



Dossiers de l'OHI n° S3/8151 & S3/6004

**LETTRE CIRCULAIRE 29/2019**  
**13 juin 2019**

**ENQUETE AUPRES DES ETATS MEMBRES DE L'OHI  
CONCERNANT LE FUTUR DE LA CARTE MARINE PAPIER**

Références:

- A. Doc. HSSC11-05.4B – *Le futur de la carte papier – Rapport préliminaire.*
- B. Liste des décisions et actions découlant du HSSC-11.

Madame la Directrice, Monsieur le Directeur,

1. Le groupe de travail de l'OHI sur la cartographie marine (NCWG) a rédigé un rapport préliminaire intitulé « Le futur de la carte papier » (FPNC) (cf. référence A), qui a été présenté à la 11<sup>ème</sup> réunion du Comité des services et des normes hydrographiques (HSSC) de l'OHI en mai 2019. Des corrections mineures ont été portées au rapport, sur la base du retour des membres du HSSC reçu après la réunion. Le rapport préliminaire (version du 31 mai 2019) est à présent disponible à l'adresse : [www.iho.int](http://www.iho.int) > HSSC > NCWG > Divers > Future of the Paper Nautical Chart – Preliminary Report > [Link](#).

2. Ce rapport préliminaire aborde plusieurs questions importantes relatives au futur de la carte papier qui pourraient nécessiter que l'OHI, les services hydrographiques, les organismes de régulation, les navigateurs et les autres parties prenantes abordent différemment la carte papier et mènent les actions appropriées en vue de se préparer pour le futur de la carte papier. Certains des sujets couverts par le rapport incluent :

- Les changements d'utilisation et de vente des cartes papier et des ENC
- Les changements des règles d'utilisation des cartes papier et électroniques
- Les changements des spécifications pour les cartes papier
- Les changements de pratiques de production, partant d'une seule base de données pour produire à la fois les ENC et les cartes papier
- Des méthodes alternatives pour la production des cartes papier, comme « la production à la demande »
- La possibilité de créer des cartes papier et des cartes de secours à partir des données des ENC
- La production des cartes internationales (INT)
- Les ressources allouées à la production et à la tenue à jour des cartes papier
- Les recommandations sur la voie à suivre.

3. Certaines analyses contenues dans le rapport sont issues de la perspective d'un seul ou de quelques services hydrographiques. Afin de parvenir à une compréhension plus complète de l'état de la production, de la diffusion et des pratiques d'usage des cartes marines papier, dans l'ensemble de la communauté hydrographique, le HSSC, lors de sa 11<sup>ème</sup> réunion, a approuvé la proposition du NCWG de mener une enquête auprès des Etats membres de l'OHI afin de réunir davantage d'informations (cf. référence B, décision et action HSSC11/46).

4. Un questionnaire adapté aux questions soulevées dans le rapport préliminaire a été préparé par le NCWG. Ce questionnaire est fourni en Annexe A et sa version en ligne est disponible à l'adresse : [www.iho.int](http://www.iho.int) > HSSC > NCWG > Divers > Future of the Paper Nautical Chart – Online Survey > [Lien](#).

5. Les Etats membres sont encouragés à examiner le rapport préliminaire afin de comprendre le contexte des questions présentées dans l'enquête et de compléter ensuite le questionnaire. Les résultats de l'enquête seront incorporés au rapport FPNC final, qui sera présenté à la 12<sup>ème</sup> réunion du HSSC en mai 2020.

6. Instructions relatives à l'enquête : L'enquête sera effectuée en ligne. Veuillez examiner les questions de l'enquête listées en Annexe A à la présente lettre circulaire afin de préparer vos réponses au préalable et remplissez ensuite l'enquête en ligne ([Lien](#)). Chaque Etat membre peut répondre une seule fois à l'enquête en ligne. La date limite de réponse à l'enquête est le **31 août 2019**.

7. Pour toute question concernant l'enquête ou en cas de difficultés pour accéder au questionnaire en ligne, veuillez contacter M. Colby Harmon, président du sous-groupe FNPC du NCWG ([Colby.Harmon@noaa.gov](mailto:Colby.Harmon@noaa.gov)).

8. Le Secrétariat de l'OHI apprécierait une large participation à cette enquête importante. Les informations obtenues grâce à cette enquête aideront à formuler des recommandations en vue de futurs travaux du NCWG et d'autres groupes de travail du HSSC visant à soutenir la création, la tenue à jour et la fourniture de produits de navigation pour le milieu marin moderne.

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

Pour le Secrétaire général,



Abri KAMPFER  
Directeur

Annexe :

A. Questionnaire sur le futur de la carte marine papier (format PDF, en anglais uniquement).

# IHO Future of the Paper Nautical Chart Survey

This survey was prepared by the International Hydrographic Organization (IHO) Nautical Cartography Working Group (NCWG) to accompany its preliminary report on the Future of the Paper Nautical Chart (FPNC).

The results of the survey will be incorporated into the final FPNC report, which will be presented by the NCWG at the twelfth meeting of the IHO Hydrographic Services and Standards Committee (HSSC), 11-15 May 2020.

Each IHO Member State may submit only one survey response.

The deadline for completing your survey is 31 August 2019.

## Survey Submitter Information

Information about the submitting IHO Member State and the associated Point of Contact

1. **First name of person submitting this survey response**

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2. **Last name of person submitting this survey response**

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3. **E-mail of person submitting this survey response**

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**4. Which IHO Member State is this survey response from?***Mark only one oval.*

- Algeria
- Argentina
- Australia
- Bahrain
- Bangladesh
- Belgium
- Brazil
- Brunei Darussalam
- Bulgaria
- Cameroon
- Canada
- Chile
- China
- Colombia
- Croatia
- Cuba
- Cyprus
- Denmark
- Dominican Republic
- Ecuador
- Egypt
- Estonia
- Fiji
- Finland
- France
- Germany
- Greece
- Georgia
- Guatemala
- Iceland
- India
- Indonesia
- Iran
- Ireland
- Italy
- Jamaica
- Japan
- Korea, Democratic People's Republic of

- Korea, Republic of
- Kuwait
- Latvia
- Malaysia
- Malta
- Mauritius
- Mexico
- Monaco
- Montenegro
- Morocco
- Mozambique
- Myanmar
- Netherlands
- New Zealand
- Nigeria
- Norway
- Oman
- Pakistan
- Papua New Guinea
- Peru
- Philippines
- Poland
- Portugal
- Qatar
- Romania
- Russian Federation
- Saudi Arabia
- Seychelles
- Singapore
- Slovenia
- South Africa
- Spain
- Sri Lanka
- Suriname
- Sweden
- Thailand
- Tonga
- Trinidad and Tobago
- Tunisia
- Turkey

- Ukraine
- United Arab Emirates
- United Kingdom
- United States
- Uruguay
- Vanuatu
- Venezuela
- Viet Nam

## National Regulatory Information

Information about your national maritime regulations for commercial vessels on domestic voyages. (Ref FPNC 2.2.b)

**5. Primary - What type of nautical charts does your national maritime authority require commercial vessels to carry on domestic voyages? [Check one]**

*Mark only one oval.*

- Only Paper Charts
- Only ENCs
- Either Paper Charts or ENCs
- Other: \_\_\_\_\_

**6. Backup - What type of nautical charts does your national maritime authority allow commercial vessels to carry on domestic voyages as a backup for the primary chart type? [Check all that apply]**

*Check all that apply.*

- Paper Charts
- ENCs
- RNCs
- No Backup required
- Other: \_\_\_\_\_

## Backup Chart Development

### Backup Charts

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Information about any existing or development plans for a "fit for purpose" paper chart to be used as a backup. (Ref FPNC 2.3.a)

**7. What actions or plans has your agency made to provide a simplified paper nautical chart specifically for use as a backup for electronic navigational systems (ECDIS, ECS, chart plotters, etc.)? [Check all that apply]**

*Check all that apply.*

- We have no plans to create a simplified paper chart product other than standard nautical charts.
- We recently started considering the possibility of creating a new, simplified paper chart for backup.
- We are actively developing policies and/or specifications for a new, simplified paper chart for backup.
- We have prototyped a new, simplified paper chart for backup.
- We are producing and distributing a new, simplified paper chart for backup.
- We explored producing a simplified paper chart for backup, but have now stopped this effort.

**8. Is your agency doing any other activities related to development of any product to be used as a backup for electronic navigational systems?**

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## Chart Production System

Information about the use of a single production system for maintaining both ENC and paper chart nautical products.

**9. Is your agency using, or moving toward the use of, a single production database that stores data to maintain both ENC and paper charts? (Ref FPNC 2.4.a) [Check the closest answer]**

*Mark only one oval.*

- Our ENC and paper charts are produced from a single database.
- Our ENC and paper charts are produced from separate databases.
- Our ENC and paper charts are produced from separate databases, but we are actively migrating toward use of a single production database.
- Our ENC and paper charts are produced from separate databases, but we are considering a move toward use of a single production database.
- Other: \_\_\_\_\_

**10. Is your agency using S-57 encoded data to produce S-4 based symbolization on raster chart products? (Ref FPNC 2.4.b) [Check the closest answer]**

*Mark only one oval.*

- Yes. The symbolization of raster charts totally automated.
- Yes. The symbolization of raster charts nearly automated, but some manual "finishing" is required to completely symbolize the chart.
- No. We use S-57 encoded data to create raster charts, but raster symbolization is generated from additional (non-S-57) attribution.
- No. Our raster charts are not created from S-57 encoded data.

## Distribution of Paper Nautical Charts

### Paper Nautical Chart Sales

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Information about sales of paper nautical charts between 2008 and 2018. This section first asks about pre-printed stocking of paper nautical charts and then about Print-on-Demand distribution methods. Please report sales numbers for each separately.

**11. What methods do you use for stocking and distributing your paper nautical charts? (Ref FPNC 2.4.c) [Check all that apply]**

*Check all that apply.*

- Large stocks of charts are printed in advance and stored for distribution.
- Single charts, or small quantities, of charts are printed or plotted as orders are received.
- Other: \_\_\_\_\_

**12. The questions that follow ask that you enter paper chart sales numbers for the years 2008 through 2018, one year at a time. If you prefer, you may alternatively e-mail a spreadsheet or table to [colby.harmon@noaa.gov](mailto:colby.harmon@noaa.gov) with this information. If you prefer to e-mail your information, please indicate so below.**

*Mark only one oval.*

- I will provide individual year sales information within this survey.
- I will e-mail this information *Skip to question 35.*
- We do not sell paper nautical charts *Skip to question 35.*
- We do not have this information *Skip to question 35.*

### Provide Paper Chart Sales Data

You will first be asked to provide numbers for sales of "pre-printed" charts for years 2008-2018. You will then be asked to provide numbers for sales of "print on demand" paper charts for years 2008-2018..

### Please provide the number of your agency's standard, pre-printed, paper nautical charts sold in each of the calendar years below. (Ref FPNC 25.a)

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These are charts printed in large batches, usually by offset lithography, and then warehoused for subsequent distribution to customers.

**13. 2008**

\_\_\_\_\_

**14. 2009**

\_\_\_\_\_

**15. 2010**

\_\_\_\_\_



16. **2011**

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17. **2012**

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18. **2013**

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19. **2014**

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20. **2015**

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21. **2016**

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22. **2017**

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23. **2018**

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**Please provide the number of your agency's standard, Print-on-Demand, paper nautical charts sold in each of the calendar years below. (Ref FPNC 25.a)**

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These are charts printed one or a few at a time as they are ordered by customers.

24. **2008**

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25. **2009**

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26. **2010**

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27. **2011**

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28. 2012

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29. 2013

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30. 2014

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31. 2015

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32. 2016

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33. 2017

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34. 2018

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## Distribution of Electronic Navigational Charts (ENCs)

35. The questions that follow ask that you enter ENC sales numbers for the years 2008 through 2018, one year at a time. If you prefer, you may alternatively e-mail a spreadsheet or table to [colby.harmon@noaa.gov](mailto:colby.harmon@noaa.gov) with this information. Please indicate your preference below.

*Mark only one oval.*

- I will provide individual year sales information within this survey.
- I will e-mail this information *Skip to question 48.*
- We do not produce or sell ENCs *Skip to question 48.*
- We do not have this information *Skip to question 48.*

## Provide ENC Sales Data

36. ENC usage can be counted in several ways. Please indicate the method that you are using to report ENC sales.

*Check all that apply.*

- If an ENC is sold or licensed for use in any part of a year, it is counted as 1 sale in that year.
- If an ENC is licensed for use for a portion of a year, the count for that ENC is pro-rated. For example, if a particular ENC is licensed for a ship's use for 6 months, it is counted as 0.5 sale for that year.
- Other: \_\_\_\_\_

## ENC Sales

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Information about sales of ENC cells between 2008 and 2018.

**Please provide the number of your agency's ENCs sold in each of the calendar years below. (Ref FPNC 25.b)**

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37. **2008**

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38. **2009**

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39. **2010**

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40. **2011**

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41. **2012**

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42. **2013**

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43. **2014**

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44. **2015**

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45. **2016**

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46. **2017**

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47. **2018**

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## Nautical Chart Types

Information about the relationship between your paper chart products, Raster Navigational Charts (RNCs), and Electronic Navigational Charts (ENCs) (Ref FPNC 25.c)

**48. Which of the following nautical chart types does your agency produce. [Check all that apply]**

*Check all that apply.*

- Standard paper nautical charts
- Special paper charts for recreational boaters
- Raster Navigational Charts (RNC)
- Electronic Navigational Charts (ENC)
- Other: \_\_\_\_\_

**49. What products or services does your agency provide specifically for recreational boaters? (Ref FPNC 25.d)**

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### Future Products

**50. How many new (first edition) paper INT charts does your agency expect to create in the next three years? (Ref FPNC 3.1.a)**

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**51. Do you plan on a general rescheming of the layouts of your paper nautical charts in the next five years? (Ref FPNC 3.1.b)**

*Check all that apply.*

- Yes
- No

**52. If rescheming paper nautical charts is planned, please explain the rational for rescheming (to better align with ENC coverage and scales, reduction in raster chart coverage, etc.) (Ref FPNC 3.1.b)**

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53. **Do you have corresponding paper nautical chart coverage for your ENC's? (Ref FPNC 3.1.c) [Check the closest answer]**

*Mark only one oval.*

- Nearly every one of our ENC's have a corresponding paper chart covering the same area.
- About 75% of our ENC's have a corresponding paper chart covering the same area.
- About 50% of our ENC's have a corresponding paper chart covering the same area.
- About 25% of our ENC's have a corresponding paper chart covering the same area.
- None of our ENC's have a corresponding paper chart covering the same area.

54. **When you create new or larger scale coverage in an area, what nautical chart products do you produce? (Ref FPNC 3.1.c-d) [Check all that apply]**

*Check all that apply.*

- Standard paper nautical chart
- ENC
- RNC
- Raster titled data
- Vector tiled data
- Other: \_\_\_\_\_

55. **Are you using or planning to use any technology that would print paper charts directly from ENC data? (Ref FPNC 3.2.a) [Check the closest answer]**

*Check all that apply.*

- Yes, we are use a mostly automated process to do this.
- Yes, we are use a semi-automated process to do this.
- Yes, we are use a mostly manual process to do this.
- No, but we are exploring ways in which this might be done.
- No. We have no plans on doing this.

56. **Are you using, or planning to use, any technology that enables users to define their own paper chart extent and scale to output their own customized chart? (Ref FPNC 3.2.b) (Ref FPNC 3.2.b) [Check the closest answer]**

*Check all that apply.*

- Yes, we already provide this service to our customers?
- Yes, we are prototyping technology that could provide this service.
- Yes, we are considering the possibility of developing this service.
- No. We have no plans for providing this type of service.

## Impact of Change

Assessment of the potential impacts of a world without paper nautical charts.

57. What is your perception of the impact of a world without paper nautical charts would have on the following five areas? That is, what degree of changes would be needed to accommodate paperless navigation or would result from paperless navigation? (Ref FPNC 4.) [Check one level for each row]

Mark only one oval per row.

	High	Med	low
International Regulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
National Regulations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
User Requirements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nautical Product Production	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sales Revenue	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

58. What types of changes in your maritime national regulations would be required to enable the disuse of paper nautical charts? (Ref FPNC 4.1.a)

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### Additional Comments

59. Are there any other comments that you would like to add regarding the future of the paper nautical chart?

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