



IHB File N° TA-006-S1/3022

CIRCULAR LETTER 10/2013  
07 February 2013

**JAPAN CAPACITY BUILDING PROJECT**  
**5th Course in Hydrographic Data Processing and Marine Cartography,**  
**including specialism in Electronic Navigational Chart.**  
**UKHO, Taunton, UK, 02 September – 13 December 2013**  
*(Recognized at Category B by the FIG-IHO-ICA International Board on Standards  
of Competence for Hydrographic Surveyors and Nautical Cartographers)*

References:

- A. CL 77/2008 dated 02 October -*Japan Capacity Building Project and Secondment of Personnel*
- B. CL 16/2012 dated 08 February - *Japan Capacity Building Project – 4th Course in Hydrographic Data Processing and Marine Cartography including specialism in Electronic Navigational Chart*
- C. CL 46/2012 dated 07 May - *Japan Capacity Building Project - Selected candidates*

Dear Hydrographer,

1. Reference A informed Member States that the IHB had concluded a Memorandum of Understanding for the implementation of the Japan Capacity Building Project - aimed at providing technical training in nautical cartography. References B and C provided information on the most recent training conducted under the terms of the Project.
2. The IHB has now been informed that the Nippon Foundation (NF), as benefactors of the Japan Capacity Building Project has made resources available to continue the Project in the 2013 Japanese fiscal year. This will enable a 5<sup>th</sup> course to be conducted at the UK Hydrographic Office (UKHO). A meeting between the Japan Hydrographic and Oceanographic Department (JHOD), the Japan Hydrographic Association, UKHO and the IHB was held on 31st January and 1st February at the headquarters of the JHOD to coordinate the details for the 5th Course.
3. The 5<sup>th</sup> course in Hydrographic Data Processing and Marine Cartography including specialism in Electronic Navigational Chart (ENC) will take place at the UKHO, from 02 September to 13 December 2013. The course programme includes three modules of 5 weeks each, the summary of which is given in Annex A to this letter.
4. Financial support is available for up to six trainees. The support provided by the Nippon Foundation will cover course fees, travel to and from the respective countries, accommodation and a moderate living allowance.
5. IHO Member States are invited to consider nominating **ONE suitable candidate** who will benefit from this training and assist the nominating country. The Chairmen of Regional Hydrographic Commissions are invited to pass on this information to their Associate and Observer Member States so that they can also consider applying for this training opportunity.

6. It is essential that candidates are employed by a hydrographic office, a port authority or a related national agency of the nominating country. The nomination must include a statement specifying that the candidate is or will be involved in the production and maintenance of nautical charts - paper and ENC- and once the training has been successfully completed, will continue to work in this field.

7. 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 the sponsoring organization gain full benefit.

8. **Nominated candidates MUST 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.
- Background in cartography or hydrographic surveying.

9. The IHB, jointly with JHA and the UKHO, will select the candidates for the next course. The successful candidates will be informed of their selection **by the end of April 2013**. The Member States will also be informed of the election results. Selected candidates will receive detailed logistic information directly from the UKHO Training Team.

10. An Application Form (included at Annex B) should be submitted to the following address **no later than 3 April 2013**:

International Hydrographic Bureau  
Fax: + 377 93 10 81 40  
e-mail: [info@iho.int](mailto:info@iho.int) with copy to [mustafa.iptes@iho.int](mailto:mustafa.iptes@iho.int)

On behalf of the Directing Committee  
Yours sincerely,



Mustafa IPTES  
Director

Annexes:

- A. Summary of Course Programme
- B. Application Form

## SUMMARY OF COURSE PROGRAMME

### JAPAN CAPACITY BUILDING PROJECT 5<sup>th</sup> Course in Hydrographic Data Processing and Marine Cartography, including specialism in Electronic Navigational Chart.

UKHO, Taunton, UK, 02 September – 13 December 2013

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 and the contents are as follows:

#### MODULE 1 – MARINE CARTOGRAPHY.

A practical introduction to marine cartography and chart construction.

This module is recognized by FIG–IHO–ICA International board on standards of competence (IBSC) as fulfilling the relevant parts of its Category B syllabus 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 by FIG–IHO–ICA International board on standards of competence (IBSC) as fulfilling the relevant parts of its Category B syllabus 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 by FIG–IHO–ICA International board on standards of competence (IBSC) as fulfilling the relevant parts of its Category B syllabus 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

## APPLICATION FORM

JAPAN CAPACITY BUILDING PROJECT  
5th Course in Hydrographic Data Processing and Marine Cartography,  
including specialism in Electronic Navigational Chart.

UKHO, Taunton, UK, 02 September – 13 December 2013

To reach the IHB no later than **3 April 2013**

<p><b>Send to:</b> International Hydrographic Bureau Fax: +377 93 10 81 40 E-mail: <a href="mailto:info@iho.int">info@iho.int</a> with copy to <a href="mailto:mustafa.iptes@iho.int">mustafa.iptes@iho.int</a></p>
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Family Name	
First or given Names	
Nationality	
Date of Birth	
Place of Birth	
Mailing Address	
Telephone	
Fax	
E-mail	
<i><b>Note:</b> Reliable fax numbers and e-mail addresses are MANDATORY and VITAL for further communications</i>	
Brief description of candidate's ability in written and spoken English language together with supporting evidence	

Present position and description of duties	
Brief description of candidate's past experience in hydrography and cartography	
Candidate's future plans for work in the Production and Maintenance of Nautical Charts (Paper Charts and ENC)	
Nominee's signature	

**STATEMENT**

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

Name:	
Signature:	
Date:	

**Attachment: Curriculum Vitae of Candidate (mandatory)**