

Earthquakes and Tsunamis in Chile, and other Natural Hazards

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Abstract

Chile is located along the subduction zone of the Nazca plate beneath the Southamerican plate. Large earthquake have been recorded in the last 500 years, including the largest ever recorded Mw 9.5 earthquake and tsunami in southern Chile. As a matter of fact, 3 earthquakes of magnitude larger than 8.0 and consecutive tsunamis have taken place in the last 6 years, namely 2010, 2014 and 2015. In this seminar, the characteristics of past and recent earthquakes and tsunamis will be presented as well as the impact along developed areas. In addition, some important features of the tsunami behaviour will be described such as tsunami wave amplification due to resonance inside semi-closed bays. Moreover, some new soft and hard mitigation measures along the 2010 tsunami affected area will be presented. Finally, a short description of the current tsunami research in Chile and how the country is facing the tsunami hazard will be given.