

UNESCAP TTF-29 Project: Strengthening tsunami early warning in the North-West Indian Ocean region through regional cooperation

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TTF-29 Project: Strengthening tsunami early warning in the North West Indian Ocean region through regional cooperation

Project Funder: **UNESCAP Tsunami Trust Fund**

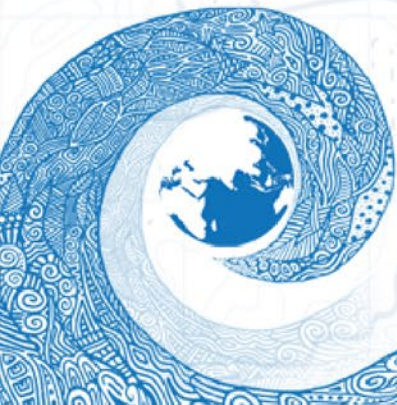
Participating Member States: **India, Iran, Pakistan & Oman, representatives from UAE**

Target Groups: **National Tsunami Warning Centres (NTWCs), Disaster Management Organisations (DMOs), Communities, Response Agencies, Media**

Project Duration: **24 Months**

Outcomes:

- 1 Better understanding of the risk knowledge based on scientific research**
- 2 Improvement of warning services at NTWC level and the organization of the national warning chains to assure timely warnings and rapid response with due emphasis on self-protection for near source events.**



Background Information

1. Countries that border the North-West Indian Ocean (NWIO) are at risk of being impacted by tsunami generated by the Makran undersea trench, which can rupture at any time.
2. In 1945 a tsunami generated by this trench caused the death of many people. The estimated death toll ranges from a few hundred to 4,000.
3. A tsunami generated in this area may arrive on the Makran coastline within 20 minutes.
4. A number of uncertainties existed about the tsunami hazard and associated risk for the NWIO.
5. NTWCs, DMOs, and the Broadcast Media are all key links in national tsunami warning chains that needed to be enhanced to deliver timely warnings to at-risk communities.



Outcome 2: National Warning Services and Tsunami Warning Chains

- High-Level conference (Muscat, Sept 2019) resulted in agreed joint working process for improving national warning chains
- Development of National Working Groups (ongoing).
 - The National Working Groups with key stakeholders involved in the TEWS to improve the SOPs at NTWC and DMO levels.
- Contributes to work of ICG/IOTWMS NWIO-Working Group and ICG/IOTWMS Task Team Tsunami Preparedness for a Near-Field Tsunami Hazard

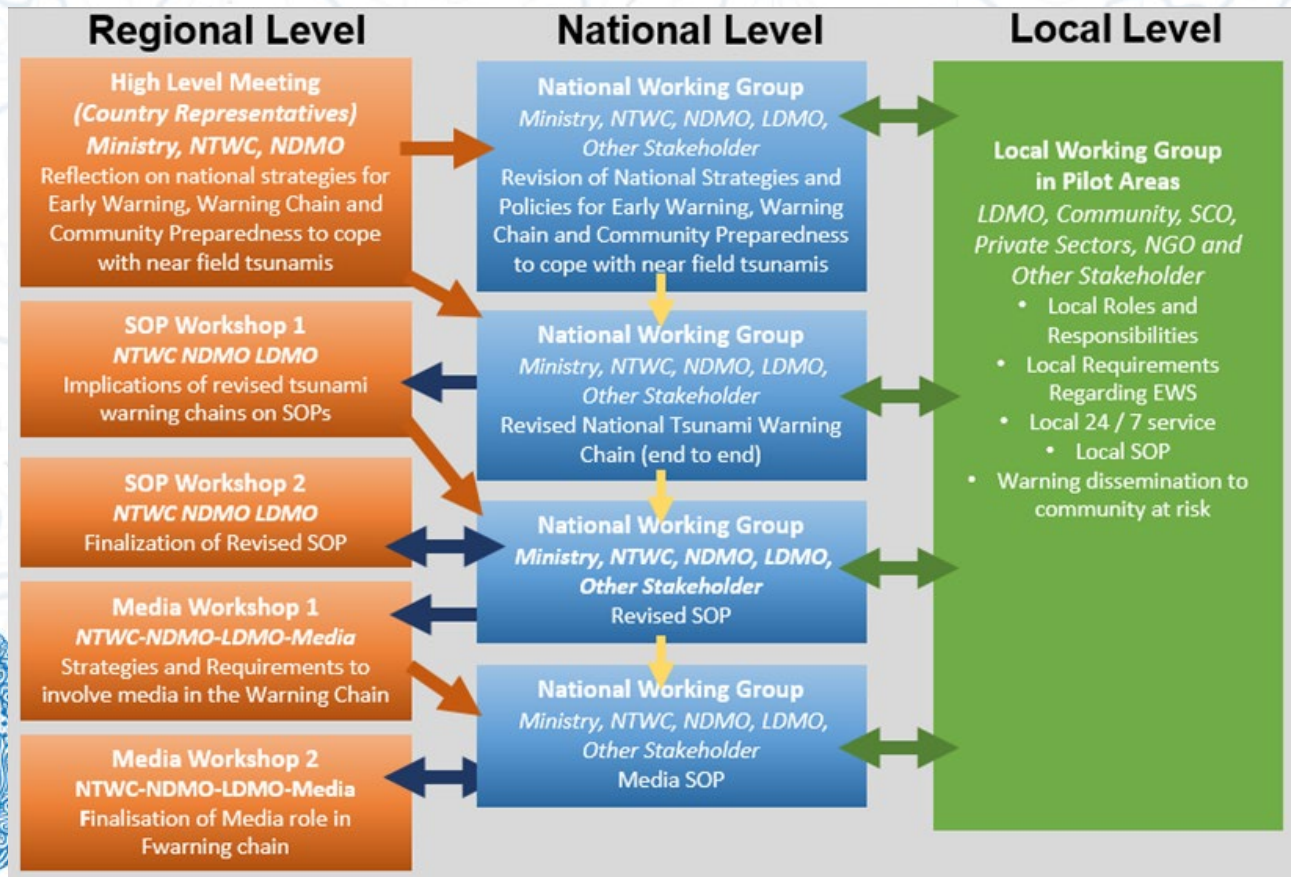
Outcome 2: National Warning Services and Tsunami Warning Chains (cont)

- Workshop #1 on Standard Operating Procedures (SOPs) for Tsunami Early Warning (Karachi, Feb 2020).
 - National tsunami warning chains assessed and consolidated against actual time available during a near-field tsunami threat.
- Upstream warning chains tested during Exercise IOWave20 (Oct 2020)
- Regional Workshop on Harmonisation of NTWC warnings and products (online, Nov 2020): included thresholds, threat levels, warning colours, and consistency of messaging.



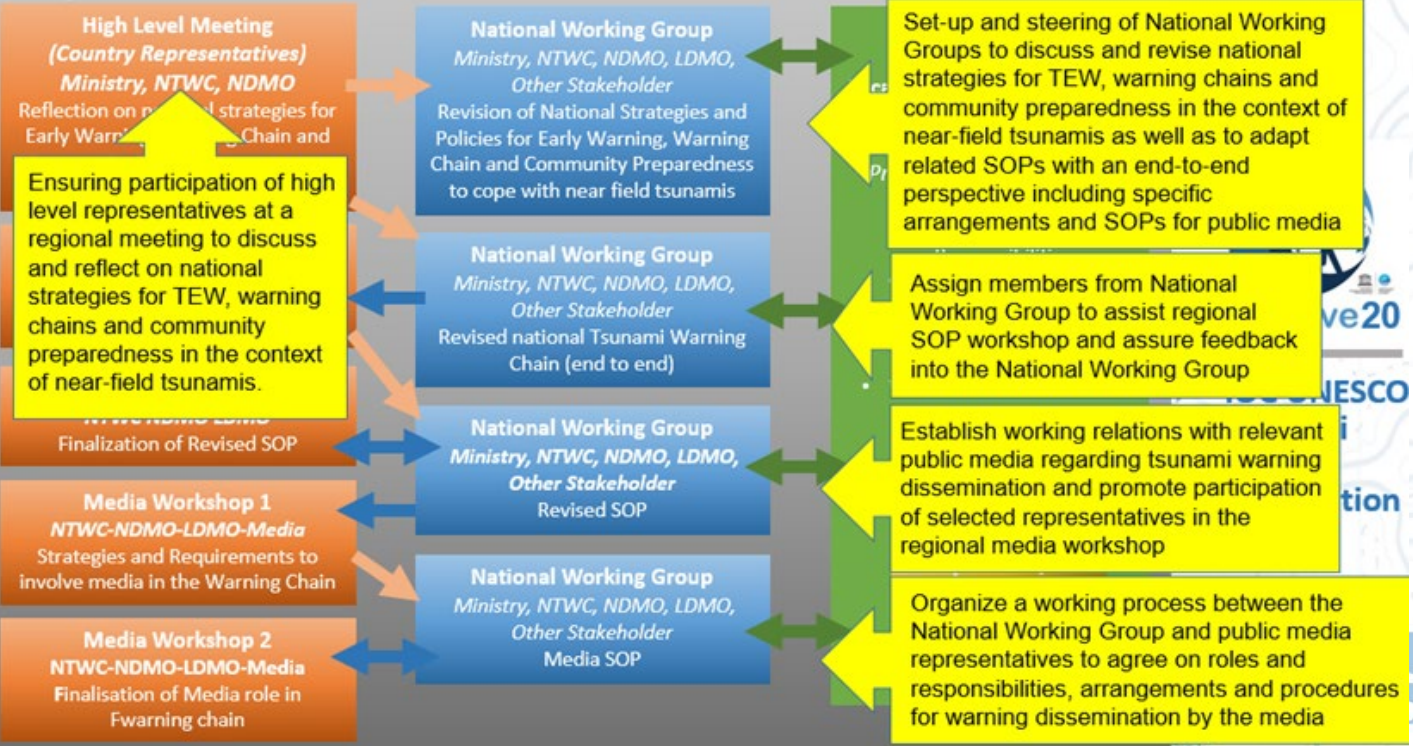
Outcome 2: National Warning Services and Tsunami Warning Chains (cont)

- Series of virtual National Consultative Meetings with India, Iran, Oman, and Pakistan
- Regional Webinar on Engagement of the Broadcasting Media in the Tsunami Warning Chain (17 June 2021)
- Media SOP Workshop #1: NTWCs, DMOs, Media (7-9 Sept 2021)
- Workshop #2 on Standard Operating Procedures (SOPs) for Tsunami Early Warning : NTWCs, DMOs (11-14 Oct 2021)
- Media SOP Workshop #2: NTWCs, DMOs, Media (26-28 Oct 2021)



Project Contribution

Member States Contribution



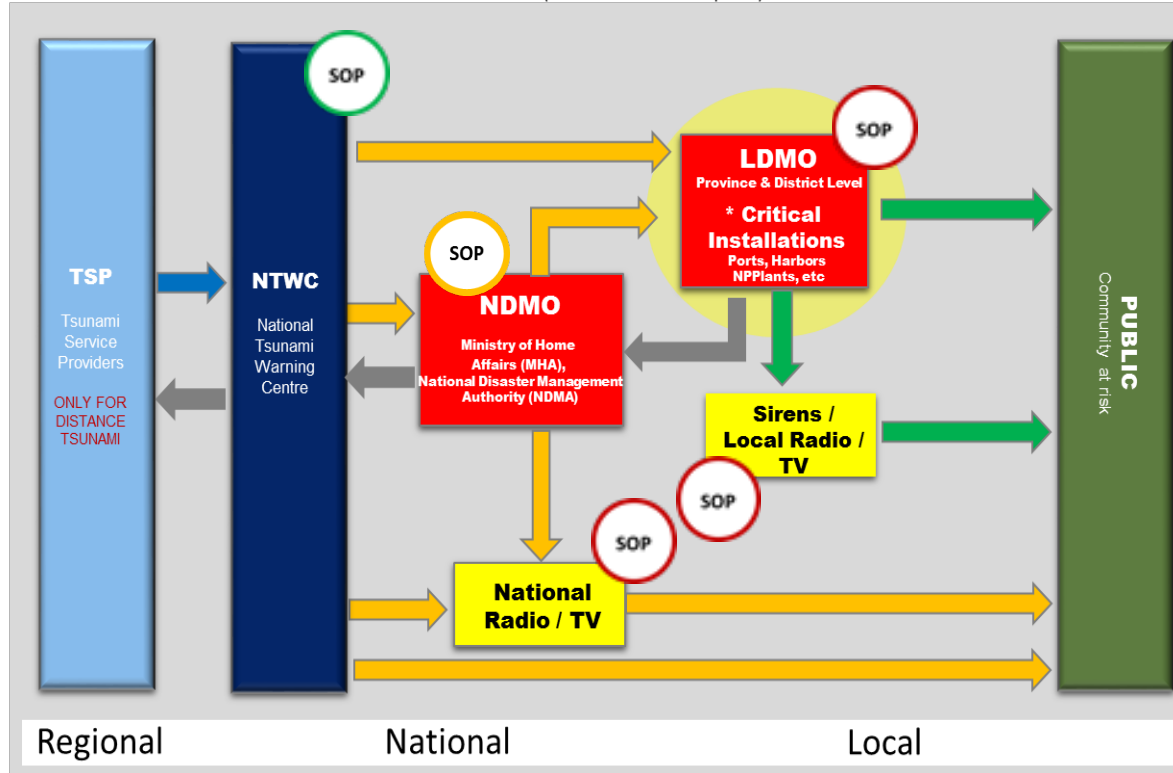
Technical Meeting 19 November 2020

20 Min

10 min

20 min

Timeline (Minutes after Earthquake)



India

19/11/2020

* Critical Installations evacuation call only at Institution level

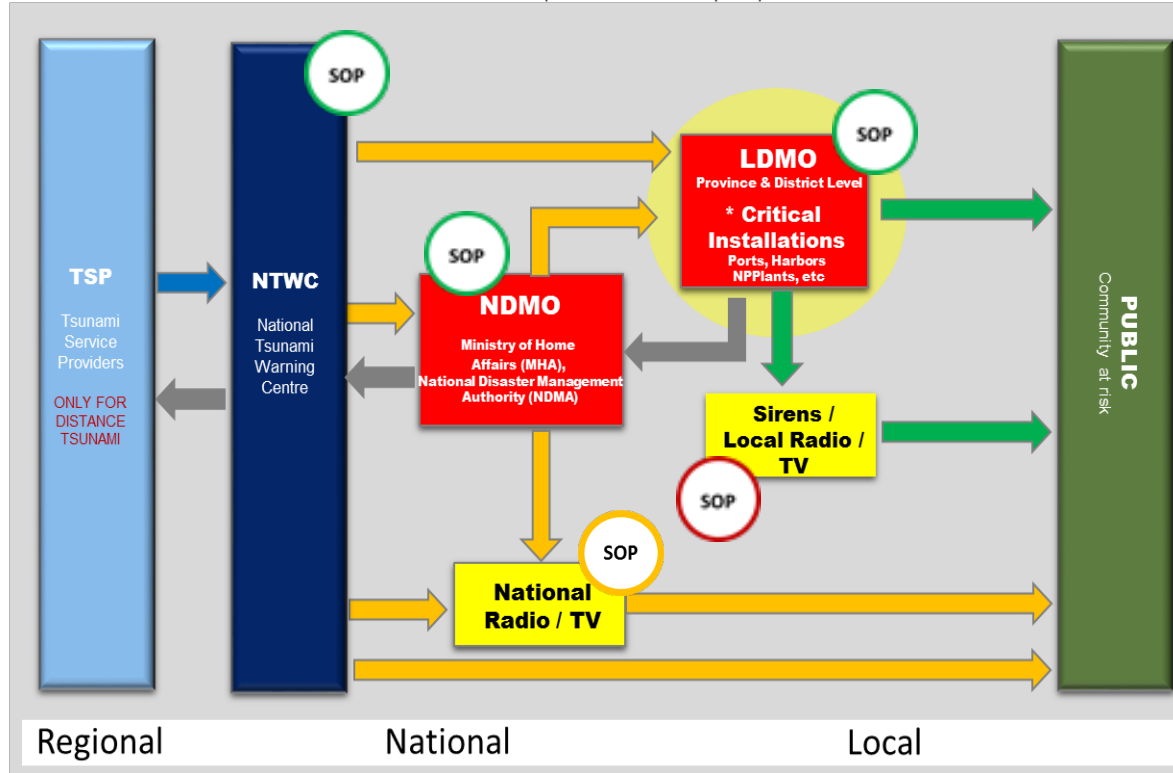
Technical Meeting 28 October 2021

20 Min

10 min

20 min

Timeline (Minutes after Earthquake)



India

28/10/2021

* Critical Installations evacuation call only at Institution level

Recommendation	Agree				Implemented			
	OM	IR	PAK NTWC	PAK DMO	OM	IR	PAK NTWC	PAK DMO
1. Warning messages from NTWC should include advice and issued to communities at risk	Yes	Yes	Yes	No	Yes	Yes	Yes	No
2. The advice should be tied to warning levels	Yes	Yes	Yes	Yes	Yes	Yes	Partial	No
3. Integrate authorized evacuation calls into the NTWC warning messages	Yes	Yes	Yes	Yes	Yes	No	Partial	No
4. Assure one clear message to the communities	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
5. National and local media have a wide outreach and should be therefore considered as key actors in the warning chain	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
6. If sirens are operated or to be installed, a clear policy is required as to who is mandated to trigger them and what is actually the meaning of the siren sound(s)	Yes	Yes	Yes	Yes	No	Yes	Partial	Yes
7. Set maximum times not only for issuing warnings by NTWC, which is the common practice, but also for the reception of warning and guidance messages by the community at risk	Yes	Yes	Yes	Yes	No	Yes	No	No
8. No-threat information is just as important as a warning may be	Yes	Yes	Yes	Yes	No	No	No	No
9. Hazard and risk assessments need to be undertaken to educate communities and relevant authorities on the threat and potential impacts on coastal communities.	Yes	Yes	Yes	Yes	Yes	Yes		Yes
10. Communities at risk must have a high level of awareness and sufficient knowledge to react independently and properly during a tsunami threat. Self-evacuation is the key to surviving near-field tsunamis.	Yes	Yes	Yes	Yes	Partial	Partial	Partial	No



TTF29 – Phase 2: Under Consideration

Participating Member States: **India, Iran, Pakistan & Oman, representatives from UAE**

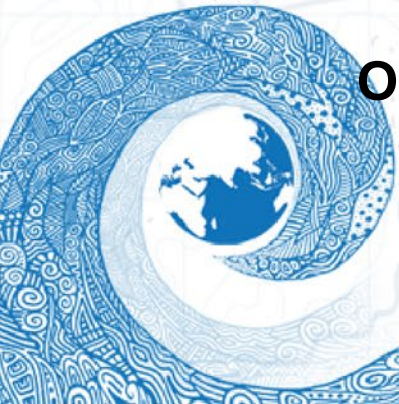
Target Groups: **NTWCs, DMOs, Communities, Response Agencies**

Project Duration: **18 Months**

Proposed Budget: **USD ~500K**

Outcomes:

- 1 Development of hazard and inundation maps by enhancing capacities on tsunami modelling**
- 2 Development of evacuation plans in line with the requirement of near-field tsunamis.**



Thank you

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- ❖ *Rick Bailey, Head ICG/IOTWMS Secretariat, Australia*
- ❖ *Ardito M. Kodijat, Head of Indian Ocean Tsunami Information Center, Indonesia*
- ❖ *Harald Spahn, Independent Project Consultant, Germany*
- ❖ *Nora Gale, ICG/IOTWMS Secretariat, Australia*

(Muscat, 2019)



(Karachi, 2020)

