

IHO File No AB-2

CIRCULAR LETTER 31/2024
26 July 2024

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

Reference: IRCC16 List of Actions, Decisions and Recommendations - Decision 28.

Dear Hydrographer,

1. The IBSC work programme, approved by IRCC16 (see Reference) includes a task to conduct a routine review of the Standards of Competence for Hydrographic Surveyors and Nautical Cartographers. The review aims to update the S-5 and S-8 standards by 2026.
2. To receive inputs from the respective stakeholders, the IBSC started initial consultations during the respective meetings in London (Nov 23) and Hamburg (Apr 24) and in some specific events such as FIG Working Week Ghana (May 24) and the Canadian Hydrographic Conference (May 24), and prepared the "IBSC Questionnaire" annexed to this letter. Further consultations are planned for regional hydrographic meetings and conferences, including Hydro24 in Rostock (Nov 24) and FIG Working Week in Brisbane (Apr 25).
3. The IHO Secretariat would like to encourage the National Hydrographic Offices and Institutions offering IBSC recognized education & training programmes based on the S-5 and/or S-8 Standards to assist the IBSC on the task to review the standards, providing the respective input to the annexed IBSC Questionnaire, via the online link **by 23 October 2024**.

On behalf of the Secretary-General

Yours sincerely,



Luigi Sinapi
Director

Annex: Contextual information and link to the IBSC questionnaire.

IBSC QUESTIONNAIRE

Updating the Standards of Competence for Hydrographic Surveyors and Nautical Cartographers – S-5A & S-5B, S-8A & S-8B

References:

- [STANDARDS OF COMPETENCE FOR CATEGORY "A" HYDROGRAPHIC SURVEYORS – S-5A](#)
- [STANDARDS OF COMPETENCE FOR CATEGORY "B" HYDROGRAPHIC SURVEYORS – S-5B](#)
- [STANDARDS OF COMPETENCE FOR CATEGORY "A" NAUTICAL CARTOGRAPHERS – S-8A](#)
- [STANDARDS OF COMPETENCE FOR CATEGORY "B" NAUTICAL CARTOGRAPHERS – S-8B](#)
- [GUIDELINES FOR THE IMPLEMENTATION OF THE STANDARDS OF COMPETENCE](#)
- [FREQUENTLY ASKED QUESTIONS \(FAQ\)](#)

Background

Roles of the IBSC

- Maintaining International Hydrographic Organization Publications S-5A and S-5B (Hydrography) and S-8A and S-8B (Nautical Cartography)
- Review syllabi and delivery of programmes from education and training institutions (Recognition)
- Review and recognise individual recognition schemes (since 2012)
- Provide guidance to IHO and institutions on the establishment of new programmes.

Context

The last revision of the standards took place 2014-17. This was a full revision which resulted in separate standards for S-5A and S-5B in recognition of the different knowledge levels required for the differing employment of Cat A and Cat B educated hydrographic surveyors and nautical cartographers.

Since the 2017 revision, many changes have impacted the field of hydrography, such as:

- Survey/Sensor Technology - MBES, frequency agile, ping rate, autonomy, remote operations, SDB, Satellite Lidar, etc.
- Data volumes – these have massively increased due to sounding density, water column data, statistical data processing methods, resulting in new data management challenges.
- Information and Communication Technology – massive increases in processing power, transfer speeds, the emergence of AI and easy availability of cloud storage and cloud

computing services have provided new options for data processing visualisation and remote working.

- Next Generation Products - S100 HDM and multiple product specifications has changed the requirements of traditional hydrographic survey outputs.

Challenges

Duration of Programmes. For those institutions designing and delivering IBSC recognized programmes, it is already challenging to deliver the competencies and to meet the mandatory learning outcomes within the minimum allowable timeframes of programmes. Some educational institutions advise that they can't make the programme any longer and still fit into academic schedules.

What must we add? With the changes noted above there are many topics that could be added, but the intent is that the FIG/IHO/ICA Standards are minimum standards of competence so it is important to limit the consideration to what we MUST add.

What can we take out? There has been no agreement during initial consultations. Some want more maths, physics and computer science – some want less. Some want more practical exercises, some want less. Can we remove traditional survey techniques such as sextant, theodolite, sun azimuths, resections and chart manual composition and lithographic reproduction methods?

What is the correct level of knowledge? Should a Category A qualification mean you know everything about hydrography/nautical cartography to a high level of knowledge? Or perhaps they should know the fundamental principles, have the analytical skills to work things out and solve problems and only have a general understanding of “everything about hydrography/nautical cartography”?

Or should there be additional syllabi for deep specialisms such as: Hydrographic data management, statistical processing methods, cloud computing methods, autonomous survey methods, space-based hydrography, MSDI, etc.?

Your opinion really matters.

To assist the IBSC to tackle the task of revision of the hydrography standards a survey questionnaire has been developed. You are requested to complete the questionnaire via the online link here <https://forms.office.com/r/MDA0fd6nPZ>



THANK YOU!