



NCM

المركز الوطني للأرصاد
National Center of Meteorology



UNESCO-IOC Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System
(ICG/IOTWMS)

Regional Working Group for the North-West Indian Ocean
(RWG-NWIO), 22 July 2024.

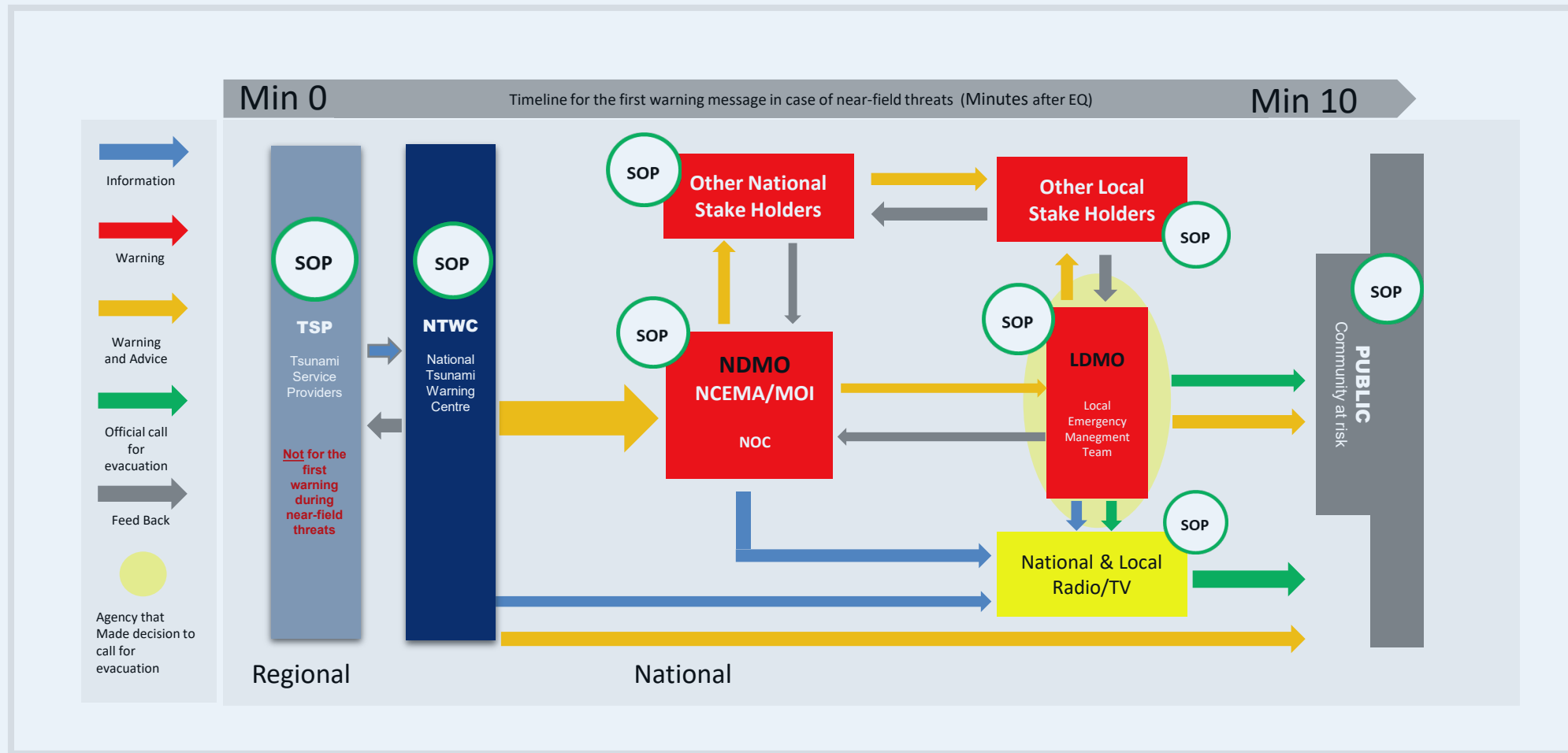
Status Report (United Arab Emirates)

By Badr Alameri

Outline

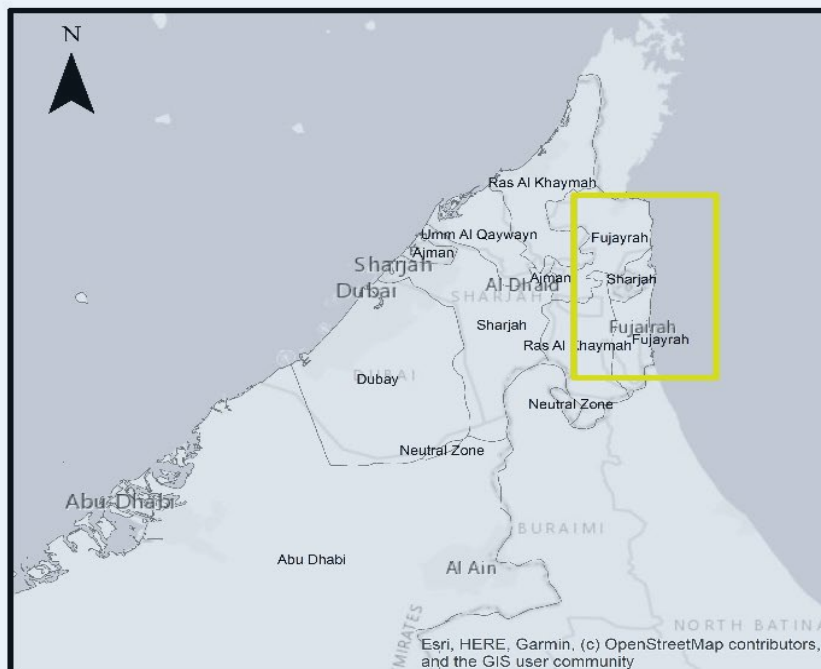
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- I. Warning chain & SOPs
 - II. Tsunami Hazard Assessment
 - III. Inundation
 - IV. Awareness & Preparedness (Drill Exercise)
 - V. Current Situation & Future plan

I. United Arab Emirates Tsunami Warning Chain



Media SOP proceed corresponding to the Media Response Plan of Natural Hazards

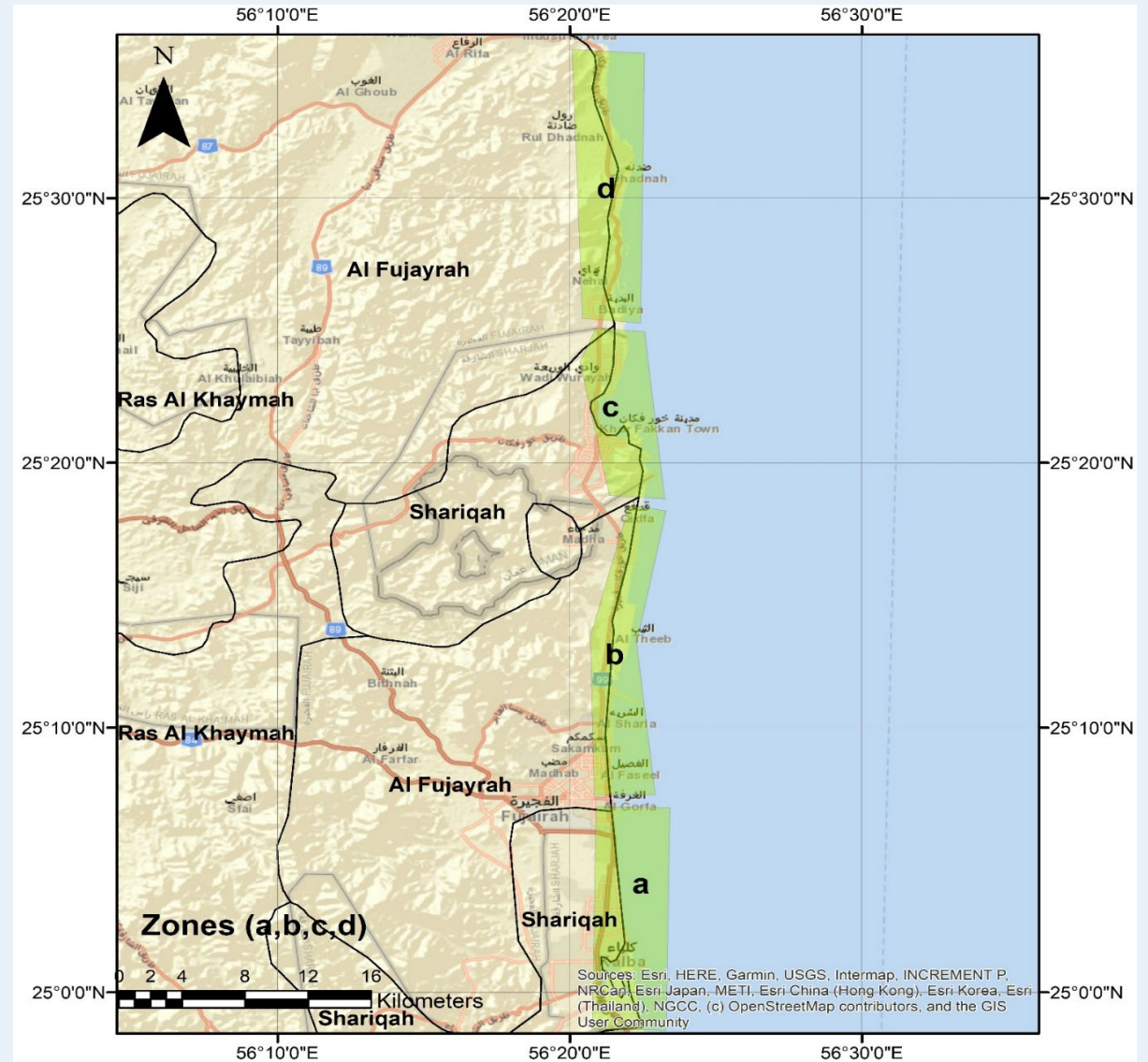
II. Tsunami Hazard Assessment



Tsunami Hazard Assessment

Example of : Study area divided into 4 zones:

- Zone (a) comprises Kalba city.
- Zone (b) encloses Al Fujairah city.
- Zone (c) involves Khor Fakkan city.
- zone (d) includes Dibba Al- Fujairah city.



III. Inundation

Input Data & modeling

DEM 5m Bathymetry 15 arcs MATLAB / ARC GIS

The main findings :

- The Mw 9.2 earthquake in the MSZ fault scenario causes a travel time of **42 minutes**, a maximum run-up height of **2.55 m**, a maximum flow depth of **2.2 m**, and a maximum inundation distance of **153 m**.
- The Mw 8.2 earthquake from the western MSZ scenario generates **lower impact** on Al Fujairah coast, with tsunami travel time of **31 min**, a maximum run-up height of **1.7m**, a maximum flow depth of **1.64 m**, and a maximum inundation distance of **105 m**.
- The MW 8.8 earthquake from the Eastern MSZ scenario produces **towest** tsunami impact on Al Fujairah coasts, with a travel time of **54 minutes**, a maximum run-up height of **1.3 m**, a max flow depth of **1.05 m**, and a maximum inundation distance of **71 m**.

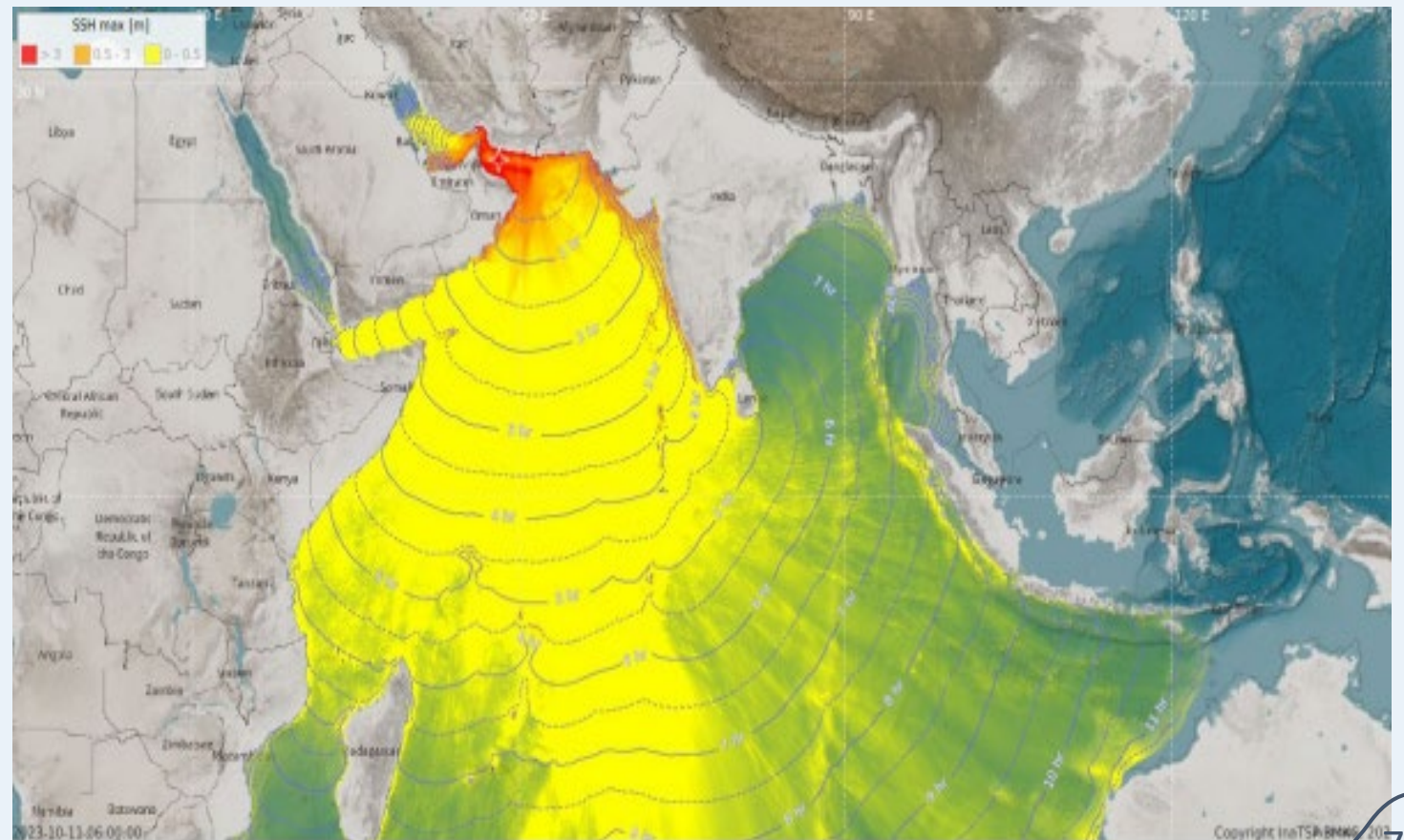
Scenario	MSZW	MSZWE	MSZE
Mw	8.2	9.2	8.8
Travel time	31 m in	42 m in	54 m in
Maximum run-up (m)	1.7 m	2.55 m	1.3 m
Maximum flow depth (m)	1.64 m	2.21 m	1.05 m
Maximum inundation (m)	105 m	153 m	71 m

IV. Awareness & Preparedness (Drill Exercise)

Drill Exercise

Indian Ocean Wave 23, Scenario 2 Makran Trench

This is the scenario of a magnitude ~ 9 earthquake in the Makran Trench of the North-West Indian Ocean (epicenter 24.80N, 58.20E), starting at 06:00 UTC on Wednesday 11 October 2023.



Al Righailat

Pilot Area

Al Righailat

DEM 5m

Bathymetry 15 arcs

MATLAB / ARC GIS

Scenario	MSZWE
Mw	9.2
Travel time	42 m in
Maximum run-up (m)	2.55 m
Maximum flow depth (m)	2.21 m
Maximum inundation (m)	153 m



National Tsunami Warning & Mitigation System

- Involved organizations in the warning chain:

NTWC (NCM)

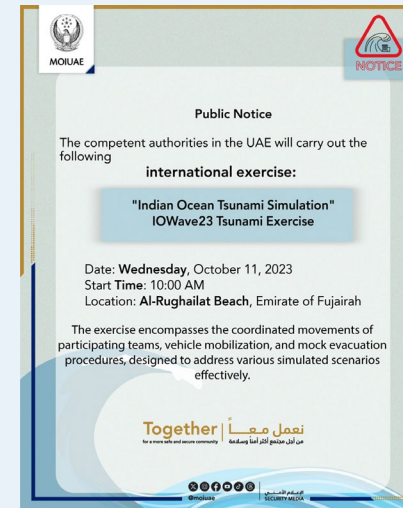
DMO (NCEMA, MOI, MEDIA)

- Organization responsible for issuing the warning:

NTWC (NCM)

- Responsible for calling for evacuation:

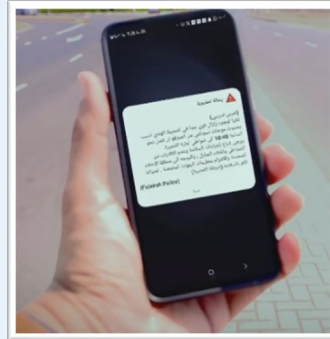
LDMO



Drill Exercise



Warning issued



Warning received



Authorities responding



Community responding



Evacuation



Safe shelters

Current Situation

- Execution Drill Exercise
- Inundation Maps
- Establishment of the TRFP and other sub committees
- Meetings with stakeholders
- Conducting Public awareness and workshops

Future Plan

- Conduct tabletop exercise in 2024
- Conduct drill exercise in 2025
- Continuously meetings with stakeholders
- Continue conducting Public awareness and workshops

Thank You
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