

High-energy coastal hazard events in Aotearoa/New Zealand: records, processes and preparedness

Over the past few years, New Zealand has experienced multiple high-energy hazard events with very different origins. Tsunamis have been quite frequent, including the March 2021 Kermadec transoceanic tsunami and the Loyalty Islands regional tsunamis of February 2021 and May 2023, both triggered by powerful earthquakes. However, earthquakes were not the only source of tsunamis with the January 2022 HTHH and the November 2022 Lake Taupo eruptions both also causing tsunamis. In addition, New Zealand has been severely impacted by Cyclone Gabrielle, the worst tropical cyclone to impact the country since Cyclone Bola in 1988. It had the largest and costliest impact ever recorded in the southern hemisphere, especially in New Zealand where 11 died and economic damage estimates reach NZ\$13 billion. In this session, we welcome presentations on how we can better reproduce and understand these phenomena, and better prepare and protect the population from their impact.