

**1st IHO-HSSC Meeting
The Regent Hotel, Singapore, 22-24 October 2009**

Information Paper for Consideration by HSSC

Draft of S-49 under development by CSPCWG

Submitted by: Chairman CSPCWG

Executive summary: The latest draft of a revised version (edition 2) of S-49 *Standardization of Mariners' Routeing Guides* is annexed.

Related Documents: CSPCWG Work Plan item F.1: Review S-49 (HSSC1-06.5A, Report of CSPCWG, refers)

Related Projects: S-49

1. Introduction & Background

CSPCWG was tasked by CHRIS with reviewing and constructing a completely revised and updated version of former S.P. 49 '*Recommendations concerning Mariners' Routeing Guides*'.

A sub-WG was established under the direction of Germany (Jens Schröder-Fürstenberg). This correspondence group has progressed its work and delivered a draft document to CSPCWG for wider review. A 'beta' draft is currently under consideration by CSPCWG, a copy of which is at Annex for information.

CSPCWG members have further opportunity to comment on this draft by responding to CSPCWG Letter 12/2009, before 5 November.

It is anticipated that CSPCWG will be in a position to submit a final draft to MS for comment and approval, via CL, before the end of the year (2009).

2. Conclusion

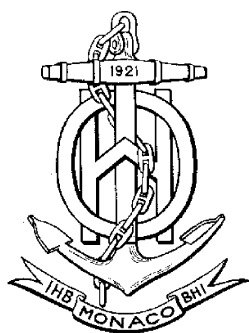
The latest draft of Edition 2 of S49 is at Annex for information.

3. Action Required of HSSC

The HSSC is invited to note the progress of this work item.

**Annex
to HSSC1 INF Paper**

INTERNATIONAL HYDROGRAPHIC ORGANIZATION



S-49

**Standardization
of
Mariners' Routing Guides**

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4, Quai Antoine 1er
B.P 445 - MC 98011 MONACO Cedex
Principauté de Monaco
Telefax: (+377) 93 10 81 40
Web <http://www.iho-ohi.net>

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FOREWORD

IHO Publication S-49 provides a standardized structure for the preparation and publication of Mariners' Routeing Guides.

The text of this document (S-49) was prepared by a sub-working group of the Chart Standardization and Paper Chart Working Group (CSPCWG) in 2009. It is the result of a comprehensive review of the 1st Edition, published in 1985 and titled 'Recommendations Concerning Mariners' Routeing Guides (IHO Special Publication No. 49)'.

This publication was subject to IHO Member States' approval (IHO Circular Letter ??/2009 refers).

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Contents

Commentaire [c1]: please ignore page numbers here; the field will be updated when final version prepared.

1. Introduction.....	7
2. Recommendations.....	7
2.1 Format.....	7
2.2 Layout.....	7
2.3 Title.....	7
2.4 Maintenance.....	8
2.5 Language and symbology.....	8
2.6 Use of acronyms and abbreviations.....	8
2.7 Geographic areas requiring guides.....	8
2.8 Type of Information.....	8
3. Appendix (Recommended content of a Mariners' Routeing Guide).....	9
3.1 Definitions.....	9
3.1.1 Mariners' Routeing Guide (MRG).....	9
3.1.2 Essential.....	9
3.1.3 Useful.....	9
3.1.4 Not appropriate.....	9
3.1.5 Use of IMO 'Ships' Routeing'.....	9
3.2 Recommended content of a Mariners' Routeing Guide.....	10
3.2.1 Enumeration order.....	10
3.2.2 Subject matter considered ESSENTIAL.....	10
3.2.3 Subject matter considered USEFUL.....	12
3.2.4 Subject matter considered NOT APPROPRIATE.....	13

1. Introduction

The IHO publication 'Standardization of Mariners' Routeing Guides' evolved in response to an opinion by the International Maritime Organization (IMO) that in areas where there is a complex routeing system, comprising several related routeing measures with lengthy special provisions and associated recommendations on navigation by vessels using the system, a special routeing guide might be prepared which would give full information on all aspects of the routeing measures and that it would be desirable to have a degree of standardization of such guides.

The background on the establishment of the original ad hoc Working Group (WG), which prepared Special Publication (SP) No. 49 Edition 1 and its procedures, appears in the progress report presented to the XIIth International Hydrographic Conference (IHC) in April 1982 (CONF.XII/DOC.18). The background on the establishment of the sub-WG of CSPCWG, which prepared Edition 2 and its procedures, appears in Committee on Hydrographic Requirements for Information Systems (CHRIS) paper 19-11.1A, based on an explanatory note provided by Finland to the 12th Baltic Sea Hydrographic Conference (BSHC) Meeting. The revision of SP No. 49 was assigned to the Chart Standardization and Paper Chart Working Group (CSPCWG) under CHRIS Action Item 19/24. It was affirmed by CHRIS20-01D and CHRIS20-06.5A.

The revision (for this Edition 2) was based on consideration of the content of several existing Mariners' Routeing Guides produced by various Hydrographic Offices and is a result of an interactive process between the sub-working group members.

2. Recommendations

2.1 Format

Mariners' Routeing Guides should normally be designed in paper chart format, although in certain circumstances a booklet format may be more appropriate. The size and shape of the geographic area to be covered and the amount of information to be included are key factors in the selection of the format.

Mariners' Routeing Guides may also be produced in digital form. In digital form, it is recommended that the content is in accordance with S-49 recommendations. However, the design of a digital format 'Mariners' Routeing Guide' is not within the scope of this S-49 document.

2.2 Layout

The layout of a guide should include both a plan of the relevant geographic area on which the routeing measures, major aids to navigation, etc. are shown graphically, and text giving appropriate guidance concerning passage planning, routeing, etc.

The guide, if in chart form, should be designed to be folded, so that it can be easily utilised by the mariner at the chart table, in conjunction with the appropriate nautical charts for the area.

2.3 Title

The title should be 'Mariners' Routeing Guide' followed by the appropriate geographic area name. This reflects the IMO-defined term, 'Routeing', noting that the guide must cover a complex routeing system, and the fact that the guide is designed for use by the mariner (as opposed, for example, to the IMO publication 'Ships' Routeing', which is designed for use by Administrations). It

should also help differentiate such guides from other special guidance products (approaches to ports, etc.) which are highly useful in their own way but do not relate to IMO-adopted routeing systems.

2.4 Maintenance

Maintaining the guide by Notice to Mariners (NtM) is necessary to ensure the credibility of the product in the eyes of the mariner. Experience with existing guides has shown that comparatively few NtM are required to keep them maintained. Recommended criteria for the selection of information to be included in the guide excludes information subject to frequent change - such information should rather appear in the basic nautical product dealing with the subject matter, such as standard nautical charts and associated nautical publications.

2.5 Language and symbology

The 'Mariners' Routeing Guide' is normally designed to be used for international shipping and should be produced in the English language. The 'Mariners' Routeing Guide' may also be produced in the National language, if other than English.

Symbols and abbreviations in the guide should be according to IHO chart specifications (S-4 and INT 1) for nautical charts; exceptions should be explained in the guide.

The 'Mariners' Routeing Guide' is recommended to be an International (INT) Chart series product. An INT chart 'Mariners' Routeing Guide' must be produced in the English language. The INT chart producer should be identified by the relevant Regional Hydrographic Commission (RHC) or its delegated International Charting Coordination Working Group.

2.6 Use of acronyms and abbreviations

In all text, acronyms and other abbreviations which may be unfamiliar to the average navigator should be avoided unless their definitions are also included in the guide.

2.7 Geographic areas requiring guides

Routeing Guides should only be published for those waters where there is a clear need, which must include complex routeing system(s). Such guides will therefore serve as a forewarning to the mariner of the need for special care in the area covered. The views of the mariner on the areas for which guides would be most useful should be sought before embarking on the development of the product.

2.8 Type of Information

The recommendations contained in the Appendix are focused on the following:

- a. the type of information essential to be included.
- b. the type of additional information which might usefully be included if space permits.
- c. the type of information which should not be included because, for example, it would either encourage mis-use of the guide or would be subject to such frequent change that it would present a significant maintenance problem.

3. Appendix (Recommended content of a Mariners' Routeing Guide)

3.1 Definitions

3.1.1 Mariners' Routeing Guide (MRG)

A guidance document designed to be used in conjunction with nautical charts and other nautical publications for geographic areas where there are IMO-adopted, complex routeing systems comprising several related routeing measures with lengthy special provisions and associated recommendations on navigation by vessels using the system. The MRG is intended to provide the mariner with the special information required for planning safe navigation in the described area.

3.1.2 Essential

Items recommended as ESSENTIAL for a Mariners' Routeing Guide concern those subjects of major importance to safety of navigation guidance information. Not all items may be applicable to all geographic areas considered by such guides because of differences in either environmental or administrative conditions. However, where an ESSENTIAL subject is not applicable (e.g. tides are a negligible factor, or there is no Broadcast Information Service) consideration should be given to the inclusion of a statement that the particular subject is not of significance or does not exist in the area.

3.1.3 Useful

Items recommended as USEFUL for a Mariners' Routeing Guide concern subjects of importance to safe navigation in a particular geographic area on which information would be helpful to the mariner and its collection in a single document (the MRG) would facilitate its use. Not all items will be applicable to all geographic areas considered by such guides, and the relative importance of the items will vary between geographic areas. USEFUL items should be reviewed for each geographic area and those deemed of higher priority should be included in the guide whenever space permits.

3.1.4 Not appropriate

Items recommended as NOT APPROPRIATE for a Mariners' Routeing Guide are those which either do not contribute to the enhancement of safety of navigation, or those which by their inclusion may actually reduce safety by obscuring presentation of essential information or by enticing the mariner to use the MRG as a nautical chart. In addition, information subject to frequent change should be avoided, being left to appear in the appropriate standard nautical document which is maintained by regular Notices to Mariners.

3.1.5 Use of IMO 'Ships' Routeing'

'Ships' Routeing', published by the IMO, is the authoritative publication to which hydrographic offices should turn for details of routeing measures adopted by IMO. The publication is primarily directed to Administrations and not designed for shipboard use. Hydrographic offices should take this into account in ensuring that all general and special rules, provisions and recommendations from the publication are given in adequate detail in any relevant guides.

3.2 Recommended content of a Mariners' Routeing Guide

3.2.1 Enumeration order

Items are ordered according to the following enumeration for the categories ESSENTIAL (E), USEFUL (U) and NOT APPROPRIATE (N):

- 1. Plan(s) of the area (graphics)
- 2. Passage planning (textual)
- 3. Routeing (textual)
- 4. Communications (textual)
- 5. Pilotage (textual)
- 6. Natural Environment (textual)
- 7. General

3.2.2 Subject matter considered ESSENTIAL

No.	Item	Special comments
E 1	Plan(s) of the area (graphics), depicting:	Graphics should be as large scale as possible to cover area required.
E 1.1	Routeing Measures.	Traffic separation schemes, deep-water routes, areas to be avoided, two-way routes and associated roundabouts, precautionary areas, inshore traffic zones, etc. – use standard chart symbols, where possible. Principal lines of traffic flow may be clarified by the use of tinted flowlines.
E 1.2	Major Aids to Navigation associated with Routeing Measures, including those which help to relate routeing locations to features shown on standard charts.	Show position and any associated identifying name for correlation with the text, but do not show characteristics (e.g. light description), to reduce maintenance effort.
E 1.3	Warning that Plans are to be used for Navigational planning only and that this Guide must be used only in conjunction with, and as supplementary information to, the appropriate standard nautical chart(s) and other publications while navigating in the area.	
E 1.4	Legend (key or symbols). Plan(s) to have graduated borders. Plan(s) to show significant names.	To facilitate cross-reference to other publications and the inclusion of changes notified in NtM.
E 1.5	Depth limitations.	Alternatively, a statement on depth limitations may be given in E 2.3. Selected depth contours may be given in U 1.1.
E 1.6	Pilot boarding places. Officially designated anchorages or waiting areas. Cargo transshipment areas.	
E 1.7	Points, or lines marking boundaries, where radio reporting is required.	Graphic to complement information in text.
E 1.8	Locations with names of Traffic Surveillance Stations.	

No.	Item	Special comments
E 2	Passage planning (textual)	
E 2.1	IMO-approved Rules or Recommendations on planning a passage through the area.	Not necessary to include the verbatim text of the IMO 'Rules and Recommendations on Navigation' which accompany some routeing measures, but give enough detail to remove need for the mariner to consult the verbatim text which appears in the IMO document 'Ships' Routeing' and in nautical publications. Consideration should be given to distinguishing IMO-approved rules and recommendations from other advice, e.g. by sidelining, or printing in a distinctive colour.
E 2.2	Specific advice, extracted where necessary from national Sailing Directions, on planning a passage through the area.	
E 2.3	Underkeel clearance criteria and specific advice to deep draught vessels (if not included in E 2.1 or E 2.2).	Cross-referenced to U 6.1. Could include diagram to show predicted squat for large vessels, examples of calculations of 'Tidal Windows', etc.
E 3	Routeing (textual)	
E 3.1	IMO-adopted Special Provisions and Warnings relating to specific Routeing Measures.	Not necessary to include the verbatim text of the IMO adopted 'Special Provisions' and 'Warnings' but give enough detail to remove any need for the mariner to consult the IMO document 'Ships' Routeing', or verbatim text from that document reproduced in nautical publications.
E 3.2	National rules and recommendations relating to specific Routeing Measures.	
E 4	Communications (textual)	
E 4.1	Vessel Reporting Systems.	Voluntary and mandatory radio reporting, with message formats.
E 4.2	Broadcast Information Services (Shipping movements, Navigational Warnings, Weather).	Giving times if practicable, frequencies, languages of broadcasts, etc.
E 5	Pilotage (textual)	
E 5.1	Compulsory Pilotage Information.	
E 5.2	Contact and Boarding Area Information.	Primarily off-shore or deep-sea pilotage, rather than harbour pilotage
E 5.3	Helicopter Boarding Guidance, where specific to the area.	

3.2.3 Subject matter considered USEFUL

No.	Item	Special comments
U 1	Plan(s) of the area (graphics), depicting:	
U 1.1	Selected Depth Contours.	
U 1.2	All significant Aids to Navigation in area associated with Routeing Measures, including those helping to relate routeing locations to features shown on standard nautical charts.	Show positions and any associated identifying names for correlation with the text, but do not include characteristics (e.g. light characteristics), to reduce maintenance effort.
U 1.3	Positions and names of Rescue Centres.	
U 1.4	Ferry crossings.	
U 1.5	Indication of general pattern of traffic flow.	If they regularly represent possible hazards. Occasional possible hazards (e.g. military practice and exercise area, oil exploration activity, yachting activity) may be mentioned in text.
U 1.7	Zones, with times, of heavy fishing in vicinity of routeing measures.	
U 1.8	Zones under Constant Radar Surveillance.	
U 2	Passage planning (textual)	
U 2.1	General Planning Principles.	Include four stages: Appraisal, Planning, Execution, Monitoring.
U 3	Routeing (textual)	
U 3.1	Selected quotations from IMO's document 'Ships' Routeing', Part A, General Provisions.	Particularly relevant for navigators are: § 2 Definitions and § 8 The use of routeing systems.
U 3.2	Quotations from, or discussion of Rule 10 COLREG.	
U 4	Communications (textual)	
U 4.1	Maritime Assistance Service.	General introduction and contact details.
U 4.2	Maritime Safety Information.	Type of information provided and appropriate transmission methods.
U 4.2	Weather forecast areas.	
U 4.3	NAVTEX areas.	
U 4.4	Communication with port of destination.	
U 4.5	ISPS Reports.	Only if specific to area.
U 4.6	Reports according to supra-national guidances.	Only if specific to area.
U 6	Natural Environment (textual)	
U 6.1	Tidal height (e.g. by Co-tidal diagrams), negative surges, and swell.	Important feature where underkeel margins are critical and where tides must be exploited for safe passage of deep draft vessels. Details will depend on situation.
U 6.2	Currents and tidal streams.	
U 6.3	Visibility Restrictions.	
U 6.4	Ice Information.	Only if specific to area; preferably indicate maximum limit of coverage.
U 6.5	Sea level.	Only if specific to area.
U 7	General	
U 7.1	References to other publications.	
U 7.2	Nautical Chart Index	Not necessary to include if space is limited; reference

		to chart catalogue is preferred.
U 7.3	Recommended Nautical Charts.	General remark stating that the appropriate nautical charts with the best scale available should always be used. Refer to both paper and digital charts.
U 7.4	Anchorage Area Guidance.	

3.2.4 Subject matter considered NOT APPROPRIATE

No.	Item	Special comments
N 1	Plan(s) of the area (graphics), depicting:	
N 1.1	Soundings.	To discourage the use of Guide plans as substitutes for nautical charts.
N 1.2	Detailed characteristics of local Aids to Navigation.	
N 1.3	Locations of Coast Radio Stations, with names and call signs	
N 2	Passage planning (textual)	
N 2.1	Verbatim wording of preambles to IMO Resolutions, although the Recommendations themselves will often appear under E 2.1.	For example, 'The Assembly, recalling Art. 16 (1) of the Convention...being aware of...being also aware of...'
N 4	Communications (textual)	
N 4.1	Two-way Radio Communications other than vessel reporting systems.	
N 4.2	GMDSS.	Not considered necessary as general information, not specific to area.
N 8	Reference to electronic navigational aids (textual)	
N 8.1	Racons.	