



INTERNATIONAL HYDROGRAPHIC ORGANIZATION  
MESO AMERICAN & CARIBBEAN SEA HYDROGRAPHIC COMMISSION



MACHC Letter 07 / 2010  
19 February 2010

To:  
MACHC Associate Members

Subject: Japan Capacity Building Project

Reference: IHB Circular Letter 15/2010

Dear Colleagues,

1. Throughout the circular letter in reference (and enclosed to this one) the International Hydrographic Bureau announces the 2nd Course in Hydrographic Data Processing and Marine Cartography, including specialism in Electronic Navigational Chart, to be held in the United Kingdom Hydrographic Office (UKHO), Taunton, UK, and sponsored by the Japan Hydrographic Association (JHA) and the Nippon Foundation (NF). This course is recognized at Category B by the FIG-IHO-ICA International Advisory Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers.
2. You are invited to consider the contents of IHB Circular Letter 15/2010, particularly dates, extensions, requirements, and expenses to be sponsored. Each Member State can only apply one nomination.

Best regards,

LUIZ FERNANDO PALMER FONSECA  
Vice Admiral (Brazil)  
Brazilian Director of Hydrography and Navigation - MACHC Chair

Copy:  
MACHC Full Member; IHB

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Note: To improve the Commission's effectiveness, this letter is provided only by e-mail.



IHB File N° TA-006-S1/3022

CIRCULAR LETTER 15/2010  
08 February 2010

**JAPAN CAPACITY BUILDING PROJECT**  
**2nd Course in Hydrographic Data Processing and Marine Cartography,**  
**including specialism in Electronic Navigational Chart.**  
**UKHO, Taunton, UK, 6 September - 17 December 2010**

*(Recognized at Category B by the FIG-IHO-ICA International Advisory Board on Standards  
of Competence for Hydrographic Surveyors and Nautical Cartographers)*

- References:
- a) CL 77/2008 dated 02 October.
  - b) CL 10/2009 dated 13 February.
  - c) CL 27/2009 dated 24 April.

Dear Hydrographer,

1. Through the Circular Letter in reference a), IHO Member States were informed that the IHB had concluded a Memorandum of Understanding (MoU) with the Japan Hydrographic Association (JHA), acting on behalf of the Japan Hydrographic and Oceanographic Department (JHOD) for the implementation of a Capacity Building Project - the Japan Capacity Building Project - aiming at developing and promoting human capacity building of technical personnel in developing countries, particularly in Asia and its adjacent regions in nautical cartography. Circular Letters in references b) and c) provided information on the 1<sup>st</sup> Course that was successfully completed on 18 December 2009.
2. The IHB has now been informed by the JHA that the Nippon Foundation (NF) has made resources available to implement the project for the 2010 Japanese fiscal year. In order to agree on the details and content of the Circular Letter announcing the 2nd Course, a coordination meeting was held on 3-4 February at the JHOD headquarters in Tokyo, with the participation of JHA, JHOD and the IHB.
3. The course title is "Hydrographic Data Processing and Marine Cartography including specialism in Electronic Navigational Chart (ENC) " and will be run at the UK Hydrographic Office, from 6 September to 17 December 2010. The course programme includes three modules of 5 weeks each, the summary of which is given in Annex I.
4. Up to 6 trainees will be considered for financing. The support provided by the NF will cover course fees, travel to and from the respective countries, accommodation and a reasonable living allowance.
5. IHO Member States are kindly invited to consider nominating **one suitable candidate** who would benefit from this training. The Chairmen of Regional Hydrographic Commissions are invited to pass on

this information to their Associate and Observer Members so that they can also consider applying for this training opportunity.

6. The Application Form (Annex II) should be received at the following address by **12 April 2010** :

Captain Hugo GORZIGLIA  
IHB Director  
International Hydrographic Bureau  
Fax : + 377 - 93-108140  
e-mail : hgorziglia@ihb.mc

The IHB jointly with JHA and the UKHO will select those candidates they feel would benefit from this training. The selected candidates will be informed of their selection no later than **26 April 2010**.

7. It is essential that candidates are employed by the hydrographic office, the port authority or a related national agency of their country. The nomination must be originated by the employer and should include a statement specifying that the candidate **is involved in, or will be involved in, the production and maintenance of navigational charts - Paper and ENC - and once the training has been successfully completed, he/she will work in this field.**

8. The authority nominating candidates should carefully choose the nominee and ensure that opportunities will be in place for the individual to transfer the learning undertaken in a structured manner. This will ensure that the individual and his organization gain full benefit.

9. Nominated candidates should meet the following criteria:

- A very good standard of English, both written and spoken, with reasonable technical English.
- A high standard in mathematics and geography.
- A background in cartography or hydrographic surveying.

10. Selected candidates will receive detailed logistic information from the UKHO.

On behalf of the Directing Committee  
Yours sincerely,



Captain Hugo GORZIGLIA  
Director

Annex I - Summary of the Programme.

Annex II - Application Form.

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**2nd Course in Hydrographic Data Processing and Marine Cartography,**  
**including specialism in Electronic Navigational Chart.**  
**UKHO, Taunton, UK, 6 September - 17 December 2010**

**SUMMARY OF THE COURSE PROGRAMME**

The course is composed of modules. The Modules are: Marine Cartography, Hydrographic Data Processing and Electronic Navigational Charts (ENC). Each module is of 5 weeks duration. The Modules contents are as follows:

**MODULE 1 - MARINE CARTOGRAPHY.** A practical introduction to marine cartography and chart construction. This module is recognized as part of the FIG-IHO-ICA Category B Certificate in Nautical Cartography.

The navigational chart
The navigational chart - its role and purpose
The navigational chart - History and Development
Type of chart and chart user
Chart projections and grids
Horizontal datums
Vertical datums
Accuracy, precision and reliability
Chart scheming
International and national organizations
Linear scales
Latitude and longitude
Compass roses; magnetic variation.
Bearing and distance
Navigational aids
IALA Buoyage System
Lights; radio aids
Chart symbols
Chart text and type styles
Chart topography
Chart Specifications
Verification procedures
Generalisation
Scaling methods
Introduction to surveying
Depths - units; selection; contouring.
Navigational Dangers; Nature of seabed.
Tidal theory
Quality management system.
Chart Compilation; vector capture;
Intellectual property.
Printing and finishing;
Network operating systems;

**MODULE 2 HYDROGRAPHIC DATA PROCESSING.** A practical introduction to hydrographic data processing, data assessment and resulting chart maintenance. This module is recognized as part of the FIG-IHO-ICA Category B Certificate in Nautical Cartography.

Introduction to source data
Accuracy of source data
Source material
Source diagrams
CATZOC
Data assessment
Chart maintenance - the need.
Notice to Mariners; Notice to Mariners Blocks.
Foreign Government Charts.
Routing; Law of the Sea;
Hydrographic Databases;
New Edition procedures and processes;
Raster data; file management
Multibeam; SIPS;
Oceanographic data;
Archiving and retrieving source information

**MODULE 3 ELECTRONIC NAVIGATIONAL CHARTS (ENC).** A highly practical introduction to the Electronic Navigational Chart (ENC), international standards for ENC, and the production and maintenance of ENC data. This module is recognized as part of the FIG-IHO-ICA Category B Certificate in Nautical Cartography.

What is an ENC? History and Development of ENCs;
Introduction to GIS;
Overview of S-57;
Objects and attributes; polygons; topology;
ENC Product Specification;
Mandatory attributes; META objects; TXT and PICREP files;
Object Catalogue; Attribute Catalogue; Use of the Object Catalogue; Data Capture Specifications;
Usage bands;
Distribution of ENCs; RENCs;
New Cell capture;
SCAMIN; CATZOC;
Lights and Light Supports;
ENC Quality Procedures
Consistency of ENCs;
Positional accuracy;
Magnetic Variation;
ENC Updates;
New Editions;
Edge matching;
Verification and validation;
ECDIS; S-52;
S-100; Future developments;

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**UKHO, Taunton, UK, 6 September - 17 December 2010**

To reach the IHB no later than 12 April 2010

**Send to:**  
Captain Hugo GORZIGLIA  
IHB Director, International Hydrographic Bureau  
Fax: +377 93 10 81 40  
Email: hgorziglia@ihb.mc

**APPLICATION FORM**

1. FAMILY NAME .....
- FIRST NAME .....
- NATIONALITY .....
- Date of Birth .....
- Place of Birth .....
2. Mailing Address .....
- .....
- .....
- Telephone .....
- Fax .....
- E-mail .....
- Note:** Reliable fax numbers and e-mail addresses are mandatory and vital for further communications.
3. Present position and description of duties
- .....
- .....
- .....
- .....
- .....

4. Brief description of candidate's past experience in hydrography and cartography

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5. Candidate's future plans for work in the Production and Maintenance of Navigational Charts - Paper Charts and ENC:

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Nominee's signature .....

**STATEMENT**

The Hydrographer of ..... (or appropriate authority) endorses this application and accepts the conditions that apply.

Date: \_\_\_\_\_

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

\_\_\_\_\_  
Attachment: Curriculum Vitae of Candidate.