



Análisis de deslizamientos subacuáticos en deltas lacustres (lago Nahuel Huapi, Argentina) a partir de batimetrías de alta resolución [

2014

text (article)

Analítica

The cities located along the coasts of the North-Patagonian Andean lakes are exposed to regional seismic and volcanic activities and associated tsunamigenic events developed in the lacustrine basins. Extraordinary waves, such as the 1960 tsunami in Nahuel Huapi lake that hit the coasts of the city of Bariloche, may be induced by subaqueous or subaerial landslides triggered during a strong earthquake (Villarosa et al., 2009). This article focusses on the study of mass-wasting processes that occur in the submerged portion of lacustrine deltas located at the coasts of Bariloche and Dina Huapi cities. The results presented here are an input for future hazard evaluation studies. The subaqueous morphology was surveyed using a Phase Measuring Bathymetric Sonar System. Digital Elevation Models and DEMderived maps were performed in ArcGIS. Bathymetric data show characteristic features of Gilbert-type deltas: steep delta fronts where sediments are mobilized by gravitational processes (landslides, debris flows and/or turbidity currents). Numerous landslides found in the delta fronts (~10-m high headscarps with a maximum length of ~200 m, and lateral scarps that exceed a length of 600 m) indicate that mass-wasting phenomena involving large volumes of sediment periodically develop in these environments. These events are potential generators of waves in the water surface. The proximity among these deltas and the coastal cities implies that an event of this kind triggered by a strong regional earthquake could affect their vulnerable coasts

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Editorial: 2014

Tipo Audiovisual: lago Nahuel Huapi movimiento en masa deslizamientos subacuáticos deltas lacustres tsunami 1960 Nahuel Huapi lake mass-wasting events subaqueous landslides lacustrine deltas 1960 tsunami

Documento fuente: Cuadernos de investigación geográfica / Geographical Research Letters, ISSN 0211-6820, N° 40, 1, 2014 (Ejemplar dedicado a: Geomorfología Fluvial / Fluvial geomorphology), pags. 247-260

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Lengua: Spanish

Enlace a fuente de información: Cuadernos de investigación geográfica / Geographical Research Letters, ISSN 0211-6820, N° 40, 1, 2014 (Ejemplar dedicado a: Geomorfología Fluvial / Fluvial geomorphology), pags. 247-260

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