

## **The Indian Ocean Tsunami Warning and Mitigation System 10 years after the Indian Ocean Tsunami: Achievements, Challenges, Remaining Gaps and Policy Perspectives**

**BMKG Auditorium, Jakarta, Indonesia, 24 - 25 November 2014**

### **CONFERENCE PROGRAMME**

#### **Day 1, Monday 24 November**

**08:30 – 09:00: REGISTRATION**

**09:00 – 10:00: OPENING SESSION**

1. Introduction by Mr Tony Elliott, Head of ICG/IOTWS Secretariat, IOC-UNESCO.
2. Welcoming Remarks by Director UNESCO Regional Science Bureau for Asia and the Pacific, UNESCO Jakarta Office, Mr. Hubert J. Gijzen, PhD.
3. Welcoming Remarks by the Executive Secretary of IOC and Assistant Director General of UNESCO, Mrs. Wendy Watson-Wright, PhD. (video message).
4. Welcoming Remarks by Director General of BMKG, Dr. Andi Eka Sakya, M.Eng.
5. Opening Speech by Professor Muhammad Nasir, Minister for Research, Technology and Higher Education of Indonesia.

**10:00: GROUP PHOTO AND COFFEE/TEA BREAK**

**10:30 – 12:30: Session 1: Development of the IOTWS since 2004. What has been achieved? What is different? Is the Indian Ocean region safer than it was in 2004?**

***Moderator: Mr Rick Bailey, Head, Tsunami Warning & Ocean Forecast Services, Australian Bureau of Meteorology and Chair of ICG/IOTWS***

This session will report on the achievements of the last 10 years and compare the present status of the IOTWS to what was available in 2004. The moderator will provide the context of the early days of the IOTWS in 2005 that brought the international donor community together. The Chair of the ICG/IOTWS will provide an overview of the entire system. Representatives of the Interim Advisory Service providers will provide a summary of their roles and activities between April 2005 and March 2013. The Chairs of the ICG/IOTWS Working Groups will report on achievements in the context of the three pillars of the IOTWS: tsunami risk assessment and reduction; tsunami detection, warning and dissemination; and tsunami awareness and response.

**10:30: Introduction by Moderator**

**10:35: Overview of the IOTWS. Mr Rick Bailey, Head, Tsunami Warning & Ocean Forecast Services, Australian Bureau of Meteorology and Chair of ICG/IOTWS**

**10:55: The Interim Advisory Service, 2005-2013. Dr Charles McCreery, Director of Pacific Tsunami Warning Centre, USA and Takeshi Koizumi, Senior Coordinator for International Earthquake and Tsunami Information, Japan Meteorological Agency, Japan**

**11:15: Risk Assessment and Reduction. Prof Samantha Hettiarachchi, University of Moratuwa and Chair of ICG/IOTWS Working Group 1**

**11:30: Detection, Warning and Dissemination. Dr Srinivasa Kumar, Head, ASG & In-Charge National Tsunami Warning Centre, Indian National Centre for Ocean Information Services (INCOIS), India and Vice-Chair of ICG/IOTWS**

**11:45: Awareness and Response. Dr Harkunti P. Rahayu, Institute of Technology Bandung and Chair of ICG/IOTWS Working Group 3**

**12:00: Panel discussion**

**Panellists:**

Mr David Thomas, Chief of Information and Telecommunications System Division, WMO  
Dr Prih Harjadi, former Deputy Director General for Geophysics, BMKG  
Dr Charles McCreery, Director of Pacific Tsunami Warning Centre  
Mr Takeshi Koizumi, Senior Coordinator for International Earthquake and Tsunami Information, JMA  
Prof Samantha Hettiarachchi, University of Moratuwa and Chair of ICG/IOTWS Working Group 1  
Dr Srinivasa Kumar, Head, National Tsunami Warning Centre, INCOIS and Vice Chair of ICG/IOTWS  
Dr Harkunti P. Rahayu, Institute of Technology Bandung and Chair of ICG/IOTWS Working Group 3

**12:30 – 14:00: LUNCH and LAUNCHING OF INDIAN OCEAN TSUNAMI INFORMATION CENTRE**

**14:00 – 17:30: Session 2: Outstanding needs and future developments. What still needs to be done? What future developments are planned?**

***Moderator: Dr Andi Eka Sakya, Director General of the Indonesian Agency for Meteorology, Climatology and Geophysics (BMKG)***

This session will cover what is still lacking in the IOTWS and what future developments are planned, and will be presented from the perspective of the IOTWS Member States and other international partners. The focus of the session will be to review the status of countries representing different regions in the Indian Ocean from the point of view of capacity development, future developments and outstanding needs.

14:00: Introduction by Moderator

14:05: **The Indonesian Tsunami Master Plan** – Mr B. Wisnu Widjaya, Deputy for Prevention and Preparedness, National Agency for Disaster Management – Indonesia (BNPB).

14:20: **The progress and its challenges to the new technology in the establishment of Oman Tsunami Early Warning System**, Dr Sultan Al-Yahyai, Chief of Numerical Weather Prediction, Directorate General for Meteorology, Oman.

14:40: **The implementation of the French tsunami warning system in La Réunion: scope for sub-regional cooperation.** Mr Francois Schindele, Coordinator, French Tsunami Warning Centre (CENALT).

15:00 **Gaps and future needs for tsunami research to support the Early Warning Systems.** Mr Danny Hilman Natawidjaja, Senior Researcher of the Geo-technology Research Centre, Indonesian Institute of Science (LIPI).

**15:15 – 15:45: COFFEE/TEA BREAK**

15:45: Outstanding needs of Indian Ocean countries – panel sessions:

15:45 – 16:00: **Small Island Panel:** Maldives, Mauritius, Seychelles

16:00 – 16:20: **Eastern Indian Ocean Panel:** Australia, Indonesia, Malaysia, Thailand, Timor Leste

16:20 – 16:40: **Northern and Central Indian Ocean Panel:** Bangladesh, India, Iran, Myanmar, Oman, Sri Lanka, Pakistan, Yemen

16:40 – 17:00 **Western Indian Ocean Panel:** Kenya, Madagascar, Mozambique, South Africa, Tanzania

17:00: Panel discussion

**Panellists:**

Ms Irina Rafliana, Public Education & Science Communication, Indonesian Institute of Sciences (LIPI)  
Mr Rajesh Sharma, Programme Specialist, Asia-Pacific Regional Centre, UNDP  
Mr Harald Spahn, Consultant, GIZ  
Mr B. Wisnu Widjaya, Deputy for Prevention and Preparedness, BNPB  
Dr Sultan Al-Yahyai, Chief of Numerical Weather Prediction, Directorate General for Meteorology  
Mr Francois Schindele, Coordinator, French Tsunami Warning Centre (CENALT)  
Mr Danny Hilman Natawidjaja, Senior Researcher of the Geo-technology Research Centre, LIPI

17:30: Close of Day 1

**17:30 – 18:30: VISIT TO BMKG TSUNAMI WARNING CENTRE**

**18:30: WELCOME RECEPTION – DINNER AND CULTURAL SHOW, BMKG AUDITORIUM**

## **Day 2, Tuesday 25 November**

### **8:45: Day 2 Opening and Day's Logistics**

### **9:00– 10:30: Session 3: Donor Perspectives. What have been the outcomes and impacts of donor interventions?**

**Moderator: Mr Rajan Gengaje, Head of Indonesia Office, UN-OCHA**

Donor countries, UN agencies and other regional organisations will report on the outcomes of their contributions to the IOTWS. Ongoing and future planned interventions will also be discussed to align with the gaps and outstanding needs highlighted in Session 2.

9:00: Introduction by Moderator

9:05: **The German contribution to IOTWS and outlook on further co-operation.** Dr Joern Lauterjung, Head Scientific Infrastructure, Deutsches GeoForschungsZentrum (GFZ), Germany

9:20: **Pooling donor resources for greater impact - ESCAP's experience.** Mr Alf Blikberg, Programme Officer, Trust Fund for Tsunami, Disaster and Climate Preparedness, UNESCAP

9:35: **Nations and communities are in danger, but we are better prepared** - Summary of UNDP's work in the region and future strategic priorities. Mr Rajesh Sharma, Programme Specialist, Asia-Pacific Regional Centre, UNDP

9:50: **The USAID contribution to the IOTWS: looking back and learning for the future.** Dr Jenna Jadin, Climate Change Specialist, USAID, USA

10:00: Session 3: panel discussion

#### **Panellists:**

Prof Richard Haigh, Global Disaster Resilience Centre, University of Huddersfield

Dr Laura Kong, Director, IOC-UNESCO/NOAA International Tsunami Information Center

Prof Samantha Hettiarachchi, University of Moratuwa and Chair of ICG/IOTWS Working Group 1

Dr Joern Lauterjung, Head Scientific Infrastructure, GFZ

Mr Alf Blikberg, Programme Officer, UNESCAP

Mr Rajesh Sharma, Programme Specialist, Asia-Pacific Regional Centre, UNDP

Dr Jenna Jadin, Climate Change Specialist, USAID, USA

### **10:30 – 11:00: COFFEE/TEA BREAK**

### **11:00– 12:35: Session 4: Sustainability of the IOTWS**

**Moderator, Dr Ray Canterford, Division Head; Hazards, Warnings and Forecasts, Australian Bureau of Meteorology**

This session will focus on the long term sustainability of the IOTWS now that it is fully operational. Presentations and discussions will cover the governance of the IOTWS, financial models and resource mobilisation for maintenance, training and capacity development needs, and the need for international and national policies to ensure that the IOTWS is sustained for the long term.

11:00: Introduction by Moderator

11:05: **Governance of the IOTWS: IOC's mandate and global experience.** Thorkild Aarup, Head of Tsunami Unit, IOC-UNESCO

11:20: **Maintenance needs of the IOTWS and financial models for sustaining the system.** Daniel Jaksa, Geoscience Australia, Dr Srinivasa Kumar, INCOIS and Dr Wandono, BMKG.

11:35: **Resource mobilisation for training and capacity development needs.** Prof Richard Haigh, Global Disaster Resilience Centre, University of Huddersfield, UK

11:50: **Outcomes and Lessons learnt from 7 years of Capacity Development in the "last mile" in Indonesia.** Harald Spahn, Consultant, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Germany

12:05: Session 4: panel discussion

**Panellists:**

Dr Charles McCreery, Director of Pacific Tsunami Warning Centre

Mr Alf Blikberg, Programme Officer, UNESCAP

Mr Thorkild Aarup, Head of Tsunami Unit, IOC-UNESCO

Mr Daniel Jaksa, Geoscience Australia

Dr Srinivasa Kumar, Head, ASG & In-Charge National Tsunami Warning Centre, INCOIS

Dr Wandono, Head of Earthquake and Tsunami Information Division, BMKG

Prof Richard Haigh, Global Disaster Resilience Centre, University of Huddersfield

Mr Harald Spahn, Consultant, GIZ

**12:35 – 14:00: LUNCH**

**14:00– 15:30: Session 5: Strengthening international cooperation: the role of international organisations in tsunami warning.**

***Moderator: Prof Yutaka Michida, University of Tokyo and Vice-Chair of IOC***

This session will focus on the role international organisations have played and can continue to play in the further development of the IOTWS, including coordination, raising community awareness and preparedness, and strengthening Member States' capacity through scientific research, training workshops and the development of information resources, including the Indian Ocean Tsunami Information Centre. Presentations and discussion will cover lessons learned in the past 10 years, what has proved to be useful and what is needed to further strengthen international cooperation. Lessons learned in the IOTWS of relevance to other regional Tsunami Warning Systems will also be discussed.

14:00: Introduction by Moderator

14:05: **IOC-UNESCO's role in coordinating the ICG/IOTWS since 2005.** Mr Tony Elliott, Head of Secretariat for the ICG/IOTWS, IOC-UNESCO

14:20: **WMO contribution to the IOTWS within a multi-hazard framework.** Mr David Thomas, Chief of Information and Telecommunications System Division, WMO

14:35: **Building responsible and reliable Tsunami Warning Systems through shared best practice: ITIC's 10 years supporting the IOTWS.** Dr Laura Kong, Director, IOC-UNESCO/NOAA International Tsunami Information Center

14:50: **The development and status of the Indian Ocean Tsunami Information Centre.** Mr Ardito Kodijat, Coordinator, Indian Ocean Tsunami Information Centre, IOC-UNESCO

15:05 : Session 5: panel discussion

**Panellists:**

Mr Takeshi Koizumi, Senior Coordinator for International Earthquake and Tsunami Information, JMA

Dr Joern Lauterjung, Head Scientific Infrastructure, GFZ

Mr Francois Schindele, Coordinator, French Tsunami Warning Centre (CENALT)

Mr Tony Elliott, Head of Secretariat for the ICG/IOTWS, IOC-UNESCO

Mr David Thomas, Chief of Information and Telecommunications System Division, WMO

Dr Laura Kong, Director, IOC-UNESCO/NOAA International Tsunami Information Center

Mr Ardito Kodijat, Coordinator, Indian Ocean Tsunami Information Centre, IOC-UNESCO

**15:35 – 16:00: COFFEE/TEA BREAK**

**16:00– 17:00: Session 6: Towards the 3<sup>rd</sup> UN World Conference on Disaster Risk Reduction in Sendai, Japan, 14 to 18 March 2015**

***Moderator: Dr Sang-Kyung Byun, Korea Ocean Research & Development Institute and Chair of IOC***

The moderators of the panel discussions of each session will summarise the outcomes of their respective sessions and a statement will be framed for conveyance to the 3<sup>rd</sup> World Conference on Disaster Risk Reduction in Sendai, Japan, 14 to 18 March 2015. The statement will recognise the achievements of the IOTWS in the last 10 years and record the commitment of the IOTWS Member States, UN agencies and other international partners to sustain and strengthen the IOTWS through regional cooperation.

**17:00: CLOSING CEREMONY**

Representative of IOC-UNESCO

Representative of BMKG