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	Hikurangi Response Plan – developing a coordinated response to a subduction rupture to assist and enhance community resilience across the North Island East Coast
Date of application	29 September 2017
Details on application	
Applicant	Hawke's Bay Regional Council
CDEM Group/s affected	CDEM Groups directly affected: Hawke's Bay, Gisborne, Wellington, Manawatu/Wanganui and Bay of Plenty
Other local authorities, Groups or organisations supporting this proposal	East Coast LAB and Research Groups: GNS Science, Massey University Earthquake Commission

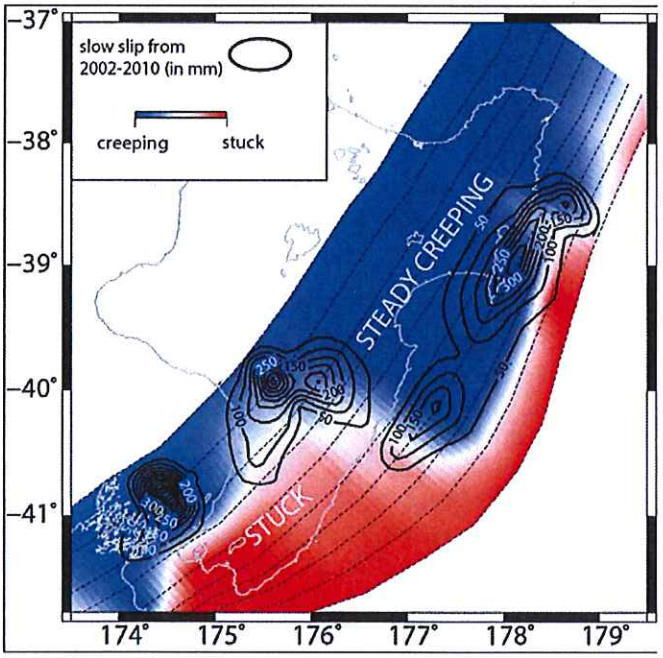
Project description

Executive summary *[200 words maximum description.]*

This application is for a one-year project comparable to AF8. There are increased risks posed by the Hikurangi subduction zone: New Zealand's largest plate boundary fault, following the Kaikoura sequence and subsequent slow slip events.

The impact on the North Island and the national economy will be significant and we must provide strategic thinking and a coordinated effort to plan for the next event.

While each CDEM Group has been working largely in isolation preparing plans, a large team of national and international scientists are coordinating research on the Hikurangi plate boundary to find out more about the risk it poses to New Zealand, and this research will continue through to 2021.



The opportunity to coordinate the CDEM planning with the science around the subduction zone under one steering group would be a huge benefit. Being able to scope the current situation, develop a maximum credible hazard scenario to inform consideration of the impacts and consequences to produce an initial response plan to an event, and then continue relationships into the future will vastly enhance the resilience of New Zealand to this largest source of earthquake and tsunami risk.

Challenge/opportunity *[200 words maximum description.]*

Subduction zones are a type of fault and are responsible for the largest and most powerful earthquakes and tsunamis in the world, such as Sumatra 2004, Chile 2010, and Japan 2011. The Hikurangi subduction zone is potentially the largest source of earthquake and tsunami hazard in New Zealand and GNS have estimated the probability of 7.8 earthquake or greater over 2017 has increased to 5% https://www.geonet.org.nz/news/257QXiFua86IoCEiMCImMA , which is approximately 6 times greater than it was prior to the Kaikoura Earthquake. The need to prioritise mitigation and appropriate planning was also highlighted in the NZ Institute of Economic Research Report for EQC August 2015 "Tsunami Risk Facing New Zealand".

While there is considerable scientific investigation being carried out along our subduction zone, there is currently a lack of understanding of the consequences to CDEM Groups collectively, and therefore the impacts nationally. While CDEM Groups have individually prepared for the response to a subduction zone event, there is a lack of coordinated response planning across areas likely to be immediately affected by an event.

'Community Resilience' is a common vision at all levels across CDEM. This plan will put us in far better place to serve our communities in the long term, leveraging off subduction zone science, gaining a better understanding of risks, there is an opportunity to coordinate CDEM planning and produce an response plan to an maximum credible event. This project will be managed under the umbrella of East Coast LAB, a multi-agency initiative which seeks to develop and build effective partnerships to promote and make accessible cutting-edge research that aims to increase understanding of the East Coast plate boundary. This project will assist in building relationships into the future, which will vastly enhance the resilience of New Zealand to this significant risk.

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

The National Civil Defence Emergency Management Strategy sets out the overall direction for CDEM in New Zealand, and this project aligns with the following goals and objectives:

Goal 2 Reducing the risk from hazards to NZ
2b - Developing a comprehensive understanding of New Zealand's hazard-scape.
2c - Encouraging all CDEM stakeholders to reduce the risks from hazards to acceptable levels.

Goal 3 Enhancing New Zealand's capability to manage civil defence emergencies
3b, c, d, e & f – Enhancing the ability of CDEM Groups, emergency services, lifeline utilities and government agencies to prepare for and manage an event of national significance.

Goal 4 Enhancing New Zealand's capability to recover from civil defence emergencies
4b - Enhancing the ability of agencies to manage the recovery process

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

This project will rely on sector consultation and bringing together Groups and stakeholders from across the country to promote a coordinated approach to tackling this risk, which will be of immeasurable benefit when this event happens.

The project will be managed in stages as follows:

1) Initial scoping – Using a maximum credible Hikurangi margin earthquake and tsunami scenario already developed for EQC for loss modelling purposes – complete scenario inform consideration of the impacts and consequences for CDEM response planning.
2) Scope out interdependencies and key partners to be engaged, gaps in our scientific knowledge, existing plans, what future work needs to be done, and a planning time-frame. There will also be the opportunity to define best practice, and incorporate lessons from AF8 and WENIRP.
3) Informed workshops - will raise awareness of the risks associated with a subduction zone event, and promote community and response planning. Following the lead of AF8 the project will use engagement and discussion with a range of different stakeholders and organisations to gain a full understanding of issues and risks.
4) Development of response plan – Work will begin on the development of a comprehensive response plan, with further engagement/consultation workshops with researchers and CDEM staff as required. The response plan will have national benefits and will ensure groups are able to respond appropriately and effectively to any event.
   Planning will include; summary of scientific information available and recommendations for further work; identification of 'at risk' communities across the North Island East Coast and summary of best practice work for community resilience; an assessment of lifelines information and planning across the North Island East Coast and likely impacts to their network; summary of essential resources required and likely response from North Island Groups; and recommendations to MCDEM for inclusion in any national plan.

Sector benefits will be realised by active CDEM Group participation in the project through identifying consequences and vulnerabilities individually and collectively, and development of response actions. The report will be distributed to all CDEM Groups and made available online, and will provide a catalyst for further sector response and recovery planning. Project planning would contribute to national exercise planning to test and bed-in the Response Plan.

Project design		
Project manager	East Coast LAB - Lisa Pearse	
Other project members	Tairāwhiti CDEM Group - Louise Bennett Wellington CDEM Group - Jeremy Holmes Manawatu/Wanganui - Ian Lowe Bay of Plenty – Clinton Naude Hawke's Bay – Jim Tetlow	
External providers/contractors	Emergency Management Contractor – TBA GNS Science & NIWA Universities Earthquake Commission	
Deliverables		
Milestones	Date for completion	Cost
Scoping Phase Formation of Steering Group, terms of reference and project management framework. Complete maximum credible hazard scenario using latest scientific theories and existing EQC modelling. Scope out scientific information currently available, interdependencies, gaps in our scientific knowledge, existing stakeholder plans for subduction zone events and what future work needs to be done including opportunity to define best practice & incorporate lessons from AF8	**1 July – 30 October 2018** 30 July 2018 30 September 2018 30 October 2018	Up to $20,000 (with support from EQC)
Informed workshops Following the lead of AF8 the project will use engagement and discussion with a range of different stakeholders and organisations to gain a full understanding of issues and risks. Workshops will also raise awareness of the risks associated with a subduction zone event, and promote community and response planning.	**1 November –31 March 2019** 31 January 2019 31 March 2019	
Develop response plan Develop comprehensive response plan, with further engagement/consultation workshops with researchers and CDEM staff as required. The response plan will have national benefits and will ensure groups are able to respond appropriately and effectively to any event. It will also identify beneficial preparations for agencies including groups and lifelines, and recommended interagency MOU's, summary of best practice work for community resilience; common public education messaging and ways of delivery; summary of essential resources and future work programmes.	**1 April – 30 June 2019**	
Project Management (20 hours per week)	Reported Monthly	$150,000

Project administration, consumables, printing, etc	Reported Monthly	$20,000
Travel, workshops and associated costs	Reported Monthly	$50,000
TOTAL		$240,000

Identified risks	
Risks	Suggested management
Commitment to timeframes with partners and contractor	The Steering Group will oversee all work, and receive monthly reports to minor expenditure and progress. This steering group approach has been used effectively for East Coast LAB.
The subduction zone ruptures before work is completed.	Any preparation will be of benefit and starting the conversations with interested parties is key to networking and providing a coordinated response.
Project Manager becomes unavailable /unsuitable.	Project Manager's work will be reviewed monthly by the steering group and any deficiencies highlighted.
Individual Groups do not have the time or capacity to contribute.	There will be several opportunities and methods for Groups to contribute either through workshops and during the development of the response plan.

Funding request and use	
CDEM resilience fund contribution	$240,000
Local authority/organisation contribution	In-kind staff time for project leadership, and staff time (all participating CDEM Groups) for assistance in developing and reviewing the project.
Other sources of funding or support	The GNS Core Funding Project on Societal Impacts of Hazards (SIH) supports the project, and has offered kind-in science support up to $200k. Advice and support will also be provided to the project through the long-term MBIE Endeavour Funded Hikurangi Subduction Earthquakes and Slip Behaviour project, and Resilience to Nature Challenges.
Budget	The majority of our proposed budget is to employ a Project Manager to bring all the work-streams together, facilitate workshops, prepare reports and to liaise between stakeholders. An allowance of 20 hours per week at a rate of $150 per hour has been allowed. It is planned to have one Project Manager for the bulk of this work, perhaps with assistance at time from a specialist in the scientific areas of expertise. The HBCDEM Group will provide administration support (up to 10 hours per week @ $35/hour) printing and other routine matters to allow the Project Manager to concentrate on high level work. This project aims to bring Groups together around an identified significant national risk to build networks for a resilient future. The travel budget proposed recognises the costs of travel around New Zealand and see it as an essential part of this project.
Applies if application exceeds $100,000 over the life of the project	Do you wish to attend a hearing in support of this application? Yes ☐ No ☒

Application confirmation	
Approval of Chief Executive	

CDEM Group comment
Comment from Wayne Jack – Chairman HB CEG: *"The Hikurangi subduction zone is New Zealand's largest plate boundary fault. While there is significant research being undertaken to understand the risk this fault poses to New Zealand we need to be prepared for an event. This project is important to develop a maximum credible hazard scenario to inform consideration of the impacts and consequences and then to produce an initial response plan to an event to what could be the largest source of earthquake and tsunami risk. Improving the resilience for the region and for New Zealand is critically important."*
Partner Comments
EQC will contribute a loss-modelling scenario they already have developed for the Hikurangi margin earthquake and tsunami (noted in Stage 1). Other EQC partnership interests cited in the project include: • Potential for additional direct support from EQC, perhaps via EC LAB, for further technical development of the scenario that makes it adaptable for multi-sector use (notionally in the order of $30k). • EQC interests in working closely with HBCDEMG and other Groups on operational planning associated with the project • EQC interests in building on the response plan to inform longer-term joint recovery planning.