
BENTOS PARTICIPATES IN INTERNATIONAL COOPERATION RESEARCH

Investigation for the evaluation of risks of tsunamigenesis from underwater landslides of seismic origin in Lake Villarrica.

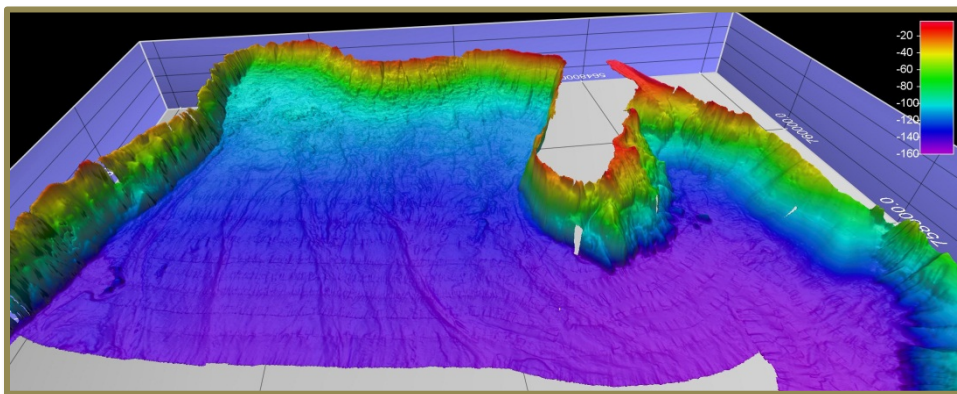
The universities of Gent (Belgium) and Zurich (Switzerland), acting in collaboration with the Austral University of Chile (UACH) and the Chilean company BENTOS, are performing exploration of the bottom of Lake Villarrica.

During the last 10 years, a group of scientists of the marine geology and sedimentology areas of the universities of Gent and Zurich, acting in collaboration with UACH, have been working at various lakes in southern Chile between Temuco and Chiloé to study sedimentary processes and geologic risks. After evaluating prehistoric and historic events of underwater slides of sediments on a scale of kilometers, the banks of Lake Villarrica were determined as a possible area of influence.

In this context, the team of Belgian researchers made up of Dr. Jasper Moernaut and the Engineer Koen De Rycker, with the collaboration of Dr. Mario Pino, currently the dean of the School of Sciences at UACH, has compiled a variety of geotechnical and geophysical information on Lake Villarrica. During the latest campaign, currently in progress, the team of scientists has enjoyed the collaboration of the company BENTOS, on an Ad Honorem basis, which has provided professionals, a hydrographic vessel (the *Bentos Surveyor*), multibeam hydrographic instruments (R2Sonic), DGPS positioning systems (Omnistar) and a control and processing system for bathymetric surveying (Hypack).

The international team, following a biweekly campaign (January and February 2013) of data acquisition and editing of hydrographic information, has obtained high resolution digital cartography of Lake Villarrica; this hydrographic information complements the scientific investigation for the characterization of underwater slides of sediment.

The information obtained from this campaign reveals the presence of fronts of slides that have occurred in the last 2,000 years in addition to topographical characteristics in detail, information that is to be published in scientific journals.



Digital model (looking to the east) of the delta of the Río Trancura (Playa Grande) and the bay of Pucón.