



REPORT OF THE FIG/IHO/ICA INTERNATIONAL BOARD ON STANDARDS OF COMPETENCE FOR HYDROGRAPHIC SURVEYORS AND NAUTICAL CARTOGRAPHERS

Submitted by: Chair, FIG/IHO/ICA IBSC

Executive Summary:

This paper provides a summary report of the work and achievements of the International Board of Standards of Competence for hydrographic Surveyors and Nautical Cartographers since the last IRCC meeting.

General:

1. The FIG/IHO/ICA IBSC is comprised of the following members:

FIG: Capt. Andrew Armstrong, Prof. Delf Egge, Prof. Nicolas Seube (Chair);
IHO: Mr. Adam Greenland (Vice-Chair I), Mr. Gordon Johnston, Prof. Keith Miller;
ICA: Mr. Ron Furness (Vice Chair II), Prof. Lysandros Tsoulos.

Secretary:
Captain Alberto Neves [IHO]

The Board acknowledged the resignation of two members: RAdm K. N. Nair (IHO) and Prof. Razali Mahmud (Vice-chair I, FIG).

2. The 37th IBSC meeting was hosted by the Japan Hydrographic and Oceanographic Dept, Japan Coast Guard, in Tokyo, from 11 April to 17 April 2014.

Summary of IBSC activities in 2013-2014:

In addition to its annual meeting, the IBSC has been working on the following tasks:

- New standards development : 3 working groups have been organized (Brest, France Sept 2013; Durham, USA, Dec 2013; Monaco, March 2014);
- Diffusion of information for stakeholders: Participation to the UK Hydrographic Society conf. (Southampton), October 2013, Organization of the 1st IBSC Stakeholder seminar (Monaco, March 2014);
- Revision of the S-5 and S-8 standards.

- Fifteen submissions have been reviewed in 2014. Among them are:

Category B programmes	Hydrography	5	8
	Cartography	3	
Category A programmes	Hydrography	6	6
	Cartography	0	
Individual Recognition Schemes		1	1
TOTAL			15

It is to be noticed that eight new programmes have been submitted. Four of them has been recognized or conditionally recognized, three of them has not been recognized but a full resubmission will be accepted by June 2014 (Intersession), and one of them has not been recognized.

The Board recalls that four types of decisions may be taken for a given submission:

- Recognized: The documentation provided is adequate, recognition is granted;
- Conditional recognized: The programme is recognized upon conditions that must be submitted to the Board within two months after the annual meeting. Recognition will be granted upon satisfaction of the Board with the additional provided documentation;
- Not recognized, with possibility of an inter-session review of a full re-submission;
- Not recognized.

New standards development:

The separation of Category A and Category B standards has been discussed in the IBSC stakeholder seminar and feedback to the CL 14/2013 has already been reviewed by the Board. This evolution of the standards is well accepted by stakeholders, and the process of writing new standards is in progress.

Priority has been given to the development of the new S5-B; S5-A, and the S-8B, S8-A will follow.

The new S5-B (Basics and Essentials) has been drafted by IBSC working groups. The new S5-B draft does not incorporate any option, but focus on core competences of Category B hydrographers in a broad sense. The list of subject is as follows:

BASICS:

B1: Mathematics, statistics, theory of errors, B2: Information and Communication technologies, B3: Physics, B4: Earth sciences, B5: Nautical sciences.

Meteorology will be incorporated to B5

ESSENTIALS:

E1: Underwater acoustics, E2: Remote sensing and photogrammetry, E3: Water levels and flows, E4: Positioning, E5: Hydrographic practice, E6: Hydrographic Data management, E7: Environment;

Legal aspects will be incorporated in E7 and E5.

The format of the S5-B syllabus has been changed to a "learning outcomes" oriented description. This new format was presented at the 1st IBSC Stakeholder seminar, reviewed and approved during the IBSC37 meeting, Tokyo, 11-17 March 2014.

A draft of the S-5B will be available by 15 June 2014.

The IBSC proposed work plan for the new standards development is as follows:

- June 2014 : First draft of the S-5B and guidelines will be available; Publication for discussion on the IHO web site;
- CL to be issued in order to inform stakeholders of S5-B publication for discussion and seeking feedback;
- Regional Stakeholder seminars to be organized in 2014-2015 (Aberdeen 2014, Washington DC March 2015);

- February 2015: First Draft of the S5-A and guidelines to be ready; Publication for discussion on the IHO web site;
- CL to be issued in order to inform stakeholders of S5-A publication for discussion and seeking feedback;
- 23 March 2015 - 2 April 2015 : IBSC38 meeting (Brazil) : Analysis of stakeholder responses;
- April 2015: Final versions of S-5A, S5-B and guidelines for the S5-A and B to be ready;
- Submission of S-5B, S-5A and separate guidelines to IRCC7 for endorsement;
- Final versions of S5-B and S5-A to be published by July 2015.

The Board decided to separate guidelines and standards: The new S5-B and S5-A will describe syllabus, a separate document will contain information about submission procedure and the review process for the sake of clarity.

Diffusion of information for stakeholders:

The IBSC participated to the UK Hydrographic Conference and made a presentation on the role of the IBSC and the new standards development plan.

A stakeholder seminar has been organized, back to back to the CBSC stakeholder seminar in March 7th (Monaco). The IHB noticed about 50 participants. Four sessions were organized as follows:

- Standards of Competence for Nautical Hydrographers and Cartographers;
- New standards development;
- Standards of Competence in the Industry;
- New delivery methods and contribution to Capacity Building.

During the seminar, the S-5 and S-8 revision has been discussed, and the feedback to the IHO CL 11/2014 has been presented. Feedback on the S-5 and S-8 revision was positive.

The new S5-A, S5-B, S8A, and S8-B standards (rationale for separation between Category A and Category B, constructive alignment) have also be presented and discussed. This work is widely supported by the Stakeholders, and positive feedbacks were recorded.

Revision of the S-5 and S-8 standards

During the IBSC stakeholder seminar (Monaco, 7 March 2014), the feedback to the CL 11/2014 have been presented :

- 18 member states responded ;
- The Board noticed a large majority of approval;
- Some MSs consider Category B as a pre-requisite for Category A. (notice that *IBSC do not*)
- In cases where a Category A programme is preceded immediately prior by a Category B programme then time frames for the Category A program may take into account the time devoted to the Category B program: There is no objection from the Board.
- Clarification : Time frame *without exemption* = time frame *including basics* subjects
- Remarks on the S-5 syllabus: overtaken by new S-5B in preparation.
- Minor corrections (typos, wording): will be incorporated before publication

The IBSC proposes the IRCC to endorse these revisions. They should be in force for the 2014 submission session, at least in early September 2014.

IBSC annual meeting in Tokyo, 11-17 April 2014

1. Chairman report: The chair reported on his meeting with the DC in February 2014. The following topics were addressed: Status of the revision process of S-5 and S-8; presentation of the new standards development planning; IBSC fund management; IBSC stakeholder seminar program. The Chair reported the resignation of two Board's members: Prof. Razali Mahmud from FIG (Vice Chair I) and Rear Admiral K.M. Nair from IHO. The Chair also reported about ICA pending decision about support to its two members.

2. Election of the new Vice-Chair I: The Board unanimously elected Mr. Adam Greenland (FIG) as the new Vice-Chair I.
3. Review of submissions: Fifteen submissions have been reviewed by the Board:
 - 5 Category B (S5) submissions, including 3 new programmes;
 - 6 Category A (S5) submissions, including 1 new programme;
 - 3 Category B (S8) submissions, including 2 new programmes;
 - 1 Individual recognition scheme.The list of decisions is postponed in appendix 1.
4. Standards endorsement from parent organisations: The Board discussed the process for endorsement of the standards. ICA and FIG endorsement process will be described in accordance with their internal rules of procedures.
5. Following two submissions of programmes which claimed exemptions in the Essential subjects, the Board confirmed its position to not consider exemptions in the Essential subjects.
6. Following three submissions of “portable” programs, the Board decided the possibility to recognize portable delivery of programmes. A special attention is paid by the Board to the availability of infrastructures and resources used for this type of delivery.
7. A list of provisional programmes where the Board should conduct an on-site visit in 2014-2015 has been made.
8. The Board discussed the possibility of electronic submissions in order to facilitate both the submission process and its review. This would require the development and maintenance of a web site, which seems not feasible at the present time. The Board will issue electronic documents such like cross-reference templates, documentation templates.
9. The Board confirmed the composition of the 4 working groups in the framework of the new standards of competence development process.
10. The Board discussed the organisation of stakeholder seminars. Regional Stakeholder seminar will be organized in order to facilitate participant’s attendance.
11. Venue for the 2015 meeting: The 2015 IBSC annual meeting will be host by Brazil (Niteroi) from 23 March to 2 April 2015. It will follow an IBSC Stakeholder seminar, hosted by the US-Hydro in Washington DC (USA).

Appendix 1: Summary of IBSC decisions

	Institution	Country	Cat	Type	Options	Name of the course	language	Last recognition	Decision
1	Bangladesh Navy	Bangladesh	B	H		Basic Hydrographic Course	English	2005	Recognized
2	CIDCO	Canada	B	H		Course in hydrographic surveying	English	NEW	Not recognized. Intersession resubmission
3	Ensta Bretagne	France	A	H		Master in Hydrography	English/French	NEW	Conditionally recognized
4	Institut teknologi bandung	Indonesia	A	H		Hydrographic surveyor profession education program	English	NEW	Not recognized. Intersession resubmission
5	IIC Technologies Academy	India	B	H		Hydrographic Surveying Programme	English	NEW	Conditionally recognized
6	Hydrogeo school	Iran	B	H		Basic Hydrographic Surveying Course		NEW	Recognized
7	Italian Hydrographic Institute	Italy	A	H	1	Specialization Course	Italian	2008	Recognized
8	JCG and JICA	Japan	B	H		Hydrography for Charting, Disaster Prevention and Environmental Protection	English	2008	Recognized
9	Japanese Coast Guard School	Japan	A	H	1	Advanced Course in Hydrography	Japanese	2008	Recognized
10	Universiti Teknologi Malaysia (UTM)	Malaysia	A	H	2,7	Course in Hydrography	English	2008	Conditionally recognized
11	Maritien Instituut Willem Barentsz	Netherlands	A	H	2,4,7	Programme in Hydrography	Dutch	2007	Not recognized. One year extension
12	UKHO	UK	B	C		Hydrographic Data Processing and Marine Cartography Programme	English	2005	Conditionally recognized
13	Korea Hydrographic and Oceanographic Commission	Korea	B	C		TDRC Course in Nautical Cartography	English and Korean	NEW	Conditionally recognized
14	IIC Technologies Academy	India	B	C		Marine Geospatial Information (portable)	English	NEW	Not recognized. Intersession resubmission
15	Assoc. of Canada Land Surveyors	Canada		IRS			English	NEW	Not recognized
E1	Skilltrade	Netherlands	B	H			English		1 year extension
E2	Tunisian Hydrographic Office	Tunisia	B	H	1	Patent Superior Technician in Hydrography	French	2007	Lost recognition