

Proposed amendments to the Draft MSI Manual Version dated 28 April 2008

Submitted by IHB

**SUMMARY**

Executive Summary: The annex to this document contains draft amendments submitted by Brazil.

Action to be taken: Paragraph 2

Related documents: CPRNW10/4/2 and CPRNW10/4/2/1

1. See Annex for draft amendments proposed by Brazil.
2. CPRNW is requested to consider the annex during its consideration of the draft text of the Joint MSI Manual.

## PREFACE

SOLAS, chapter IV, Regulation 12 states, in part, that “Every ship, while at sea, shall maintain a radio watch for broadcasts of maritime safety information on the appropriate frequency or frequencies on which such information is broadcast for the area in which the ship is navigating.”

At the request of the Sub-Committee on Radiocommunications, the International Hydrographic Organization (IHO) and the World Meteorological Organization (WMO) produced this joint document on the drafting of maritime safety information broadcasts, which was circulated to IHO Member States with IHB CL 10/1994 and approved by the Sub-Committee on Radiocommunications and Search and Rescue (COMSAR), at its first session (February 1996) and further endorsed by the Maritime Safety Committee at its 66th session (May/June 1996).

The publication contains sections from the International Maritime Organisation (IMO) Assembly resolution A.706(17), “World-Wide Navigational Warning Service”, as amended, and relevant sections of the WMO Publication “Manual on Marine Meteorological Services”.

**Comment [c1]:** Wouldn't be advisable to make any reference to resolution A. 705 (17)?

Although this is an IMO publication, it is intended that the responsible organizations will maintain their respective sections of this joint IMO/IHO/ WMO document.

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## 1 – GENERAL INFORMATION

This manual provides a practical guide for anyone who is concerned with drafting radio navigational warnings or with the issuance of meteorological forecasts and warnings under the Global Maritime Distress and Safety System (GMDSS) Maritime Safety Information (MSI) is promulgated in accordance with the requirements of International Maritime Organization (IMO) Assembly resolution A.705(17), as amended. Navigational warnings are issued under the auspices of the IMO/International Hydrographic Organization (IHO) World-Wide Navigational Warning Service (WWNWS) in accordance with the requirements of IMO Assembly resolution A.706(17), as amended. Meteorological forecasts and warnings are issued under the patronage of the WMO. In order to achieve the necessary impact on the mariner it is essential to present timely and relevant information in a consistent format that is clear, unambiguous and brief. Within this manual, it is particularly intended to provide the best form of words for use in all types of navigational warnings and meteorological forecasts and warnings that are required to be broadcast in the English language<sup>1 2</sup>. Note has been taken of the IMO Standard Marine Communication Phrases (IMO Assembly resolution A.918(22)), where appropriate.

**Comment [c2]:** Insert a point before "Maritime".

This manual cannot provide specimen texts for every type of event which may occur. However, the principles illustrated herein may be applied in general to drafting messages for every kind of navigational warning and covering all types of hazards and for the issuance of meteorological forecasts and warnings.

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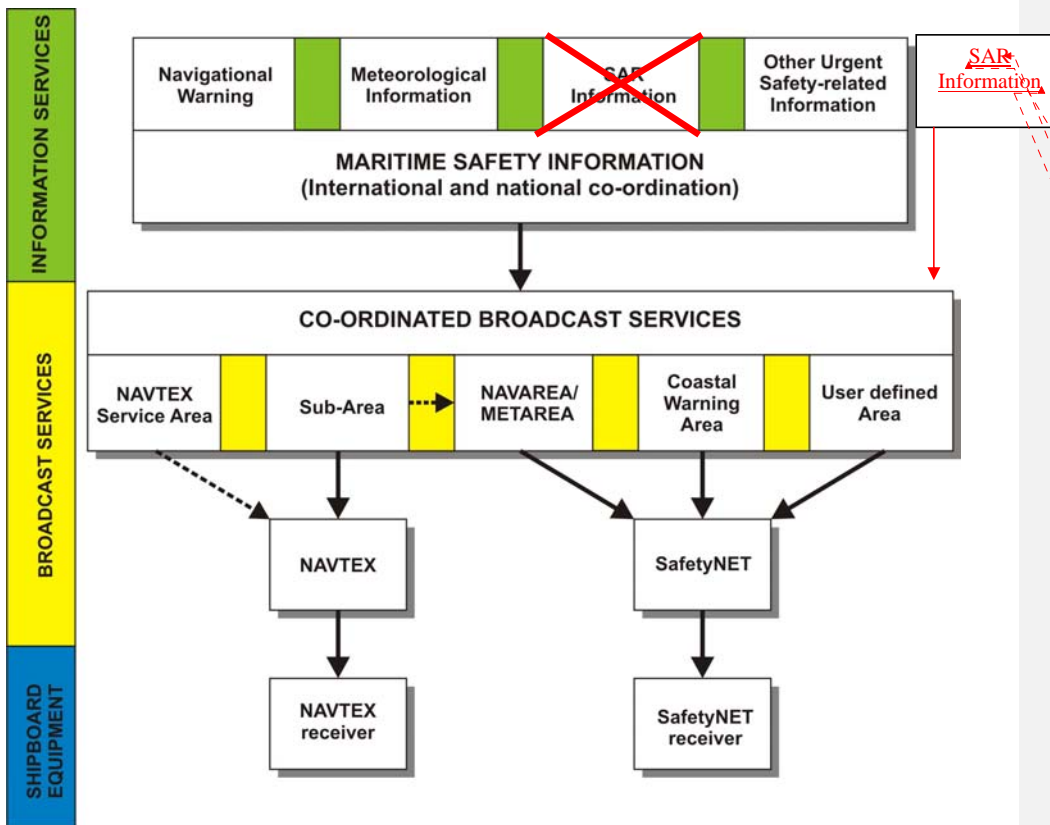
<sup>1</sup> See WWNWS Guidance Document, section 5.3 (IMO/IHO Special Publication S-53)

<sup>2</sup> See WMO Publication Manual on Marine Meteorological Services (WMO No 558).

## 2 – PROMULGATION OF MARITIME SAFETY INFORMATION

### 2.1 Introduction

2.1.1 The maritime safety information service of the GMDSS is the internationally and nationally co-ordinated network of broadcasts containing information which is necessary for safe navigation, received in ships by equipment which automatically monitors the appropriate transmissions, displays information which is relevant to the ship and provides a print capability. This concept is illustrated in Figure 1.



**Comment [c4]:** I think that this Fig. should reflect exactly the contents given on 2.2.1.9., 2.2.1.24, 2.2.1.26, 9.1 and 9.2. Therefore, "SAR Information" should be put in another Box outside the MSI Box. By the other hand, I'm afraid that it will imply the necessity of changing draft of new Res A.705 (17) the same way. Is it still possible?

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**Figure 1 - The maritime safety information service of the Global Maritime Distress and Safety System**

2.1.2 Maritime safety information is of vital concern to all ships. It is therefore essential that common standards are applied to the collection, editing and dissemination of this information. Only by doing so will the mariner be assured of receiving the information he needs, in a form which he understands, at the earliest possible time.

2.1.3 The purpose of IMO Assembly resolution A.705(17) as amended "Promulgation of Maritime Safety Information" is to set out the organization, standards and methods which should be used for the promulgation and reception of maritime safety information.

## 2.2 Definitions

2.2.1 For the purposes of this manual, the following definitions apply:

**.1** *Coast Earth Station (CES)* means a fixed terrestrial radio facility acting as a gateway between terrestrial networks and the Inmarsat satellites in the maritime mobile-satellite service.

**.2** *Coastal warning* means a navigational warning promulgated as part of a numbered series by a National co-ordinator. Broadcast shall be made by the International NAVTEX service to defined NAVTEX service areas and/or by the International SafetyNET service to coastal warning areas. (In addition, Administrations may issue coastal warnings by other means).

**.3** *Coastal warning area* means a unique and precisely defined sea area within a NAVAREA/METAREA or Sub-Area established by a coastal state for the purpose of co-ordinating the broadcast of coastal maritime safety information through the SafetyNET service.

**.4** *HF NBDP* means High Frequency narrow-band direct-printing, using radio telegraphy as defined in Recommendation ITU-R M.688.

**.5** *In-force bulletin* means a list of serial numbers of those NAVAREA, Sub-Area or coastal warnings in force issued and broadcast by the NAVAREA co-ordinator, Sub-Area co-ordinator or National co-ordinator during at least the previous six weeks.

**.6** *International NAVTEX service* means the co-ordinated broadcast and automatic reception on 518 kHz of maritime safety information by means of narrow-band direct-printing telegraphy using the English language<sup>3</sup>.

**.7** *International SafetyNET service* means the co-ordinated broadcasting and automated reception of maritime safety information via the Inmarsat Enhanced Group Call (EGC) system, using the English language, in accordance with the provisions of the International Convention for the Safety of Life at Sea, 1974, as amended.

**.8** *Local warning* means a navigational warning which covers inshore waters, often within the limits of jurisdiction of a harbour or port authority.

**.9** *Maritime safety information (MSI)*<sup>4</sup> means navigational and meteorological warnings, meteorological forecasts and other urgent safety-related messages broadcast to ships.

**.10** *Maritime safety information service* means the internationally and nationally co-ordinated network of broadcasts containing information which is necessary for safe navigation.

**.11** *METAREA* means a geographical sea area<sup>5</sup> established for the purpose of co-ordinating the broadcast of marine meteorological information. The term METAREA followed by a roman numeral may be used to identify a particular sea area. The

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<sup>3</sup> as set out in the IMO NAVTEX Manual.

<sup>4</sup> as defined in Regulation IV/2 of the 1974 SOLAS Convention, as amended.

delimitation of such areas is not related to and should not prejudice the delimitation of any boundaries between States.

**.12** *Meteorological information* means the marine meteorological warning and forecast information in accordance with the provisions of the International Convention for the Safety of Life at Sea, 1974, as amended.

**.13** *National co-ordinator* means the national authority charged with collating and issuing coastal warnings within a national area of responsibility.

**.14** *National NAVTEX service* means the broadcast and automatic reception of maritime safety information by means of narrow-band direct-printing telegraphy using frequencies other than 518 kHz and languages as decided by the Administration concerned.

**.15** *National SafetyNET service* means the broadcasting and automated reception of maritime safety information via the Inmarsat EGC system, using languages as decided by the Administration concerned.

**.16** *NAVAREA* means a geographical sea area<sup>5</sup> established for the purpose of co-ordinating the broadcast of navigational warnings. The term NAVAREA followed by a roman numeral may be used to identify a particular sea area. The delimitation of such areas is not related to and should not prejudice the delimitation of any boundaries between States.

**.17** *NAVAREA co-ordinator* means the authority charged with co-ordinating, collating and issuing NAVAREA warnings for a designated NAVAREA.

**.18** *NAVAREA warning* means a navigational warning or in-force bulletin promulgated as part of a numbered series by a NAVAREA co-ordinator.

**.19** *Navigational warning* means a message containing urgent information relevant to safe navigation broadcast to ships in accordance with the provisions of the International Convention for the Safety of Life at Sea, 1974, as amended.

**.20** *NAVTEX* means the system for the broadcast and automatic reception of maritime safety information by means of narrow-band direct-printing telegraphy.

**.21** *NAVTEX service area* means a unique and precisely defined sea area for which maritime safety information is provided from a particular NAVTEX transmitter.

**.22** *NAVTEX co-ordinator* means the authority charged with operating and managing one or more NAVTEX stations broadcasting maritime safety information as part of the International NAVTEX service.

**.23** *Sub-Area* means a sub-division of a NAVAREA in which a number of countries have established a co-ordinated system for the promulgation of navigational warnings. The delimitation of such areas is not related to and shall not prejudice the delimitation of any boundaries between States.

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<sup>5</sup> which may include inland seas, lakes and waterways navigable by sea-going ships.

**.24** *Other urgent safety-related information* means maritime safety information broadcast to ships that is not defined as a navigational warning, meteorological information or SAR information. This may include, but is not limited to, significant malfunctions or changes to maritime communications systems, and new or amended mandatory ship reporting systems or maritime regulations affecting ships at sea.

**.25** *SafetyNET* means the international service for the broadcasting and automatic reception of maritime safety information through the Inmarsat EGC system. SafetyNET receiving capability is part of the mandatory equipment which is required to be carried by certain ships in accordance with the provisions of the International Convention for the Safety of Life at Sea, 1974, as amended.

**.26** *SAR information* means distress alert relays and other urgent search and rescue information broadcast to ships.

**.27** *Sea Area A1* means an area within the radiotelephone coverage of at least one VHF coast station in which continuous DSC<sup>6</sup> alerting is available, as may be defined by a Contracting Government.

**.28** *Sea Area A2* means an area, excluding sea area A1, within the radiotelephone coverage of at least one MF coast station in which continuous DSC alerting is available, as may be defined by a Contracting Government.

**.29** *Sea Area A3* means an area, excluding sea areas A1 and A2, within the coverage of an Inmarsat geostationary satellite in which continuous alerting is available.

**.30** *Sea Area A4* means an area outside sea areas A1, A2 and A3.

**.31** *Sub-Area* means a sub-division of a NAVAREA/METAREA in which a number of countries have established a co-ordinated system for the promulgation of maritime safety information. The delimitation of such areas is not related to and shall not prejudice the delimitation of any boundaries between States.

**.32** *Sub-Area co-ordinator* means the authority charged with co-ordinating, collating and issuing Sub-Area warnings for a designated Sub-Area.

**.33** *Sub-Area warning* means a navigational warning promulgated as part of a numbered series by a Sub-Area co-ordinator. Broadcast shall be made by the International NAVTEX service to defined NAVTEX service areas or by the International SafetyNET service (through the appropriate NAVAREA co-ordinator.)

**.34** *User defined area* means a temporary geographic area, either circular or rectangular, to which maritime safety information is addressed.

**.35** *Universal Co-ordinated Time (UTC)* is the same time zone as GMT (Z)

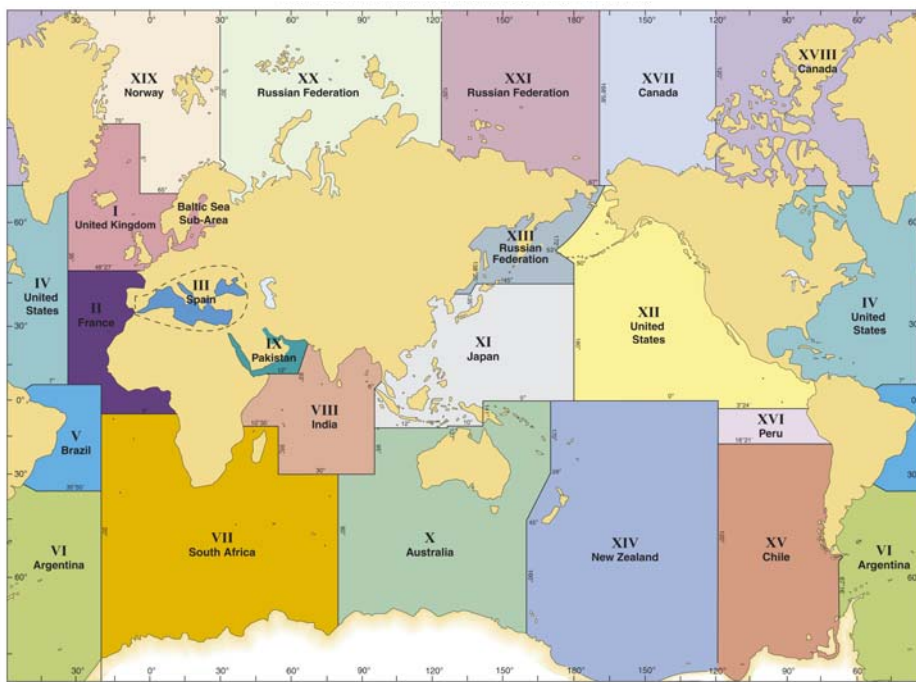
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<sup>6</sup> Digital selective calling (DSC) means a technique using digital codes which enables a radio station to establish contact with and transfer information to another station or group of stations and complying with the relevant recommendations of the International Radio Consultative Committee ((CCIR) – ‘‘Radiocommunications Bureau of the International Telecommunication Union’’ from 1 March 1993).



.36 *World-Wide Navigational Warning Service (WWNWS)*<sup>7</sup> means the internationally and nationally co-ordinated service for the promulgation of navigational warnings.

.37 In the operating procedures *co-ordination* means that the allocation of the time for data broadcast is centralized, the format and criteria of data transmissions are compliant as described in the Joint IMO/IHO/WMO Manual on Maritime Safety Information and that all services are managed as set out in IMO Assembly resolutions A.705(17) as amended and A.(706)17, as amended.



**Figure 2 – NAVAREAS for co-ordinating and promulgating radio navigational warnings under the World-Wide Navigational Warning Service**

The delimitation of such areas is not related to and should not prejudice the delimitation of any boundaries between states.

<sup>7</sup> as set out in resolution A.706(17), as amended.

## 2.3 Broadcast methods

2.3.1 Two principal methods are used for broadcasting maritime safety information in accordance with the provisions of the International Convention for the Safety of Life at Sea, 1974, as amended, in the areas covered by these methods, as follows:

- .1 **NAVTEX:** broadcasts to coastal waters; and
- .2 **SafetyNET:** broadcasts which cover all the waters of the globe except for Sea Area A4, as defined by IMO Assembly resolution A.801(19), Annex 3, as amended.

2.3.2 Information should be provided for unique and precisely defined sea areas, each being served only by the most appropriate of the above systems. Although there will be some duplication to allow a vessel to change from one system to another, the majority of messages will be broadcast on one system.

2.3.3 NAVTEX broadcasts shall be made in accordance with the standards and procedures set out in the NAVTEX Manual.

2.3.4 SafetyNET broadcasts shall be made in accordance with the standards and procedures set out in the International SafetyNET Manual.

2.3.5 HF NBDP may be used to promulgate maritime safety information in areas outside Inmarsat coverage (SOLAS regulation IV/7.1.5).

2.3.6 In addition, Administrations may also provide maritime safety information by other means.

2.3.7 In the event of failure of normal transmission facilities, an alternative means of transmission should be utilised. A NAVAREA Warning and a Coastal Warning, if possible, should be issued detailing the failure, its duration and, if known, the alternative route for the dissemination of MSI.

## 2.4 Scheduling

### 2.4.1 Automated methods (NAVTEX /SafetyNET)

2.4.1.1 Navigational warnings shall be broadcast as soon as possible or as dictated by the nature and timing of the event. Normally, the initial broadcast should be made as follows:

- .1 **for NAVTEX**, at the next scheduled broadcast, unless circumstances indicate the use of procedures for VITAL or IMPORTANT warnings; and
- .2 **for SafetyNET**, within 30 min of receipt of original information, or at the next scheduled broadcast.

2.4.1.2 Navigational warnings shall be repeated in scheduled broadcasts in accordance with the guidelines promulgated in the NAVTEX Manual and International SafetyNET Manual as appropriate.

2.4.1.3 At least two scheduled daily broadcast times are necessary to provide adequate promulgation of NAVAREA warnings. When NAVAREAs extend across more than six time zones, more than two broadcasts should be considered to ensure that warnings can be received. When

using SafetyNET in lieu of NAVTEX for coastal warnings, Administrations may need to consider an increase in the number of scheduled daily broadcasts compared with the requirement for NAVAREA warnings

#### **2.4.2 Schedule changes**

**2.4.2.1** Broadcast times for NAVTEX are defined by the B1 character of the station, allocated by the co-ordinating Panel on NAVTEX Services of the Sub-Committee on Radiocommunications and Search and Rescue.

**2.4.2.2** Times of scheduled broadcasts under the international SafetyNET service are co-ordinated through the International SafetyNET co-ordinating Panel.

### **2.5 Shipboard equipment**

**2.5.1** Ships are required to be capable of receiving maritime safety information broadcasts for the area in which they operate in accordance with the provisions of the International Convention for the Safety of Life at Sea, 1974, as amended.

**2.5.2** The NAVTEX receiver should operate in accordance with the technical specifications set out in Recommendation ITU-R M.540-2, as amended, and should meet the performance standards adopted by the IMO in IMO Assembly resolution MSC.148(77), as amended.

**2.5.3** The SafetyNET receiver should conform to the Maritime Design and Installation Guidelines (DIGs) published by Inmarsat, and should meet the performance standards adopted by the IMO in IMO Assembly resolution A.664(16).

**2.5.4** In Sea Area A4, outside of the coverage of NAVTEX, where MSI is received using HF NBDP, the HF NBDP receiver should operate in accordance with the technical specifications set out in Recommendation ITU-R M.688, as amended, and should meet the performance standards adopted by the IMO in IMO Assembly resolution A.700(17), as amended.

### **2.6 Provision of information**

**2.6.1** Navigational warnings should be provided in accordance with the standards, organization and procedures of the WWNWS under the functional guidelines of the IHO through its Commission on Promulgation of Radio Navigational Warnings. Details of NAVAREA Co-ordinators are maintained on the IHO Web site [www.iho.org/committees/cprnw](http://www.iho.org/committees/cprnw) and are also published by an IMO COMSAR Circular.

**2.6.2** Meteorological information shall be provided in accordance with the WMO technical regulations and recommendations, monitored and reviewed by the Expert Team on Maritime Safety Services of the Joint WMO/IOC<sup>8</sup> Commission for Oceanography and Marine Meteorology (JCOMM).

**2.6.3** SAR information shall be provided by the various authorities responsible for co-ordinating maritime search and rescue operations in accordance with the standards and procedures established by the IMO.

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<sup>8</sup> IOC is the Intergovernmental Oceanographic Commission of UNESCO.

**2.6.4** Other urgent safety-related information shall be provided by the relevant national or international authority responsible for managing the system or scheme.

**2.6.5** Relevant national or international authorities shall take into account the need for contingency planning.

## **2.7 Co-ordination procedures**

**2.7.1** In order to make the best use of automated reception facilities and to ensure that the mariner receives at least the minimum information necessary for safe navigation, careful co-ordination is required.

**2.7.2** In general, this requirement for co-ordination will be met by the standard operational procedures of IMO, IHO, WMO, International Telecommunication Union (ITU) and International Mobile Satellite Organization (IMSO). Cases of difficulty should be referred, in the first instance, to the most appropriate parent body.

**2.7.3** Administrations broadcasting maritime safety information should provide details of services to the IMO, which will maintain and publish this as part of the GMDSS Master Plan.

**2.7.4** The co-ordination of changes to operational NAVTEX services and of the establishment of new stations is undertaken by the Co-ordinating Panel on NAVTEX Services of the Sub-Committee on Radiocommunications and Search and Rescue on behalf of the Maritime Safety Committee.

**2.7.5** The co-ordination of changes to operational SafetyNET services and of the authorization and registration of information providers is undertaken by the International SafetyNET Co-ordinating Panel of the Sub-Committee on Radiocommunications and Search and Rescue on behalf of the Maritime Safety Committee.

**2.7.6** Administrations should design their broadcasts to suit specific service areas<sup>9</sup>. The designation of service areas is an important part of the co-ordination process since it is intended that a ship should be able to obtain all the information relevant to a given area from a single source. The Maritime Safety Committee approves NAVAREAs/METAREAs and service areas for the International NAVTEX and SafetyNET service as advised by IHO and WMO.

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<sup>9</sup> Co-ordination of HF NBDP broadcasts in the Arctic should be undertaken by relevant MSI Service Providers

### 3 - CO-ORDINATOR RESOURCES AND RESPONSIBILITIES

#### 3.1 NAVAREA co-ordinator resources

##### 3.1.1 The NAVAREA co-ordinator must have:

- .1 the expertise and information sources of a well established national hydrographic service;
- .2 effective communications, e.g. telephone, e-mail, facsimile, internet, telex, etc., with Sub-Area and National co-ordinators in the NAVAREA, with other NAVAREA co-ordinators, and with other data providers; and
- .3 access to broadcast systems for transmission to the navigable waters of the NAVAREA. As a minimum, this shall include those described in paragraph 3.1.1. Reception should normally be possible at least 700 nautical miles beyond the limit of the NAVAREA (24 hours' sailing by a fast ship).

#### 3.2 NAVAREA co-ordinator responsibilities

##### 3.2.1 The NAVAREA co-ordinator must:

- .1 endeavour to be informed of all events that could significantly affect the safety of navigation within the NAVAREA;
- .2 assess all information immediately upon receipt in the light of expert knowledge for relevance to navigation in the NAVAREA;
- .3 select information for broadcast in accordance with the guidance given in paragraph 4.2.2;
- .4 draft NAVAREA warning messages in accordance with the Joint IMO/IHO/WMO Manual on Maritime Safety Information;
- .5 direct and control the broadcast of NAVAREA warning messages, in accordance with the provisions of the International Convention for the Safety of Life at Sea, 1974, as amended;
- .6 forward NAVAREA warnings and relevant associated information which may require wider promulgation directly to adjacent NAVAREA co-ordinators and/or others as appropriate, using the quickest possible means;
- .7 ensure that NAVAREA warnings which remain in force for more than six weeks are made available immediately to NAVAREA co-ordinators, other authorities and mariners in general, as appropriate;
- .8 ensure that information concerning all navigational warning subject areas listed in paragraph 4.2.2 that may not require a NAVAREA warning within their own NAVAREA is forwarded immediately to the appropriate National and NAVAREA co-ordinators affected by the event;
- .9 broadcast in-force bulletins not less than once per week at a regularly scheduled time;

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- .10 promulgate the cancellation of NAVAREA warnings which are no longer valid;
- .11 act as the central point of contact on matters relating to navigational warnings within the NAVAREA;
- .12 promote and oversee the use of established international standards and practices in the promulgation of navigational warnings throughout the NAVAREA;
- .13 when notified by the authority designated to act on reports of piracy and armed robbery against ships, arrange for the broadcast of a suitable NAVAREA warning. Additionally, keep the national or regional piracy control centre informed of long-term broadcast action(s);
- .14 when notified by the appropriate authorities, arrange for the broadcast of suitable NAVAREA warnings to promulgate World Health Organization (WHO) health advisory information; and tsunami related information;
- .15 monitor the broadcasts which they originate to ensure that the messages have been correctly broadcast;
- .16 maintain records of source data relating to NAVAREA messages in accordance with the requirement of the National Administration of the NAVAREA Co-ordinator;
- .17 co-ordinate preliminary discussions between neighbouring Member States, seeking to establish NAVTEX services and with other adjacent Administrations, prior to formal application;
- .18 contribute to the development of international standards and practices through attendance and participation in the IHO Commission on the Promulgation of Radio Navigational Warnings (CPRNW) meetings, and also participate in relevant IMO, IHO and WMO fora as appropriate, e.g. Sub-Committee on Radiocommunications and Search and Rescue, Expert Team On Maritime Safety Services and other regional conferences etc. as required ; and
- .19 take into account the need for contingency planning.

### 3.3 Sub-Area co-ordinator resources

#### 3.3.1 The Sub-Area co-ordinator must have, or have access to:

- .1 the expertise and information sources of a well established national hydrographic service;
- .2 effective communications, e.g. telephone, e-mail, facsimile, internet, telex, etc., with National co-ordinators in the Sub-Area, with the NAVAREA co-ordinator, and with other data providers; and
- .3 access to broadcast systems for transmission to the entire Sub-Area.

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### 3.4 Sub-Area co-ordinator responsibilities

#### 3.4.1 The Sub-Area co-ordinator must:

- .1 endeavour to be informed of all events that could significantly affect the safety of navigation within the Sub-Area;
- .2 assess all information immediately upon receipt in the light of expert knowledge for relevance to navigation in the Sub-Area;
- .3 select information for broadcast in accordance with the guidance given in paragraph 4.2.2;
- .4 draft Sub-Area warning messages in accordance with the Joint IMO/IHO/WMO Manual on Maritime Safety Information;
- .5 direct and control the broadcast of Sub-Area warning messages, in accordance with the provisions of the International Convention for the Safety of Life at Sea, 1974, as amended;
- .6 forward Sub-Area warnings and relevant associated information which may require wider promulgation directly to their own NAVAREA co-ordinator using the quickest possible means;
- .7 broadcast in-force bulletins not less than once per week at a regularly scheduled time;
- .8 promulgate the cancellation of Sub-Area warnings which are no longer valid;
- .9 act as the central point of contact on matters relating to navigational warnings within the Sub-Area;
- .10 promote the use of established international standards and practices in the promulgation of navigational warnings within the Sub-Area;
- .11 monitor the broadcasts which they originate to ensure that the messages have been correctly broadcast;
- .12 maintain records of source data relating to NAVAREA messages in accordance with the requirement of the National Administration of the NAVAREA Co-ordinator;
- .13 contribute to the development of international standards and practices through attendance and participation in relevant IMO, IHO and WMO fora, e.g. Sub-Committee on Radiocommunications and Search and Rescue (COMSAR), CPRNW, Expert Team On Maritime Safety Services, appropriate regional conferences etc.; and
- .14 take into account the need for contingency planning.

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### 3.5 National co-ordinator resources

#### 3.5.1 The national co-ordinator must have:

- .1 established sources of information relevant to the safety of navigation within national waters;
- .2 effective communications, e.g. telephone, e-mail, facsimile, internet, telex, etc., with the NAVAREA/Sub-Area co-ordinator and adjacent National co-ordinators; and
- .3 access to broadcast systems for transmission to their area of national responsibility.

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### 3.6 National co-ordinator responsibilities

#### 3.6.1 The national co-ordinator must:

- .1 endeavour to be informed of all events that could significantly affect the safety of navigation within their area of national responsibility;
- .2 assess all information immediately upon receipt in the light of expert knowledge for relevance to navigation in their area of national responsibility;
- .3 select information for broadcast in accordance with the guidance given in paragraph 4.2.2;
- .4 draft coastal warning messages in accordance with the Joint IMO/IHO/WMO Manual on Maritime Safety Information;
- .5 direct and control the broadcast of coastal warning messages, in accordance with the provisions of the International Convention for the Safety of Life at Sea, 1974, as amended;
- .6 forward coastal warning messages and relevant associated information which may require wider promulgation directly to their NAVAREA co-ordinator and/or adjacent National co-ordinators as appropriate, using the quickest possible means;
- .7 broadcast in-force bulletins not less than once per week at a regularly scheduled time;
- .8 promulgate the cancellation of coastal warnings which are no longer valid;
- .9 act as the central point of contact on matters relating to navigational warnings within their area of national responsibility;
- .10 promote the use of established international standards and practices in the promulgation of navigational warnings within their area of national responsibility;
- .11 monitor the broadcasts which they originate to ensure that the messages have been correctly broadcast;
- .12 maintain records of source data relating to NAVAREA messages in accordance with the requirement of the National Administration of the NAVAREA Co-ordinator; and
- .13 take into account the need for contingency planning.

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## 4 – NAVIGATIONAL WARNINGS FOR THE WORLD-WIDE NAVIGATIONAL WARNING SERVICE

### 4.1 General

**4.1.1** Navigational warnings are issued in response to SOLAS regulation V/4 and carry information which may have a direct bearing on the safety of life at sea. It is the fundamental nature of navigational warnings that they will often be based on incomplete or unconfirmed information and mariners will need to take this into account when deciding what reliance to place on the information contained therein.

**4.1.2** In order to achieve the necessary impact on the mariner it is essential to present timely and relevant information in a consistent format that is CLEAR, UNAMBIGUOUS and BRIEF. This is ensured by using structured messages in standard formats, as shown in Sections 6 and 7 of this manual.

**4.1.3** The resources employed by administrations and the mariner are extremely limited. Thus only information which is vital to the safe conduct of vessels should be transmitted. Notices to Mariners and other means exist for passing less urgent information to ships after they have reached port. Information of a purely administrative nature should never be broadcasted on the regular international navigational warning schedules.

**4.1.4** There are four types of navigational warnings: NAVAREA warnings, Sub-Area warnings, coastal warnings and local warnings. The WWNWS guidance and co-ordination are involved with only three of them:

- .1 NAVAREA warnings,
- .2 Sub-Area warnings, and
- .3 Coastal warnings.

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**4.1.5** Navigational warnings shall remain in force until cancelled by the originating co-ordinator. Navigational warnings should be broadcast for as long as the information is valid; however, if they are readily available to mariners by other official means, for example in Notices to Mariners, then after a period of six weeks they may no longer be broadcast.

**4.1.6** The minimum information in a navigational warning which a mariner requires is “hazard” and “position”. It is usual, however, to include sufficient extra detail to allow some freedom of action in the vicinity of the hazard. This means that the message should give enough extra data for the mariner to be able to recognize the hazard and assess its effect upon his navigation.

**4.1.7** If known, the duration of the event causing a navigational warning should be given in the text.

**4.1.8** Some of the subjects for navigational warnings listed in paragraph 4.2.2 (e.g. drifting ice, tsunami warnings, negative tidal surges) may also be suitable for promulgation as METAREA forecasts or warnings. In this event, appropriate co-ordination between the relevant NAVAREA co-ordinator and METAREA issuing Service must occur.

## 4.2 NAVAREA warnings

**4.2.1.** NAVAREA warnings are concerned with the information detailed below which ocean-going mariners require for their safe navigation. This includes, in particular, new navigational hazards and failures of important aids to navigation as well as information which may require changes to planned navigational routes.

**4.2.2** The following subjects are considered suitable for broadcast as NAVAREA warnings. This list is not exhaustive and should be regarded only as a guideline. Furthermore, it pre-supposes that sufficiently precise information about the item has not previously been disseminated in a Notice to Mariners:

- .1** casualties to lights, fog signals, buoys and other aids to navigation affecting main shipping lanes;
- .2** the presence of dangerous wrecks in or near main shipping lanes and, if relevant, their marking;
- .3** establishment of major new aids to navigation or significant changes to existing ones when such establishment or change, might be misleading to shipping;
- .4** the presence of large unwieldy tows in congested waters;
- .5** drifting hazards (including derelict ships, ice, mines, containers, other large items, etc.);
- .6** areas where search and rescue (SAR) and anti-pollution operations are being carried out (for avoidance of such areas);
- .7** the presence of newly discovered rocks, shoals, reefs and wrecks likely to constitute a danger to shipping, and, if relevant, their marking;
- .8** unexpected alteration or suspension of established routes;
- .9** cable or pipe-laying activities, the towing of large submerged objects for research or exploration purposes, the employment of manned or unmanned submersibles, or other underwater operations constituting potential dangers in or near shipping lanes;
- .10** the establishment of research or scientific instruments in or near shipping lanes;
- .11** the establishment of offshore structures in or near shipping lanes;
- .12** significant malfunctioning of radio-navigation services and shore-based maritime safety information radio or satellite services;
- .13** information concerning special operations which might affect the safety of shipping, sometimes over wide areas, e.g. naval exercises, missile firings, space missions, nuclear tests, ordnance dumping zones, etc. It is important that where the degree of hazard is known, this information is included in the relevant warning. Whenever possible such warnings should be originated not less than five days in advance of the scheduled event and reference may be made to relevant national publications in the warning;
- .14** acts of piracy and armed robbery against ships;

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.15 tsunamis and other natural phenomena, such as abnormal changes to sea level; ~~and~~

Comment [c6]: Delete the word "and".

.16 World Health Organization (WHO) health advisory ~~information~~; ~~and~~

Comment [c7]: Delete "." and insert "; and"

.17 security related requirements.<sup>10</sup>

Comment [c8]: Insert "."

### 4.3 Sub-Area warnings

4.3.1 Sub-Area warnings broadcast information which is necessary for safe navigation within a Sub-Area. They will normally include all subjects listed in 4.2.2 above, but will usually affect only the Sub-Area.

### 4.4 Coastal warnings

4.4.1 Coastal warnings broadcast information which is necessary for safe navigation within areas seaward of the fairway buoy or pilot station, and should not be restricted to main shipping lanes. Where the area is served by NAVTEX, it should provide navigational warnings for the entire NAVTEX service area. Where the area is not served by NAVTEX, it is necessary to include all warnings relevant to the coastal waters up to 250 miles from the coast in the International SafetyNET service broadcast.

4.4.2 Coastal warnings should include at least the subjects in 4.2.2.

### 4.5 Local warnings

4.5.1 Local warnings broadcast information which cover inshore waters, often within the limits of jurisdiction of a harbour or port authority. They are broadcast by means other than NAVTEX or SafetyNET, and supplement coastal warnings by giving detailed information within inshore waters.

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<sup>10</sup> In accordance with the requirements of the International Ship and Port Facilities Security Code

## 5 - THE STRUCTURE OF NAVIGATIONAL WARNINGS

### 5.1 Numbering

**5.1.1** Navigational warnings in each series shall be consecutively numbered throughout the calendar year, commencing with 1/YY (NNN/YY) at 0000 UTC on 01 January.

**5.1.2** Navigational warnings shall be transmitted in reverse numerical order on scheduled broadcasts.

### 5.2 Language

**5.2.1** All NAVAREA, Sub-Area and coastal warnings shall be broadcast only in English in the International NAVTEX and SafetyNET services in accordance with IMO Assembly resolution A.706(17), as amended.

**5.2.2** In addition to the required broadcasts in English, NAVAREA, Sub-Area and coastal warnings may be broadcast in a national language using national NAVTEX and SafetyNET services and/or other means.

**5.2.3** Local warnings may be issued in the national language and/or in English.

### 5.3 “No warnings” message

**5.3.1** When there are no navigational warnings to be disseminated at a scheduled broadcast time, a brief message shall be transmitted to identify the broadcast and advise the mariner that there is no navigational warning message traffic on hand.

### 5.4 Standard elements of messages

**5.4.1** The minimum information which a mariner requires to avoid danger is:

#### **HAZARD + POSITION**

It is usual, however, to include amplifying remarks in order to provide sufficient extra details to clearly identify the significance of the hazard and to assist mariners in recognizing and assessing its effect upon their navigation. The time, date and duration of the event shall be included if known.

**5.4.2** A message can have up to three parts: Preamble, Warning, Postscript. Sections 6 and 7 of the Manual give guidance on the correct way of phrasing each part of the warning to achieve maximum impact with minimum broadcast time.

**5.4.3** The text of a navigational warning shall contain specific message elements, identified and ordered by the reference numbers shown in **Figure 3** and expanded in Section 6.

<b>MESSAGE ELEMENTS TABLE</b>		
<b>Part</b>	<b>Reference No.<sup>11</sup></b>	<b>Message Elements</b>
<b>Preamble</b>	1	Message identifier
	2	General area
	3	Locality
	4	Chart number
<b>Warning</b>	5	Key subject
	6	Geographical position
	7	Amplifying remarks
<b>Postscript</b>	8	Cancellations details

**Figure 3 – Message Elements Table showing standard elements for each part of a message**

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<sup>11</sup> Reference number is not to be included as part of the message text

## 6 - MESSAGE FORMAT OF NAVIGATIONAL WARNING

### Part 1 - PREAMBLE

#### Standard Message Element Reference 1 - MESSAGE IDENTIFIER

The first words of the text of every warning message shall always be MESSAGE SERIES IDENTIFIER followed by the CONSECUTIVE NUMBER (NNNN/YY)

**NAVAREA WARNING:**

NAVAREA III 496/09;

NAVAREA VII 42/09;

**SUB-AREA WARNING:**

BALTIC SEA NAV WARN 009/09

**COASTAL WARNING:**

AVURNAV TOULON 1015/09;

WZ 345/09

Notes:

1) The Consecutive Number re-starts each calendar year at 0001/YY (Leading zeros are not mandatory)

2) For Coastal Warnings the Consecutive Number is not the same as the NAVTEX Number B<sub>3</sub>B<sub>4</sub>.

#### Standard Message Element Reference 2 - GENERAL AREA

The General Area shall be sufficient to identify which broad geographic region the message affects.

**NAVAREA WARNING:**

'NORTH SEA' or 'MALACCA STRAIT' would be correct; 'NORTH AMERICA, EAST COAST' is too general.

**SUB-AREA WARNING:**

GULF OF FINLAND

**COASTAL WARNING:**

BAY OF BISCAY;

CANTABRICO

Notes:

(1) In some cases, it may be appropriate to use established meteorological forecast areas (eg. CANTABRICO), defined in WMO publication No. 9 Volume D and other relevant nautical publications.

(2) For a NAVAREA-wide event, e.g. failure of satellite of terrestrial positioning systems, a NAV AID IDENTIFICATION ACRONYM "GPS", "LORAN", "DECCA" etc shall be used instead of a General Area.

**Standard Message Element Reference 3 – LOCALITY**

The Locality shall be stated in terms which allow the mariner to identify warnings which affect his passage without having to plot them. Locality will only need to be stated when it is considered necessary to refine the General Area.

**NAVAREA WARNING:**

THAMES ESTUARY;  
PINANG APPROACH

**SUB-AREA WARNING:**

STORA MIDDELGRUND

**COASTAL WARNING:**

BARRA DE PARANAGUA – CANAL DA GALHETA

**Standard Message Element Reference 4 – CHART NUMBER**

For charted features, reference shall be made to an International Chart number if one exists; if not, reference shall be made to a national chart (not necessarily the largest scale) identified by the State abbreviation and chart number.

**NAVAREA WARNING:**

INT Chart 649; MX Chart 354

**SUB-AREA WARNING:**

**BALTICO TO SUPPLY – Baltico do not use chart numbers at the moment**

Notes:

1) Warnings may refer to an Electronic Navigational Chart (ENC). In such cases, ENC cell numbers shall be quoted, e.g. US3AK7RM

2) Chart or ENC cell numbers are not mandatory for Coastal Warnings which are only broadcast in the vicinity of the hazard.

## Part 2 -WARNING

### Standard Message Element Reference 5 – KEY SUBJECT

Key subjects referenced in paragraph 4.2.2 are considered suitable for broadcast as NAVAREA, SUB-AREA, or COASTAL Warnings.

### Standard Message Element Reference 6 – GEOGRAPHICAL POSITION

Geographical positions shall always be given in Degrees and Minutes or in Degrees, Minutes and decimal minutes in the form:

Latitude: DD-MM N or S  
Longitude: DDD-MM E or W  
or  
Latitude: DD-MM.mm N or S  
Longitude: DDD-MM.mm E or W

e.g. 07-08N 039-17W  
32-18.65S 165-02.81E

Note that leading zeros shall always be included. Three digits are used for reporting degrees of longitude.

Positions shall only be quoted to the accuracy required. In many cases this will be less than the known accuracy. For example, it will often be sufficient to quote position to the nearest whole minute of latitude and longitude when indicating the location of a charted feature. The best accuracy available (to a maximum of 0.01 minutes) shall be used when broadcasting the position of new hazards. The same level of accuracy shall always be quoted for both latitude and longitude.

When defining the limits of a polygon, positions should be listed in a clockwise direction starting from the North West corner. For square or rectangular areas, only two latitudes and two longitudes may be necessary.

Circular areas should be defined by a radius in nautical miles from a single point.

The use of the word "POSITION" or "POS" is not necessary. – LIGHT ESTABLISHED IN ..... or BUOY MOVED TO ..... rather than – LIGHT ESTABLISHED IN POSITION ..... or BUOY MOVED TO POSITION .....?

### Standard Message Element Reference 7 – AMPLIFYING REMARKS

Amplifying remarks may be used to provide sufficient extra details to clearly identify the significance of the hazard and to assist mariners in RECOGNIZING and ASSESSING its effect upon their navigation.

Distances shall be quoted in Nautical Miles and decimals.

The TIME, DATE and DURATION of the event shall be included if known. The time standard for Navigational Warnings shall always be Co-ordinated Universal Time (UTC).

Accepted formats for Date Time Groups (DTG) in the text of the message are as follows:

DDHHMM UTC MoMoMo YY; e.g. 231642 UTC JUN 09.  
DDHHMM Z MoMoMo YY; e.g. 231642 Z JUN 09  
DDHHMM GMT MoMoMo YY; e.g. 231642 GMT JUN 09



**Part 3 - POSTSCRIPT**

**Standard Message Element Reference 8 – CANCELLATION DETAILS**

Cancellation details shall be provided in a message that includes a definitive timeframe; the cancellation time shall be one hour after the event completes or one day later if the time is not accurately known.

A reason for the cancellation should only be included if it is of benefit to the mariner, and can be stated concisely.

<b>Examples</b>	<b>Comments</b>
<p>A. CANCEL 0123/92 AND THIS MESSAGE.</p> <p>B. SELF CANCELLING. CANCEL AUSCOAST 0042. SURVEY COMPLETE.</p> <p>C. (MESSAGE TEXT – EVENT OF KNOWN DURATION). CANCEL THIS MESSAGE _____ UTC.</p> <p>D. CANCEL TALLINN RADIO COAST WARNING 0087/94 ON RECEIPT OF RUSSIAN NOTICE TO MARINERS 520/94;</p> <p>OR</p> <p>E. CANCEL TALLINN RADIO COAST WARNING 0087/94. RUSSIAN NOTICE TO MARINERS 520/94 REFERS.</p>	<p>Stand-alone cancellation messages may be in form A or B.</p> <p>Choose a time for self-cancelling messages (type C) one hour after the event completes or one day later if time is not accurately known.</p>

**7 – GUIDANCE AND EXAMPLES FOR WARNINGS BY TYPE OF HAZARD  
(AS LISTED IN 4.2.2)**

**[See separate document]**

## 8 – METEOROLOGICAL WARNINGS AND FORECASTS

### 8.1 Provision of warnings and weather and sea bulletins (GMDSS application)

**8.1.1** The global maritime distress and safety system (GMDSS) application which is compatible with and required by the radiocommunication provisions of the 1988 SOLAS amendments via the NAVTEX, International SafetyNET and HF MSI services.

#### Principles

**8.1.2** The principles for the preparation and issue of warnings and weather and sea bulletins are as follows:

- .1** For the purpose of the preparation and issue of meteorological warnings and the regular preparation and issue of weather and sea bulletins, the oceans and seas are divided into areas for which national Meteorological Services assume responsibility.
- .2** The areas of responsibility together provide complete coverage of oceans and seas by meteorological information contained in warnings and weather and sea bulletins for the high seas.
- .3** The issue of meteorological warnings and routine weather and sea bulletins for areas not covered by NAVTEX should be by the International SafetyNET Service for the reception of maritime safety information (MSI ) in compliance with SOLAS chapter IV ‘‘Radiocommunications’’, as amended.  
*Note:* In addition, national Meteorological Services may have to prepare and/or issue warnings and routine forecasts for transmission by an HF-direct printing telegraphy maritime safety information service for areas where such a service is provided for ships engaged exclusively on voyages in such areas.
- .4** The preparation and issue of warnings and weather and sea bulletins for areas of responsibility are co-ordinated in accordance with the procedures mentioned in the following section.
- .5** The efficiency and effectiveness of the provision of warnings and of weather and sea bulletins are monitored by obtaining opinions and reports from marine users.
- .6** Maritime Safety Information broadcasts are monitored by the originating Issuing Service to ensure the accuracy and integrity of the broadcast.

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### 8.2 Procedures

#### Definitions

**8.2.1** A *Preparation Service* is a national Meteorological Service which has accepted responsibility for the preparation of forecasts and warnings for parts of, or an entire, designated Maritime Safety Information (MSI) area in the WMO system for the dissemination of meteorological forecasts and warnings to shipping under the GMDSS and for their transfer to the relevant Issuing Service for broadcast.

**8.2.2** An *Issuing Service* is a national Meteorological Service which has accepted responsibility for ensuring that meteorological forecasts and warnings for shipping are disseminated through the Inmarsat and SafetyNET service to the designated area for which the Service has accepted responsibility under the broadcast requirements of the GMDSS. The Issuing Service is responsible for composing a complete broadcast bulletin on the basis of information input from the relevant Preparation Services, and for inserting the appropriate EGC header, as specified in annex 4(b) of the *International SafetyNET Manual*. The Issuing Service is also responsible for monitoring the broadcasts of information to its designated area of responsibility.

*Preparation and issue of weather and sea bulletins for the high seas*

**8.2.3** Weather and sea bulletins for the high seas shall include, in the order given hereafter:

- .1 Part I: Storm warnings;
- .2 Part II: Synopsis of major features of the surface weather chart and, to the possible extent, significant characteristics of corresponding sea-surface conditions; and
- .3 Part III: Forecasts.

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**8.2.4** Weather and sea bulletins for the high seas may, in addition, include the following parts:

- .1 Part IV: Analysis and/or prognosis in IAC FLEET code form;
- .2 Part V: Selection of reports from sea stations; and
- .3 Part VI: Selection of reports from land stations.

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- Notes:* (1) The reports included in part VI should be for a fixed selection of stations in a fixed order.
- (2) Parts IV, V and VI may be issued at a separate scheduled time.

**8.2.5** For area(s) for which an Issuing Service has assumed responsibility, the Service should select the appropriate CES to service that area.

- Notes:* (1) As there are several CESs which can serve an Ocean Region and hence an area of broadcast responsibility, Issuing Services may negotiate directly with the various CES operators to obtain the most favourable tariff (and service) consideration.
- (2) In order to ensure reception of unscheduled broadcasts by shipping in an area which is served by more than one satellite and recognizing that the national Meteorological Services will not know to which of these satellites the ship's equipment is tuned, the following procedures should be adopted by Issuing Services:
- (i) *For scheduled broadcasts:* These should be issued for broadcast over at least a single nominated satellite, in accordance with a pre-arranged schedule, co-ordinated by WMO.
  - (ii) *For unscheduled broadcasts:* These should be issued for broadcast under the SafetyNET Service through all Inmarsat ocean region satellites covering the Issuing Service's area of responsibility.

**8.2.6** Weather and sea bulletins shall be prepared and issued at least twice daily.

**8.2.7** The issue of the weather and sea bulletins should be at a scheduled time and be in the following sequence: part I to be followed immediately by part II and then part III. A schedule of transmission start times for these bulletins has been compiled for all MSI areas and the CESs which serve the areas and takes into consideration, *inter alia*, the existing WMO synoptic times for observations, data analysis and forecast production. Additionally, as these broadcast schedules for the International SafetyNET Service have to be co-ordinated, under the aegis of WMO, with other organizations such as IHO, Issuing Services should not independently change or request WMO to arrange frequent alterations to these co-ordinated and published schedules.

**8.2.8** Issuing Services must ensure that the correct EGC message addressing formats are adhered to for all warning and forecast messages intended for broadcast by a CES.

**8.2.9** Warnings, synopses and forecasts should be given in plain language.

**8.2.10** Warnings, synopses and forecasts intended for the International SafetyNET Service should be broadcast in English.

*Note:* Additionally, if a national Meteorological Service wishes to issue warnings and forecasts to meet national obligations under SOLAS, broadcasts may be made in other languages. These broadcasts will be a part of a national SafetyNET Service.

**8.2.11** In order to ensure the integrity of the warnings and forecasts being received by mariners, it is essential that Issuing Services monitor the broadcasts which they originate. Monitoring is especially important in a highly automated system which is dependent on careful adherence to

procedure and format. This may be accomplished by the installation of an EGC receive-capability at the Issuing Service's facility.

*Note:* Each Issuing Service may use the EGC receiver to check the following:

- (1) That the message has been broadcast;
- (2) That the message is received correctly;
- (3) That cancellation messages are properly executed; and
- (4) Any unexplained delay in the message being broadcast.

**8.2.12** The language of the synopsis should be as free as possible from technical phraseology.

**8.2.13** The terminology in weather and sea bulletins should be in accordance with the "Multilingual list of terms used in weather and sea bulletins".

*Note:* The multilingual list of terms used in weather and sea bulletins is given in Annex 1-2.A of the Guide to Marine Meteorological Services (WMO-No. 471) and in Appendix II-6 hereto.

### **8.3 Warnings**

**8.3.1** Warnings should be given for gales (Beaufort force 8 or 9) and storms (Beaufort force 10 or over), and for tropical cyclones (hurricanes in the North Atlantic and eastern North Pacific, typhoons in the Western Pacific, cyclones in the Indian Ocean and cyclones of similar nature in other regions).

**8.3.2** The issue of warnings for near gales (Beaufort force 7) is optional.

**8.3.3** Warnings for gales, storms and tropical cyclones should have the following content and order of items:

- .1 type of warning,
- .2 date and time of reference in UTC,
- .3 type of disturbance (e.g. low, hurricane, etc.) with a statement of central pressure in hectopascals,
- .4 location of disturbance in terms of latitude and longitude or with reference to well-known landmarks.
- .5 direction and speed of movement of disturbance,
- .6 extent of affected area,
- .7 wind speed or force and direction in the affected areas,
- .8 sea and swell conditions in the affected area, and
- .9 other appropriate information such as future positions of disturbance.

Sub-items .1, .2, .4, .6, and .7 listed above should always be included in the warnings.

**8.3.4** When warnings are included for more than one pressure disturbance or system, the systems should be described in a descending order of threat.

**8.3.5** Warnings should be as brief as possible and, at the same time, clear and complete.

**8.3.6** The time of the last location of each tropical cyclone or extra-tropical storm should be indicated in the warning.

**8.3.7** A warning should be issued immediately the need becomes apparent and broadcasted immediately on receipt, followed by a repeat after six minutes, when issued as an unscheduled broadcast.

**8.3.8** When no warnings for gales, storms or tropical cyclones are to be issued, that fact should be positively stated in part I of each weather and sea bulletin.

**8.3.9** Warnings should be updated whenever necessary and then issued immediately.

**8.3.10** Warnings should remain in force until amended or cancelled.

**8.3.11** Warnings issued as part I of a scheduled bulletin do not need to be repeated after 6 minutes.

## **8.4 Synopses**

**8.4.1** The synopses given in part II of weather and sea bulletins should have the following content and order of items:

- .1 date and time of reference in UTC,

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- .2 synopsis of major features of the surface weather chart, and
- .3 direction and speed of movement of significant pressure systems and tropical disturbances.

**8.4.2** ~~Significant~~ If possible, significant characteristics of corresponding wave conditions (sea and swell) should be included in the synopsis ~~whenever this information is available~~, as well as characteristics of other sea-surface conditions (drifting ice, currents, etc.) if feasible and significant.

**8.4.3** Significant low-pressure systems and tropical disturbances which affect or are expected to affect the area within or near to the valid period of the forecast should be described; the central pressure and/or intensity, location movement and changes of intensity should be given for each system; significant fronts, high-pressure centres, troughs and ridges should be included whenever this helps to clarify the weather situation.

**8.4.4** Direction and speed of movement of significant pressure systems and tropical disturbances should be indicated in compass points and metres per second or knots respectively.

**8.4.5** Units used for speed of movement of systems should be indicated.

## 8.5 Forecasts

**8.5.1** The forecasts given in part III of weather and sea bulletins should have the following content and order of items:

- .1 the valid period of forecast,
- .2 name or designation of forecast area(s) within the main MSI area, and
- .3 a description of:
  - (i) wind speed or force and direction;
  - (ii) visibility when forecast is less than six nautical miles (ten kilometres); ~~and~~
  - (iii) ice accretion, where relevant applicable-; and
  - (iv) waves from sea and swell.

**8.5.2** The forecasts should include expected significant changes during the forecast period, significant meteors such as freezing precipitation, snowfall or rainfall, and an outlook for a period beyond that normally covered by the forecast.

**8.5.3** The valid period should be indicated either in terms of number of hours from the time of issue of the forecast or in terms of dates and time in UTC of the beginning and the end of the period.

**8.5.4** Visibility should be indicated in nautical miles or kilometres or given in descriptive terms.

**8.5.5** Units used for visibility should be indicated.

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## 9 – SEARCH AND RESCUE NOTIFICATION

**9.1** Communications related to search and rescue operations such as distress alerts, co-ordination of operations, local communications and positioning signals are never MSI, even when (for some shore-to-ship alerts) they use the International SafetyNET or NAVTEX services which are also used for MSI. This guide, therefore, does not apply to them.

**9.2** Search and rescue operations may, however, involve the broadcasting of MSI in the navigational warning category, described in **4.2.2.6** of this Manual:

Information on “areas where search and rescue (SAR) and antipollution operations are being carried out (for avoidance of such areas)”.

Such navigational warnings should only be broadcast at the request of an MRCC or at least after the broadcasting service has confirmed with the MRCC that no further assistance is requested.

Key subject	Comments
RESCUE OPERATION IN PROGRESS, POSITION____ ____, WIDE BERTH REQUESTED	



## **10 – PROCEDURE FOR AMENDING THE JOINT IMO/IHO/WMO MANUAL ON MSI**

**10.1** Proposals for amendment or enhancement of the maritime safety information service should be submitted for evaluation to Maritime Safety Committee through the Sub-Committee on Radiocommunications and Search and Rescue.

**10.2** The agreement of the IHO, WMO, IMSO and ITU, as appropriate, and the active participation of other bodies should be sought, according to the nature of the proposed amendments.

**10.3** The active participation of IHO, WMO, IMSO and ITU is considered necessary for the co-ordination of broadcasts of all maritime safety information.

**10.4** Amendments adopted by Maritime Safety Committee will be notified to all concerned. At least 12 months notice will be given before implementation and they will come into force on 1 January of the following year