

# Background & Objectives of the Media Workshop

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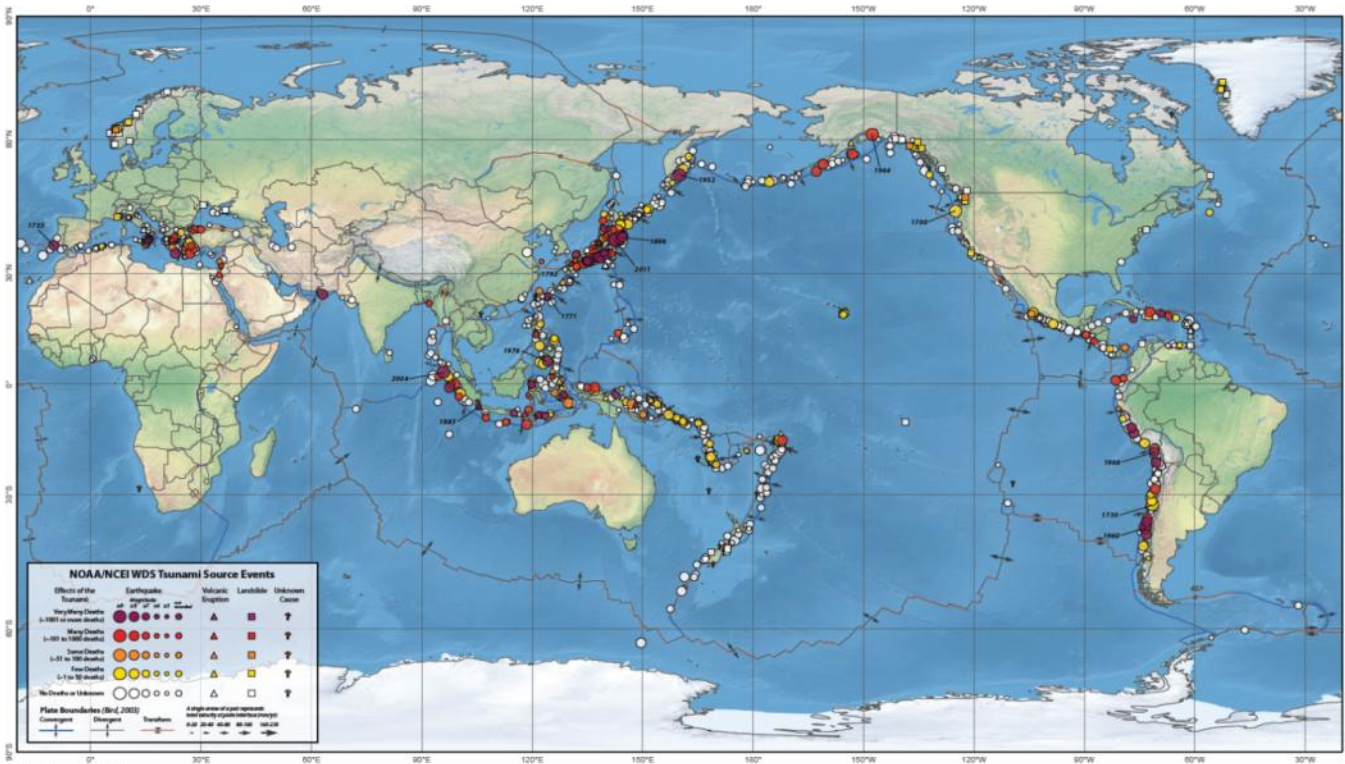
Regional Standard Operating Procedure Workshop  
for Broadcasting Media in the Tsunami Warning Chain

INCOIS, Hyderabad

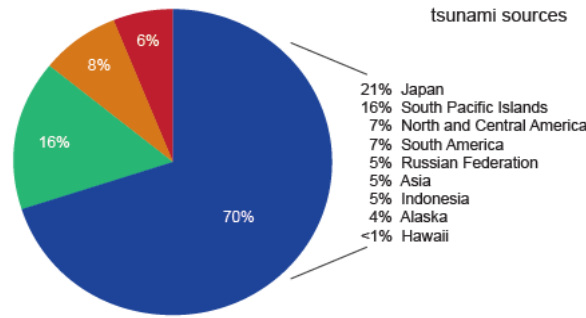
8 September 2021

# Past Tsunamis

## Tsunami Sources 1610 B.C. to A.D. 2020 From Earthquakes, Volcanic Eruptions, Landslides, and Other Causes



Global distribution of confirmed tsunami sources



■ Pacific Ocean     ■ Caribbean Sea and Atlantic Ocean  
■ Mediterranean Sea     ■ Indian Ocean

**Table 1. Regional and local tsunamis causing 2,000 or more deaths**

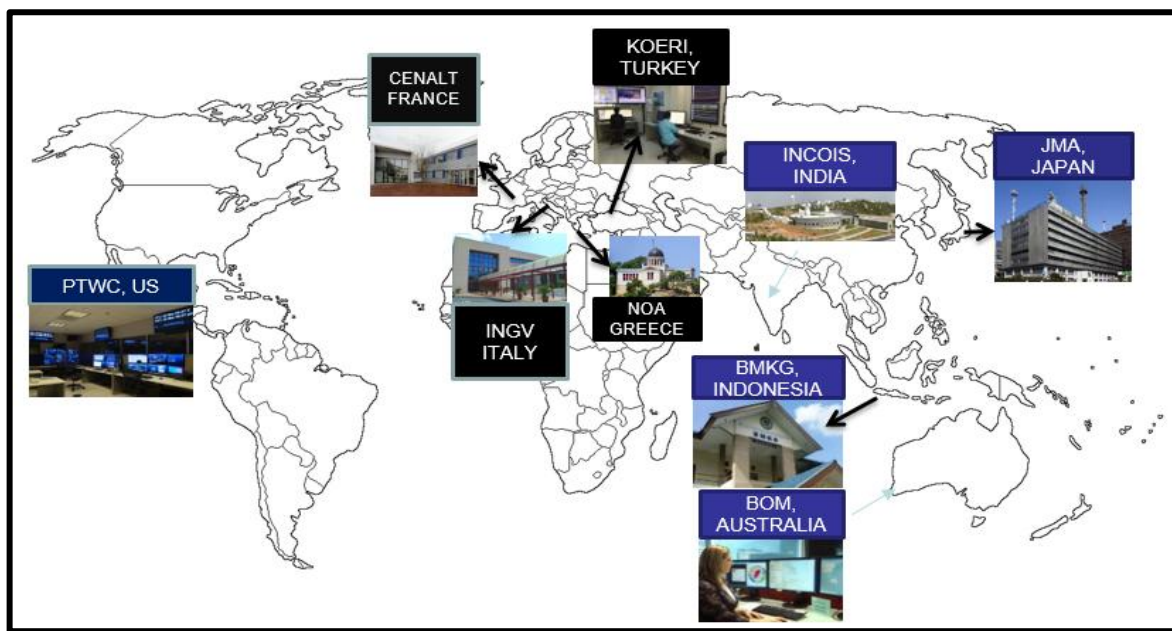
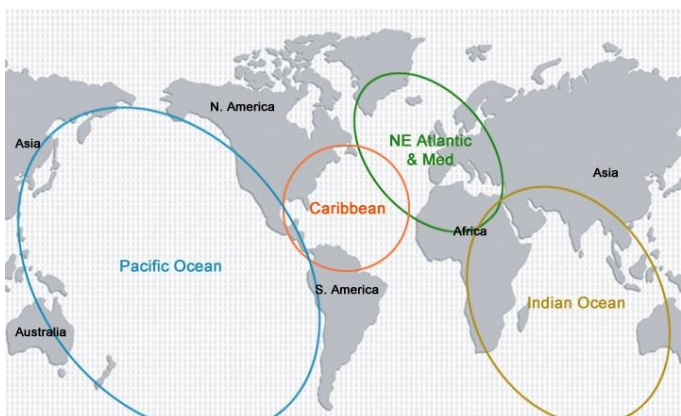
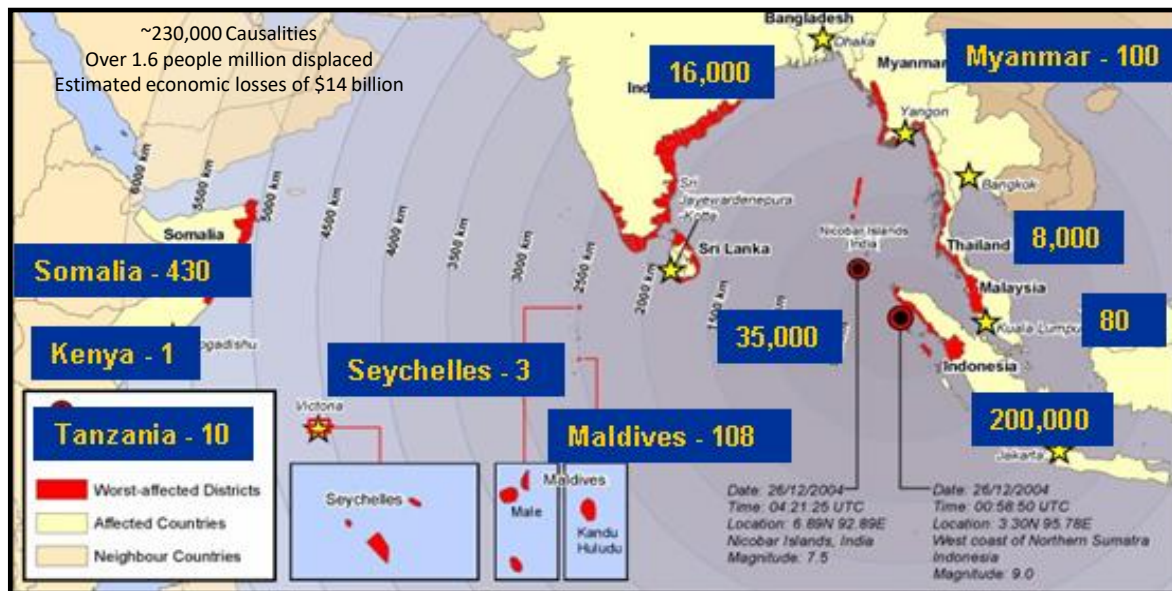
Year	Date		Source Location	Estimated Dead or Missing
	Mon	Day		
365	7	21	Crete, Greece	5,000
887	8	2	Niigata, Japan	2,000
1341	10	31	Aomori Prefecture, Japan	2,600
1498	9	20	Enshunada Sea, Japan	5,000
1570	2	8	Central Chile	2,000
1605	2	3	Nankaido, Japan	5,000
1611	12	2	Sanriku, Japan	5,000
1674	2	17	Banda Sea, Indonesia	2,244
1687	10	20	Southern Peru	*5,000
1692	6	7	Port Royal, Jamaica	2,000
1703	12	30	Boso Peninsula, Japan	*5,233
1707	10	28	Enshunada Sea, Japan	2,000
1707	10	28	Nankaido, Japan	*5,000
1741	8	29	Hokkaido, Japan	2,000
1746	10	29	Central Peru	4,800
1751	5	20	Northwest Honshu, Japan	2,100
1755	11	1	SW Iberian Margin, Portugal	*50,000
1771	4	24	Ryukyu Islands, Japan	13,486
1792	5	21	Kyushu Island, Japan**	15,000
1854	12	24	Nankaido, Japan	*3,000
1868	8	13	Northern Chile*	25,000
1877	5	10	Northern Chile	2,282
1883	8	27	Krakatau, Indonesia**	34,417
1896	6	15	Sanriku, Japan	*27,122
1899	9	29	Banda Sea, Indonesia	*2,460
1908	12	28	Messina Strait, Italy	2,000
1923	9	1	Sagami Bay, Japan	2,144
1933	3	2	Sanriku, Japan	3,022
1945	11	27	Makran Coast, Pakistan	*4,000
1952	11	4	Kamchatka, Russia	10,000
1960	5	22	Southern Chile	2,000
1976	8	16	Moro Gulf, Philippines	6,800
2004	12	26	Banda Aceh, Indonesia	**227,899
2011	3	11	Tohoku, Japan	**18,429
2018	9	28	Sulawesi, Indonesia	*4,340
<b>Total</b>				<b>510,378</b>

\*May include earthquake deaths  
 \*\*Tsunami generated by volcanic eruption  
 ^Includes dead/missing near and outside source region

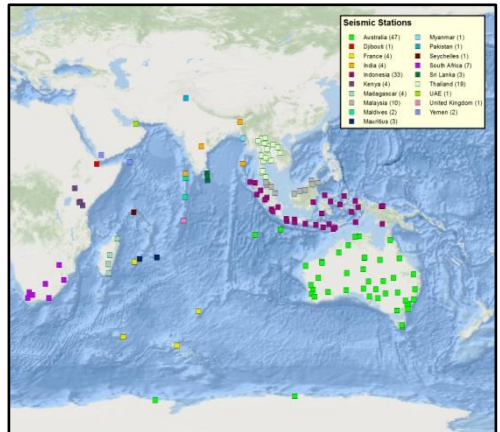
Source: ITIC

# Regional Tsunami Warning Systems

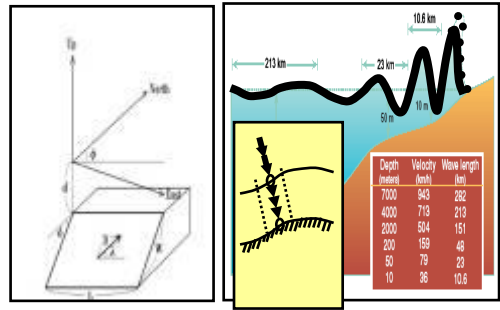
- Pacific since 1965
- 2004 tsunami in Indian Ocean illustrated need for more
- In 2005, the IOC was mandated to establish three more TWS
  - ICG IOTWMS
  - ICG CARIBE EWS
  - ICG NEAMTWS
- 4 Regional TWS operational with 7 New Tsunami Service Providers established since 2004



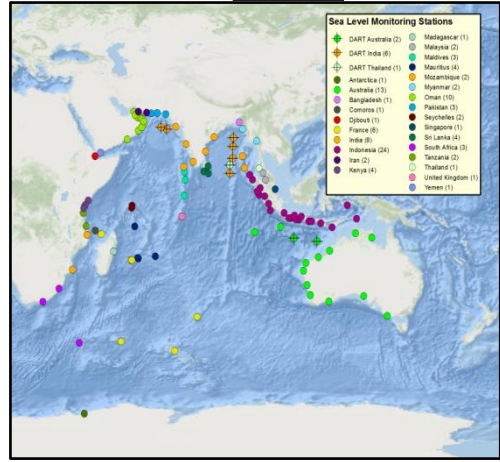
# Operational Elements of Tsunami Warning



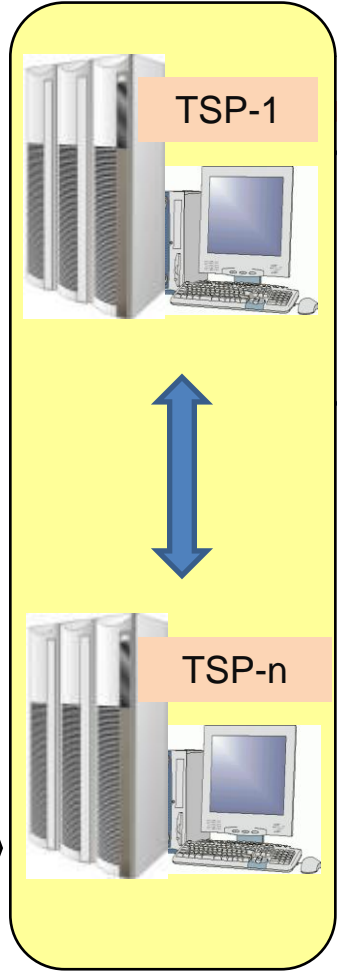
Seismological Data



Model Results



Sea level Data



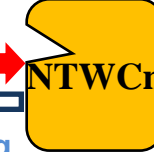
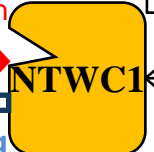
Threat Information

Warning Status  
Threat Information

Warning Status

Threat Information

Warning Status



- Warnings
- NDMO
  - LDMO
  - Media
  - Public

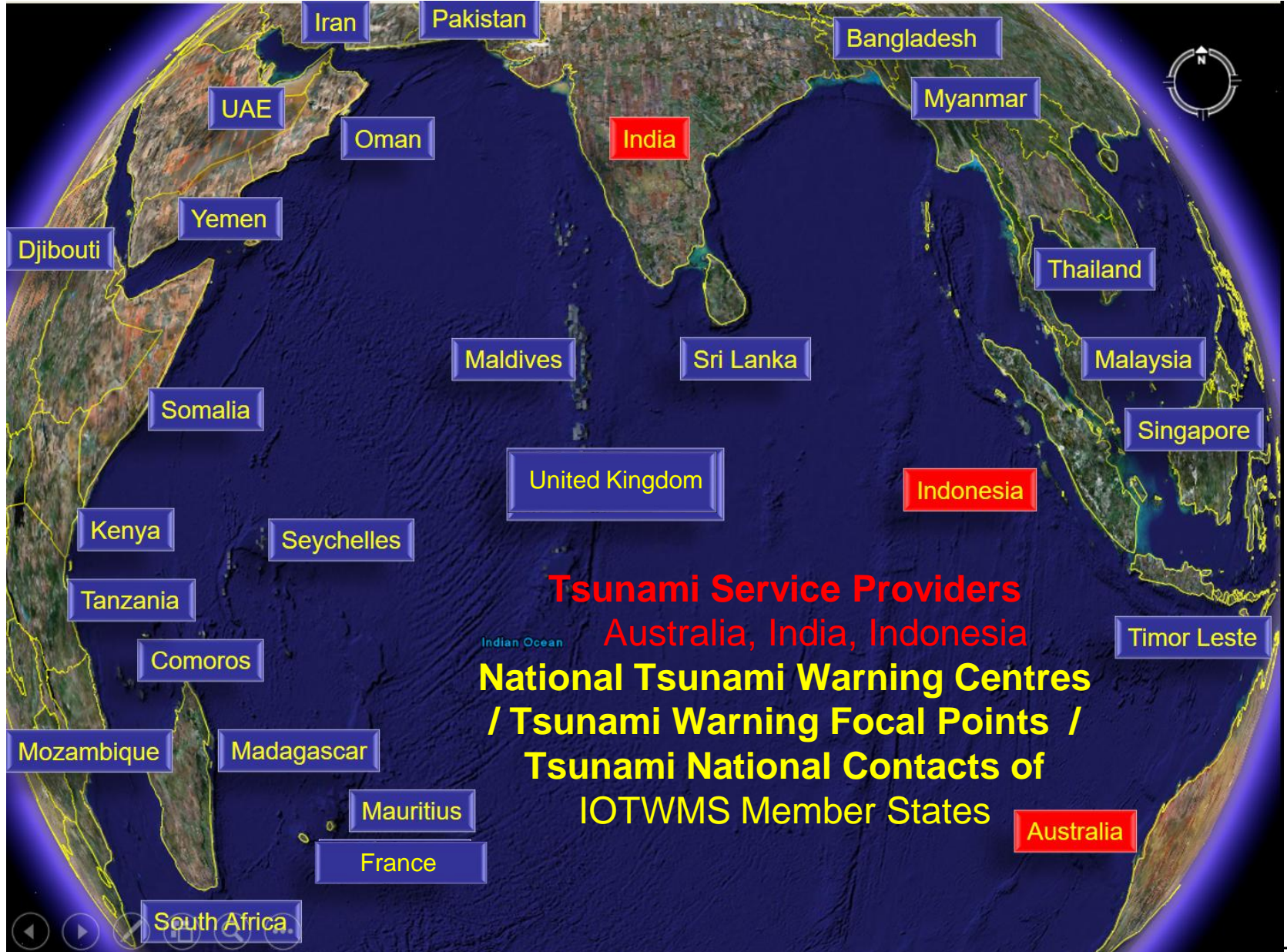


- GTS
- SMS
- FAX
- Email
- Web

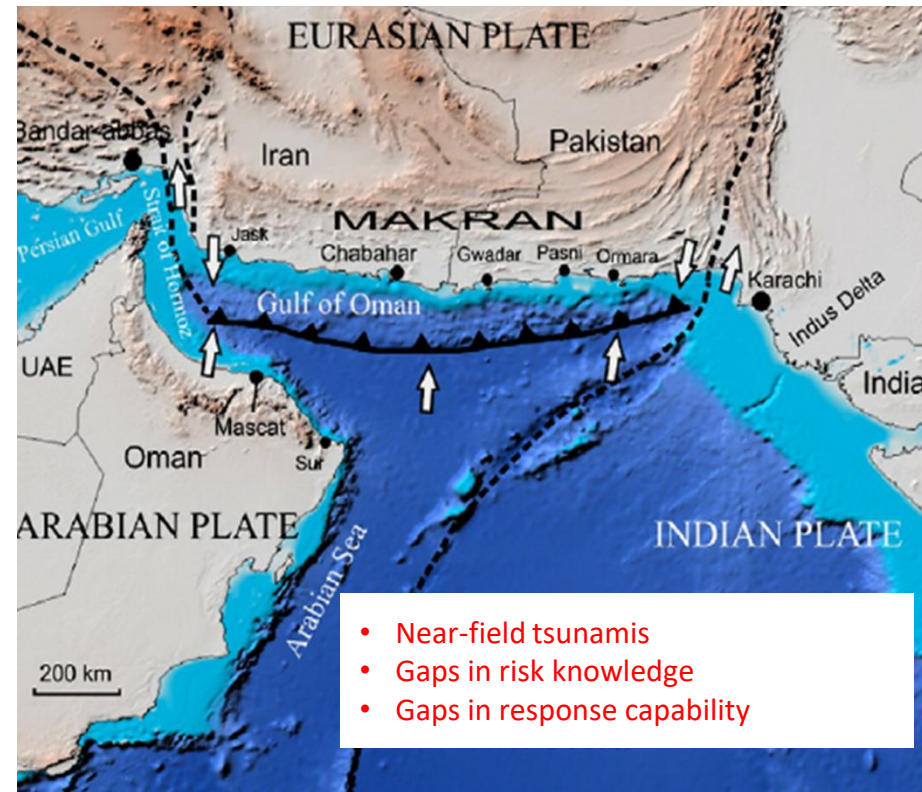
- TV
- Radio
- SMS
- Email
- Web
- SIRENS

IOTWMS KPIs:  
EQ Info: 10 Min  
Tsunami Threat Info: 20 Min

# ICG/IOTWMS Member States



# Strengthening Tsunami Warning in NWIO Region



- Status, Gaps, Priorities – Kish Expert Consultation
- ICG/IOTWMS TT MSZ, TT Near Field, WG-NWIO
- Project funded by UNESCAP Tsunami Trust Fund being implemented by IOC (in India, Iran, Pakistan, Oman, UAE)
- Kick-off meetings in Muscat 01 – 06 Sep 2019
- **Risk Knowledge - develop unified regional PTHA**
  - seismo-tectonic model, tsunami modelling, non-seismic tsunamis
  - promote sharing of seismic data
  - working group/process involving national and international experts supported by regional meetings
- **Response Capability - enhance tsunami warning chains**
  - strengthen national coordinating mechanisms
  - select pilot communities – Tsunami Ready
  - test enhanced warning chains and SOPs – IOWaves
  - national working process supported by regional SOP workshops involving NTWC, DMO, Media



# Objectives of the Workshop

**Strengthening the engagement of the media in the tsunami early warning processes in the Makran region through:**

- Strengthening relationships between broadcasting Media, NTWCs, and DMOs
- Understanding the national tsunami warning chains and the NTWC and DMO procedures
- Understanding National Tsunami Warning Centre's SOP, products, dissemination
- Identification of challenges and issues to address regarding media engagement in tsunami warning processes
- Clarifications on the role of media in the national tsunami warning chain
- Discussions on the requirements for Media SOPs to facilitate timely and accurate dissemination of advice from the authorities.

**Thank you  
for  
your  
attention**