Indian Ocean Wave Exercise 2009 (IOWave09)
A Try Out for the Indian Ocean Tsunami Warning System

THE INITIATIVE

Following the implementation of national tsunami early warning systems by Indian Ocean Country’s, a decision to test their warning services throughout the Indian Ocean region was made by the Intergovernmental Coordination Group-Indian Ocean Tsunami Warning and Mitigation System (ICG-IOTWS) at the 5th ICG-IOTWS meeting in Putrajaya, Malaysia. The test was done through a regional activity called the “Indian Ocean Wave Exercise 2009 (IOWave09)” held on 14th October 2009, coinciding with the International Disaster Risk Reduction Day, using the scenario of the mega event Tsunami 2004.

There were 3 levels of exercises that could be chosen by participating countries: 1) testing only the issuance and the receipt of warning dissemination by the Indonesian NTWC to member states; 2) decision making by member states regarding dissemination of warning for public reaction and emergency response exercise; and 3) decision making followed by public reaction and emergency response exercise. Indonesia choose the third level. Banda Aceh hosted the event.

THE PREPARATION

A series of road shows by national institutions were conducted in April and May. The National Disaster Management Agency (BNPB), the Ministry of Communications and Information (MENKOMINFO), the National Planning Agency (BAPPENAS), and the Ministry of Home Affairs (DEPDAGRI) actively supported the exercise. The first official meeting with the Aceh Provincial Government took place in Jakarta on 22nd May 2009.

The preparation phase included several workshops at both national and local levels. A four-day SOP workshop was held on 13th–16th July in Aceh, resulting in a solid draft for procedures regarding local Tsunami Warning and Emergency Response, followed by validation of SOP on 18th–19th August in Banda Aceh.

The participation of the media was initiated by a Chief Editor Meeting on 31st July in BMKG. On 10th–14th August, four workshops were held simultaneously at the Hotel Le Meridien, Jakarta: Regional Task Team Meeting, SOP Workshop, Working Group 6 Meeting, and Media Workshop. A tabletop exercise was held on the last day.

Another tabletop exercise was held on 14th September, conducted by BMKG, BNPB, and the Aceh Emergency Operation Center (PUSDALOPS), including warning dissemination from BMKG to the PUSDALOPS Aceh.

THE IMPLEMENTATION

On the 12th October a rehearsal had been done by PUSDALOPS at province level and 3 SATLAKs (Banda Aceh, Aceh Besar, and Sabang) along with partial community participation from the three areas. As planned, on 14th October, the exer-
cise was conducted. Twenty-five observers coming from various institutions were positioned at different observation points.

Initiated by the ‘simulated’ earthquake at 8 am, the first warning message was received from BMKG through SMS at 08.07 am. The rest of the exercise was done according to the predefined SOP, where the Vice Governor gave the instruction to activate the siren and start the evacuation. HT and mobile phones were mainly used by officials for communications. Warning dissemination to the community used sirens and mosque loudspeakers. Evacuation in the community run as planned. Approximately 200-300 persons from each district moved to the evacuation sites. The ‘all clear’ message was issued at 10 am.

**LESSONS LEARNT**

On the afternoon of 14th October, observers were gathering in the Tsunami Museum to recall their observation results, along with compiling evaluation forms. An evaluation meeting was also held in Jakarta on 9th November, inviting representatives of the Provincial Government of Aceh, to discuss the results of the observations, reviews by the facilitators, and reviews by the actors involved, resulting in the following recommendations:

- Inter-institutional coordination mechanism on national level needs to be built and strengthened
- Register PUSDALOPS personnel cell phone to BMKG
- Add more communication and dissemination equipment to strengthen the communication and coordination among institutions for disaster
- Secure special frequency for the purpose of disseminating warning and coordination
- Allocate sufficient number of staff with adequate skills for PUSDALOPS office to be running 24/7
- Make the SOP as simple as possible. A predefined dissemination text is preferable
- Check the coverage of existing dissemination equipment and add more dissemination equipments in other areas
- As mosques are used as one mode of dissemination, ensure the availability of equipment and operators in mosques
- Involve community in maintaining the equipment and conduct smaller scale drills frequently
- Include dissemination text in non-Indonesia languages as there is a possibility of the presence of tourists or temporary residents in the area
- Conduct socialization for evacuation procedures regularly
- Provide updates on information and status of evacuation site
- Conduct more ‘realistic’ drills. Community movement needs to be made from the place they conduct normal activities on a regular day
- Provide clear SOP for involvement of mass media in warning dissemination describing the content of the message being disseminated

**Further information:**
- www.gitews.org/tsunami-kit
- RISTEK: www.pirba.ristek.go.id
- JTIC UNESCO: www.jtic.org
- LIPI: www.lipi.go.id
- GITEWS: www.gitews.org