

# Canterbury Wellbeing Index

## December 2013



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Child, Youth and Family (CYF) has identified an error in its data and as a result the section “Child abuse and neglect” has been removed from the Canterbury Wellbeing Index

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## Introduction

The Canterbury Wellbeing Index (the Index) was initiated by social sector agencies in the Community Wellbeing Planners Group, who advise CERA's Community Wellbeing Team.

The Index tracks the progress of social recovery using indicators to identify emerging social trends and issues.

The Index is a collaborative project across many government agencies.<sup>1</sup>

### The purpose of the Index is to:

- enable Canterbury communities to access accurate and comprehensive information about the social recovery.
- provide early warning of emerging social trends and issues to enable CERA and partner agencies to respond in a timely way.
- inform decisions about the most efficient targeting of funds and resourcing through the recovery.
- meet the monitoring and reporting requirements of the Recovery Strategy.

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<sup>1</sup> Canterbury District Health Board, Canterbury Earthquake Temporary Accommodation Service, Canterbury Public Health, Christchurch City Council, Creative New Zealand, Department of Corrections, Department of Courts, Department of Internal Affairs, Department of Labour, Electoral Commission, Energy Efficiency Conservation Authority, Environment Canterbury, Housing New Zealand Corporation, Ministry of Business, Innovation and Employment, Ministry of Civil Defence and Emergency Management, Ministry of Culture and Heritage, Ministry of Education, Ministry of Health, Ministry of Justice, Ministry of Pacific Island Affairs, Ministry of Social Development, Ministry of Transport, Natural Hazards Platform, New Zealand Police, Office of the Community and Voluntary Sector, Partnership Health, Selwyn District Council, Sports Canterbury, Sports NZ, Statistics NZ, Te Puni Kokiri and Waimakariri District Council.



## Pre and Post Quake Social Recovery Analysis

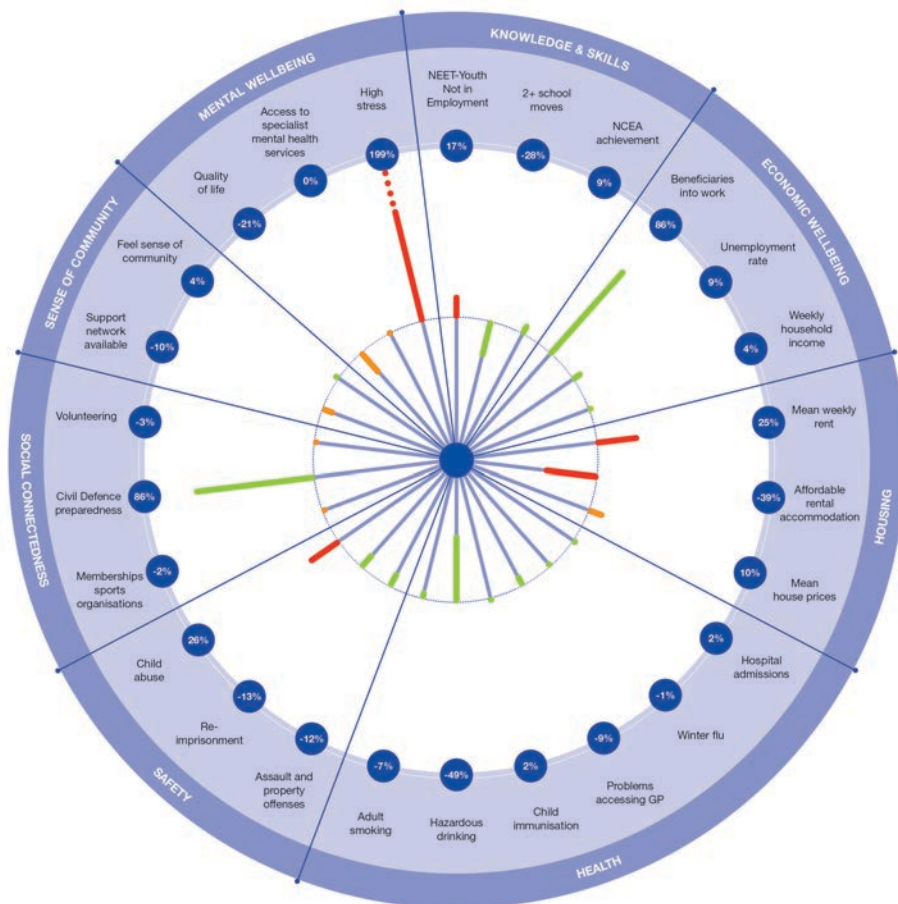
- **Favourable**  
by comparison to pre-quake
- **Neutral**  
average has not changed
- **Less favourable**  
by comparison to pre-quake
- Pre quake average**  
represents average outcomes for each indicator pre-quake.

Interpreting changes in social recovery 2008-10 to 2012

The spider diagram uses 'spokes' to represent changes in each indicator,

- the blue dotted circle represents average data prior to the September 2010 earthquake (where possible using a two year average); and
- the spokes represent average data after 2011 (where possible using data for the entirety of 2012).

Longer spokes represent greater change. However, there is no relationship between indicators in magnitude of change. Spokes extending out from the blue circle indicate increases, and spokes extending inwards indicate decreases.



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**CERA is monitoring and reporting on the progress of the recovery. The Canterbury Wellbeing Index tracks the progress of social recovery using indicators to identify emerging social trends and issues.**

### Why is participation in education important?

Our early childhood centres, schools and tertiary institutions exist as an investment in the futures of our children and young people.

Participation in all stages of the education system is crucial so that young people can develop the skills and knowledge they need to find employment and a high quality of life. When levels of participation and achievement are high, the region and the country benefit economically, society is more cohesive and cultures are enriched.

By participating in early childhood education, young children are prepared socially and academically for their transition to primary school. Participation in early childhood education can also help reduce inequalities among our most vulnerable children.

Low participation in compulsory education can be a signal that issues such as a disruptive home life or behavioural problems are interfering with attendance. Sustained truancy affects educational achievement and can be a strong predictor of violence, delinquency, substance abuse, suicide risk, unemployment and early parenting.<sup>1</sup> Linkages between truancy and crime are of considerable concern.

Young people who are not engaged in employment, education or training (NEET) miss the opportunity to develop skills and knowledge at an age that has a strong influence on future success. They also miss the opportunity to contribute fully to society.

Tertiary education builds on human capital. It is vital for creating a socially cohesive greater Christchurch. Young people who have valued qualifications and skills are more likely to find sustainable employment, put roots down in the city, and work to create a better future.

International students have a doubly positive impact. First, they strengthen the financial position of schools and tertiary providers they attend. Second, they bring an international perspective to greater Christchurch.

Attracting domestic and international students back to tertiary providers based in greater Christchurch will contribute significantly to the economic recovery.

### How was participation in education impacted by the earthquakes?

After the February 2011 earthquake, 18 schools were relocated and 7,000 students were bussed daily to host sites. Fifty-five per cent of secondary students were 'site sharing', with one school holding classes in the mornings and another school holding classes in the afternoons.<sup>2</sup>

Within three weeks 84 per cent of school students were able to attend school again, and within a month 78 per cent of early childhood education centres were back up and running.

However, the earthquakes continue to have a major impact on education provision. Most early childhood centres, schools and tertiary providers have been damaged in some way or the number of enrolments has changed as people have moved around or away from greater Christchurch.

The earthquakes changed patterns of attendance in early childhood education, with enrolments down by 1,125 in the year to July 2011. Many affected centres were located in the east of the city.



Following the February 2011 earthquake, over 12,000 primary and secondary students also left the school they had been attending and enrolled elsewhere, often at a school outside the region. Many have since returned, but as of March 2012, 4,500 fewer students were enrolled in greater Christchurch schools than in March 2010.

In the tertiary sector, 2011 domestic enrolments were down 14 per cent on 2010. Across Lincoln and Canterbury universities, first year enrolments were down by 28 per cent.

International enrolments for the first eight months of 2011 were down 31 per cent. The earthquakes dented the confidence of potential international students in Christchurch as an education destination. A large proportion of the reductions in international students were in private training establishments.<sup>3</sup>

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## What is happening now?

The Ministry of Education and Tertiary Education Commission have been engaging with educators and communities around the Education Renewal Recovery Programme for greater Christchurch.

The draft Education Renewal Recovery Programme was released for public consultation in May 2012. The programme aims to offer an innovative response to the earthquakes by improving the delivery of education, extending options for learners and lifting student achievement. The Government is investing up to one billion dollars in the renewal of education across greater Christchurch.

Recognising that some school communities have reduced in size while others have grown, the programme proposes greater sharing of education facilities.

In response to the public consultation, initial proposals were released in September 2012 affecting 38 out of the 215 schools in Christchurch (about 20%). Of these, two schools chose to close voluntarily (Hammersley Park and Le Bons Bay), and five Aranui schools were given an extension on their consultation because of the complexity of the proposal. Interim decisions for the other 31 schools and their communities were announced in February 2013, with 12 schools accepting these decisions. The other 19 were given until March 2013 to provide further feedback before final decisions were made.

On 22 May, the Aranui schools received an interim decision that:

- A Year 1-13 Campus should be built on the current Aranui High School site, opening in January 2017.
- Four schools – Aranui High School, Wainoni Primary, Aranui Primary and Avondale Primary – should close in January 2017.
- Chisnallwood Intermediate should remain open, and continue to operate as normal on its current site, with a review in 2020, once all other changes have bedded in.

Final decisions on this proposal are expected later this year.

The following final decisions were announced on 29 May 2013 for 16 of the remaining 19 schools:

- Two schools that had an interim decision to remain open but for one school to relocate will both stay open on their current sites (Te Kura Kaupapa Māori o Waitaha and Te Kura Kaupapa Māori).
- One school that had an interim decision to merge will remain open on its current site (South New Brighton).
- Seven schools will close (Branston Intermediate, Glenmoor School, Greenpark School, Kendal School, Linwood Intermediate, Manning Intermediate and Richmond School).
- Six schools will merge to create three schools (Burwood School with Windsor School, on the Windsor site, Phillipstown School with Woolston School, on the Woolston site, and Lyttelton West School with Lyttelton Main, into a newly built school on the Lyttelton Main site).

The remaining three schools in New Brighton (North New Brighton, Central New Brighton and Freeville) are now subject to two new proposals, which will now be consulted on together.



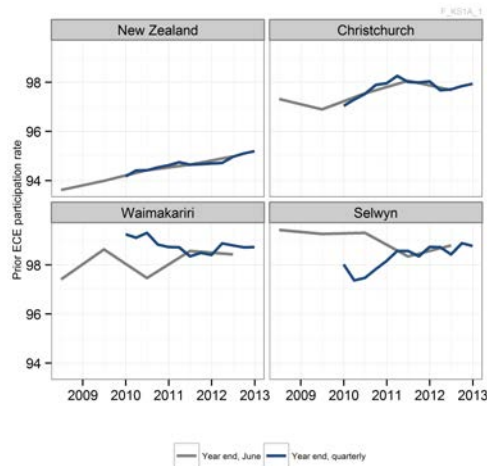
## What are the indicators telling us?

### ECE participation

This is measured in this report as the proportion of Year 1 entrants who had prior participation in early childhood education (ECE).

Before the earthquakes, greater Christchurch was well served with 15,644 ECE places. Figure 1 confirms that ECE participation has been consistently higher than the national average. Despite the earthquakes, this high rate of ECE participation has continued in 2012 in greater Christchurch.

Figure 1: Proportion of Year 1 entrants who had previously participated in early childhood education



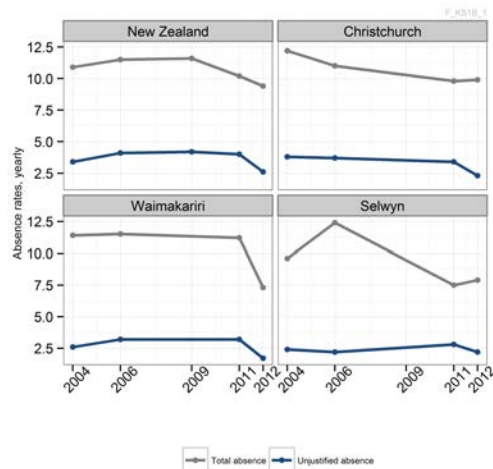
### Student absences

This is measured in this report through the total absence rate and unjustified absence rate from primary and secondary schools. Unjustified absence is also called 'truancy'.

In the first year after the earthquakes, schools reported fewer student absences. This is reflected in Figure 2, which records a slight decline in the total absence rate in Christchurch and the Selwyn District in the 2011 year compared with 2006. The rate in Waimakariri District remained the same. While justified absences have decreased elsewhere, there has been a levelling-off in Christchurch and Selwyn between 2011 and 2012.

The unjustified absence rate appears to have remained relatively stable despite the earthquakes and has in fact decreased slightly in 2012 in line with the overall New Zealand trend.

Figure 2: Total absence rate and unjustified absence rate<sup>4</sup>







**NEET rate** (youth Not in Education, Employment or Training)

Historically, the proportion of people aged 15-24 years who are not in employment, education or training (NEET) in greater Christchurch has been lower than for New Zealand as a whole. The greater Christchurch rate spiked after the February 2011 earthquakes but then lowered again below the overall New Zealand rate. The NEET rate in greater Christchurch peaked at 14.7 per cent in March 2011 but has since dropped to 11.6 per cent in the March 2013 quarter – a drop of 21 per cent in the last two years. In the March 2013 quarter, the NEET rate for greater Christchurch is below that of New Zealand overall (13.7 per cent).

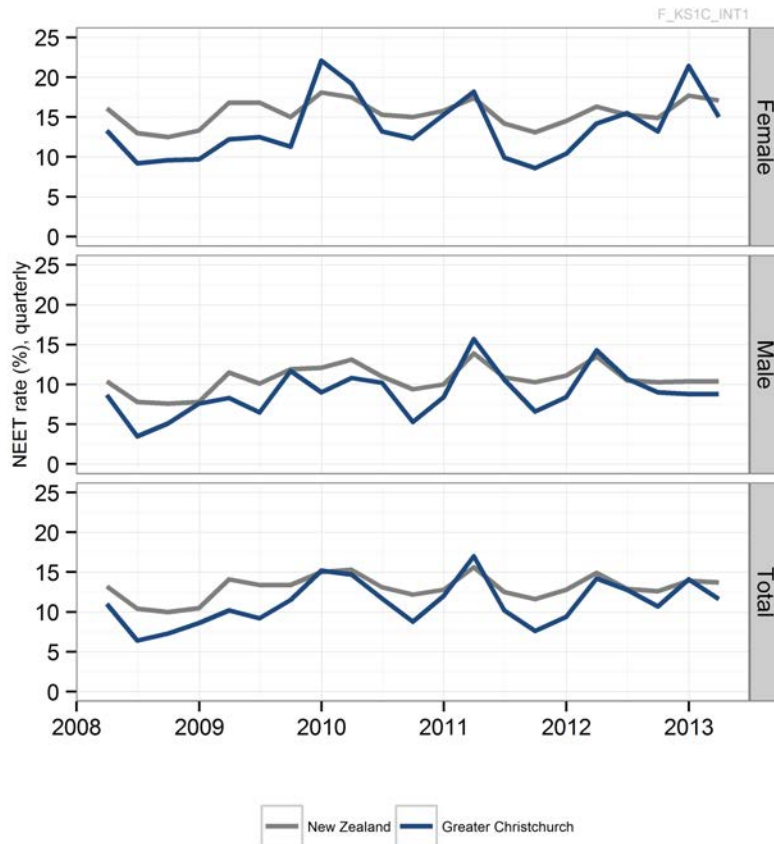
In the March 2013 quarter, there were 3,600 NEET males in greater Christchurch, representing a NEET rate of 8.8 per cent (compared with 10.4 per cent for males in New Zealand overall). The NEET rate for males in greater Christchurch has decreased by 39 per cent since the March 2012 quarter, when the NEET rate was 14.3 per cent.

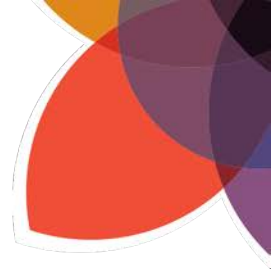
In the March 2013 quarter, there were 4,900 NEET females in greater Christchurch, representing a NEET rate of 15 per cent (compared with 17 per cent for females in New Zealand overall). The NEET rate for females in greater Christchurch has increased by 5.6 per cent since the March 2012 quarter, where the NEET rate was 14.2 per cent.

While the NEET rate for females steadily increased over the 2012 year and peaked at December 2012, it has dipped to 15 per cent in March 2013. This dip is encouraging but the female NEET rate for the March 2013 quarter rate (15 per cent) remains higher than for males (8.8 per cent).

We anticipate that as employment and training opportunities generated by the rebuild grow the female NEET rate will continue to fall.

Figure 3: 'Not in Employment, Education or Training' rate for the youth population by sex





**Tertiary enrolments**

This is measured for the domestic and international students enrolled in tertiary institutions.

Figure 4 shows that enrolments of all part-time and full-time students in formal tertiary education in greater Christchurch declined 18 per cent from 2009 (45,912 students) to 2011 (37,700 students) compared with an 8 per cent decline across New Zealand.

Enrolments in universities declined by 7 per cent from 2009 (21,552 students) to 2011 (19,998 students). Polytechnic enrolments declined by 31 per cent over the same period (from 17,494 to 12,013 students) compared with a 16 per cent decline nationally.

Figure 4: Number of tertiary enrolments

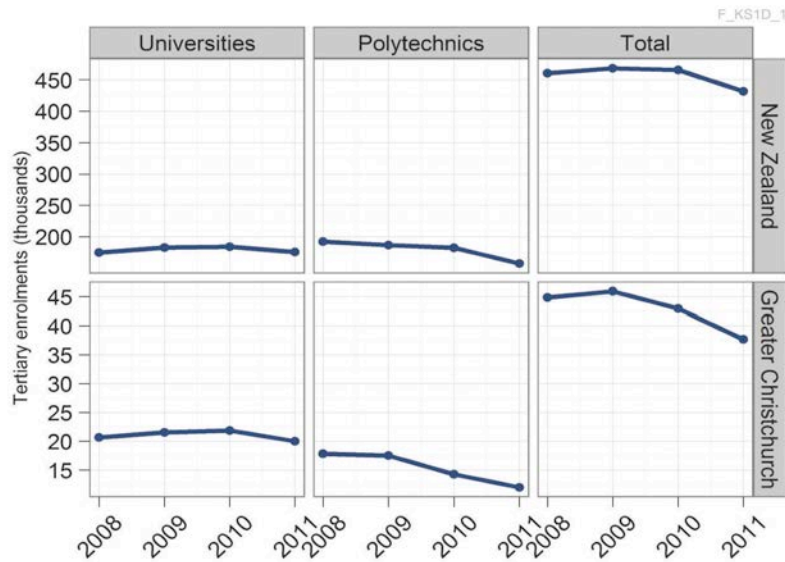


Table 1 sets out enrolment numbers for domestic and international students.<sup>5</sup> In 2011 enrolments in tertiary education dropped significantly from 2010; the number of domestic students fell by 10 per cent and the number of international students by 17 per cent.

For 2012, intakes of tertiary students at Christchurch-based institutions were slightly lower than in 2011, meaning they were still 11 per cent down on 2010. International enrolments in 2012 were down a further 17 per cent from 2011, while domestic enrolments were up 2 per cent from 2011.

Table 1: Full year domestic and international student enrolments in greater Christchurch 2010-2012

	2010	2011	2012
Domestic	37,363	33,689	34,403
International	5,614	4,671	3,878
All	42,977	38,360	38,281



**Student engagement**

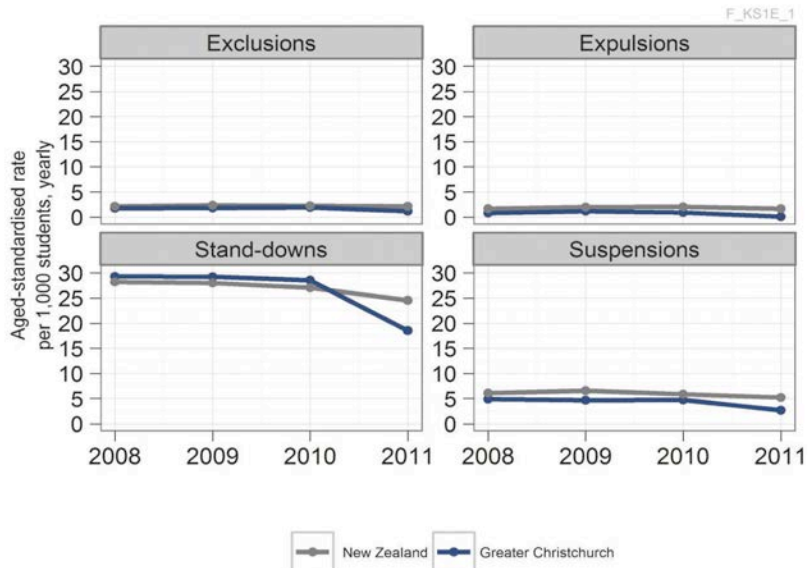
Student engagement is measured in this report by the age-standardised rate of exclusions, expulsions, stand-downs and suspensions for primary and secondary school students.

Figure 5 shows that the age-standardised rate for stand-downs in the greater Christchurch area decreased by 10 per 1,000 students from 2009 (29 per 1,000 students) to 2011 (19 per 1,000 students). Across New Zealand in the same period, stand-downs fell from 28 to 25 per 1,000 students.

The age-standardised rate for suspensions in greater Christchurch also decreased by 2 per 1,000 students from 2009 (5 per 1,000 students) to 2011 (3 per 1,000 students). By comparison, the number fell from 7 to 5 per 1,000 students across New Zealand.

These statistics may reflect a greater tolerance in the school environment and an increase in community supports.

*Figure 5: Age-standardised rate for stand-downs, expulsions, suspensions and exclusions per 1,000 students*



**Student transience**

In this report, student transience is measured by the number of times a school student has re-enrolled within greater Christchurch during the school year.

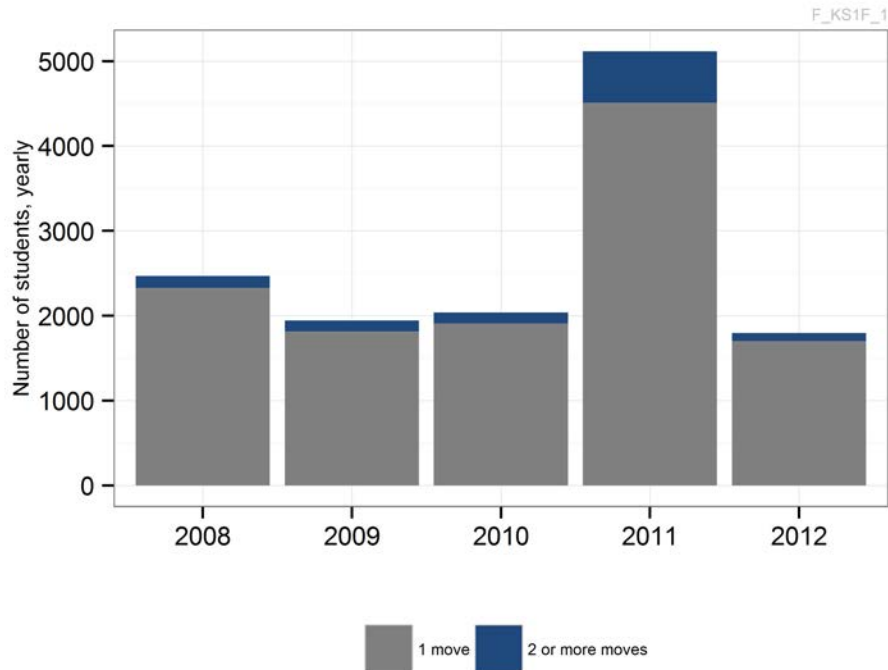
Figure 6 shows there was a noticeable change in student transience during 2011. That is, the proportion of students who moved at least once more than doubled between 2009 (3 per cent) and 2011 (7 per cent) before returning to pre-earthquake levels in 2012. In 2009, 1,816 students re-enrolled once in a new school within greater Christchurch compared with 4,504 students in 2011. The number of students who re-enrolled in a new school twice or more increased almost fivefold from 126 students in 2009 to 603 in 2011.

This movement most likely reflects the significant upheaval families faced with damaged homes and changes to employment patterns and social connections during 2011. The 2012 figures suggest that this upheaval has subsided and the numbers that have moved reflect standard patterns of pre-quake transience.

The vast majority of students within greater Christchurch remain enrolled in the same school each year (over 93 per cent each year for 2008-2012).



Figure 6: The number of students who re-enrol at a different school in greater Christchurch each year



### Find out more

Find out more about the Ministry of Education's education renewal plans:  
[www.shapingeducation.minedu.govt.nz](http://www.shapingeducation.minedu.govt.nz)

Find out more about education statistics:  
[www.educationcounts.govt.nz](http://www.educationcounts.govt.nz)

*Right Service Right Time* is an innovative approach to ensure the wellbeing of children and families.  
[www.rightservice.org.nz](http://www.rightservice.org.nz)

### Technical notes

#### ECE participation:

**Data source:** Ministry of Education administrative data  
**Data frequency:** Yearly to June and yearly to each quarter  
**Data complete until:** June 2012 and December 2012

**Notes:** The measure is institution-based, so the geographic assignment is based on where children are in child care, not where they normally reside. Christchurch city, Selwyn, and Waimakariri refer to the territorial authority boundaries.

Data presented are yearly to June, and yearly to each quarter. ECE prior participation rates are affected by seasonal variations.



### Student absences

**Data source:** Ministry of Education's Attendance in New Zealand Schools Survey  
**Data frequency:** Yearly in 2004, 2006, 2009, 2011 and 2012

**Notes:** 2009 figures are not available at the territorial authority level due to the nature of the sample.

Rates for the Christchurch area in 2011 should be interpreted with caution. These data were collected during the week in June 2011 when there were significant aftershocks and schools may have been closed. Schools had the option to report the week before or after, depending on whether they kept electronic or paper records.

### NEET (youth not in education, employment or training)

**Data source:** Household Labour Force Survey (HLFS), Statistics NZ  
**Data frequency:** Quarterly

**Data complete until:** March 2013

**Notes:** NEET refers to youth not in employment or education or training.

The HLFS interviews approximately 32,000 people or 16,000 private households in New Zealand each quarter. Each person is interviewed for eight quarters (two years) so that changes in labour market can be measured. Interviews are carried out each week of the quarter so that the data are an average for that quarter.

Greater Christchurch is comprised of Christchurch City Council, Selwyn District Council and Waimakariri District Council and is below survey design level. Data are indicative only and should be interpreted cautiously. Data for greater Christchurch during 2011 are subject to slightly higher sampling error than normal owing to interruption of surveying.

The HLFS is a sample survey and therefore subject to sampling error. Estimates based on populations fewer than 1000 are suppressed as they are subject to sampling errors too high for most practical purposes. Estimates of numbers in this table have been rounded to the nearest hundred.

### Tertiary enrolments

**Data source:** Ministry of Education administrative data  
**Data frequency:** Yearly

**Data complete until:** 2012

**Notes:** Numbers are head counts, not equivalent full-time students, and include New Zealand and international students. The numbers include Christchurch campus enrolments for institutions headquartered elsewhere (eg Wellington Institute of Technology, Southland Institute of Technology, University of Otago), and exclude non-Christchurch enrolments of Christchurch-based providers (eg the Telford campus of Lincoln University). Telford Rural Polytechnic merged with Lincoln University in 2011.

Students who were enrolled in more than one sub-sector have been counted in each sub-sector. Consequently, the sum of the sub-sectors may not add to the total number of students. Students who were enrolled in more than one territorial local authority have been counted in each authority. Consequently, the sum of the students in all territorial local authorities may not add to the total number of students.

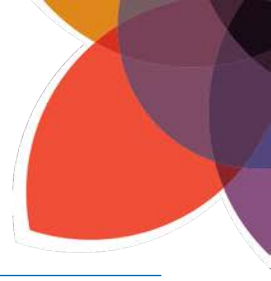
### Student engagement

**Data source:** Ministry of Education Stand-downs and Suspensions database and the Ministry of Education July school roll returns

**Data frequency:** Yearly in July

**Data complete until:** 2011

**Notes:** The numerator for the rates in this indicator was from the Ministry of Education Stand-downs and Suspensions database, and the denominator for the rates was from Ministry of Education July school roll returns. Only state and state integrated schools are included in the data.



The age-standardised rate of intervention per 1,000 students eligible for that intervention is the number of observed interventions divided by the number of expected interventions multiplied by the latest national rate per 1,000. By age-standardising, rates from different areas can be compared more accurately by controlling for the effect of differing age distributions in those different areas. All of the age-standardised rates are standardised against the current year national rate so that the data are comparable across years.

All students are eligible for suspension and stand-downs. Only students up to the age of 16 years are eligible for exclusions. Only students 16 years and older are eligible for expulsion.

The data have been aggregated for all of New Zealand, and separately for those territorial local authorities that constitute greater Christchurch (Christchurch City Council, Selwyn District Council and Waimakariri District Council).

The engagement data are defined as:

Stand downs – the removal of a student from school for a specified period

Suspension – the removal of a student from school until the Board of Trustees decides the outcome

Exclusion – a student under 16 years old is permanently removed from school and has to enrol elsewhere

Expulsion – a student 16 years old or over is permanently removed from the school.

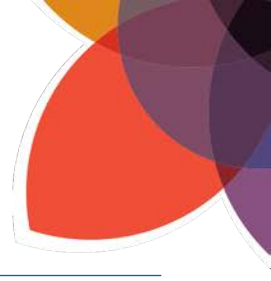
#### **Student transience (number of moves within greater Christchurch)**

**Data source:** Ministry of Education school enrolment data.

**Data frequency:** Yearly in March

**Data complete until:** 2012

**Notes:** The data include students who were enrolled in schools in greater Christchurch (Christchurch City Council, Selwyn District Council and Waimakariri District Council) throughout the entire school year.



## Endnotes

<sup>1</sup> [www.educationcounts.govt.nz/indicators/main/student-engagement-participation/1935](http://www.educationcounts.govt.nz/indicators/main/student-engagement-participation/1935)

<sup>2</sup> Ministry of Education. (2012). *Shaping Education, Directions for Education Renewal in Greater Christchurch*.

<sup>3</sup> Ministry of Education (in press). *Monitoring the recovery: Post-compulsory education in Christchurch*.

<sup>4</sup> Due to the earthquakes, figures for Christchurch may not represent 'typical' rates for the region. The survey of school rolls was scheduled to take place during the week of June 2011 that was subject to substantial aftershocks. Schools had the option of reporting the week earlier or later instead. Note schools were surveyed for absence rates in 2009, but the data are not available at the territorial authority level for that year. Rates for New Zealand overall in 2009 are shown.

<sup>5</sup> This denominator differs from that used for Figure 4.

# Canterbury Wellbeing Index

## Educational achievement: NCEA Level 2 pass rate



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### Why is NCEA achievement important?

A formal school qualification, such as the National Certificate of Educational Achievement (NCEA), is a measure of the extent to which young adults have completed a basic prerequisite for higher education and training and many entry-level jobs.

People who achieve higher educational qualifications also tend to earn more. In turn, with higher earnings they can keep better health, participate more in community life and live in better-quality housing. In addition, their children tend to go further in their own education.

An educated workforce is also critical to a region's future economic success. Cities with higher education levels grow jobs and population faster, and are more resilient to economic downturns, than cities with lower education levels.<sup>1</sup>

NCEA Level 2 is considered the minimum qualification needed to continue with further education or join the workforce. One of the Government's priorities is to increase the proportion of 18-year-olds with NCEA Level 2 or an equivalent qualification so that they can contribute fully to the New Zealand economy.

Historically, since NCEA was introduced, NCEA Level 2 pass rates for Christchurch students have been higher than the national average. Selwyn District students have also achieved at a high level over time. Results in the Waimakariri District have generally been similar to the national average.

### How was NCEA achievement impacted by the earthquakes?

In 2011 the New Zealand Qualifications Authority developed a special derived grades procedure for students in greater Christchurch. The process was designed to address concerns that school closures and site sharing may have impaired learning and to mitigate any such impact.

In the event, many schools, including a large number who were site sharing, achieved better results in 2011 than in 2010. This finding is consistent with the trend towards improving results in the area since the introduction of NCEA. While the special grades procedure may have contributed to some extent, principals have observed that students and staff generally demonstrated significant determination in challenging times.

### What is happening now?

As part of the Better Public Services programme the Government has set a target that 85 per cent of 18-year-olds will gain NCEA Level 2 or an equivalent qualification.<sup>2</sup> In line with this goal, the Ministry of Education continues to monitor achievement in greater Christchurch against the impact of the earthquakes.

The Ministry of Education is leading the greater Christchurch Education Renewal Recovery Programme, which aims to build on the best of existing practice while supporting the development of new, more effective approaches to teaching and learning.<sup>3</sup> One of the key objectives of this programme is that all learners achieve a solid academic base, gaining at least NCEA level 2.







The Youth Guarantee initiative provides young people a wider range of learning opportunities to achieve NCEA level 2 or equivalent to enable young people to transition to further education and participate in the workforce. A range of programmes including Vocational Pathways, Secondary-Tertiary Programmes (including Trades Academies), Service Academies and Fees-free places provide young people opportunities to engage in higher education and vocational training.

**What are the indicators telling us?**

NCEA achievements can be measured in different ways to present different pictures of how the schooling system is performing:

- ‘School Leavers’ data show the highest qualification of people who have left the schooling system, indicating how well prepared students are for further education or employment.
- ‘Year 12’ data focus on only the Year 12 cohort who are typically studying at NCEA Level 2, providing a cleaner picture of examination success.

Figure 1 shows that greater Christchurch school leavers achieved at an increasingly higher rate in each of the years affected by the earthquakes: 2010 and 2011. These results indicate that their school achievements have helped them to advance in their post-schooling ambitions, despite significant challenges.

*Figure 1: Proportion of school leavers who achieved NCEA Level 2 or a higher qualification*

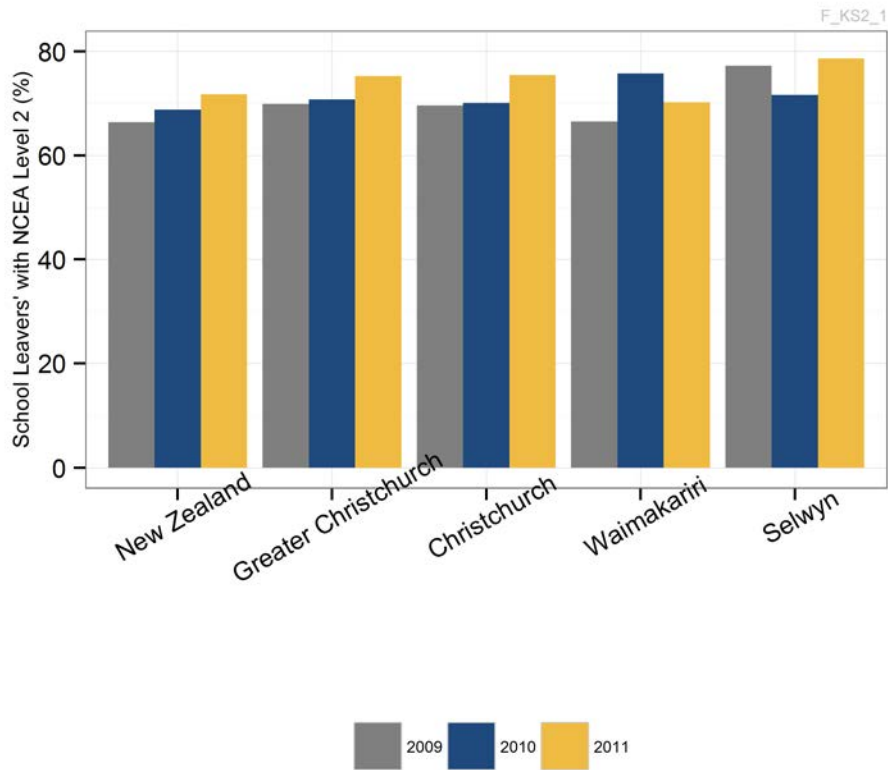
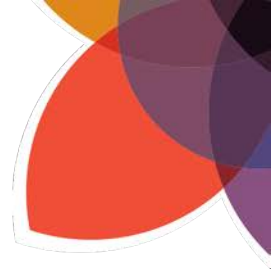


Figure 2 shows that NCEA Level 2 pass rates for Year 12 students in both Waimakariri and Christchurch have increased in each earthquake-affected year.

In Christchurch city, pass rates increased from an average of 72 per cent in 2009 to 73 per cent in 2010 and 78 per cent in 2011. In the Waimakariri District, the 2011 pass rates were higher than the achievement rates of previous years. Achievement rates in the Selwyn District have remained consistently high throughout the past five years.



These findings indicate that NCEA achievement for this cohort of students was high despite the earthquakes.

Figure 2: Proportion of Year 12 candidates who attained NCEA Level 2

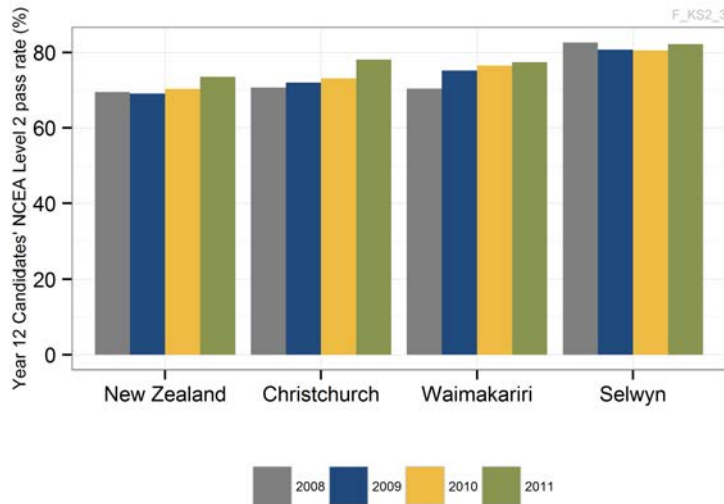
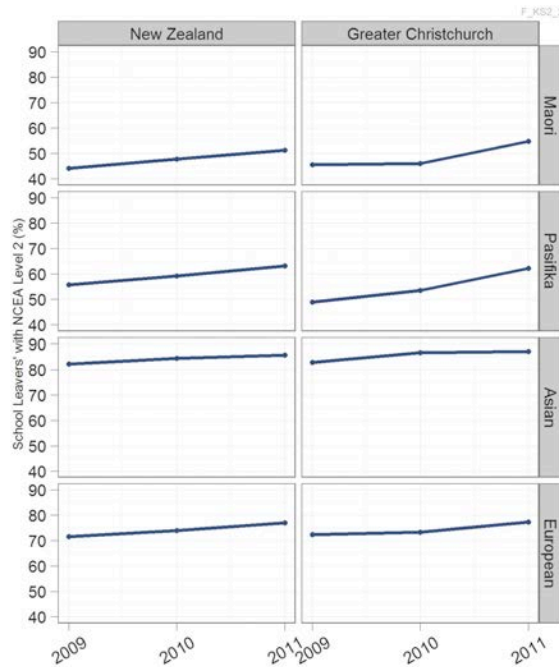


Figure 3 analyses school leaver achievement rates in terms of ethnicity. It shows that these rates were generally consistent with national trends.

Notably, 2011 Māori and Pacific school leaver achievement in greater Christchurch increased relative to national trends, although Pacific rates were still lower than the national average in 2011.

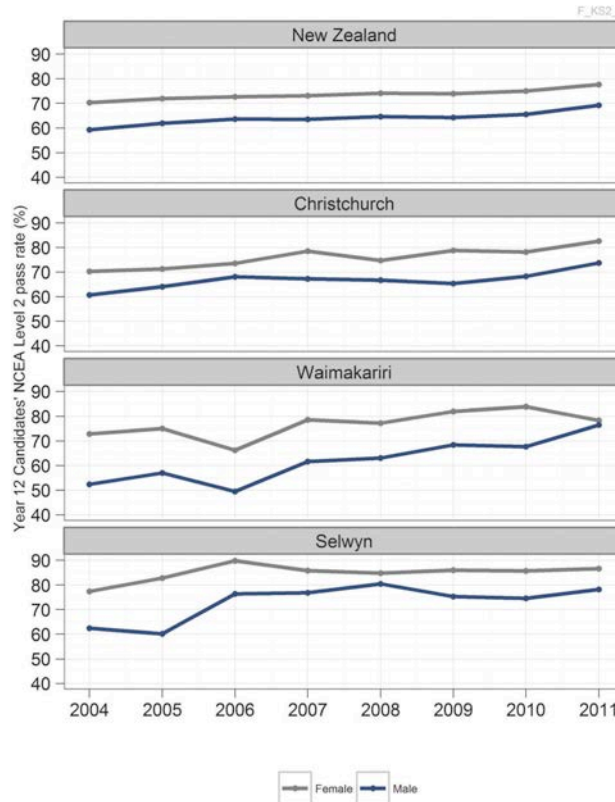
Figure 3: Proportion of school leavers who attained NCEA Level 2, by ethnicity



Achievement at NCEA Level 2 has consistently been higher for female students than for male students in Year 12 as Figure 4 shows. Some of the variation in rates in the Waimakariri and Selwyn districts is likely to be due to the smaller number of people involved, which makes the data less reliable.



Figure 4: Proportion of Year 12 candidates who achieved NCEA Level 2, by gender



### Find out more

Find out more about the Canterbury Wellbeing Index: [www.cera.govt.nz/cwi](http://www.cera.govt.nz/cwi)

Find out more about NCEA from the New Zealand Qualifications Authority: [www.nzqa.govt.nz/qualifications-standards/qualifications/ncea/](http://www.nzqa.govt.nz/qualifications-standards/qualifications/ncea/)

Find out more about the Youth Guarantee programme: <http://youthguarantee.net.nz/>

### Technical notes

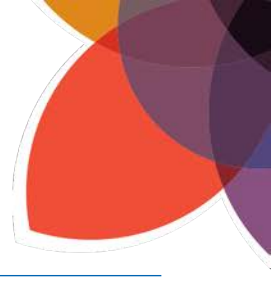
**Data sources:** Ministry of Education school leaver collection, Ministry of Education database of New Zealand Qualifications Authority NCEA results

**Data frequency:** Yearly in September and June

**Data complete until:** 2011

**Notes:** International students and students with gender unknown are excluded from the overall data and data by gender.

Greater Christchurch includes Christchurch City, Waimakariri and Selwyn Districts.



## Endnotes

<sup>1</sup> Simon, Curtis J. and Nardinelli, Clark. (1996). The talk of the town: Human capital, information and the growth of English cities. *Explorations in Economic History* 33(3): 384–413.

David, Matthew. (2004). Education levels drive down city growth, [www.nber.org/digest/jun04/w10191](http://www.nber.org/digest/jun04/w10191), cited in A. Plyer and E. Ortiz (2011).

The New Orleans Index at Six. Greater New Orleans Community Data Centre.

<sup>2</sup> Better Public Services [www.ssc.govt.nz/better-public-services](http://www.ssc.govt.nz/better-public-services)

<sup>3</sup> Shaping Education, Directions for Education Renewal in Greater Christchurch, Ministry of Education, 2012.



PUBLISHED JUNE 2013

**CERA is monitoring and reporting on the progress of the recovery. The Canterbury Wellbeing Index tracks the progress of social recovery using indicators to identify emerging social trends and issues.**

### Why is employment important?

Employment has a direct impact on wellbeing. It affects the economic wellbeing and the quality of life of an individual and their family. It also has significant impacts on their social and emotional wellbeing.

Most researchers agree that being employed is the most important way for a person to get enough income to meet their material needs and to fully participate in their community.<sup>1</sup> It is also central to an individual's identity and their role in society.<sup>2</sup>

Unemployment has strong linkages to ill health and other outcomes. Unemployed people have higher mortality rates, a higher risk of mental health issues and a higher rate of criminal activity.<sup>3</sup> Longitudinal studies show that unemployment has a direct effect on health over and above the effects of socioeconomic status, poverty and prior ill-health.<sup>4</sup>

It is particularly important for the future of greater Christchurch, and New Zealand, that young people are able to find employment when they finish their education and training. Young people are particularly vulnerable in the job market because they do not yet have the experience and skills to compete with older workers. The recent global economic downturn increased youth unemployment rates in New Zealand but it is anticipated that young people will find significant job opportunities in the rebuild of greater Christchurch.<sup>5</sup>

Another group who are at risk in the labour market are people with disabilities who are also vulnerable to adverse employment outcomes during economic downturns.<sup>6</sup>

When people move from unemployment to employment, they gain in material wellbeing, physical and mental health, and socioeconomic status.<sup>7</sup> Increasing employment rates in the greater Christchurch region will be central to the recovery of the community and the economy.

### How was employment impacted by the earthquakes?

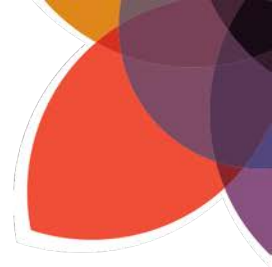
The February 2011 earthquake had immediate economic consequences across greater Christchurch and the whole of the South Island. Some of the most severely affected sectors were tourism, small businesses, and service industries such as retail, hospitality, international education and aged care.

Businesses in the central business district could not trade from, or even access, their premises. Smaller suburban centres in older parts of town such as Sydenham were disproportionately affected as damage from unreinforced masonry buildings closed roads and pavements, making it harder for pedestrians to reach them. Some of the large shopping malls could not open due to damage, and economic activity was disrupted completely or forced to shift to different parts of town.

On 28 February 2011 the Government set up the Earthquake Support Subsidy so that businesses could continue to pay their employees when they were unable to operate or were losing significant trade. A similar package called Job Loss Cover assisted the self-employed. Because of these payments, a significant number of businesses were able to remain viable.<sup>8</sup>

Partly as a result of these measures, fewer people moved onto the unemployment benefit than might be expected in the period after the earthquakes. Since then the labour market has picked up as many businesses relocated to new premises and began trading again. Others started trading online.





## What is happening now?

The work involved in rebuilding and repairing domestic dwellings and commercial buildings is expected to fuel economic growth in the Canterbury region for a number of years. This growth should in turn increase employment in the region.

The Canterbury Earthquake Recovery Authority (CERA) estimates that thousands of construction-related workers will be required at the peak of rebuilding activity. Demand is expected to be greatest for carpenters and joiners, painters, concreters and plasterers as well as for general labourers. Additional employees will also be required in non-construction sectors that support the rebuild, such as accountants, lawyers, hospitality and retail workers.

Canterbury continues to be the fastest-growing region in the country by a significant margin. The economy is estimated to have grown by 7.5 per cent during 2012 while the national rate was 2.5 per cent.<sup>9</sup>

The Ministry of Business, Innovation & Employment's (MBIE) Jobs Online Index shows a 16.9 per cent increase in skilled vacancies between April 2012 and April 2013 in Canterbury.<sup>10</sup> This compares with an 11.8 per cent increase for all of New Zealand. Despite the increase, the number of vacancies in the construction and engineering industry fell by 9.3 per cent over this period.

Over the year to March 2013, Canterbury employment only rose by 2,100 (0.6 per cent) compared with a national increase of 1.7 per cent. During this time unemployment decreased by 4,000 (21.3 per cent). This decrease in unemployment came almost entirely from males (3,800) – female unemployment in Canterbury hardly changed. Over the year, there was a decline of 13,400 people in Canterbury's working-age population.<sup>11</sup>

Over the year to March 2013, 'construction' jobs in Canterbury fell by 100 (0.3 per cent), 'wholesale trade jobs decreased by 5,100 (30 per cent) and 'manufacturing and electricity, gas, water, and waste services' jobs fell by 200 (0.5 per cent).<sup>12</sup> Despite the decrease over the last year, numbers in the construction industry have increased by 10,700 since the March 2011 quarter (49 per cent). This work brings with it increased risks of work-related injuries as construction is an industry that is particularly prone to workplace accidents.<sup>13</sup>

While the employment indicators are starting to improve, some people report concerns about the impacts of the earthquakes on workplace stress. In the 2012 CERA Wellbeing Survey, 44 per cent of respondents reported additional work pressures as a result of the earthquakes and 30 per cent workplace safety concerns (for example, perceptions that their building is unsafe).

In 2011, the Government invested \$42 million in trades training through Skills for Canterbury, which includes up to 3,000 more construction-related training places in polytechnics in order to capitalise on rebuild opportunities. In November 2012, the Government committed an extra \$28 million to maintain the expanded training pipeline for trades people. The Government has also announced significant investment in training opportunities: 10,000 new apprenticeships and a further 300 places through the He Toki ki te Rika Māori trade training initiative.

## What are the indicators telling us?

### Beneficiaries obtaining work

This report uses two measures of beneficiaries obtaining employment:

- the proportion of the total population of beneficiaries who cancel their benefit because they have obtained work
- the number of cancellations of a benefit due to obtaining work.

Note that not all unemployed people seek or are eligible for a benefit.

Figure 1 shows that the proportion of beneficiaries in greater Christchurch who left the benefit for work decreased to 1.2 per cent in the month after the February 2011 earthquake. This was the lowest proportion since December 2008. Since then, there have been marked increases, with 3.8 per cent leaving the benefit for work in May 2011 compared with 2.6 per cent across New Zealand. While fluctuating, the Canterbury rate has generally remained above the New Zealand rate.

Figure 2 shows that at the end of 2012, approximately 600 people were leaving the benefit for work each month in Canterbury. Following seasonal trends, this figure tapered off over the Christmas period but is expected to resume in 2013.



Figure 1: Proportion of beneficiaries leaving benefit for employment

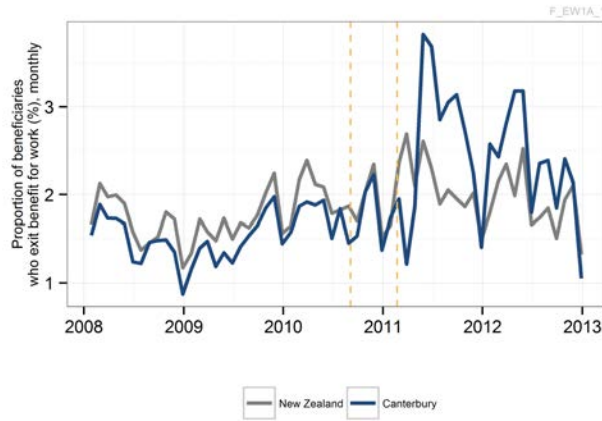


Figure 2: Number of beneficiaries leaving benefit for employment

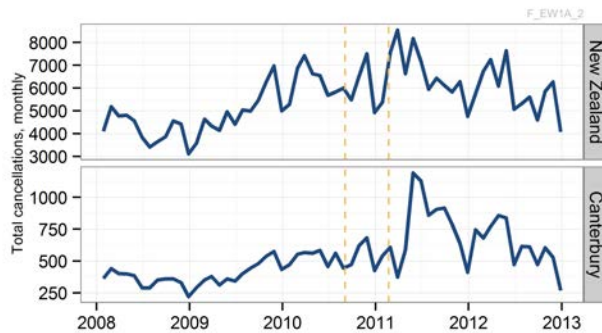


Figure 3, shows that since the earthquakes, employment opportunities have favoured males. In the three months to December 2012, 2.4 per cent of males on a benefit left for work, compared with 1.5 per cent of females. It is expected that this gender imbalance will change as the rebuild generates wider economic growth and employment opportunities. One reason for the gender imbalance, regardless of labour market opportunities, is the issue of childcare and the need for part-time employment options for the primary caregiver.

Figure 3: Number of beneficiaries leaving benefit for employment, by sex

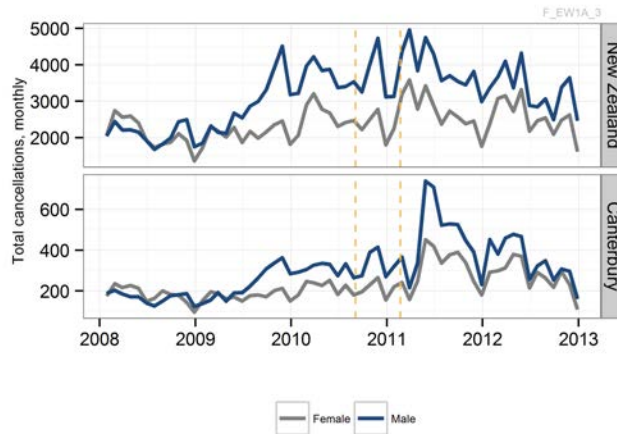
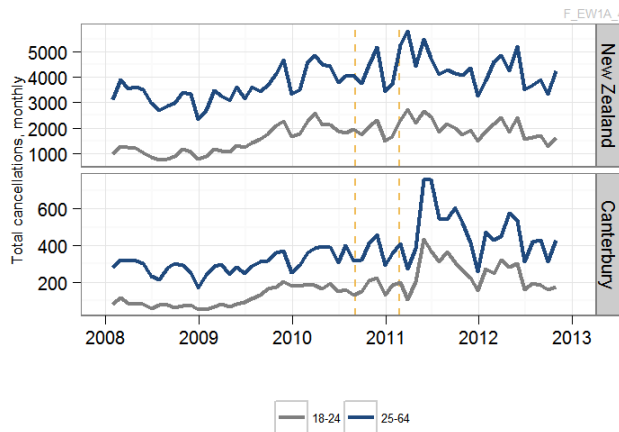




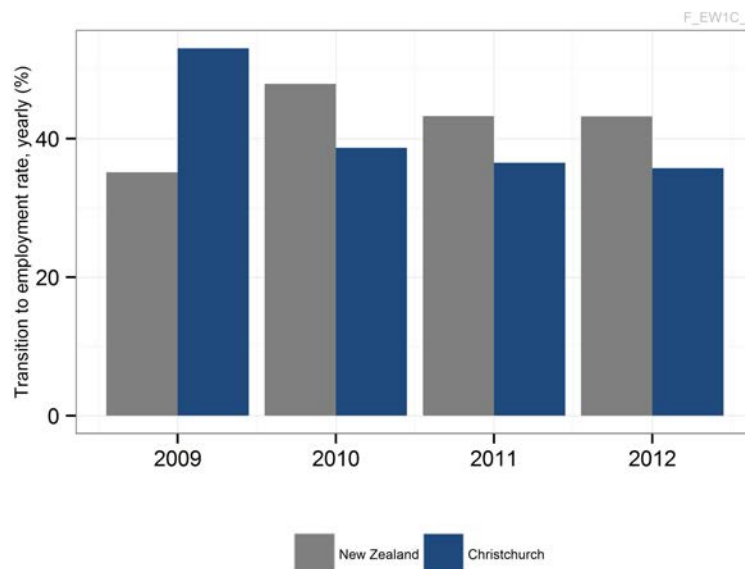
Figure 4 shows the difference in the number of young people aged 18-24 and those aged 25-64 moving from a benefit into employment per month. The graph shows there are more older people leaving benefits than youth, which largely reflects the greater numbers of older people. In the three months to December 2012, an average of 3.6 per cent of people aged 18-24 on a benefit left for work, compared with 1.5 per cent of those aged 25-64. In the three months to December 2012, 2.7 per cent of women aged 18-24 left a benefit for employment in greater Christchurch compared with 5.4 per cent of young males. This compares favourably with 2.1 per cent for young women across New Zealand and 5.1 per cent for young men across New Zealand.

Figure 4: Number of beneficiaries leaving benefit for employment, by age

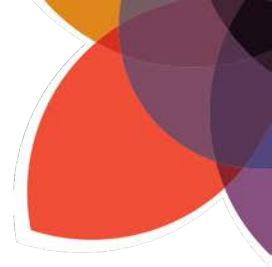


Workbridge finds employment for people with disabilities. In the post-earthquake period employment placements have decreased in Christchurch, compared with the trend across New Zealand. Figure 5 shows that in 2009 more Workbridge clients in Christchurch transitioned to jobs compared with national rates. By 2012, this transition rate had fallen below the national rate.

Figure 5: Percentage of those registered with Workbridge obtaining employment, yearly







## Rates of employment, unemployment and participation

The unemployment rate is the number of unemployed expressed as a percentage of the labour force.

The employment rate is the number of those employed for more than an hour a week expressed as a percentage of the labour force.

The labour force participation rate is the proportion of the working age population classified as employed or unemployed.

## How is greater Christchurch doing?

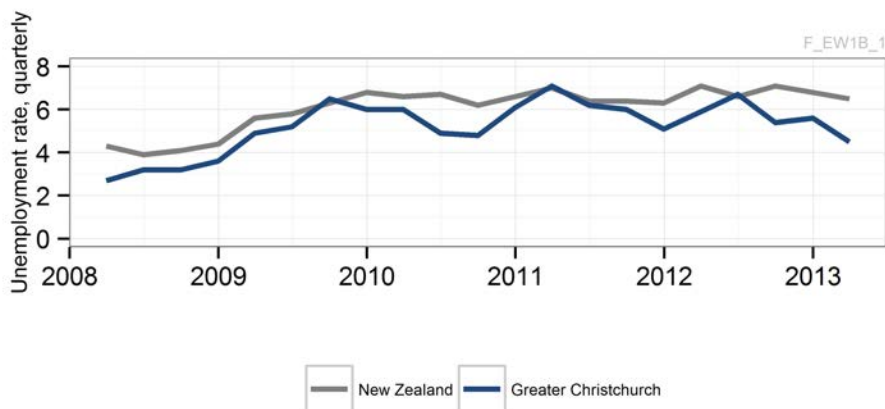
### Unemployment

Figure 6 shows that greater Christchurch has typically had a lower unemployment rate before the earthquakes than the national rate. However, the unemployment rate increased after the September 2010 earthquake and decreased again following the February earthquake. The unemployment rate peaked at 7.1 per cent in March 2011 but has since dropped to 4.5 per cent in the March 2013 quarter – a drop of 37 per cent in the last two years and the lowest rate since December 2008. The unemployment rate for greater Christchurch is below that of New Zealand overall (6.5 per cent).

In March 2013, there were 3,900 unemployed young people (15-19) in greater Christchurch which represents an unemployment rate of 25.6 per cent (the same rate as all of New Zealand). This rate is higher than the pre-earthquake rate of 17.8 per cent for greater Christchurch in September 2010. However, it has decreased significantly from 40.2 per cent in the December 2012 quarter.

In March 2013, there were 1,700 unemployed young people (20-24) in greater Christchurch which represents an unemployment rate of 5.1 per cent which is less than half of the rate for all of New Zealand (10.9 per cent). The greater Christchurch rate is lower than the pre-earthquake rate of 10.8 per cent in September 2010. It has decreased from 6.5 per cent in the previous quarter, and has decreased by a significant 69 per cent over the past year.

Figure 6: Unemployment rate



### Employment rate

After a sharp decline in the employment rate following the earthquakes, the rate for greater Christchurch increased to pre-earthquake levels by March 2013. Figure 7 shows the employment rate fell from 67 per cent in September 2010 to 63 per cent in September 2011 before recovering to 67.7 per cent in March 2013 (compared with 63.8 per cent across New Zealand). This increase is set against a slight decrease in the employment rate nationally. Between the December 2012 and March 2013 quarters an additional 4,200 people were employed.

The rate of employment in greater Christchurch is expected to increase further as the rebuild gains momentum.

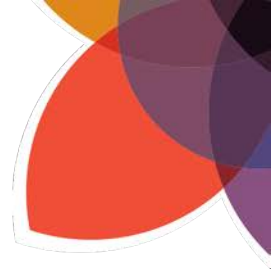
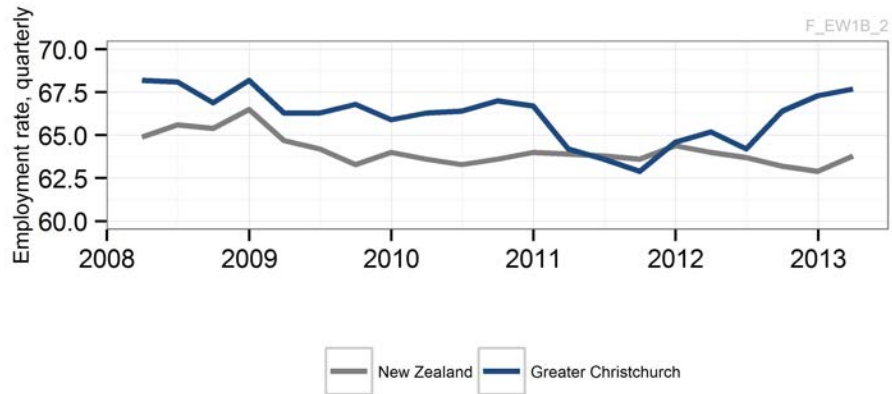


Figure 7: Employment rate

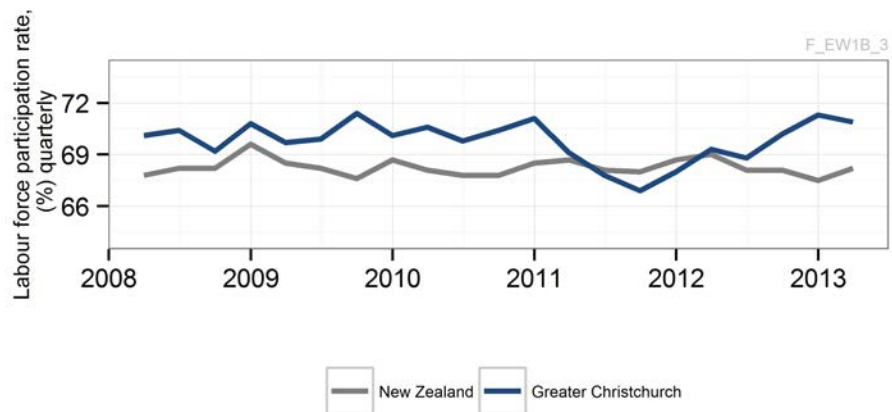


**Labour force participation rate**

Figure 8 shows that the proportion of the greater Christchurch population who identified themselves as part of the labour force decreased in the period after the February 2011 earthquake. There may be many reasons for this effect. For example, some people may have taken time out from seeking employment to focus on their family’s wellbeing.

Participation rates returned to pre-quake levels by the March 2013 quarter with a greater Christchurch labour force participation rate of 70.9 per cent (compared with 68.2 per cent across New Zealand). While the rate has decreased since the December 2012 quarter (from 71.3 per cent) the actual number participating has increased by 1,200 people. This is due to an estimated increase in the size of the working aged population.

Figure 8: Labour force participation rate



**Work-related injuries**

Figure 9 shows that work-related accident claims have steadily decreased across New Zealand. In greater Christchurch the rate dropped in 2009 and remained relatively stable over 2009-10 at approximately 900 accidents per 10,000 FTEs per annum. However the rate increased by 4 per cent between 2010 and 2011 and will need to be carefully monitored with the rebuild work getting underway, as construction is an industry that is particularly prone to accidents.<sup>14</sup>

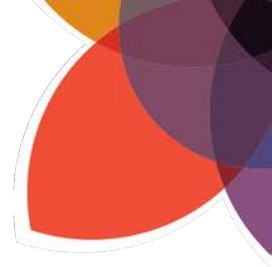
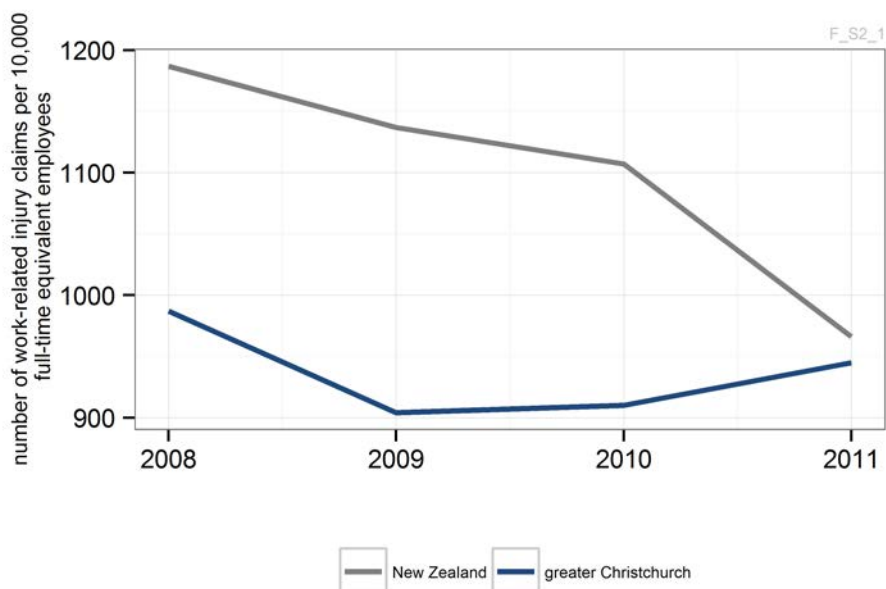


Figure 9: The number of work-related injury claims per 10,000 full-time equivalent employees



### Summary

Overall the rebuild is delivering significant employment opportunities in greater Christchurch, as evidenced by improving trends in the most recent employment data. The opportunity exists to ensure that many young people benefit from labour market opportunities through the rebuild, including females and those aged 15-19 years of age.

### Find out more

Find out more about the Canterbury Wellbeing Index: [www.cera.govt.nz/cwi](http://www.cera.govt.nz/cwi)

Find out more from CERA about the Canterbury Economic Indicators:  
[cera.govt.nz/economic-indicators](http://cera.govt.nz/economic-indicators)

Find out more about the Canterbury Employment and Skills Board and the Canterbury workforce:  
[www.cesb.org.nz/](http://www.cesb.org.nz/)

Find out more about the Canterbury Skills and Employment Hub:  
[www.opportunitycanterbury.org.nz/](http://www.opportunitycanterbury.org.nz/)

Find about more about jobs in the rebuild:  
[www.jobseeker.co.nz/Rebuild-Opportunities-Canterbury-jobs](http://www.jobseeker.co.nz/Rebuild-Opportunities-Canterbury-jobs)

Find out more about jobs for young people: [www.facebook.com/BBCanty](http://www.facebook.com/BBCanty)

Find out more about jobs for disabled people:  
<http://www.dol.govt.nz/er/pay/exemptions/Employment%20Supports%20for%20People%20with%20Disabilities.pdf>

Find out more about economic development in Christchurch City: [www.cdc.org.nz/](http://www.cdc.org.nz/)

Find out more about economic development in the Waimakariri District:  
[www.northcanterbury.co.nz/business/ENCInfo/](http://www.northcanterbury.co.nz/business/ENCInfo/)

Find out more about economic development in the Selwyn District:  
[www.selwyn.govt.nz/services/economic-development](http://www.selwyn.govt.nz/services/economic-development)



## Technical notes

### CERA Wellbeing Survey

**Data source:** Canterbury Earthquake Recovery Authority  
**Data frequency:** Six-monthly  
**Data complete until:** October 2012

**Notes:** The CERA Wellbeing Survey 2012 is a representative sample of 2,381 residents of greater Christchurch delivered by Nielsen. Respondents were randomly selected from the Electoral Roll. The survey was delivered online and by hard copy and closed on 14 October 2012. The response rate was 51.5 per cent. Weighting was used to correct for imbalances in sample representation. The survey was developed in partnership with Christchurch City Council, Waimakariri District Council, Selwyn District Council, the Canterbury District Health Board, Ngai Tahu and the Natural Hazards Research Platform. Survey available:  
<http://cera.govt.nz/sites/cera.govt.nz/files/common/cera-wellbeing-survey-2012-report-20120220.pdf>

### Beneficiaries obtaining work

**Data source:** Ministry of Social Development's (MSD) database  
**Data frequency:** Monthly  
**Data complete until:** October 2012

**Notes:** Cancellations and clients are calculated from the total number of working-age benefits of the following types: 1) Domestic Purposes Benefit (DPB) and DPB-related benefits, which include DPB-Caring for Sick or Infirm, DPB-Sole Parent, DPB-Woman Alone and Emergency Maintenance Allowance; 2) Invalid Benefit; 3) Sickness Benefit and Sickness Benefit Hardship; and 4) Unemployment Benefit and Unemployment Benefit Hardship. Cancellations in these benefit types were counted if they were cancelled for the reason 'Obtained work'.

The Canterbury Work and Income region presented here excludes the Ashburton service area.

Note that the eligibility requirements for the Unemployment Benefit are different from the definition of unemployed in the HLFs. See MSD for information about Unemployment Benefit eligibility requirements: [www.statistical-report-2010.msd.govt.nz/main+benefits/unemployment+benefits/eligibility+%96+unemployment+benefits](http://www.statistical-report-2010.msd.govt.nz/main+benefits/unemployment+benefits/eligibility+%96+unemployment+benefits).

Note that these benefit data may be affected by earthquakes as some service centres had interrupted services following the February 2011 earthquakes. These data are not adjusted for external factors affecting employment (eg, government policy or recession).

### Workbridge employment rate

**Data source:** Ministry of Social Development  
**Data frequency:** Yearly  
**Data complete until:** 2012

**Notes:** Workbridge employment rate is calculated from the number of clients placed into work yearly over the total enrolments with Workbridge yearly.

The Christchurch area is calculated by combining Workbridge numbers from the Christchurch and Hornby Centres.

Note that only some of the clients referred by ACC would show in the Workbridge information sent to MSD. These data are not adjusted for external factors affecting employment (e.g. government policy or recession).

### Employment, Unemployment and Labour force participation rate

**Data source:** Household Labour Force Survey (HLFS), Statistics New Zealand



**Data frequency:** Quarterly

**Data complete until:** March 2013

**Notes:** The HLFS interviews approximately 32,000 people or 16,000 private households in New Zealand. Each person is interviewed for eight quarters (two years) so that changes in labour market can be measured. Interviews are carried out each week of the quarter so that the data are an average for that quarter.

The greater Christchurch area includes Christchurch City, Waimakariri District and Selwyn District Councils and is below survey design level. Data are indicative only and should be interpreted cautiously.

Data for greater Christchurch during 2011 are subject to slightly higher sampling error than normal owing to interruption of surveying.

The HLFS is a sample survey and therefore subject to sampling error. Estimates based on populations fewer than 1,000 are suppressed as they are subject to sampling errors too high for most practical purposes. Estimates of numbers have been rounded to the nearest hundred.

'Unemployed' refers to all people in the working age population who during their reference week were without a paid job and were available for work and had actively sought work in the past four weeks, or had a new job to start within four weeks. A person whose only job search method in the previous four weeks has been to look at job advertisements in newspapers is not considered to be actively seeking work.

'Employed' refers to HLFS respondents who: 1) had worked for one hour or more, for pay or profit, in the context of an employee–employer relationship or self-employment; 2) worked without pay for one hour or more in work which contributed directly to the operation of a farm, business or professional practice owned or operated by a relative; or 3) had a job but were not at work due to a) own illness or injury, b) personal or family responsibilities, c) bad weather or mechanical breakdown, d) direct involvement in an industrial dispute, or e) leave or holiday. Employment rate refers to the employed, as a proportion of the working age population.

The labour force participation rate refers to all members of the working age population who during their survey reference week are classified as 'employed' or 'unemployed', as a proportion of the working age population.

### **Work-related injury claims**

**Data source:** Injury statistics - Work-related claims, Statistics New Zealand

**Data frequency:** Yearly

**Data complete until:** 2011

**Notes:** Injury Statistics – Work-related Claims measures claims accepted by ACC for work-related injuries. The statistics are based on one claim for each person for each injury event. Claims are only included if some costs are recorded.

Full-time equivalent employee information from the Household Labour Force Survey is used to calculate the number of work-related injury claims per 1,000 FTEs. Full-time equivalent employees (FTEs) is a standard measure used in labour force statistics, for example, to calculate average weekly earnings. FTEs are calculated as the number of full-time employees plus half the number of part-time employees.

The data in this information release are not a definitive count of all work-related injuries. This is because not all work-related injuries result in a claim to ACC. The 2011 data are provisional and subject to change.



## Endnotes

- <sup>1</sup> Milligan, S., Fabian, A., Coope, P., & Errington, C. (2006). *Family wellbeing indicators from the 1981–2006 New Zealand Censuses*. Statistics NZ, University of Auckland, University of Otago.
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- <sup>6</sup> New Zealand Human Rights Commission (2011). *Tracking Equality at Work for Disabled People*. NZHRC: Wellington, NZ. <http://www.hrc.co.nz/wp-content/uploads/2011/07/Tracking-Equality-at-Work-for-disabled-people.pdf>
- <sup>7</sup> Waddel et al. (2011). *Christchurch City Health Profile*.
- <sup>8</sup> Labour and Immigration Research Centre, Department of Labour. (2011). *A changing landscape: the impact of the earthquakes on Christchurch workplaces*. Retrieved from [www.dol.govt.nz/research](http://www.dol.govt.nz/research)
- <sup>9</sup> ANZ Regional Trends (February 2013). Retrieved from : <http://www.anz.co.nz/commercial-institutional/economic-markets-research/regional-trends/>
- <sup>10</sup> Jobs Online Index. <http://www.dol.govt.nz/publications/jol/reports/jol-apr-13/>
- <sup>11</sup> [www.stats.govt.nz/~media/Statistics/Browse%20for%20stats/HouseholdLabourForceSurvey/HOTPMar13qtr/HouseholdLabourForceSurveyMar13qtrHOTP.pdf](http://www.stats.govt.nz/~media/Statistics/Browse%20for%20stats/HouseholdLabourForceSurvey/HOTPMar13qtr/HouseholdLabourForceSurveyMar13qtrHOTP.pdf)
- <sup>12</sup> Jobs are categorised according to ANZSIC06: Australian and New Zealand Standard Industrial Classification, 2006. Data from Household Labour Force Survey: March 2013 quarter – supplementary Canterbury tables <http://www.stats.govt.nz/~media/Statistics/Browse%20for%20stats/HouseholdLabourForceSurvey/HOTPMar13qtr/hlfs-Mar13qtr-Canterbury-tables.xls>
- <sup>13</sup> Injury Statistics – Work-related Claims: 2010 retrieved from Statistics New Zealand: [www.stats.govt.nz/browse\\_for\\_stats/health/injuries/InjuryStatistics\\_HOTP10/Commentary.aspx#occupation](http://www.stats.govt.nz/browse_for_stats/health/injuries/InjuryStatistics_HOTP10/Commentary.aspx#occupation)
- <sup>14</sup> Injury Statistics – Work-related Claims: 2010 retrieved from Statistics New Zealand: [www.stats.govt.nz/browse\\_for\\_stats/health/injuries/InjuryStatistics\\_HOTP10/Commentary.aspx#occupation](http://www.stats.govt.nz/browse_for_stats/health/injuries/InjuryStatistics_HOTP10/Commentary.aspx#occupation)

PUBLISHED JUNE 2013

**CERA is monitoring and reporting on the progress of the recovery. The Canterbury Wellbeing Index tracks the progress of social recovery using indicators to identify emerging social trends and issues.**

### Why is household income important?

Having sufficient household income contributes substantially to a family's wellbeing. With an adequate income, a household can get essential and non-essential items such as quality housing, food, health services and transport. The members of the household can participate in their community through social and recreational activities.

Where parents have sufficient income, the children in the household are more likely to experience wellbeing in virtually every dimension that social scientists measure.<sup>1</sup> Where there is insufficient income, children are more likely to have negative outcomes such as lower educational achievement, poorer health, poorer economic status in their adult life, and behavioural problems.

Rises in household income have wider economic benefits through helping the economy to grow and increasing the country's tax base.

### How was household income impacted by the earthquakes?

The earthquakes caused significant damage to the economy. However, it is unclear whether this damage impacted significantly on household incomes in greater Christchurch.

A quarter of the respondents in the 2012 Canterbury Earthquake Recovery Authority (CERA) Wellbeing Survey have experienced potential or actual loss of employment or income as a result of the earthquakes.<sup>2</sup> In addition, 45 per cent of respondents report 'additional financial burdens (e.g. replacing damaged items, additional housing costs, supporting family members)' as a result of the earthquakes.<sup>3</sup>

On the other hand, 18 per cent of residents experienced business and employment opportunities as a result of the earthquakes.

### What is happening now?

The rebuild is expected to fuel economic growth in the region. In turn, this growth is likely to increase household incomes. Canterbury continues to be the fastest-growing region in the country by a significant margin – it is estimated that the economy has grown by 7.5 per cent during 2012.<sup>4</sup>

However, there is heavy demand for housing from displaced residents and workers coming to the city for the rebuild. This demand is driving up house prices and rents, which could reduce median equivalised weekly income after housing costs.

### What are the indicators telling us?

This report measures household income in two ways:

- median and 20th percentile equivalised gross weekly household income
- median weekly household income net of housing costs for renters and home owners.





**Median and 20th percentile equivalised gross weekly household income**

Median gross household income is the dollar amount that divides all households into two equal groups based on their income. Half the households have an income above that amount, and half the households have an income below that amount.

The 20th percentile for household income is the dollar amount that divides households into the 20 per cent of households that have an income below this amount and the 80 per cent that have an income higher than this amount.

Household income has been ‘equivalised’ which means the dollar amounts have been adjusted based on the age and number of children in the household.

Figure 1 shows that the median equivalised gross weekly household income has increased for greater Christchurch and New Zealand overall from 2008 to 2012.

Median equivalised weekly income for greater Christchurch was \$1,126 in 2008 and increased to \$1,181 in 2012. During these same four years, the median equivalised weekly income for New Zealand overall was slightly lower, reaching \$1,131 in 2012.

Overall, greater Christchurch has had a 4.9 per cent increase between 2008 and 2012, while New Zealand has experienced a 4.2 per cent increase over this period.

*Figure 1: Median equivalised gross weekly household income*

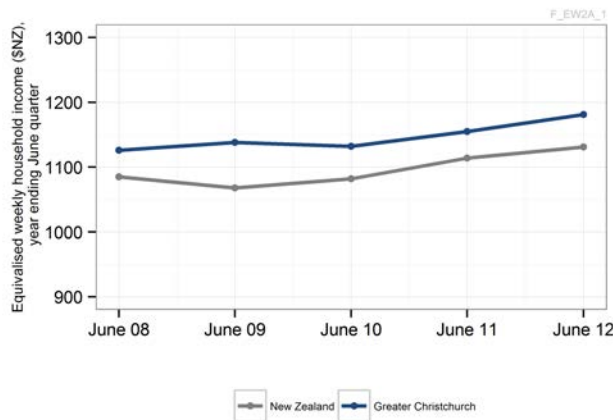
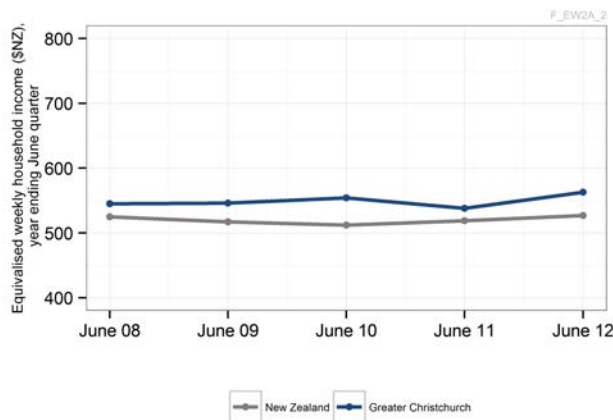


Figure 2 shows that the 20th percentile for equivalised gross weekly household income increased 3.3 per cent in greater Christchurch from \$545 in 2008 to \$563 in 2012.

*Figure 2: 20th percentile equivalised gross weekly household income*







**Median weekly household income net of housing costs**

This is the median amount that households have in gross weekly income, after housing costs have been deducted. Home owners have higher median weekly incomes than renters, both in greater Christchurch and in New Zealand as a whole.

Figure 3 shows the median equivalised weekly income net of housing costs for greater Christchurch home owners increased 7.6 per cent from \$1,227 in 2010 to \$1,319 in 2012 after a dip in 2011.

*Figure 3: Median equivalised weekly household income net of housing costs, for home owners*

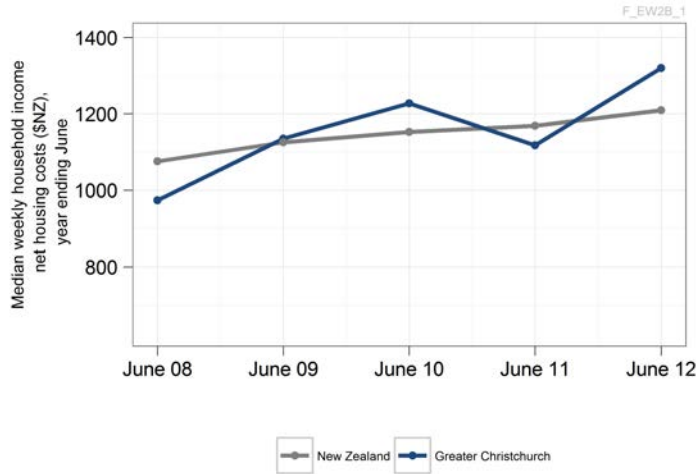
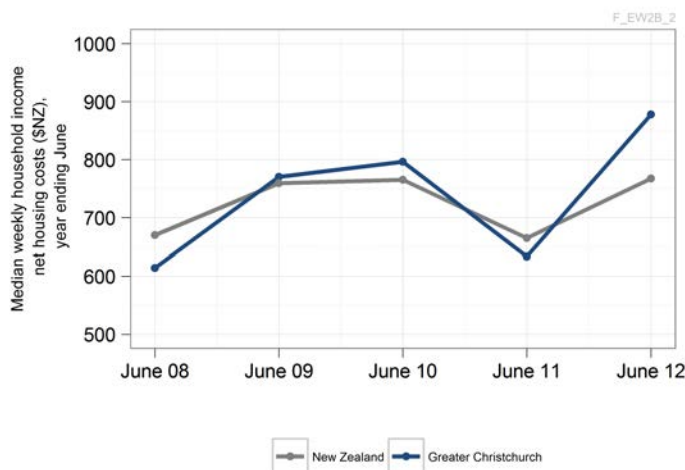


Figure 4 shows that renters in greater Christchurch experienced a decline in median equivalised weekly income between 2010 and 2011. This was followed by an increase between 2011 and 2012. Overall, this equates to a 14 per cent increase in median equivalised weekly income between 2009 and 2012. The dip in median equivalised weekly income from 2010 to 2011 is experienced across New Zealand and therefore may be due to the global financial crisis impacting on renters and not only because of the effects of the earthquakes.

When looking at both renters and home owners overall, income after housing expenses are taken into account is increasing faster in greater Christchurch than in the rest of New Zealand.

*Figure 4: Median equivalised gross weekly household income net of housing costs, for renters*



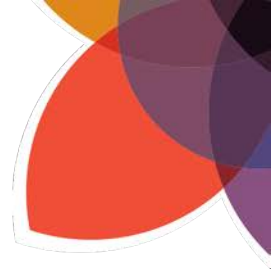
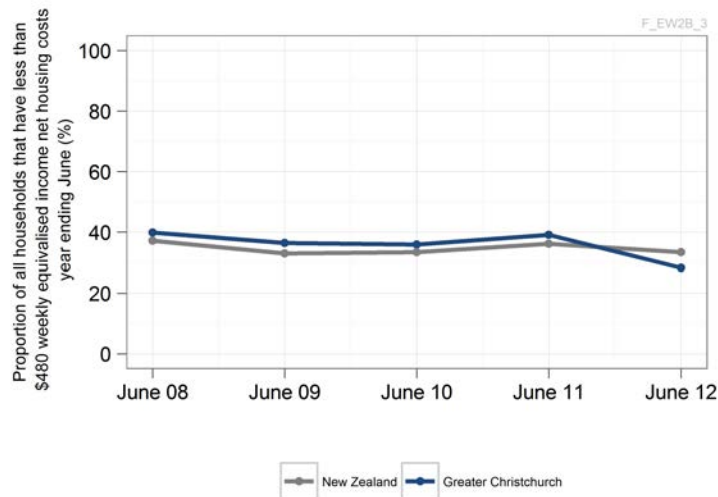


Figure 5 shows the proportion of renting households in greater Christchurch with a gross income of less than \$480 per week after rental housing costs. It shows that this proportion has remained relatively stable from 2008 to 2011 and has then decreased in the post-earthquake period from 39 per cent in 2011 to 28 per cent in 2012.

These decreases indicate that there are fewer residents of greater Christchurch that have less than \$480 per week after rental housing costs.

*Figure 5: Proportion of renting households that have less than \$480 of gross weekly household income net housing costs*



**Summary**

Taken together, the indicators of household income presented in this report show that incomes appear to be increasing at roughly the same rate as for the rest of New Zealand, but that income after housing expenses are taken into account is increasing faster in greater Christchurch than in the rest of New Zealand. This may be due to the significantly higher cost of housing in the Auckland region.<sup>5</sup>

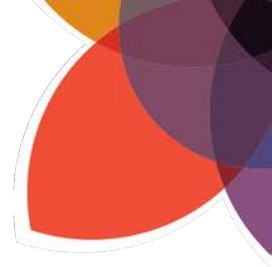
**Find out more**

Find out more about the Canterbury Wellbeing Index: [www.cera.govt.nz/cwi](http://www.cera.govt.nz/cwi)

Find out more from CERA about the Canterbury Economic Indicators: [cera.govt.nz/economic-indicators](http://cera.govt.nz/economic-indicators)

Find out more about the Canterbury Employment and Skills Board and the Canterbury workforce: [www.cesb.org.nz/](http://www.cesb.org.nz/)

Find out more about standard of living in Christchurch: <http://www.ccc.govt.nz/cityleisure/statsfacts/statistics/economicstandardofliving.aspx>



## Technical notes

### CERA Wellbeing Survey

**Data source:** Canterbury Earthquake Recovery Authority

**Data frequency:** Six-monthly

**Data complete until:** October 2012

**Notes:** The CERA Wellbeing Survey 2012 is a representative sample of 2,381 residents of greater Christchurch delivered by Nielsen. Respondents were randomly selected from the Electoral Roll. The survey was delivered online and by hard copy and closed on 14 October 2012. The response rate was 52 per cent. Weighting was used to correct for imbalances in sample representation. The survey was developed in partnership with Christchurch City Council, Waimakariri District Council, Selwyn District Council, the Canterbury District Health Board, Ngāi Tahu and the Natural Hazards Research Platform. Survey available: <http://cera.govt.nz/sites/cera.govt.nz/files/common/cera-wellbeing-survey-2012-report-20120220.pdf>

### Median and 20th percentile gross weekly household income

**Data source:** New Zealand Income Survey (NZIS), Statistics New Zealand

**Data frequency:** The NZIS is run annually during the June quarter

**Data complete until:** 30 June 2012

**Notes:** The NZIS is run annually as a supplement to the Household Labour Force Survey (HLFS) during the June quarter (April to June). In the HLFS approximately 15,000 private households (approximately 29,000 individuals) in New Zealand are interviewed. The NZIS is asked of all respondents to the HLFS. Data for greater Christchurch in 2011 are subject to slightly higher sampling error than normal owing to interruption of surveying.

Equivalisation is of gross household weekly income using the Revised Jensen Scale. Adult and child definitions are consistent with Household Economic Survey treatment.

Greater Christchurch is the aggregation of Christchurch City, Waimakariri District and Selwyn District Councils and is below survey design level. Data are indicative only and should be interpreted cautiously.

Households composed exclusively of people outside the ages 18 to 64 are excluded.

Dollar values presented are nominal, which means they represent the currency value each year they are reported, but they have not been adjusted for inflation. Therefore the value (or 'purchasing power') of one dollar may change from year to year.

All information is reported annually in June.

### Weekly household income net housing costs

**Data source:** Household Economic Survey (HES) and HES (Income), Statistics New Zealand

**Data frequency:** Yearly. HES results are 2007 and 2010, and HES (Income) results are 2008, 2009, 2011 and 2012

**Notes:** Greater Christchurch is the aggregation of Christchurch City, Waimakariri District and Selwyn District Councils and is below survey design level. Data are indicative only and should be interpreted cautiously. Households that are 'Not owned' include renting, rent-free, and not owned but rental status unknown. 'Owned' households include those where ownership is through a family trust.

Weekly household Income net of housing cost is defined as Gross Household Income less Housing Cost. Housing costs are calculated using the 2009 definition and in a manner that permits comparison across time. However, differences between HES and HES (Income) mean that caution should be used when comparing the results.

Dollar values presented are nominal, which means they represent the currency value each year they are reported, and so have not been adjusted for inflation. Therefore the value (or 'purchasing power') of one dollar may change from year to year.

Housing costs include expenditure on rent and mortgages (both principal and interest payments), property rates, and building-related insurance. Household income is from total regular and recurring income sources, and is gross (before tax) income



## Endnotes

<sup>1</sup> Meyer, S. (2002). *The influence of parental incomes on children's wellbeing*. Ministry of Social Development, p.65.

<sup>2</sup> For information on the CERA Wellbeing Survey, refer to the Technical Notes.

<sup>3</sup> For 26 per cent of respondents, additional financial burdens have 'moderately' or 'majorly' negatively impacted their everyday life.

<sup>4</sup> ANZ Regional Trends (February, 2013)

<sup>5</sup> Ministry of Business, Innovation & Employment.(February 2013). Key Auckland Indicators. Retrieved from [www.dbh.govt.nz/UserFiles/File/Sector%20info/key-indicator-reports/kir-auckland-february-2013.pdf](http://www.dbh.govt.nz/UserFiles/File/Sector%20info/key-indicator-reports/kir-auckland-february-2013.pdf)



PUBLISHED JUNE 2013

**CERA is monitoring and reporting on the progress of the recovery. The Canterbury Wellbeing Index tracks the progress of social recovery using indicators to identify emerging social trends and issues.**

### Why are housing affordability and availability important?

Access to housing is a basic human need. There is also growing recognition that good-quality, affordable housing is essential to strong communities.

Affordable housing is usually defined as housing (rented or owned) that costs no more than 30 per cent of a household's gross income.<sup>1</sup>

Affordability and availability are closely linked. Where housing supply is low and demand for houses is high, the market increases prices. People with limited income may find it more difficult to obtain affordable housing.

Changes in relative levels of affordability also affect the demand for different kinds of housing. For example, if home ownership becomes less affordable, more households will rent.

Poor-quality or overcrowded housing can affect people's mental and physical health.<sup>2</sup> In particular, housing that is cold, damp and mouldy significantly worsens the health of older people, small children and people who already have health problems.<sup>3</sup> Adequate housing is particularly important for children as poor-quality accommodation can limit their educational attainment.<sup>4</sup>

### How were housing affordability and availability impacted by the earthquakes?

As a result of the earthquakes, there are 171,000 properties in greater Christchurch with a dwelling damage claim.<sup>5</sup> It is estimated that over 16,000 properties were seriously damaged and of these, 9,100 were assessed as uninhabitable.<sup>6</sup> An additional 7,250 residential red-zone houses will be vacated by mid-October 2013 at the latest. Over half the respondents (51 per cent) in the 2012 CERA Wellbeing Survey reported having to 'live day to day in a damaged home' and 22 per cent said this had a negative impact on their everyday life.

Housing New Zealand and the Christchurch City Council (CCC) provide social housing to people with a serious housing need. Prior to the earthquakes, Housing New Zealand had 6,122 properties in greater Christchurch, which housed approximately 18,000 people.<sup>7</sup> Ninety-five per cent of Housing New Zealand's properties were damaged in the earthquakes; 550 were uninhabitable including 215 in the residential red zone (188 in Christchurch and 27 in Kaiapoi).

CCC is the second biggest landlord in New Zealand with 2,649 city housing rental units.<sup>8</sup> All CCC units require a detailed engineering evaluation to determine whether they are structurally able to withstand any earthquakes in the future. Unoccupied units are prioritised for repair and evaluation as a way of increasing the supply of units available for rent. CCC reports that 453 of its 2,649 properties are either uninhabitable or red zoned.

After each of the major earthquakes, the immediate response of both organisations was to establish the wellbeing of tenants and ensure properties had access to essential services. Urgent repairs were made and, where necessary, tenants were re-housed.

International evidence indicates that the quantity of low-cost, private rental accommodation reduces after a disaster.<sup>9</sup> This is partly due to the loss of properties that are not rebuilt, and also the higher rents that landlords can charge for a house that has been repaired to a higher standard.





According to tenancy bonds data, in the year to January 2011 there were 10,047 bonds lodged with rents below \$300, but in the year to October 2012 only 6,029 such bonds were lodged.<sup>10</sup> This means there was a 40 per cent reduction in the supply of low-cost private rental stock.

In addition to private rental housing, some niche forms of housing were particularly affected. For example, at least 250 beds in boarding houses, bedsits and low-cost, one-bedroom units in the east of the inner city were lost.<sup>11</sup> These dwellings predominantly housed vulnerable single men with social and mental health issues.

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## What is happening now?

### Housing and wellbeing

There is evidence that earthquake-related housing and insurance issues can act as 'secondary stressors' that have a direct impact on individual and community resilience. Secondary stressors are circumstances, events or policies that are indirectly related to the primary stressor (the earthquakes).<sup>12</sup> Secondary stressors typically persist for longer periods of time and can delay people's recovery. International experience shows that delays in insurance and housing recovery are secondary stressors, as is living in temporary accommodation.<sup>13</sup>

In the 2012 CERA Wellbeing Survey, 37 per cent of respondents reported that dealing with insurance issues had a negative impact on their everyday life. Respondents reported a low level of satisfaction with the communication and information received from the Earthquake Commission (EQC) (25 per cent) and private insurers (27 per cent). Twenty-nine per cent said 'decisions about house damage, repairs and relocation' had a negative impact on their everyday life.

While housing and insurance-related issues are having significant impacts on wellbeing, progress on the rebuild is now firmly underway. By January 2013, EQC had repaired approximately 32,000 properties and resolved a further 27,600 through cash settlements (41 per cent of the 147,000 properties under cap).<sup>14</sup> Of the 18,500 properties confirmed as being managed by private insurers, 3,600 have had their claims resolved by their insurance company.

### Housing affordability and availability

Pressures are emerging that are likely to impact on housing affordability and availability, particularly in the rental market. These pressures include the permanent relocation of households from the residential red zone and other homes that cannot be repaired or rebuilt, displaced households requiring temporary accommodation while their homes are repaired or rebuilt, and the arrival of the labour force that will assist with the rebuild.

The Ministry of Business, Innovation and Employment (MBIE) is leading the Housing Recovery Programme alongside CERA, EQC, private insurers and local government. This programme will consider the market's response to the housing issues arising from the recovery and will coordinate central and local government housing activities and the pace of the residential rebuild. Activity is well underway to address the current and future needs for affordable and available housing. This work includes:

- finding short- and medium-term solutions to the need for temporary accommodation for displaced residents
- addressing the need for social and affordable housing and its impact on vulnerable populations
- changing or developing regulations to encourage an increase in the supply of housing.

### Short- and medium-term solutions for temporary accommodation

After the February 2011 earthquake, the exact number of people needing urgent accommodation was unknown. MBIE commissioned 350 campervans to provide temporary shelter for displaced residents. Housing New Zealand managed an 0800 service to match displaced residents with unused private homes or holiday homes. However, uptake of these services was relatively low as it seems people tended to stay with friends and family.

By August 2011 the Government established its first temporary village for displaced residents in Linwood Park, followed by others in Kaiapoi, Rawhiti Domain and Rangers Park. These villages are for home owners and renters whose homes are uninhabitable and who need accommodation while their home is repaired or rebuilt. As at April 2012, a total of 314 households had used these villages.



The Government also recognised that insurance cover for home owners may expire before some are able to return to a rebuilt or repaired home. Temporary Accommodation Assistance was introduced to assist with rent, board or motel stays so that displaced home owners do not need to cover two sets of accommodation costs. As at April 2013, a total of 1,242 households were receiving Temporary Accommodation Assistance after their insurance cover expired, at a total cost of \$341,030 weekly.

The Earthquake Support Coordination service was established to support displaced individuals and families directly affected by the earthquakes. This service provides information and connects people with the services they may need. By April 2013, 7,165 individuals and families had used this service. All of these services are provided through the Canterbury Earthquake Temporary Accommodation Service, which is operated jointly by MBIE and the Ministry of Social Development.

### **Social and affordable housing**

By December 2012, Housing New Zealand had repaired and tenanted 212 vacant earthquake-damaged homes. In 2013 it announced that 5,000 of its earthquake-damaged properties will be repaired or rebuilt within the next three years. The repair and rebuild programme will include construction of up to 700 new houses suitable for state rental, first home buyers and others seeking affordable housing to be built by 2015. In April 2013, Housing New Zealand reached a \$320 million settlement with insurers over 5,559 homes damaged in the Canterbury earthquakes and can now progress its repair/rebuild programme.

In total, \$31 million has been allocated for Canterbury social housing providers over the next three years. This includes \$10 million from Canterbury Community Trust and \$21 million from the Government.

MBIE has undertaken research to determine how much overcrowding and homelessness the earthquakes have caused.<sup>15</sup> While acknowledging that there are no reliable statistics available, the report estimates that between 5,510 and 7,405 residents are without secure housing, up from 3,750 before the earthquakes.<sup>16</sup>

CCC has announced a Social Housing Asset Renewal and Repair Programme including a 2013 work plan to build 22 units on existing sites, and to undertake 119 repairs to units currently vacant and 202 repairs to tenanted units.

### **Regulations to encourage an increase in the housing supply**

Significant land has been freed up to enable rapid rebuilding, with thousands of sections rezoned in greater Christchurch since the earthquakes. The number of building consents for new dwellings is rising at a higher rate than the New Zealand average.<sup>17</sup>

Regulatory changes have been made to District Plans to streamline the design and consenting process so that a range of temporary accommodation can be developed for the migrant workforce. Aligned to this regulatory response, CERA is working across agencies to develop some guidelines around the management of worker accommodation to encourage social integration of the worker population with the local community.

In November 2012 the Minister for Canterbury Earthquake Recovery also directed Environment Canterbury to prepare a Land Use Recovery Plan for greater Christchurch with support from the Christchurch City Council, Selwyn and Waimakariri District Councils, Te Rūnanga o Ngāi Tahu, New Zealand Transport Agency and CERA.

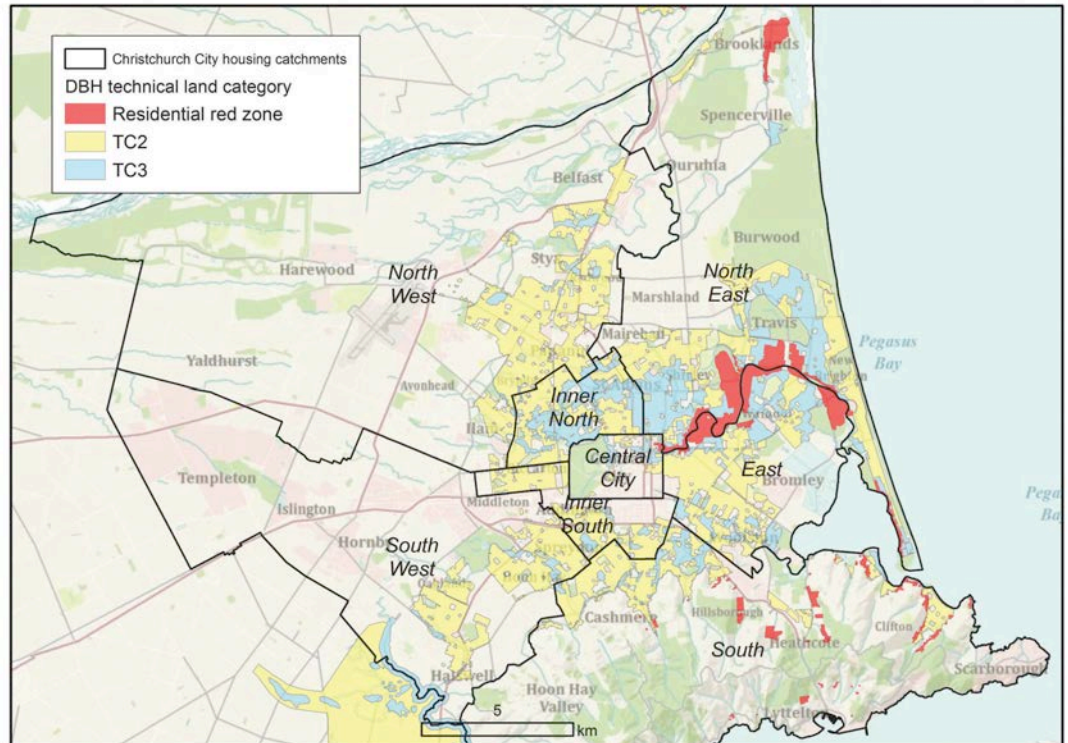
The Land Use Recovery Plan responds to the impacts of the earthquakes on residential and business land use, and provides a framework for rebuilding and future development. The preliminary draft Plan went out for consultation in March-April 2013 with a draft due for Ministerial approval in October 2013. The draft Plan identifies 10 priorities for land use, business and housing, including increased supply of housing and housing choice.

### **What are the indicators telling us?**

The following indicators for housing are, where possible, broken down into eight geographic areas of Christchurch city shown in the map below, as well as into the Selwyn and Waimakariri Districts, which together form the greater Christchurch area. Please refer to the map below when reading this section.



*Geographic areas of Christchurch city*



**House and sections**

Trends in affordability and availability within the house and section market are being measured using the following indicators:

- mean sale price for houses as an indicator of affordability, which can also reflect changes in availability
- the number of houses and the number of sections sold each month in greater Christchurch as indicators of changes in demand and supply.

Figure 1 shows that mean house sale prices remained largely stable before and after the earthquakes for most of Christchurch. In the twelve months to January 2013, house prices have increased 6.6 per cent in Christchurch city compared with 6 per cent nationally.<sup>18</sup> However, pressures have pushed up prices in some parts of the city.

Taking a longer view, Table 1 shows that some areas have had significant increases, while others have decreased. Between the three months to February 2010 and the three months to February 2013, prices have been rising in the West (North West and South West) of the city and remaining relatively static in the East (East and North East) and Inner North, where much of the worst liquefaction occurred. Selwyn and Waimakariri Districts have experienced large price increases as people move from Christchurch city. Prices have also increased in the South (Inner South and South).

Between the three months to February 2010 and the three months to February 2013, mean prices rose 18 per cent in the South West, 11 per cent in the North West and 9 per cent in the Inner South. Overall, the mean house price increased by 10 per cent across Christchurch city, 16 per cent in Selwyn District and 23 per cent in Waimakariri District in this three year time period.





Figure 1: Mean sale price for houses

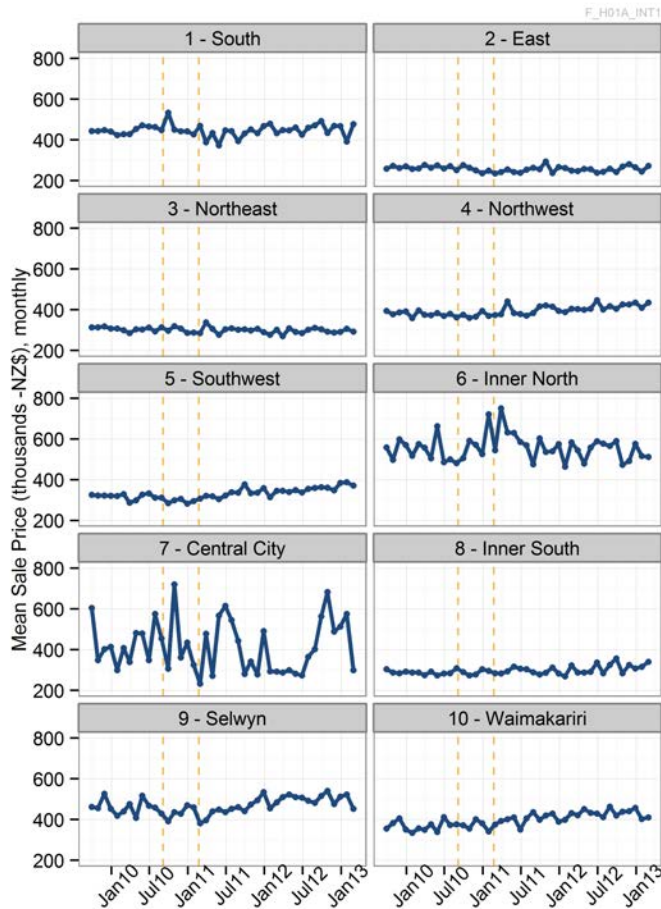


Table 1: Change in mean house prices from February 2010 to February 2013

Area	February 2010	February 2013	% change
South	\$431,298	\$453,201	5.1%
East	\$261,989	\$260,329	-0.6%
North East	\$306,337	\$297,497	-2.6%
North West	\$384,942	\$427,352	11.0%
South West	\$324,144	\$383,882	18.4%
Inner North	\$555,127	\$550,052	-0.9%
Central City*	\$392,500	\$511,653	30.4%*
Inner South	\$289,547	\$315,870	9.1%
Christchurch (Total)	\$373,047	\$411,068	10.2%
Selwyn District	\$437,543	\$506,134	15.7%
Waimakariri District	\$348,288	\$428,625	23.1%

\*low sample size means this area is measured with significant measurement error



Figure 2 shows the number of monthly house sales in the Waimakariri District doubled in the year after the February 2011 earthquake compared with the year before. There was also a 38 per cent increase in the number of sales in the Selwyn District. House sales have eased in both these areas since the second half of 2012.

In the year after the February 2011 earthquake, the number of monthly house sales in the city increased by 28 per cent in the North West and 29 per cent in the South West compared with the year to February 2010.

Across the geographic areas a pattern emerges of a market that had a decreasing number of sales in the pre-earthquake period and picked up in sales in the year after. These increases appear to have eased during 2012 and the first few months of 2013.

When viewed together, Figures 1 and 2 indicate that while house sales increased in 2011, there appeared to be sufficient supply in most areas. However, higher demand in Selwyn, Waimakariri, and the North West and South West of Christchurch increased mean prices in those areas in 2012. Despite a subdued market in the East, North East and Inner South, overall mean house prices in greater Christchurch have increased at a slightly faster rate than those in New Zealand overall.

Figure 2: Number of houses sold

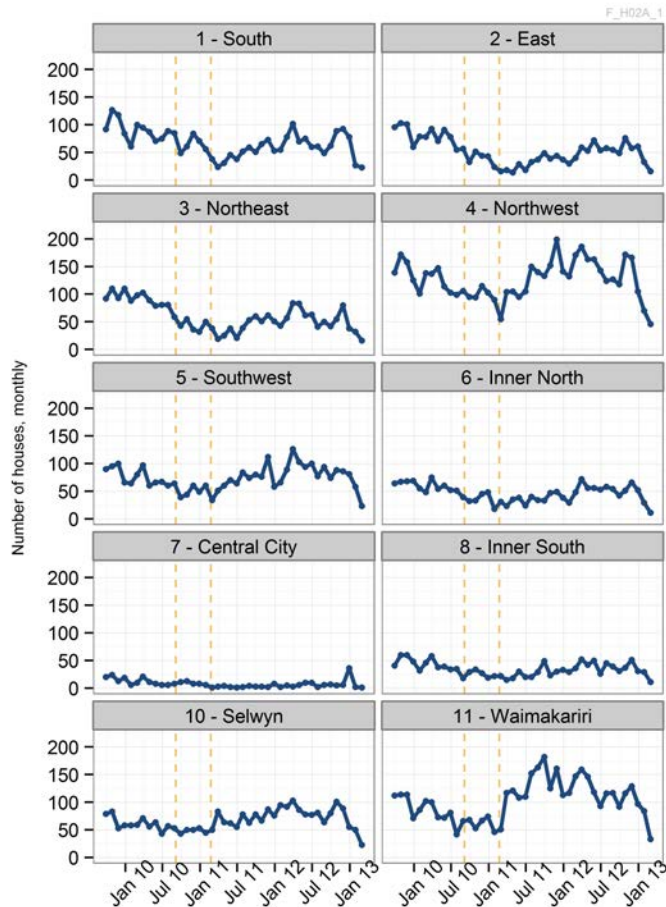
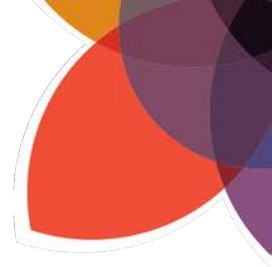


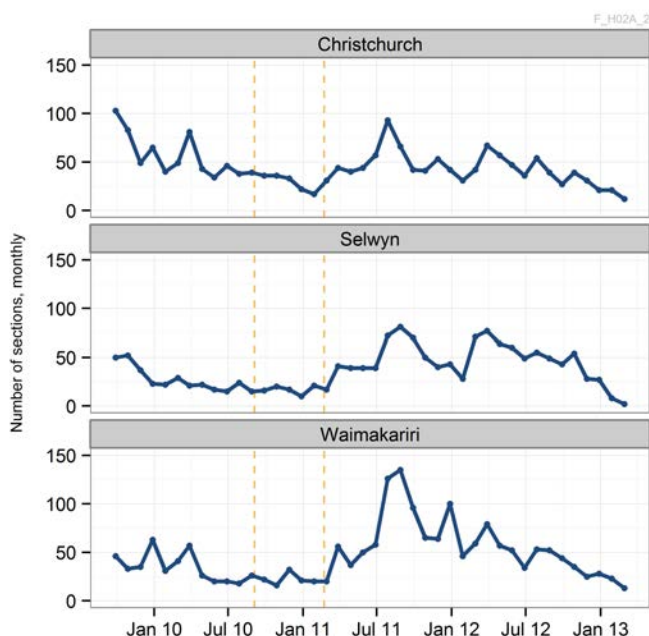
Figure 3 shows a spike in monthly section sales in the winter months of 2011 across greater Christchurch. This timing coincides with the Government's first set of land zone announcements on 23 June 2011 and likely indicates that newly-classified red zone residents were largely driving this spike in section sales.



In the Selwyn District, the number of monthly section sales increased by 88 per cent in the year after the February 2011 earthquake, compared with the 12 months to February 2010. In the Waimakariri District there was a 115 per cent increase in the same period. Sales have since eased below pre-quake levels.

An increase in section sales is important for the recovery, in part because it indicates that residents are choosing to remain in greater Christchurch. Additionally, building new homes on these sections will stimulate the local economy and will grow the supply of houses, which is a positive sign for future affordability and availability of housing.

Figure 3: Number of sections sold



### Rental market

The affordability and availability of rental housing are measured using the following indicators:

- mean (average) weekly rent for new tenancies each month as an indicator of changes in affordability
- the total number of bonds lodged for rental properties in Christchurch that cost under \$300 per week as an indicator of affordability and the availability of low-cost rental properties
- the number of new rentals listed with Trade Me each week as an indicator of availability.

Figure 4 shows that mean weekly rent for new tenancies generally increased in the period following the September 2010 and February 2011 earthquakes. Looking at the change in mean rents between the three months to February 2010 and the three months to February 2013 the mean increase in Christchurch city of 25 per cent equates to an extra \$74 per week in rent.

In Table 2, the biggest increases have occurred in Selwyn District (36 per cent), Waimakariri District (35 per cent), and the Inner North and North West of Christchurch (34 per cent each). The East still has the lowest mean rents of \$309 per week, with a mean increase of \$51 per week (19.8 per cent).

Rental prices have probably risen due to a shortage of properties available to rent.

As of February 2013, mean private weekly rents across the wider Canterbury region are continuing to increase at a faster rate than house prices and at a faster rate than the national rental average, including Auckland.<sup>19</sup>

Mean weekly rent has increased across homes of all sizes, but especially for those with more bedrooms. Anecdotally, demand for houses with more bedrooms is being driven by employers seeking accommodation for incoming workers. From February 2010 to February 2013, five or more



bedroom rentals have increased by 71 per cent in the South and 107 per cent in the North East. Overall five-plus bedroom rentals have increased by 32 per cent in Christchurch city.

Table 2: Change in mean weekly rent from February 2010 to February 2013

Area	February 2010	February 2013	% change
South	\$356.00	\$431.76	21.3%
East	\$258.48	\$309.68	19.8%
North East	\$285.65	\$351.25	23.0%
North West	\$314.64	\$420.78	33.7%
South West	\$308.23	\$346.15	12.3%
Inner North	\$308.19	\$412.92	34.0%
Central City	\$276.34	\$318.50	15.3%
Inner South	\$280.72	\$353.53	25.9%
Christchurch (Total)	\$296.46	\$370.51	25.0%
Selwyn District	\$326.67	\$444.39	36.0%
Waimakariri District	\$292.12	\$393.40	34.7%

Figure 4: Mean weekly rent

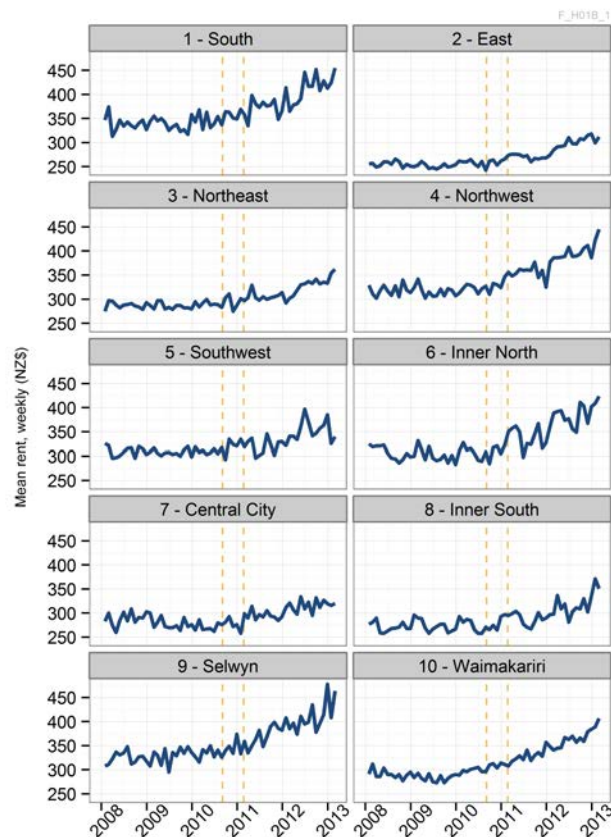




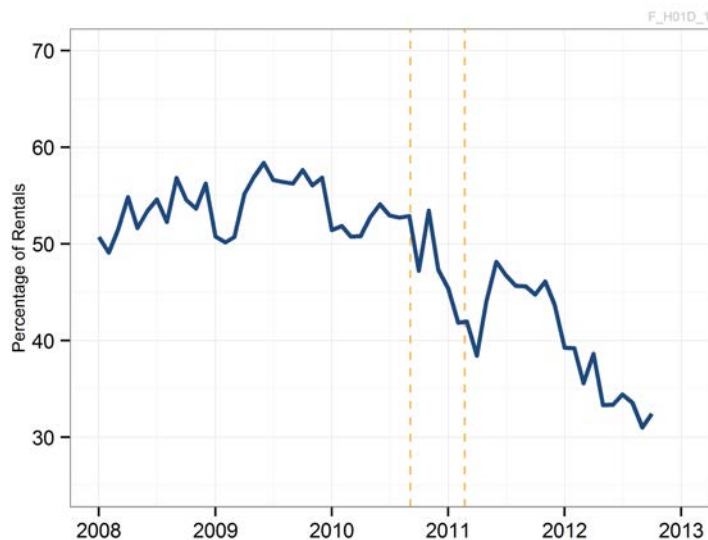
Figure 5 shows that while the proportion of bonds for low-cost rentals (less than \$300 per week) lodged per month remained relatively steady in the year before the September 2010 earthquake (averaging 54 per cent of all bonds lodged), there has been a steady decrease in the proportion of low-cost rentals since then to a low of 32 per cent in October 2012.

The drop in the proportion of low-cost properties available for rent is probably because poorer-quality housing was damaged in the earthquakes and landlords are charging higher prices following earthquake repairs and as demand for rentals grows. According to the 2012 CERA Wellbeing Survey,<sup>20</sup> slightly more than a quarter of respondents (26 per cent) have had to move house permanently or temporarily as a result of the earthquakes although for many this move may have been short term.

Further analysis shows the number of bonds lodged in the East, Inner North and North East fell slightly, as might be expected given the damage to homes in those areas.

Lower quartile weekly private rents in Christchurch continue to rise faster than in Auckland and Wellington in the year to November 2012, and are tracking above the national level. In November 2012 the lower quartile rent in Christchurch was \$270, up 13 per cent from November 2011. This compares with \$250 nationally.<sup>21</sup>

Figure 5: Percentage of rental bonds lodged monthly with weekly rent below \$300



The total number of rental bonds lodged in greater Christchurch fell from 19,869 in the year to September 2010 to 16,829 in the year to September 2012 (a 15 per cent decrease). This decrease represents the lowest annual number of new bonds lodged since 1999.<sup>22</sup>

Figure 6 shows the number of rental listings on Trade Me fell over the period July 2011 to October 2012. In October 2011 there was a weekly average of 1,003 properties listed on Trade Me. This fell to an average of 780 per week in October 2012, a decrease of 20 per cent.

Further analysis of the vacancy rate<sup>23</sup> across the whole of the private sector rental market shows that it has fallen sharply from 3.6 per cent in 2010 to 2.8 per cent by December 2012.<sup>24</sup>



Figure 6: Number of rental listings on Trade Me



**Social housing**

Social housing is measured in two ways in this report:

- habitability rates for CCC and Housing New Zealand social housing units
- social housing waiting lists.

Following the September 2010 and February 2011 earthquakes, a large number of social housing units were damaged and become ‘uninhabitable’ therefore reducing the supply of social housing. Since April 2011, detailed engineering evaluations (DEE) have found structural problems in additional units and some have become uninhabitable.

Figure 7 shows the percentage of habitable CCC and Housing New Zealand housing units decreased after the September 2010 quake and continued to decrease as the DEE assessments progressed. By April 2013, a total of 453 of 2,649 CCC units were closed.

The proportion of habitable Housing New Zealand units followed a similar pattern until late 2012, when a number of units were repaired. Since October 2012, over 90 per cent of Housing New Zealand units have been habitable. With the announcement of an insurance settlement finalised in April 2013, and detailed remedial foundation tests nearing completion, Housing New Zealand has signalled an accelerated rebuild and repair plan for social housing units.

Figure 7: Proportion of habitable Housing New Zealand and CCC housing units

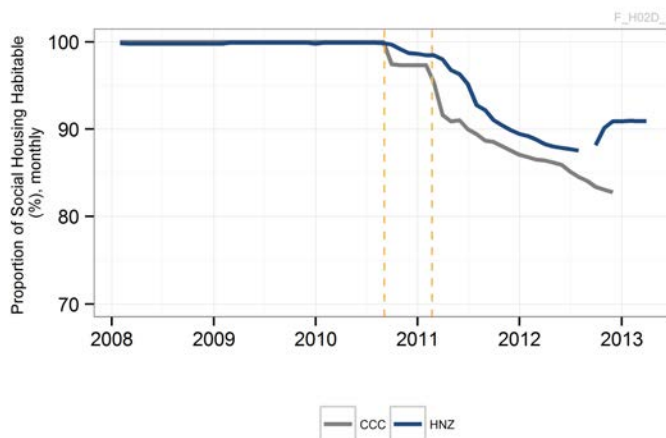




Figure 8 shows that while the Housing New Zealand waiting list decreased over the first half of 2012, it grew over the second half. The CCC waiting list has increased by 50 per cent over 2012.

Note that CCC data are missing for 2011 due to internal disruptions as staff were displaced from their offices.

Figure 8: CCC and Housing New Zealand (A&B only) waiting lists



### Temporary accommodation assistance

Figure 9 shows the number of people receiving temporary accommodation support. This support includes:

- Temporary Accommodation Claims (TAC) paid by insurers
- Temporary Accommodation Assistance (TAA) from the Government.

The number of TAC payments rose to 6,583 in December 2011. Payments dipped in May 2012 to 5,210. At October 2012, a total of 7,847 households were receiving payments from insurers.

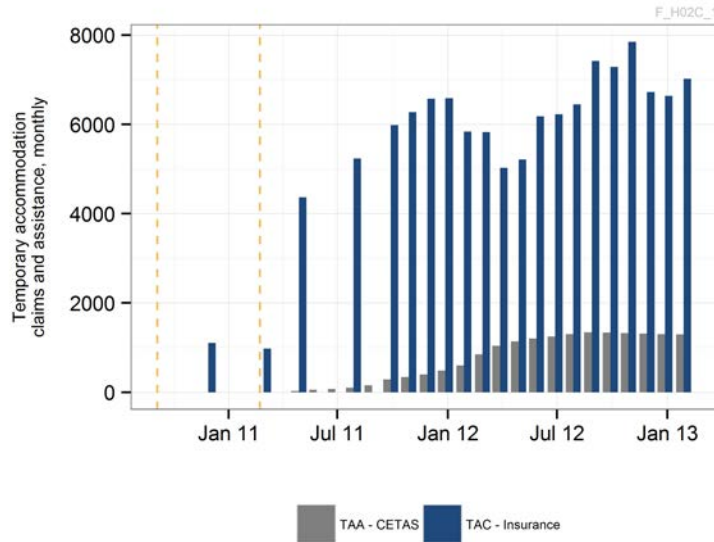
Many insurance policies cover a year of temporary accommodation and then home owners who remain displaced are able to apply for TAA from the Canterbury Earthquake Temporary Accommodation Service (CETAS).

The number of households receiving TAA has increased every month since the programme was established, although this demand seems to have levelled off towards the end of 2012 after peaking at 1,342 per month in August 2012. At January 2013 a total of 1,296 households were receiving TAA.

In total at January 2013, a total of 8,316 households were receiving assistance from TAC and TAA for living away from their homes.



Figure 9: Numbers receiving temporary accommodation assistance



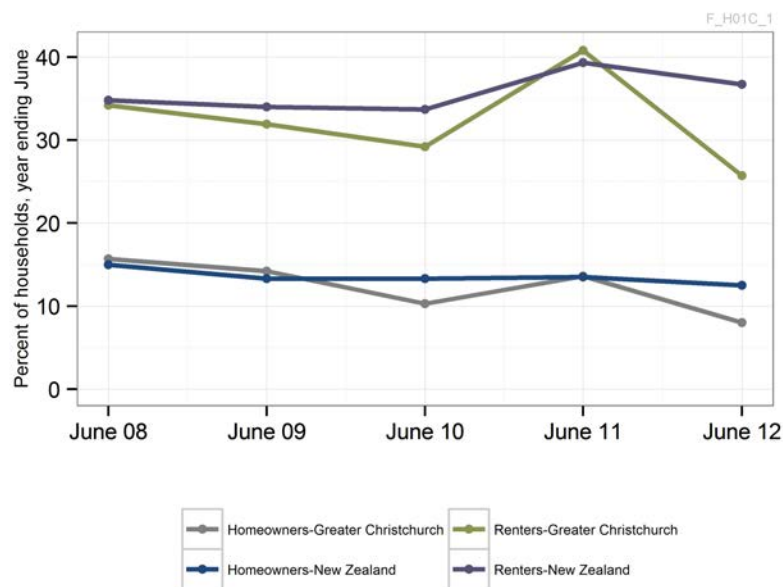
**Housing costs relative to income**

Housing affordability is usually defined as housing that is of reasonable quality and does not cost so much that households cannot afford other basic needs.

Figure 10 indicates that the proportion of those spending more than 30 per cent of their household income on housing has decreased from 32 per cent of renters in the year ending June 2009 to 25.7 per cent in 2012 (after a spike of over 40 per cent in 2011). Over the same time, the percentage of home owners who spend more than 30 per cent on housing has steadily decreased from 14 per cent in 2009 to 8 per cent in the year ending June 2012.

These findings relate to a small sample and should be treated with caution.

Figure 10: Percentage of households who spend more than 30 per cent of their household income on housing







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## Summary

In the two years before the February 2011 earthquake, the number of house sales was decreasing in line with the general easing in the property market. Following the February 2011 earthquake there was an increase in the number of houses sold across greater Christchurch, except in the East of Christchurch city. There were also increases in mean house prices in the Waimakariri and Selwyn Districts and in the West of Christchurch. During this time prices remained steady in the rest of the city, as did affordability for home owners overall.

Rents in greater Christchurch are rising at a greater rate than the rest of the country, due to a decrease in the supply of rental properties after February 2011 and increasing numbers of households seeking temporary accommodation. There has also been a decrease in the city's social housing capacity due to structural damage. Overall the proportion of low cost rental housing has decreased, which may be putting pressure on vulnerable residents.

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## Find out more

Find out more about the Canterbury Wellbeing Index: [www.cera.govt.nz/cwi](http://www.cera.govt.nz/cwi)

Find out more about the Land Use Recovery Plan: [www.developingchoices.org.nz](http://www.developingchoices.org.nz)

Find out more about the key housing indicators for Canterbury from the Ministry of Business, Innovation and Employment (Building and Housing Group):  
<http://www.dbh.govt.nz/key-indicator-reports>

Find out more about the Canterbury Earthquake Temporary Accommodation Service including temporary villages and Temporary Accommodation Assistance:  
<http://www.quakeaccommodation.govt.nz/>

Find out more about Housing New Zealand's Earthquake Recovery Programme:  
[www.hnzc.co.nz/ceqp](http://www.hnzc.co.nz/ceqp)

Find out more about the Earthquake Commission:  
[www.eqc.govt.nz](http://www.eqc.govt.nz)

Find out more about the Insurance Council of New Zealand:  
[www.icnz.org.nz](http://www.icnz.org.nz)

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## Technical notes

### CERA Wellbeing Survey

**Data source:** Canterbury Earthquake Recovery Authority

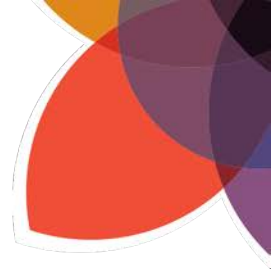
**Data frequency:** Six-monthly

**Data complete until:** October 2012

**Notes:** The CERA Wellbeing Survey 2012 is a representative sample of 2,381 respondents of greater Christchurch delivered by Nielsen. Respondents were randomly selected from the Electoral Roll. The survey was delivered online and by hard copy and closed on 14 October 2012. The response rate was 52 per cent. Weighting was used to correct for imbalances in sample representation. The survey was developed in partnership with Christchurch City Council, Waimakariri District Council, Selwyn District Council, the Canterbury District Health Board, Ngāi Tahu and the Natural Hazards Research Platform. Survey available:  
[cera.govt.nz/sites/cera.govt.nz/files/common/cera-wellbeing-survey-2012-report-20120220.pdf](http://cera.govt.nz/sites/cera.govt.nz/files/common/cera-wellbeing-survey-2012-report-20120220.pdf)

### House sales

**Data source:** Quotable Value (QV) Residential Property Monthly Price Movement Dataset



**Data frequency:** Monthly

**Data complete until:** February 2013

**Notes:** Houses include all properties with a land use description defined by QV as 'bach', 'multi-unit', 'multi-use within lifestyle', 'multi-use within residential', 'residential', 'single unit – lifestyle', 'single unit excluding bach'. Comparisons used in this analysis were the mean for the three months to August 2010 compared with the mean for the three months to August 2012 in order to avoid seasonal effects.

#### Rental market

**Data source:** Tenancy Bonds database, MBIE

**Data frequency:** Monthly

**Data complete until:** February 2013

**Notes:** Seasonality may exist in the rental and housing market. Rentals may be especially affected by the university term. Data are for new tenancy bonds registered per month.

**Data source:** Trade Me data, MBIE

**Data frequency:** Weekly

**Data complete until:** 26 November 2012

**Notes:** Seasonality may exist in the rental and housing market. Rentals may be especially affected by the university term.

Includes all listings not listed as 'section'. Data are missing for 2 January 2012.

It would appear that Trade Me has a smaller percentage of rentals listed at less than \$400 per week and a higher percentage of rentals above \$500+ per week when compared with data obtained from the MBIE Tenancy Bonds database. While Trade Me data may not be representative of all available rental properties, it is in accord with the general finding of a decreasing supply of rental accommodation in greater Christchurch.

#### Social housing capacity and waiting lists

**Data source:** Christchurch City Council and Housing New Zealand

**Data frequency:** Monthly

**Data complete until:** March 2013 (Housing New Zealand) November 2012 (CCC)

**Notes:** Occupancy rates are calculated by dividing total habitable units by total occupied/let units.

Housing New Zealand habitability rate = (number of let properties at month end + number of vacant properties at month end) / Total properties.

Waitlist allocation system criteria: [http://www.hnzc.co.nz/about-us/our-publications/factsheets/SAS\\_criteria/Social-allocation-system-Criteria.pdf](http://www.hnzc.co.nz/about-us/our-publications/factsheets/SAS_criteria/Social-allocation-system-Criteria.pdf)

Due to a system upgrade in August 2012, no habitability data are available from Housing New Zealand for that month. Housing New Zealand data are for categories A & B only.

CCC habitability rate = (Total Vacancies at month end + Total Occupied at month end) / Total housing units.

Waitlist eligibility criteria: <http://resources.ccc.govt.nz/files/CityHousingApplicationForm-docs.pdf>

#### Temporary accommodation

**Data source:** Canterbury Earthquake Temporary Accommodation Service (CETAS) administrative records and Insurance Council New Zealand (ICNZ) administrative records

**Data frequency:** Monthly

**Data complete until:** January 2013 for CETAS and ICNZ



**Notes:** Temporary Accommodation Assistance (CETAS) figures are those current at the last day of each month, not the total who have applied. TAA started on 21 February 2011, but was stopped on 22 February 2011 due to the earthquake, and became operational again in April 2011. Temporary Accommodation Claims (Insurers) are those current at the first day of each month, but are portrayed on the graph as the last day of the previous month to align more closely with the CETAS figures. The data are from six major insurance companies operating in greater Christchurch. Because data presented represent current claims/assistance on one day each month, data should not be interpreted as an exact representation of the current claims levels on all days of each month.

#### **Housing costs relative to income**

**Data source:** Household Economic Survey (HES) and Household Economic Survey (Income), Statistics NZ

**Data frequency:** Years ending June 2008–2012

**Data complete until:** June 2012

**Notes:** Greater Christchurch is the aggregation of Christchurch city and Waimakariri and Selwyn Districts and is below survey design level. Data are indicative only and caution should be used.

‘Not owned’ includes renting, rent-free, and not owned but rental status unknown. ‘Owned’ includes through a family trust.

Housing costs are calculated using 2009 definition and in a manner that permits comparison across time. However, differences between HES and HES (Income) still mean that caution should be used comparing the results. HES results are 2007 and 2010, and HES (Income) results are 2008, 2009, 2011 and 2012. Income is equivalised using the Revised Jensen Scale (RJS) method. The percentage spent on housing is calculated by dividing equivalised gross household income by housing costs.

Note that households with higher income can afford to pay more than 30% of their income on housing costs and may choose to do so without reducing their ability to afford other basic needs.



## Endnotes

- <sup>1</sup> Ministry of Social Development. (2012). *Social Report* <http://socialreport.msd.govt.nz/economic-standard-living/housing-affordability.html>  
United States Government Department of Housing and Urban Development (2012) [www.hud.gov/offices/cpd/affordablehousing/](http://www.hud.gov/offices/cpd/affordablehousing/)
- <sup>2</sup> Affordable Housing National Research Consortium. (2001). *Affordable housing in Australia: Pressing need, effective solution*. Canberra: AHNRC.
- <sup>3</sup> Howden-Chapman, P. (2008). Effects of improved home heating on asthma in community dwelling children: randomised controlled trial. *British Medical Journal* 337:a1411.
- Howden-Chapman, P. (2007). Effect of insulation existing homes on health inequalities. *British Medical Journal* 10.1136/BMJ.39070.573032.80.
- <sup>4</sup> Mitchell, I. and O'Malley, S. (2004). *How affordable is housing in New Zealand and what strategies are available to reduce housing stress?* Paper presented to Social Policy, Research and Evaluation Conference, 25–26 November.
- <sup>5</sup> Canterbury Earthquake Recovery Authority. (2013). Canterbury Economic Indicators: February 2013. Accessed from: [cera.govt.nz/sites/cera.govt.nz/files/common/canterbury-economic-indicators-quarterly-report-february-2013.pdf](http://cera.govt.nz/sites/cera.govt.nz/files/common/canterbury-economic-indicators-quarterly-report-february-2013.pdf)
- <sup>6</sup> Estimate based on an analysis of Earthquake Commission damage bands.
- <sup>7</sup> Housing New Zealand Corporation. (2011). *Briefing to the Incoming Minister*. Retrieved from [www.hnzc.co.nz/about-us/our-publications/briefing-to-the-incoming-minister-2011/briefing-for-the-minister-of-housing-2011/briefing-to-the-incoming-minister-2011.pdf](http://www.hnzc.co.nz/about-us/our-publications/briefing-to-the-incoming-minister-2011/briefing-for-the-minister-of-housing-2011/briefing-to-the-incoming-minister-2011.pdf)
- <sup>8</sup> In addition to HNZC and CCC it is estimated that there are an additional 704 beds provided by NGOs in Christchurch. Ministry of Business, Innovation & Employment.(2013). *Housing pressures in Christchurch: a summary of the evidence*. Ministry of Business, Innovation & Employment.
- <sup>9</sup> Zhang, Y. and Peacock, W.G. (2010). Planning for housing recovery? *Journal of the American Planning Association* 76(1): 5–24.
- Levine, J.N., Esnard, A.-M. and Sapat, A. (2007). Population displacement and housing dilemmas due to catastrophic disasters. *Journal of Planning Literature* 22(1): 3–15.
- Hirayama, Y. (2000). Collapse and reconstruction: housing recovery policy in Kobe after the Hanshin Great Earthquake. *Housing Studies* 15(1): 111–28.
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- Comerio, M.C. (1997). Housing issues after disasters. *Journal of Contingencies and Crisis Management* 5(3): 166–78.
- <sup>10</sup> MBIE, unpublished data.
- <sup>11</sup> Te Whare Roimata analysis of red stickered housing, inner city east zone (May 2011 and March 2012), cited in Canterbury Anglican Diocese Social and Environmental Issues Unit. (2012). *Inner city east recovery: Low income/social Housing*.
- <sup>12</sup> Department of Health. (2009). *NHS Emergency Planning Guidance: Planning for the psychosocial and mental health care of people affected by major incidents and disasters: Interim national strategic guidance*. London: Department of Health.



<sup>13</sup> Lock, S., Rubin, G.L., Murray, V., et al; (2012). Secondary stressors and extreme events and disasters: a systematic review of primary research from 2010-2011 PLoS Current. 2012 October 29. doi: 10.1371/currents.dis.a9b76fed1b2dd5c5bfcfc13c87a2f24f

<sup>14</sup> Houses with less than \$100,000 damage per earthquake-related event are rebuilt or repaired by EQC. Houses with a greater level of damage ('over cap') are repaired by the owner's insurance company.

<sup>15</sup> Ministry of Business, Innovation & Employment. (2013). *Housing pressures in Christchurch: a summary of the evidence*. Ministry of Business, Innovation & Employment.

<sup>16</sup> The term 'housing insecurity' is used in this report to reflect the Statistics New Zealand definition of homelessness as 'living situations where people with no other options to acquire safe and secure housing: are without shelter, in temporary accommodation, sharing accommodation with a household or living in uninhabitable housing' Statistics New Zealand (2009), New Zealand definition of homelessness, Wellington, New Zealand

<sup>17</sup> Statistics New Zealand. Infoshare. Since 2008-10, the number of new residential building consents has risen 160% in Waimakariri District, 12% in Christchurch City and 79% in Selwyn District in the year to December 2012. This compares with 5% for New Zealand on average.

<sup>18</sup> Ministry of Business, Innovation & Employment (February, 2013). Key Canterbury Indicators. [www.dbh.govt.nz/UserFiles/File/Sector%20info/key-indicator-reports/2013/kir-canterbury-march-2013.pdf](http://www.dbh.govt.nz/UserFiles/File/Sector%20info/key-indicator-reports/2013/kir-canterbury-march-2013.pdf) accessed 2/3/13.

<sup>19</sup> Ministry of Business, Innovation & Employment (February, 2013). Key Canterbury Indicators. [www.dbh.govt.nz/UserFiles/File/Sector%20info/key-indicator-reports/kir-canterbury-february-2013.pdf](http://www.dbh.govt.nz/UserFiles/File/Sector%20info/key-indicator-reports/kir-canterbury-february-2013.pdf) accessed 2/3/13.

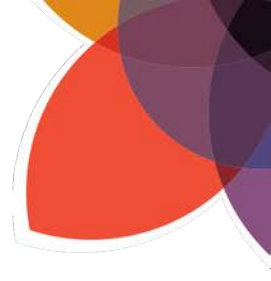
<sup>20</sup> For information on the CERA Wellbeing Survey, refer to the Technical Notes.

<sup>21</sup> Ministry of Business, Innovation & Employment (November, 2012). Key Social Housing Indicators. [www.dbh.govt.nz/UserFiles/File/Sector%20info/key-indicator-reports/kir-social-housing-december-2012.pdf](http://www.dbh.govt.nz/UserFiles/File/Sector%20info/key-indicator-reports/kir-social-housing-december-2012.pdf)

<sup>22</sup> Ministry of Business, Innovation & Employment. (2013). *Housing pressures in Christchurch: a summary of the evidence*. Ministry of Business, Innovation & Employment.

<sup>23</sup> The rental vacancy rate is the fraction of rental properties not rented at a point in time. This captures pressures in the rental market. Eaquib, S. & Loke, J. (2012). *Estimating the Private Sector Rental Vacancy Rate for Canterbury: gaining insights from administrative data*. NZ Institute of Economic Research.

<sup>24</sup> Ministry of Business, Innovation & Employment (February, 2013). Key Canterbury Indicators. [www.dbh.govt.nz/UserFiles/File/Sector%20info/key-indicator-reports/2013/kir-canterbury-march-2013.pdf](http://www.dbh.govt.nz/UserFiles/File/Sector%20info/key-indicator-reports/2013/kir-canterbury-march-2013.pdf) accessed 2/3/13.



PUBLISHED JUNE 2013

**CERA is monitoring and reporting on the progress of the recovery. The Canterbury Wellbeing Index tracks the progress of social recovery using indicators to identify emerging social trends and issues.**

### Why are keeping well and having access to services important?

Good health is crucial to the wellbeing of individuals, their families and their communities. The health system aims to maximise both the length and quality of life.

By keeping healthy, people are better able to lead rich and rewarding lives within their families and their communities. People who are less healthy may find it more difficult to participate in sports and recreation, or arts and cultural activities, or simply to complete the tasks of daily living. They may also struggle to socialise with their family, friends and community.

Health is determined by a number of environmental and social factors that health services have no control over. For example, living in poor-quality housing, having a low income or being unemployed, and having few educational qualifications significantly lessen people's health and wellbeing.<sup>1</sup> Poor-quality housing that is cold, damp and mouldy significantly worsens the health of older people, young children and people who already have health problems.<sup>2</sup>

Among the main aims of our health system are to maintain the health of the population, identify any disease or health condition as soon as possible and provide timely access to health care services. Early access helps restore health, for example through surgery, or helps people with a long-term condition to continue to function as well as possible. If geographical, cultural, or other barriers to care are reduced, more people gain help from health services in a more timely manner.

#### Acute medical admissions

In an acute medical admission, a person is admitted to a hospital because they require urgent specialist attention, which may be for any of a wide range of medical conditions.<sup>3</sup> Acute medical admissions make up a third of all hospital admissions in New Zealand. If the rate of acute medical admissions increases, it could indicate the underlying health status of the population is declining. Alternatively it could mean that people are not accessing or engaging with community services, especially general practice, which is the point of first contact with the health system for most people.<sup>4</sup>

International research suggests that cardiovascular disease rates may increase after disasters.<sup>5</sup> Even in 'normal times' congestive heart failure among the elderly is particularly likely to affect the rate of acute medical admissions.<sup>6</sup>

Among children, respiratory admissions are one of the two leading causes of acute medical admissions. Respiratory illness, especially asthma in children, is affected by housing quality.<sup>7</sup>

#### Influenza-like illness

Influenza (flu) is a significant public health issue. Ten to twenty per cent of New Zealanders are infected every year.<sup>8</sup> While most recover at home, a few people are admitted to hospital because their condition becomes serious. Influenza can be fatal for a small number of people, most of whom already have health problems. As well as affecting people's wellbeing, influenza has a financial impact on workplaces, and can place a heavy load on primary care and hospital services during winter epidemics.

Since the earthquakes, people are more likely to be living in damaged, overcrowded homes that are damp and cold, which may lead to more cases of influenza. If the incidence of influenza rises, acute medical admissions for cardiac and respiratory conditions, particularly in the elderly and children, are also likely to increase.





### **Childhood immunisation rates**

Childhood immunisation provides protection from a range of serious illnesses, including measles, mumps, rubella, diphtheria and whooping cough.

Childhood immunisation rates are a good indicator of access to primary care, as these immunisations are undertaken in general practices. If there are barriers to seeing GPs, such as cost or transportation then it is likely that immunisations rates will decrease.

Until July 2012, the Government targets for immunisation required that 85 per cent of two year olds were immunised by July 2010, 90 per cent by July 2011 and 95 per cent by July 2012.<sup>9</sup> This has been a successful campaign, with immunisation coverage across New Zealand rising from 67 per cent in 2007 to 88 per cent in December 2010.<sup>10</sup>

In 2012 the Government's target changed to focus on eight month olds, requiring District Health Boards to ensure that 85 per cent are immunised by July 2013, 90 per cent by July 2014 and 95 per cent by December 2015.<sup>11</sup>

### **Access to primary health care**

Primary health care services, such as general practices and medical centres, are the primary means for many New Zealanders to take care of their health needs. People need to be able to access primary health services on time to get treatment for a health condition before it becomes more severe. In the 2011/12 New Zealand Health Survey, 78 per cent of Canterbury respondents had visited a GP in the past 12 months.

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## **How were keeping well and having access to health services impacted by the earthquakes?**

The September 2010 earthquake triggered an immediate rise in heart attacks, with increased admissions to cardiac services in the days following the earthquake.<sup>12</sup> Afterwards admissions for heart attacks returned to usual levels. The February 2011 earthquake did not lead to an increase in heart attack admissions and it may be that those who would have been predisposed to a heart attack in February had experienced it earlier as a result of the September quake.

However, the February earthquake had a major impact on hospital services, with a loss of over 100 beds in general medicine and 635 beds in aged residential care.<sup>13</sup> Over 250 elderly rest home residents were evacuated to other regions because their rest homes were no longer habitable. This group were repatriated to other Canterbury facilities by December 2011, although approximately 60 chose to continue to live outside Canterbury.

The February earthquake also had a profound impact on the primary care and community provider infrastructure and its capacity to provide health care. However, most services were soon up and running again.

Since the earthquakes, households have been exposed to factors that increase the risk of acute medical admissions for respiratory conditions and other health problems. These risk factors include damaged, damp and cold homes, and overcrowding of homes, schools and office spaces.

Some community members have suggested that liquefaction silt may have an effect on respiratory illness rates although there is little evidence to support this belief.<sup>14</sup> A report from the Institute of Environmental Science & Research (ESR) concluded that health impacts of liquefaction are unknown<sup>15</sup> and there are no hospital admission data to support this theory.

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## **What is happening now?**

Under the Recovery Strategy, agencies within the Canterbury health system are responsible for delivering the Canterbury District Health Board Transition Programme. This programme will create services and environments that support people to stay well. In this way, the health system will be more able to manage demand for health services and keep people well.

Immediately after the February 2011 earthquake, support was provided to vulnerable populations and providers, services to support people at risk of acute admission to hospitals were extended and new programmes were developed to support people in their own homes following discharge from hospital. The Government's influenza immunisation programme was extended in Canterbury to



include under 18 year olds in addition to the usual national target groups: people aged 65 years and over, pregnant women, and people under 65 years with a long-term health condition. Canterbury DHB has extended free influenza vaccination for children under 18 years for another three years because of the housing situation and pressure on hospital beds.

The rate of respondents reporting excellent, very good, or good self-rated health in the New Zealand Health Survey has increased slightly in Canterbury from 90.8 per cent in 2006/7 to 91.3 per cent in 2011/12, while in New Zealand overall the rate has decreased slightly from 90.2 per cent to 89.9 per cent. This indicates that self-rated health hasn't changed since the earthquakes.

## What are the indicators telling us?

### Acute medical admissions

The three measures used in this report are:

- the number of acute medical admissions
- the number of admissions for congestive heart failure for people aged 65+
- the number of respiratory paediatric admissions for children aged 0-15 years.

Figure 1 shows that acute medical admissions have a seasonal pattern of increases in the winter months. They have also been increasing over time. In previous years, demand tended to trail off in September; however there was a second peak in November 2010, which may indicate that the September 2010 earthquake caused some additional demand. Conversely, demand fell after the February 2011 earthquake. This may have been due to changes in people's behaviours and an increase in community-based services. The spike in admissions in winter 2012 follows a similar pattern to that seen pre-earthquakes.

Figure 1: Number of acute general medicine admissions

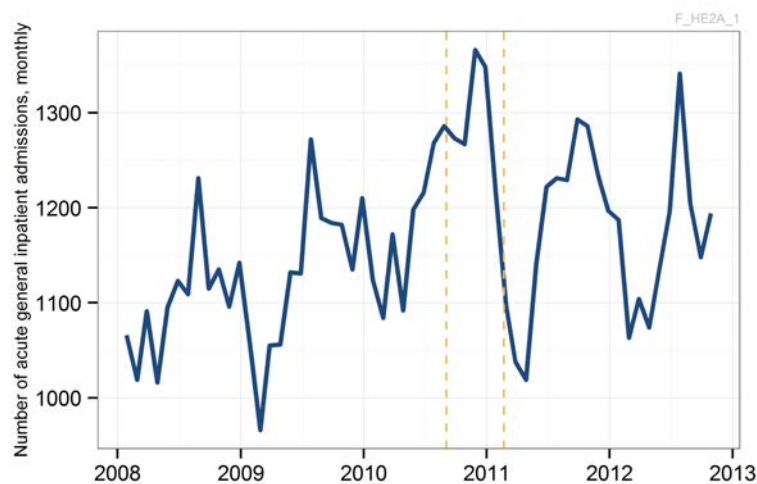
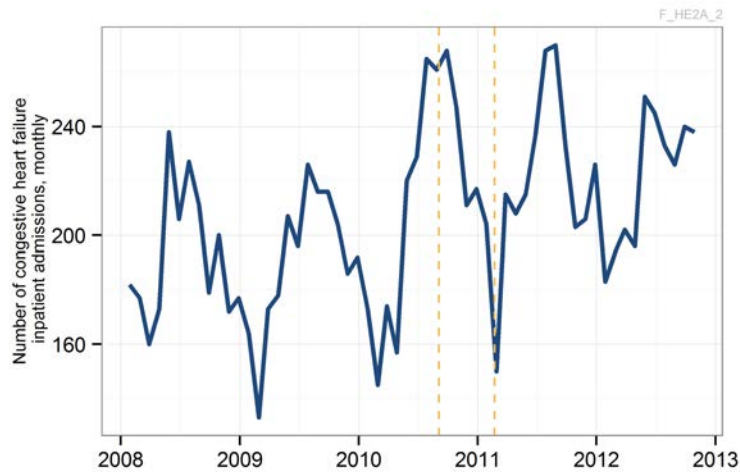


Figure 2 shows that the peak of inpatient admissions for congestive heart failure was higher in the winter of 2010 than in all previous years. However, admissions had started to peak before the September 2010 earthquake. Congestive heart failure admissions also peaked in the winter of 2011, but the demand fell in the winter of 2012.



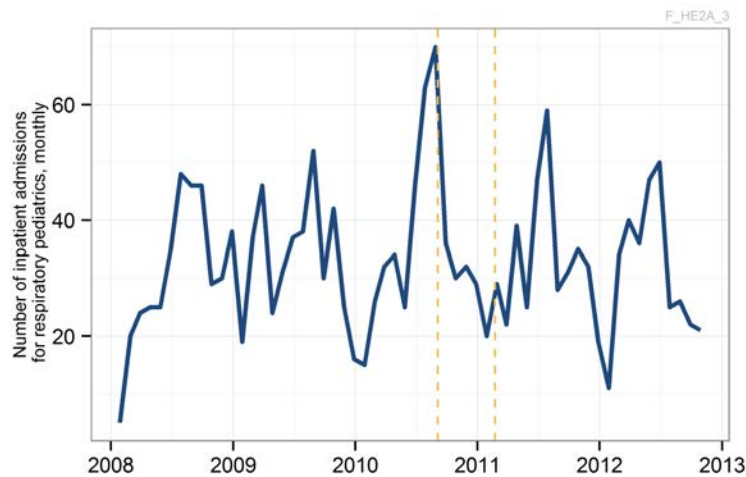


Figure 2: Number of congestive heart failure admissions for people aged 65 years and over



There appears to be little association between the earthquakes and paediatric respiratory admissions for children aged 0-15 years as Figure 3 shows. The number of admissions has also tended to increase in winter months, and the largest spike occurred before the September 2010 earthquake. There was another spike in winter 2011; however, the average number of paediatric respiratory admissions had fallen to pre-earthquake levels by winter 2012.

Figure 3: Number of respiratory admissions for children aged 0-15 years



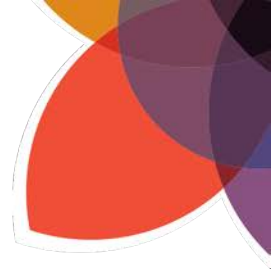
**Influenza-like illness (rates)**

This is the rate of influenza-like illness per 100,000 population of people enrolled in general practices.

Influenza-like illness rates are determined by a number of factors including the virulence of the influenza strains that are circulating that year and the proportion of the population that has received the influenza vaccination.

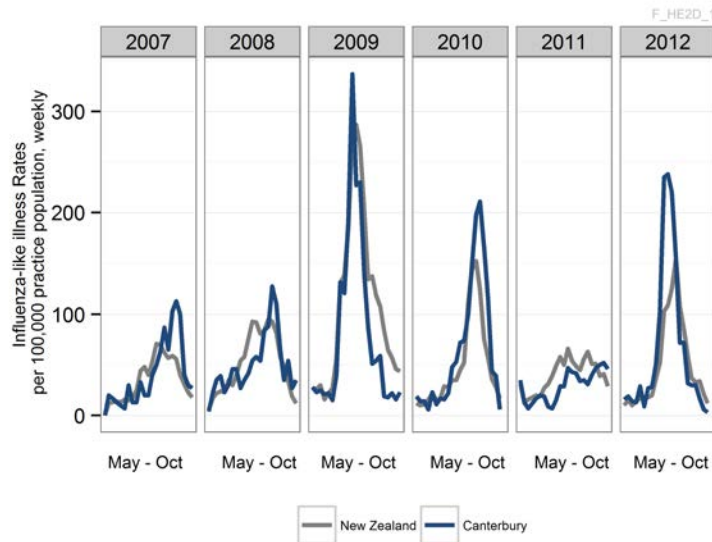
In 2011 New Zealand experienced a low incidence of influenza compared with previous years. During most weeks of 2011, Canterbury had even lower rates than New Zealand overall.

However, as shown in Figure 4, the 2012 season was severe. The rates in Canterbury were more than double those of New Zealand during the July peak and were the highest reported nationally.



Influenza incidence is unpredictable and vaccination and good personal respiratory hygiene are the best methods of prevention.

Figure 4: Weekly influenza-like illness rate

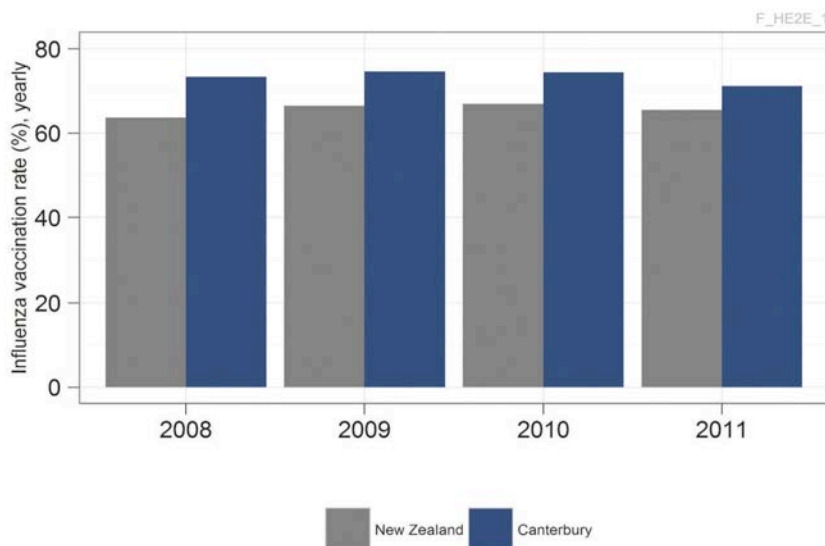


**Influenza (vaccinations)**

In this report, influenza vaccinations are measured as the proportion of the population enrolled in general practices aged 65 years and over who receive an influenza vaccine each year.

Figure 5 demonstrates that the yearly 65+ vaccination rate for influenza in the Canterbury District Health Board (CDHB) area has remained relatively stable over time at 73-74 per cent. In 2011, the rate dropped to 71 per cent of the eligible enrolled population although this was still the second highest of the 20 District Health Boards. People may have been less likely to seek a vaccination, in part due to the general impacts on daily activities caused by the earthquakes and the mildness of that winter.

Figure 5: Vaccination rate for eligible population 65 years and older





**Access to general practice services**

The two measures used in this report are:

- barriers to health care
- childhood immunisation rates.

Respondents in the New Zealand Health Survey were asked about their experiences of getting an appointment at their usual medical centre within 24 hours in the past 12 months. In the 2006/7 survey, 17.1 per cent of Canterbury respondents indicated that they had been unable to get an appointment, while in the 2011/12 survey this had decreased to 15.5 per cent. This indicates that access to GPs does not appear to be affected by the earthquakes.

From Table 1 it can be seen that over a quarter of Canterbury residents (28 per cent) reported unmet need for primary health care for a variety of reasons, which means they were not able to get health care when they needed it. Sixteen per cent did not seek GP services due to cost and 9 per cent did not use after-hours services due to cost. Rates for Canterbury respondents are similar to rates for New Zealand overall.<sup>16</sup>

*Table 1: Summary of barriers to health care for adults in the past 12 months*

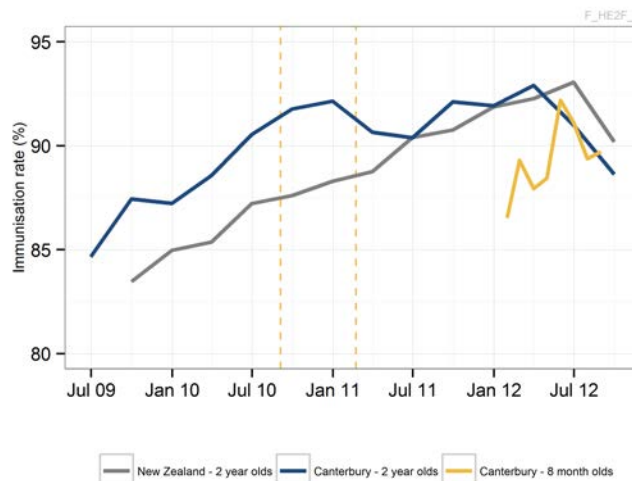
Indicator	% Canterbury	% New Zealand
Experienced unmet need for primary health care	28.2	27.6
Unable to get appointment at usual medical centre within 24 hours	15.5	15.9
Unmet need for GP services due to cost	15.9	14.9
Unmet need for after-hours services due to cost	9.1	7.4
Unfilled prescription due to cost	6.6	7.9

Childhood immunisation rates are measured in two ways in this report:

- two-year-old immunisation rates (Government target July 2010 – July 2012)
- eight-month-old immunisation rates (Government target July 2013 – July 2015)

Figure 6 shows the immunisation rates for two year olds dipped in the two quarters after the February 2011 earthquake. This may indicate that general practice access was difficult in that time period. The rate recovered and peaked at 93 per cent in the quarter ending March 2012, before dipping below 90 per cent in August 2012.<sup>17</sup> Data for eight month olds indicate that Canterbury District Health Board is on track to meet the target of 85 per cent immunisation by July 2013.

*Figure 6: Immunisation rates for 2 year olds and 8 month olds*





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## Find out more

Find out more about the Canterbury Wellbeing Index: [www.cera.govt.nz/cwi](http://www.cera.govt.nz/cwi)

Find out more about the links between health and housing in New Zealand:  
[www.healthyhousing.org.nz/](http://www.healthyhousing.org.nz/)

Find out more about how to get winter flu jabs:  
[www.cdhb.govt.nz/yourhealth/staying\\_healthy.htm](http://www.cdhb.govt.nz/yourhealth/staying_healthy.htm)

Find out more about accessing health services in Canterbury:  
[www.cdhb.govt.nz/yourhealth/](http://www.cdhb.govt.nz/yourhealth/)

Find out more about the Canterbury District Health Board Transition Programme:  
[www.cdhb.govt.nz/communications/documents/transition\\_2012\\_plan.pdf](http://www.cdhb.govt.nz/communications/documents/transition_2012_plan.pdf)

Find out more about the ESR report on PM10 and Christchurch liquefaction silt:  
[www.esr.cri.nz](http://www.esr.cri.nz)

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## Technical notes

### Morbidity

**Data source:** Canterbury District Health Board (CDHB)

**Data frequency:** Monthly

**Data complete until:** October 2012

**Notes:** Acute medical admissions are defined as acute general inpatient admissions where the health specialty is general medicine. Acute respiratory admissions are defined as acute general inpatient admissions where health specialty is respiratory medicine. Congestive heart failure (CHF) admissions are defined as CHF admissions with ICD Codes I50, J81.

### Influenza-like illness (rates)

**Data source:** Community and Public Health, CDHB

**Data frequency:** Weekly

**Data complete until:** October 2012

**Notes:** The rate presented is the influenza-like illness (ILI) rates per 100,000 practice population. ILI is measured weekly starting in week 18 (approximately the first week of May) through to week 40 (approximately the first week of October).

ILI surveillance is a voluntary national surveillance programme conducted in every District Health Board annually by sentinel medical practices. General practitioners identify all ILI patients who attend their practices from weeks 18–40 inclusive during the influenza season.

### Influenza (vaccinations)

**Data source:** Canterbury District Health Board

**Data frequency:** Yearly

**Data complete until:** 2011

**Notes:** The vaccination rate is the number of people over 65 years who are vaccinated each year divided by the enrolled population for the target group. These data are provided by the national Primary Health Organisations Performance Programme. The assumptions are not provided and enrolled population does not match DHB records.



## **New Zealand Health Survey: 'self-rated health' and 'barriers to accessing health care'**

**Data source:** Ministry of Health  
**Data frequency:** Data collected 2006/7 & 2011/12  
**Data complete until:** 2011/12

**Notes:** The NZHS has a multi-stage, stratified, probability-proportional-to-size (PPS) sampling design. The survey is designed to yield an annual sample size of approximately 13,000 adults and 4,500 children.

A dual frame approach has been used where participants are selected from an area-based sample and a list-based electoral roll sample. The aim of this approach is to increase the sample sizes for Māori, Pacific and Asian ethnic groups.

Interviews are conducted in participants' homes, with the interviewer typing responses directly into a laptop computer using 'Survey System' computer assisted personal interview (CAPI) software. Showcards with predetermined response categories are used to assist respondents, where appropriate.

The 2011/12 survey was the first time the New Zealand Health Survey asked directly about most of the unmet need indicators. Respondents were asked if they were 'Unable to get an appointment at usual medical centre within 24 hours in the past 12 months' in both 2006/7 and 2011/12.

The Canterbury region was defined as the Canterbury District Health Board area.

The results reported are age standardised prevalence (%) data for adults 15 and over.

### **Immunisations**

**Data source:** Canterbury District Health Board and Ministry of Health  
**Data frequency:** Quarterly  
**Data complete until:** September 2012

**Notes:** Immunisation data for two year olds (24 months) come from the National Immunisation Register from the Ministry of Health. The data represent the proportion of children who have completed their age-appropriate immunisations by the time they turned two years. Data are reported quarterly.

Eight-month immunisation data come from the Canterbury District Health Board until August 2012. The data represent the proportion of children who have completed their age-appropriate immunisations by the time they turned eight months in the Canterbury District Health Board area. From September 2012, quarterly data come from the National Immunisation Register from the Ministry of Health. Data are reported monthly until 31 August 2012 and quarterly subsequently.



## Endnotes

- <sup>1</sup> Howden-Chapman, P., et al. (2004). *Retrofitting houses with insulation to reduce health inequalities*. Retrieved from [www.energysmart.co.nz/site/energysmart/files/images/documents/Housing%20Insulation%20and%20Health.pdf](http://www.energysmart.co.nz/site/energysmart/files/images/documents/Housing%20Insulation%20and%20Health.pdf)
- <sup>2</sup> Howden-Chapman, P. (2008). Effects of improved home heating on asthma in community dwelling children: randomised controlled trial. *British Medical Journal* 337:a1411.
- Howden-Chapman, P. (2007). Effect of insulation existing homes on health inequalities. *British Medical Journal* 10.1136/BMJ.39070.573032.80.
- <sup>3</sup> Note the literature does not appear to agree upon a single definition: [www.bgs.org.uk/index.php?option=com\\_content&view=article&id=44:gpgacutecare&catid=12:goodpractice&Itemid=106/](http://www.bgs.org.uk/index.php?option=com_content&view=article&id=44:gpgacutecare&catid=12:goodpractice&Itemid=106/)
- <sup>4</sup> New Zealand Health Technology Assessment. (1998). *Acute medical admissions: A critical appraisal of the literature*. Christchurch School of Medicine: New Zealand Health Technology Assessment. Retrieved from: [www.otago.ac.nz/christchurch/otago014024.pdf](http://www.otago.ac.nz/christchurch/otago014024.pdf)
- <sup>5</sup> Jiao, Z., Kakoulides, S.V., Moscona, J., et al. (2011). Effect of Hurricane Katrina on incidence of acute myocardial infarction in New Orleans three years after the storm. *American Journal of Cardiology* 109: 502–505.
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- Dobson, A.J., Alexander, H.M., Malcolm, J.A., et al. (1991) Heart attacks and the Newcastle Earthquake. *Medical Journal of Australia* 155:757–61. PMID:1745166.
- Kario, K., Ohashi, T. (1997) Increased coronary heart disease mortality after the Hanshin-Awaji Earthquake among the older community on Awaji Island. Tsuna Medical Association. *Journal of the American Geriatrics Society* 45: 610–13. PMID:9158584. Retrieved from [www.ukpmc.ac.uk/abstract/MED/12887126/reload=0;jsessionid=FAWYDpnDio09F4G5leA0.4](http://www.ukpmc.ac.uk/abstract/MED/12887126/reload=0;jsessionid=FAWYDpnDio09F4G5leA0.4)
- <sup>6</sup> See note 5.
- <sup>7</sup> See note 5.
- <sup>8</sup> [www.health.govt.nz/our-work/diseases-and-conditions/influenza](http://www.health.govt.nz/our-work/diseases-and-conditions/influenza)
- <sup>9</sup> Ministry of Health. (2011). *Targeting Immunisation*. Wellington [www.moh.govt.nz](http://www.moh.govt.nz)
- <sup>10</sup> See note 9.
- <sup>11</sup> 2012/13 DHB Health Targets, [www.nsfh.health.govt.nz/apps/nsfl.nsf/pagesmh/.../HT\\_Feb\\_2012.doc](http://www.nsfh.health.govt.nz/apps/nsfl.nsf/pagesmh/.../HT_Feb_2012.doc)
- <sup>12</sup> Quake: surge in heart attacks, *Press*, 10 September 2010.
- <sup>13</sup> Canterbury Earthquake Recovery Authority, unpublished data.
- <sup>14</sup> [www.stuff.co.nz/national/4656584/Residents-say-silt-dust-a-health-risk](http://www.stuff.co.nz/national/4656584/Residents-say-silt-dust-a-health-risk)
- <sup>15</sup> Institute of Environmental Science and Research (2012). PM<sub>10</sub> and Christchurch liquefaction silt. Institute of Environmental Science and Research. <http://www.esr.cri.nz/SiteCollectionDocuments/ESR/PDF/MoHReports/Dust%20-%20Liquefaction%20Silt%20Dust%20Report.pdf>
- <sup>16</sup> Ministry of Health. (2012). The health of New Zealand adults 2011/12: Key findings of the New Zealand Health Survey. Section 7: Barriers to accessing health care. Accessed from: [www.health.govt.nz/system/files/documents/publications/health-of-new-zealand-adults-2011-12-section7.pdf](http://www.health.govt.nz/system/files/documents/publications/health-of-new-zealand-adults-2011-12-section7.pdf)
- <sup>17</sup> Part of this dip may be accounted for by a change in the Government target – as an additional vaccination was added to the schedule.



PUBLISHED JUNE 2013

**CERA is monitoring and reporting on the progress of the recovery. The Canterbury Wellbeing Index tracks the progress of social recovery using indicators to identify emerging social trends and issues.**

### Why is mental wellbeing important?

Mental wellbeing is a positive state where people are emotionally healthy, are able to live full and creative lives, and can deal with life's challenges. Sometimes this is also defined as flourishing, where people are engaged with life, and have a sense of meaning and purpose.

Mental wellbeing can positively affect most dimensions of people's lives: family and friendships, employment, education, good physical health and life expectancy.<sup>1</sup>

People who are mentally well are more productive in the workforce, do better in education and are able to function better cognitively.

When people are mentally well, they are also more likely to live longer, are less likely to engage in adverse behaviours like smoking, hazardous drinking, drug use and risky sexual behaviour, and they are less likely to be obese.<sup>2</sup>

One in four people will experience a mental health problem at some point in their life. At any given time, one person in every six in the adult population is experiencing mental ill health.<sup>3</sup>

Experts agree that disasters have a negative impact on people's mental wellbeing, particularly at the severe end of the spectrum.<sup>4</sup> The World Health Organisation estimates that after a disaster, severe mental disorders increase from 2-3 per cent to 3-4 per cent of the population, and mild to moderate mental disorders can double from 10 per cent to 20 per cent.<sup>5</sup> However, experts agree that over time, those experiencing mild psychological reactions will be able to cope and recover if they receive basic support.<sup>6</sup>

Stress from a disaster can also increase risk behaviours such as alcohol and drug abuse, and problem gambling. Such behaviours can be early warning signs of mental health issues.<sup>7</sup> In May 2011 Chief Science Advisor Professor Sir Peter Gluckman indicated that up to 5 per cent of the population may continue to have significant psychological ill health requiring professional help as a result of the earthquakes.<sup>8</sup>

International experience suggests that post-disaster stressors, such as delayed decisions about property and insurance, are some of the most significant factors that increase the risk of mental ill health and hold back recovery. These 'secondary stressors' are circumstances, events or policies that are indirectly related or 'non-inherent and consequential' to the earthquakes.<sup>9</sup> Examples are housing difficulties; problems with insurance; and loss of social networks.<sup>10</sup>

In contrast, primary stressors are defined as stress that is inherent to the disaster; for example injuries sustained or aftershocks.

The mental wellbeing of some population groups may be particularly vulnerable after a disaster. These groups include people who already had mental health issues and those who lack the social supports necessary to help them to cope. Other vulnerable people are those who had no previous difficulties, but who have experienced significant loss as a result of the earthquakes. This may include loss of a loved one, personal injury, loss of property, or financial problems. Recovery is improved where affected people perceive that social supports are available and they are able to access these supports.<sup>11</sup>





## How was mental wellbeing impacted by the earthquakes?

The earthquakes have deeply affected the residents of greater Christchurch. The loss of life, injury, damage to homes and businesses, and the stress associated with the earthquakes and aftershocks are experiences that many people have never had before, and never wish to have again.

Psychological recovery has been interrupted by the sequence of aftershocks, which have meant that people have had to continue to respond to new events.<sup>12</sup>

Levels of general distress in the population were high immediately after the earthquakes. Health and welfare services reported high demand for assistance with general stress symptoms, hyper-vigilance and anxiety. For some people, these symptoms continued for a long time.

By the middle of 2012, services were reporting that people's mental wellbeing was less affected by aftershocks. However, a growing number of people were saying that secondary stressors such as uncertainty around decisions relating to their insurance and the repair or rebuild of their homes were causing stress and anxiety.<sup>13</sup>

Table 1 shows key findings from the 2012 Canterbury Earthquake Recovery Authority (CERA) Wellbeing Survey, which asked a number of questions about secondary stressors associated with the earthquakes.<sup>14</sup> The survey found that 65 per cent of those surveyed reported 'dealing with EQC/insurance issues in relation to personal property or house' had an impact on their lives and over a third (37 per cent) reported that this had a moderate or major negative impact on their everyday life.

*Table 1: Most common negative outcomes of the earthquakes*

Negative outcome	% who had experienced outcome	% who reported moderate or major negative impact
Loss of other* recreational, cultural and leisure time facilities (cafes, restaurants, libraries etc.)	69	34
Distress or anxiety associated with ongoing aftershocks	66	42
Dealing with EQC/insurance issues in relation to personal property and house	65	37
Making decisions about house damage, repairs and relocation	54	29

\*Additional questions were asked about the loss of indoor and outdoor sports facilities etc.

While there were some obvious challenges to mental wellbeing due to the earthquakes, people also experienced many positives.

Table 2 shows the four most common positive outcomes, which include 'pride in ability to cope' and 'heightened sense of community'. Some research has shown that bonds with family and friends can become stronger, people become more knowledgeable about themselves, wiser and more compassionate, and find new perspectives on life after facing adversity.<sup>15</sup>





Table 2: Most common positive outcomes of the earthquakes

Positive outcome	% who had experienced outcome	% who reported moderate or major positive impact
Pride in ability to cope under difficult circumstances	76	41
Family's increased resilience	69	36
Renewed appreciation of life	68	45
Heightened sense of community	67	34

### What is happening now?

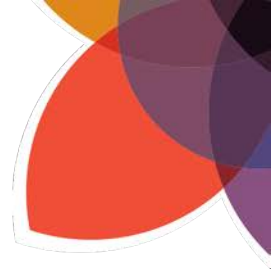
Government and non-government social agencies have worked together to develop a system of wellbeing support for people experiencing distress. Many of these services are focused around early intervention, to ensure that people can get help and support that will prevent them from developing a severe mental health condition. This stepped approach is summarised below.

A number of community and family services are in place to help people access information and the health and social services they need.

- The 'All right?' social marketing campaign was launched in February 2013 to assist people who are struggling and to provide tools and support to improve their wellbeing.<sup>16</sup>
- The 0800 Canterbury Support Line provides callers with advice and referral to timely and appropriate support.
- Counselling services have been provided at no cost to residents affected by the earthquakes. The main provider is Relationships Aotearoa (formerly Relationship Services).
- The Earthquake Support Coordination Service is there for people who require more help. This service includes 55 staff who support vulnerable and at-risk whānau. They provide practical information and support to people displaced from their homes or who have on-going issues relating to the earthquakes.
- Earthquake Assistance Centres in Avondale and Kaiapoi provide information and assistance for home owners. At 31 January 2013, a total of 10,404 people have been through the Earthquake Assistance Centre in Avondale, and 3,019 through the Kaiapoi Earthquake Hub.
- The Ministry of Education has developed several programmes to respond to the earthquake-related needs of students and teachers.
- The Ministry of Social Development provided training to help support the community leaders, frontline staff, professional health and social service staff who are working with affected clients and communities.
- Extended GP consultations have been put in place to deal with complex cases including people with mental and physical health effects.
- Brief intervention coordinators have also provided up to five sessions of treatment for individual patients.
- The Canterbury District Health Board's (CDHB's) earthquake teams address severe anxiety, distress and post-traumatic stress disorder in separate programmes for children and youth (and their parents/caregivers); adults; and older people.

Since the earthquakes, the number of adults with serious mental health problems accessing acute hospital inpatient care has fallen. This may reflect the services that have been put in place in the community supporting people before they become very unwell.

In addition the Residential Advisory Service, which started on 16 May 2013 for all property owners having difficulty with insurance and other repair or rebuilding challenges, will play an important role in recovery. The service provides independent assistance to residential property owners to help them understand and progress the repair and rebuild process.



**What are the indicators telling us?**

**Overall quality of life**

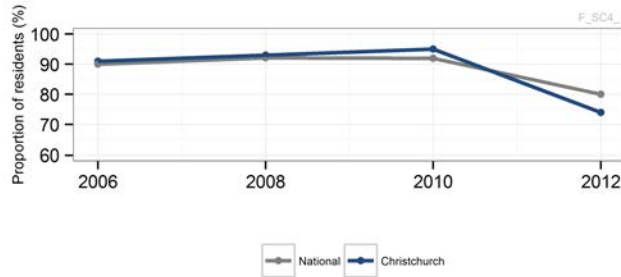
Prior to the earthquakes, quality of life in Christchurch tracked close to the national average of 90 to 92 per cent.

In 2012, 74 per cent of greater Christchurch (72 per cent of Christchurch city) reported good or extremely good quality of life in the CERA Wellbeing Survey (Figure 1).<sup>17</sup> While this is a decrease from 95 per cent in 2010, it follows a decrease across New Zealand. An earthquake effect is apparent but the national decrease indicates that other factors, such as the global financial crisis, may have also had an impact.

Residents of greater Christchurch were also asked if their quality of life had changed since the earthquakes. Over half reported that their quality of life had ‘decreased significantly’ (10 per cent) or ‘decreased to some extent’ (44 per cent).

Overall, respondents from Christchurch rate their quality of life less positively than those in Selwyn and Waimakariri districts.

*Figure 1: Overall quality of life reported as good or extremely good*



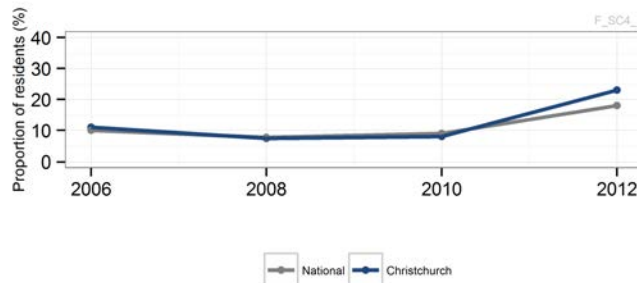
**Negative impacts of the earthquakes**

Figure 2 shows that 23 per cent of greater Christchurch respondents have experienced stress ‘always’ or ‘most of the time’ in the past 12 months (Christchurch city 24 per cent). While there has also been an increase in reported stress across New Zealand, the increase has been higher in greater Christchurch, reflecting the significant impacts of the earthquakes on resident’s wellbeing. Only 20 per cent of respondents reported rarely or never experiencing stress.

Two thirds (66 per cent) of greater Christchurch respondents reported experiencing ‘distress or anxiety associated with ongoing aftershocks’, and for 42 per cent of respondents this has had a moderate or major negative impact on their everyday life. In addition, one third (32 per cent) reported ‘dealing with frightened, upset or unsettled children’.

The stresses caused by events like earthquakes and the associated secondary stressors can put pressure on relationships, with 28 per cent of respondents reporting ‘relationship problems (arguing with partner/friends)’.

*Figure 2: The proportion of respondents reporting high levels of stress*

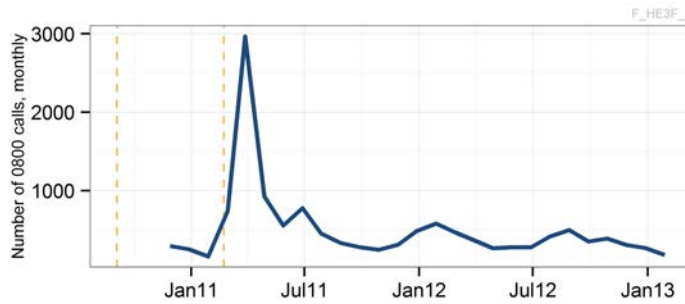




**Access to earthquake support services**

Figure 3 shows there was a spike in calls to the 0800 Canterbury Support Line immediately after the February 2011 earthquake. A smaller increase in calls in February 2012 may have been due to the anniversary of the 2011 earthquake and the increase in August 2012 may have followed land zoning announcements. Between September 2010 and December 2012 more than 13,000 residents sought assistance through this service.

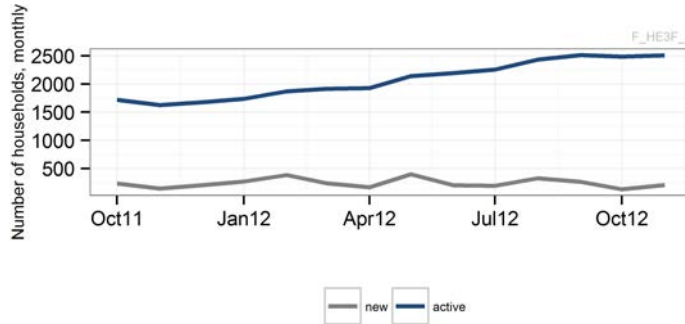
*Figure 3: Calls to the 0800 Canterbury Support Line*



Over 51,000 counselling sessions have been provided through Relationships Aotearoa. Clients present for reasons including chronic stress related to secondary stressors around housing and insurance, which are affecting people’s wellbeing and recovery.

Figure 4 shows that between 130 and 300 new households have enrolled weekly with the Earthquake Support Coordination Service since September 2010. Overall, 7,165 households have been supported and at April 2013, 2,171 households remain registered.

*Figure 4: Households registered with Earthquake Support Coordination Service*

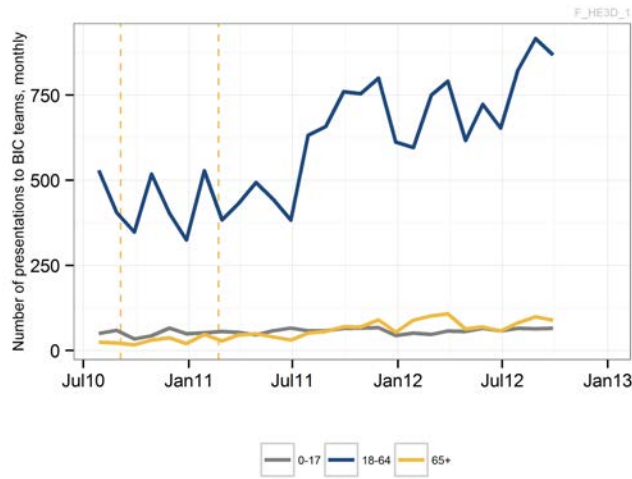


**Access to brief intervention counselling in general practice**

Figure 5 shows there was an increase in the number of presentations to brief intervention counselling services monthly from July 2011. The service employed additional staff to meet increased demand from the earthquakes. Presentations peaked at over 1,000 per month in August 2012 (double the rate of presentations in August 2010).



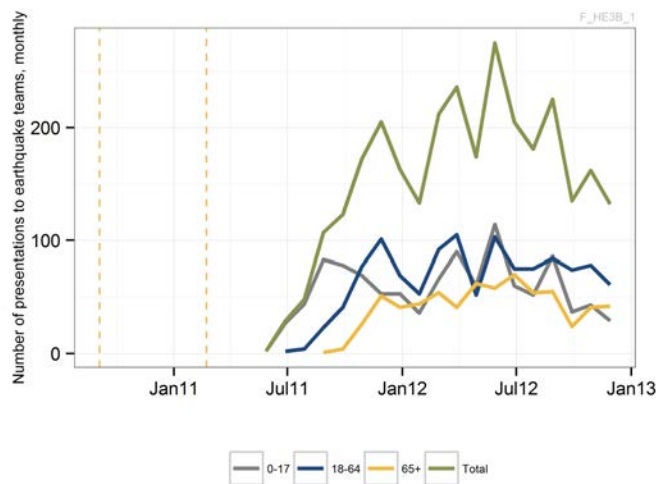
Figure 5: Number of attendances for brief intervention counselling by age



**Mental health earthquake teams**

Earthquake teams were established in mid-2011 to address earthquake-related mental health needs. Figure 6 shows that presentations peaked in May-June 2012 and then fell by half in late-2012.

Figure 6: Number of attendances at CDHB earthquake teams for mental health reasons by age



**Total number of clients accessing existing CDHB mental health services**

Figure 7 shows the total number of clients seeking mental health services and then provides breakdowns of access to specialist mental health services, non-government organisations (NGOs) and primary mental health. These services all existed before the earthquakes.

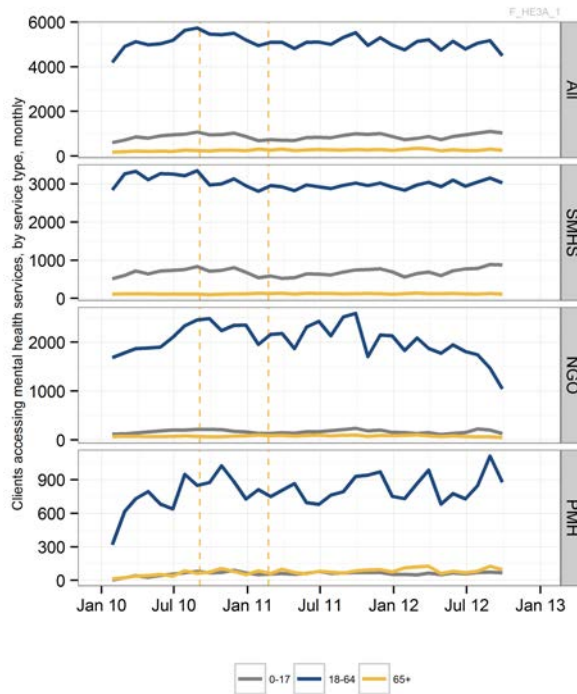
Total demand has not increased, which suggests that the provision of support services at a community level may have prevented demand for more specialised mental health services.

While access to NGO services is declining, there have been slight increases in access to specialist mental health services and primary care-based mental health services in the last year. In particular, young people (0-17) are increasing their use of specialist mental health services. In the three



months to September 2012 there was an average of 847 admissions monthly of young people to specialist services, up 24 per cent on the three months to September 2011.

*Figure 7: Total number of clients accessing mental health services, by service type and age*



**Dispensing of pharmaceuticals for mental health**

This is measured by the number of anti-depressants and anxiety medications dispensed.

Figure 8 shows that the number of anti-depressant prescriptions dispensed in the CDHB region declined to 1,748,883 units in February 2011, the month of the most devastating earthquake. It is not possible to determine whether this drop in prescriptions demonstrates a decline in usage, whether prescriptions were filled in other parts of New Zealand, or if people were too busy with other concerns to get to a GP.

The number of prescriptions filled then plateaued from May 2011 to December 2011 before dipping in the first quarter of 2012. In the second half of 2012 it appears that rates of dispensing, while still increasing, are increasing at a similar rate to that before the earthquakes.

*Figure 8: Number of anti-depressant prescriptions dispensed*

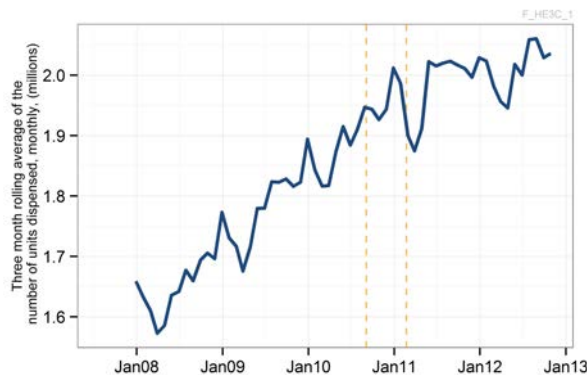
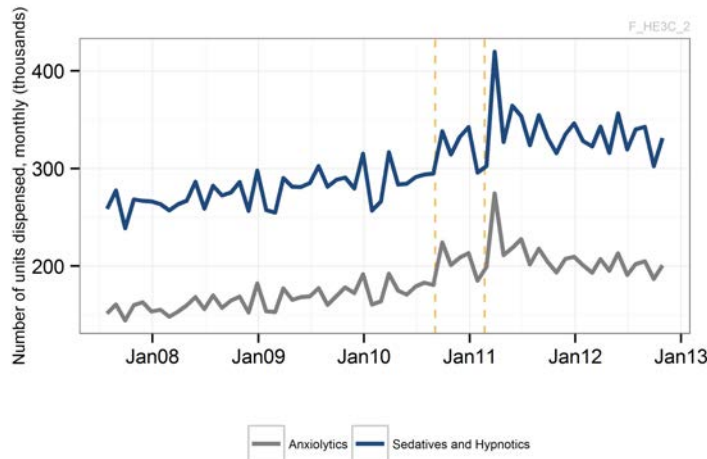




Figure 9 shows that the number of anti-anxiety medications (anxiolytics, sedatives and hypnotics) dispensed increased immediately after the February 2011 earthquake. Levels peaked in March 2011 when 274,510 units of anxiolytics, and 419,623 units of sedatives and hypnotics were dispensed. These medications are usually prescribed in response to acute stress and sleep difficulties. Since then the number of prescriptions filled has generally been decreasing, against a pattern of increase pre-earthquake.

Figure 9: Number of anti-anxiety prescriptions dispensed



## Find out more

Find out more about the Canterbury Wellbeing Index: [www.cera.govt.nz/cwi](http://www.cera.govt.nz/cwi)

Find out more about the support and assistance you can receive:  
[www.cera.govt.nz/support-and-assistance](http://www.cera.govt.nz/support-and-assistance)

Find out more about the Canterbury District Health Board Mental Health Services:  
[www.cdhb.govt.nz/yourhealth/mental.htm](http://www.cdhb.govt.nz/yourhealth/mental.htm)

Find out more about building community resilience:  
<http://www.familyservices.govt.nz/working-with-us/programmes-services/connected-services/supporting-canterbury/resources-reports.html>.

Ring the Earthquake Support and Counselling Line on: 0800 777 846

Be connected to an Earthquake Support Coordinator: 0800 673 227

Be connected to a Kaitoko Whānau Earthquake Support Worker on: 0800 KAI TAHU or 0800 524 8248

## Technical notes

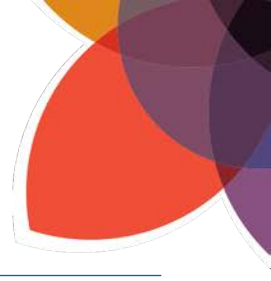
### CERA Wellbeing Survey

**Data source:** Canterbury Earthquake Recovery Authority

**Data frequency:** Six-monthly

**Data complete until:** October 2012

**Notes:** The CERA Wellbeing Survey 2012 is a representative sample of 2,381 residents of greater Christchurch delivered by Nielsen. Respondents were randomly selected from the Electoral Roll. The survey was delivered online and by hard copy and closed on 14 October 2012. The response rate was 52 per cent. Weighting was used to correct for imbalances in sample representation. The



survey was developed in partnership with Christchurch City Council, Waimakariri District Council, Selwyn District Council, the Canterbury District Health Board, Ngāi Tahu and the Natural Hazards Research Platform. Survey available: [cera.govt.nz/sites/cera.govt.nz/files/common/cera-wellbeing-survey-2012-report-20120220.pdf](http://cera.govt.nz/sites/cera.govt.nz/files/common/cera-wellbeing-survey-2012-report-20120220.pdf)

#### **'Quality of life' and 'Experienced stress that has had a negative effect'**

**Data source:** The Quality of Life Survey (2006, 2008, 2010 Christchurch city and New Zealand data, and 2012 New Zealand data); CERA Wellbeing Survey (2012 greater Christchurch data)

**Data complete until:** October 2012

**Note:** The Quality of Life Survey is a national survey run every two years. Computer assisted telephone interviews (CATI) were conducted with New Zealand residents aged 15 years and older. Residents were selected randomly from the Electoral Roll. The Christchurch sample size is 496 for 2010. For 2010, fieldwork was conducted between 19 November 2010 and 2 March 2011. All interviewing in Christchurch was undertaken before the 22 February 2011 earthquake (and after the first large quake in September 2010).

The questions were asked in the same fashion in the Quality of Life Surveys and the CERA Wellbeing Survey. The question "If you were faced with a serious illness or injury, or needed emotional support during a difficult time, is there anyone you could turn to for help?" was not asked in 2006.

The results of the Quality of Life Survey include residents of Christchurch only while the CERA Wellbeing Survey also includes residents of Waimakariri and Selwyn. The 'national' total in 2012 is the combined results of the 6 Quality of Life Project cities of Auckland, Porirua, Hutt, Wellington, Christchurch and Dunedin.

The 'national' total in 2010 is the combined results of the 8 Quality of Life Project cities of Auckland, Hamilton, Tauranga, Porirua, Hutt, Wellington, Christchurch and Dunedin.

Prior to 2010, a further 2 cities were involved and the 'national' average included a number of people resident outside the main Quality of Life Project cities.

#### **The 0800 Canterbury Support Line**

**Data source:** Family and Community Services Southern, Ministry of Social Development

**Data frequency:** Monthly

**Data complete until:** November 2012

**Notes:** Calls are logged as low, medium or high priority by staff. Calls are also categorised by reason for call.

#### **The Earthquake Support Coordination Service**

**Data source:** Canterbury Earthquake Temporary Accommodation Service

**Data frequency:** Monthly

**Data complete until:** November 2012

**Notes:** Data from February 2011 to September 2011 were not available for graphing as they were previously collated monthly.



#### **Brief intervention counselling services**

**Data source:** Canterbury District Health Board

**Data frequency:** Monthly

**Data complete until:** September 2012

**Notes:** The BIC service provides up to five sessions of free psychological intervention for clients and, in some cases, also refers clients to other community agencies, such as Presbyterian Support and the Stop Trust, for ongoing support. Clients are referred to the BIC service through their general practice teams.

#### **Mental health earthquake-related services**

**Data source:** Canterbury District Health Board

**Data frequency:** Monthly

**Data complete until:** October 2012

**Notes:** These data cover those patients predominantly seen by the speciality service that was formed after February 2011. Note that data for young people include some presenting with non-earthquake-related issues.

#### **Mental health referrals to pre-existing services**

**Data source:** Canterbury District Health Board

**Data frequency:** Monthly

**Data complete until:** November 2012

**Notes:** The data represent all referrals received from all sources, and referrals seen. Referrals seen are those referrals that proceeded to be seen for assessment/treatment (one day or more) for one or more contacts and include mental health earthquake-related services.

Note there have been some data integrity issues that have affected capturing of NGO data.

#### **Mental health pharmaceuticals**

**Data source:** Pharms Data Mart via Canterbury District Health Board

**Data frequency:** Monthly

**Data complete until:** October 2012

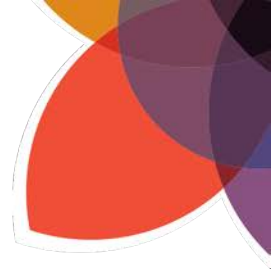
**Notes:** The data presented are for prescriptions that are filled by patients. This does not measure the number of people that are actually taking prescribed medications. Further, many people do not fill prescriptions due to cost (8 per cent in 2011/12) and these people may be disproportionately represented in those requiring mental health pharmaceuticals.





## Endnotes

- <sup>1</sup> UK Government. (2010). *Confident communities, brighter futures: A framework for developing wellbeing*. Department of Health and New Horizons.
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- <sup>3</sup> Wells, J., Oakley Browne, M., Scott, K., et al. (2006). Prevalence, interference with life and severity of 12 month DSM-IV disorders in Te Rau Hinengaro: New Zealand Mental Health Survey. *Australian and New Zealand Journal of Psychiatry* 40: 845–54.
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- <sup>4</sup> Bidwell, S. (2011). *Long term planning for recovery after disasters: Ensuring health in all policies (HiAP)*. Community and Public Health for Healthy Christchurch, pp.4-5.
- <sup>5</sup> Adapted from Van Ommeren, M. (2006). *Inter-Agency Standing Committee (IASC) guidance on mental health and psychological support in emergency settings*. Paper presented at Public Health Pre-Deployment Training, 28 November 2006: Chavannes de Bogis, Switzerland.
- <sup>6</sup> Bidwell, S. (2011). *Long term planning for recovery after disasters: Ensuring health in all policies (HiAP)*. Community and Public Health for Healthy Christchurch. Version 1.
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- <sup>7</sup> State of Victoria, Government Department of Human Services. (2009). *After the bushfires: Victoria's psychosocial recovery framework*. Melbourne, Australia: Author, 5.
- <sup>8</sup> Gluckman, P. (2011). *The psychological consequences of the Canterbury earthquakes*. Retrieved from [www.pmcsa.org.nz/wp-content/uploads/Christchurch-Earthquake-Briefing-Psychosocial-Effects-10May11.pdf](http://www.pmcsa.org.nz/wp-content/uploads/Christchurch-Earthquake-Briefing-Psychosocial-Effects-10May11.pdf)
- <sup>9</sup> Department of Health. (2009). *NHS Emergency Planning Guidance: Planning for the psychosocial and mental health care of people affected by major incidents and disasters: Interim national strategic guidance*. London: Department of Health.
- <sup>10</sup> Lock, S., Rubin, GL, Murray, V., et al. (2012). Secondary stressors and extreme events and disasters: a systematic review of primary research from 2010-2011 PLoS Current. 2012 October 29. doi: 10.1371/currents.dis.a9b76fed1b2dd5c5bfcfc13c87a2f24f
- <sup>11</sup> Lock, S., Rubin, GL, Murray, V., et al. (2012). Secondary stressors and extreme events and disasters: a systematic review of primary research from 2010-2011 PLoS Current. 2012 October 29. doi: 10.1371/currents.dis.a9b76fed1b2dd5c5bfcfc13c87a2f24f
- <sup>12</sup> Geonet. (2012). *Aftershocks*. Retrieved from [www.geonet.org.nz/canterbury-quakes/aftershocks](http://www.geonet.org.nz/canterbury-quakes/aftershocks)
- <sup>13</sup> Information from Canterbury Earthquake Recovery Authority.
- <sup>14</sup> For information on the CERA Wellbeing Survey, refer to the Technical Notes.
- <sup>15</sup> Joseph, F. (2011). *What Doesn't Kill Us: The New Psychology of Posttraumatic Growth*. Basic Books:



<sup>16</sup> All Right? is a Healthy Christchurch project that is being led by the Mental Health Foundation and the Canterbury District Health Board.

<sup>17</sup> Note that data from previous years are not directly comparable with the 2012 results as they were obtained using a different methodology. However, the results of the two surveys can be compared in a very general sense.

**CERA is monitoring and reporting on the progress of the recovery. The Canterbury Wellbeing Index tracks the progress of social recovery using indicators to identify emerging social trends and issues.**

### Why are risk factors important?

Risk factors and the behaviours behind them put people, and at times their families and communities, at risk of harm or poor health.

#### Problem gambling

Around 3 per cent of New Zealand adults are at risk of problems from their own gambling.<sup>1</sup>

Problem gambling affects not only the gamblers themselves but also the people around them. The evidence indicates that between 5 and 10 other people are affected to varying degrees by the behaviour of each serious problem gambler.<sup>2</sup>

Many of the consequences of problem gambling are financial. A 2010 study estimated that 5 per cent of adults had experienced someone in their wider household going without something they needed or a bill being unpaid in the previous 12 months because of gambling.<sup>3</sup> Problem gambling can lead to social isolation, depression, suicide, relationship breakdown, lowered work productivity, job loss, bankruptcy and crime (including family violence and fraud).<sup>4</sup>

#### Air quality

Home heating is the main cause of air pollution in urban centres in winter and people's heating decisions can present health risks to others. When solid fuels burn, they emit particulate matter (PM<sub>10</sub> particles) into the air. People then breathe in those particles and absorb them into their lungs. PM<sub>10</sub> particles can irritate eyes, throats and lungs.

In mid-2012, the Canterbury District Health Board (CDHB) released a position statement recognising that clean air is a requirement for community health and wellbeing. It also acknowledged the considerable international evidence that air pollution causes excess morbidity and mortality, particularly through increases in the incidence of respiratory and cardiovascular illness. These effects are particularly concerning for the elderly and infants, people with asthma and other respiratory diseases, and sufferers of other chronic diseases, such as heart disease.<sup>5</sup>

The Government's National Environmental Standards for Air Quality have set national targets that polluted airsheds around New Zealand must meet. Christchurch and Kaiapoi must reduce their number of high pollution days to meet a target of three days a year by 2016 and one day a year by 2020. Rangiora must meet a target of one day a year by 2016. A high pollution day is defined as exceeding 50 micrograms of PM<sub>10</sub> per cubic metre of air (µg/m<sup>3</sup>).

Christchurch ratepayers have made a significant investment in cleaning up the air over the last 10 years. Before the earthquakes, the number of annual high pollution days in Christchurch fell from 60 to 16. Although considerable gains have been made, there is still some way to go to achieve the National Environmental Standards for Air Quality.

#### Warm homes

Many New Zealand homes do not meet World Health Organization recommendations for an indoor temperature of 18 degrees (and up to 21°C for the very young and the very old).<sup>6</sup> Cold, damp homes have negative health effects especially affecting older people, children and people with a health condition or disability. The benefits of improved home insulation and more efficient heating include reduced health risks and lower heating costs.<sup>7</sup> In response to these issues, the Government introduced the Warm Up New Zealand: Heat Smart (WUNZ:HS) programme in 2009.

The Energy Efficiency and Conservation Authority (EECA) administers WUNZ:HS and has provided \$347 million over five years for insulation retrofits and clean, efficient heating grants.



### Smoking rates

Tobacco smoking kills 5,000 New Zealanders a year. Although the smoking rate has reduced over time, around 18 per cent of New Zealanders continue to smoke.<sup>8</sup> Marginally more men smoke (19 per cent) than women (18 per cent) and more people who identify as Māori smoke (41 per cent) than people who identify as New Zealand European (20 per cent).<sup>9</sup>

Smoking tobacco is a risk factor in six of the eight leading causes of death worldwide.<sup>10</sup> In New Zealand the main causes of smoking-related death are cancer, vascular diseases and respiratory diseases. About 50 per cent of regular smokers will be killed by their smoking. For Māori, the mortality rate due to smoking is 10 per cent higher than the rate for non-Māori.<sup>11</sup>

### Obesity

Obesity is defined as an excessively high amount of body fat in relation to lean body mass. Eating a healthy diet and getting regular physical activity can help maintain a healthy body size.

Obesity is associated with an increased risk of a number of health conditions, including Type 2 diabetes, ischaemic heart disease, high blood pressure, cancers, arthritis (especially osteoarthritis) and stroke.

There has been a rise in obesity in New Zealand adults from 9 per cent of males and 11 per cent of females in 1977 to 28 per cent for both in 2008/09.<sup>12</sup>

### Hazardous drinking

Alcohol is the most commonly used recreational drug in New Zealand, with 84 per cent of people having had an alcoholic drink in the previous 12 months.<sup>13</sup> Alcohol is a cause of over 60 different health conditions and for almost all conditions, heavier alcohol use means higher risk of disease or injury.<sup>14</sup> Estimates indicate between 600 and 1,000 people die from alcohol-related causes each year.<sup>15</sup>

Alcohol also contributes to death and injury through traffic accidents, drowning, suicide, assault and domestic violence.<sup>16</sup> Up to 35 per cent of injury-based emergency department presentations are estimated to be alcohol-related, rising to up to 70 per cent during the weekend.<sup>17</sup> The Police estimate that approximately one-third of all apprehensions involve alcohol.<sup>18</sup>

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## How were risk factors impacted by the earthquakes?

### Problem gambling

Before the earthquakes, Christchurch had 114 venues operating 1,767 pokie machines. Earthquake damage reduced the number of functioning premises.<sup>19</sup> The February 2011 earthquake closed nine venues in the central business district, 15 venues in the eastern suburbs, and the Christchurch Casino.<sup>20</sup>

No venues closed in the western suburbs. Analysis of gambling spending indicates that displaced users of damaged premises shifted their use of pokies to functional premises in the western suburbs.<sup>21</sup>

In Kaiapoi, the September 2010 earthquake closed three of the four licensed gambling venues.

### Air quality

There is a great deal of uncertainty about how the earthquakes have affected air quality. Although thousands of chimneys fell down during the earthquakes, many of these were for unused open fires and therefore do not necessarily represent a gain for air quality.

The Earthquake Commission (EQC) Winter Heating Programme was established after the earthquakes to offer people with damaged chimneys the choice of replacing their old log burners or open fires with a new, clean efficient heating system with the cost covered through their claim to the EQC. At January 2013, there had been 18,545 repairs or replacements of heating appliances (10,316 heat pumps and 8,299 log burners), and this programme is ongoing.<sup>22</sup>

### Warm homes

As noted above, thousands of homes lost their primary heat source in the earthquakes. In addition, liquefaction damage to homes may have caused dampness and mould. Damaged houses have become drafty and harder to heat.



### **Smoking rates**

Internationally, rates of smoking have tended to increase after a natural disaster.<sup>23</sup> Information collected on admission to Christchurch Hospital suggests that before the earthquakes, 14-15 per cent of patients were smokers. Towards the end of 2012, this rate had increased to 17 per cent.<sup>24</sup>

### **Obesity**

It has been suggested that increased levels of obesity may occur because disasters trigger a survival instinct which may cause people to consume more calories.<sup>25</sup> A research study of women that started before the greater Christchurch earthquakes found that before the earthquakes, women's eating habits were fairly stable. Following the February 2011 earthquake, emotional eaters who reported high levels of post-earthquake distress started reporting increased overeating.<sup>26</sup>

### **Hazardous drinking**

Many studies suggest that disasters can lead to increased alcohol use and abuse.<sup>27</sup> In greater Christchurch there are anecdotal reports of increased alcohol use after the earthquakes. Women's Refuge reported an increased rate of hazardous drinking leading to domestic violence following the earthquakes.<sup>28</sup>

## **What is happening now?**

### **Problem gambling**

At September 2012, 101 venues in Christchurch were operating with 1,377 machines. The Christchurch Casino reopened on 26 May 2011. The gaming machine profits for Christchurch City increased significantly after the earthquakes (a 19 per cent increase), but returned to pre-earthquake levels in 2012.<sup>29</sup>

In addition, the Multi Venue Exclusion programme has been introduced to Canterbury. Under this programme, people who have recognised that their gambling has become a problem can choose to exclude themselves from several venues at once without having to visit each venue separately to do so. This programme works across all venues and casinos.

### **Air quality**

In August 2012 the Institute of Environmental Science & Research (ESR) released a report on the health and other impacts of liquefaction silt following the Canterbury earthquakes.<sup>30</sup> This report concluded that PM<sub>10</sub> from liquefaction silt has different physical and chemical properties to existing PM<sub>10</sub> in Canterbury, and resulting health impacts are unknown. The report recommends that silt should be removed as soon as possible if further liquefaction occurs.

To ensure people with earthquake-damaged heating remained warm in the winters of 2011 and 2012, Environment Canterbury relaxed the implementation of the Air Plan restrictions on the use of open fires and non-compliant burners. In 2013, as part of recovery, Environment Canterbury is reminding the greater Christchurch community that air quality is important to support community health and wellbeing.

This winter, Environment Canterbury is focusing on improving the city's air quality through initiatives including encouraging behaviour change around home heating and enabling ultra-low emissions and cleaner technologies.

To continue to improve air quality this winter, Environment Canterbury will be talking to people about the impacts of smoky chimneys, asking people to check their chimney to make sure it is not smoking excessively and educating people about the practical actions that they can take to reduce the amount of smoke emitted.

### **Warm homes**

A recent change to the Earthquake Commission's rules around the Canterbury earthquake repairs process allows customers the opportunity to install insulation in areas exposed during earthquake repairs, even if the insulation work is not earthquake related. Insulation in some parts of a house can be difficult to access and install. Coordinating insulation installation with repairs will give customers the opportunity to get normally difficult spaces insulated.

Home owners are responsible for organising and paying for any insulation that had not been installed in the house already. The initiative has been a collaboration between the Canterbury Home Repair Programme (CHRP) and EECA.

Healthy Homes is a collaborative project between Partnership Health, the CDHB and EECA to reduce demand on Christchurch hospitals by providing heating and insulation for Canterbury's most



vulnerable citizens, including those who are regularly admitted to hospital for cold-related illness. By February 2013, insulation has been installed in 242 houses and heating has been installed in 94 houses.

The Warm Up New Zealand: Heat Smart programme has installed insulation in 15,000 homes in greater Christchurch and over 8,000 homes have had a clean and efficient heater installed between July 2009 and December 2012.

**Smoking rates**

CDHB and Smokefree Canterbury have a range of initiatives to support people impacted by the earthquakes to quit smoking and to work with schools in disadvantaged areas. Enrolments in the general practice-based cessation programme have increased significantly.<sup>31</sup>

**Hazardous drinking**

Police are adopting a much more proactive response to manage any issues related to hazardous drinking in Christchurch.<sup>32</sup> Christchurch City Council is drafting a local alcohol policy with tougher rules on where and when alcohol can be sold in Christchurch. The draft policy – a provision of the Sale and Supply of Alcohol Act 2012 – will enable the council to regulate opening hours for licensed premises, control location and lay down one-way door restrictions in late-night bars and clubs. The draft Local Alcohol Policy is out for consultation between 31 May and 1 July 2013.

**What are the indicators telling us?**

**Problem gambling help seeking**

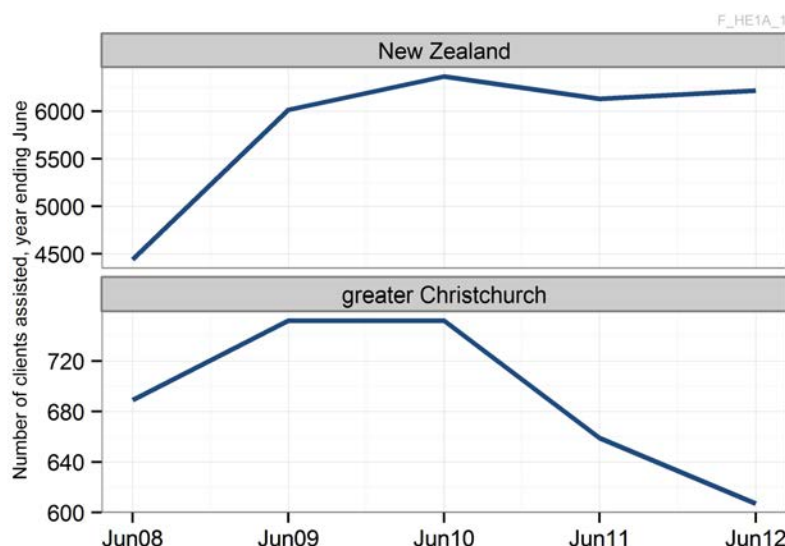
We are measuring this in two ways:

- the number of new callers recorded in the Gambling Helpline database
- the number of clients seeking help from face-to-face problem gambling intervention services funded by the Ministry of Health.

Data on calls to the Gambling Helpline do not show a clear impact of the earthquakes on new client calls, with numbers decreasing at a similar rate in both Canterbury and New Zealand.

Figure 1 shows the number of people accessing face-to-face problem gambling services decreased from the year ending June 2010 to the year ending June 2012 in greater Christchurch while it remained steady in New Zealand overall.

*Figure 1: Number of problem gamblers assisted by an intervention service*





**Air quality breaches**

Air quality breaches are measured as the number of days the particulate level exceeds the daily level for particulate matter (PM<sub>10</sub> of 50 µg/m<sup>3</sup>) each year. The National Environmental Standards for Air Quality allow such a breach on only one day a year by 2020.

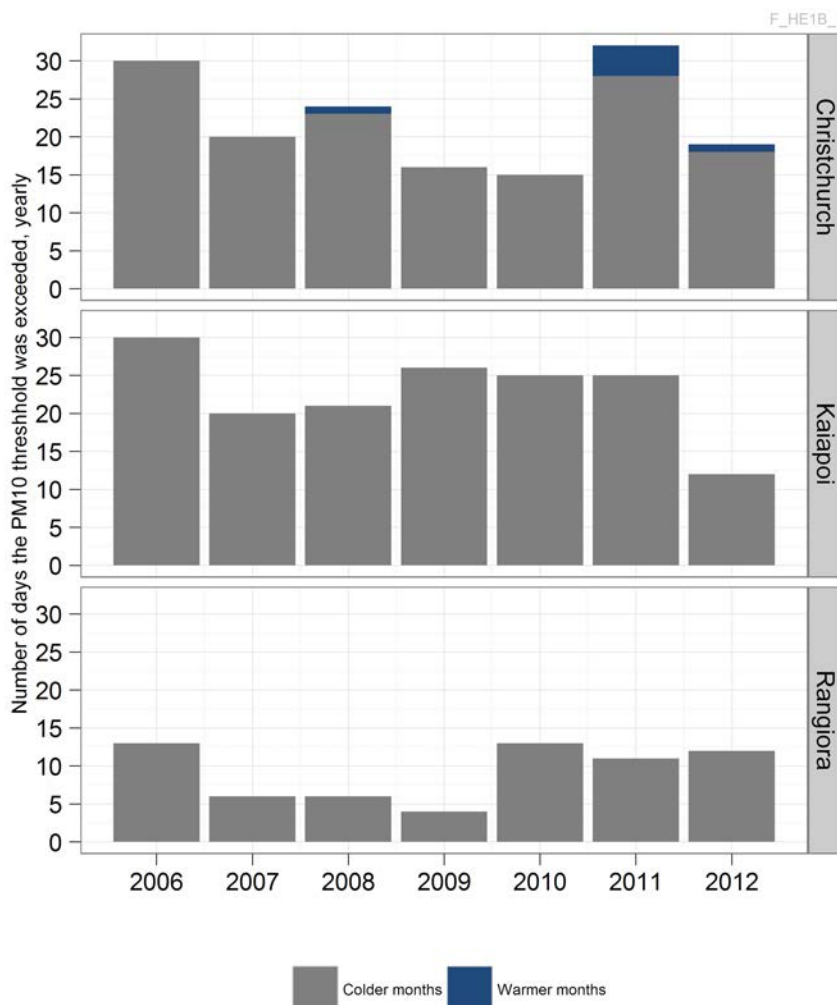
Figure 2 shows the number of days in a year that exceeded allowable daily PM<sub>10</sub> concentrations. Where these days occurred during the colder months of April to September, they are shown in grey; where they occurred in the warmer months of October to March, they are shown in blue.

The number of days that exceed the standard varies annually and is affected by the weather. Typically breaches in air quality occur on still, cold winter nights when households burn wood for heating.

After the February 2011 earthquake, there were some days on which the standard for air quality was breached. It was during this time that strong winds blew dry liquefaction silt around. Traffic also moved silt and finely ground gravel on roads into the air, which increased the number of days of air quality breaches in Christchurch during 2011. Environment Canterbury reports that 17 of the 32 high-pollution days recorded in 2011 were influenced by liquefaction silt and dust on roads.

Note that Christchurch results for 2012, while lower than 2011, are still higher than in 2009-10.

Figure 2: Number of days of air quality breaches each year

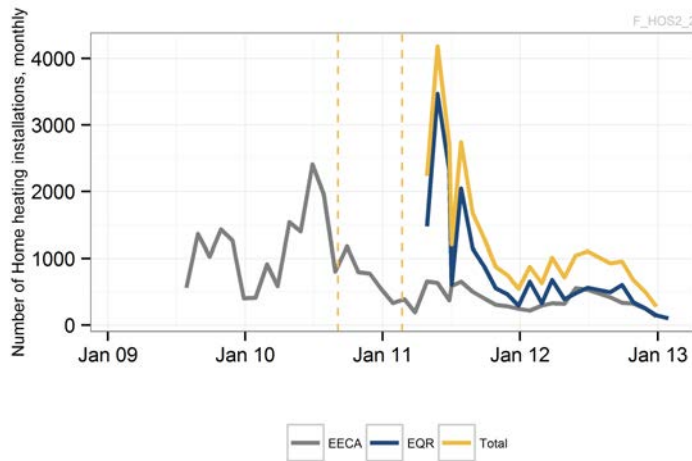




**Warm homes**

Figure 3 shows clean heating installations by EECA combined with the EQC Winter Heating Programme spiked in winter 2011 with 13,253 installations between April and August of that year.

*Figure 3: Winter heating installations by EECA and EQC in greater Christchurch*



**Smoking rates**

We are measuring this in three ways:

- youth smoking – measured as the proportion of the Year 10 population who smoke every day
- adult smoking – the proportion of the adult population presenting to their GP who are current smokers
- adult smoking – the proportion of the adult population who are current smokers from the New Zealand Health Survey.

Figure 4 shows that the proportion of Canterbury Year 10s who smoke every day has generally declined over time, consistent with national trends. From 2011 to 2012, while national rates remained steady at 4.1 per cent, Canterbury rates of daily smoking decreased from 3.8 per cent to 3.1 per cent. While rates for Year 10 students have decreased from 2007 to 2012, in the New Zealand Health Survey (refer Table 1) youth aged 15-24 went from 18.6 per cent being current smokers in 2006/7 to 19.7 per cent in 2011/12. However, this increase was not significant.

*Figure 4: The proportion of the Year 10 population that are daily smokers*

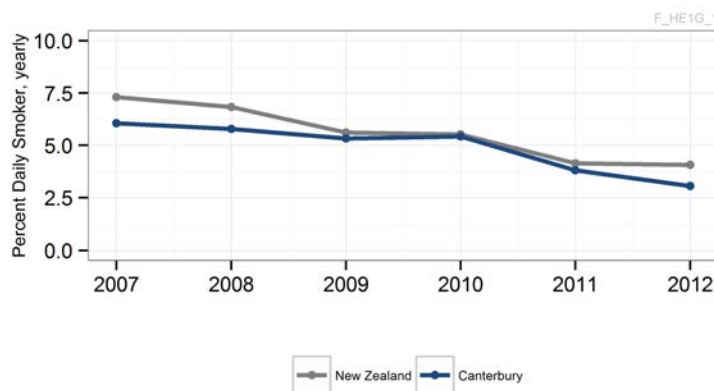


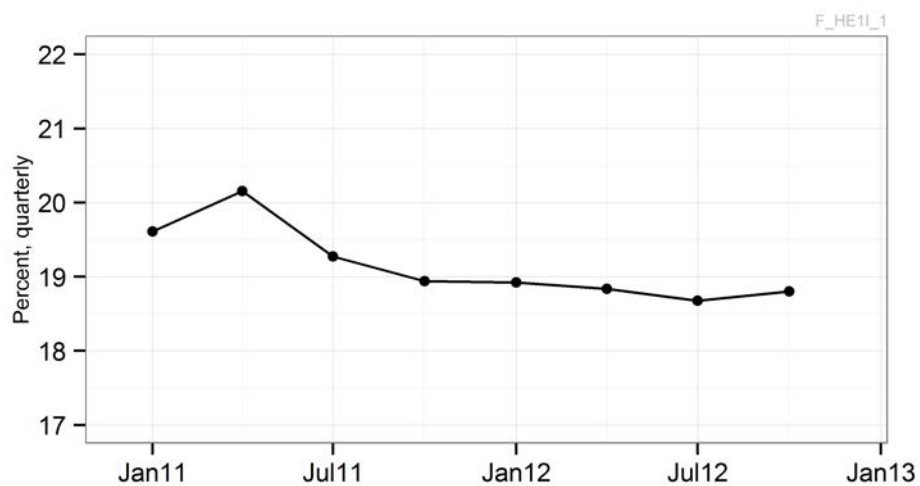




Figure 5 shows that the proportion of the adult population in Canterbury who reported to their GP that they are current smokers increased slightly after the February 2011 earthquakes. It has since decreased.

The New Zealand Health Survey found that the proportion of smokers 15 and over in Canterbury decreased from 19 per cent in 2006/7 to 17.7 per cent in 2011/12 (see Figure 6). The rates of smoking in Canterbury are slightly lower than in New Zealand overall. Table 1 shows that the rate of current smoking in the 45-64 year old age group declined significantly over time from 18.8 per cent in 2006/7 to 10.2 per cent in 2011/2.

Figure 5: Proportion of adult population who are current smokers



**Obesity**

Figure 6 shows that overall obesity has increased slightly between 2006/7 and 2011/12 in both the CDHB area and New Zealand generally. Table 1 shows that the rate of obesity in the 15-24 year old age group increased significantly over time from 3.3 per cent in 2006/7 to 17.3 per cent in 2011/12.

**Hazardous drinking**

The results for hazardous drinking in Figure 6 are of note, given anecdotal reports of increased alcohol abuse since the earthquakes. While hazardous drinking has decreased nationally, the 49 per cent decrease in Canterbury is substantially greater than for any of the other major district health boards. While the reasons for this decrease are not clear, the results are encouraging from a public health perspective, particularly in the 15-24 year old age range where the decrease is important for long-term health.

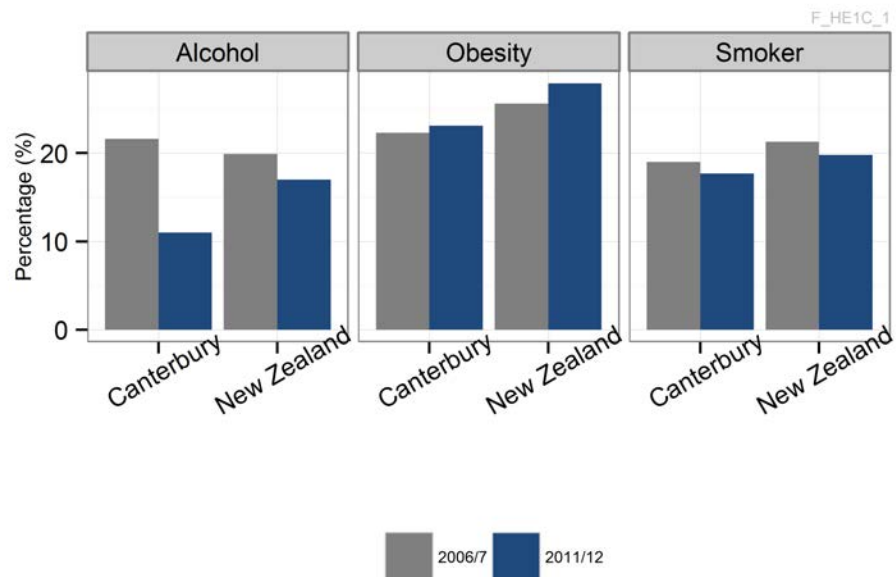


Table 1: Proportion of Canterbury residents (15+) who are current smokers, obese, or hazardous drinkers

Demographics	Current smoking (%)		Obesity (%)		Hazardous drinking (%)	
	2006/7	2011/12	2006/7	2011/12	2006/7	2011/12
<b>Sex</b>						
Female	16.8	12.8	25.1	23.1	11.2	3.7
Male	20.4	18.9	23.2	25	28.2	15.1
<b>Age</b>						
15-24	18.6	19.7	3.3	17.3	41.9	17.0
25-44	22.4	24.6	26.6	22.7	18.7	13.7
45-64	18.8	10.2	30.8	26.2	13.1	5.9
65+ years	8.5	5.4	27.9	29.2	6.4	0.7
<b>Population Rate</b>	19.0	17.7	22.3	23.1	21.6	11.0

**Key** (blue = significant difference over time)

Figure 6: Proportion of Canterbury and New Zealand residents who are current smokers, obese, or hazardous drinkers



**Find out more**

Find out more about the Canterbury Wellbeing Index: [www.cera.govt.nz/cwi](http://www.cera.govt.nz/cwi)

Ring the Gambling Helpline on 0800 654 655 or visit the website: [www.gamblingproblem.co.nz](http://www.gamblingproblem.co.nz)

Find out more about problem gambling including how to seek help in Canterbury and other parts of New Zealand from the Health Sponsorship Council's Choice Not Chance website: [www.choicenotchance.org.nz](http://www.choicenotchance.org.nz)



Find out more about actions to eliminate disease and death caused by tobacco from ASH New Zealand: [www.ash.org.nz/](http://www.ash.org.nz/)

Ring the smoking Quitline on 0800 778 778 or visit the website: [www.quit.org.nz](http://www.quit.org.nz)

Find out more about the National Environment Standards for air quality from the Ministry for the Environment: [www.mfe.govt.nz/environmental-reporting/air/air-quality/](http://www.mfe.govt.nz/environmental-reporting/air/air-quality/)

Find out more about air quality in greater Christchurch, including air quality rules and policy, from Environment Canterbury: [www.ecan.govt.nz/our-responsibilities/air/pages/default.aspx](http://www.ecan.govt.nz/our-responsibilities/air/pages/default.aspx)

Find out more about the ESR report on PM<sub>10</sub> and Christchurch liquefaction silt: [www.esr.cri.nz](http://www.esr.cri.nz)

Find out more about the effect of alcohol on health:  
[www.alcohol.org.nz/alcohol-you/your-body-alcohol/body-effects](http://www.alcohol.org.nz/alcohol-you/your-body-alcohol/body-effects)

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## Technical notes

### Problem gambling prevalence

**Data source:** Ministry of Health administrative data

**Data frequency:** Year ending June

**Data complete until:** June 2012

**Notes:** The intervention client data represent the number of clients who have received problem gambling treatment services and who have identified to the service provider a primary problem gambling mode causing them significant harm.

A direct comparison between the July 2004 to June 2008 data and the July 2008 to June 2012 data has limitations because 1) new service specifications for problem gambling intervention service providers were implemented from January 2008 and 2) equivalent intervention services provided by the Gambling Helpline have been included in the data since November 2008.

### Air quality breaches

**Data source:** Environment Canterbury (ECan) air quality monitoring data

**Data frequency:** Data collected daily

**Data complete until:** 18 November 2012

**Notes:** Environment Canterbury monitors air quality for three airsheds in the greater Christchurch area: Rangiora, Kaiapoi, and Christchurch city. PM<sub>10</sub> in Christchurch city is measured at two locations: St Albans and Woolston. Data for Christchurch city come from the maximum reading from the two locations in the city. The data reported are the 24-hour average PM<sub>10</sub> concentrations from midnight in µg/m<sup>3</sup>.

The critical value for an exceedance is 50 µg/m<sup>3</sup>, so the daily concentration has to be greater than 50 µg/m<sup>3</sup>. ECan reports there is uncertainty in measuring the PM<sub>10</sub> concentrations (probably about +/- 2 µg/m<sup>3</sup>), so it reports PM<sub>10</sub> concentrations in whole numbers. We have used the same method as ECan and count the day as an exceedance if the PM<sub>10</sub> concentration is greater than or equal to 50.5 µg/m<sup>3</sup>.



### Warm Up New Zealand: EECA Heat Smart retrofits

**Data source:** Energy Efficiency and Conservation Authority  
**Data frequency:** Data collected monthly  
**Data complete until:** December 2012

**Notes:** A retrofit is where a home has had a subsidised heating or insulation retrofit contracted by EECA. Data show the number of houses that had a subsidised insulation retrofit and/or a subsidised heating retrofit.

The EECA data do not include repairs and replacements undertaken by the EQC winter heat programme.

### EQC winter heating installations

**Data source:** Earthquake Commission (EQC)  
**Data frequency:** Data collected weekly  
**Data complete until:** 25/1/2013

**Notes:** Chimney Replacement Programme. If a home owner's chimney was damaged significantly by the earthquakes they could choose to have it rebuilt or to take part in the Chimney Replacement Programme. To be eligible, the house owner must have a claim with EQC and be referred to Fletcher EQR.

The Chimney Replacement Programme was set up following the September 2010 earthquake. It has since been rolled into the Canterbury Home Repair Programme run by EQC and Fletcher EQR. It offers people whose chimneys were damaged the choice to replace their old log burner or open fire with a new, clean efficient heating system, with the cost being covered under their EQC claim.

### Smoking rates for youth

**Data source:** Year 10 ASH Snapshot Survey  
**Data frequency:** Data collected annually  
**Data complete until:** 2012

**Notes:** The Year 10 ASH Snapshot Survey has been used to monitor student smoking since 1999. The ASH survey samples approximately half of the schools in New Zealand with Year 10 students annually, and reports results for students who were 14 or 15 years of age at the time of the survey. The indicators are based on the results that are estimates for the whole population based on the Year 10 sample.

The survey normally takes place in term 3. In 2011 it was changed to term 2. In 2011, term 2 went from 2 May to 15 July. In 2010, term 3 ran from 1 August to 7 October.

Daily smokers are those students who reported that they smoke 'at least once a day' when asked "How often do you smoke now?"

The Canterbury area refers to the Canterbury District Health Board boundaries.

### PHO smoking rates for adults

**Data source:** CDHB PHO data  
**Data frequency:** Data collected quarterly  
**Data complete until:** December 2012

**Notes:** This is measured as the proportion of the adult population (15-74) who are current smokers in the Canterbury District Health Board area. The data are provided by Canterbury GPs. This information is required by the Ministry of Health and the proportion of the population who have been asked this question has steadily increased. As of July 2012, these data are based on over 200,000 patients. The smoking rate is only calculated for those who have attended a GP in the past year.



This may exclude many high-risk smoking groups from the present sample who do not access GP services for various reasons.

**New Zealand Health Survey: Results for smoking, obesity and hazardous alcohol use.**

**Data source:** Ministry of Health  
**Data frequency:** Data collected 2006/7 & 2011/12  
**Data complete until:** 2011/12

**Notes:** The NZHS has a multi-stage, stratified, probability-proportional-to-size (PPS) sampling design. The survey is designed to yield an annual sample size of approximately 13,000 adults and 4,500 children.

A dual frame approach has been used where participants are selected from an area-based sample and a list-based electoral roll sample. The aim of this approach is to increase the sample sizes for Māori, Pacific and Asian ethnic groups.

Interviews are conducted in participants' homes, with the interviewer typing responses directly into a laptop computer using 'Survey System' computer assisted personal interview (CAPI) software. Showcards with predetermined response categories are used to assist respondents, where appropriate.

**Current smoker:** based on the World Health Organization definition, is someone who has smoked more than 100 cigarettes in their lifetime and is currently smoking at least once a month. In the 2011/2 New Zealand Health Survey, most current smokers smoked at least once a day (91.2 per cent), one in 16 current smokers (6.4 per cent) smoked at least once a week, and 2.5 per cent smoked at least once a month. There were no differences by gender in the frequency of smoking.

**Obesity:** is defined as a body mass index (BMI) of 30 or more. Survey interviewers measured respondents' height and weight, from which BMI could be calculated. BMI is a simple index of weight-for-height that is commonly used to classify overweight and obesity in adults. It is defined as a person's weight in kilograms divided by the square of their height in meters ( $\text{kg}/\text{m}^2$ ). According to the World Health Organization.<sup>33</sup>

- a BMI greater than or equal to 25 is overweight
- a BMI greater than or equal to 30 is obesity.

BMI provides the most useful population-level measure of overweight and obesity as it is the same for both sexes and for all ages of adults. However, it should be considered a rough guide because it may not correspond to the same degree of fatness in different individuals and ethnicities.

**Hazardous drinking** is defined as a score of 8 or more on the 10-question Alcohol Use Disorders Test (AUDIT),<sup>34</sup> which includes questions about alcohol use, alcohol-related problems and abnormal drinking behaviour. Hazardous drinking refers to an established drinking pattern that carries a risk of harming the drinker's physical or mental health, or having harmful social effects on the drinker or others.

This score indicates a potentially hazardous drinking pattern with high risk of future damage to physical and/or mental health due to drinking alcohol, but may not yet have resulted in significant adverse effects.<sup>35</sup>

'Total' data presented in Table 1 and Figure 6 are age-standardised rates.



## Endnotes

<sup>1</sup> Ministry of Health. (2012). *Problem Gambling in New Zealand: Preliminary findings from the New Zealand Health Survey (July 2011 to March 2012)*. Ministry of Health, Wellington.

<sup>2</sup> Productivity Commission. (1999). *Australia's Gambling Industries*. Report No. 10, AusInfo, Canberra.

<sup>3</sup> Health Sponsorship Council. (2012). *New Zealanders' Knowledge, Views and Experience of Gambling: Results from the 2010 Health and Lifestyles Survey*. Retrieved from [www.hsc.org.nz/researchpublications.html](http://www.hsc.org.nz/researchpublications.html).

<sup>4</sup> See, for example, Centre for Social and Health Outcomes Research and Evaluation & Te Ropu Whariki, (2008), *Assessment of the Social Impacts of Gambling in New Zealand*, Auckland: SHORE/Whariki, and

Productivity Commission, (2011), *Gambling*, Report No. 50, Canberra.

<sup>5</sup> See note 8.

<sup>6</sup> World Health Organization. 1987. Health impact of low indoor temperatures: Report on a WHO meeting, Copenhagen, 11-14 November 1985. Copenhagen: WHO.

<sup>7</sup> Howden-Chapman, P., A. Matheson, J. Crane, H. Viggers, M. Cunningham, T. Blakely, C. Cunningham, A. Woodward, K. Saville-Smith, D. O'Dea, M. Kennedy, M. Baker, N. Waipara, R. Chapman, and G. Davie. (2007). Effect of insulating existing houses on health inequality: cluster randomised study in the community. *British Medical Journal*, 334.460-64.

<sup>8</sup> Ministry of Health. (2006). *Tobacco trends 2006: Monitoring tobacco use in New Zealand*, and Ministry of Health. (2008). *A portrait of health: key results of the 2006/07 New Zealand Health Survey*. Ministry of Health: Wellington.

Both cited in ASH Smoking Statistics Factsheet, retrieved from [www.ash.org.nz/?t=108](http://www.ash.org.nz/?t=108)

<sup>9</sup> Ministry of Health. (2012). *The Health of New Zealand Adults 2011/12: Key findings of the New Zealand Health Survey*. Wellington: Ministry of Health.

<sup>10</sup> These are: ischaemic heart disease, cerebrovascular disease, lower respiratory infections, chronic obstructive pulmonary disease, tuberculosis and lung cancer. WHO. (2008). *WHO report on the global tobacco epidemic, 2008: The MPOWER Package*. World Health Organization, Geneva. Cited in ASH Smoking and Disease Factsheet, retrieved from [www.ash.org.nz/?t=108](http://www.ash.org.nz/?t=108)

<sup>11</sup> Blakely, T. et al (2006). What is the contribution of smoking and socioeconomic position to ethnic inequalities in mortality in New Zealand. *Lancet* 368:44–52. Cited in ASH Smoking and Disease Factsheet, retrieved from [www.ash.org.nz/?t=108](http://www.ash.org.nz/?t=108)

<sup>12</sup> Ministry of Health. *Obesity*. Retrieved from: [www.health.govt.nz/our-work/diseases-and-conditions/obesity](http://www.health.govt.nz/our-work/diseases-and-conditions/obesity)

<sup>13</sup> 2006/7 New Zealand Health Survey.

<sup>14</sup> Room, R., Babor, T., & Rehm, J. (2005). Alcohol and public health. *The Lancet*, 365(9458), 519–530.

[www.alcohol.org.nz/alcohol-you/your-body-alcohol/body-effects](http://www.alcohol.org.nz/alcohol-you/your-body-alcohol/body-effects)

<sup>15</sup> Connor, J., Broad, J., Rehm, J., Hoorn, S.V., Jackson, R.T. (2005). *The burden of death, disease and disability due to alcohol in New Zealand*. Wellington: Alcohol Advisory Council of New Zealand.

<sup>16</sup> See note 15.



- <sup>17</sup> Jones, I., McElroy, C. and Robinson, M. 2009. Alcohol related injury presentations. *Public Health Report* 6 (1).
- <sup>18</sup> New Zealand Police. (2010 in draft). *National Alcohol Assessment*. Wellington: New Zealand Police.
- <sup>19</sup> Department of Internal Affairs, cited in Healthy Christchurch. (2011). *Christchurch City Health and Wellbeing Profile*.
- <sup>20</sup> Department of Internal Affairs, unpublished.
- <sup>21</sup> See note 20.
- <sup>22</sup> [www.eqr.co.nz/](http://www.eqr.co.nz/)
- <sup>23</sup> Lanctot, J., Stockton, M., Mzayek, F., Read, M., McDevitt-Murphy, M., and Ward, K. (2008). Effects of disasters on smoking and relapse: an exploratory study of Hurricane Katrina victims. *American Journal of Health Education* 39: 91–93.
- <sup>24</sup> However, it is not certain whether this reflects a change in staff recording this information or a rise in smokers being admitted.
- <sup>25</sup> Burnham, T. and Phelan, J. (2000). *Mean Genes: From Sex to Money to Food: Taming Our Primal Instincts*. New York: Penguin.
- <sup>26</sup> Kuijter, R.G., Boyce, J.A. (2012). Emotional eating and its effect on eating behaviour after a natural disaster. *Appetite* 58(3):936-9.
- <sup>27</sup> Cerdá, M., Tracy, M., Galea, S.(2011). A prospective population based study of changes in alcohol use and binge drinking after a mass traumatic event. *Drug Alcohol Dependence* 115(1-2) 1-8.
- <sup>28</sup> Women's Refuge. (2011). Maori women put up with violence in Christchurch. Retrieved from [www.womensrefuge.org.nz/WR/Archive%202011%20%20News/Maori%20women%20put%20up%20with%20violence%20in%20Christchurch.htm](http://www.womensrefuge.org.nz/WR/Archive%202011%20%20News/Maori%20women%20put%20up%20with%20violence%20in%20Christchurch.htm)
- <sup>29</sup> [http://www.dia.govt.nz/diawebsite.nsf/wpg\\_URL/Resource-material-Information-We-Provide-Gaming-Statistics?OpenDocument](http://www.dia.govt.nz/diawebsite.nsf/wpg_URL/Resource-material-Information-We-Provide-Gaming-Statistics?OpenDocument)
- <sup>30</sup> Institute for Environmental Science and Research (2012). PM10 and Christchurch liquefaction silt. Retrieved from: <http://www.esr.cri.nz/>
- <sup>31</sup> CDHB personal communications.
- <sup>32</sup> 'Police Worried About More Alcohol Fuelled Violence in Chch'. Retrieved from: [www.scoop.co.nz/stories/PO1304/S00061/police-worried-about-more-alcohol-fuelled-violence-in-chch.htm](http://www.scoop.co.nz/stories/PO1304/S00061/police-worried-about-more-alcohol-fuelled-violence-in-chch.htm)
- <sup>33</sup> World Health Organization. Obesity and overweight. Retrieved from: [www.who.int/mediacentre/factsheets/fs311/en/](http://www.who.int/mediacentre/factsheets/fs311/en/)
- <sup>34</sup> Babor, T., Higgins-Biddle, J., Saunders, J., et al. (2001). *AUDIT: The Alcohol Use Disorders Identification Test: Guidelines for use in primary care*. Geneva: World Health Organization.
- <sup>35</sup> Ministry of Health. Section 2: Health Behaviours and Risk Factors. Retrieved from [www.health.govt.nz/system/files/documents/publications/health-of-new-zealand-adults-2011-12-section2.pdf](http://www.health.govt.nz/system/files/documents/publications/health-of-new-zealand-adults-2011-12-section2.pdf)

**CERA is monitoring and reporting on the progress of the recovery. The Canterbury Wellbeing Index tracks the progress of social recovery using indicators to identify emerging social trends and issues.**

### Why are offending patterns important?

Offending and people's fear of offending affects the wellbeing of individuals and communities. People who hold greater fears for their personal security can have a lower quality of life and a decreased sense of wellbeing, and may find it difficult to participate fully in their community.<sup>1</sup>

Similarly where offending in a community is perceived to increase or actually does increase, the community may become less appealing for new residents and/or for people who go there for recreation or shopping.<sup>2</sup> In contrast, communities with low levels of offending attract greater investment from the private sector, which in turn creates more employment opportunities and a higher quality of life as the community is more stable and healthier.<sup>3</sup>

Offending patterns are associated with poverty, exclusion and low quality of life. Conditions that make offending more likely are high levels of unemployment, low incomes, low educational achievement, and difficult early family circumstances including abuse and neglect.<sup>4</sup>

In addition to preventing people from starting a life of offending, significant social and economic resources are invested in reducing re-offending. Experts agree that crime is linked to unemployment, low earnings and job instability and that gaining stable employment is 'an important step away from offending'.<sup>5</sup>

The path to employment is smoother where the released prisoner has overcome any substance abuse issues, has found stable housing and has significant support to reintegrate into the community.<sup>6</sup> It is also beneficial if they receive training before they are released so that they have skills required in the labour market, and if local employers are prepared to employ ex-prisoners.<sup>7</sup>

It is anticipated that employment opportunities created by the repair and rebuild of greater Christchurch may help to lower the rates of offending and re-offending.

### How were offending patterns impacted by the earthquakes?

As would be expected, the number of calls to emergency services in the immediate aftermath of the September 2010 and February 2011 earthquakes was high. These calls largely related to earthquake needs rather than criminal activity. Fewer calls were received after the 6.3 aftershock in June 2011.

In the aftermath of some disasters such as Hurricane Katrina in New Orleans, violence and property crime spiked immediately and later fell to a lower rate than before the disaster.<sup>8</sup> However, the context in New Orleans before the disaster was quite different from that in greater Christchurch. More typically crime rates drop after disasters and return to usual levels within six months to a year.<sup>9</sup>

In greater Christchurch the Police recorded a significant fall in total recorded crime in the year following the September 2010 earthquake. Expressed as a rate per 10,000 of population, total crime for the three years before the earthquake was 1,073 offences per 10,000. The rate for the year after the September 2010 earthquake dropped to 876 offences per 10,000 people.<sup>10</sup>

There are likely to be many reasons for the reduction in criminal behaviour. For example, after the earthquakes many people moved away from greater Christchurch and the communities that remained became more connected. In addition, after the February 2011 earthquake, the central business district, historically a high crime location, was closed and extra police and military





personnel from around New Zealand and other countries provided a reassuring presence to the community.

With the central business district closed, some of the criminal activities that are usually associated with centres of nightlife have moved to other areas such as the entertainment hubs of Riccarton and Merivale.

Overall, burglary rates have fallen in a similar way to the rate for crime overall. However, the number of burglaries rose sharply in the month after the February 2011 earthquake, possibly because damaged and unoccupied homes made burglaries easier.

Researchers have found that immediately after other disasters, family violence rates have increased.<sup>11</sup> New Zealand Police data however suggest that, initially at least, greater Christchurch may not have followed this pattern.

Total family violence offences reported did increase in the month of the September 2010 earthquake (434 compared with 291 in September 2009). However, no increase was apparent immediately after the February 2011 earthquake and comparatively low levels of offences were reported in each of the four months following.<sup>12</sup> Yet these figures may not be an accurate record of offending: it is possible that reporting was lower due to other pressures caused by the earthquake. It is estimated that even in 'normal times' only 18 per cent of family violence events nationally are reported to the Police.<sup>13</sup>

Women's refuge providers support the view that rates of reporting may have been affected by the earthquakes. Their experience was that victims were less able to seek help due to many stressors, including damaged homes, lost employment and more frequent risk behaviours such as hazardous drinking.<sup>14</sup> Anecdotally, social services report that cases became more complex, with the addition of earthquake-related stress.<sup>15</sup>

Like many other social sectors, the justice sector experienced significant damage to infrastructure in the earthquakes. After losing its facilities, the Ministry of Justice opened a criminal court at Ngā Hau e Whā National Marae. Other social agencies that are based there report that locating the court in the marae created stronger links with the community and across agencies.

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## What is happening now?

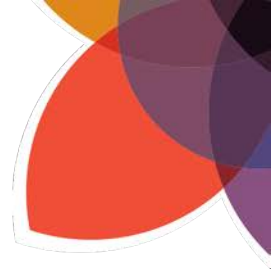
Total crime patterns in greater Christchurch are unique and it appears they have deviated from the trends evident after disasters overseas. Total assault- and property-related crime has decreased significantly since the start of the earthquakes in September 2010 and as of December 2012 was still below pre-earthquake levels.

While these reductions in crime are positive news, the rebuild of greater Christchurch creates more opportunities for offending, such as rebuild fraud.

The Government has directed social agencies working across the justice sector to focus on four priorities under the Drivers of Crime programme. That is, they are to improve parenting support for at-risk families, address conduct and behavioural problems in childhood, reduce harmful alcohol use, and manage low-level repeat offenders.<sup>16</sup> Under the Prevention First strategy, the New Zealand Police are focusing on a goal of reducing total crime by 13 per cent by the 2014/15 financial year.

In addition to these goals the Department of Corrections is working to assist more offenders to find employment when they are released from prison. Among other forms of education, prisoners who meet certain criteria can participate in Trade and Technical National Certificates approved by the New Zealand Qualifications Authority, as well as in industry training qualifications. Under the Better Public Services results action plan, the Government has set a target of reducing reoffending by 25 per cent by June 2017.

The repair and rebuild of greater Christchurch offers significant opportunities for employment. To make the most of these opportunities, Corrections is providing training to offenders that will assist them to find employment in Canterbury, in areas such as light engineering, painting and decorating, timber joinery, food processing and grounds maintenance. Local prisons have already re-oriented their industry training courses to align with rebuild activity. For example, a major project is currently underway to build a construction yard at Rolleston Prison, to refurbish damaged houses for social housing providers.



## What are the indicators telling us?

### Offences usually reported to the Police

This is measured using the following offence types in this report:

- *Assault-related:* 1) Assaults in public places, 2) Assaults in dwellings, 3) Serious assaults resulting in injury
- *Property-related:* 1) Burglary, 2) Vehicles stolen, 3) Robbery.

### Assault-related offences

Figure 1 shows that assaults in public places and serious assaults resulting in injury both declined in greater Christchurch in 2011 compared with the pre-earthquake levels of 2009. Assaults in public places dropped by 32 per cent over this period and serious assaults resulting in injury dropped by 11 per cent. This decrease is likely due to the reduction of licensed premises in the centre of Christchurch in 2011.

Data in Figure 2 indicate that from June 2012, assaults in public places are tracking up towards pre-earthquake levels. This increase may reflect the re-establishment of bars and clubs in Christchurch.

Figure 1 also shows that assaults in dwellings, which decreased 6.2 per cent between 2010 and 2011, have increased again by 7 per cent in 2012. An interagency initiative aimed at early intervention to prevent family violence has been developed. The Police Safety Order pilot is a collaboration of NZ Police, Stopping Violence Services and refuges to offer direct support and safety advice for people who are identified as being at risk of committing violence within their family. It will bolster existing services that support victims.

Figure 1: Number of assault-related offences by year

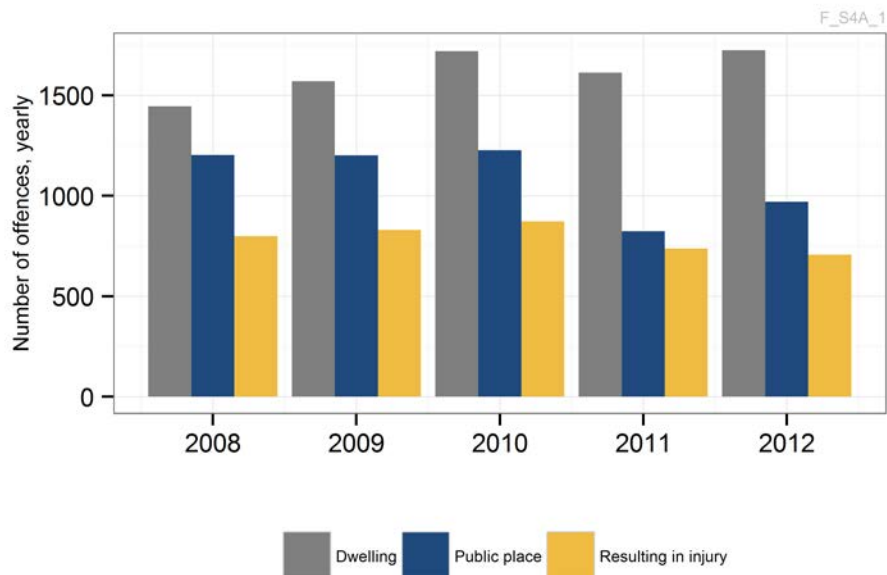
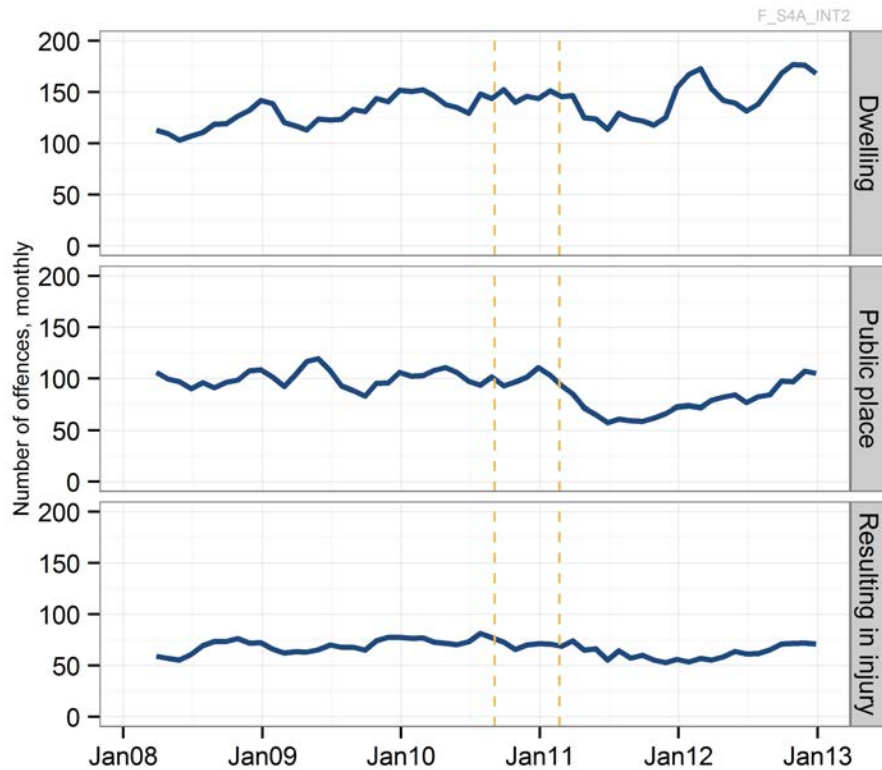




Figure 2: Number of assault-related offences by three-month rolling average



Another measure of family violence is the number of court-ordered protection orders.

Figure 3 shows that there has been a decrease in the number of protection orders since the earthquakes. In the year to August 2012, the number of court-ordered protection orders was 17 per cent lower than in the year to August 2010.

Another role of the family court system is to provide support to help families to resolve their issues. Currently there is a focus on counselling for resolution of private relationship issues. In the year to August 2012, the number of pre-court counselling applications was 39 per cent lower than in the year to August 2010.



Figure 3: Three-month rolling average of the number of final protection orders



**Property-related offences**

Figure 4 shows that the number of burglaries, robberies, and vehicles stolen in greater Christchurch decreased after the earthquakes. Figure 5 shows this decrease continued into the first half of 2012, but burglaries increased in the second half of 2012 (while they were still well below 2010 levels).

Figure 4: Number of property-related offences by year

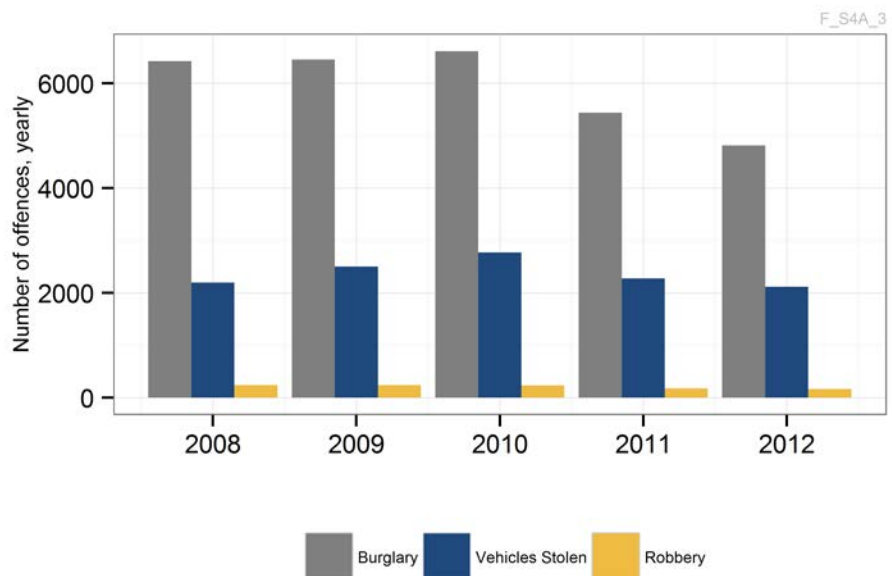
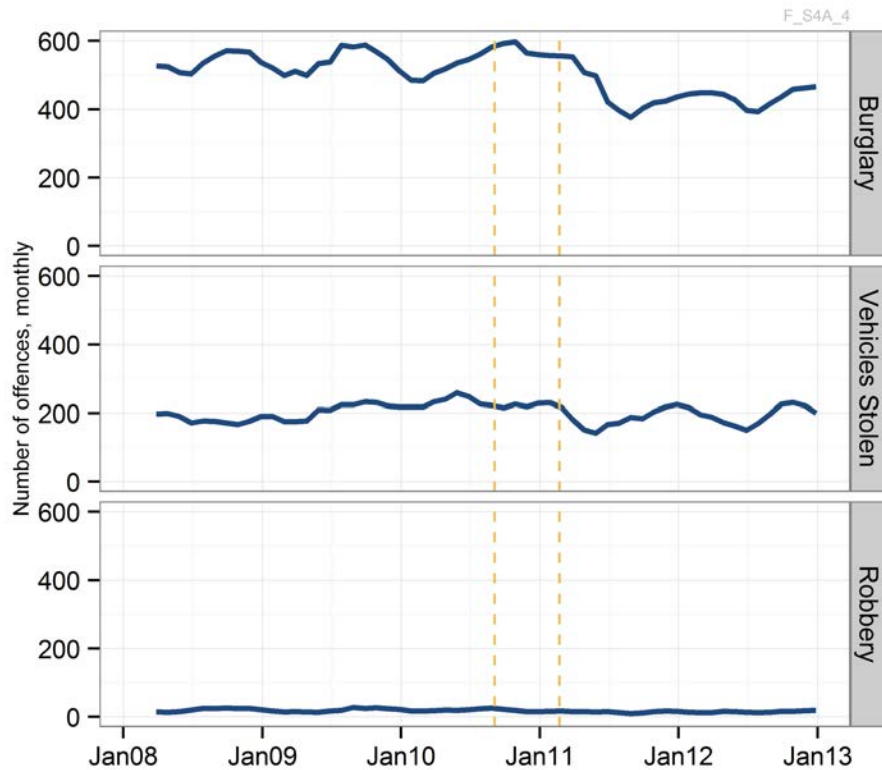




Figure 5: Number of property-related offences by three-month rolling average



**Apprehensions for offences usually reported to Police**

This is measured using the number of apprehensions for assault-related and property-related offences reported to NZ Police, for greater Christchurch. The offence types included are serious assaults resulting in injury and burglary.

Figure 6 shows that there was a general decline in assaults for offenders across all ages from 2010 to 2011, continuing into the first half of 2012. Youth offenders showed a particular decline. The number of apprehensions for all offences by young people aged 17 to 20 decreased 27 per cent from the year to June 2010 to June 2012. This includes a 29 per cent decrease in apprehensions for offences of a violent or sexual nature.<sup>17</sup>



Figure 6: Number of apprehensions for serious assaults resulting in injury

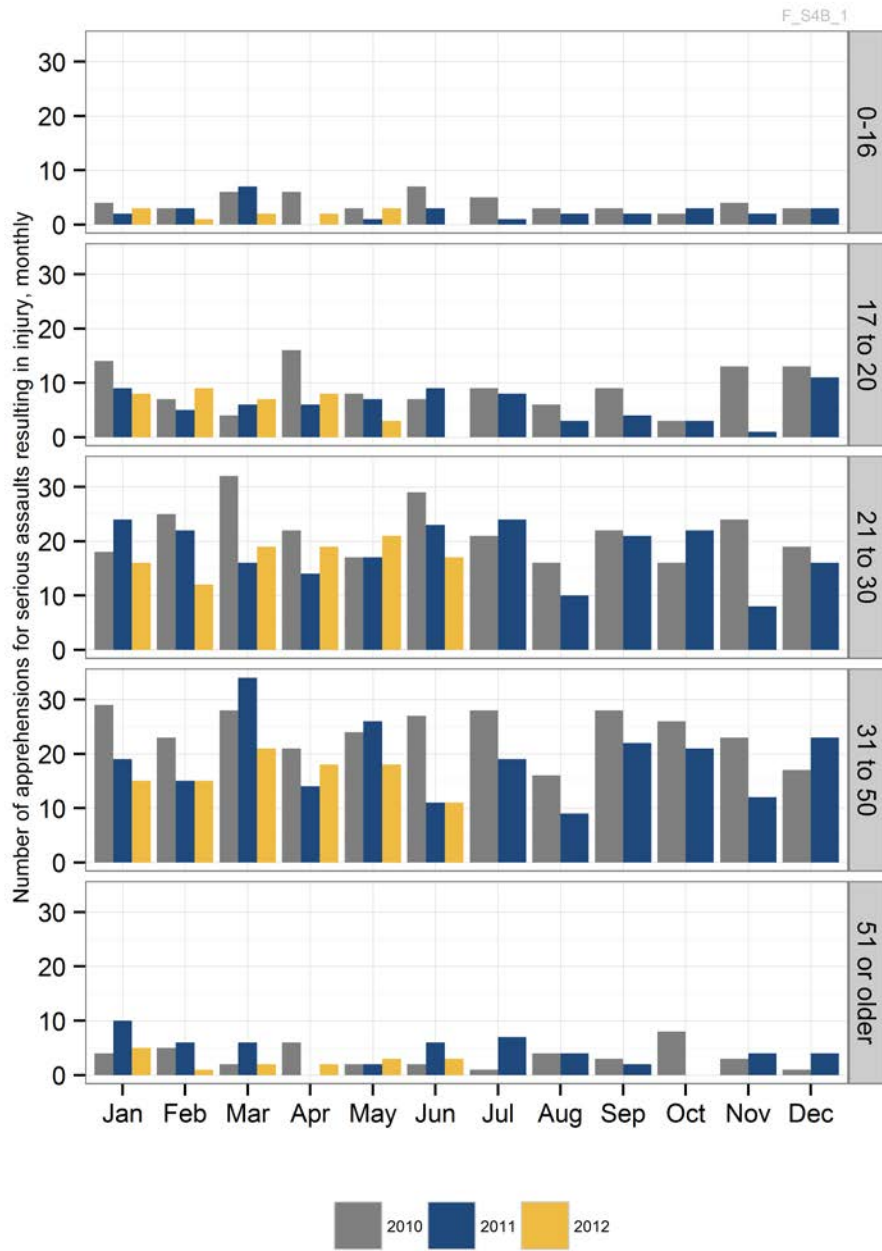
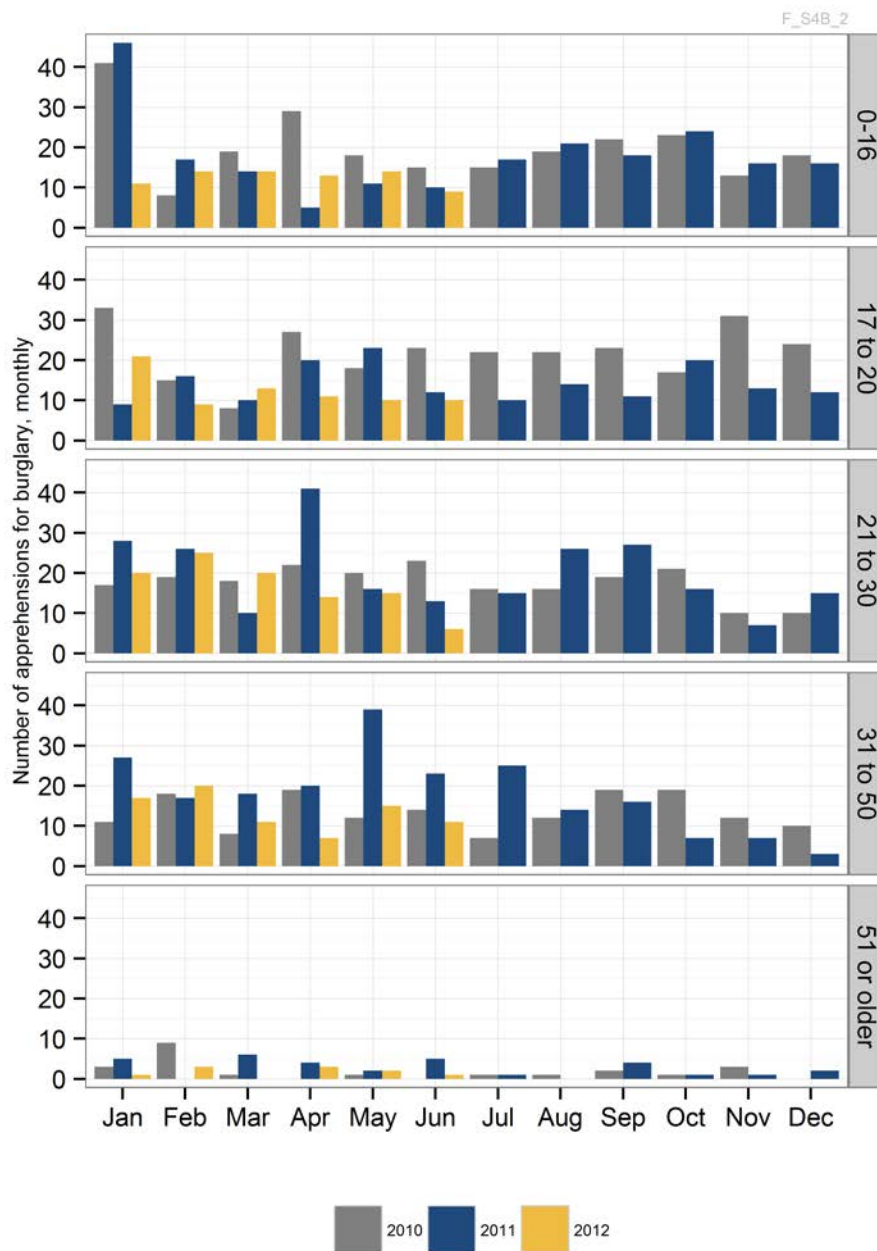




Figure 7 indicates that apprehensions for burglary have generally decreased between 2010 and June 2012 for offenders aged 17–20 years. However, the pattern is more variable among other age groups. For offenders aged 31–50 years, apprehensions doubled in the winter months of 2011 compared with 2010, before decreasing again in 2012.

Figure 7: Number of apprehensions for burglary





**Re-offending rates**

This is measured using the prisoner re-imprisonment rate and community offender reconviction rate from the Recidivism Index, for males, for all New Zealand men’s prisons and for men’s prisons in greater Christchurch. From 2011 onwards the Recidivism Index yields a figure for greater Christchurch specifically.

Figure 8 shows that in 2011, 27.4 per cent of prisoners in greater Christchurch were re-imprisoned within a year of their release. This proportion is similar to the national rate of 27 per cent. In 2012, the Christchurch rate had decreased to 23.8 per cent while the national rate had remained constant.

*Figure 8: Rate of re-imprisonment, men only*

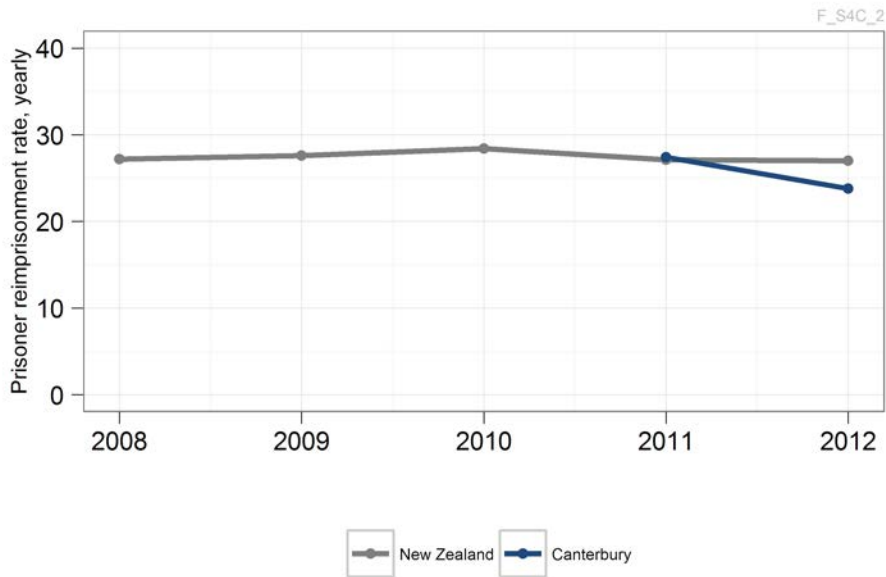


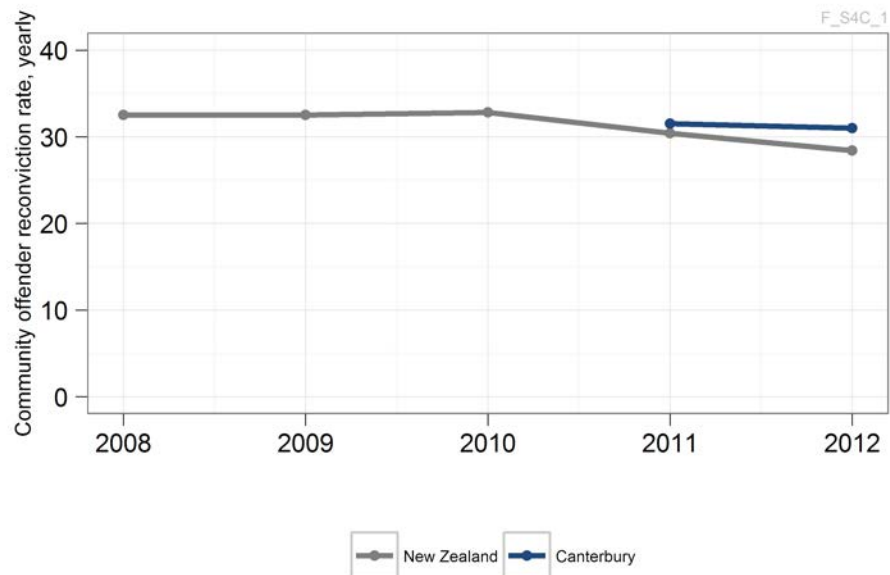
Figure 9 outlines the rate of reconviction for people on community-based sentences. These sentences include community work, home detention, and intensive and extended supervision.

In greater Christchurch, for the 2011 year, 31.5 per cent of community offenders were reconvicted within a year of their community sentence ending. Nationwide, the community offender reconviction rate was 30.4 per cent for 2011. While the national reconviction rate decreased slightly to 28.4 per cent in 2012, Canterbury remained at the same rate as in 2011.





Figure 9: Rate of community offender reconviction, men only



### Find out more

Find out more about the Canterbury Wellbeing Index: [www.cera.govt.nz/cwi](http://www.cera.govt.nz/cwi)

Find out more about New Zealand Police monthly statistics for the Canterbury region: [www.police.govt.nz/service/monthly-statistics](http://www.police.govt.nz/service/monthly-statistics)

Find out more about the Campaign for Action on Family Violence: [www.areyouok.org.nz](http://www.areyouok.org.nz)

Find out more about taking out a protection order: [www.justice.govt.nz/courts/family-court/publications/pamphlets/applying-for-a-protection-order-english](http://www.justice.govt.nz/courts/family-court/publications/pamphlets/applying-for-a-protection-order-english)

### Technical notes

#### Offences usually reported to the Police

**Data source:** NZ Police monthly statistical indicators

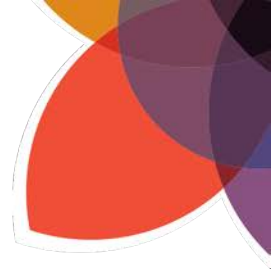
**Frequency:** Monthly

**Data complete until:** December 2012

**Notes:** Yearly figures presented are aggregated from monthly statistical indicators.

These monthly statistics are 'provisional and drawn from a dynamic operational database'. 'They are subject to change as new information is continually recorded.' The monthly provisional statistics are counted differently from the official statistics for recorded offences that are published each April and October. These figures should therefore not be compared with official statistics. For official statistics, see Statistics NZ Crime and Justice Statistics: [www.stats.govt.nz/crime](http://www.stats.govt.nz/crime)

The monthly offence statistics presented here have been aggregated for the three Police districts closest to greater Christchurch: Southern Canterbury, Northern Canterbury, and Christchurch



Central. A map of NZ Police districts is available from Statistics NZ:

[www.stats.govt.nz/tools\\_and\\_services/tools/TableBuilder/recorded-crime-statistics/maps.aspx](http://www.stats.govt.nz/tools_and_services/tools/TableBuilder/recorded-crime-statistics/maps.aspx)

**Serious assaults resulting in injury:** This is a new category for reporting crime statistics in New Zealand and reflects a category in the Australian Standard Offence Classification (ASOC), which New Zealand adopted in July 2010. Offences reported here include 'grievous assault', 'aggravated assault', 'male assaults female', 'assaults child' and other serious assaults that resulted in physical injury. This category excludes common assaults and other assaults that did not result in injury. Serious assaults resulting in physical injury can occur in public places or dwellings. In such instances, the assault will be included in two indicators in this report.

**Public place assaults:** The number of recorded assaults that occurred in public places. This includes both serious and minor assaults. This indicator focuses on the type of location where the assault occurred.

**Dwelling assaults:** The number of assaults recorded that occurred in dwellings. This indicator includes both serious and minor assaults. This indicator focuses on the type of location where the assault occurred. Most assaults in New Zealand occur in either public places or dwellings. Dwelling assaults often occur in situations where family violence is a factor. Note that the New Zealand Police are changing the way they collect family violence statistics, but that many family violence incidents occur in dwellings. [www.police.govt.nz/news/release/31365.html](http://www.police.govt.nz/news/release/31365.html)

**Robbery:** The number of robbery offences recorded by Police. A robbery is a theft from a person that is accompanied by violence or threats of violence. Robbery offences have been included because they are serious offences that tend to be of public interest.

**Burglary:** The number of burglary offences recorded by Police. Unlike robbery, burglary does not necessarily involve violence or threats of violence. It does involve entering an enclosed space with the intention of committing an offence. Burglary offences have been reported here because they are serious offences that tend to be of public interest. Police have a strong focus on preventing and responding to burglaries.

**Vehicles stolen:** The number of offences Police recorded for theft or unlawful taking of a motor vehicle. This includes instances where a vehicle is taken for a joy ride and later recovered, as well as instances where vehicles are taken permanently. Such offences have been included because they are of public interest. Police have a strong focus on preventing and responding to these offences.

#### Protection orders

**Data source:** Ministry of Justice. Final Protection Orders Granted under the Domestic Violence or Sentencing Acts

**Frequency:** Monthly

**Data complete until:** October 2012

**Notes:** Prior to October 2009, Family Court proceedings related to applicants living in the Rangiora catchment area were filed and dealt with at Christchurch.

For privacy reasons, individual months with less than 3 orders have been replaced by "<3".

Dates with <3 have been adjusted so that the monthly average is used.

Final protection orders include orders made in the Family Court under the Domestic Violence Act 1995 and in the Criminal Court under the Sentencing Act 2002. The latter changes came into force July 2010. The change in July 2010 meant that more powers to make protection orders now exist than previously. However the numbers of protection orders made under the Sentencing Act (the new powers) in Christchurch are very small - 4 in 2010 (July - Dec), 5 in 2011 (Jan - Dec) and 11 in 2012 (Jan - Oct).

#### Apprehensions for offences usually reported to Police

**Data source:** Statistics NZ apprehensions statistics for the most recent 24 months (calendar year)



**Frequency:** Yearly

**Data complete until:** June 2012

**Notes:** Data sourced from Statistics NZ Table Builder.

Apprehensions for two offence types are shown. These were chosen because there are comparable apprehensions data.

Note the apprehensions and offences data sets are not directly comparable because: 1) one is based on official statistics and one is based on monthly Police indicators which are counted differently; and 2) exact offence types included in each may vary.

### Re-offending rates

**Data source:** Department of Corrections Recidivism Index (RI)

**Frequency:** Yearly

**Data complete until:** 2012

**Notes:** Rates are simple percentages, where the number re-imprisoned/reconvicted is the numerator, and total releases/new starts are the denominator. Rates are raw percentages, which mean no adjustment for risk was made.

The re-imprisonment sample includes all prisoners released from Christchurch Men's Prison and Rolleston Prison. A small number of released prisoners may live outside of Christchurch and surrounding localities. Reconviction figures are for all offenders managed within the Christchurch Community Probation Service area. Women are excluded from this analysis because Christchurch Women's Prison houses many prisoners from throughout the South Island and parts of the North Island.

The follow-up period is 12 months from each individual offender's date of release or date of community sentence new start. For 2011 figures, offenders were released from prison or had new starts on community sentences between 1 April 2009 and 31 March 2010.

### Community-based sentences include:

Community Work – unpaid work for non-profit organisations

Home Detention Sentences – offender to remain at an approved residence at all times under electronic monitoring and close supervision by a probation officer (sentence range 14 days to 1 year)

Supervision – rehabilitative community-based sentence (sentence range 6 months – 1 year)

Community Detention – community-based sentence with electronically-monitored curfew (sentence range up to 6 months)

Intensive Supervision – rehabilitative community-based sentence (sentence range 6 months to 2 years)

Extended Supervision – managing child sex offenders in the community (sentence range up to ten years).



## Endnotes

- <sup>1</sup> Department of Justice, Equality, and Law Reform. (2009). *Fear of crime and its impact on quality of life*. Dublin.  
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- <sup>6</sup> McMaster, K. and Riley, D. *Effective Interventions with Offenders: Lessons Learned*. Wellington, 2011, pp.230-231.
- <sup>7</sup> Hancox, K.F. (2004). *Ex-offenders and stable employment*. Avalon Consulting for the Ministry of Social Development.
- <sup>8</sup> Greater New Orleans Community Data Centre. (2011). *The New Orleans Index at Six: Measuring greater New Orleans's progress towards prosperity*.
- <sup>9</sup> Harper, P. and Frailing, K. (2010). *Crime and Criminal Justice in Disaster*. Durham.
- <sup>10</sup> Information from New Zealand Police.
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<sup>13</sup> Family and Community Services, Ministry of Social Development. Statistics. Retrieved from [www.areyouok.org.nz/statistics.php](http://www.areyouok.org.nz/statistics.php)

<sup>14</sup> Women's Refuge. (2011). Maori women put up with violence in Christchurch. Retrieved from [www.womensrefuge.org.nz/WR/Archive%202011%20%20News/Maori%20women%20put%20up%20with%20violence%20in%20Christchurch.htm](http://www.womensrefuge.org.nz/WR/Archive%202011%20%20News/Maori%20women%20put%20up%20with%20violence%20in%20Christchurch.htm)

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<sup>17</sup> See NZ.Stat tables. <http://nzdotstat.stats.govt.nz>



PUBLISHED JUNE 2013

**CERA is monitoring and reporting on the progress of the recovery. The Canterbury Wellbeing Index tracks the progress of social recovery using indicators to identify emerging social trends and issues.**

Child, Youth and Family (CYF) has identified an error in its data and as a result the section “Child abuse and neglect” has been removed from the Canterbury Wellbeing Index. CERA is seeking new data from CYF and the next version of the Canterbury Wellbeing Index will contain accurate data.

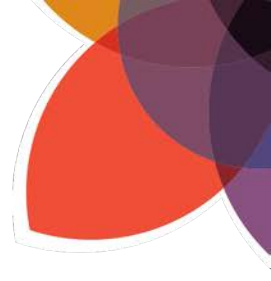


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### Why is it important for people to be involved in the arts?

People attend and participate in the arts for pleasure, creative expression, personal growth and learning. Other reasons are to make social ties and to connect with their own and other cultures.

When individuals gain such advantages, the wider public also benefits. For example, cultures have greater empathy and understanding towards each other and communities are more able to express and create common values and identity.<sup>1</sup>

In addition, the arts promote broad social, cultural and economic goals, such as economic growth and better academic performance.<sup>2</sup>

New Zealanders support the arts strongly. In a 2012 survey, 80 per cent agreed that arts help define who we are as New Zealanders, and 73 per cent agreed that the arts contribute positively to our economy.<sup>3</sup>

Research in 2011 found that 91 per cent of adults in the Canterbury region had been to at least one cultural event or place within the previous three years.<sup>4</sup> This is lower than the national average of 95 per cent. The estimated amount spent on participating in the arts, culture and heritage sectors is \$322.3 million in the Canterbury region.

### How did the earthquakes affect the arts?

The earthquakes were devastating for the arts infrastructure of greater Christchurch.

The earthquakes damaged some arts, cultural and heritage collections, such as those held in the Central City Library. Many collections were left without a permanent home.<sup>5</sup>

Earthquakes disrupted, damaged or destroyed performing arts facilities including the Town Hall and Isaac Theatre Royal. Rehearsal spaces and community venues were lost. Key performing arts organisations and events, such as the Court Theatre, Christchurch Symphony Orchestra, kapa haka and the Christchurch Arts Festival, were disrupted.

All areas of visual arts at professional and community levels have been affected. The Christchurch Art Gallery remains closed, and individual artists have lost studio and exhibition spaces.<sup>6</sup> In the Arts Centre, 22 of 23 buildings were closed for the foreseeable future. The estimated repair cost of the Arts Centre is \$290 million.<sup>7</sup>

Despite these challenges, 90 per cent of Christchurch residents agree that arts and culture have a vital role to play in rebuilding the city.<sup>8</sup>





## What is happening now?

From September 2010 to December 2012, Creative New Zealand provided \$2.2 million in grants to artists, practitioners and organisations through its Earthquake Emergency Response Fund.<sup>9</sup>

New spaces, such as the Cultural Collection Recovery Centre at the Air Force Museum, Wigram have opened to temporarily house collections and allow organisations to work on the collections.<sup>10</sup> Arts organisations, such as the Court Theatre, are operating out of temporary premises and work is in progress on the Isaac Theatre Royal.

Exciting initiatives have sprung up from within the creative community. Gap Filler is a regeneration initiative working to create temporary creative projects in vacant spaces. Among its events so far have been a cycle-powered cinema, a dance floor with lighting and sound powered by a coin-operated converted washing machine and the Pallet Pavilion – a transitional architecture project that functions as a community space and venue for events. The Pallet Pavilion was built by volunteers over six weeks in late 2012.

Greening the Rubble is a charitable trust creating temporary parks, gardens and installations on the sites of demolished buildings and their activities are enjoyed particularly by people visiting the city.

In the 2012 CERA Wellbeing Survey, 35 per cent of respondents reported they have had the opportunity to experience public events and spaces (eg memorial events, and initiatives like Gap Filler and Re:START).<sup>11</sup>

The Christchurch Art Gallery is running its 'Outer Spaces' programme which exhibits new works of art in the central city and suburban areas. The ArtBox project is a community collaboration, led by CPIT in collaboration with creative industry partners to provide temporary exhibition and retail spaces for the arts community. The planned BeatBox initiative includes a proposed multi-room music rehearsal facility and general music community hub. Art Beat was a four-month multi-arts programme of performance, music and exhibitions run over summer 2012 in the Re:START Mall.

FESTA (Festival of Transitional Architecture) is a new annual event for the city to celebrate and explore temporary architecture and design and DIY urbanism in Christchurch. It drew 20,000 people to its inaugural event in October 2012.

Chambers@241 is a new art gallery and artists' studio space, which opened with the support of funding from Creative New Zealand. It is intended to represent the work and interests of Christchurch artists, addressing the absence of a more permanent arts infrastructure in the inner city. Founded in June 2012, Dog Park is an independently run artist project space that presents new and experimental work by local and international practitioners with a focus on emerging artists.

Memory projects are important for helping earthquake survivors move forward and for honouring the lives of those who died. Online projects include CEISMIC and Quake Stories. Archives, museums and libraries are also collecting material on the earthquakes.

Restoration work on the Arts Centre is proceeding, with estimated reopening of the registry building in June 2013, the gymnasium building in December 2013 and Block C in June 2015.<sup>12</sup>

The Ministry for Culture and Heritage is leading the arts and cultural recovery. It will focus on restoring participation in arts to pre-earthquake levels. The Arts and Culture Recovery Programme has three themes, each including a number of individual projects:

- Ngā Whakaputunga – Cultural heritage collections
- Te Auahatanga – Creative and cultural activities and spaces
- Te Maumaharatanga – Collective memory and historical legacy.

The Christchurch Central Recovery Plan released by the Government on 30 July 2012 announced plans for Te Puna Ahurea Cultural Centre and a Performing Arts Precinct in the central city.



## What are the indicators telling us?

People's involvement in the arts will be measured as the proportion of all people who:

- participate in arts events
- attend arts events.

Figure 1 shows that the proportion of the Christchurch population who did not attend arts events in the previous year increased significantly from 2008 to 2011 (from 19 per cent to 31 per cent of the population).

A number of reasons help to explain why fewer people attended arts events in 2011. For example, the city had lost many art spaces and places, and the earthquakes had affected people both personally and financially.

Figure 1: Proportion of all people who attend arts events

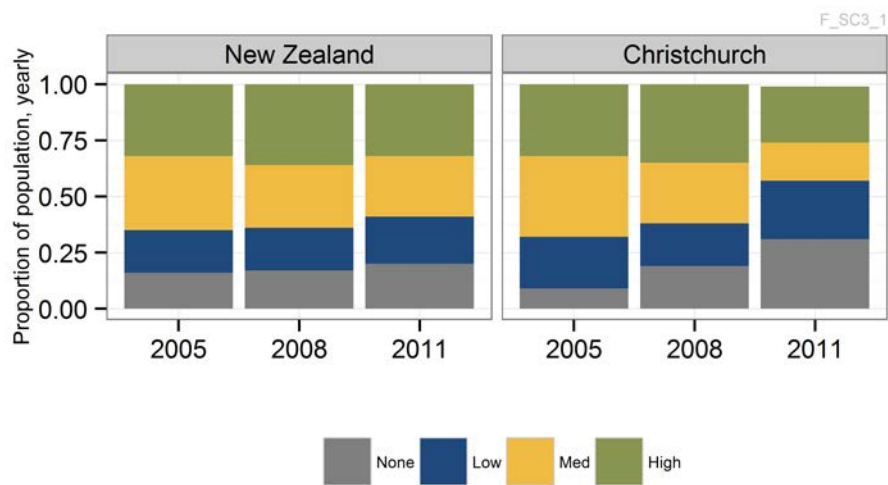
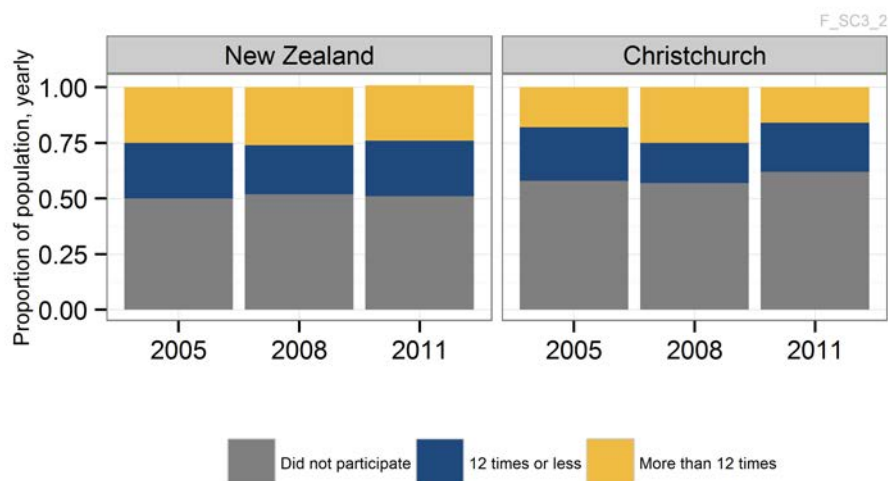


Figure 2 shows that the proportion of the Christchurch population who participate in arts events remained relatively stable. However, people participated less frequently in 2011 than in 2008.

Figure 2: Proportion of all people who participate in arts events





## Find out more

Find out more about the Canterbury Wellbeing Index: [www.cera.govt.nz/cwi](http://www.cera.govt.nz/cwi)

Find out more about the New Zealanders and the Arts Survey: [www.creativenz.govt.nz/en/arts-development-and-resources/audience-and-market-development/new-zealanders-and-the-arts](http://www.creativenz.govt.nz/en/arts-development-and-resources/audience-and-market-development/new-zealanders-and-the-arts)

Find out more about Creative New Zealand's Earthquake Emergency Assistance Grants: [www.creativenz.govt.nz/en/about-creative-new-zealand/christchurch-earthquake-regular-updates-and-impacts-on-the-arts-151502231124172/earthquake-emergency-assistance-grant](http://www.creativenz.govt.nz/en/about-creative-new-zealand/christchurch-earthquake-regular-updates-and-impacts-on-the-arts-151502231124172/earthquake-emergency-assistance-grant)

Find out more about Gap Filler: [www.gapfiller.org.nz](http://www.gapfiller.org.nz)

Find out more about BeatBox: [christchurchmusic.org.nz/beatbox](http://christchurchmusic.org.nz/beatbox)

Find out more about ArtBox: <http://www.cpit.ac.nz/industry-and-research/industry-and-partnerships/capabilities-and-technologies-for-industry/artbox>

Find out more about CEISMIC: [www.ceismic.org.nz](http://www.ceismic.org.nz)

Find out more about Quake Stories: [www.quakestories.govt.nz/](http://www.quakestories.govt.nz/)

Find out more about the Court Theatre: [www.courttheatre.org.nz](http://www.courttheatre.org.nz)

Find out more about the Christchurch Art Gallery: [www.christchurchartgallery.org.nz](http://www.christchurchartgallery.org.nz)

Find out more about the Christchurch Central Recovery Plan: [www.ccd.govt.nz/](http://www.ccd.govt.nz/)

## Technical notes

### CERA Wellbeing Survey

**Data source:** Canterbury Earthquake Recovery Authority

**Data frequency:** Six-monthly

**Data complete until:** October 2012

**Notes:** The CERA Wellbeing Survey 2012 is a representative sample of 2,381 residents of greater Christchurch delivered by Nielsen. Respondents were randomly selected from the Electoral Roll. The survey was delivered online and by hard copy and closed on 14 October 2012. The response rate was 52 per cent. Weighting was used to correct for imbalances in sample representation. The survey was developed in partnership with Christchurch City Council, Waimakariri District Council, Selwyn District Council, the Canterbury District Health Board, Ngāi Tahu and the Natural Hazards Research Platform. Survey available: <http://cera.govt.nz/sites/cera.govt.nz/files/common/cera-wellbeing-survey-2012-report-20120220.pdf>

### Attending arts events

**Data source:** New Zealanders and the Arts Survey, Creative New Zealand

**Dates generated:** 2005, 2008 and 2011

**Data complete until:** 2011

**Notes:** Christchurch boundary defined by the local Christchurch telephone calling area. Because this survey is a sample survey, results are subject to sampling error.

### Definitions:

The arts are defined as:

**visual arts:** painting; photography; sculpture; web-based/digital art; ceramic-making; film-making

**performing arts (theatre, dance, music):** ballet or contemporary dance performances; theatre; concerts; singing or musical performances or events; circuses

**literature:** writers' workshops or literary events; writing poetry, fiction or non-fiction



**Māori arts:** art or craft; workshops, including carving, weaving or singing; kapa haka or other Māori dance or music activities

**Pacific arts:** weaving and other Pacific handicrafts; workshops; carving; traditional dance; choir or other musical activities.

**Attendance includes going to:**

- art galleries (including online galleries), exhibitions and film festivals
- performances in theatre, contemporary dance, ballet, music concerts and circuses
- poetry or book readings, and literary festivals or events
- cultural performances and festivals and celebrations of Māori or Pacific arts.

**Participation** includes the active involvement of individuals, groups and/or communities in the making or presentation of art. It applies to professional, emerging and non-professional artists, including those involved in cultural and recreational activities.



## Endnotes

<sup>1</sup> McCarthy, K., Ondaatje, E., Zakaras, L., and Brooks, A. (2005). *Gifts of the muse: reframing the debate about the benefits of the arts*, MG-218-WF.

<sup>2</sup> See note 1.

<sup>3</sup> Creative New Zealand. (2012). *New Zealanders and the arts: attitudes, attendance and participation in 2011*, [www.creativenz.govt.nz/en/arts-development-and-resources/research-and-arts-sector-resources/new-zealanders-and-the-arts-full-report-2011](http://www.creativenz.govt.nz/en/arts-development-and-resources/research-and-arts-sector-resources/new-zealanders-and-the-arts-full-report-2011)

<sup>4</sup> Audience Atlas, Creative New Zealand. (2011). [www.creativenz.govt.nz/en/arts-development-and-resources/research-and-arts-sector-resources/audience-atlas-new-zealand-report-2011](http://www.creativenz.govt.nz/en/arts-development-and-resources/research-and-arts-sector-resources/audience-atlas-new-zealand-report-2011)

<sup>5</sup> Ministry for Culture and Heritage. (2012). Arts, Culture, and Heritage Collections Recovery Programme, unpublished, p.7.

<sup>6</sup> See note 5.

<sup>7</sup> The Arts Centre (April, 2013). Issue 1.

<sup>8</sup> See note 5.

<sup>9</sup> [www.creativenz.govt.nz/en/results-of-our-work/who-got-funded/funding-rounds/earthquake-emergency-assistance-grants-december-2011-february-2012](http://www.creativenz.govt.nz/en/results-of-our-work/who-got-funded/funding-rounds/earthquake-emergency-assistance-grants-december-2011-february-2012)

<sup>10</sup> Due to be completed by November 2012.

<sup>11</sup> For information on the CERA Wellbeing Survey, refer to the Technical Notes.

<sup>12</sup> The Arts Centre (April, 2013). Issue 1.

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**CERA is monitoring and reporting on the progress of the recovery. The Canterbury Wellbeing Index tracks the progress of social recovery using indicators to identify emerging social trends and issues.**

### Why is participating in sport important?

When people participate in sport, they gain significant benefits for themselves, their communities and the economy.

Evidence suggests that people who participate in sports and recreation are more productive employees, enjoy better health, and have a better quality of life.<sup>1</sup> When people are more productive and healthier, society benefits and savings are made in the health system.

Sports and recreation sectors contributed an estimated \$352.9 million to the GDP of Christchurch in the 2008/09 year, or 1.6 per cent of regional GDP.<sup>2</sup> In 2006 just under 4,500 people were employed in these sectors in the city.<sup>3</sup>

The people of greater Christchurch appear to appreciate these advantages. A 2011 survey showed over 94 per cent of adults and 96 per cent of young people in the Canterbury-West Coast region participate in at least one sports or recreation activity every year.<sup>4</sup>

### How did the earthquakes affect sports participation?

The earthquakes caused critical losses in the sports and recreation infrastructure. Some highly valued facilities and spaces are closed indefinitely. Among them are QEII, Centennial Pool, AMI Stadium and a number of mountain biking and walking tracks in the Port Hills.<sup>5</sup>

Sports have been affected in different ways. For example, rowing lost the flat water space at Kerr's Reach, hockey lost access to artificial turfs, and athletics lost access to an all-weather track. Other sports such as basketball and netball had to operate across a reduced number of venues.

Almost half (47 per cent) the respondents in the 2012 CERA Wellbeing Survey have experienced the loss of usual access to the natural environment due to the earthquakes. Just under half the respondents (44 per cent) say they have experienced the loss of indoor sports and active recreation facilities, while 37 per cent have experienced the loss of outdoor sports and active recreation facilities.

### What is happening now?

The Sports and Recreation Earthquake Leadership Group (chaired by Sport Canterbury) is leading the Sports and Recreation recovery programme. This programme is working to recover the sports and recreation infrastructure so that participation remains high. Part of this work is to develop 30-year plans for 'spaces and places' and 'people'. These plans will give a long-term vision of the sports and recreation sector and guide decision making through the recovery.<sup>6</sup>

In 2012, Sport Canterbury targeted 66 primary schools throughout Canterbury, 40 of which are in Christchurch, to boost sports participation. Sport Canterbury gave teachers professional development to help them coach sports and ran taster sessions for students at lunch times. Primary-aged sports participation in Christchurch city is up 42 per cent from 2011 and in the eastern suburbs, where schools were particularly targeted, children's sports teams have quadrupled in number since the earthquakes.<sup>7</sup>



## What are the indicators telling us?

Sports participation is measured as the number of people who are members of clubs affiliated to the Canterbury regional sports body.

Prior to 2011, a number of sports have missing data, which makes plotting trends over time problematic. Organisations that did not have complete data prior to 2011 have been excluded.<sup>8</sup> Figure 1 shows that membership numbers of regional sports organisations in Canterbury have declined by nearly 7,000 (5 per cent) since 2010. Sports participation is now back to 2008-9 levels.

Figure 1: Total memberships for Canterbury regional sports organisations

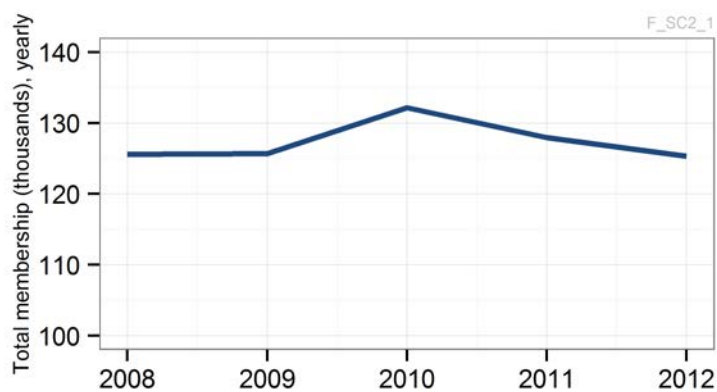


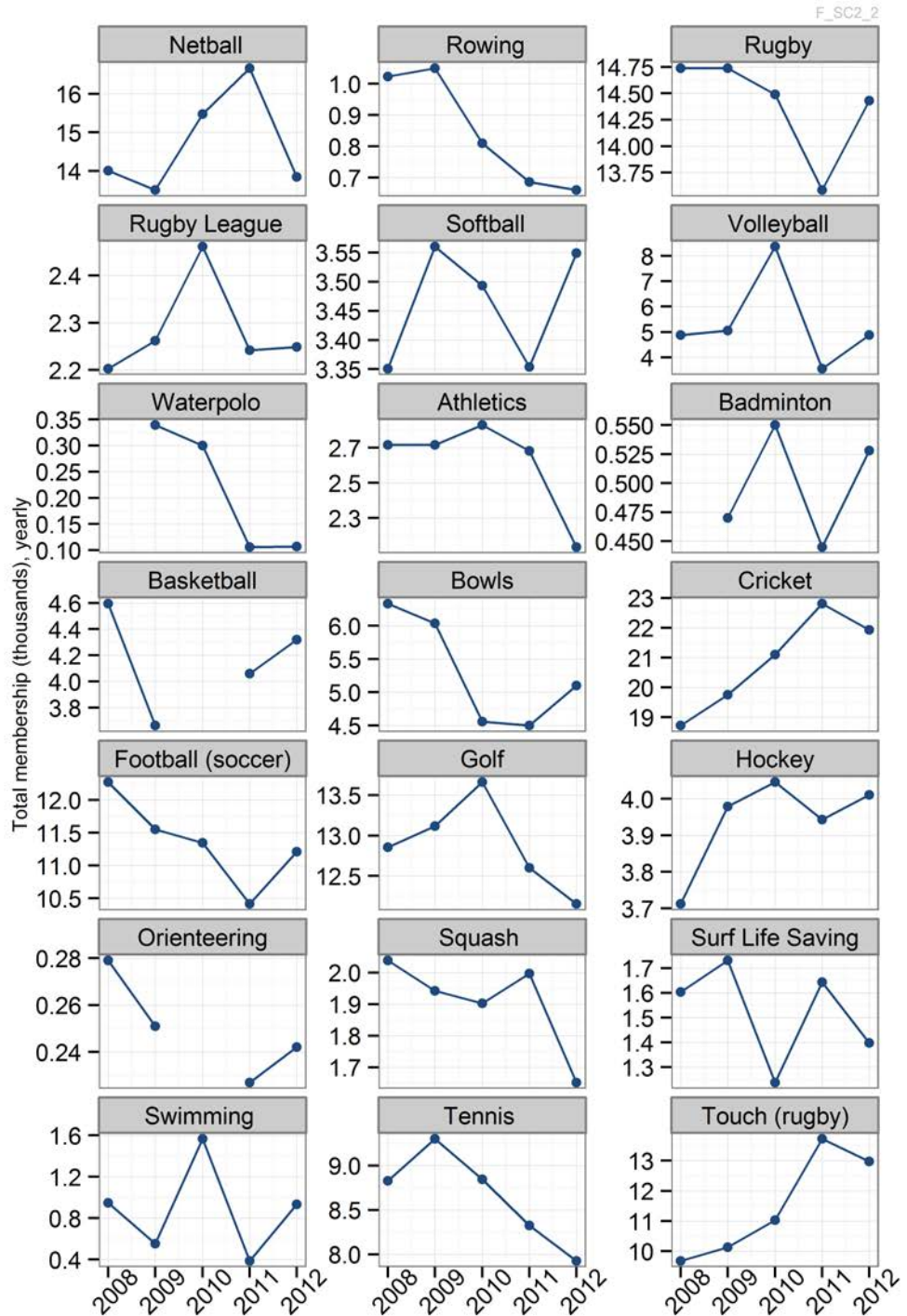
Figure 2 shows that patterns within individual sports are clearer. Membership of swimming and water polo organisations fell the most of all sports (by 75 per cent and 65 per cent respectively) although swimming participation rebounded in 2012. The loss of swimming pools is likely to have contributed to this drop. Additionally, the loss of specialised facilities such as tennis and squash courts, volleyball courts and bowling greens may have led to a decrease in participation in these sports.

In contrast, membership rose in outdoor sports that were less reliant on specialised facilities, such as touch and cricket.





Figure 2: Total memberships by specific regional sports organisations





## Find out more

Find out more about the Canterbury Wellbeing Index: [www.cera.govt.nz/cwi](http://www.cera.govt.nz/cwi)

Find out more about sports participation in Canterbury: [www.sportcanterbury.org.nz](http://www.sportcanterbury.org.nz)

Find out more about the economic value of sports in Canterbury:  
[www.sportnz.org.nz/Documents/Research/value%20of%20sport/full%20report/Canterbury-West%20Coast-VoSR-Report-pdf.pdf](http://www.sportnz.org.nz/Documents/Research/value%20of%20sport/full%20report/Canterbury-West%20Coast-VoSR-Report-pdf.pdf)

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## Technical notes

### CERA Wellbeing Survey

**Data source:** Canterbury Earthquake Recovery Authority

**Data frequency:** Six-monthly

**Data complete until:** October 2012

**Notes:** The CERA Wellbeing Survey 2012 is a representative sample of 2,381 residents of greater Christchurch delivered by Nielsen. Respondents were randomly selected from the Electoral Roll. The survey was delivered online and by hard copy and closed on 14 October 2012. The response rate was 51.5 per cent. Weighting was used to correct for imbalances in sample representation. The survey was developed in partnership with Christchurch City Council, Waimakariri District Council, Selwyn District Council, the Canterbury District Health Board, Ngāi Tahu and the Natural Hazards Research Platform. Survey available:  
<http://cera.govt.nz/sites/cera.govt.nz/files/common/cera-wellbeing-survey-2012-report-20120220.pdf>

### Sports information

**Data source:** Sport Canterbury, drawn from the larger regional sports organisations. Note that other sports operate in the region but do not provide regional data to Sport Canterbury.

**Dates generated:** Annually

**Data complete until:** 2012

**Notes:** Regional sports organisations have different catchments and started reporting to Sport Canterbury in different years. See the table below. Some sports measure membership differently. The numbers are based on how that sport calculates its playing membership numbers. Data for Yachting, Arawa Canoe, Canterbury Triathlon, Canterbury Yachting and GymSports are not included in Figure 1 or Figure 2 because only limited data were available.



Regional Sports Organisation (RSO)	Regions covered	Years data provided
<b>Arawa Canoe</b>		2012
<b>Athletics Canterbury</b>	Covers South Canterbury, Mid Canterbury, West Coast and Canterbury	2008-12
<b>Badminton Canterbury</b>	Covers Canterbury	2009-12
<b>Canterbury Basketball</b>	Covers Christchurch and Selwyn TA regions	2008-9, 11-12
<b>Bowls Canterbury</b>	Covers Canterbury	2008-12
<b>Canterbury Cricket</b>	Covers South Canterbury, Mid Canterbury, West Coast and Canterbury	2008-12
<b>Mainland Football</b>	Covers Mid Canterbury, West Coast and Canterbury	2008-12
<b>Canterbury Golf</b>	Covers Canterbury	2008-12
<b>GymSports</b>	Covers South Canterbury, Mid Canterbury, West Coast and Canterbury	2011-12
<b>Canterbury Hockey</b>	Covers Canterbury	2008-12
<b>Canterbury Netball</b>	Covers South Canterbury, Mid Canterbury, West Coast and Canterbury	2008-12
<b>Peninsula and Plains Orienteering</b>	Covers Canterbury	2008-9,11-12
<b>Canterbury Rowing</b>		2008-12
<b>Canterbury Rugby</b>	Covers Canterbury	2008-12
<b>Canterbury Rugby League</b>	Covers South Canterbury, Mid Canterbury and Canterbury	2008-12
<b>Canterbury Softball</b>	Covers Canterbury	2008-12
<b>Squash Canterbury</b>	Covers West Coast and Canterbury	2008-12
<b>Surf Life Saving</b>		2008-12
<b>Swimming Canterbury</b>	Covers West Coast and Canterbury	2008-12
<b>Tennis Canterbury</b>	Covers Mid Canterbury, West Coast and Canterbury	2008-12
<b>Touch Canterbury</b>	Covers Canterbury	2008-12
<b>Canterbury Triathlon</b>		2012
<b>Canterbury Volleyball</b>	Covers Canterbury	2008-12
<b>Canterbury Waterpolo</b>	Covers Canterbury	2009-12
<b>Canterbury Yachting</b>	Covers Canterbury	2011-12



## Endnotes

<sup>1</sup> Dalziel, P. (2011). *The economic and social value of sport and recreation to New Zealand*, Research Report No. 322.

<sup>2</sup> SPARC. (2011). *The economic value of sport and recreation to the Canterbury-West Coast region*. Wellington: SPARC.

<sup>3</sup> Census 2006 data quoted in SPARC (2011). *The economic value of sport and recreation to the Canterbury-West Coast region*. Wellington: SPARC.

<sup>4</sup> SPARC. (2011). *The economic value of sport and recreation to the Canterbury-West Coast region*. Wellington: SPARC. Note the data for young people are from the combined 1997, 1998 and 2000 New Zealand Sport and Physical Activity Surveys. The data for adults are drawn from SPARC's 2007/08 Active NZ Survey. See [www.activenzsurvey.org.nz](http://www.activenzsurvey.org.nz)

<sup>5</sup> Global Leisure Group. (2011). *Places and spaces for sport and recreation in Greater Christchurch*, Final Issues and Options Paper, unpublished.

<sup>6</sup> See note 5.

<sup>7</sup> Charley Mann (08/04/2013) 'Post-quake shake-up in participation'. Retrieved from: [www.stuff.co.nz/the-press/news/8520385/Post-quake-shake-up-in-participation](http://www.stuff.co.nz/the-press/news/8520385/Post-quake-shake-up-in-participation)

<sup>8</sup> Canterbury Yachting (approximately 1,500 members) and Gym Sports (approximately 9,000) have not submitted membership data for 2008-10, meaning numbers would be artificially inflated by over 10,500 for 2011-12 were these data included in the total calculated for Figure 1. Canterbury Basketball and Peninsula and Plains Orienteering, which had missing data for 2010, had the average of 2009 and 2011 data substituted for 2010 in the calculation of total sports membership in Figure 1.

# Canterbury Wellbeing Index

## Households are prepared for Civil Defence emergencies



PUBLISHED JUNE 2013

**CERA is monitoring and reporting on the progress of the recovery. The Canterbury Wellbeing Index tracks the progress of social recovery using indicators to identify emerging social trends and issues.**

### Why is being prepared important?

Being resilient after a disaster is a responsibility that individuals, households, businesses, communities and governments share.

Individuals and households are expected to take responsibility for preparing for, responding to and recovering from disasters. Authorities recommend that households are prepared to look after themselves for at least three days or more after an emergency.<sup>1</sup>

Preparedness is considered a good indicator of community resilience.<sup>2</sup> If people actively plan and prepare for protecting life and property, based on their awareness of the specific threats in their area, they can help their family and the wider community to re-establish stability after the event.<sup>3</sup>

Researchers have found that people are more likely to be prepared if they believe that the next emergency is likely to occur within 12 months. Those who believe there will not be an emergency for several years are much less likely to be prepared.<sup>4</sup>

### How did the earthquakes affect households' level of preparation?

Between 4 September 2010 and 7 June 2012 the residents of greater Christchurch experienced 41 earthquakes of magnitude 5.0 and over, including four over magnitude 6.0.<sup>5</sup>

Residents experienced power outages, loss of sewer systems, closed shops and services, and damaged roads and public transport systems. In addition to significant support offered by government and non-government agencies, communities, households and individuals banded together to share resources, survive and even thrive in these difficult times.

It would therefore be expected that households in greater Christchurch would be more prepared after these earthquakes.

The Review of the Civil Defence Emergency Management Response to the 22 February Christchurch Earthquake found that "The resilience of the Christchurch community was demonstrated by the way so many households were able to care for themselves and also by the way in which community organisations stepped up and looked after their neighbourhoods."<sup>6</sup>

However, the review also noted that international experience has shown repeatedly that lower income families struggling to survive from day to day do not have the ability to store food in advance or have the supplies recommended for survival.<sup>7</sup>

### What is happening now?

Planning for natural disasters continues across greater Christchurch and is targeted at all known natural hazards.

For example, the Waimakariri District Council is leading community response planning around the development of Tsunami Information Boards for the coastal communities in North Canterbury.





This process will establish the location of prescribed tsunami evacuation zones. It will also support coastal communities such as Waikuku Beach, Woodend Beach, Pines-Kairaki Beach and parts of Kaiapoi in developing their own tsunami response plans. Copies of these plans will be distributed to the affected households as well as schools, GPs, libraries and a number of public outlets.

**What are the indicators telling us?**

The extent to which households are prepared for an emergency is measured as the proportion of households with:

- all the items needed for basic preparation (a three-day supply of food and water, and a household emergency plan)
- all the items needed for better preparation (basic preparation, plus a torch, portable radio, spare batteries, first aid kit and essential medicines)
- none of the items needed for basic preparation.

Figures 1 and 2 show that in 2008, basic and better levels of preparedness in Canterbury were comparable with the national average.

However, following the September 2010 earthquake,<sup>8</sup> the proportion of prepared households almost doubled in Canterbury and increased slightly across the country. In Canterbury, households with basic preparation almost doubled from 15 per cent in 2008 to 28 per cent in 2010, and those who were better prepared likewise jumped from 11 per cent to 20 per cent.

Also in Canterbury the proportion of homes with an emergency plan increased from 28 per cent in 2008 to 42 per cent in 2010.

*Figure 1: Proportion of households with all the items needed for basic preparation*

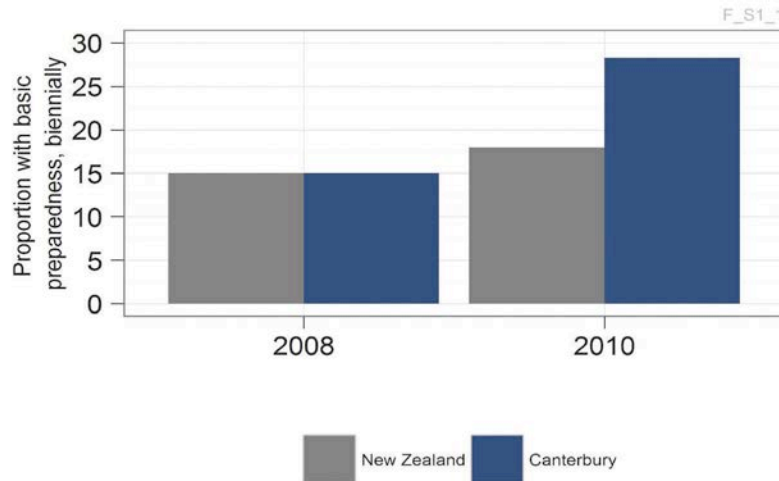




Figure 2: Proportion of households with all the items needed for better preparation

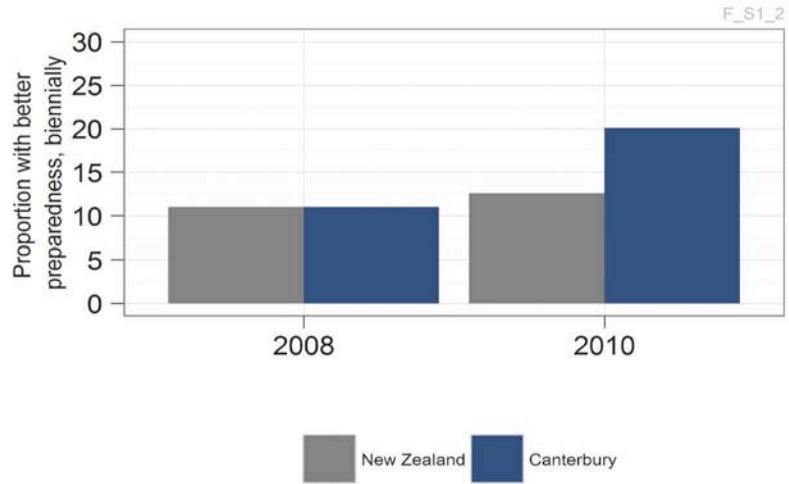
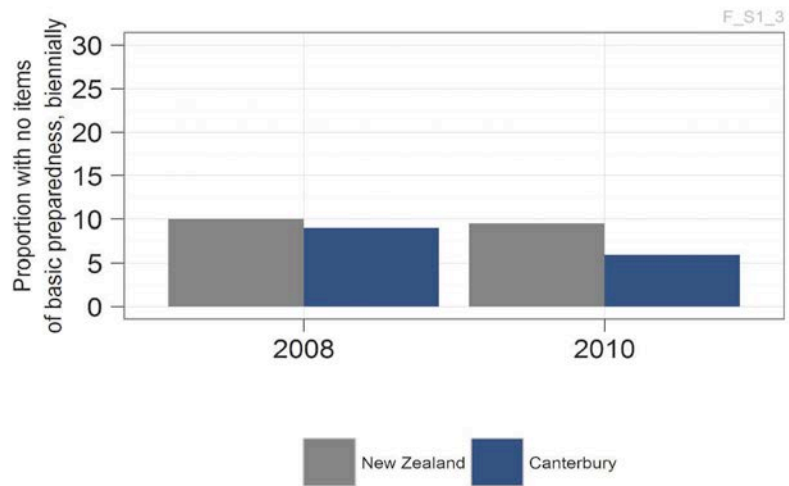
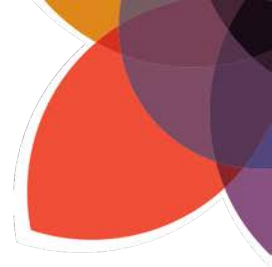


Figure 3 shows that the proportion of Canterbury households with none of the items needed for preparation fell from 9 per cent in 2008 to 6 per cent in 2010. Households with none of the basic preparations tend to be renters (rather than owner occupiers) and tend not to hold contents insurance.

Figure 3: Proportion of households with none of the items needed for basic preparation





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## Find out more

Find out more about the Canterbury Wellbeing Index: [www.cera.govt.nz/cwi](http://www.cera.govt.nz/cwi)

More information about the New Zealand Social Survey's findings on household preparedness: [www.stats.govt.nz/browse\\_for\\_stats/people\\_and\\_communities/Households/natural-disaster-how-prepared-nzers.aspx](http://www.stats.govt.nz/browse_for_stats/people_and_communities/Households/natural-disaster-how-prepared-nzers.aspx)

Advice on how to prepare your home and your business for disasters: [www.civildefence.govt.nz/memwebsite.nsf/wpgURL/Being-Prepared-Index?OpenDocument](http://www.civildefence.govt.nz/memwebsite.nsf/wpgURL/Being-Prepared-Index?OpenDocument)

Find out more about how to be a Civil Defence volunteer in the Waimakariri District: [www.waimakariri.govt.nz/civil\\_defence\\_home/can-you-help.aspx](http://www.waimakariri.govt.nz/civil_defence_home/can-you-help.aspx)

Find out more about how to be a Civil Defence volunteer in the Selwyn District : [www.selwyn.govt.nz/services/civil-defence/volunteering](http://www.selwyn.govt.nz/services/civil-defence/volunteering)

Find out more about how to be a Civil Defence volunteer in Christchurch City: [www.ccc.govt.nz/homeliving/civildefence/volunteering/index.aspx](http://www.ccc.govt.nz/homeliving/civildefence/volunteering/index.aspx)

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## Technical notes

**Data source:** New Zealand General Social Survey, Statistics NZ  
**Data frequency:** 2008 and 2010

**Note:** The criteria for basic preparation are a three-day supply of food and water, and a household emergency plan. The criteria for better preparation are a torch, a portable radio, spare batteries, first aid kit and essential medicines, as well as food and water for three days and a household emergency plan. A few respondents refused the question, or did not know whether their households had an item; they were classified as not having the item for the 'basic and better preparation' analysis.

The NZGSS samples part of the population, so data are estimates only.

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## Endnotes

<sup>1</sup> [www.getthru.govt.nz/web/GetThru.nsf/web/BOWN-7GZTZF?OpenDocument](http://www.getthru.govt.nz/web/GetThru.nsf/web/BOWN-7GZTZF?OpenDocument)

<sup>2</sup> Paton, D., Ronan, K., Johnston, D., Smith, L., and Johnston. M. (2003). *Responding to earthquake hazards: promoting household resilience and preparedness*. Paper presented at the Pacific Conference on Earthquake Engineering.

<sup>3</sup> Gurwitsch, R. H., Pfefferbaum, B., Montgomery, J. M., Klomp, R. W., & Reissman, D. B. (2007). *Building community resilience for children and families*. Oklahoma City: Terrorism and Disaster Center at the University of Oklahoma Health Sciences Center.

<sup>4</sup> Paton, D., Smith, L.M., and Johnston., D. (2005). When good intentions turn bad: promoting natural hazards preparedness, *Australian Journal of Emergency Management* 20, 25–30.

<sup>5</sup> [www.geonet.org.nz/canterbury-quakes/significant.html](http://www.geonet.org.nz/canterbury-quakes/significant.html)

<sup>6</sup> McLean, I. Oughton, D. Ellis, S. Wakelin, B. & Rubin, C.B. (2012). Review of the Civil Defence Emergency Management Response to the 22 February Christchurch Earthquake. Page 175.

<sup>7</sup> Mileti, D. (1999). *Disasters by Design: A Reassessment of Natural Hazards in the United States*. Joseph Henry Press,

<sup>8</sup> Note that data for 2010 were collected both before and after the September 2010 earthquake, so the increase may have been higher if data had been collected only after the event or after the February 2011 earthquake.



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### Why is social connectedness important?

Social connectedness refers to the relationships people have with others and the benefits these relationships can bring to the individual as well as to society.<sup>1</sup> High levels of social connectedness are thought to promote better health and psychological wellbeing.<sup>2</sup> People who feel socially connected also contribute towards building communities and society. They help to create what is sometimes called 'social capital' – the networks that help society to function effectively. Social connectedness is particularly important in building communities that can withstand adversity, whether caused by economic, social or environmental shocks.<sup>3</sup>

Social connectedness includes relationships with family, friends, colleagues and neighbours, as well as connections people make through paid work, sport and other leisure activities, voluntary work or community service.

Social connectedness for people with disabilities may be adversely affected by earthquakes to an even greater extent than usual. Providing adequate access to the built environment allows disabled people to be included in the economic and social life of the community, to make social connections and to contribute to society.<sup>4</sup>

### Volunteering

Over a million New Zealanders are involved in voluntary work. As volunteers they make a huge contribution to sports, recreation, arts, culture and heritage, emergency and social services, health, education, conservation and the environment.<sup>5</sup>

Volunteering creates stronger communities by building social connections and networks of reciprocity and trust. Volunteers foster and maintain cultural identity through events and activities. They also maintain and improve our natural environment and provide services to families.

Volunteering has a positive impact on the economy. Through their work, volunteers learn new skills that they can use in paid employment.

There are over 97,000 non-profit organisations in New Zealand. Of this total, 90 per cent rely entirely on voluntary labour.<sup>6</sup> The non-profit sector, including the voluntary labour force, contributes 4.9 per cent of the country's gross domestic product (GDP), which is similar to the contribution of the entire construction sector.<sup>7</sup>

### How was social connectedness impacted by the earthquakes?

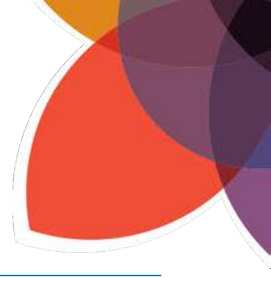
The community immediately responded to the earthquakes with spontaneous volunteering. People pitched in and did whatever was necessary and possible to assist each other.

Noteworthy acts of altruism occurred in the hours after the earthquakes. Passersby pulled people from rubble and saved animals from damaged buildings. Teachers and bus drivers looked after groups of school children for hours before their parents were able to reach them.

In the days afterwards people shared meals with neighbours, created community food kitchens, supplied water to elderly residents, towed strangers' cars from holes in the roads and teamed up to deconstruct damaged chimneys.

Response agencies such as the Red Cross, the Salvation Army and churches immediately started organising volunteers to knock on doors to assess the wellbeing of residents and to ensure their immediate needs were met. New volunteering groups formed organically, such as the Student and





Farmy Armies who mobilised university students and the rural community respectively to clear liquefaction and undertake many other services.

Networks of professionals such as lawyers, accountants and health professionals offered their time and expertise for free to assist affected people. Residents' groups such as CanCERN and Addington Action formed to support their communities.

In other parts of the country, individuals, groups, churches and businesses also mobilised and established supply chains of items such as warm clothing, heaters and household items to distribute to affected people. Iwi representatives from around New Zealand arrived to volunteer their skills and support to Ngāi Tahu and other Māori communities.

People remaining in damaged areas developed new bonds with neighbours in similar predicaments. However, social connectedness was also weakened as people left their communities due to damage or concerns about aftershocks. In the 2012 CERA Wellbeing Survey, 26 per cent of respondents reported having to move house permanently or temporarily 'because of the earthquakes'.<sup>8</sup>

Whole communities were uprooted and some people felt their social networks had developed 'holes' due to people leaving.<sup>9</sup> Children's social networks were disturbed with some travelling to schools in other parts of town. Some people, particularly in the hard-hit eastern suburbs, had their lives and social connections severely disrupted.<sup>10</sup>

Many facilities where people used to meet and connect were damaged or closed down. In the 2012 CERA Wellbeing Survey, 69 per cent of respondents reported the loss of recreational, cultural and leisure time facilities (cafes, restaurants, libraries, marae, arts and cultural centres).

### What is happening now?

Many informal and formal volunteering initiatives continue to provide assistance. Groups such as Habitat for Humanity are repairing damaged homes. The Red Cross and the Salvation Army continue to check on affected residents. Creative groups such as Gap Filler and Greening the Rubble are working to create temporary creative projects in vacant spaces.

The Department of Internal Affairs, which oversees the distribution of lottery funds and the Community Organisation Grants Scheme (COGS), prioritised support for volunteering in its funding rounds for 2011 and 2012. It has also streamlined the processes involved in applying for COGS grants so that it is easier for volunteers to seek funding for their organisations.

The Department of Internal Affairs funds Volunteering Canterbury to support volunteering and to promote good practice and build capacity in the community and voluntary sector.

### What are the indicators telling us?

In this report, sense of community is measured in the following two ways:

- sense of community with others in neighbourhood
- having anyone you could turn to for help during a difficult time.

Prior to 2010 Christchurch residents reported lower levels of community than the national average. However, after the earthquakes it was slightly higher than across New Zealand. Over half of residents (55 per cent) agreed that they felt a strong sense of community compared with 53 per cent across New Zealand (see Figure 1). This may be because the earthquakes have engendered a greater spirit of social connectedness. When asked about their wider community (ie friends and family, as well as neighbours), 67 per cent of respondents reported they had a heightened sense of community as a result of the earthquakes. Further, 52 per cent reported spending more time together as a family as a result of the earthquakes.

Another positive mentioned by respondents was the opportunity to experience public events and spaces (eg memorial events, and initiatives like Gap Filler and Re:START) as a result of the earthquakes.



Figure 1: Percentage of residents who felt a sense of community

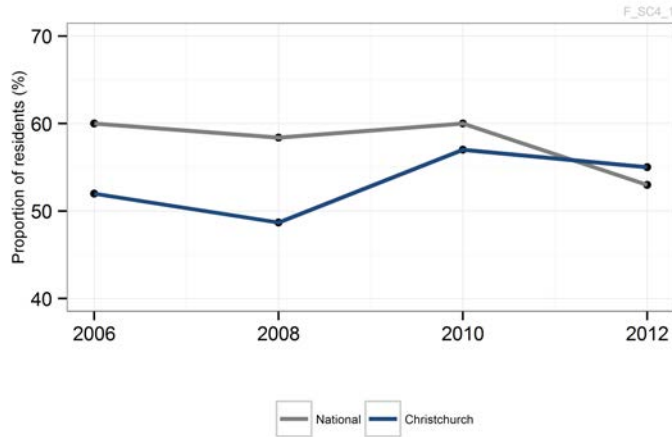
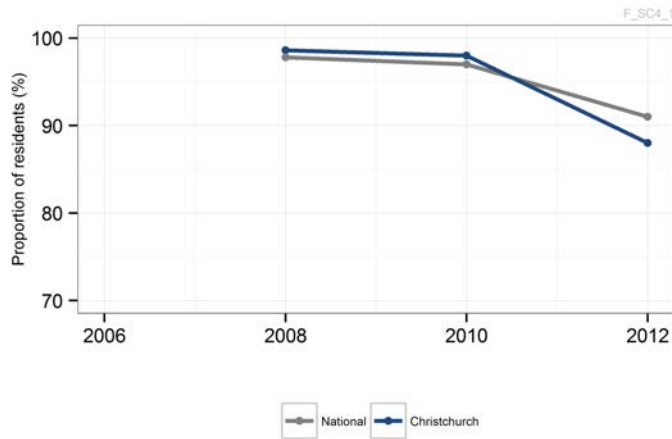


Figure 2 shows the percentage of residents who agreed that they had someone to turn to for help during a difficult time. This percentage decreased from 99 per cent in 2010 to 88 per cent in 2012. This decrease in perceived support availability may be due to population movement. However, it reflects similar trends nationally.

While emotional support is important for people with a serious illness or injury, the earthquakes have produced their own set of physical challenges for people with a disability. Nineteen per cent of respondents reported 'dealing with barriers around disabilities as a result of the earthquakes'.<sup>11</sup> Some of the barriers may be due to damage to footpaths and roads in greater Christchurch and the relocation of services into new premises.

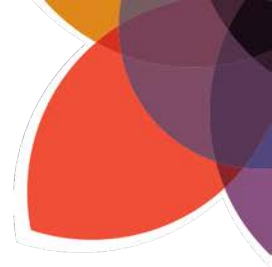
Figure 2: Proportion of residents reporting they had someone they could turn to for help during a difficult time



In terms of people's commitment to greater Christchurch, the results were mixed. Almost half of respondents (47 per cent) in the 2012 CERA Wellbeing Survey reported a sense of a stronger personal commitment to Christchurch / Selwyn / Waimakariri as a result of the earthquakes. On the other hand, 46 per cent of respondents reported they had experienced uncertainty about 'my own or my family's future in Canterbury'.

**Volunteering**

Data in Figure 3 show that the volunteering rate in Canterbury increased in the period following the February 2011 earthquake to 35 per cent of the population having spent time volunteering. The rate

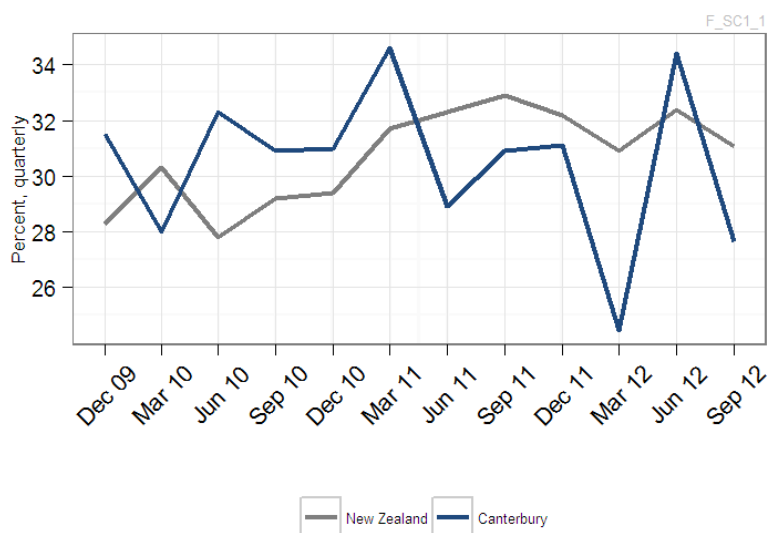


has since fluctuated and despite spiking at 34 per cent in June 2012, it has generally remained below the New Zealand rate.

Similarly, after the February 2011 earthquake, people in Canterbury tended to volunteer more hours on average than before. However, volunteering has generally remained below the New Zealand average since June 2011. This reduction may reflect levels of fatigue in the population.

When comparing the rates between Canterbury and New Zealand, it must be remembered that a lot of informal volunteering in Canterbury since the earthquakes is not captured by this measure.

Figure 3: Volunteering rate



### Find out more

Find out more about the Canterbury Wellbeing Index: [www.cera.govt.nz/cwi](http://www.cera.govt.nz/cwi)

Find out more about volunteering post-earthquakes across New Zealand: [www.volunteernow.org.nz/article/14](http://www.volunteernow.org.nz/article/14)

Find out more about the Strengthening Communities Fund: [www.ccc.govt.nz/cityleisure/communityfunding/strengtheningcommunities/index.aspx](http://www.ccc.govt.nz/cityleisure/communityfunding/strengtheningcommunities/index.aspx)

Find out more about Volunteering Canterbury: [www.facebook.com/pages/Volunteering-Canterbury/76308735321](https://www.facebook.com/pages/Volunteering-Canterbury/76308735321)

Find out more about the Community Organisation Grants Scheme: [www.communitymatters.govt.nz/Funding-and-grants---Crown-Funds---Community-Organisation-Grants-Scheme---Local-Priorities](http://www.communitymatters.govt.nz/Funding-and-grants---Crown-Funds---Community-Organisation-Grants-Scheme---Local-Priorities)

### Technical notes

#### CERA Wellbeing Survey

**Data source:** Canterbury Earthquake Recovery Authority

**Data frequency:** Six-monthly

**Data complete until:** October 2012

**Notes:** The CERA Wellbeing Survey 2012 is a representative sample of 2,381 residents of greater Christchurch delivered by Nielsen. Respondents were randomly selected from the Electoral Roll.



The survey was delivered online and by hard copy and closed on 14 October 2012. The response rate was 52 per cent. Weighting was used to correct for imbalances in sample representation. The survey was developed in partnership with Christchurch City Council, Waimakariri District Council, Selwyn District Council, the Canterbury District Health Board, Ngāi Tahu and the Natural Hazards Research Platform. Survey available: <http://cera.govt.nz/sites/cera.govt.nz/files/common/cera-wellbeing-survey-2012-report-20120220.pdf>

### **Sense of community**

**Data source:** The Quality of Life Survey (2006, 2008, 2010 Christchurch city and New Zealand data, and 2012 New Zealand data); CERA Wellbeing Survey (2012 greater Christchurch data)

**Data complete until:** October 2012

**Note:** The Quality of Life Survey is a national survey run every two years. Computer assisted telephone interviews (CATI) were conducted with New Zealand residents aged 15 years and older. Respondents were selected randomly from the Electoral Roll. The Christchurch sample size is 496 for 2010. For 2010, fieldwork was conducted between 19 November 2010 and 2 March 2011. All interviewing in Christchurch was undertaken before the 22 February 2011 earthquake (and after the first large quake in September 2010).

Data from previous years are not directly comparable with the 2012 result as they were obtained using a different methodology and a different survey. However, the results of the two surveys can be compared in a very general sense.

The questions were asked in the same fashion in the Quality of Life Surveys and the CERA Wellbeing Survey. The question "If you were faced with a serious illness or injury, or needed emotional support during a difficult time, is there anyone you could turn to for help?" was not asked in 2006.

The results of the Quality of Life Survey include residents of Christchurch city only while the CERA Wellbeing Survey also includes residents of Waimakariri and Selwyn districts.

The 'national' total in 2012 is the combined results of the 6 Quality of Life Project cities of Auckland, Porirua, Hutt, Wellington, Christchurch and Dunedin.

The 'national' total in 2010 is the combined results of the 8 Quality of Life Project cities of Auckland, Hamilton, Tauranga, Porirua, Hutt, Wellington, Christchurch and Dunedin.

Prior to 2010, a further 2 cities were involved and the 'national' average included a number of people resident outside the main Quality of Life Project cities.

### **Volunteering**

**Data source:** Nielson CMI Survey via Department of Internal Affairs

**Data frequency:** Quarterly

**Data complete until:** September 2012

**Notes:** This indicator is based on survey questions from the Nielson CMI Survey. This survey only collects data on formal volunteering (ie that done for/through an organisation). A negligible amount of informal volunteering (helping neighbours etc.) is also captured. Results are provided for the population 10 years and older, which is the standard measure used by the Department of Internal Affairs for volunteering data.

The rate of volunteering used is the number of people aged 10 years and older who have formally volunteered for a group or organisation in the last three months, as a proportion of all people aged 10 years or older.

The 22 February 2011 earthquake fell in the middle of the March 2011 quarter survey period. The March 2011 quarter results should be considered indicative only due to data quality issues, especially in the Canterbury region. Canterbury region sample size is 1,630 for 2010.



## Endnotes

<sup>1</sup> <http://www.socialreport.msd.govt.nz/social-connectedness/>

<sup>2</sup> Ministry of Social Development. (2005). *The Social Report. 2005*  
<http://www.socialreport.msd.govt.nz/documents/2005/sr05-social-connectedness.pdf>

Giordano, G.N., Lindstorm, M. 2010. The impact of changes in different aspects of social capital and material conditions on self-rated health over time: a longitudinal cohort study. *Social Science and Medicine* 70(5), 700-710. In Christchurch City Health Profile. Retrieved from:  
<http://www.healthychristchurch.org.nz/media/27507/socialconnectedness.pdf>

<sup>3</sup> Cork, S. 2009. *Brighter prospects: enhancing the resilience of Australia*. Weston, ACT: Australia 21. In, Christchurch City Health Profile. Retrieved from:  
<http://www.healthychristchurch.org.nz/media/27507/socialconnectedness.pdf>

<sup>4</sup> Human Rights Commission. (2012). *Better Design for Everyone: Disabled People's Rights and the Built Environment*. HRC: Auckland

<sup>5</sup> [www.ocvs.govt.nz/about-the-community-and-voluntary-sector/about-volunteering/index.html#Whyvolunteeringisimportant1](http://www.ocvs.govt.nz/about-the-community-and-voluntary-sector/about-volunteering/index.html#Whyvolunteeringisimportant1)

<sup>6</sup> [www.ocvs.govt.nz/work-programme/building-knowledge/subsector-facts.html](http://www.ocvs.govt.nz/work-programme/building-knowledge/subsector-facts.html)

<sup>7</sup> [www.ocvs.govt.nz/about-the-community-and-voluntary-sector/about-volunteering/index.html#Whyvolunteeringisimportant1](http://www.ocvs.govt.nz/about-the-community-and-voluntary-sector/about-volunteering/index.html#Whyvolunteeringisimportant1)

<sup>8</sup> For information on the CERA Wellbeing Survey, refer to the Technical Notes.

<sup>9</sup> Torstonson, S. (2011). *Supporting Community Resilience in Post-Quake Christchurch*. Retrieved from: <http://ccoss.org.nz/wordpress/wp-content/uploads/Supporting-Community-Recovery-Final-Report-July-2011.pdf>

<sup>10</sup> Christchurch City Health Profile. Retrieved from:  
<http://www.healthychristchurch.org.nz/media/27507/socialconnectedness.pdf>

<sup>11</sup> The actual question read: Which of the following have you experienced as a result of the earthquakes? -'dealing with barriers around disabilities (own or other people's) whether existing or earthquake related'.

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### Why is civil participation important?

Citizen participation in public decision-making gives people a way of contributing to the communities they live in. This contribution is an important aspect of people's wellbeing.

Participation can bring an ability to influence decisions, as well as opportunities to connect with others in the community and to learn and understand what is going on. It can also build a sense of being valued by community leaders and others in the community.<sup>1</sup> Experts say that having a say in the rebuild helps people's recovery.<sup>2</sup>

Electoral participation is one way of measuring how much people feel engaged in, and responsible for, their community. If people believe strongly in their ability to be heard and to make a difference, they tend to enrol and to vote in elections.<sup>3</sup>

Higher voter turnout rates also suggest that the population has confidence in government and believes that the government is responsive to the views of citizens.<sup>4</sup>

General elections are held at least every three years, with the most recent held in November 2011. Local government elections are also held every three years, most recently in October 2010.

There appears to be little research on the impact of natural disasters on voter turnout, but it is generally agreed that disasters are likely to reduce participation.<sup>5</sup>

Voter turnout overall decreased after Hurricane Katrina in New Orleans. However, the impact of the disaster was not straightforward: in some more heavily flooded areas, turnout actually increased while it fell in some of the less flooded areas.<sup>6</sup>

### How was civil participation impacted by the earthquakes?

The 2010 local elections were held just one month after the September 2010 earthquake. Postal ballots were due by 9 October 2010.

The Christchurch City Council ran a campaign to raise voter awareness. Advertisements were placed on buses, in malls and in doctors' surgeries, and radio advertising and interviews were undertaken. As noted in Figure 1 this campaign appeared successful and voter turnout increased by 10 per cent in 2010, from 2007.

The 2011 general election was held nine months after the February 2011 earthquake, and just five months after the major June 2011 aftershocks.

In recognition that the earthquakes had caused significant infrastructure and communications obstacles, the Electoral Commission heavily promoted advance voting in Christchurch for the general election.<sup>7</sup> Advance mobile services were provided via campervans which stopped at pre-advertised sites on the path of local bus routes.



As a result, a survey of voter and non-voter experiences found that 80 per cent of Christchurch residents were aware of advance voting options, in contrast to 63 per cent of all New Zealanders.<sup>8</sup> Advance voting in the badly damaged electorates of Christchurch East and Christchurch Central (19 per cent in each case) was higher than the national average of 15 per cent.<sup>9</sup>

This same survey found that Christchurch residents typically knew more about aspects of the general election process and the associated referendum than New Zealanders as a whole.<sup>10</sup>

Across New Zealand, voter turnout as a percentage of those eligible to vote fell by 6 per cent from 2008 to 2011. Voter turnout in the Christchurch electorates was only 1 per cent lower than in the 2008 election when adjusted for the lower turnout nationwide.<sup>11</sup>

Declining voter turnout is a long-term global trend.<sup>12</sup>

### What is happening now?

The Canterbury Earthquake Recovery Authority (CERA) is communicating and engaging with individuals, families and communities to ensure they are supported to shape their own recovery. Providing information in a timely and targeted manner can be of huge benefit to communities. It is essential that the information reaches the intended people in a way that is easily understood and helps people to respond in a way that is appropriate for their situation.<sup>13</sup>

Engagement guidelines have been developed by CERA to help programmes and projects to identify opportunities for the public to be involved in various aspects of recovery. Public engagement can include scoping, problem solving, identifying issues and considerations, and can ultimately impact on the long-term sustainability and success of outcomes.

The next local election is scheduled for 12 October 2013, and the next general election is scheduled for 2014.

### What are the indicators telling us?

This report measures civil participation in three ways:

- confidence in decision-making
- voter turnout in local elections for councillors
- voter turnout in general elections.

#### Earthquake recovery-related decision-making and communication

Table 1 shows the confidence in decision-making overall, and confidence in decision-making by CERA. The majority of respondents either had confidence in CERA (40 per cent) or were neutral (28 per cent).

Table 1 also shows respondents' satisfaction with communications and information, overall, and from CERA. Again, the majority of respondents were either satisfied with communications and information from CERA (36 per cent) or were neutral (38 per cent).

Opinion was evenly split over satisfaction with the opportunities the public has had to influence earthquake recovery decisions. Overall 30 per cent of respondents in greater Christchurch reported they are satisfied (very satisfied or satisfied) while 28 per cent are dissatisfied or very dissatisfied.





Table 1: Confidence in decision-making and satisfaction with communications/information

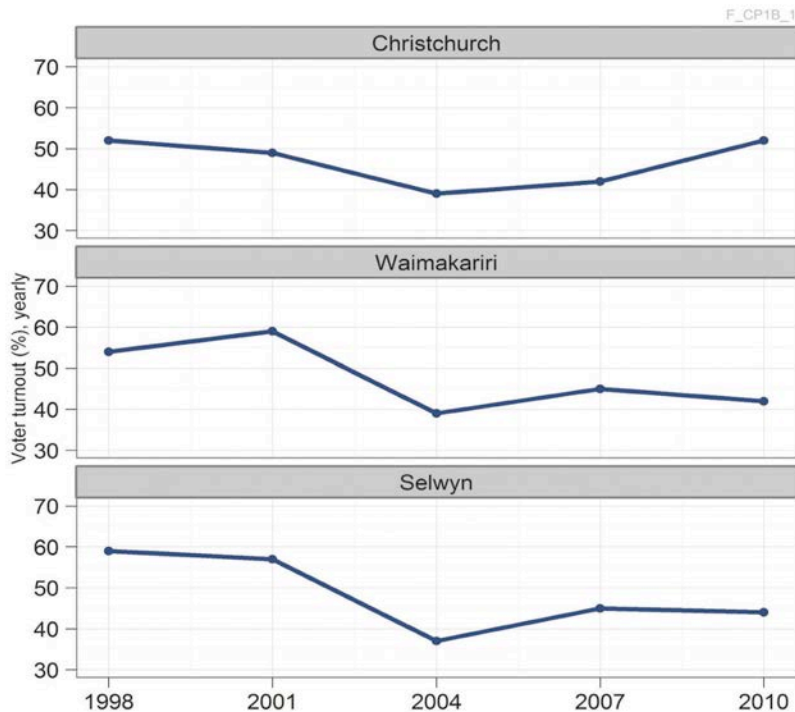
Question	% expressed confidence	% expressed lack of confidence
% confident that the agencies involved in the earthquake recovery have made decisions that were in the best interests of greater Christchurch	34	37
% confident that decisions by CERA are made in the best interests of greater Christchurch	40	29
	% expressed satisfaction	% expressed dissatisfaction
% satisfied with communications and information about earthquake recovery decisions	35	32
% satisfied with CERA communications and information about earthquake recovery decisions	36	15

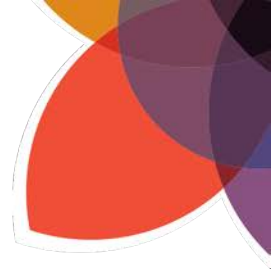
**Local elections**

Figure 1 shows that voter turnout for local elections for councillors has increased in Christchurch City since 2004, including after the September 2010 earthquake. Turnout increased from 39 per cent in 2004 to 42 per cent in 2007 and 52 per cent in 2010.

Voter turnout for local elections for councillors declined slightly between the 2007 and 2010 elections in the Waimakariri and Selwyn Districts.

Figure 1: Voter turnout in local elections for councillors



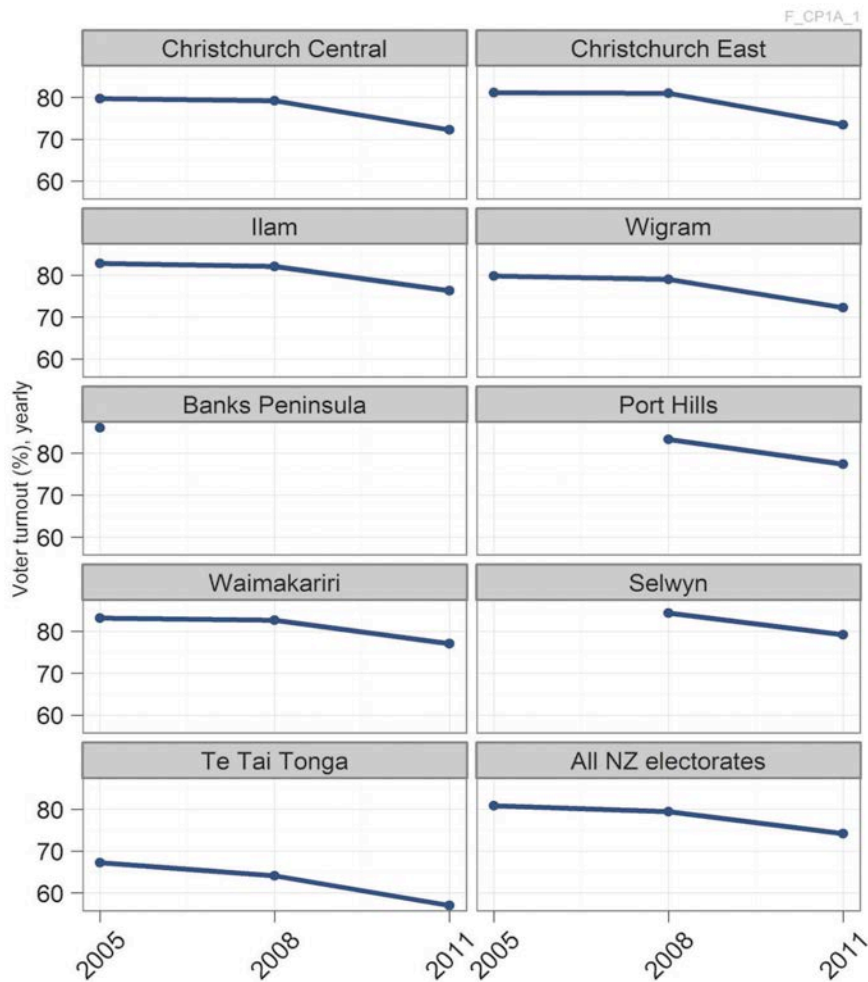


**General elections**

Figure 2 shows that voter turnout for general elections in the greater Christchurch area has declined from 2005 to 2011. This pattern is consistent with voting trends in New Zealand overall.

In the 2011 election, Christchurch East had the greatest decline, falling by 8 per cent from 81 per cent turnout in 2008 to 73 per cent turnout in 2011. In the Te Tai Tonga Māori electorate, which covers a wider area than Canterbury alone, turnout fell by 7 per cent, from 64 per cent in 2008 to 57 per cent in 2011. The Wigram turnout dropped from 79 per cent voter turnout in 2008 to 72 per cent in 2011.

Figure 2: Voter turnout in general elections



**Find out more**

Find out more about the Canterbury Wellbeing Index: [www.cera.govt.nz/cwi](http://www.cera.govt.nz/cwi)

Find out more about benefits of effective community engagement:  
[www.goodpracticeparticipate.govt.nz/benefits-of-community-participation/index.html](http://www.goodpracticeparticipate.govt.nz/benefits-of-community-participation/index.html)

Find out more about elections in New Zealand: [www.elections.org.nz](http://www.elections.org.nz)

Find out more about electorate-level turnout information from 1996: [www.electionresults.org.nz](http://www.electionresults.org.nz)



## Technical notes

### CERA Wellbeing Survey

**Data source:** Canterbury Earthquake Recovery Authority

**Data frequency:** Six-monthly

**Data complete until:** October 2012

**Notes:** The 2012 CERA Wellbeing Survey is a representative sample of 2,381 residents of greater Christchurch delivered by Nielsen. Respondents were randomly selected from the Electoral Roll. The survey was delivered online and by hard copy and closed on 14 October 2012. The response rate was 52 per cent. Weighting was used to correct for imbalances in sample representation. The survey was developed in partnership with Christchurch City Council, Waimakariri District Council, Selwyn District Council, the Canterbury District Health Board, Ngāi Tahu and the Natural Hazards Research Platform. Survey available: <http://cera.govt.nz/sites/cera.govt.nz/files/common/cera-wellbeing-survey-2012-report-20120220.pdf>

Base for questions on satisfaction with communications/information was those who recall receiving communications or information from the various organisations.

### Voting information

**Data source:** Electoral Commission. The Local Authority Election Statistics (Department of Internal Affairs)

**Data frequency:** Each election

**Notes:** Voter turnout is defined as the proportion of all enrolled electors who cast a vote in general elections (Voter turnout = Total Votes Cast / Electoral Population).

Local elections occur every three years, most recently in 2010. Territorial authority elections for councillors and for mayors have almost identical turnout rates for these electorates. For simplicity, we are reporting only on councillor elections.



## Endnotes

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- <sup>2</sup> Rutherford, D. Current thinking from NZ and overseas. Speech at the 10th World Conference of the International Ombudsmen's Institute. [www.rebuildchristchurch.co.nz/blog/2012/11/current-thinking-from-nz-and-overseas-david-rutherford#\\_ftn6](http://www.rebuildchristchurch.co.nz/blog/2012/11/current-thinking-from-nz-and-overseas-david-rutherford#_ftn6)  
Benefits of effective community engagement. [www.goodpracticeparticipate.govt.nz/benefits-of-community-participation/index.html](http://www.goodpracticeparticipate.govt.nz/benefits-of-community-participation/index.html)
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- <sup>4</sup> Niemi, R.G., Craig, S.C., and Mattei, F. (1991). Measuring internal political efficacy in the 1988 National Election Study. *American Political Science Review* 85(4): 1407–13.
- <sup>5</sup> The Electoral Knowledge Network, [www.aceproject.org/main/english/po/poh01d04.htm](http://www.aceproject.org/main/english/po/poh01d04.htm)
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- <sup>7</sup> Electoral Commission. (2012). *Report of the Electoral Commission on the 2011 General Election and Referendum*. Retrieved from [www.elections.org.nz/files/Report\\_of\\_the\\_EC\\_on\\_the\\_2011\\_general\\_election\\_and\\_referendum.pdf](http://www.elections.org.nz/files/Report_of_the_EC_on_the_2011_general_election_and_referendum.pdf)
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- <sup>9</sup> Electoral Commission. (2012). *Report of the Electoral Commission on the 2011 General Election and Referendum*. Retrieved from [www.elections.org.nz/files/Report\\_of\\_the\\_EC\\_on\\_the\\_2011\\_general\\_election\\_and\\_referendum.pdf](http://www.elections.org.nz/files/Report_of_the_EC_on_the_2011_general_election_and_referendum.pdf)
- <sup>10</sup> Electoral Commission. (2012). *Report of the Electoral Commission on the 2011 General Election and Referendum*. Retrieved from [www.elections.org.nz/files/Report\\_of\\_the\\_EC\\_on\\_the\\_2011\\_general\\_election\\_and\\_referendum.pdf](http://www.elections.org.nz/files/Report_of_the_EC_on_the_2011_general_election_and_referendum.pdf)
- <sup>11</sup> Electoral Commission. (2012). *Report of the Electoral Commission on the 2011 General Election and Referendum*. Retrieved from [www.elections.org.nz/files/Report\\_of\\_the\\_EC\\_on\\_the\\_2011\\_general\\_election\\_and\\_referendum.pdf](http://www.elections.org.nz/files/Report_of_the_EC_on_the_2011_general_election_and_referendum.pdf)
- <sup>12</sup> Niemi, R.G., Wiesberg, H.F., & Kimball, D. (2001). *Controversies in Voting Behavior*. (5<sup>th</sup> Ed.) CQ Press: Washington DC.
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**CERA is monitoring and reporting on the progress of the recovery. The Canterbury Wellbeing Index tracks the progress of social recovery using indicators to identify emerging social trends and issues.**

### Why is population important?

Population is important because it is about communities, families and individuals. It is also important because changes in population size have significant impacts on the natural, physical, economic and social environments.

Populations change through births, deaths and migration.

If a population grows, there is greater demand for cultural and recreational services such as libraries, art galleries, sports grounds and swimming pools. The social infrastructure must expand so that everyone in the population has access to important services such as schools, general practices, community halls and emergency services. With more people, demand also intensifies for natural resources such as land and energy, and greater pressure is placed on existing roads, water and waste systems.<sup>1</sup>

Under the right conditions, population growth can help drive economic growth as people consume more goods and services. In turn, higher consumption can create employment and boost the economic wellbeing and quality of life in the growing communities. However, for economic activity to increase there must be more supporting infrastructure such as roads, ports and telecommunications infrastructure.

If a population declines, less money circulates in the economy which can lead to businesses failing and people losing their jobs. Services such as hospitals and schools become less viable. In this way, long-term population decline reduces both economic and social wellbeing.

Before the earthquakes, the populations of Christchurch city and Waimakariri and Selwyn districts were growing, and Statistics New Zealand projected that this trend would continue (see Figure 1).

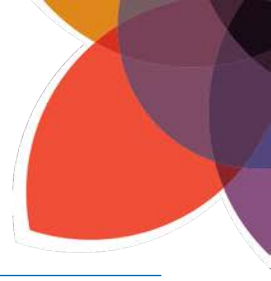
Since the earthquakes, predictions of population changes in greater Christchurch have had to be adjusted. Using evidence from previous natural disasters in developed countries, it appears that, after the first year following the disaster, the total number of people migrating from the region is likely to be less than 2.5 per cent.<sup>2</sup> This loss of people is likely to be offset by natural population growth and migration into greater Christchurch.<sup>3</sup> A long-term fall in the number of people in the region is considered unlikely.

International research suggests that the people who experience the greatest dislocation tend to be those whose homes have been most damaged.<sup>4</sup> In general, socioeconomically vulnerable populations are more likely to bear the burden of a natural disaster, to be displaced and to be displaced for longer.

After disasters, displaced people tend to relocate near their previous homes rather than moving long distances.<sup>5</sup> In this way, they can keep their links to their former communities as well as continue to work in their usual place of employment or attend their usual school.

The Census is the most comprehensive source of population data. The 2011 Census was due to be held on 8 March 2011, but was delayed due to the national state of emergency that followed the Canterbury earthquake on 22 February 2011.

The Census was held on 5 March 2013 and results will be available from late 2013. Until then, changes in population cited for this indicator are drawn from other, more fragmented sources of data. For example, some sources provide data on the re-enrolment patterns of school children, or on the movements of older people who are receiving New Zealand Superannuation or enrolled with general practices.



## How was the population impacted by the earthquakes?

In the immediate aftermath of the February 2011 earthquake there were reports of tens of thousands of people leaving the city. For most people this was a short-term response to an emergency, as families wanted time out from the aftershocks and from the damage to their homes and workplaces. Most people returned over the following days, weeks and months.

According to an analysis of cellphone calls made by Christchurch users, around 55,000 residents may have left the city in the week after the February 2011 earthquake.<sup>6</sup> This total is 15 per cent of the usually resident population. Among those residents using their cellphones in areas outside Christchurch, most phone calls were made from Otago, and the next highest number from Auckland or Wellington. A month after the earthquake, cellphone records indicate that most people had returned to Christchurch.

New Zealand Post mail redirections show that 8,632 households relocated in the six weeks after the February 2011 earthquake compared with 2,397 in the six weeks before.<sup>7</sup> The majority (81 per cent) of these households relocated within the Canterbury region, and 67 per cent of Christchurch city residents relocated within the city. Based on Christchurch City Council rates data, it appears that in the first few months people tended to relocate near their former neighbourhood. The median distance between former and current residences was just 3.5 kilometres.

The most common destinations for relocations outside Canterbury were Auckland, Otago and Wellington.

Within Waimakariri District, displaced households tended to relocate primarily within the district or to Christchurch city.

A survey of 26,000 secondary students carried out in June 2011 asked if students had moved to a different home because of the earthquakes. In Canterbury, 8.2 per cent indicated they had moved, while in the rest of the country, on average, 1.8 per cent indicated they had moved out of Christchurch because of the earthquakes.<sup>8</sup>

Statistics New Zealand estimates that in the year from June 2010 to June 2011, the population of Christchurch city decreased by 8,900 people (2.4 per cent).<sup>9</sup> Many are likely to have settled in other parts of Canterbury, as the total estimated loss to the Canterbury region was only 5,000 people. Provisional figures indicate that between June 2011 and June 2012, Christchurch city's population declined by a further 1.2 per cent to 363,200.<sup>10</sup> This means that between June 2010 and June 2012, Christchurch city's population has declined by about 13,500 (3.6 per cent) due to a net migration loss of 16,600 (partly offset by a natural increase of 3,100).

Between June 2010 and June 2011, the number of people leaving New Zealand permanently, or for the long term, increased by 22 per cent (to a total of 80,100).<sup>11</sup> In the year to June 2012 there was a further 9 per cent increase in international migrant departures.<sup>12</sup> One reason for this increase was that more residents of greater Christchurch were leaving because of the earthquakes.

The proportion of children and young people leaving Christchurch city was higher than it was for older age groups. In all, 9.6 per cent (9,300) of those aged 0-19 years left the city between June 2010 and June 2012 and the population aged 35-49 years decreased by 5,700 (7 per cent). Some reasons for these figures are that families with young children were more likely to leave and fewer young adults moved to Christchurch to study. During the same period, the male population aged 20-34 years increased by 500, while the corresponding female population decreased by 1,700. This reflects a net inflow of young male workers.<sup>13</sup>

Between June 2010 and June 2011, Selwyn District was the fastest-growing territorial authority in New Zealand with a 3.9 per cent increase in its population. Selwyn District remained the fastest-growing territorial authority area in the year to June 2012, increasing a further 2.9 per cent (1,200). Waimakariri District increased by 2.1 per cent (1000) in the year to June 2011 and 1.2 per cent (600) in the year to June 2012.

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## What is happening now?

Population movement across the greater Christchurch area is significant. Much of this movement is due to land zone decisions.



In June 2011 the Government announced that due to the scale of land damage, and in order to provide residents with certainty about the future, greater Christchurch would be divided into residential land zones. The following land zones were identified through geotechnical investigations.

Green zone land is generally suitable for residential development. A property is zoned green because it is considered to have a sufficiently low risk to life and the land can be remediated independently of surrounding properties. Green zone land may be subject to a technical category by the Building and Housing Group, Ministry of Business, Innovation and Employment. The technical categories – TC1 (grey), TC2 (yellow) and TC3 (blue) – describe the foundation systems most likely to be required, if there is a need to repair or rebuild foundations. ‘Technical category not applicable’ means that normal consenting procedures will apply.

Red zone land would require a level of repair that would be uneconomical and prolonged.

White zone properties were in the Port Hills area that had complex geotechnical issues that require further assessment. White zone assessments are now complete and land has been classified red or green. The issues in the Port Hills are different to those in the low-lying plains areas where there has generally been widespread land damage from liquefaction and lateral spreading. In the Port Hills, the issues have largely involved potential rockfall, cliff collapse and landslips.

Red zone home owners were offered two choices. First, the Crown may purchase their house and land at the 2007 rateable valuation. Alternatively the Crown may purchase their land only, leaving the home owner to settle their house claim with the Earthquake Commission and their insurer.

As at 8 April 2013 there were 7,860 residential red zone properties. Of these, 7,043 home owners (95 per cent of eligible home owners) have signed a sale and purchase agreement with the Crown.

Other population movements are underway as people are temporarily displaced from homes in the green zone that are being repaired or rebuilt. In addition, the workforce for the rebuild has started to grow, which includes workers arriving from other parts of New Zealand and overseas.

The Canterbury Earthquake Recovery Authority (CERA) and other agencies are working to ensure that social services meet the changing needs of the population. Agencies are also supporting communities through this resettlement process. Through their work, there is a focus on community resilience, safety and wellbeing and enhanced quality of life for residents and visitors.

To assist with future planning, the Christchurch City Council, Waimakariri District Council and Selwyn District Council, Environment Canterbury, New Zealand Transport Agency and CERA have commissioned growth projections of resident households of the greater Christchurch area to 2041.<sup>14</sup>

Limited data are available regarding people’s intentions to stay in the greater Christchurch region. Almost half of the respondents to the 2012 CERA Wellbeing Survey reported a stronger personal commitment to the region (47 per cent) as a result of the earthquakes.<sup>15</sup> In addition, two-thirds of respondents reported a heightened sense of community since the earthquakes. However, 46 per cent report they have experienced uncertainty about their future in Canterbury.

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## What are the indicators telling us?

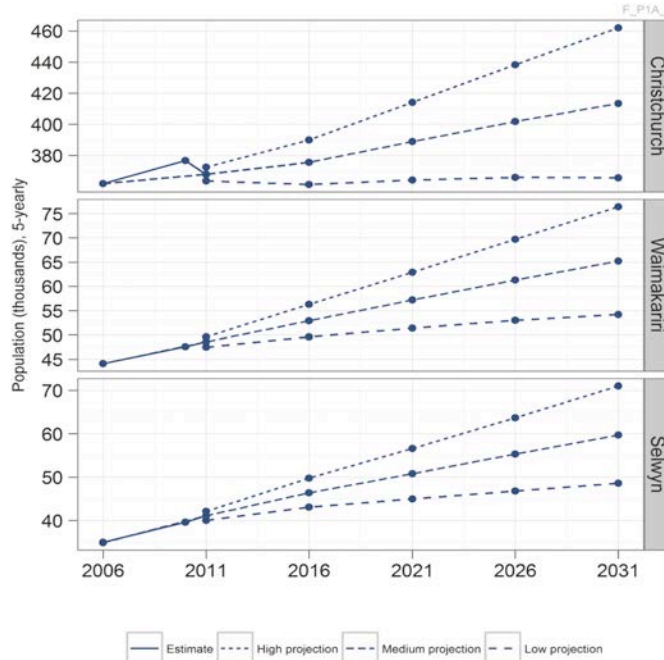
### Total population

In the February 2010 subnational population projections (prior to the earthquakes), Christchurch city was estimated to grow by 0.6 per cent per annum out to 2031, while Waimakariri District was projected to grow by 1.6 per cent and Selwyn District by 2.2 per cent per annum over the same period.

Figure 1 is based on the population projections that were released by Statistics New Zealand in October 2012 and annual population estimates developed in June 2012 and released in October 2012. The medium subnational population projection now indicates that Christchurch’s population is expected to continue to increase out to 2031 by 0.5 per cent per annum. Projections for Waimakariri District and Selwyn District remain unaltered.



Figure 1: Estimated (2006-2012) and projected (2011-2031) number of usual residents



**School student population**

The student population is measured by the number of students enrolled in schools in each territorial authority at 1 July each year.

As Figure 2 shows, the number of 5 to 12 year olds enrolled in Christchurch schools remained relatively stable before the earthquakes, just falling slightly from July 2006 to July 2010. However, the February 2011 earthquake had a significant impact: Christchurch school rolls for this age group fell by 7 per cent – or 2,526 students (from 35,435 to 32,909) – from July 2010 to July 2011.

Figure 2 also shows that the drop in the school roll for older students in Christchurch was less marked than for younger students, but still sizeable. The number of enrolled students in this age group fell by 1,140 students from 25,759 to 24,619 (4 per cent) between July 2010 and July 2011.

From these findings, it appears that families with younger children were more likely to move than those with older children.

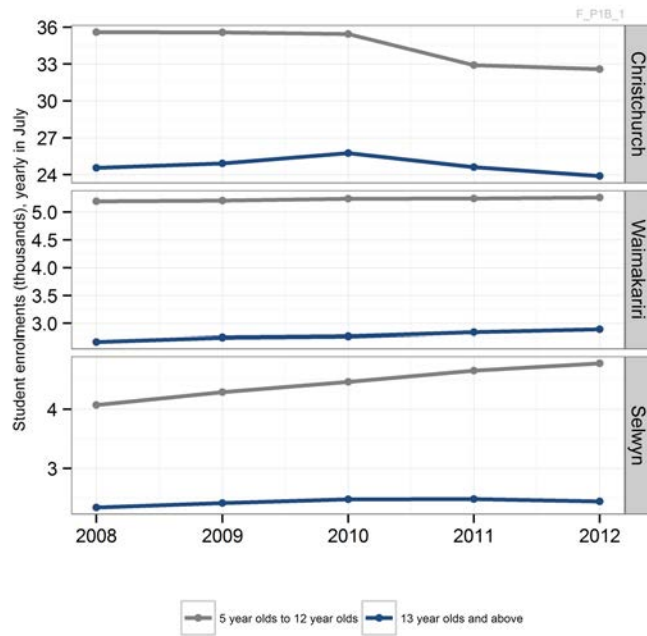
From 2006–2011 enrolments in primary and secondary schools outside the city grew constantly – by 21 per cent in Selwyn District and 5 per cent in Waimakariri District. This increase has continued after the earthquakes.

Over the period from July 2010 to July 2012, Christchurch schools have had an overall net loss of 4,729 students representing a 7.7 per cent decrease, while Selwyn District (3.9 per cent) and Waimakariri District (1.8 per cent) had slight increases. Overall, the greater Christchurch area experienced a net loss of 4,311 students between July 2010 and July 2012.





Figure 2: Number of students enrolled at school



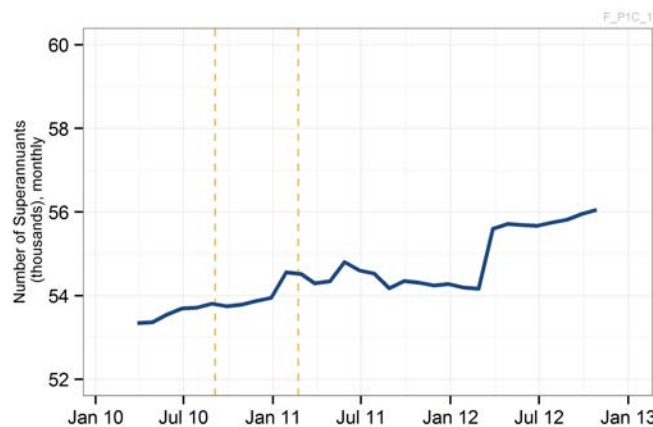
**Older people**

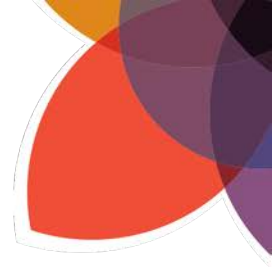
There are two measures of the older population in this report:

- the number of people receiving New Zealand Superannuation
- the number of older people aged 65 years and over registered with a general practitioner who is aligned with a primary health organisation (PHO).

Figure 3 shows that the number of people receiving superannuation in the Christchurch city area decreased very slightly in the month following the September 2010 earthquake. Numbers decreased more markedly following the February 2011 earthquake: 260 fewer recipients of superannuation were living in Christchurch in March than in January that year. While the population levelled off for a while after the earthquakes, it now appears to have returned to the same upward trajectory evident prior to September 2010.

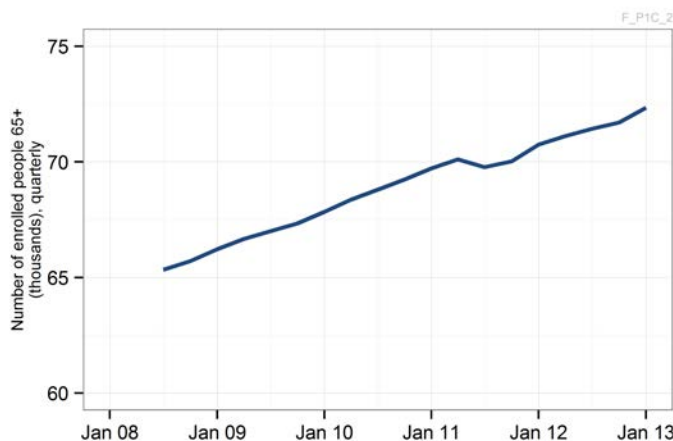
Figure 3: New Zealand Superannuation clients





Similarly, Figure 4 shows that the total number of older people enrolled in a PHO declined slightly after the February 2011 earthquake but recovered to pre-earthquake levels by the end of 2011 and has now returned to the same upward trajectory evident prior to September 2010. Within the PHOs, enrolments fell in the inner city and grew in the PHO that covers the rural satellite towns around Christchurch city.

Figure 4: Number of people aged 65+ enrolled in a PHO



## Find out more

Find out more about the Canterbury Wellbeing Index: [www.cera.govt.nz/cwi](http://www.cera.govt.nz/cwi)

Find out more from Statistics New Zealand about estimating population change after the earthquakes: [www.stats.govt.nz/browse\\_for\\_stats/population/estimates\\_and\\_projections/estimating-pop-after-chch-quakes-paper.aspx](http://www.stats.govt.nz/browse_for_stats/population/estimates_and_projections/estimating-pop-after-chch-quakes-paper.aspx)

Find out more about the land zone decisions: [www.cera.govt.nz](http://www.cera.govt.nz)

Find out what land zone your greater Christchurch property is in: [www.cera.govt.nz](http://www.cera.govt.nz)

Find out more about population movement from GNS Science: [www.massey.ac.nz/massey/fms/Colleges/College%20of%20Humanities%20and%20Social%20Sciences/Psychology/Disasters/pubs/GNS/2012/Misc\\_Series\\_44.pdf](http://www.massey.ac.nz/massey/fms/Colleges/College%20of%20Humanities%20and%20Social%20Sciences/Psychology/Disasters/pubs/GNS/2012/Misc_Series_44.pdf)

Find out more about the Greater Christchurch Household Scenarios 2011–2041: [www.greaterchristchurch.org.nz/News/PDF/UDSHouseholdScenarios2011-2041.pdf](http://www.greaterchristchurch.org.nz/News/PDF/UDSHouseholdScenarios2011-2041.pdf)

## Technical notes

### CERA Wellbeing Survey

**Data source:** Canterbury Earthquake Recovery Authority

**Data frequency:** Six-monthly

**Data complete until:** October 2012

**Notes:** The CERA Wellbeing Survey 2012 is a representative sample of 2,381 residents of greater Christchurch delivered by Nielsen. Respondents were randomly selected from the Electoral Roll. The survey was delivered online and by hard copy and closed on 14 October 2012. The response rate was 52 per cent. Weighting was used to correct for imbalances in sample representation. The survey was developed in partnership with Christchurch City Council, Waimakariri District Council, Selwyn District Council, the Canterbury District Health Board, Ngāi Tahu and the Natural Hazards



Research Platform. Survey available: <http://cera.govt.nz/sites/cera.govt.nz/files/common/cera-wellbeing-survey-2012-report-20120220.pdf>

### Total population

**Data source:** Population estimates and projections, Statistics New Zealand. Subnational population estimates are at 30 June 2012: [www.stats.govt.nz/browse\\_for\\_stats/population/estimates\\_and\\_projections/subnational-pop-estimates-tables.aspx](http://www.stats.govt.nz/browse_for_stats/population/estimates_and_projections/subnational-pop-estimates-tables.aspx)

Population projections are Subnational Population Projections: 2006–2031 update, released 8 October 2012.

**Data complete until:** June 2012

**Notes:** See Statistics New Zealand website for more detail on high, medium and low projections.

### Student population

**Data source:** School enrolment data

**Data frequency:** Yearly in July

**Data complete until:** July 2012

**Notes:** Age refers to the age (in years) as at 1 July of the student enrolled at the school. Territorial authority refers to the territorial authority area in which the student's school is located. Territorial authority boundaries are defined by Statistics New Zealand.

### Older people population:

**Data source:** New Zealand Super administrative data

**Data frequency:** Monthly

**Data complete until:** October 2012

**Notes:** Since March 2010 New Zealand superannuitants have been managed by super centres. These centres differ from Work and Income service centres and have different geographic boundaries.

**Data source:** Primary Health Organisation enrolment data via CDHB

**Data frequency:** Quarterly

**Data complete until:** January 2013

**Notes:** Geographic cover is greater Christchurch area primary health organisations.



## Endnotes

- <sup>1</sup> Christchurch City Council. (2003). *Christchurch City social trends report 2003*. Retrieved from [www.resources.ccc.govt.nz/files/SocialTrendsReport2003-docs.pdf](http://www.resources.ccc.govt.nz/files/SocialTrendsReport2003-docs.pdf)
- <sup>2</sup> Love, T. (2011). *Population movement after natural disasters: A literature review and assessment of Christchurch data*. Sapere Research Group. Retrieved from [www.srgexpert.com/publications\\_two.html](http://www.srgexpert.com/publications_two.html)
- <sup>3</sup> See note 2.
- <sup>4</sup> See note 2.
- <sup>5</sup> See note 2.
- <sup>6</sup> Nissen, K. and Potter, D. (2011). Where did people relocate to? Experimental cell phone data analysis of population movements following the 22nd February Christchurch Earthquake. Presented at the PANZ Biennial conference, New Zealand's Demographic Futures: Where to from here, University of Auckland, cited in Newall, J., Johnston, D. and Beaven, S. (2012). *Population movements following the 2010–2011 Canterbury earthquakes: Summary of research workshops November 2011 and current evidence*. GNS Science Miscellaneous Series 44.
- <sup>7</sup> Thomas, J. (2011). *Preliminary report on household relocation from and within the Canterbury region*. Wellington, Opus Central Laboratories.
- <sup>8</sup> Year 10 ASH Snapshot Survey unpublished data.  
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- <sup>9</sup> Statistics New Zealand. (2011). *Subnational population estimates: At 30 June 2011*. Retrieved from [www.stats.govt.nz/browse\\_for\\_stats/population/estimates\\_and\\_projections/subnational-population-estimates-info-releases.aspx](http://www.stats.govt.nz/browse_for_stats/population/estimates_and_projections/subnational-population-estimates-info-releases.aspx)
- <sup>10</sup> Statistics New Zealand. (2012). *Subnational population estimates: At 30 June 2012*. Retrieved from: [www.stats.govt.nz/browse\\_for\\_stats/population/estimates\\_and\\_projections/SubnationalPopulationEstimates\\_HOTPYe30Jun12.aspx](http://www.stats.govt.nz/browse_for_stats/population/estimates_and_projections/SubnationalPopulationEstimates_HOTPYe30Jun12.aspx)
- <sup>11</sup> See note 8.
- <sup>12</sup> Statistics New Zealand. (2012). *Subnational Population Estimates: At 30 June 2012 – Media Release*. Retrieved from: [www.stats.govt.nz/browse\\_for\\_stats/population/estimates\\_and\\_projections/SubnationalPopulationEstimates\\_MRYe30Jun12.aspx](http://www.stats.govt.nz/browse_for_stats/population/estimates_and_projections/SubnationalPopulationEstimates_MRYe30Jun12.aspx)
- <sup>13</sup> See note 9.
- <sup>14</sup> Fairgray, D. and Foy, R. (2012). Greater Christchurch household scenarios, 2011–2041. Market Economics. Note this work covers the Urban Development Strategy boundaries which differ from those of greater Christchurch as defined by the Canterbury Earthquake Recovery Act 2011.
- <sup>15</sup> For information on the CERA Wellbeing Survey, refer to the Technical Notes.

