

Preface

Catastrophe due to the 2004 Indian Ocean Tsunami: Lessons Learned through the Disaster and Post-recovery Process

The special issue was planned to collect papers regarding the regional characteristics of the tsunami disaster as well as the reconstruction and recovery process of the damaged area in the Indian Ocean, and to share the lessons and to discuss a design for prevention and mitigation of future disasters.

A great earthquake occurred followed by a giant tsunami at 00:58:50 (UTC) on Sunday, December 26, 2004. The magnitude-9.3 event located off the west coast of northern Sumatra set off a series of other earthquakes lasting 10 hours until 11:05 UTC, 250 km SSE of Banda Aceh, Sumatra. Such a huge earthquake has never been reported in the area over 200 years of our history. The tsunami attack in all coastal areas in the ocean as well as the earthquake event caused widespread catastrophes in the Indian Ocean, particularly in Indonesia, Sri Lanka, India, Maldives, and Thailand with damage also in Malaysia, Bangladesh, Somalia, and Seychelles. In total, more than 230,000 people were killed, including a huge number of missing in Indonesia and India. The whole world was heavily shocked by the precipitate tragedy.

Three years have passed since the 2004 catastrophe. After the catastrophic event, several surveys, investigations, and analyses with the data have been carried out to clarify what happened in the affected area and the reasons why so serious damage was caused. Activities to recover and reconstruct the damaged area have been carried out through a collaboration in regional and international operations. And we have learned several lessons from the huge damage for mitigating natural disasters in the future, which should be shared with areas in the Indian Ocean as well as the world. Series of the earthquakes have been generating in the region Sumatra trench and its surrounding area, continuously causing a severe damage.

The following papers are in volume 29-1:

- Recovery Process in Thailand after the 2004 Indian Ocean Tsunami;
- Towards Integrated Tsunami Disaster Mitigation: Lessons Learned from Previous Tsunami Events in Indonesia;
- Post-tsunami Recovery Process in Sri Lanka;
- Regional Characteristics of Tsunami Risk Perception among Tsunami-affected Countries in the Indian Ocean.

And further papers in the special issue will be published:

- Evaluation of the Structural Fragility of a Bridge Structure Subjected to a Tsunami Wave Load;
- Promotion of Community-based Disaster Reduction Activity Through Hands-on Training in Sri Lanka;
- Restoration after the Sumatra Earthquake Tsunami in Banda Aceh: A Focus on Housing Reconstruction;
- Study on Regional Differences in Permanent Housing Reconstruction in Sri Lanka after the 2004 Indian Ocean Tsunami;
- Revival of Tourism in Sri Lanka following the December 2004 Indian Ocean Tsunami.

Fumihiko Imamura

Invited editor of the special issue

Prof. of Tsunami Engineering

Disaster Control Research Center, Tohoku University