MSI Assessment for NAVAREA X

Reporting period from 1 January 2023 to 31 December 2023

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 1 January 2023 to 31 December 2023.

Action to be taken: 13

Related documents: WWNWS15-5.3.2

1. General information

1.1. NAVAREA X and Australian National Coordinator

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 and Australian National 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.

1.2. NAVAREA X

As depicted in Figure 1, NAVAREA X extends from the Antarctic coast at longitude 080º 00 E then,

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		

then to the Antarctic coast at longitude 160° 00 E.

1.3. Coastal warning areas

NAVAREA X includes eight (8) coastal warning areas administered by the National Coordinator for Australia (A thru H) shown in Figure 1. A further coastal warning area (N) (shown in Figure 2) is administered by the National Coordinator for France (New Caledonia).

The coordinates for coastal warning areas A thru H and N are provided in Table 1.

Note 1: Where the coastal warning area C and D coordinates meets the Australian coast require confirmation.

Note 2: The coordinates of coastal warning area N intersect the boundary between NAVAREA X and XIV at 170° 00 E.

COASTAL WARNING AREA	COORDINATES
A	Australian coast at longitude 142° 00 E, thence 10° 00 S 142° 00 E, 09° 00 S 144° 00 E, 17° 00 S 150° 00 E, thence to the Australian coast at latitude 17° 00 S.
B	Australian coast at latitude 17° 00 S, 17° 00 S 150° 00 E, 25° 00 S 156° 00 E, thence to the Australian coast at latitude 25° 00 S.
C	Australian coast at latitude 25° 00 S, thence 25° 00 S 156° 00 E, 41° 00 S 155° 00 E, thence to the Australian coast at 37° 39.8 S 149° 54 E.
D	Australian coast at 37° 39.8 S 149° 54 E, thence 41° 00 S 155° 00 E, 48° 00 S 155° 00 E, 48° 00 S 141° 00 E, thence to the Australian coast at longitude 141° 00 E.
E	Australian coast at longitude 141° 00 E, thence 43° 00 S 141° 00 E, 41° 00 S 129° 00 E, thence to the Australian coast at longitude 129° 00 E.
F	Australian coast at longitude 129° 00 E, thence 41° 00 S 129° 00 E, 38° 00 S 108° 00 E, 27° 00 S 108° 00 E, thence to the Australian coast at latitude 27° 00 S.
G	Australian coast at latitude 27° 00 S, thence 27° 00 S 108° 00 E, 20° 00 S 108° 00 E, 12° 00 S 120° 00 E, 12° 00 S 127° 00 E, 10° 00 S 127° 00 E, 10° 00 S 129° 00 E, thence to the Australian coast at longitude 129° 00 E.
H	Australian coast at longitude 129° 00 E, thence 10° 00 S 129° 00 E, 10° 00 S 142° 00 E, thence Australian coast at longitude 142° 00 E.
N	14° 00 S 156° 00 E, 14° 00 S 163° 30 E, 21° 30 S 169° 30 E, 21° 30 S 174° 30 E, 26° 30 S 174° 30 E, 26° 30 S 156° 00 E, 14° 00 S 156° 00 E.

Table 1: Coordinates for coastal warning areas in NAVAREA X

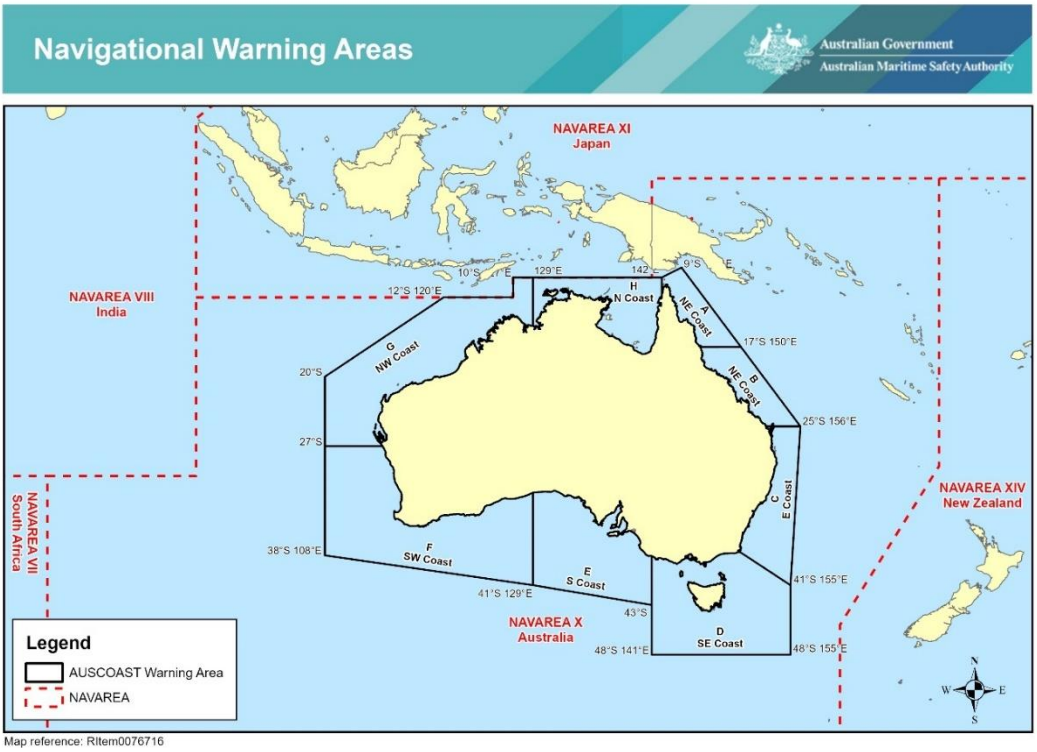

Figure 1: NAVAREA X outline and coastal warning areas A thru H

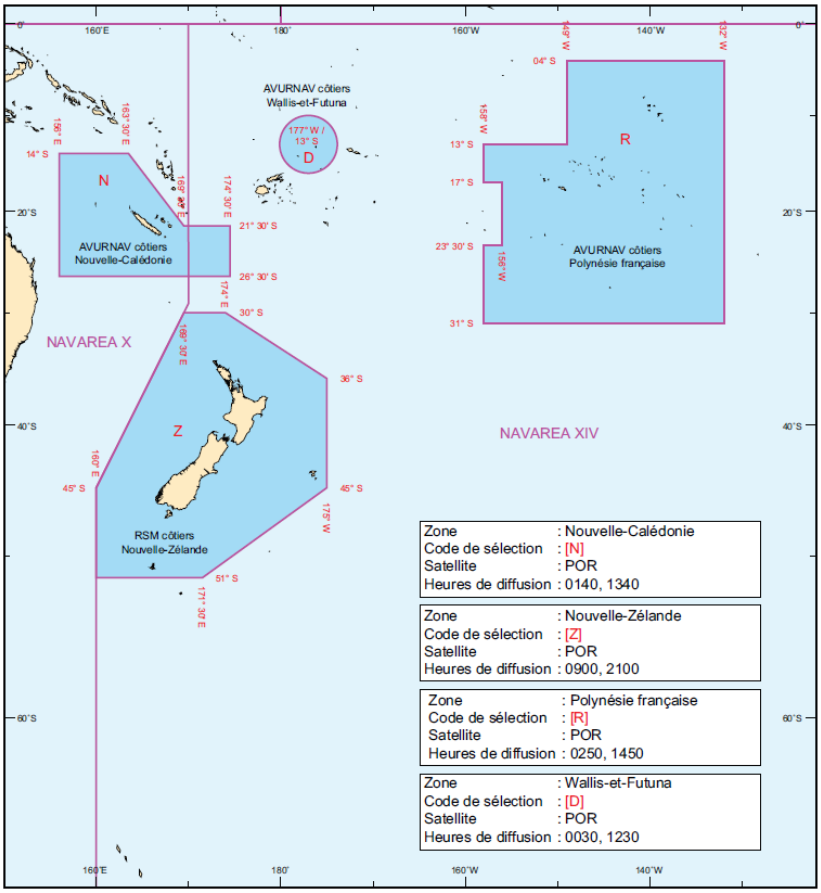

Figure 2: Coastal warning area N

1.4. 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
France (New Caledonia)	MRCC Noumea	+687 29 21 21		operations@mrcc.nc
	Service hydrographique et océanographique de la Marine (SHOM)	+33 2 56312192 (OS sector) +33 2 56312439 (Pacific zone)		infonaut-om@shom.fr
Papua New Guinea	PNG MRCC	+675 3212969 +675 73517017	+675 3210484	PNGMRCC@nmsa.gov.pg
Solomon Islands	MRCC Honiara	+677 21609 +677 27685		mrcc@solomon.com.sb
	Solomon Islands Maritime Authority	+677 7479869		john.dalomae@sima.gov.sb
Vanuatu	Department of Ports and Maritime	+678 33600		trobson@vanuatu.gov.vu alan.ngwele@gmail.com

Table 2: National Coordinators within the NAVAREA

1.5. GMDSS Master Plan

The GISIS GMDSS Master Plan module has been checked in accordance with International Maritime Organization (IMO) Circular GMDSS.1/Circ.23. The NAVAREA and METAREA X Coordinators are collaborating to review and update the information contained in GISIS to more accurately reflect broadcast areas and transmission schedule(s). The last update was made in July 2023 to show Australia is 'operational' for Iridium SafetyCast NAV, MET and SAR services.

2. NAVAREA EGC broadcast and monitoring equipment or software

2.1. Details of EGC services

NAVAREA X EGC broadcasts are promulgated via all operational recognised mobile satellite service providers. SafetyNet broadcasts are sent in a non-interactive manner (email) to Burum LES for broadcast over the Inmarsat IOR and POR satellites. SafetyCast broadcasts are sent via web interface for broadcast over the Iridium constellation. EGC is broadcast on-receipt then in accordance with the broadcast schedule.

Note: Coastal warnings A thru H on the SafetyNET service are only promulgated over POR.

Broadcast Equipment/Software	**Broadcast schedule/Satellite**	**Location (LES) and/or implementation**
LES	0700 and 1900, IOR and POR	Burum LES via email
Iridium SafetyCast	0700 and 1900	Web interface

Monitoring Equipment	**Manufacturer/Software**
TT-3020B (Primary)	EMON Version 1.1 circa.1990
TT-3022A (Cold standby)	EMON Version 1.1 circa.1990
Iridium LT-3100S	Iridium

Table 3: EGC services for NAVAREA X

The SafetyNET 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. NAVTEX

There are no NAVTEX services provided within NAVAREA X; however, as reported at WWNWS15, a national coordinator within NAVAREA X has commenced considerations to operate two NAVTEX stations to provide coverage of its waterways. No additional update is available.

2.3. Other methods of promulgation

Navigational warnings for NAVAREA X and coastal warning areas A thru H 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: Coastal warnings for coastal warning areas A thru H, and N, on the SafetyNET service are only promulgated over POR (C_0 = 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	72	0	1805	-
	-	B		26	0	481	-
	-	C		16	0	732	-
	-	D		31	0	1342	-
	-	E		20	0	277	-
	-	F		13	0	193	-
	-	G		110	0	4701	-
	-	H		58	0	1698	-
France (New Caledonia)	-	N	0140 and 1340	42	21	63	-

Table 4: Coastal warnings issued in NAVAREA X in 2023

Figure 3 shows the volume of coastal warnings issued by calendar year. It shows that in general, the volume of coastal warnings by coastal warning area is consistent.

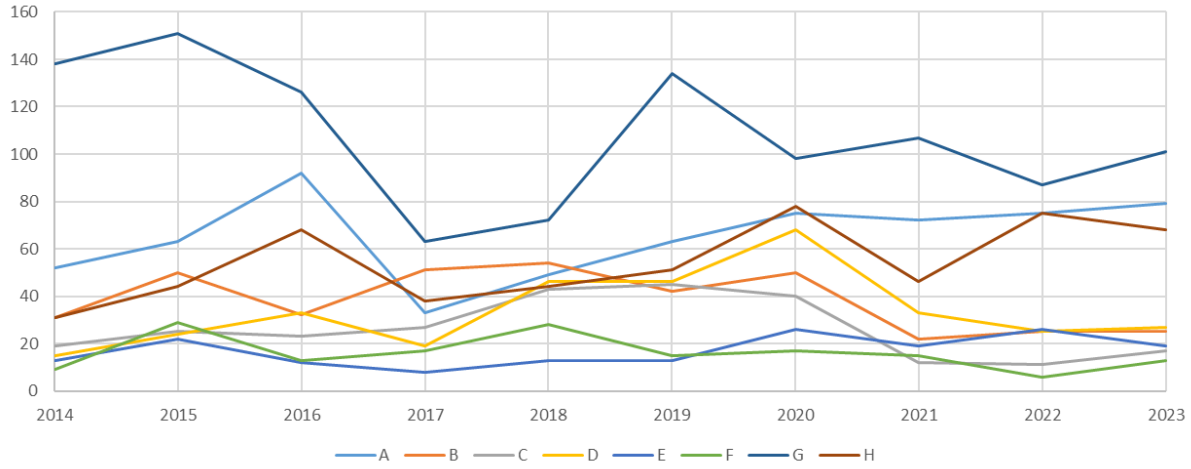

Figure 3: Coastal warnings (A thru H) by calendar year

Chart 1 provides an overview of the type of hazard which results in a coastal warning being issued.

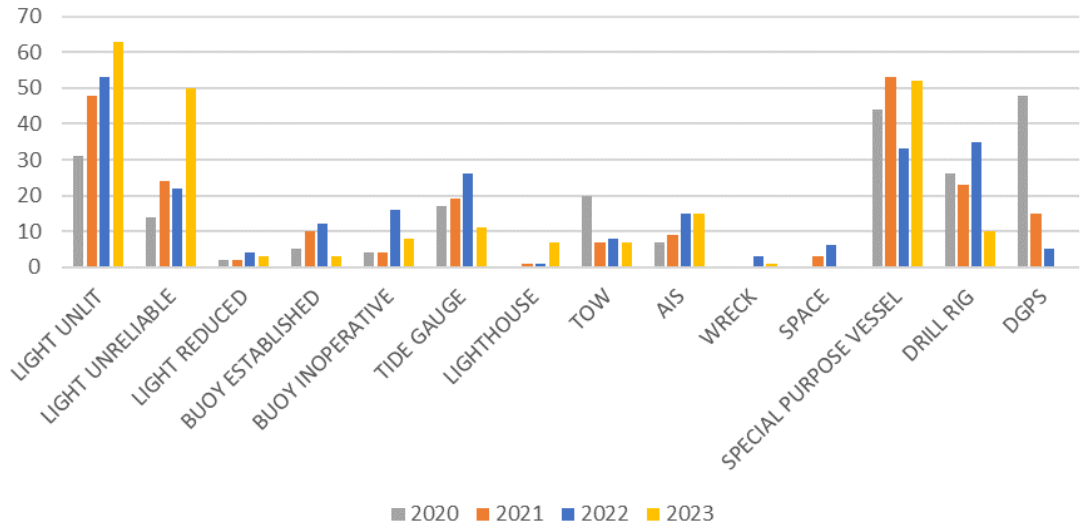

Chart 1: Count of coastal warning by type of hazard

3.2. NAVAREA warnings broadcasts

Note 1: The information provided in the following tables on broadcast data (MB), where available, is an estimation based on the repetition code(s) (C_4) of each warning.

Note 2: SafetyCast services were declared operational on 010001 UTC July 2023.

Provider	Total number of warnings issued	Ocean Region (C_0)	Total number of warnings broadcast, including repetitions	Broadcast data in megabytes
SafetyNet	75	POR	1129	-
		IOR	1129	-
SafetyCast	38	-	-	-

Table 5: NAVAREA X broadcasts in 2023

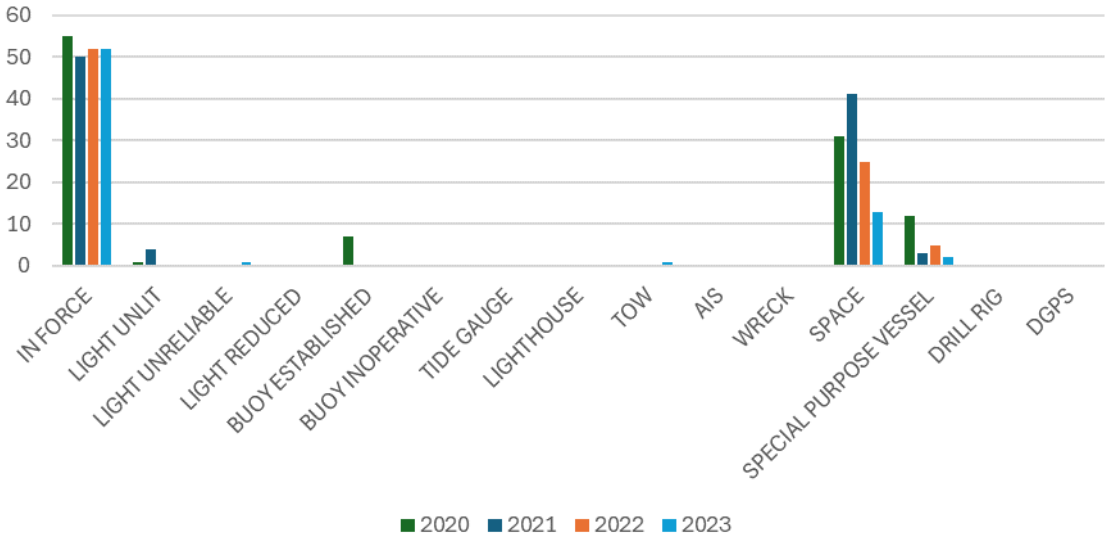

Chart 2: Count of NAVAREA X warning by type of hazard

Chart 2 provides an overview of the type of hazard which results in a NAVAREA X warning being issued. There is a steady decrease is space debris/operation warnings and special purpose vessel operations have stabilised. Whilst space debris/operation has declined, larger areas and longer windows supporting more launches are being requested.

3.3. Urgent EGC Warnings

There were no navigational warnings broadcast with an urgent priority.

3.4. VITAL Coastal Warnings

Not applicable, see paragraph 2.2.

3.5. In-force warnings

3.5.1. In-force bulletins issued

NAVAREA X issue in force warnings, for NAVAREA and coastal warnings (A thru H) in force and promulgated, on a weekly basis. These warnings are available on the AMSA website until the messages are self-cancelled (7 days).

2020	2021	2022	2023
53	50	50	54

Table 6: Number of in force warnings issued by NAVAREA X

3.5.2. Requests for in force warnings

This data is unavailable.

3.6. Arctic navigational warnings broadcast by HF NBDP

Not applicable.

4. Operational Issues

The offices of the NAVAREA X Coordinator have relocated to 18 Marcus Clarke St, Canberra, ACT, Australia. Transition of the facilities exercised AMSA's back-up arrangements.

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	Comment
France (New Caledonia)	63	-	-	See Table 1 for details of coastal warning area N
Papua New Guinea	0	N/A	No change	
Solomon Islands	0	N/A	No change	
Vanuatu	0	N/A	No change	

Table 7: Navigational warnings 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 WWNWS-SC and to contribute to the annual NAVAREA X self-assessment.

6. Contingency Planning

The NAVAREA X Coordinator's primary workplace is in Canberra, 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.

7. S-124 Navigational Warnings Development

7.1. Based on current progress, NAVAREA X is unlikely to declare operational S-124 services by 1 January 2026.

7.2. Australia has been actively engaged in the development and early implementation of the S-124 product specification. We have developed an initial prototype utilizing large language models (LLMs) for AI-based auto conversion of S-53, intended for demonstration purposes. This prototype can deliver S-124 in real-time via SECOM (IEC 63173-2) and includes an interactive WebUI for visualizing the datasets on an ENC.

7.3. We are collaborating closely with Finland and Canada, including the S-124 Project Team Chair, to test the interoperability of our S-124 services. This collaboration is part of the Open Digital Incubator initiative, which focuses on the verification and

validation of digital maritime services within the context of e-Navigation and is advised by IALA. Additionally, we have provided feedback on the product specification and are actively integrating S-124 into Australia's national S-100 testbed.

7.4. In November 2022 the Australian Hydrographic Office (AHO) hosted the inaugural meeting of Australia's S-100 Working Group (S-100WG). The S-100WG was stood up to take a leadership role in the creation, implementation and oversight of the introduction of S-100 based services in Australia and New Zealand by developing documentation, creating national guidelines and policies, defining roles, responsibilities and controls that will harmonize the e-Navigation data chain.

The S-100WG is responsible for coordinating and managing the timely and effective implementation of a broad range of S-100 products and services in the region. The S100WG is working towards implementing an S-100 Test Bed area this calendar year to bring together a broad range of S-xx prototypes and not only learn their aggregated benefit but also understand how to operationalise their service.

8. Capacity Building

8.1. NAVAREA X and XIV coordinated the **Regional Capacity Building Workshop on Maritime Safety Information** (MSI) which was held in Fiji, July 2023. This was also reported last year (WWNWS15-5.3.2). The workshop aimed to:

- To increase flow of MSI to the NAVAREA X and XIV Coordinators and grow expertise within the PICTs to fulfil National Coordinator roles.
- Endeavour to be informed of events that could significantly affect the safety of navigation within their coastal region.
- Draft navigational warnings in accordance with the Joint IMO/IHO/WMO Manual on MSI.
- Forward MSI for further promulgation to the NAVAREA Coordinator using the quickest means possible.

8.2. Further discussions are required to determine the future of regional MSI training courses (especially due to funding concerns) and whether opportunities to utilise a different delivery model could improve the ability to hold these capacity building activities within NAVAREA X and XIV. Due to competing commitments and ability to coordinate funding arrangements, the intentions of NAVAREA X and XIV to host/facilitate an MSI capacity building training activity in 2025 will be postponed until 2026 at this stage.

9. Other Activities

9.1. The AHO attended a **Technical Workshop on Disaster Response** was held in Fiji, February 2023. The workshop aimed to:

- Exercise and refine the SWPHC Disaster Response Framework.
- Are familiar with necessary readiness and response actions.
- Are familiar with specific communication requirements.

9.2. Papua New Guinea (PNG) National Maritime Safety Authority (NMSA) hosted an **Awareness Workshop on Hydrography & Maritime Safety Information** in August 2023. The AHO attended the Awareness Workshop on Hydrography. The workshop set out to achieve the aim of raising awareness and support for NMSA about hydrography in support of safety of navigation and to enable dialogue with stakeholders on the requirements for a national hydrographic service.

10. 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. This webpage was recently updated to improve the information available to mariners on availability of EGC services in Australia with the operationalisation of Iridium SafetyCast services.

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 / total page views**		**Average time on page**	
	2022	**2023**	**2022**	**2023**
General information on MSI	5,495 / 12,381	4,659 / 16,730	1:33	0:52
Navigational warnings	11,627 / 55,422	9,712 / 67,458	1:56	0:51

Table 8: Unique visitors to AMSA NAVAREA webpages

There has been an 15% decrease in visitors seeking general information on MSI, spending 44% less time on the page. Despite this, total page views have increased 35%. With little change to the regulatory framework for MSI in Australia, this is not unexpected.

The live display of navigational warnings has seen a 16% decrease in unique visitors, spending 54% less time on the page. Despite this, total page views have increased 22%. Potentially, there are less users using the service more often.

11. NAVAREA contact information

Stuart Shepard
NAVAREA X Coordinator
Australian Maritime Safety Authority
GPO Box 2181, Canberra, ACT, Australia, 2601
Email: stuart.shepard@amsa.gov.au
Website: https://www.amsa.gov.au

24-hour operational contact
Joint Rescue Coordination Centre (JRCC) Australia
Within Australia: 1800 641 792
Outside Australia: +61 2 6230 6811
Email: rccaus@amsa.gov.au

12. Recommendations

None.

13. Actions requested

Note the information provided, and take action as required.

14. Summary

NAVAREA X and the National Coordinator for Australia are fulfilling its responsibilities for promulgation of navigational warnings in accordance with IMO and IHO guidelines and regulation. The NAVAREA X Coordinator is actively engaged internationally to promote the WWNWS and the service it provides, particularly, improvement of the services to sustain them in the future.

Australia is progressing implementation of S-100 and S-124, though progress is unlikely to result in a declared service by 1 January 2026. Due to competing commitments and ability to coordinate funding arrangements, the intentions of NAVAREA X and XIV to host/facilitate an MSI capacity building training activity in 2025 will be postponed until 2026 at this stage.

Annex(es):

A. Self Assessment Spreadsheet