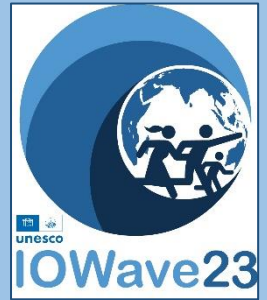


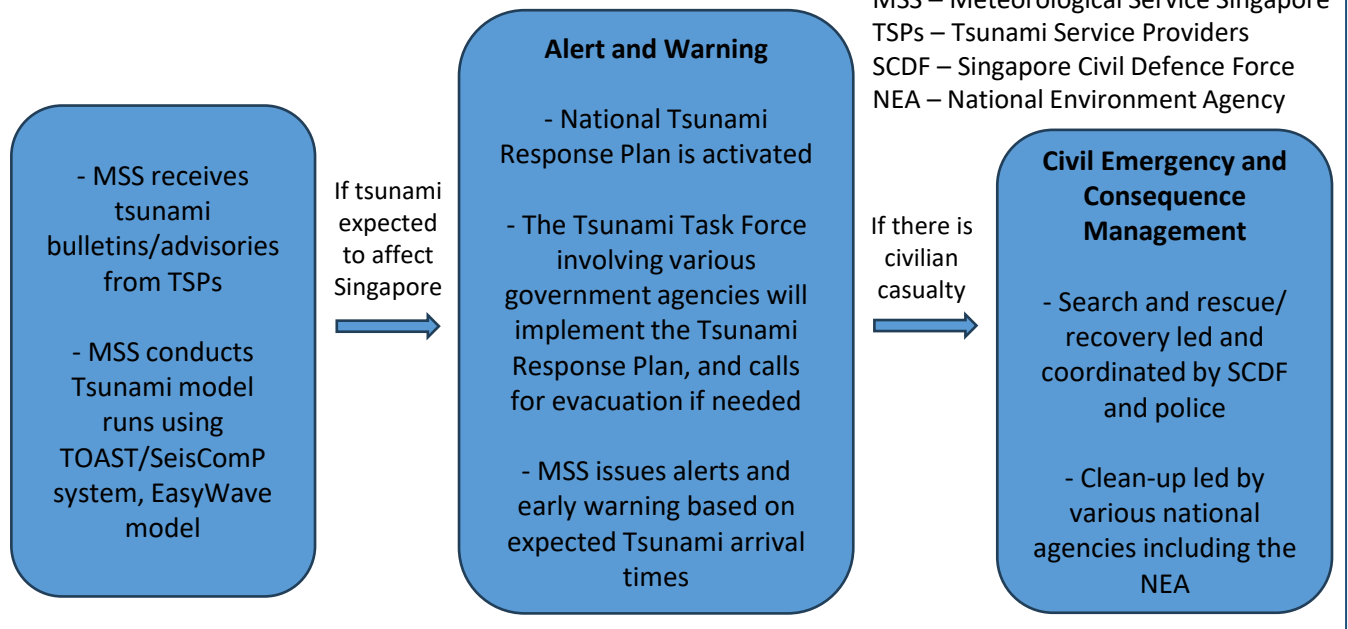
Singapore

Scenarios Exercised:

- Andaman Trench (4 Oct)
- Makran Trench (11 Oct)
- Heard Island (18 Oct)
- Java Trench (25 Oct)



National Tsunami Warning & Mitigation System



Exercise Participants



- The Meteorological Service Singapore (MSS) participated in the IOWave23 Exercise as the National Tsunami Warning Centre (NTWC)
- Only took part in the Andaman Trench exercise as Singapore is not affected by the other scenarios
- Modelled Tsunami wave propagation for Andaman Trench scenario provided also do not reach Singapore

National Organisation of Exercise IOWave23

Focused on testing communication channels with the various TSPs

- No national warnings were produced
- Tabletop exercise with relevant agencies and stakeholders was conducted in 2022 in conjunction with PacWave22

Monitored and recorded the time stamps of the tsunami bulletins from TSPs via SMS, Email, GDS and Fax

- Most communication channels were functioning, and bulletins were received in time
- Singapore was not significantly affected by the tsunami waves in the scenario

Lessons Learnt

Benefits

- Using this opportunity to orientate the operations staff to the various communication channels in the event of a tsunami
- Identifying the gaps in our communication channels to be rectified for future tsunami events
- Testing the systems and connectivity with TSPs for warning bulletins and alerts

Areas of improvement

- Conduct further studies using worst-case scenarios that include the impacts of tides and sea level changes on resultant tsunami wave heights
- Conduct inundation studies on the impact of Tsunami waves on floods
- Need to better understand the risk of non-EQ generated Tsunami waves (landslides/volcanic eruptions) that may occur nearer Singapore