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Regional Initiatives in Indian Ocean Tsunami Warning System (IOTWS) Program

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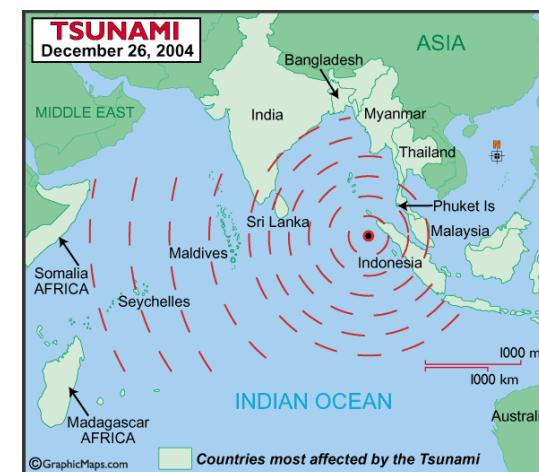




IOTWS Program Objective

Strategic support under UNESCO ICG/IOTWS towards the development of an Indian Ocean Tsunami Warning System (IOTWS)

- ◆ Total USG IOTWS budget: \$16,596,000
- ◆ Program period: August 2005 – September 2007
- ◆ USAID provides management and coordination from Bangkok office
- ◆ ADPC Working as a Program Integrator with IRG-TetraTech





Geographic Focus

- Focus on **Indonesia, Sri Lanka, India, Thailand, and the Maldives**
- Regional-level activities encompass all 28 Indian Ocean countries





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US IOTWS Program Approach

- Integrated “end-to-end” system, inter-operable with international systems
- Regional, national, and local level interventions
- Multi-hazard, addressing tsunami and other coastal hazards simultaneously
- Replication of best practices
- Catalytic impact and leveraged resources



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Developing an "End-to-End" Tsunami Warning System for the Indian Ocean

The U.S. Indian Ocean Tsunami Warning System (IOTWS) program is providing technical assistance to the region using an integrated, "end-to-end" approach. In addition, the approach is multi-hazard in that it simultaneously addresses tsunami hazards and a number of other critical coastal hazards such as cyclones, sea swells, floods, and earthquakes.



www.iotws.org



Regional

National

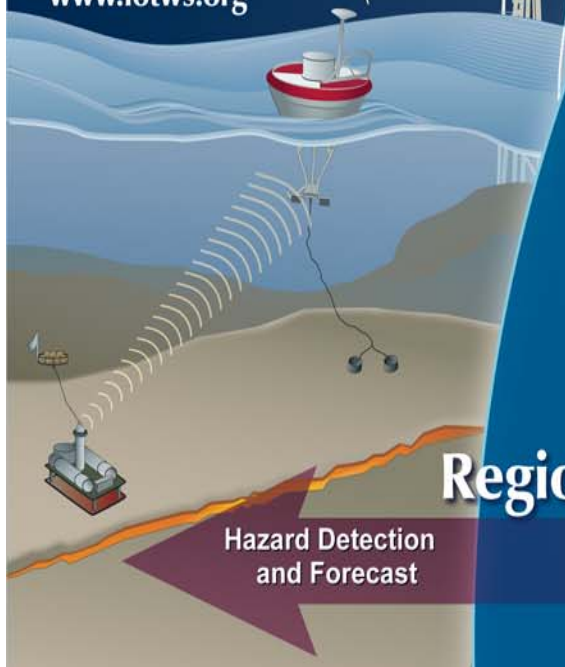
Local

Hazard Detection and Forecast

Warning Formulation

Warning Dissemination

Local Preparedness and Response





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Expected Outcomes for US IOTWS Program

- US leadership provided & capacity strengthened via IOC process:
 - ◆ Conceptual design of end-to-end system & “IOTWS Master Plan”
 - ◆ Seismic and sea-level detection, communications systems
 - ◆ Tsunami and hazard modeling/mapping
 - ◆ “Concept of operations”
- Capacity strengthened in national governments and all-hazards disaster warning centers
- Coastal preparedness and mitigation significantly improved
- Technology transfer provided in combination with training
- Regional institutions strengthened for long-term IOTWS support

Progress and Plans

- IOC/IOTWS conferences and technical working groups
 - Technical direction and leadership, facilitation, technical assistance
- IOC National Assessments
 - USG expert participation in 4 national assessments
 - USAID rushed to prepare comprehensive report (16 assessments) for IOC/IOTWS-II in Hyderabad
- National government & warning center capacity building
 - *Incident Command System* launch/ training in Sri Lanka
 - *Tsunami alert rapid notification system (“TARNS”)* in Thailand
 - *Tsunami Resilient Communities* initiative starting up (i.e. Sri Lanka, Thailand and Indonesia)
 - Seismology exchanges and equipment upgrades (i.e. 5 countries)





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Progress and Plans

National warning formulation & communication

- **Global Telecommunications System (GTS) upgrade**
 - ♦ Upgrade GTS and WAN systems for Sri Lanka, Maldives and Thailand
 - ♦ Late 2006 – GTS upgrade contracts initiated
- **Radio and Internet Communication (RANET)**
 - ♦ A community-based communications program to reach the “last mile” in remote locations
 - ♦ Collaborative with met services, related national agencies and NGOs for all kinds of messages relevant for local communities
 - ♦ Mid 2006 - Country discussions and site selection (e.g. Sri Lanka, Thailand)
 - ♦ Early 2007- RANET deployment



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Progress and Plans

National warning formulation & communication

- **Concept of Operations (CONOPS) capacity building**
 - ◆ Conceptual design training and information
 - ◆ Strategic support on how best to manage national warning centers and to formulate and communicate warnings
 - ◆ Select countries to apply CONOPS and prepare operations manual
 - ◆ June 2006 – all hazards CONOPS regional workshop
 - ◆ End 2006 – selected countries conduct trainings



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Progress and Plans

Local preparedness and mitigation

- TsunamiResilient Communities (TRC) Program and Integrated Coastal Management for Disaster Mitigation
 - ◆ Standard criteria, benchmarks, and planning for better coastal management and disaster preparedness
 - ◆ Local government, NGOs, and tourist industry as partners
 - ◆ May-Aug 2006 - guidebook developed
 - ◆ , Indonesia, Thailand and India Sept 2006 or later - orientation trainings in Sri Lanka

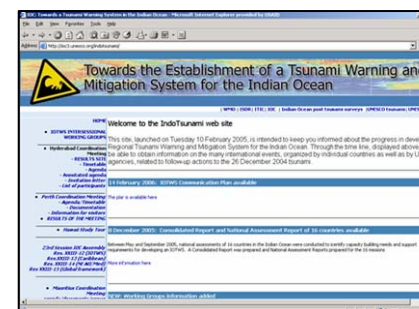
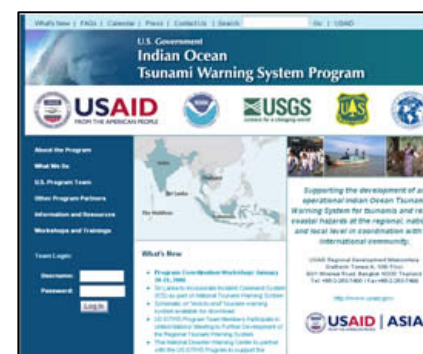




Information Resources

- <http://www.us-iotws.gov>
 - ♦ Fact sheets, outreach materials, events calendar,
 - ♦ Technical information, links to U.S. program partners
 - ♦ Contact information, etc.

- <http://ioc3.unesco.org/indotsunami>
 - ♦ ICG/IOTWS official site
 - ♦ Key decisions, working group documents, calendar of upcoming events





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Thank You