



CDEM Resilience Fund Project Application Form

This form provides the minimum of information for the application; a detailed project plan should be developed to inform this application and may be attached.

Project title: Tsunami Taumaruru (Name to be confirmed by Project Team)

Date of application: 14 Jan 2020

Details on application

Applicant: Hawke's Bay CDEM

CDEM Group/s affected: Hawke's Bay CDEM and Tairāhiti CDEM

Other local authorities, Groups or organisations supporting this proposal: East Coast Life at the Boundary and QuakeCoRE

Project description

Executive summary [200 words maximum description.]

Hundreds of early learning services and kura (schools) in Aotearoa New Zealand are located in tsunami evacuation zones (Johnston et al., 2016). It is so important that kaiako (teachers) and tamariki (children) at these early learning services and kura know what to do if there is a long or strong earthquake and where their tsunami safe location is in the event of a local source tsunami. This was highlighted by research conducted after the 2011 Japanese earthquake and tsunami which found that child mortality rates were directly influenced by levels of preparedness in schools (Nakahara & Ichikawa, 2013).

This pilot project follows on from work carried out by Repia (2018) who produced an interactive pouwhenua light installation to raise awareness of our tsunami risk here in Aotearoa New Zealand, and Kaiser and Boersen (2020) who designed culturally and locally relevant materials for ākonga (students) and kura kaupapa Māori to work with Te Kura Kaupapa Maori (TKKM) and kura in tsunami evacuation zones.

This pilot project will bring together interested kura with emergency managers, researchers, artists, to learn, design, develop and install culturally relevant tsunami tohu or pou and practise their tsunami evacuation hikoi. Ākonga (students) will have a proactive role in making their communities' tsunami safer and their kura more resilience (see Figure 1). Research highlights the value hazard education programmes in schools and the benefits such as increasing awareness of risk and motivating preparedness actions of tamariki who participate in such programmes (Ronan & Johnston, 2001).

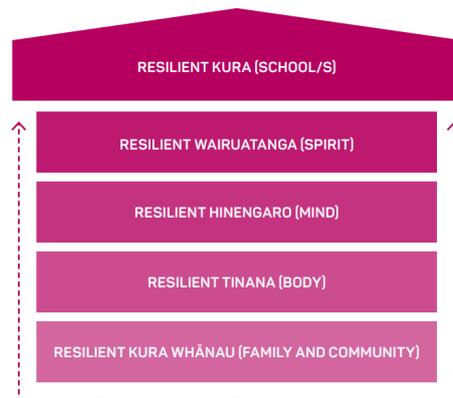


Figure 1 Whakaoranga Kura (resilient school) framework (Kaiser and Boersen, 2020).

Signage is integral to the effective response to tsunami and, discussions and planning that precede signage, and the exercising that tests response are all strong public education tools (Tsunami Working Group Signage Subcommittee, 2007). In recognition of this, the Director of the Ministry of Civil Defence & Emergency Management (MCDEM) issued a National Tsunami Signage Technical Standard for the CDEM Sector in 2008 with the intent to ensure maximum consistency across the country (MCDEM, 2008).

Tsunami signage has traditionally been relatively homogenous in Aotearoa New Zealand to align with this Technical Standard but there are other forms of signage that could be of benefit. Since it was developed the Minister of Civil Defence issued the National Disaster Resilience Strategy in 2019. This strategy recognises the importance of building natural hazard risk awareness, risk literacy and risk management, by enabling and empowering organisations and acknowledging the importance of culture to resilience (MCDEM, 2019).

Challenge/opportunity [200 words maximum description.]

This as an opportunity to support our commitment to honour the principles of the Treaty of Waitangi, partnering with and supporting Māori communities to participate in emergency management activities, and supporting traditional Māori practices of emergency management.

Following, Repia (2018) and Kaiser and Boersen (2020)'s work, Hawke's Bay Civil Defence Emergency Management engaged with a few schools to ascertain interest in this project and they are supportive provided there is funding available. There is also support from tangata whenua in Tairāwhiti to approach schools to pilot this approach.

This pilot project aims to make kura communities' tsunami safer and more resilience, presents multiple opportunities such as:

- Utilising the whakaoranga kura framework to build greater risk awareness and refine each kura's emergency management plans.
- Exploring a kura's connection to conventional tsunami signage versus tsunami tohu or pou they have created themselves.
- Connecting emergency managers and kura and creating pathways to the wider community.
- Acknowledging the importance and value of culture and art and the value it brings to emergency management.

The tsunami tohu or pou created will complement existing tsunami signage, ensuring the finished project will be an asset to the community providing an art piece as well as vital safety information.

It is culturally fitting in Aotearoa to use pou as an indicator of a place of safety, and the engagement opportunity will make it meaningful and build awareness, self-efficacy and resilience in the kura and community.

Alignment with identified goals and objectives identified in the CDEM sector [200 words maximum description.]

This project directly aligns to National Disaster Resilience Strategy (2019):

- ✓ **Objective 1:** Identify and understand risk scenarios (including the components of hazard, exposure, vulnerability, and capacity), and use this knowledge to inform decision-making
- ✓ **Objective 3:** Build risk awareness, risk literacy, and risk management capability, including the ability to assess risk
- ✓ **Objective 8:** Build the relationship between emergency management organisations and iwi/groups representing Māori, to ensure greater recognition, understanding, and integration of iwi/Māori perspectives and tikanga in emergency management
- ✓ **Objective 13:** Enable and empower individuals, households, organisations, and businesses to build their resilience, paying particular attention to those people and groups who may be disproportionately affected by disasters
- ✓ **Objective 14:** Cultivate an environment for social connectedness which promotes a culture of mutual help; embed a collective impact approach to building community resilience
- ✓ **Objective 18:** Recognise the importance of culture to resilience, including to support the continuity of cultural places, institutions and activities, and to enable the participation of different cultures in resilience

Dissemination of benefits to sector [200 words maximum description.]

The benefits to the sector include:

- ✓ **Normalising culturally responsive resilience building activities:** The project team will share regular project updates in the sector wide e-bulletin newsletter to normalise culturally responsive resilience building activities.
- ✓ **Inspire innovation:** This pilot project, will hopefully inspire others in the sector to take up similar creative ways to meet the National Resilience Strategy objectives.
- ✓ **Sharing lessons learnt:** This pilot project will be evaluated by researchers through QuakeCoRE funding. This report will document the process, lessons learnt and recommendations for future

work, including suggestions on how to overcome barriers, such as cost, to support other kura to do more tohu. It will be shared with the sector so that if successful the new concept could be rolled out across Aotearoa New Zealand and any lessons learnt can be applied to other initiatives.

✓ **Increase school community resilience:** This project will raise awareness and support ECEC's and school communities to respond appropriately to potential tsunami threats. This awareness will be disseminated into the wider community as school communities share this journey with others they have contact with, resulting in more resilient coastal communities. Should a tsunami event occur, this will be of huge benefit to the CDEM sector.

Project design

Project manager	Kate Boersen (East Coast LAB)
Other project members	Representatives from East Coast LAB, Hawke's Bay CDEM and Tairāhiti CDEM, Te Kura Kaupapa Māori/Kura, and QuakeCoRE
External providers/contractors/advisors	Hawke's Bay and Tairāwhiti kaumātua and Māori artists/designers, and representatives from Ministry of Education

Deliverables

Milestones ¹	Date for completion	Cost
Stage 1: Whakawhanaungatanga Partner with a minimum of two schools, one in each of the regions – Gisborne and Hawke's Bay Understand what stage each school is at on their journey to becoming tsunami-safer and work alongside them to review their tsunami evacuation routes/safe locations	15 April	\$1,500
Stage 2: Ako Work together with schools (principal/teachers/students) to deepen their understanding of both western science/mātauranga Māori concepts of tsunami and their schools' tsunami risk	28 May	\$3,000
Stage 3: Mahi tahi Develop design/art concepts to weave together to develop a design for their school's tsunami evacuation tohu. Install tohu/pou along evacuation route or in tsunami safe location	25 June	\$35,500
Stage 4: Aromātai Evaluate effectiveness of the pilot project alongside teachers, students, emergency managers and others involved in the process.	30 June	In kind support from Quake CoRE

¹ Note: These milestones have been developed to align with the School Evaluation Indicators developed by ERO to promote and respond to learner's wellbeing (ERO, 2015)

Identified risks							
Risks	Suggested management						
Commitment to timeframes	Timelines will be well-communicated to project team members and schools and project manager will work to ensure deadlines are met						
Lack of engagement by schools	Project manager will introduce the project context/challenge/opportunity thoroughly, so schools know and understand what they are committing to before partnering.						
Tsunami safe location is on private land	Consider this factor when approaching schools and have a conversation around their safe location prior to partnering to ascertain whether this is possible. Alternatively consider having a series of tohu marking the way to a safe location.						
COVID-19 resurgence	Work with schools virtually to design their pou/tohu and delay installation until appropriate and safe to do so						
The Hikurangi subduction zone rupture or another significant event occurs before the work is complete	Any preparation will be of benefit. Supporting conversations on preparedness through public education is vital to increasing community resilience and anything we do now will make a difference						
Funding request and use							
CDEM resilience fund contribution	\$40,000 (\$20,000 each to Tairāwhiti and Hawke's Bay)						
Local authority/organisation contribution	\$5,000 in kind support of emergency management advisors time						
Other sources of funding or support	\$20,000 from QuakeCORE to evaluate effectiveness of the project alongside teachers, students, emergency managers and others involved in the process.						
Budget <i>[Please supply spreadsheet]</i>							
Applies if application exceeds \$100,000 over the life of the project	<table border="0"> <tr> <td>Do you wish to attend a hearing in support of this application?</td> <td>Yes</td> <td>No</td> </tr> <tr> <td></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>	Do you wish to attend a hearing in support of this application?	Yes	No		<input type="checkbox"/>	<input type="checkbox"/>
Do you wish to attend a hearing in support of this application?	Yes	No					
	<input type="checkbox"/>	<input type="checkbox"/>					
Application confirmation							
Approval of Chief Executive							
CDEM Group comments							
<p>This application will explore and advance resilience to the tsunami hazard in a culturally relevant way to some of our most vulnerable tamariki and rangitahi who live in tsunami inundation areas. This project will also help further the emergency management sectors understanding of Māori perspectives and tikanga in being prepared and responding to tsunamis.</p> <p>Ian Macdonald HBCDEM Group Manager</p> <p>A key aspect of the Tairawhiti for 2021 is the strategy for enhancing the collective engagement with iwi and our vulnerable groups that reside within the tsunami zones. The current Tairawhiti Community Link framework will be expanded as part of this strategy and will see the addition of 'Iwi Link' that will facilitate the integration of te ao maori. This project will provide a good opportunity to co-develop this with iwi and community groups as well as partnering with the Hawkes Bay CDEM Group.</p> <p>Ben Green Tairawhiti CDEM Manager</p>							