

Tsunami alerts for maritime community

Submitted by Secretariat

SUMMARY

Executive Summary: This document provides an update on the framework arrangement concerning Tsunami alerts to the maritime community

Action to be taken: [Insert paragraph number in document where actions are requested]

Related documents: IOC/TOWS-WG-XII/3 dated June 2019

1. At the WWNWS10 meeting in Monaco in August 2018 the WWNWS-SC was briefed on IOC Tsunami Warning Service and the Tsunami Service Providers (TSP). In particular details were provided on the development of the warning messages, which had started in February 2014, and the key requirements for consideration in the development of the message text and promulgation of the messages.
2. The Chair WWNWS-SC provided information on message format and content, focused on particular issues raised by IOC. Chair WWNWS-SC asked selected NAVAREAs to provide detailed feedback to IOC. It was noted that all mobile satellite service providers would be used by the TSP, when operational, to ensure all the maritime community is informed regardless of which service is being used.
3. At the 30th session of the IOC Assembly held in Paris July 2019, the framework arrangement concerning Tsunami alerts to the maritime community, which have been developed with the WWNWS-SC, was adopted formally through the omnibus Decision IOC-XXX/8.2 Tsunami and Other Coastal Hazards Warning Systems.
4. The framework is described in the Summary Report from the Twelfth Meeting of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG-XII), Paris, 21-22 February 2019, see Enclosure 1. The full report is available as document WWNWS11/3/3/3.2 and via link http://www.ioc-unesco.org/index.php?option=com_oe&task=viewDocumentRecord&docID=24672
5. The Framework will be forwarded to the four regional Tsunami Warning Systems and their Intergovernmental Coordination Groups (ICG). The ICGs will discuss and decide on which TSP centres may eventually be ready to provide an alert service to their respective NAVAREA coordinators.
6. The WWNWS-SC is requested to:
 - a. **Provide** comment and feedback to TOWS-WG on the framework;

- b. **Encourage** relevant NAVAREA Coordinators to engage with their TSP to establish appropriate communication methods and working relationships;
- c. **Assist** TSPs in setting-up and operationalizing the framework arrangements into a fully functioning warning service; and
- d. **Take** any other action deemed appropriate.

Enclosure:

1. Framework for Tsunami Service Provider Messages for the Maritime Community

APPENDIX 4

Intergovernmental Oceanographic Commission of UNESCO

Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG)

Tsunami Service Provider Messages for the Maritime Community

A Proposal to the World-Wide Navigational Warning Service Sub-Committee (WWNWS-SC)

29 January 2019

The following is an initial proposal for the format, content, and dissemination of messages with tsunami guidance specifically for ships on the high seas from the Tsunami Service Providers (TSPs) of the four Tsunami Warning Systems operated by the Intergovernmental Oceanographic Commission (IOC) of UNESCO. This proposal was generated in response to discussions between representatives of the International Hydrographic Organization (IHO) and the IOC to improve the accuracy and consistency of messages issued by the NAVAREA coordinators for tsunami events. This proposal incorporates feedback received from the 10th session of the WWNWS-SC held in Monaco during 27-31 August 2018.

1. Messages would be created and disseminated only for potential and confirmed tsunami occurrences when forecast amplitudes at any coast within a TSP's service area exceed pre-defined threat threshold (typically 0.3 meters), the minimum coastal amplitude considered to be a hazard.
2. Messages would be disseminated by each TSP by email to those NAVAREA coordinators who subscribe for receiving tsunami threat information within that TSP's service area, based on the IOC Area of Service Map. (Please refer to Appendix 3 for the Area of Service Map. Note that multiple TSPs cover some NAVAREAs and each TSP covers multiple NAVAREAs. In case of multiple TSPs covering same NAVAREAs, the NAVAREA coordinator may note that threat assessment could differ from one TSP to the other and hence is advised to use the "worst-case" in formulating maritime safety messages).
3. The initial TSP maritime message would be issued to NAVAREA coordinators when the TSP issues its initial quantitative coastal forecast for the Member States within its IOC System. This is usually within 30 minutes of the earthquake that generated the tsunami. Note that a TSP may issue a qualitative advisory product to Member States preceding the initial quantitative coastal forecast products.
4. An additional TSP maritime message would be issued only if the forecast significantly changes.
5. One message would be issued indicating the final handling of the event by the TSP, usually when the threat has passed everywhere in the service area. However, the

hazard may continue along some coasts and that status must be determined by local authorities.

6. NAVAREA coordinators would have the responsibility for turning TSP messages into maritime safety messages issued via SafetyNet to ships at sea.

Message Format and Content

The format and content of the proposed TSP messages generally follows the guidance given in the Manual on Maritime Safety Information – IHO Publication 53 (January 2016 Edition) in order that the conversion by NAVAREA coordinators to a maritime safety message be as simple as possible.

Message Element	Element Description	TSP Content	Queries	Summary of Clarifications by WWNWS-SC and TTTWO
1	NAVAREA name	NAVAREA having coasts with tsunami forecast amplitude exceeding the pre-defined threat threshold (typically 0.3 meter)	Can one message apply to more than one NAVAREA?	There is no need to put the NAVAREA name or number on the message(s) provided. The NAVAREA Coordinator for the area affected by the Tsunami Warning will provide this information. If the Tsunami Warning applies to more than one NAVAREA, the NAVAREA Coordinator understands the need to forward this information to the adjacent NAVAREA(s) that may be affected. While NAVAREA Coordinators are responsible for passing information to other affected NAVAREAs, there should not be a reliance upon this to receive tsunami warnings. All NAVAREA Coordinators should be responsible for subscribing to the warning service appropriate to their AOR, in reference to the IOC AoS map in Appendix 3. For example, the coverage map clearly shows that PTWS is the warning service that provides alerts to NAVAREA XIV, so it should be the responsibility of the NAVAREA XIV Coordinator to subscribed

				to alerts from this service.
2	General Area	Name of the general area forecast to be affected by the tsunami	Need to identify or create a standard area naming scheme for ocean areas.	Not mandatory for TSPs to use a standard naming scheme for General Area. They can describe in general terms which broad area the bulletin applies to (eg. Indian Ocean / Western Indian Ocean/ Eastern Indian Ocean / etc.). The NAVAREA Coordinator will refer to the chart coverage for the affected area(s) by the event and will utilize the naming convention found on those applicable charts, as appropriate.
3	Locality	Not Used		
4	Chart Number	Not Used		
5	Key Subject	Type of Tsunami Message (Confirmed Threat/Cancellation/etc.), issuing centre and issuing time. A likely or confirmed tsunami, with key information about the source - usually an earthquake (lat/lon, region name, origin time).		
6	Geographical Region	Names of countries/Islands (from a standard list) in NAVAREA with coasts forecast to have hazardous tsunami waves.	Need standard list of key harbors and their names.	It would be better to list only the names of Countries/Islands as standard text (not graphical) products. TSPs can provide a geographic region name for the area affected, if desired. Additionally, they can provide key harbor names for the area effected, but it is not necessary to use a standardized list of key harbor names for the area. The NAVAREA Coordinator will refer to the chart coverage for the affected area(s) by the event and will utilize the naming convention found on those applicable charts, as appropriate.
7	Amplifying Remarks	Tsunami impact on ships in shallow waters. Consult		

		local authorities of destination.		
8	Cancellation Details	Indicate if final message and that continuing hazard possible. Must be evaluated locally.		