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**Indian Ocean Tsunami  
Information Centre (IOTIC)**

**UNESCO IOC - BMKG Programme**



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Commission



**BMKG**



# **Indian Ocean Tsunami Information Centre (IOTIC)**

## **UNESCO IOC - BMKG Programme**

UNESCO IOC - Indian Ocean Tsunami Information Centre (IOTIC)  
UNESCO Office Jakarta  
Jl Galuh II no. 5  
Kebayoran Baru  
Jakarta Selatan  
Indonesia

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Jakarta Pusat  
Indonesia

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# Table of Contents

<b>BACKGROUND</b>	<b>1</b>
<b>OBJECTIVE</b>	<b>2</b>
<b>EXPECTED OUTCOME</b>	<b>2</b>
<b>THE IOTIC-BMKG PROGRAMME</b>	<b>2</b>
<b>PART 1</b>	
<b>INDIAN OCEAN REGIONAL WORKSHOP (IORW)</b>	<b>3</b>
<b>PART 2</b>	
<b>INDIAN OCEAN CAPACITY BUILDING PROGRAMME (IOCAP)</b>	<b>7</b>
<b>PART 3</b>	
<b>PRESERVING PAST TSUNAMI INFORMATION FOR FUTURE PREPAREDNESS</b>	<b>19</b>
<b>PART 4</b>	
<b>TSUNAMI EDUCATION, AWARENESS AND PREPAREDNESS</b>	<b>21</b>
<b>PART 5</b>	
<b>DOCUMENTATION AND COMMUNICATION OF IOTIC AND IOWAVE EXERCISES</b>	<b>25</b>





# UNESCO-IOC and BMKG Partnership Agreement on the Support to Indian Ocean Tsunami Information Centre (IOTIC) 2017 –2022

## Background

The Indian Ocean Tsunami Information Centre (IOTIC) was endorsed by the Indian Ocean member states at the 10<sup>th</sup> Session of the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWMS) held in Muscat, Oman, 24-26<sup>th</sup> March 2015. The development of IOTIC builds on the Jakarta Tsunami Information Centre (JTIC), a project of UNESCO-IOC, supported by the Canadian International Development Agency (CIDA) and hosted at UNESCO Office Jakarta. The IOTIC is an UNESCO-IOC entity that operates under the overall authority of the Executive Secretary of UNESCO-IOC, and with day-to-day management oversight by the IOC-UNESCO National Programme Officer stationed in UNESCO Office Jakarta.

UNESCO-IOC signed a five-year partnership agreement with the Government of Indonesia, through the Agency for Meteorology, Climatology, and Geophysics of Indonesia (BMKG) for setting up the IOTIC-BMKG Programme Office (2017-2022). The overarching objective of this partnership is to support and develop IOTIC program and activities in order to strengthen national capacity and the Indian Ocean Tsunami Early Warning and Mitigation System.



## Objectives

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- ✓ Ensure sustainability of the Indian Ocean Tsunami Information Centre.
- ✓ Support IOTIC programs and activities for Indian Ocean Member States in coordination with the ICG/IOTMWS Secretariat.
- ✓ Enhance BMKG's role in IOTWMS.
- ✓ Support capacity building of BMKG's InaTEWS staff in international cooperation.

## Expected outcome

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- ✓ Increased programs and activities of IOTIC to support the Indian Ocean Member States.
- ✓ Active involvement of BMKG's InaTEWS staff in IOTWMS activities and programs.
- ✓ Strengthened capacity of IOTIC and BMKG's Staff.

## The IOTIC-BMKG programme

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1. Indian Ocean Regional Workshops (IORW)
2. Indian Ocean Capacity Building (IOCAP)
3. Preserving Past Tsunami Information for Future Preparedness
4. Documentation and communication of IOTIC and IOWave Tsunami Exercise
5. Tsunami Education, Awareness and Preparedness

## The IOTIC-BMKG Staff

---

1. Ardito M Kodijat, UNESCO-IOC - UNESCO Office Jakarta (2017-Now)
2. Aprilia Puspita Cahyaningrum, BMKG (2017-2018)
3. Litanya Octonovrilna, BMKG (2017-Now)
4. Admiral Musa Julius, BMKG (2017- Now)
5. Kian Purna Sinki, BMKG (2019-2020)
6. Alfath Abu Bakar, BMKG (2021-Now)

# Indian Ocean Regional Workshop (IORW)



## Objectives

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- ✓ Facilitate UNESCO-IOC, ICG/IOTWMS, and/or IOTIC program and activities to the Indian Ocean Member States.
- ✓ Exchange information and experiences among the Indian Ocean Member States.
- ✓ Review IOTIC, ICG/IOTWMS and/or the Indian Ocean Member States tsunami related activities.
- ✓ Identify and recommend appropriate actions and improvements of programs and activities implemented by IOTIC, ICG/IOTWMS and/or the Indian Ocean Member States.

## Expected outcome

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- ✓ Increased understanding of the Indian Ocean Member States of UNESCO-IOC, ICG/IOTWMS, and/or IOTIC programs and activities.
- ✓ Updated information from the Indian Ocean Member States on the implementation of UNESCO-IOC, ICG/IOTWMS, and/or IOTIC programs and activities.
- ✓ Recommendation for programs, activities improvements and/or actions for ICG/IOTWMS Working Groups, Task Teams, and IOTIC.

## Activities:

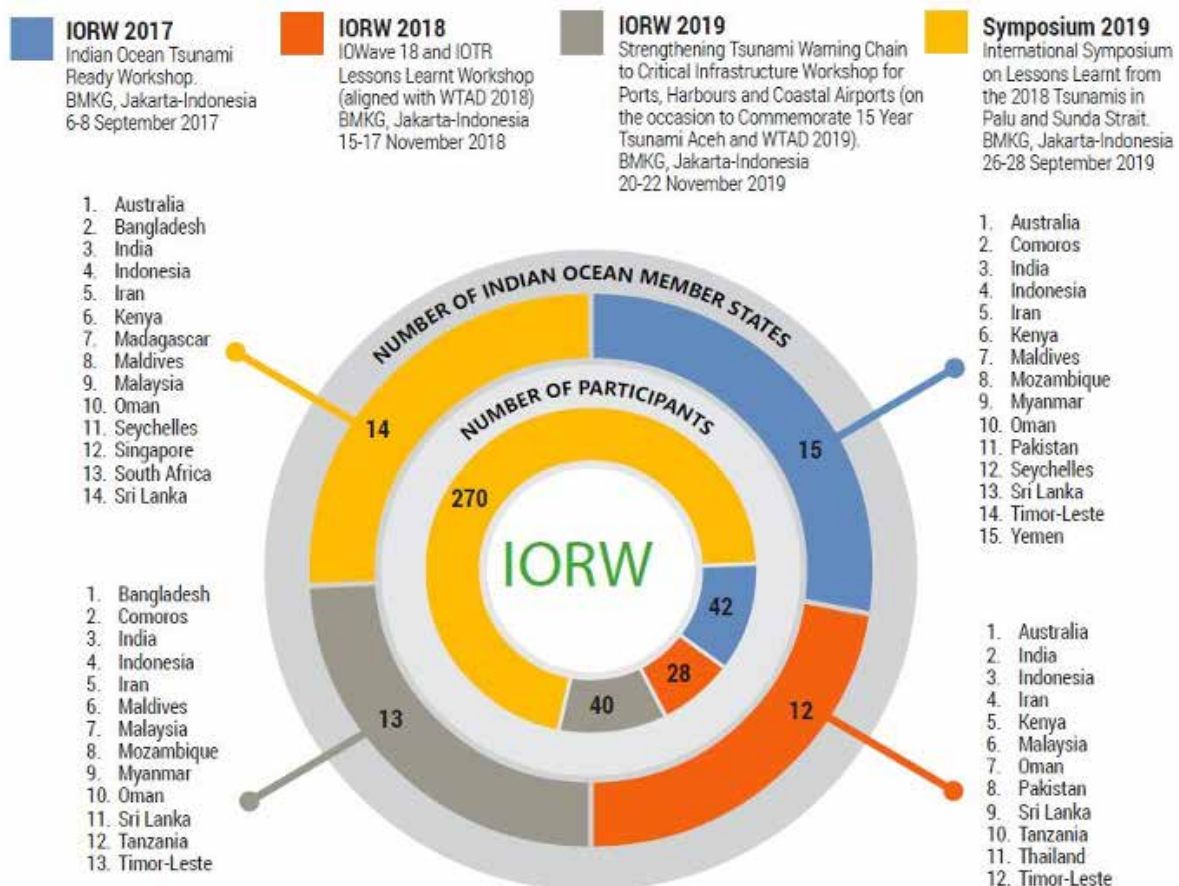
In collaboration and with the support of the ICG/IOTWMS secretariat, IOTIC-BMKG jointly organized series of workshop and webinars:

- A. Between 2017- 2019, IOTIC-BMKG organized three Indian Ocean Regional Workshop and one Symposium
- B. Due to COVID-19 in 2020 – 2021 the Indian Ocean Regional Workshop shifted to virtual webinar/workshop. IOTIC-BMKG organized three Regional webinar in 2020 and one regional webinar in 2021



## A. Indian Ocean Regional Workshop (2017-2019)

Approximately 380 participants from 20 Indian Ocean Member States benefited from these regional workshops. 270 persons attended the International Symposium on Lessons Learnt from the 2018 Tsunamis in Palu and Sunda Strait. In addition to the Indian Ocean Member States, there were participants from 12 other countries attending the symposium.

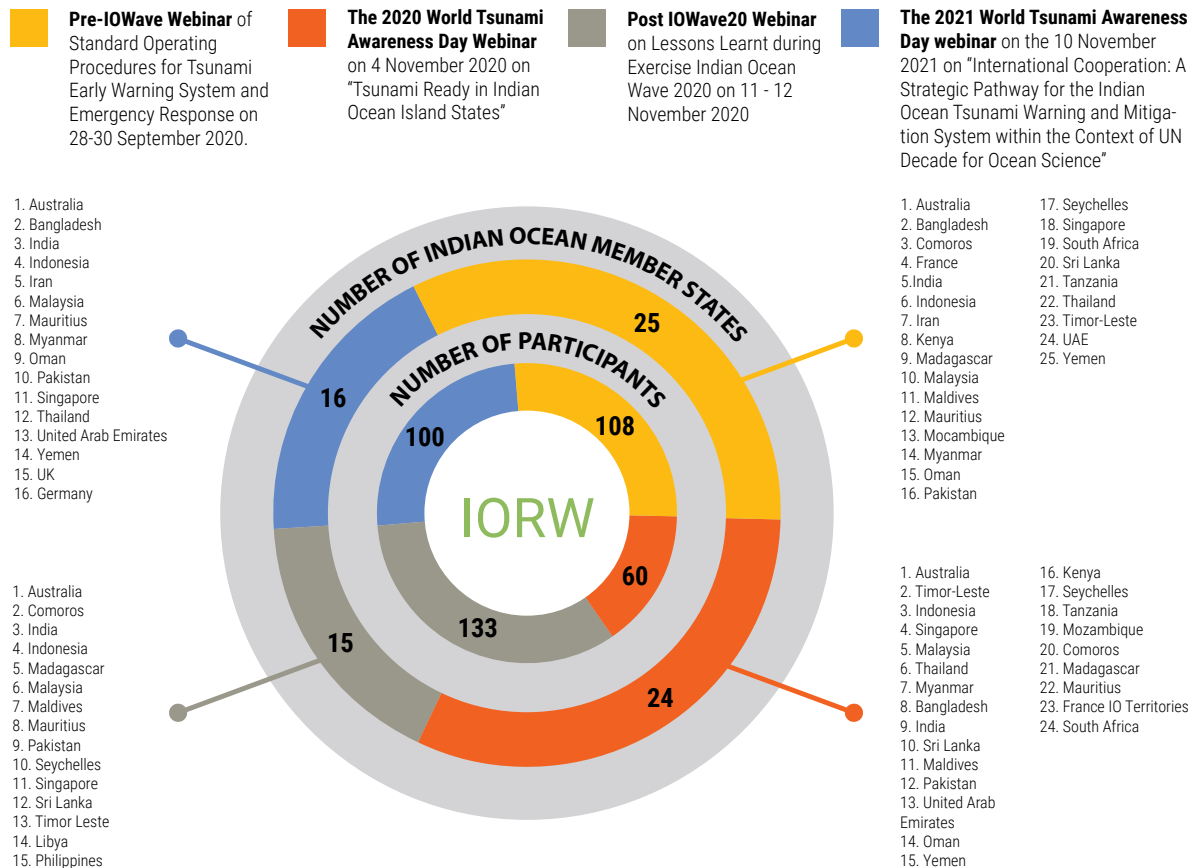


### Highlights:

- The Indian Ocean Tsunami Ready guideline developed
- Recommendations and actions developed to improve the implementation of IOWave exercises including Policy, Preparation, Exercise Scenario and Planning, Observer and Exchange Programme for IOWave20.
- Initial engagement of several National Warning Centres and operators of the ports, harbours, and coastal airports. Recommendations developed for tsunami early warning SOP in critical infrastructures.
- Developed recommendations and strategies for enhancements of end-to-end tsunami early warning system based on scientific findings of Palu and Sunda Strait Tsunamis.

## B. Indian Ocean Regional Webinars (2020-2021)

Approximately 446 participants from 24 Indian Ocean Member States benefited from these regional Webinars. Around 168 persons joined the webinar related to the IOWave exercise webinars and 278 attended the World Tsunami Awareness Day webinars. In addition to the Indian Ocean Member States, there were participants from other countries also attending the World Tsunami Awareness Day Webinars.



## Highlights

- Recommendations and plan to implement IOWave during the Pandemic (COVID-19).
- Lessons of Indian Ocean member states on the implementation of the IOWave exercise during the Pandemic (COVID-19).
- Update and report on end-to-end National Tsunami Warning Chain and National Tsunami Early Warning (NTWC) and Emergency Response (DMO) SOPs.
- Identification of interest and the challenges in implementing Tsunami Ready indicators in the Indian Ocean Island States.
- Recommendations on elements in terms of implementation of strategic pathways and outcomes.
- Recommendations to achieve more timely warnings with reduced uncertainties delivered to at-risk communities that are 100% Tsunami Ready.





IORW 2017 IOTR Workshop



IORW 2018 Post IOWave18 Workshop



IORW 2019 WTAD 2019 International Symposium



Symposium 2018 Lessons Learnt Palu and Sunda Strait



IORW 2020 WTAD 2020 Webinar

**POST IOWAVE20 WEBINAR ON LESSONS LEARNT DURING EXERCISE INDIAN OCEAN WAVE 2020**
  
 Wednesday, 11 November 2020
   
 Thursday, 12 November 2020

**unesco**
  
 Registration: <https://forms.office.com/r/33S0U9X0G3>
  
**WORLD TSUNAMI AWARENESS DAY**
  
 5 NOVEMBER

**Indian Ocean World Tsunami Awareness Day Webinar**
  
**International Cooperation: A Strategic Pathway for the Indian Ocean Tsunami Warning and Mitigation System within the Context of UN Decade or Ocean Science**

**Wednesday 10 November 2021**
  
 07:00 - 10:30 (UTC)

Event website for the Indian Ocean WTAD webinar: <https://oceanexpert.org/event/3302>

# Indian Ocean Capacity Building Programme (IOCAP)

# 2

## Objectives

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- ✓ Assist, enhance, develop, and/or empower the Indian Ocean Member States stakeholders (individuals and organizations) to implement programs and activities of UNESCO-IOC, ICG/IOTWMS, and/or IOTIC.

## Expected outcome:

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- ✓ Strengthened capacity of individuals and organizations of the Indian Ocean Member States to implement programs and activities of UNESCO-IOC, ICG/IOTWMS, and/or IOTIC

## Activities:

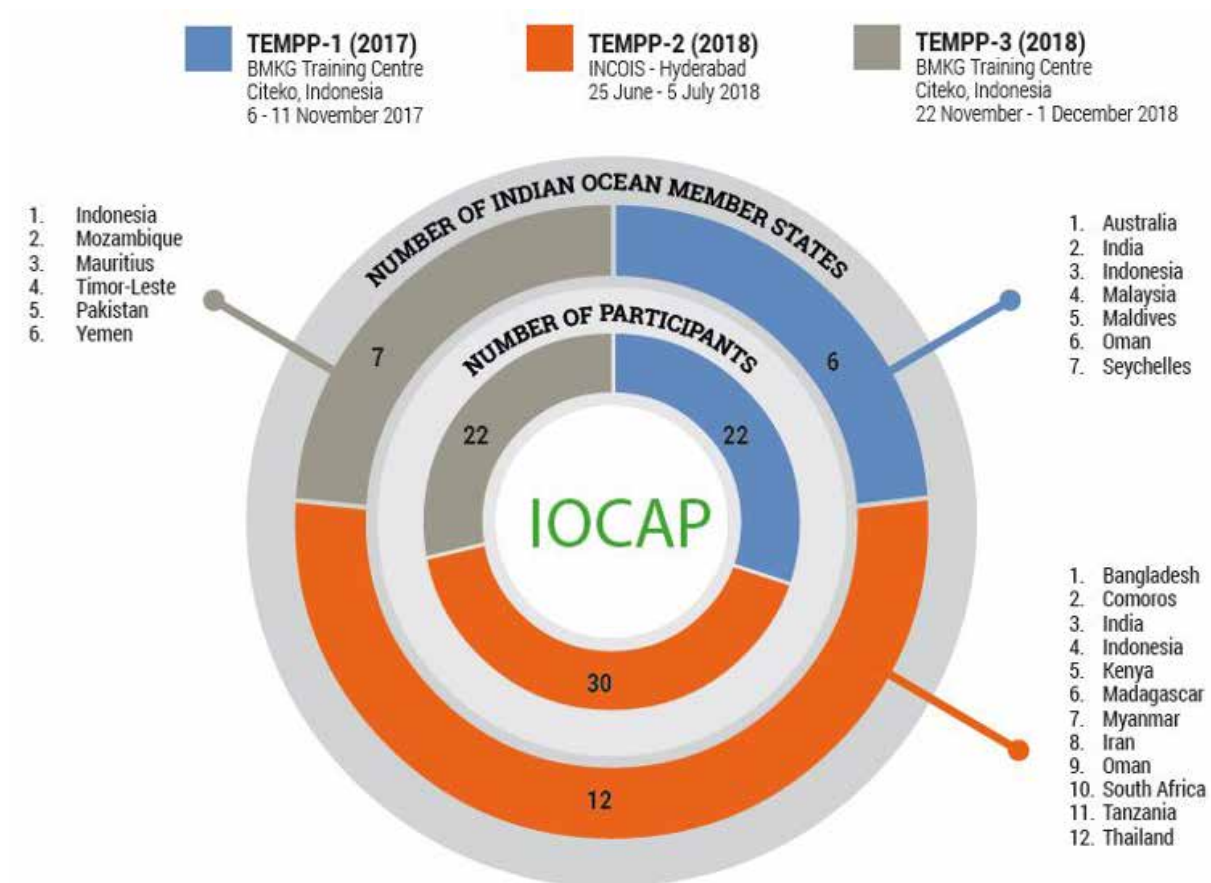
In collaboration and with the support of ICG/IOTWMS secretariat, IOTIC-BMKG jointly organized series of capacity building activities:

- A. Between 2017-2019, IOTIC-BMKG organized two regional trainings on Tsunami Evacuation Maps, Plans, and Procedures (TEMPP) for the Indian Ocean Member States (TEMPP 1 and TEMPP 3) and supported the TEMPP 2 organized by INCOIS in Hyderabad.
- B. Due to COVID-19 in 2020 – 2021 the Indian Ocean Capacity Building Program was shifted into IOTIC Online Lecture Series.



## A. Indian Ocean Capacity Building

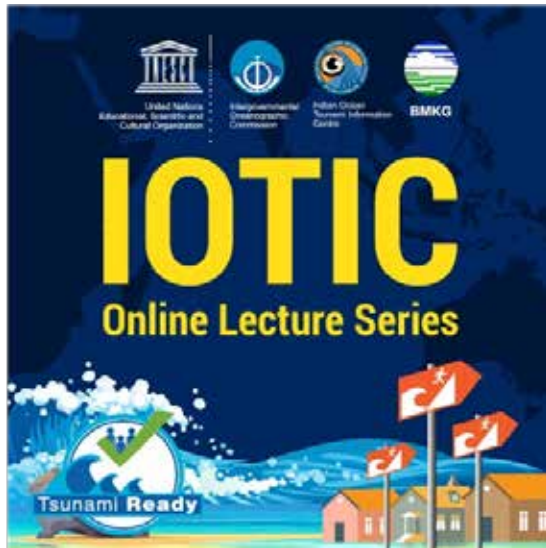
Approximately 74 participants from 20 Indian Ocean Member States have been trained on TEMPP through these training sessions.



### Highlights:

- **The training introduced and built capacities of the member states on:**
  - ✓ **Tsunami Inundation Modelling**
  - ✓ **Inundation Mapping for Evacuation**
  - ✓ **Evacuation Map, Route, and Signage**
  - ✓ **Community Tsunami Response Plans & SOPs**
  - ✓ **Public Tsunami Evacuation Information**
- **Based on ICG/IOTWMS recommendation for IOCAP to focus on In-country capacity building and support member states implementing / piloting the UNESCO-IOC Tsunami Ready programme and recognition, IOTIC-BMKG supported the INCOIS National Workshop on UNESCO IOC Tsunami Ready in 2019.**

## B. IOTIC Online Lecture Series (2020)



During the COVID-19 Six IOTIC Online Lecture Series was delivered using the Zoom Webinar platform with a live stream in IOTIC Facebook Every Friday between 4 September - 9 October 2020. Approximately a total of 2.171 participants from 44 countries in 6 IOTIC online lecture series. Out of that total 1.861 are from 20 Indian Ocean countries.

With the support of:

- Chair of WG-1
- ICG/IOTWMS Secretariat
- Indian Ocean Experts and Resource Persons
- UNESCO Office Jakarta Team
- IOTIC-BMKG Staffs

### Objectives

- Introduced UNESCO-IOC tsunami ready program and recognition in Indian Ocean
- Introduce 12 indicators of UNESCO-IOC Tsunami Ready
- Motivate and encourage Indian Ocean member states to pilot and implement UNESCO-IOC Tsunami Ready

**IOTIC Online Lecture Series:**  
Interactive Expert Sessions on Piloting IOC-UNESCO Tsunami Ready in Indian Ocean

**Lecture Session 1: Introduction to IOC-UNESCO Tsunami ready**  
Friday, 4 September 2020 at 04:00 – 08:15 PM (Jakarta) / GMT +7  
Topic 1: Setting Community Tsunami Ready  
Speaker: Mr. Bernardo Aliaga, UNESCO Tsunami Unit, France  
Topic 2: Tsunami Ready Community in India  
Speaker: Dr. Srinivasa K. Tummala, Director of Indian National Centre for Ocean Information Services, India  
Registration link: <http://bit.ly/Tsunami-Ready-REG1>

**Lecture Session 2: Tsunami Hazard and Risk Reduction**  
IOC-UNESCO Tsunami Ready Indicators 1, 2, and 4  
Friday, 11 September 2020 at 02:00 – 02:15 PM (Jakarta) / GMT +7  
Topic 3: Tsunami Hazard Map, what is it for the community?  
Speaker: Ms. Sunanda Manneela, Indian National Centre for Ocean Information Services, India  
Topic 4: Knowing how exposed a community to tsunami hazard  
Speaker: Dr. Harkunt P Rahayu, Chair of WSP, Indian Ocean Tsunami Warning and Mitigation System, Chair of Indonesian Disaster Expert Association, Institute of Geomatics Technology, Indonesia  
Registration link: <http://bit.ly/Tsunami-Ready-REG2>

**Lecture Session 3: Tsunami Information and Evacuation Plan**  
IOC-UNESCO Tsunami Ready Indicators 9 and 5  
Friday, 18 September 2020 at 02:00 – 02:15 PM (Jakarta) / GMT +7  
Topic 5: Public Display of Tsunami Information  
Speaker: Mr. Nick Kuster, NSW State Emergency Services, Australia  
Topic 6: Tsunami Evacuation Plan  
Speaker: Mr. Harald Spain, Tsunami Early Warning Expert, Germany  
Registration link: <http://bit.ly/Tsunami-Ready-REG3>

**Lecture Session 4: Tsunami Education, Outreach, and Exercise**  
IOC-UNESCO Tsunami Ready Indicators 6, 7, and 8  
Friday, 25 September 2020 at 02:00 – 03:15 PM (Jakarta) / GMT +7  
Topic 7: Community Tsunami Education and Outreach  
Speaker: Ms. Ghazala Nasim, Tsunami Early Warning and Mitigation System and Resilience Group, Pakistan  
Topic 8: Tsunami Exercise  
Speaker: Mrs. Weniza, The Agency for Meteorology, Climatology, and Geophysics (BMKG), Indonesia  
Registration link: <http://bit.ly/Tsunami-Ready-REG4>

**Lecture Session 5: Tsunami Warning and Emergency Response**  
IOC-UNESCO Tsunami Ready Indicators 9, 10, 11, and 12  
Friday, 2 October 2020 at 02:00 – 04:15 PM (Jakarta) / GMT +7  
Topic 9: Community Tsunami Emergency Operation Plan  
Speaker: Mrs. Henry Vidarina, Tsunami Early Warning and Mitigation System, Indonesia  
Topic 10: Community Tsunami Early Warning System  
Speaker: Mr. Ajay Kumar B, Indian National Centre for Ocean Information Services, India  
Registration link: <http://bit.ly/Tsunami-Ready-REG5>

**Lecture Session 6: Piloting Tsunami Ready and Applying for Recognition**  
Friday, 9 October 2020 at 02:00 – 04:15 PM (Jakarta) / GMT +7  
Topic 11: Piloting Tsunami Ready in Community  
Speaker: Mr. Ardito M Kodijat, IOC-UNESCO Indian Ocean Tsunami Information Center, Indonesia  
Topic 12: Applying for IOC-UNESCO Tsunami Ready Recognition  
Speaker: Mrs. Nora Gale, Secretariat of the Intergovernmental Coordination Group for Indian Ocean Tsunami Warning and Mitigation System, Australia  
Registration link: <http://bit.ly/Tsunami-Ready-REG6>

Open to All Participants  
Free Registration  
Register to Each Session to Get the Lecture Link  
Certificate of Participation for Each Session  
Certificate of Completion for All 6 Sessions

For more information please email to: [iotic@unesco.org](mailto:iotic@unesco.org)

**Speakers and Moderators**

- Prof. Shahbaz Khan**, Director of UNESCO Regional Science Centre for Asia and the Pacific, Indonesia
- Mr. Bernardo Aliaga**, IOC-UNESCO Tsunami Unit, France
- Dr. Srinivasa K. Tummala**, Director of Indian National Centre for Ocean Information Services, India
- Mr. Ardito M Kodijat**, Indian Ocean Tsunami Information Centre - IOC-UNESCO, UNESCO Office, Jakarta, Indonesia
- Ms. Sunanda Manneela**, Indian National Centre for Ocean Information Services, India
- Dr. Harkunt P Rahayu**, Chair of WSP, IOTWMS, Chair of Indonesian Disaster Expert Association, Bandung Technological Institute - Indonesia
- Mr. Nick Kuster**, NSW State Emergency Services, Australia
- Mr. Harald Spain**, Tsunami Early Warning Expert, Germany
- Ms. Ghazala Nasim**, Tsunami Early Warning and Mitigation System, Expert and Resilience Group, Pakistan
- Mrs. Weniza**, The Agency for Meteorology, Climatology, and Geophysics, Indonesia
- Mrs. Henry Vidarina**, Tsunami Early Warning and Emergency Response Expert, Indonesia
- Mr. Ajay Kumar B**, Indian National Centre for Ocean Information Services, India
- Mrs. Nora Gale**, Intergovernmental Coordination Group for Indian Ocean Tsunami Warning and Mitigation System Secretariat, Australia

## Episode 1:

### Getting Community Tsunami Ready and Tsunami Ready Community in India

Friday, 4 September 2020 at 02:00 - 03:15 (Jakarta) GMT+7

<https://www.facebook.com/638787276156090/videos/2752690768322708>



**Topic 1:**  
**Getting Community Tsunami Ready**  
Mr Bernardo Aliaga  
*IOC UNESCO Tsunami Unit*



**Topic 2:**  
**Tsunami Ready Community in India**  
Dr Srinivasa K. Tummala  
*Director of Indian National Centre For Ocean Information Services, India*



**Moderator:**  
Prof Shabaz Khan  
*Director of UNESCO Regional Science Bureau for Asia and the Pacific*

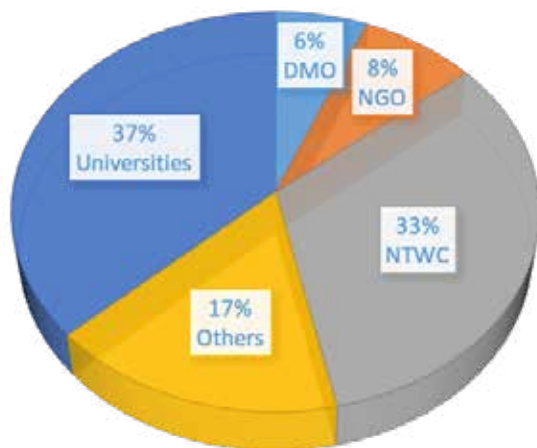
**337 Participants**

**136**

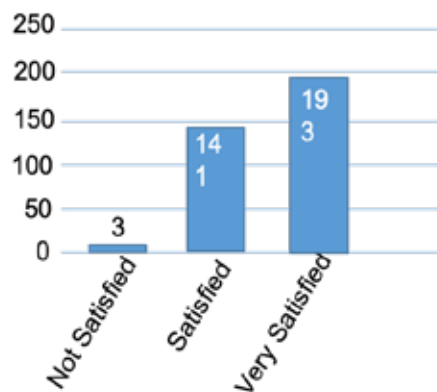


**201**

Participant's Organization



Satisfactory



### Question & Answer (Q&A)

**Topic 1** **20**

**Topic 2** **28**

<https://www.instagram.com/iotsunami/>

## Episode 2:

### Tsunami Hazard and Tsunami Risk Reduction

Friday, 11 September 2020 at 02:00 - 03:15 (Jakarta) GMT+7

<https://www.facebook.com/638787276156090/videos/327121388610133>



**Topic 1:**  
**Tsunami Hazard Map, what is it for the community?**  
 Mrs Sunanda Manneda  
 Indian National Centre for Ocean Information on Services, India



**Topic 2:**  
**Knowing how exposed a community to tsunami hazard**  
 Dr Harkunti P Rahayu  
 Chair of WG-1 Indian Ocean Tsunami Warning and Mitigation System



Moderator:  
 Mr Ardito M Kodijat  
 Head of Indian Ocean Tsunami Indonesian Centre of UNESCO Indonesia

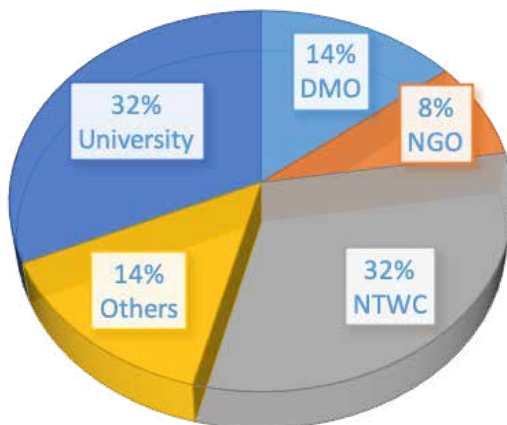
**365 Participants**

**147**

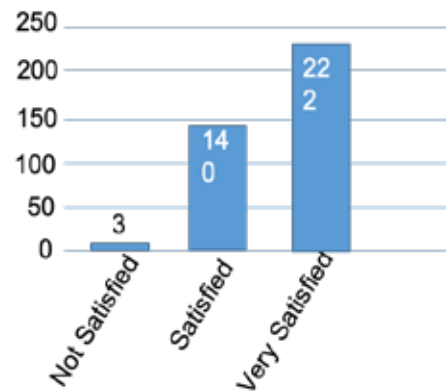


**218**

Participant's Organization



Satisfactory



### Question & Answer (Q&A)

**Topic 1** **26**

**Topic 2** **21**

<https://www.instagram.com/iotsunami/>



### Episode 3:

## Tsunami Information Display and Tsunami Evacuation Plan

Friday, 18 September 2020 at 02:00 - 03:15 (Jakarta) GMT+7

<https://www.facebook.com/638787276156090/videos/2752690768322708>



**Topic 1:**  
**Public display of tsunami information**  
Mr Nick Kuster  
NSW State Emergency Service Australia



**Topic 2:**  
**Tsunami Evacuation Plan**  
Mr Harald Spahn  
Tsunami Early Warning Expert Germany



**Moderator:**  
Mr Ardito M Kodijat  
Head of Indian Ocean Tsunami Indonesian Centre of UNESCO Indonesia

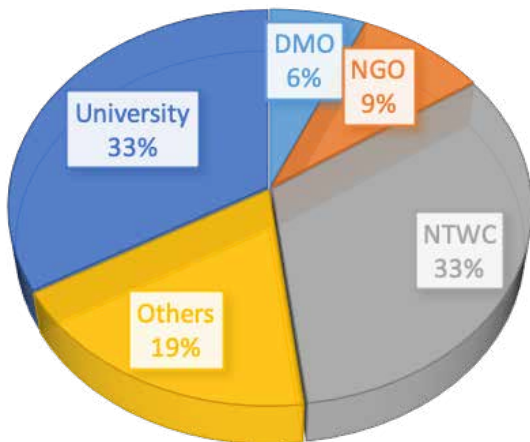
**383 Participants**

**152**

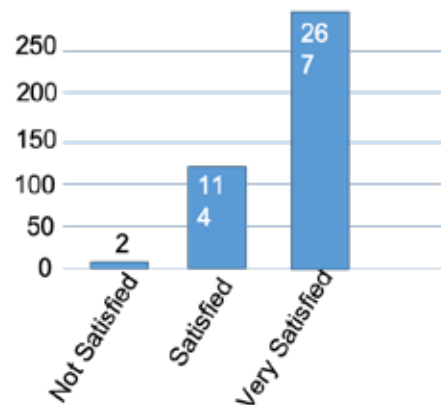


**231**

Participant's Organization



Satisfactory



### Question & Answer (Q&A)

**Topic 1** **19**

**Topic 2** **16**

<https://www.instagram.com/iotsunami/>

## Episode 4:

### Tsunami Education and Outreach and Tsunami Exercise

Friday, 25 September 2020 at 02:00 - 03:15 (Jakarta) GMT+7

<https://www.facebook.com/638787276156090/videos/918727415318359>



**Topic 1:**  
**Community tsunami education and outreach**  
Ms Ghazala Naeem  
*Tsunami Early Warning and Mitigation Expert Pakistan*



**Topic 2:**  
**Tsunami exercise**  
Mrs Weniza  
*The Agency for Meteorology Climatology and Geophysics Indonesia*



**Moderator:**  
Mr Ardito M Kodijat  
*Head of Indian Ocean Tsunami Indonesian Centre of UNESCO Indonesia*

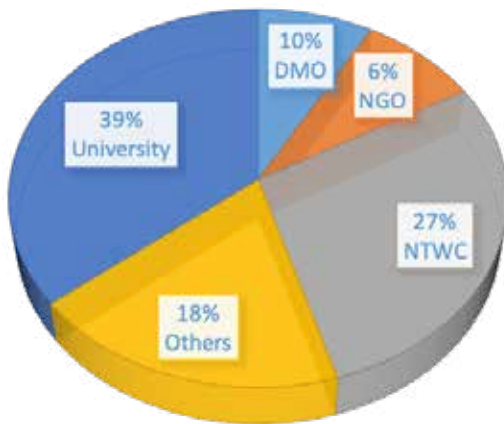
**353 Participants**

**138**

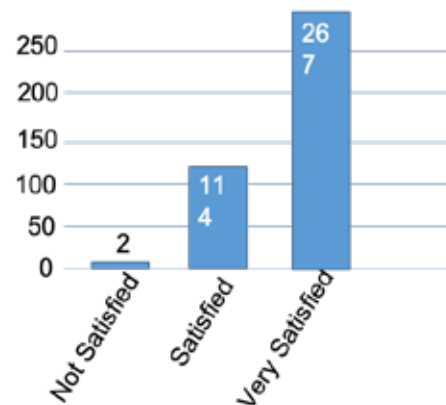


**215**

Participant's Organization



Satisfactory



### Question & Answer (Q&A)

**Topic 1** **25**

**Topic 2** **15**

<https://www.instagram.com/iotsunami/>

## Episode 5:

### Tsunami Emergency Response and Tsunami Early Warning

Friday, 2 October 2020 at 02:00 - 03:15 (Jakarta) GMT+7

<https://www.facebook.com/638787276156090/videos/628384164708457>



**Topic 1:**  
**Community tsunami emergency operation plan**  
Mrs Henny Vidiarina  
*Tsunami Early Warning and Mitigation Expert Indonesia*



**Topic 2:**  
**Community tsunami early warning system**  
Mr Ajay Kumar B  
*Indian National Centre for Ocean Information Services India*



**Moderator:**  
Mr Ardito M Kodijat  
*Head of Indian Ocean Tsunami Indonesian Centre of UNESCO Indonesia*

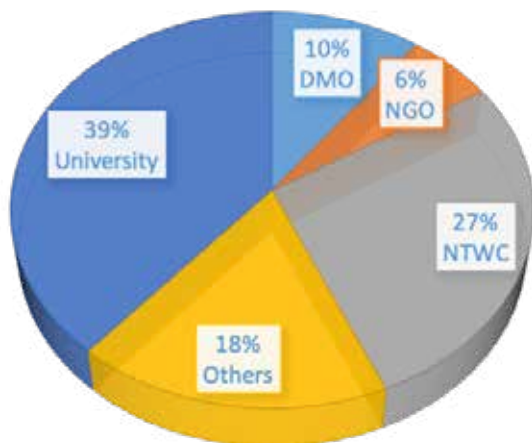
**354 Participants**

**146**

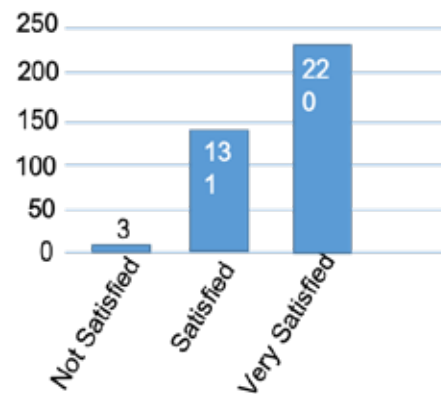


**208**

Participant's Organization



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### Question & Answer (Q&A)

**Topic 1** **16**

**Topic 2** **8**

<https://www.instagram.com/iotsunami/>

## Episode 6:

### Piloting Tsunami Ready Community and Applying for UNESCO-IOC TR Recognition

Friday, 9 October 2020 at 02:00 - 03:15 (Jakarta) GMT+7

<https://www.facebook.com/638787276156090/videos/645066346155602>



**Topic 1:  
Piloting tsunami  
ready in  
community**

Mr Ardito M Kodijat  
Head of Indian Ocean  
Tsunami Centre of IOC-  
UNESCO Indonesia



**Topic 2:  
Applying for IOC-  
UNESCO tsunami  
ready recognition**

Mrs Nora Gale  
Indian Secretariat of  
Intergovernmental  
Coordination Group of the  
Indian Ocean Tsunami  
Warning and Mitigation  
System Australia



**Moderator:**  
Dr Harkunti P Rahayu  
Chair of WG-1 Indian  
Ocean Tsunami Warning  
and Mitigation System

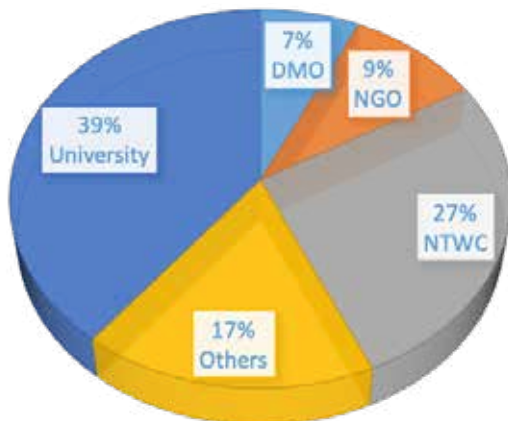
**381 Participants**

**145**

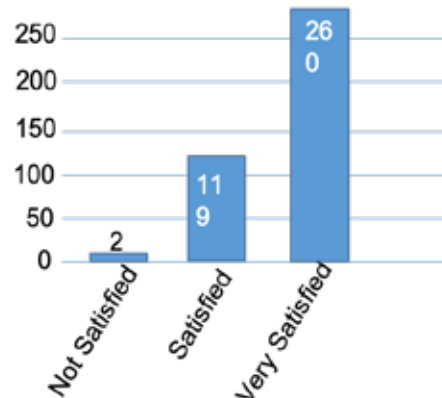


**236**

Participant's Organization



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### Question & Answer (Q&A)

**Topic 1** **37**

**Topic 2** **12**

<https://www.instagram.com/iotsunami/>



## Number of Total Participants

<b>2.171</b> Participants	<b>44</b> Countries	<b>6</b> IOTIC Lectures
------------------------------	------------------------	----------------------------

## Indian Ocean Country Participants

No	Countries	Lecture					
		1	2	3	4	5	6
1	Australia	3	3	3	3	3	3
2	Bangladesh	-	-	-	1	1	-
3	Comoros	1	1	1	1	1	1
4	India	13	11	12	15	16	22
5	Indonesia	209	232	245	221	212	224
6	Iran	2	3	2	2	2	2
7	Kenya	6	5	4	6	6	4
8	Madagascar	3	7	5	6	7	7
9	Malaysia	10	10	9	10	11	10
10	Maldives	1	1	1	1	1	1
11	Mauritius	1	1	-	1	-	-
12	Myanmar	7	7	9	10	10	10
13	Oman	2	3	4	1	1	1
14	Pakistan	12	11	11	8	13	15
15	Seychelles	7	11	11	9	7	8
16	Singapore	3	10	9	7	7	8
17	Sri Lanka	-	1	-	-	-	-
18	Timor-Leste	-	-	-	1	1	5
19	United Arab Emirates	3	3	2	2	2	2
20	Yemen	1	-	-	-	-	-
<b>Total : 1.861</b>		<b>284</b>	<b>320</b>	<b>328</b>	<b>305</b>	<b>301</b>	<b>323</b>

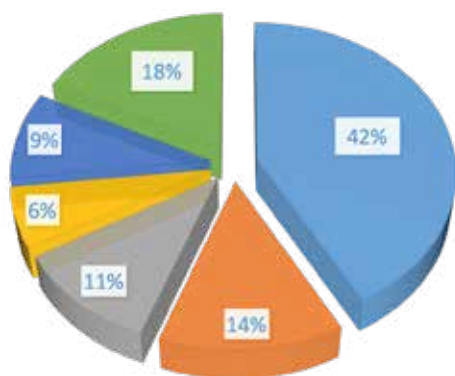
**15 countries representations participated in all 6 Lectures**

## Other Country Participants

No	Countries	Lecture					
		1	2	3	4	5	6
1	Brazil					1	1
2	China					1	
3	Egypt	1		1	1		
4	Fiji	2		2	1	1	
5	French polynesia	1	2	1			
6	Geneva	1					
7	Germany					1	
8	Greece	2	1	2	2	2	2
9	Israel			1			
10	Italy		2	3	3	2	3
11	Jordan				1		
12	Lebanon						1
13	Libya	1	2	1			1
14	Nepal	2	3	4	2	1	4
15	Norway						1
16	Philippines	31	27	33	30	38	37
17	Solomon Islands	1			1		
18	Somalia	1	1		1	1	1
19	Spain	2	1	2	1	1	1
20	Turkey	1	1	1			
21	United Kingdom	2	2	2	2	2	1
22	USA	1	1				1
23	Vanuatu	3	1	2	3	2	2
24	Vietnam	1	1				
<b>Total : 310</b>		<b>53</b>	<b>45</b>	<b>55</b>	<b>48</b>	<b>53</b>	<b>56</b>

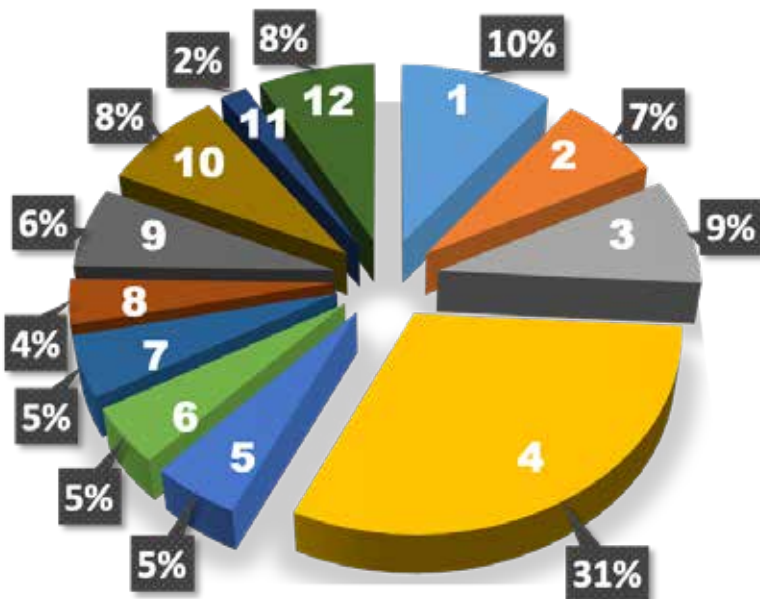
**6 countries representations participated in all 6 Lectures**

### IOTIC Online Lecture Series Outreach

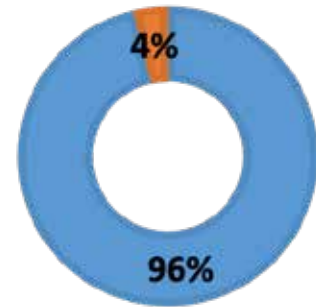


- 319 Only Participated in 1 lecture
- 104 Participated in 2 lectures
- 84 Participated in 3 lectures
- 49 Participated in 4 lectures
- 71 Participated in 5 lectures
- 133 Participated in all 6 lectures

Which indicator(s) would be the most difficult to implement in your country?



Do you think there is interest in your country to implement Tsunami Ready and get UNESCO-IOC Tsunami Ready Recognition?



Yes No

1. Have designated and mapped tsunami hazard zones.
2. Information of the estimate number of people that live in the tsunami hazard zone.
3. Public display of tsunami information.
4. Inventory of available economic, infrastructural, political and social resources to reduce tsunami risk at the community level.
5. Easily understood tsunami evacuation maps as determined to be appropriate by local authorities.
6. Development and distribution of outreach and public education materials
7. Conduct three outreach or education activities annually
8. Conduct a biennial tsunami community exercise.
9. Establish tsunami emergency operations plan (EOP) for the community.
10. Build capacity to manage emergency response operations during a tsunami.
11. Establish redundant and reliable means to receive 24-hour official tsunami alerts
12. Establish redundant and reliable means to disseminate 24-hour official tsunami alerts to the public.

### Highlights:

- Reaching a wide range of stakeholder on the understanding or UNESCO-IOC Tsunami Ready
- Interest of stakeholders on UNESCO-IOC Tsunami Ready
- Understanding of stakeholders on gaps, challenges, and difficulties to implement the UNESCO IOC Indicators

# Preserving Past Tsunami Information for Future Preparedness

# 3

## Objective:

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- ✓ To preserve information and eyewitness stories of past tsunamis in Indonesia
- ✓ To have a locally effective tsunami awareness and education materials based on past tsunamis.

## Expected outcome:

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- ✓ Increased awareness and understanding in areas that has been hit by tsunamis based on local evidence and eyewitness story.

## Activities:

- A. Information collection, video documentation of 45 eyewitnesses and survivors' stories of the Flores Tsunami (12 December 1992), and development of public education booklet "Kala Air Laut Menerjang Tanah Flores".**
- B. Information collection, video documentation of 46 eyewitnesses and survivors' stories of the Banyuwangi Tsunami (2 June 1994), and development of public education booklet "Segoro Mungah di Jum'at Pon, Mengingat Tsunami Senyap Banyuwangi"**
- C. Video documentation of 30 eyewitnesses and survivors' stories of the Central Sulawesi EQ and Tsunamis (1927, 1938, 1968, 1996, and 2018). With additional support from the Engelhard Foundation.**
- D. Information collection, video documentation of 60 eyewitnesses and survivors' stories of the Biak Tsunami (17 February 1996).**



# Video Documentation of Eyewitness and Survivors

2018 | Flores Tsunami 1992 | 45 videos + Information and Education Booklet

**Gabriel Gago** adalah saksi dari tsunami 1992 Flores. Ia berusia 21 tahun pada waktu kejadian tsunami di Desa Masambé, Flores - Indonesia.

"Gempal Gempal saya lihat air sudah muncul dari bawah naik dari laut. Setelah air surut, kembali ke bawah, banyak ikan-ikan yang mati, beberapa rumah rubuh. Rumah saya rubuh, rumah setengah tembok tidak runtuh hanya plasteran rumah itu runtuh terkena air laut."

**Gabriel Gago** is living witness of the 1992 Tsunami in Flores. He was 21 years old when the tsunami happened in Masambé Village, Flores - Indonesia.

"Earthquake Earthquake I saw water that came from the sea. The water was going back down while carrying many dead fish, some houses were destroyed. My house collapsed, the houses did not go down, it used cement, the house collapsed because of the seawater."

**GABRIEL GAGO**  
Masambé Village, Flores - Indonesia

In Collaboration with:

With the support of:







Sringati, usia 43 tahun pada saat kejadian Tsunami 1994, Banyuwangi. Beliau menjadi saksi hidup ganasnya terjangan Tsunami di Desa Lampon, Banyuwangi - Indonesia.

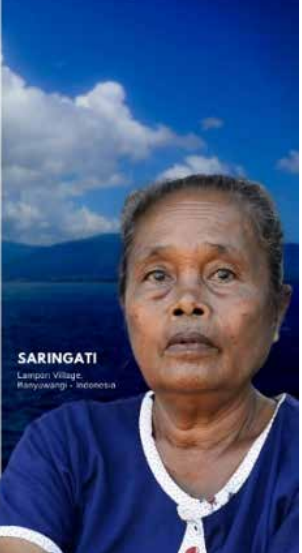
"Golombang datang waktu itu ada tiga kali, warna air nya kurang jelas terlihat karena kondisi pada waktu itu malam hari, hanya saja bau nya seperti campuran minyak, gas, dan solar."

Sringati was 43 years old when the tsunami happened in 1994. She is a living witness of the massive tsunami in Lampon Village, Banyuwangi - Indonesia.

"The wave came three times, the water wasn't clear because it happened at night, the water smelled like a mix of oil, gas, and diesel fuel."

## 1994 Banyuwangi Tsunami

Survivor and Eyewitness Stories



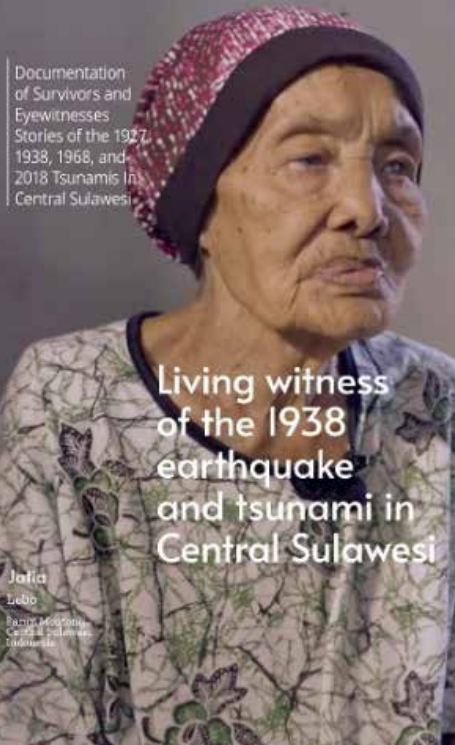
**SRINGATI**  
Lampon Village, Banyuwangi - Indonesia





**2020** | Central Sulawesi Tsunamis (1927, 1938, 1968, 1996, 2018) | 30 videos

With additional support from Charles Engelhard Foundation.



**2021** | Tsunami Biak 1996 |

- Documented 60 Eyewitnesses and Survivors stories
- 8 location : Farusi, Korem, Mansoben, Munggui, Pulau Nomfur, Rarisi, Wardo, Wari





# Tsunami Education, Awareness and Preparedness

# 4

## Objective:

- ✓ To ensure the availability of tsunami education, awareness, and preparedness materials for the Indian Ocean Member States.

## Expected outcome:

- ✓ Increased awareness and understanding of tsunami in the Indian Ocean.

## Activities:

- In line with the UN Decade on Ocean Science for Sustainable Development 2021-2030. In 2021, IOTIC-BMKG focused on developing communication, socialization, and promotion tools of the UNESCO-IOC Tsunami Ready.

### 1. UNESCO-IOC Tsunami Ready Boardgame.

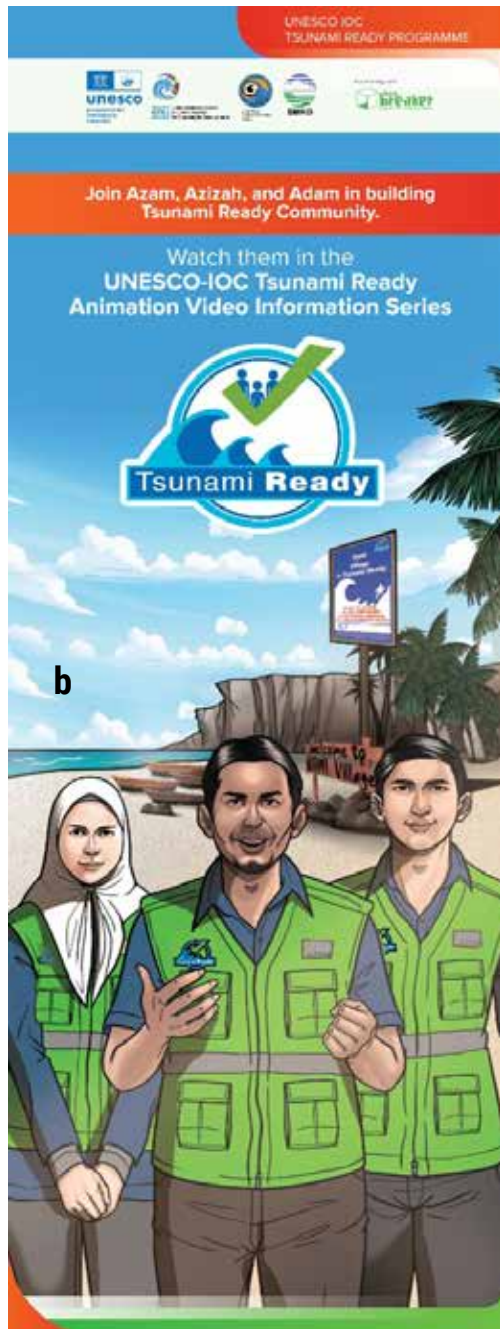
The Boardgame is an edutainment tools to promote and introduce the UNESCO-IOC Tsunami Ready programme and the 12 tsunami ready indicators. The game aims to raise awareness on tsunami ready community and can be used to advocate, guide, and work with the community in implementing the Tsunami Ready programme.





## 2. Video animation series on UNESCO-IOC Tsunami Ready program and indicators.

These 4-7 minutes animation video series provide information about the UNESCO-IOC Tsunami Ready programme and the 12 tsunami ready indicators. The series tell the story a group of community member in building their community as tsunami ready community by implementing the agreed indicators until their community got the recognition as UNESCO-IOC Tsunami Ready Community. The 14 videos are:



**Video 1:** Tsunami Ready (an introduction).

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**Video 2:** Tsunami Hazard for Tsunami Ready Community

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**Video 3:** Knowing people at risk of tsunami

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**Video 4:** Resource and capacity for Tsunami Ready Community

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**Video 5:** Tsunami Evacuation Map for the community

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**Video 6:** Public Tsunami Information in Community

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**Video 7:** Public Awareness and Education Resources

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**Video 8:** Outreach Activities in Tsunami Ready Community

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**Video 9:** Community Tsunami Exercise

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**Video 10:** Community Tsunami Emergency Operation Plan

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**Video 11:** Building Capacity in community for Emergency Response

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**Video 12:** Linking the Community to the Tsunami Warning Chain

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**Video 13:** Providing warning to the community

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**Video 14:** Getting Tsunami Ready Recognition.

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These UNESCO-IOC Tsunami Ready animation videos will be made available for public through IOTIC Youtube and Website in January 2022.

### 3. Indian Ocean Youth Short Video Competition on Tsunami Awareness



To build awareness among youth in Indian Ocean member states on Tsunami hazard, tsunami awareness, and tsunami preparedness, IOTIC-BMKG organized Indian Ocean Youth Short Video Competition on Tsunami Awareness. This youth video competition increased the knowledge of Indian Ocean youth on the topic of Tsunami Awareness and Preparedness and upskill Indian Ocean youth in the content creation in particular on the topic of Tsunami Awareness and Preparedness.

A total of 79 videos were successfully submitted by participants from 9 countries (Bangladesh 3, India 5, Indonesia 24, Kenya 4, Malaysia 12, Maldives 2, Pakistan 25, Seychelles 3 and Tanzania 2). Five (5) independent judges evaluated the videos based on 6 assessment criteria: theme/topic, information, originality, impact, concept, creativity. There were 12 winners of 4 groups

#### GROUP 1: Eastern Indian Ocean Region

- 1<sup>st</sup> Winner: Little Sea in Tompe by Sarah Adilah (Indonesia)  
<https://drive.google.com/open?id=1Hi0SUEO30j1vNNifBA-8qmHbXfDAOBWG>
- 2<sup>nd</sup> Winner: Living with the Sea by Vania Qanita Damayanti, Adrian Muhammad Fikri Suni & Nur Amri Firmansyah (Indonesia)  
[https://drive.google.com/open?id=1gGDLdL8D-g6eo\\_JX54lkWp47r6y3UNsg](https://drive.google.com/open?id=1gGDLdL8D-g6eo_JX54lkWp47r6y3UNsg)
- 3<sup>rd</sup> Winner: Atypical Tsunami and Solution by Muhyddin Aprizandy, Bobby Tegar Sanjaya & Muna Fauziah (Indonesia)  
<https://drive.google.com/open?id=1Xb-m2xfbTKN0QfEOyc2PWWyUNtQjWK-2>

#### Group2 - Indian Ocean Small Island States

- 1<sup>st</sup> Winner: We Are Aware by Darius Ashvine Commettant, Shainarah Chandell Manisha Ragain & Ruth Abigail Nicole Henrie (Seychelles)  
<https://drive.google.com/open?id=1RXKsj43e3iXIfEAGtrllSCuuQqEikRkH>
- 2<sup>nd</sup> Winner: Public Tsunami Awareness by Ahmed Yaeesh Shaheem (Maldives)  
<https://drive.google.com/open?id=1e0-aJ4ztLH1aO-Te81k01U0LPZ30c7Pf>
- 3<sup>rd</sup> Winner: Tsunami the Incoming Threat by Melchizedek Solin (Seychelles)  
[https://drive.google.com/open?id=1vdHHMP\\_CKvcZ-zEpOLsMLXRdSGm2dYwM](https://drive.google.com/open?id=1vdHHMP_CKvcZ-zEpOLsMLXRdSGm2dYwM)

#### Group3 - North Western Indian Ocean

- 1<sup>st</sup> Winner: Surviving Tsunami by Vandita Sariya (India)  
<https://drive.google.com/open?id=1rKqrguYpKtqBUf5D7jvIDXYzIWny8Uk>
- 2<sup>nd</sup> Winner: Let's Buck Against the Wave by Aneeqa Bibi, Humera Khan & Sania Mehmood (Pakistan)  
[https://drive.google.com/open?id=1qttldLuNJBkXq\\_yrDFe1ugwJR55w1J3l](https://drive.google.com/open?id=1qttldLuNJBkXq_yrDFe1ugwJR55w1J3l)
- 3<sup>rd</sup> Winner: Make Them Aware if You Care by Ayesha Nadeem (Pakistan)  
<https://drive.google.com/open?id=1CZmUKsPVPBbwIDPoPlmCEIv-V3F4SsiT>

#### Group4 - Western Indian Ocean region

- 1<sup>st</sup> Winner: Good Wave Intentions by Mahfudh Khamisi Omar (Kenya)  
<https://drive.google.com/open?id=1w3YbJeHpLd4KHMclqdR2exBpxdDysXiZ>
- 2<sup>nd</sup> Winner: Tsunami Exercise by Neema Tayai Mollel (Tanzania)  
<https://drive.google.com/open?id=1f0eIL-wfWvAkFNmRg9iOarvABzdb5TbP>
- 3<sup>rd</sup> Winner: Do We Communicate Hazard and Risk of Tsunami by Yasin Ramadhan (Tanzania)  
[https://drive.google.com/open?id=1oR17PnAm2e-dpibot9UQQxgE-BeQR\\_Mc](https://drive.google.com/open?id=1oR17PnAm2e-dpibot9UQQxgE-BeQR_Mc)

These videos will be made available in IOTIC Social Media and website in 2022.

# Documentation and communication of IOTIC and IOWave exercises

# 5

## Objective:

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- ✓ To preserve information and evidence of IOTIC and IOWave activities
- ✓ To facilitate communication on IOTIC and IOWave activities to the Indian Ocean Member States.

## Expected outcome:

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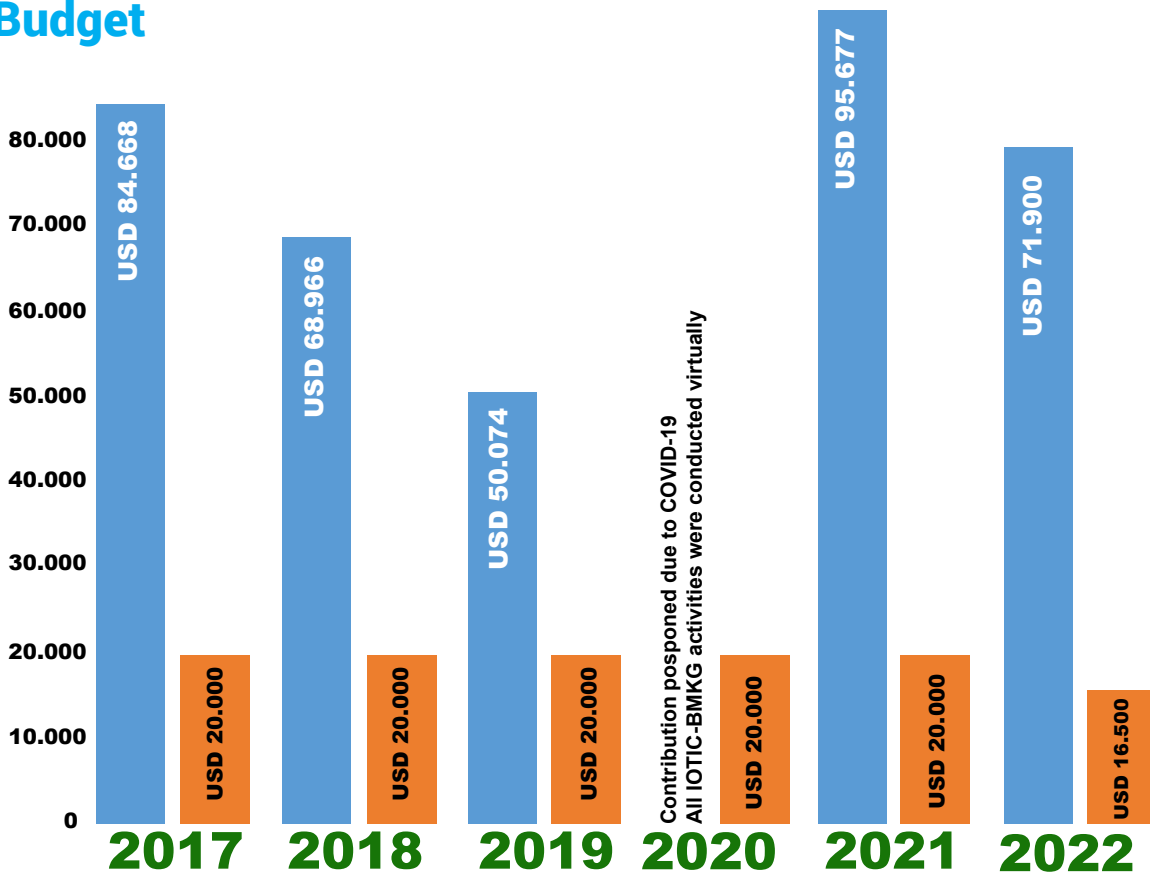
- ✓ Public have easy access and updated information of IOTIC and IOWave activities.

## Activities:

- A. Documentation and communication of IOWave16 in cooperation with UNESCAP. Social Media engagement of IOWave16.
- B. Documentation and communication of IOWave 18 and IOWave 20, Social Media engagement and development of IOWave website ([www.iowave.org](http://www.iowave.org)).



## Budget



**Annual Budget from BMKG for IOTIC BMKG Programme**  
Agreed annual budget from BMKG ~ USD 80,000

**Annual Budget from UNESCO-IOC Regular Programme**  
Agreed annual budget from UNESCO-IOC ~ USD 20,000

### Note:

Based on UN Exchange Rate for January each year

The amount stated did not include:

- BMKG's In-kind support to IOTIC-BMKG programme office (3 dedicated staff, office space and facilities).
- BMKG's additional support for the International Symposium on the Lessons Learnt from the 2018 Tsunamis in Palu and Sunda Strait.
- In-kind support and staff time of UNESCO-IOC IOTIC and ICG/IOTWMS Secretariat in the implementation of IORW and IOCAP activities.
- Additional funding support from ICG/IOTWMS secretariat for the IORW and IOCAP activities.



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**Alfath Akbar ([alfath.takalar@gmail.com](mailto:alfath.takalar@gmail.com))**