

Indonesia-U.S. Technology Exchange on Tsunami Detection: Ships, Flags, and Balinese Dance

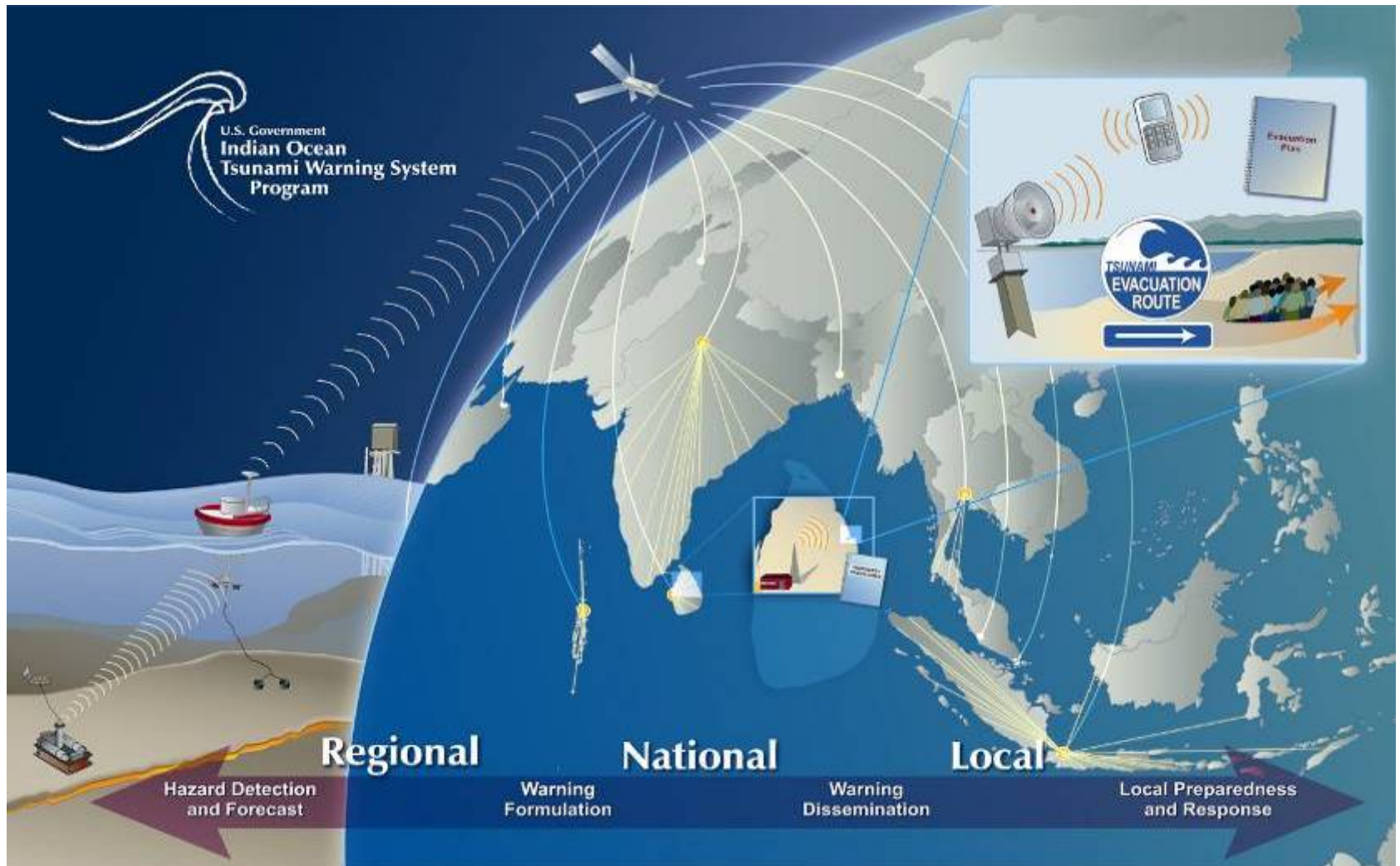
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Topics

- Indonesia and the US Contribution to the IOTWS
- Building a Technology Partnership
- Opportunities and Challenges

U.S. Contribution to the IOTWS



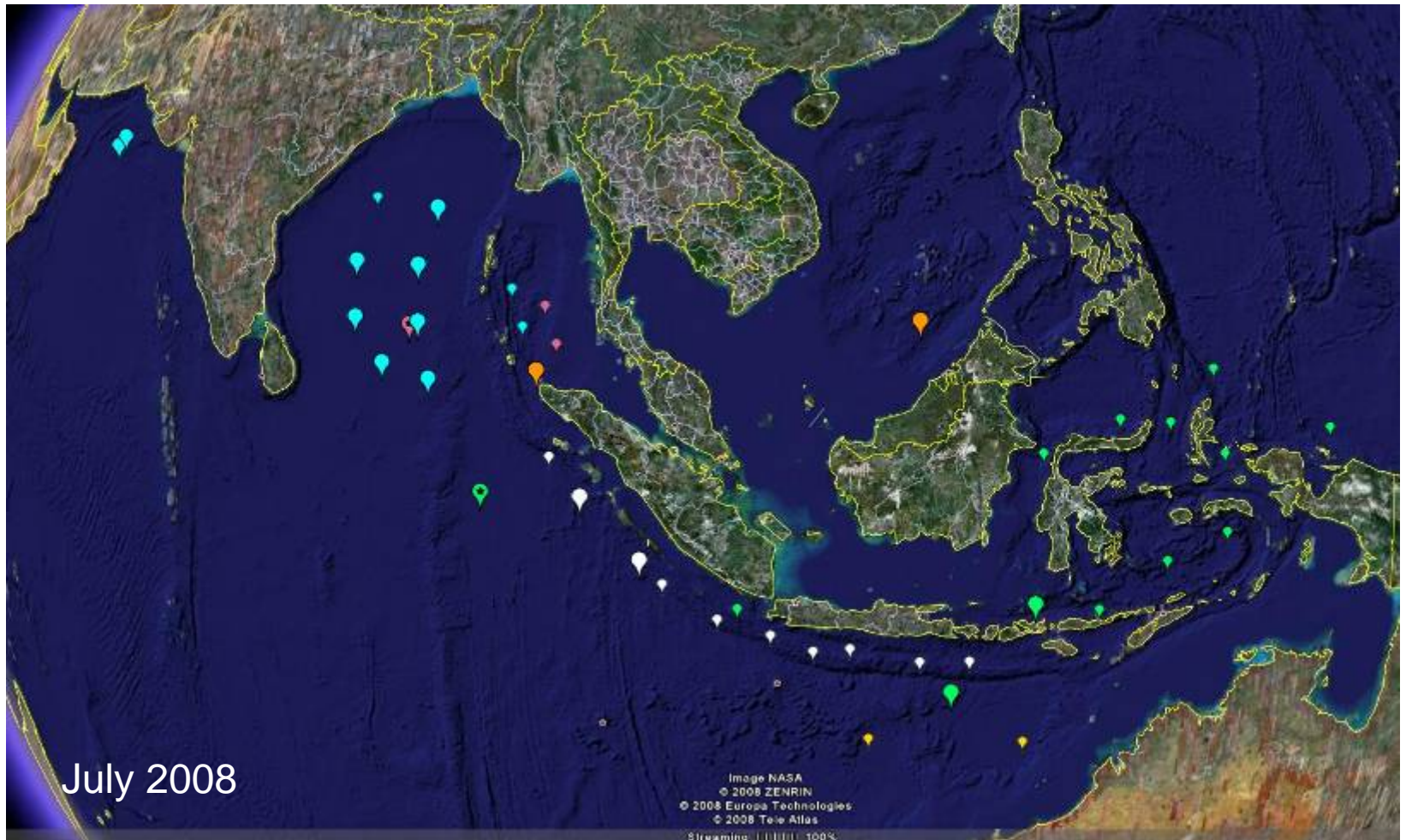
The U.S. Contribution: Results

- Active engagement in the Intergovernmental Oceanographic Commission process influenced IOTWS design
- U.S. tsunameter, other warning system elements served as models for performance, communications, other protocols
- U.S. experience and willingness to contribute helped create a regional tsunami warning and mitigation system focus and context for interoperability
- (But there is still much to do)

Indonesia

- As goes Indonesia, so goes the IOTWS
- Deluge of donor commitments for an Indonesian tsunami warning system: Germany, France, Japan, China, others
- Strong desire to prove itself in tsunami warning system development, technology
- Grand Scenario for the Indonesian Tsunami Early Warning System (Ina-TEWS)
- Financial and political commitment to the “Structure” and “Culture” of an effective tsunami warning system

Indonesia and the IOTWS



Indonesia

- “Public diplomacy” context for U.S.-Indonesia bilateral relationship
- President Bush visit to Indonesia in November, 2006
 - Need for deliverables: \$1 million for Indonesian Tsunami Early Warning System (Ina-TEWS)
 - Driver for Multihazards MOU
 - NOAA-Embassy partnership with Ministry of Science and Technology, Agency for the Assessment and Application of Technology



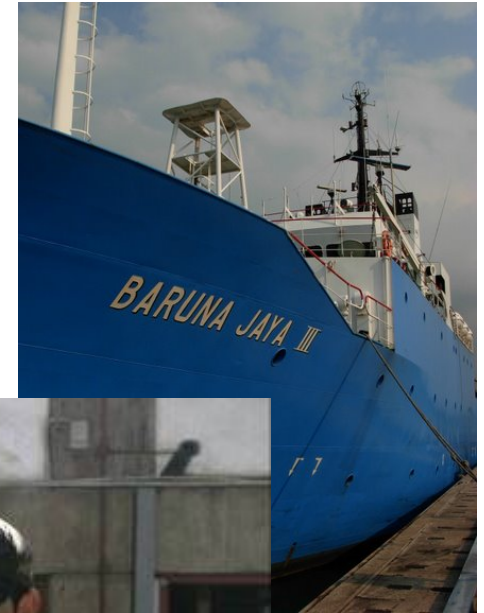
Building a Technology Partnership

Tsunameter Technology Exchange

- Agreement for engineering training in tsunami detection technology and the NOAA DART system
- Next-generation DART ETD donated
- Indonesian purchase of second DART ETD
- Indonesian commitment to maintain DART II system deployed under U.S. IOTWS program
- Training in modeling, communications
- Complementary to Indonesian tsunameter development program

Indonesian Contributions

- Capable, energized engineers and scientists
- Deep-ocean research vessels
- Funding, commitment to Ina-TEWS from political leadership
- Commitment to IOTWS and leadership in Indian Ocean Region



Partnership Results

- DART II Deployment (Sept. 2007)
- DART II ETD Training (Sept. 2007)
- DART II ETD Deployment (June 2008)
- DART II ETD Procurement (in progress)
- Ina-TEWS Dedication (Nov 2008)
- Retrofit of Ina-Buoy with DART II electronics (in planning)





Opportunities and Challenges

Opportunities

- Science and technology exchanges are critical contributions to our diplomacy abroad
- In meeting international needs we meet our own
 - disaster risk reduction to save lives, reduce costs
 - expanded observational network and analysis
- Better organization can help us meet the challenge of helping to improve multihazards warning and mitigation systems internationally
 - across government
 - in the technical agencies like NOAA

Challenges in Technology Transfer

- International organizations (UNESCO) needed, but process is slow
- USAID and domestic technical agencies are still learning to work together; State role often is unclear
- Technical agencies don't always have an international mandate; international technology transfer often is an "other duty as assigned"
- Good scientists and engineers aren't always good teachers
- "Workshops" usually don't equal "education" or "training"

Challenges in Technology Transfer

- What is on offer may not be what's needed or wanted
- Partners have highly variable capacities and ability to absorb training or education
- Partners are also struggling to meet domestic priorities—and priorities set by other donors
- Personal and institutional relationships determine success
- VTC and email are not the same as being there
- Communication across language, cultural, knowledge, and political barriers is difficult

Making Technology Partnerships Work

- Intersection of interests among partners
- Real, not fabricated, partnership
 - among USAID, State, and technical agencies
 - between technical agencies and counterparts
- Focus on understanding partners
- Focus on personal and institutional relationships
 - Counterparts educated in the U.S. are easy to work with
 - Personal relationships override barriers
- Local presence: on site or frequent travel
- Responsiveness, flexibility, patience, humility needed

Improving Effectiveness

- We need to recognize that multihazards S&T exchanges are critical tools for diplomacy—and in our own interest
- Long term USG investment in education for foreign nationals in disciplines related to multihazards warning and mitigation is an inexpensive way to make our exchanges more effective
- We need to engage closely with UNESCO/IOC; WMO, and other international bodies: these provide a framework for bilateral cooperation
- We need formal USAID partnerships with U.S. technical agencies; a “National Response Framework” for international technical assistance

Making Technology Partnerships Work

Clear statement of partner's critical role

Clear partner Identity

USG, not NOAA

US role muted

Partner-organized event

Ambassador lends credibility, status

Indonesian capacity as backdrop

Personal relationships matter



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