

**The FIG/IHO/ICA Standards of Competence of  
Hydrographic Surveyors  
and  
Nautical Cartographers**

**Prof. Delf Egge, HafenCity Universitat, Hamburg  
Gordon Johnston, Venture Geomatics Ltd.**

**hydro 2010  
02-05 November  
Rostock-Warnemünde, Germany**

**The International Board for the Standards of  
Competence of Hydrographic Surveyors and  
Nautical Cartographers**

- **Membership**
- **Duties**
- **Regulation by Terms of Reference and Terms of Procedures**
- **Recent and Current activity**



## The FIG/IHO/ICA International Board

- The FIG/IHO/ICA International Board on the Standards of Competence of Hydrographic Surveyors and Nautical Cartographers or simply **“the Board”**.
- It is supported by FIG (the International Federation of Surveyors), IHO (the International Hydrographic Organisation) and ICA (the International Cartographic Association)
- The Board meets annually.



## The FIG/IHO/ICA International Board

- There are 10 members of **“the Board”** representing the 3 sponsoring organisations, FIG, IHO and ICA of which 4 are from IHO, 4 from FIG and 2 from ICA.
- A secretary is provided by the IHO.
- The individuals are from civil, governmental, and educational sectors.
- Has a wide spectrum of knowledge and experience in education, hydrography, and nautical cartography.
- The members are from different geographical areas (Australasia, S. E. Asia, Europe, India, North America).



## The FIG/IHO/ICA International Board

- Establish and maintain the minimum standards of competence described in S-5 and S-8.
- Maintain publications (S-5, S-8, S-6, S47)
- Review syllabi and provide advice on syllabi
- Review procedures on submission of syllabi
- Inform the sponsoring organisations of its work.



## The Board's Terms of Reference

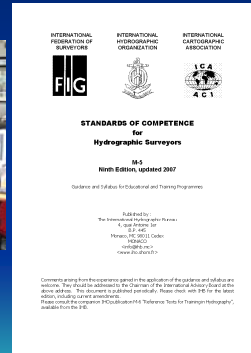
- Regulated by published Terms of Reference and a series of Rules of Procedure
- Terms of Reference approved by sponsoring organizations
- Funding and expenses are at the members' own or for sponsoring organisation. The Board itself is not financed or supported directly.....at least until now 2010.....



## The Standards of Competence

- Updates and Maintains the Standards
- S-5 Hydrography & S-8 Nautical Cartography

[http://www.iho-ohi.net/iho\\_pubs/IHO\\_Download.htm](http://www.iho-ohi.net/iho_pubs/IHO_Download.htm)



## The Standards of Competence

- Establish requirements for educational programs for hydrographers and nautical cartographers
- Describe competencies that students should master in the training environment in terms of a learning outcome.
  - Uses Bloom's Taxonomy
- Considered by the Board as minimum Standards
- The syllabus content is described but NOT how to deliver, or what time should be spent or how to manage the training course.



## The Standards of Competence

- The Standards S-5 & S-8 are aimed at ensuring academic or training courses produce suitably qualified individuals. It comprises of:
  - **3 Knowledge Levels: Fundamental, Practical & Detailed**
  - **2 Minimum Subjects: Basic & Essential**
- Educational and training programs levels are:
  - **Category A**
  - **Category B**



## Recognition

- The Board develops and maintains standards and recognises academic or training programs at two levels
  - **Category A**
  - **Category B**
  - **Unclassified (there is no Category C)**
- The Board maintains a list of recognized programs on the IHO website
- It does NOT recognise individuals



## The Category B

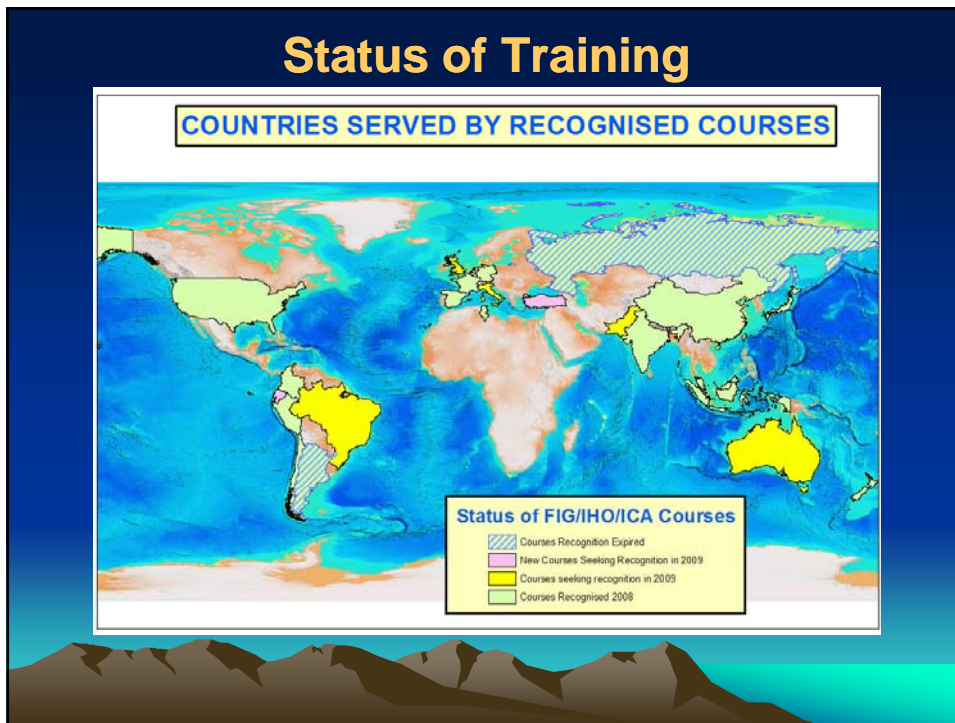
- A programme that provides a practical comprehension of hydrographic surveying for individuals with the skill to carry out the various hydrographic surveying tasks.
- **Example competency:**  
Explain the principles of various types of water level gauges and poles. Describe characteristics of river, coastal and offshore water level gauges. Install and operate water level gauges and poles.



## The Category A

- A programme which provides a comprehensive and broad-based knowledge in all aspects of the theory and practice of hydrography and allied disciplines for individuals who will practise analytical reasoning, decision making and development of solutions to non-routine problems.
- **Example Competency:** Evaluate and select appropriate instruments and sites for water level monitoring. Calibrate analogue and digital recording water level gauges. Evaluate sources of error. Apply appropriate corrections.





## The International Board

- Reviews courses at the Category A or B level.
- Soon to be able to review Ongoing Competency Assessment Schemes\*.

\*The current revision is being circulated by IHO for approval

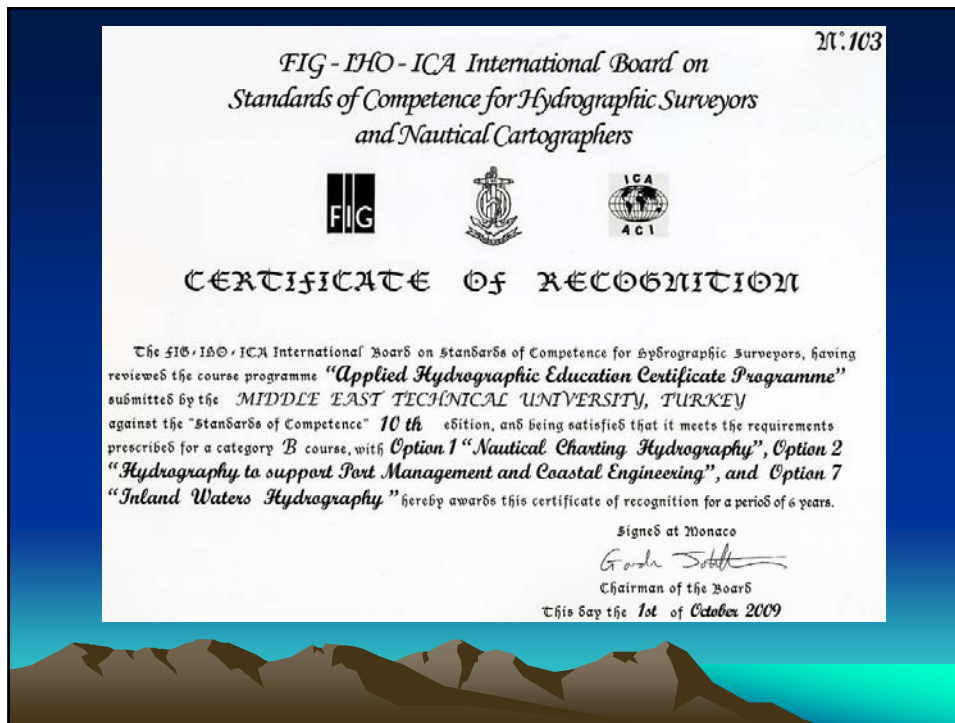


**FIG**





**ICA  
ACI**



## The 2009 Board Meeting

- There were 10 Courses to review at the then M-5 and M-8 Standards.
- The Standards had minor revisions and were updated.
- Progress was made on several major Board issues:
  - The Assessment of Individuals once in their work
  - The potential for funding to support the work of the Board.
- Considerable time and effort has been applied into these topics by Board members since 2003.





## General Developments

- The time span for recognition has been reduced from 10 years to 6 years.
- The submission of Ongoing Assessment Schemes, or Programmes, for Individuals is anticipated.
- **Note:** The Board does not deal with Individuals directly.
- The Board has developed a fee structure to enable it to travel and visit Courses and inspect the sites, facilities and the quality of training.



## The 2010 Board Meeting

- A total of 7 courses were reviewed
- **Individual Recognition:** considered at length in 2008 & 2009, the outcome is that the new Standards now include a section relating to experience introducing the possibility of Assessment Programmes being Recognised.
- The Board still does NOT recognise individuals.



## The 2010 Board Meeting

- **Funding of the Board:** the previous meetings had concluded that there are good grounds to introduce a fee to support the work of the Board in assessing submissions.
- **Submission Fees** for each submission were agreed and the meeting developed a “Course Fees “ document as an annex to the Board’s Rules of Procedure
- This is now at review by IHO.
- Once accepted there will be a fee assigned to the submission and recognition of Courses.



## Looking Forward

- The Board shall continue on a stable basis with funding.
- The Board shall maintain and update the S-5 and S-8 Standards with revisions next year aiming for major new editions in 2012.
- Ongoing Assessment Schemes for Individuals can submit their programmes for recognition
- I anticipate 10 Course submissions next year with 3 of these being new submissions.
- The Board shall identify opportunities to visit Courses.
- The further promotion of the work of the Board shall be continued through articles, presentations and papers.



## In Conclusion

- I wish to acknowledge the continued support and assistance of IHO and FIG and the ICA.
- The Standards shall now include systems to review and recognise the programmes that assess the competency of Individuals.
- I wish to encourage organisations and institutions to consider how to support and develop individuals.
- By the introduction of fees I believe the Board now has a positive and solid base on which to develop and maintain Standards.



*Any Questions  
Thank You!*

