

NAVAREA Bulletin Implementation

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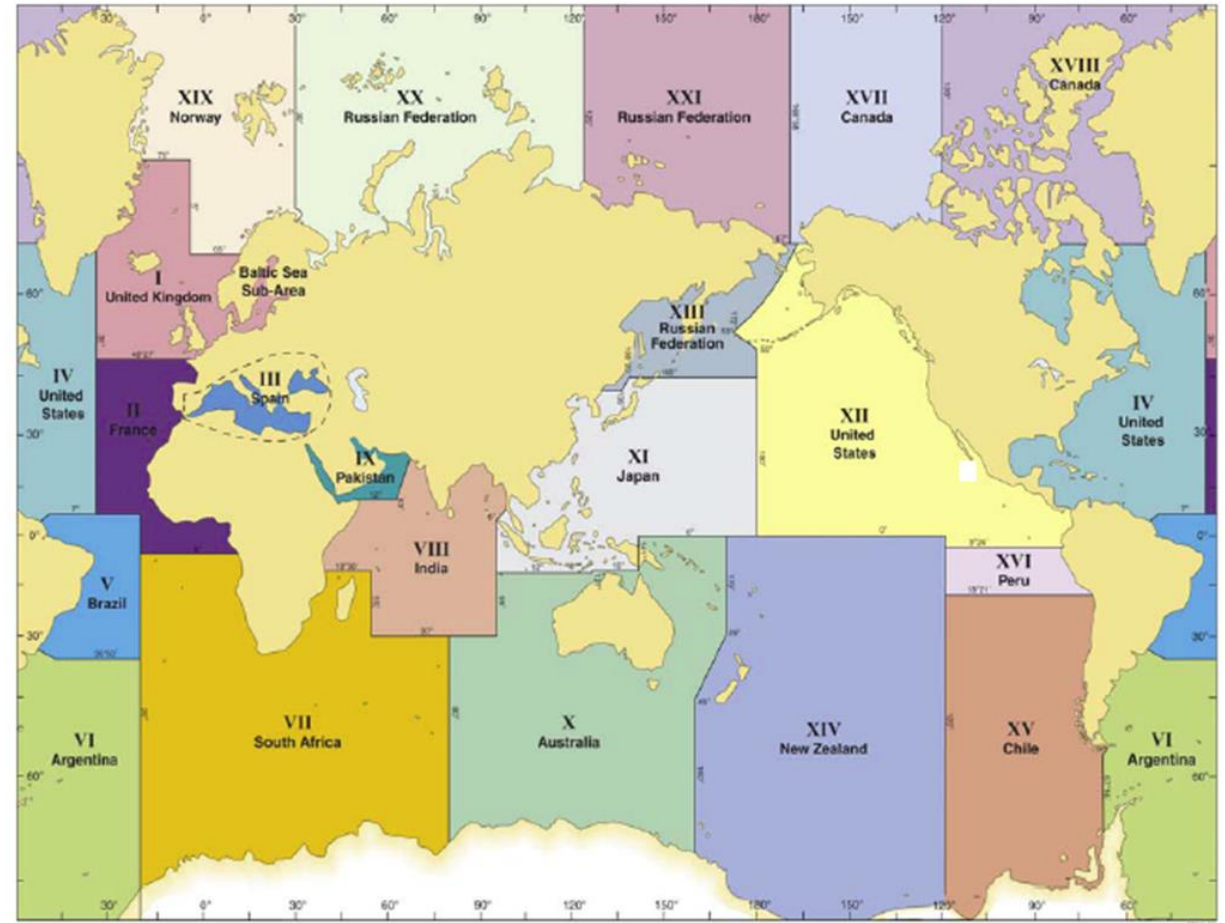
Maritime Community TSP Products

- Known as TSP NAVAREA Bulletins
- Help NAVAREA coordinators in tsunami events
 - 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.
- Requirements and specs
 - Listed in the 2019 TOWS-WG Task Team Tsunami Watch Operations proposal [here](#)
 - The [12th ICG/IOTWMS](#) 9-12 Mar 2019 recommended for TSPs in IOTWMS to implement
 - The [30th IOC Assembly](#) 26 Jun- 4 Jul 2019 approved the ICG recommendations
 - The action to implement was adopted in the WG2 workplan at the [ICG/IOTWMS Integrated Meetings](#), 29 Sep – 2 Oct 2019

NAVAREA Codes

IOTWMS covers 5 NAVAREAs of VII, VIII, IX, X, XI

COUNTRY	NAVAREA	Indian Ocean Area
AUSTRALIA	X	East
BANGLADESH	VIII	North
COMOROS	VII	West
DJIBOUTI	IX	Northwest
FRANCE (Indian Ocean Territories)	VIII	West
INDIA	VIII	Northwest
INDONESIA	XI	North
IRAN	IX	Northwest
KENYA	VII	West
MADAGASCAR	VII	West
MALAYSIA	XI	North
MALDIVES	VIII	West
MAURITUS	VIII	West
MOZAMBIQUE	VII	West
MYANMAR	VIII	North
OMAN	IX	Northwest
PAKISTAN	IX	Northwest
SEYCHELLES	VIII	West
SINGAPORE	XI	North
SOMALIA	VIII	West
SOUTH AFRICA	VII	West
SRI LANKA	VIII	North
TANZANIA	VIII	West
THAILAND	XI	North
TIMOR-LESTE	XI	East
UNITED ARAB EMIRATES	IX	Northwest
UNITED KINGDOM (Indian Ocean Territories)	VIII	West
YEMEN	IX	Northwest



Update IOTWMS Service Definition to V5.0

3. Through bilateral agreements, NTWCs may request TSPs to directly send TSP exchange products to them.
4. Through agreement with IHO, TSPs are asked to provide NAVAREA products each time Potential Threat, Confirmed Threat, ND Final bulletins are issued in the agreed format as per Annexure 7.
5. TSP **public products** shall consist of a combination of textual bulletins, graphics and public web sites.

Type 2 NAVAREA POTENTIAL THREAT BULLETIN Template

(Variable fields in **red**; modification required for non-seismic and complex source events highlighted in yellow)

TSP AUSTRALIA TSUNAMI BULLETIN NUMBER 1 FOR

NAVAREA VII, NAVAREA VIII, NAVAREA X, NAVAREA XI

EAST INDIAN OCEAN, NORTH INDIAN OCEAN, SOUTHWEST INDIAN OCEAN, WEST INDIAN OCEAN

TSUNAMI THREAT MESSAGE ISSUED BY TSUNAMI SERVICE PROVIDER AUSTRALIA IN SUPPORT OF THE UNESCO/IOC INDIAN OCEAN TSUNAMI WARNING AND MITIGATION SYSTEM AT 0016 UTC Monday 01 May 2015.

A TSUNAMI IS POSSIBLE TO BE GENERATED BY A MAGNITUDE 8.9 EARTHQUAKE THAT OCCURRED NEAR SOUTH OF BALI, INDONESIA [10.00S, 115.97E] AT 0000 UTC 01 May 2015.

HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS OF AUSTRALIA, FRANCE (INDIAN OCEAN TERRITORIES), INDONESIA, MADAGASCAR, MAURITIUS, SOUTH AFRICA, SRI LANKA, TIMOR-LESTE

TSUNAMI WAVES ARE NOT A HAZARD TO SHIPS IN DEEP WATER BUT CAN CAUSE STRONG CURRENTS AND RAPID SEA LEVEL CHANGES IN SHALLOW WATER, AS WELL AS INUNDATION OF THE COAST. SHIPS APPROACHING THE COAST SHOULD CONSULT LOCAL AUTHORITIES REGARDING LOCAL CONDITIONS AND ADVICES.

Type 3 NAVAREA CONFIRMED THREAT BULLETIN Template

(Variable fields in **red**; modification required for non-seismic and complex source events highlighted in yellow)

TSP AUSTRALIA TSUNAMI BULLETIN NUMBER 2 FOR

NAVAREA VII, NAVAREA VIII, NAVAREA X, NAVAREA XI

EAST INDIAN OCEAN, NORTH INDIAN OCEAN, SOUTHWEST INDIAN OCEAN, WEST INDIAN OCEAN

TSUNAMI CONFIRMED THREAT MESSAGE ISSUED BY TSUNAMI SERVICE PROVIDER AUSTRALIA IN SUPPORT OF THE UNESCO/IOC INDIAN OCEAN TSUNAMI WARNING AND MITIGATION SYSTEM AT 0016 UTC Monday 01 May 2015.

A TSUNAMI HAS BEEN GENERATED BY A MAGNITUDE 8.9 EARTHQUAKE THAT OCCURRED NEAR SOUTH OF BALI, INDONESIA [10.00S, 115.97E] AT 0000 UTC 01 May 2015. HAZARDOUS TSUNAMI WAVES ARE FORECAST FOR SOME COASTS OF AUSTRALIA, FRANCE (INDIAN OCEAN TERRITORIES), INDONESIA, MADAGASCAR, MAURITIUS, SOUTH AFRICA, SRI LANKA, TIMOR-LESTE

TSUNAMI WAVES ARE NOT A HAZARD TO SHIPS IN DEEP WATER BUT CAN CAUSE STRONG CURRENTS AND RAPID SEA LEVEL CHANGES IN SHALLOW WATER, AS WELL AS INUNDATION OF THE COAST. SHIPS APPROACHING THE COAST SHOULD CONSULT LOCAL AUTHORITIES REGARDING LOCAL CONDITIONS AND ADVICES.

Type 4 NAVAREA FINAL BULLETIN Template – Tsunami Observed

(Variable fields in **red**; modification required for non-seismic and complex source events highlighted in yellow)

TSP AUSTRALIA TSUNAMI BULLETIN NUMBER 13 FOR

NAVAREA VII, NAVAREA VIII, NAVAREA X, NAVAREA XI

EAST INDIAN OCEAN, NORTH INDIAN OCEAN, SOUTHWEST INDIAN OCEAN, WEST INDIAN OCEAN

TSUNAMI CANCELLATION MESSAGE ISSUED BY TSUNAMI SERVICE PROVIDER AUSTRALIA IN SUPPORT OF THE UNESCO/IOC INDIAN OCEAN TSUNAMI WARNING AND MITIGATION SYSTEM AT 0000 UTC 01 May 2015.

THE THREAT HAS NOW LARGELY PASSED FOR THE TSUNAMI GENERATED BY A MAGNITUDE 8.9 EARTHQUAKE THAT OCCURRED NEAR SOUTH OF BALI, INDONESIA [10.00S, 115.97E] AT 0000 UTC 01 May 2015.

HOWEVER, SHIPS APPROACHING THE COAST SHOULD STILL CONSULT LOCAL AUTHORITIES REGARDING LOCAL CONDITIONS AND ADVICES.

Type 4 NAVAREA FINAL BULLETIN Template – No Tsunami Observed

(Variable fields in **red**; modification required for non-seismic and complex source events highlighted in yellow)

TSP AUSTRALIA TSUNAMI BULLETIN NUMBER 13 FOR

NAVAREA VII, NAVAREA VIII, NAVAREA X, NAVAREA XI

EAST INDIAN OCEAN, NORTH INDIAN OCEAN, SOUTHWEST INDIAN OCEAN, WEST INDIAN OCEAN

TSUNAMI CANCELLATION MESSAGE ISSUED BY TSUNAMI SERVICE PROVIDER AUSTRALIA IN SUPPORT OF THE UNESCO/IOC INDIAN OCEAN TSUNAMI WARNING AND MITIGATION SYSTEM AT 0000 UTC 01 May 2015.

NO TSUNAMI WAS OBSERVED FROM A MAGNITUDE 8.9 EARTHQUAKE THAT OCCURRED NEAR SOUTH OF BALI, INDONESIA [10.00S, 115.97E] AT 0000 UTC 01 May 2015. HOWEVER, SHIPS APPROACHING THE COAST SHOULD STILL CONSULT LOCAL AUTHORITIES REGARDING LOCAL CONDITIONS AND ADVICES.

Next Steps

- Do all 3 TSPs need to generate NAVAREA products or is one sufficient?
TSP Australia and India have already produced NAVAREA products, while TSP Indonesia is still ongoing.
- Advertise that the service is ready to NAVAREA coordinators through the secretariat.
- Do we update CFZ shapefile to include NAVAREA as an attribute?
- Presumably, NAVAREA coordinators should be part of future exercises and comms tests.

Thank You