



FIG/IHO/ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers

Update for SWPHC 21



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Role of the IBSC

- Maintaining International Hydrographic Organization Publications S5A and S5B (Hydrography) and S8A and S8B (Cartography)
- Review syllabi and delivery of programmes from education and training institutions (Recognition)
- Review individual recognition schemes
- Provide guidance to IHO and institutions on the establishment of new programmes



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IBSC Membership

12 Board members: 4 FIG, 4 IHO, 4 ICA (+IHO Secretary Leonel Manteigas)

Chair: Capt. Nickolás Roscher (IHO);

Vice-Chair 1: Sobri Syawie (FIG)

Vice-Chair 2: Emeritus Prof. Dr. Lysandros Tsoulos (ICA)

IHO – Capt. Andrew Armstrong; CDRE Rod Nairn and CDR(R) Felipe Barrios

FIG – Gordon Johnston; Adam Greenland and Prof. Dr. Harald Sternberg

ICA – CDRE J Gurumani; Pablo SÁNCHEZ Gámez; Dr. Manuela MILLI

IRCC15

Tokyo, Japan, 12 – 14 June 2023



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Not Present:
CDRE Rod Nairn
CDRE J Gurumani

IBSC46- Tokyo, Japan -



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Our Annual Work Routine

- Jan – Mar: Individually review programme submissions and assess
- April : Meet for 2 weeks to receive verbal submissions, resolve minor matters and DECIDE on Recognition of Programmes (Recognised, Could be Recognised or Not Recognised)
Review Annual Reports from recognised schemes,
and progress review of Standards and review of Guidelines
- Sep - Oct: Individual and by Vidcon – review resubmissions
- Nov: Meet for 1 week to finalise resubmissions, progress review and improvement of standards and supporting documents



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Not Present:
Mr Adam Greenland
Mr Sobri Syawie
CDRE J Gurumani
Dr. Manuela MILLI
Dr Paulo Sánchez
Gámez

IBSC Working Group – London November 2023



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Result after the Interessional Revisions 2022

2022	In the IBSC45 Meeting		Interessional Revision	After Interessional Revisions	
	Total	Standards		Total	Standards
Recognized	3	1		13	3
		1			6
		1			1
Could Be Recognized	7	2	2		3
		3	3		
		2	2		
Not Recognized	3	2	2		
		1	1		
Total	13		10		13



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IBSC Challenges

- The high number of deficient submissions given intersessional resubmission opportunities is causing substantial additional workload
- Members across all time zones so long vidcon meetings are difficult
- A second annual workshop is necessary but difficult for board members to get time off work
- The second workshop is taken up in finalising reviews of intersessional resubmissions – at the expense of new work
- Board succession and stability – some members for > 20 years but 4 new members in the last 12 months



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Recent Activities

Professional Hydrographic Certification for Individuals – four schemes recognised

Expansion of the Board

- From 10 to 12 (additional 2 carto) to spread workload

Recognise individual subjects from the S5A and S5B syllabi (Guidelines currently being drafted)

- Following implementation an institution may offer Full Subject “Short courses”
- Institutions may apply to combine Subject modules from multiple institutions to enable completion of a full S5A or S5B programme - details
- WHY?
 - to make quality Hydrographic education more obtainable – and economically viable
 - To support Individual Professions Certification scheme – fill gaps in individual’s knowledge



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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 offer 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.

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.



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The Case for Revision of Standards - S5A & S5B

- Last revised 2014 – 2017
- S5 split into two separate standards – distinctly different knowledge levels (controversial)

Since 2017

- Massive changes:
 - Technology -MBES, ACDP, autonomy, remote operations, SDB, Satellite Lidar...
 - Data - volumes, density, statistical processing, management challenges...
 - IT - processing power, transfer speeds, cloud storage, cloud computing...
 - Products - S100 HDM and multiple product specifications...



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Revision Plan

- IRCC has endorsed plan to review S5A
- Timeline – aim to have a revision by **Mid 2026**
- First consultation workshop took place in London Nov 2023
- IHO Circular Letter will go to Member States this Semester
- Consultation Workshop Hamburg April 24
- FIG Commission 4 to commence discussions at Working Week May 24
- Expect further consultation workshops – or discussions at RHCs and hydrographic conferences – drafts circulated for comment 2025
- 2026 Draft submitted for approval of IHO member states / FIG / ICA



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IBSC Industry Consultation Workshop – London
November 2023



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Challenges - Revision of Standards - S5A & S5B

- S5A syllabus is already challenging – Most educational institutions can't make the programme any longer
- Lots of things to add – we all agree
- **WHAT CAN WE TAKE OUT?** - no agreement here – some want more maths, physics and computer science – some want less

So, some questions:

- How much foundation theory is needed? – more computer science?
- Does the Hydrographic surveyor need to go to sea?
- Does the surveyor still need to know about traditional survey methods?
- Does the S5A programme need to teach Nautical Skills?
- Should the syllabus be more theory and less practical or vice versa?



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Final Words

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- Submitting institutions, please....
 - Engage with the IHO Secretariat early in the process of preparing submissions for programme recognition.
 - Read and follow the Guidelines
 - Refer to FAQs on the IBSC WEB page
- Member States and Industry Partners
 - Support your institutions providing Cat A and Cat B Programmes
 - Take an interest in the revision of the standards
 - Provide feedback – tell us what we need to change



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Really Final Words

Thanks for listening!

Please send any thoughts or feedback to:

IBSC (at) iho.int