

Small islands, big story. Opening up the palaeotsunami record of the Pacific

When one considers that the Pacific region accounts for 85% of known historical tsunamis worldwide, it is unsettling that we have only documented 11 Holocene palaeotsunamis throughout all Pacific island Countries. A recent addition to this dataset comes from a multi-proxy study of sites on Futuna Island, in the Wallis and Futuna archipelago. These sites preserved a record of two palaeotsunamis dated to around 1860-2000BP and c. 470BP. One of the most useful proxies in this study has been the archaeological data associated with occupations that immediately underlie the deposits associated with both palaeotsunamis, indicating that the study of palaeotsunamis is not solely in the domain of the geologist.

While the palaeotsunami dataset is small, we collated the Futuna evidence with those on other islands in a first attempt to map the spatial and temporal distribution of past events over the last several thousand years throughout the entire Pacific region. We acknowledge that this is extraordinarily incomplete, but the method and the results are already providing interesting possible correlations. Both the 1860-2000BP and c. 470BP events identified on Futuna Island correlated with other data in the Pacific and start to point towards potential source areas. Ultimately, once a sufficient number of islands and data points have been studied, they will provide the essential baseline information needed for achieving more effective disaster risk reduction for PICs.