

## MSI Self Assessment NAVAREA X

Submitted by Australia (Australian Maritime Safety Authority)

### SUMMARY

Executive Summary: Annual report by NAVAREA X for period July 2020 to June 2021

Action to be taken: 12

Related documents: N/A

#### 1. Background:

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

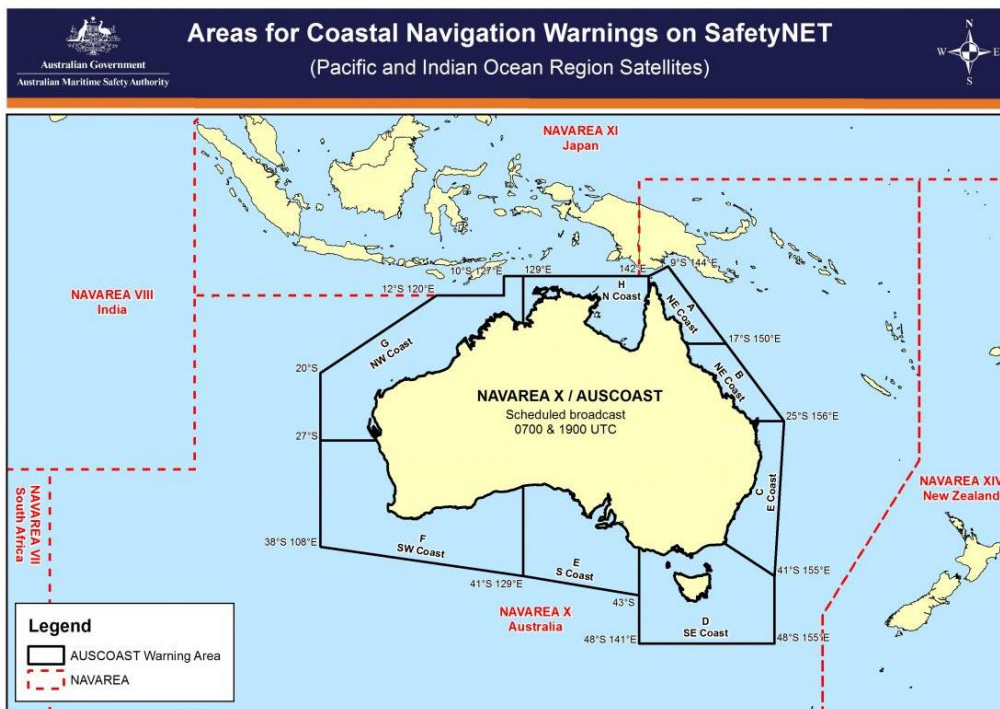
30° 00 S 080° 00 E	30° 00 S 095° 00 E	12° 00 S 095° 00 E
12° 00 S 127° 00 E	10° 00 S 127° 00 E	10° 00 S 141° 00 E
00° 00 S 141° 00 E	00° 00 S 170° 00 E	29° 00 S 170° 00 E
45° 00 S 160° 00 E		

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)<sup>1</sup> publication and the United Kingdom Hydrographic Office (UKHO) *Admiralty List of Radio Signals (ALRS) Volume 5 (NP285) - Global Maritime Distress and Safety System (GMDSS)*<sup>2</sup> 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, navigation warning MSI is provided via long-range and coastal warnings.
- 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.

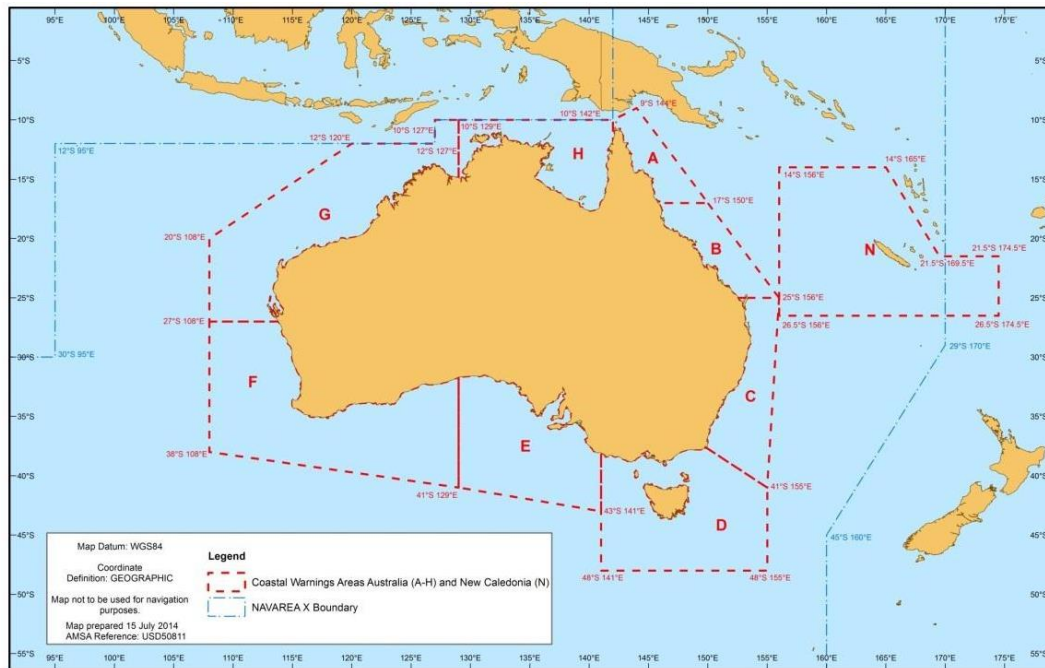
<sup>1</sup> <http://www.hydro.gov.au/prodserv/publications/ahp20.htm>

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



**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. NAVAREA X EGC broadcasts are under test via the recognised mobile satellite service provider, Iridium. NAVAREA X declared ‘on trial’ service on 23 December 2020.
- 1.8. Navigational warnings, including NAVAREA X, AUSCOAST and Sea Safety Message – refer to paragraph 1.10, are also made via high frequency (HF) radiotelephone using transmitters located at Charleville (QLD) and Wiluna (WA) under the callsign ‘VIC’ with MMSI 005030001.
- 1.9. All long-range navigational warnings (NAVAREA X) are broadcast at the scheduled times of UTC 0700 and 1900.
- 1.10. Coastal and local warnings (AUSCOAST and Sea Safety Messages) are transmitted at the scheduled times of UTC 0700 and 1900 (for SafetyNET, via the POR satellite only). 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**

1.11. Weather broadcasts for METAREA X are the responsibility of the Australian Bureau of Meteorology. Details of the SafetyNET/SafetyCast 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.

2018	2019	2020
14,656	14,952	14,881

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

1.12. METAREA X EGC broadcasts are under test via the recognised mobile satellite service provider, Iridium. METAREA X declared ‘on trial’ service on 16 February 2021. A count of SafetyCast messages promulgated for METAREA X over the past three calendar years is provided in Table 3.

2018	2019	2020
-	-	7,440

**Table 3: The total number of SafetyCast messages promulgated for METAREA X**

1.13. Local weather influences in the METAREA X region typically generate a small variation in the number of reports from year to year. Calendar year 2020 statistics are provided in Table 4.

High seas and coastal waters forecasts	9,859
Ocean wind warnings (including tropical cyclone warnings)	5,022

**Table 4: METAREA X product broadcast**

1.14. The Australian Bureau of Meteorology's Marine Weather Services National Program Office remains certified to the ISO9001:2015 standard for Quality Management Systems.

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

COUNTRY	INSTITUTION	TELEPHONE	FACSIMILE	EMAIL
Australia	Australian Maritime Safety Authority – AMSA	+61 2 6230 6811		rccaus@amsa.gov.au
New Caledonia	MRCC Noumea	+687 29 21 21	+687 29 23 03	operations@mrcc.nc
	French Hydrographic Office - SHOM	+33 2 56312303		na-om@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
	Solomon Islands Maritime Authority - SIMA	+677 7524899		clifford.olisukulu@sima.gov.sb
Vanuatu	Department of Ports and Maritime	+678 33600		trobson@vanuatu.gov.vu

**Table 5: 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 August 2021.

2.2. The GISIS GMDSS Master Plan module for Iridium SafetyCast service has been updated to show Australia is ‘under trial’ for NAV, MET and SAR services (see also paragraph 1.7 and 1.12). This information is also reflected on the IHO webpage for Iridium SafetyCast Implementation Status (<https://iho.int/en/iridium-safetycast-implementation-status>).

2.3. 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	1990
TT-3020B (Standby)	1.1	

**Table 6: NAVAREA X monitoring equipment for SafetyNET**

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

- 2.4. There is no automated process to monitor SafetyCast transmissions; however, NAVAREA X does have access (see paragraph 4.2) to an Iridium LT-3100S GMDSS System at Joint Rescue Coordination Centre (JRCC) Australia (35° 16.467' S / 149° 7.839' E).
- 2.5. Over the past three calendar years, the number of messages regarding MSI matters received were:

2018				2019				2020			
E-mail	Fax	Phone	Text	E-mail	Fax	Phone	Text	E-mail	Fax	Phone	Text
1508	-	89	-	1790	-	157	-	2033	-	143	-

**Table 7: Messages regarding MSI matters**

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

	2018		2019		2020	
	Total	Average elapsed time (minutes)	Total	Average elapsed time (minutes)	Total	Average elapsed time (minutes)
SafetyNet	466	9.8	614	10	588	10
SafetyCast	NA	NA	NA	NA	4*	NA

**Table 8: Navigational warnings issued over SafetyNET and SafetyCast**

\* Iridium SafetyCast remains 'on trial' – see paragraph 1.7.

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

	2018		2019		2019	
	Total	Average elapsed time (minutes)	Total	Average elapsed time (minutes)	Total	Average elapsed time (minutes)
SafetyNet	172	NA	194	NA	122	NA
SafetyCast	NA	NA	NA	NA	4*	NA

**Table 9: Navigational warnings identified as immediate priority**

\* Iridium SafetyCast remains 'on trial' – see paragraph 1.7.

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

2018		2019		2020	
Total	Email	Total	Email	Total	Email
92	92	68	68	63	63

**Table 10: Requests for in-force bulletins**

- 2.9. 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 a contractual agreement with Iridium.

3. NAVTEX Coverage:

3.1. There are no NAVTEX services provided within NAVAREA X. Australian Coastal (AUSCOAST) warnings are broadcast via HF radiotelephone, SafetyNET and SafetyCast 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	No. of MSI messages	Topics/Subject	Year-on-year
New Caledonia	2	Live Fire	Reduction from 34
Papua New Guinea	0	N/A	Reduction from 44
Solomon Islands	0	N/A	No change
Vanuatu	0	N/A	Reduction from 1

**Table 11: Coastal state MSI broadcast**

There has been a marked reduction in MSI broadcast by New Caledonia and Papua New Guinea during the reporting period. We are engaging with them to ascertain the reasoning.

4.2. NAVAREA X has installed an Iridium LT-3100S GMDSS System at JRCC Australia to assist in the training of NAVAREA X staff and monitoring of broadcasts.

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](mailto: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 have been no operational impacts on the promulgation of navigational warnings caused by the impacts of COVID-19.

5. Quality Management Survey

5.1. Table 12 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 <sup>*, #</sup>
24/7 contact information provided	Yes
Promulgate two scheduled broadcasts	Yes
Certificates for all recognised service providers	Yes
IMO Master Plan updated	Yes

**Table 12: NAVAREA X quality management survey**

\* There is no automated process to monitor SafetyCast transmissions, see paragraph 2.4.

# Following the transition of the IOR satellite constellation, mainland monitoring of IOR broadcasts is not possible. NAVAREA X Coordinator is investigating options to re-establish this service, see paragraph 2.3.

## 6. Contingency Planning

- 6.1. The NAVAREA X Coordinator's primary workplace 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 workplace in a 'hot standby' state. In the past year, the transfer of staff and systems from the primary workplace to the DRF has been regularly exercised due to business continuity operations (see paragraph 6.5).
- 6.3. NAVAREA X Coordinator functionality for SafetyNET can 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.
- 6.4. NAVAREA X Coordinator functionality for SafetyCast can be carried out by the manual submission of MSI via an authenticated web interface. This was exercised in October 2020.
- 6.5. AMSA has implemented its business continuity planning, to reduce the impacts of COVID-19 on providing RCC services. There has been no impact on the promulgation of MSI.

## 7. Capacity Building:

- 7.1. 18<sup>th</sup> Capacity Building Sub-Committee Meeting (CBSC18), held 2-3 June 2020, approved IHO funding for two capacity building activities in the region: MSI Regional Workshop and Technical Workshop on Hydrographic Governance. These have been deferred to 2022 due to COVID-19 pandemic. There is a preference to conduct MSI training in person, rather than remotely. The last MSI training provided to coastal states was in 2018 (see paragraph 7.1 of WNWWS11/3/2-X).
- 7.2. The pandemic impacted Papua New Guinea's (PNG) capacity building proposal for training placements for two staff at the Australian Hydrographic Office (AHO).
- 7.3. Pacific Community (SPC) Safety of Navigation Project has conducted remote training for aid to navigation (AtoN) maintenance, the simplified IALA risk assessment tool (SIRA<sup>3</sup>), and technical assistance to Tonga, Solomon Islands and Kiribati.
- 7.4. The Royal Australian Navy (RAN) Hydrographic School was renamed the Maritime Geospatial Training Centre (MGTC). Hydrographic training (Category B course) conducted in 2020 and 2021 included participants from Australia, Fiji, Malaysia and New Zealand.

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<sup>3</sup> A simple qualitative tool to enable smaller states to meet their international obligation of providing AtoN by conducting waterways risk assessments

- 7.5. A proposal to review of MSI service capabilities in PNG was initiated in 2020 under the Agency Support Arrangement (ASA) of the PNG-Australia Transport Sector Support Program (TSSP). The ASA Activity Review of PNG National Maritime Safety Authority (NMSA) current MSI service capabilities was approved by the Australian High Commission in January 2021. The activity and budget will include engagement of subject matter experts from NAVAREA X Coordinator (Australia) to review existing policies, procedures, roles and Responsibilities.
8. Other Activities:
- 8.1. Approximately 60 delegates, from all eleven Member States and four Associate Members, international/regional organizations, industry and the IHO Secretariat, attended the 18<sup>th</sup> session of the South West Pacific Hydrographic Commission (SWPHC), held virtually from 17-19 February 2021. The meeting included a session on the IHO Revised Strategic Plan to assist in formulating a SWPHC three-to-six-year Work Plan. The SWPHC18 draft minutes have been published on the IHO website (<https://iho.int/en/swphc18-2021>).
- 8.2. The SWPHC Marine Spatial Data Infrastructures (MSDI) Working Group (<https://iho.int/en/msdiwg-0>) held its inaugural meeting on 3 February 2021 and had its Terms of Reference and Rules of Procedure endorsed at SWPHC18.
- 8.3. RAN surveys planned for PNG and Solomon Islands were curtailed by COVID restrictions. The survey vessels operated a reduced survey programme with a focus on the Torres Strait.
- 8.4. PNG, in collaboration with its Primary Charting Authority (Australia), has produced the *Papua New Guinea National Tide Tables* consisting of tidal information for 16 ports. These are published in AHP11 *Australian National Tide Tables* available from: <https://www.hydro.gov.au/prodserv/publications/antt.htm>.
- 8.5. Australia (as the NAVAREA X Coordinator) continued to Chair the *IHO Enhanced Group Call (EGC) Application Programming Interface (API) Correspondence Group (EGC-API CG)*, finalising the groups work and reporting to WNWNS13 (WWNWS13-3-4-4) on 3 May 2021.
- 8.6. The 103<sup>rd</sup> session of the IMO Maritime Safety Committee (MSC) agreed to establish the establish the *Correspondence Group on Dissemination of MSI and SAR-related information*, with Australia appointed Coordinator<sup>4</sup> of the correspondence group. Further information on the commencement of activities within the correspondence group, and an invitation for NAVAREA and National Coordinators to participate in its work, is provided in WNWNS13-3-4-5.

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<sup>4</sup> Mr. Stuart Shepard  
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9. NAVAREA 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	4,117 / 7,939	2:10
For paragraph 9.2	Navigational warnings	10,640 / 38,412	3:31

**Table 13: Unique visitors to AMSA NAVAREA webpages**

There has been a 2% increase on visitors seeking general information on MSI, spending an extra 5% on the page. The database of navigational warnings has seen a 54% decrease in unique visitors, but a 10% increase in page views with time spent on the page remaining steady.

10. NAVAREA 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](mailto: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 1 July 2020 to 30 June 2021.

Annex(es):

A. Self Assessment Spreadsheet