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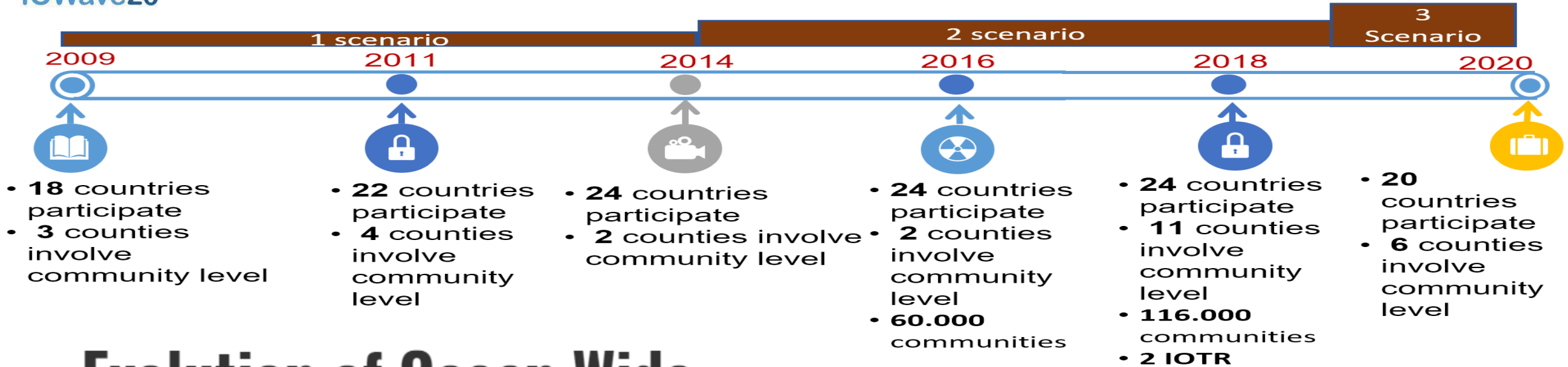
Recommendation of Exercise Indian Ocean Wave 2020 (IOWave20)

Weniza-BMKG-Indonesia

Acknowledge :

Mr. Rick, Ms. Nora, and TT IOWave23

Working Group 3 Meeting
24 August 2023



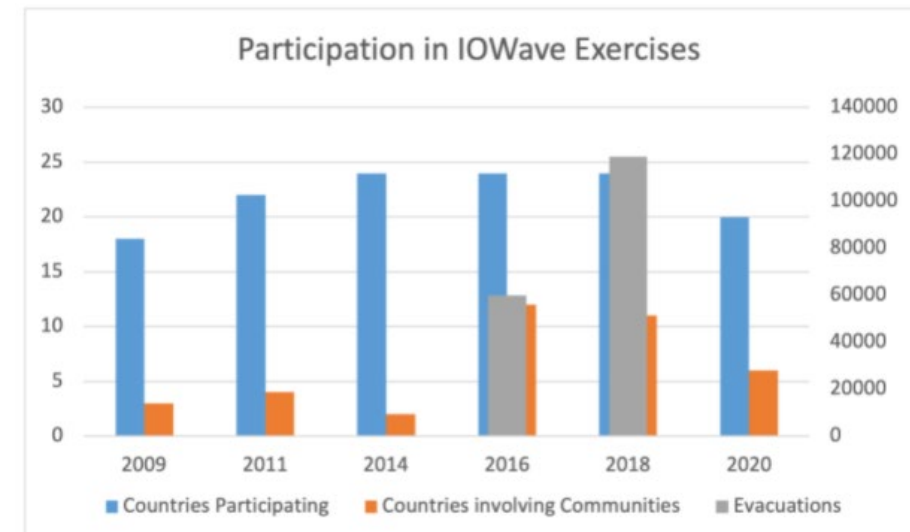
Evolution of Ocean Wide Exercises in the Indian Ocean

Nora Gale, Ardito M Kodijat, Weniza, Ali Khoshkholgh, Ajay Kumar Bandela, and Simon Allen

POSTED ON JULY 6, 2021



<https://www.ecomagazine.com/in-depth/featured-stories/evolution-of-ocean-wide-exercises-in-the-indian-ocean>



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Objective and Exercise Success Criteria

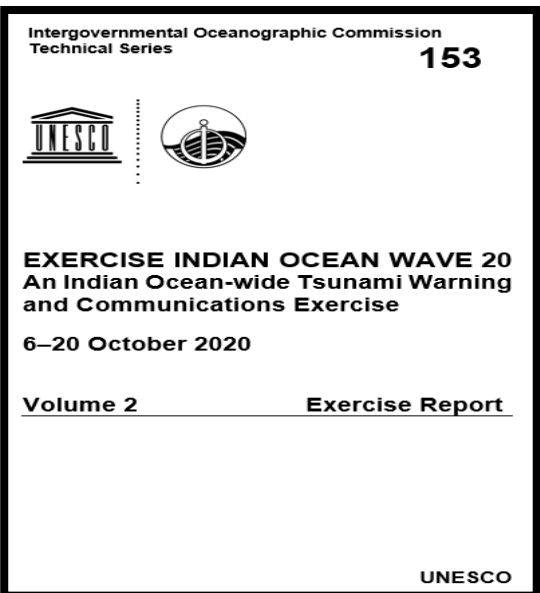
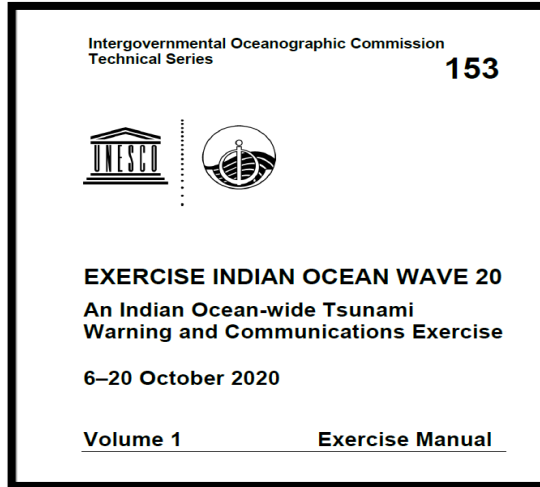
Scale:

- Due to the ongoing Covid-19 pandemic, the scale of IOWave20 was **reduced in comparison with previous exercises**.
- Member States were encouraged to **test communication protocols and conduct a “virtual” table-top exercise (as a minimum)**
- Emphasis was placed on **updating organizational Standard Operating Procedures, plans and policies for tsunami warning and emergency response during a pandemic.**

Objective:

1. Validate **the dissemination by TSPs of Tsunami Bulletin Notification Messages to NTWCs** via Tsunami Warning Focal Points (TWFPs) of Indian Ocean countries and **the reception** by NTWCs of the TSP messages.
2. Validate **the access by NTWCs to the tsunami bulletins and other products on the TSP websites**, and the use of that information for the production of national warnings.
3. Validate **the reporting by NTWCs to the TSPs of their National Tsunami Warning Status.**

Summary of Achievement



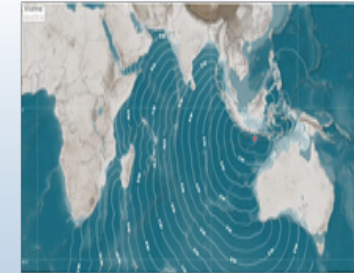
- ✓ IOWave20 was held **during the Covid-19 pandemic**, which is affecting countries around the world and in the Indian Ocean region
- ✓ Exercise Indian Ocean Wave 2020 was held over two-weeks, **6-20 October 2020 --- 1 week intervals on 6, 13 and 20 October**
- ✓ To date **20 Indian Ocean Member States** reported their participation in the IOWave20 evaluation survey.
- ✓ At least **6 active Indian Ocean Member States** involve **Communities** with health Covid-19 protocol.
- ✓ Exercise Indian Ocean Wave 2020 contained **three earthquake scenarios with all scenarios run in real-time (Java Trench, Andaman Trench and Makran Trench)**
- ✓ **For Each scenario, the TSPs issued four tsunami bulletins in real time over a 1-hour period.**
- ✓ IOC-UNESCO conducted **on online assessment** that was coordinated in country by the IOWave20 National Contacts.

Scenarios



1. Java Trench

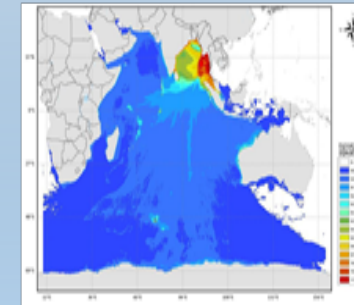
6 October 2020; 03:00 UTC; M9.1; 10 Km; 10.40 S, 112.80 E, South of Java, Indonesia



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

Participation

- ✓ 20 IOTWMS active Member States participated
- ✓ 12 Member States participated in one scenario
Australia, Comoros, Madagascar, Malaysia, Mauritius, Mozambique, Myanmar, Oman, Singapore, South Africa, Sri Lanka and United Arab Emirates
- ✓ 4 Member States participated in two scenario
Bangladesh, India, Seychelles and Yemen
- ✓ 4 Member States participated in three scenario
Indonesia, Kenya, Pakistan and Thailand

- ✓ 19 countries (100%) included the National Tsunami Warning Center in the exercise,
- ✓ 17 countries (89%) included national disaster management organizations;
- ✓ 14 countries (74%) included local disaster management organizations;
- ✓ 9 countries (47%) involved the media,
- ✓ 6 countries (32%) involved the community but not necessarily in evacuations.



- ✓ **Indonesia** → evacuation drill at the New Yogyakarta International Airport involving 120 people → to practice evacuation in a tsunami emergency situation, to test the new dissemination mode WRS New Generation, and to evaluation the airport infrastructure preparedness in case of a tsunami emergency.
- ✓ **Kenya** → involved 3 coastal communities (Kwale, Mombasa, Kilifi). Communities were involved in tsunami → awareness activities and interviews with key community stakeholders on their tsunami response
- ✓ **Mauritius** → limited simulation exercise at the level of the National Disaster Risk Reduction and Management Centre for a small coastal locality
- ✓ **Seychelles** → community stakeholders Indian Ocean Tuna (staff residence), Eden Island (tourism, marina, commercial), Seychelles Maritime Academy and Seychelles Petroleum Company in a full scale exercise.
- ✓ **Mozambique** and **Thailand** responded to the survey that communities were involved, but did provide details.



Indian Ocean tsunami mock communication exercise - IOWave-20 successfully conducted by A&N Administration

Test conducted to check disaster management organization's preparedness for tsunami warning and response

For the Oct 07 IOWave-20 Mock Communication Exercise was successfully conducted today by the A&N Administration from the State Emergency Operation Centre in coordination with Intergovernmental Oceanographic Commission and Indian Ocean Tsunami Warning and Mitigation System (IOWave20) of UNESCO and Indian National Centre for Ocean Information Services, Hyderabad (INCOIS).

The main focus of this exercise was primarily on monitoring and leveling warning of tsunami in Indian Ocean by simulating Earthquake and tsunami management organization's communication protocols, organizational SOPs, plans and policies for tsunami warning and response.

Tingkatkan Kesiapan Hadapi Tsunami di Masa Pandemi, BMKG Gelar IOWave20

Ibrahim / 07 Okt 2020



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ELECTIONS 2020 | DOMESTIC | PRESIDENCY | BUSINESS | ENVIRONMENT | TOURISM | SPORTS

DOMESTIC

DRDM conducts tsunami exercise | 14 October 2020



Bureau of Meteorology | 6 October

In a year full of virtual events (thanks Covid), Australia has just survived a virtual tsunami

The Joint Australian Tsunami Warning Centre (JATWC) spent yesterday simulating a full-scale tsunami in the Indian Ocean as part of UNESCO's international Indian Ocean tsunami warning exercise involving 23 countries, to test the tsunami warning and response chain.

If a real tsunami ever threatens our shores, you'll find warnings and advice at <http://ow.ly/c49350BKvxm>... See more

Surface buoy



Malagasy Youth for Sustainable Development (MY SD)

7,7 rb suka • 8,3 rb pengikut

- ✓ **To consider to use scenarios that are suitable for all Member States** to participate → 3 scenarios worked well – choose one with major impact
- ✓ **To consider the period time of exercise** → 1 week apart rather than on consecutive days and **conducted in September/October** → 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].
- ✓ **To Coordinate with PTWS** → to ensure Exercises occur in opposite years [Australia, Indonesia, Timor Leste] PTWS 2022, IOTWS 2023.
- ✓ To consider informing more to **national leaders of the Exercise in addition to the Tsunami National Contacts.**
- ✓ To **encourage to test/verify the UNESCO-IOC Tsunami Ready** Indicators during the Exercise.
- ✓ To encourage countries to conduct **regular exercises at least every year between IOWave** → They could align with communication tests.
- ✓ **To include International observers** → should be included in future exercises (such as IORA) and virtual observations should be utilized more widely.



Terimakasih