

MSI Self Assessment NAVAREA X

Submitted by Australia (Australian Maritime Safety Authority)

SUMMARY

Executive Summary: Annual report by NAVAREA X for period July 2019 to June 2020

Action to be taken: Paragraph 12

Related documents: Nil

1. Background:

- 1.1. NAVAREA X (depicted in Figure 1) extends from the Antarctic coast at longitude 080° 00 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.

- 1.2. Outline maps of NAVAREA X are available from the Australian Hydrographic Office (AHO) *Seafarers Handbook for Australian Waters (AHP20)*¹ publication and the United Kingdom Hydrographic Office (UKHO) *Admiralty List of Radio Signals (ALRS) Volume 5 (NP285) - Global Maritime Distress and Safety System (GMDSS)*² publication.
- 1.3. Australian Maritime Safety Authority (AMSA) is Australia's national agency responsible for maritime safety, protection of the marine environment, and maritime aviation search and rescue.
- 1.4. As the NAVAREA X Coordinator, AMSA provides vessels with maritime safety information (MSI) about hazards and foreseeable dangers to safe navigation through Australia's, and our regions, marine environment. In Australia, MSI is provided via long-range and coastal warnings (paragraphs 1.7 and 1.8).

¹ <http://www.hydro.gov.au/prodserv/publications/ahp20.htm>

² <https://www.admiralty.co.uk/publications/publications-and-reference-guides/admiralty-list-of-radio-signals>

- 1.5. AMSA remains certified to the AS/NZS ISO 9001 (quality), AS/NZS ISO 14001 (environmental) and AS/NZS ISO 4801 (occupational health and safety) standards, having completed an audit in 2018-19.

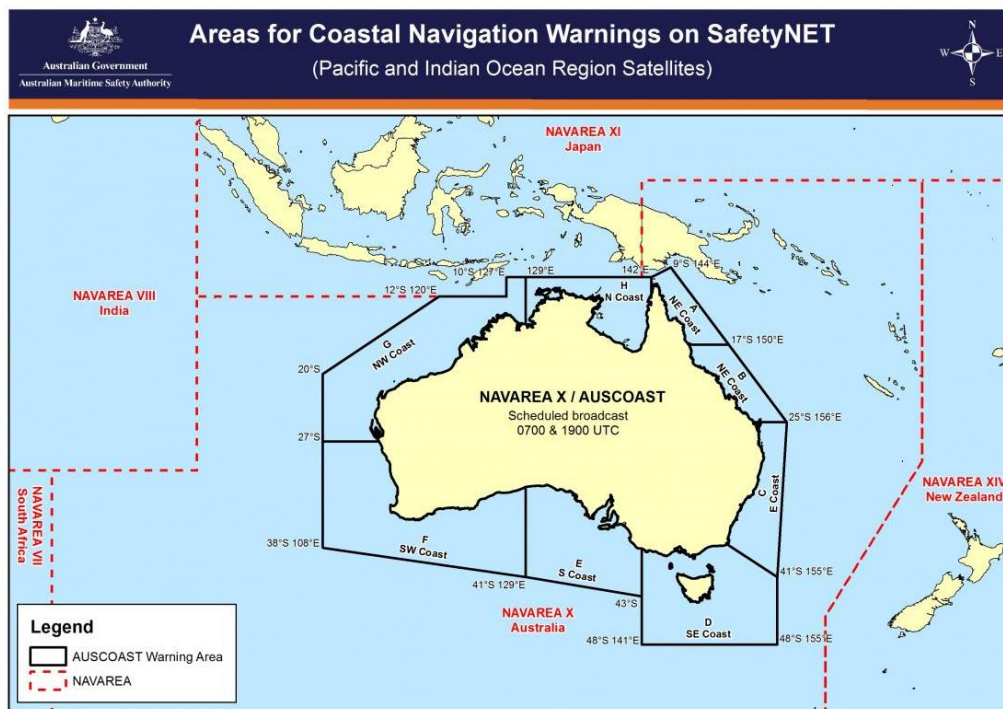


Figure 1: NAVAREA X outline

- 1.6. NAVAREA X EGC broadcasts are made via the recognised mobile satellite service provider, Inmarsat, through Burum land earth station (LES). Messages are sent to Burum LES via simple mail transfer protocol (SMTP) with transport layer security and DomainKeys Identified Mail (TLS+DKIM). Messages are received from Burum LES via SMTP (TLS). Messages are sent in a non-interactive manner to Burum LES for broadcast over SafetyNET via the IOR and POR satellites.
- 1.7. All long-range navigational warnings (NAVAREA X) are broadcast via SafetyNet on the IOR and POR satellites at the scheduled times of UTC 0700 and 1900.
- 1.8. Coastal and local warnings (AUSCOAST and Sea Safety Messages) are transmitted on the POR satellite only at the scheduled times of UTC 0700 and 1900. There are nine defined AUSCOAST areas identified by the letters A to H. In addition, area N around New Caledonia has scheduled broadcasts at UTC 0140 and 1340 (refer to Figure 2).

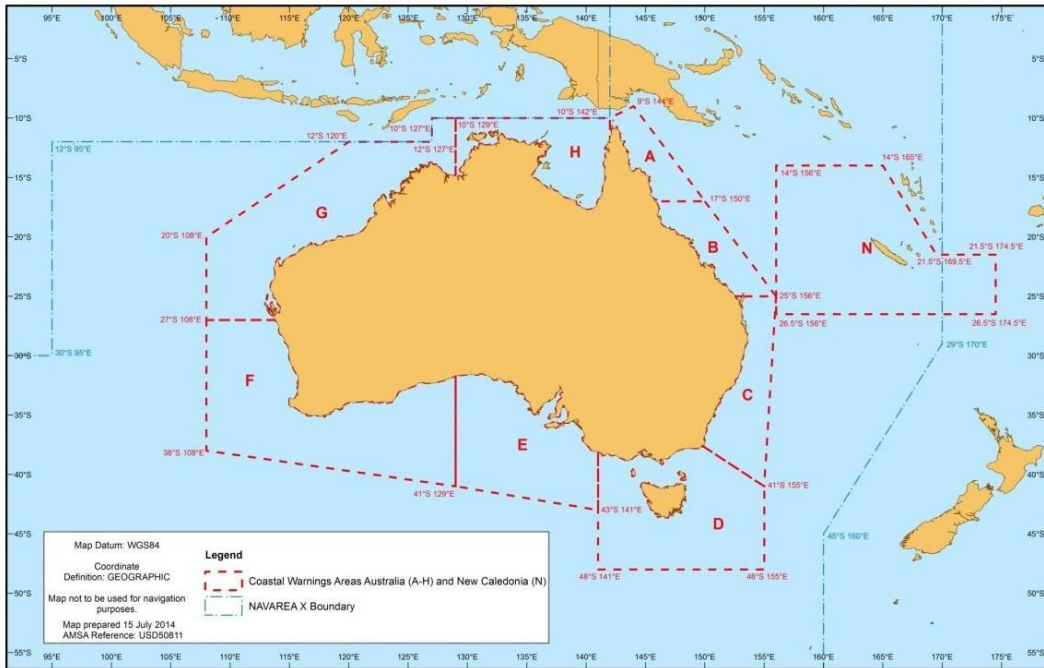


Figure 2: Coastal warning areas

1.9. 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>. A count of SafetyNET messages promulgated for METAREA X over the past three calendar years is provided in Table 2.

2017	2018	2019
12,654	14,656	14,952

Table 2: The total number of SafetyNET messages promulgated for METAREA X

1.10. Local weather influences in the METAREA X region typically generate a small variation in the number of reports from year to year. Calendar year 2019 statistics are provided in Table 3.

Coastal waters	6 584
High seas forecasts	3 275
Ocean wind warnings (including TC warnings)	5 093

Table 3: METAREA X product broadcast on SafetyNET

1.11. The Bureau's Marine Weather Services National Program Office remains certified to the ISO9001:2015 standard for Quality Management Systems, having completed a surveillance audit in March 2020.

1.12. Operational points of contact for National Coordinators within NAVAREA X have been checked and confirmed as follows:

COUNTRY	INSTITUTION	TELEPHONE	FACSIMILE	EMAIL
New Caledonia	MRCC Noumea	+687 29 21 21	+687 29 23 03	operations@mrcc.nc
	SHOM	+33 2 56312303		alain.paire@shom.fr
Papua New Guinea	PNG MRCC	+675 3212969 +675 73517071	+675 3210484	PNGMRCC@nmsa.gov.pg
Solomon Islands	MRCC Honiara	+677 21609	+677 23798	mrcc@solomon.com.sb
Vanuatu	Department of Ports and Maritime	+678 33600		trobson@vanuatu.gov.vu

Table 4: Operational points of contact

2. Comments:

2.1. The GISIS GMDSS Master Plan module has been checked in accordance with International Maritime Organization (IMO) Circular GMDSS.1/Circ.23 and is up to date. The last update was made 27 January 2019.

2.2. POR broadcasts are monitored automatically via maritime earth station (MES) units located in Canberra (East Coast) and Fremantle (West Coast). With the relocation of IOR coverage areas, there is no terrestrial capability for Australia to monitor IOR broadcasts. Alarms are provided to operators if there is a broadcast transmission error.

Equipment Type	Software Version	Date of Up-date
TT-3022A (Primary)	EMON Version 1.1	1990
TT-3020B (Standby)		

Table 5: NAVAREA X monitoring equipment

Australian Maritime Safety Authority (AMSA) also provides the output of its EGC monitoring to Maritime New Zealand (MNZ).

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

2017				2018				2019			
E-mail	Fax	Phone	Text	E-mail	Fax	Phone	Text	E-mail	Fax	Phone	Text
778	-	79	-	1508	-	89	-	1790	-	157	-

Table 6: Messages regarding MSI matters

- 2.4. Over the past three calendar years, the number of navigational warnings issued over SafetyNET and SafetyCast, including average elapsed times, were:

	2017		2018		2019	
	Total	Average elapsed time (minutes)	Total	Average elapsed time (minutes)	Total	Average elapsed time (minutes)
SafetyNet	419	12.0	466	9.8	614	10
SafetyCast	NA	NA	NA	NA	NA	NA

Table 7: Navigational warnings issued over SafetyNET and SafetyCast

The increase (32% year-on-year) in navigational warnings issued this calendar year can primarily be attributed to an increase in space-related warnings and one special-purpose vessel (Ile De Re - IMO: 8200278, MMSI: 525100486) operating beyond our coastal warning area with intermittent buoy and cable laying operations.

- 2.5. Over the past three calendar years, the number of NAVAREA warnings identified as urgency priority (requiring transmission within 30 minutes) were:

	2017		2018		2019	
	Total	Average elapsed time (minutes)	Total	Average elapsed time (minutes)	Total	Average elapsed time (minutes)
SafetyNet	164	NA	172	NA	194	NA
SafetyCast	NA	NA	NA	NA	NA	NA

Table 8: Navigational warnings identified as immediate priority

- 2.6. Over the past three calendar years, the number of requests for in-force bulletins were:

2017		2018		2019	
Total	Email	Total	Email	Total	Email
28	28	92	92	68	68

Table 9: Requests for in-force bulletins

- 2.7. NAVAREA X received its *Certificate of Authorization* for Iridium GMDSS service from the IMO EGC Coordinating Panel on 10 January 2020. NAVAREA X is registered with Inmarsat and has entered a contractual agreement with Iridium (see paragraph 2.8).
- 2.8. NAVAREA X entered a contractual agreement with Iridium on 9 December 2019, and following installation of a test (beta) terminal on the Coral Knight (IMO: 9696280), has been undertaking navigational and meteorological warning testing.
- 2.9. Australia anticipates that Iridium SafetyCast services will be available in January 2021. In the interim, Australia is conducting an initial operating capability assessment of Iridium SafetyCast services using our test (beta) terminal on the Coral Knight.

3. NAVTEX Coverage:

- 3.1. There are no NAVTEX services provided within NAVAREA X. Australian Coastal (AUSCOAST) warnings are broadcast via SafetyNET using the relevant C codes.

4. Operational Issues:

4.1. For the calendar year, the following MSI was broadcast, provided by coastal states within NAVAREA X:

Coastal State/Country	Number of MSI messages	Topics/Subject
New Caledonia	34	Military exercise and navigation aids
Papua New Guinea	44	Navigation aids
Solomon Islands	0	
Vanuatu	1	Navigation aids

Table 10: Coastal state MSI broadcast

4.2. NAVAREA X has installed no new infrastructure to support the GMDSS.

4.3. NAVAREA X issue in force warnings and bulletins. Mariners can access in force warnings either by sending a blank email to ausmsi@amsa.gov.au for an automatic reply, or via web page <https://www.amsa.gov.au/safety-navigation/navigation-systems/maritime-safety-information-database>. Archived warnings are not available, except by specific request.

4.4. There has been no operational impacts on the promulgation of navigational warnings caused by the impacts of COVID-19 (see also paragraph 6.4)

5. Quality Management Survey:

5.1. Table 11 provides the results of the NAVAREA X quality management survey.

ISO 9001-2008	Yes
Promulgate “In-Force” Bulletins	Yes
Promulgate “No-Warning” Messages	Yes
Monitor Broadcast	Yes
24/7 contact information provided	Yes
Promulgate two scheduled broadcasts	Yes
Certificates for all recognised service providers	Yes
IMO Master Plan updated	Yes

Table 11: NAVAREA X quality management survey

6. Contingency Planning:

6.1. The NAVAREA X Coordinator’s primary work place is in Braddon, Australian Capital Territory, Australia and co-located with Joint Rescue Coordination Centre (JRCC) Australia. JRCC Australia is supported by a disaster recovery facility (DRF) located 13 kilometres north in Mitchell, Australian Capital Territory, Australia.

6.2. The DRF provides redundant functionality of the primary work place in a ‘hot standby’ state. In the past year, the transfer of staff and systems from the primary work place to the DRF has been regularly exercised. The next exercise is not anticipated at present due to business continuity operations (see paragraph 6.4).

- 6.3. NAVAREA X Coordinator functionality can also be carried out by the manual submission of MSI via an authenticated email account direct to Burum LES, using an internet-connected laptop/desktop, with webmail functionality. This was exercised in August 2019.
- 6.4. AMSA has implemented its business continuity planning, to reduce the impacts of COVID-19 on providing RCC services. JRCC Australia remains operational 24-hours with day and night shift at separate locations (Braddon and the DRF) since 16 March 2020. There has been no impact on the promulgation of MSI.
7. Capacity Building:
- 7.1. At the seventeenth South West Pacific Hydrographic Commission (SWPHC), there was discussion on the need for capacity building in the South-West Pacific. There is a growing awareness that states could move straight to new ways of working instead of building 'capacity' with the introduction of new technology.
- 7.2. The United States will take over from New Zealand as the capacity building coordinator for the SWPHC.
- 7.3. The SWPHC successfully submitted two capacity building bids to the eighteenth Capacity Building Sub-Committee Meeting (CBSC18) (on-line meeting on 2-3 June 2020), as part of the 2021 IHO Capacity Building (CB) work program. These were:
- MSI Regional Workshop (to be coordinated by Land Information New Zealand - LINZ)
 - Technical Workshop on Hydrographic Governance (in conjunction with SWPHC18 Meeting).
- 7.4. As part of the 2020 IHO CB work program, Sunil Kumar of Maritime Safety Authority Fiji (MSAF) completed a 'Train the Trainer' distance-learning course on MSI in January 2020. The training was put into practice with Sunil's participation in delivering the 'MSI For Managers' workshop (preceding the SWPHC17 Meeting) in Wollongong, Australia, 10-11 February 2020 (paragraph 8.3).
- 7.5. AMSA works directly with the PNG National Maritime Safety Authority (NMSA) to build institutional capacity to deliver their statutory obligations. Our focus at present covers:
- Implementation of revised domestic maritime legislation, which will implement key IMO Conventions;
 - Enhanced capacity to deliver an effective Port State Control inspection regime; and
 - Conducting a diagnostic of PNG's navigation services capabilities.
- 7.6. AMSA has agreed to a request from the IMO to support the development of the Solomon Islands Maritime Safety Administration (SIMSA) under the IMO's Integrated

Technical Cooperation Program. Two attachments within AMSA were planned for March 2020, but postponed due to COVID-19:

- Implementation of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) ; and
- Delivery of Electronic Chart Display Information System (ECDIS) for PNG Port State Control officers.

7.7. The last MSI training provided to coastal states was in 2018 (see paragraph 7.1 of WWNWS11/3/2-X).

8. Other Activities:

8.1. The seventh session of the IMO Navigation, Communication, Search and Rescue Sub-Committee (NCSR) was held in London, UK from 14 to 24 January 2020. The key outcome for NAVAREA X was consideration of cost, interoperability and interconnectivity issues associated with the introduction of additional recognized mobile satellite service providers, that will also be considered at the one-hundred and second Maritime Safety Committee (MSC).

8.2. Eighteenth Document Review Working Group was held in London, UK from 28 to 30 January 2020. The key outcomes for NAVAREA X were: progress on the EGC-API CG (refer to paragraph 8.4), continuing update to the Interim Iridium SafetyCast Service Manual and progress on the implementation and timeline for Iridium.

8.3. The seventeenth South West Pacific Hydrographic Commission (SWPHC) was held in Wollongong, New South Wales, Australia from 12 to 14 February 2020 and was preceded by a two-day technical workshop on MSI for Managers and Disaster Framework for SWPHC. Commodore Fiona Freeman (Royal Australian Navy) was the Chair of the meeting. For the next meeting, the Chair will be New Zealand and the Vice Chair will be the Solomon Islands.

8.4. The eleventh WWNWS-SC meeting established an Enhanced Group Call (EGC) Application Programming Interface (API) Correspondence Group (EGC-API CG), tasked to develop a machine-to-machine standard to support the transfer of EGC shore-to-ship information, including its required messaging instructions, between certified and registered EGC providers and recognized mobile-satellite service providers. The Chair is from Australia and the Vice Chair is from Canada.

9. NAVAREA X website:

9.1. General information on MSI, including availability and publication of navigational and meteorological warnings and services for NAVAREA/METAREA X are on AMSA's website <https://www.amsa.gov.au/safety-navigation/navigation-systems/maritime-safety-information>.

9.2. Navigational warnings are updated in real time when warnings are issued and cancelled, and can be updated by refreshing the webpage <https://www.amsa.gov.au/safety-navigation/navigation-systems/maritime-safety-information-database>. The date and time of the last update is shown on the website and any download.

9.3. A breakdown of access to web resources is detailed:

Description	Web page content	Visitors / page views	Average time on page
For paragraph 9.1	General information on MSI	4031 / 8355	2m 04s
For paragraph 9.2	Navigational warnings	23041 / 34890	3m 32s

Table 12: Unique visitors to AMSA NAVAREA webpages

There has been an 87% increase on visitors seeking general information on MSI, spending an extra 18% on the page. The database of navigational warnings has seen a 20% increase in visitors and time spent on the page.

10. NAVAREA X Contact Information:

NAVAREA X Coordinator
Australian Maritime Safety Authority
GPO Box 2181
Canberra, ACT 2601
Australia

24-hour contact
Within Australia: 1800 641 792
Outside Australia: +61 2 6230 6811
Email: rccaus@amsa.gov.au

Fax: + 61 2 6230 6868
Website: <https://www.amsa.gov.au>

11. Recommendations:

None

12. Actions requested:

The Sub-Committee is invited to note the information provided.

13. Summary:

The NAVAREA X MSI Self Assessment report provides detail on the activities of NAVAREA X for the period July 2019 to June 2020. It highlights activity in the IHO and IMO, capacity building in the South-West Pacific region and Australia's implementation of Iridium GMDSS services.

Annex(es):

A. Self Assessment Spreadsheet