



**ENCUESTA A LOS ESTADOS MIEMBROS SOBRE EL FUTURO DE
LA CARTA NAUTICA DE PAPEL**

Referencias:

- A. Doc. HSSC11-05.4B - *El Futuro de la Carta Náutica de Papel - Informe Preliminar.*
- B. Lista de Decisiones y Acciones del HSSC-11.

Estimado(a) Director (a),

1. El Grupo de Trabajo de la OHI sobre Cartografía Náutica (NCWG) preparó un informe preliminar sobre el « Futuro de la Carta Náutica de Papel » (FPNC) (Referencia A), que fue presentado a la 11.^a reunión del Comité de Servicios y Normas Hidrográficas de la OHI (HSSC), en Mayo del 2019. Se hicieron algunas pequeñas correcciones al informe, basándose en la contribución recibida de los Miembros del HSSC después de la reunión. El informe preliminar (versión fechada el 31 de mayo del 2019) está ahora disponible en: www.iho.int > HSSC > NCWG > Miscellaneous > Future of the Paper Nautical Chart - Preliminary Report > [Link](#).

2. Este informe preliminar trata sobre importantes temas relativos a la carta de papel, que podrían requerir que la OHI, los Servicios Hidrográficos, los organismos reguladores, los navegantes y otras partes interesantes consideren las cartas de papel de forma diferente y que tomen las medidas adecuadas para prepararse para el futuro de la carta de papel. Algunos de los temas cubiertos por el informe incluyen:

- Los cambios en los usos y las ventas de las cartas de papel y las ENC;
- Los cambios en los reglamentos relativos al uso de las cartas de papel y electrónicas;
- Los cambios en las especificaciones de las cartas de papel;
- Los cambios en las prácticas de producción, a partir de una base de datos individual para producir ambas, las cartas ENC y las cartas de papel;
- Los métodos alternativos de producción de las cartas de papel, como «la producción a la demanda»;
- Las posibilidades de crear cartas de papel y cartas de reserva a partir de los datos ENC;
- La producción de Cartas Internacionales (INT);
- Los recursos asignados a la producción y al mantenimiento de las cartas de papel;
- Las recomendaciones sobre el camino a seguir.

3. Una parte de los temas tratados en el informe procede de la perspectiva de sólo uno o de muy pocos Servicios Hidrográficos. Para adquirir una comprensión más completa del estado de la producción, la distribución y las prácticas de uso de las cartas náuticas de papel en la comunidad hidrográfica en general, el HSSC, en su 11.^a reunión, aprobó la propuesta efectuada por el NCWG de llevar a cabo una encuesta de los Estados Miembros de la OHI para reunir más información (Referencia B, ver Decisión y Acción HSSC11/46).

4. Un cuestionario fue preparado por el NCWG, vinculado a los temas tratados en el informe preliminar. Se adjunta en el Anexo A el cuestionario mencionado y su versión en línea está disponible en: www.iho.int > HSSC > NCWG > Miscellaneous > Future of the Paper Nautical Chart – Online Survey > [Link](#).

5. Se anima a los Estados Miembros a revisar el informe preliminar para adquirir algo de información sobre las preguntas que se presentan en la encuesta y posteriormente a completar el cuestionario. Los resultados de la encuesta serán incluidos en el informe final del FPNC, que será presentado en la 12.ª reunión del HSSC en mayo del 2020.

6. Instrucciones relativas a la encuesta: La encuesta está siendo efectuada en línea. Le rogamos revise las preguntas de la encuesta que se enumeran en el Anexo A de esta Carta Circular, para poder preparar sus respuestas por anticipado y proceder posteriormente a la encuesta en línea ([enlace](#)). Cada Estado Miembro puede responder sólo una vez a la encuesta en línea. La fecha límite para completar la encuesta es **el 31 de agosto del 2019**.

7. Para todas las preguntas sobre la encuesta o sobre la dificultad de acceder al cuestionario en línea deberían dirigirse al Sr. Colby HARMON, Presidente del Subgrupo FNPC del NCWG (Colby.Harmon@noaa.gov).

8. La Secretaría de la OHI agradecerá su participación en este importante estudio. La información obtenida gracias a esta encuesta ayudará en la formulación de recomendaciones para el futuro trabajo que será emprendido por el NCWG y por otros Grupos de Trabajo del HSSC para apoyar la creación, el mantenimiento, y el suministro de productos de navegación para el moderno entorno marino.

En nombre del Secretario General
Atentamente,



Abri KAMPFER
Director

Anexo:

A. Cuestionario sobre el Futuro de la Carta Náutica de Papel (*formato pdf, en Inglés únicamente*).

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**

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

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

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

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?

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

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 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)

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

17. 2012

18. 2013

19. 2014

20. 2015

21. 2016

22. 2017

23. 2018

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)

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

24. 2008

25. 2009

26. 2010

27. 2011

28. 2012

29. 2013

30. 2014

31. 2015

32. 2016

33. 2017

34. 2018

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 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

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)

37. **2008**

38. **2009**

39. **2010**

40. **2011**

41. **2012**

42. **2013**

43. **2014**

44. **2015**

45. **2016**

46. **2017**

47. **2018**

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)

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)

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 rationale for rescheming (to better align with ENC coverage and scales, reduction in raster chart coverage, etc.) (Ref FPNC 3.1.b)

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)

Additional Comments

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

