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Tsunami Hazards: Public Awareness & Response

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Although tsunamis have not been frequent in Sri Lanka, the Indian Ocean Tsunami (IOT) in 2004 and the subsequent tsunami alerts in 2005, 2007, 2010 and 2012 have highlighted the exposure of the country to such hazards. The need has thus arisen to develop appropriate tsunami mitigation measures in the country.

Although tsunamis can be generated from a variety of causes, the majority of tsunamis are caused by undersea earthquakes. Considering the geographic location of the country, it is evident that Sri Lanka is exposed to potential tsunamis generated at two undersea earthquake prone regions, namely Sunda Trench located to the east and Makran Fault located to the northwest. However these regions are located thousands of kilometres away from the country, exposing the country to far field tsunamis with propagation times of a few hours, allowing the country the opportunity of receiving early warnings and sufficient time for evacuation to mitigate adverse impacts.

The effectiveness of an early warning and evacuation system would depend on the public awareness of possible hazards and associated responses to warnings issued. A study was thus conducted to assess the public awareness on tsunamis and the response to tsunami warnings issued in 2005, 2007 and 2010. It was conducted in the form of a questionnaire survey in the regions affected by the IOT.

The analysis of the information gathered revealed that, although the majority of the public was not aware of tsunamis as a natural hazard prior to IOT, the awareness has now increased significantly. The results indicate that the majority of the public is now well aware of the possible causes of generation of tsunamis, the difficulty in predicting the occurrence of tsunamis and identified early warning and evacuation as an effective mitigation measure for Sri Lanka. The warnings issued have been received clearly by the majority of the public, mainly by electronic media/communications as well as from the community. The majority of public has evacuated within 30 minutes after receiving the warning. The majority of the public was also aware of places of evacuation.

It is thus evident that the preliminary results presented indicate that the majority of public in the country is now well aware of tsunami hazards. The results also indicate that effective early warnings are issued.

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