



39th Meeting of the FIG/IHO/ICA International Board on Standards of Competence for
Hydrographic Surveyors and Nautical Cartographers (IBSC39)

Brest, France, 4 - 15 April 2016

REPORT

Chair:	Prof. Nicolas SEUBE, Canada (IHO)
Vice-Chair 1:	Mr. Adam GREENLAND, New Zealand (FIG)
Vice-Chair 2:	Mr. Ron FURNESS, Australia (ICA)
Secretary:	Alberto COSTA NEVES (IHB)
Members:	IHO: Captain Andrew Armstrong (USA), Commodore Rod Nairn (Australia), Captain Nickolas Roscher (Brazil); FIG: Mr. Gordon Johnston (UK), Prof. Keith Miller (Trinidad and Tobago), Mr. Sobri Syawie (Indonesia); ICA: Prof. Lysandros Tsoulos (Greece).

Background:

- The FIG/IHO/ICA IBSC is composed of four Members from FIG, four Members from IHO and two Members from ICA. In broad terms the IBSC role is to;
 - maintain the Standards of Competence for Hydrographic Surveyors and Nautical Cartographers (S-5 & S-8);
 - maintain the publications C-6 (Reference Texts for Training in Hydrography) and C-47 (Training Courses in Hydrography and Nautical Cartography);
 - review programme submissions from institutions against these standards;
 - award certificates of programme recognition when appropriate;
 - undertake onsite visits to institutions offering recognized programmes.
- The output of IBSC activities are a worldwide network of formally recognised programmes of education and training for Hydrographic Surveyors and Nautical Cartographers. This supports the following objectives established in the IHO Strategic Plan (2009):

*"(b) To improve global coverage, availability and quality of hydrographic data, information, products and services and to facilitate access to such data, information, products and services;
(c) To improve global hydrographic capability, capacity, training, science and techniques;
(d) To establish and enhance the development of international standards for hydrographic data, information, products, services and techniques and to achieve the greatest possible uniformity in the use of these standards;"*

3. This is an absolute fundamental requirement of industry and government, from established HOs to emerging states that are part of the IHO CB programme.

Meetings Held During Reporting Period and Planned for the next years

4. The 39th IBSC meeting was hosted by France (SHOM), Brest, from 4 to 15 April 2016.
5. The 40th IBSC meeting will be hosted by LINZ, New Zealand, in 2017.
6. The 41th IBSC meeting will be hosted by the Bandung Technical University, Indonesia, in 2018.

Summary of IBSC activities in 2015-2016:

7. In addition to its annual meeting, the IBSC has been working on the following tasks:
 - a) New standards development (task 3.3.9 in the 2013-2017 IHO Work Programme):
 - two working group meetings were organized in 2015 for drafting the S-5A Standards: Rimouski, Canada; Antigua (side to side with the MACHC16);
 - two working group, for the S-8B drafting (Rio de Janeiro, Brazil, July 2015, Bandung, Indonesia, Feb 2016);
 - b) Diffusion of information for stakeholders: Participation to the HYDRO15 Conference. (Cap Town), Participation to the MACHC16 Meeting (Antigua, Dec 2015);
 - c) 18 submissions have been reviewed during IBSC 39, Brest, France

Category B programmes	Hydrography	9	10
	Cartography	1	
Category A programmes	Hydrography	7	7
	Cartography	0	
Individual Recognition Schemes		1	1
TOTAL			18

New standards development:

8. As a result of the activities reported in 7a, the new standards will incorporate four documents:
 - a) S-5B, S-5A,
 - b) S-8B, S-8A,

They will be supplemented by guidelines for the implementation of the standards of competence, as separate document(s).

9. *S-5B* has been adopted by Member States. It is in force since January 2016. SHOM (France) submitted its "Advanced training course on Hydrography for Petty Officers" against the *S-5B* and this programme was recognized during IBSC39. This first submission against the new *S-5B* has been an opportunity for the Board to experiment the *S-5B* and the guideline companion document through a comprehensive submission and review process. The IBSC thanks SHOM for its work and the constructive feedback given to the Board on the *S-5B* submission process.

10. *S-5A* was agreed during IBSC39 and is now submitted to IRCC for endorsement, in accordance with IHO Resolution 2/2007, in a separate document (doc. IRCC8-07H2).

11. Draft *S-8B* was agreed during IBSC39 and is now submitted to IRCC for input and comments in a separate document (doc. IRCC8-07H3).

12. The Board decided to organize two additional working groups for *S-8A* and *S-8B* Standards development in 2016. The Board agreed on the following calendar for *S-8B* and *S-8A* (Note that this calendar is in accordance with the development plan proposed in 2014 by the IBSC):

- Feb 2017: First draft of *S-8B* and *S-8A* available for discussion. A CL will be issued to require feedback from the MSs;
- April 2017: Final draft of *S-8B* and *S-8A*, with modifications taking into accounts MSs comments;
- June 2017: proposition for IRCC9 endorsement;
- June 2017: CL for MSs approval of *S-8A* and *B*;
- September 2017: *S-8A* and *S-8B* in force.

IBSC annual meeting in Brest, 4 April – 15 April 2016

13. Review of submissions: 18 submissions have been reviewed by the Board. The list of decisions is shown in Annex A.

14. The Board made a final review of the draft *S-5A* and guidelines, and produced the final draft of both *S-5A* and the "*Guidelines for the Implementation of the Standards of Competence for Hydrographic Surveyors*". The Cartography working group presented the *S8-B* draft produced during the two workshops held in Brazil and Indonesia.

Election of the new IBSC Chairman

15. Mr Adam Greenland (FIG) has been unanimously elected, and will chair the IBSC from 30 September 2016.

IBSC ToR update

16. The Board agreed on modifications of the Rules of Procedures (Annex B) concerning the management of fees due by submitting institutions (transferred from FIG to IHB). The Board acknowledged the progress made for managing the IBSC fund by the IHB.

IHB support to IBSC activities

17. The Board acknowledges a significant improvement in terms of IHB secretarial and administrative support to IBSC. This support is a key factor for the success in managing an increasing number of submissions (the IBSC foresee about 20 submissions in 2017).

Summary of IBSC 39 decisions

Ed.	Programme	Submitted by		Cat	Op	Notes
Hydrography						
S-5 11.1.0	H2 Hydrographic Surveying Course	Royal Australian Navy	(Australia)	B	1	Recognized
S-5 11.1.0	Course in Hydrography for Officers	Brazilian Navy/DHN	(Brazil)	A	1, 2, 3, 5, 6, 7	Recognized
S-5 11.1.0	Course in Hydrography and Navigation for Petty Officers	Brazilian Navy/DHN	(Brazil)	B	1	Recognized
S-5 11.1.0	Ocean Mapping – Joint Diploma of Technology / Bachelor of Technology	The Fisheries and Marine Institute of Memorial University of Newfoundland (MI)	(Canada)	A	1, 2, 3, 4, 5, 7	Recognized in Category B
S-5 11.1.0	Ocean Technology	Maritiem Instituut Willem Barentsz	(Netherlands)	A	1, 2, 4, 5, 7	Recognized
S-5 11.1.0	Specialty Course in Hydrography	Oceanographic Institute of the Navy	(Ecuador)	B	1, 2, 6	Recognized with conditions
S-5 11.1.0	Master of Science in Hydrography	ENSTA Bretagne	(France)	A	1, 2, 5	Recognized with conditions
S-5 11.1.0	Option Hydrographie et Océanographie	ENSTA Bretagne	(France)	A	1, 2, 5	Recognized with conditions
S-5B 1.0.0	Advanced Training Course on Hydrography for Petty Officers	Service Hydrographique et Oceanographique de la Marine (SHOM)	(France)	B		Recognized with conditions
S-5 11.1.0	Hydrographic Survey Cat B Programme	Skilltrade – Nova College	(Netherlands)	B	2, 4	Recognized with conditions
S-5 11.1.0	Hydrographic Survey for Production of Nautical Charts	Pakistan Navy	(Pakistan)	B	-	Recognized with conditions
S-5 11.1.0	Applied Hydrographic Education Certificate Programme	Middle East Technical University (METU)	(Turkey)	B	1, 2, 7	Pending recognition
S-5 11.1.0	Postgraduate Diploma in Advanced Hydrography for Professionals	Marine Learning Alliance (MLA)	(UK)	A	-	Pending recognition in Category B
Cartography						
S-8 3.1.0	Marine Geospatial and Cartography Programme	Universiti Teknologi Malaysia (UTM)	(Malaysia)	B	1, 2	Recognized

Scheme						
S-5 11.1.0	System for Certifying and Recognizing the Competency of Individuals as Hydrographic Surveyors in Canada	Association of Canada Land Surveyors (ACLS)	(Canada)	-	-	Recognized with conditions
Not recognized						
S-5 11.1.0	Hydrographic Surveyor Cat B	Marine Offshore Network Experts - Marine One - by OMNIA srl	(Italy)	B	-	Not recognized
Granted one year extension						
S-5 11.1.0	Hydrography and Oceanography for Officers	Hydrographic and Oceanographic Service of the Chilean Navy	(Chile)	A	1, 2	Granted one year extension
S-5 11.1.0	MSc Course in Hydrographic Surveying	University of Plymouth	(UK)	A	1	Granted one year extension
Granted one year extension						
S-5 11.1.0	Course Programme in Geomatics and Hydrography	HafenCity University	(Germany)	A	1, 3, 5	Granted one year extension
S-5 11.1.0	Course Programme in Hydrography	TECHAWI	(Germany)	B	2, 3, 5	Granted one year extension
S-5 11.1.0	MSc in Hydrographic Surveying	University College of London/ Port of London Authority	(UK)	A	1, 2	Granted one year extension

FIG/IHO/ICA INTERNATIONAL BOARD ON STANDARDS OF COMPETENCE FOR HYDROGRAPHIC SURVEYORS AND NAUTICAL CARTOGRAPHERS (IBSC)
TERMS OF REFERENCE
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 (NPF) 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 National Focal Points 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 ten members, four provided by FIG, four provided by IHO and two provided by ICA. The Chairman shall have a seat in the IRCC and shall report on the activities of the Board to the IRCC Chairman for further report to each ordinary session of the International Hydrographic Conference (<i>“each ordinary session of the International Hydrographic Conference”</i> to be replaced by <i>“each ordinary session of the IHO Assembly through the IHO Council”</i> when the IHO Council and IHO Assembly are established).
11. The Board shall have its permanent Secretariat at the International Hydrographic Bureau, (<i>“the International Hydrographic Bureau”</i> to be replaced by <i>“the IHO Secretariat”</i> when the IHO Secretariat is established). The Secretary shall be nominated by the Directing Committee of the International Hydrographic Bureau (<i>“the Directing Committee of the International Hydrographic Bureau”</i> to be replaced by <i>“the IHO Secretariat”</i> when the IHO Secretariat is established). 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 IHB (<i>the IHB</i> to be replaced by <i>“the IHO Secretariat”</i> when the Secretariat is established) 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. IHB 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 – Revision 3 (15 April 2016)

1. The IB shall normally hold a meeting every year (usually in April/May time) 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 meetings can be called by the Chairman or any appointed member, as considered necessary, with the agreement of the simple majority of all members of the Commission.
2. The Board shall elect, from amongst its members, a Chairman and two Vice-Chairmen for a term of three years. Under agreement of all the Board's members, the Chairman 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 Chairman's mandate (30th September of the 3rd year), the First Vice-Chairman shall normally become the Chairman. If this is not the case then a new Chairman and a new Vice-Chairman 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 IB section of the IHO web-site.
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 IHO Member States for adoption through the IHB Directing Committee. (*"the IHB Directing Committee"* to be replaced by *"the IHO Secretariat"* when the IHO Secretariat is established).
5. The draft minutes of each meeting shall be distributed by the Chairman to the members of the Board within one month of the meeting, and members' comments should be returned within two months of the meeting. Final minutes will be posted on the IHO web-site 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 issues:
 - 7.1 Fees will be reviewed by the Board at appropriate intervals (not exceeding 2 years). Revenue from any fee will be used 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 IHB). The Board shall identify a funding group comprising three Board members (including the Chairman) and the IB 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 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 on an annual basis. It has been agreed an annual value of **450€ (net of bank charges)** to 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.

Fees are paid to **IHB** that holds and operates an especially dedicated IBSC account. The details for transfer will be made available to any submitting organization and **are likely to include:**

Name of Account:

Bank Name and Branch:

Account Number:

International IBAN/Roll No. (or equivalent) number:

Postal Address:

Amount of fee due (based upon submission(s): 450€ (net of bank charges) per submission:

Currency - Euros Date of any required payment:

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 **IHB** 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 **IHB** 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) integrated by one representative of each organization. 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 and to assist in meeting the travel expenses of the IBSC Chair, or designated representative, when participating in relevant meetings.

The FG shall receive the requests of support from each incumbent IBSC member and approve the provision of funds. The FG may not necessarily fund the 100% of any request made. The funds may only be used to support 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.

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

ANNEX B TO THE RULES OF PROCEDURES

**Code of Conduct for the FIG-IHO-ICA International Board on Standards of
Competence (IBSC)**

All IBSC Board members and Secretary commit to the highest ethical and professional conduct and agree:

1. To accept responsibility in developing Standards of Competence consistent with the best practices of hydrographic surveying and nautical cartography;
2. To accept responsibility in making recognition decisions consistent with the Standards of Competence and the advancement of the hydrographic and nautical cartographic profession;
3. To act as faithful agents or trustees of the IBSC and its parent organizations, FIG, IHO, and ICA;
4. To keep confidential all matters relating to recognition decisions unless required to disclose information by law or IBSC Terms of Reference or Rules of Procedure;
5. To make or issue either public or internal statements only in an objective and truthful manner;
6. To conduct themselves honorably, responsibly, ethically, and lawfully so as to enhance the reputation and effectiveness of the IBSC and parent organizations;
7. To report concerns regarding accounting, internal accounting controls or auditing matters without fear of retaliation;
8. To treat all persons involved in recognition activities with fairness and justice;
9. To assist interested institutions in developing effective hydrographic and nautical cartographic education and training programs and obtaining IBSC recognition;
10. To support a mechanism for the prompt and fair adjudication of alleged violations of this code.
11. Costs for visits related to the work of the Board shall not be covered by the visited institutions.