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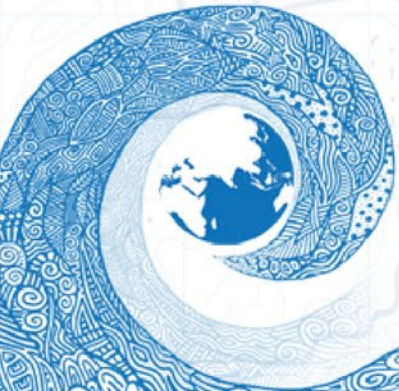
Intergovernmental
Oceanographic
Commission

India National Report for *Interssisonal Period*

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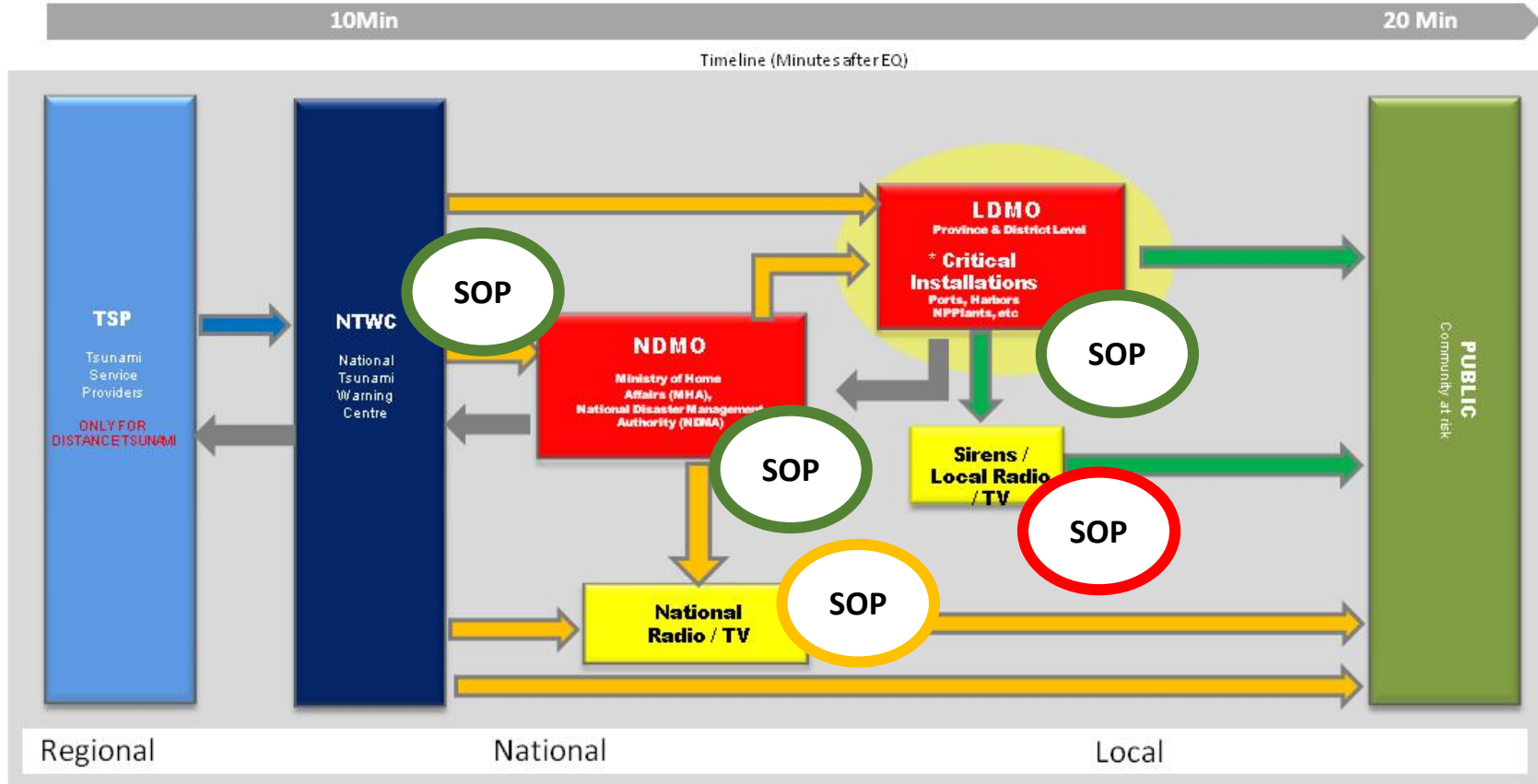
Intersessional Meeting of the ICG/IOTWMS November 2021



India Report during Intersessional Period

- ❑ During the Inter-sessional period, In total, 62 Tsunamigenic earthquakes monitored globally and for 46 events issued first bulletins as per 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
- ❑ Large Database of open ocean propagation scenarios (oops db) covering both Makran and Sunda Tsunamigenic Zones generated using TUNAMI FF in spherical coordinates and migrated to New hardware as part of Tsunami Technology Refreshment
- ❑ 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.
 - ✓ Initiated for BM Tests for inundation
- ❑ Tsunami Technology Refreshment for National Tsunami Warning Center Infrastructure
 - ✓ An End to end tsunami applications porting , enhancements and migration on to the new Hardware (servers and storage) at both Data Centre at ITEWC, INCOIS and Disaster Recovery site (DR) at IITM, Pune locations.
 - ✓ It was made operational on March 19, 2020.
 - ✓ A new responsive website is made available to both national and Indian Ocean rim countries.
- ❑ Implementing the CAP service for National stake holders in coordination with NDMA

Tsunami Warning Chain



* Critical Installations evacuation call only at Institution level

Tsunami Awareness & Response

- Participated in 4 Communication Tests (12 June 2019, 11 Dec 2019, 10 June 2020 and 09 June 2021)
- 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 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 with various activities such as Open Day for school children, Tsunami Science Models exhibition, Drawing/Painting/Essay writing competition, Tsunami webinars, sensitization workshop and tsunami mock drill.



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 pilot basis in 6 villages
- National Board visited to Venkatraipur of Ganjam district and Noliasahi of Jagatsinghpur district in December 2019 and recognized them nationally and recommend for UNESCO-IOC recognition.
- Venkatraipur 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 activities programme in the Indian Ocean region.
- INCOIS is planning to extend the programme to other coastal States/UTs of India.



Photos of National Board Visit Venkatraipur 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

