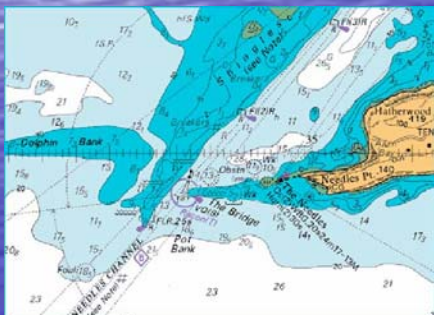




# Electronic Navigational Charts (ENC) Capacity Building



Vaughan Nail, UKHO

# What is Capacity Building?

The IHO defines Capacity Building as:

*"the process by which the organization assesses the status of current arrangements and assists States to achieve sustainable development and improvement in their ability to meet hydrographic, cartographic and maritime safety obligations with particular reference to recommendations in UNCLOS, SOLAS, and other international instruments."*

# Capacity Building Background

CB vital in efforts of intergovernmental technical organisations to support UN development goals

IHO Capacity Building Committee established in 2003 to co-ordinate effort. It has already:

- Established IHO Capacity Building Strategy
- Established approved Assessment Criteria for Development of Hydrographic Capability
- Developed a Capacity Building Management Plan
- Created Capacity Building Fund
- Organized RHC Seminars and Technical Workshops
- Provided support to students to attend Courses

# IHO Capacity Building Strategy

To provide guidance for IHO CB to ensure optimum contribution to SOLAS, to environmental protection, and to national economic development.

## Principles:

- National needs and capacity for infrastructure development assessed against three phases of development
- Skill / technology transfers provide appropriate, sustainable, solutions
- Regional coordination co-operation of CB projects
- Capacity building to develop hydrographic services, supported by National Administration
- Benefits from enduring output, not infrastructure

# IHO Capacity Building Strategy – Procedures

Aim:

To enable RHCs and CBC to optimize funding

- RHCs submit inputs to CBC by 1 April each year
- All RHCs to include S-55 and input to CBC on their agendas
- Thorough assessment of submissions by RHC Chairs

# IHO Capacity Building Strategy – Prioritisation Matrix

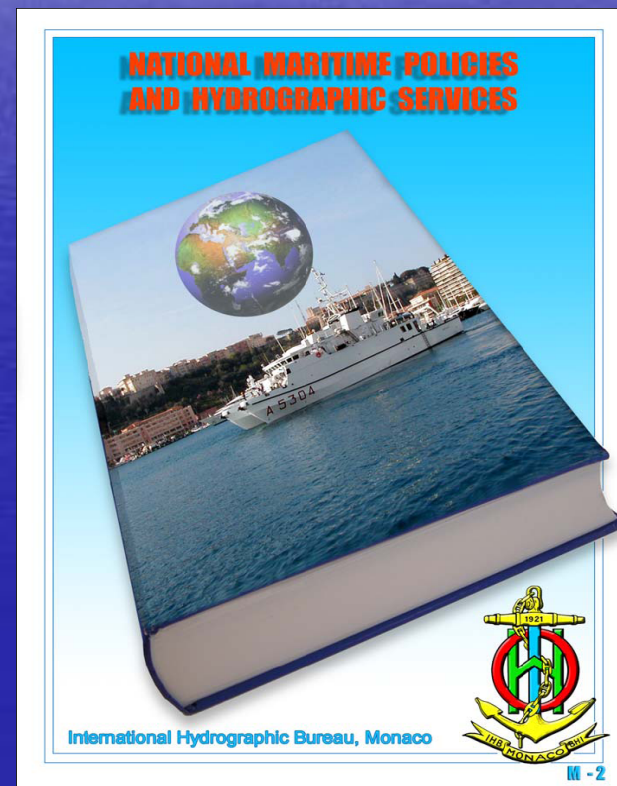
Risk Score

SOLAS	Significant passenger traffic; port regulation
Shipping density	Major international
Navigational complexity	Unsurveyed or poor quality
Environmental impact	Designated sensitive areas; other known sensitive areas
Economic significance	High value economic activity

# Three Phases of Capacity Building

Three phases are defined in IHO Publication M-2:

Downloadable for free from [www.iho.org](http://www.iho.org)



# Phase Three

- supports further development of a national hydrographic service including such capabilities as production of paper charts, electronic navigational charts and nautical publications.



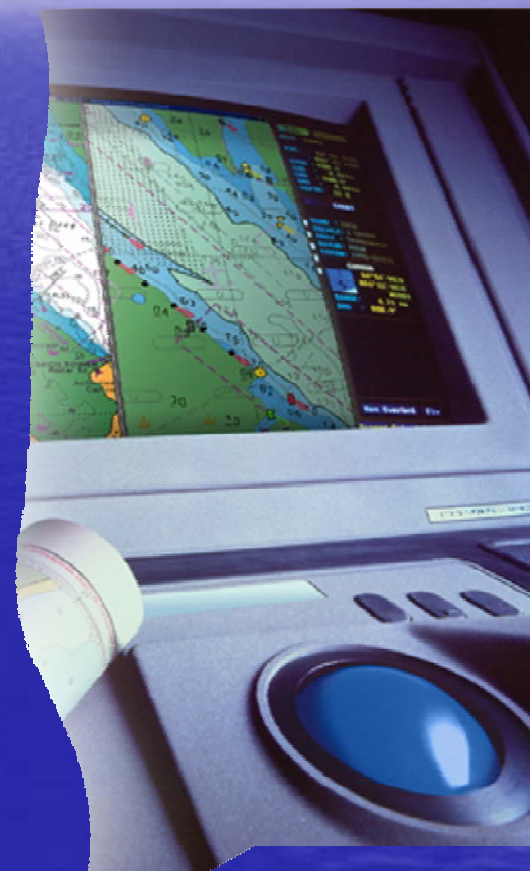


# IHO Capacity Building

- Work programme
  - Technical visits
  - Technical support/seminars
  - Capacity Building funding
  - Training opportunities/funding of programmes
  - Documentation including S65 ENC Production Guide

# WEND

- **4. Assistance and Training**
- 4.1 Member States' HOs are strongly recommended to provide, upon request, training and advice to HOs that require it to develop their own national ENC provision.



# UKHO Training

- *Provision of quality technical training courses to support the needs of the international hydrographic community*

*Hydrographic Data Processing*

*Marine Cartography*

*ENC and ENC Production*

*Chart Correction*

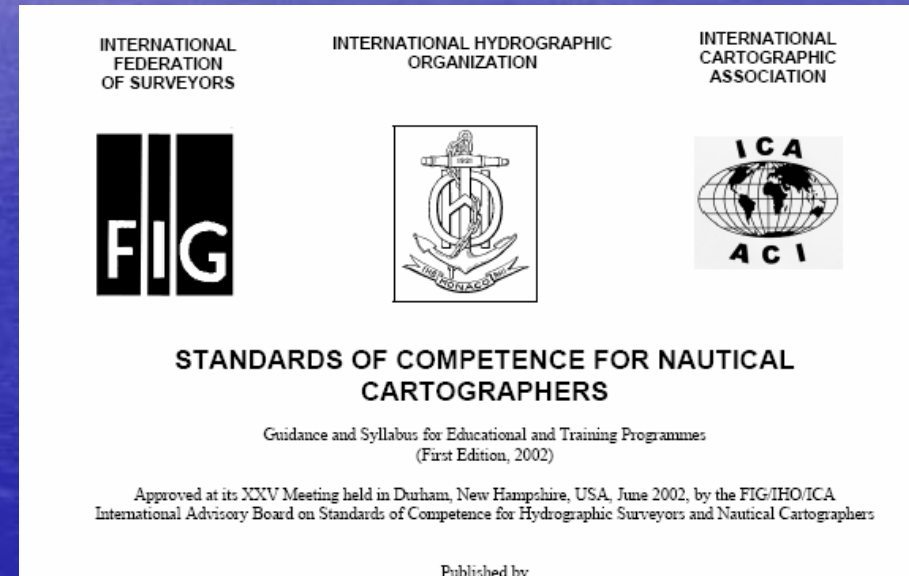
*Phase 1 skills*

*Bespoke solutions*



# Accreditation

- UKHO Course, Hydrographic Data Processing , Marine Cartography , and Specialism, Electronic Navigational Charts – IHO/FIG/ICA Accreditation at Category B level of the IHO M8 Standard for Nautical Cartographers

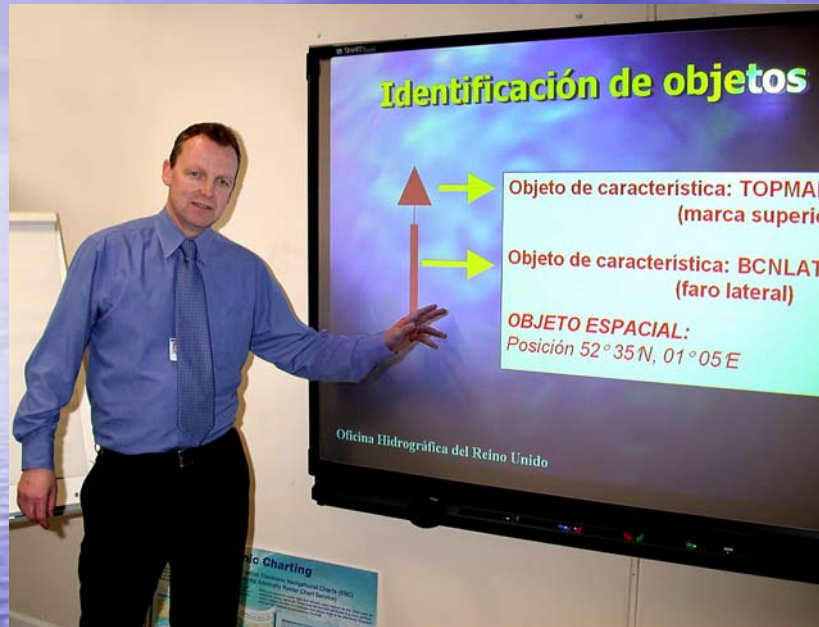


# UKHO ENC Training provision



- Highly practical
- S-57
- ENC production
- UKHO or “in country”
- Tailored for organizational requirements

# Bespoke training



- Training tailored to organizational needs
- Training has been delivered in Spanish
- Over 250 students trained
- 45 countries
- "in country " training in Oman, Brunei, Indonesia, Malaysia, Denmark, Netherlands, Vietnam.

# South America



- Over 25 officers from South America trained
- Including Venezuela, Colombia, Mexico, Guatemala, Nicaragua, Ecuador, Honduras, Belize, Cuba, Uruguay, Argentina, Brazil, Chile, Trinidad.

# Pre requisites



- A good standard of English
- Good academic standard of mathematics and geography
- A knowledge and practical understanding of the navigational chart



# ***GUIDELINES FOR THE IMPLEMENTATION OF THE WEND PRINCIPLES***

*As endorsed by the 11th WEND Committee Meeting (Tokyo, 2-5 September 2008)*

- **3. Capacity Building and Cooperation**
- 3.1. Assistance to coastal States may cover aspects such as development of an ENC production capability, ENC quality and the role of RENCs in ENC validation and distribution.
- 3.2. It is essential that coastal States have established cartographic capability and infrastructure prior to undertaking ENC production and maintenance tasks themselves so as to ensure that the ENCs within the WEND database meet the high quality standards necessary to fulfil SOLAS requirements.
- 3.3. IHO Member States should consider ENC related projects as high priority capacity building initiatives.



Questions

Any Questions?