

# How Communities in Christchurch Have Been Coping with Their Earthquake

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This paper focuses on what Christchurch people coped on Tuesday February 22, 2011, immediately afterwards, and how they are coping at the end of 2011. It offers some constructive suggestions for recovery from future disasters. This is not the work of an expert on earthquakes or on how people cope with them. It is not an exhaustive profile or an accurate representation of how all people in Christchurch, New Zealand are coping. It is a compilation of newspaper stories, experiences, conversations, and information people have shared with the author.

The major earthquake activity in Canterbury has included:

- 7.1 measured earthquake on Saturday morning, 4:34am, September 4, 2010, now known as the Greendale Fault or the Canterbury earthquake, which was centred at Darfield (near Mt Hutt) with no loss of life
- 6.3 measured aftershock on Tuesday lunchtime, 12:51pm, February 22, 2011, now known as the Port Hills Fault, which was centred under the Port Hills between Christchurch and Lyttelton, resulting in death for 181 people
- 6.3 measured aftershock on Monday afternoon, 2:20pm, June 13, 2011 which was centred near Clifton Hill (Sumner area), one subsequent death
- 33 shocks over magnitude 5.0, 2889 over 3.0 from Sep 2010 to Dec 2011 (GeoNet, Dec 16, 2011).

Most people in New Zealand know generally about the major Canterbury earthquake and the subsequent aftershocks. People in Christchurch know exactly where they were, what they were doing, eating, wearing, discussing at the time of these major seismic events. Most people in Christchurch have the same story for the first earthquake on September 4, 2010;

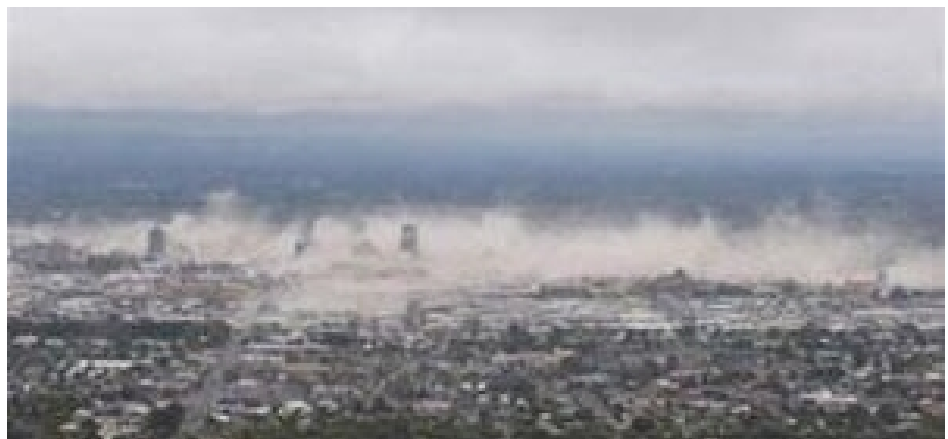
they were all asleep. February 22, 2011 was lunchtime, an active time of the day, and therefore, there are over 440,000 individual stories of the experience of this earthquake aftershock and how people are coping now.

## February 22, 2011

The February 22, 2011 activity was particularly damaging as *“the rupture was less than five kilometres from Christchurch’s central business district .....with unusually violent ground movements. The earthquake brought down buildings, caused liquefaction in large areas of Christchurch and triggered numerous rockfalls on the Port Hills”* (Natural Hazards Research Platform, 2011, paras. 7-8). The moment the aftershock hit the Christchurch central business district is shown in Figure 1 below.

February 22, 2011 was a day for the people of Christchurch to remember and to forget in equal measure; *“a lot of people, even people in the army, won’t see what we saw that day, in their lifetimes...people just going to lunch or back to work, just completely undeserving people”* (McGregor, as cited in *Eleven*, 2011, C7). People, on that day, saw and heard of the collapsed buildings and crushed buses and cars; the deceased people trapped under buildings (in particular the PGC and CTV buildings) and in vehicles. The CBD / central city was cordoned off within 2 hours and a state of emergency declared.

▼**Figure 1:** City of Christchurch, 12:51am, Feb 22, 2011 (photo taken from the Port Hills)





◀ **Figure 2:** Colombo St, Feb 22, 2011



▲ **Figure 3:** Colombo St

The roads were buckled and choked with people trying to get home to their families and loved ones. Homes were destroyed or severely damaged, and liquefaction deposits of mud and silt was coming up in driveways and streets, particularly in the eastern and southern parts of Christchurch. In addition, emergency services were stretched as 6000 people were injured and needing services, which included amputations and 82 orthopaedic operations (Glass, 2011, p. A10).



◀ **Figure 4:** Anglican Cathedral, The Square

Damage was extensive in the CBD and the Anglican and Catholic cathedrals (Figures 4 and 5). The Hotel Grand Chancellor, now nicknamed the Hotel Ground Chancellor (Figure 6), suffered much damage from the intense shaking: the building's "*seismic resisting structure was pushed to its yield point and beyond its elastic limit ... and failed in a brittle and abrupt manner*" (Dunning & Thornton Consultants Ltd, 2011, p.22).



◀ **Figure 5:** Catholic Cathedral, Barbados St

▼ **Figure 6:** Hotel Grand Chancellor





**Liquefaction** was visible and its effects in Christchurch were extensive and resulted in significant damage to property, buildings and infrastructure, not to mention creating a widespread mess. Silt, sand and water came up in people's backyards, in streets and parks and even through the concrete floors of buildings.

► **Figures 7:** Engineering checks at the Palms Shopping Mall

Liquefaction is the process that “leads to a soil suddenly losing strength, most commonly as a result of ground shaking during a large earthquake .... and then behaves like a fluid” (Institution of Professional Engineers of New Zealand [IPENZ], 2011, paras. 2-3) and when this happens in a shopping mall, the impact is immense, as shown in Figures 7 and 8

▼ **Figures 8:** Liquefaction silt at the Palms Shopping Mall



When this author got home on February 22, 2011 after 2 and a half hours (usually a 15 minute drive) battling the traffic, getting children from school, checking elderly parents, it was to a destroyed / ‘munted’ house.

The side of the house had landed on the car (as in Figure 9), the ceilings had fallen in, outside bricks were in the living room and the dog was shedding hair and traumatised as he was in the house as it rattled and disintegrated.

► **Figure 10:** Kitchen scrambled



It was obvious that day that the house would be red stickered (deemed unsafe and uninhabitable), as was later confirmed by the Earthquake Commission.

The garage, which housed research reports, interview scripts,

publications, tax records, sports gear, paints and handyman tools, was completely destroyed.

▼ **Figure 9:** Author's car and home in Huntsbury, now known as “Muntsbury”



## *How Communities in Christchurch have been Coping with Their Earthquake*

The Christchurch rest homes were badly hit, with 600 elderly people having to be moved out of the city. Management struggled to get staff to work and to sort out sanitation difficulties. There is a story of one rest home in Redcliffs, a badly hit and cliffside suburb, where residents and staff were sleeping in one room, and the elderly residents were comforting the distressed staff.

School teachers were keeping children safe and calm and hoping that all the parents would arrive. At one primary school, the teachers were working in shifts so that others could go out and have a cry, as they all worried about their own families and lives. At another primary school, teachers stayed until after 7:30pm that night waiting for parents to collect their children.

### **Feb 22 Immediately Afterwards – Heroic and Honeymoon Phase**

In the days immediately after February 22, 2011 many suburbs had no power, no water and no sanitation. For many it was fortuitous that there was no power, as residents were not able to see a lot of the horrific earthquake images.

The earthquake was a huge social leveller as people were all working together without water, power and gas and with or without portaloos, dealing with aftershocks and liquefaction and cleaning up properties. The majority of people were now at home; people weren't at work, they weren't at study, they weren't at play. Life slowed down incredibly, and people had time to check on the neighbours. The few open supermarkets were busy and ran low on alcohol, toilet paper and canned food, but were definitely the place to be with many stories and latest news swapped and repeated.

Gluckman (2011, p. 2) argues there are the heroic (when people see help needed and don't count the costs) and the honeymoon (when people see help arriving and feel that the situation will improve) phases in a disaster recovery. Most effective social support and help after a disaster comes from neighbours and communities (NZ Psychological Society, 2011,

para. 4) and is more helpful than contact with professionals in the early stages. This neighbourly social support was in abundance in most suburbs and surprisingly most activated in the areas facing liquefaction, as many people from throughout Christchurch and Canterbury went to help out. It is surprising how long it takes to dig out one driveway full of liquefaction. In addition the Māori wardens knocked on an average of 700 doors per day especially in the eastern suburbs (Dalziel, 2011, para. 3) and the Red Cross, in their bright red suits, made many house visits.

Thank goodness for texting; as many texts came in from around the country and the world with words of cheery support and warm interest in the plight of the people of Christchurch.

People tried to make sense of the devastation and loss. There were common survival stories, common losses of people and property, common vulnerability and common fears for the future. It was a very collective community-wide processing of loss, adjustment and grief. It was a quite extraordinary time seeing and hearing how it affected so many people in each neighbourhood and community. People, neighbours and communities offered each other psychological first aid, most generously.

### **Losses**

It is quite humbling to consider the scale of losses on February 22, 2011. This author considers that the greatest loss was of **loved ones**, as 182 people died that day. People lost members of their family as well as partners, friends, work colleagues. One man went to 12 funerals in the two weeks after February 22 as almost a whole layer of an organisation was wiped out. A lot of people who died were middle-aged working people, from many walks of life, as well as many international students. The death notices in the local Press newspaper highlighted numerous people in their 30s, 40s and 50s.

The next greatest loss for many Cantabrians was income and **financial security**, as businesses were destroyed, or jobs made insecure or lost. Another great loss was **homes**, many irreparable, particularly in the southern and eastern suburbs. The northern and the western suburbs were less affected. An unexpected and massive loss was the **loss of the city** and a way of life, with 40,000 people who worked in the CBD now scattered throughout Christchurch. The loss of the functioning of the CBD and the number of buildings lost has hit many businesses and many more people. Streets and areas are still inaccessible behind gates and guards. Throughout Christchurch, buildings are being demolished at a rapid pace by 78 demolition crews. About 370 buildings have been demolished (in the CBD), but 530 wait to be either pulled down entirely, partly demolished or made safe (Law, 2011, paras. 4-5).

For many people, there was a major gap between what they had that morning and what they had in the afternoon.

### **What are we Coping with at the End of 2011? - Disillusionment Phase**

Moore (2011) observes that “every facet of how and where we live has undergone a radical shift...psychological and physical landmarks of daily life have been damaged” (p. 184) and that we “live daily with visible reminders of the disaster” (p. 184). As Bennett (2011), a local writer and social commentator puts it, we “live in a city of uncertainty and ... the task is so vast, problems so various, that there is no real sense of the way ahead” (p. 9). Gluckman (2011, p. 2) describes this as the disillusionment phase (the third phase of recovery) as people realise how long recovery will take and become angry and frustrated.

The figures for the rebuild are staggering. The bill for non-residential reconstruction including infrastructure (roads and sewage) is estimated at \$3billion (Cosgrove, 2011, para. 1). There have been about 387,000 claims for damage made to the Earthquake



Commission (Law, 2011, para. 9). 100,000 homes were damaged and require repair work (Law, 2011) while 10,000 homes are being demolished and rebuilt.

There are varying estimates of how many people have left Christchurch, with the figure of 26,000 touted in September, 1000 people per week in a November newspaper headline, and a conservative estimate of one family a day from the local schools. Some schools in the city's eastern suburbs have reported roll declines of about 20 per cent. Education Ministry figures show 4496 pupils have moved to new schools (Law, 2011, paras. 11-13). So there are gaps where people have gone. Some streets in the eastern and southern suburbs are almost deserted, and this makes life challenging for those who remain living in these areas. Many Māori have returned to their iwi and home areas away from the city.

Toward the end of 2011, the people of Christchurch are coping with **multiple issues** and layers of difficulties. It has been a most memorable year with earthquakes, after shocks, unexpected snowfalls and the subsequent further days off school and work, and rising rivers due to drainage difficulties after the damage created by the earthquake. In addition, we had no Rugby World Cup (RWC) games in Christchurch, this year.

The **load** Christchurch people are carrying includes housing damage, interrupted family and school life and extra stress for the elderly, as well as physical, financial, work related, relocation, social and emotional difficulties underpinned by concerns about their future in the Garden City of Christchurch. For some it is "chronic stress imposed by the on-going human, economic and social costs" (Gluckman, 2011, p. 1).

**Housing damaged / munted.** The housing problems are extensive. People have been coping with temporarily fixed up properties; some in the eastern suburbs of Christchurch are still living without sewage and using chemical toilets. Some people are having to wait a long time for their

insurance companies to process their claims and start repair and rebuilding work. It is important to consider what homes and buildings represent to people: it is their financial security, their personal history and their place in the world; so for many more than 10,000 people, this has been taken away.

**Children and families disrupted.** Some families/whānau are still coping with sleeping problems. For both children (particularly younger children) and parents, so that there is a lack of quality, recuperative sleep. Younger children can exhibit "fear of separation, strangers, withdrawal or sleep disturbances" (Gluckman, 2011, p. 4). Teachers have observed some children getting anxious or having trouble letting their mothers go. Bidwell (2011) argues that children and young people are particularly vulnerable after disasters. A study of children after the Hurricane Katrina disaster found that the children were nearly five times as likely as a cohort (non disaster group) to suffer serious emotional disturbance and some children suffered long term stress symptoms (Abramson, Park, Stehling-Ariza, & Redlener, as cited in Bidwell, 2011).

There have also been a number of disrupted routines. School friends have left and gone to live elsewhere. Children and adults are visiting friends in munted houses, and some still have extra people living in their homes. There is a lot of anger, mood swings, and many people in the family / whānau who are tired much of the time. Relationships can be under extra stress. This is cumulatively very disruptive for children and for families/whānau.

**School and teaching changes.** Teachers have borne the brunt of a lot of kids' reactions and "day to day, teachers end up dealing with the trauma associated with the earthquakes and the uncertainty in homes" (Wilkinson, as cited in Matthews, 2011, C5). One psychologist hypothesised that "up to 50 per cent of children who might have gone on to suffer post-traumatic stress disorder avoided it" because of the calming actions of their teachers

(Bangma, as cited in Matthews, 2011, C4).

There are numerous school teachers being laid off this year due to falling school rolls, with one estimate of "167 full time teaching positions being unfunded in 2012" (Matthews, 2011, C4). Some schools were still site sharing with other schools at the end of 2011, while Marian College in the eastern suburbs will not return to its site until 2016 and Avonside Girls College by the river in the same suburb, has been deemed unsafe. The University of Canterbury is 25% down on its enrolments for 2012, particularly international students.

**Elderly struggles.** Quite a number of elderly people who have been on their own have moved into a different arrangement as they just don't want to be alone. For some it has been a temporary move that has become permanent. Six hundred rest home beds for the elderly were moved out of Christchurch to Timaru and Nelson and other distant locations after February 22. Some were separated from friends and relatives, and many folk have died earlier than expected as there has been so much change at such a late stage in life.

There has also been a rise in elderly people having falls, increased levels of dementia or disorientation as well as an inability to recover from their financial losses. Moreover for the elderly, the earthquake stressors may have come on top of other life stress and they may find them uninvited and overwhelming. They may be having on-going changes to their general health and living arrangements, and experiencing a lack of familiar places (e.g., shops and landmarks), changes in their level of activity, and interrupted access to community venues which have been damaged or disappeared. Even changes in bus routes can be difficult for some elderly people.

**Policing changes.** Anecdotal evidence suggests that there has been a drop in crime in the north and eastern/ central parts of Christchurch as their local population moves out; and there is much less social activity within the CBD. The proactive

monitoring and pastoral care of youth at risk has been interrupted as many youngsters have been lost in the system, or have changed schools or left the area. Police, like schools, are in a state of uncertainty around future resourcing, as they wait to find out how much of the population change and geographical shift is temporary or permanent.

**Physical traffic difficulties.** Parts of the city still “remain off limits, and potholes still pock the roads” (Law, 2011, para. 2). There are now more traffic jams and extra commuting to different work spaces as employees are spread over the city and some major roads are still being repaired e.g., Fitzgerald and Deans Avenues. Huge containers lie at the foot of the Port Hills near Sumner to protect from further rock debris falling. The state of the streets and the on-going damage to cars is another thing people are dealing with.

**Shops, businesses, sports grounds missing.** Lyttelton’s harbour-side shops and businesses have mostly gone; Beckenham and Sydenham (in the south) have lost a block of eight shops and many shops respectively, as have other suburbs, while some supermarkets have taken months to re-establish and some banks have still not re-opened. There are fewer sports grounds, no QE2 sports complex or pool, missing swimming pools, and no AMI Stadium for major rugby matches.

**Financial losses.** People are losing jobs, particularly teachers in schools (Matthews, 2011, C4) and employees in small businesses and in hospitality. Many schools and organisations, dependent on international students, have struggled as Christchurch is still considered an unsafe place of study. People who own red stickered homes are facing the end of their insurance payouts and possibly having to pay their mortgages and top up their Work and Income NZ (WINZ) temporary accommodation allowances to cover their rent. For many who own red stickered rental properties, there are additional financial drains.

**Workplaces relocated.** It is “work that seems the most different” (Van Beynen, 2011, C12) for the journalists of the Press who were relocated from the Square to near the airport, as for many others. Staff have been relocated to offices all over the city, or are in cramped conditions with 6 people working in an office designed for two. Many lawyers in Christchurch are struggling because they have lost offices and courtrooms and now need to commute out to Rangiora (out of town) and to Pages Road, East Christchurch for the District Court, and to Timaru (2 hours away) to the High Court for their work.

**Working from home.** People working from home have less social contact, less motivation at times and fewer useful corridor information exchanges. Additionally, trying to have work or staff meetings is difficult, as it is hard to find places to meet. Venues have included the Netball Centre at Hagley Park, the hospital cafeteria and many local cafes. The staff at the Christchurch Museum only went back to work in September 2011.

**Different suburbs / different struggles.** There are differences around the city in terms of on-going damage and difficulties. Eastern and southern Christchurch are the most affected areas. Some Brighton (in the east) streets have been left with the housing designed half green (okay to live here) and half red (unsafe and must leave) zoning and this may have an impact on the on-going value and resale for this and other suburbs. One manager in the eastern suburbs takes staff and people who live in the northern and western suburbs of Christchurch on empathy tours around these damaged areas to increase their appreciation of how much hardship people are living with.

**Social – no CBD.** There is no CBD or central city, although the Ballantynes department store and some adjacent shops opened at the end of October 2011. It is difficult to live without a central city CBD. The Court Theatre is no longer in the Arts Centre in the CBD and has relocated to Addington. There are only a very few central city theatres, restaurants or

bars on the greater outskirts of the city, so the local suburban cafes and bars have become much more popular. Much of the central city is still behind gates guarded by the military and inaccessible to the local residents.

**Emotional responses.** Many people in Christchurch are exhausted and tired. Bangma (as cited in Matthews, 2011, C4) says that “there is an incredible amount of tiredness.” Some meetings and some days it seems like everyone in the room (male and female) has PMT or menopause, because so many are fraught and short tempered.

**Uncertainty about the future.** Many people are living with uncertain futures, living and working in the orange and white zones, where there are EQC decisions yet to be made about future viability and safety. The lack of control is tiring and a lot of people in Christchurch are living in limbo about their future. Many don’t know what is happening with their homes or with their insurance companies. It can be most difficult to establish long term goals for the family, for holidays, routines, property values and resale. No one seems to know or be able to predict what is happening, or what is going to happen.

**Meaning and purpose.** Facing disaster and surviving can change what people take for granted and alter perceptions of what is really important, and it can also change what people want from life. Traumatic events can have an impact on how people see the world, life, goals and relationships (Australian Centre for Posttraumatic Mental Health, 2007, para. 4). Some people question some of their long-held beliefs - about safety, how much control they have over their life and how predictable the world really is (Australian Centre for Posttraumatic Mental Health, 2007, para. 2).

The power of nature can also be overwhelming. Being outside in an earthquake and seeing concrete and pavements move in a snakelike manner, or being in a car and watching other cars bounce as if on a trampoline, or watching the whole estuary get up and boogie, is

extraordinary. Afterwards, things don't seem the same, and it can have a profound effect on people's views and sense of order and predictability.

**Other – alopecia.** 218 people in Canterbury have claimed grants for wigs for temporary hair loss since Sept 4, 2010 (83 people nationwide usually apply for grant each year) and hair loss is usually related to stress (McKenzie-McLean, 2011, p. 1)

*The long term measurement of recovery in Christchurch will be how the people come out of it and how lives are rebuilt, not just the quality of the buildings and the depth of the foundations.*

### How Are We Coping and What Is Helping?

It is not possible to answer this question for 424,000 people, especially as at least 26,000 have left the city; including possibly some of the most traumatised. Some people are very stoic, resilient and hardy, but not always and not every day. There are individual variations from people with very orderly lives upset about the state of roads, the missing CBD and the long delays, to those who have quite chaotic lives who consider the earthquake interruptions as merely more stressors in their lives.

However we do know that recovery is “primarily judged in terms of people feeling that they are coping with their lives and livelihood, not just in physical terms” (Gluckman, 2011, p.1). Gluckman says that most people are resilient and will recover in time although a subset of about “5% (or more) will have on-going significant psychological morbidity requiring professional help” (p. 2). Bidwell (2011) argues that a “belief in self efficacy, adaptive coping and problem solving skills of survivors has consistently been found to be a buffer against persisting distress” (para. 8). Survivors from a number of serious disasters in the US who believed in their ability to cope with events and exercise control over their lives did not experience long-term symptoms (Benight & Bandura as cited in Bidwell, 2011). This theme of

exercising control over their lives is most prevalent in Christchurch.

**New behaviours.** Many people in Christchurch won't park underground or on top of parking buildings as they consider it will be too difficult to get out if there is an emergency. Some people drive down the middle of the road (not near the edges) or won't go into high rise buildings, lifts or enclosed spaces. People have survival kits, sleeping bags, and water in backpacks ready to move quickly. Many carry their cell phone everywhere so that they can contact and be contacted at all times.

**Preparedness and getting homes checked.** People are now living in homes that are the most EQC and engineer assessed homes in New Zealand. When the 10,000 homes are rebuilt, they will be built to the latest standard of the Building Code. Other people in New Zealand would be wise to have their own homes checked. The Turkish earthquake in August 1999 killed around 45,000 people. It was described as a manmade disaster, not a natural disaster, as these people died in poorly designed, built and inspected buildings. Christchurch has now lost or will lose all their substandard and unsafe buildings.

**Building strong neighbourhood communities.** Many people in Christchurch are now much closer to their neighbours (if they are still in their homes). Knowing the neighbours and local community has been a great support, post disaster. Christchurch City Council supports and minimally funds Neighbourhood Week annually, for people to get to know their neighbours and live in strong communities.

**Schools.** School teachers were for many families, the heroes on February 22 as they kept children safe and calm and exercised their duty of care. Schools are very prepared for disasters and children have survived there in February and in June 2011, so know they are safe places. In addition, schools are for many families a natural village meeting place, and a have a lot of regular routine. Children learn to do the turtle posture (huddled on the ground with hands behind their

heads), as part of their earthquake drills and this action is important for children to feel some control in the face of disaster.

Some school staff have had sessions with Special Education Services and other psychologists on helping children cope with anxiety, trauma and low mood, stress and anger, as well as typical symptoms for the parents and children, to help understand what is earthquake related behaviour and what is within the normal range of psychological effects people can expect (Gluckman, 2011, p. 5). Staff at Relationship Services were valuable as they were available 24 hours, 7 days a week .

**Regular events and routines.** Life returning to normal or to pre-quake activities has included sports, and after school activities resuming, although not always at the regular venues. It has been important to resume a normal routine as quickly as possible, but avoiding putting all the energy into activities or work in an attempt to avoid the unpleasant feelings and memories (Australian Centre for posttraumatic Mental Health, 2007, para. 4) is not a wise move.

**Workplace.** Some useful practices in different workplaces have included Staff Well-being Committees, workplace quake-leave for people to take time off to deal with EQC assessors and insurance companies, and maps of where staff live and their current zoning. Talking and sharing stories, people being proactive and telling co-workers or staff to take time off...and being clear that time off is for their best welfare (Cosgrove, as cited in Eleven, 2011, p. C88) are all important messages.

**Rest and self care.** People are being reminded that the adrenalin does wear out and that rest and looking after themselves is really important, so that stress levels remain low or manageable. Adrenalin however borrows “energy from the future and must be replenished eventually. Tiredness is inevitable” (Aylers, 2011, para. 5).

**Attitudes and kindness.** Other people's positive attitudes were and



## How Communities in Christchurch have been Coping with Their Earthquake

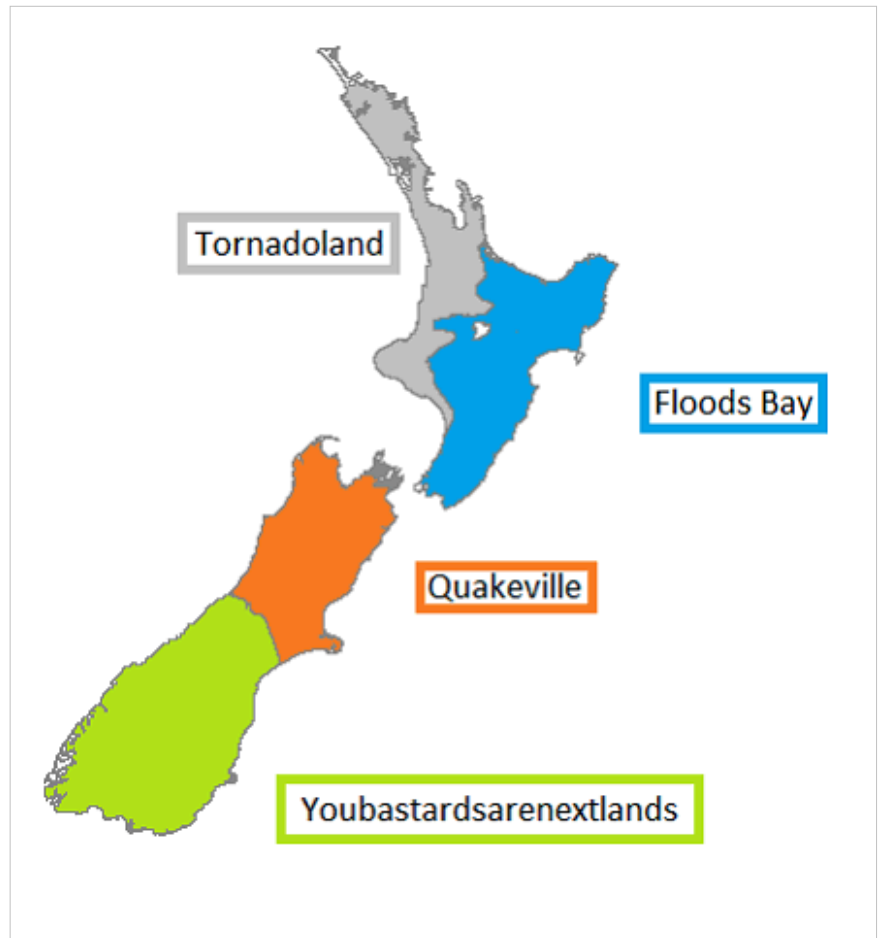
are very helpful as are random acts of kindness. People cooking others meals and taking extra interest and care of their neighbours and each other, has been most appreciated.

**Information and helpful insurance company staff.** People having useful, up-to-date information, for example from insurance company staff, is most helpful. Many people are living in limbo and unable to make decisions around housing and their future, as the insurance companies are dealing with so many claims at the same time, and are not able to give clear timeframes.

**Community participation in the future of the city.** A feeling of “self efficacy and community efficacy assists the population in reactivating their coping mechanisms” (Gluckman, 2011, p. 5). So actively promoting community participation is an important factor in recovery. Japan has a model of *machizukuri* (Nishimura, 2005, p.1) with 100 neighbourhood councils and grassroots processes to help communities rebuild their cities and infrastructures.

Involving and empowering people is useful to “regain some sense of control over one’s life” (Gluckman, 2011, p. 3). People being involved in the future planning of the city is vital because they then talk about what is happening and get excited and committed to the rebuilding. People have been talking about the possibility of the new light rail, the new swimming pool and other proposals for the new Christchurch.

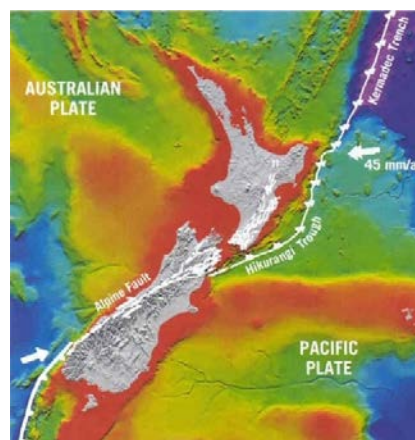
**Humour.** Humour is important. For example, what are the new suburbs in Christchurch? Cashmere is now Smashmere, Bexley is Hexley because it's been hit twice with all the liquefaction, Bowenvale is now Brokenvale, Huntsbury is now Muntsbury, St Martins is now St Muntins, Richmond is now Richmunt and Mt Pleasant is now Mt Unpleasant (WheellieKiwi, 2011, p. 1). The new map of New Zealand (Klubkiwi, 2011) is shown in Figure 12.



▲Figure 12: A new map of NZ

The humorous question of “What have we got to look forward to in Canterbury?” is answered with “the alpine fault (another major earthquake risk) erupting” as in Figure 11.

▼Figure 11: The Alpine Fault, possibly the next big quake.



### Final Word

People are in different spaces. Christchurch people, “who all have their own stories of often calamitous

change, have proved marvellously adaptable” (van Beynen, 2011, p.c12). However, there are those who were traumatised and may have left the city; some are just getting on and are mostly unaffected; some are in denial and minimising damage and interruption and only discuss their situation if asked directly; some are living in strange places and waiting for insurance companies to process their claims; some are working in odd places in strange conditions; some are getting information and trying to get some control over the event; some are desperately trying to get things done. Some are in the red zone awaiting “*a decent payout and hoping to find other homes and lives as living in the red zone is a depressing business*” (Apps, 2011, p. 4).

The long term measurement of recovery in Christchurch will be how the people come out of it and how lives are rebuilt, not just the quality of the buildings and the depth of the foundations. Most people with difficulties arising from the earthquake do not want to be regarded



as needy or desperate but just want to be seen as people with 'extra needs' or similar.

Psychologists have been valuable in journeying with people and identifying symptoms and signs of healthy and unhealthy behaviours and reactions to the disaster. Their straight talking and practical ideas for children with anxiety and stress have been helpful and their useful psychological messages have included –

- most of our behaviour and responses are just usual reactions to an abnormal or difficult situation (Gluckman, 2011, p. 5)
- it is important to take care of our minds, talk about what we witnessed and are worried about or write about it
- it is important to replace horrible images with positive ones, particularly for children
- it is important to admit and share emotions
- everyone has different tipping points or things that will tip them over to act or react
- there are different tipping points within individuals, within families and within our communities.

Gluckman (2011) emphasises that the final phase of recovery has no “clear endpoint in that things can never return to exactly what they were before the disaster” (p. 2). Recovery is about rebuilding “people’s lives, not just buildings” (Gluckman, 2011, p. 7) and that is what is most important for the people of Christchurch. At the end of 2011, it is opportune to reflect back over the year and consider how much has changed and how many lives, livelihoods and lifestyles have been effected by our Canterbury earthquake and how far we still have to go in our long journey of recovery. Kia kaha Christchurch.

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## Illustration Credits

**Figure 1:** City of Christchurch, 12:51am, Feb 22, 2011. The image, taken from high above Christchurch (in the Port Hills) and published on Twitter, shows a cloud of murky dust rising above the tallest buildings and covering the city centre. May 23, 2011 from <http://news.msn.co.nz/article/8216250/photo-shows-christchurch-earthquake>.

The images in Figures 2, 3, 4 and 5 were distributed by USAR personnel. We were unsuccessful in tracing original photographers.

## How Communities in Christchurch have been Coping with Their Earthquake

**Figure 2 and 3:** Colombo St (main street), Feb 22, 2011. USAR Photos

**Figure 4:** Anglican Cathedral, The Square, (Feb 23, 2011). USAR Photos

**Figure 5:** Catholic Cathedral, Barbados St. USAR Photos

**Figure 6** Hotel Grand Chancellor. Bob Arthurs, Christchurch.

**Figures 7 and 8:** Liquefaction at the Palms Shopping Mall, after Feb 22, 2011. flickr from Yahoo and originally Newstalk ZB

**Figure 9:** Kitchen contents everywhere. Alumine Andrew.

**Figure 10:** Author's home in "Muntsbury." Bob Arthurs., Christchurch

**Figure 11:** The alpine fault. Otago Regional Council.

**Figure 12:** A new map of NZ, Courtesy of Klubkiwi and Twitter; retrieved December 20, 2011 from <http://www.klubkiwi.com/2011/05/latest-new-zealand-zoning/>

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### Editor's Note

Libby Gawith refers in this article to the briefing paper authored by Sir Peter Gluckman FRS, the Chief Science Advisor to the Prime Minister of New Zealand. Professor Gluckman is a highly distinguished medical scientist, strongly committed to making scientific knowledge available to the community. Recognising the need for the government to be well informed on the likely psychological, emotional, and social impacts of the Christchurch earthquakes, he sought input from the specialists at the Joint Centre for Disaster Research and based his valuable article on the best available evidence from the JCDR. This link between scientific expertise at the universities and the CRIs (National Hazards Platform) in New Zealand and important government representatives confirms the value of having such an outstanding scholar providing high quality scientific advice to the Prime Minister and Cabinet, as well as the general public, at a time of urgent national need.

▼ **Figure 13** Neighbourhood support, Geoff Trotter

