MSI Self Assessment NAVAREA X

Submitted by Australia (Australian Maritime Safety Authority)

SUMMARY

Executive Summary: Annual report by NAVAREA X for period July 2017 to June 2018.

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 non interactive manner to Burum LES for broadcast over SafetyNET via the IOR and POR satellites.

1.3   AMSA is modernising its computer infrastructure and as part of that process, commencing mid-August, we will start sending MSI messages to Burum LES using SMTP (TLS). The new components for receiving Inmarsat messages via SMTP (TLS) are planned for cutover in September.

1.4   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 2017 to June 2018 is provided in Table 1 and averaged 99.89%.

Month	IOR/POR Availability
July 2017	99.85
Aug 2017	99.98
Sep 2017	100.00
Oct 2017	99.96
Nov 2017	99.94
Dec 2017	99.81
Jan 2018	99.82
Feb 2018	99.83
Mar 2018	99.51
Apr 2018	100.00
May 2018	100.00
Jun 2018	99.95

1.5   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 transmitted within 30 minutes of receipt of the initial notification.

1.6   Coastal warnings (termed AUSCOAST 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.
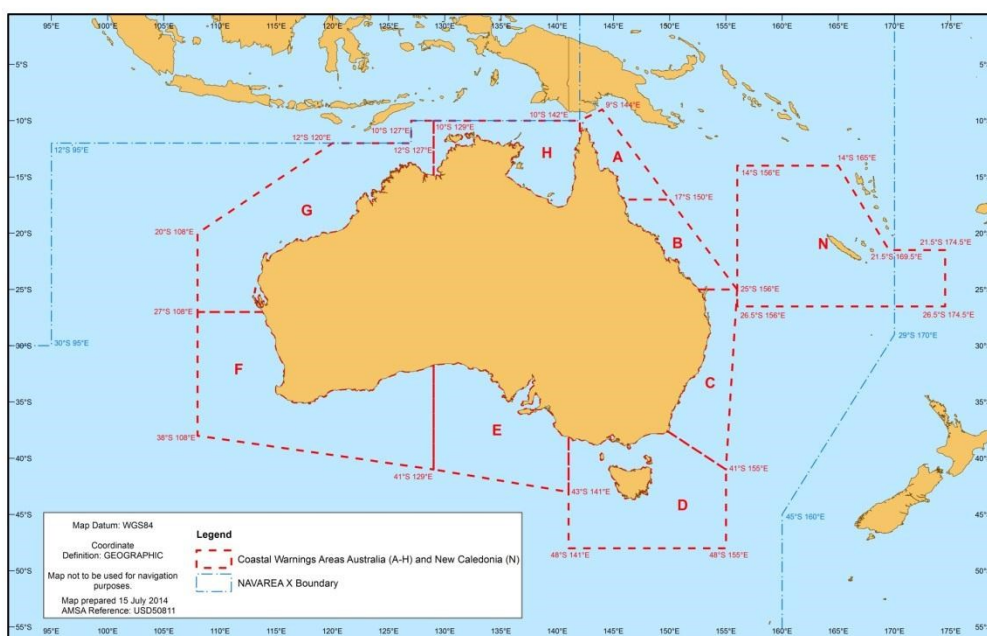

Figure 1: Coastal Warnings Areas

1.7   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

1.8   The number of SafetyNET messages promulgated for METAREA X:

2015-2016	12,610
2016-2017	12,725
2017-2018	12,654

1.9 A breakdown of the SafetyNET messages promulgated for METAREA X

Type of product broadcast on the GMDSS SafetyNet satellite service	*Count for 2017/18*
Coastal waters	6,481
High Seas forecasts	2,759
Ocean Wind Warnings (including TC warnings)	3,414
TOTAL	**12,654**

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

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

Table 2: Points of Contact for NAVAREA X National Coordinators

COUNTRY	INSTITUTION	TELEPHONE	FACSIMILE	EMAIL
New Caledonia	MRCC Noumea	+687 292332	+687 292303	operations@mrcc.nc
Papua New Guinea	PNG MRCC	+675 3212969/ +675 73517017	+675 3210873	PNGMRCC@nmsa.gov.pg
Solomon Islands	MRCC Honiara	+677 21609	+677 23798	mrcc@solomon.com.sb
Vanuatu	Vanuatu – Dept of Ports & Maritime	+678 33600 +678 22475	No Fax Service	trobson@vanuatu.gov.vu

2.   Comments:

2.1   The details for Australia reported in the GMDSS Master Plan (GMDSS.1/Circ.21 dated 31 May 2017) have been checked and are correct. An update will be required on completion of migration of SafetyNET services from I3 to I4 satellites.

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   Due to changes associated with the migration of Inmarsat SafetyNET services from I3 to I4 satellites and the associated change of satellite footprints, in particular POR to EMEA scheduled for Q4 2018. NAVAREA X will no longer to be able to monitor all NAVAREA X MSI transmissions directly from Australia or its external territories. Technical discussions have taken place with Inmarsat and Burum LES to put in place an alternative arrangement to facilitate NAVAREA X MSI broadcast monitoring. The current proposed solution has NAVAREA X providing a remote Inmarsat-C transceiver located at Burum LES which will forward all EGC broadcasts to a nominated email address at AMSA.

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

2016				2017				2018			
E-mail	Fax	Phone	Text	E-mail	Fax	Phone	Text	E-mail	Fax	Phone	Text
973	-	38	-	922	-	67	-	778	-	79	-

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

2015		2016		2017	
Total	Average elapsed time	Total	Average elapsed time	Total	Average elapsed time
450	12.6 min	424	14.5 min	419	12 min

2.6   Specifics of Requests for In-Force bulletins;

2015		2016		2017	
Total	E-mail	Total	E-mail	Total	E-mail
2	2	2	2	28	28

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.

3.   NAVTEX Coverage:

Australia does not broadcast navigational warnings via 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.

Coastal State/Country	Number of MSI messages	Topics/Subjects of messages
New Caledonia	132	Gunnery Exercises
Papua New Guinea	4	Nav Aids
Solomon Islands	--	--
Vanuatu	2	Nav Aids

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 2018.

7.   Capacity Building:

7.1   A regional MSI Capacity Building training for National Coordinators is being hosted by NAVAREA XIV in Wellington, New Zealand in August 2018 with representation from all four NAVAREA X National Coordinators. NAVAREA X has provided an instructional staff member to assist in this training and funded an additional student from Papua New Guinea to attend as part of enhancing the National Coordinator capability in the region.

7.2   Following recommendations made at WWNWS9 and following consultations with the SafetyNET panel chair work has been conducted to develop a pathway for Papua New Guinea to enhance its MSI capabilities so that it can fully meet its National Coordinator responsibilities. It is proposed to have a three-phase implementation;

7.3   *Phase 1 – Train Papua New Guinea National Coordinator staff in the dissemination of MSI.* Two suitable PNG NMSA staff were identified and are undergoing training at the IHO SWPHC MSI Capacity Building. One staff member was funded by IHO CB funding and one under Australia-Papua New Guinea Transport MOU funding.

7.4   *Phase 2 – Deliver Papua New Guinea – effective long-range MSI warning capability via NAVAREA X Coordinator.*
Implement 24/7 capability for Papua New Guinea to receive, assess and draft, in S-53 format, MSI broadcasts for promulgation by AMSA.

7.5   *Phase 3 – Deliver Papua New Guinea – effective Coastal MSI warning capability*
Implement 24/7 capability for Papua New Guinea to receive, assess and draft, in S-53 format, MSI Coastal broadcasts via SafetyNET through national arrangements.

8.   Other Activities:

8.1   <u>South West Pacific Hydrographic Commission (SWPHC) Meeting and Workshop</u>

The 15th SWPHC Meeting was held in Nadi, Fiji on 21-22 February 2018. It was attended by 39 participants - representing all 9 Member States of the Commission, 6

Associate Members, 2 Observer States, international/regional organizations, industry and the IHO.

The meeting was preceded by a one-day 'Technical Workshop on Implementing Hydrographic Governance' - being part of the IHO Capacity Building Work Programme (CBWP) for 2018. It was led by Land Information New Zealand (LINZ), with presenters from Australia, New Zealand, United Kingdom, IHO, IALA and SPC. The workshop was attended by 29 participants from Australia, Cook Islands, Fiji, France, Kiribati, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Samoa, Tonga, Tuvalu, United Kingdom, United States of America, Vanuatu, IALA, IHO Secretariat, GEBCO, SPC and IIC Technologies.

The 16th SWPHC Meeting is planned to be held in Alofi, Niue on 13-14 February 2019. It will be preceded by a two-day workshop on disaster response planning and data discovery.

8.2   **Primary Charting Authority**

8.2.1 Australia became the Primary Charting Authority (PCA) for Solomon Islands in August 2017.

8.3   **New Associate Member of SWPHC**

8.3.1 Indonesia, an IHO MS from the neighbouring East Asia Hydrographic Commission, has become an Associate Member of SWPHC to facilitate the harmonization of ENCs and to coordinate hydrographic surveys, capacity building activities, data sharing and exchange expertise.

8.4   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 early 2019.

8.5   Australia (and some other Asia-Pacific)nations have recently agreed to participate in a Pan-Pacific Web testbed trial. The 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.

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   On 8 December 2017 AMSA launched a new website. The changes are aimed at providing an easier and better user experience to persons navigating the website. Additionally it also allows for better capture of data and allows to interpret web-site visitor activity with more granularity. This reflects in the additional data reported below.

9.4   In total, there were 21,243 unique visitors (non-repeat views) for the year 1 July 2017 to 30 June 2018 with users spending an average of 3m 38s on the MSI web pages. A breakdown of the use is detailed below;

Description	Web page content	Unique Visitors/ Unique page views	Average time on page
Maritime safety information 1 Jul 2017 to 07 Dec 2017	MSI arrangements User advice NAVAREA X MSI Database	6,350	4m 3s
Maritime safety information 08 Dec 2017 to 30 Jun 2018	MSI arrangements User advice	1,806	1m 38s
Maritime safety information database - 08 Dec 2017 to 30 Jun 2018	NAVAREA X MSI Database	13,087	3m 43s
Total		**21,243**	**3m 38s**

10.   NAVAREA Contact Information:

No change to that currently promulgated.

11.   Recommendations:

None

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 2017 to June 2018.

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