



Terms of Reference

1. International Federation of Surveyors

1.1 **Background.** The International Federation of Surveyors (FIG) is the premier international organisation representing the interests of surveyors worldwide. FIG is a federation of national member surveying associations covering the range of professional fields and disciplines within the global surveying community. The organisation provides an international forum to develop and promote professional surveying practice and standards. The aim of FIG is to ensure the disciplines of surveying and all who practise them, meet the needs of the markets and communities they serve.

2. FIG Commissions

2.1 Ten (10) Commissions lead FIG's technical work programme. Each surveying member association appoints a delegate to each of the Commissions. Detailed information on the work of the Commissions, their work plans, working groups, seminars, newsletters and publications can be found on the [FIG Commissions](#) webpage

3. FIG Commission 4 – Hydrography Mission Statement

Mission Statement

- Promote the aims and objectives of FIG to hydrographers through the active involvement of national delegates from member associations and other interested parties in the activities of the commission.
- Foster closer links with all sister organisations currently active within the global Hydrographic community.
- Develop guidelines and standards that will assist hydrographers in the provision of their services.
- Disseminate information relevant to the profession through participation in international meetings, conferences and committees.

4. WG 4.1 – Standards and Guidelines for Hydrography

4.1 **Authority.** WG 4.1 forms a subsidiary working group within FIG Commission 4. The work of WG 4.1 and its deliverables are subject to Commission 4 oversight, review and approval.

4.2 These Terms of Reference (ToR) reflect the objectives of the four year WG 4.1 Work Plan 2015 – 2018 that was approved by Commission 4 delegates at the FIG Working Week in Sofia, Bulgaria in May 2015.

5. WG 4.1 Objectives

- Assist in the development and recognition of standards of competency for hydrographic surveyors;
- Assist in the development of technical standards and guidelines;
- Assist with the review of standards and guidelines; and



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- Promote the need for and benefits of, professional hydrographic surveyor certification.

6. WG 4.1 Governance Arrangements

- 6.1 **Membership.** WG 4.1 shall comprise volunteer representatives of FIG Commission 4 along with members from professional hydrographic surveying organisations (eg. SSSI, NZIS etc). Membership may also be drawn from personnel attached to international hydrographic services (eg. SHOM, Australian Hydrographic Service, UK Hydrographic Office, Land Information New Zealand etc) and other hydrographic-related organisations, which includes personnel from within the commercial hydrographic industry itself.
- 6.2 Membership is open to entities and organisations which can provide a relevant and constructive contribution to the work of this WG. Membership at both a national and international level is encouraged from Government and non-Government agencies, from commercial organisations, and from practising individuals within the broader hydrographic community and allied spatial science field.
- 6.3 The WG 4.1 membership list shall be promulgated and maintained on the FIG Commission 4 [WG 4.1](#) website.
- 6.4 **Secretariat.** The Secretariat shall be drawn from within the WG 4.1 membership.
- 6.5 **WG 4.1 Chair.** The Chair is to be a member of an accredited hydrographic surveying organisation (eg. SSSI, NZIS). The Chair will normally be appointed for a period of four years to coincide with FIG Congress periods.
- 6.6 The election of the Chair shall be decided/confirmed at the Commission 4 meeting convened during the quadrennial (four yearly) FIG Congress and shall be determined by the eligible vote of those Commission 4 members present.
- 6.7 The WG 4.1 Vice Chair is a rotational appointment and does not have a set period of service; it may rotate as required by the Chair or as a result of the incumbent's personal circumstances and/or work commitments. The position is to be chosen from within WG 4.1 by WG members. The nomination is to be endorsed by the Chair.
- 6.8 If the Chair is unable to conduct the duties of the office the Vice Chair shall act on behalf of the Chair with the same powers and duties.

7.0 Specific Projects/Activities

- 7.1 For the period 2015-2018, WG 4.1 will aim to:
- broaden the membership of WG 4.1 to ensure its legitimacy as an active international professional body;



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- support the IHO through the work of the HSSC by participating as an EC in subordinate working groups and associated project teams, in reviewing relevant hydrographic standards and guidelines, namely;
 - S-44 - *IHO Standards for Hydrographic Surveys*
 - S-100 - *IHO Universal Hydrographic Data Model*
 - S-102 – *Bathymetric Surface Product Specification*
- support FIG member(s) on the IBSC in reviewing/updating competency standards, namely;
 - S-5A - *Standards of Competence for Category "A" Hydrographic Surveyors*
 - S-5B - *Standards of Competence for Category "B" Hydrographic Surveyors*
- represent Commission 4 on the FIG Standards Network; and
- support the work of other Commission 4 working groups and participate in major Commission 4 events.

7.2 WG 4.1 may also provide EC input to Standards and guidelines other than those listed above (eg. S-8 - *Standards of Competence for Nautical Cartographers*). This will depend on the nature of the request, the type and relevance of the Standard or guideline, and the capacity of WG 4.1 to undertake any review.

8.0 Hydrographic Standards and Guideline Submissions/Responses

8.1 WG 4.1 is to provide input as an EC into the review and maintenance of the hydrographic standards identified at para. 7.1 above as and when requested by the IHO.

8.2 The principal WG 4.1 function is to collate, clarify, simplify or elucidate submissions and/or responses from its members, and from hydrographic organisations and hydrographic industry stakeholders, to any IHO (HSSC/IBSC) request for review, for subsequent forwarding to the HSSC or IBSC. It should not be the intention of WG 4.1 to alter, influence or change the views or comment of contributors; the process is intended to be inclusive (not exclusive) of comment.

8.3 WG 4.1 submissions/responses to the HSSC/IBSC are to be tabled in English.

8.4 WG 4.1 submissions may be formal (eg. in response to a specific request from the HSSC and/or IBSC through an IHO Circular letter) or informal in nature (eg. where initiated by a contributor or lobbying by an EC). Contributor(s) may be Government or non-Government agencies, commercial organisations or individuals involved with hydrography or in appropriately aligned allied sciences. A contributor may also be current subject matter expert in contemporary hydrographic 'best practice' and procedures.

8.5 Amendments or suggested improvements to Standards and guidelines may also be suggested by individual members during any WG 4.1 meeting/teleconference.

8.6 Submissions/responses shall be compiled, collated and submitted using the Hydrographic Standards and Guidelines Submission template (available on the WG 4.1 webpage). Submissions are to be endorsed by the WG 4.1 Chair and submitted under a covering letter (signed by the Commission 4 Chair) for on-forwarding to the IBSC or to the HSSC (through the Chair of the relevant WG/project team lead).

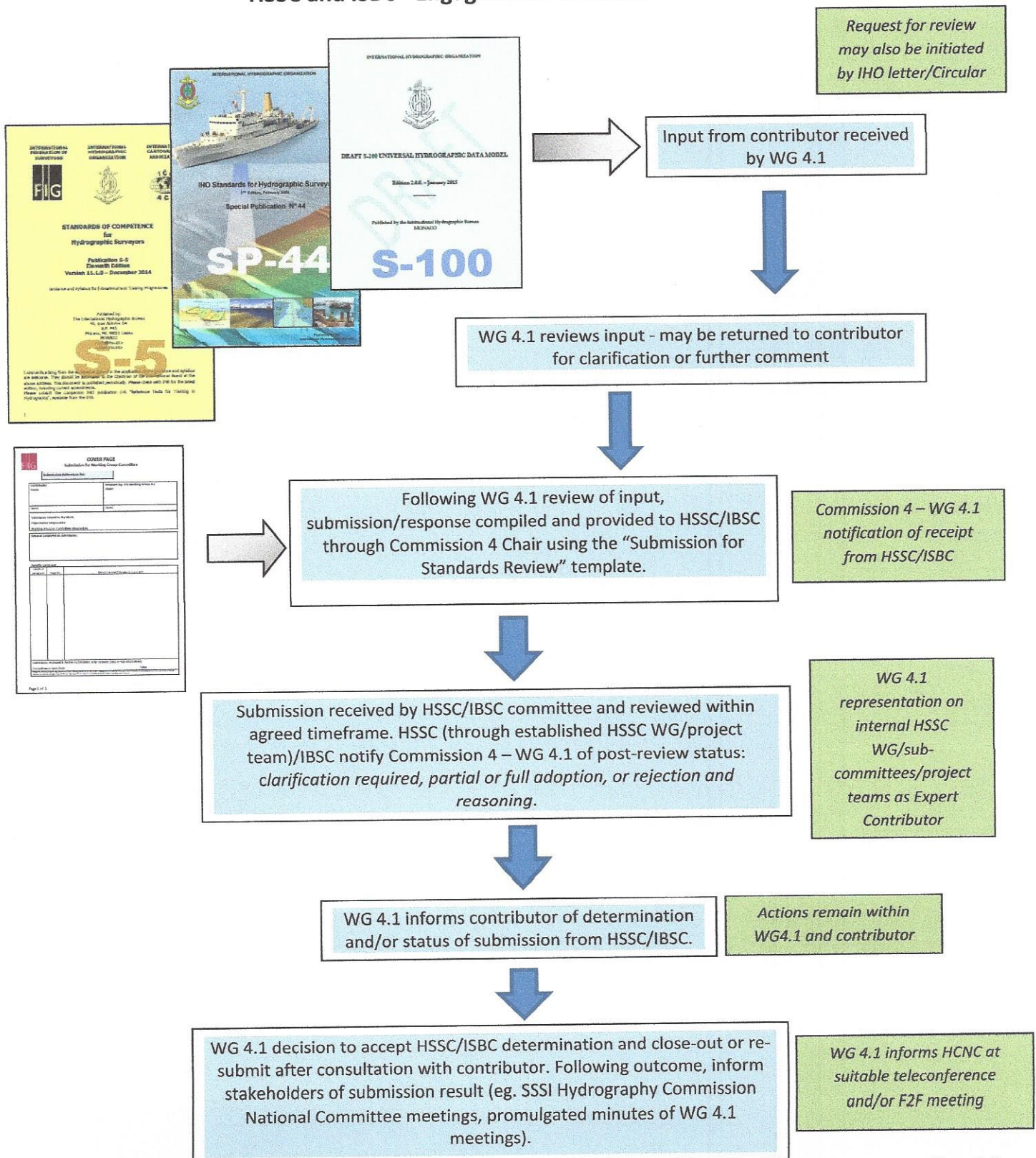


FIG Commission 4 Working Group (WG) 4.1

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8.7 The procedure for providing WG 4.1 submissions and responses to formal requests for review by the HSSC and/or the IBSC is detailed in the following flowchart.

HSSC and ISBC - Engagement Flowchart





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9.0 WG 4.1 Procedures

9.1 WG 4.1 will normally correspond and conduct its review activities by email, teleconference or Skype when required to consider a particular Standard or guideline; when a formal request to review a Standard or guideline is received from the IHO or in the event urgent Standards-related business needs to be attended to 'out of session'. It is important any input into the IHO review process is actioned as soon as reasonably possible by the WG membership.

9.2 WG 4.1 should convene at least annually or at a time best suited to facilitate a particular review of a Standard or guideline within the timeframe nominated as part of the request. The date and arrangements for the meeting (and if applicable, the venue) shall be promulgated by the Chair at the earliest opportunity in order to facilitate member participation and if applicable, participants' travel arrangements.

9.3 WG 4.1 members may also meet on an opportunity basis in conjunction with another relevant conference or meeting (eg. annual FIG Working Week, Surveying and Spatial Sciences Institute [SSSI] regional conference, Hydrography Commission National Committee [HCNC] meetings etc).¹ The date and venue for such meetings shall be promulgated by the Chair at the earliest opportunity in order to accommodate participants' travel arrangements.

9.4 The Chair (or any member of WG 4.1 with the agreement of the Chair) can call extraordinary meetings out of session/cycle. Confirmation of the venue and date for such meetings shall normally be announced at least one (1) month in advance.

9.5 **HSSC Working Groups/Project Teams.**² The ToR for some HSSC WGs (eg. S-100 WG) allow external contributions to be made from ECs as part of the standing WG membership. WG 4.1 participation as an EC in support of an HSSC WG (or associated project team) will be arranged separately with the WG Chair/project team lead. If agreed, WG 4.1 will be listed on relevant HSSC WGs/project teams as an EC and added to the distribution list.

9.6 Any WG 4.1 representation involving a particular Standard or guideline as an EC of an HSSC WG/sub-committee/project team must be the collaborative result of active consultation with the broader WG 4.1 membership. This engagement must be undertaken and completed before any formal submission/response is made to the HSSC.

9.7 As an EC member of an established HSSC WG or project team, the collated WG 4.1 submission or response to a request to review a Standard or guideline will normally be tabled through the Commission 4 Chair to the Chair of the relevant HSSC WG or project team lead.

¹ Depending on WG 4.1 membership at the time.

² At this stage the IBSC does not have any subordinate WG to review hydrographic Standards (ie. S-44). WG 4.1 engagement is therefore, direct to the IBSC itself.



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10. Reporting

10.1 **Minutes/Outcomes.** The draft record of all meetings shall be distributed by the Chair within six (6) weeks of the meeting date. All WG 4.1 members' comments/feedback should be returned within three (3) weeks of the date of despatch.

10.2 Final minutes/outcomes of all meetings (planned or extraordinary) shall be distributed to all WG 4.1 members and posted on the FIG Commission 4 website within two (2) months after the meeting date.

10.3 **Annual Report.** WG 4.1 is to report annually on its activities. An annual report is to be produced for the FIG Commission 4 Chair in Nov/Dec each year. This report is to be promulgated on the Commission 4 WG 4.1 webpage.

10.4 The report may be distributed to the wider Commission 4 membership by the Commission 4 Chair. A copy of the annual report may also be forwarded by the WG 4.1 Chair to the HCNC Chair for distribution to the SSSI Board.

11.0 Budget

11.1 Funding to support WG 4.1 is currently provided by the SSSI as part of the Hydrography Commission's annual budget arrangements. WG 4.1 funding is subject to annual HCNC review and SSSI endorsement to cover the attendance of the WG 4.1 Chair (or a nominated WG 4.1 representative) at the annual FIG Working Week/Congress. The budget extends to registration costs and travel expenses for this WG 4.1 member.

12.0 Terms of Reference – Annual Review

12.1 These ToR can be amended with WG 4.1 consensus and in accordance with FIG Commission 4 - Rules and Procedures.

12.2 As a minimum the ToR are to be reviewed annually, ideally during the FIG Working Week/Congress meeting. Updated ToR are to be promulgated on the FIG Commission 4 WG 4.1 webpage.

13.0 Glossary:

FIG	Federation Internationale des Géomètres
HC	Hydrography Commission of the SSSI
HCNC	Hydrography Commission National Committee
HSSC	Hydrographic Services and Standards Committee
IBSC	FIG-IHO-ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers
IHO	International Hydrographic Organization
NZIS	New Zealand Institute of Surveyors
SHOM	Service Hydrographique et Océanographique de la Marine
SSSI	Surveying and Spatial Sciences Institute (Australia)



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14.0 Revisions Table

Date	Ver	Para & Page(s)	Description
25/6/15	1.0	Draft only	Issued for review.
5/8/15	2.0	N/A	Final – promulgated on FIG website.
19/12/16	3.0	All	Annual review and general update.