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МЕЖПРАВИТЕЛЬСТВЕННАЯ ОКЕАНОГРАФИЧЕСКАЯ КОМИССИЯ
اللجنة الدولية الحكومية لعلوم المحيطات
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To: ICG/IOTWMS Tsunami National Contacts (TNC)
ICG/IOTWMS Tsunami Warning Focal Points (TWFP)

cc. ICG/IOTWMS Chair and Vice Chairs
ICG/IOTWMS Working Group Chairs and Vice Chairs
Official National Coordinating Body for liaison with the IOC of ICG/IOTWMS Member States
Permanent Delegates/Observer Missions to UNESCO of ICG/IOTWMS Member States
Directors of UNESCO and IOC Regional Offices in the Indian Ocean Region

**Subject: Announcement of IOTWMS Indian Ocean Tsunami Exercise (IOWave16)
on 7th and 8th September 2016**

At its 10th Session held in Muscat, Oman in March 2015, the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWMS) decided to organise an Indian Ocean Wave Exercise (IOWave16) in 2016 and established a Task Team to plan and conduct the exercise. At its recent intersessional meeting held in Hyderabad, India on 13th November, the Task Team decided to conduct the IOWave16 exercise on 7th and 8th September 2016. This letter provides details of the exercise in which all IOTWMS Member States are encouraged to participate to the extent possible.

Exercise IOWave16 will simulate Indian Ocean countries being put in a tsunami warning situation and require the National Tsunami Warning Centre (NTWC) and the National and/or Local Disaster Management Offices (NDMO/LDMO) in each country to implement their Standard Operating Procedures (SOP). A significant observation from Exercise IOWave14, held in September 2014, was that only three countries included any form of community evacuation drill in the exercise. A primary objective of IOWave16 therefore is to encourage more countries to involve coastal communities in the exercise to test the SOPs and communications links at all levels of the warning chain.

The exercise will comprise two scenarios on successive days, one in the eastern Indian Ocean and the other in the northwestern Indian Ocean. The first scenario will simulate a magnitude 9.2 earthquake south of Sumatra, Indonesia and the second scenario will simulate a magnitude 9.0 earthquake in the Makran Trench south of Iran and Pakistan. Both scenarios will generate simulated tsunami waves travelling across the Indian Ocean basin. The south of Sumatra scenario will commence at 0300 hours UTC on 7th September and the Makran Trench scenario will commence at 0600 hours UTC on 8th September.

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Member States are invited to participate in either or both events, which will run in real time. The IOTWMS Tsunami Service Providers (TSP) of Australia, India and Indonesia will provide exercise bulletins and detailed tsunami threat advice on their password-protected websites, and will send Notification Messages to the Tsunami Warning Focal Points (TWFP) as the data is updated during the events. An IOWave16 Exercise Manual will be distributed by the end of March 2016 with further details of the exercise scenarios and the exercise evaluation to be conducted afterwards. Guiding principles for the planning and conduct of the exercise are provided in Annex 1 for your information.

In order to ensure that the commitment of participating Member States is fully coordinated, we seek your nomination of a National Contact for Exercise IOWave16 with whom we will communicate about planning for the conduct of the exercise. The designated National Contact will be expected to confirm the accuracy of existing tsunami warning arrangements within your country, including the identification of operational points of contact for receipt and dissemination of tsunami warnings downstream from the NTWC. The designated National Contact will also be responsible for coordinating input to the exercise evaluation, details of which will be circulated as part of the IOWave16 Exercise Manual.

I would be grateful if you could **provide the details of your National Contact for Exercise IOWave16 by 29 February 2016** to the ICG/IOTWMS Secretariat by email to iotws@unesco.org. I would also encourage you to disseminate copies of this letter to the appropriate organizations and authorities within your country.

Yours sincerely,

[signed]

Vladimir Ryabinin, IOC
Executive Secretary

ANNEX 1

Guiding Principles for IOWave16 Exercise

1. The exercise will simulate each IOTWMS Member State being placed in a tsunami warning situation and require the National Tsunami Warning Centre (NTWC) and the National and/or Local Disaster Management Office (NDMO/LDMO) to implement their Standard Operating Procedures (SOP).
2. Member States are encouraged to conduct the exercise to community level to test SOPs and communications at all levels of the warning chain. However, it is recommended to only conduct the exercise to the level prepared for, which at a minimum should include testing the SOPs and operational lines of communication at the NTWC and DMO.
3. The two exercise scenarios are:
 - Scenario 1 starting at 0300 UTC on Wednesday 7 September 2016: Magnitude 9.2 earthquake south of Sumatra, Indonesia. The simulated tsunami will take approximately 7.5 hours to travel from its source to the coasts of Iran and Pakistan, and 11 hours to travel to the southern coast of South Africa.
 - Scenario 2 starting at 0600 UTC on Thursday 8 September 2016: Magnitude 9.0 earthquake in the Makran Trench south of Iran and Pakistan. The simulated tsunami will take approximately 11 hours to travel from its source to the western coast of Australia.
4. Exercise bulletins and detailed tsunami threat advice will be generated in real time by the IOTWMS Tsunami Service Providers (TSPs India, Indonesia and Australia) and made available on their password-protected websites. Notification Messages will be sent to the national Tsunami Warning Focal Points (TWFP) by the TSPs as the data is updated during the events.
5. All Member States are strongly encouraged to participate to the extent possible in their country, particularly for the scenario that is "near field" for them. Note that it may be very worthwhile to participate in both scenarios if possible, because SOP issues picked up on the first day can be corrected and exercised again on the second day, and because the tsunami arrival times will vary for each scenario.
6. Due care should be taken not to inadvertently alarm the public.
7. Participating Member States are requested to share information following the exercise regarding the procedures applied and the lessons learned, via the Exercise Evaluation (details to be provided in the Exercise Manual). The outcomes and performance measures to be reported will include at a minimum:
 - Communications media (GTS, fax, email, SMS, etc.) on which Notification Messages were received, and their elapsed time of arrival;
 - What assessment tools were used for decision making about evacuations;
 - How the DMO and public (if applicable) were notified and instructed;
 - Elapsed time until the public was notified and instructed (if applicable);
 - Feedback from stakeholders regarding their own performance and the performance of their information providers;
 - Media response (if applicable).

