MSI Self Assessment NAVAREA X

Submitted by Australia (Australian Maritime Safety Authority)

SUMMARY

Executive Summary: Annual report by NAVAREA X for period July 2016 to June 2017.

Action to be taken: Paragraph 12.

Related documents: Nil

1.   Background:

1.1   NAVAREA X extends from the Antarctic coast at longitude 080° E thence,

30° 00 S 080° 00 E	30° 00 S 095° 00 E	12° 00 S 095° 00 E
12° 00 S 127° 00 E	10° 00 S 127° 00 E	10° 00 S 141° 00 E
00° 00 S 141° 00 E	00° 00 S 170° 00 E	29° 00 S 170° 00 E
45° 00 S 160° 00 E		

thence to the coast of the Antarctic continent at longitude 160° 00 E.

Outline maps of NAVAREA X are available from the Seafarers Handbook for Australian Waters (AHP20) and the UK Hydrographic Office publication ALRS Volume 5.

1.2   NAVAREA X broadcasts are made via the satellite service provider, Inmarsat, through Burum LES. Messages are transmitted to Burum LES using XOT (X.25 over TCP) and messages are received from Burum via TCP/IP. MSI messages are transmitted in a noninteractive manner to Burum LES for broadcast over SafetyNET via the IOR and POR satellites.
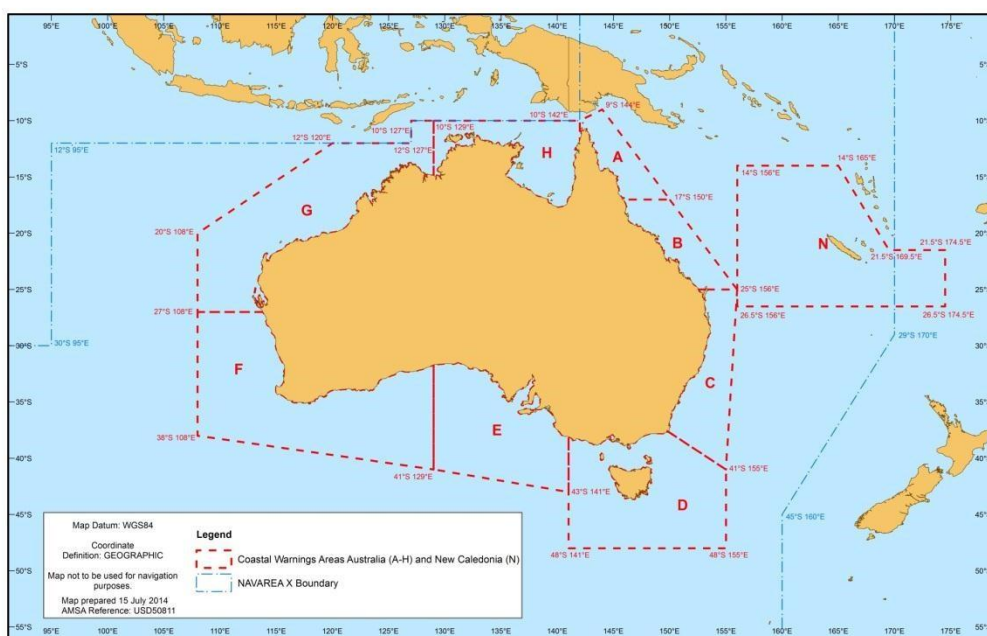
1.3   NAVAREA X has contractual arrangements with its SafetyNET provider, requiring an availability of 99.5% per calendar month. The availability of the service for July 2016 to June 2017 is provided in Table 1 and averaged 99.87%.

Month	IOR/POR Availability
July 2016	100.00
Aug 2016	100.00
Sep 2016	100.00
Oct 2016	100.00
Nov 2016	100.00
Dec 2016	100.00

Jan 2017	99.92
Feb 2017	99.94
Mar 2017	99.87
Apr 2017	100.00
May 2017	100.00
Jun 2017	99.75

1.4   All navigational warnings (NAVAREA X, coastal and local warnings) are transmitted via SafetyNET on the IOR and POR satellites at the scheduled times of 0700 and 1900 UTC. Messages are also transmitted within 30 minutes of receipt of the information.

1.5   Coastal warnings are transmitted via SafetyNET to nine defined coastal areas. These coastal areas are identified by the letters A to H clockwise around the Australian coast (see Figure 1 below) and area N around New Caledonia. New Caledonia scheduled broadcasts are at 0140 and 1340 UTC.

Figure 1: Coastal Warnings Areas

The above information is included in the Seafarers Handbook for Australian Waters (AHP20) http://www.hydro.gov.au/prodserv/publications/ash.htm

1.6   Weather broadcasts for METAREA X are the responsibility of the Australian Bureau of Meteorology. Details of the SafetyNET broadcasts can be obtained from the website: http://www.bom.gov.au/marine/radio-sat/bureau-inmarsat.shtml

1.7   The number of SafetyNET messages promulgated for METAREA X:

2014-2015	12,351
2015-2016	12,610
2016-2017	12,725

1.7.1   The 2015-2016 value of 13,640 SafetyNET messages provided to the Sub-Committee in 8-3-2-X has been revised due to a double counting issue. The figure has been corrected in this report to 12,610.

1.7.2   The statistically small variation in the number of reports from year to year relates to local weather influences in the METAREA X region.

1.7.3   The Bureau's Marine Weather Services National Program Office recently achieved certification to the ISO 9001:2015 standard for Quality Management Systems.
The Bureau has commenced a national implementation of the WMO's Marine Forecaster Competency Framework. Two Forecasting offices containing 60 staff have now been deemed competent to provide marine forecasts.

1.8   Operational Points of Contact for National Coordinators within NAVAREA X have been checked and confirmed as follows:

COUNTRY	TELEPHONE	FACSIMILE	EMAIL
New Caledonia	+687 292332	+687 292303	mrcc.nc@lagoon.nc
Papua New Guinea	+675 3213033	+675 3210873	PNGMRCC@nmsa.gov.pg
Solomon Islands	+677 21609	+677 23798	mrcc@solomon.com.sb
Vanuatu	+678 22339	+678 22475	hworek@vanuatu.gov.vu

Table 2: Points of Contact for NAVAREA X National Coordinators

2.   Comments

2.1   The details for Australia reported in the GMDSS Master Plan (GMDSS.1/Circ.19 dated 8 August 2016) have been checked and are correct.

2.2   Warnings are monitored automatically via a POR (Canberra) and IOR (Fremantle) MES in almost real time using special EGC monitoring software which precludes the need to power down and reboot the MES at regular intervals. AMSA's EGC broadcast receiver for the POR/IOR region has recently been re-developed and re-written from C to Java. The original EGC broadcast receiver was developed nearly 2 decades ago. The benefits of the redevelopment are;
*   the EGC broadcast receiver is now part of AMSA's IT infrastructure high availability architecture
*   the software has been re-written in a modern programming language which is easier to support
*   the new software incorporates better system monitoring

The only noticeable change visible to clients who receive forwarded EGC messages are the recipient and sender addresses have changed.

MSI traffic received on the POR and IOR by the NAVAREA X EGC monitors is provided to USA and New Zealand authorities in almost real time. The equipment and software is listed below.

Equipment Type	Software Version	Date of Up-date
Thrane & Thrane TT 3022A (Primary) Inmarsat C transceivers with TT3020B (Standby)	EMON Version 1.1	1990

2.3   Over the past three calendar years, the following number of messages regarding MSI matters were received:

2014				2015				2016			
E-mail	Fax	Phone	Text	E-mail	Fax	Phone	Text	E-mail	Fax	Phone	Text
977	-	18	-	973	-	38	-	963	-	67	-

2.4   Over the past three calendar years the following number of navigational warnings were issued over SafetyNET with average elapsed times:

2014		2015		2016	
Total	Average elapsed time	Total	Average elapsed time	Total	Average elapsed time
439	16.7 min	450	12.6 min	424	14.5 min

2.5 Specifics of Requests for In-Force bulletins;

2014		2015		2016	
Total	E-mail	Total	E-mail	Total	E-mail
--	--	2	2	2	2

Note that the latest NAVAREA X In-force bulletin is available from the current MSI Webpage or via automated email and is included in the list of current navigational warnings. Figures for accessing MSI via webpage are contained in Section 9 of this report. It is not possible to determine what percentage of users are accessing the web-page specifically for the In-force bulletin. It is of note that a number of requests for navigational warnings listed in the weekly In-force bulletin but cancelled in the interim have been received. This potentially indicates that Mariners have some confusion in regards the purpose of the In-force bulletin.

3.   NAVTEX Coverage:

Australia does not broadcast navigational warnings on NAVTEX and no other National Coordinators use NAVTEX within NAVAREA X. Australian Coastal (AUSCOAST) warnings are broadcast via SafetyNET using the relevant C codes.

4.   Operational Issues

4.1   NAVAREA X issues "In Force warnings" Bulletins.

4.2   NAVAREA X broadcasts navigational warnings whilst in force. The Australian Hydrographic Service no longer compiles Section III of the Australian Notices to Mariners (Navigation Warnings) and directs Mariners to the AMSA MSI Website.

4.3   NAVAREA X continues to engage National Coordinators to enhance the provision of MSI services within the region. A regional MSI Capacity Building training for National Coordinators was hosted by NAVAREA XIV in Wellington, New Zealand in August 2016 with representation from all four NAVAREA X National Coordinators. Unfortunately, NAVAREA X was unable to provide a resource to assist in this training. A further regional south-west Pacific MSI Capacity Building Course has been approved by the IMO/IHO, it is tentatively scheduled to occur in August 2018.

5.   Quality Management Survey

NAVAREA	ISO 9001 -2008	Promulgate "In-Force" Bulletins	Promulgate "NoWarning" Messages	Monitor Broadcast in almost real time	24/7 contact information provided	Promulgate two scheduled broadcasts	IMO Master Plan updated
X	YES	YES	YES	YES	YES	YES	YES

6.   Contingency Planning

6.1   The NAVAREA X Coordinator's primary work place within JRCC Australia in Canberra is supported by a disaster recovery facility (DRF), 13 kilometres north of the primary site. The DRF provides all the functionality of the primary site, including computing and communication systems in an almost "hot standby" state. In the past year, JRCC Australia/NAVAREA X Coordinator duty staff have regularly exercised transfer of systems to the DRF site. Work continues to develop AMSA's IT infrastructure as part of a modern high availability architecture approach with a migration of computer systems to virtual Data Centre hosted environments.

6.2   NAVAREA X Coordinator functionality can also be carried out by the manual submission of MSI information via an authenticated email account direct to Burum LES, using an internet connected laptop/desktop, with webmail functionality. This was exercised during February 2017.

7.   Capacity Building:

7.1   The AUSAID/Australian Department of Foreign Affairs and Trade (DFAT) Project to provide a GMDSS capability in Papua New Guinea (PNG) was completed in October 2016. It is anticipated that PNG will seek approval via the SafetyNET panel for the inclusion of Sub-Area 'P' to improve capability for both navigational warnings and search and rescue purposes. NAVAREA X Coordinator has indicated that they are happy to assist PNG in any application to the SafetyNET panel.

8.   Other Activities:

8.1   AMSA is leading an international project team that is developing an IHO S-100 based product specification for Under Keel Clearance Management (UKCM) information. It is expected that the project team will complete the product specification in 2018.

8.2   AMSA has been actively contributing to the IMO NCSR correspondence group that is developing guidelines for the harmonized display of navigation information received via communications equipment.

8.3   Australia (and other Asia-Pacific) nations have recently been invited to participate in Asia-Pacific Web (APW). The APW testbed aims to provide a web-based platform where digital maritime services that are available in a region (such as navigational and meteorological warnings and notices to mariners), can be discovered by ships and shore authorities. Australia is preparing to participate in these trials.

8.4   Pacific Regional Energy and Transport Ministers Meeting

The 3rd Pacific Regional Energy and Transport Ministers Meeting held in Nuku'alofa, Tonga, 24-28 April 2017 endorsed the 'Regional Strategy on Safety of Navigation in the Pacific'. The Strategy covers five interlinked areas of safety of navigation (i) governance; (ii) navigation and meteorological services and warnings; (iii) hydrographic services; (iv) aids to navigation and vessel traffic services; and (v) search and rescue services. Details can be obtained from following links:

http://www.spc.int/blog/pacific-ministers-for-energy-and-transport-endorse-communique/

http://prdrse4all.spc.int/sites/default/files/17_energytransport_ministers_meeting_-_agenda_item_t5_-_safety_of_navigation_-_0.pdf

8.5   South West Pacific Hydrographic Commission (SWPHC) Meeting and Workshop

The 14th SWPHC Meeting was held in Noumea, New Caledonia on 30 Nov - 2 Dec 2016. It was attended by 46 participants - representing all 8 Member States of the Commission, 6 Associate Members, 2 Observer States, international/regional organizations, industry and the IHB.
The meeting was preceded by a 2-day technical workshop on formulating and implementing strategic development plans for hydrography. The workshop was coordinated by LINZ, with presenters from Australia, New Zealand, United Kingdom and IALA. Attended by 31 participants from Australia, Cook Islands, Fiji, Kiribati, Nauru, New Caledonia, New

Zealand, Nauru, Niue, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, United Kingdom, United States of America, Vanuatu, IALA, IHO Secretariat, GEBCO and SPC.

The 15th SWPHC Meeting is planned to be held in Tonga in February 2018.

8.6   SWPHC Capacity Building (CB) Activities

The following CB activities have been carried out in the region as part of the IHO CB Work Programme for 2016:

8.6.1 **Technical Assessment & Advice Visits to Samoa and Tuvalu**

These visits were carried out in August and November 2016, with the following objectives:

(i) Prepare a prioritised plan for the development of a robust system for MSI promulgation
(ii) Identify and prioritise areas requiring urgent hydrographic survey
(iii) Identify suitable available resource to undertake the surveys.

Reports of the visits have been submitted to the IHO.

8.6.2 **MSI Regional Workshop**

A MSI Regional Workshop was held in Wellington, New Zealand on 22-24 August 2016. It was attended by 17 participants from Cook Islands, Fiji, French Polynesia, Kiribati, New Caledonia, New Zealand, Niue, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.

8.7   Solomon Islands Charts

8.7.1 The Australian Hydrographic Office (AHO) has worked with the Solomon Islands Maritime Safety Administration to produce Solomon Islands charts, which were published on 11 August 2017.

8.8   New IHO Members in SWPHC

8.8.1 Vanuatu became an IHO Member in 2017 and Solomon Islands is in the process of becoming a Member.

9.   NAVAREA Website:

9.1   Current NAVAREA X MSI can be obtained from the AMSA website at: http://www.amsa.gov.au/search-and-rescue/about-the-gmdss/msi-information/msi-email/index.asp

9.2   The webpage allows users to obtain the latest MSI by automatic response on the browser or via an e-mail address. As well as all navigational warnings in force, there is a Summary of Mobile Drilling Rigs locations and a Summary of Special Purpose Vessels, including area of operation, which are no longer available on SafetyNET.

9.3   The MSI webpage is updated in almost real time when warnings are issued and cancelled. Otherwise, it updates every 30 minutes. The date and time of the last update is shown on the website and any download.

9.4   In total, there were 19,007 unique visitors (non-repeat views) for the year 1 July 2016 to 30 June 2017, with an average time of 3 minutes 03 seconds spent on the page

9.5   A new AMSA website is scheduled to go live at the end of November 2017. A MSI webpage will continue to be available post these changes. The changes are aimed at providing an easier and better user experience to persons navigating the website.

10.   NAVAREA Contact Information:

No change to that currently promulgated.

11.   Recommendations:

No change to that currently promulgated.

12.   Actions requested:

The Sub-Committee is invited to note the report.

13.   Summary:

The NAVAREA X Self Assessment report highlights MSI activities for the period July 2016 to June 2017.

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