

Field Survey of 2006 Java Tsunami Disaster

A large tsunami was generated by a M7.7 earthquake which occurred in a subduction zone off Java Island, Indonesia, at 15:19 (local time) on 17 July 2006. Coastal areas in the west and central Java suffered serious tsunami damages. More than 500 persons died.

Japan's Port and Airport Research Institute (PARI) dispatched a field survey team to Java working in cooperation with the Japan Society of Civil Engineers (JSCE) and the Ministry of Marine Affairs and Fisheries (MMAF), Indonesia to perform field investigation of tsunami heights. The Japanese team consisted of Dr. Shigeo Takahashi, PARI (Team Leader); Prof. Koji Fujima, National Defense Academy in Japan; and Mr. Daisuke Tatsumi, PARI with the assistance of Mr. Yasuo Takagaki (JICA), Mr. Ichiro Makuta, Pacific Consultants International (PCI), and Mr. Sigit Widaryoko (PCI). The Indonesian team was lead by Dr. Subandono Diposaptono (MMAF) with Mr. Utantyo Wuryatmo, Mr. Erva Kurniawan, and Miss Nelly Julius.

Figure 1 shows distribution of tsunami water mark heights. Blue lines are results from the Japanese team and red circles show the results from the Indonesian team. The results of from the two teams are slightly different because the teams selected different water marks. However, the variation pattern of surveyed results is similar. The measured tsunami heights are 2 m to 8 m. The detailed report is available at:

<http://www.pari.go.jp/information/news/h18d/3/abstjoint%20survey.pdf> and
<http://www.pari.go.jp/bsh/ky-skb/trc/jawareport-total.pdf>

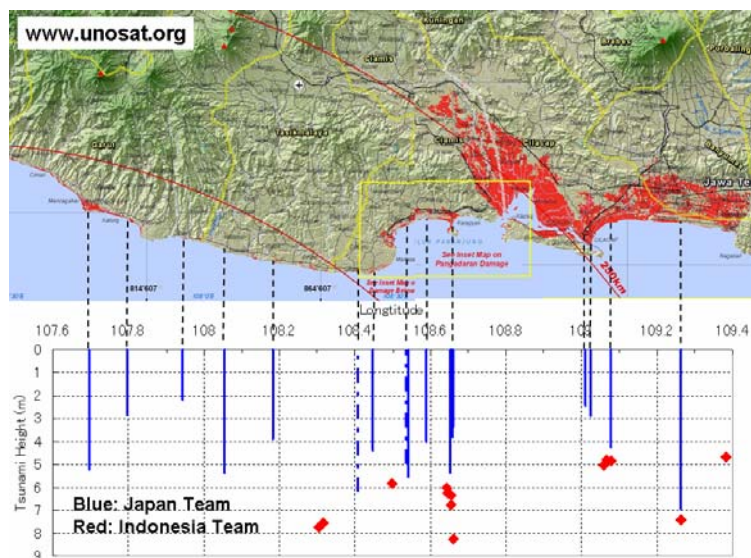


Figure 1. Distribution of Water Mark Height by 2006 Java Tsunami

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The Fourth U.S.-Japan Workshop on Wind Engineering

The fourth U.S.-Japan Workshop on Wind Engineering was held during 20-22 July 2006 at the National Institute for Land and Infrastructure Management (NILIM). The workshop was co-hosted by the Building Research Institute (BRI) and the Public Works Research Institute (PWRI), Japan-side Panel member organizations of Task Committee D (T/C D). The first three U.S.-Japan T/C D Workshops were held in: Hawaii, U.S., in 1997; Tsukuba, Japan, in 1999; and Seattle, U.S., in 2002. Twelve attendees from the US side traveled to Japan to join 17 Japanese researchers for the three-day event, which included the formal workshop and a study tour in Tokyo. Technical presentations were made over the first two days and breakout sessions of three groups were conducted on: Wind Characteristics and Wind Hazards; Wind Effects on Buildings; and Wind Effects on Bridges.

The theme of the 4th Workshop was “New Challenges for Reduction of High-Wind Disasters” as shown in Figure 3 below. In this workshop, the U.S. and Japanese leading researchers (see Figure 2) discussed wind engineering issues ranging from structural and civil engineering to meteorology. In 2004, ten typhoons struck Japan, resulting in great damages across the country. The building damages caused by the heavy wind included “shattered exterior materials” such as roofing, exterior wall, windows, etc. During 2005 the US experienced numerous hurricanes including Hurricanes Katrina and Rita in the New Orleans area that caused loss of life and significant property damages.

During the workshop, the new development and research projects aimed at reducing high-wind disasters were introduced and the future prospects of the U.S.-Japan cooperative research projects were presented and discussed. Each of the groups agreed to interact via the internet and various forums within the next 18 months to exchange information and monitor progress. A number of specific projects also were identified that will be continued during that period. The research papers and resolutions will be available at the BRI website (<http://www.kenken.go.jp>).

As part of T/C D's 22 July 2006 technical site visits the participants visited “Roppongi Hills” to study its vibration control system and wind environment through high-rise buildings. In the afternoon, they visited “Honjo Bosaikan (Tokyo Fire Department) to discuss and experience a virtual earthquake, heavy storm and fire disaster. The visits provided a unique opportunity to learn about the educational campaign -- how to survive disasters.

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Figure 2. Participants in the 4th U.S.-Japan Workshop on Wind Engineering

*New Challenges for Reduction
of High-Wind Disasters*



Figure 3. Task Committee D Workshop Theme (Fairy-tale Ogre who generates Heavy Wind)