

**INTERNATIONAL HYDROGRAPHIC ORGANIZATION
CAPACITY BUILDING COMMITTEE**



**EAST ASIA HYDROGRAPHIC COMMISSION (EAHC) WORKSHOP ON
MARINE CARTOGRAPHY AND ENC PRODUCTION AND
QUALITY ASSURANCE
- REPORT -**

NOVEMBER / 2010

**INTERNATIONAL HYDROGRAPHIC ORGANIZATION
CAPACITY BUILDING COMMITTEE**

SUMMARY SHEET

Title of the Activity: EAHC Workshop on Marine cartography and ENC production and Quality Assurance

Host Country: Vietnam

Venue and Date: Nam Cuong hotel – Haiphong city between 23 – 26 November, 2010.

Organized by: Vietnam Maritime Safety North and Vietnam Maritime Safety South.

Supported by: IHO, MPA and Seven Cs.

No. of participants/countries: 29 participants from 8 countries.

Cost: 8,700 Euros.

Executive Summary

EAHC Workshop on Quality Assurance of ENC Production was organized and hosted by Vietnam Maritime Safety North and Vietnam Maritime Safety South from 23 to 26 November 2010 at Nam Cuong Hotel, Hai Phong city, Vietnam. It was sponsored by IHO and supported by MPA and Seven Cs. 29 participants from 8 countries were attended the workshop. The workshop aims to improve the capacity of EAHC member states in quality assurance of ENC production to meet the IHO requirements. The workshop program consisted of a lecture, hand-on practice and sea trial, allowing participants to obtain more knowledge and experiences. Participants also shared their experiences and techniques in quality assurance of ENC production.

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2. INTRODUCTION

The Workshop on Quality Assurance of ENC Production was organized and hosted by Vietnam Maritime Safety - North and Vietnam Maritime Safety - South. It is one of the two courses approved for EAHC under the IHO capacity building work programme for 2010.

3. OBJECTIVES

In general the workshop aims to provide the member states of EAHC the recommendations of ENC production in order that coverage, availability and consistency of ENCs produced for this region meet the IHO requirements. Specifically, the workshop focuses on improving the ENC production capability, especially in quality assurance, of EAHC member states in order to assure safety of navigation.

4. VENUE, DATES AND PARTICIPANTS

The workshop was taken place from 23 to 26 November 2010 in the meeting room of Nam Cuong Hotel, Hai Phong city about 100 km South-East of Hanoi.

All EAHC member states, except North Korea, attended the workshop. The list of participants appears as Annex 1.

5. TOTAL COST

Items	Amount (Euro)
Accommodation	2.371
Course fee	
Round trip air fare	4,714
Meeting room fee	645
Workshop facilities	970
Total	8,700

11. DAILY ACTIVITIES

Please refer to Annex 2 for the program of the workshop. The Maritime and Port Authority of Singapore (MPA) kindly supported a lecturer Ms Goh Siew Ngoh Jenny and Seven Cs kindly supported the ENC software for hand-on practice.

Day 1:

The first day of the workshop focused mainly on a lecture reviewing the fundamental of quality assurance of ENC database. A lecture on procedures and details of ENC updating was also delivered to the participants. Participants were invited to share their experiences in ENC production of their organizations.



Ms Goh Siew Ngoh Jenny led a hand-on practice session



Participants shared their techniques and experiences

Day 2:

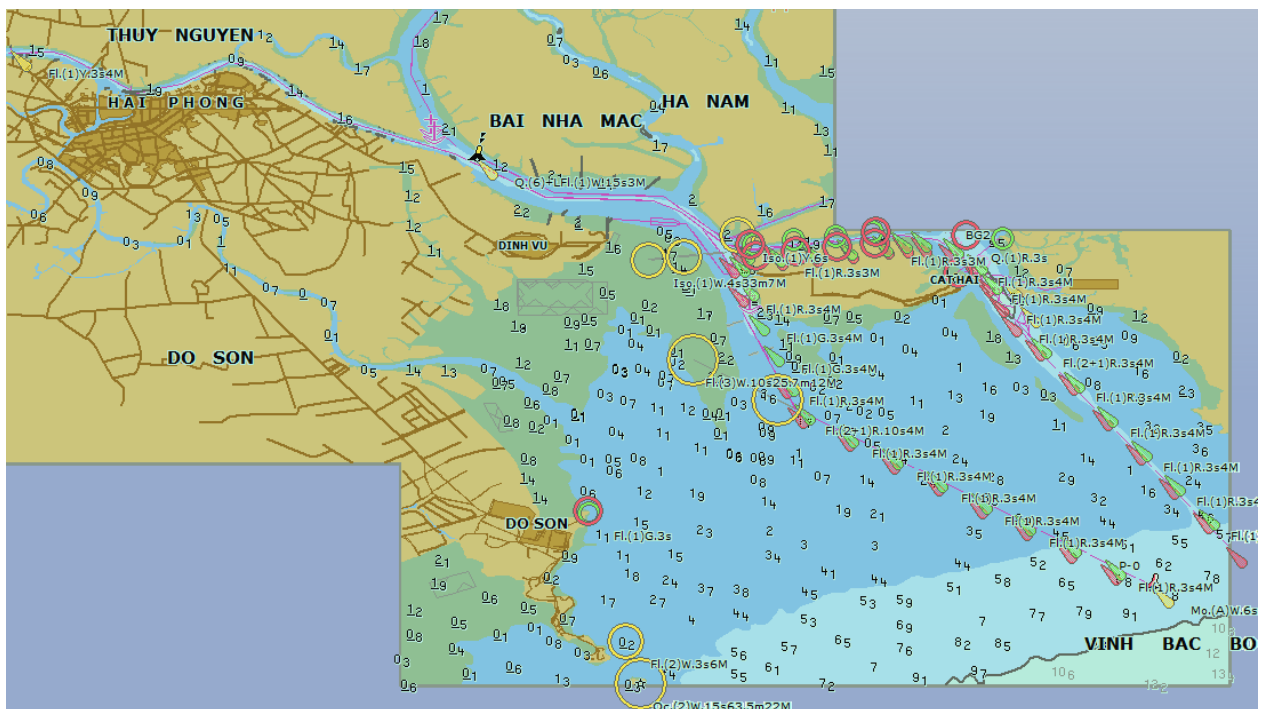
On day 2, a focus was given on hands-on practice on carrying out QA and corrective action using Seven Cs ENC software. The participants learned the difference between warnings and errors, and where important errors occur during ENC production and how to fix them. Participants also shared their experiences and techniques to fix errors.



Practice and discussion

Day 3:

The sea trial was organized on day 3. An Electronic Chart System with an ENC of the field area and GPS was installed on a hire boat. The field trip was conducted in Haiphong fairway.



Day 4: Ha Long bay visit



7. COLLATERAL ACTIVITIES

Collecting information about ENC production from Members countries and Vietnam.

8. EVALUATION OF THE EVENT BY PARTICIPANTS

9. EVALUATION OF THE EVENT BY THE REPORTER

The workshop was well organized, especially to include a practice session and field sea trial into the workshop program. Incorporation of a practice session and field sea trial into the workshop program allowed participants to gain more understanding and experiences in checking and updating ENC. Sharing experiences is also an important part of the workshop, which was a good opportunity to learn from each other and to know different types of QA software, i.e. Chart King..

10. CONCLUSIONS AND RECOMMENDATIONS

This kind of courses is very essential for member states that need support to develop their own capacity to meet the requirements. It also ensures that ENCs produced by member states will meet standards for safety of navigation. EAHC Workshop on Quality Assurance of ENC Production is successful to increase participants' skill and knowledge in quality assurance and updating of ENC. Importantly, the workshop strengthens the relationships and cooperation among member states. Furthermore, EAHC also agreed that celebrating workshops in member countries has more advantages than in EAHC offices because the host

countries will have more benefit by having many participants attending the workshops.

11. ACTION LIST (IF ANY)

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ANNEX 2 – PROGRAMME

**Marine cartography and ENC production and Quality Assurance
Hai phong city, Vietnam November 23-26, 2010**

	Duration
Planning and Organizing the QA Process	
Quality Assurance of ENC Database	
a, Verification : <ul style="list-style-type: none"> I. Cell naming II. Data set descriptive (meta) records III. Cross verification with paper charts IV. Digital check V. Logical check using software (e.g. ENC Analyzer) VI. Check edited data b, Harmonization of objects between cells c, SCAMIN d, Detailed checks on Objects Crucial to Navigation : <ul style="list-style-type: none"> I. Danger to Navigation II. Regulated Area, Harbor Regulation (e.g. TSS, anchorages, fairways) III. Others (e.g. submarine cables, fishing facilities) e, Corrective Action f, Practicals- Hands-on practice on carrying out QA and corrective actions g, Standardization and documentation	1 day
Harmonization of Paper chart and ENC databases	1 day
a, ENC and Paper coverage and compilation scales b, Comparison of Meta data eg. Zone of Confidence c, ENC and paper chart updating d, T and P notices e, Practicals-Hand-on practice on carrying out QA and corrective actions f, Standardisation and documentation	
Field Verification of ENCs	1 day
ECDIS Sea Trials – verification of ENCs	
Review	
a, Review and conclusion of training course	
Ha Long Bay Visit	1 day
Total	4 days

ANNEX 3 - SYNOPSIS OF EVALUATION QUESTIONNAIRES

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ANNEX 4 – OPENING AND CLOSING REMARKS