Geophysical Research Abstracts, Vol. 7, 07468, 2005 SRef-ID: 1607-7962/gra/EGU05-A-07468 © European Geosciences Union 2005



1 Tsunami hazard in French Polynesia: advances in modelings towards a global risk assessment

A. Sladen (1), H. Hébert (1), F. Schindelé (1), D. Reymond (2)

(1) CEA-DASE, BP 12, 91680 Bruyères le Châtel, France, (2) CEA, Laboratoire de Géophysique, Pamatai, Faaa, 98702, Polynésie française (helene.hebert@cea.fr)

French Polynesia is exposed to transoceanic tsunamis triggered by subduction earthquakes around the Pacific rim. The last events observed have confirmed that the Marquesas archipelago is the most exposed because of the gentle submarine slopes surrounding the islands, and of the lack of any protective coral reef. Numerical modelings of the initiation, propagation and amplifications of the tsunami waves have succeeded to explain the observations recorded and gathered during the 90's in the Marquesas (Chile 1995, Peru 1996). Other recent observations gathered for historical events (1946 Aleutian tsunami, 1960 Chile) in the other archipelagos remind us that the tsunami risk can be significant in Society Islands and Austral Islands as well. However, only a few modern modelings have been performed so far for these archipelagos.

We present here our latest detailed modeling results of historical (1946, 1960) and modern events in French Polynesia, with a special focus on Tahiti. In light of these results, and using also additional theoritical sources, we give some preliminary elements to assess the tsunami risk in French Polynesia on a regional scale.