



Dossier du BHI N° S3/3055

LETTRE CIRCULAIRE 33/2008  
1<sup>er</sup> avril 2008

**PROJETS DE SOUMISSIONS DE L'OHI A PROPOS DES ENC  
AU SOUS-COMITE DE LA SECURITE DE LA NAVIGATION DE L'OMI**

Référence : LC 72/2007 du 31 juillet,  
53e Session du sous-comité de la sécurité de la navigation de l'OMI

Madame la Directrice, Monsieur le Directeur,

1 Conformément à la lettre mentionnée en référence, le BHI a préparé deux soumissions à présenter à la 54e session du sous-comité de la sécurité de la navigation (NAV54) de l'OMI. Ces documents seront envoyés à l'OMI, le 21 avril, afin de respecter la date limite de soumission au NAV54 de l'OMI.

2 La soumission relative à l'évaluation de la mise à disposition des cartes électroniques de navigation (ENC) a été préparée en consultation avec le groupe de travail du WEND, comme décidé lors de la réunion extraordinaire du WEND tenue en octobre 2007, et repose sur les informations fournies par les Etats membres. Le BHI estime qu'à partir de cette soumission, la question de la disponibilité des ENC ne peut pas légitimement être évoquée pour faire obstacle à l'introduction de prescriptions supplémentaires en ce qui concerne l'import obligatoire des ECDIS.

3 Le rapport de l'OHI au NAV 54 sur la couverture en ENC souligne les travaux et l'engagement continus des Etats membres de l'OHI, en vue d'assurer une qualité et une cohérence globales des ENC. Le Comité de direction a pourtant été récemment informé de certaines difficultés associées au contenu des ENC, difficultés qui ont été mises en relief par le RU, à l'occasion du développement de son nouveau service d'ENC intégré et qui concernent précisément l'évaluation de la vérification des ENC qu'ils ont récemment entreprise. Le RU pense que pour surmonter ces difficultés il sera peut-être nécessaire de définir de manière plus claire les pratiques opérationnelles qui sous-tendent les principes du WEND. Le Comité de direction estime qu'il s'agit de questions importantes qui devraient être résolues par le WEND, lors de sa prochaine réunion de septembre 2008.

4 La soumission concernant le développement d'un catalogue complet en ligne de cartes officielles disponibles a été préparée par le BHI et repose sur les travaux entrepris à ce jour ainsi que sur les informations reçues des Etats membres. Depuis la publication de la LC 10/2008 du BHI et de la LC 2850 de l'OMI, le BHI n'a plus reçu d'information supplémentaire concernant les recommandations des Etats côtiers sur les cartes papier qui doivent être emportées en tant que dispositif de secours. Cette soumission demande donc au sous-comité d'examiner à nouveau cette prescription, vu son utilité limitée pour le navigateur. Afin de fournir certaines informations sur la

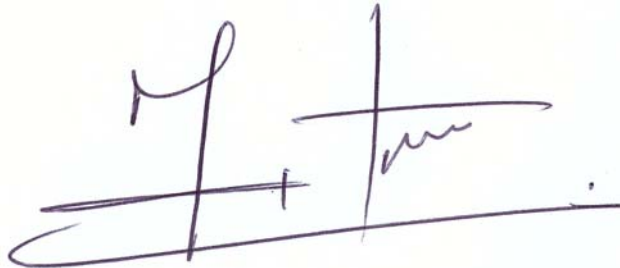
mise à disposition des cartes papier, le BHI envisage d'inclure un lien direct vers les sites web des Etats membres qui fournissent un catalogue de cartes papier en ligne. Il est donc demandé aux Etats membres de bien vouloir communiquer les adresses web (URL) de leur catalogue de cartes papier en ligne, le cas échéant.

5 Les Etats membres sont priés de bien vouloir :

- informer le BHI par courrier électronique des adresses web (URL) de leur catalogue de cartes papier en ligne, le cas échéant. L'adresse URL devra être communiquée par courriel à « *shipman@ihb.mc* », **dans les meilleurs délais.**
- fournir au BHI des commentaires sur les projets de soumission, **avant le mercredi 16 avril 2008.**

Veillez agréer, Madame la Directrice, Monsieur le Directeur, l'assurance de ma haute considération,

Pour le Comité de direction,

A handwritten signature in dark ink, consisting of a large, stylized initial 'M' followed by a horizontal line and a vertical stroke, and a second, more fluid signature below it.

Vice-amiral Alexandros MARATOS  
Président

Annexe A : projet de soumission NAV 54/14/x sur l'évaluation de la disponibilité des ENC.

Annexe B : projet de soumission NAV 54/14/xx sur l'élaboration d'un catalogue de cartes marines officielles en ligne.

SUB-COMMITTEE ON SAFETY OF  
NAVIGATION  
54<sup>th</sup> session  
Agenda item 14

NAV 54/14/x  
21 April 2008  
Original: ENGLISH

## DEVELOPMENT OF CARRIAGE REQUIREMENTS FOR ECDIS

### Evaluation of Electronic Navigational Chart (ENC) Availability

#### Submitted by the International Hydrographic Organization (IHO)

#### SUMMARY

<b>Executive summary:</b>	This document provides updated information on the availability of ENCs.
<b>Strategic Direction:</b>	5.2 – Enhancing technical, operational and safety management standards
<b>High Level Action:</b>	5.2.4 – Keep under review measures to improve navigational safety, including e-navigation, ships' routing systems, ship reporting systems, vessel traffic services, requirements and standards for shipborne navigational aids and systems
<b>Planned Output:</b>	5.2.4.1 – Development of carriage requirements for ECDIS
<b>Action to be taken:</b>	Paragraph 12
<b>Related documents:</b>	NAV 52/18, paragraph 6.19; NAV 53/5/2; NAV 53/INF.3; NAV 53/22, paragraphs 5.18 to 5.23 and 14.1 to 14.11; DNV Report No. 2008-0048 (Revision No 1)

#### Introduction

1 The use of ECDIS with ENC is recognised as a major factor in improving safety at sea. In conjunction with the consideration of mandatory carriage requirements for ECDIS, all the IHO MS have decided to anticipate and take the necessary measures to meet possible IMO requirements. The IHO in its report to NAV 53 (NAV 53/5/2) indicated that ENC coverage was steadily increasing and that there would be an adequate coverage of consistent ENCs by the time any further mandatory ECDIS carriage requirements were likely to be adopted by the IMO.

2 The IHO at its 17<sup>th</sup> International Hydrographic Conference in May 2007 adopted two resolutions which concluded that:

- IHO Member States should adhere and comply with the IHO's World-wide Electronic Navigational Database (WEND) Principles in order to achieve adequate coverage, availability, consistency and quality of ENCs by 2010; and
- The IHO strongly supports the efforts by IMO to introduce mandatory carriage requirements for ECDIS, emphasizing that a significant coverage of ENCs is already in place and will be further improved by 2010, as indicated in the DNV report (NAV 53/INF.3) and supported by IHO assessments, and that acceptance of mandatory carriage requirements will further accelerate the production of ENCs.

3 The Sub-Committee at its fifty-third session (NAV 53/22) noted with appreciation the information provided by the IHO (NAV 53/5/2) and invited the IHO to update the Sub-Committee on progress at NAV 54.

### ENC Availability

4 **Coverage in 2008.** The IHO has conducted a global analysis of the ENC coverage which was commercially available to mariners in January 2008. The IHO analysis compared existing paper charts in the UK global series with corresponding ENCs. The latest IHO data confirms that there is currently a significant availability of ENCs and that this has increased notably and in line with the expectations forecast in the IHO report to NAV 53. The results of the IHO global ENC coverage analysis are shown in the table below.

	IHO Global Analysis - 2008
Small scale ENCs (planning charts)	>90%
Medium scale ENCs (coastal charts)	60%
Large scale ENCs (top 800 ports)	65%

5 The data obtained by the IHO has also been used as part of a separate analysis by DNV and is reported in DNV Report No. 2008-0048 (Revision No.01). The DNV analysis has returned a similarly positive result using criteria from another perspective (safety and environmental protection).

6 The IHO information shows that:

- Many areas of the world, major trading routes and ports, and vulnerable and complex areas are already comprehensively covered with ENCs.
- There are at least 2000 ENC cells (in addition to 7 400 existing ENC cells) that have been produced by Hydrographic Offices (HOs) that are awaiting final validation prior to public release in the near future. These ENCs should be available shortly and represent an increase of more than 25% over the number of ENCs currently available.
- There are a number of key areas where ENCs should be available before 2010 that will be based on new original surveys with data that is significantly better than existing paper charts. These areas include the Malacca and Singapore Straits and the Western Indian Ocean, centred on the Mozambique Channel. This work is being undertaken through the Marine Electronic Highway Projects and with supervision, technical assistance and advice provided by IMO, IHO, IALA, INTERTANKO, ICS and HOs.
- The development of the IHO-online catalogue together with the effective operational ENC data coverage tools provided by RENCs demonstrate the improvement in ENC availability.

7 **Coverage in 2010.** The IHO has consulted widely with its Member States, other coastal States, IHO Regional Hydrographic Commissions (RHCs) and the Regional ENC Centres (RENCs) to gather information regarding the availability of ENCs in 2010 covering international routes and ports to and from each coastal State. The information received by the IHO up to February 2008 indicates that in addition to the significant number of ENCs that have already been published, there are co-operation plans in place to cover all remaining major shipping routes and ports where coastal States have no hydrographic capabilities. Before or during 2010 these States will either be publishing ENCs themselves to cover their

international routes and ports to and from their State or have arrangements in place for other States to produce the necessary ENC's on their behalf.

	<b>IHO Prediction for 2010 (International Routes and Ports)</b>
Small scale ENC's (planning charts)	100%
Medium scale ENC's (coastal charts)	95 - 100%
Large scale ENC's (top 800 ports)	95 - 100%

### **Capacity Building and Cooperation**

8 The IHO through its Capacity Building Committee, RHCs and individual HOs will continue to provide technical assistance and support to those coastal States that require it for the provision of hydrographic services, including the production of ENC's, to meet the requirements of SOLAS regulation V/9. A number of IHO Member States are continuing their long-standing assistance programmes by creating ENC's for those coastal States for which they already act as primary charting authority. Many HOs are liaising directly with their national maritime safety authorities to raise the awareness of electronic navigation which in turn is helping to ensure that the appropriate regulations and training programmes are considered.

### **Consistency and Quality**

9 The IHO and its Member State HOs in addition to their efforts to complete worldwide coverage of ENC's are fully committed to continuously improve the consistency and quality of ENC's. Work on these issues is continuing and IHO Member States are acting to ensure that matters concerning safety of navigation and protection of the marine environment are being fully dealt with.

### **Pricing**

10 The cost of both paper charts and ENC's (neither of which takes into account the actual cost of surveys and production development) has always been, and will remain, the responsibility of individual coastal States and the commercial value-added resellers. The HOs of IHO Member States are coordinating and cooperating through the relevant IHO committees, the RENCs, and the relevant maritime stakeholders' forums to achieve consistent pricing and licensing of ENC's. This is already being reflected in recent changes in ENC pricing structures, subscription durations and licensing arrangements.

### **Conclusions**

11 ENC production, consistency and availability is constantly increasing and will continue to do so. There is no reason to doubt that there will be an adequate worldwide coverage of consistent ENC's by 2010. Factual figures and HO official planning reports show that the world's major trading routes and ports will be covered by 2010.

**Action requested of the Sub-Committee**

12 The Sub-Committee is invited to take note of the information provided and take action as it considers appropriate.

\*\*\*\*\*

SUB-COMMITTEE ON SAFETY OF  
NAVIGATION  
54<sup>th</sup> session  
Agenda item 14

NAV 54/14/xx  
21 April 2008  
Original: ENGLISH

## DEVELOPMENT OF CARRIAGE REQUIREMENTS FOR ECDIS

### Development of a comprehensive online catalogue of available official charts

#### Submitted by the International Hydrographic Organization (IHO)

#### SUMMARY

<b>Executive summary:</b>	This document provides updated information on the development of the IHO online catalogue of ENCs, RNCs and coastal States recommendations for the appropriate portfolio of paper charts to be carried as backup.
<b>Strategic Direction:</b>	5.2 – Enhancing technical, operational and safety management standards
<b>High Level Action:</b>	5.2.4 – Keep under review measures to improve navigational safety, including e-navigation, ships' routing systems, ship reporting systems, vessel traffic services, requirements and standards for shipborne navigational aids and systems
<b>Planned Output:</b>	5.2.4.1 – Development of carriage requirements for ECDIS
<b>Action to be taken:</b>	Paragraph 11
<b>Related documents:</b>	NAV 52/6/1, NAV 52/18, paragraphs 6.1 to 6.25, NAV 53/5/1, NAV 53/22, paragraphs 5.15 to 5.17 and IMO Circular Letters No. 2773 and 2850

#### Introduction

1 The IHO reported to NAV 52 (NAV 52/6/1) and NAV 53 (NAV 53/5/1) on the status of the work undertaken to prepare a "Comprehensive online catalogue of available official charts" and sought comments / further guidance from the Sub-Committee on this matter. The fifty-third session of the Sub-Committee discussed this matter under agenda item 5 and reported its conclusions in section 5 of its report to the Maritime Safety Committee (MSC) (NAV 53/22).

#### Developments

2 The IHO has continued with the technical development of this online catalogue which is nearing completion. The IHO will be arranging to demonstrate the catalogue during the fifty-fourth session of the Sub-Committee.

#### ENCs

3 The primary function of the catalogue is to show, in a graphical format, the coverage of all ENCs that are available to the mariner. A harvesting application has been developed and made freely available to the Regional ENC Centres (RENCs) and to other hydrographic

offices that do not market their ENC's through a RENC. This application allows the information required for portrayal of the coverage within the Catalogue to be extracted with the minimum of human intervention.

4 Metadata for each cell can be displayed by clicking within the cell limits. This information will not be held within the catalogue but will be downloaded from the RENC or participating hydrographic office on each occasion that it is requested. This will ensure that the data displayed is up to date.

### **RNCs**

5 Similar harvesting tools for RNC coverage have been developed and made available to those hydrographic offices producing RNCs. RNC information will be available as a separate data layer within the catalogue. Users will be able to specify RNC coverage according to both producer and scale band criteria. This will allow the user to identify the relevant RNCs which are available in areas where there is no ENC coverage.

### **Appropriate portfolio of paper charts (APC) required as back-up**

6 The catalogue, as requested by the Sub-Committee, will also provide information regarding coastal States' recommendations for the appropriate portfolio of up-to-date paper charts to be used as a backup in areas where ECDIS is operated in RCDS mode and/or when a single ECDIS with ENC's is in use. The Sub-Committee has requested coastal States to forward this information to the IHO for inclusion in the catalogue and this request has been endorsed by the Maritime Safety Committee. IHO and IMO Member States were requested by IHO and IMO Circular Letters respectively in both 2007 and 2008 to provide this information. Despite these requests, at the time of submission, the IHO had only received information from 33 coastal States.

7 Although the IHO requested the information to be supplied in a specific format (IMO CL No. 2773 Annex paragraphs 9 and 10) the data received has been in a variety of formats including: a simple statement as to the type of chart that should be carried; a graphical image from a chart catalogue; and a 44 page document listing some 600 charts. Given this variety of format the IHB has converted each document, as supplied, into pdf format and the user will be able to view a coastal State's recommendation by selecting that State from a drop down list.

8 Given the limited extent of the information and the wide variety of formats in which it has been provided the IHO is not convinced on its usefulness to the mariner. The Sub-Committee is requested to review whether it still wishes this data to be included in the catalogue and if so to urge Member States to provide the IHO with the necessary information.

### **Paper charts**

9 The catalogue will also provide links to those Hydrographic Office web sites which provide an on-line catalogue of paper charts.



**Conclusion**

10 The IHO catalogue will be accessible from the IHO web site [www.iho.org](http://www.iho.org) from the 30 June 2008.

**Action requested of the Sub-Committee**

11 The Sub-Committee is invited to:

- .1 take note of this information; and
- .2 reconsider the requirement for the catalogue to show coastal States' recommendations for the appropriate portfolio of up-to-date paper charts paper charts to be used as a backup in areas where ECDIS is operated in RCDS mode and/or when a single ECDIS with ENC's is in use and if it so decides request coastal States' to provide this information to the IHB as a matter of urgency.

\*\*\*\*\*