

MSI Assessment for NAVAREA X

Reporting period from 1 January 2022 to 31 December 2022

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 2022 to 31st December 2022. The Iridium SafetyCast service was declared ‘operational’ on 1 July 2023 via Australian Notice to Mariner for all SafetyCast services including navigational warnings.

Action to be taken: 12

Related documents: WWNWS15-5.3.2 – NAVAREA X/XIV MSI training report
WWNWS15-3.1.3 – Developments in GMDSS services, including guidelines on MSI
SWPHC20-10B – NAVAREA X Coordinator report to SWPHC

1. General information

1.1. NAVAREA X 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 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 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.

1.3. Coastal warning areas

As depicted in Figure 1, NAVAREA X includes eight (8) coast warning areas administered by the National Coordinator for Australia (A thru H). A further coastal warning area (N) (not shown in Figure 1) 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: The coordinates of coastal warning areas C and D where it meets the Australian coast at 37° 39.8 S 149° 54 E require confirmation.

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	<i>Not available</i>

Table 1: Coordinates for coastal warning areas in NAVAREA X

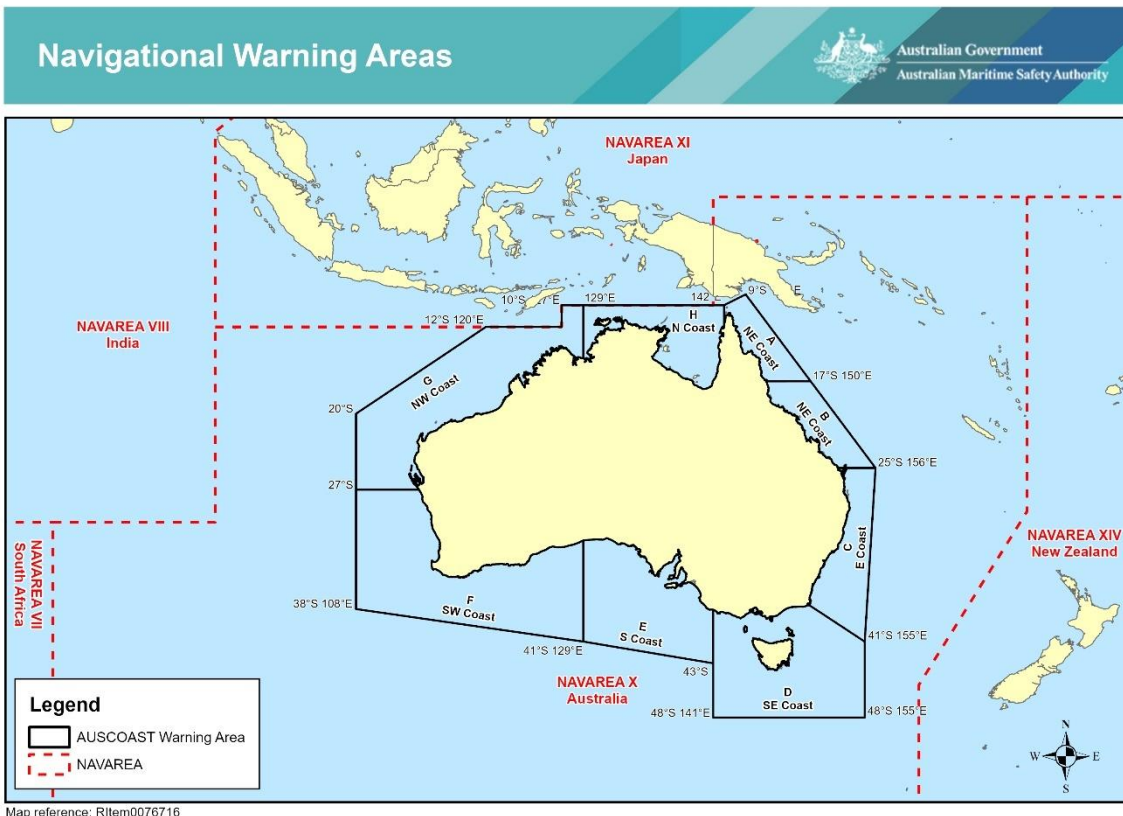


Figure 1: NAVAREA X outline

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
	French Hydrographic Office	+33 2 56312190 (OS sector) +33 2 56312439 (Pacific zone)		dops-psm-na-omer-infonaut@shom.fr infonaut-om@shom.fr (effective 1 September 2023)
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 7524899		clifford.olisukulu@sima.gov.sb
Vanuatu	Department of Ports and Maritime	+678 33600		trobson@vanuatu.gov.vu alan.ngwele@gmail.com

Table 2: National Coordinators in NAVAREA X

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 and is up to date. The last update was made in July 2023 to show Australia is ‘operational’ for Iridium SafetyCast NAV, MET and SAR services.

The Iridium SafetyCast service was declared ‘operational’ on 1 July 2023 via Australian Notice to Mariner. 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 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 satellite. EGC is broadcast on-receipt then in accordance with the broadcast schedule.

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-3022A (Primary)		EMON Version 1.1 circa.1990
TT-3020B (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, a national coordinator within NAVAREA X has commenced considerations to operate two NAVTEX stations to provide coverage of its waterways. The NAVAREA X Coordinator in collaboration with the NAVTEX Coordinating Panel Chair, is helping to facilitate this consideration.

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

(Queensland) and Wiluna (Western Australia) 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 and is only applicable to SafetyNET broadcasts.

Note 2: Coastal warnings for coastal warning areas A thru H on the SafetyNET service 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	78	0	665	61.7
	-	B		25	0	1182	36.5
	-	C		10	0	215	2.9
	-	D		23	0	1371	45.2
	-	E		17	0	348	9.4
	-	F		6	0	255	2.7
	-	G		84	0	5077	611.6
	-	H		80	0	1052	104.0
France (New Caledonia)	-	N	0140 and 1340	<i>Not reported</i>			

Table 4: Coastal warnings issued in NAVAREA X in 2022

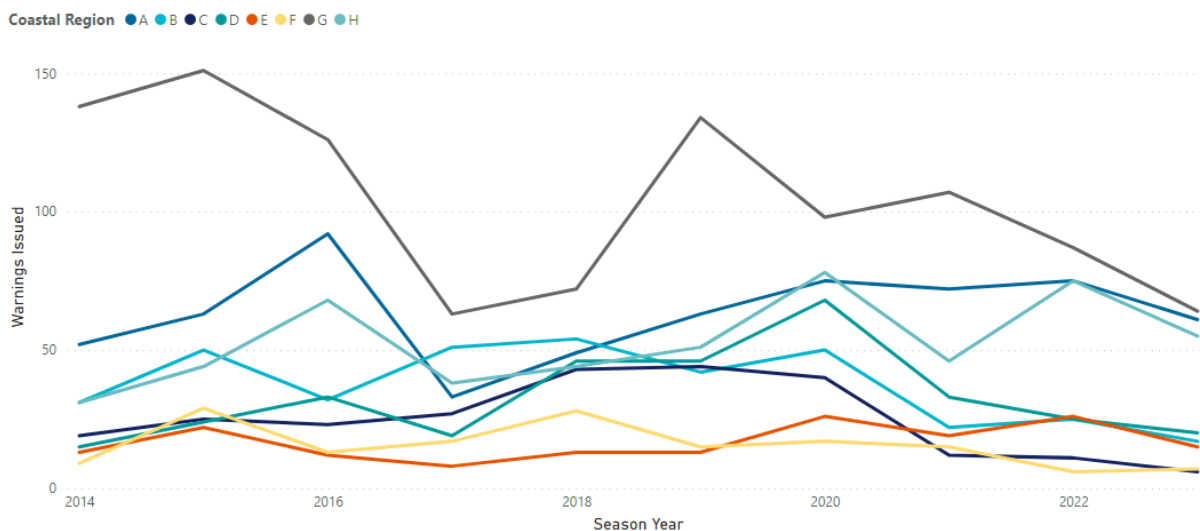


Figure 2: Coastal warnings (A thru H) by calendar year

Figure 3 provides an overview of the type of hazard which results in a coastal warning being issued. A spike for DGPS in 2020 was due to cessation of the service, the deployment of tide gauges is increasing, and there is a continuing increase in lights being unlit.

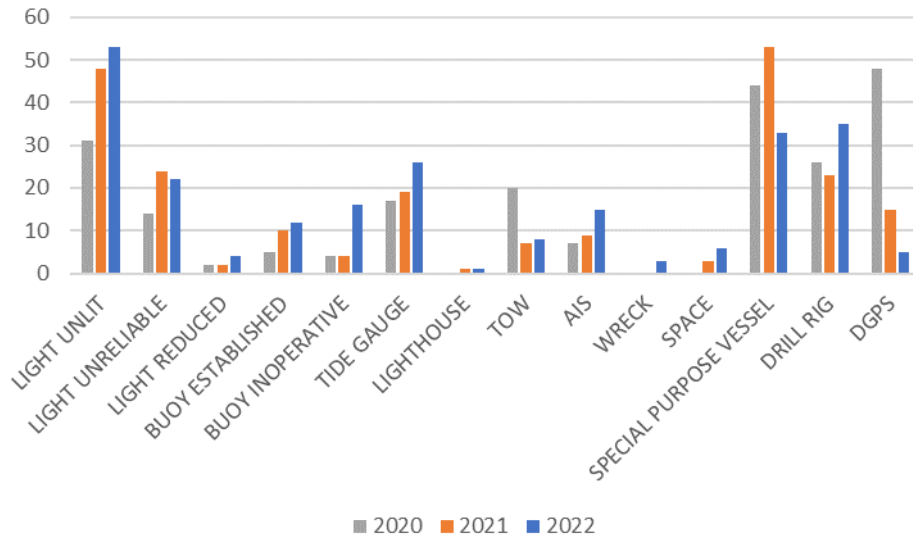


Table 3: Count of coastal warning by type of hazard

3.2. NAVAREA warnings broadcasts

Note: The information provided in the following tables on broadcast data (MB), where available, 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	182	POR	1483	410.3
		IOR	1483	410.3
SafetyCast	-	-	-	-

Table 5: NAVAREA X broadcasts in 2022

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 message is cancelled (7 days).

2020	2021	2022
53	50	50

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

3.5.2. Requests for in force warnings:

This data is unavailable.

4. Operational Issues:

Nil for 2022 or to-date for 2023. During mid-2024, the offices of the NAVAREA X Coordinator will be moving (though remaining in Canberra, Australia). Transition of the facilities is currently being coordinated, with back-up arrangements expected to be operationalised during this period. The status and any impact will be reported next year.

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)	0	N/A	No change	See Table 4 for details of coastal warning area N
Papua New Guinea	0	N/A	No change	17 local warnings were issued
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 WNWNS-SC and to contribute to the annual NAVAREA X self-assessment.

6. 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.

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. MSI training was provided from 25 to 27 July 2023 to Solomon Islands, Papua New Guinea, Vanuatu, Fiji, Palau, Marshal Islands, Kiribati, Cook Islands, Micronesia, Samoa and Tonga as Coastal States within and adjacent to NAVAREA X and XIV. A detailed report is provided in WNWNS15-5.3.2.

- 7.2. Australia has supported two Fiji Hydrographic Service personnel to undertake the S8 nautical cartography training program.
 - 7.3. Australia has partnered with Fiji on hydrographic capacity building projects. During FY 22-23, Australia supported the set to work of the Republic of Fiji hydrographic ship, the RFS Volasiga, which was then used for supported hydrographic surveys. Australia will continue to provide hydrographic support in FY 23-24 to continue training and development of Fiji Hydrographic Service personnel.
 - 7.4. Nautical charting projects were completed for Port Noro in Solomon Islands, and Kavieng in Papua New Guinea. Australia also participated in a Tri-Partite hydrographic surveying project in Solomon Islands with the Japan International Co-operation Agency (JICA), Solomon Islands Maritime Authority (SIMA) and the Australian Hydrographic Office (AHO).
 - 7.5. Royal Australian Navy (RAN) Maritime Geospatial Training Centre (MGTC) conducts hydrographic training at three levels, Basic, Intermediate and Advanced (H2-Category B Course). In 2022 and 2023 the Advanced Level (H2) Courses comprised students from Australia, New Zealand, Fiji, Tonga and Indonesia.
8. Other Activities:

8.1. Joint IMO/ITU Experts Group on Radiocommunication Matters (IMO/ITU EG)

The NAVAREA X Coordinator participated in the eighteenth meeting of the IMO/ITU EG held 5 to 9 December 2022, with a particular interest in progressing the work of the correspondence group on *Dissemination of MSI and SAR-related information* which was coordinated by Australia (Stuart Shepard). The continuation on discussions related to revision of resolution A.1001(25)¹ were also of relevance, noting NCSR 10 agreed to continue to progress this work intersessionally.

8.2. South West Pacific Hydrographic Commission (SWPHC)

The twentieth meeting of SWPHC was held 14 (remote) and 22-24 February 2023, with the NAVAREA X Coordinator presenting the NAVAREA X Coordinator report (SWPHC20-10B)². Progress made by NAVAREA X for S-124 was noted. The NAVAREA X Coordinator advised that Australia is continuing to progress implementation of Iridium SafetyCast services in accordance with IHO and IMO requirements.

A Workshop on Hydrographic Governance was held at the same venue on 20-21 February.

The twenty-first SWPHC Meeting will be held 26 February to 1 March 2024, kindly hosted by Fiji. In conjunction with the meeting, a Regional Capacity Building Workshop on Disaster Response will also be held.

¹ *Criteria for the provision of mobile satellite communication systems in the Global Maritime Distress and Safety System (GMDSS)*

² https://iho.int/uploads/user/Inter-Regional%20Coordination/RHC/SWPHC/SWPHC20/SWPHC20_2023_10B-NAVAREA_X_Report.pdf

8.3. Sub-Committee on Navigation, Communications and Search and Rescue (NCSR)

The tenth session of NCSR was held 10 to 19 May 2023. The NAVAREA X Coordinator is the Chair of the Working Group on Search and Rescue and Other Technical Matters. Six elements which, individually or in combination, could be used to address cost implications for MSI providers were submitted to the Maritime Safety Committee (MSC) for policy resolution.

The issue of cost for implementation, not limited to operation, is becoming more prevalent in the recognition or adoption of new and innovative technology. Australia was a vocal proponent for the Organization to consider the cost-benefit, not just the costs. A more substantial update is provided in WNWWS15-3.1.3.

The Australian delegation closely followed progress to develop the Very High Frequency Data Exchange System (VDES) performance standard, regulatory amendments to SOLAS Chapter V (Safety of Navigation) and is participating in the intersessional correspondence group established by NCSR 10.

8.4. Handover of SWPHC Chair to Australia

Australia, Ms Hilary Thompson Executive Director AHO, took over as Chair of the SWPHC from New Zealand, Mr Adam Greenland, on 23 June 2023. Ms Thompson acknowledged the achievements of the SWPHC during Mr Greenland's tenure as Chair including:

- Commencing the S-100 journey in the SWP
- Establishing the inaugural SWPHC Hydrographic Leaders Program
- Engagement with Pacific Minister's forums
- Commencing the Women in Hydrography in the Pacific Program.

The SWPHC Hydrographic Leaders Program Pilot was successfully delivered with 17 participants from the region being matched with mentors and undertaking leadership development activities over six months.

8.5. Australia's involvement in various IHO activities is listed in the table below:

	Meeting	Chair/ Vice Chair	Member/ Associate/ Observer
	IHO Assembly		M
	IHO Council		M
	Inter-Regional Coordination Committee (IRCC)		M
HCA	Hydrographic Commission on Antarctica		M

	Meeting	Chair/ Vice Chair	Member/ Associate/ Observer
SWPHC	South West Pacific Hydrographic Commission SWPHC International Charting Coordination WG SWPHC Marine Spatial Data Infrastructure WG SWPHC Work Plan and Priorities WG SWPHC Strategic Performance Indicators (SPI) WG	Chair Chair V-Chair	M M M M M
NIOHC	North Indian Ocean Hydrographic Commission		A
EAHC	East Asian Hydrographic Commission		O
ENCWG	ENC Working Group		M
DQWG	Data Quality Working Group		M
MSDIWG	Marine Spatial Data Infrastructure Working Group		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		M
GEBCO GC	General Bathymetric Chart of the Ocean Guiding Committee		M
SCUFN	GEBCO Sub Committee on Undersea Feature Names		M

Table 8: Australia's involvement in various IHO activities

9. 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 / page views		Average time on page	
	2021	2022	2021	2022
General information on MSI	4,381 / 8,529	5,495 / 12,381	2:05	1:33
Navigational warnings	11,166 / 39,934	11,627 / 55,422	3:40	1:56

Table 9: Unique visitors to AMSA NAVAREA webpages

There has been an 25% increase in visitors seeking general information on MSI, spending 26% less time on the page. The database of navigational warnings has seen a 4% increase in unique visitors, spending 47% less time on the page.

Initial statistics for 2023 show a 2% increase in visitors seeking general information on MSI, spending 44% less time on the page. The database of navigational warnings has seen a 14% increase in unique visitors, spending 55% less time on the page.

10. NAVAREA Contact Information:

NAVAREA X Coordinator
Stuart Shepard
Email: stuart.shepard@amsa.gov.au

Australian Maritime Safety Authority
GPO Box 2181
Canberra, ACT 2601
Australia
Website: <https://www.amsa.gov.au>

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

11. Recommendations:

None.

12. Actions requested:

Note the information provided.

13. Summary:

The Iridium SafetyCast service was declared 'operational' on 1 July 2023 via Australian Notice to Mariner for all SafetyCast services including navigational warnings, meteorological forecasts and warnings and search and rescue services. NAVAREA X and XIV, with assistance from Maritime Safety Authority Fiji (MSAF) conducted MSI capacity building training from 25 to 27 July 2023 with eleven coastal states within and adjacent to NAVAREA X and XIV. From 23 June 2023, Australia is the new Chair of the South West Pacific Hydrographic Commission (SWPHC) from New Zealand.

Annex(es):

A. Self Assessment Spreadsheet