





## No "button" pressed for Dec. 26, 2004 Tsunami

- 00:58:53 UTC: A monster earthquake, measuring 9.0 on the eastern Indian Ocean near Sumatra, Indonesia, causes an enormous wave packet that starts moving towards northeast and southwest.
- O2:33 UTC: A tsunami hit the east coast villages in Sri Lanka.
- 03:45 UTC: PTWC received a call from a Sri Lankan Navy Commander inquiring about the potential for further tsunami waves from aftershocks.
- Geological Survey and Mines Bureau of Sri Lanka knew of the occurrence of the earthquake. Not tasked to issue warnings and did not have the capacity to interpret seismic data

## "Button" pressed on 12 Sept. 2007, but ...

- 4:40pm (IST): Earthquake hits off of southern Sumatra
   5:18pm (IST): Authorities are saying "warning" at a time when only "alerts" should be sent out.
- **5:55pm (IST):** Radio and tv stations have issued a tsunami warning. PTWC issues a tsunami watch for Sri Lanka.
- **5:57pm:** The DMC issues a tsunami warning, people near beaches urged to evacuate.
- 6:00pm: Sarvodaya DD reports that the HIH will be manned overnight by two HIH personnel. If required a voice alert by the ED will be issued to all Sarvodaya villages.
- 6:05pm: SL's largest phone provider, Dialog Telekom, is having difficulty obtaining information from the DMC. Then the phone lines start getting cut. Only SMS messages seem to be getting through.

## "Button" pressed on 12 September, but... (cont'd)

- 6:11pm: Tsunami warning confirmed for the eastern,northern and southern SL coasts from the Met Dept..
   6:25pm: DMC sends another SMS warning for North, Eastern and
- 6:25pm: DMC sends another SMS warning for North, Eastern and Southern coasts, people are to move from the coast.
   6:26pm: CNN reports there is no indication that a tsunami has
- been generated
   6:36pm: TV- Met Dept. reports existence of a tsunami warning.
- People advised to stay away from the coastline. **6:44pm:** MDMHR secretary says that people need to be vigilant
- and evacuate.

  General Strain Strain
- expects a small tsunami by 7:30.
   7:34pm: The DMC sends another SMS lifting the tsunami warning. USGS has increased quake magnitude to 8.2.
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   8:05pm: CNN reports tsunami threat passed. Dialog Telekom has made a cell broadcast the following message "Tsunami Warning Avoi".

























### EOI form and Effectiveness Measure

- Effectiveness of the *HIH Monitor* was measured based on whether they were capable of --
  - Extracting and Recording the mandatory CAP elements (qualifiers) from the received bulletin
  - Deciding on and Recording the Priority of the hazard and set the CAP attributes <certainty>, <severity>, and <urgency>
  - Accuracy of recording the necessary and sufficient information on the EOI
  - Providing the minimal set of information for Executive to make decision on authorizing dissemination to local level

















# Gaps in the determination of a hazard at the national level

- Politicians in charge of decision-making on creating and disseminating warnings
- No precise means of sending warnings to community members (i.e. chain ends at mid-level warning recipients)
- Disaster notification levels not explicitly delineated for use in all hazards (only vaguely tsunami)
- Communities are not participants in the warning process but only recipients of government mandated preparedness and mitigation programs

