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Singapore

Webinar:
Lessons Learnt during Exercise IOWave 2025

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Scenarios Exercised

- ☐ Sunda Trench (25 Sept)
- ☐ Makran Trench (15 Oct)
- ☐ Fani Maore Volcano (25 Oct)
- ☑ Sumatra Trench (05 Nov)

Meteorological Service Singapore

- The Meteorological Service Singapore (MSS) participated in the IOWave25 Exercise as the National Tsunami Warning Centre (NTWC)
- Only took part in the Sumatra Trench exercise as Singapore is not affected by the other scenarios
- Modelled Tsunami wave propagation for Sumatra Trench scenario provided also does not reach Singapore

National Tsunami Warning & Mitigation System

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- MSS receives tsunami bulletins/advisories from TSPs

- MSS conducts Tsunami model runs using TOAST/SeisComP system, EasyWave model

If tsunami expected to affect Singapore

Alert and Warning

- National Tsunami Response Plan is activated

- The Tsunami Task Force involving various government agencies will implement the Tsunami Response Plan, and call for evacuation if needed

- MSS issues alerts and early warning based on expected Tsunami arrival times

If there is civilian casualty

Civil Emergency and Consequence Management

- Search and rescue/ recovery led and coordinated by SCDF and police

- Clean-up led by various national agencies including the NEA

Acronyms
MSS – Meteorological Service Singapore
TSPs – Tsunami Service Providers
SCDF – Singapore Civil Defence Force
NEA – National Environment Agency

National Organisation of Exercise IOWave25

Focused on testing communication channels with the various TSPs

- No national warnings were disseminated

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

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

Lessons Learnt

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Benefits

- Providing valuable training for operational personnel on the different communication systems available during tsunami situations
- Helping to pinpoint weaknesses in our communication networks that need to be addressed before future tsunami incidents
- Enabling testing of system connectivity with Tsunami Service Providers for warning bulletins and alerts

Areas of improvement

- Carrying out additional research using extreme scenarios that factor in how tides and changing sea levels might affect the height of tsunami waves
- Studying the potential for tsunami waters to cause flooding in inland areas

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THANK YOU