

TT DMP WAVE Exercise Meeting  
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# INDIAN OCEAN WAVE EXERCISE 20 (IOWave20)

Ms. Weniza  
Chair IOWave20  
[weniza@bmgk.go.id](mailto:weniza@bmgk.go.id)

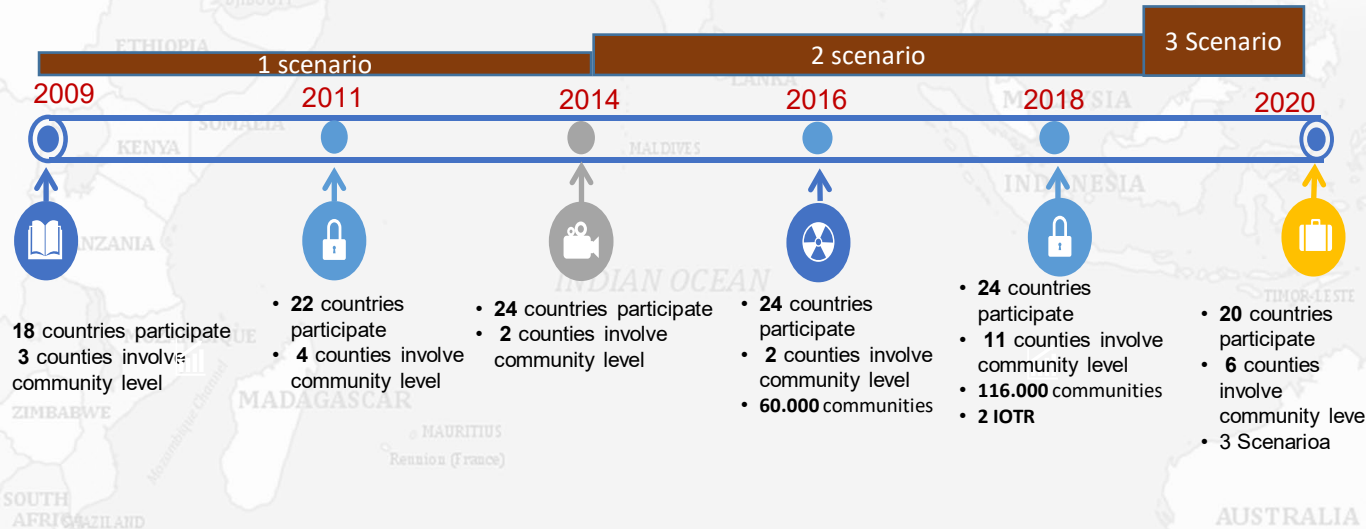
*Acknowledgements:*

*Prof. Dwikorita (Chair ICG/IOTWMS), Rick Bailey (UNESCO-IOC), Nora Gale (UNESCO-IOC), Dr. Ali khoshkholgh (Vice Chair IOWave20), **Dr. Harkunti (Chair WG1)**, Dr. Yuelong (Chair WG 2), and Mr. Ardito M. Kodijat (IOTIC-UNESCO-IOC)*

# IOWave20



IOWave20



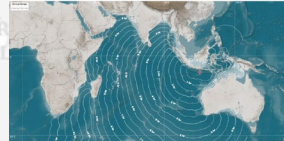
# IOWave20 Scenarios



IOWave20

## 1. Java Trench

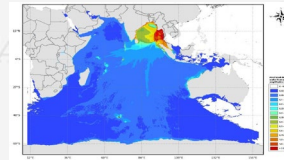
6 October 2020; 03:00 UTC; M9.1; 10 Km; 10.40 S,  
112.80 E, South of Java, Indonesia



20 countries under threat

## 2. Andaman Trench

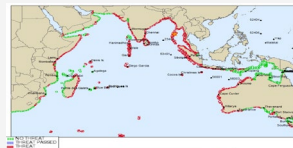
13 October 2020; 04:00 UTC, M9.2, 10 Km, 12.65 N,  
93.50 E, Off West Coast of Andaman Islands, India



18 countries under threat

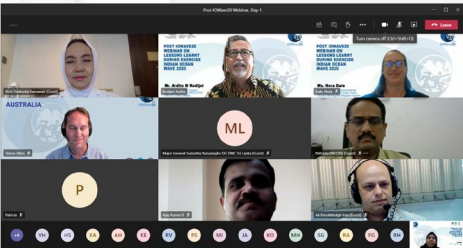
## 3. Makran Trench

20 October 2020; 06:00 UTC, M9.0, 10 Km, 24.8 N,  
62.2 E, Off Coast of Pakistan



21 countries under threat

# Lesson Learnt from iowave20



- **Technical guide/manual** for exercise in **pandemic situation** needs to be developed.
- **Evacuation Response** in pandemic situation needs to be **standardize and applicable for all countries**;
- Virtual exercise proved to be **effective in maintaining the goal of IOWave20 in term of fulfilling objective**, but decrease in term of number participants and technical difficulties.
- IOWave should be **integrated with the implementation of Tsunami Ready Program in local community**;
- Pre and post IOWave evaluation which consist of **capacity examination of each countries to design the future IOWave (may refer to 12 indicators tsunami ready)**

AUSTRALIA



## The Recommendations from IOWave20

- IOWave Exercises should use scenarios that are suitable for all Member States to participate, 3 scenarios worked well for coverage.
- Holding the scenarios 1-week apart worked well.
- The Exercise should be conducted in September to avoid the cyclone season [Australia; India] However, after IOWave18 it was noted that September is inconvenient for some countries due to Monsoon and Floods [Pakistan, India, Sri Lanka] and hot weather [Oman].
- Coordinate with PTWS to ensure Exercises occur in opposite years [Australia, Indonesia, Timor Leste].
- International observers should be included in future exercises (such as IORA) [India] and virtual observations should be utilised more widely.
- Consider informing more national leaders of the Exercise in addition to the Tsunami National Contacts.
- Document the lessons learnt and changes triggered from the Exercise (i.e. establish a monitoring mechanism).



# The Recommendations from IOWave20

## Downstream

- Member States should **update their SOPs for the pandemic situation** with support from WG1- IOTIC.
- Where possible, **communities should be encouraged to test/verify the UNESCO-IOC Tsunami Ready** Indicators during the Exercise.
- Encourage countries to conduct **regular exercises at least every year between IOWaves**. They could align with communication tests.
- WG1-IOTIC should provide guidelines for **conducting virtual table-top exercises**.

## Upstream

- Establish **a work mechanism between NTWCs and TSPs** to solve communication issues (i.e. non-receipt of messages).
- WG-2 to identify **reliable tide gauge stations with fast transmission rates**.
- Consider having the **TSPs send an SMS/email notification whenever there are tsunami product updates** (ex. Tide gauge observations).
- Conduct a **risk assessment of upstream tsunami warning including dissemination of tsunami warnings, reliable resources, etc.**



## The Recommendation to TTDMP

- Conducting exercise **in opposite years between IOTWMS and PTWS.**
- **Encouraged to test/verify the UNESCO-IOC Tsunami Ready Indicators** during the Exercise.
- Providing guidelines for conducting **virtual table-top exercises.**
- Agree **common exercise objectives and Exercise success criteria.**



Terimakasih