

**Final Report of Technical Committee on
“Sumatra Offshore Earthquake and the Indian Ocean Tsunami”
Japan Society of Civil Engineers**

A tsunami caused by a great earthquake occurred in the Indian Ocean on 26 December 2004 and hit more than 10 countries around the ocean including Indonesia, Sri Lanka, India, Thailand and etc., which resulted in a death toll of nearly 300,000 people and great economic losses.

Since the occurrence of the disaster, ACECC has recognized its important role in the mutual cooperation for the investigation and the recovery, and discussed the possible scheme for the future assistance. Accordingly, the technical committee on the “Sumatra Offshore Earthquake and the Indian Ocean Tsunami” had been set up and its activities lead by JSCE, were carried out based on the following terms of references.

1. To collect and provide information concerning the Sumatra Offshore Earthquake and the Indian Ocean Tsunami.
2. To hold workshops for the purpose of exchanging mutual information.
3. To transmit proposals for tsunami disaster mitigation to the world.
4. To encourage education for tsunami disaster preparedness.
5. To hold a forum (4th CECAR) as summarization of the activity result.

A number of activities based on the above were carried out and some of them were reported on the occasion of the round table discussion on Disaster Mitigation, dated 18 January 2006 in Cebu, the Philippines. (Refer to the attachment).

And as for the summarization of the lesson we learnt from the disaster and to indicate the technical guidelines for the possible future ones, the special forum was held at the 4th CECAR. The details of the forum were as follows.

Title	The 2004 Indian tsunami – their damage, lessons and disaster mitigation
Date	June 26 2007, 16:00-18:00
Venue	Taipei International Convention Center, Room102
Sponsor	JSCE

Special Forum Program

No.	Title	Name/Affiliation
1	Report on the TC effort regarding Sumatra Offshore Earthquake and Indian Ocean Tsunami	Prof. Fumihiko Imamura TC Chair Tohoku University, JSCE
2	Supplementary Post-Tsunami Survey in Sumatra Island for 2004 Indian Ocean Tsunami	Prof. Koji FUJIMA National Defense Academy, JSCE
3	Damage to Bridges during the Off-Sumatra Earthquake	Prof. Kenji KOSA Kyushu Institute of Technology, JSCE
4	Report on the Tsunami Warning System in Thailand	Prof. Seree Supartid Ransit University, Thailand
5	Report on the Tsunami Damage in Indonesia and its progress in Disaster Mitigation	Dr. Hamzah Latief Institute of Technology Bandung, Indonesia
6	Contributions to Communities and People for Natural Disaster Mitigation by the Japan Society of Civil Engineers	Prof. Masanori Hamada Waseda University Immediate Past JSCE President
7	Discussion and Forum Summary	Prof. Fumihiko Imamura TC Chair Tohoku University, JSCE

There were 6 speakers in total.

At the beginning of the forum, Professor F. Imamura introduced the Indian Ocean Tsunami on December 2004 by showing the video which recorded the Tsunami and the simulation video of the Tsunami propagation obtained from numerical analysis. He also introduced the general purposes and the contents of the Tsunami TC activities and the data-base which compiled the Tsunami survey results on Google Earth.

2nd Speaker: Professor K. Fujima reported the survey results on the north-east area of Sumatra Island which had been un-surveyed until one and half year after the Indian Ocean Tsunami, focusing on the damage to the infrastructure of this area. He also introduced Tsunami survey results database and relating web site, which will enable everybody to access the data-base and use them.

3rd Speaker: Professor K. Kosa reported the damages of the bridges due to the Tsunami. He indicated the possible Tsunami flow velocity and gave some consideration on the structural differences between the flushed out bridges and

remained bridges against the Tsunami force.

4th Speaker Professor Seree Supartid, who was from Tsunami affected country Thailand, introduced the Tsunami warning system, which was under construction in Thailand, based on the Earthquake and Tsunami database. It was reported that the Tsunami warning system is assimilated with the real time monitoring data for the earthquake.

5th Speaker: Dr. Hamzah Latief reported the database of the previous Indonesian tsunami records and introduced the hazard map developed from the database. He also introduced the features of the damage in coastal area in Indonesia due to the series of the Earthquake and the Tsunami and the efforts for the Tsunami damage recovery and reconstruction.

Finally, Professor M.Hamada (Waseda University, Immediate Past JSCE President) presented a special lecture on the international cooperation by introducing the contribution made by JSCE for the people in Indonesia. Those are “Tsunami education by means of educational video, cartoon and picture-card show”, “student group activities for the Tsunami education and damage recovery”, and “aid for the reconstruction plan and Tsunami warning system” etc.

In the Q&A session, there was a proposal to take some consideration for the Tsunami evacuation road in the regional traffic planning. As for the conclusion of the discussion, the emphasis was placed on the importance of the civil engineers' role to incorporate the Tsunami research results into the national policy, and encourage local government to take the actual action against Tsunami.

After the discussion, the forum was rounded out with the following declaration by TC chair.

1. Tsunami TC activities under the crown of ACECC will be terminated by this forum, however the disaster caused by Tsunami would be unavoidable in the near future as well. Therefore, the efforts toward Tsunami disaster mitigation by the Tsunami working group would be continued.
2. It is required to develop the structural design code against the Tsunami effect especially for the bridge,
3. It is highly important to make use of the past Tsunami experience to reduce the future Tsunami damage

4. For the above purpose, the accumulated data obtained from Tsunami surveys and researches are compiled in Google Earth. It is hoped this data will be shared by every concerned and make the most of it to root out the Tsunami disaster.