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## **2.3 - TSP-India Status Report for *Intersessional Period (WG-2)***

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**TSP-India**

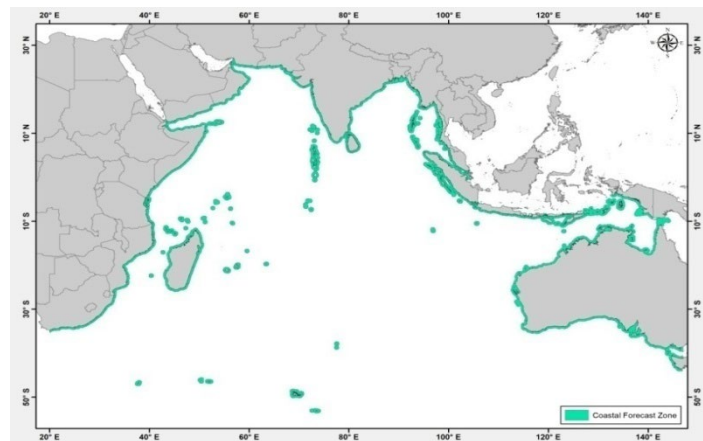
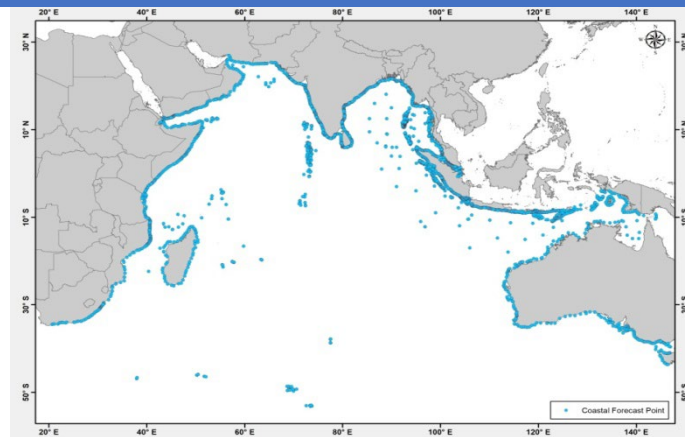
**Intersessional Meeting of ICG/IOTWMS-Working Group 2 on Tsunami Detection, Warning and Dissemination  
5 & 6 April 2023**

# TSP India Activities during Interseasonal Period

- ❑ Update on CFZs of India – Maintained by TSP-India
- ❑ Probabilistic Tsunami Hazard Assessment for Red Sea & Persian Gulf Regions
- ❑ Monitored all Tsunamigenic earthquakes and issued bulletins as per the TSP Service Definition
- ❑ TSP India continued to maintain the IOTWMS feedback mechanism and pushing the data to TSP-Australia Public display page.
- ❑ Participated in all IOTWMS Communication Tests during the reporting period
- ❑ On 05<sup>th</sup> Nov 2021 & 2022, conducted Tsunami Mock drill to Odisha Tsunami Ready Villages
- ❑ ITEWC (TSP India) has upgraded the seisComP3 to SeisComP4 in 2022
- ❑ Restored/Sustained the Indian Tsunami buoy and tide gauge networks and sharing the data to international community through NOAA-NDBC / UNESCO-IOC sea level facility.

# UPDATES In CFP and CFZ Version 2018 Mar 14

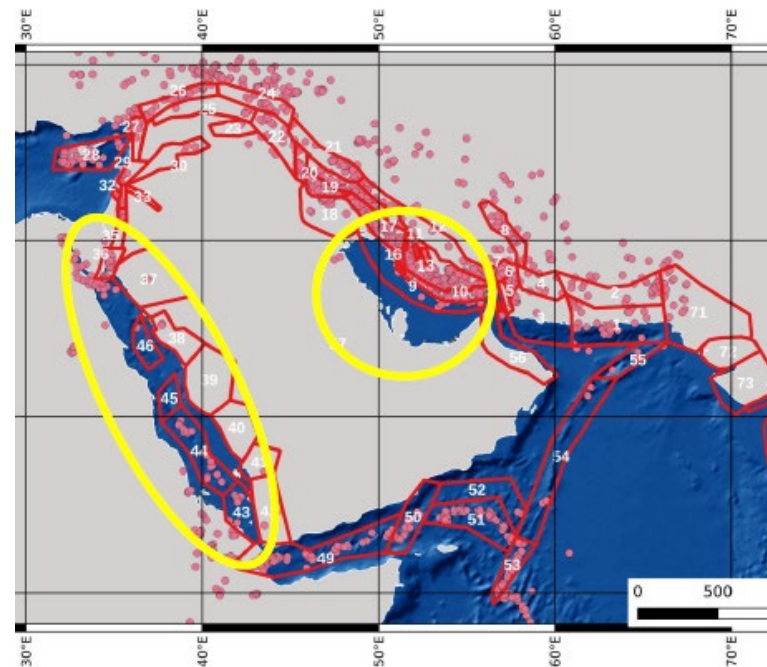
- ❑ CFZs : 581 and CFPs : 2251
- ❑ As part of NTWC SL III operational requirements, added 9 CFZs and modified 1 CFZ of India.
- ❑ Total **79** CFZ are identified for India and generated official list of Tsunami hazard districts approved by NDMA, India
- ❑ Linking CFZs With new GADM (Version 3.6).
- ❑ Verification of Place names, District, State/Province and Country names, naming standards against the ISO standard documents is under progress.
- ❑ CFZ files will be circulated to TSP Australia and Indonesia for comments and suggestions and will be released as a new version with approved date.



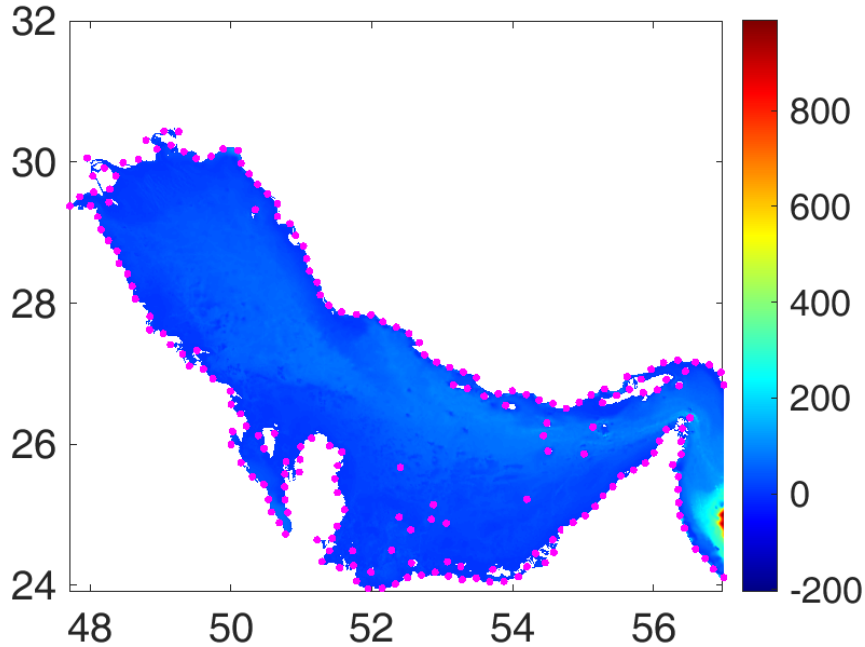
# Probabilistic Tsunami Hazard Assessment

- ❑ TSP-India is actively participating in UNESCAP project of PTHA
- ❑ Millions of Tsunami propagation simulations were carried out using ADCIRC for the Persian Gulf and Red Sea regions in two phases.
- ❑ Results (max elevation) were shared with the Task team on PTHA for these two regions at POIs.
- ❑ Completed the phase 2 simulations and shared by INCOIS

## Source Zones



# PTHA Simulations on the Persian Gulf

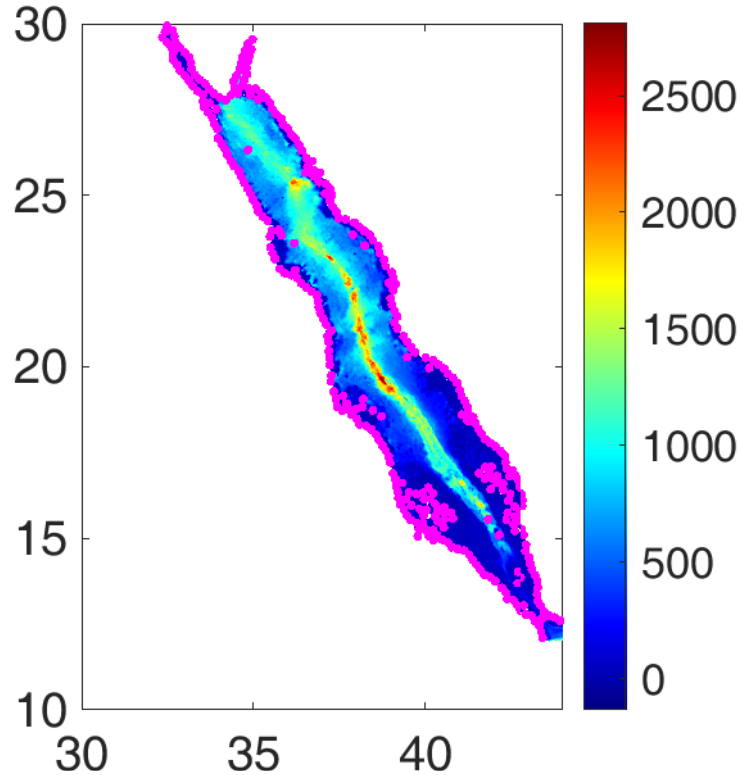


Persian Gulf region for which PTHA simulations were carried out. The magenta dots show the POIs

	Simulations	Status
Phase 1	75707	Completed
Phase 2	321991	Completed
	397698	

nele = 1737915;  
nnodes = 874620;  
Simulation time = 12 hrs;  
Computational time = 1 min;  
No of Processors = 180

# PTHA simulations on the Red Sea



Red Sea region for which PTHA simulations were carried out. The magenta dots show the POIs

	Simulations	Status
Phase 1	354890	Completed
Phase 2	706124	completed
	1061014	

nele = 2650346;  
nnodes = 1333616  
Simulation time = 12 hrs;  
Computational time = 2 min  
Processors = 288

# Tsunami Awareness & Response

- ❑ Participated in **all Communication Tests** during the reporting period.
- ❑ Participated in **IOTWMS Regional SOP Workshop for Broadcasting Media and DMOs** during 7-9 September 2021, 12-14 October 2021 and 26-28 October 2021
- ❑ **World Tsunami Awareness Day** commemorated during 2021 & 2022 with various activities such as Open Day for school children, Tsunami Science Models exhibition, Drawing/Painting/Essay writing competition, Tsunami webinars and sensitization workshops.
- ❑ **On 05<sup>th</sup> Nov 2022, conducted Tsunami Mock drill to Odisha Tsunami Ready Villages.**
- ❑ **National SOP workshop for DMOs and Broadcasting media in tsunami warning chain was organised on 31<sup>st</sup> Oct – 03<sup>rd</sup> Nov 2022 at INCOIS.**



## Tsunami Ready in India

- ❑ **Odisha state has initiated to extend the tsunami ready program to other tsunami prone coastal villages. Approx 100 villages/communities.**
- ❑ **Kerala state has initiated implementation of tsunami ready at about 6 coastal villages.**

# Future Plans

- ❑ Work on **Operational procedures (SOP)** for **atypical tsunami** sources such as Submarine landslides, Volcanic eruption and meteoric sources.
- ❑ Utilization of **real-time GNSS & SMA data** for rupture characterization of the tsunamigenic earthquakes.
- ❑ Working towards implementation of NAVAREA products
- ❑ Working towards implementation of IOTWMS Service Definition version V5.0
- ❑ Upgradation to SeisComP5
- ❑ Continue to contribute strongly to IOTWMS activities in the next intersessional period, including:
  - The planning, conduct and reporting of biennial IOWave exercises and 6-monthly Communication Tests
  - Regular NTWC/DMO/Media SOP Training Workshops
  - ICG/IOTWMS Working Groups and Task Teams



**THANK YOU**

