



## CDEM Resilience Fund project application form

Application for CDEM Resilience Collaborative fund approval	
Project title	Project AF8 - Developing a coordinated response to an Alpine Fault rupture to assist and enhance community resilience across the South Island
Date of application	14 March 2016
Details on application	
Lead authority	Emergency Management Southland
CDEM Group	Southland
Other local authorities or Groups supporting the proposal	<p>CDEM groups: Nelson-Tasman, Marlborough, Canterbury, West Coast, Otago, Wellington</p> <p>Research groups: University of Canterbury, University of Otago, Victoria University and GNS science.</p>
Project description	
<p>Executive summary <i>[200 words maximum description.]</i></p> <p>This is a revised application from that submitted in August 2015. This application is for two years work 2016/17 and 2017/18. It is envisaged that a further application will be made in the second year to continue this programme as it develops.</p> <p>It is highly likely that an Alpine Fault event will happen in the lifetime of today's population. The impact on the South Island and the national economy will be significant and we must provide strategic thinking and a coordinated effort to plan for this event.</p> <p>This project brings science and emergency management planning together to identify consequences of a large Alpine Fault earthquake for all CDEM groups in the South Island and identify coordinated initial response actions for CDEM groups.</p> <p>Currently each CDEM Group works largely in isolation preparing plans and commissioning scientific work on an ad-hoc basis. The scale of an Alpine Fault event will impact all Groups and will necessitate a national coordinated response.</p> <p>The outcomes of the project will include:</p> <ul style="list-style-type: none"> <li>• Improved understanding of the likely consequences of a large Alpine Fault earthquake for CDEM groups across the South Island and into the Wellington region</li> <li>• Identification of initial response actions, interdependencies between CDEM Groups and priorities for response</li> <li>• Identification of opportunities for improving emergency management arrangements at both the CDEM group and national levels</li> <li>• Identification and planning for community resilience in areas likely to be heavily impacted</li> <li>• Strategic oversight of scientific work on the Alpine Fault including setting best practice research needs for each CDEM Group, identification of gaps in our understanding and sourcing funding for future work</li> </ul> <p>A significant outcome for this project will be the formation of a multi-agency initiative (Project AF8) that will bring together into one coordinated structure, research, policy and practice stakeholders working on Alpine Fault issues. This aligns with 'Developing a National Disaster Resilience Strategy and working towards a 'Resilient New Zealand'.</p>	

Problem/opportunity [200 words maximum description.]

Alpine Fault earthquakes are frequent events – there is evidence of at least 26 large earthquakes in the last 8,000 years, with a return period of around 300 years. Currently it is 299 years since the last rupture in 1717. There is strong evidence that the Alpine Fault has regularly occurring large surface-rupturing earthquakes, and research indicates that there is a 30 to 50% chance of an event occurring within the next 50 years.

While there has been considerable scientific investigation into the Alpine Fault, 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 an Alpine Fault earthquake through individual response arrangements, there is a lack of coordinated response planning across the area likely to be affected by the event.

The opportunity to coordinate both the CDEM planning and the science around the Alpine Fault under one steering group would be of huge benefit. Being able to scope the current situation, produce an initial response plan to an event and then continue these relationships into the future will vastly enhance the resilience of New Zealand to this highly likely scenario.

At all levels across CDEM 'Community Resilience' is a common vision. If we fail to plan for a risk that is clearly identified and that will happen in our lifetimes, then we are negligent in our approach to Emergency Management. This resilience fund application will put us in far better place to serve our communities for the long term.

Alignment with identified goals and objectives [200 words maximum description.]

The National Strategy sets out the overall direction for CDEM in New Zealand. It has a vision: *Resilient New Zealand: communities understanding and managing their hazards.*

The National CDEM Plan aims to integrate and align agencies' CDEM planning and related operational activities at the national level.

Other CDEM regional plans have similar goals and objectives. For example, Southland CDEM Group Plan is aligned to other group plans across the country, and contains sections of particular relevance, such as;

**Reduction**

2.a Improve understanding of Southland's hazardscape and associated risks

2.b Undertake long term strategic reduction of the risks from hazards through collaborative planning with stakeholders

**Readiness**

1.a Increasing the level of business and community awareness through public education and consultation.

3.b Strengthen and enhance the co-ordination and cooperation amongst all relevant sectors in planning for and responding to an emergency

This project closely aligns with all these plans and objectives, providing a comprehensive and coordinated platform for increasing community resilience across the 4Rs.

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

This project will rely heavily on sector consultation and bringing together Groups and stakeholders from across the country. The next Alpine Fault rupture is the biggest hazard facing the South Island and work to promote a coordinated approach to tackling this issue will be of immeasurable benefit when this event happens.

The initial scoping phase during Year 1 will allow all groups to understand likely impacts across the South Island, interdependencies, gaps in our scientific knowledge, existing plans and what future work needs to be done. There will also be the opportunity to define best practice and to highlight minimum standards in planning, resourcing, inventories and research. The opportunity to assist with finding funding and to help prioritise work in each Group will also be of great value.

Face-to-face meetings with robust discussion and informed workshops will raise awareness of the risks associated with an Alpine fault rupture and promote community and response planning. The highly collaborative nature of this project requires a lot of engagement and discussion with a range of different stakeholders and organisations, which is reflected by the budget dedicated to travel for this project across both years.

In Year 2, the second phase will involve the development of a South Island response plan for an Alpine Fault event. This work will involve several engagement workshops with researchers and CDEM staff to develop a comprehensive response plan. This plan will have obvious national benefits and is essential for us to respond appropriately and effectively to any event.

Reporting will include; summary of the scientific information available and recommendations for further work, identification of 'at risk' communities across the South Island and summary of best practice work for community resilience, an assessment of lifelines information and planning across the South Island and likely impacts to their network, summary of resources available and likely response from South 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 springboard for further sector response and recovery planning.


### Project design

Project sponsor	Angus McKay
Other project members	<p>Steering Group Members:</p> <p>Southland, Angus McKay (Chair)  West Coast, Chris Raine  Otago, Chris Hawker  Canterbury, Neville Reilly  Nelson Tasman, Roger Ball  Marlborough, Brian Patton  GNS Science, Robert Langridge  University of Otago, Caroline Orchiston  University of Canterbury, Tom Wilson  Victoria University (Wellington), John Townend</p> <p>Observers:  WREMO, Bruce Pepperell  MCDEM, Southland REMA</p>

2016/12

	Project Manager: Brendan Morris – overall project Caroline Orchiston – science liaison	
External providers/contractors	Emergency management contractor (Brendan Morris Consulting Ltd.) Universities, GNS Science EQC (currently funding a scoping project being undertaken by Caroline Orchiston for a multi-agency Alpine Fault initiative).	
Deliverables		
Milestone	Date for completion	Cost
<b>2016/17 - Scoping phase</b>		
<ul style="list-style-type: none"> <li>Formation of working group, terms of reference and project management framework</li> </ul>	July 2016	
<ul style="list-style-type: none"> <li>Prepare likely scenarios using latest scientific theories and modelling. Postdoctoral student over two years (annual contribution from Resilience Fund, total cost \$150k per year co-funded from other organisations)</li> </ul>	July 2017, on-going	\$20,000
<ul style="list-style-type: none"> <li>Assessment of Scientific Information currently available, summary and workshops. Develop best practice guidelines.</li> </ul>	Nov 2016	
<ul style="list-style-type: none"> <li>Likely impacts and response actions (identifying high risk communities and lifelines vulnerabilities)</li> </ul>	Dec 2016	
<ul style="list-style-type: none"> <li>Assessment of Group resource capabilities, shortfalls and interdependencies and develop a standard form of recording resources</li> </ul>	Feb 2017	
<ul style="list-style-type: none"> <li>Draft scoping report write up and review</li> </ul>	Mar 2017	
<ul style="list-style-type: none"> <li>Draft Report workshop and socialisation</li> </ul>	Apr 2017	
<ul style="list-style-type: none"> <li>Finalise and publish</li> </ul>	Jun 2017	
<ul style="list-style-type: none"> <li>Project Management (20 hours per week)</li> </ul>	Reported Monthly	\$150,000
<ul style="list-style-type: none"> <li>Project admin, consumables, printing etc</li> </ul>	Reported Monthly	\$25,000
<ul style="list-style-type: none"> <li>Travel and associated costs</li> </ul>	Reported Monthly	\$50,000
	<b>TOTAL</b>	<b>\$245,000</b>
<b>2017/18 – Response Planning</b>		
<ul style="list-style-type: none"> <li>Continue likely scenario modelling. Postdoctoral student over two years (annual contribution from Resilience Fund, total cost \$150k per year co-funded from other organisations)</li> </ul>	July 2018, on-going	\$20,000
<ul style="list-style-type: none"> <li>Identify future work programme and on-going governance arrangements for Project AF8</li> </ul>	Aug 2017	
<ul style="list-style-type: none"> <li>Identification and collation of all stakeholder plans for Alpine Fault events</li> </ul>	Sept 2017	
<ul style="list-style-type: none"> <li>Produce common Public Education messaging and ways of delivery</li> </ul>	Dec 2017	
<ul style="list-style-type: none"> <li>Establish MoU's between stakeholders for</li> </ul>	Dec 2017	

<p>'cross border' support</p> <ul style="list-style-type: none"> <li>• Confirm role and expectations of MCDEM versus Groups in responding to Alpine Fault rupture</li> <li>• Draft Alpine Fault Response Plan write up and review</li> <li>• Draft Plan workshop and socialisation</li> <li>• Finalise and publish</li> <li>• Design and conduct South Island Exercise</li> </ul> <ul style="list-style-type: none"> <li>• Project Management (20 hours per week)</li> <li>• Project admin, consumables, printing etc</li> <li>• Travel and associated costs</li> </ul> <p style="text-align: right;">2 Year Project Cost</p>	<p>Dec 2017</p> <p>Mar 2018</p> <p>Apr 2018 May 2018 June 2018</p> <p>Reported Monthly Reported Monthly Reported Monthly</p> <p><b>TOTAL</b></p>	<p>\$150,000</p> <p>\$25,000</p> <p>\$50,000</p> <p><b>\$245,000</b></p> <p><b>\$490,000</b> <b>excl GST</b></p>
<b>Identified risks</b>		
<b>Risk</b>	<b>Suggested management</b>	
Commitment to timeframes with partners and contractor	The proposed Governance structure will oversee all work and receive monthly reports to monitor expenditure and progress. This steering group approach has been used effectively for the ITF (Integrated Training Framework) project with a similar budget.	
The Alpine Fault 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 steering group and any deficiencies highlighted. Contract would be reviewed annually.	
Individual Groups do not have the capacity to contribute fully	By clearly communicating the risk and minimum standards required to mitigate an Alpine Fault event, we will be able to advocate for more resources.	
<b>Funding request and use</b>		
CDEM resilience fund contribution	\$490,000 over 2 years	
Local authority 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	EQC, Resilience to Nature's Challenges (National Science Challenge), QuakeCoRE, GNS Science core funding	
Expenditure <i>[Please supply details]</i>	This application is for a two year project to start the process of a coordinated response to an Alpine Fault event. It has two streams: the CDEM planning and the science work. This application is for funding to get Project AF8 under way, produce a CDEM plan and to coordinate the science work being undertaken.	

	<p>Other than a small contribution to the proposed postdoctoral project to define a likely Alpine Fault scenario, there is no provision for funding scientific work. It is envisaged that the other funding streams available continue to fund this work.</p> <p>The majority of our proposed budget is to employ a Project Manager to bring all the workstreams 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 times from a specialist in the scientific areas of expertise.</p> <p>Emergency Management Southland would provide a member of staff for admin support (10 hours per week @ \$35/hour), printing and other routine matters to allow the Project Manager to concentrate on high level work.</p> <p>This project will concentrate on breaking down barriers, bring Groups together and building networks for a resilient future. The travel budget proposed recognises the costs of travel around New Zealand and sees it as an essential part of this project.</p>
<b>Application confirmation</b>	
Approval of Chief Executive	
<b>CDEM Group comment</b>	
Comment	Fully supported at Group level.
Approval of Coordinating Executive Group Chair	