

IOC Circular Letter No 3026
(Available in English only)

IOC/SK/BA
31 January 2025

To : ICG/IOTWMS¹ Tsunami National Contacts
ICG/IOTWMS Tsunami Warning Focal Points
ICG/IOTWMS National Tsunami Warning Centres

C.c. : ICG/IOTWMS Chair and Vice Chairs
ICG/IOTWMS Working Group Chairs and Vice Chairs
Official National Coordinating Bodies for liaison with IOC in ICG/IOTWMS Member States
Permanent Delegates/Observer Missions to UNESCO, and National Commissions for UNESCO of ICG/IOTWMS Member States

Subject: Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWMS) – Call for nomination of experts to the ICG/IOTWMS Working Groups, Steering Group and Task Teams

At its 14th session (Banten, Indonesia 17–19 November 2024), the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWMS-XIV) took decisions regarding its subsidiary bodies as follows:

- Continue **Working Group 1 on Tsunami Risk, Community Awareness and Preparedness** and nominated Dr Weniza (Indonesia) as Chair and Dr Mahendra S Ranganalli (India) as Vice-chair with the second Vice-chair position open. The following Member States expressed interest in joining the working group: Australia, Malaysia and Oman.
- Continue **Working Group 2 on Tsunami Detection, Warning and Dissemination** and nominated Mr Padmanabham Jijavarapu (India) as Chair, and Dr Robert Greenwood (Australia) and Mr Yedi Dermadi (Indonesia) as Vice-chairs. The following Member States expressed interest in joining the working group: India, Indonesia, Malaysia and Oman.
- Continue **Working Group 3 on Tsunami Ready Implementation** and nominated Ms Suci Dewi Anugrah (Indonesia) as Chair and Dr Ali Khoshkholgh (Iran) as Vice-chair.

¹ ICG/IOTWMS Member States include Australia, Bangladesh, Comoros, Djibouti, France, India, Indonesia, Iran, Kenya, Madagascar, Malaysia, Maldives, Mauritius, Mozambique, Myanmar, Oman, Pakistan, Seychelles, Singapore, Somalia, South Africa, Sri Lanka, Tanzania, Thailand, Timor Leste, United Arab Emirates and Yemen

Chairperson

Yutaka MICHIDA, Prof.
Special Presidential Envoy
for UN Ocean Decade
The University of Tokyo (Atmosphere
and Ocean Research Institute)
Kashiwanoha 5-1-5
2778564 Kashiwa
JAPAN

Vice-Chairpersons

Dr Marie-Alexandrine SICRE
Directrice de Recherche
Centre national de la recherche scientifique
(CNRS)
3 rue Michel Ange
75016 Paris
FRANCE

Dr Nikolay VALCHEV
Director
Institute of Oceanology
Bulgarian Academy of Sciences
40 Parvi May Str.
9000 Varna
BULGARIA

Mr Juan Camilo FORERO HAUZEUR
Executive Secretary
Colombian Ocean Commission (COO)
Avenida Ciudad de Cali No. 51 – 66
Edificio WBC, Oficina 306
111071 Bogotá, D.C.
COLOMBIA

Prof. Amr Zakaria HAMOUDA
President of Marine Hazards Mitigation Center
(MHMC)
National Institute of
Oceanography and Fisheries (NIOF)
Qaitbay, Al-Anfoshi
Alexandria
EGYPT

Executive Secretary

Mr Vidar HELGESEN
Intergovernmental Oceanographic
Commission — UNESCO
7 Place de Fontenoy
75352 Paris Cedex 07 SP
FRANCE

- Continue the **Regional Working Group for the North-West Indian Ocean** (WG-NWIO) and nominated Ms V Sunanda Maneela (India) as Chair and Mr Nasser Al Ismaili (Oman) as Vice-chair.
- Establish a new intersessional **Task Team on Exercise Indian Ocean Wave 2025** reporting to the Steering Group and nominated Dr Ajay Kumar Bandela (India) as Chair and Ms Septa Anggraini (Indonesia) as Vice-chair. The following Member States expressed interest in joining the working group: Australia, Malaysia, Oman and Seychelles.
- Establish a new intersessional **Task Team on New / Emerging Technologies for Observations and Forecasting** under Working Group 2 and nominated Dr Wahyu Widodo Pandoe (Indonesia) as Chair.

With this circular letter, I have the pleasure to invite those Member States who have already expressed an interest, as well as all other IOTWMS Member States, to nominate members with the necessary expertise to contribute to the Terms of Reference for each of the above-mentioned Working Groups and Task Teams, as described in Annex I. The Rules and Conditions for ICG/IOTWMS Working Groups, which are generally applicable to Task Teams, are enclosed as Annex II.

Nominations endorsed by the Tsunami National Contact should be addressed to Dr Srinivasa Kumar Tummala and reach the ICG/IOTWMS Secretariat (iotwms@unesco.org; sk.tummala@unesco.org) no later than 28 February 2025 accompanied by a CV for each nominated expert.

With the assurances of my highest consideration, I remain,

Yours sincerely,

[signature]

Vidar Helgesen
Executive Secretary

Enclosures (2):

Annex I: Rules and Conditions for ICG/IOTWMS Working Groups

Annex II: Terms of Reference:

- Working Group 1 on Tsunami Risk, Community Awareness and Preparedness
- Working Group 2 on Tsunami Detection, Warning and Dissemination
- Working Group 3 on Tsunami Ready Implementation
- Regional Working Group for the North-West Indian Ocean
- Task Team on IOWave25
- Task Team on New/Emerging Technologies for Observations and Forecasting

Annex I / Terms of Reference of the Working Groups and Task Teams

Working Group 1: Tsunami Risk, Community Awareness and Preparedness

Liaise with other working group(s) and task team(s) within the ICG/IOTWMS and with working groups from the other ocean basins through the TOWS-WG to:

1. Assist, develop and strengthen the overall capacity and capability of Member States in tsunami hazard, risk assessment and mitigation, community awareness and preparedness, including for tsunamis generated by non-seismic and complex sources and multi-hazard framework.
2. Encourage Member States to mainstream tsunami Disaster Risk Reduction into sustainable development to help achieve resilient communities in the region.
3. Support implementation of IOWave Exercises.
4. Identify areas of priority for action following assessments, exercises, and real tsunami events.
5. Provide advice on user requirements and utility of tsunami warning products and services.
6. Provide advice to and collaborate with the UNESCO-IOC Indian Ocean Tsunami Information Centre (IOTIC) on education, awareness and preparedness including for non-seismic and complex sources.
7. Provide special attention to the needs of SIDS, LDCs, Africa in the work program
8. Develop WG1 work plans in line with the broad objectives of ODTP RDIP, Ocean Decade Challenge 6, EW4ALL
9. Promote collaboration among academia, research institutions and disaster management offices to encourage multidisciplinary and multi sectoral interaction in ensuring tsunami risk knowledge are streamlined to risk reduction strategies.

The Working Group will be composed of members nominated by Member States with expertise in disaster management, an invited IOTIC representative, and other invited observers as required, with a chairperson and two vice-chairpersons to be elected by the ICG.

Working Group 2: Tsunami Detection, Warning and Dissemination

Liaise with other working group(s) and task team(s) within the ICG/IOTWMS and with working groups from the other ocean basins through the TOWS-WG to:

1. Coordinate and strengthen the operational implementation of tsunami detection, warning and dissemination, including for tsunamis generated by non-seismic and complex sources, and multi-hazard framework.
2. Support the Tsunami Service Providers (TSPs) delivery of interoperable regional tsunami threat information products to Member States.
3. Support Member States in the development of their national tsunami warning capabilities.
4. Monitor the performance of key observational, warning and communication system components.
5. Support implementation of IOWave Exercises.
6. Identify areas of priority for action following assessments, communications tests, exercises, and real tsunami events.
7. Provide advice to and collaborate with the UNESCO-IOC Indian Ocean Tsunami Information Centre (IOTIC) on capacity development on warning system and services including for non-seismic and complex sources.
8. Provide special attention to the needs of SIDS, LDCs, Africa in the work program.
9. Develop WG2 work plans in line with the broad objectives of ODTP RDIP, Ocean Decade Challenge 6, EW4ALL.
10. In collaboration with UNESCO-IOC IOTIC and UNESCO-IOC Secretariat for ICG/IOTWMS, help strengthen the capacity and capability of Member States.

The Working Group will be composed of members nominated by Member States, Member State representatives for each ICG-designated TSP, at least two representatives of non-TSP National Tsunami Warning Centres, and invited observers, with a chairperson and one or two vice-chairpersons to be elected by the ICG.

Working Group 3: Tsunami Ready Implementation

Liaise with other working group(s) and task team(s) within the ICG/IOTWMS and with working groups from the other ocean basins through the TOWS-WG to:

1. Monitor and evaluate the implementation of the UNESCO-IOC Tsunami Ready Recognition Programme (TRRP) and similar initiatives
2. Promote and provide guidance on how to nationally initiate TRRP and similar initiatives
3. Facilitate the capacity development of TRRP and sharing of experiences between Member States
4. Update Member States on TRRP developments and other related initiatives
5. Explore the possibilities of extending the Tsunami Ready indicators to other sectors such as to critical infrastructures
6. Provide advice to and collaborate with the UNESCO-IOC Indian Ocean Tsunami Information Centre (IOTIC) on capacity building for TRRP
7. Prioritize SIDS, LDCs, Africa and NWIO region in the work program
8. Integrate ODTP RDIP into the WG3 work plan

The Working Group membership will be comprised of ICG/IOTWMS TRRP experts, Member State Tsunami Ready Focal Points (TRFP), invited experts, IOTIC, Secretariat.

Regional Working Group North-West Indian Ocean

Liaise with other working group(s) and task team(s) within the ICG/IOTWMS and with working groups from the other ocean basins through the TOWS-WG to:

1. Evaluate capabilities and ascertain capacity building requirements of Member States in the region for providing end-to-end tsunami warning and mitigation services within the framework of the ICG/IOTWMS and within a multi-hazard framework
2. Facilitate cooperation in the establishment and upgrading of seismic, sea level and GNSS stations and networks and communication systems in the region
3. Facilitate the capacity building and the sharing of the tsunami-related data and information in the region
4. Establish and maintain procedures for National Tsunami Warning Centres (NTWCs) across the region to exchange information on national tsunami warnings, observations, and impacts during events.
5. Support the WG3 effort to implement the Tsunami Ready Recognition Program in the region.

The Working Group will be composed of members representing National Tsunami Warning Centres and Tsunami Ready Focal Points from each of the Member States of India, Iran, Oman, Pakistan, United Arab Emirates, and Yemen in the North-West Indian Ocean region and invited experts.

Task Team on IOWave25

Under the direction of the Steering Group:

1. Plan and coordinate the next IOWave Exercise (IOWave25), taking on-board suggestions from the post-IOWave23 lessons learnt workshop, including an increased focus on involving Local Disaster Management Offices (LDMOs) down to community level and implementation of IOTR.

2. Prepare the IOWave25 Exercise Manual in accordance with the Guideline on "How to Plan, Conduct and Evaluate Tsunami Exercises" (IOC Manuals and Guides No. 58) at least 6 months in advance of the exercise.
3. Prepare the Exercise Report for ICG/IOTWMS-XV.

The Task Team will report to the Steering Group and work in collaboration with Working Group 1, Working Group 2, Working Group 3 and IOTIC, and be composed of members nominated by Member States and representatives from TSPs, with a chairperson and vice-chairperson.

Task Team on New Technologies for Observations and Forecasting

This expert Task Team will establish integrating new and emerging techniques and technologies by:

1. Developing a methodology for gap and sensitivity analysis that combines multiple sensing technologies for tsunami detection and characterisation.
2. Designing optimal notional seismic and sea level networks to enhance the timelines of Tsunami Early Warning by TSPs and NTWCs.
3. Integrating emerging techniques and sensor technologies (e.g. better use of tide gauges; GNSS technology and processing; sensors on SMART Cables) with the existing sensing network to meet tsunami warning service requirements in support of UN ODTP goals.
4. Where possible, include cost-benefit analysis of the potential technologies being considered
5. Undertake to establish direct collaboration between ICG/IOTWMS Member States, with other ICGs, and expert groups (such as International Association of Geodesy (IAG), International GNSS Service (IGS) for the purpose of collaborating on data sharing and research efforts that are adaptable to the tsunami warning systems and operations.
6. Assess the utility and limitations of emergent technologies and techniques, e. g. GNSS and SMART Cable, that have potential to deliver ocean height in real-time.
7. Investigate emerging methods including PTF, AI/ML, real-time data assimilation and modelling etc for suitability to be adopted for operational tsunami warning.
8. Share information and procedures on deployments of new technologies to monitor sea level variations used for tsunami warning purposes, including undersea cable installations being deployed by Indonesia and India.

The Task Team will be open to TSPs, members nominated by Member States, and invited experts.

Annex II / Rules and Conditions for ICG/IOTWMS Working Groups

The following rules and conditions apply to all Working Groups of the ICG/IOTWMS:

- Working language: English
- Frequency of meetings: inter-sessionally
- Coordination and elections: Following the rules of procedures applying to IOC subsidiary bodies, unless nominated by the ICG/IOTWMS, a chair and at least one vice-chair will be elected by the members of the working group for two years with possible re-election of one term in the same position
- Members and appointment: Nominated by Member States in accordance with the rules of procedures applying to IOC subsidiary bodies. Technical experts and observers can be invited at the discretion of the chair
- Duration of the working group: Two years, renewable subject to review by the ICG
- Programme of intersessional work should be determined by the working group at its meeting and included in the report to the ICG to which it reports
- Intersessional work is generally conducted by email and teleconference, in addition to at least one integrated meeting of the working groups subject to availability of budget
- Reports: A progress report should be submitted two months before each ICG session and within two months of each working group meeting.
- Financial resources: Participation in the working groups and attendance at meetings will be at national expense.