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# India National Report for *Intersessional Period*

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# India Report during Inter-sessional Period

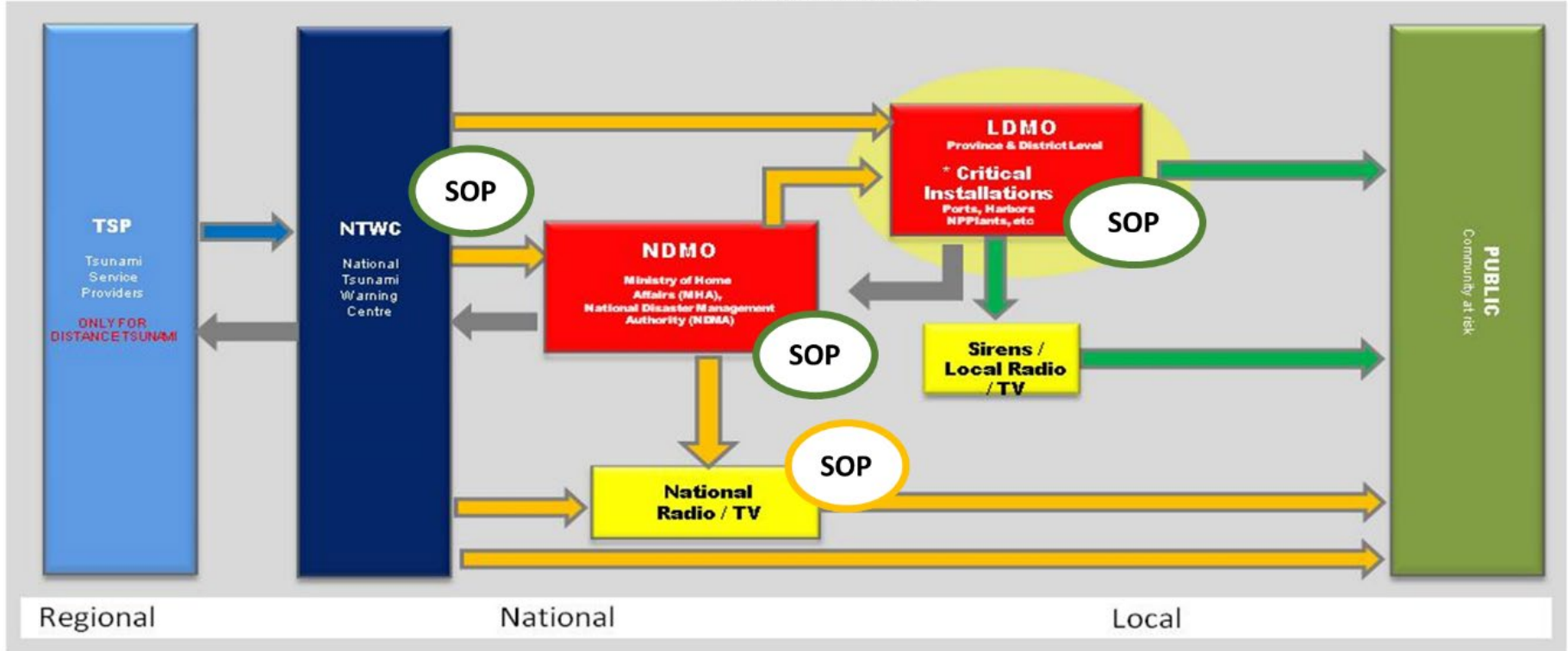
- ❑ During the Inter-sessional period (Apr 2019-Oct 2022), a total of 81 tsunamigenic earthquakes were monitored and issued bulletins as per the Service Definition
- ❑ Tsunami Warning centre – 24 X 7 Operational Services
- ❑ Participated in IOWAVE20 & IOTWMS Communications Test conducted during reporting period
- ❑ Upgrading the Decision Support System- R&D on Atypical source Tsunamis.
- ❑ Real-time tsunami modeling for global tsunamigenic earthquakes on GPUs
- ❑ Real-time tsunami Modelling for propagation and inundation using ADCRIC model –
  - ✓ Proof of Concept (POC) of Service Level –III .
  - ✓ This model has been tested against the Dec 26, 2004 tsunami event and results are in good agreement.
- ❑ Integrated the CAP service for National stake holders in coordination with NDMA and made operational.
- ❑ Initiated Tsunami Ready program at other Coastal states.

# Tsunami Warning Chain

10Min

20 Min

Timeline (Minutes after EQ)



\* Critical Installations evacuation call only at Institution level

# Tsunami Awareness & Response

- Participated in **Six Communication Tests** during April 2019 to October 2022.
- Participated in IOWAVE 2020 Exercise in Oct 2020
- Participated in IOTWMS Pre and Post IOWave20 webinars during 28-30 September 2020 and 11-12 November 2020
- Conducted a webinar on “**Tsunami Preparedness and Implementation of Tsunami Ready**” to Odisha Disaster Management Officials in coordination with Odisha State Disaster Management Authority (OSDMA) on 19 February 2021
- INCOIS and the National Institute of Disaster Management (NIDM) jointly organized a Webinar on “**Tsunami Risk Reduction and Resilience**” on 10 August 2021
- 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 2019, 2020 , 2021 and 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 2021 & 2022, conducted Tsunami Mock drill to Odisha Tsunami Ready Villages.**



# Implementation of Tsunami Ready

- The IOC-UNESCO Tsunami Ready Programme is a community performance based programme. In India, a **National Board was constituted under the Chairmanship Director, INCOIS** with members drawn from Ministry of Earth Sciences (MoES), National Disaster Management Authority (NDMA), Ministry of Home Affairs (MHA), Odisha State Disaster Management Authority (OSDMA), Andaman & Nicobar Islands Directorate of Disaster Management (DDM) and INCOIS.
- Odisha State Disaster Management Authority, (OSDMA) Odisha implemented the programme in 6 villages
- National Board visited to Venktraipur of Ganjam district and Noliasahi of Jagatsinghpur district in December 2019 and recognized them nationally and recommend for UNESCO-IOC recognition.
- **Venktraipur and Noliasahi of Odisha are recognized as Tsunami Ready communities by UNESCO-IOC and conferred the Certificate of Recognitions on 07 August 2020**
- India is the first country Tsunami Ready programme in the Indian Ocean region.
- INCOIS is planning to extend the programme to other coastal States/UTs of India.
- **Currently for Kerala state**, a pilot village **Alappad** is identified to implement the Tsunami Ready programme with the support of **KSDMA and Amrita Vishwa Vidyapeetham**.



*Photos of National Board Visit Venktraipur and Noliasahi villages, and virtual event of Tsunami Ready Recognition*



# 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.
- ❑ Mounting efforts on **Integrated inversions** for tsunami source characterisation
- ❑ Implementation of **Service Level 3 inundation modeling for National** Indian coastal zones.
- ❑ Mounting efforts **on tsunami hazard assessment** and modelling studies
- ❑ Implementation of **Tsunami Ready Program** in most vulnerable coastal regions
- ❑ Participate in 6-monthly IOTWMS **Communication Tests** and biennial **IOWave** exercises
- ❑ Conduct National Mock drills in coordination with MHA, NDMA and SDMOs
- ❑ Regular SOP Training Workshops for National stockholders
- ❑ Finalization of DMOs, Media SOPs in consultation with NDMA, SDMO and Media

**THANK YOU**

