

MSI Assessment for NAVAREA X

Reporting period from 1st January 2021 to 31st December 2021

Submitted by Australia / Australian Maritime Safety Authority

SUMMARY

Executive Summary: This paper contains the annual MSI Assessment for NAVAREA X in the reporting period from 1st January 2021 to 31st December 2021.

Action to be taken: 11

Related documents: N/A

1. General information:

1.1. NAVAREA X

As depicted in Figure 1, NAVAREA X 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.

Outline maps 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.

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.

As the NAVAREA X Coordinator, AMSA provides vessels with maritime safety information (MSI) about hazards and foreseeable dangers to safe navigation through

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>

Australia's, and our regions, marine environment. In Australia, MSI is provided via long-range and coastal warnings.

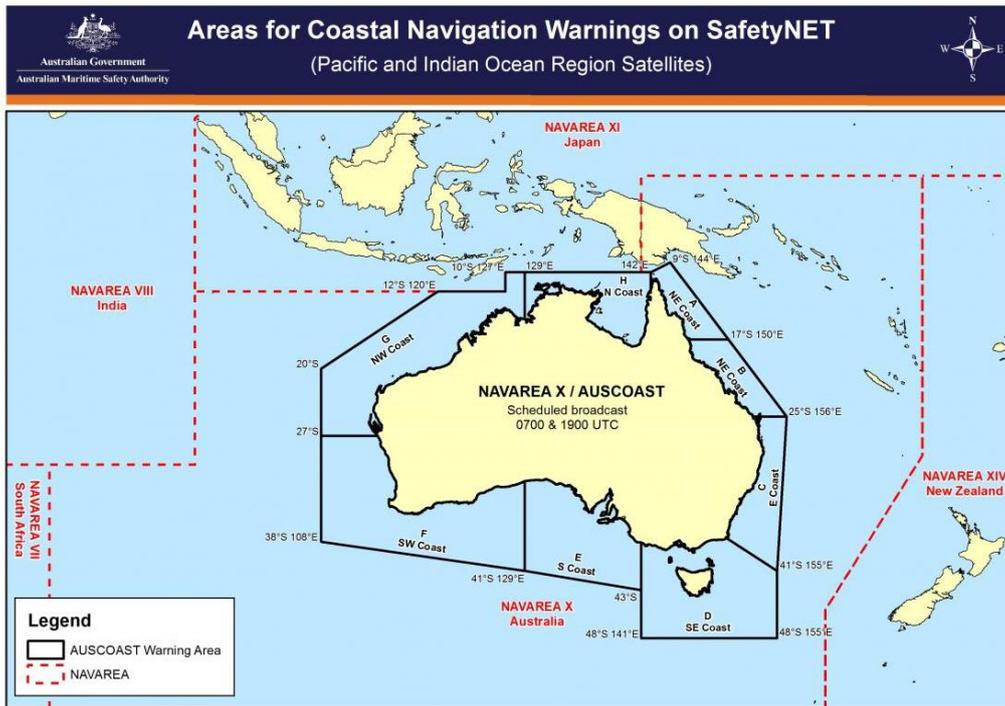


Figure 1: NAVAREA X outline

1.2. Operational points of contact for National Coordinators within the NAVAREA

COUNTRY	INSTITUTION	TELEPHONE	FACSIMILE	EMAIL
Australia	Australian Maritime Safety Authority	+61 2 6230 6811		rccaus@amsa.gov.au
		+61 2 6279 5703		stuart.shepard@amsa.gov.au
New Caledonia	MRCC Noumea	+687 29 21 21		operations@mrcc.nc
	French Hydrographic Office	+33 2 56312190 (OS sector) +33 2 56312439 (Pacific zone)		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	+677 7524899		clifford.olisukulu@sima.gov.sb
Vanuatu	Department of Ports and Maritime	+678 33600		trobson@vanuatu.gov.vu

Table 1: National Coordinators in NAVAREA X

1.3. GMDSS Master Plan:

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 in August 2021.

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. This information is also reflected on the IHO webpage for Iridium SafetyCast Implementation Status (<https://iho.int/en/iridium-safetycast-implementation-status>).

2. NAVAREA EGC broadcast and monitoring equipment or software:

2.1. Details of EGC services:

NAVAREA X EGC broadcasts are promulgated via the recognised mobile satellite service provider, Inmarsat, through Burum land earth station (LES). Messages are sent in a non-interactive manner to Burum LES for broadcast over SafetyNET via the IOR and POR satellites.

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.

Broadcast Equipment/Software	Broadcast schedule/Satellite	Manufacturer/Location (LES)/Implementation
LES	0700 and 1900, IOR and POR	Burum LES
Iridium SafetyCast	0700 and 1900	On trial
Monitoring Equipment		Manufacturer/Software
TT-3022A (Primary)		EMON Version 1.1 circa.1990
TT-3020B (Standby)		EMON Version 1.1 circa.1990
Iridium LT-3100S		Iridium

Table 2: EGC services for NAVAREA X

The Inmarsat EGC monitoring solution will no longer be repaired/replaced if it becomes unserviceable. AMSA disseminates some of its monitoring data to other NAVAREA Coordinators (for POR transmissions) and has advised them of this decision.

2.2. Other methods of promulgation:

Navigational warnings, including NAVAREA X, AUSCOAST and Sea Safety Messages, are also made via high frequency (HF) radiotelephone using transmitters located at Charleville (QLD) and Wiluna (WA) under the callsign ‘VIC’ with MMSI 005030001.

3. NAVAREA Metrics

3.1. Coastal Warnings issued by International NAVTEX or EGC coastal warning area:

Note 1: The information provided in the following tables on broadcast data (MB) is an estimation based on the repetition code(s) (C₄) of each warning.

Note 2: Coastal warnings for coastal warning areas A thru H are only promulgated over POR (C₀ = 2).

Country	NAVTEX station name	B1 Character or Coastal Warning Area	Broadcast schedule times UTC (only for EGC)	Total number of warnings broadcast	Number of warnings broadcast with urgent priority (EGC) or vital (NAVTEX)	Total number of warnings broadcast, including repetitions	Broadcast data in megabytes
Australia	-	A	0700 and 1900	79	0	1402	125.4
	-	B		20	0	732	19.1
	-	C		12	0	491	8.1
	-	D		34	0	1628	82.0
	-	E		25	0	516	20.5
	-	F		16	0	791	18.3
	-	G		112	0	4886	801.6
	-	H		50	0	369	20.9
New Caledonia	-	N	0140 and 1340	0	0	0	0

Table 3: Coastal warnings issued in NAVAREA X in 2021

Country	NAVTEX station name	B1 Character or Coastal Warning Area	Broadcast schedule times UTC (only for EGC)	Total number of warnings broadcast	Number of warnings broadcast with urgent priority (EGC) or vital (NAVTEX)	Total number of warnings broadcast, including repetitions	Broadcast data in megabytes
Australia	-	A	0700 and 1900	44	0	383	20.5
	-	B		19	0	305	7.3
	-	C		5	0	96	0.8
	-	D		23	0	1034	34.1
	-	E		6	0	169	1.3
	-	F		2	0	204	0.9
	-	G		53	0	2297	173.7
	-	H		46	0	414	23.6
New Caledonia	-	N	0140 and 1340	0	0	0	0

Table 4: Coastal warnings issued in NAVAREA X in 2022 (up to 12 August 2022)

3.2. NAVAREA Warnings broadcasts:

Note: The information provided in the following tables on broadcast data (MB) is an estimation based on the repetition code(s) (C4) of each warning.

Provider	Total number of warnings issued	Ocean Region (C₀)	Total number of warnings broadcast, including repetitions	Broadcast data in megabytes
SafetyNet	122	POR	2711	917.1
		IOR	2711	917.1
SafetyCast	-	-	-	-

Table 5: NAVAREA X broadcasts in 2020

Provider	Total number of warnings issued	Ocean Region (C₀)	Total number of warnings broadcast, including repetitions	Broadcast data in megabytes
SafetyNet	111	POR	1504	512.8
		IOR	1504	512.8
SafetyCast	-	-	-	-

Table 6: NAVAREA X broadcasts in 2021

Provider	Total number of warnings issued	Ocean Region (C₀)	Total number of warnings broadcast, including repetitions	Broadcast data in megabytes
SafetyNet	56	POR	874	151.5
		IOR	874	151.5
SafetyCast	-	-	-	-

Table 7: NAVAREA X broadcasts in 2022 (up to 8 August 2022)

3.3. Urgent EGC Warnings:

NAVAREA X did not promulgate any navigational warnings with an urgent priority.

3.4. In-force warnings.

3.4.1. In-force bulletins issued:

NAVAREA X issue in force warnings, for NAVAREA and coastal warnings in force and promulgated, on a weekly basis. These warnings are available on the AMSA website until the message is cancelled (7 days).

2020	2021	2022
53	50	29

Table 8: Number of in force warnings issued by NAVAREA X (up to 8 August 2022)

3.4.2. Requests for in force warnings:

This data is unavailable.

4. Operational Issues:

There were no operational issues encountered during 2021.

5. National Coordinator Communication:

5.1. IRCC Strategic Performance Indicator:

NAVAREA X has established and maintained regular communication with its National Coordinators. These coastal states provide MSI in accordance with the Joint IMO/IHO/WMO Manual on MSI.

Coastal State/Country	No. of messages	Subject	Year-on-year
New Caledonia	0	N/A	Reduction from 2
Papua New Guinea	0	N/A	No change
Solomon Islands	0	N/A	No change
Vanuatu	0	N/A	No change

Table 9: MSI issued by NAVAREA X on behalf of its National Coordinators

5.2. Procedures:

The NAVAREA X Coordinator contacts the National Coordinators every six months via email to confirm its contact details (this typically aligns with development of reports to the South West Pacific Hydrographic Commission (SWPHC) and WNWNS-SC) and to contribute to the annual NAVAREA X self-assessment.

5.3. Contingency Planning:

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.

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.

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.

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.

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.

6. Capacity Building:

- 6.1.1. AMSA, through the Australian Department of Foreign Affairs and Trade, is working with Papua New Guinea on several MSI, search and rescue (SAR) and Port State Control (PSC) capability projects to be delivered over the next eighteen months.
- 6.1.2. NAVAREA X is collaborating with the NAVAREA XIV Coordinator, the National Coordinator in Fiji, the SWPHC Capacity Building Coordinator and the Chair of the SWPHC to schedule in-person MSI training in 2023. Unfortunately, it was not possible to schedule this in alignment with SWPHC20.
- 6.1.3. Australia chairs the SWPHC Work Plan and Priorities WG. The WG has embarked on a SWPHC Hydrographic Leadership Programme to build capability for hydrographic leadership in the South West Pacific region, and to recognise the significant contribution that Pacific Island Countries can offer in this domain. The programme will support a diverse group of approximately 15 individuals with targeted training in technical and ‘soft’ skills, mentoring and opportunities to engage internationally.
- 6.1.4. In August 2022 two staff of the Fiji Hydrographic Office attended training in nautical cartography at the Australian Hydrographic Office (AHO).
- 6.1.5. The AHO is assisting the Solomon Islands Maritime Authority (SIMA) in developing their Hydrographic Office Instructions and Standards for Hydrographic Surveys. These will provide useful guidance on developing survey specifications for hydrographic work in Solomon Islands.
- 6.1.6. Royal Australian Navy (RAN) Maritime Geospatial Training Centre (MGTC) conducts hydrographic training at three levels, Basic, Intermediate and Advanced (H2 - Category B course). In 2021 and 2022 the Advanced Level (H2) Courses comprised students from Australia, New Zealand, Fiji, Indonesia and Malaysia.

7. Other Activities:

- 7.1.1. The NAVAREA X Coordinator participated in the 105th session of the IMO Maritime Safety Committee (MSC 105) which met 20 – 29 April 2022, particularly focussed on *Cost implications for maritime safety information (MSI) and search and rescue (SAR) information providers concerning the recognition of multiple GMDSS mobile satellite services*. This work was informed by input from the associated correspondence group formed at MSC 103 and coordinated by Australia.

Following considerable deliberation in Plenary, the Committee agreed that once a mobile satellite service was recognised by the Organization, it must then be used by all information providers covering its service area. The NCSR Sub-Committee was instructed to consider any necessary amendments to

existing MSI related instruments, including the SOLAS Convention, to clarify this decision.

The working group was unable to conclude on an option to address the cost implications. Therefore, the NCSR Sub-Committee was instructed to further consider technical solutions for the dissemination and reception of MSI and SAR related information over multiple services, including interoperability issues and broadcast monitoring, with a view to addressing the operational and financial burden of disseminating the information to ships.

- 7.1.2. The NAVAREA X Coordinator participated in the ninth session of the IMO Sub-Committee on Navigation, Communications and Search and Rescue (NCSR 9), held from 21 to 30 June 2022, as Chair of WG 3 on SAR and other technical matters.

As noted in section 7.1.1, NCSR 9 further considered the dissemination of Maritime Safety Information and Search and Rescue related information over multiple recognised mobile satellite services and agreed to establish a correspondence group to be again coordinated by Australia.

Other relevant matters at NCSR 9 included:

- recognition of China's Beidou Mobile Satellite Service, subject to completion of all some technical and operational issues.
- finalising IMO's position on relevant agenda items for the World Radiocommunication Conference 2023; and
- review and update of the IMO Performance Standards for ECDIS (Electronic Chart Display and Information System) standards and ECDIS guidance, which allows for transition to new digital chart standards.

- 7.1.3. The NAVAREA X Coordinator participated in the 20th session of the IHO Document Review Working Group (DRWG20), which met virtually from 21 to 24 March 2022, and a pre-DRWG meeting held 15 to 17 February 2022.

- 7.1.4. The NAVAREA X Coordinator participated in the meeting of the IMO Enhanced Group Call (EGC) Coordinating Panel, held 10 November 2021.

- 7.1.5. Australia's active participation in the South West Pacific Hydrographic Commission (SWPHC) is led by the AHO. The 19th SWPHC Meeting was held virtually from 23 to 25 February 2022. National Reports were summarised with the respective achievements and challenges, enhancing continued investment in technology, partnerships and collaboration for data collection, engagement with the Marine Spatial Data Infrastructure groups and the contribution with the Seabed2030 Project.

NAVAREA Coordinators from areas X, XI and XIV presented their reports. Members were encouraged to nominate points of contact to NAVAREA XI and a standardized template for MSI Reports was requested from the IHO.

The Seabed 2030 South and West Pacific Ocean Regional Centre reported that in the region 13% of area has data collected. The Centre has been engaged with countries to discover and exchange data and working with vessels to plan transits to maximise ‘mapping the gaps’ and ensuring private vessels provide data back to the data’s sovereign nation.

7.1.6. Australia’s involvement in various IHO activities is listed in the table below:

	Meeting	Chair/ Vice Chair	Member/ Associate/ Observer
	IHO Council		M
HCA	Hydrographic Commission on Antarctica		M
SWPHC	South-West Pacific Hydrographic Commission SWPHC International Charting Coordination WG SWPHC Marine Spatial Data Infrastructure WG SWPHC Work Plan & Priorities WG SWPHC Strategic Performance Indicators (SPI) WG	Chair Vice- Chair Chair	M M M M M
NIOHC	North Indian Ocean Hydrographic Commission		A
EAHC	East Asian Hydrographic Commission		O
SAIHC	Southern Africa and Islands Hydrographic Commission		O
ENCWG	ENC Working Group		M
DQWG	Data Quality Working Group		M
MSDIWG	Marine Spatial Data Infrastructure Working Group		M
HSPT	S-44 Hydrographic surveys Project Team		M
TWCWG	Tidal, Water Level and Currents Working Group		M
WEND	World-Wide Electronic Navigational Chart Database		M
WWNWS-SC	World-Wide Navigational Warnings Service Sub-Committee		M
ABLOS	Advisory Board on the Law of the Sea		O
CSBWG	Crowd Sourced Bathymetry Working Group		O
S-100	S-100 Working Group		M
S-101	Project Team	Vice Chair	M
S-104	Development Group		M
S-111	Development Group		M
S-121	Development Group		M
S-124	Development Group		M
S-129	Development Group		M
S-412	Development Group		M
IBSC	International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers	Chair	M

	Meeting	Chair/ Vice Chair	Member/ Associate/ Observer
GEBCO GC	General Bathymetric Chart of the Ocean Guiding Committee		M
SCUFN	GEBCO Sub Committee on Undersea Feature Names		M

Table 10: 7.1.6. Australia's involvement in various IHO activities

8. NAVAREA Website:

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>.

NAVAREA X, AUSCOAST and Sea Safety Message warnings are updated in real time when they 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. Historical warnings are not available.

A breakdown of access to web resources is detailed:

Web page content	Visitors / page views		Average time on page	
	2020	2021	2020	2021
General information on MSI	3,931 / 7,662	4,381 / 8,529	2:09	2:05
Navigational warnings	10,444 / 36,825	11,166 / 39,934	3:30	3:40

Table 10: Unique visitors to AMSA NAVAREA webpages

There has been an 11% increase in visitors seeking general information on MSI, spending 3% less time on the page. The database of navigational warnings has seen a 7% increase in unique visitors, spending 5% more time on the page.

9. NAVAREA Contact Information:

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

24-hour operational 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>

10. Recommendations:

None

11. Actions requested:

WWNWS-SC is invited to note the MSI Assessment for NAVAREA X, and take action as required.

12. Summary:

This MSI Assessment provides detail on the activities of NAVAREA X for the reporting period 1 January 2021 to 31 December 2022. The NAVAREA X Coordinator is a proactive participant and coordinator of international and regional activities associated with the WWNWS. NAVAREA X has maintained regular communication with its National Coordinators.

Annex(es):

A. MSI Assessment Spreadsheet