

**THIRD MEETING OF THE IHO INTER REGIONAL COORDINATION COMMITTEE  
IHO-IRCC3  
Niteroi, Brazil, 26-27 May 2011**

**IMPACT OF IHO RESOLUTION 2/2007 AS AMENDED ON IRCC**

**Submitted by the Chair of IRCC**

## **1. Background**

Initiated by CHRIS (now HSSC) in 2001, a set of principles and procedures for making change to IHO technical standards and specifications was turned into IHO Technical Resolution A1.21 approved in 2007 by IHO Member States. With the introduction of a new numbering system in 2010, this resolution is now identified as IHO Resolution 2/2007.

Following a recommendation of HSSC, further amendments to IHO resolution 2/2007 were submitted to the approval of IHO Member States through IHO CL 87/2010 of 13 December 2010. Considering that the scope of the amended resolution and its implication were not fully accounted for, the Chair of IRCC invited the IHB Directing Committee to clarify the intent of the proposal by a letter dated 3 January 2011 which was copied to IRCC members. These comments were involuntarily overlooked and the proposed text was approved without any change as reported in IHO CL 24/2011 of 14 March 2011. However, further discussion with the IHB led to the conclusion that it was worthwhile to revisit the subject at IRCC3.

## **2. Analysis**

Resolution 2/2007 as amended is attached in **Annex A**.

In section 1 the former reference to IHO technical standards under the responsibilities of HSSC (ex-CHRIS) is replaced with a reference to “the ISO/IEC definitions for *standard* and *guide*”. On the one hand it is worth noting that a new classification of IHO publications (resolution 3/1957 as amended) was introduced subsequently to the drafting of the original resolution 2/2007. One would expect that the amended scope of resolution 2/2007 includes the S-category, which is defined as “Standards and Specifications”, but is not limited to this category. However, it was indicated in annex C to CL 87/2010 that some IHO documents in the S-category “do not meet the criteria to be considered as standards”. The status of other publications, such as B-6 (Standardization of Undersea Feature Names [Guidelines, Proposal Form Terminology] or C-17 (Spatial Data Infrastructures: “The Marine Dimension” - Guidance for Hydrographic Offices) which seem to qualify under the ISO/IEC definitions was not discussed in the annex.

On the other hand section 3 of resolution 2/2007 as amended and the diagram in section 5 retain the original scope of the resolution through referring the procedure to HSSC and its Working Groups. Such prescription does not account for the fact that some IHO publications encompassed by the ISO/IEC definitions are under the responsibilities of the subordinate bodies of IRCC (e.g. S-5 and S-8 dealing with “Standards of Competence”) and changes to these publications which fall under article 5 of the IRCC terms of reference (reference a/) do not have to be referred to HSSC.

### 3. Proposal

In order to be consistent with the scope extended to all IHO standards (in the ISO/IEC sense) it is proposed to amend sections 3 and 5 of resolution 2/2007 to accommodate standards which are not all under the responsibility of HSSC. The following changes are suggested:

- in section 3.2.1: replace: “to Working Group level approval for clarifications” with: “to approval at the level of a subordinate body for clarification”;
- in section 3.2.2: replace: “The HSSC should consider all proposals” with: “The relevant Committee (HSSC or IRCC) should consider all proposals”;
- in the first bullet of section 3.2.2: replace: “The HSSC should consider the impact” with: “The Committee should consider the impact”;
- in section 3.2.3, 3.2.7 and 3.2.8: replace: “the HSSC” with: “the Committee”;
- in section 3.2.6: replace: “The relevant Working Groups should provide HSSC with progress reports on a regular basis ...” with: “The relevant subordinate bodies should provide the Committee with progress reports on a regular basis ...”;
- in section 3.2.11: replace: “HSSC Working Groups” with: “Subordinate bodies”;
- in sub section “Clarification” of section 5.1: replace: “*Clarifications* are the responsibility of the relevant expert WG and may be delegated to the responsible editor.” with: “*Clarifications* are the responsibility of the relevant subordinate body and may be delegated to the responsible editor.”;
- in diagram of section 5.2: replace: “HSSC” with: “Committee” and replace: “WG” with “subordinate body”.

Resolution 2/2007 as amended, including these modifications in track-change mode is attached in **Annex B**.

Additionally the list of publications under the responsibility of IRCC subordinate bodies which are to be treated as standards is proposed in table 1. It is worth noting that in some cases, further thought will be required on how the “stakeholder feedback” element of the process is to be achieved.

**Table 1**  
**List of IHO Publications under the responsibility of IRCC subordinate bodies**

No	Title	Category	Organ	Comments
B-1	General Bathymetric Chart of the Oceans	Chart	GGC	
B-4	Information Concerning Recent Bathymetric Data	List	DCDB	
B-6	Standardization of Undersea Feature Names (Guidelines, Proposal Form Terminology)	<b>Standard</b>	SCUFN	Stakeholders to be identified
B-7	GEBCO Guidelines	Guide	GGC	
B-8	Gazetteer of Geographical Names of Undersea Features	List	SCUFN	
B-9	GEBCO Digital Atlas	Chart	GGC	
B-10	The History of GEBCO	Miscellaneous	GGC	

C-6	Reference Texts for Training in Hydrography	Bibliography	IBSC	
C-47	Training Courses in Hydrography and Nautical Cartography	List	IBSC	
C-55	Status of Hydrographic Surveying and Nautical Charting Worldwide	List	RHCs & IHB	
S-5	Standards of Competence for Hydrographic Surveyors	<b>Standard</b>	IBSC	Stakeholders to be identified
S-8	Standards of Competence for Nautical Cartographers	<b>Standard</b>	IBSC	Stakeholders to be identified
S-23	Limits of Oceans and Seas	<b>Standard</b>	S-23WG	
S-53	Joint IMO/IHO/WMO Manual on Maritime Safety Information	<b>Standard</b>	WWNWS	Inter-organizational process

#### 4. Action required of IRCC

**The Committee is invited to consider the proposals in section 3 above and take actions as it deems appropriate.**

**Annex A to IRCC3-04.1C**  
**IHO Resolution 2/2007 as amended**

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

**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.

1.2 Any reference to “standards” in these principles and procedures follows the ISO/IEC definitions for *standard* and *guide* and may therefore also include some IHO “specifications” and “guidelines” as appropriate<sup>1</sup>. 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. The 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.

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

---

<sup>1</sup> 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.*

The ISO defines a guide as  
*... a document giving orientation, advice or recommendations on non normative matters relating to international standardization.*

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.

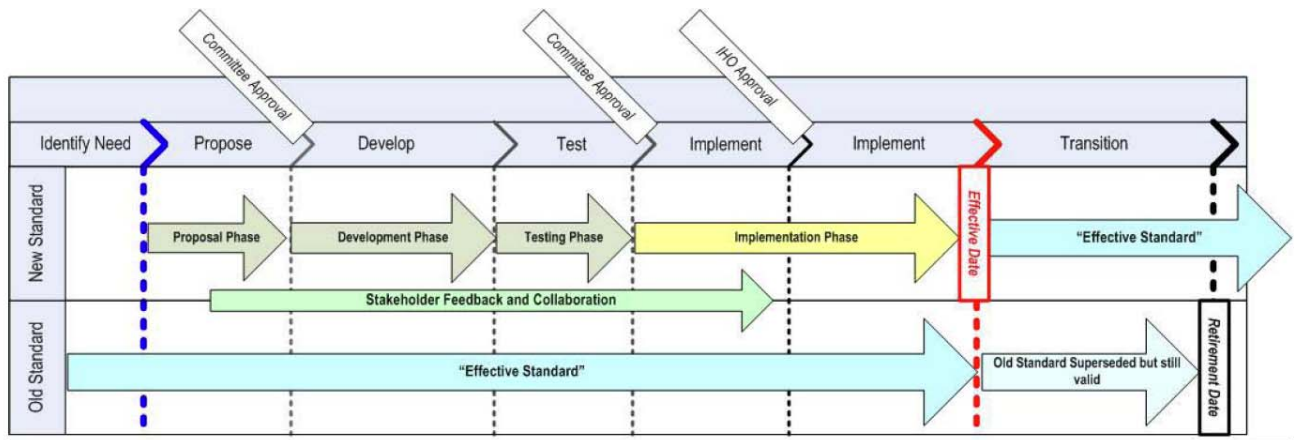
2.1.7 The principles of a recognised project management system should be followed.

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 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.

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

- The HSSC should consider the impact on relevant *stakeholders* when assessing a proposal and planning any subsequent work. This assessment should systematically include a risk and feasibility analysis, and an estimate of the resources needed for the implementation of a new or revised standard or its development, including within Member States Hydrographic Services.

- If rejected, feedback should be provided to the proposal originator giving the reasons for rejection.

3.2.3 After the HSSC has endorsed proposals and established a work priority, the IHB will incorporate

tasks into the relevant 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.

3.2.6 The 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.

3.2.7 At the successful completion of the development and testing phases for new standards and proposed changes to existing standards, the HSSC should review the work done in terms of its impact on relevant stakeholders and whether the appropriate non-IHO stakeholder consultation process has been achieved.

3.2.8 After endorsement by the HSSC, the new or changed standard should be submitted to Member States by the IHB for approval of the content, and confirmation of the “*effective date*”.

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 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 New Editions, Revisions and Clarifications***

## **New Edition**

*New Editions* of standards introduce significant changes. *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. 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 can enter into force. All cumulative *clarifications* and *revisions* must be included with the release of an approved *New Edition* of a standard.

## **Revision**

*Revisions* are defined as substantive semantic changes to a standard. 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. 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 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 bypass the appropriate consultation processes.

## **Clarification**

*Clarifications* are non-substantive changes to a standard. 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. *Clarifications* are the responsibility of the relevant expert WG and may be delegated to the responsible editor.

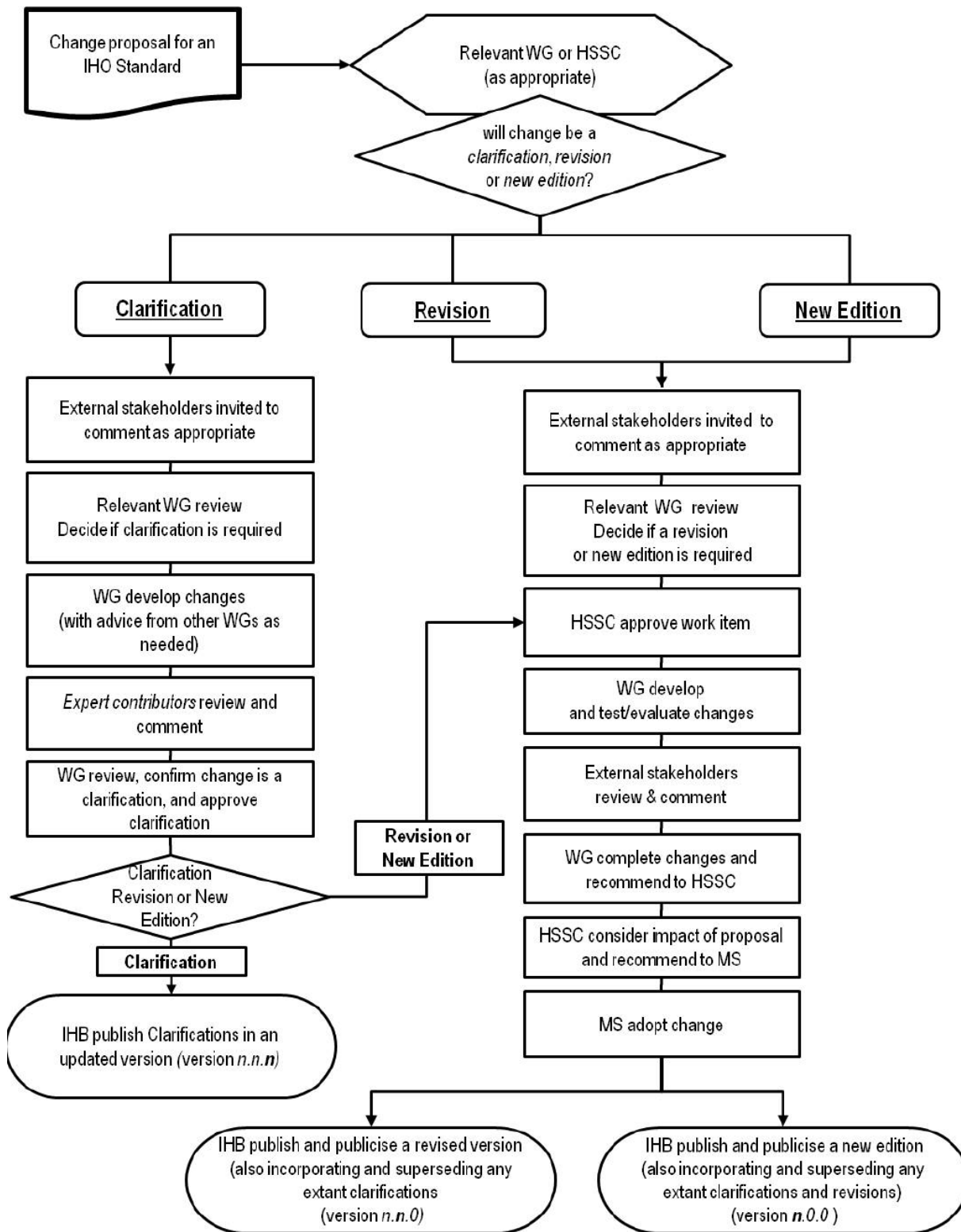
5.2 The associated version control numbering to identify changes (*n*) to IHO standards should be as follows:

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 - General Case**



**Annex B to IRCC3-04.1C**  
**IHO Resolution 2/2007 as amended**

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

**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.

1.2 Any reference to “standards” in these principles and procedures follows the ISO/IEC definitions for *standard* and *guide* and may therefore also include some IHO “specifications” and “guidelines” as appropriate<sup>2</sup>. 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. The 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.

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

---

<sup>2</sup> 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.*

The ISO defines a guide as  
*... a document giving orientation, advice or recommendations on non normative matters relating to international standardization.*

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.

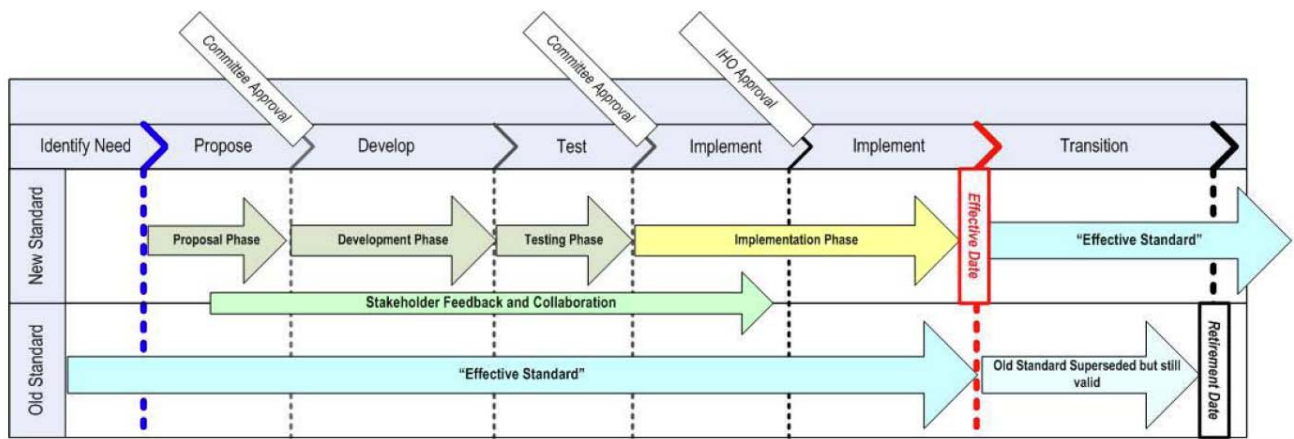
2.1.7 The principles of a recognised project management system should be followed.

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 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 approval at the level of a subordinate body 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 relevant Committee (HSSC or IRCC) should consider all proposals to develop *new editions* and *revisions* to standards before work begins.

- The Committee HSSC should consider the impact on relevant *stakeholders* when assessing a proposal and planning any subsequent work. This assessment should systematically include a risk and feasibility analysis, and an estimate of the resources needed for the implementation of a new or revised standard or its development, including within Member States Hydrographic Services.

- If rejected, feedback should be provided to the proposal originator giving the reasons for rejection.

3.2.3 After the ~~Committee HSSC~~ has endorsed proposals and established a work priority, the IHB will incorporate tasks into the relevant 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.

3.2.6 The relevant ~~subordinate bodies Working Groups~~ should provide ~~the Committee 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.

3.2.7 At the successful completion of the development and testing phases for new standards and proposed changes to existing standards, the ~~Committee HSSC~~ should review the work done in terms of its impact on relevant stakeholders and whether the appropriate non-IHO stakeholder consultation process has been achieved.

3.2.8 After endorsement by the ~~Committee HSSC~~, the new or changed standard should be submitted to Member States by the IHB for approval of the content, and confirmation of the “*effective date*”.

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 ~~Subordinate bodies 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 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 New Editions, Revisions and Clarifications

### New Edition

*New Editions* of standards introduce significant changes. *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. 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 can enter into force. All cumulative *clarifications* and *revisions* must be included with the release of an approved *New Edition* of a standard.

### Revision

*Revisions* are defined as substantive semantic changes to a standard. 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. 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 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 bypass the appropriate consultation processes.

### Clarification

*Clarifications* are non-substantive changes to a standard. 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. *Clarifications* are the responsibility of the relevant subordinate body 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:

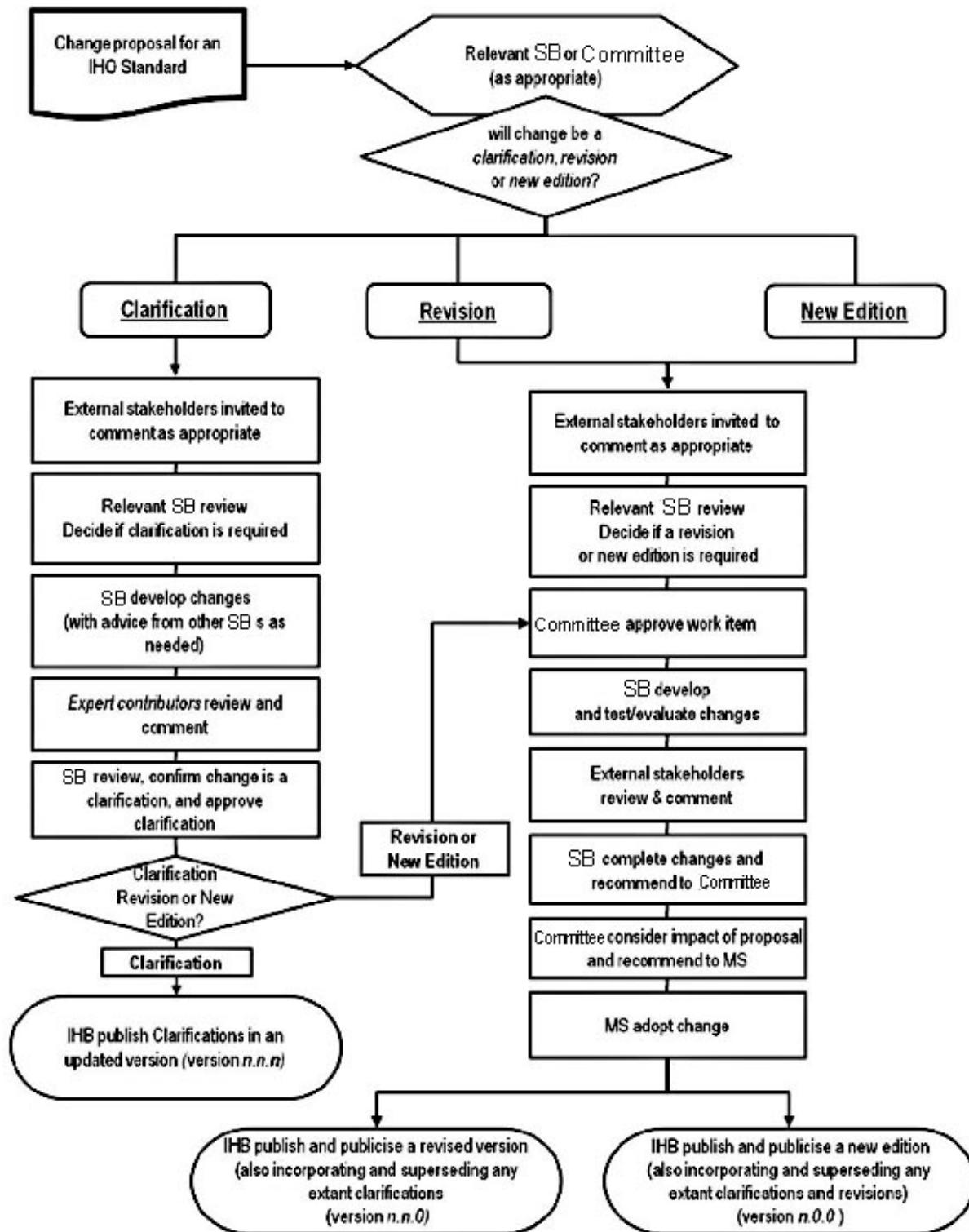


Diagram - Changes to IHO Standards - General Case