

National Hazards Centre

setting the foundation for a safer future

Auckland tsunami hazard assessed

The Auckland region may experience a large tsunami (greater than 5 metres) about once every 900 years on average. This is one finding from our overview of the tsunami hazard for Auckland Regional Council.

Our modelling, verified by geological evidence, indicates that a subduction earthquake along the Tonga–Kermadec Trench could be one of the most damaging tsunami sources for Auckland. A subduction earthquake there could produce a tsunami affecting a large section of coast. Waves would vary in height, but could be over 7 metres. The tsunami would hit Great Barrier Island about 70 minutes after the quake.

Help for fighting floods

When regional councils and emergency managers receive a flood forecast, they know it won't be correct to the last cubic metre per second. But, until now, the tools for estimating how big the range of 'correct' results might be, or what is the best case and worst case, have not been available.

This year we have developed and tested tools for calculating uncertainty limits in flood forecasting models we built for the Manawatu and Wairau (Marlborough) Rivers. Assuming accurate rainfall forecasts, preliminary tests show flood forecast accuracies of $\pm 20\%$ are achievable.

The work was funded by the Foundation for Research, Science & Technology.

bringing together the expertise of NIWA and GNS Science on the full range of natural hazards



- providing information for policy managers, planners, emergency managers
- helping people improve their resilience & better manage the risks
- floods & droughts, extreme weather, coastal erosion, landslides, earthquakes, volcanoes, tsunamis

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