



## ORGANIZACION HIDROGRAFICA INTERNACIONAL

ESTA CIRCULAR INCLUYE UN CUESTIONARIO

Dossier del BHI No. S3/8151/DQWG

CIRCULAR No. 23/2011  
11 de Marzo del 2011

**GRUPO DE TRABAJO SOBRE LA CALIDAD DE LOS DATOS**  
**- CUESTIONARIO DE ENCUESTA A LOS NAVEGANTES SOBRE LA COMPRENSIÓN Y**  
**EL USO DE LOS INDICADORES DE CALIDAD PARA DATOS CARTOGRAFICOS**

**Referencias:**

- a) Circular del BHI No. 36/2007 del 3 de Abril;
- b) Circular del BHI No. 120/2007 del 17 de Diciembre;
- c) Circular del BHI No. 32/2009 del 12 de Mayo;
- d) Circular del BHI No. 17/2010 del 8 de Febrero;
- e) Circular del BHI No. 59/2010 del 7 de Septiembre.

Estimado(a) Director(a),

**Introducción.**

1. Según se indicaba en la Circular de la Referencia a), el Grupo de Trabajo sobre la Calidad de los Datos (DQWG) fue creado en el 2007 por el CHRIS (actualmente el HSSC) para estudiar de qué modo podría presentarse mejor la calidad de los datos hidrográficos al navegante. La Circular de la Referencia b) indicaba que eran necesarias investigaciones adicionales en cuanto al uso y la visualización de los indicadores de calidad para datos ENC. Esto dio como resultado una recomendación inicial para enmendar las definiciones del atributo CATZOC de objetos de la S-57. Estos cambios recomendados fueron posteriormente aprobados por los Estados Miembros y anunciados en la Circular de la Referencia c).

2. El DQWG está continuando ahora su trabajo, considerando los Indicadores apropiados de la Calidad de los Datos para la S-101, la próxima generación de Especificación de Producto para ENCs, y desarrollando también modos mejores de presentar la calidad de los datos al usuario en las ENCs de la S-101. A este respecto, el DQWG debe determinar si los indicadores de calidad de los datos ENC existentes serán adecuados o si se tendrán que desarrollar nuevos indicadores.

3. La Circular de la Referencia d) solicitaba a los Estados Miembros que notificasen qué indicadores actuales de calidad de los datos de la S-57 estaban utilizando para poblar sus ENCs. La Circular de la Referencia e) solicitaba a los Estados Miembros que describiesen cómo atribuyen las clasificaciones CATZOC a los antiguos datos (datos batimétricos recogidos antes de la implementación de las normas CATZOC).

**Cuestionario de Encuesta.**

4. La próxima etapa del examen de los indicadores de calidad de los datos es asegurarse de la comprensión del navegante en materia de calidad de datos cartográficos mediante un cuestionario de encuesta. Dicho cuestionario se presenta en dos formatos: una versión pdf, que puede ser bajada y completada estando desconectado y una versión web que puede ser completada por las personas sondeadas y sometida en línea. Se adjunta la versión pdf (*en Inglés*), que puede ser bajada también del sitio Web de la OHI: [www.iho.int](http://www.iho.int) » *Committees & WGs* » *DQWG* » *Miscellaneous*.

Puede accederse a la versión en línea del cuestionario en:

<https://www.surveymonkey.com/s/IHODQWG>

5. Se ruega a los Estados Miembros que indiquen los detalles del cuestionario de encuesta a los navegantes por todos los medios posibles y particularmente a todos los institutos marítimos relevantes, para que pueda obtenerse una amplia respuesta.

6. Las personas que deseen responder al cuestionario deben hacerlo directamente a la dirección indicada en el mismo **antes del 27 de Mayo del 2011.**

En nombre del Comité Directivo  
Atentamente,



Robert WARD  
Director

**Anexo:** Cuestionario de encuesta sobre la Representación de la Calidad de los Datos en las Cartas Náuticas (*en Inglés únicamente*).

# Questionnaire about the Depiction of the Quality of the Data in Nautical Charts

Your answers to this questionnaire, to be returned **before 27 May 2011** (see details on last page), will remain anonymous unless you choose to provide your details at the end of this questionnaire.

There is NO obligation to provide your personal or contact details.

## Section A, About You

1. What is your Position or Role?

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2. How many years have you been using nautical charts?

- 0 – 5
- 5 – 10
- 10 – 15
- 15 +

3. What navigation qualifications do you hold?

Qualification 1 Please state:

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Qualification 2 Please state:

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Qualification 3 Please state:

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**4. Which of the following best describes the type of shipping that you are involved in?**

*Select all that apply.*

- Local/coastal
- Domestic
- Trans Oceanic
- Other. Please state: \_\_\_\_\_

**5. Which sector do you operate in?**

*Select all that apply.*

- Military
- Merchant Navy
- Commercial
- Ferry
- Oil and Gas (support)
- Renewables (support)
- Leisure (yacht)
- Day boat
- Cruise liner
- Fishing
- Pilotage
- Survey
- Other. Please state: \_\_\_\_\_

**6. In your work, which products do you use to navigate?**

*Select all that apply.*

- Paper Charts
- ENCs
- Raster Charts
- Commercial (non Hydrographic Office) Vector Charts

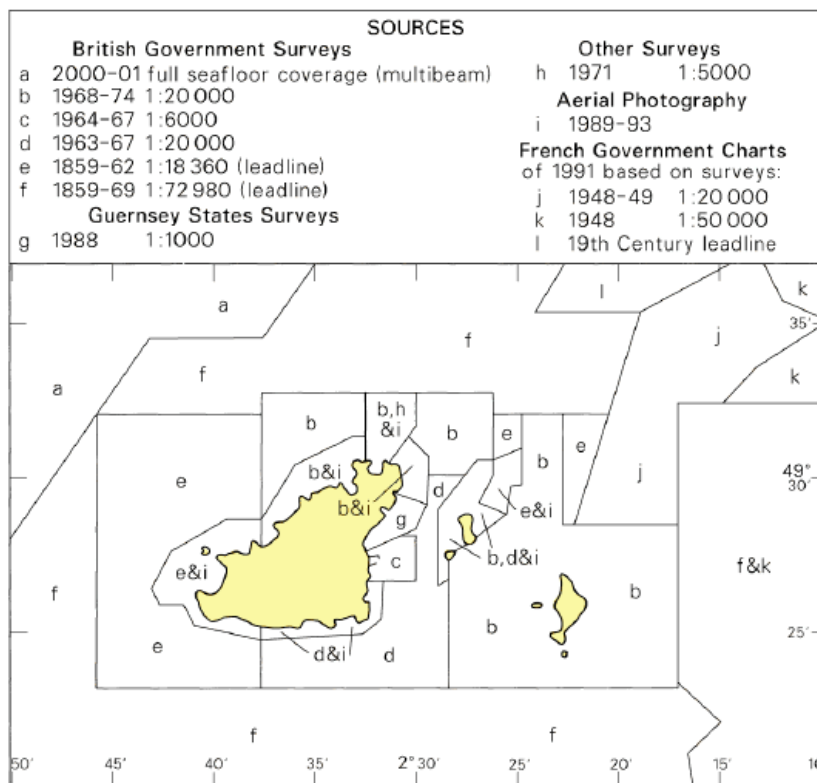
## Section 2, Your Perception and Awareness of Current Methods of Representing the Quality of the Data in Nautical Charts

Paper charts and ENCs indicate the quality of the data in nautical charts in many different, and sometimes subtle, ways. These are set out below. Please answer the questions relating to any of the methods that apply to you. The questions are not intended to be a “test” so please **do not look up the answer so as to get a good “score”**. The questions are intended to identify which of the existing chart data quality identifiers are not used or are not well understood and to use this information to design a better method of depicting quality in the future.

### Paper Charts

#### 7. Do the charts you use have a source or reliability diagram?

For example:



Yes

No

Jump to question 9

**8. Do you use the information in the source or reliability diagram?**

Yes

If Yes; Do you plan routes which stay in better surveyed areas?

Yes

No

If you operate using revised procedures for areas with different qualities of survey, for example reducing speed, please state what you do: \_\_\_\_\_

Are there any other actions that you take? (Please describe them) \_\_\_\_\_

No

If No, why?

I have used the same route many times before

I do not think quality information is relevant

I do not trust the quality information

I do not understand the quality information

I think the quality information presented is too complicated

I think the provided quality information is not comprehensive enough

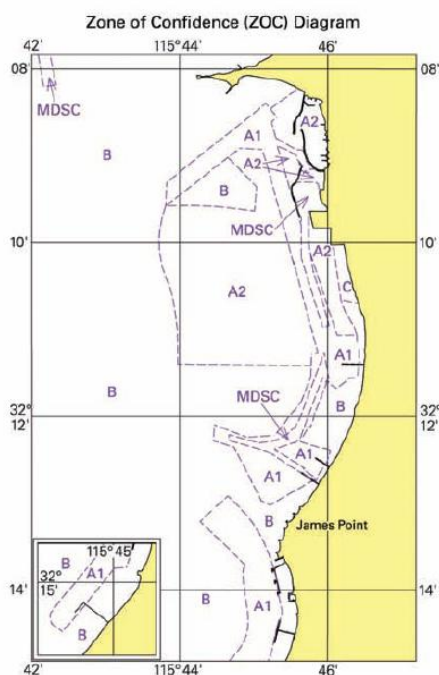
I have never been aware that quality information is available

I have no time to study the quality information

Other. Please state: \_\_\_\_\_

**9. Do the charts you use have a 'Zones of Confidence' (ZOC) diagram?**

**For example:**



ZOC CATEGORIES			
(For details see Australian Notice to Mariners No 25)			
ZOC	POSITION ACCURACY	DEPTH ACCURACY	SEAFLOOR COVERAGE
A1	±5m	=0.50m + 1%d	All significant seafloor features detected.
A2	±20m	=1.00m + 2%d	All significant seafloor features detected.
B	±50m	=1.00m + 2%d	Uncharted features hazardous to surface navigation are not expected but may exist.
C	±500m	=2.00m + 5%d	Depth anomalies may be expected.
D	Worse than ZOC C	Worse than ZOC C	Large depth anomalies may be expected.
U	Unassessed - The quality of the bathymetric data has yet to be assessed.		
MDSC	Maintained Depth See Chart.		

Yes

No      Jump to question 11.

**10. Do you use the information in the ZOC Diagram?**

Yes

If Yes;      Do you plan routes which stay in better surveyed areas?

Yes

No

If you operate revised procedures for areas with different qualities of survey, for example reducing speed, please state what you do: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Are there any other actions that you take? (please describe them)

\_\_\_\_\_

\_\_\_\_\_

No

If No, why?

I have used the same route many times before

I do not think quality information is relevant

I do not trust the quality information

I do not understand the quality information

I think the quality information presented is too complicated

I think the provided quality information is not comprehensive enough

I have never been aware that quality information is available

I have no time to study the quality information

Other. Please state: \_\_\_\_\_

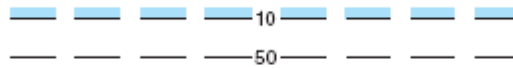
\_\_\_\_\_

\_\_\_\_\_

**Charts have several quality indicators. Please state if you are aware of the meaning of the various indicators shown below and also how you take note of or use these indicators when planning a route and navigating.**

## 11. Broken depth contours

Example:



A) Do you understand the meaning of the Broken Depth Contour symbol?

Yes What does it indicate? \_\_\_\_\_

\_\_\_\_\_

No Proceed to question 12

B) How does the existence of broken depth contours alter the way that you plan and then navigate a route? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## 12. Broken coastline

Example:



A) Do you understand the meaning of the broken coastline symbol?

Yes What does it indicate? \_\_\_\_\_

\_\_\_\_\_

No Proceed to question 13

B) How does the existence of a broken coastline alter the way that you plan and then navigate a route? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_





**B)** How does the existence of a discontinuity between surveys note alter the way that you plan and then navigate a route? \_\_\_\_\_

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### 15. Notes relating to lack of survey

**Example:**



**A)** Do you understand the meaning of the „Unsurveyed’ and „Depths’ notes?

Yes

No Proceed to question 16

**B)** What does the „Unsurveyed’ note mean? \_\_\_\_\_

**C)** What does the „Depths’ note mean? \_\_\_\_\_

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**D)** How does the existence of „Unsurveyed’ and „Depths’ notes alter the way that you plan and then navigate a route? \_\_\_\_\_

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### 16. PA, PD, ED and SD abbreviations

**Example:**

*PA PD ED | SD |*

**A)** Do you understand the meaning of the PA, PD, ED and SD abbreviations when applied to a feature or sounding?

Yes

No Proceed to question 17

**B)** What does the abbreviation PA mean? \_\_\_\_\_

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**C)** What does the abbreviation PD mean? \_\_\_\_\_

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**D)** What does the abbreviation ED mean? \_\_\_\_\_

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E) What does the abbreviation SD mean? \_\_\_\_\_

\_\_\_\_\_

F) What does the abbreviation Rep'd (1999) mean? \_\_\_\_\_

\_\_\_\_\_

G) How does the existence of a „PA, PD, ED, SD or Rep'd abbreviation against a feature or sounding alter the way that you plan and then navigate a route?

PA \_\_\_\_\_

\_\_\_\_\_

PD \_\_\_\_\_

\_\_\_\_\_

ED \_\_\_\_\_

\_\_\_\_\_

SD \_\_\_\_\_

\_\_\_\_\_

Rep'd (1999) \_\_\_\_\_

\_\_\_\_\_

H) How would you plan a route or navigate differently if the year reported was 25 years ago, as opposed to 1 year ago? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## 17. Upright (hairline) sounding

Example:

12

9<sub>1</sub>

12

9<sub>2</sub>

**Upright font**

**Normal font for soundings**

A) Do you understand the meaning of a sounding written in an upright font?

Yes What does it indicate? \_\_\_\_\_

\_\_\_\_\_

No Proceed to question 18

**B)** How does the existence of a sounding written in an upright font alter the way that you plan and then navigate a route? \_\_\_\_\_

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### 18. Discoloured water legend

**Example:**

*Discoloured water*

**A)** Do you understand the meaning of the discoloured water note?

Yes    What does it indicate? \_\_\_\_\_

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No    Proceed to question 19

**B)** How does the existence of a discoloured water note alter the way that you plan and then navigate a route? \_\_\_\_\_

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### 19. Sand wave symbol

**Example:**



**A)** Do you understand the meaning of the sand wave symbol?

Yes    What does it indicate? \_\_\_\_\_

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No    Proceed to question 20

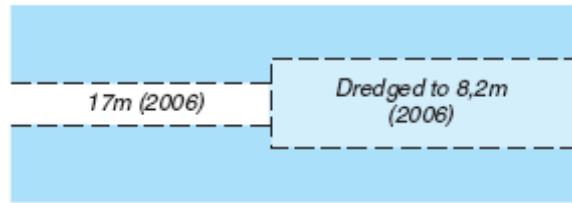
**B)** How does the existence of a sand wave symbol alter the way that you plan and then navigate a route? \_\_\_\_\_

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## 20. Dredged to... note

**Example:**



**A)** Do you understand the meaning of the „Dredged to...’ note?

Yes What does it indicate? \_\_\_\_\_

\_\_\_\_\_

No Proceed to question 21

**B)** How does the existence of a „Dredged to...’ note alter the way that you plan and then navigate a route? \_\_\_\_\_

\_\_\_\_\_

**C)** How would you plan a route or navigate differently if the year dredged was 10 years ago, as opposed to 1 year ago? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## 21. Potentially Dangerous Wreck

**Example:**



**A)** Do you understand the meaning of the potentially dangerous wreck symbol?

Yes What does it indicate? \_\_\_\_\_

\_\_\_\_\_

No Proceed to question 22

**B)** How does the existence of a potentially dangerous wreck symbol alter the way that you plan and then navigate a route? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## 22. Bar above a Dangerous wreck symbol

Example:



A) Do you understand the meaning of a bar above a dangerous wreck symbol?

Yes What does it indicate? \_\_\_\_\_

\_\_\_\_\_

No Proceed to question 23

B) How does the existence of a bar above a dangerous wreck symbol alter the way that you plan and then navigate a route? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## 23. Works in progress legend

Example:

Under construction (2004)  
Works in progress (2004)



A) Do you understand the meaning of works in progress legend?

Yes What does it indicate? \_\_\_\_\_

\_\_\_\_\_

No Proceed to question 24

B) How does the existence of a works in progress legend alter the way that you plan and then navigate a route? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

You have now answered questions on a set of symbols representing data quality. The following questions relate to how you feel about current symbology.

## 24. Is the current set of symbols clear?

Yes

No

**25. Are the number of symbols adequate?**

- Yes
- No
- Too Many
- Too Few

**26. Which symbol(s) are the most important to you?**

Select all that apply

- Broken depth contours (as seen in question 11)
- Broken coastline (as seen in question 12)
- Dotted danger lines (as seen in question 13)
- Discontinuity between surveys (as seen in question 14)
- Notes relating to lack of survey (as seen in question 15)
- PA, PD, ED and SD abbreviations (as seen in question 16)
- Upright (hairline) sounding (as seen in question 17)
- Discoloured water legend (as seen in question 18)
- Sand wave symbol (as seen in question 19)
- Dredged to ... legend (as seen in question 20)
- Potentially Dangerous Wreck (as seen in question 21)
- Bar above a Dangerous wreck symbol (as seen in question 22)
- Works in progress legend (as seen in question 23)

**27. Which symbol(s) are the least important to you?**

Select all that apply

- Broken depth contours (as seen in question 11)
- Broken coastline (as seen in question 12)
- Dotted danger lines (as seen in question 13)
- Discontinuity between surveys (as seen in question 14)
- Notes relating to lack of survey (as seen in question 15)
- PA, PD, ED and SD abbreviations (as seen in question 16)
- Upright (hairline) sounding (as seen in question 17)

- Discoloured water legend (as seen in question 18)
- Sand wave symbol (as seen in question 19)
- Dredged to ... legend (as seen in question 20)
- Potentially Dangerous Wreck (as seen in question 21)
- Bar above a Dangerous wreck symbol (as seen in question 22)
- Works in progress legend (as seen in question 23)

**28. Is there specific information on data quality that is missing?**

- Yes      Please state: \_\_\_\_\_  
\_\_\_\_\_
- No      Proceed to question 29



# ENCs

## 29. Do you use ENCs?

- Yes
- No      Jump to question 41

## 30. When using ENCs do you use the information in the CATZOC display?

- Yes

If Yes;      Do you plan routes which stay in better surveyed areas?

- Yes

- No

Do you operate revised procedures for areas with different qualities of survey (for example do you slow down?) Please state what you do: \_\_\_\_\_

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Any other actions that you take? (please state actions)

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- No      Proceed to next question

**In addition to CATZOC, ENCs have several data quality indicators included in the encoding details, as listed below. Please indicate if you are aware of the following indicators and their meaning and also whether you use these when navigating and/or route planning.**

## 31. HORACC – Horizontal accuracy

**A) What is your understanding of HORACC?**

- Do not know      Proceed to question 32

What does HORACC indicate? \_\_\_\_\_

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**B) How does HORACC alter the way that you plan and then navigate a route?**

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**32. POSACC – Positional accuracy**

**A)** What is your understanding of POSACC?

Do not know    Proceed to question 33

What does POSACC indicate? \_\_\_\_\_

\_\_\_\_\_

**B)** How does POSACC alter the way that you plan and then navigate a route?

\_\_\_\_\_

\_\_\_\_\_

**33. SOUACC – Sounding accuracy**

**A)** What is your understanding of SOUACC?

Do not know    Proceed to question 34

What does SOUACC indicate? \_\_\_\_\_

\_\_\_\_\_

**B)** How does SOUACC alter the way that you plan and then navigate a route?

\_\_\_\_\_

\_\_\_\_\_

**34. VERACC – Vertical Accuracy**

**A)** What is your understanding of VERACC?

Do not know    Proceed to question 35

What does VERACC indicate? \_\_\_\_\_

\_\_\_\_\_

**B)** How does VERACC alter the way that you plan and then navigate a route?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**35. SURATH – Survey Authority**

**A)** What is your understanding of SURATH?

Do not know    Proceed to question 36

What does SURATH indicate? \_\_\_\_\_

\_\_\_\_\_

**B)** How does SURATH alter the way that you plan and then navigate a route?

\_\_\_\_\_

\_\_\_\_\_

**36. SURSTA – Survey Start**

**A)** What is your understanding of SURSTA?

Do not know    Proceed to question 37

What does SURSTA indicate? \_\_\_\_\_

\_\_\_\_\_

**B)** How does SURSTA alter the way that you plan and then navigate a route?

\_\_\_\_\_

\_\_\_\_\_

**37. SUREND – Survey End**

**A)** What is your understanding of SUREND?

Do not know    Proceed to question 38

What does SUREND indicate? \_\_\_\_\_

\_\_\_\_\_

**B)** How does SUREND alter the way that you plan and then navigate a route?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**38. TECSOU – Technique of Sounding**

**A)** What is your understanding of TECSOU?

Do not know    Proceed to question 39

What does TECSOU indicate? \_\_\_\_\_

\_\_\_\_\_

**B)** How does TECSOU alter the way that you plan and then navigate a route?

\_\_\_\_\_

\_\_\_\_\_

**39. QUASOU – Quality of Sounding**

**A)** What is your understanding of QUASOU?

Do not know    Proceed to question 40

What does QUASOU indicate? \_\_\_\_\_

\_\_\_\_\_

**B)** How does QUASOU alter the way that you plan and then navigate a route?

\_\_\_\_\_

\_\_\_\_\_

**40. QUAPOS – Quality of Position**

**A)** What is your understanding of QUAPOS?

Do not know    Proceed to question 41

What does QUAPOS indicate? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**B)** How does QUAPOS alter the way that you plan and then navigate a route?

\_\_\_\_\_

\_\_\_\_\_

## Wider Data Quality Issues

**41. Do you feel that the data quality of the paper chart or ENC that you use, is of any relevance to you?**

- Yes    Jump to question 44  
 No     Proceed to question 42

**42. Would you make use of information about the quality of the charted data if it was explained to you or was available on the charts that you use?**

- Yes    Jump to question 44  
 No     Proceed to question 43

**43. Why would you not take note or use information about the quality of the chart data? (You may tick more than one)**

- Routes are planned centrally and I have no/little control over them  
 Policy is governed by my company/organisation  
 The route I use has no alternatives so I can not alter it.  
 The route I use has been travelled many times before so I know it is OK.  
 I trust that the HO producing the chart has done a good job and that the chart depicts the seafloor accurately.  
 I am not aware of what data quality information is available.  
 I do not understand the relevance of the data quality information  
 The charts / ENCs I use do not contain any data quality information or is so limited that it is effectively useless.

Other reasons. Please state: \_\_\_\_\_

\_\_\_\_\_

**44. Do you take into account the mobility of the seabed (For example sand waves, siltation) when navigating/passage planning?**

- Yes  
 No. Why not? Please state: \_\_\_\_\_

\_\_\_\_\_

If you answered No jump to question 46

**45. How would you judge the mobility of the seabed?**

Please state: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**46. Do you take data quality information into account when determining a safe minimum under keel clearance?**

Yes      please state how: \_\_\_\_\_

\_\_\_\_\_

No      please state why: \_\_\_\_\_

\_\_\_\_\_

**47. Do you feel that you have received sufficient training on data quality?**

Yes

No

**48. Would you like to receive further training/information on data quality?**

Yes

No

**49. If you currently use data quality indicators do you think the existing methods (Source diagram, CATZOC etc) are adequate?**

Yes

No

**So far you have answered questions that relate to the quality of charted bathymetric (depth) data. The following questions relate to the quality of other charted data.**

**50. Would you find it useful to have quality information relating to non bathymetric data? This could be about the source and date of certain information, for example: “... navigation light description recorded on the 16<sup>th</sup> January 2003, by Trinity House Vessel Galatea. Last verified on 18<sup>th</sup> June 2005. Record complete.”**

Yes

No      Jump to question 56

**51. For which types of non bathymetric charted data would you find it useful to have quality information available?**

Harbour information

Sailing directions

Regulations/restrictions

Navigational aids

Hazards

Other, please state: \_\_\_\_\_

**52. What information would you like to be available? You may tick more than one:**

- Date/age
- Completeness of the records
- Individual/organisation that collected the data
- Other please state: \_\_\_\_\_

**53. Would you like old/out of date information to be automatically flagged?**

- Yes
- No

What would you consider to be old/out of date?

- 1 year since it was reviewed
- 5 years since it was reviewed
- 10 years since it was reviewed
- 20 years since it was reviewed
- 50 years since it was reviewed
- Other, please state: \_\_\_\_\_

**54. Would you like incomplete date information to be automatically flagged?**

- Yes
- No

**55. How would you like to see the completeness of data represented? Please state:** \_\_\_\_\_

\_\_\_\_\_

## Section 3, Future Developments

**56. All existing data quality indicators relate to charted parameters. Would you like any new system (ECDIS) to take into account your own vessel parameters; for example, draught, length, beam, under-keel clearance? (such parameters would need to be entered into your ECDIS).**

Yes Please state why: \_\_\_\_\_  
\_\_\_\_\_

No

**57. If you answered No to question 56, please say why and, if you can, explain how you would like information about the quality of charted data to be presented?**

Please state: \_\_\_\_\_  
\_\_\_\_\_

**58. In addition to the existing methods of representing data quality several alternatives have been suggested. Please consider the list below and indicate which concept you prefer and why.**

Categories for the zone of confidence (CATZOC), as presently in use

A yes/no indicator highlighting whether the information meets the minimum standards for safe navigation, based on survey age, accuracy, and seabed mobility

A no-go-area overlay, based on survey age, accuracy, and seabed mobility, and vessel parameters

A dynamic colour overlay (for example; red = no-go, amber = beware, green = safe-to-go) on ENCs based on the ship parameters, charted depth, estimated uncertainty of the charted depth, and so on.

Separate indicators for survey age, accuracy, and seabed mobility

Other, please state: \_\_\_\_\_  
\_\_\_\_\_

Please explain the reason for your choice: \_\_\_\_\_  
\_\_\_\_\_



**59. Please consider the following visualisation methods and indicate which concept you would like to see utilised in conjunction with your answer from Question 58**

- A permanent data quality symbol
- A permanent data quality colour overlay
- A permanent quality figure
- A permanent short description in words
- An on-demand (via toggle function) data quality symbol as a sparse grid
- An on-demand (via toggle function) data quality colour overlay
- An on-demand (via toggle function) quality figure
- An on-demand (via toggle function) short description in words
- Other, please state: \_\_\_\_\_  
\_\_\_\_\_

Please explain the reason for your choice: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Further Comments

If you have any further comments that you feel would be useful to the work of the IHO Data Quality Working Group, please use the space below or attach other sheets.

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**Please send completed questionnaires *before 27 May 2011* to:**

Mr Sam Harper  
Bathymetric Data Centre  
United Kingdom Hydrographic Office  
Admiralty Way  
Taunton  
Somerset TA1 2DN

**England**

**Or email to:** [samuel.harper@ukho.gov.uk](mailto:samuel.harper@ukho.gov.uk)

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**Contact Details (Optional)**

Your answers to this questionnaire will be anonymous.

However, you may wish to give permission for the IHO Data Quality Working Group to contact you regarding our study. If so, please fill out the form below. Your details will not be passed to any third party and will be discarded once the study has finished.

Name: \_\_\_\_\_

Email: \_\_\_\_\_

Address: \_\_\_\_\_

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Contact telephone number: \_\_\_\_\_

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