

Why weren't we warned?

Fiction by Michael Paine*

The Sun was just rising on a coral atoll in the South Pacific, between Tonga and New Zealand. Deep below the Earth gave a sigh and a shudder as the giant Pacific and Australasian plates slid against one another - a Great Earthquake.

A block of ocean floor larger than Tasmania suddenly dropped fifty metres. The surface of the ocean dropped with it. Seawater drained from coral reefs but there were few other signs that an insidious tsunami was now radiating across the Pacific at the speed of a Jumbo Jet.

It was 3am at the Bureau in Canberra. The duty officer received the earthquake alert just a few minutes later. Half an hour later the tsunami warning message arrived, confirming her worst fears - a mega-tsunami was heading towards the east cost of Australia and would start reaching the shores in three hours. She phoned her supervisor and then initiated the Australian tsunami warning procedures - faxes, text messages and emails were delivered to coastal communities from Bega to Cooktown.

Joel was at the Fire Station at Bringle Bay on the New South Wales North Coast. He read the fax with disbelief. "A series of large tsunami is expected to reach the east coast of Australia by 6am - barely two hours away. Evacuate all communities less than 5 metres above sea level." But tsunami never happen in Australia!

He alerted the others on his shift. "How do we know which areas are less than 5 metres?" "How do we wake people and tell them to get out?" They started to phone other emergency service personnel. At first the calls were met with the same disbelief but the stress in the callers voices meant they were taken seriously.

Soon about ten vehicles were driving around the sleepy streets of Bringle Bay, sirens wailing, horns tooting, voices shouting. Hardly anyone came out at first but the few who did were told to wake family and neighbours and run the top of the hill at the back of town.

Gradually the streets filled with stunned people. About half of the people in Bringle Bay made it to the hill by the time the eastern sky started to brighten with the sunrise. Those on the hill saw a white mist roll in from the horizon, with flashes like lightning. The first wave had arrived. With horror they watched as the town was inundated. Then the water rushed back to the ocean, taking broken buildings and cars with it.

Some people on the hill rushed down to try and help any survivors. Other yelled at them that more waves were coming. The speed and ferocity of the first wave were fresh on their minds and they wisely returned to the hill.

All along the East Coast the tragedy was repeated. Some towns were swamped without warning. In Sydney many low lying suburbs along the rivers were devastated, along with the beach suburbs. The Sydney Harbour Tunnel withstood the first wave but by the time the second one arrived, half an hour later, the foundations had been eroded by the water rushing back out the harbour and the tunnel sections were washed away. Fortunately, by then, the tunnel had been closed.

Sydney Airport was not spared. Only the largest international jets were high enough from the ground to resist the rush of water. The smaller planes were tossed around like sticks.

Wollongong was the only coastal community that managed to avoid a huge loss of life, despite many homes being in the path of the tsunami. In 2008, some four years after the Indian Ocean Tsunami, the Wollongong Region had been selected for the first East Coast Tsunami Action Plan by State Emergency Services. The residents knew their homes were at risk, they knew the warning sounds and they knew how to get to safe, high ground. The air-raid sirens woke the residents. A quick check of the radio, TV or internet confirmed the need to evacuate and people followed their prepared evacuation paths to hill tops and sturdy multi-storey buildings. Their homes were devastated but they survived. Later that morning the news reports revealed that they had been very fortunate to be prepared for this rare but deadly event.

* Michael Paine is a consulting mechanical engineer and is a member of The Tsunami Society. He has papers about the risk of tsunami published in the international journal The Science of Tsunami Hazards. Mr Paine has corresponded with US tsunami experts who have identified that a great earthquake along the Tongan Trench could generate a mega-tsunami like the one described in this story. The mechanisms are similar to those that resulted in a devastating tsunami along the Sri Lankan coast as a result of the Great Sumatran Earthquake of 26 December 2004. He is convinced that many Australian coastal communities need tsunami action plans, like those being implemented in Wollongong.

http://users.tpg.com.au/horstts/tsunami_hazard