USAID | ASIA
FROM THE AMERICAN PEOPLE

U.S. Contribution to the Indian Ocean Tsunami Warning System

January-March 2008
US IOTWS Program - Final Update

US Indian Ocean Tsunami Warning System (IOTWS) Program
from advanced technologies to resilient communities

Final Update for the US IOTWS Program

After two-and-a-half years of program implementation, this is the final Monthly Update for the US Indian Ocean Tsunami Warning System (IOTWS) Program.

During that time, the US Agency for International Development (USAID) and its US Government partners have worked with the international community, governments, communities, and other partner organizations to strengthen the region's capacity to detect and respond to tsunamis and other natural hazards under the leadership of the UNESCO Intergovernmental Oceanographic Commission (IOC) and the Intergovernmental Coordination Group for the IOTWS (ICG/ITOWS).

The US program team extends its thanks and appreciation to the many individual and partners participating in the US contribution to the IOTWS to date, and looks forward to ongoing collaboration as ongoing and new partnerships continue into the future. As a follow-on to this initial US contribution to the IOTWS, US Government agencies and partners will continue working in each of the key technical areas being addressed through the ICG/IOTWS and national government efforts.

Countries across the region have made significant advances to national warning system networks, communications, and government operations and procedures and are now able to disseminate appropriate warnings rapidly to local populations. The following reflect some of the major highlights from the Program.

- The installation of detection systems including seismic stations, Deep-ocean Assessment and Reporting of Tsunamis (DART) systems, and tide gauges in Indonesia, Thailand, and Sri Lanka have increased capacity to detect changes and forecast potential threats of a tsunami.
- As a result of upgraded communication networks using GTS, Sri Lanka and the Maldives can now receive data from detection systems in a timelier manner so that forecasts can be generated more quickly.
- Sri Lanka and Thailand have adopted policies and procedures to ensure that tsunami advisories are disseminated rapidly and accurately.
- Indonesia and Sri Lanka have created multiple communication channels through the use of RANET satellite phones to disseminate information widely and quickly.
- Thousands of people in Indonesia, Sri Lanka, Thailand, India, and the Maldives have been trained in community preparedness and resilience to minimize the risk to communities in future disasters.
- Hundreds of technical specialists have received training on the end-to-end component of tsunami warning systems, and the new International Tsunami Training Institute (ITTI) will offer training for years to come (see story below).

While this will be the last US IOTWS Program Update, you can continue to access numerous technical resources on the Program web site at www.us-iotws.gov, which will be maintained by the Asian Disaster Preparedness Center (ADPC).

The following stories reflect activities that occurred during the final quarter of the Program.

Indonesian Scientists Trained on Operating and Interpreting Data from the DART Tsunameter Network

January 28-30, 2008, Jakarta, Indonesia

US IOTWS Program

Participants at the DART training workshop

A core group of 31 engineers and scientists responsible for Indonesia's tsunami warning system have gained new skills and knowledge on the use, operation, and maintenance of the US-designed DART system. The US National Oceanic and Atmospheric Administration (NOAA) conducted the seminar for Indonesia's Agency for the Assessment and Application of Technology (BPPT), the Meteorological and Geophysical Agency (BMG), Marine Affairs and Fisheries (DKP), and the National Coordinating Agency for Surveys and Mapping (BAKOSURTANAL). The hands-on training familiarized participants with the instrument, data protocols, and tools that will be applied in Indonesia's operational warning center for detecting, analyzing, and forecasting tsunamis using critical sea-level data. BPPT and BMG are responsible for operating and maintaining the DART provided to Indonesia and the region in September 2007.

Warning Communications Capacity Strengthened from National Level to the "Last Kilometer"

January 31-February 1, 2008, Jakarta, Indonesia

NOAA delivered Concept of Operations (CONOPS) training to representatives of government agencies and related disaster management organizations on building and managing tsunami early warning systems. Training sessions included an overview on the costs to operate a national tsunami early warning system; optimizing tsunami early warning equipment networks, data communications linkages; strengthening institutions; and establishing capacity building programs. Participants also received the *Tsunami Warning Center Reference Guide,* which describes and end-to-end CONOPS and the resources required to create a national and regional warning system (equipment, expertise, and partnerships). Participants identified challenges and opportunities for enhancing their tsunami warning systems, as well as strategies to improve these systems and communications between relevant agencies.

ITTI Course: First Certificate Program in Asia on Tsunami Science and Preparedness

March 10-26, 2008, Pathumthani, Thailand

The first offering of the International Tsunami Training Institute in Asia transitions the program from the University of Washington (UW), where it was offered last summer, to the Asian Institute of Technology (AIT). More than 240 candidates from the five target countries applied for 30 USAID-funded positions, demonstrating the value of this professional certificate program to the region. The AIT offering is a result of a formal partnership with UW and NOAA. In fact, participants will receive certificates from both AIT and UW as formal ITTI partners. AIT and UW are expected to include ITTI in their respective course catalogs and offer the certificate program regularly. Based on the strength of the applicant class for the March program and clear demand, AIT has submitted a grant application to UNESCAP to support three ITTI offerings in 2009 and 2010.

US IOTWS Program

Participants from Thailand, Indonesia, the Maldives, and the Philipines interview village women in Ranong Province about coastal community resilience as part of a field exercise.

Study Tour to US on Incident Command System for Disaster Management

March 15-23, 2008, California, USA

A diverse group of participants from Indonesia will visit California to learn more about disaster response and management from US counterparts. The group of six participants is made up of representatives from the Indonesia National Police, Indonesia Red Cross, BAKORNAS (the lead disaster management agency in Indonesia) and the Indonesia Department of Forestry. The group will meet with representatives from several disaster management organizations such as the US Forest Service Law Enforcement Officials in Vallejo, California, Wildland Fire Training Center in Sacramento, City of Vallejo Citizens ALERT Program representatives, and the Bay Area Chapter of the American Red Cross.

UPCOMING US IOTWS PROGRAM AND RELATED ACTIVITIES

Fifth Session of the Intergovernmental Coordination Group for the ICG/ IOTWS-V, April 8-10, 2008

Putrajaya, Malaysia

For more information see http://ioc.unesco.org/tsunami/icgiotws5.

ComMIT Training for Thai Meteorological Department Staff, June 29-July 6, 2008

Chulalongkorn University, Bangkok, Thailand

For more information contact Absornsuda Siripong, at sabsorns@chula.ac.th.

About the US Indian Ocean Tsunami Warning System (IOTWS) Program

The US IOTWS Program has been part of the international effort to develop tsunami warning system capabilities in the Indian Ocean following the December 2004 tsunami disaster. The US program adopted an "end-to-end" approach—addressing regional, national, and local aspects of a truly functional warning system—along with multiple other hazards that threaten communities in the region. In partnership with the international community, national governments, and other partners, the US program has offered technology transfer, training, and information resources to strengthen the tsunami warning and preparedness capabilities of national and local stakeholders in the region. For more information please visit **www.us-iotws.gov**.