



impact

Volume 52
June 2014



Cyclone Ita – a Greymouth perspective

In this issue: CDEM Controllers Development Programme | CDEM Capability Development Strategy | Civil Defence cellphone alerting project funded | Coordinated Incident Management System 2nd edition published | South Island CDEM Conference | Gore fire | NZ's first disaster Communications Conference | Honorary Fellowship for Bill Simpson | Cyclone Ita – a Greymouth perspective | Emergency rainwater tanks wins Energy Globe Award | Exercise Whateva – a perfect day for a storm | Civil Defence competition for schools | Finally! BCPs for our local businesses | Lifelines Vulnerability study | Rescuers of tomorrow | Neighbours Day Aotearoa – building community resilience | New flood protection barriers | Storm a catalyst for major change | Loss of utility services | Vocational training team exchange | What do older people's life experiences tell us about emergency preparedness? | Critical Incident Leadership Training for future leaders | Get Ready Get Thru in nine languages | Public participation redefines Christchurch flood hazard | Public consultation: Revised National CDEM Plan | Sharing our lessons learnt | Volcanic Alert Level system changing on 1 July

Impact is a quarterly magazine for the civil defence sector published March, June, September and December. Previous issues can be found on the Ministry's website:

www.civildefence.govt.nz

Items may be reproduced with acknowledgement

Emergency contacts

For information and media enquiries,
Duty Media 24/7 coverage:
Telephone: 04 494 6951
Email: pim@ncmc.govt.nz

Editorial enquiries

Vince Cholewa, 04 817 8560
vince.cholewa@dpmc.govt.nz

Contributors

John Hamilton
Jo Mitchell
Hon Nikki Kaye
Tane Woodley
Allan Wilson
Craig Sinclair
Michele Poole
Sarah Gauden-Ing
Janelle Mackie
Meagan Edhouse
Sonal Chandratilake
Dave Jack
Kimberley Cleland
Roger Eynon
Angela Rampton
Neil Brown
Ally Koehler
Sandy Thambiah
Victoria Cornell
Chris Hawker
Graeme Smart
Alex Hogg
James Thompson
Sally Potter

Common acronyms

MCDEM Ministry of Civil Defence & Emergency Management
CDEM Civil Defence Emergency Management
NCMC National Crisis Management Centre
ECC Emergency Coordination Centre
EOC Emergency Operations Centre
EMO Emergency Management Officer

Visit us on the web

www.civildefence.govt.nz
www.getthru.govt.nz
www.whatstheplanstan.govt.nz

Published by the Ministry of Civil Defence & Emergency Management

PO Box 5010 Wellington
Level 17, Bowen House
Corner Lambton Quay and Bowen Street, Wellington
Telephone: 04 817 8555

Disclaimer

Impact may publish articles of interest to the CDEM sector that are not written by the Ministry. Such articles are the opinion of the author. They do not necessarily reflect Ministry policy and their publication is not an endorsement by the Ministry of the views expressed.

EDITORIAL

John Hamilton, Director Civil Defence



Foreword

Since the last copy of Impact the Ministry of Civil Defence & Emergency Management has settled into its new accommodation in Bowen House in Wellington and into the way in which its new departmental parent, the Department of the Prime Minister and Cabinet, operates.

Amongst other references, it was the Review of the Response to the Christchurch Earthquake that suggested the benefit for civil defence emergency management of being associated with the department that is the closest to coordinating the national response to a crisis. I have no doubt about the benefits of that relationship at the highest levels of roles and responsibilities. But in our sector simply carrying the big stick, or thinking that by being associated with high office you are perceived to be carrying a big stick, is not enough to have communities modify their behaviours. Deep engagement with communities that helps them understand their hazard risks and what they can do to manage them is effective in changing behaviours at the local level.

This Impact is replete with examples of where people from our sector are engaged effectively with their communities and through those relationships encouraged them to adjust their thinking and practices in civil defence emergency management and when necessary, providing the additional support a community requires in an emergency. I encourage you to read and share the articles on response teams, leadership training for our ASEAN neighbours, developing controllers and encouraging schools to think about local hazards as well as having teams from secondary schools take part in rescue competitions. There are also reports of local groups providing welfare support, assisting in flooding situations and helping develop business continuity plans and the consideration of vulnerabilities to lifeline utilities. These examples indicate what can be done in communities. I am sure the investment in these activities will pay off should an emergency strike later.

The strong rope is made of many interwoven strands. Building strong, well-prepared and resilient communities is at the heart of civil defence emergency management in New Zealand and the strength of civil defence emergency management comes from the combining of the many and varied strands many of which are well illustrated by this month's stories. ■



Bowen House, Wellington.

CDEM Controllers Development Programme

As part of the CDEM Capability Development Strategy, earlier this year MCDEM sought proposals from suitably qualified learning and development providers to design, develop and provide a capability development programme for CDEM Controllers.

The programme, to be rolled out in the second half of 2014, is targeted at Controllers at all levels, local to national, and will cater for all experience levels. The aim is to develop a pool of highly competent and accredited response leaders in each CDEM Group, and to contribute to a national cadre of coordination professionals.

MCDEM have selected Massey University, in conjunction with the Auckland University of Technology (AUT), to design, develop and deliver the *CDEM Controllers Development Programme*.

The programme will emphasise the application of grounded research and teaching to this crucial aspect of emergency management practice. The programme will be led by Research Manager Jon Mitchell, at Massey University/GNS Science's Joint Centre for Disaster Research (JCDR), supported by Massey's Professional and Continuing Education (PaCE) team.

The *CDEM Controllers Development Programme* will include an element of initial preparatory work to enable learning throughout the programme, a residential phase to provide interactive, face-face learning and assessment, followed by individualised follow-up and support from peers and mentors.

Jon Mitchell says JCDR and PaCE will be bringing experts in emergency and disaster response leadership from New Zealand, Australia, North America, Asia and Europe, to contribute to the development and delivery of the programme.



Joint Centre for Disaster Research, Research Manager Jon Mitchell and Director of Civil Defence Emergency Management John Hamilton.

"This is an exciting opportunity for the emergency response community in New Zealand to go to a whole new level of professionalism. Massey is delighted to be working with AUT, the Australasian Emergency Management Institute, and personnel from the University of Southern California Long Beach and Harvard University's Meta Leadership Programme on-board. Above all, our aim is to ensure this course makes a difference on the ground, better enabling controllers to confidently and competently lead capability development and response coordination, before, during and after emergencies," says Mitchell.

After successful completion of the programme, participants will be accredited as CDEM Controllers.

If you have any questions regarding the *CDEM Controllers Development Programme*, please contact the MCDEM Team Leader Capability, Grant Morris, on 04 817 8581, or email grant.morris@dpmc.govt.nz ■

MCDEM have selected Massey University, in conjunction with the Auckland University of Technology (AUT), to design, develop and deliver the CDEM Controllers Development Programme.



CDEM Capability Development Strategy

The CDEM Capability Development Strategy was designed for those agencies with specific responsibilities under the Civil Defence Emergency Management Act 2002 and the National CDEM plan.

Its purpose is to provide support and direction for developing the capability of all people engaged in CDEM. The strategy focuses on the capability of individuals. Capable individuals then contribute, in turn, to capable teams, capable organisations, and a capable, strong and effective CDEM sector nationally. MCDEM are currently developing a model to demonstrate the key

result areas of the strategy, and how they work in conjunction to enhance the CDEM sector's capability.

The strategy is a living document, and has been designed to fit within a five year period. There is some work yet to occur in a number of areas, however for the first time those agencies involved have an agreed framework of intent, a common language,

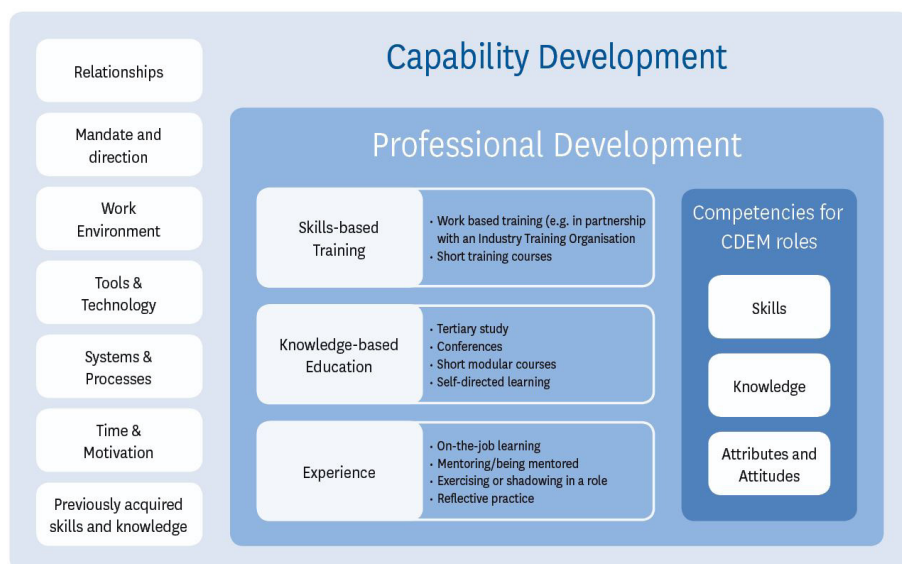
and the support required for developing the capability of all people engaged in CDEM in New Zealand.

The benefits of the strategy are:

- better support for roles and functions in CDEM
- better support for CDEM leaders
- better support for CDEM volunteers
- better sustained collaboration and commitment for CDEM agencies
- better enablement of evidence-based research and practice.

A more comprehensive explanation of capability development, the CDEM Capability Development Strategy, and its Key Result Areas, is contained on the MCDEM website at www.civildefence.govt.nz

If you have any questions regarding the CDEM Capability Development Strategy, or Capability Development in general, please contact the MCDEM Team Leader Capability, Grant Morris, on 04 817 8581, or email grant.morris@dpmc.govt.nz ■



Civil Defence cellphone alerting project funded

New operating spending of \$250,000 in 2014/15 will develop a business case for the possible introduction of a telecommunications-based public alerting system to warn people of impending emergencies, Civil Defence Minister Nikki Kaye says.

“This project is about reaching large numbers of people quickly, through cellphone alerts, to save lives in civil defence emergencies. By using a separate cellphone channel, the technology could reach specific geographical areas without causing communications congestion,” Ms Kaye says.

“Time can be crucial in some major emergencies. For example, following an earthquake that presented an immediate tsunami threat, a cellphone alerting system could be used to warn quickly those in the most dangerous zones.

“New Zealand doesn’t have a standard public alerting system that has coverage right across the country. It makes sense to look at taking advantage of advances in technologies to increase our public alerting coverage and preparedness for natural disasters.

“Other countries utilising cellphone text technology to issue public alerts about emergencies include Australia, the USA, the Netherlands and Israel.

“It is important that there continues to be a range of methods of emergency public alerting from sirens, to all forms of media.

I believe this could be an important complementary addition to ensure people have adequate warning in the event of a major emergency.

“The Ministry of Civil Defence and Emergency Management will work closely with telecommunication providers and local authorities on this business case. Funding to implement public alerting technology through cellphone alerting, should the business case be supported, would require agreement through a subsequent Budget process.” ■

Coordinated Incident Management System (CIMS) 2nd edition published

The 2nd Edition of the Coordinated Incident Management System (CIMS) was published in May 2014.

It replaces the 1st Edition (otherwise known as the Blue Book), which was published in 1998. The aim of CIMS 2nd Edition is that it can be used to manage any incident in New Zealand, regardless of size, complexity and hazard type.

The 2nd Edition is the result of a review process that began in 2007. This was overseen by the CIMS Steering Group, which consists of the emergency services, CDEM Groups and a number of central government agencies.

The major changes from the 1st Edition of CIMS are:

- Inclusion of national, regional, local and community response levels to complement the original incident level
- Recognising that communities play a part in response
- Larger emphasis on Planning, including the inclusion of an action planning process
- Larger emphasis on Public Information Management (PIM)
- Larger emphasis on Welfare as a function
- Recognition of governance, and the role it plays in response

- Description of lead and support agencies
- More detailed descriptions of the respective functions
- Removal of the function checklists from the appendices.

The changes to CIMS draw on 15 years of experience gained by agencies since the Blue Book was published. This includes the responses to the 2010-11 Canterbury earthquakes, the Pike River mine disaster and the MV Rena grounding.

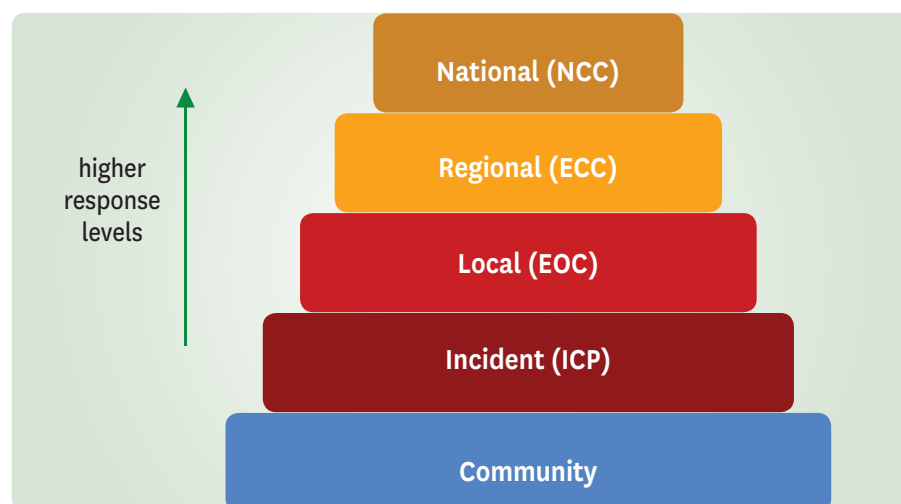
The vast majority of incidents in New Zealand are dealt with by emergency services at the incident level of response. However, it was clear to the Steering Group that more guidance was required for managing more complex incidents. In addition, experience showed that the community takes an active role when faced with an incident, and doesn't wait passively for assistance or to be called upon to help responding. Recognition of this will help to ensure that official responders align and coordinate their actions with community groups. This recognition and the higher profile given to the PIM and Welfare functions are aimed at ensuring that community needs are given appropriate consideration in incident management.

CIMS is available electronically, and an e-book version is currently being investigated. It can be found on the MCDEM website in two different formats:

- in PDF format for personal use or small-scale printing
- a printable file format that can be provided to a commercial printer for larger scale print runs.

It can be found at: http://www.civildefence.govt.nz/memwebsite.nsf/wpg_URL/For-the-CDEM-Sector-Publications-CIMS-2nd-edition

Any queries can be addressed to Tane Woodley, MCDEM, on 04 817 8566 or tane.woodley@dpmc.govt.nz ■



South Island Civil Defence Emergency Management Conference

Allan Wilson, Grey District Council

This year's conference will be held at Shantytown near Greymouth on the West Coast. There is an excellent line up of speakers, including local and national business people, academics and CDEM and local government practitioners. The theme of the conference is "Building Resilience". The proposed outcome is some practical advice for businesses, institutions and communities so that they can make themselves more resilient. This conference is aimed at a wider audience than the traditional conference. Business people, government agencies, NGO's community leaders, educators and the emergency services have all been invited.

The venue is set in the living museum of the world famous Shantytown. During the breaks delegates can wander this historic



wonder. Check out www.shantytown.co.nz. A dinner has been organised on the first evening serving some of the local delicacies. The menu is looking really good; and a tour of Monteith's Brewery is available for those interested in tasting some of what the West Coasters drink.

We also have some excellent companies who have agreed to set up trade displays, so there will be lots to do and see during the breaks.

If you would like to attend this Conference please register as it is filling up quickly. ■

Gore fire

At 6.30 p.m. on Sunday 14 April, Gore emergency services responded to a large fire caused by an electrical fault at a livestock mineral supplement factory and warehouse.

A strong easterly wind fanned flames toward a neighbouring business which housed industrial gas products including highly volatile acetylene and LPG. The ninety or so volunteer firefighters on the scene managed to ensure the fire didn't spread to this building or a major evacuation of sections of the town would have had to been considered.

The main business and residential districts of the town were blanketed in thick smoke and the public were drawn to the scene with many standing in the smoke watching.

As the effect of the cocktail of chemicals in the smoke was uncertain, Police appealed to smoke-affected restaurants, supermarkets and bars to close. State Highway 1 at the Mataura River Bridge, and the main trunk railway line had to be closed to ensure that the fire teams had access to reticulated water.

Emergency Management Southland (EMS) joined local Fire, Police, Ambulance and health services in coordinating a response plan.

EMS volunteers prepared to set up a temporary welfare centre at the Heartland Hotel Croydon on the outskirts of town. This was considered the safest place as the other designated welfare centres were either in the pall of smoke or too close to the scene of the fire. Fortunately the coordinated effort in responding to the fire meant that the fire was extinguished without further problems and the welfare centre didn't have to open.

One lesson learnt was the importance of utilising liaison staff to free up communications channels. In this emergency, Liaison staff went to the scene and coordinated from the incident Control point set up at the Fire Command vehicle. ■



NZ's first Disaster Communications Conference

Michele Poole (Queenstown Lakes District Council, EMPA Fellow)

Good communication is often more important than response in saving lives and preventing injury in major incidents, according to one of America's highest ranking emergency communicators.

That message, from keynote speaker Bob Jensen, was well received by the 150 delegates who attended New Zealand's first conference dedicated to the specialist field of disaster communications, held in Auckland in May.

Jensen, who is the Principal Deputy Assistant Secretary for Public Affairs at the US Department of Homeland Security, spoke of the lessons learned in over 30 years of emergency response, including the Deepwater Horizon oil spill and Hurricane Sandy.

He offered advice on how to avoid "media fratricide" when multiple agencies were competing to get their messages heard, and emphasised the importance of consistent messaging, from warnings through response and into recovery.

The conference was organised by the Australasian organisation Emergency Media & Public Affairs, and attracted delegates from across the spectrum of local and central government, private sector, utilities and not-for-profit organisations.

The programme brought together top ranking international speakers, including Denis McClean, Chief of Communications and Outreach from the UN Office for Disaster Risk Reduction, and a diverse range of local emergency communications

practitioners, including Air New Zealand's Chief Pilot, David Morgan and Canterbury Geologist Mark Quigley.

A quick-fire "Practical PIM" session offering nine five-minute presentations from some of the country's most experienced PIMs on emergency communications topics was a particular hit.

Conference Chair Michele Poole said that the feedback from delegates was still being considered, but the organising committee would be deciding within weeks whether to hold the event again in 2015 or wait until 2016. EMPA is a not-for-profit organisation and would be channelling the proceeds of this year's conference into research, to help improve effective communication in future emergencies. ■

Honorary Fellowship for Bill Simpson

One of New Zealand's pioneering emergency communicators has been awarded an Honorary Fellowship by the Australasian organisation Emergency Media & Public Affairs (EMPA).

Bill Simpson was presented with the award at the inaugural EMPA Disaster Communications Conference in Auckland last month. The award recognises his contribution to Public Information over more than 20 years, and is the first Honorary Fellowship that EMPA has bestowed.

A former teacher and TV documentary maker, Bill Simpson was the Canterbury Regional Council's first Communications Manager and mentored and inspired a generation of Public Information Managers, in Canterbury and nationally, from the early 1990s until his retirement in mid 2011.

Bill was quick to see the potential benefits of creating resilient communities, and at the time of the September 2010 earthquake, was leading a trial resilience project in Christchurch. Although he was to have



From left, EMPA Fellows Dr Susan Nicholls (Canberra), Bill Simpson (Christchurch), Bob Jensen (Washington DC), Peter Rekers (Brisbane – also EMPA's Chief Executive) and Michele Poole (Queenstown).

retired on 25 February 2011, Bill deferred his departure to serve as one of the Public Information Managers in the earthquake response.

Since his retirement, he has been a neighbourhood leader in recovery efforts in his home community of South Shore, in Christchurch. ■

Cyclone Ita – a Greymouth perspective

Allan Wilson, Grey District Civil Defence Emergency Management Officer

This is the third time in the last few years where Grey District has been hit by damaging winds. There was a tornado in 2005 and a wind storm in 2008 and on 17 April 2014 Cyclone Ita. We are incredibly fortunate that in all three there have been no fatalities and few injuries.

Timeline of events on 17 April

Approx 12 noon Strong winds, reports of damage and flying iron.

Approx 1300 Call from Fire service that they were receiving more calls that they could comfortably cope with.

1310 Grey District CDEM does quick damage assessment and places all EOC managers on standby.

1330 Call from fire service that they would like assistance in coordination. Asked if they required a Declaration.

1340 Meeting with police. Asked if they required declaration.

1400 Conducted another damage assessment of effected areas.

1430 Fire again request coordination – again asked if they required a declaration.

1440 Called in all EOC Managers and opened EOC.

1455 Meeting with Police and Fire again asked if declaration required. Police say it is likely that they will close the Cobden Bridge because of the strong wind gusts. This will effectively cut the town in two.

1500 Agree to set up two CD centres, one in Cobden and one in town.

1515 Cobden CD Centre is about to open in the School hall but roof comes off hall. Relocate to school staff room but roof comes off that.

1530 Cobden Bridge closed to all traffic.

1535 Blaketown closed as power lines down over several roads.

1550 CD Centre opened in town. Staffed by Red Cross.

1620 Cobden CD Centre relocate to older part of school as roof looks to be holding. CD Centre set up by CD warden, volunteers, Salvation Army and Red Cross.



(Top) Blaketown Band Hall completely demolished by the cyclone.

(Bottom left) Tree broken off – demonstrates the power of the wind.

(Bottom right) Tree smashed. This was a healthy tree – demonstrates the power of the wind.

1730 Greymouth CBD closed due to flying iron.

1800 CD Centres are busy with people who have lost roofs. Many are understandably scared and want to move from Cobden into town. Police move people a few at a time from Cobden to the town CD centre. Many people moved from CD Centre to local motels.

1830 receive report that hanger at airport had been demolished with several aircraft inside. Hanger in mainly scattered along the beach road and several aircraft are either destroyed or badly damaged.

1900 More people arriving at CD Centres.

2200 EOC stood down. Welfare centres remained open.

The following day once the wind had abated somewhat a damage assessment was carried out. Over 200 homes damaged, 39 are uninhabitable as are 5 business premises. Fire service handled 455, 111 calls; a record for the district. Still many roads closed throughout the district due to downed power lines and fallen trees.

Council staff, contractors, emergency services and volunteers worked all weekend and Easter Monday to clean up. By Tuesday most business opened for business as usual.

The CD Centres registered 55 people and put 27 into temporary accommodation. Only two families required longer term accommodation as most had moved in with friends or family.

It was good to see all the agencies working together and the coordination seemed to work fairly well.

The new waste water treatment plant, still under construction was filled with over one million plastic discs. They were picked up by a wind like a tornado. We spent two days picking up about 750,000 of them by hand!

In the following days, 10 homes and two commercial buildings were demolished

A debrief was held on 13 May 2014 chaired by John Lovell, the West Coast's Regional Emergency Management Advisor (REMA). Some valuable lessons learned and there is still discussion as whether a state of emergency should have been declared. The main problems identified were, as always, communication as some people were inadvertently left out of the loop and some agencies did not fully understanding the role of other agencies. ■



(Left) Plastic discs from treatment plant. The plastic discs are used to grow bacteria in the treatment plant. Fortunately the plant had not been commissioned, and the discs were clean.



(Top right) There really is a road under here. The Bellhill Road under fallen trees.

(Bottom right) Aircraft hangar. The Greymouth airport hanger blown onto the road.

Emergency rainwater tanks wins Energy Globe Award

The Wellington region's emergency rainwater tank initiative has been declared as the New Zealand national winner of the 2014 Energy Globe Awards for Sustainability.

The initiative was aimed to make rainwater tanks and the diverter kit, available at the cost effective price of \$105. Similar packages retail for \$200 or more.

The Energy Globe Jury found that the winner 'has developed a water storage system that makes drinking water available in emergency situations'.

This joint initiative was established between Wellington Region Emergency Management Office (WREMO), the water tank manufacturer (The Tank Guy), and the eight territorial authorities in the Wellington region who sell the water tanks. Over 4,500 emergency rainwater tanks have been sold in the Wellington region to date. In Upper Hutt it is estimated that one in ten households now have an emergency rainwater tank, greatly improving the resilience of the city.

The water tanks are designed with a diverter kit which can be connected to a downpipe so that in an emergency the water can be replenished, greatly increasing the

resilience of those households that have a tank installed. Added to this is the ability for stored rain water to be used in non-emergency situations such as during water-shortage periods in the summer months.

For more information on the emergency rainwater tank initiative see <http://www.getprepared.org.nz/rainwater-tanks>. For more information on Energy Globe Awards see <http://www.energyglobe.info> ■



Gary King, The Tank Guy, Nick Leggett, Porirua Mayor and Chair of the Wellington Region Civil Defence and Emergency Management Group with Scott Dray and Sarah Gauden-Ing of WREMO and their award winning rainwater tank.

Exercise Whateva – a perfect day for a storm

A large response team exercise around the Selwyn District and Christchurch on the 17th and 18th of May, brought together response teams from around the South Island for Exercise Whateva.

Based on a storm scenario, Exercise Whateva was organised jointly by the Canterbury CDEM Group Office and Christchurch City Council. The aim, amongst other things, was to test the current level of self-sufficiency within the teams.

Along with about 80 volunteers making up the response teams, over 100 others were recruited to act as casualties to provide a touch of realism to the exercise.

Each team was sent fictional weather warnings leading up to the exercise to “paint the picture” but the weather gods actually delivered a sunny autumn Canterbury day. The first teams deployed got to see the stunning sunrise after their 3:30am wake-up call, and quickly got busy setting up a Base of Operations (BoO) in a paddock adjacent to Lincoln University. With the exception of some portaloos, the teams only had the equipment they had brought along.

The storm scenario focused mainly on flood and wind issues, with teams dealing with reconnaissance, first aid, general rescue and flood response as well as emergency roofing needs and in one instance, moving a mob of sheep. The teams managed their own Incident Management and this included rosters and planning for the arrival of further teams.

During the day, teams responded to simulated emergency events across 16 sites including Lincoln, Rolleston and Burnham, Christchurch and Quail Island where the Coast Guard was also involved. The last team got back to base at 2:30am. They were then rudely woken up along with everyone else at 6:30am to respond to an explosion near the BoO. It took out the Incident Management Team and nearby camped Response Team members.

The exercise was over once the teams moved their BoO to Selwyn District Council. Some very tired team members were very pleased to see the spit-roast meal waiting for them.

The participating teams were NZRT1 (Canterbury Group), NZRT12 (Waimakariri), NZRT10, 11 and 14 (Christchurch City), NZRT2 (Nelson Tasman), Timaru Response Team and Red Cross NDRT.

Contact janelle.mackie@cdemcanterbury.govt.nz if you would like more information about the exercise. ■

Tips for the running of a successful exercise:

1. Find a passionate person for the job of exercise coordinator – in our case it was Jan Wright who worked tirelessly to get it all together.
2. Support this person with an exercise coordinating team who can help and guide when needed.
3. For each site, have exercise umpires (setting down the rules and keeping things on track), casualty coordinator (to look after the checking in/checking out and welfare of volunteer casualties), makeup/moulage people and on some sites, external evaluators. It sounds like a lot of people but it really pays off, along with some clear role definition.



Early morning incident control meeting.



NZRT12 in flood response exercise.



NZRT2 stretcher a casualty from rubble.



Exercising night time recovery.

Civil Defence competition for schools

School students from around the Eastern Bay of Plenty are encouraged to enter a new Civil Defence competition to help us understand our hazards and prepare for an emergency in the Bay of Plenty.

TSUNAMI EARTHQUAKE FLOODING VOLCANIC ERUPTION

COMPETITION

GREAT PRIZES!

CATEGORIES:

- PRIMARY (YEAR 1-6)
- INTERMEDIATE (YEAR 7 & 8)
- SENIOR (YEAR 9-13)

ENTRIES CLOSE 15 AUGUST

For more information visit www.bopcivildefence.govt.nz,
your local Council website or see your local school



Eastern Bay of Plenty Civil Defence has organised a competition for schools in the Whakatāne, Ōpōtiki and Kawerau Districts with a focus on increasing awareness of the Bay's four main natural hazards – tsunami, earthquake, volcanic eruption and flooding.

There are three age categories – Primary, Intermediate and Senior. The finalists in each category will be displayed at a number of public events around the Eastern Bay in late August with the overall winner in each category chosen by public vote.

The winners of the Primary and Intermediate categories will each win a helicopter flight for an adult and two children around Ōhope Beach or Whale Island with Frontier helicopters. The winning team of four in the Senior category will win a trip to White Island with Peejays White Island Tours.

Eastern Bay of Plenty Civil Defence Emergency Management Advisor, Meagan Edhouse, says the idea is to not only improve awareness of these hazards but to prompt students to learn about what we can do before, during or after an event and to help us prepare.

The categories are age appropriate with activities ranging from drawing the best flood, volcano, tsunami or earthquake through to full interactive hazard models built by teams of four.

Find out more at:
<http://www.bopcivildefence.govt.nz/>

Or facebook page:
<https://www.facebook.com/BOPCivilDefence> ■

Finally! BCPs for our local businesses

Small to Medium Enterprises (SMEs) make up 97% of all the businesses in our country and contribute to 27% of New Zealand's economy.

Although most business owners recognize the importance of having a Business



Continuity Plan (BCP), few have the resources or time to complete one. "It's Easy: Prepared Businesses" is WREMO's most recent addition to the "It's Easy" family.

Prepared Businesses is a simplified BCP that can be completed in 12 easy-to-follow practical steps, which are adaptable and expandable to suit business needs. The business owner or manager of a community

organisation can download the guide from www.getprepared.org.nz/businesses and fill out the editable PDF in a few stages. Once completed, the BCP can be emailed to the business owner and appropriate staff. The BCP can also be stored on a mobile phone and made available offline for immediate access. Prepared Businesses also provides a checklist for basic emergency preparedness steps as well as a reminder to schedule practice drills, which means the BCP plan can be incorporated into day-to-day business operations. ■



Local business owner, Rick Barrett, from The Hobby Stop at Kilbirnie with his copy of the "It's Easy" BCP guide.

Lifelines Vulnerability study

The Southland Lifelines Group has just completed its Lifelines Vulnerability study. This is a first step in assisting Southland's Lifeline Utility organisations to meet their obligations under the Civil Defence Emergency Management Act 2002.

The Group was formed in 2010 following a meeting of interested utility organisations, initiated by Emergency Management Southland.

The first project completed by the Group was to build a GIS-based viewer to hold all utility data for comparison with the region's identified natural hazards. The GIS Viewer project provided the basis for utility organisations to provide the assessments and data used in this study. The mapping system was born out of the GIS consortium led by Environment Canterbury. Hosting and building was done by Eagle Technology.

Asset information was provided by each organisation for inclusion on the common GIS platform. All participating organisations were provided with access to the Lifeline Viewer information.

Emergency Management Southland is in the process of transferring the Lifeline Viewer information onto the Environment Southland

GIS system. This will increase the mapping function, make updates when they may be required and make it easier to print maps. Access arrangements for utility organisations will be provided to the Environment Southland system in due course.

The Group worked very well together and part of the success of the project was the ability to see the big picture. For instance organisations that work competitively in the energy market saw that they were also reliant on each other to some extent and willingly shared information for the greater good.

Field trip meetings were another incentive to participate with visits to Meridian's West Arm power station in Fiordland and Southport's Port of Bluff the highlights. Seeing the operations firsthand and discussing their vulnerabilities reinforced the Group's resolve to ensure an excellent finished product. ■



Russell Hawkes, Project Manager, Southland Lifelines Vulnerability Group (left) and Neil Cruickshank, Manager, Emergency Management Southland celebrate the completion of the Southland Lifelines Vulnerability Plan.

Rescuers of tomorrow

They may be young, but the Hutt Valley students taking part in the recent Secondary Schools Rescue Training Programme in Wainuiomata showed a level of professionalism beyond their years.

Senior Emergency Management Advisor Dave Jack was impressed with the almost 90 students who took part in the three-day programme, which is now in its 39th year.

“Students are tested on their learning in areas such as loading and lashing casualties, reconnaissance, triage, improvised lifts and knots.

“It’s fantastic to see their confidence, knowledge and skills in these very practical areas grow after the three days of training but what is perhaps more encouraging, is the leadership and problem solving skills on display.

“These young people really are our rescue and emergency teams of tomorrow. To know that they all volunteered to take part is even more impressive because we know it takes real passion to be involved in this very challenging line of work,” says Jack.

Ministry of Civil Defence and Emergency Management Director John Hamilton was also on-site to see the students in action.

The annual programme is an initiative established by the Hutt Valley office of Wellington Regional Emergency Management and was the first of its kind in the country. This programme has only been made possible by the support of the Hutt City Emergency Response Team (NZRT 18) and members of the Upper Hutt Community Rescue (NZRT 9) who give their time voluntarily.

Devereux-Blum Training & Development Ltd, who train in emergency management nationally, have supported the programme for a number of years with their development of training programmes for each session and completing the assessment process for those seeking to gain the NZQA General Rescue at Ground Level unit standard 20473.

St Patrick’s College Silverstream were awarded the Civil Defence Shield and St Oran’s College the Spirit Cup which are awards presented by Lower Hutt Mayor Ray Wallace and Upper Hutt Mayor Wayne Guppy at the completion of the programme. The Shield recognises the school judged most competent across the range of skills assessed and the Cup recognises outstanding team work.

Sam Stannard from Hutt Valley High School and Rebecka Cox from Sacred Heart College were jointly awarded Devereux-Blum leadership with distinction certificates in recognition of their outstanding leadership skills assessed against criteria as part of day 3 of the programme. This award was presented by Devereux-Blum Training & Development Ltd. ■



(Top) St Oran’s College during the improvised carriers session. (Bottom left) St Patrick’s College Silverstream completing their reconnaissance briefing to their Team Leader. (Bottom right) Chilton St James School during the rescue exercise.

Neighbours Day Aotearoa – building community resilience

Kimberley Cleland – Neighbours Day Aotearoa, Roger Eynon – Neighbourhood Support New Zealand, Angela Rampton – Wellington City Council

Neighbours Day Aotearoa 2014 (www.neighboursday.org.nz) helped to spark connections between thousands of Kiwis throughout New Zealand this year – and helped to get out the message that it's friends and neighbours who'll probably be the first to help out in the event of a big quake, tsunami or other major emergency.

People all over New Zealand took the Neighbours Day Aotearoa concept and made it their own on 29 and 30 March 2014.

Why are we doing this? Because we know that communities are more resilient to disasters or emergencies and are safer when neighbours know each other and can help each other.

How do we know this? Neighbours Day has evidenced a continuing growth in local involvement. We have been asking participants about how Neighbours Day changes their perceptions of their neighbourhoods. Our online community has grown over the four years that we have been celebrating Neighbours Day nationally, more organisations are helping us to promote Neighbours Day and local authorities are investing in encouraging their local communities to get involved.

Perceptions of a group of surveyed participants includes around 86 per cent feeling that they know their neighbours better after Neighbours Day, 85 per cent are more likely to connect with their neighbours throughout the year, 55 per cent feel safer, and around 80 per cent are more likely to ask their neighbours for help if needed.

Neighbourhood Support New Zealand (NSNZ) is one of the national partners working with the Neighbours Day Aotearoa campaign team. NSNZ Chief Executive Roger Eynon says: "We know that adversity brings people together. It would be even better if our communities choose to do that before adversity touches them."

Wellington City Council actively promoted Neighbours Day Aotearoa in the Capital.



Young future police man enjoying the Neighbours Day open day at Kilbirnie Community Policing Station.

Neighbours Day Aotearoa will be celebrated over the weekend of the 28-29 March 2015

The Council sees the day as a great tool to empower all Wellingtonians, especially elderly, vulnerable, ethnic and migrant communities, to be more resilient. Wellington's Mayor Celia Wade-Brown is a great advocate for Neighbours Day Aotearoa. "Good neighbours are an everyday pleasure and a necessity in an emergency. We should all take the time to say hello to your neighbours and find out how you can help in a civil defence emergency."

Neighbours Day Aotearoa celebrations in Wellington were diverse. Some people celebrated with a street BBQ with their immediate neighbours. Ngā Hau e Whā o Paparāangi Marae held a community fun day at the Marae which included takeaway hangi and games/activities for children. Two suburban Community Policing Centres held open days which were well attended.

We are planning what Neighbours Day will look like in the future and how we can grow neighbourliness to be an activity Kiwis get involved in all year round. If anyone in the CDEM community wants to find out more about celebrating and promoting Neighbours Day Aotearoa 2015 they should get in touch with the Neighbours Day Aotearoa campaign team at kiaora@neighboursday.org.nz, on facebook and twitter or by registering at www.neighboursday.org.nz ■



A Neighbours Day group gathers in Civic Square, Central Wellington: From left Mayor Celia Wade-Brown, Helen Tupai and her daughter Hatesa Tupai (7 weeks old), Councillor Malcolm Sparrow, and Elizabeth St John-Ives.

New flood protection barriers

On a dark winter's night in Dunedin, a group of oddly dressed characters assembled in a quiet sidestreet in an industrial area.

For a while there appeared to be little going on as shadowy figures moved about – things were looking decidedly suspicious – then, with a burst, a generator fired up a set of lights, long sausages of blue PVC were unrolled and standpipes, hoses, pumps and fire appliances were brought into action.

Dunedin City Civil Defence Emergency Management was training in the use of its new water-filled flood protection barriers.

These recent additions to the stock of more traditional sandbags, shovels, wheelbarrows and rolls of polythene sheeting are part of our strategic flood protection capability. Not designed for large-scale flood control, this kit, along with the rural fire force that has been

trained in its use, is primarily for protecting strategic assets under threat from flood water.

In recent years we have suffered more frequent instances of high intensity, short duration rainstorms that produce localised flooding problems.

The fire force knows from experience how much time and effort it takes to properly sandbag even a small area, so they were thrilled to discover that each 9.5m long barrier could be filled with water in only seven minutes and not a blistered hand or sore back to be found.

Examples where the barriers would have been useful in the past include a telephone exchange under threat, the approaches of a bridge on a stop-bank

being undermined and a number of events of urban flooding in central Dunedin and Mosgiel that flooded businesses. Rapid diversion of flood flows is just not possible with traditional methods, but should be achievable with the flood barriers.

While we missed out on a resilience funding application to put together a prototype strategic flood protection trailer, we felt it was sufficiently important to be able to respond rapidly to protect critical assets that we have started assembling the required equipment anyway. At present, it can be loaded into a utility or ordinary trailer to be taken to where it is needed. ■

Storm a catalyst for major change

In February 2004, the Horizons Region experienced its most devastating flood in 100 years. Afterwards it was said that storms of similar intensity would come again and 2004 should be a catalyst for fundamental change.

Ten years on, this change has taken place in many forms at Horizons Regional Council – particularly in the areas of hill country erosion, river height and rainfall monitoring and region-wide capital flood protection upgrades.

Over 30,000 hectares of valuable hill country was classified as severely affected by erosion during the 2004 storm, resulting in 200 million tonnes of soil being lost to downstream streams and rivers.

In 2006 Horizons, along with a number of partners, applied to a new Hill Country Erosion Fund to incentivise sustainable hill country farming practices and where appropriate subsidise land use change. This application was successful, and with funding assistance from the Ministry of Agriculture and Fishery, the Sustainable Land Use Initiative (SLUI) was born.

Horizons' environmental manager land Grant Cooper says SLUI is founded on a number of key principles that hold true today.

"Everyone is contributing, including central government, as everyone benefits from improved water quality and less sediment in the river downstream. The programme has gone from strength to strength and now has over 450 farmers joined up," he says.

These farms represent about 40 per cent of the worst affected hill country and show SLUI is well on its way to meeting the 2016 target of having 50 per cent of farms committed to the programme.

Prior to 2004 Horizons monitored 60 physical sites that measured either rain, water or climate levels. This has since increased to 167 sites, with 297 sensors feeding information back to Horizons hydrology staff who keep a constant eye on results.

Monitoring results are made available via Horizons' website, providing up-to-the-minute information for residents to make informed decisions.

The data is also used to trigger Horizons' Interactive Voice Response (IVR) system, which is an automated phone network set up to call over a thousand people who have requested river height warnings.

Horizons manager emergency management office Ian Lowe says to protect communities as a whole, detailed flood action plans have been prepared for the most vulnerable locations within the Region.

"These plans provide direction for emergency services during a flood event and allow them to react quickly and efficiently. Horizons has also spent over \$2 million digitally mapping a thousand square kilometres of flood plain since 2004," he says.

This digital mapping has been turned into highly detailed flood maps used to provide strong guidance and rules around development in flood risk areas.

Horizons' erosion and flood control schemes suffered significant damage following the storm of 2004. Overall it took five years to reinstate the \$24.8 million worth of damage suffered.

Many requests were received for Horizons to quantify existing flood risk and to present options for improved protection, as data from the 2004 storm showed existing protection was not as high as expected. As a result Council committed to flood protection upgrade works in nine of its river and drainage schemes, at a total cost of approximately \$72.5 million.

With around \$42 million spent on flood protection improvements to date, including raising Palmerston North City's flood protection to a 500 year event level, it's anticipated all outstanding upgrade work will be completed by June 2018.

In responding to the community's expectation of reduced levels of flood and erosion risk, Horizons has generated the most intensive period of engineering activity within its river and drainage schemes since the 1960s.

The work has required a high level of support from the community, particularly in terms of increased rating impacts, and Horizons has endeavored to strike a balance between risk and affordability.

Once all the upgrade projects are complete, there will still be residual flooding and erosion risks. Horizons operations manager Allan Cook says this is an unavoidable consequence of the intensive development that's occurred on the flood plains for productive and residential or commercial purposes.

However, a combination of physical upgrades and the application of much improved flood risk information for planning and emergency response mean communities within the Horizons Region are in a much better place than they were 10 years ago if the rains come again. ■



Horizons hydrology technician Micah Dodge (left) and Horizons area engineer Paul Joseph (2nd from right) talking to people at Feilding's Farmers' Market about the impact of flood protection.

Loss of utility services

Kiwis generally will be familiar with the Civil Defence call to be prepared to get through a natural catastrophe.

Perhaps lesser known is the need to be prepared for the loss of a utility service. This will normally accompany a natural disaster, but more commonly the loss of electricity, gas, water or telecommunications services occurs due to other causes – third party damage, mechanical or technical failure, and isolated acts of nature.

This was brought into sharp relief in October 2011, when the Maui pipeline – the main artery for transporting gas from the Taranaki fields to the upper half of the North Island – suffered damage from a landslide in the rugged White Cliffs area on the North Taranaki coast, and needed to be shut down for six days for repairs. During those six days, there was significant disruption to businesses and services in the top half of the North Island that rely on gas for their normal operation. Around 5,000 businesses were required to curtail their demand, and the resulting cost to the economy was estimated at \$200 million.

However, once the pipeline was repaired, gas users were able to recommence their gas usage within the day, due to the successful management of the incident under the Gas Governance (Critical Contingency Management) Regulations 2008 (CCM Regulations).

What are the CCM Regulations?

The purpose of the CCM Regulations is to ‘achieve the effective management of critical gas outages and other security of supply contingencies without compromising long-term security of supply’. Their focus is the high pressure transmission pipeline systems that deliver gas directly to large electricity generators, petrochemical manufacturers, and other industrial consumers; and that feed into the lower pressure distribution networks that supply over 260,000 households, community facilities and commercial customers throughout the North Island.

In addition to damage to pipelines, such as what happened to the Maui pipeline in October 2011, critical contingencies can also be triggered by the loss of production from major natural gas fields.

The aim of critical contingency management is maintaining safe operating pressures in the transmission pipelines for as long as possible. An important additional consideration is keeping the local distribution networks ‘live’ because, if these were also to shut down due to pressure loss, consumers are in for a long and exhaustive process to safely resume gas use when the emergency is over.

At the heart of the CCM Regulations is the Critical Contingency Operator (CCO), which formally determines, manages and terminates critical contingencies. A key tool is the CCO’s ability to curtail consumption in order to stabilise the pressure in the affected part or parts of the transmission system. Curtailment instructions given by the CCO have the force of law; consumers must comply with CCO directions as soon as possible after the direction is given. Curtailment orders are given by reference to pre-determined consumer bands based on consumption volumes: the largest consumers are curtailed first, followed by bands in descending order of customer size. The CCM Regulations also provide for priority bands for gas consumers who provide services related to public health and safety or who provide hospital or other critical care services. The CCO has no power to curtail domestic consumers but can make an appeal for voluntary load reduction.

Visit the CCO website at www.cco.org.nz for notifications about critical contingencies, reports on past events and test exercises, transmission system map, and the CCM Regulations.

What happens in the case of a civil defence emergency?

It is possible that a natural disaster such as an earthquake could cause damage to a production station or pipeline that would trigger a critical contingency. However, the CCM Regulations are clear that compliance with CCO directions is not required where it would prevent compliance with the Civil Defence Emergency Management Act 2002. In other words, if a civil defence emergency is declared, the arrangements for managing that emergency take precedence over the critical contingency arrangements or any directions from the CCO.

What can businesses do to minimise their risk of disruption?

The Maui outage highlighted a lack of business risk and continuity planning by gas users, many of whom were unable to continue operations. Gas consumers may wish to consider whether installing backup fuel capability or increasing their supply inventory would be sensible steps that would help to mitigate the effects that a gas disruption would cause.

New Zealand’s gas infrastructure has a long history of reliability. But as rare as the October 2011 Maui pipeline failure was, it demonstrated that things can go wrong from time to time and that consumers should consider how best to prepare for when it happens. ■

Vocational training team exchange – Allan Wilson

In the second half of March Rotary International sponsored an exchange between Victoria Australian emergency managers and people who had worked on the Canterbury earthquake.



(Left) A view of Melbourne from Kinglake in 2010. (Centre) A stainless tree in Strathewen. The leaves are inscribed with the names of the dead and notes of condolence – an example of community recovery. (Right) Just such a lovely picture. The poor koala looks like a teddy bear.

The team selected was; Baden Ewart from CERA, Tim Priddy from CCC, Leanne Curtis from Cancern and Allan Wilson from Grey District CDEM. Unfortunately just before we departed Baden had to pull out due to work commitments.

We travelled to Melbourne on 16 March and met with our host families. We just spent a little time in Melbourne looking at how Moonnee Valley City deals with emergencies.

We then travelled to Kinglake to study the 2009 Black Saturday fires. This was very sobering; some of the survivor stories were very difficult to listen to. We met some amazing people who had stepped up as community leaders to manage the recovery. What surprised us was the similarity between the fires and the Canterbury earthquakes. A disaster is a disaster no matter what the cause. People suffer and some die and the survivors have to rebuild their lives as best they can. This can be a very painful process and it can take a very long time. Various agencies come in to assist: some do a good job and listen to the survivors as to what their needs are while others come in and tell the survivors what their needs should be.

We then moved on to Yea, a lovely little town in Murrindindi Shire, that was not directly affected by the fire but dealt with a number of the survivors. The local shire office is in Yea so we spent some time discussing with their staff about the response and recovery. We also spent a morning with the principal of the local high school. He has noticed a huge

spike in students behaving in a dangerous manner and feels that he will have to deal with this for some years to come.

From Yea we travelled to Seymour to look at a fairly new Country Fire Authority (CFA) ICC. The CFA have spent a long time looking at the best layout for their ICCs and have come up with a design that has a central room where Intelligence sit. Off this room are a number of smaller rooms with very large sliding doors and large windows. This is where all the functional desks sit so that with the door open they are part of the ICC but can close the door if privacy is needed. It seems to work very well.

We then moved to Numurkah in Moira Shire to look at how the floods of 2012 had been managed. This is an unusual shire. The fall across the whole shire is 1 in 800 so that they have to use complex laser equipment to discover which way to dig drainage ditches. The floods come up very slowly but take over two weeks to disperse. Not only did the shire have a flood but in recent years they have suffered a tornado, plagues of mice and locusts and a fire.

After a very pleasant stay we went to Kilmore to look at the recent fires of February 2014. Not far from Kilmore is the Australian Emergency Management Institute (AEMI). This is a fascinating place to visit. If anyone is in the Melbourne area I strongly recommend you organise a visit to this place. New Zealand could do very well to have such an institute; not only do they do all the high level training, they also sit on all the EM

committees and this is where most of the EM policy is set.

Finally we travelled back to Melbourne to visit the State Emergency Control centre. This is very similar to the ICC in Seymour but much bigger and during the fire season is fully staffed all the time.

This was a fantastic two weeks, it is undoubtedly the most intense, extensive and exhausting professional development I have ever undertaken.

The top four lessons I have taken away are:

- In writing our plans for the four Rs we must engage the community. The current practice of writing plans and then asking for community input is not the best way. If we want the community engaged in recovery then we need to be engaging them from the very beginning.
- Recovery must be balanced, it must come from the people and not only be top down
- Recovery is a slow process and people who have not been effected do not understand this
- CDEM desperately need a common set of practices and training. I am absolutely convinced that the only way to achieve this is to have common training in a specially designed facility. I applaud the work in common training that is going on at the moment but without a training facility, like all the other emergency services have, we are bound to be second at best. ■



(Left) Murrindindi flood. (Right) Marysville, a small town in the Kinglake area – only three homes survived.

What do older people's life experiences tell us about emergency preparedness? – Victoria Cornell

Victoria has worked in the field of emergency management for eight years, both at local and state government levels. Her main professional position is in the South Australian State Recovery Office which is responsible for planning and coordinating whole of government support to communities that have been affected by disasters. Currently, Victoria is undertaking a short term secondment to the South Australian Fire and Emergency Services Commission, working on national projects aimed at building resilience across the country. Victoria was awarded her PhD by Flinders University in May 2014.

Anecdotally, in Australia older people are considered to be under-prepared for emergency events. However, they are rarely engaged directly, to understand their knowledge and experience of emergencies and their feelings regarding emergency preparedness. Discussion thus far largely considers the development of tools and checklists that will help older people prepare for emergencies, rather than what might influence their decision to prepare.

Recent research in South Australia took a qualitative approach to explore and understand whether people's life experiences have influenced their perception of preparedness and what it means to them be prepared for an emergency event.

During the research, in-depth interviews were held with 11 people – eight women and three men – who ranged in age from 77 to 90 years. All participants lived in their own homes, in the greater Adelaide or Adelaide Hills areas, and were in receipt of low-level in-home care, for example assistance with shopping or housework.

I found that the participants felt that being prepared for an emergency is not a one-off

activity that is achieved upon completing a preparedness checklist or a safety plan. It is an ongoing process, built upon over many years. Experience, strength and ability to cope is gathered from many aspects of life, both the big events and the small. This process leads to a feeling of comfort, safety and security. While they might not define themselves as 'being prepared', the people I interviewed certainly considered themselves to be resilient; they accept their limitations and feel confident they can cope.

Given lack of engagement to date, this is a key finding as it has implications for how older people may (and should) be engaged in the future; i.e. they should not be approached as a 'vulnerable' group as such; rather a group that has some specific needs, but that also has a wealth of positive attributes in terms of knowledge, experience and sense of community.

The material gathered in this research shows that for these older people, being prepared is principally a mental state of being. In accepting their advancing years and deteriorating physical ability, the participants gain comfort in knowing

that their life experiences (including the emergency events they have lived through) have left them feeling comfortable, and strong enough mentally to deal with any potential future emergency.

The research therefore has implications for the emergency management sector in terms of developing well informed policy and practice. By understanding what influences older people living in the community to prepare for emergency events – indeed, understanding that for this group of older participants being prepared is less important than being resilient – the sector can establish how best to assist them in their emergency preparedness planning; rather than making assumptions about what this target group wants or needs.

For further information on Victoria's research, please contact her on cornell.vicki@safecom.sa.gov.au

Acknowledgments

Victoria would like to thank Resthaven Incorporated who provided a full time PhD scholarship for this research. ■

Critical Incident Leadership Training for future leaders

When your region is faced with some of the most challenging and devastating natural disasters, how do you improve your resilience, especially when there are ten separate nations involved?

ASEAN (Association of Southeast Asian Nations) found a way with the signing of the ASEAN agreement on Disaster Management and Emergency Response (AADMER). This agreement set out a comprehensive work programme which included the enhancement of humanitarian assistance and emergency response coordination under which the ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management (AHA Centre) was established.

In January 2014 the AHA Centre launched the AHA Centre Executive (ACE) Programme which will bring two NDMO officers from each member state to the AHA Centre for six months to be trained as future leaders in disaster management. Three groups of trainees are expected to be sent to AHA Centre by 2015 and the New Zealand Government is actively supporting this initiative through the Ministry of Foreign Affairs NZ Aid Programme. The Programme makes funding available to bring each group of students to New Zealand for training in critical incident leadership, emergency exercise science, and to meet and develop relationships with practitioners and educators in New Zealand.



ACE Trainees hard at work on UC Campus.

The University of Canterbury's Centre for Risk, Resilience & Renewal (UCR3) is delivering this training and the first group arrived in Christchurch in February 2014. The UCR3 programme delivered academic and experiential training through classroom work, field activities and visits to Wellington and Auckland to meet and interact with MCDEM, GNS Science, Wellington Regional

Emergency Management, Auckland Civil Defence & Emergency Management, and to undertake additional training at Auckland University of Technology.

For more information contact Chris Hawker, Director, UCR3, chris.hawker@canterbury.ac.nz

Get Ready Get Thru in nine languages

Did you know the Get Ready Get Thru is believed to be the most translated government website in New Zealand?

It is in English, Simplified Chinese, Traditional Chinese, Hindi, Korean, Te Reo Maori, Samoan, Tongan and Arabic. Just click on the language and it translates the website.

CDEM organisations and community groups are most welcome to download and use translated information to use in their communities.

If you need help with this, please contact vince.cholewa@dpmc.govt.nz



Public participation redefines Christchurch flood hazard

The Canterbury earthquake series has changed the land and rivers of Christchurch. Drainage systems no longer operate as planned, chronic flooding is occurring in some areas, previous flood maps are inaccurate and significant resources are being deployed to delineate the areas now more vulnerable to flooding.



5th March 2014 Christchurch flood map prepared by NIWA with public assistance. Emergency callout locations are shown as red triangles, photo locations as red pins. The view shown looks due south. The actual flood water was not blue!

During severe rain storms on 5 March this year, all available technicians were sent to record the flooding but it became obvious that resources were insufficient to cover the whole city. Using radio, newspapers and blogs, NIWA (the National Institute of Water and Atmospheric Research) called on the general public to email photographs showing the peak water levels during the floods. Over 600 images were contributed. Many of these were used to draw and refine a flood map of the event. To do this, the exact location of each photograph had to be established. Some photographs had latitude and longitude

recorded in the image file by the camera. Others were located from a supplied street address. Some with names like “my backyard” remain unidentified! Where a water’s edge on a field, road or footpath was shown in a photo, the water level could be determined very precisely from existing post-earthquake LiDAR surveys. Where an important water level could be seen against a recognisable, durable landmark such as a doorstep or fence paling a survey team was sent to “level in” this point. Corroborating information was obtained from a record of emergency callout locations and from the field technicians.

The resulting hazard map is being used to plan response and evacuation and to calculate human and economic costs of flooding using RiskScape (www.riskscape.org.nz).

Contact graeme.smart@niwa.co.nz for further information. ■

Public consultation: Revised National CDEM Plan

The Minister of Civil Defence has publicly released the revised National Civil Defence Emergency Management Plan (revised Plan) for public consultation and welcomes written submissions.



The National Civil Defence Emergency Management Plan sets out the hazards and risks to be managed at the national level and the civil defence emergency management

necessary to manage those hazards and risks. It also sets out the roles and responsibilities of central government, Civil Defence Emergency Management Groups and other agencies such as lifeline utilities, emergency services and non-government organisations.

The current Plan has been in force since 1 July 2006. Under section 46 of the CDEM Act 2002, the Minister of Civil Defence must review the Plan every five years. The review commenced in 2010, and determined that, overall, the Plan was adequate, but a number of aspects could be improved.

The review was halted at the time of the 22 February 2011 Christchurch Earthquake to enable Government to focus on the response to the earthquake and for reviews of the response to be carried out. The revised Plan has been amended to incorporate all relevant recommendations from these reviews, as well as advancements in national civil defence emergency management planning arrangements.

Copies of the revised Plan

The revised Plan, a summary of amendments, and a feedback form are available online at www.civildefence.govt.nz

Submitters are required to state those aspects of the revised Plan that they support, those aspects they oppose, the reasons for the support or opposition and any specific alternatives they wish to recommend.

Submissions close at 5pm on Friday 25 July 2014.

Any queries can be directed to NationalCDEM.Plan@dpmc.govt.nz ■

Get Ready Week 21-27 September 2014

What Would You Do?

Every year the CDEM sector, promotes a week of activities aimed at raising awareness of the need to be prepared for disasters.

This year, the theme agreed by the National Public Education reference Group is "What Would You Do?"

Get Ready Week is supported by the national Get Ready Get Thru advertising campaign and social media messaging, and reinforced by local and regional community-based activities.

The purpose is to encourage people to plan for a range of scenarios where their normal routines are disrupted by a major disaster event. The generic theme enables CDEM Groups to customise local campaigns or activities on their preferred area of focus.

Examples of possible scenarios:

- Transport disrupted after a major earthquake or flooding event – "What would you do if you can't get home tonight?"
- Water/power/phones down – "What would you do without water/power/phones for the next three days?"
- Event specific – "What would you do if there was an earthquake/tsunami/volcanic eruption/flood – when you are at work /at home/travelling/on holiday?"

The Ministry is developing a range of online materials and resources that you can print out or provide electronically to encourage people to take action to be better prepared. If you have suggestions for activities in your community or region please share them with your public education representative on the National Public Education Reference Group or email chandrika.kumaran@dpmc.govt.nz ■



Sharing our lessons learnt – James Thompson Canterbury CDEM Group

The USGS and GNS Science have a governmental arrangement to share knowledge and consider ways to support each other's countries. The Canterbury earthquakes have provided an opportunity to do this.

In October 2014, a team of scientists, emergency management professionals, and building inspectors from New Zealand visited Memphis and Seattle to share some of the lessons learned about emergency response and building safety. Interestingly, Memphis sits in the New Madrid seismic zone and is prone to earthquakes and liquefaction as are many other parts of eastern United States, making these exchanges of information valuable for both countries.

In May this year, David Johnston (GNS Science), Ann Brower (Lincoln University), and James Thompson (Canterbury CDEM Group) visited Washington DC and Charleston, South Carolina with Joan Gomborg, Tom Pratt (USGS) and Steven Jaume' (College of Charleston) to share more experiences of the Canterbury earthquakes and the 2011 Mineral, Virginia earthquake.

In Washington DC, we presented at a government security conference, a business continuity conference, to a group of young engineers, to the Department of Homeland Security Science and Technology Directorate, to Congressional Staffers, the Deputy Secretary of Interior for Water and Science, as well as to the USGS. Also in Washington, we met up with the NZ Ambassador to the US, Mike Moore.

In Charleston we presented to the Charleston County EOC staff, the Charleston Board of Architectural Review, gave a public seminar at the College of Charleston, and the South Carolina Emergency Management Division staff. Steve also took us on a tour of parts of Charleston that suffered earthquake damage in 1886. Evidence of this damage is still present in buildings today.

During our presentations, David talked about the basic geology of the Christchurch earthquake and some of the social aspects of the recovery, Ann talked about her personal experiences of surviving being trapped in a bus after a building collapse



James Thompson (Canterbury CDEM Group), David Johnston (GNS Science), and Ann Brower (Lincoln University) outside the US Capitol building after presenting to Congressional Staffers.

and the cost of building stabilisation compared to the cost of medical treatments of survivors, and James talked about some of the lessons from the response. Tom set the scene in many cases with the potential for a Christchurch earthquake in the eastern US, a scary proposition considering the population density and the prevalence of unreinforced masonry buildings.

Two highlights of this tour were seeing how DHS have combined the emergency management and crowd-sourced data of eight States using a GIS product. This

product will be used as an emergency management information-sharing tool for the largest disaster management exercise in the States held in June this year. The other highlight was establishing a research proposal to look at what sorts of retrofitting to URM building would be most cost effective for saving lives and reducing medical costs during an earthquake.

The chance to go on such exchanges is valuable with both counties getting to learn and experience what the other has gone through. ■

Volcanic Alert Level system changing on 1 July

The Volcanic Alert Level system, used by GNS Science and GeoNet to communicate volcanic activity in New Zealand, will be changing on 1 July 2014.

The six-stage system is changing to better meet the needs of organisations in the civil defence and emergency management sector, tourism operators and civil aviation, as well as the public throughout New Zealand.

GNS Science Social Science researcher Sally Potter, whose PhD research was the impetus for the changes, said that the new system was developed to improve the effectiveness of the communication of scientific information.

“During my research the people who use the alert level system told me that having a simple volcanic alert level system is really important to them. So we combined the two existing systems into one new system for all of New Zealand’s volcanoes, and simplified the wording,” Ms Potter said.

“We also included information on the most likely hazards that will be seen at each alert level. This is important information for our emergency management partners and communities affected by the volcanoes.”

Two of the main reasons for the upgrade were the complex nature of the former system, and developments in volcano monitoring over the past 20 years which have created an opportunity for an improved alerting system.

Other changes include having two levels for volcanic unrest instead of just one, to enable greater accuracy in defining lower levels of volcanic activity.

The overall number of levels in the new system remains unchanged, and ranges from 0 (no volcanic unrest) to 5 (major volcanic eruption). No changes have been made to the international aviation colour code system.

Volcanologists first developed the alert system in 1994. It was revised before the Ruapehu eruptions in 1995 and this is its third update.

To find out more information on the new Volcanic Alert Level system, visit the GeoNet website: (<http://info.geonet.org.nz/display/volc/Volcanic+Alert+Levels>).

Information on Aviation Colour Codes: <http://info.geonet.org.nz/display/volc/Aviation+Colour+Codes>

To find out what to do before, during and after volcanic activity, visit www.getthru.govt.nz ■

New Zealand Volcanic Alert Level System			
	Volcanic Alert Level	Volcanic Activity	Most Likely Hazards
Eruption	5	Major volcanic eruption	Eruption hazards on and beyond volcano*
	4	Moderate volcanic eruption	Eruption hazards on and near volcano*
	3	Minor volcanic eruption	Eruption hazards near vent*
Unrest	2	Moderate to heightened volcanic unrest	Volcanic unrest hazards, potential for eruption hazards
	1	Minor volcanic unrest	Volcanic unrest hazards
	0	No volcanic unrest	Volcanic environment hazards
An eruption may occur at any level, and levels may not move in sequence as activity can change rapidly.			
Eruption hazards depend on the volcano and eruption style, and may include explosions, ballistics (flying rocks), pyroclastic density currents (fast moving hot ash clouds), lava flows, lava domes, landslides, ash, volcanic gases, lightning, lahars (mudflows), tsunami, and/or earthquakes.			
Volcanic unrest hazards occur on and near the volcano, and may include steam eruptions, volcanic gases, earthquakes, landslides, uplift, subsidence, changes to hot springs, and/or lahars (mudflows).			
Volcanic environment hazards may include hydrothermal activity, earthquakes, landslides, volcanic gases, and/or lahars (mudflows).			
*Ash, lava flow, and lahar (mudflow) hazards may impact areas distant from the volcano.			
This system applies to all of New Zealand’s volcanoes. The Volcanic Alert Level is set by GNS Science, based on the level of volcanic activity. For more information, see geonet.org.nz/volcano for alert levels and current volcanic activity, gns.cri.nz/volcano for volcanic hazards, and getthru.govt.nz for what to do before, during and after volcanic activity. Version 3.0, 2014.			

New Zealand’s new Volcanic Alert Level system, which will be used from 1 July 2014.