THIS CIRCULAR LETTER REQUIRES YOU TO VOTE

IHO File No. S3/8151 & S3/7198 & S3/3061

CIRCULAR LETTER N° 27
15 July 2020

CALL FOR THE APPROVAL OF EDITION 6.0.0 of S-44 - IHO STANDARDS FOR HYDROGRAPHIC SURVEYS, EDITION 1.0.0 of S-67 - MARINERS' GUIDE TO ACCURACY OF DEPTH INFORMATION IN ELECTRONIC NAVIGATIONAL CHARTS (ENC) and EDITION 2.1.0 of S-49 - MARINERS ROUTEING GUIDES

References:

A. IHO CL 30/2019 – Outcome of the 11th Meeting of the Hydrographic Services and Standards Committee (HSSC).

B. HSSC CL 02/2020 dated 6 May 2020 – *Call for endorsement of Ed. 6.0.0 of S-44 - IHO Standards for Hydrographic Surveys, Ed. 1.0.0 of S-67 - Mariners' Guide to Accuracy of Depth Information in Electronic Navigational Charts (ENC) and Ed. 2.1.0 of S-49 - Mariners Routeing Guides*

C. IHO Resolution 2/2007 as amended -

Dear Hydrographer,

1. Since HSSC-11 (Reference A) and the postponement of HSSC-12 to October 2020, the Working Groups and Project Team under the Hydrographic Services and Standards Committee (HSSC) have remained committed and pursued their activities despite the difficulties due to COVID-19 pandemic. Pursuant to the postponement of HSSC12, it was decided by the HSSC Chair and the IHO Secretariat, in consultation with the Chairs of the Working Groups and Project Teams, to continue with the endorsement process by correspondence of the standards, which were considered to be mature.

2. The Data Quality Working Group (DQWG), Nautical Information Provision Working Group (NIPWG) and Standards for Hydrographic Surveys Project Team (HSPT) prepared new draft editions of standards that were all considered to be ready for endorsement and they were subsequently submitted for endorsement by the HSSC Members by correspondence (Reference B).

3. The HSSC Chair/Secretariat thanks the following 23 HSSC Members who responded to Reference B and endorsed the new editions of S-44, S-67 and S-49: Canada, Chile, Denmark, Estonia, Finland, France, Germany, Greece, India, Indonesia, Italy, Japan, Netherlands, New Zealand, Poland, Portugal, Republic of Korea, Singapore, South Africa, Sweden, Turkey, United Kingdom, and United States of America.

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4. Nine HSSC Members (Chile, Denmark, France, Germany, Japan, Netherlands, New Zealand, Portugal and United Kingdom) offered comments in addition to their endorsement. These comments and the outcome of their review by the Working Groups and Project Team Chairs/HSSC Chair/Secretariat are provided in Annex A to this Circular Letter.

5. Noting the excellent progress made by the DQWG, NIPWG and HSPT to prepare these draft editions of standards, which now include amendments requested during the endorsement phase by the HSSC (See red-line amended versions on https://iho.int/en/draft-publications), Member States are now invited, in accordance with Reference C, to approve them **no later than 1 September 2020** by email (cl-lc@iho.int) using the Voting Form provided in Annex B or, but preferably, using the IHO Online Form System available at the following link:

https://IHO.formstack.com/forms/web_form_cl_27_20

On behalf of the Secretary-General
Yours sincerely,

Abri KAMPFER
Director

Annex A: HSSC Members' responses to HSSC CL 02/2020 and comments from the WGs/PT Chair/HSSC Chair and Secretariat (*in English only*)

Annex B: Voting Form

HSSC MEMBERS' RESPONSES TO HSSC CL 02/2020 AND COMMENTS FROM THE WORKING GROUPS' and HYDROGRAPHIC SURVEYS PROJECT TEAM's CHAIRS, HSSC CHAIR / SECRETARIAT

S-44, Ed. 6.0.0	IHO Standards for Hydrographic Surveys

CHILE (Vote for endorsement = YES)

We notice the introduction of the concept of a Matrix of parameters and data types to define realisations of survey standards and specifications, a tool for a broader classification of surveys. Nevertheless, there is no indication on why the "criteria" in the matrix goes from 1 to 14 and no guidance is offered on the reason for selecting criteria 4, or 7 or 3 in a particular case (Annex A Table Al). Is the criteria selected arbitrarily or is there a certain pattern for certain type of surveys? We are of the opinion that some explanation is missing and it is needed to better understand the application of the matrix.

Comments by the HSPT Chair and HSSC Chair/Secretariat:

The HSPT Chair/HSSC Chair/Secretariat thank Chile for these comments.

All values have been chosen carefully according to "private orders" already used by some Hydrographic Offices, and using a sort of consistent progression to the more demanding values. Furthermore, all values have been "consolidated" during the 3 years of work of the HSPT by representatives from Member States and Expert Contributors.

Regarding the selection of values for the definition of a survey, it has to be chosen according to the true need, depending on the purpose of the surveys (archaeology, dredging, pipe inspection, etc.).

Hence, the matrix is a method to reach the entire hydrographic community for the definition of specific surveys, not only dedicated for the safety of navigation, and the Matrix is a tool as well for the surveys qualification, a posteriori.

As it is something new in this edition of S-44, we can understand that, further instruction may be necessary. This is why the HSPT supports the idea of establishing a new standing Working Group, in order to undertake the communication on this specific topic (but not only), and, as well, to gather feedback from industry and Hydrographic Offices, in order to prepare additional guidance for a future revision or the next edition. Further guidance, on selection of parameters in the Matrix, might be added in a future revision of the C-13 (within the scope of the proposed HSWG).

GERMANY (Vote for endorsement = YES)

The BSH appreciates the contributions of all members of the HSSC Project Team on Standards for Hydrographic Surveys (HSPT) in the development to the draft publication of the 6th edition of the IHO Standards for Hydrographic Surveys (IHO Publication No. S-44). Although BSH considers certain changes from the current edition as an important milestone

towards the production of more accurate and reliable hydrographic information for a variety of applications, it is recognised that the safety of navigation remains the primary need. We fully support that the changes made emphasise the technology agnostic and we support the introduction of "The Specification Matrix" for hydrographic surveys. Considering the advent of new survey technologies and data processing techniques, the BSH appreciates if a future version of the S-44 will reflect those developments.

Comments by the HSPT Chair and HSSC Chair/Secretariat:

The HSPT Chair/HSSC Chair/Secretariat thank Germany for their comment. The proposals for focus in a future edition are noted and well received. It is planned to be considered by HSSC at their next meeting together with the issue on the future of the HSPT.

JAPAN (Vote for endorsement = YES)

(1) Please consider unifying the similar wordings which indicate the same things. For example, use "The hydrographic office or authority" instead of "The hydrographic office or other responsible authority." (2) For the title of Chapter 3, please consider using the wording "BATHYMETRIC COVERAGE" in place of "BOTTOM COVERAGE" taking into the fact that "BATHYMETRIC COVERAGE" is used in the text throughout the whole chapter.

Comments by the HSPT Chair and HSSC Chair/Secretariat:

The HSPT Chair/HSSC Chair/Secretariat thank Japan for these comments. Both the suggested amendments will be included as noted below and a revised version is to be uploaded:

(1) To be consistent, it is true that the term “The hydrographic office or authority” should be used systematically.

(2) It should be indeed “Chapter 3 Depth, Bathymetric Coverage, Features, and nature of the Bottom.

PORTUGAL (Vote for endorsement = YES)

Portugal does endorse the ed. 6.0.0 draft 2.0.0 version of S-44, although, at a final check, some visual or form aspects are worth being addressed in order to be changed.

Considering the Table presented at S44, there are 3 issues to point out:

Issue 1

Table 1 and 2 is now considerably more complicated to read, than it was in previous versions, which may be an obstacle for the smooth acceptance of the major changes in S-44.
One major factor for this, is that in edition 6 the sequence was flipped horizontally, it now starts with the “less” restrictive order.
All IHO documents are written using occidental notation and rules, meaning the reader reads from left to right, so the focus is always on the left, and less attention is given (on a primary look) to the right side.
The current way of presenting the Orders in the Table, Table 1 & 2, forces the reader to go through all of each line in the table to find the “best” resolution, the “best” order.

It should probably be the other way round, as one wants to give emphasis to what is more restrictive and deals with more danger to navigation. This would just mean having it the same way it was in ed. 5
There is actually no need to change this, and it looks more harmful than favourable doing so.
If needed, it can even be difference from the Matrix, there is no harm with doing that.

Issue 2

It may make some sense of having the reference to the matrix in the table, as it connects both, but in fact it does not have any helpful practical use, and it complicates the visual understanding of the table (maybe trying to use a smaller font would help)
It would be far more valuable to have a reference to the table in the Matrix.

Issue 3

Following Issue 2, it would be very useful to have the string for each Order, right after the table (as a note, for instance) (even knowing that we have one example in the Annex).

Considering the Matrix presented at S44, there are 2 issues to point out, somehow similar to the ones pointed out for the table:

Issue 1

Once again, the reader has to go through the whole line to find the "best" resolution, and there are white cells in the Matrix for the best option, meaning that the best column (14) is empty for some lines.
One would prefer to have it the other way round, as explained before.
A suggestion would be to invert the order of the columns, simply placing column 14 at the left.
Additionally, making all better resolutions to be on column 14, would place the white cells away from readers sight, right after the "worst" resolution, where the reader is already expecting to find less important information.

Issue 2

As explained before, it would be very useful to have the orders shown in the Matrix, as a guide, and even for comparison.
This would even make it easier for a possible evolution in a following edition.
What seems like a very good approach for having the orders shown, would be to have the cells coloured, or using vertical lines limiting each order, (what is Special Order, and what still is O1A)
A full example for the Bathymetry is sent next, as it is easy to do.

Comments by the HSPT Chair and HSSC Chair/Secretariat:

The HSPT Chair/HSSC Chair/Secretariat thank Portugal for these comments and observations. It is noted that Portugal is an active member of the HSPT and was represented during 4 of the 5 meetings held over the past three years of intensive work. The draft S-44 6th Edition is a result of this work completed by the consensus of the entire group, and guided by inputs and comments received from the Questionnaire, the Member States and Expert Contributors.

Issue 1:

Compared to the 5th Edition, the table 1 (and 2 now) starts with the less restrictive order to the more demanding one. It was mainly due to the consistency with the Matrix construction. To

allow future growth, the Matrix starts with less demanding values, to the more demanding ones. Furthermore, employing this construction, the more demanding order (like the Exclusive one), can be selected carefully from reading the end of the table. It should be noted that the standards should not be considered to be simply the Tables. The tables are just a synthesis of the entire standards, which should be read in full.

Issue 2:

During HSPT's discussions initially it was considered not to add references to the matrix in the table. However after a few iterations, the HSPT realized it was not really clear and considering the Matrix is a new concept in S-44, it was realised that the links between the Table and the matrix need to be explicit and therefore included.

On the opposite side, so as not to overload the Matrix, and after discussions and a number attempts, the HSPT decided to not add references to the Table inside the Matrix.

Issue 3:

The use of the Matrix is a way to choose the right specifications according to the true need, depending on the purpose of the surveys (archaeology, dredging, pipe inspection, etc.). Hence, the matrix is a method to reach the entire hydrographic community for the definition of specific surveys, not only dedicated for the safety of navigation, and the Matrix is a tool as well for the surveys qualification, a posteriori.

The HSPT decided to not express the Orders using the full Matrix references. The examples are here to highlight this idea.

Matrix Issue 1:

As mentioned above, to allow future growth, the Matrix starts with less demanding values, to the more demanding ones. It was considered unlikely that further less demanding criteria would be developed or needed, however it was felt by the entire group that more demanding standards were likely to be developed in the future and to avoid the complete reorganisation of the Tables and the Matrix and all the associated references, it was considered logical to allow any new more demanding standards to be added into additional right hand columns. There is a consistency with the Table 1 (and 2).

Matrix Issue 2:

Initially, the HSPT tried to add colours in the Matrix to highlight the connection with Orders. However, taking into account the potential for black and white printing used by many hydrographers in the field, it was decided that the benefits for good comprehension of the Matrix would be lost. In addition, the Project Team was not keen to add more information inside the Matrix.

As this Matrix concept is new for this edition of S-44, it is agreed that, maybe, further instruction is necessary. This is why, the HSPT supports the idea of establishing a new Working Group, in order to undertake the communication on this specific topic (but not only), and, as well, to

gather feedback from industry and Hydrographic Offices, in order to prepare additional guidance for a future revision or the next edition.

UNITED KINGDOM (Vote for endorsement = YES)

The work of the group should not be considered complete but perhaps should wait for S100 to bed in before looking at S44 being amended to better correlate with the charting standard.

Comments by the HSPT Chair and HSSC Chair/Secretariat:

The HSPT Chair/HSSC Chair/Secretariat thank the UK for their comment. First, it is confirmed that the S-100 first specifications have been considered by HSPT for this edition of S-44.The other proposal by the UK is planned to be considered by HSSC at their next meeting together with the issue on the future of the HSPT. It is anticipated for instance that a future "Working Group", if established, will be tasked to pursue the alignment of the S-44 with the hydrographic community’s requirements, including cartographers’.

S-67 Ed. 1.0.0	Mariners' Guide to Accuracy of Depth Information in Electronic Navigational Charts (ENC)

DENMARK (Vote for endorsement = YES)

GST don't agree with the statement in the Introduction on page 2. "Any sounding on the smallest scale chart will also be present on the largest scale." This statement is taken from S-4 B-100.5, which we thinks needs updating in this section. 1. This statement is taken from the assumption that charts are made manually and the sounding selection is completed manually and then generalized manually, which is how we used to make charts. Most hydrographic offices now use automated tools for sounding selection and run the data for each scale from the source survey information at each scale. Due to computer algorithms it would be extremely unlikely that the same soundings are picked through the different scales every time. If you are in depths over 100m it really doesn't matter if a depth of 102 is picked one product and 103 on another scale, as long as the representation of the real world is the same. It is possible to avoid this by running a base line survey selection and then only generalizing from that output, but that also brings in its own constraints. We actually don't think this statement will always be true for products that have been produced in the more traditional ways due to generalization and criteria for NtM action will also have led to discrepancies. 2. If this statement was referring to critical sounding depths only, we would agree with it. Therefore this statement needs updating in S-4 which should be addressed direct through the NCWG. The question if we want to use it in the new standard document.

Comments by the DQWG Chair and HSSC Chair/Secretariat:

Noted. The DQWG Chair/HSSC Chair/Secretariat thank Denmark (GST) for their contributions. It is recognized that vertical consistency is not always 100% achieved but it is the current leading principle in S-4, from which the statement in S-67 is derived. The suggestion to modify S-4 will be discussed at the HSSC meeting for further consideration by the NCWG.

FRANCE (Vote for endorsement = YES)

A l'occasion d'une future révision, le document pourra utilement être complété en étendant le sujet du CATZOC au-delà des ENCs, celui-ci étant de plus en plus souvent présent sur les cartes papier sous forme de diagramme. Les éléments de l'annexe B pourraient venir en redondance du papier "Information on ENC Generalization, Over-Scaling and Safety Checking Functions in ECDIS " qui sera présenté au HSSC12 fin 2020.

On the occasion of a future revision, the document could usefully be supplemented by extending the subject of CATZOC beyond ENCs, which is more and more often present on paper maps in the form of a diagram. The elements of Annex B could come in redundancy from the paper "Information on ENC Generalization, Over-Scaling and Safety Checking Functions in ECDIS" which will be presented at HSSC12 at the end of 2020.

Comments by the DQWG Chair and HSSC Chair/Secretariat:

Noted. To be proposed and discussed at the next HSSC meeting.

GERMANY (Vote for endorsement = YES)

The BSH congratulates DQWG for having prepared the S-67 draft version (Mariners' Guide to Accuracy of Depth Information in Electronic Navigational Charts (ENC)). The text on hand provides a comprehensive guide to mariners to access the Data Quality information provided in ENC in an appropriate way. The Standard also emphasises the importance that HOs should provide fully DQ information in all of their ENC. This is the only way to increase the trust in the chart data and to improve the efficiency of the ENC based navigation.

Comments by the DQWG Chair and HSSC Chair/Secretariat:

The DQWG Chair/HSSC Chair/Secretariat thank Germany for their comments.

NETHERLANDS (Vote for endorsement = YES)

Editorial remarks have been brought to the attention of Chair DQWG.

Comments by the DQWG Chair and HSSC Chair/Secretariat:

The DQWG Chair/HSSC Secretariat thank the Netherlands for their valuable inputs. Draft version 2.0 dated 09 July 2020 of Edition 1.0.0 of S-67, submitted to the approval of IHO MS includes these editorial corrections.

NEW ZEALAND (Vote for endorsement = YES)

A useful document for the mariner, especially educating them on the assessment and use of CATZOC. The document should include a warning that the survey date should always be considered even if the ZOC is showing A1 as the survey could be an A1 but 5 years old which has an impact on the quality.

Comments by the DQWG Chair and HSSC Chair/Secretariat:

The DQWG Chair/HSSC Chair/Secretariat thank New Zeeland for their contributions.

A slight amendment at clause 4.1, 3rd sentence of the paragraph directly under Figure 4-1 is proposed in the new draft version 2.0 dated 09 July 2020 of Edition 1.0.0 of S-67 as follows: *In areas where the seabed is subject to change, ENC encoding guidance recommends the inclusion of the date of the survey[1]; and/or downgrading of the assigned ZOC category, restoring it only once a replacement survey is incorporated in the ENC*.

In the Executive Summary (clause 2), the last bullet of the 3rd paragraph is also proposed to be amended as follows: *Areas of continual and rapid change occur in many tidal rivers and estuaries; over bars in the approaches to some ports; and over some off-lying banks. A limitation of the CATZOC system is the lack of information about when a survey was conducted, or whether the seabed is stable; noting however that the date that a survey was conducted in an area may be available in the ENC through an ECDIS Pick Report. It is therefore considered important for mariners to note areas of sand-waves; dates within dredged channels; and any other notes advising that channels may have changed or are subject to change*.

[1] Explanatory note for hydrographic offices, not to be included in S-67: the attributes SUREND (Survey End) and SURSTA (Survey Start) may be used on M_QUAL. Please refer to S-57 Appendix B.1, Annex A (UOC), clause 2.2.3.1, Remarks 10th bullet point. This is further reinforced in the Remarks 1st bullet, which recommends using SUREND for unstable seafloors.

PORTUGAL (Vote for endorsement = YES)

Excellent work and excellent guide. However may be consider being included in a new tab (G - Guides) other than standards.

Comments by the DQWG Chair and HSSC Chair/Secretariat:

The DQWG Chair/HSSC Chair/Secretariat thank Portugal for their comments. A decision was made by HSSC not to create a new category G (see comments by IHO Secretariat in Doc. HSSC10-05.2B and subsequent Action HSSC10/25). This is now covered in the IHO Resolution 2/2007 as amended (See paragraph 1.2).

UNITED KINGDOM (Vote for endorsement = YES with the caveat that the errors identified are corrected before final version is published).

General comments by the DQWG Chair and HSSC Chair/Secretariat:

The DQWG Chair/HSSC Secretariat thank the UKHO for their valuable and comprehensive inputs. Proposed editorial corrections have been made accordingly into the new draft version of S-67 submitted to the approval of the IHO Member States. The other more substantive suggestions are commented below. They are not considered as 'errors'.

UK1: The uncertainty that this document seeks to clarify is how should CATZOC be taken into account when calculating UKC, and this table is all that is required in section 2.

Comments by the DQWG Chair and HSSC Chair/Secretariat:

Not agreed. Calculation of UKC is end-user policy driven. The text of section 2 is the outcome of the work and expertise of the DQWG including mariners, after analysing several shipping accidents and their root causes, without getting into the liability issue.

UK2: It must also be stressed within S-67 that UKC should not be Draft + Safety Margin + CATZOC =UKC, but that the safety margin must take CATZOC into consideration.

CATZOC	Accuracy	UKC (m)	XTD (m)
A1-A2	High	0.5	20
B	Medium	0.5 -1.0	50
C-D-U	Low	2	500

Comments by the DQWG Chair and HSSC Chair/Secretariat:

Not agreed. Not all end users wish to apply CATZOC into their safety margin. If they did, they would set the ECDIS anti-grounding alarm to the worst case scenario, but that would prevent them from executing the voyage as planned (500m overlapping circles). Also the numbers provided by the HOs are usually not accurate as POSACC and SOUACC are hardly being applied (1% from PRIMAR database query).

UK3: 2. Executive summary and recommendations

Suggest we use the S-52 naming for the data selector that turns CATZOC display on and off in ECDIS 'Accuracy'. Remove text (or some other setting, depending on the type of ECDIS).

Comments by the DQWG Chair and HSSC Chair/Secretariat:

Agreed. The new draft version 2.0 dated 09 July 2020 of Edition 1.0.0 of S-67 includes this correction.

UK4: 3. Accuracy of depth information in paper charts

Remove this whole section as this is not relevant to Electronic charting, and we have moved past the IMO ECDIS mandate.

Comments by the DQWG Chair and HSSC Chair/Secretariat:

Not agreed. Discussed at length at the last DQWG meeting and the proposed wording is based on the consensus reached at the meeting. Especially the last paragraph is relevant. Also this guidance is meant for end users and training institutes, some may still use paper charts and wonder what their context means. It provides means for training institutes to explain where it is all coming from.

UK5: 4 Accuracy of depth information in Electronic Navigational Charts

4.2 There is no Reef S-57 object class, need to make it clear you won't find this feature in a ECDIS Pick Report

Comments by the DQWG Chair and HSSC Chair/Secretariat:

Not agreed. S-57 Appendix B.1 ENC Product Specification Annex A: Use of the Object Catalogue for ENC Edition 4.2.0 April 2020, chapter 6 Dangers, specifically note paragraph 6.1 Rocks and coral reefs (see S-4 — B-421) and paragraph 7.1, describe rock or coral reef as a danger to navigation. Coral reef, which is always covered, represented on paper charts as an area (INT1 - K16): An OBSTRN object of type area must be encoded with attributes CATOBS = 6 (foul area), NATSUR = 14 (coral) and WATLEV = 3 (always underwater/submerged). An UWTROC object should be encoded for each individual point danger.

UK6: 4.4.1 Safety Contour

The safety contour is not an accuracy measure of the ENC and as such should not be included as it's a function of the ECDIS. If the IHO want to include information about the granularity of contours within ENC suggest it is renamed 'Contours in ENC' and should reference HDENCs

Comments by the DQWG Chair and HSSC Chair/Secretariat:

Not agreed. The creation of mandatory contours comes from S-4 (we especially checked that S-4 and S-67 are aligned). It is the S-52 presentation library that based upon the mariner settings in ECDIS, searches for the next available deeper depth contour and displays it bold with 0.6mm line width (standard = 0.3mm) thus providing a very clear boundary between safe and unsafe waters. This is probably the most important usage of an ENC in combination with

ECDIS and one cannot be separated from the other. High Density ENCs are using exactly the same algorithm but they just have more contour lines to choose from, thus making the difference between the Mariner's safety depth setting and the nearest available contour line smaller.

UK7: Incorrect reference "high density bathymetry ENCs" rename "High Density ENC" as defined in S-65.

Comments by the DQWG Chair and HSSC Chair/Secretariat:

Agreed. The naming in force in S-65 should be used. The new draft version 2.0 dated 09 July 2020 of Edition 1.0.0 of S-67 includes these corrections.

UK8: 5 Zones of Confidence symbols in ENCs

To view the Zones of Confidence symbology, the mariner is required to activate the "information on chart display layer" (or a similar setting, depending on the type of ECDIS used). This statement is incorrect Mariner uses the display selector Accuracy in ECDIS as defined by S-52

As the symbology is defined by the IHO in S-52 the IHO should consider not criticising its own publications 'This kind of symbology tends to clutter the screen, therefore during execution of a voyage mariners will most likely de-activate this setting'.

Comments by the DQWG Chair and HSSC Chair/Secretariat:

Not agreed. Reality after 20 years has proven that this kind of symbology has failed, otherwise the IHO would not have been requested to consider the production of S-67 as the symbol would then be commonly used. It is important for the mariners that the IHO has been able to recognize the existence of some shortfalls in the list of IHO standards and publications.

UK9: 6 Assessment of the quality of a survey into a Zone of Confidence by the Hydrographic Office

Historical information not relevant to Mariner

Comments by the DQWG Chair and HSSC Chair/Secretariat:

Not agreed. S-4 states that HOs have to make an assessment of any new information that is received and should be checked against its nautical publication. With the coming of CSB data into ENCs, this section will only grow in relevance!

UK10: Introduction

Recommend adding "of" into the following paragraph at the end of the introduction:

A chart presents an image of the real world to the mariner. The depth information in a chart is compiled from various sources, each having their own adequacy and accuracy. Given this, an obvious question arises: How can the mariner distinguish, when using an ECDIS, what the adequacy and accuracy of the depth information is for the planning and executing of a voyage?

Comments by the DQWG Chair and HSSC Chair/Secretariat:

Agreed. The new draft version 2.0 dated 09 July 2020 of Edition 1.0.0 of S-67 includes this correction.

UK11: Abbreviations

Recommend correcting the spelling of “Chart” in the following:

ECDIS Electronic ~~Chard~~ Chart Display and Information System

Comments by the DQWG Chair and HSSC Chair/Secretariat:

Agreed. The new draft version 2.0 dated xx July 2020 of Edition 1.0.0 of S-67 includes this correction.

UK12: 4.1.2 Medium accuracy depth information

Depth accuracy for Catzoc B is 1m + depth element.

Recommend changing the text to reflect this:

There is a risk that significant seafloor features dangerous to the safety of navigation (rocks, coral reefs, wrecks, submerged obstructions) have not been identified, and do not appear in the chart. Those features that are present in the chart have a horizontal accuracy of ± 50 metres and a depth accuracy of at least ± 1 metre (refer to Table 4-4).

Comments by the DQWG Chair and HSSC Chair/Secretariat:

Agreed. Should be 1 metre+2% of depth. The new draft version 2.0 dated 09 July 2020 of Edition 1.0.0 of S-67 includes this correction.

UK13: 6. Assessment of the quality of a survey into a Zone of Confidence by the Hydrographic Office

Some of the general guidelines for choices made by hydrographic offices aren’t entirely accurate:

· Data from ports are generally assigned ZOC A1, A2 or B. (Agree)

· Satellite data are assigned ZOC C. (and ZOC D)

· Laser data by plane are assigned ZOC B, sometimes A2 (Lidar feature detection yet to be proven). (and ZOC C)

· Private ship-owner data are assigned ZOC D. and ZOC C (e.g. crowd source bathymetry)

Data before 1980 are assigned ZOC B, C or D. In general, the older the data, the lower the value.

Comments by the DQWG Chair and HSSC Chair/Secretariat:

Not agreed, noting that the suggestions made above are not always or entirely in line with the document provided by the UKHO “from survey data to CATZOC values” available on the DQWG webpage > Reference Documents > National Methodologies... LIDAR surveys are almost always CATZOC B, SDB = CATZOC C.

S-49, Ed. 2.1.0	Mariners Routeing Guides

Endorsed with no comments received.

Annex B to IHO CL 27/2020

CALL FOR APPROVAL OF DRAFT EDITIONS OF S-44 ED. 6.0.0, S-67 ED. 1.0.0 AND S-49 ED. 2.1.0

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VOTING FORM

to be returned to the IHO Secretariat **no later than 1 September 2020**

E-mail: cl-lc@iho.int - Fax: +377 93 10 81 40

Member State:	
Contact:	
E-mail:	

All proposed draft Editions are available at: https://iho.int/en/draft-publications.

1. **Do you approve Ed. 6.0.0 (draft version 2.0.1 dated 14 July 2020) of S-44 "*IHO Guidance for Hydrographic Standards*"?**

Please tick ☑ the appropriate box:

YES ☐ NO ☐

Please provide any additional comments in the section below.

Comments (if required)

2. **Do you approve Ed. 1.0.0 (draft red-line version 2 dated 09 July 2020) of S-67 "*Mariner's Guide to Accuracy of Depth Information in ENCs*"?**

Please tick ☑ the appropriate box:

YES ☐ NO ☐

Please provide any additional comments in the section below.

Comments (if required)

3. **Do you approve Ed. 2.1.0 of S-49 "*Mariners' Routeing Guide*"?**

Please tick ☑ the appropriate box:

YES ☐ NO ☐

Please provide any additional comments in the section below.

Comments (if required)
