

**15th MEETING OF THE IHO INTER-REGIONAL COORDINATING COMMITTEE
IHO-IRCC15
Tokyo, Japan, 12-14 June 2023**

**Report of the FIG/IHO/ICA International Board on Standards of Competence for
Hydrographic Surveyors and Nautical Cartographers (IBSC)**

Submitted by:	Chair, Capt. Nickolás ROSCHER
Related Documents:	<ul style="list-style-type: none"> - IHO 3 Year Work Programme - 3YEARWP2021-2023_ENG. - Standards of Competence for Hydrographic Surveyors and Nautical Cartographers (S-5A, S-5B, S-8A & S-8B). - Guidelines for the Implementation of the Standards of Competence for Hydrographic Surveyors and Nautical Cartographers. - Frequently Asked Questions document. - IHR-Nov-2017-Article Maintaining the Standards of Competence for Hydrographic Surveyors and Nautical Cartographers.
Related Projects:	N/A

Chair:	Capt. Nickolás Roscher, Brazil (IHO)
Vice-Chair 1:	Mr Sobri Syawie, Indonesia (FIG)
Vice-Chair 2:	Emeritus Prof. Dr. Lysandros Tsoulos, Greece (ICA)
Secretary:	Mr Leonel Manteigas, IHO Secretariat
Members:	<p>IHO: Capt. Andrew Armstrong (USA), Commodore Rod Nairn (Australia), Dr. Arata Sengoku (Japan);</p> <p>FIG: Mr. Gordon Johnston (UK), Mr. Adam Greenland (New Zealand), Prof. Dr. Harald Sternberg (Germany);</p> <p>ICA: Emeritus Prof. Dr. Lysandros Tsoulos (Greece) and Commodore J. Gurumani (India)</p>
Expert Contributors:	N/A
<i>see Annex A for full details</i>	

1. Meetings Held During Reporting Period

IBSC 2022 Workshop – Singapore (7-11 November 2022)

IBSC46 Meeting - Tokyo, Japan (15 - 26 May 2023)

Work Program

In addition to the annual meeting the IBSC worked on the following tasks:

- Review the IBSC Standards and maintain IBSC Publications (Task 3.8.4, IHO 3-year Work Programme 2021-2023),
- Review of the IBSC45 Conditional Recognized submissions and those that had been offered an intersessional review (IBSC Work Plan Q2 2022 to Q2 2023, approved IRCC14, Decision 31).

Following the IBSC Work Plan Q2 2023 to Q2 2023, approved at IRCC14, and having regard to clarifications required following the experiences gained from the reviews conducted during IBSC46 and the 2022 Workshop, the following companion to the Standards document will be updated and a new version published in 2023:

- Guidelines for the Implementation of the Standards of Competence for Hydrographic Surveyors and Nautical Cartographers (Ed 2.1.4, <Month> 2023).

During the period of this report three Members paid an On-Site Visit to UTM Malaysia. This visit was related to their S-8B recognized programme and provided additional information that helped Board members develop recommendations to improve the UTM programme. At both IBSC meetings, the list and priorities for On-Site Visits was reviewed and a plan defined.

Review of the IBSC45 Conditional Recognition submissions (IBSC Work Plan Q2 2022 to Q2 2023, approved IRCC14, Decision 31).

Thirteen (13) submissions were reviewed at IBSC45 against the Standards. Two submissions were new and from Individual Certification Schemes. The table below provides a summary of the submissions reviewed during 2022, with the finalized situation at the end of that year. It should be noted that from IRCC13 the IBSC not only reported the results immediately after the annual IBSC Meetings, but also the final result after the intersessional revisions. This was offered to provide the overall situation that would be the position the end of all revisions. Typically, this is significantly different than is the case at the end of the annual meetings. In 2022, with only three recognized submissions and 10 non recognized at IBSC45, after following the comprehensive intersessional revisions by the IBSC of the 13 submissions, all submissions were recognized. The table below presents the final situation.

2022	In the IBSC44 Meeting			Intersessional Revision	After Intersessional Revision		
	N Total	Standards			N Total	Standards	
Recognized	3	1	S-5A		13	S-5A	3
		1	S-5B			S-5B	6
		1	Schemes			S-8B	1
						Schemes	3
Could be Recognized	7	2	S-5A	2			
		3	S-5B	3			
		2	Schemes	2			
Not Recognized	3	2	S-5B	2			
		1	S-8B	1			
Total	13			10			

IBSC46 (IBSC Work Plan Q2 2022 to Q2 2023, approved IRCC14, Decision 31).

Eleven (11) submissions were reviewed at the IBSC46 meeting against the Standards and the Guidelines. Of the 11 submissions, 4 were new submissions (2 from S-5A, 1 from S-5B and 1 from S-8B). The table below provides a summary of the submissions reviewed and the preliminary results. Intersessional reviews will progress until the end of 2023. The board offered 8 submissions an intersessional review.

2023	In the IBSC46 Meeting			Intersessional Revision	After Intersessional Revision		
	Status	N Total	Standards		N Total	Standards	
Recognized	1	1	S-5A				
Could be Recognized	7	2	S-5A	2			
		3	S-5B	3			
		1	S-8A	1			
		1	S-8B	1			
Not Recognized	3	2	S-5A	0			
		1	S-5A	1			
Total	11			8			

The IBSC46 also reviewed the Annual Reports received from institutions holding recognized programmes as well as the recognized Schemes.

Due to the need arising from IBSC46 to conduct an intersessional review of 8 submissions, as well as to work on the revision of Standards and to define further the process to recognize Subjects of the current Standards, it was decided to conduct a Workshop in Q4 2023. The Workshop is expected to be held in London, from 30 October to 03 November 2023.

In addition to the review of the submissions, it was also necessary to discuss and approve other important agenda items such as the IBSC Work Programme (Annex A), establish a list of priority Institutions for an On-site visit, the financial situation of the IBSC fund, the programmes that have withdrawn or lost their recognitions and those that requested an extension of their recognition. The Board also discussed the engagement with the IHO e-Learning Center and the preparation of the Report to IRCC15. Due to the need to increase the number of Board members, the IBSC continues to seek all four ICA members.

Dr Pablo Sanchez is waiting to complete the ICA process to become an IBSC Member. He also attended the meeting participating in the revision of the submissions.

Ms Cecilia Cortina (Mexico), currently attending the University of New Hampshire - Nippon Foundation/ GEBCO program alumna, joined the Meeting as an intern supported by Nippon Foundation/GEBCO. During her internship, tutored by Professor Lysandros Tsoulos, she reviewed the Standards and Guidelines as an external, providing some recommendations of improvement that were appreciated by the Members of the Board.

The Board recognized that most of the limitations imposed by the COVID were relieved. However, considering the effort and expense necessary for the Institutions to attend the meeting for a Q&A session of about two hours and to try to better control the time available for IBSC46, the Board decided to continue with the procedure adopted during the COVID, i.e. the Board asked that a presentation by the submitting institutions be sent in a recorded format prior to the Meeting and the Delegates present online in the Q&A sessions. The cooperation of the institutions in this regard was appreciated.

The 47th meeting of the IBSC is planned to be held in Hamburg, Germany, from from 15 to 26 April 2024.

2. Progress on IRCC Action Items

N/A.

3. Problems Encountered

The main problem encountered remains the generally deficient initial quality of submissions. Despite the investment in time of the IBSC to revise the Standards' companion documents, the Guidelines and most recently the FAQs with clear examples, most of the submitting organizations did not follow them completely, presenting some significant omissions of information and without the required level of detail.

The large number of deficient submissions and the fact that most of them have a significant number of shortcomings, continue to be the primary and important reason for the increased annual workload of the IBSC.

The increased number of continuing reviews requires just per se that a second annual meeting is necessary to finalize the reviews and complete the annual IBSC programme.

4. Any Other Items of Note

Revision of the ToR and RoP

During the 2022 Workshop, after a projection of the Financial situation of the IBSC Fund, considering that the fee was not increased in the last decade and that the costs associated with the attendance of the meetings have increased significantly, the Board decided to increase the fees from 450 to 600 euros/year with effect from January 2024. After all 3 Institutions (IHO, FIG and ICA) have been informed a letter will be sent informing all institutions with recognized programmes or schemes.

Annex B presents the proposed Terms of Reference and the approved new Rules of Procedure with the changes in red.

Revision of the Standards

The Board discussed the need to update the Standards and potentially, create a new standard for Marine Spatial Data Professionals. During the discussion the need to liaise with other stakeholders, in particular the IHO MSDIWG, to make an informed decision on the way forward on this subject was necessary. This is scheduled for the next intersessional meeting.

Recognition of Subjects

The Board decided that it would be appropriate to work on the recognition of Subjects of the S-5 Standards, i.e. the Subjects in the current S5A & S5B standards, in addition to the recognition of full programmes. For example the S-5A Ed1.0.2 contains 17 Subjects "H3: LiDAR and Remote Sensing", being one of them. Once the IBSC process is concluded on this matter it is expected that an Institution may have modules on this or other Subjects recognized by the Board. The objective of the recognition of Subjects is to widen the availability of high-quality, IBSC recognized hydrographic training for S-5 A and B.

Succession plan

The IBSC in each meeting has a standing agenda item “Succession Planning” to consider anticipated changes in the membership as some members approach retirement from service as Members of the IBSC. At the end of IBSC46, Dr Arata Sengoku informed the Board on his intention to retire as a Member.

Annual workshop

A number of factors in recent years have made it imperative for the IBSC to conduct a one-week intersessional Workshop late in the calendar year relative to the pending workload arising from the previous IBSC plenary meeting. The imperative is influenced by increased submissions, the need to review the Standards and the companion documents and additionally to complete the intersessional reviews.

5. Conclusions and Recommended Actions

This year the submissions presented for renew the recognition were programmes already adapted to the new standards. The Board expected the situation would improve which was unfortunately, not the case this year. To provide additional support, the IBSC continues to improve the Guidelines, clarifying some points and giving better or more detailed examples and the Frequently Asked Questions document. It is expected that, with the forementioned factors, the situation will improve and that the Right First Time principle steadily became more a reality.

The number of submissions and the fact that most of them have a significant number of shortcomings requires an important increase in the work of the IBSC due to the increased number of reviews in the first place, and then the number of necessary intersessional reviews, which means that, under normal conditions, a second annual meeting is required and therefore justified.

The increase in the number of Members is important to share the workload of the individual Members, so an increase in two more Members from ICA was adopted.

The beginning of a process to evaluate the need and best way to revise the Standards in liaison with other stakeholders and in particular with the IHO MSDIWG is expected to allow the IBSC to define a plan in the next intersessional meeting.

The decision to work on the recognition of Subjects of the S-5 Standards related with the Subjects in the existing standards in addition to the recognition of full programmes is expected to widen the availability of high-quality, IBSC recognized hydrographic training for S-5 A and B.

The IBSC will continue to assist institutions to improve the quality of their submissions. This will have an immediate impact, as well as over time, most institutions will be able to prepare programmes that are likely to be recognized at the first review, i.e. the Right First Time principle.

6. Justification and Impacts

The goal behind the Right First Time principle is to make available to the institutions more information and better examples that allow them to prepare programme submissions with less issues in the first submission to the IBSC for its review.

To achieve this objective, the Guidelines and the Frequently Asked Questions document are being reviewed in each meeting to provide better examples and clear requirements.

The IBSC is always available to engage with institutions to clarify any questions through correspondence and with essential on-site visits and it also seeks opportunities for stakeholder engagement at conferences, meetings, and workshops when conditions permit (see Tasks in Annex B).

7. Action Required of IRCC

The IRCC is invited to:

- a) Note this report.
- b) Acknowledge the work done by the IBSC members, to review all 13 submissions received as well as offering intersessional revisions to 8.
- c) Encourage Member States and submitting institutions to engage with the IHO Secretariat early in the process of them preparing submissions for programme recognition.
- d) Encourage Member States and submitting institutions to consult the Guidelines, the FAQs and the White Paper (IHR-Nov-2017 – Article: Maintaining the Standards of Competence for Hydrographic Surveyors and Nautical Cartographers) early in the process of preparing submissions for programme recognition.
- e) Approve the IBSC Proposed Work Plan – Q2 2023 to Q2 2024 (Annex A).
- f) Note the Revised Rules of Procedure with the increase in the annual fees from 450 euros to 600 euros (Annex B).
- g) Note the intention of the Board to engage with other stakeholders on the need to revise the standards.
- h) Note the intention of the Board to start the process to recognize Subjects of the S-5 Standards related with the Subjects in the existing S5A & S5B standards in addition to the recognition of full programmes.
- i) Take any other actions as appropriate.

IBSC Proposed Work Plan – Q2 2023 to Q2 2024

1. The IBSC will continue to assist institutions to improve the quality of submissions to achieve *Right First Time* i.e. to reduce the number of submissions that are either not recognised or conditional recognition

IBSC Tasks

Task	Work Item	Priority	Milestones	Start Date	End Date	Status	Contact Person	Affected Pubs/Standard	Remarks
1	IBSC Workshop 2023	H		2023	2023	P	IHO Secretariat		London, 30 October to 3 November 2023
2	Review of IBSC45 Conditional Recognition submissions	H		Q2-Q3 2023	Q4 2023	O	Board Members		Intersessional Meeting
3	Review the S-5/8 A and B Standards	H		Q3-Q4 2023	Q4 2023	O	Board Members	S-5/8 A and B	Intersessional Meeting
4	Improve Guidelines and FAQ companion documents	M		Q3-Q4 2023	Q1 2024	O	Board Members	Guidelines and FAQ companion documents	Intersessional Meeting
5	Implement the pathway to Recognition of Subjects of the S-5 Standards	H		Q3-Q4 2023	Q1 2024	O	Board Members	Guidelines and FAQ companion documents	Intersessional Meeting
5	Succession Planning	M		2023		O	Board Members		Intersessional Meeting
6	On-site visits to provide guidance and assistance to institutions	M		Q3 2022 - Q1 2023		P	Board Members		Q2 2023 – IIC (TBC) Q4 2023 – UKHO and Italy (TBC)
7	IBSC47	M		2024		P	IHO Secretariat		Hamburg, Germany 15 - 26 April 2024

Abbreviations:

- 1) **Priority:** H-high, M-medium and L-low
- 2) **Status:** P-planned, O-ongoing and C-Completed

FIG/IHO/ICA INTERNATIONAL BOARD ON STANDARDS OF COMPETENCE FOR HYDROGRAPHIC SURVEYORS AND NAUTICAL CARTOGRAPHERS (IBSC)
TERMS OF REFERENCE
As approved by the IRCC at its 14 th meeting by Decision 32 (6-8 June 2022)
1. Review at appropriate intervals (not exceeding two years) the recommended minimum standards of competence for hydrographic surveyors and nautical cartographers, taking into account developments in science and technology, current practices and comments and recommendations received from National Focal Points (NFP) and other authorities.
2. Maintain and promulgate all publications and documents resulting from the tasks carried out by the Board.
3. Review the syllabi of programmes and individual recognition schemes submitted by Hydrographic Offices, institutions and learned bodies taking into account comments and recommendations received from NFP and other authorities.
4. Review such syllabi by comparison with the recommended minimum standards and award certificates of programme recognition to those institutions whose programmes meet the recommended standards.
5. Conduct where appropriate, site visits to submitting and recognized organizations.
6. Review the procedures of submission.
7. Communicate with IHO through the Inter Regional Co-ordination Committee (IRCC), with FIG through the Chair of Commission IV, and with ICA through the Commission on Marine Cartography.
8. Normally meet once each year.
9. The FIG/IHO/ICA International Board shall be composed of members of known competence in the civil, governmental or educational sectors of hydrographic surveying and nautical cartography, selected to provide as wide as possible a spectrum of knowledge and experience in educational practices, hydrography and nautical cartography, from different geographical areas, as far as reasonable.
10. The Board shall have up to twelve members, four provided by FIG, four provided by IHO and four provided by ICA. The Chair shall have a seat in the IRCC and shall report on the activities of the Board to the IRCC Chair for further report to each ordinary session of the IHO Assembly through the IHO Council.
11. The Board shall have its permanent Secretariat at the IHO Secretariat. The Secretary shall be nominated by the IHO Secretariat. The Secretary shall provide the secretarial and administrative support needed to gather, hold and disseminate information on behalf of the Board, as required. The Secretary shall provide a summary of the Board's activities to be included in the IHO Annual Report.
12. The IHO shall finance the cost involved of the IHO Secretariat and Secretary. Members of the Board are expected to be supported by their own organizations for travel expenses and work.
13. The Board will set fees for submissions. IHO Secretariat will receive and hold in trust for the use of the Board monies received from fees levied by the Board.
14. Proposals from the Board to modify these Terms of Reference must be ratified by IHO, FIG and ICA following the procedures of these bodies.
15. The internal functioning of the Board shall be ruled by Rules of Procedure issued and approved by the Board Members, as deemed necessary.

FIG/IHO/ICA INTERNATIONAL BOARD ON STANDARD OF COMPETENCE FOR HYDROGRAPHIC SURVEYORS AND NAUTICAL CARTOGRAPHERS (IBSC)
RULES OF PROCEDURE
As amended by the IBSC during its 2022 Workshop (7 - 11 November 2022)
1. The Board shall normally hold a meeting every year (usually in April) whenever possible in conjunction with another related conference or meeting. The venue and date of the meeting shall be decided at the previous meeting, in order to facilitate participants' travel arrangements. Extraordinary

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meetings can be called by the Chair or any appointed member, as considered necessary, with the agreement of the simple majority of all members of the Board.
2. The Board shall elect, from amongst its members, a Chair and two Vice-Chairs for a term of three years. Under agreement of all the Board's members, the Chair may be re-elected for a second period. FIG, IHO and ICA nominees on the Board shall hold these posts alternatively. On completion of the Chair's mandate (30 September of the 3 rd year), the First Vice-Chair shall normally become the Chair. If this is not the case then a new Chair and new Vice-Chairs shall be elected. It is expected that members shall serve on the Board initially for a period of six years.
3. Members are expected to attend every meeting of the Board and to conduct business by correspondence between meetings. Appointed members who are absent from meetings over two consecutive years will normally be considered to have resigned and new nominations shall be sought. E-mail communication will be the normal method. Papers and information material will be posted on the IBSC section of the IHO website.
4. During the meetings, decisions shall be taken by simple majority vote of Members of the Board present. When dealing with matters by correspondence, a simple majority of all Members of the Board shall be required. Recommendations of the Board shall be submitted to the FIG, IHO and ICA for consideration and adoption.
5. The draft minutes of each meeting shall be distributed by the Chair to the members of the Board within one month of the meeting, and members' comments should be returned within two months of the meeting. A final report will be posted on the IHO website and sent to IHO, FIG and ICA, to institutions running currently recognized courses and other appropriate organizations.
6. The working language of the Board shall be English.
7. Fees and Funding: 7.1 Fees will be reviewed by the Board at appropriate intervals (not exceeding 2 years). Revenue from fees will be used only for the work of the Board. All expenditure will be approved by the Board as outlined in the Annex A "Course Recognition's Fee". 7.2 The fees levied by the Board shall be deposited in the IHO account (operated by the IHO Secretariat). The Board shall identify a funding group comprising three Board members (including the Chair) and the Secretary. The funding group will oversee the account and instruct any payments. 7.3 Requests for funds shall be submitted to the Funding Group in writing prior to any expenditure being accumulated.
8. The IBSC Rules of Procedure can be amended by simple majority of all its Members.
9. The Board Members and the Secretary will follow the Code of Conduct described in Annex B.

FIG/IHO/ICA
INTERNATIONAL BOARD ON STANDARDS OF COMPETENCE FOR HYDROGRAPHIC
SURVEYORS AND NAUTICAL CARTOGRAPHERS (IBSC)

ANNEX A TO THE RULES OF PROCEDURES

Course Recognition's Fees

1. Rationale

To achieve, with effectiveness and efficiency, the ongoing work entrusted to the IBSC, the IBSC requires holding annual meetings and to assess the training programmes before and after their programmes have been recognized as complying to the international standards set.

This document aims to outline the process for collecting, holding and disbursing the fees received in the process of recognizing courses. It helps the IBSC and the parent organizations to understand the process and ensures transparency and openness on the use of the funds.

2. Collection of fees

The fees are applied to each submission. An annual value of 600€ (net of bank charges) will be levied for each programme, while such a programme holds the recognition of the IBSC. The first fee is to be paid when submitting a programme for recognition. That fee will not be returned in the case of failure to gain recognition, but it will not be necessary to make a second payment when offering an amended submission. However for new or revised documentation submitted the following year for assessment then a fee would apply. Annual fees thereafter shall be paid before the end of the year.

To minimise bank fees associated with international funds transfers, an option is made available to pay the full fee at the time of submission (3,600€). Alternatively, the balance remaining for the full period of recognition may be paid after recognition is granted by a single payment covering the remaining period (600€ at time of submission plus 3,000€ for the remaining period).

Fees are paid to IHO who holds and operates a dedicated IBSC account in accordance with the IHO Resolution 1/2014. The details for transfer will be made available to the submitting organizations with the invoice.

All charges relative to the deposit/transfer of the fees will be paid by the submitting organization

IMPORTANT: a scanned copy of the bank transfer MUST be sent to the Secretary of the Board.

Fees can also be paid by credit card (please contact the Secretary for details).

3. Holding of fees

Upon receiving a payment IHO Secretariat will issue a certificate acknowledging the receipt of the fee, clearly identifying the source, year that it covers and any other identification felt to be useful. The IHO Secretariat will make resources available to the IBSC following the instructions of an IBSC Funding Group, details of which are provided below.

4. Disbursing the fees

The IBSC shall form a Funding Group (FG) comprising one representative from each organization (normally the Chair and Vice-Chairs). The IBSC Chair will be the FG Chair. The IBSC secretary shall keep minutes of the FG meetings and be the only liaison with submitting institutions.

The fund is intended to support IBSC members' expenses to attend meetings of the Board and to make site visits to the venues of training programmes under the purview of the Board, to assist in meeting the travel expenses of the IBSC Chair, or designated representative, when participating in relevant meetings and to cover some logistic preparations and execution of the meetings when necessary. Logistics of the Board's meetings, travel expenses and a per diem allowance for members of the IBSC to attend meetings and site visits related to the activities of the Board can be covered by the IBSC fees.

The FG shall receive the requests of support for logistics preparations and from each incumbent IBSC member and approve the provision of funds. Approval may be granted intersessionally. The FG may not necessarily fund 100% of any request made. The funds may only be used to support logistics preparations and IBSC members' expenses such as travel, accommodation and meals. The FG shall report on the status of the fees at each IBSC annual meeting and submit for consideration of the IBSC the documentation detailing the income, outgoings and the standing balance.

The IBSC Chair shall keep the parent organizations informed on the status and management of the fees and therefore shall include a section on this matter in its reports at the end of each IBSC meeting.