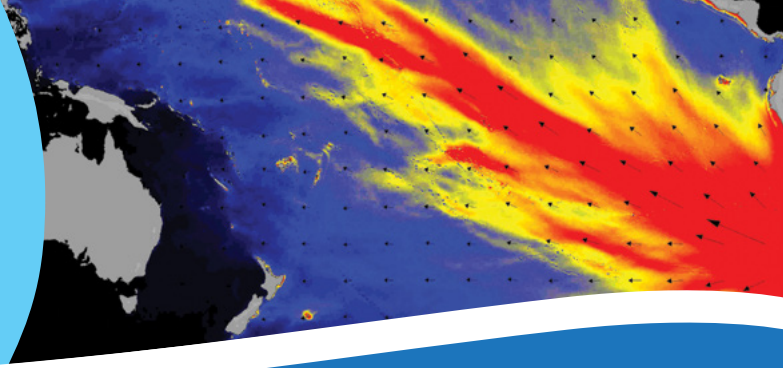


Pārongo 2

Ngā whakatūpato

Information Sheet 2: Hazards, warnings and impacts



Key messages

for CDEM Groups to discuss with early learning services and schools:

- Early learning services and schools that are near the coast and feel a long earthquake (longer than a minute) or strong earthquake (hard to stand up) should immediately evacuate all zones.
- Emergency management plans should cover all hazards and impacts.
- Early learning services and schools need to understand the different types of warnings they may receive e.g. natural warnings of a tsunami (see next page).

The following information can provide the basis for conversations CDEM Groups to have with early learning services and schools about hazards, warnings and impacts. Ensure the key messages are covered in any discussion or correspondence with early learning services and schools about hazards, warnings and impacts.

Hazards – Tsunami

Early learning services and schools should have an emergency management plan for all hazards they may face, especially for sudden impact hazards where children, students and staff have to act quickly e.g. earthquake, tsunami, fire, violent threat.

This factsheet focuses on tsunami, a significant threat to low lying areas along the entire coastline of New Zealand. New Zealand sits at the convergent boundary of the Pacific and Australian Tectonic Plates. This tectonic setting puts New Zealand's entire coastline at risk of tsunami from local, regional and distant sources.

A tsunami is a series of powerful waves with strong currents. Large tsunami waves can contain considerable amounts of energy enabling them to travel a long way inland over low lying areas of land and up estuaries and rivers. They are mostly caused by underwater or coastal earthquakes, and sometimes by underwater landslides or volcanic eruptions.

There are three sources of tsunami:

- 1. Local:** Generated less than an hour travel time away from the New Zealand coast. There may only be a few minutes warning between initial earthquake shaking and when the first wave arrives e.g. Hikurangi subduction zone.
- 2. Regional:** Generated 1–3 hours travel time away from the New Zealand coast e.g. the Kermadec Trench to the north of New Zealand.
- 3. Distant:** Generated more than three hours travel time away from the New Zealand coast e.g. off the coast of South America

Most (but not all) tsunami evacuation maps in New Zealand will have three zones – red, orange and yellow. The coloured zones are primarily used for regional and distant source warnings. They are used by CDEM Groups to manage official evacuations when there is time. Therefore, it is important to know the colour of the tsunami hazard zone that the early learning service or school are in.

Tsunami evacuation maps are available on the relevant CDEM Group or regional (or unitary) council websites: www.civildefence.govt.nz/get-tsunami-ready/

Early learning services and schools prior to excursions, school trips and Education Outside the Classroom (EOTC) activities need to check whether they are going into a tsunami evacuation zone.

The most important message for all early learning services and schools is that if they are near the coast and feel a long or strong earthquake they drop, cover hold and then immediately self-evacuate all zones.

Pārongo 2 Ngā whakatūpato here

Information Sheet 2: Hazards, warnings & impacts

Warnings

It is important that early learning services and schools understand the three types of tsunami warnings that may be received and what public notification channels systems that each CDEM Group has in place.

All staff, children and students should be taught to recognise the natural warning signs of a tsunami and what actions to take. For example, if they feel an earthquake that is LONG (longer than a minute) or STRONG (hard to stand up) GET GONE then they need to move immediately to the pre-arranged safe location or alternatively the nearest high ground, or as far inland as they can.

Early learning services and schools should not wait for an official warning, as it may not be possible to issue warnings in sufficient time and/or accuracy in the case of local source tsunami. Even if evacuations ultimately prove unnecessary, consider them a good practice opportunity.



Impacts

If an emergency occurs, early learning services and schools may have to respond to a range of impacts. For example, a large local earthquake, in addition to generating tsunami waves that can arrive within minutes, may damage bridges and create liquefaction and landslides along the pre-planned evacuation route. This may leave early learning services or schools with no power, phone, internet, or water or useable toilets, with students unable to get home, and parents unable to collect children or students. Emergency management plans must take these possibilities into consideration. Early learning services and schools should run “what-if” scenarios based on potential hazards or other possible secondary impacts, while planning for earthquake and tsunami.

The three types tsunami warnings:

NATURAL WARNING - This may be the only warning in a local source tsunami



A long (more than a minute) or strong (makes it hard to walk or stand up) earthquake



A sudden rise or fall in sea level



Unusual noises from the sea (noises like jet planes or trains)

OFFICIAL WARNING - Will only occur for a regional or distant source tsunami.

There are different warning systems used in different regions. Ways to warn people include: Social media and websites, TV, Apps, Radio, Emergency mobile alert Text Alerts, Sirens and PA systems, Door to door evacuation by emergency services



INFORMAL WARNING - Warnings may come from friends, neighbours, wider community or international media.

After reaching safety or while in transit, early learning services and schools can check the validity of warnings via TV/radio broadcasts, CDEM Group official websites and social media sites.

