

Intergovernmental Oceanographic Commission

Utilizing NTWC products in DMO SOPs

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ICG Indian Ocean Tsunami Warning & Mitigation System SOP Workshops July 2023:

Standard Operating Procedures (SOPs) for

National Tsunami Warning Centres (NTWCs) and

Disaster Management Organisations (DMOs)

Issues

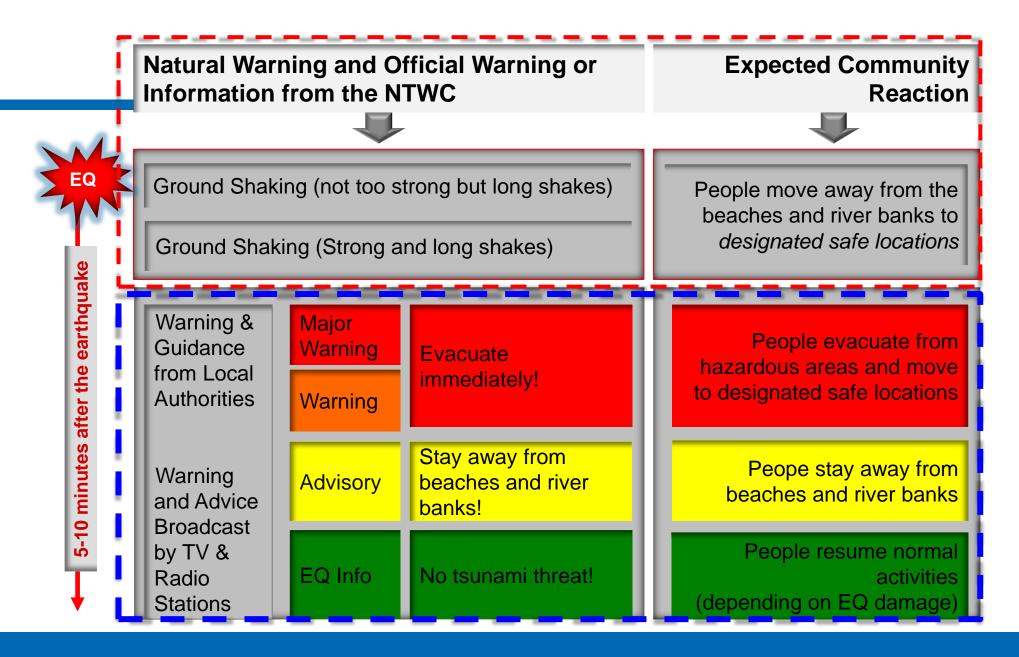


- What communication means NTWC-DMO
 - Multi mode of communication: Email, WRS, Text Message, interagency networks, VHF, Vsat, fix-line phone, cell phone,
 - · Acknowledgement of messages received
- What kind of information
 - Technical parameter:
 - Warning Level information
 - ETA,
 - · Tsunami Height,
 - Affected Areas
 - Guidance for action
 - Maps: travel time, inundation
- Time-line for warning bulletin

Bulletins 1 - 2 - 3(3.1-3.n) - 4

Coordination between NTWC and DMO and Media

Flow of Information (NTWC – DMO – Media or NTWC – DMO and Media) How to cope with social media







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Alert level: Warning ("AWAS")

Support dissemination warning to BPBD, Public and risk communities (Web, TV/Radio National, Social Media)

-analysing capabilities of local authorities/district in handling critical situation-

create policy and decision at National level in order to support emergency situation, whether needed or not?

> Mobilization National Resources immediately (TNI, POLRI, SAR, Others Ministries)

Coordination & Confirm to 24/7 PUSDALOPS BPBD (Evacuation order and emergency procedure)

Activate Sirens by Local Authority (coordination with BMKG)

Assist Local Authorities/ BPBD in emergency situation

Alert level: Watch ("WASPADA")

Support dissemination warning and advise to public and risk communities to stay away from the shoreline and river and other areas of potential danger until the next news (Web. TV/Radio National, Social Media)

> National Resources standby (TNI, POLRI, SAR, Others Ministries)

Coordination & Confirm to 24/7 PUSDALOPS BPBD (observation, dissemination warning & advise)

DMO Activities on Warning Level

Support dissemination warning to public and risk communities (Web, TV/Radio National, Social Media)

-analysing capabilities of local authorities/district in handling critical situation-

create policy and decision at National level in order to support emergency situation, whether needed or not?

> Mobilization National Resources immediately (TNI.POLRI, SAR, Others Ministries)

Coordination & Confirm to 24/7 PUSDALOPS BPBD (Evacuation order and emergency procedure)

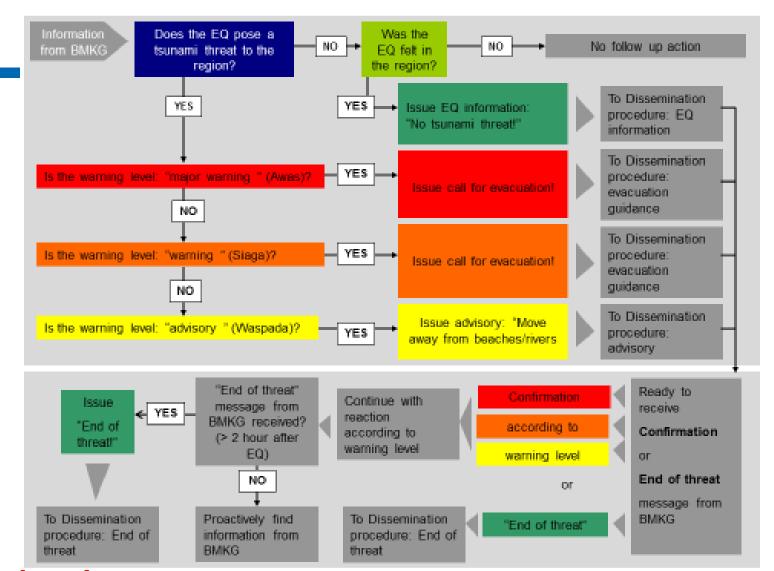
Activate Sirens by Local Authority (coordination with BMKG)

Assist Local Authorities/ BPBD in emergency situation

Alert level: Advisory ("SIAGA"

Example from Indonesia

FLOW CHART DMO SOP





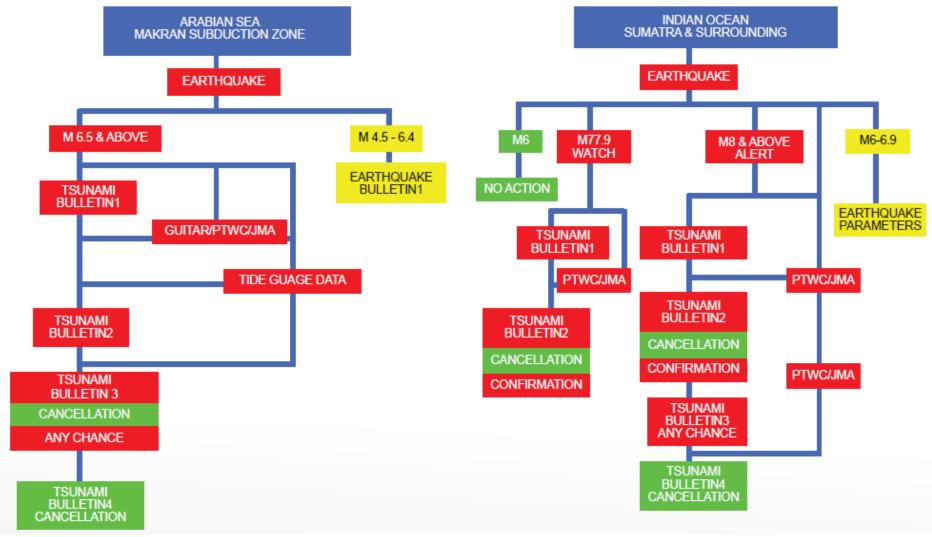
Source: Tsunami Early Warning Service Guidebook for InaTEWS,

Example from Indonesia

NTWC SOP- Pakistan



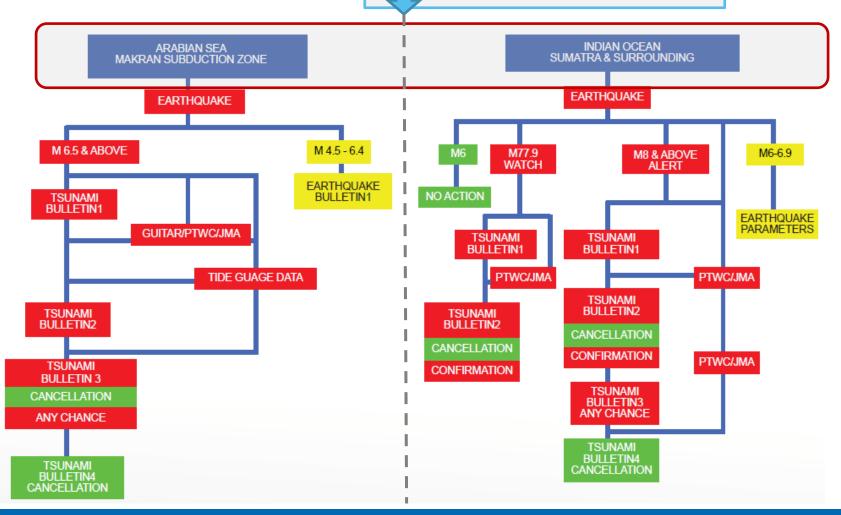
Commission





2 main process flows in accordance with near-field and far-field scenarios

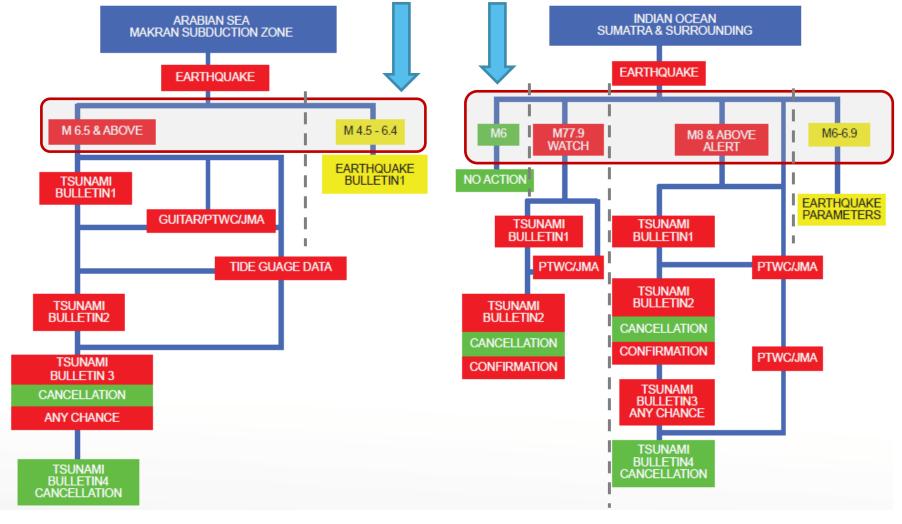




NTWC SOP- Pakistan

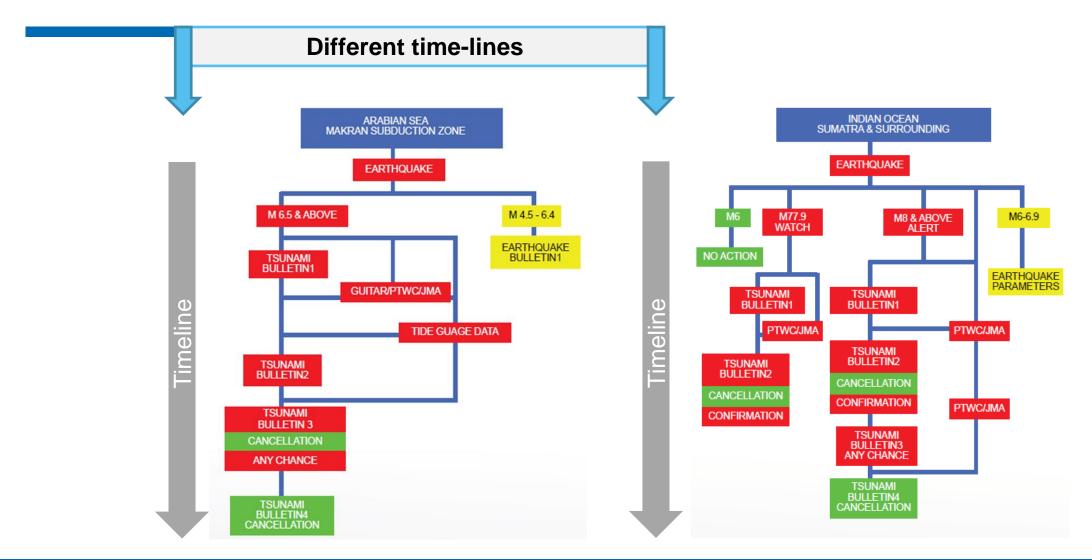
Secondary process flows depending on threat levels





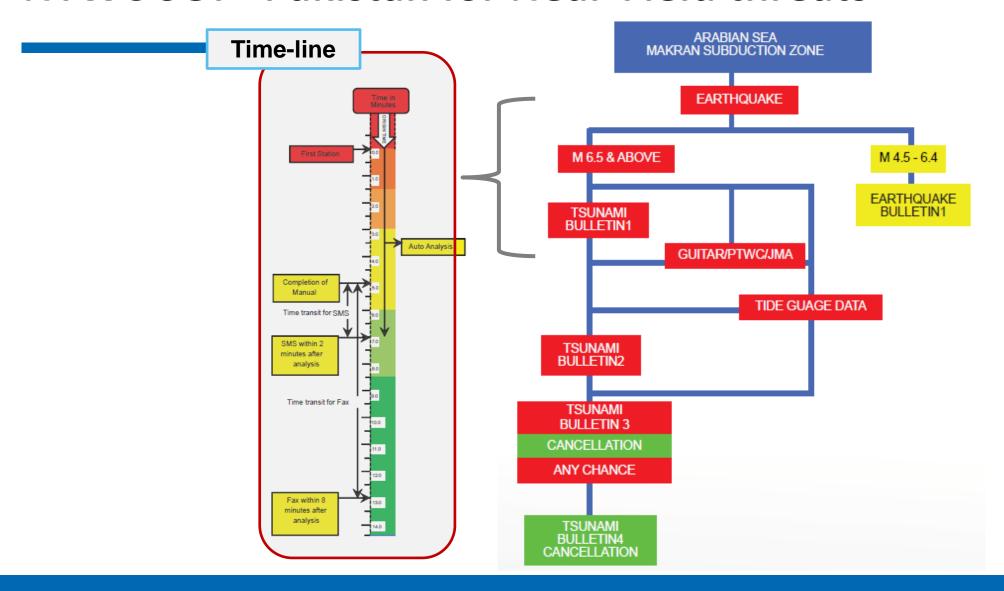
NTWC SOP- Pakistan





NTWC SOP- Pakistan for Near-Field threats



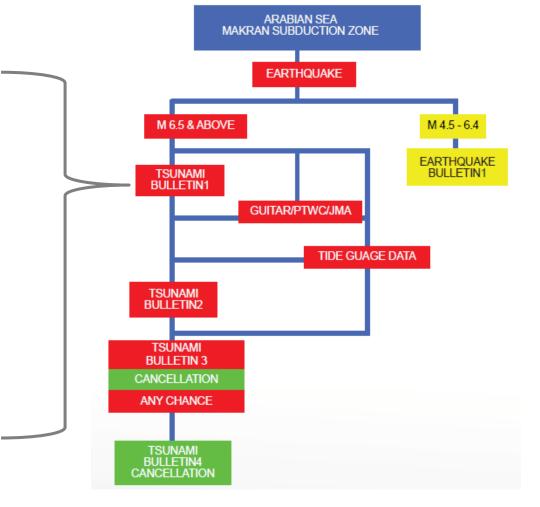


NTWC SOP- Pakistan Output: Bulletin 1



People in coastal areas of Balochistan especially Jiwani, Gwadar, Pasni, Ormara and neighbourhood are STRONGLY ADVISED TO EVACUATE IMMEDIATELY to higher grounds or go far inland.

People in coastal areas of Sindh are advised to standby for evacuation. Boats and Ships at sea are advised to stay in the deeper parts of the sea until the threat is over. If there is sufficient time, boats and ships in harbours and bays are advised to go to the deeper parts of the sea until the threat is over.



NTWC SOP- Pakistan Output: Bulletin 1



EARTHQUAKE People in coastal areas of Balochistan especially Jiwani, Gwadar, Pasni, Ormara M 4.5 - 6.4 M 6.5 & ABOVE and neighbourhood are STRONGLY **ADVISED TO EVACUATE IMMEDIATELY** to **BULLETIN1** higher grounds or go far inland. GUITAR/PTWC/JMA People in coastal areas of Sindh are TIDE GUAGE DATA advised to standby for evacuation. Boats and Ships at sea are advised to stay in the TSUNAMI BULLETIN2 deeper parts of the sea until the threat is over. If there is sufficient time, boats and TSUNAMI **BULLETIN 3** ships in harbours and bays are advised to CANCELL ATION ANY CHANCE go to the deeper parts of the sea until the threat is over. **BULLETIN4** CANCELLATION Input for DMO & Media

ARABIAN SEA

MAKRAN SUBDUCTION ZONE



THANK YOU

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