

**14th MEETING OF THE IHO INTER-REGIONAL COORDINATING COMMITTEE
IHO-IRCC14**

Denpasar - Bali, Indonesia, 6-8 June 2022

Report of the Word-Wide Navigational Warning Service Sub-Committee (WWNWS-SC)

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| Submitted by: | Chair, World-Wide Navigational Warning Service |
| Related Documents: | Joint IMO/IHO/WMO Manual on Maritime Safety Information (IHO Publication S-53) |
| Related Projects: | S-124 development Project Team, Enhanced Group Call API Correspondence Group |
| Chair: | Mr. Christopher Janus, USA |
| Vice-Chair: | Mr. Trond Ski, Norway |
| Secretary: | Mr. Sam Harper, IHO |
| Member States: | Argentina, Australia, Brazil, Canada, Chile, China, Colombia, Cyprus, Ecuador, Egypt, France, Germany, Greece, India, IR of Iran, Italy, Japan, Malta, New Zealand, Norway, Oman, Pakistan, Peru, Russian Federation, South Africa, Spain, Sweden, Turkey, UK, USA |
| Members: | IMO, WMO, IOC, IMSO |
| Expert Contributors: | Inmarsat, SONSAT, CIRM, Iridium |

1. Meetings Held During Reporting Period

The WWNWS-SC monitors and guides the International Maritime Organization (IMO)/International Hydrographic Organization (IHO) World-Wide Navigational Warning Service (WWNWS), which includes NAVAREA and coastal warnings. The WWNWS-SC is responsible for studying and proposing new methods to enhance the provision of navigational warnings to mariners at sea, facilitating the implementation of the major changes in procedures for dissemination of navigational warnings and providing appropriate guidance to concerned IHO Member State Representatives to further the evolution of the WWNWS. The Sub-Committee also maintains a close liaison and cooperation with the World Meteorological Organization (WMO) for its Worldwide Met-Ocean Information and Warning Service (WWMIWS).

The thirteenth session of the World-Wide Navigational Warning Service Sub-Committee (WWNWS-SC) was held from 30 August to 3 September 2021 as a virtual meeting. The five sessions were chaired by the WWNWS-SC Chair, Mr. Christopher Janus (USA). The sessions were attended by 88 participants from 25 IHO Member States, the Secretariat of the International Maritime Organization (IMO), the Secretariat of the World Meteorological Organization (WMO), the Secretariat of the International Mobile Satellite Organization (IMSO), the Chairs of IMO EGC and NAVTEX Coordinating Panels, Inmarsat, Iridium, Security of Navigation, Stabilisation, Advice and Training (SONSAT) and GSA EUROPA. The delegates included representatives of 17 NAVAREA Coordinators, one Sub-Area Coordinator and eight National Coordinators. The IHO Secretariat was represented by IHO Director Luigi Sinapi, Assistant Director David Wyatt and Assistant Director, designate, Samuel Harper.

The fourteenth meeting of the WNWNS-SC (WWNWS14) will be held in Geneva, Switzerland, from 12 to 16 September 2022 as a collocated event with the Worldwide Met-Ocean Information Warning Service Sub-Committee (WWMIWS-SubC). All NAVAREA Coordinators and National MSI Coordinators are encouraged to attend the meetings of the WNWNS-SC to broaden their experience and interact with each other.

2. Work Program

WWNWS Documentation

The work of the 19th meeting of the Document Review Working Group (DRWG) was reviewed in conjunction with the outcomes of the 8th session of the IMO Sub-Committee on Navigation, Communications and Search and Rescue (NCSR 8) and how they directly impacted the interim Iridium SafetyCast Service manual. The DRWG highlighted the work it conducted to revise the interim Iridium SafetyCast Service manual to prepare it for submission to MSC 104. The remainder of the time the DRWG reviewed the IMO NAVTEX Manual and its draft amendments, in particular the process for shutting down a NAVTEX station.

It was agreed that the DRWG20 meeting would be held the week after NCSR 9 at the IMO in London. If the IMO scheduled NCSR 9 later in 2022, the DRWG20 would be held as a remote event in the January/February period to ensure the continuation of the document review cycle.

All draft documents under development by the Sub-Committee are available via the WNWNS page of the IHO web site. Member States are encouraged to review the documents and submit comments to the Chair (Mr Christopher Janus, e-mail: IHO_WWNWS_Chair@nga.mil) and the IHO Secretariat (Assistant Director Samuel Harper, e-mail: adso@iho.int). Any proposed changes or amendments and further work will be undertaken at the DRWG21, which will be held the week after the tenth session of the NCSR at IMO Headquarters in London in 2023. The drafting work will be finalised at WWNWS15 and then submitted to the IMO for approval.

GMDSS / MSI Briefing

The Sub-Committee received Maritime Safety Information (MSI) self-assessment reports from 19 NAVAREAs, the Baltic Sea Sub-Area and a national report from China. There were a number of issues highlighted, which the Sub-Committee agreed to assist NAVAREA Coordinators through the IHO Secretariat to gain the support of National Coordinators in ensuring that all SOLAS MSI responsibilities were being met.

The Sub-Committee noted that, as result of the comments made at NCSR 8, the issue of rectangular area broadcasting within the Arctic NAVAREAs required further consideration. It was noted that the matter had been referred to the IMO EGC Coordinating Panel for a final decision on cessation of rectangular area broadcasting to be replaced by Area broadcasting. It was noted that further investigation needed to be undertaken to confirm that all legacy equipment was no longer in use and that it was appropriate to set a date for this action. It was further noted that currently SafetyNET and SafetyCast use different broadcast methods for the Arctic and there is a need to expedite this action to achieve harmonisation between the two systems.

The Chair of the WNWNS-SC provided a briefing on Annexes 7 & 8 in the GMDSS Master Plan. He highlighted the contents of Annex 7 covering NAVTEX and noted the inconsistencies between the information provided by the NAVAREA Coordinators in their assessment reports and that contained in the GISIS. He encouraged all to conduct a review of the published data and work toward harmonisation between the various data sources. He highlighted the inconsistencies with the information published for EGC Services, in particular the state of Iridium SafetyCast displayed on the IHO graphic and the GISIS information; it was acknowledged that some validation of the information

was required. He also noted that there were discrepancies for the information on Inmarsat SafetyNET between GISIS and what NAVAREA Coordinators reported.

The report from the Chair of the EGC Coordinating Panel reminded the Sub-Committee that the IMO Maritime Safety Committee (MSC) recognized Iridium as a provider of Global Maritime Distress and Safety System (GMDSS) satellite services and that the Iridium SafetyCast Service is operational. He noted that ships are installing Iridium GMDSS terminals in compliance with the requirements of SOLAS Chapter IV. He noted further that all NAVAREAs are part of the World-Wide Navigational Warning Service (WWNWS) and, at present, the WWNWS is not providing its service on all the recognized GMDSS satellite services.

The Chair of the WWNWS-SC provided a high-level overview on the IOC Tsunami Early Warning and Mitigation Systems, its structure and the functions of the Tsunami Service Providers (TSP). He described how a Tsunami warning would likely reach a NAVAREA Coordinator, although he noted that there were other alternatives and varying content for tsunami warnings. It was noted that this topic had been discussed at WWNWS10 and that it appeared that limited progress had been achieved towards developing a standard, more effective format for a tsunami navigational warning. He proposed that further engagement was likely required with the IOC Secretariat. He noted that it was anticipated that a representative of the IOC would attend WWNWS14 to help progress the work.

NAVAREA X (Australia), as the Chair of the Enhanced Group Call API Correspondence Group (EGC-API CG), submitted the CG's final report, noting the completion of the standard. Inmarsat provided a presentation covering the EGC API, including background explanation, details on how it functioned, the advantages of using it, and a live demonstration. The WWNWS-SC endorsed the API standard and approved that it should be published on the IHO website and progress reported to NCSR 9. Further, the WWNWS-SC addressed a request to develop a shore-to-ship SAR-related information broadcast in the standard, and agreed to progress the work if the IMO made a formal request to do so.

The Chair of the IMO Maritime Safety Information CG provided a presentation on the background for the establishment of the CG by MCS 103 and noted the relevant tasks to be addressed by the CG. He noted the CG's report to the MSC 105 needed to be submitted by mid-January 2022. After his presentation, there was a lengthy discussion and comments from many. At the conclusion, the Chair of the WWNWS-SC summed up that the consensus was to implement a global service for all recognized mobile satellite services to support the IMO decision. However, he recognised that it would not resolve the cost issues and that careful consideration should be given in the future when considering the recognition of additional mobile satellite service providers.

MSI Capacity Building

The sessions considered progress reports on the delivery of MSI training courses, and discussed the processes for reporting the status of MSI provision at Regional Hydrographic Commission meetings and methods for identifying to the Capacity Building Sub-Committee the regions and coastal States most in need of training and assistance.

The following charts detail WWNWS support from three perspectives: NAVAREA Warnings issued, coastal state support, and an estimate of Inmarsat EGC data usage and its implications.

Figure 1 details the number of individual NAVAREA warnings broadcast annually by the WWNWS. While the total number declined in 2020 and 2021, the trend remains on an increasing trajectory.

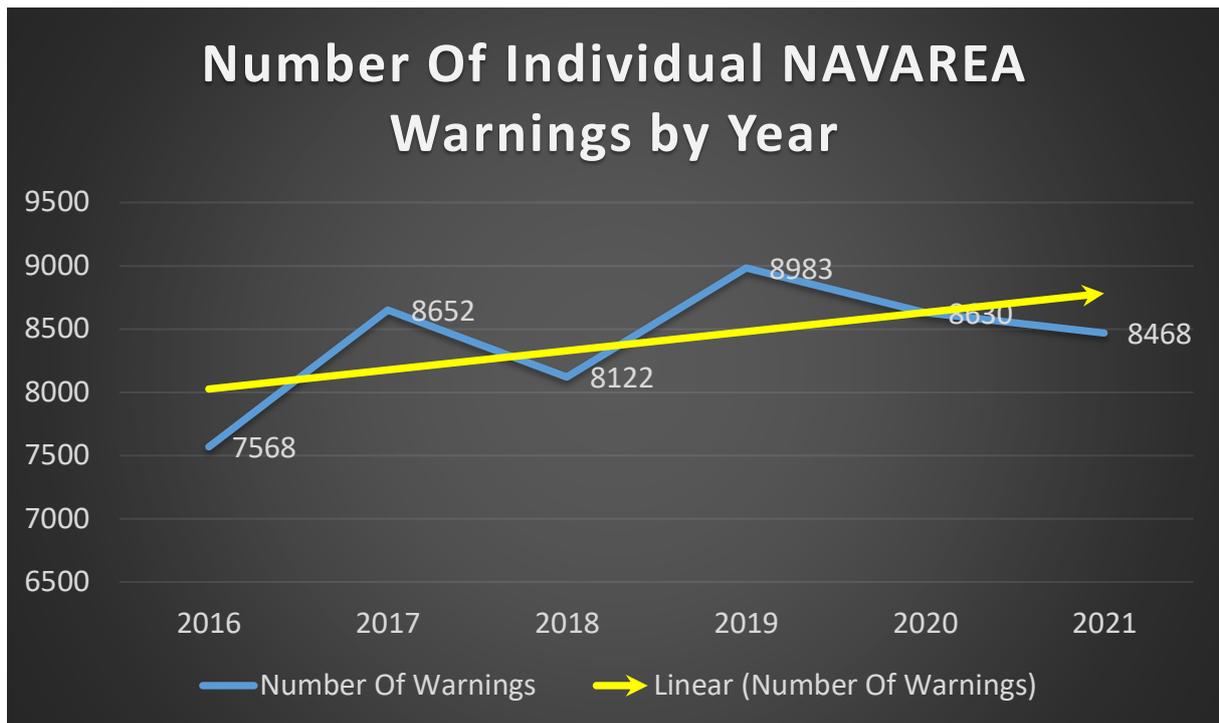


Figure 1 Number of NAVAREA Warnings

The chart in Figure 2 details the percentage of Coastal States that are capable to provide maritime safety information (MSI). The data used to compile those metrics came from the NAVAREA self-assessment reports submitted to WNWWS13. It is important to note that the indicator of support from a coastal state remained unchanged for this reporting period. If a Coastal State provided any MSI, it met its obligation. If it did not, then it did not meet its obligation. It is also important to note that Brazil, (NAVAREA V), Chile (NAVAREA XV), Peru (NAVAREA XVI), the Russian Federation (NAVAREAs XIII, XX, and XXI), and Canada (NAVAREAs XVII, XVIII) are the only coastal state in their NAVAREA. Those NAVAREAs have 100% support. They are labeled in green to differentiate them from others that achieved 100% support.

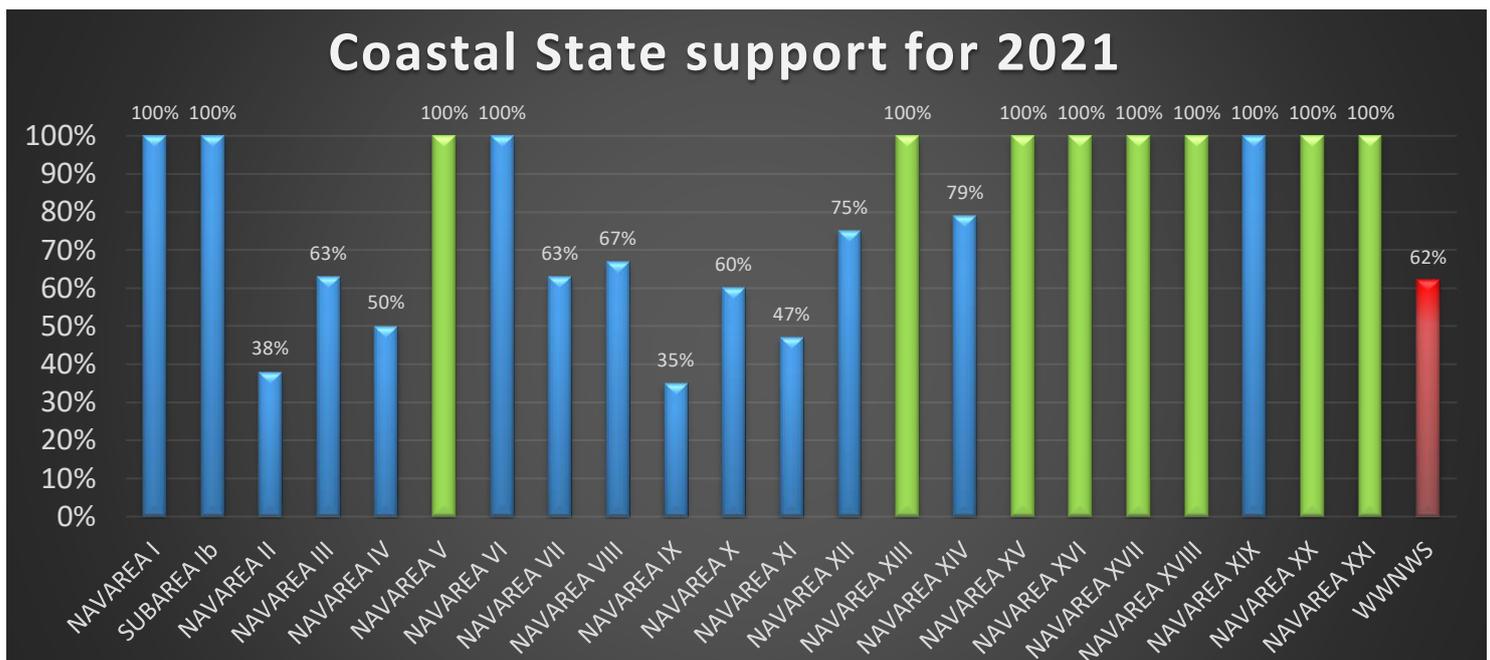


Figure 2 Percentage of Coastal States that are capable to provide marine safety (SPI 3.1.1)

At WWNWS13 a number of NAVAREA Coordinators expressed reservations with the current methodology used to determine if a NAVAREA Coordinator and Coastal State met the IHO’s strategic performance indicator for the WWNWS, SPI 3.1.1. The resultant action was to review the Self Assessment proforma at DRWG20 and amend it as required to accurately represent Coastal State support towards SPI 3.1.1. Based on DRWG20 and correspondence after the meeting, the definition the WWNWS will use to assess Coastal State support changed to include “regular communication” in addition to providing MSI; regular communication is defined as once per year. The modified measurement will account for Coastal States that may not have any MSI to provide during the reporting period, yet are fully capable to meet the criteria to do so.

Overall, for 2021, the WWNWS received MSI from 62% of Coastal States.

Figure 3 provides a representation of EGC broadcast data from 11 NAVAREA Coordinators that use Inmarsat’s SafetyNET II service. The WWNWS Chair downloaded the data in .csv format from the SafetyNET II website for the maximum range allowed. The date range spanned from 179 days for NAVAREA VII (South Africa) to 96 days for NAVAREA XV (Chile). The data for NAVAREAs XIV (New Zealand) and XV (Chile) includes EGC coastal warnings. All NAVAREA data includes repeated broadcasts. The data on the following chart is an estimate based on actual data from those 11 NAVAREAs.

There were several conclusions drawn from the data. The first was that the number of individual navigational warnings issued does not directly translate into a higher OR lower annual cost for a NAVAREA. Likewise, the number of broadcasts, including repetitions, does not directly translate into a higher OR lower annual cost. All factors must be considered together: number of navigational warnings, number of broadcasts and the size of each message in kilobytes. Based on that approach, NAVAREAs III, IV, and VII would likely have had the highest SafetyNET EGC broadcast costs for 2021. SafetyNET II allows each information provider to download usage data and accurately determine and forecast its annual costs and data usage. While this is import for cost, it can also be a representative indicator for planning how to support S-124 and its data requirements.

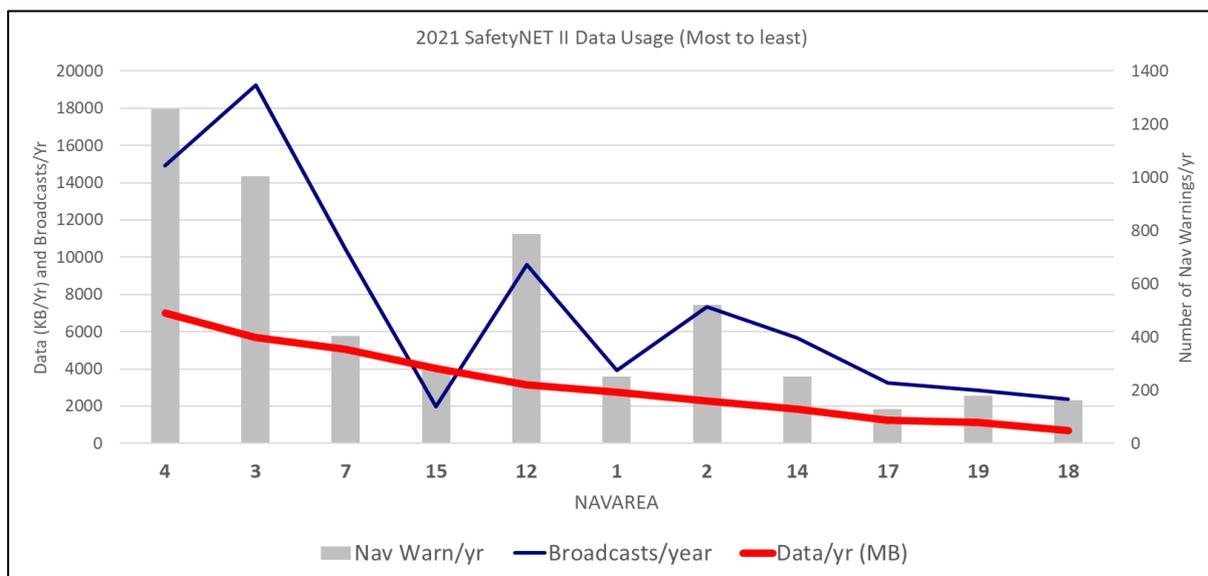


Figure 3 Inmarsat SafetyNET II Usage estimate for 2021

3. Progress on IRCC Action Items

S-124

The WWNWS-SC established a Project Team (PT) at WWNWS11 to draft a digital product specification for navigational warnings based on the IHO's S-100 Universal Hydrographic Data Model; this specification is known as S-124. The Chair of the S-124 Project Team (S-124PT) briefed the Sub-Committee on its progress. NAVAREA Coordinators inquired how to accurately align the Joint IMO/IHO/WMO Manual on Maritime Safety Information (S-53) with the S-124 product specification to facilitate an efficient transition. The S-124PT Chair suggested that more consistency, adherence to approved guidance, and reduced options would make a significant difference. Further, the S-124 PT Chair noted the challenge of multiple languages used in local warnings and its implications. It was noted that this situation could evolve with the wider availability of Maritime Services in the context of e-navigation.

4. Problems Encountered

None to report, pending the release of the final report from the 105th meeting of the IMO's Maritime Safety Committee.

5. Any Other Items of Note

WWNWS13 was the last meeting for which David Wyatt served as the WWNWS-SC Secretariat. The WWNWS Chair noted that it was hard not to look back at all the successes of the WWNWS without seeing him right there, sometimes in the shadows, but always the keel that enabled the WWNWS-SC to progress effortlessly through the waters of international bureaucracy and documentation. The Subcommittee thanked him for his nine years of outstanding and exemplary service to the IHO, WWNWS-SC, and to the seafarer.

6. Conclusions and Recommended Actions

See paragraph 3.

7. Justification and Impacts

N/A.

8. Action Required of IRCC

The IRCC is invited to:

- a. **Note** the information provided in this report on the outcomes of WWNWS13;
- b. **Encourage** relevant Member States to report to the IMO Secretariat and the Chair of the EGC Coordinating Panel on the progress and status of implementation of newly recognized mobile satellite services by MSI providers;
- c. **Note** that MSI providers, should they implement Iridium SafetyCast services, are compelled to bear the burden of all additional costs, as a consequence of the approval by IMO Member States of the Iridium SafetyCast as an RMSS; and
- d. **Take** any other action it considers appropriate.