO NAVIGATION. Includes both BUOYs and BEACONS (fixed artificial navigation mark).*

pile: A long heavy timber or section of steel, wood, concrete, etc., forced into the earth or *SEA FLOOR* to serve as a support, as for a PIER, or to resist lateral pressure; *or as a free standing pole within a marine environment.*

radar line: See *RADAR GUIDED TRACK*.

restricted area: A specified area designated by appropriate authority ~~and shown on charts~~, within which *access* or navigation is restricted in accordance with certain specified conditions.

safe water mark: In the IALA Maritime Buoyage System a ~~safe water~~ *NAVIGATION MARK indicates used to indicate* that there is NAVIGABLE WATER around its POSITION *with no known hazards nearby.*

sandwave: A large wavelike sediment feature in very shallow water and composed of sand. The wavelength may reach 100 meters; the amplitude ~~is about 0.5 meter~~ *may be up to 20metres. Also sand-wave or sand wave. Also Sometimes* called a mega-ripple.

sil: *A large cylindrically shaped enclosed structure used for storing bulk materials.*

special mark: In the IALA Maritime Buoyage System, *a special marks indicates an area or FEATURE referred to in NAUTICAL documents; it is not primarily intended to assist NAVIGATION are not primarily intended to assist safe navigation* but to indicate a special area or an object mentioned on CHARTs or other NAUTICAL documents.

spoil ground: A sea area where dredged material is deposited. See ~~Also called~~ *DUMPING GROUND.*

submarine cable: *An assembly of wires or fibres, or a wire rope or chain, which has been laid underwater or buried beneath the SEA FLOOR. An insulated, waterproof wire or bundle of wires for carrying an electric current under water.*

submarine transit lane: *A LANE where submarines may NAVIGATE under water or at the surface.*

swept area: *An area that has been determined to be clear of navigational dangers to a specified DEPTH.*

traffic separation line: See *SEPARATION ZONE*.

traffic separation zone: See *SEPARATION ZONE*.

transhipment or lightening area: An area designated for transfer of cargo from one vessel to another *sometimes in order* to reduce a vessel's ~~the~~ DRAUGHT ~~of the larger vessel~~. Also called cargo transfer area *or cargo transhipment area*.

Turbulence: A state of fluid flow in which the instantaneous velocities exhibit irregular and apparently random fluctuations, so that in practice only statistical properties can be recognized and submitted to analysis.

water turbulence: *The disturbance of water caused by the interaction of any combination of WAVES, CURRENTS, TIDAL STREAMS, WIND, SHOAL patches and OBSTRUCTIONS*

Terms from the WWNWS Sub-Committee

navigation warning: - ~~A broadcast message containing urgent information relevant to safe navigation.~~ *a message containing urgent information relevant to safe navigation broadcast to ships in accordance with the provisions of the International Convention for the Safety of Life at Sea, 1974, as amended. See COASTAL WARNING, LOCAL WARNING, NAVAREA WARNING.*

radio navigational warning: ~~A radio transmitted message affecting the safe navigation of vessels or aircraft.~~ *See NAVIGATIONAL WARNING.*

coastal warning: *a NAVIGATIONAL WARNING, or in-force bulletin, promulgated as part of a numbered series by a National coordinator.*

local warning: *a NAVIGATIONAL WARNING which covers inshore waters, often within the limits of jurisdiction of a harbour or port authority.*

NAVAREA warning: *a NAVIGATIONAL WARNING or in-force bulletin promulgated as part of a numbered series by a NAVAREA coordinator.*

enhanced group call (EGC): *the system for broadcasting messages via the mobile satellite communications system operated by Inmarsat. EGC is a part of the INMARSAT-C system.*

Inmarsat-C: *the digital satellite communications system for store-and-forward text or data messaging using mobile terminals with omni-directional antennas. Inmarsat-C is the only system (2011) that allows ships to meet the majority of the satellite communication requirements of the GMDSS including distress alerting, reception of MARITIME SAFETY INFORMATION and general communications.*

Inmarsat: ~~International Maritime Satellite Organization~~ *a company providing mobile satellite communications. The only company (2011) providing services within the GMDSS.*

IMSO: *International Mobile Satellite Organization*

NAVTEX: *the system for the broadcast and automatic reception of MARITIME SAFETY INFORMATION by means of narrow-band direct-printing telegraphy.* ~~Narrow-band direct-printing telegraphy system for transmission of MARITIME SAFETY INFORMATION.~~

SafetyNET: *the international service for the broadcast and automatic reception of MARITIME SAFETY INFORMATION via the INMARSAT EGC system in waters where an international NAVTEX service is not provided.*

Rescue co-ordination centre (RCC): *a unit responsible for promoting efficient organization of search and rescue services and for coordinating the conduct of search and rescue operations within a search and rescue region. Also called Maritime Rescue Co-ordination Centre (MRCC).*

Business Rules for International Hydrographic Organization (IHO) Publication S-32

1. S-32 is maintained by the Hydrographic Dictionary Working Group (HDWG), a subsidiary body of the Hydrographic Services and Standards Committee (HSSC) of the IHO.
2. IHO Publication S-32 – “The Hydrographic Dictionary” provides definitions for terms commonly encountered within the areas of competence of the IHO.
3. Definitions included in S-32 are intended to cover:
 - Hydrography and Marine Cartography – extensively
 - Geodesy, Land Surveying, Law of the Sea, Mathematics, Navigation and Physics – to the extent required for clarity and to avoid ambiguity
4. Terms for inclusion in S-32 may be proposed by IHO Member States, IHO Committees and subordinate bodies and the IHB. Following consideration by the HDWG proposals for the inclusion of new definitions or the amendment / deletion of existing definitions will be passed to the HSSC for endorsement prior to circulation to IHO Member States for adoption.
5. Where IHO Member States have adopted an IHO Publication which includes definitions (for example, S-53 – “Joint IMO/IHO/WMO Manual on Maritime Safety Information” these definitions may, at the discretion of the HSSC, be included in S-32 without further reference to IHO Member States.
6. Since January 2010, S-32 has been available as an on-line “WIKI” dictionary in English and French. The preparation of a Spanish version and the interlinking of the three languages remain to be done. The English and French WIKIs contain those definitions previously published in the printed 5th Editions of S-32.
7. Where a definition has been added or amended since the establishment of the WIKI versions, the IHB Circular Letter reference or IHO Conference decision number is recorded under the WIKI “*Discussion Tab*”. This information is only accessible via a username and password login. This password and login is restricted to HDWG members and IHB staff. However any user of the WIKI can see the date on which an entry was last amended.

VOTING FORM

(to be returned to the IHB by **13 March 2012**
 E-mail: info@ihb.mc - Fax: +377 93 10 81 40)

Member State			
Point of Contact:		E-mail:	

ADOPTION OF DEFINITIONS IN S-32

1. I agree in general to the inclusion of the terms and acronym in S-32:

Yes or No:

2. If there are any definitions which you do not support please indicate them in the table below together with your reasons:

Comments (if required)

3. I agree to the Business Rules for S-32 and their inclusion in the preface to the on-line WIKI version of S-32:

Yes or No:

Name/Signature:Date: