

*ICG/IOTWMS  
Steering Group Meeting  
14-15 July 2022*



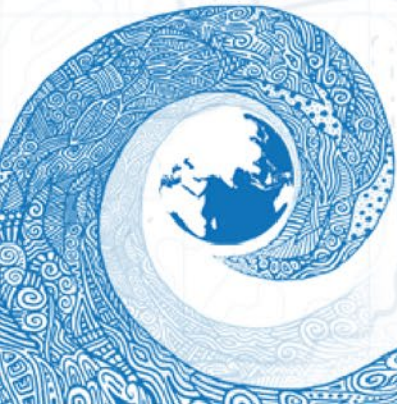
# **UNESCAP Project Report:** **Strengthening Tsunami Warning in the North West Indian Ocean Through Regional Cooperation**

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# Phase 1 UNESCAP TTF-29 Project

Project Funder: UNESCAP Tsunami Trust Fund

Participating Member States: India, Iran, Pakistan, *Oman & UAE as self-funded*

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

Project Duration: 24 Months - completed

**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.





## Phase 2 UNESCAP TTF-29 Project

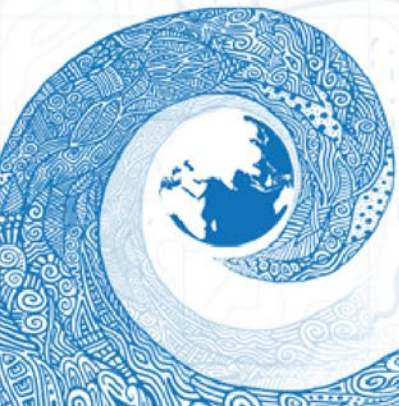
Project Funder: UNESCAP Tsunami Trust Fund

Participating Member States: India, Iran, Pakistan, *Oman & UAE as self-funded*

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

Project Duration: 12 Months: December 2021 - November 2022

- Outcomes:**
- 1** Finalisation of Phase-1 activities in tsunami risk knowledge and strengthening of national tsunami warning chains.
  - 2** Gap analysis and development of guidance on tsunami inundation mapping and evacuation planning in the NWIO region.

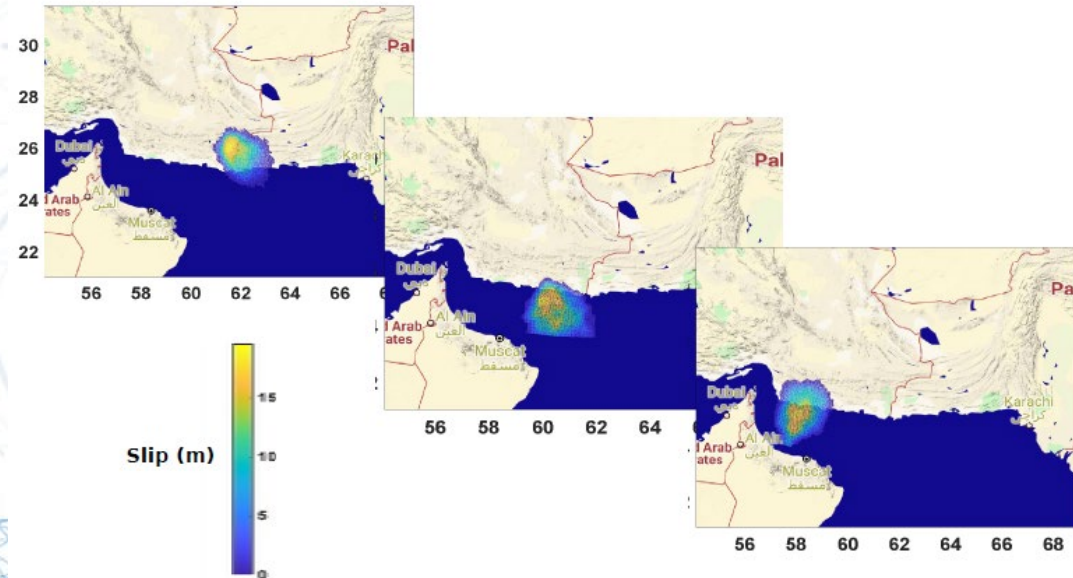


# Phase 1 - Probabilistic Tsunami Hazard Assessment

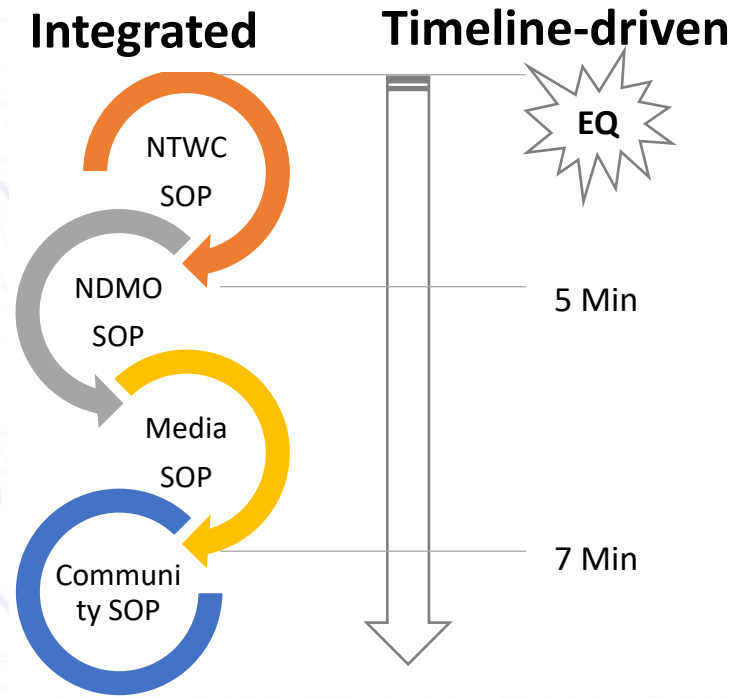
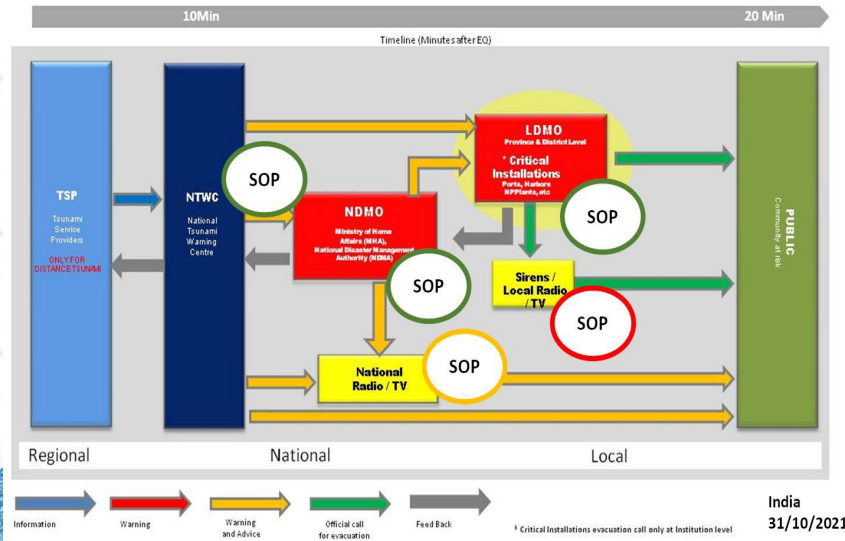
- Identification of seismic zones
- Green's function in deep ocean & Arabian Sea
- Direct calculation method in Persian Gulf and Red Sea
- Upcoming Hackathon to complete the probabilistic calculation for all seismic scenarios to produce a final PTHA models.

**Hackathon to be held in Rome during 19 August to 9 September 2022.**

## Makran subduction M8.5 slip distribution examples



# Phase 1 - National Tsunami Warning Chains & SOPs



**Final SOP NTWC/DMO/Broadcast Media Training Workshop to be held online during 19-23 September**



# Phase-1 - Science Exchange Meeting

Topic = Understanding the tsunami hazard of the Makran region

## Content

- Share the Probabilistic Tsunami Hazard Assessment model and a regional tsunami hazard map with the region for adoption
- Report on the latest regional/international studies on the tsunami hazard of the Makran subduction zone

Output = The current scientific insights on the tsunami hazard from the MSZ can be used for future risk assessment activities in the countries

**Makran Source Zone Science Exchange Meeting to be held online with a possible face-to-face meeting in Oman during 17-18 October 2022.**



# New Activity related to Phase-1: NWIO Regional tsunami exercise

## Activity

- Table-top exercise
- NWIO region

## Output

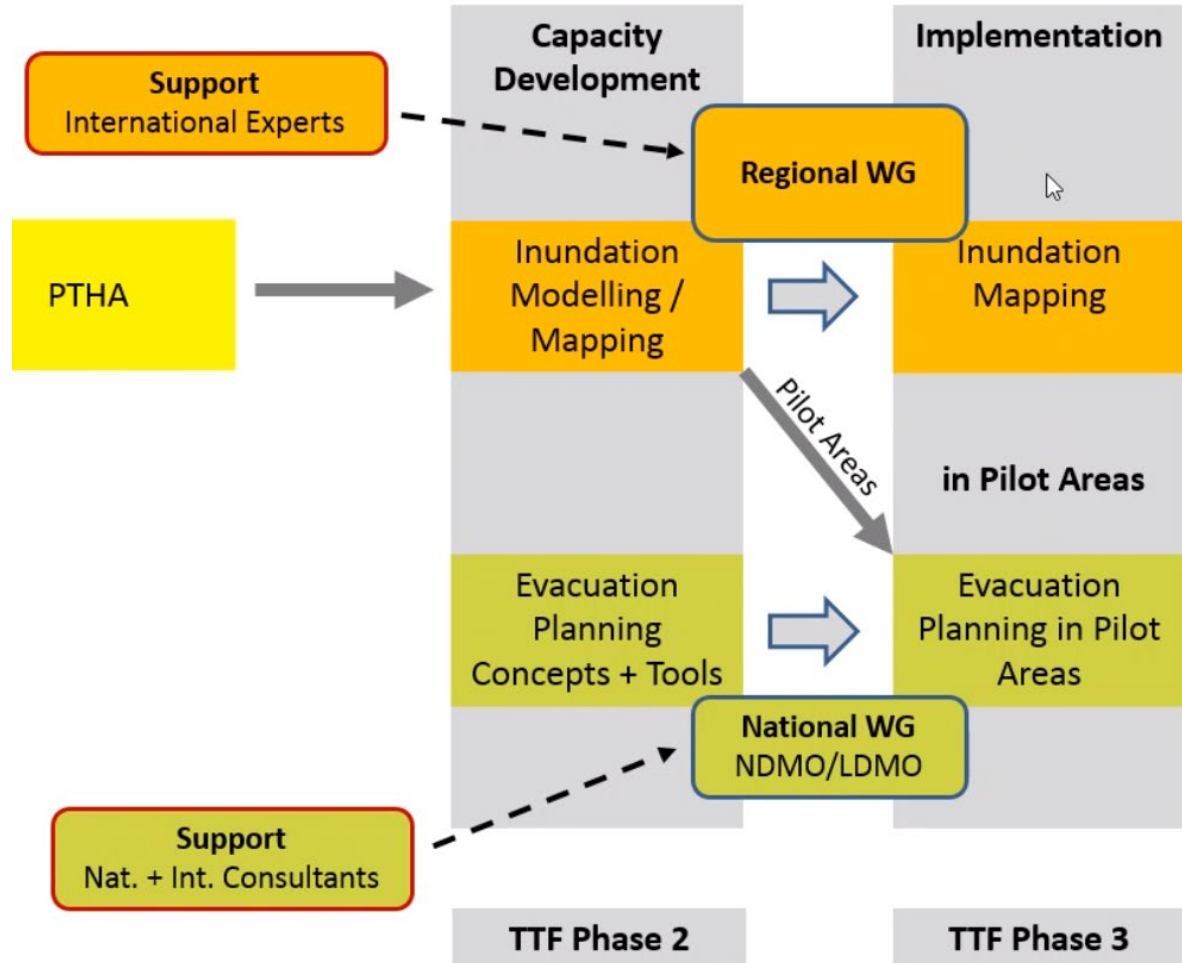
- Test and refine national tsunami warning chains established during Phase-1 of project.

**NWIO Table-top SOP Exercise to be held in hybrid formation (regional online & national face-to-face meetings during 1-3 November 2022.**



# Phase 2 –

Gap analysis and development of guidance on tsunami inundation mapping and evacuation planning in the NWIO region.





# Tsunami Inundation Mapping: Gap analysis and development of guidance

## Activity

- Included in WG-NWIO activities
- Underpinned by PTHA model of Phase-1
- Cooperation and exchange of knowledge on tsunami modelling and inundation mapping
- Gap analysis of tsunami inundation capabilities in the region

## Output

- Development of a unified approach and method for tsunami modelling and inundation mapping for the NWIO region.

## Key Players

- Regional Reference Group
  - Agencies that hold data: bathymetry and topography
  - Modellers
  - National Tsunami Warning Centers, Regional Researchers/Academics, and International Experts
  - Consultant to undertake a NWIO Region Inundation Modelling Gap Analysis



# Tsunami Evacuation Planning: Gap analysis and development of guidance

## Activity

- Synthesise existing information on tsunami evacuation planning: approaches, standards, methodologies & best practices
- Guide development of national tsunami evacuation planning policies, standards and approaches
- Support establishment of national working groups on tsunami evacuation planning to facilitate implementation in each participating country

## Output

- Set of national policies, standards and approaches for tsunami evacuation planning in participating countries

## Key Players

- National Reference Groups
  - Disaster Management Organisations
  - Emergency Managers
  - Community Leaders and other local-level stakeholders
  - International consultant supported by national consultants to assist with compilation of National Tsunami Evacuation Mapping Gap Analysis

# National and Regional Workshops and Meetings

## Sharing and Developing Best Practices

Activity	Modality	Date
Regional Evacuation Gap Analysis Workshop	Online	16 August
Regional Working Group on Inundation Modelling Meeting	Online	8-9 September
National Tsunami Evacuation Group meetings	Hybrid, national	12-16 September
Makran Source Zone Science Exchange Meeting	Online	17-18 October
NWIO Regional Inundation Science Meeting	Hybrid, national	19-20 October
Evacuation Mapping Workshop	Hybrid, Bali, Indonesia	23 November



# Consultancies

## Key Tasks

- *Development of training & briefing materials*
- *Identification of best practices in inundation & evacuation mapping*
- *Workshop & meeting preparation*

## Consultants

- *Indian National Center for Ocean Information Services (INCOIS)*
- *Mr. Medhi Masoodi (Iran)*
- *Ms. Ghazala Naeem (Pakistan)*
- *Dr. Jorn Lauterjung (International)*
- *Mr. Harald Spahn (International)*



Thank  
you.



*UNESCAP TTF-29 Project – Launch of Phase 2, 16 May 2022*