

Integration of the IMS waveform technologies for Tsunami Early Warning: A perspective from Venezuela and the Caribbean

In the last 500 years, more than 75 tsunamis have been documented in the Caribbean and the adjacent regions. Since 1842, 3446 deaths associated with tsunami waves have been reported. Since the mid-1990s, UNESCO's Intergovernmental Oceanographic Commission has focused on the development of a tsunami warning system for the Caribbean (von Hillebrand-Andrade, 2013), enabling many countries in the region to implement warning systems, including the National Seismological Service and Tsunami Warning Center of Venezuela managed by FUNVISIS. The main objective is the inclusion of the Caribbean tsunami warning centers and NDCs to the CTBTO disaster warning initiatives. Tsunami warning centers in 14 countries receive data from around 100 IMS stations, particularly those covering the Pacific and Indian Oceans. This "tsunami agreement" only includes data from seismic and hydroacoustic stations, the inclusion of infrasound stations is introduced taking as a reference the experience of Garcés et al. with Sumatra earthquake in 2004, who propose that the initiation and propagation of a tsunami can produce low frequency sound near the source, as well as along the coastline and basins.

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