

INTERNATIONAL HYDROGRAPHIC
ORGANIZATION



ORGANISATION HYDROGRAPHIQUE
INTERNATIONALE

IHB File N° S1/3022-TA-006

CIRCULAR LETTER 10/2009
13 February 2009

JAPAN CAPACITY BUILDING PROJECT
1st Course in Hydrographic Data Processing and Marine Cartography
UKHO, Taunton, UK, 7 September - 18 December 2009
*(Recognized at Category B by the FIG-IHO-ICA International Advisory Board on Standards
of Competence for Hydrographic Surveyors and Nautical Cartographers)*

Reference: CL 77/2008 dated 02 October.

Dear Hydrographer,

1. The IHO Member States were informed in the above-referenced Circular Letter 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. The aim of this Project is to develop and promote training in nautical cartography of technical personnel in developing countries, particularly in Asia and its adjacent regions.
2. Following the signing of the MOU, the IHB was informed by the JHA that the Nippon Foundation (NF) had made the necessary resources available to implement the project for the 2009 Japanese fiscal year. In order to organize the implementation of the project, a meeting was held at the IHB with JHA, JHOD and the UKHO (selected by the JHA as the training provider) to agree on the details of the implementation of the project and the content of this Circular Letter announcing the 1st Course to be run under this project.
3. The course title is "Hydrographic Data Processing and Marine Cartography" and will be run at the UK Hydrographic Office, from 7 September to 18 December 2009. It consists of three modules of 5 weeks each; a summary of the programme is included in Annex I.
4. Up to 6 trainees will be accepted 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 the Regional Hydrographic Commissions are invited to share this information with their Associate and Observer Members so that they can also consider applying for this training opportunity.

6. Application Forms (Annex II) should be sent to the IHB address, as given below, and should reach the IHB no later than **17 April 2009** :

Captain Hugo GORZIGLIA
IHB Director and CBC Chairman
International Hydrographic Bureau
4, Quai Antoine 1er.
98011 Monaco Cedex
Tel : 00377 93108100
Fax : 00377 93108140
e-mail : hgorziglia@ihb.mc

The IHB, JHA and the UKHO will jointly select those candidates they feel would benefit from this training. The selected candidates will be informed no later than **24 April 2009**.

7. It is essential that candidates are employed by the hydrographic office, port authority or related national agency of their country. The nomination must come from 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 and that, upon successful completion of the training, he/she will continue in this field.

8. The authority nominating candidates should carefully select the nominee and ensure that opportunities will be in place to enable 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:

- 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 or other relevant experience.

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

On behalf of the Directing Committee
Yours sincerely,



Captain Hugo GORZIGLIA
Director

Attachments:

Annex I - Summary of the Programme.

Annex II - Application Form.

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SUMMARY OF THE PROGRAMME

The course is offered in modular format. The Modules are: Marine Cartography, Hydrographic Data Processing and Electronic Navigational Charts, each of 5 weeks duration. The contents of the Modules 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. 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 ENC;
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;
Edgematching;
Verification and Validation;
ECDIS; S-52;
S-100; Future developments;

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APPLICATION FORM

- 1. FAMILY NAME
- FIRST NAME

- NATIONALITY

- Date of Birth
- Place of Birth

- 2. Mailing Address
-
- Telephone
- Fax
- E-mail

- 3. Present position and description of duties.....
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- 4. Brief description of candidate's past experience in hydrography and cartography
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- 5. Candidate's future plans for work in hydrography and cartography.....
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Nominee's signature

STATEMENT

The **Hydrographer of** (or appropriate authority) requests the IHB to consider this Application Form and confirms that he is fully aware of the conditions associated to this application.

Date: _____ Name: _____

Signature: _____

Attachment: Candidate's Curriculum Vitae