

THIS CIRCULAR LETTER REQUIRES YOU TO VOTE

IHB File No. S3/8151/HSSC

CIRCULAR LETTER 87/2010 13 December 2010

PROPOSED AMENDMENTS TO IHO RESOLUTION 2/2007 - Principles and Procedures for making changes to IHO Technical Standards and Specifications

References:

- a) IHB CL 106/2007 dated 15 November Entry into Force of new IHO Technical Resolution A1.21
- b) IHO Resolution 2/2007 (formerly, A1.21) *Principles and Procedures for making changes to IHO Technical Standards and Specifications*
- c) HSSC-2 paper HSSC2-04B Standardised Development, Consultation and Approval Procedures for IHO Technical Standards

Dear Hydrographer,

1. Reference a) reported on the adoption by Member States of IHO Technical Resolution A1.21 (subsequently re-numbered IHO Resolution 2/2007).

2. At its second meeting in Rostock in October 2010, the Hydrographic Services and Standards Committee (HSSC) considered certain improvements to IHO Resolution 2/2007 to standardize the procedures for the approval and versioning of changes to IHO technical standards. The procedures described in the proposed amendment to IHO Resolution 2/2007 are based on existing practices; therefore, there should be no adverse impacts.

3. The proposal to amend IHO Resolution 2/2007 has been endorsed by the HSSC and it is recommended to Member States for adoption. The proposed revisions to IHO Resolution 2/2007 are shown in Annex A in a tracked-change version and in Annex B as a clean copy.

4. In considering the proposed changes to IHO Resolution 2/2007, the HSSC considered that the revisions should not, at this stage, apply to the extensive and ongoing revision to S-4 - *Chart Specifications for the IHO and Regulations for International (INT) Charts*. Instead, the existing approval arrangements set out in Spec. B-160 of S-4 and accepted by Member States should remain in force until the current major revision of S-4 is completed, which is expected in 2012. This will avoid changing a well-established and accepted practice midway through the revision process.

5. The proposed amendments to IHO Resolution 2/2007 will ensure that in future any changes to IHO technical standards will follow an open and transparent process and will include the appropriate

consultation processes already indicated in the existing Resolution. A full explanation and justification for the changes to IHO Resolution 2/2007 is contained in Annex C.

Voting Required

6. Member States are requested to consider the recommendation of the HSSC to amend IHO Resolution 2/2007 and to indicate their support using the voting form at Annex D, by <u>15 February</u> <u>2011</u>. A simple majority of all Member States is required to agree the adoption of the amendments to the Resolution. This majority is currently 40 Member States.

On behalf of the Directing Committee Yours sincerely,

Captain Robert WARD Director

Annexes:

- A. Proposed revisions to IHO Resolution 2/2007 (track change version)
- B. Proposed revisions to IHO Resolution 2/2007 (clean copy)
- C. Explanation and justification of changes to IHO Resolution 2/2007
- D. Voting Form for changes to IHO Resolution 2/2007

Proposed Amendment to IHO Resolution 2/2007 (formerly A1.21)

(deletions are shown in strikethrough; additions are shown in red typescript)

PRINCIPLES AND PROCEDURES FOR MAKING CHANGES TO IHO TECHNICAL STANDARDS AND SPECIFICATIONS

History

These principles and procedures are derived from those agreed at the 18th meeting of CHRIS in Cairns, Australia 26-29 September 2006. The latter superseded those developed at the 13th meeting of CHRIS in Athens, September 2001 and revised at the 15th meeting of CHRIS in Monaco in June 2003.

1. Scope

1.1 These principles and procedures are intended to be applied to all proposals for changes to IHO technical standards and specifications and for new work items that will require significant resources to resolve or will potentially impact on those who need to apply the standards and specifications. They are not intended for IHO publications, catalogues or supporting documentation of a guidance, general or non-technical nature.

These procedures are not intended to be applied to minor or technical issues that arise from the work of HSSC, or for the correction of identified problems or for clarification of elements of the standards themselves.

1.2 Any reference to "standards" in these principles and procedures follows the ISO/IEC definitions for *standard* and *guide* and may therefore also includes some IHO "specifications" and "guidelines" as appropriate.¹ IHO product specifications are considered to be standards.

2. Principles

2.1 Improvements to technical standards can only occur by change. However, significant change can lead to problems such as incompatibility between systems, high updating costs, market monopoly, dissatisfied users, or increased risks to safety of navigation. These following guiding principles have been developed to avoid these circumstances.

2.1.1. Before approval is granted, any proposed changes to existing standards should be assessed from a technical and commercial perspective, also taking into account any other relevant factors.

2.1.2. Where possible, assessment should involve not only IHO Member States but all relevant parties such as international organisations, maritime administrations, equipment manufacturers, data distributors, users and other professional organisations. These are the *stakeholders*.

2.1.3. As far as practicable, any change to standards or systems should be "backwards compatible", or the existing version must be supported for a specified time.

2.1.4. If changes are required for the basis of product enhancement rather than for safety of navigation, then the previously approved system must be allowed to continue to be used at sea for a sufficient time to allow changes to be implemented on board.

The ISO defines a guide as

¹ ISO/IEC Directives, Part 2 - Rules for the Structure and Drafting of International Standards defines a standard as

^{...} a document, established by consensus and approved by a recognized body, that provides for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context.

^{...} a document giving orientation, advice or recommendations on non normative matters relating to international standardization.

2.1.5. If not already specified by an external or higher IHO authority, the timeline for making changes should be defined, where appropriate.

2.1.6. In exceptional cases (for example, those affecting safety of navigation), it may be necessary to make recommendations for immediate change to standards and systems to the relevant authorities. This may be achieved through shortening the normal time frames for submission and consideration of proposals.

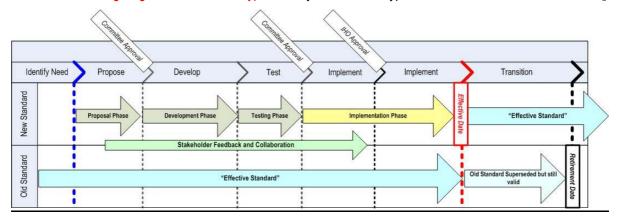
2.1.7. The principles of a recognised project management system should be followed.

2.1.8. All interested parties should be encouraged to continuously improve IHO technical standards. Constructive feedback should therefore be provided for all rejected proposals.

3. Procedures - General

3.1 Standardised procedures are recommended help to ensure that any proposed changes to IHO standards are properly assessed and implemented. These procedures should remain simple to encourage their use.

3.2 The following diagram illustrates the typical life cycle of an IHO typical standard is illustrated in Annex A.:



3.2.1 Changes to IHO standards are classified at one of three different levels: *new edition, revision,* or *clarification (see paragraph. 5.1)*. In each case, the development, consultation and approval process will be slightly different; ranging from a very comprehensive regime for *new editions*, to Working Group level approval for *clarifications*. *New editions* and *revisions* are considered to be "significant changes" for the purposes of review, consultation and approval.

3.2.2 The HSSC should consider all proposals to develop *new editions* and *revisions* to standards before work begins.

- The HSSC will should consider the impact on relevant stakeholders in when assessing a proposal and planning any subsequent work. Relevant stakeholders may include representation from international organisations, maritime administrations, non governmental international organisations, equipment manufacturers, data distributors and other users of the standard.

- If rejected, feedback <u>will</u> should be provided to the proposal originator giving the reasons for rejection.

3.2.3 After the HSSC has endorseding proposals, and establisheding a work priority, the HSSC IHBwill will forward proposals to the IHB for necessary action including incorporateion tasks into the relevant IHO-work programs.

3.2.4 Relevant stakeholders should be notified by the IHB of the timetable for new work items and be invited to comment and participate as appropriate. The notification should include a summary forecast of:

- the potential changes,
- the documents affected,
- the likely action list for relevant stakeholders,

- the timetable for implementation, and
- the proposed effective date of the new or revised standard.

3.2.5 The IHB should maintain an on-line register of IHO stakeholders. The register should be used to inform and seek input from stakeholders concerning any proposed changes to IHO standards.

4.3.2.6 The HSSC-relevant Working Groups should provide HSSC with progress reports on a regular basis and after each milestone during the development and testing phases. These should be made available to stakeholders by the IHB.

5.3.2.7 At the endsuccessful completion of the development and testing phases for new standards and proposed changes to existing standards, the HSSC will should review the standard work done in terms of its impact on relevant stakeholders and whether the appropriate non-IHO stakeholder consultation process has been achieved. If endorsed, a "change note" should be forwarded to relevant stakeholders. The "change note" will provide:

- a summary of changes,
- the documents affected,
- a recommended action list,
- the timetable for implementation, and
- the proposed effective date of the new standard, or revised.

6.3.2.8 After endorsement by the HSSC, Following an adequate period for comment on the "change note", and incorporation of any relevant feedback, the new or changedrevised standard should be submitted to Member States by the IHB for approval of the content, and confirmation of the "effective date".

7.3.2.9 At the "*effective date*", the new or changedrevised standard becomes the effective standard. TheA "*superseded*" standard will should normally usually remain available concurrently with the revised standard for a suitable transition period.

8.3.2.10 A "superseded" standard may be "retired" as an available standard when it is no longer appropriate for use, subject to Member State approval.

3.2.11 HSSC Working Groups may assess and authorise *clarifications* to standards and associated references, subject to seeking input from relevant stakeholders.

4. Urgent Revisions

4.1 The introduction of revisions to existing standards and specifications is intentionally a thorough process, in order to allow for appropriate levels of development, testing and consultation. However, there may be instances where more urgent action is required, especially where there are serious implications to safety of navigation. In such cases, a "fast-track" approval and implementation process may be needed. This should only occur in exceptional circumstances and in consultation with Member States. Any such fast-tracked revisions still require the approval of Member States before they can enter into force.

5. Procedures - Specific

5.1 <u>New Editions, Revisions and Clarifications</u>

New Edition New Editions of standards and product specifications introduce significant changes to a standard or a dependent product specification. New Editions enable new concepts, such as the ability to support new functions or applications, or the introduction of new constructs or data types, to be introduced. New Editions are likely to have a significant impact on either existing users or future users of the revised standard or specification. It follows that a full consultative process that provides an opportunity for input from as many stakeholders as possible is required. Proposed changes to a standard should be evaluated and tested wherever practicable. The approval of Member States is required before any New Edition of a standard or a product specification can

enter into force. All cumulative *clarifications* and *revisions* must be included with the release of an approved *New Edition* of a standard or product specification.

Revision Revisions are defined as substantive semantic changes to a standard or a dependent product specification. Typically, revisions change existing specifications to correct factual errors; introduce necessary changes that have become evident as a result of practical experience or changing circumstances; or add new specifications within an existing section. A *revision* shall not be classified as a clarification. *Revisions* could have an impact on either existing users or future users of a revised standard or product specification. It follows that a full consultative process that provides an opportunity for input from as many stakeholders as possible is required. Proposed changes to a standard should be evaluated and tested wherever practicable. The approval of Member States is required before any *revisions* to a standard or a product specification can enter into force. All cumulative *clarifications* must be included with the release of approved corrections revisions.

A *revision* shall not be classified as a *clarification* in order to by-bass the appropriate consultation processes.

Clarification Clarifications are non-substantive changes to a standard or a dependent product specification. Typically, clarifications: remove ambiguity; correct grammatical and spelling errors; amend or update cross references; insert improved graphics in spelling, punctuation and grammar. A clarification must not cause any substantive semantic change to a standard or product specification. *Clarifications* are the responsibility of the relevant expert WG and may be delegated to the responsible editor.

5.2 The associated version control numbering to identify changes (*n*) to IHO standards should be as follows:

New Editions denoted as **n**.0.0

Revisions denoted as n.*n*.0

Clarifications denoted as n.n.n

5.3 The following diagram illustrates the development, consultation and approval processes for IHO standards:

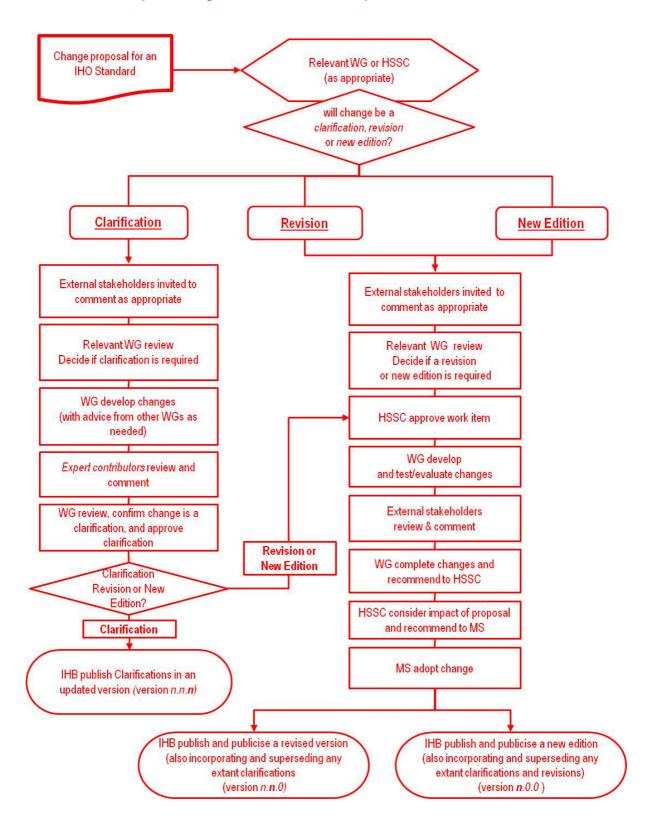


Diagram - Changes to IHO Standards and Specifications – General Case

Proposed Amendment to IHO Resolution 2/2007 (formerly, A1.21)

<u>Clean Copy</u>

PRINCIPLES AND PROCEDURES FOR MAKING CHANGES TO IHO TECHNICAL STANDARDS AND SPECIFICATIONS

1. Scope

1.1 These principles and procedures are intended to be applied to all proposals for changes to IHO technical standards and for new work items that will require significant resources to resolve or will potentially impact on those who need to apply the standards. They are not intended for IHO publications, catalogues or supporting documentation of a guidance, general or non-technical nature.

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2.1.6. In exceptional cases (for example, those affecting safety of navigation), it may be necessary to make recommendations for immediate change to standards and systems to the relevant authorities. This may be achieved through shortening the normal time frames for submission and consideration of proposals.

2.1.7. The principles of a recognised project management system should be followed.

² ISO/IEC Directives, Part 2 - Rules for the Structure and Drafting of International Standards defines a standard as

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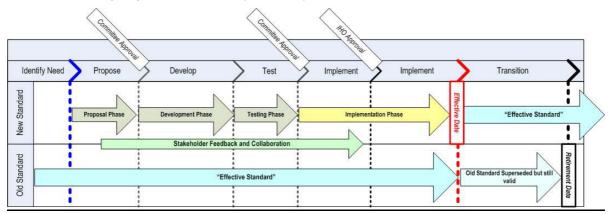
The ISO defines a guide as

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3. Procedures - General

3.1 Standardised procedures help to ensure that any proposed changes to IHO standards are properly assessed and implemented. These procedures should remain simple to encourage their use.



3.2 The following diagram illustrates the typical life cycle of an IHO standard:

3.2.1 Changes to IHO standards are classified at one of three different levels: *new edition, revision,* or *clarification (see paragraph. 5.1).* In each case, the development, consultation and approval process will be slightly different; ranging from a very comprehensive regime for *new editions*, to Working Group level approval for *clarifications. New editions* and *revisions* are considered to be "significant changes" for the purposes of review, consultation and approval.

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3.2.9 At the *"effective date"*, the new or changed standard becomes the effective standard. A *"superseded"* standard should normally remain available concurrently with the revised standard for a suitable transition period.

3.2.10 A "superseded" standard may be "retired" as an available standard when it is no longer appropriate for use, subject to Member State approval.

3.2.11 HSSC Working Groups may assess and authorise *clarifications* to standards and associated references, subject to seeking input from relevant stakeholders.

4. Urgent Revisions

4.1 The introduction of revisions to existing standards and specifications is intentionally a thorough process, in order to allow for appropriate levels of development, testing and consultation. However, there may be instances where more urgent action is required, especially where there are serious implications to safety of navigation. In such cases, a "fast-track" approval and implementation process may be needed. This should only occur in exceptional circumstances and in consultation with Member States. Any such fast-tracked revisions still require the approval of Member States before they can enter into force.

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New Edition New Editions of standards and product specifications introduce significant changes to a standard or a dependent product specification. New Editions enable new concepts, such as the ability to support new functions or applications, or the introduction of new constructs or data types, to be introduced. New Editions are likely to have a significant impact on either existing users or future users of the revised standard or specification. It follows that a full consultative process that provides an opportunity for input from as many stakeholders as possible is required. Proposed changes to a standard should be evaluated and tested wherever practicable. The approval of Member States is required before any New Edition of a standard or a product specification can enter into force. All cumulative clarifications and revisions must be included with the release of an approved New Edition of a standard or product specification.

Revision *Revisions* are defined as substantive semantic changes to a standard or a dependent product specification. Typically, revisions change existing specifications to correct factual errors; introduce necessary changes that have become evident as a result of practical experience or changing circumstances; or add new specifications within an existing section. A *revision* shall not be classified as a clarification. *Revisions* could have an impact on either existing users or future users of a revised standard or product specification. It follows that a full consultative process that provides an opportunity for input from as many stakeholders as possible is required. Proposed changes to a standard should be evaluated and tested wherever practicable. The approval of Member States is required before any *revisions* to a standard or a product specification can enter into force. All cumulative *clarifications* must be included with the release of approved corrections revisions.

A *revision* shall not be classified as a *clarification* in order to by-bass the appropriate consultation processes.

Clarification Clarifications are non-substantive changes to a standard or a dependent product specification. Typically, clarifications: remove ambiguity; correct grammatical and spelling errors; amend or update cross references; insert improved graphics in spelling, punctuation and grammar. A clarification must not cause any substantive semantic change to a standard or product

specification. *Clarifications* are the responsibility of the relevant expert WG and may be delegated to the responsible editor.

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5.3 The following diagram illustrates the development, consultation and approval processes for IHO standards:

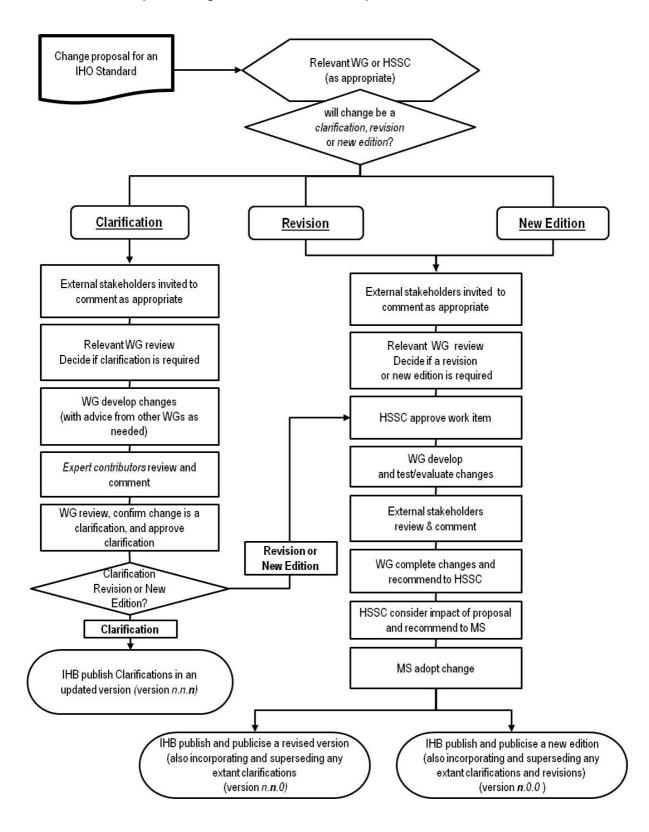


Diagram - Changes to IHO Standards and Specifications – General Case

Explanation and Justification of Changes to IHO Resolution 2/2007

Standardised Development and Approval Processes for IHO Standards

1. Controlling and properly considering changes to IHO technical standards and product specifications are one of the most critical aspects of the IHO technical programme because they can have a direct impact on stakeholders. For this reason, significant changes (to be known as *new editions* and *revisions*) to standards and product specifications must undergo a thorough evaluation, consultation and approval process. This principle is already reflected in the overview governance lifecycle diagram for IHO standards contained in Resolution 2/2007. However, a more detailed process flow diagram is missing.

2. Such a process flow diagram showing the generic development, consultation and approval process that could be applied to IHO technical standards and to IHO Product Specifications has been included in the changes proposed in Annexes A and B to this Circular Letter. The process flow diagram indicates that stakeholder consultation and input is achieved through circulating all proposals to the external stakeholders registered with the IHB. Testing will also involve relevant stakeholders as *expert contributors*. Because of this, the existing requirement in resolution 2/2007 for the IHB to publish a "change note" can be removed from the Resolution.

3. The role of the HSSC in the approval process is to approve proposals for work to commence on new standards and changes to existing standards, to monitor progress as work proceeds and finally to consider the impact of the completed work on relevant stakeholders.

ISO Definition of a Standard

4. ISO/IEC Directives, Part 2 - *Rules for the Structure and Drafting of International Standards* defines a <u>standard</u> as

- ... a document, established by consensus and approved by a recognized body, that provides for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context.
- 5. The ISO defines a <u>guide</u> as

... a document giving orientation, advice or recommendations on non normative matters relating to international standardization.

6. Using these definitions, the existing IHO standards and guidelines can be categorized according to the list at the end of this Annex.

7. Using the ISO/IEC definitions, certain IHO documents, such as S-23 – *Limits of Seas and Oceans*, S-60 - *Users Handbook on Datum Transformations involving WGS 84*, S-65 – *ENC Production Guidance*, S-100 – Universal Hydrographic Data Model do not meet the criteria to be considered as standards. Conversely, there are some IHO "guidelines" that should be considered as standards, such as S-11 Part A – *Guidance for the Preparation and Maintenance of INT chart schemes*, and S-58 – *Recommended ENC Validation Checks*. In the context of the proposed changes to Resolution 2/2007, *Product Specifications are definitely considered as standards*.

Controlling Changes to Standards

8. Most standards and authoritative technical references, such as software programs, typically classify changes at three levels, according to their impact on users and stakeholders. The development, consultation and approval process for each level of change can be different; ranging from a very comprehensive evaluation regime for changes that introduce major new features or requirements, to working level approval for simple editorial changes or clarifications to an existing text. IHO standards S-52 and S-57 have followed this approach with three levels of changes being designated. IHO publication S-100 follows the same principles. For the sake of consistency, this methodology should be extended to cover all the IHO standards and product specifications using the following definitions:

New Edition. *New Editions* of standards and product specifications introduce significant changes to a standard or a dependent product specification. *New Editions* enable new concepts, such as the ability to support new functions or applications, or the introduction of new constructs or data types, covering subject matter not previously part of the standard. *New Editions* are likely to have a significant impact on either existing users or future users of the revised standard or specification. It follows that a full consultative process that provides an opportunity for input from as many stakeholders as possible is required. Proposed changes to a standard should be evaluated and tested wherever practicable. The approval of Member States is required before any *New Edition* of a standard or a product specification can enter into force. All cumulative *clarifications* and *revisions* should be included with the release of an approved *New Edition* of a standard or product specification.

Revision. *Revisions* are substantive semantic changes to a standard or a dependent product specification. Typically, revisions change existing specifications to correct factual errors; introduce necessary changes that have become evident as a result of practical experience or changing circumstances, or add new specifications within an existing section. A *revision* shall not be classified as a *clarification*. *Revisions* could have an impact on either existing users or future users of a revised standard or product specification. It follows that a full consultative process that provides an opportunity for input from as many stakeholders as possible is required. Proposed revisions to a standard should be evaluated and tested wherever practicable. The approval of Member States is required before any *revisions* to a standard or a product specification can enter into force. All cumulative *clarifications* should be included with the release of approved revisions.

Clarification. Clarifications are non-substantive changes to a standard or a dependent product specification. Typically, clarifications remove ambiguity, correct grammatical and spelling errors, amend or update cross references, or insert improved graphics. A clarification must not cause any substantive semantic change to a standard or a product specification. *Clarifications* are the responsibility of the relevant expert WG and may be delegated to the responsible editor.

9. A *revision* should not be classified as a *clarification* in order to by-pass the appropriate consultation processes.

10. Version control numbering used to identify changes (*n*) are then as follows:

New Editions denoted as *n*.0.0

Revisions denoted as n.*n*.0

Clarifications denoted as n.n.n

Urgent Amendments

11. The introduction of *new editions* and *revisions* to existing standards and specifications is intentionally a thorough process, in order to allow for appropriate levels of development, testing and consultation. However, there will be instances where more urgent action is required, especially where there are serious implications to safety of navigation. In such cases, a "fast-track" approval and implementation process for *revisions* may be needed. This should only occur in exceptional circumstances and under the authority of the Member States. Any such fast-tracked *revisions* will still require the approval of Member States before they can enter into force. A recent example was the urgent introduction of temporal attribution rules for S-57 objects, announced by IHO Circular Letter 32/2009.

Classification of IHO Technical Publications (according to ISO/IEC definitions)

| | IHO Standards a document, established by consensus and approved by a recognized body, that provides for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context | Relevant maintenance body |
|------------------------------------|---|------------------------------|
| S-4 | Regulations of the IHO for International (INT) Charts and Chart Specifications of the IHO (including INT 1, INT 2, INT 3) | CSPCWG |
| S-11 Part A | Guidance for the Preparation and Maintenance of INT Chart schemes | CSPCWG |
| S-12 | Standardization of List of Lights and Fog Signals | WG when/if required |
| S-32 | Hydrographic Dictionary | HDWG |
| S-44 | IHO Standards for Hydrographic Surveys | S44 WG when required |
| S-49 | Standardization of Mariners' Routeing Guides | CSPCWG |
| S-52 | Specifications for Chart Content and Display Aspects of ECDIS | DIPWG |
| S-57 | IHO Transfer Standard for Digital Hydrographic Data | TSMAD |
| S-57 Appendix B1 | ENC Product Specification | TSMAD |
| S-58 | Recommended ENC Validation Checks | TSMAD |
| S-61 | Product Specifications for Raster Navigational Charts (RNC) | WG when/if required |
| S-62 | ENC Producer Codes | IHB |
| S-63 | IHO Data Protection Scheme | DPSWG |
| S-64 | Test Data Sets for ECDIS | TSMAD, DPSWG, DIPWG |
| S-99 (when adopted) | Operational Procedures for the Organization and Management of the IHO Geospatial Information Registry | TSMAD |
| S-10<i>n</i> (when adopted) | S-100 based Product Specifications | WG when/if required |

| | IHO Framework Models or Guides a document giving orientation, advice or recommendations on non normative matters relating to international standardization | |
|-------|--|--|
| S-23 | Limits of Seas and Oceans | S-23 WG |
| S-60 | Users Handbook on Datum Transformations involving WGS 84 | WG when/if required |
| S-65 | ENC Production Guidance | TSMAD |
| S-66 | Facts about Electronic Charting and Carriage Requirements | ICENC-PRIMAR Joint Information Working Group (JIWG), on behalf of HSSC |
| S-100 | IHO Universal Hydrographic Data Model | TSMAD |

IHB File No. S3/8151/HSSC

VOTING FORM

(to be returned to the IHB by **<u>15 February 2011</u>**)

E-mail: info@ihb.mc - Fax: +377 93 10 81 40)

| Member State: | |
|-----------------|--|
| Contact name: | |
| Contact E-mail: | |

TITLE

1. Do you agree to the amendments to IHO Resolution 2/2007, as reflected in Annex B to IHB CL 87/2010? Yes? or No? :



Any comments and/or proposed amendments to IHO Resolution 2/2007:

Name/Signature:Date: