



**unesco**

Intergovernmental  
Oceanographic  
Commission

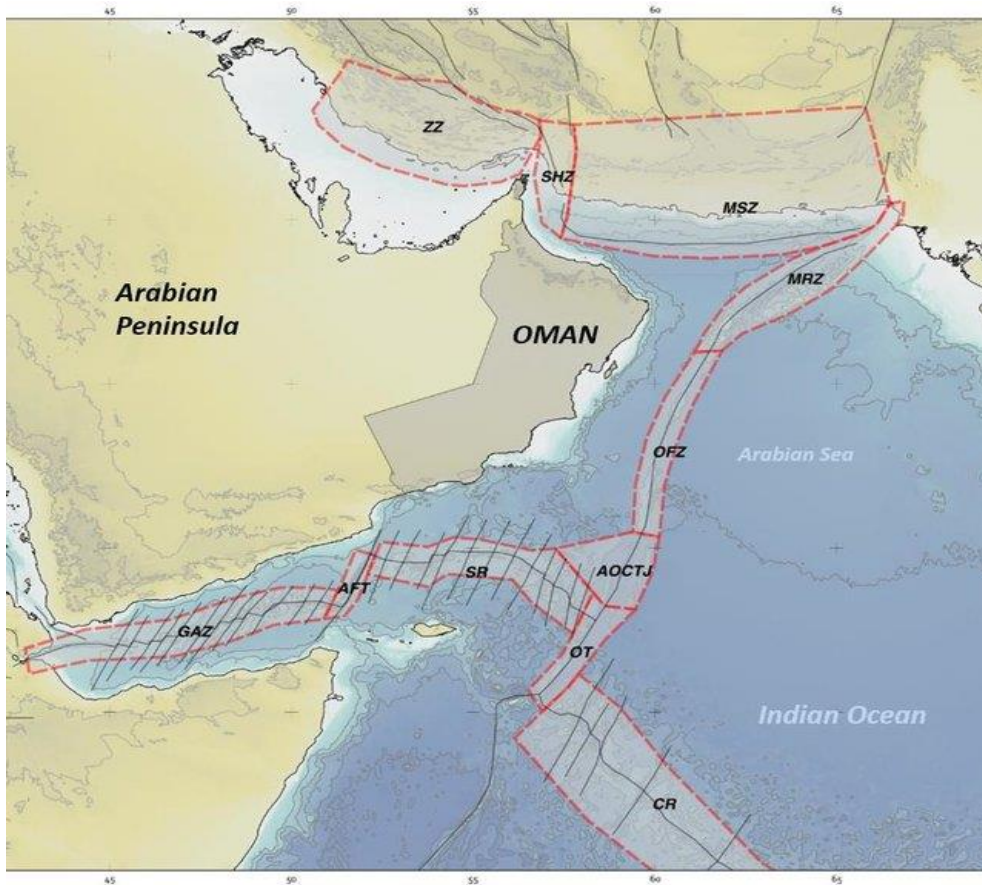
## Country Report - Oman

**Nasser Al Ismaili**

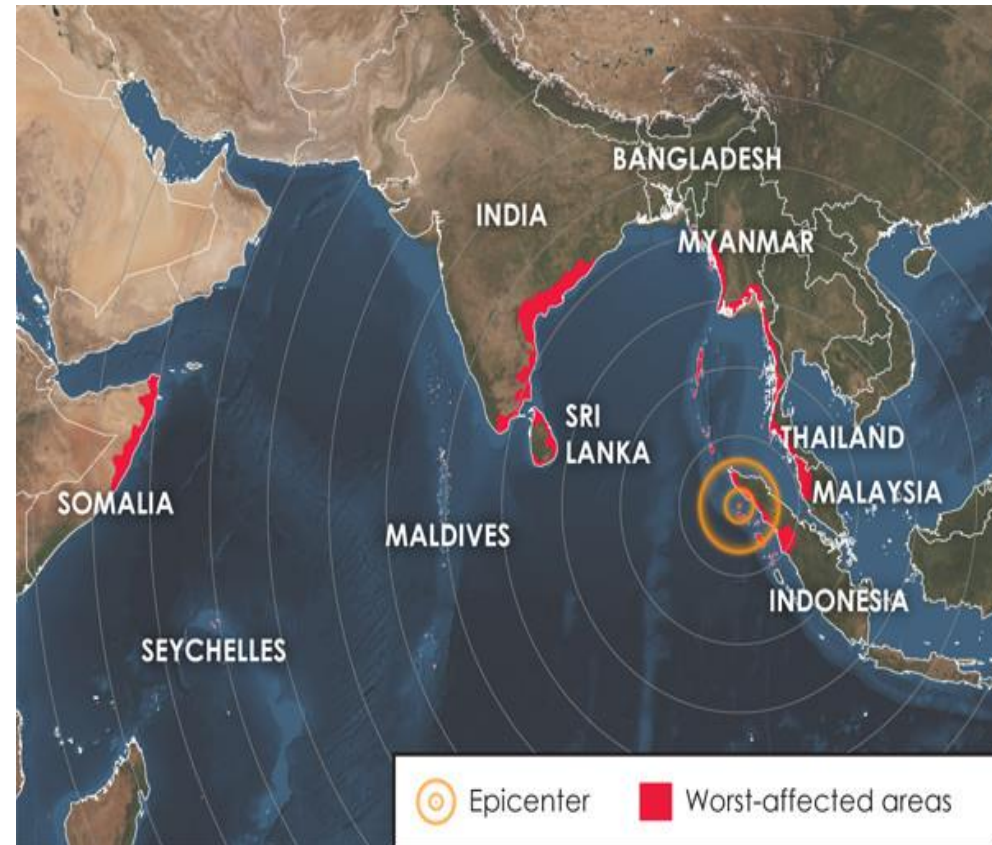
*The National Multi Hazard Early Warning Center*

*Nasser.ismaili@caa.gov.om*

# Overview: Tsunami Sources



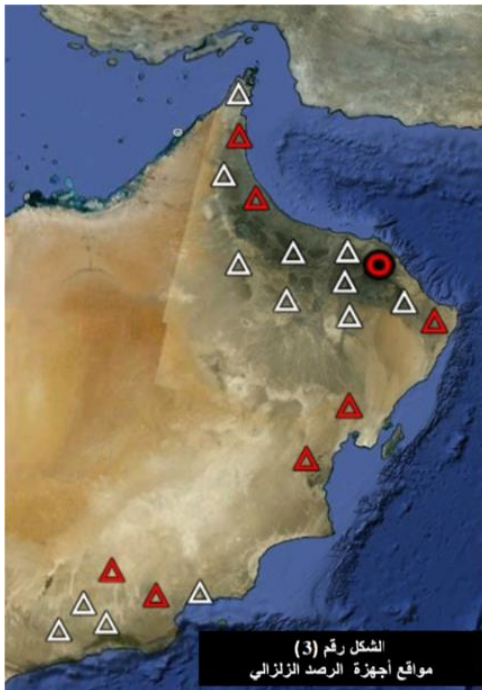
**Tsunami near source Wave arrival time is less than 30 minutes**



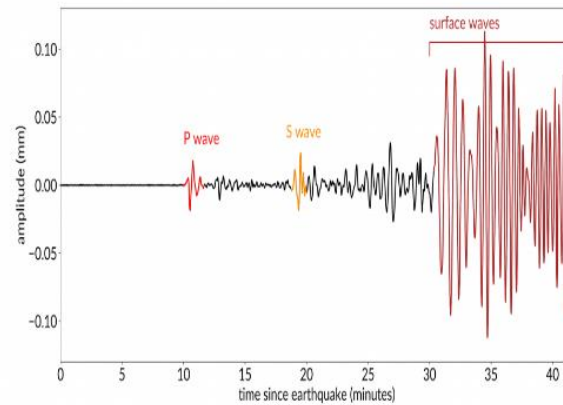
**Distant tsunami source Wave arrival time is 7-8 hours**

# Tsunami Warning System: System & Stations

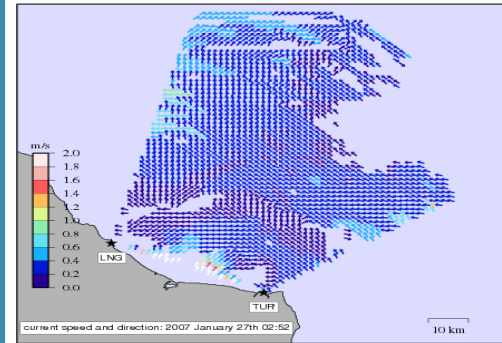
## Seismic Station



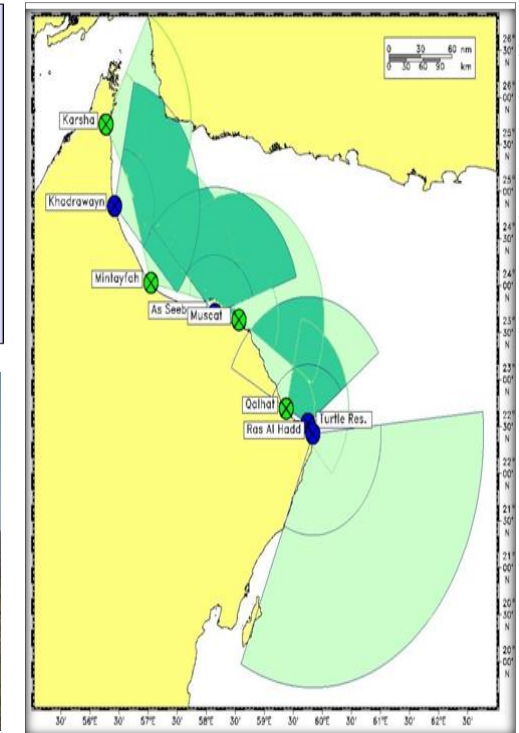
26- Stations



## Wave radars



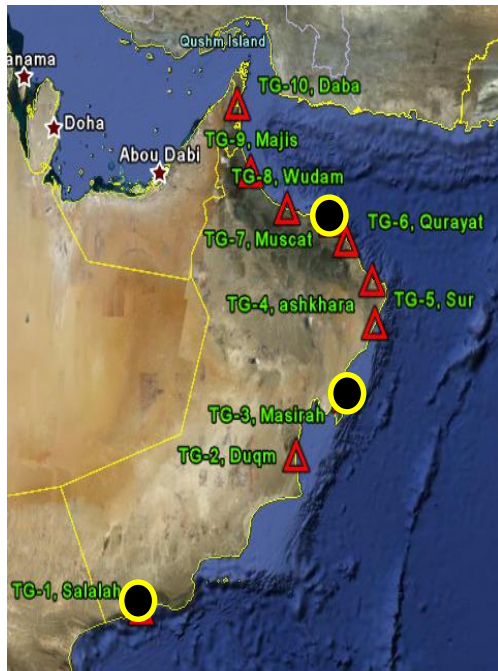
6- Radars



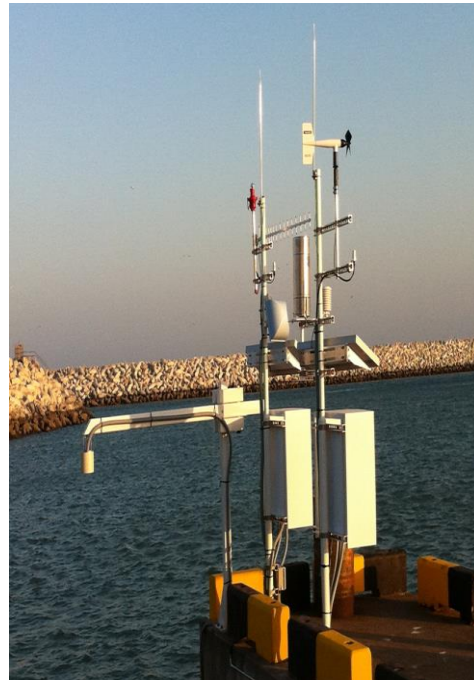


# Tsunami Warning System: System & Stations

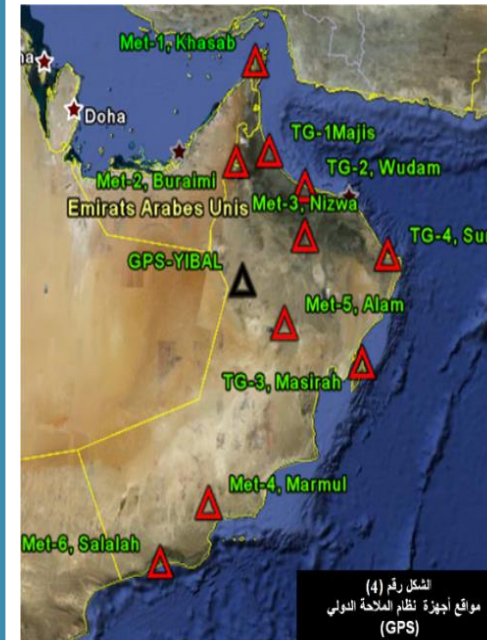
## Tide gauge sensor



10- Stations



## GPS stations



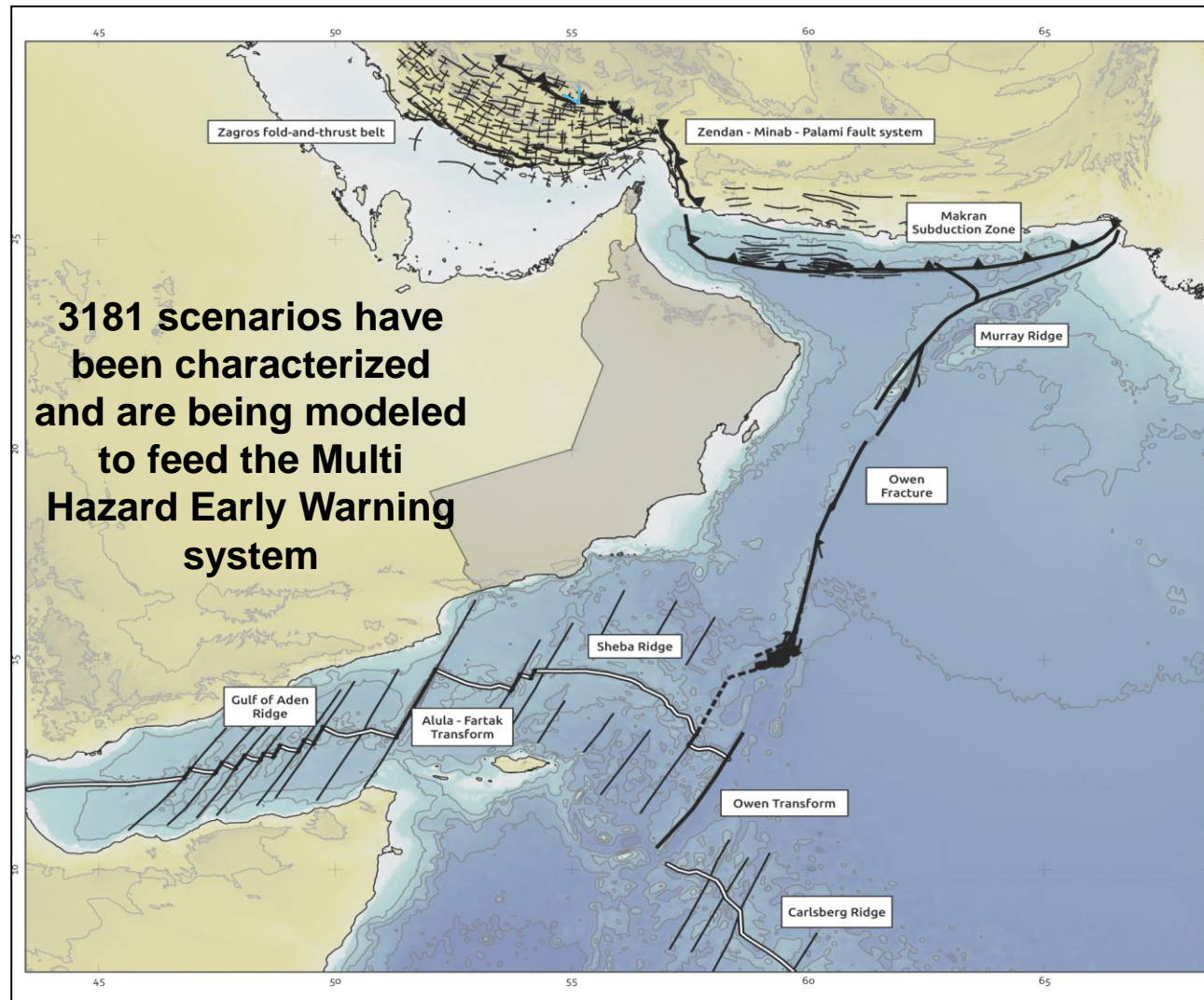
10- Stations



# Tsunami Warning System: System & Stations

## Software & Database

- Eq. Analysis:  
**Seiscomp**
- Decision support  
system: **TOAST**



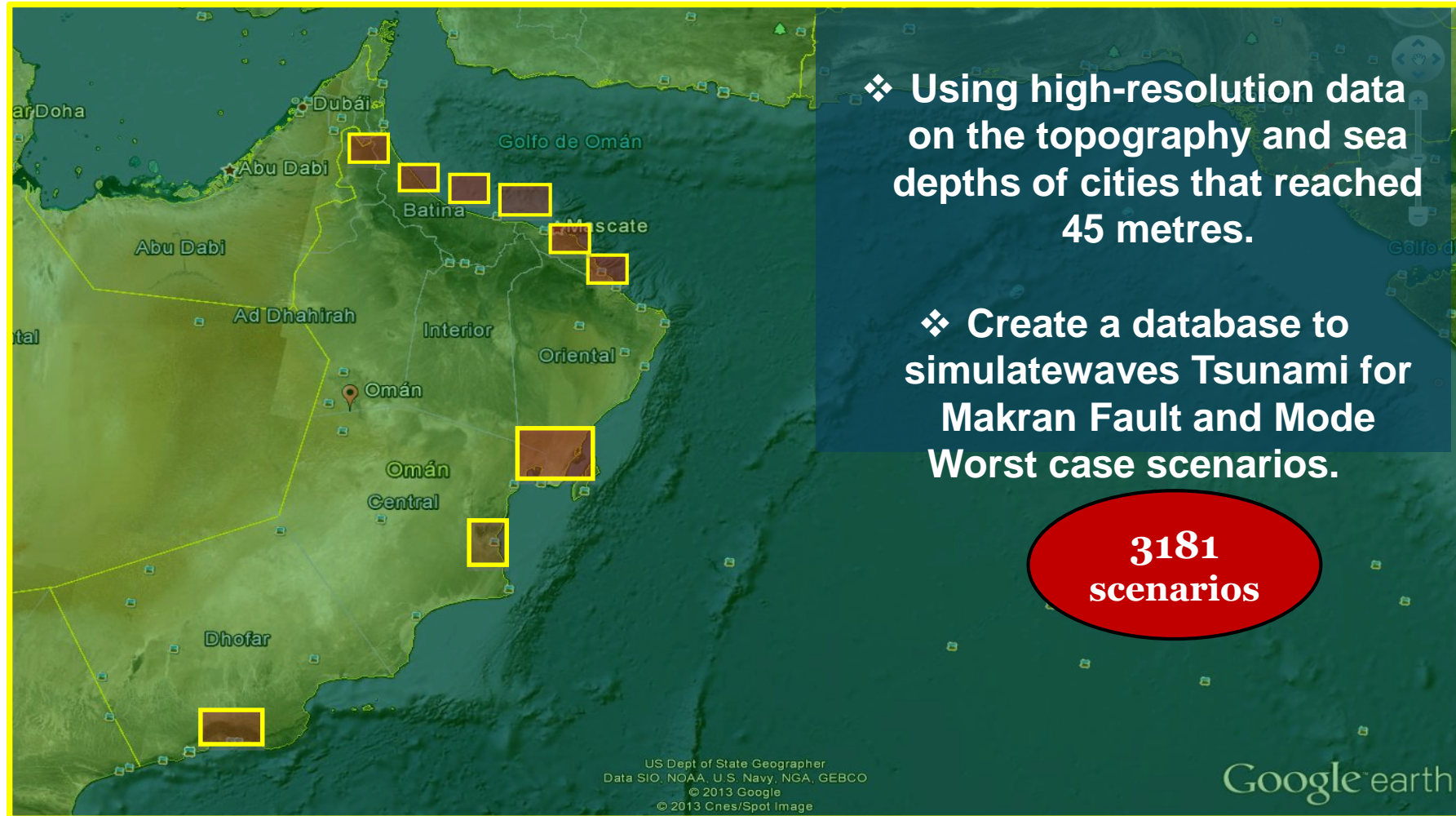
### 10 seismic areas considered

Zone	Number
Aden Gulf	44
Alula Fartak	1
AOCT	14
Sheba Ridge	65
Owen Transform	3
Carlsberg Ridge	74
Owen Fracture	16
Murray Ridge	33
Hormuz	48
Zagros	148
Makran	2735
<b>TOTAL</b>	<b>3181</b>

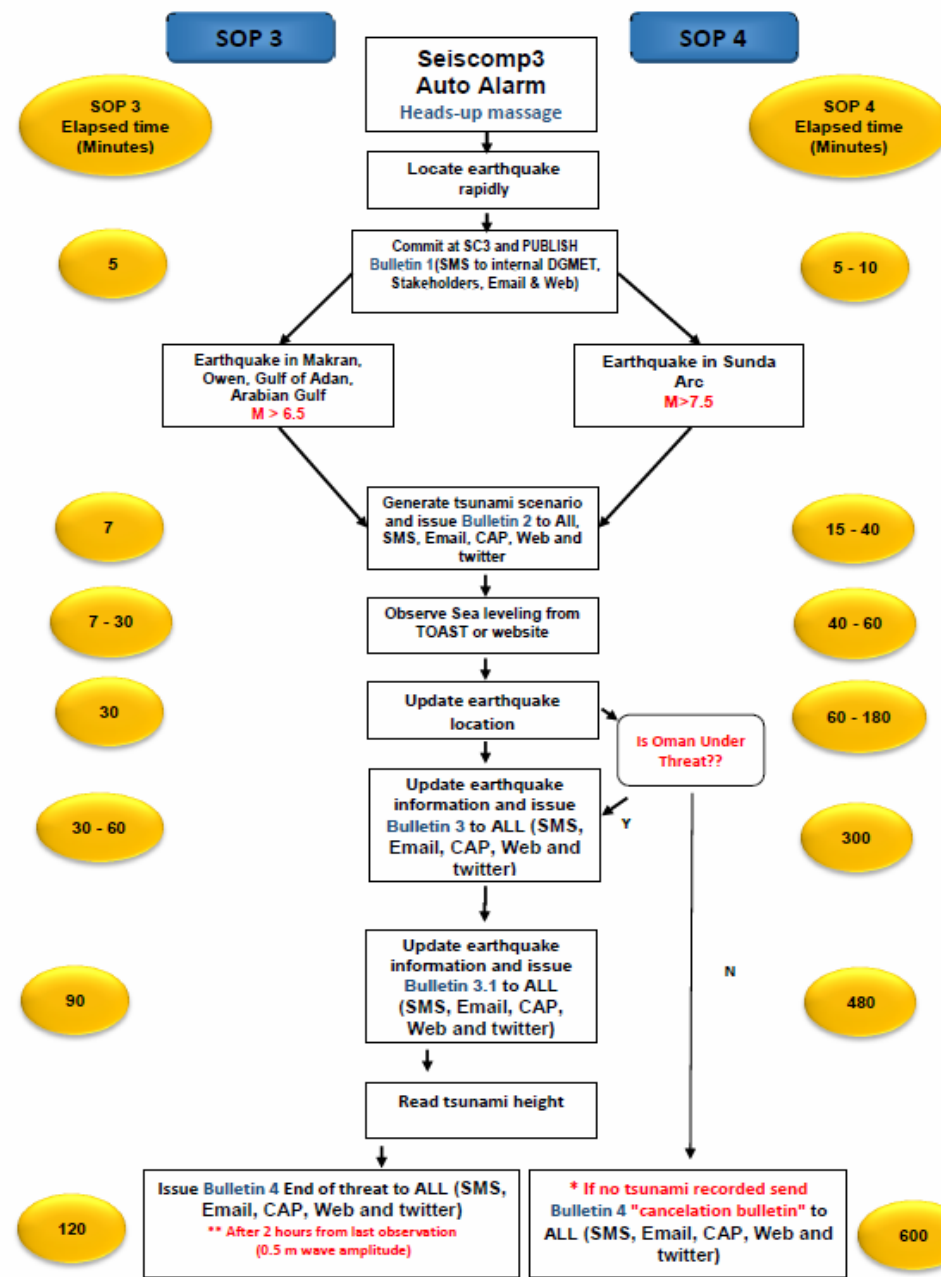
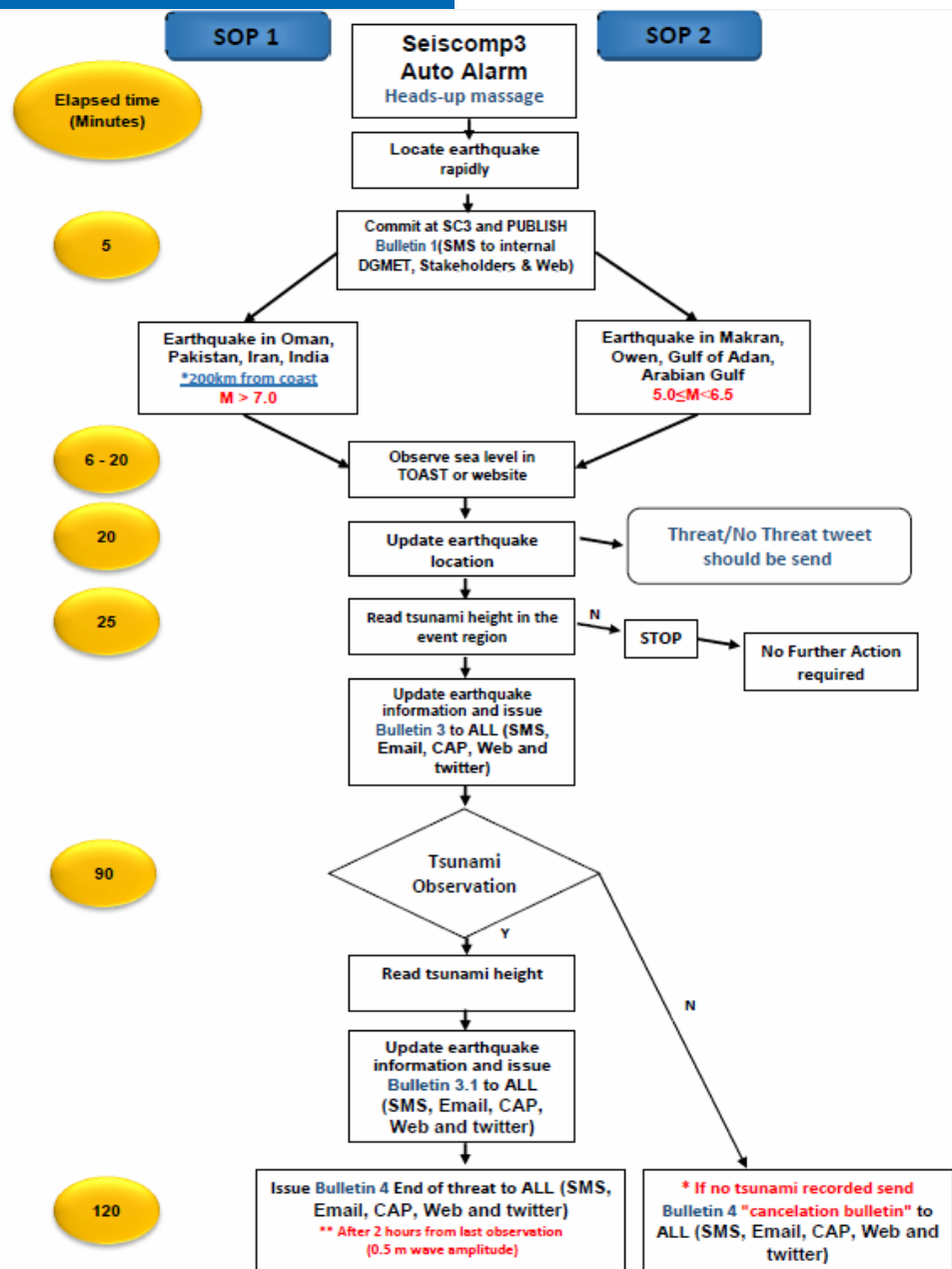
### 10 magnitudes considered

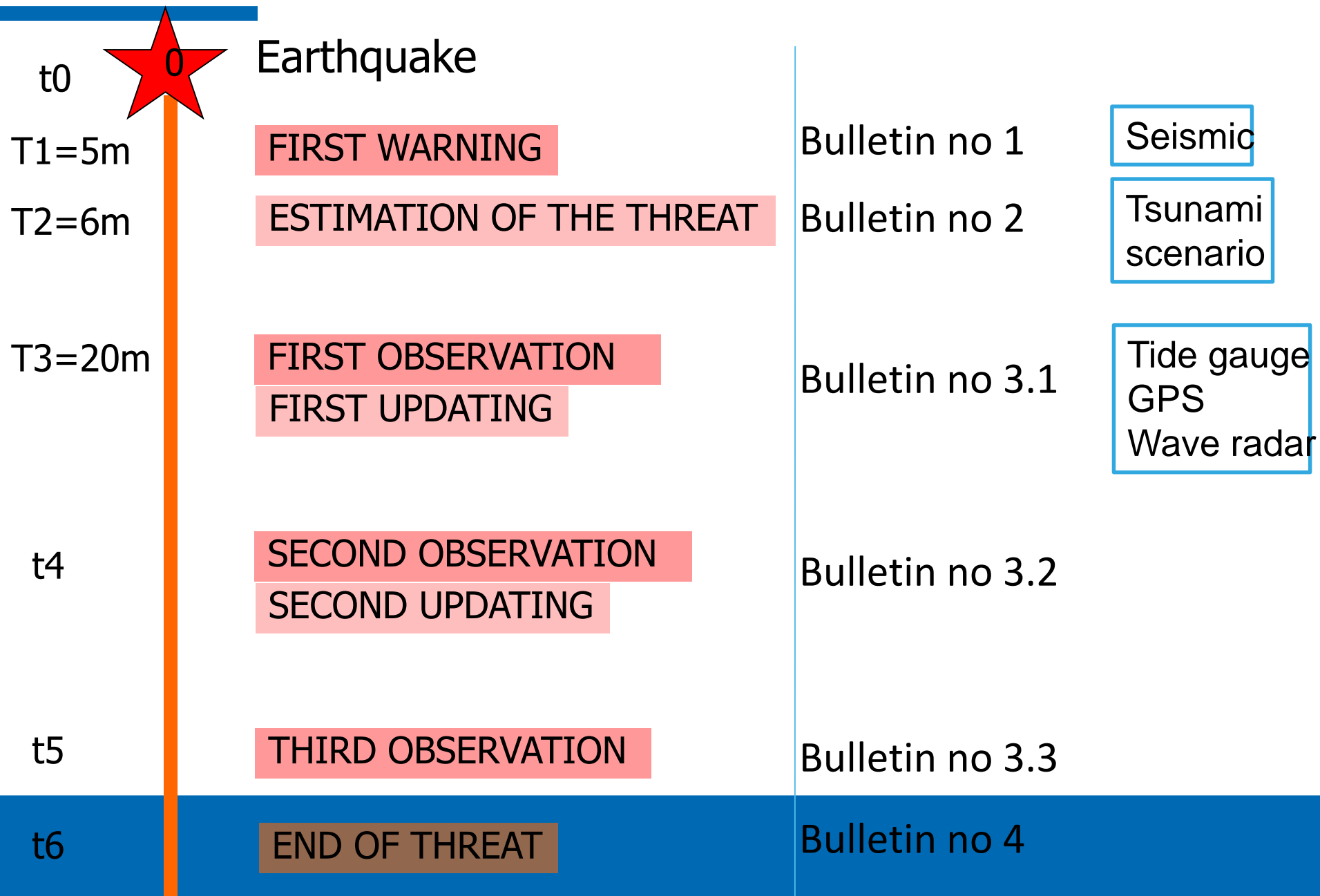
6.5, 7.25,  
7.5, 7.75,  
8.0, 8.25,  
8.5, 8.75,  
9.0, 9.25





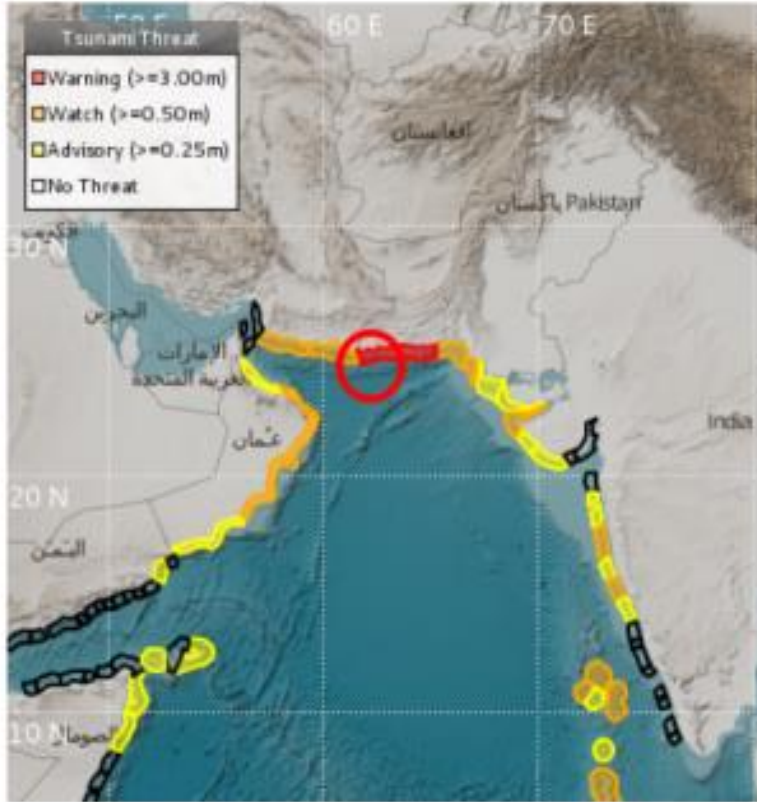
# SOPs







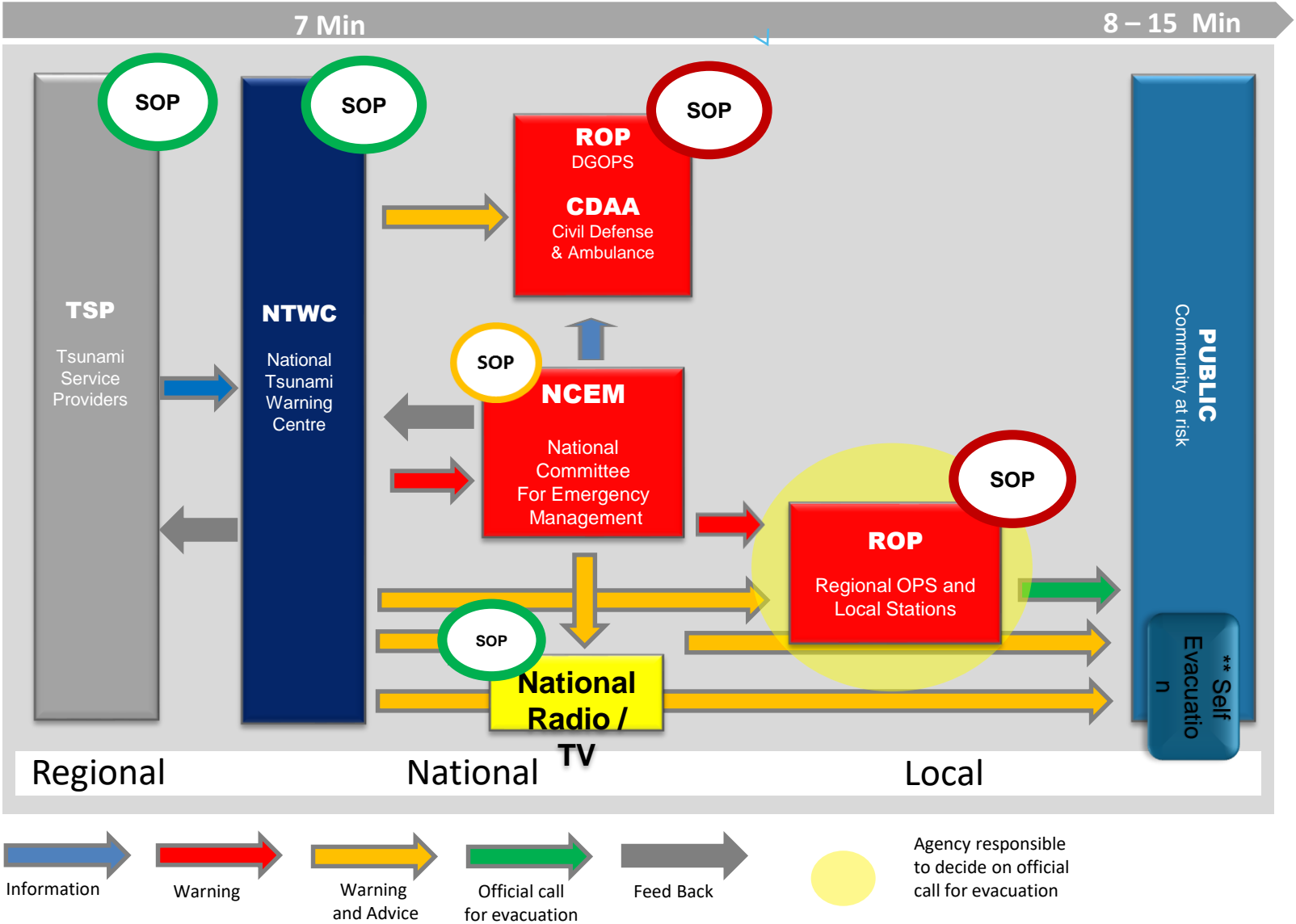
### زلزال مع إحصائية تأثير أمواج تسونامي على سواحل السلطنة Earthquake with potential tsunami along Oman coasts



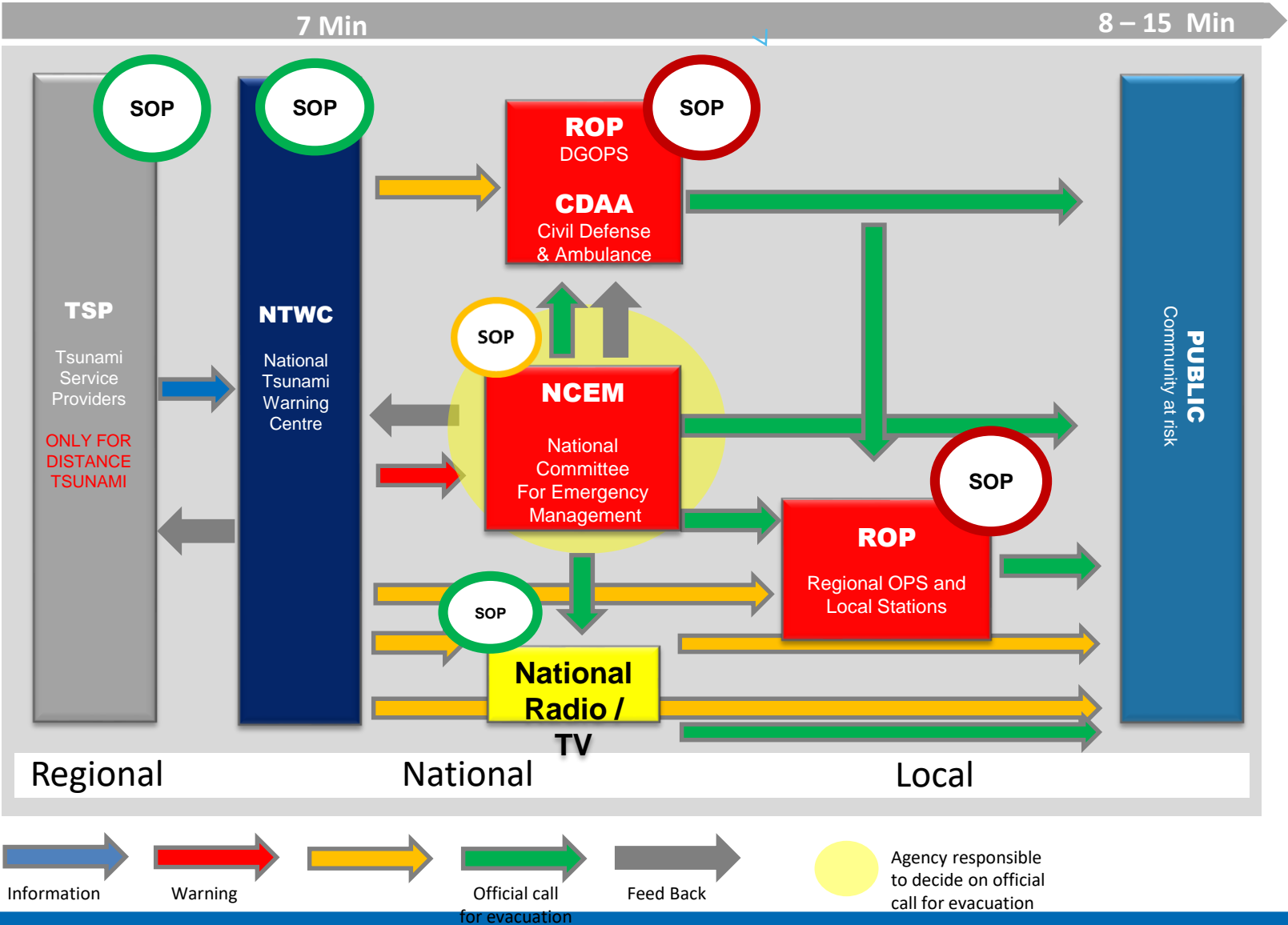
Magnitude	8.0	قوة الزلزال
Region	Off Coast of Pakistan	المنطقة
Depth	20 km	العمق
Date	05/03/2016	التاريخ
Time (MCT)	17:09:43	التوقيت المحلي

SOUTH AL SHARQIYAH (ARABIAN SEA)	Watch	تنبيه	الشرقية جنوب - بحر العرب
SOUTH AL SHARQIYAH (OMAN SEA)	Watch	تنبيه	الشرقية جنوب - بحر عمان
MUSCAT	Watch	تنبيه	محافظة مسقط
AL WUSTA	Watch	تنبيه	المنطقة الوسطى
NORTH AL BATINAH	Advisory	إشعار	الباطنة شمال
DHOFAR	Advisory	إشعار	محافظة ظفار
SOUTH AL BATINAH	Advisory	إشعار	الباطنة جنوب
MUSANDAM	Advisory	إشعار	محافظة مسندم

# Oman National Warning Chain – Near Distant Threat



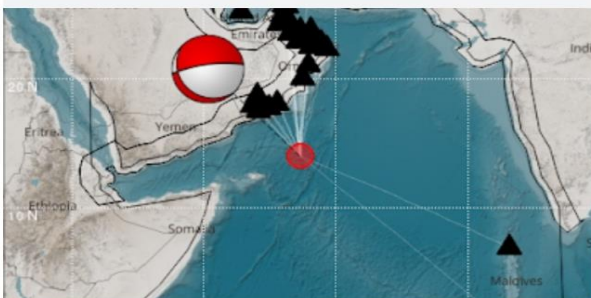
# Oman National Warning Chain – Far Distant Threat





## SMS

Potential tsunami. Earthquake: magnitude 5.5, Owen Fracture Zone R, depth 8km, 2021-04-24 22:00:34 GST, [met.gov.om/e/dgmet2021hzvm](https://met.gov.om/e/dgmet2021hzvm)



CAA - DSS Earthquake Catalog

[met.gov.om](https://met.gov.om)

B1

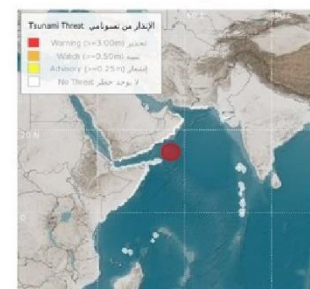
B2

لا توجد احتمالية تسونامي. انظر:  
<https://dss.met.gov.om/b2/21hzv>

## Social Media – X platform

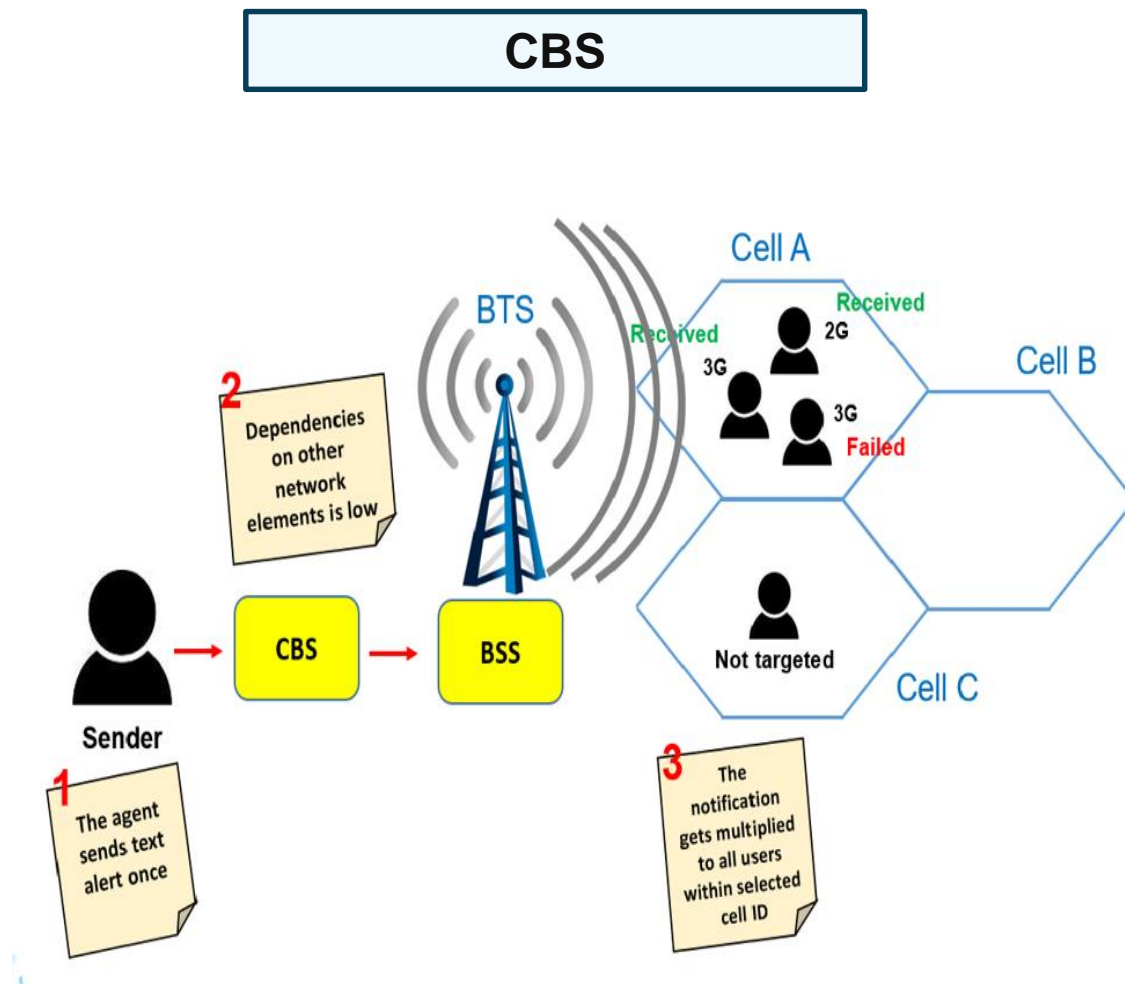
NO POTENTIAL tsunami due to an earthquake in Owen Fracture Zone Region, Arabian Sea at 2021-07-03 21:04:33 MCT with magnitude 5.7.

زلزال مع عدم احتمالية حدوث أمواج تسونامي  
Earthquake with NO potential tsunami



Magnitude	5.7	قوة الزلزال
Region	منطقة صدع أوبي في بحر العرب	المنطقة
Region	Owen Fracture Zone Region, Arabian Sea	المنطقة
Depth		العمق
Date	07/03/2021	التاريخ
Time (MCT)	21:04:33	الوقت المحلي

هيئة الطيران المدني، المديرية العامة للأرصاد الجوية



Using (CB) technology, it is possible to send Millions of text messages (alarms) To areas that are pre-determined It is characterized by not causing pressure Network compared to SMS technology

## 3 National Awareness campaigns: lectures, exhibition, Tsunami vertical evacuation drills

North Al Batinah, Dhofar,  
South al Sharqia.

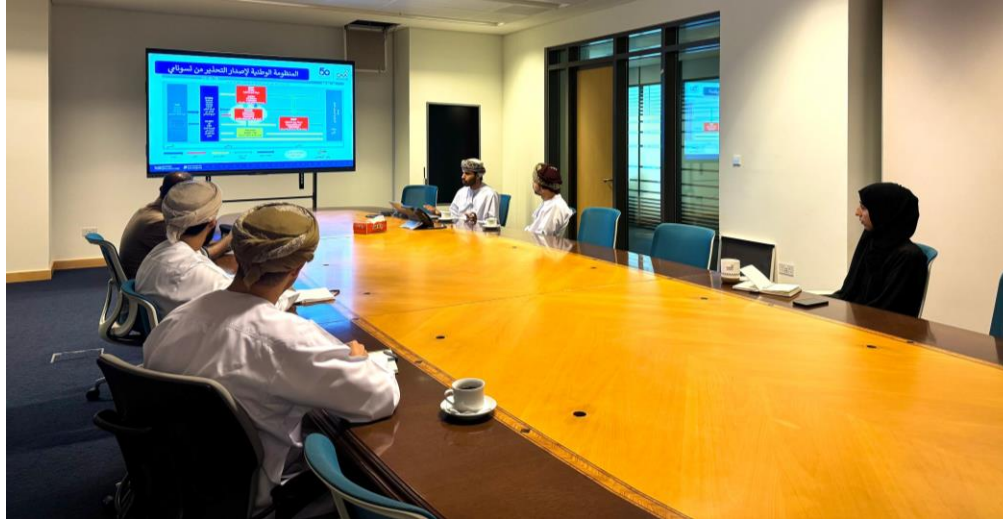




- Training for System Operators (9 operators)
  - Sultan Qaboos University (Earthquake Monitoring Center), Muscat – May 2025
  - BMKG, Jakarta - Sep 2025
  - INCOIS, Hyderabad – Nov 2025
  - OJT, Muscat Dec
- Severe weather & Tsunami preparation Workshop was conducted for subcommittees several governorates by NCEM (2024 - 2025).

# Exercise IOWave25 Plans

- **Scenarios:** 2) Makran Trench (Wednesday 15 October 2025).
- **Exercise types:**, Functional exercise.
- **Key players:** NTWC, NCEM, ROP, Civil Defense Authority, media.
- **Evacuation:** No planning for evacuation.



- Updating Risk Assessment Maps (Project)
- Acquiring 40 GPS stations data
- Training
- Continue the national awareness campaign (Muscat – Nov/Dec 2025)
- Discussion with key stakeholders of the National Committee for Emergency Management for implementing Tsunami ready program or alternative approach.





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**THANK YOU**