



5<sup>th</sup> Meeting of the IHO - Inter Regional Coordination Committee  
IRCC5  
Wollongong, Australia, 3-4 June 2013

**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:  
**IHO:** Capt. Andrew Armstrong, Prof. Delf Egge – Vice Chair I, RAdm K. N. Nair, Prof. Nicolas Seube  
**FIG:** Mr. Adam Greenland, Mr. Gordon Johnston, Prof. Razali Mahmud – Vice Chair II, Prof. Keith Miller  
**ICA:** Mr. Ron Furness, Prof. Lysandros Tsoulos – Chair  
**Secretary:** Captain Alberto Neves [IHO]
2. **The 36<sup>th</sup>** FIG/IHO/ICA IBSC meeting was hosted by the Hydrographic Institute of Portugal, in Lisbon from 15 to 25 April 2013. During the first two working days the meeting was observed by the IHB Director RAdm Mustafa Iptes.
3. The main agenda items at the FIG/IHO/ICA IBSC 36 were:

**Chairman report**

- a. The Chair reported on his meeting (December 2012) with the IHB Directing Committee and elaborated on the process discussed and agreed with the DC for the development of the new version of the Standards. The process agreed will be in accordance with IHO Resolution 2/2007 (see item “New Edition of Standards – Feedback on CL 14/2013” of this report).
- b. Presentation of the concept of “constructive alignment” in education and its application to the new version of Standards.
- c. Inclusion of distant learning element in the Standards.
- d. Submission of annual assessment report by institutions offering recognized programmes.
- e. On-site review programme of the past year.

**Election of new Chair**

The Board unanimously elected Prof. Nicolas Seube [IHO] as the new IBSC Chair. Prof. Seube will assume the IBSC Chair on the 1<sup>st</sup> of October 2013.

### Review of Programmes Submitted

The Board reviewed sixteen (16) new submissions and re-submissions, considered requests for extension of recognition and decided on pending recognitions from its 35<sup>th</sup> meeting. The number of programmes under review has been the highest ever - average number of submissions in previous years is nine (9). This is considered as an indication of the interest of the international hydrographic community in establishing educational/training programmes in Hydrography and Nautical Cartography and the reputation of the IBSC.

The list of programmes reviewed appears as Annex I to this report

### On site visit Programme

Rationale and criteria for the identification of the programmes for on-site visit/review.

Decision on the three programmes for on-site review visit during the inter-sessional period.

### Revision of the current versions of Standards

It was considered necessary that the introductory parts of both S-5 and S-8 be revised in order to include/improve the following items:

- Onsite review process
- Field work description (Appendix 2)
- Distance - Blended learning
- Time frames:
  - Time frame over which a programme is delivered
  - Minimum duration of a programme
  - Time frame for the recognition
- Correction of typos, duplications

These revisions do not refer to the syllabi, which is the core of the Standards, but to the introductory part of both S-5 and S-8. They aim to clarify the submission and review processes and cannot be considered as substantive semantic changes to the Standards.

### New Edition of Standards – Feedback on CL 14/2013

The Board has recognized the need for the Standards to continue to evolve in order to meet contemporary and future requirements. The Board believes that a fundamental change to the structure of the Standards is now required. A proposed new structure will have separate Standards for Category A and for Category B programmes, both in S-5 and in S-8. The need for this was recognized by the XVIIIth International Hydrographic Conference that noted the Report of the IBSC Chair and approved Task 3.3.9 in the 2013-2017 IHO Work Programme.

*3.3.9 "IBSC to develop a new Standards framework to separate competency requirements for Cat A and Cat B Hydrographers and Nautical Cartographers by developing two discrete parts in the standards S-5 and S-8 and update their content to comply with the scientific and technological developments in the fields of Hydrography and Nautical Cartography".*

In line with the IHO policy concerning the revision of established technical standards the Board recognizes the benefit of feedback and contributions from the broad range of stakeholders in order to ensure that any revision of the existing standards take into account the requirements and expectations of the stakeholders.

In order to promote discussion and obtain feedback on the nature of the next round of changes being proposed by the IBSC, its Chair has provided a White Paper entitled "*Towards New Standards of Competence for Hydrographers and Nautical Cartographers*". The paper explains the principal reasons for the review of the S-5 and S-8 Standards and the underlying thinking. The White Paper is available from the IHO website in the IBSC web page: [www.iho.int/IBSC](http://www.iho.int/IBSC) > IBSC36 > Doc. IBSC36-03.

In addition to the content of the White Paper the Board in its 36<sup>th</sup> meeting decided on the adoption of a modified version of the “constructive alignment” approach in order to include both the syllabi and the expected competences/learning outcomes for each category programme and profession. Through CL 14/2013, IHB invited Member States and other stakeholder organizations to review the proposals set out in the IBSC White Paper and to provide comments and suggestions, if any, to the IHB before the end of March 2013. This enabled the IBSC to consider feedback at the 36<sup>th</sup> meeting in Lisbon.

#### Summary of responses:

- Broad support to the proposal and the rationale for restructuring the Standards as described in the White Paper.
- IHO Resolution 2/2007 needs to be accounted for in the process of revising the standards
- Safety of navigation must be the cornerstone of the Standards. The development of courses “à la carte” should be avoided, meaning that the Options (S-5) and Specialisms (S-8) should not substitute the core parts of the Standards.
- Suggestion to consider using Hydrographic (Cartographic) Engineer and Hydrographic (Cartographic) Technician instead of Cat A and Cat B, in order to align with other professions.
- Some Member States consider Cat A as a natural evolution of a Cat B and thus the process of separation has to consider this dependency. Others presented a view to the contrary suggesting that there should be a differentiation between Cat A and Cat B developments given that the intellectual skills are different.
- Need to clarify how to progress from Cat B to Cat A or if it is a prerequisite to do a Cat B before a Cat A.
- Support for using modular and blended learning.
- Concerns expressed that the new version will result to lengthy courses comparable to those leading to Master of Sciences (MSc) degree.
- Suggestion for a more detailed analysis of the roles of the CatA and CatB Hydrographers and Nautical cartographers.
- Stakeholders pointed out the growth of the market and the need for experienced hydrographers (mainly Cat A).

The Board will take into account these responses when developing the new versions of the Standards and will follow a consultative process with the stakeholders that will provide an opportunity from input in accordance with IHO Publication M-3.

#### New Edition of Standards – Project plan

The project plan for the development of the new Standards is as follows:

- a) Finalize S-5 Cat B by the end of the 2015 plenary meeting.
- b) Finalize S-5 Cat A by the end of the 2016 plenary meeting.
- c) Finalize S-8 Cat B and Cat A by the end of 2017 plenary meeting.

Extra meetings required:

- a) 2 to 3 work group meetings in the second half of 2013.
- b) 2 to 3 work group meetings in the first half of 2014.
- c) 2 to 3 work group meetings in the first three months of 2014.
- d) 2 to 3 work group meetings in the last four months of 2014.

The implementation of this project requires the approval of the IRCC for the proposed plan and the approach presented for the development of the new versions of the Standards.

### **Guidelines for submissions**

The Board discussed the need to develop Guidelines and Templates for submissions to help the submitting organizations to prepare successful programmes and decided to develop a draft document to this effect. It was decided also to investigate the possibility of developing a digital tool to be used for the preparation of the submissions.

### **Code of Contact**

All Board members and the Secretary commit to the highest ethical and professional conduct and agreed on a Code of Conduct for the FIG-IHO-ICA IBSC which will be an integral part of the Rules of Procedures.

### **Venue of the FIG/IHO/ICA IBSC 37**

The next meeting will be in Dalian Academy, China from 7 to 13 April 2014.

### **Proposals**

IRCC is invited to:

- a. Note the report
- b. Ratify the revised version of the Standards
- c. Approve the proposed plan and the approach presented for the development of the new versions of the Standards.

**Annex I to the report of the FIG/IHO/ICA IBSC to IRCC5**

N	Institution	Country	Cat	H/C	Op/Sp	Title of Programme	Status	Decision
1	Bangladesh Navy	Bangladesh	A	H		Basic Hydrographic Course	NEW	Not recognized
2	Bangladesh Navy	Bangladesh	B	H		Basic Hydrographic Course	2005	Not recognized - Granted one year extension
3	Antwerp Maritime Academy	Belgium	B	H		Postgraduate programme Hydrography	NEW	Recognized
4	National Institute of Hydrography	India	A	H	1	Long Hydrographic Course	2006	Conditional recognition
5	National Institute of Hydrography	India	B	H	1,6	Basic Hydrographic Course	2006	Conditional recognition
6	Naval Hydro-oceanographic School	Indonesia	B	H	1,2	Category B Hydrographic Surveyor Education Program	2006	Not recognized
7	Hydro Geo School	Iran	B	H	1,2,4	Hydrography Survey Course	NEW	Not recognized
8	Japanese Coast Guard School.	Japan	B	H	1	Ocean Science Course	2007	Recognized
9	University Teknologi Malaysia	Malaysia	B	H	2,7	Course in Hydrography (HYDRO I)	2007	Recognized
10	King Abdul-Aziz University	Saudi Arabia	A	H	1,2,3,5,7	Hydrography Surveying	NEW	Conditional recognition
11	STET Maritime Pte Ltd	Singapore	B	H	1,2	Hydrographic Surveying Course	NEW	Recognized
12	Spanish Hydrographic Institute	Spain	A	H	1,6	Specialization Course in Hydrography and Oceanography for Naval Officers	2005	Recognized
13	Spanish Hydrographic Institute	Spain	B	H	1,6	Specialization Course in Hydrography and Oceanography for Naval Petty Officers	2007	Recognized

14	Royal Navy Flag Officer Sea Training	UK	B	H	6	HM2 Course	2003	Recognized
15	University of Plymouth - The Hydrographic Academy	UK	A	H		Postgraduate Diploma Advanced Hydrography for Professionals	NEW	Not recognized
16	University of Plymouth - The Hydrographic Academy	UK	B	H		Diploma of Higher Education Hydrography for Professionals	NEW	Not recognized
17	Maritiem Instituut Willem Barentsz	Netherlands	B	H	2,4,7	Programme in Hydrography	2007	Granted one year extension
18	United Kingdom Hydrographic Office (UKHO)	UK	B	C		Hydrographic Data Processing and Marine Cartography Programme	2005	Granted one year extension
19	Naval Academy of Colombia	Colombia	A	H	1	Hydrographic Surveyors Programme	2001	Recognition withdrawn
20	General Commission for Survey (GCS)	Saudi Arabia	B	H	1,2	Hydrographic Surveying Programme	2012	Recognized
21	General Commission for Survey (GCS)	Saudi Arabia	B	C	2	Nautical Cartography	2012	Recognized
22	Tunisian Hydrographic Office	Tunisia	B	H	1	Patent Superior Technician in Hydrography	2007	Additional information is required