

Abstract

The tsunami disaster on 26th December 2004 has caused severe damage on the Andaman coast in the southern Thailand due to the loss of lives and damage to business activities and infrastructure, especially the resort hotels. The area of Khao Lak in Phang Nga province witnessed the heaviest damage with more than 4,000 lives lost. It was evident that many deaths that occurred in the buildings could have been prevented by better design. It is this study's hypothesis that the architectural design of buildings overlooked the risk of the tsunami disaster, and this constitutes another factor contributing to the widespread death and damage.

This research is descriptive in nature with its main objective to prepare design guidelines for resort hotels that aim to minimize the impact of tsunami waves and also to respond to investment potential and tourist demands. The initial literature reviews and field surveys of the damaged resort hotels in Khao Lak led to the formulation of the interview questions for the 3 groups of relevant correspondents; architects; hoteliers and tourists. Each group comprised 3 individuals. The responses and comments from these correspondents were further analyzed to produce the design guidelines for resort hotels in the area that could be vulnerable to a similar disaster.

The study found that all 3 sample groups were in agreements regarding the risk mitigation from the tsunami. However, such views were not always consistent with the findings from reviewed literature due to the needs of return of investment and tourist's demands. The site planning and the building design should take into consideration the relationship between the local topography and the characteristics of the tidal waves. Tidal impact could be minimized by raising ground floor levels by at least 3 m. as well as maximizing the open space between buildings. Basement floors should be avoided. Evacuation routes and high ground meeting points should be provided to ensure evacuation. In addition, beach forestation could also reduce tidal impact. The building structure should be made of reinforced concrete. The building materials should be specified according to low risk levels of damage, such as tempered glass and shingle roofs.

These recommendations are only provisional. Designers and entrepreneurs should be able to select any appropriate aspect from this study to implement for individual project, with human safety being the first priority in design considerations.