



“We had our retirement all worked out, and then ...”

Learning from Older People’s Flood Experiences

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CONTENTS

PREFACE		
1	INTRODUCTION	1
2	RESEARCH AIMS, CONTEXT AND METHOD	3
2.1	Older People in an Ageing New Zealand	3
2.2	Older People and Adverse Events	5
2.3	Older People and the Research Methods	7
3	OLDER PEOPLE REFLECT OF WHAT HAPPENED	11
3.1	The Flood	11
3.2	Immediate Help	12
3.3	Evacuation	13
3.4	Coping at Home	15
3.5	Having to Leave Home and Temporary Accommodation	17
3.6	Summary	18
4	DAMAGE, CLEAN-UP AND REPAIRS	19
4.1	The Damage	19
4.2	Clean-up and Repairs	21
4.3	Summary	23
5	INSURANCE	24
5.1	Insurance Experiences	24
5.2	Under-claiming and Non-insuring	26
5.3	Changes in the Insurance System	28
5.4	Summary	29
6	HELP AND COMMUNICATION	30
6.1	Receiving Help and Support	30
6.2	Communication	32
6.3	Helping Vulnerable People	33
6.4	Summary	34
7	WELLBEING	35
7.1	Mental and Physical Stresses	35
7.2	Summary	37

8	OLDER PEOPLE PROMOTING COMMUNITY RESILIENCE	38
8.1	Skills and Knowledge	38
8.2	Flood Proofing and Resilience	39
8.3	Being Prepared	40
8.4	Knowledge for Emergency Planning	41
8.5	Summary	41
9	SENSE OF HOME, PLACE AND FUTURE	43
9.1	Skills and Knowledge	43
9.2	Flood Proofing and Resilience	44
9.3	Being Prepared	47
9.4	Summary	48
10	FINDINGS: IMPROVING RECOVERY	49
10.1	Organisations and Improved Response	50
10.2	Older People's Information Needs	51
10.3	Support Communities	51
	REFERENCES	

TABLES

Table 2.1	Old Age Dependency Ratio by Region 2013 New Zealand Census	3
Table 2.2	Old Age Dependency Ratio by Selected Countries 2011	4

PREFACE

The research activities presented in this report have, together with other research components, been critical to the development of a variety of tools designed to enable older people and their communities to reduce the impacts of natural adverse events.

Those tools include the Flood Experience Tool, a tool to enable people to better select resilient sites for their dwellings, a materials tool designed to help older people choose more resilient materials when building a new dwelling or renovating existing dwellings, and a resilient house tool which helps people to identify key parts of their existing house or a house they may wish to buy or build which provide greater or lesser resilience.

In addition, this research component of the *Community Resilience and Good Ageing: Doing Better in Bad Times* research programme has allowed us to develop research-based guidelines for communities and agencies to learn from older people's flood experiences.

Those guidelines, along with all the other tools generated by the programme, are available at <http://resilience.goodhomes.co.nz>. The guidelines are also presented in this preface to provide ready access.

LEARNING FROM OLDER PEOPLE'S FLOOD EXPERIENCES

Research-based Guidelines for Improved Response

Community Resilience and Good Ageing: Doing Better in Bad Times Research Programme

This research summary brings together findings from interviews and focus groups with older people who have experienced floods. It identifies what helps older people's recovery, what older people contribute to community resilience, and what organisations can do to support older people and their communities to recover well.

The full research report is at: <http://resilience.goodhomes.co.nz>. Titled "*We had our retirement all worked out, and then ...*" *Learning from Older People's Flood Experiences*, the report describes what happened in the floods, the material, social and emotional impacts and the challenges of recovery. The report focuses on what can be learned from the experiences of older people to help build their own and their communities' resilience. Here are some of the learnings.

What Older People Contribute

Older people have capabilities, skills, knowledge and resources that can help others to get prepared, contribute to recovery and to building up community resilience. Those include:

- Organisational and management skills.
- Camping and outdoor living skills such as knowing how to make a fire to cook on and making a temporary toilet.
- Knowledge about food storage.
- Knowledge about bulk water collection and storage.
- First aid expertise.
- Equipment to share.
- Knowledge of the local area, the history of flooding, local flood infrastructure and changes in land use.
- Ideas to contribute to emergency planning and implementation.

Useful Amenities and Equipment

Older people found the most useful resources in a flood included:

- A woodburner for heat, cooking and drying clothes.
- Water tanks for drinking water.
- Camp cookers and barbecues for cooking.
- At least a week's supply of food.
- Bottled water.
- A week's supply of medication.
- Battery powered torches and lanterns.
- Plug-in phone.
- Battery radio.
- An emergency kit with dry clothing, water and food.
- Shovel, spade, chainsaw and wheelbarrow for clearing drains and debris.
- Access to tractor, digger, four-wheel drive vehicles and dinghies.

Most Useful Immediate Help

Some of the most useful organisational responses reported were:

- Provision of cooked food and hot drinks.
- Help with packing up household goods.
- Washing clothes and household linen.
- Provision of storage facilities.
- Provision of areas under cover where household goods could be dried out.
- Provision of free skips and rubbish disposal.



Supporting Older People to Recover Well

- Work with older people feeling isolated and alone, or having to deal with the flood clean-up and repairs by themselves. This may include help with assessing and organising what needs to be done, as well as help with the physical work.
- Ensure that personnel in response and recovery roles have the appropriate skills and approaches to work with older people. Personnel should acknowledge and understand the emotional impacts of losing treasured items, gardens, and changes to home surroundings.
- Identify vulnerable older people living independently and plan for how they will be reached and what support they will need in an emergency.
- Identify those reliant on care services, those with health conditions, those without family support or not linked into any organisation.
- Identify and plan for assisting older residents in locations especially at risk of natural hazard events.
- Work with older people's networks through organisations such as Grey Power, Age Concern, RSA, U3A, CAB, churches and service clubs to identify the particular supports and information older people need.
- Insurers may need to tailor their responses to older people, particularly those who are vulnerable, to help them resolve their claims and get repairs dealt with quickly.
- Involve older people more in emergency planning and response.

Older People's Information Needs

- Widely publicise information on what to do with pets if evacuation is required, and whether there are evacuation or other facilities available for pets.
- Assist older people to become more aware of the natural hazards or risks in

their location and how they can live with those risks.

- Ensure that older people can access information easily and through channels other than electronically as many older people do not use digital devices.
- Many older people want to be well prepared and to be able to help themselves as much as they can in an emergency. However, they may need information and advice tailored to their circumstances and capabilities.
- Ensure that older people know what assistance is available in an emergency and how they can access it.

Support Flood-affected Communities

- Ensure that policies and operational practices allow sufficient recovery time, and that support timeframes reflect the real, extended time periods during which help and support is required.
- Improve coordination and management of road and site access for flood-affected residents.
- Improve the management of drainage and flood mitigation infrastructure, including giving residents information about planned flood mitigation works.
- Review how regulation, management and monitoring of changing land use and land use practices, such as forestry, farming, roads and subdivision can reduce the frequency and intensity of flood events.
- Help people to make simple, practical changes to increase their household resilience to adverse natural events.

This research report was authored by Dr Bev James, Public Policy & Research, and Kay Saville-Smith, CRESA.

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1. INTRODUCTION

Recovering from the impacts of floods and other severe weather events is unpredictable and complex. It can take a long time, often much longer than individuals expect and certainly longer than most government, business and community organisations assume. Some impacts can be anticipated, but many are unanticipated and are only revealed as the recovery journey unfolds.

This report presents the findings of interviews and focus groups with people in their 60s and older who have experienced floods in Nelson, Tasman and Marlborough regions in recent years. Also included are findings from focus group discussions with older people in communities at risk of floods and extreme weather events. From their experiences and ideas, this report concludes how organisations can improve their planning and responses for flood-affected older people and their communities.

This report is part of the *Community Resilience and Good Ageing: Doing Better in Bad Times* research programme funded by the Ministry of Business, Innovation and Employment. The research is concerned with the ability of older people to age well, even when challenged by adverse natural events. The resilience and recovery of communities depends more and more on the skills and resilience of older people for three reasons:

- i. The structural ageing of New Zealand's population means that older people are going to constitute increasingly higher proportions of the populations of many local communities.
- ii. Associated with structural ageing in the population, is the increase in the numbers of people who must cope with some form of disability. Their needs and optimising people's contributions through enabling environments is an important dimension of adverse natural event preparation, response and recovery.
- iii. There is substantial evidence that older people can be particularly vulnerable to injury and negative health impacts associated with adverse events. These impacts can precipitate older people's movement into higher dependency living, to the loss of their communities.

Traversing experiences from the immediate event, to the aftermath and the often long months of recovery, this report contributes to the dearth of data about the lived experience of older people during and after events, which has been noted as "the most obvious glaring gap in our knowledge" of older people's resilience in the face of adverse natural events.¹ The report describes what happened in the floods, the difficulties of cleaning up and repairs, and the struggle to resume normal life. The report

¹ Greenberg, 2014.

considers the material, social and emotional impacts of floods, the challenges posed to personal and financial wellbeing, and how floods changed people's sense of place and home. Finally, the report considers what can be learned from the experiences and voices of older people to help build their own and their communities' resilience. In particular, how can public, private and community services and institutions support older people to help themselves and their communities to manage and recover from an adverse natural event?

This report comprises the following sections:

- Section 2 outlines the research programme's context, objectives and method.
- Section 3 describes the flood experience. It starts with what happened in the event and soon after, then discusses immediate impacts on living situations, the loss of services and utilities.
- Section 4 looks at the damage and the longer term impacts of clean-up and repairs.
- Sections 5, 6, 7 and 8 consider themes across all aspects of older people's flood experiences. These sections show the unpredictabilities and complexities, the extended time recovery takes, and the range of impacts. Areas covered are: insurance, a critical factor for recovery; the importance of help and support; flood impacts on health and wellbeing; and the knowledge and skills older people bring to recovery and building a resilient community.
- Section 9 explores how a flood can change perceptions of one's home and one's expectations for the future.
- Section 10 summarises participants' suggestions for improving organisational responses to flood-affected communities.

2. RESEARCH AIMS, CONTEXT AND METHOD

The *Community Resilience and Good Ageing: Doing Better in Bad Times* responds to two fundamental features of New Zealand society: structural ageing; and New Zealanders' frequent exposure to adverse natural events. The goal of the research is to encourage the development of community resilience through older people having support and services to help themselves and their communities respond to, and recover from adverse natural events. The research is design to:

- Understand better the vulnerabilities of older people in adverse natural events;
- Identify ways to integrate models and services for positive ageing and community resilience into adverse event planning, response, and recovery; and
- Develop resources to allow older people to make their dwellings resilient and optimise their financial and housing security during and after adverse natural events.

2.1 Older People in an Ageing New Zealand

New Zealand's older population is growing. In the 2013 census, 14.3% of the population was aged 65 years or more. The regions involved in this research have high proportions of older residents: Marlborough (20.5 %), Tasman (17.9%) and Nelson (17.5%).² More critical is the old age dependency ratio which is very high in some regions (Table 2.1).

Table 2.1: Old Age Dependency Ratio by Region 2013 New Zealand Census

Region	15-64 Years	65 Years and Over	Old Age Dependency Ratio
Marlborough Region	26,757	8,907	33.3
Northland Region	91,176	27,762	30.4
Tasman Region	29,271	8,463	28.9
Bay of Plenty Region	163,149	46,869	28.7
Hawke's Bay Region	92,814	25,461	27.4
Nelson Region	29,580	8,109	27.4
Manawatu-Wanganui Region	139,995	37,128	26.5
Taranaki Region	68,658	17,802	25.9
West Coast Region	20,820	5,184	24.9
Southland Region	59,529	14,616	24.6
Canterbury Region	354,894	83,844	23.6
Otago Region	135,864	31,695	23.3
Waikato Region	256,581	59,574	23.2
Gisborne Region	26,802	6,126	22.9
Total New Zealand	2,769,387	607,032	21.9
Wellington Region	317,043	62,268	19.6
Auckland Region	956,037	163,155	17.1

² Statistics New Zealand, 2013.

Three of the regions with very high old age dependency ratios in New Zealand – Marlborough, Tasman and Nelson – are regions that participated in this research programme. Marlborough has a particularly high old age dependency ratio. It lies between Japan and Italy, two of the most structurally aged societies in the world (Table 2.2), with an older age dependency ratio of 33.3%.

Table 2.2: Old Age Dependency Ratio by Selected Countries 2011³

Rank	Country	Old Age Dependency Ratio	Year
1	Japan	36.93	2011
2	Italy	31.51	2011
3	Germany	31.18	2011
4	Sweden	28.63	2011
5	Greece	28.01	2011
6	Portugal	27.21	2011
7	Finland	26.99	2011
8	Belgium	26.88	2011
9	France	26.44	2011
10	Austria	26.42	2011
13	Denmark	25.85	2011
16	United Kingdom	25.57	2011
17	Spain	25.27	2011
18	Switzerland	25.06	2011
19	Hungary	24.32	2011
20	Slovenia	24.11	2011
21	Netherlands	23.61	2011
23	Norway	22.58	2011
25	Uruguay	21.65	2011
26	Czech Republic	21.55	2011
29	Canada	20.84	2011
31	Malta	20.58	2011
32	Australia	20.33	2011
33	Luxembourg	20.33	2011
34	New Zealand	20.05	2011
36	United States	19.96	2011
38	Poland	19.32	2011
41	Iceland	18.17	2011
42	Cuba	18.02	2011
43	Ireland	17.82	2011
44	Russia	17.72	2011
46	Israel	17.04	2011
48	Slovak Republic	16.87	2011
49	Cyprus	16.66	2011
50	Argentina	16.52	2011

³ <http://data.worldbank.org/indicator/>

2.2 Older People and Adverse Events

Older people show both resilience and vulnerability to natural hazards, just like the rest of the population. Nevertheless, older people are one of the groups potentially more ‘at risk’ or vulnerable to harm. Although people are living longer, and many can expect to be healthier and remain able-bodied for longer, international research also indicates that the fact of population ageing itself, as well as longer life expectancies of those with disabilities, will increase the prevalence of those with impaired mobility.⁴ Advancing age, when combined with declining health or physical impairments, can lead to increased frailty, meaning that older people are more likely to die, be injured, or exacerbate chronic conditions during or after adverse natural events. Other factors that make older people more vulnerable in adverse natural events include financial constraints, reliance on others for transport and living alone.⁵ Older people may find it particularly hard to cope when essential infrastructure (power, water, roads) is cut, and lack of access to nutritionally appropriate food can compound health problems.⁶

Adverse natural events can become a ‘tipping point’ making it more difficult for older people to continue independent living. The familiarity and comfort of home surroundings can enhance and maximise an older person’s ability to care for themselves. Once home is disrupted, even for a short period, it can mean a decrease in the ability to live independently. Disruption, dislocation and stresses can precipitate a move to residential care.⁷

Adverse natural events can happen anywhere, anytime. New Zealand is highly exposed to storms, floods, bushfires, land erosion and coastal surges as well as earthquakes and volcanic eruptions.⁸ Flooding is the ‘number 1’ hazard in New Zealand in terms of frequency,⁹ and prior to the 2010 and 2011 Canterbury earthquakes, the most costly. The incidence of severe weather is likely to increase and heighten the vulnerability of areas already prone to flooding, and damage may be amplified by changing land use.¹⁰ New Zealand’s dispersed, exposed settlement pattern across the country with attenuated transport, energy, social and health infrastructures makes response difficult and service restoration can take weeks rather than days.¹¹

⁴ Saville-Smith *et al.*, 2009.

⁵ Gray-Graves *et al.*, 2010; Fernandez *et al.*, 2002; Carswell, 2011; Langer, 2004; Gibson, 2006; CDC, 2006; Laditka *et al.*, 2011; Chen, *et al.*, 2007.

⁶ Greenberg, 2014.

⁷ Cornell *et al.*, 2012, Whittle, 2010.

⁸ McKercher and Pearson, 2001; Ministry for the Environment, 2008; Walton *et al.*, 2004

⁹ McSaveney, 2010; McKerchar and Pearson, 2001.

¹⁰ Office of the Chief Science Adviser, 2013.

¹¹ Roaf, 2010.

By 2050, 1 million of New Zealand's 1.35 million older people will live in at risk settlements.¹² New Zealand settlements concentrate in risk areas and the sun-belt areas where older people show a pre-disposition to retire. Coasts, where a high and increasing percentage of population and infrastructure are concentrated (including many retirement villages), are particularly vulnerable to hazards such as storm surges.

This research programme has established the exposure of older people in the context of New Zealand's coastal developments¹³ using the application of Riskscape modelling flood and storm tide impacts in case study areas known to have significant concentrations of older people. The coastal analysis clearly shows that older people are over-represented among the population vulnerable to coastal inundation. About 152,000 people in 2006 lived within the 0-<3 m coastal elevation zone. Of those 14.5 percent were aged 65 years or more. That compares to an overall representation of older people in the population in 2006 of 12.3 percent. Only in Southland, Marlborough, and Manawatu-Wanganui older people under-represented among the vulnerable coastal population compared to the proportion of older people in the population as whole. The regions with over-representation of older people living within the 0-<3 m coastal elevation zone are:

- Waikato with 20.1 percent.
- Otago with 19.5 percent.
- Tasman with 18.5 percent.
- West Coast with 17.2 percent.
- Taranaki with 16.9 percent.
- Bay of Plenty with 16.7 percent.
- Northland with 16 percent.
- Nelson with 15.4 percent.

Notably, some regions with lower than the national representation of 14.5 percent of people living in the 0-<3 m coastal elevation zone have the highest absolute numbers of older people in those zones. For instance, in the Canterbury Region 13.8 percent of the population in the 0-<3 m coastal elevation zone are older people, but that constitutes over 8,600 older people, the largest single population of older people living in that vulnerable zone in New Zealand. The regions in 2006 with the largest numbers of older people living in the 0-<3 m coastal elevation zone are: Canterbury, Hawkes Bay, Auckland, Wellington, Bay of Plenty, and Waikato.

¹² Wright *et al.*, 2011; Smart and McKerchar, 2010; Walton *et al.*, 2004.

¹³ Bell, R., and S. Wadwha, 2014

2.3 Older People and the Research Methods

The programme has employed multiple methods including a national survey of older people experiencing an adverse natural event, hazard risk mapping, analysis of councils' emergency management documents and positive ageing documents, case studies of communities in Tasman, Nelson and Marlborough districts affected by flooding and focus groups outside of the case study areas with older people.

This report focuses on the case studies which included in-depth interviews with older people affected by floods and focus groups with older people. The main flood events affecting participants were the:

- Floods in December 2010 in Golden Bay, Nelson and Marlborough. These have been described as 150 year floods. About 25 houses in Golden Bay were affected, as well as properties in Wakamarina and Canvastown in Marlborough.¹⁴
- An extreme rain storm in December 2011 in Nelson and Tasman districts that caused severe flooding, landslides and debris flows and resulted in the declaration of a civil defence emergency. Hundreds of people were evacuated, there was extensive damage to homes and multiple road closures. Some areas were cut off for days. Almost 140 properties were issued with section 124¹⁵ notices (red or yellow stickers) to prevent entry to the building. Costs to the insurance industry of \$16.8m resulted.¹⁶
- A 'weather bomb' in April 2013 in Nelson and Tasman districts, with at least 90 homes flooded in Tasman District.¹⁷

This report also includes data from focus groups with older people outside the case study areas, some of whom were directly affected by flooding and others who live in areas vulnerable to extreme weather events. The approach used to collect data is qualitative, using structured questionnaires for the interviews. In the focus groups, a list of themes and questions were used to conduct discussions.

Interviews with flood-affected older people

Participants who had directly experienced floods were sought through various channels:

- Older people's forums in Nelson, Tasman and Marlborough.
- Civil defence and emergency services.

¹⁴ The New Zealand Herald "Golden Bay cleans up after worst flood in 150 years" Dec 29 2010; The Press "Flooding worst in 150 years" 29 Dec 2010.

¹⁵ Section 124 of the Building Act gives territorial authorities the power to prevent entry to a building that is dangerous.

¹⁶ ICNZ Cost of Disaster Events in New Zealand <http://icnz.org.nz/statistics-data/the-cost-of-disaster-events/>; Terry and Cuff 2012.

¹⁷ Nelson Mail "Weather bomb causes heavy flooding" 21 April 2013; NIWA Historic Weather Events Catalog; http://hwe.niwa.co.nz/event/April_2013_Upper_North_Island_and_Nelson_Storm

- Home care service providers.
- Marlborough seniors expo.
- Presentations at meetings and conferences of community organisations and local service providers.
- Advertising through community newspapers in Tasman, Nelson and Marlborough.
- The research website www.resilience.goodhomes.co.nz.

In addition, a national older people's survey of experiences of adverse natural events¹⁸ was conducted prior to the interviews and respondents in the case study areas were asked if they would agree to being approached for a follow-up interview. This was followed by a national survey of younger age groups around their experience of adverse events and their perceptions of the impact of events on older people and where they were connected.¹⁹ Finally, individuals who were interviewed were asked to recommend others that we could contact.

Those interviewed were selected to cover a broad range of experience of flooding and storm events. Participants were affected by different types of flood including river and stream flooding, mud/debris flows, landslides and stormwater flooding. Participants ranged from those who had sustained major and irreparable damage to their homes and properties, to those whose property was not damaged, but they were living in neighbourhoods or communities where there had been extensive damage, and they had been directly affected in some way by a failure of some aspect of their infrastructure (e.g. road access, water supply, sewerage system, or communications). Section 3.1 describes the range of damage experienced.

In all, 23 interviews were carried out with 28 people as five couples were interviewed together. The participants included those living in rural areas (3), small settlements (14) and urban areas (11). All participants were 60 years or more. One was under 65, and two were over 85 years. Two thirds were aged between 65 – 74 years.

All the participants were living independently (i.e. not in aged care facilities or living with relatives) at the time of the flood, and almost all were living in owner-occupied dwellings (25). One was renting and two were in license to occupy dwellings. At the time of interviewing, most remained living in the same houses where the event had occurred. However, four had moved including one who was living with family.

None of those interviewed reported that they had a disability that significantly impaired their mobility. In part this was due to the ages of most participants who were in their 60s or 70s. Their level of health and physical ability was a factor in the way they recovered from the floods, and their stories may have been somewhat different from

¹⁸ Saville-Smith and Fraser, 2013.

¹⁹ Saville-Smith and Fraser, 2013.

those experiencing flooding who are frail or disabled. Nevertheless, the participants were aware of age-related vulnerabilities and risks, and several commented on the flood experiences of frail elderly they knew including some who had, since the floods, moved into a rest home or away from the area. In the research timeframe, it was not possible to follow up those leads. Some participants reflected on whether they would have been able to cope and manage if they had been older. As one participant noted: *“I don’t know how I would have coped if I hadn’t been recently retired and reasonably fit”*.

Interviews were carried out in August and November 2013. The research focused on collecting retrospective experiences. The most recent flood event participants experienced occurred in April 2013. Two of the oldest participants talked about the floods that had most severely affected them, which had occurred more than 10 years ago. The rest were affected by significant flood events between 2010 and 2013.

The interview participants also reported experiencing other weather events as well as flooding in the last 10 years. Those included storms, tornados, landslides, snow storms and earthquakes. Several had experienced more than one storm and flooding events between 2010 and 2013. Even though participants’ recollections were retrospective, at the time of the interviews many still considered themselves to be going through the recovery process from floods that had happened between 2010 and 2013. A few had received an insurance payout around the time of interviewing, 2-3 years after the event. Some were still without adequate access to their properties and others were doing house repairs or work on their sections or were planning to do so. One was in rental accommodation, waiting to go into a new home, two years after the event.

Participants were asked about what happened to them during the floods and afterwards. Key areas explored were:

- What happened to their dwelling and section, and how their dwelling performed during and immediately after the event.
- Whether and how their dwelling facilities and infrastructure were affected.
- Whether and how neighbourhood and community infrastructure were affected.
- Whether they had to evacuate.
- What type of damage was done to their property.
- What was done about the damage, including whether they had insurance and claimed for damage, and the costs of damage.
- Clean-up and repairs and practical difficulties encountered.
- How long has recovery taken, or is taking.
- What has helped or not helped them during response and recovery.
- To what extent they were prepared prior to the event.
- Preparation, planning, or flood proofing they have done after the event.
- Perceptions about the hazard vulnerability of their neighbourhood.
- Their future housing intentions.

Focus groups

In all, 11 focus groups were conducted with older people living independently in their communities. Four of those focus groups were held outside of the case study areas. Participants of two of the focus groups had been involved flooding. In the other groups some had directly experienced floods, while others had not. There were also participants who had experienced earthquakes in Canterbury (2010 and 2011) and Marlborough (2013).

The focus groups were:

- Five focus groups made up of mostly urban residents in the case study areas.
- One small settlement focus group in a case study area.
- One rural focus group in a case study area where all had experienced a flood.
- One rural focus group outside the case study areas where all had experienced a flood.
- Three focus groups with urban-based residents outside of the case study areas.

Focus group discussions covered the following themes:

- If they have been affected by a flood, what happened? That included the damage they experienced to their homes and property, experiences with loss of infrastructure, utilities, road access and claiming insurance.
- How can older people be helped to prepare for an adverse natural event?
- What helps older people recover well from an event?
- What are the things that keep older people safe and comfortable in their houses in an event?
- What tips would they give to others about coping in an emergency?

3. OLDER PEOPLE REFLECT ON WHAT HAPPENED

This section looks at what happened to participants when the floods happened and soon after. The section starts with recollections of the event itself and immediate help. It then moves on to explore experiences of evacuation, temporary accommodation and how participants dealt with the loss of essential services.

3.1 The Flood

Participants vividly recalled their flooding experience. The immediate impacts from the flooding included damage to homes in their local area or neighbourhood, power and phone cuts, loss of or disruption to water supply and damage to sewerage systems, as well as school and road closures. Even years later, the powerlessness and distress associated with the physical impact of a flood was vividly expressed:

We were in the house at the time, the neighbour knocked on the door and said ‘the stream’s broken, you’ve got to get out’. By the time we were half way up the road, it had gone through the back of the house, which caved in. The logs, water and mud smashed the house. It would have been like being in a washing machine ... we were in shock (interview).

The house was shaking with the water. It was above head height outside, but the windows didn’t break. We were knee deep inside. I was worried about my parents, they’re over 80. We got them up on to the kitchen bench. The cat was on top of the pantry (interview).

Water came down from the neighbour’s property like a torrent (interview).

It was a flood I would never like to go through again. The river changed its course and came by the house. The water settled under the house and it was leaking with all the rain ... It was just me and my two grandchildren. They were crying and screaming, you could hear the river going past ... You could hear the landslides, I thought it was going to come through the door. It upset my girls. It’s not an experience I would want to go through again (FG).²⁰

While some had to get out immediately and could do nothing, others talked about the immediate efforts they made to deal with the flooding or to make their property safe:

There was a blocked drain, it came through like a waterfall and was calf deep outside the back door. My son was here at the time and he kept sweeping water from the back door for about two hours. If he hadn’t of cleared the drains, we

²⁰ FG indicates the comments emerging from a focus group. The text will indicate where comments are from multiple focus groups.

would have been in real trouble. The big drains by the back door and in the front of the section saved the house (interview).

We ran around turning all the electrical appliances off (interview).

We had to wedge the freezer because it was about to tip over with the force of the water ... we put everything we could on shelves or up high (interview).

The second time it happened, we were all ready. We had put things up high and had all documents ready to evacuate (interview).

3.2 Immediate Help

For most people, immediate help came from neighbours or family. There were stories of residents supporting one another:

The only thing we really needed was the road open – we were coping with everything else ... Older people, most have been here a long time. In rural areas, you're needing to be resilient, you have that practical ability to respond ... We know who can restore our water system. We know who has the skills (FG).

People walked up to see us and brought food (interview).

The camp cooker was all I needed, and we had a community barbeque every night. We passed a generator around, just to keep the freezers going (interview).

We all got together with equipment, used the tractor to get the lady's car out ... Some people are not helpful - down the street one group sat in a hot tub watching everyone else trying to save houses (interview).

We had to get out, went to friends on slightly higher ground and helped them shift their furniture upstairs. Floodwaters didn't get to their house (interview).

Some were very impressed with immediate organisational responses:

The fire brigade were around immediately. They were amazing. They dug drainage trenches and did sandbagging. They were on to it really quickly (interview).

There was an airdrop and boat drop of food and drinking water (interview).

How wonderful civil defence was, just amazing the care and aroha they had for us (FG).

But several expressed disappointment with what they perceived as a slow response from emergency services.

The message given by civil defence and emergency management organisations is that, in an emergency, residents must be prepared to manage at home and look after themselves for at least three days. It is clear that emergency services will not be able to

help everyone as quickly as needed.²¹ However, many of those interviewed expected to get help quickly. Years after the flood they still expressed consternation about the lack of an immediate civil defence response. Some, particularly those in isolated areas, felt abandoned and questioned why local civil defence, councils and other response organisations were not visible in the first few hours or even days after the event.

There was no support. Our area was cut off. We had to support ourselves. One of the neighbours got a digger, and we were very lucky our son was with us. Nobody in authority checked up to see if we were alright. I felt very lacking in support from the authorities (interview).

There was no contact from anyone official for two days. We were completely cut off (interview).

We were at the worst end, civil defence were slow coming to our aid because we were isolated, but luckily we had people down our end of the valley, and we helped ourselves. Civil defence came after two days with milk and bread (FG).

3.3 Evacuation

Some participants were evacuated by civil defence while others either evacuated themselves or were helped by others. Notice to evacuate was generally very short, and didn't leave any time to prepare. Often the call to evacuate came from neighbours, rather than from civil defence:

We got a ring about 7am, "You better get out quickly." We only had time to throw a few items into a bag, threw in the wallet and warm clothes, put on rain gear and gumboots (interview).

You don't think about what you need to take, you just do silly things. We turned off the TV and put the garage door down. Didn't think to take things like my handbag or insurance papers ... We literally had nothing with us when we had to leave the house ... The neighbour evacuated us. Several of us went up the road and stayed in a house there (interview).

We had to get out, we had no choice, water was pouring in the kitchen window ... I just grabbed a basket and a pair of shoes ... It was scary, it was dark, you couldn't see (interview).

The first night, one of the farm workers came and knocked on the door and said you've got five minutes to get out. We grabbed all our valuables, documents, and

²¹ See Get Ready Get Thru pamphlet available for download at <http://www.getthru.govt.nz/downloads>

photos and put them up high on furniture, got our bags and went up the hill to neighbours and stayed there for three days (FG).

A few said that civil defence could not reach them to evacuate them:

They couldn't evacuate us. They were taking other people out lower down the hill in the bucket of a digger, but they couldn't get to us. We walked further up the hill to the neighbours (interview).

Very few of those who were evacuated were disabled or had impaired mobility. However, two with limited mobility talked about their experiences:

Water was up to my waist when we walked out to the tractor. Getting up into the tractor was a problem for me because the steps were wide apart. ... It was nerve-racking ... When we were being driven on the tractor, it would lean, because of all the rocks under the water. That was scary, we didn't know if it would tip over ... the best part was nobody got hurt badly. We can laugh today, but it's an experience (FG).

If I had fallen over when we were walking through the water, I wouldn't have been able to get up, I had a man on each side of me helping (FG).

Other participants were very aware that evacuation can be a frightening and potentially dangerous experience, especially for those who are frail or disabled as they can get injured if evacuation is not carried out properly. They talked about people they knew:

You have to remember people are not quite acting rationally. They probably feel a bit insecure; want to stay home with what they know (FG).

We had one old lady rescued who was injured in the process (FG).

Some of our neighbours were evacuated and they had to get up onto a digger bucket. It was hard - some people can't do that (FG).

In both the focus groups and interviews there was discussion about the evacuation of pets. One person who had been evacuated took their dog with them. But others were unaware that they may be able to take their pets with them to an evacuation centre or there may be alternative provisions made for sheltering pets.²² Participants suggested that information about protecting and evacuating pets may need to be more widely notified.

²² <http://www.getthru.govt.nz/how-to-get-ready/pets-and-livestock/>

My neighbours wouldn't leave their house, even though they were told to evacuate, because they had a cat and a dog. I kept ringing them up all through the night to make sure they were OK (interview).

3.4 Coping at Home

Those who stayed in their homes, or were able to return home within 24 hours generally felt safe in their dwelling. This was either because they considered they were elevated above the worst of the floodwater, or because water had quickly receded. Most were keen to get home as soon as possible:

We were evacuated, but it was only for a few hours and then we went back home. Yes, I felt safe. It wasn't as nerve wracking as earthquakes! Although I did feel nervous because it had been raining for several days and the river was high ... The phone was still working! ... The worst thing was the silt needing to be cleaned up (interview).

We came back as soon as we could, because that's where we belonged ... we had portaloos and we were very careful until the septic tanks were cleaned of silt (FG).

For some who remained in their homes or returned within 24 hours, it was only a few hours before most utilities were operating and they were able to get in and out of their property. But others were without services and access for days or weeks and made do. Generally they were well equipped, had planned for an event and knew how to survive:

I sponge washed, saved water ... had a camp cooker, that's all I needed (interview).

I felt quite comfortable. You know that you are cut off, but I still had phone contact and the radio kept me up with what was happening. I had enough food, if I had to, I could of used the emergency kit ... It wasn't a long time, just a couple of days, but I wouldn't have wanted it to go on any longer. I was worried about whether the rain would keep on, or if there were big tides (interview)

We had a lot of food stored. We were cooking on the gas cooker and had a rainwater tank. We set up a toilet in the shed with a bucket, sawdust and wood ash (interview).

We could last for several weeks because we are well equipped ... we joke that if we had to, we've got food for a year ... we have water tanks – 3,000 litres of water ... also two portaloos and enough tents to sleep 15. We have tarpaulins to cover the roof in an emergency (interview).

The main thing is to be able to get a good feed and stay warm and I'm reasonably set up for that. I have a wood burner and camping gear (interview).

Some had to manage for extended periods without proper access or services. Loss of utilities and access was as big a concern to those participants as any damage to their dwelling. Participants recounted the inconvenience and restrictions:

It was one month before we could drive an ordinary car out. We had to have a special letter from council to get in and out of road blocks. The 7pm curfew lasted one and a half months. It was to minimise impacts on the road and allow heavy vehicles to work. Also they didn't want rubberneckers (FG).

There was no sewerage or mains water supply for 45 days (interview).

Power came on after a week. We were three weeks without road and phone. There was no cellphone coverage anywhere ... I missed the phone more than anything (interview).

The electricity was off for a couple of days. The water supply was on for 3 to 4 days, then it would go off, and you'd never know whether it was on or off. We couldn't drink it anyway because it was full of bacteria, and coloured. We couldn't get out with the car ... we were four days without the car. We couldn't walk out for a start because the channel was right across the road ... We dug a hole in the back yard for a loo. There were portaloos, but they weren't very reliable. In the finish they got flush toilets for us, but it was a few weeks before it was 100% reliable, and there were a lot of holiday makers here at the time (interview).

The amenities and equipment participants said they found most useful in the emergency included:

- A woodburner for heat, cooking and drying clothes.
- Water tanks for garden irrigation, which could also be used for drinking water.
- Camp cookers and barbeques for cooking.
- At least a week's supply of food.
- Bottled water.
- A week's supply of medication.
- Battery powered torches and lanterns.
- Plug-in phone.
- Battery radio.
- An emergency kit with dry clothing, water and food.
- Shovel, spade, chainsaw and wheelbarrow for clearing drains and debris.
- Access to tractor, digger, four-wheel drive vehicles and dinghies.

3.5 Having to Leave Home and Temporary Accommodation

The periods that some participants were out of their homes ranged from one month to 18 months, although one couple were still not in their permanent home at the time of their interview, almost two years later.

Longer term temporary accommodation was in rentals, but participants also reported staying with family, in a motel and with friends. It was common for those who had been out of their home for several months to have stayed in more than one type of accommodation. One person who waited 18 months to get back home stayed in four separate dwellings. Another couple stayed in three dwellings before getting back home. Others had two moves before returning home.

Relocation and moving around can be particularly stressful, as can the wait to return home. One person commented on this anxious time:

I had a 124 notice on the house ... I was in a motel for a month until the place was cleaned up. I was on site every day pottering around the garden ... I would have been out of the house for longer if I hadn't been assertive with the council. I fought tooth and nail to get back in (interview).

A range of concerns were expressed about accommodation. These included:

- Uncertainties over the length of time in temporary accommodation before being able to return to one's home.
- Additional costs incurred with temporary accommodation and worries over whether insurer would agree to extend payments for accommodation.
- Shortage of accommodation with little choice.

These experiences show the protracted nature of recovery. The actual event and its immediate impacts are still vividly recalled. For most participants, immediate help came from neighbours or family. Notably, most were well equipped and coped without essential services. However, some had to deal with loss of utilities and access for weeks or months. This was as big a concern to those participants as any damage to their dwelling.

Those who have to move out of their homes can expect to be in alternative accommodation for extended periods of time. Some found the experience very stressful. For those who are displaced, even for relatively short periods, the need for assistance remains high. Displacement also impacts on people's perceptions of how long it will take them to recover, and whether they expect ever to recover.²³

²³ Greenberg, 2014.

3.6 Summary

These experiences show the protracted nature of recovery. The actual event and its immediate impacts are still vividly recalled. For most participants, immediate help came from neighbours or family. Notably, most were well equipped and coped without essential services. However, some had to deal with loss of utilities and access for weeks or months. This was as big a concern to those participants as any damage to their dwelling. Those who have to move out of their homes can expect to be in alternative accommodation for extended periods of time. Some found the experience very stressful. For those who are displaced, even for relatively short periods, the need for assistance remains high. Displacement also impacts on people's perceptions of how long it will take them to recover, and whether they expect ever to recover.²⁴

²⁴ Greenberg, 2014.

4. DAMAGE, CLEAN-UP AND REPAIRS

When the waters recede, it is only the start of dealing with the aftermath of flooding. The big job is assessing the damage and dealing with the clean-up and repairs.

4.1 The Damage

The type of flood damage to the 23 homes of interviewees varied widely, from complete destruction, to extensive damage to house and/or section, to minor or no damage. Of the 23 homes, two homes were damaged beyond repair and were demolished.

The house didn't slip off its foundations, but logs and water broke the house ... We were left with only a metre between the top of the debris left by the flood and the guttering of the house (interview).

It was impossible to repair the house, it was really wrecked (interview).

Two further homes sustained very extensive damage and were repaired. Their insurance payouts were in the range of \$150,000 to over \$200,000.

The house did incredibly well ... water came up through the floor and under the doors ... water came up the toilet and bath plug. It lifted the carpet. The water pushed the veranda off its piles ... it was a total renovation. We raised the power points and outlets. There had to be site works, a bund around two sides of the house. The batts in the walls soaked up water and were a stinking mess. We had to replace them all ... The septic tank is old but it survived and was still working because it's very deep. There's still work to be done on the waste water, plumbing and exterior painting [two years later] (interview).

The whole house rocked but did not fall off its piles. I was told by the builder that if it had been a newer house, the whole thing would have gone ... Mud and water right through the house ... it was a complete renovation. I have also done the retaining walls and drainage at the back (interview).

Six properties had damage to the house and section. The highest insurance payout was \$103,500.

The retaining wall went, the landslide came through and took out all my paths. Water and mud came in the back door, down the stairs, through the ground floor rooms and through the front door downstairs. The carpet downstairs was ruined. The wall linings and panels downstairs have had to be replaced (. interview).

It's happened twice now, in 2011 and in April 2013 – water came into the studio and garage, same thing both times. Water was above the skirting boards ... skirting boards, carpet and gib board were replaced (interview).

Upstairs was fine but the garage flooded twice and had to be totally relined and also up the stairs, replaced skirting board, gib and linings, architraves (interview).

There was a slump on the side of the house and a big hole under the foundations. I've put in a retaining wall, and bored into the rock. And the plumbing (interview).

Six properties had minor to moderate damage to their house. Two of those did not claim insurance, but did the repair work themselves.

Water got in under the flashings, came down the wall and ruined the wallpaper. We had to replace the gutters, so enlarged the downpipes (interview).

Rain was driven into the house – the internal guttering didn't work (interview).

Water came off the hill and did a lot of damage to houses further down. Water came around the house and hit the garage/hobby room, it got under the doors and right up through the wall cladding, even 1-2 cm was enough to ruin the carpet (interview).

Water was up to the sliding doors, then it came under the doors and into the lounge and kitchen ... it affected the kitchen cabinets ... curtains and some other furnishings got wet (interview).

Two properties had extensive damage to outbuildings, fences, driveways and access to their properties, although there was no damage to their houses:

This home wasn't affected at all because of the topography. It's on a naturally good place to build a house ... the house next to us had to be demolished, it was full of debris and silt ... in our garden there was one metre of silt and rocks, and overflow of logs, some were 8 metres long! (interview).

The house was fine but I couldn't get into it. It was an island ... I got insurance for my fences and water tanks (interview).

Five properties sustained surface flooding in their sections with no damage to their homes as flood water had not entered the house. All those reported damage to houses in their street or immediate neighbourhood.

Our place was on the edge of the worst. It was a continual downpour, we had 3 inches of surface water on the property (interview).

Lucky we're on the high side of the road. It was 3-4 inches deep flowing under the deck and along the drive. But the house was high enough ... the house over there was demolished (interview).

It was a storm plus surface flooding and heavy rain and wind. It flooded the section and was lapping into the ventilation grills and went under the house (interview).

4.2 Clean-up and Repairs

For those who remained at home during the event itself, or returned after a few hours, they faced the immediate job of clean-up and repairs. Where the extent of damage and clean-up precludes an early return home, the eventual return can still involve protracted cleaning up and repairs that disrupt the old routine and bring new challenges.

We were nine months out of our house, it wasn't finished but it was habitable, we lived in one half and worked on the other half. It's taken two years (interview).

The physical and emotional efforts required in cleaning up and doing repairs are significant and require the householder to take an active role in managing the process. It can be overwhelming. Some did not know where to start, and had little assistance:

Cleaning up was terrible – and not knowing what to do next. People did get together on the big flood but the other ones [smaller floods] weren't the same, it was really just me (interview).

I've been here 46 years. I'm having to battle with this all myself, it's pretty stressful ... it's daunting (interview).

Some had the skills and physical ability to take on the bulk of the work themselves:

We couldn't afford tradesmen, we've done it all ourselves (interview).

We couldn't get diggers or machinery in to clear the section so it all had to be done by hand. Thirteen months it took. I was 63 when it happened, it was hard. I couldn't do it now (interview).

Others talked about how their families helped with cleaning up and organising repairs. This support had made a huge difference to their own ability to cope.

We couldn't get a professional carpet layer, they were run off their feet, so my sons did it for me ... My son dealt with insurance (interview).

Having a strong son who didn't panic! ... I would ring my son or my neighbour if it [flood] happened again (interview).

There was also assistance from organisations and others in the community. For example, having access to equipment and places to dry out household effects was much appreciated:

We piled the furniture on to the verandah to dry out, and a local organisation got us a container to store everything salvageable in (interview).

A lot of stuff was dried out in the [local] hall (interview).

We used heaters and de-humidifiers to dry out the carpets. I got two de-humidifiers lent to me. We ran them for 4-5 days at least (interview).

Typically, the clean-up and repairs took a long time. This was due to several factors, including the vast amount of mud, rocks and debris that inundated some places, the need to allow houses to dry out before work could start, lack of available workmen,²⁵ and long waits for insurance payouts, which were required before work could start:

Cleanup was the frustrating part. It took over six months to get rid of the silt. It got everywhere. We kept finding bits of clay powder. Huge amount of debris to clean up - branches, trees, silt. Eels landed up in the garden. Getting things dry was a problem. The wood burner helped a lot (interview).

We had to allow the house to dry out before we did anything. Having the piles was good, we took the base boards off to assist drying out ... There was no power on site for six months, we just used hand tools to rip out the linings and the kitchen units (interview).

Got paid out this week, two years later and I'm finally getting some work done on my driveway (interview).

Participants reported work still to be done, some of which would be funded through insurance payouts, but other work would have to be financed by themselves:

After two years, we still haven't got access into our property (interview).

The drainage is still not adequate. I also need a proper retaining wall. A lot of garden has still got mud in it (interview).

I've attempted to build berms and rearranged access to the section to avoid the car and garage being flooded. The whole stream seems to be bigger, it's been dug out lots but the spoil is just sitting on the bank. It protects his land but doesn't do anything to help me. I couldn't get good advice about the berms, and in the end the digger man told me (interview).

A few participants reported problems with the quality of work, which resulted in more work for themselves, delays and added stress:

Commercial cleaners did all the carpets and all the pile has gone – they've wrecked the carpets (interview).

The painter was a problem, trying to do a quick job and it didn't work out so they had to re-do it (interview).

²⁵ Some flood repairs were affected by demand for workers in Christchurch after the Canterbury earthquakes.

Some people experienced what other studies have called hidden flood damage, where flooding results in damage that may not be noticed until weeks or months later.²⁶ This can make it hard to determine exactly what is caused by flooding and therefore what can be claimed for. Hidden damage can result in further financial burdens, worrying set-backs and added stress well after the initial impacts of flooding and damage:

We were told that the sewers had been cleared, but a week after we moved in, the sewer was blocked so we rang up the council and they said it was the connection between the house and the main sewer line, and that it was our problem. So my husband went to have a look down the manhole and it was full of sand, it was the council's responsibility (interview).

I didn't realise there was damage to the sewerage until months later – my toilet downstairs was blocked. I don't use the downstairs toilet and it wasn't til my family came to stay that we found the problem. The drains had collapsed (interview).

Some other damage was minor and not discovered until items were unpacked later (interview).

4.3 Summary

The flood experience extends far beyond the immediate impacts of the event itself. Response and recovery are not simple, linear processes where clean-up and repairs can proceed in an orderly way. People experience both good progress and set-backs. Cleaning up can take months, while repairs, site works and repairs to roading infrastructure can take years. Disruptions can be protracted. Experiencing subsequent, unanticipated problems due to flooding also prolongs and re-defines recovery, as people may be affected in new ways, or those who were initially unaffected may subsequently find they have sustained flood damage. Many of these experiences are further illustrated in the following sections.

²⁶ Whittle *et al.*, 2010.

5. INSURANCE

Insurance cover is a critical mechanism for recovery from floods, and for supporting the resilience of older people and their homes. In New Zealand, the proportion of the population that has insurance is very high, particularly among the older population.²⁷

In New Zealand, insurance cover to assist in recovery from flooding is not provided by one agency. Instead, there is a dual system where cover is provided in two ways; through the Earthquake Commission cover (EQC) and through private insurance provided as part of the standard domestic house cover. EQC cover is limited in relation to flood as it covers only losses in relation to residential land, not to residential buildings. EQC does however cover natural landslips – which can occur as part of a storm or flood event. Private insurance covers losses for natural perils as a compulsory component of all fire insurance. (Fire insurance itself is not compulsory). EQC cover is up to a maximum amount of NZ\$100,000 (plus GST) and personal contents up to a maximum of NZ\$20,000 (plus GST). The private insurer will pay any remaining losses above those amounts according to the terms of the household (fire) policy.²⁸

This dual system of coverage, which deals with different natural events differently, and land and property differently, is complicated and confusing. The distinct roles and responsibilities of EQC and private insurance companies, and what is covered by each are not well understood. These issues are apparent in participants' experiences, as described in this section.

5.1 Insurance Experiences

A cursory glance at participants' comments in previous sections shows that in many ways insurance shapes and defines the flood experience. What happens about their insurance is part of the how people talk about their experiences throughout all stages of the event and recovery, and how they feel about what happened.

Overall, participants reported very mixed experiences with EQC and private insurers. Some felt their experience with both EQC and their insurance company had been bad. Others had found one organisation to be helpful, while it had been very difficult dealing with the other. No-one reported a wholly positive experience.

Some noted examples of good experiences:

Insurance paid out our vehicle insurance very quickly. That was so important because transport in the country is essential (interview).

²⁷ Priest, 2014; Tuohy, 2010.

²⁸ Priest, 2014.

Insurance were fantastic. They never quibbled, and went beyond the call. They did everything, organised repairs, and covered all the costs (interview).

We claimed insurance. They were fine, not a problem, they sent the assessor in ... organised the repairs. They were good (interview).

The one good experience was EQC – a good guy, he understood. No complaints, he was timely (interview).

In contrast, others felt they were treated very unsympathetically by insurance companies and EQC. Participants talked about the complexities of dealing with two organisations and the interface between them, the need for sequencing of assessment of damage that sometimes caused delays, and the potential for some damage not to be covered at all. They commented on the long and distressing wait to get insurance settled. There was concern about communication difficulties, confusion about what their premiums covered and eventual disappointment over sums paid out. These comments illustrate those negative experiences:

My biggest gripe is EQC, the length of time it took, nearly two years, and the low payout, which doesn't cover the costs of repairs ... EQC pay out on the lesser amount, either the cost of repair, or the percentage of property damaged. The repairs for retaining work will cost more than the percentage of the property affected (interview).

EQC were unhelpful, terrible. And insurance were just lovely ... EQC attitude was "you're not that bad". They were dealing with the earthquakes ... I wasn't allowed to have a new carpet to match the old one because I didn't have it in the policy, which you have to pay extra for ...the big hole in front of my gate, EQC didn't cover that ... my paths were ruined, EQC didn't cover that either ... EQC didn't pay me for my paths, or for my wall because it was 8.1 metres away, not 8 metres [the maximum distance] (interview).

It was a year of hell (interview).

At first though EQC thought it was a flood event, not a debris flow and if it was a flood we wouldn't have got anything. EQC wouldn't cover any of the orchard and garden ... Insurance wouldn't pay to hook up sewerage and water pipes (interview).

Everyone thinking EQC will step in and solve things but they don't ... they're not hands on. They were dealing with me from Australia ... EQC just pay you out and don't facilitate the work. That's what people don't realise. They expect someone to project manage it for them. Insurance co-assigned an assessor – they could help with contents, non-building things like accommodation. Bu they wouldn't do anything about the building until EQC signed the payout (interview).

Whether to call in the assessors before or after cleaning up can also be a difficult decision to make, and some pointed out that they had got conflicting advice. One focus group discussed this issue, as did interviewees:

My insurer said there's a lot of misinformation out there, like people were told not to take up wet carpet because it would affect their claim, so they're sloshing around on wet carpet for weeks and then the walls go mouldy and insurance ended up paying for more.

My thing was just to get the mud out. But EQC said you can't clean it because we can't assess it. They assessed my place in the mud and they underestimated the damage which caused six months' delay (FG).

EQC wouldn't help me with the mud at the back door because my daughter and friends had all helped to move the mud before they assessed it. It's just not right. We've asked questions of course and got no answers (interview).

A few people experienced agonising uncertainties around repair, re-build or relocation. Throughout this time, there were uncertainties about compensation as well.

Insurance was deciding whether the house could be repaired or had to be demolished, even though the council wouldn't have allowed the house to be repaired, and it was very unclear whether we would have been allowed to re-build on the same section. If we had been paid out for repairs, that wouldn't have covered a re-build. It was getting on for a year before the insurance was decided. It was a nightmare. The worst thing was not knowing. We felt so relieved when the house was demolished, there's no ambiguity, it's gone, we can move on (interview). We nearly abandoned the place but we couldn't sell the section ... insurance company wrote everything off. Contents and house written off, because it would have cost more to repair than what it was insured for ... Council told us we would not get a consent to re-build but if we did no structural changes we wouldn't need a building consent. Council doesn't want the house here – we would have been allowed to knock it down but not rebuild. So we decided to renovate (interview).

In future it is increasingly likely that insurers will not cover properties in very high risk locations.²⁹ This has already happened to a few participants:

Can't insure the property – no one could get a mortgage to buy it (interview).

5.2 Under-claiming and non-insuring

There was little direct evidence from this study that participants avoided using their insurance coverage to deal with damage. However, one person decided not to make an

²⁹ Priest, 2014.

insurance claim because they considered the damage to be minor and they wanted to deal with the damage quickly. Luckily, they could afford to bear the costs themselves. Other participants talked about hearing of older people not wanting to make an insurance claim. This can relate to fear of loss of property value and concern about affecting re-sale, fear of increasing future premiums, feeling overwhelmed with the claims process and denial of damage and impacts to the dwelling. Other studies have found similar concerns.³⁰ People may also be reluctant to make an insurance claim because part of their dwelling is non-consented. Comments included:

I had no code compliance so there were some issues (interview).

I know of an older couple who did the repairs themselves rather than go through insurance because they didn't want it to show up on their insurance record (FG).

Although many said they were distressed, dissatisfied and frustrated in their insurance dealings, it was not apparent from this study whether there was a loss of trust in insurers. However, a few comments, both in interviews and focus groups did suggest some loss of trust:

Contents insurance is a waste of money. We had it in Christchurch, it was so unsatisfactory, we decided not to have it again. It was our call (interview).

- *Insurance bill jumps up after every disaster. Insurance is getting out of hand for most of us on pensions.*
- *The small print is confusing. The salesman asks if you have any questions, but what isn't he telling us?*
- *I believe the insurance system sets up people to fail, they make it hard to afford insurance, and you don't know what you are covered for.*
- *People have lost confidence in EQC and insurance companies after the Christchurch experience. Everyone knows the stories about the long waits for payout (FG).*

Furthermore, a potential loss of trust was evident when a few participants criticised what they regarded as poor EQC follow-up to ensure claimant payouts were actually spent on remediation. They cited instances where claimants in their neighbourhood who had been paid out for flood remedial works on their land had not used the funds for intended purposes. This left surrounding properties vulnerable to impacts from future flooding and landslips. Some insurance systems overseas have introduced measures to ensure that claimants use payouts for intended recovery purposes.³¹ Two commented particularly on this issue:

³⁰ Whittle *et al*, 2010.

³¹ Priest, 2014.

He decided it was too expensive to do the work, he has had [insurance] payouts and he hasn't done the remediation work (interview).

I've told EQC the neighbour has been paid out and still hasn't fixed the drainage (interview).

5.3 Changes in the insurance system

Now, after the floods, there are new insurance worries. Participants talked about considerable premium increases following the Canterbury earthquakes, which is of particular concern to those on fixed incomes, as are most retired people. There is also additional work involved in calculating the “sum insured” premium (introduced in 2013), where the customer has to specify the maximum amount for a rebuild; that is, the sum the insurer will pay out.

Over the period that interviews and focus groups were conducted, a number of participants were renewing their insurance under the new system. Insurance was discussed at length in some of the focus groups, particularly the rises in premiums and calculating the sum to be insured. Calculating the costs of re-build was found to be challenging as it requires a level of understanding of technical aspects of building. If one is to manage the process oneself it also requires facility with electronic communications and access to cost calculators on the internet. This is seen by participants as just not feasible for a lot of older people.

Participants raised concerns about what to include in the sum insured, as well as the fear of being under-insured. Some had taken the default value for sum insured that was supplied by their insurer on their policy renewal notice, whereas others were trying to identify all possible re-build costs. Discussion in two focus groups illustrated these concerns:

- *We've just re-done our insurance policy and you have to make provisions for how you're going to clear your property, the removal of rubble, that's thousands in itself.*
- *I did mine this morning ... one of the things that's unknown is if I add another \$100,000 what's it going to cost me? It may be a small amount but it's going to make a world of difference. It's something people need to know. Maybe feedback from insurance companies.*
- *It's a big issue if you're on a fixed income (FG).*
- *... we've just paid insurance. Paid an arm and a leg and I'm not sure it would cover everything ... I've been trying to find out what we should do [for the sum insured premium], all I've been told is there's a formula on the computer. I don't have a computer.*
- *I went to the neighbours and went through it [the sum insured for the house].*
- *It cost us around \$1,000 to do our house, just the house.*

- *Ours was about \$1,300 between the house and contents.*
- *Mine's \$100 a month. When you consider the money you get from the Government.*
- *[the money] just fades away doesn't it? You just need reminding. I mean if mud went all through your house where do you even start? And the smell's another thing (FG).*

It is not only house insurance coverage that must be carefully assessed. Contents insurance is also often under-estimated, as two participants noted:

Make sure you have absolutely everything costed out for your contents insurance. We thought we had been generous in estimating our losses, but there are still things we forgot to include. To replace everything costs far more than you think. The furniture is easy to cost. It's the small things that mount up – tea towels, linen, crockery, tools, books, CDs, socks, underwear (interview).

It's very clear it's needed ... I think most would have contents insurance, but some people only have national super and they do struggle. They might find it hard to afford it (FG).

5.4 Summary

Insurance is a major determinant in the ability of older people to recover well from an adverse natural event. Participants have found dealing with insurance claims to be a complex and sometimes distressing process that has taken a lot of careful management. There has been confusion about what exactly is covered by insurances. Some have struggled with added financial burdens because payout has not covered the total cost of repairs and remediation. A few cannot get insurance on their renovated property. There is increasing reliance on electronic communications, requiring a new level of individual engagement with insurance products and providers. Participants have become much more knowledgeable about the insurance system and the nature of their premiums through the flood experience. That learning is continuing for all policy holders as the current insurance framework may challenge affordability and requires further skills in accurately assessing the costs of re-build. The particular issues that older residents have in understanding insurance policies and products, as well as affordability of insurance and the shortcomings of digital technologies for communicating with seniors, have been noted in other studies.³²

³² Greenberg, 2014.

6. HELP AND COMMUNICATION

A key theme throughout the interviews and focus groups was the importance of receiving help and support, not just at the time of the event, but for a considerable time afterwards. The clean-up is often particularly hard to manage. Dealing with repairs and insurance claims is also very challenging. While some had repairs organised through their insurance company, others took on the organisation and management of repairs, renovation or re-build themselves. Some older people are able to manage clean-up and repairs but others find it difficult because of declining physical abilities, the scale of the job, or because they do not know how to assess and organise what needs to be done.

6.1 Receiving help and support

Participants noted the crucial support and practical help from their spouses and close family, as well as from friends and neighbours.

People came out to dig mud with us for two weeks ... it rejuvenated the whanau and we wouldn't have survived without it (FG).

We had two bits of luck. My son and his partner were with us at the time, I don't know how we would have coped otherwise. And another family member rented their house to us (interview).

Nevertheless, a few felt like they have had to deal with everything on their own. It was particularly older women without spouses or family nearby who found the clean-up and dealing with repairs very daunting. Some others also felt that they could have received a lot more help than they did:

Nothing! Council never showed their face once ... You got a bottle of water and a number for Red Cross and that was it. Sally Army told us where they were and that was it (interview).

Red Cross enquired whether we had registered with them, no-one had told us that was something we could do (interview).

Participants who did receive help from organisations were very appreciative, however they made some observations about the timeliness and appropriateness of help. It was noted that offers of help with the clean-up can come too early, before it is clear what type of help is most useful. Several people commented on the 'ups and downs' of recovery, which is not a smooth or predictable process. One support worker noted,

"flood victims already felt inundated even though others were trying to help. You have to be really respectful."

When asked what helped the most, one person concluded:

The best help anyone gave us was the council provided skips for the rubbish and waived the dump fees (interview).

In a national survey of older people's experience of adverse natural events, 20 percent reported that their neighbourhood took three weeks or more to get back to 'normal', and nearly one third of those with damaged dwellings or property reported that it took them three weeks or more to get back to normal.³³

The interviews and focus groups also showed that sometimes help is needed over lengthy periods of time. It could take several months for a dwelling to dry out, making repairs possible. There could also be weeks waiting for electricity to be reinstalled, months for the sewerage system to be fixed and for potable water supply to be reliable. People could need help to access alternative services over that time. Access to transport can also be a long term issue. A few people reported still not having vehicle access to their property over two years after flooding occurred.

The problem is that the initial offers of help could be too early or often tailed off after the first couple of weeks. The community also gets exhausted trying to maintain support throughout the unpredictable course of recovery, as one person observed:

There was a cohesive community feeling at the beginning but this went after a while (interview).

Participants talked about their experiences of getting help:

We got offers of help from a business and a church, but it came too early. We didn't know what help we needed. We appreciated it and they did some of the clean up on the outside, but we were struggling to cope ourselves, let alone trying to think about what help we needed and organising someone else (interview).

There's a lot of help at the start, but that's not when you need it – you need it weeks, months later (FG).

Participants noted the importance of ensuring that the type of response is appropriate for what is needed at the time. Some of the most useful responses reported were:

- Provision of cooked food and hot drinks.
- Help with packing up household goods.
- Washing clothes and household linen.
- Provision of storage facilities.
- Provision of areas under cover where household goods could be dried out.
- Provision of free skips and rubbish disposal.

³³ Saville-Smith and Fraser, 2013.

6.2 Communication

Several participants considered that the wrong personnel were assigned to work with flood-affected communities, and this made recovery more difficult for them:

In our experience the chosen civil defence people were not people you could communicate or really share what was going on with (interview).

These agencies come and do more of an upsetting role than smoothing things out (FG)

The real problem is getting response right, at the time and after (interview).

It was completely the wrong choice of person to liaise with those affected (interview).

There was also criticism of a lack of on-going communication and liaison between affected residents and the various response agencies (councils, infrastructure contractors, insurance, EQC) over the weeks and months of clean-up and recovery. Participants considered that this lack of coordination among agencies and poor communication with residents frustrated efforts to get back to normal. Some experienced difficulties in getting information about what was happening to repair infrastructure. Many participants also noted that conflicting advice was given by different agencies and insurance companies.

A loss of confidence in local government and emergency response organisations was apparent:

The council went on holiday, so whenever I rang them up I was put through to a call centre – they didn't even know how to spell [my location] (interview).

It wasn't the lack of infrastructure that was the problem, it was the lack of communication and support from council (interview).

We didn't know what was going on. We were told nothing by council (interview).

There were so many things that we were told that we reacted to that just weren't right. Then someone else came along and told us something else. Initially we were told that neither EQC nor insurance would cover anything (interview).

I would have liked the council to send someone to come around to talk to me about the storm water ... It would have been nice if the council had been in touch (interview).

Council were ducking for cover ... Council indicated they would sort things out with EQC and although they indicated they would help, they have given no help and have been obstructive. They insisted we paid rates yet the house was red stickered! We had lost the house, entire contents and car and we were treated like that (interview).

One particular incident illustrates a lack of communication with residents and poor coordination among different services. Some residents who went to get food for themselves and their neighbours were denied access back into their area. They did not know why this problem could not have been resolved more quickly, or why communications processes between organisations managing road repairs appeared to have fallen down. This incident was seen as unnecessarily increasing stress on flood-affected residents:

We took the four wheel drive to get some supplies for ourselves and the neighbours. When we were going back home, the contractors wouldn't let us through, because the heavy machinery was working. I thought they were stopping rubberneckers, but even though we explained that we were locals and had gone for supplies, they said we wouldn't be let through for 24 hours. I lost it at that point, it was really inhumane (interview).

Several people suggested that a dedicated position should be established to work with and support older people affected in adverse natural events. Two commented:

It would have been nice if the council had been in touch with older people. It's very hard dealing with things when you're under a lot of stress. You're very angry and trying not to lose it, and they think you're just being a silly old person. You need someone to be with you dealing with it, an advocate is the word I'm looking for. It's got to be an advocate who knows what they're talking about though (interview).

One of the things I've found personally is that you need to have a trained advocate to walk alongside people. Older people who are care-dependent, you need to be aware of their problems (interview).

6.3 Helping Vulnerable People

Older people with chronic health conditions or disabilities are likely to be the most vulnerable and to need additional help in an emergency. Their ability to deal with things and make decisions could be compromised.

Participants asked questions about how frail and vulnerable older people can be assured that they will be contacted and help provided if required. In particular, those in focus groups raised concerns that older residents new to an area, living alone, or without close friends or relatives nearby might not be part of networks that would ensure people were checked on and assisted if necessary.

Many participants noted that frail older people living independently in the community may be far less identifiable than those in aged residential care as needing special help in an emergency. Discussion about this issue in four focus groups is shown below:

- *What would it be like, what would older people with disabilities have to do to deal with these things?*

- *Especially if you're trying to deal with their welfare in an emergency shelter, meeting their immediate needs ...*
- *In a city you could have older people overlooked completely. If they're not involved in a church or other groups, how would people know they're out there needing help? (FG).*
- *[older people] can be overlooked, people don't know, they're not as visible, they're not that mobile.*
- *I've often thought, if I had an accident, who would know, who would ring me?*
- *Older people are scared, aware of security, they are reluctant to get to know their neighbours. They don't know who to trust.*
- *You can't rely on your cellphone to contact someone ...*
- *And not everyone's hooked up to the internet*
- *We were brought up to know our neighbours, but it's not like that now (FG).*
- *I was thinking of people in wheelchairs who are put to bed at night and know they can't get up until someone comes for them in the morning ...*
- *It comes back to neighbours looking after each other (FG).*
- *Where would I go to get my medication in an emergency?*
- *How will the medics know that I have allergies?*
- *Will my personal alarm work if the power is off and the phone is off?*
- *Most of my neighbours come from somewhere else. I know them just to say hello to, that's all. There are some here who never mix with others (FG).*

6.4 Summary

Participants noted the crucial importance of receiving help and support in dealing with the myriad tasks of recovery. There was support from family, friends and neighbours, but some felt that they could have received a lot more help from organisations. Some older people find it hard to manage clean-up and repairs because of declining physical abilities, the scale of the job, or because they do not know how to assess and organise what needs to be done. It was particularly older women without spouses or family nearby who found the clean-up and dealing with repairs very daunting. Participants were also concerned that vulnerable older people who are frail, disabled or with health conditions, would be able to get the help they need in an emergency.

A key issue identified by participants is that help needs to be timely and appropriate. Also critical is the choice of personnel with the right skills to work with older people, and appropriate communication and liaison with flood-affected residents. Poorly managed support services can frustrate efforts to get back to normal.

7. WELLBEING

Several of those interviewed were adamant that this report should not just focus on the material and physical impacts of flooding on property and infrastructure. While those impacts can be financially burdensome, upsetting, frustrating and wide ranging, many of the participants emphasised that it is the impacts on their physical and mental wellbeing that can be most enduring and most challenge recovery. These wellbeing impacts, they emphasised, were not only caused by the flood event itself, but more by the challenges and frustrations of working through the complex processes of recovery that involve dealing with many different organisations.

Other studies have also commented on the profound mental health impacts experienced by older residents, especially those who have been displaced by an adverse event, as moving tends to disrupt their support networks. Other factors associated with mental health impacts have been identified including difficulties with insurance companies, and pre-existing health conditions.³⁴

7.1 Mental and physical stresses

Over the lengthy recovery period of months and even years, participants recall being stressed, angry, worried, frustrated and exhausted. Years later, some participants say they are still recovering and still feel those effects. Participants reported effects on health and wellbeing that they directly attributed to the floods, including heightened anxiety and exacerbation of existing medical conditions, as well as the emergence of new illnesses:

Since this has happened I've got asthma. It's stress related. I'm still vulnerable. It's an on-going saga ... It's very hard dealing with things when you're under a lot of stress. You're very angry ... I feel I've had to battle with this all myself. It's been pretty stressful (interview).

I've had serious health problems due to the stress. The worst thing was not knowing what was happening (interview).

I wasn't sleeping well for months (interview).

A lot of people were really traumatised. Later on someone sent me a list of the characteristics of trauma and I had all of them. I hadn't realised (FG).

Participants emphasised that a sense of stress and anxiety endures years after the event and is worsened by the expectation that a flood might happen again:

³⁴ Greenberg, 2014.

If there's a storm, I'm anxious. We have had another flood in July 2013. It only came up to the concrete. Very stressful, don't know how high the water will come up ... The other stressful thing is, we can't sell the property, there's just no interest (interview).

I'm still concerned about the possibility of run-off from neighbours in a big rain ... I still feel very vulnerable (interview)

Yes I'm very well prepared, but the biggest thing is the psychological effect. I'm not worried about the house, I'm prepared with physical things. It's the unpredictability and the stress of not knowing when it will happen (interview).

It is so un-nerving, out of our control (interview).

I live on tenterhooks every time it rains, because the road might close, and because of slips ... every time it rains I have to turn my water off because it comes out of the creek, which fills up with mud (interview).

A couple of months ago we had heavy rain and we couldn't get out. I don't care about myself, but it was getting my grandchildren to safety (FG).

A few also expressed concern and worry for others who had been much worse affected than themselves. They felt it was sheer chance they had escaped with little or no damage. The unpredictability and randomness of an event that left one side of the road devastated and the other side relatively unscathed was hard to accept. They also felt exhausted trying to help others, and missed friends and neighbours who had left because of the floods. Several expressed how they felt about what happened in their neighbourhood:

Luckily we're on the high side of the road. About three days after it happened, I was mowing the lawn. The neighbours across the road couldn't even find their lawn (interview).

Our place is on the edge of the worst ... we had three inches of surface water on the property ... we were so lucky, our place is just a bit higher (interview).

A set-back for one is a set-back for all (FG).

- *The long term effects are that they're really shaken up. What can you do? Make sure that someone's around there.*
- *How do you plan for things like that?*
- *We instantly became family with the old lady next door, it was terrifying for her, her dog was traumatised.*
- *Old people become dithery and fixed in their ways when they are stressed. You have to take that into account. There's a special way of helping (FG).*

Two focus group discussions showed how people become aware about managing their own stress and anxiety:

- *Karakia, prayer does help.*
- *You can stay strong, you must focus on yourself in order to help others.*
- *You must have a sense of calm.*
- *Yes, be really positive.*
- *We have to have a sense of community.*
- *A sense of responsibility and looking after others is passed down from our old people (FG).*

There was a huge upsurge of energy in the community after the flood happened. It brings everyone together. We had community meals, looked after the kids (FG).

7.2 Summary

“A normal response to abnormal events” has been the way that health and emotional impacts due to floods have been described. Those impacts are not because individuals are weak, but are rather a reflection of how flood response and recovery are managed, support provided and problems addressed.³⁵

Participants in this study identified a number of health and emotional impacts due to floods, such as illness or exacerbation in health conditions, as well as feeling angry, anxious, exhausted, stressed and vulnerable. Even those participants who sustained no, or very little damage in the floods, could experience emotional impacts because of their concerns for others in their community who had been affected more.

Health and emotional impacts can be the most enduring and most challenging for recovery. Participants emphasised that stress was not so much caused by the flood event itself, but by the difficulties and frustrations of working through the complex processes of recovery. Stressors differed from person to person, but there were some similar factors, such as the extended periods of clean-up and repairs, having to deal with a range of organisations, the attitudes of organisational personnel, lack of communication and conflicting information from organisations, and the fear of future flooding. Participants were very aware of health and emotional impacts on themselves and others, and some talked about the ways they tried to cope.

³⁵ Whittle *et al.*, 2010.

8. OLDER PEOPLE PROMOTING COMMUNITY RESILIENCE

Although experiencing a flood is traumatic and distressing and older people are potentially more vulnerable, participants did not think of themselves as passive victims. This section looks at four areas where older people contribute to their own and to their community's resilience:

- Firstly, those who were caught up in floods have used their skills and knowledge to deal with the aftermath. They also learned new skills and gained confidence in managing challenging situations. Even those who felt very stressed and overwhelmed by major clean-up efforts, repairs and site works on their properties commented on things they had learned, managed and succeeded in doing.
- Second, some people have made specific efforts to increase the resilience of their property. This could be through drainage works, or through simpler and less expensive actions.
- Third, participants, including those who have not directly experienced a flood, have made special efforts to be prepared for an emergency. In part this has been prompted by the Canterbury earthquakes in 2010 and 2011, as well as the Cook Strait and Seddon earthquakes that occurred in 2013 during the research period.
- Finally, participants talked about how older people can make important contributions to planning for adverse natural events.

8.1 Skills and knowledge

Several participants thought that prior experience gives older people a coping advantage, whether it is because they have experienced a natural hazard event or adversity before, because of their occupational skills, or simply because they have life experience. Those in focus groups discussed this at some length:

- *Older people survive a lot easier because we know what to expect and know about being prepared.*
- *We have life experience. We don't like to be talked down to or treated like old duffers (FG).*
- *Older people because of their vast experience usually do a lot better than the younger ones ...*
- *They have more of a number eight fencing wire mentality.*
- *Know how to make a toilet (FG).*
- *The older you are, the more you know about how to survive.*
- *We've been brought up in the old ways, know how to survive.*

- *Go back to your roots. If you want to learn something, local knowledge is important. The old people know where the vulnerable areas are (FG).*

I was the health and safety officer at work. Everyone should get their first aid ticket (FG).

Several older participants noted that they personally had skills important to their own response and recovery as well as to others in the community. Their capabilities in were important to both the formal and the informal response in their areas. Older residents, because of the time they spend at home, are often the only ones ‘on the spot’ when things happen and their ability to help others can be critical. Two of those who were interviewed recounted their actions:

There’s a whole lot of opportunities I had that I utilised, project management skills, people skills, contacts. I got people onside. I had skills and contacts to make it work for me ... I had a gang of guys here and they went around cleaning up for others affected too. They moved a lot of dirt (interview).

Me and a guy from up the road, we’re going round in a dinghy picking up the sheep (interview).

Some found they wanted and needed to actively manage their own recovery, as this made them feel more able to cope and in control by doing some things they had power over. It was also a way of achieving some normality. Two examples were:

We did some painting. It was a way of doing something to the place that we had control over (interview).

As an older woman - how to keep myself more resilient - wanting to keep my mind, my body more flexible, so if things happen I can deal with it ... All I had was my physical strength and my mental ability. Now I’m thinking like a beaver (FG).

Some have become more assertive through their experiences of dealing with the ups and downs of recovery. One person talked about this:

The carpet guy, I found him very difficult, he was telling the insurance the wrong things and not listening to me. I phoned the carpet people and said, I can’t deal with him and they were nice, they sent someone else to do the job and he was fine (interview).

8.2 Flood Proofing and Resilience

In addition to doing flood repairs (which in some cases were taking many months and had not been completed at the time of interviewing) participants reported additional flood proofing and resilience measures they have taken, such as section drainage works,

installing water storage tanks to give some independence from mains water supply, as well as regularly cleaning out and maintaining guttering and drains. Examples included:

We have built up the area and made a drain, channel and wall to divert water. We've re-concreted around the back door and re-gravelled the driveway (interview).

We put higher boards on the fence separating the neighbour's driveway from our property (interview).

I've cleaned out the drains ... I've cleared the garden and stacked up the firewood to improve the ability of rainwater to run away (interview).

I rang my neighbour about his drain and suggested that it was blocked. I think he has cleared that now (interview).

8.3 Being Prepared

There was anxiety about the unpredictability of natural events, and a few participants felt that preparation is futile because of that unpredictability. However there was a much more prevalent view that older people can and want to be prepared. Some participants said that through their flood experiences, they have learned about coping in emergencies.

One focus group emphasised that older people need the type of support that enables them to make their own decisions and take control themselves (if they are physically and mentally able to). Other focus groups made similar points about older people preparing themselves for an emergency and building up confidence that they can help themselves:

- *Always have some cash in your emergency kit for food and petrol.*
- *Make a list of neighbours with phone numbers and emails and keep them in an accessible place.*
- *If you are caught in an emergency, keep a diary of who you contacted and your experiences with them, e.g. insurance, tradesmen, council, agencies. Because we'll be stressed and won't remember. Note agencies contacted, who you spoke to, what they said, whether they were helpful.*
- *We are very practically focused (FG).*
- *I went out and bought a gas stove after the last earthquakes. I live in a flat and I've only got an electric stove.*
- *Make sure you have your own survival kit. This will get you through the first few days. It all depends on personal preparedness. Take some responsibility for that (FG).*

- *I have canned food, I buy it when it's cheap.*
- *I make sure I keep at least two month's supply of my medication.*
- *I keep mine all together so I can pick it up quickly (FG).*

8.4 Knowledge for Emergency Planning

Several participants said they would have appreciated the opportunity to contribute ideas to emergency planning and implementation. They identified a range of skills and knowledge they have which they can share with others in an emergency. These include:

- Organisational and management skills.
- Camping and outdoor living skills.
- Knowing how to make a fire to cook on.
- Ability to make a temporary toilet.
- Knowledge about food storage.
- Knowledge about bulk water collection and storage.
- First aid expertise and having equipment to share.
- Knowledge of their local area, the history of flooding, local flood infrastructure and changes in land use.

They felt they have skills and knowledge that would benefit emergency planning and responses, and there should be more recognition and use of locals' knowledge and skills:

Things were getting out of control, contractors doing clean up weren't talking to locals and using local knowledge (interview).

They really are not prepared to think about it. The problem is the bend and the culverts downstream. But they just send in diggers without any real plan. Developments have really changed things but they won't admit it (interview).

For a long time I looked after the water supply here. I got in touch with some elderly gents who knew the early days and what happened to the water before they made the diversion. It [flood water] would still come back to this low point. It would go along the hill (FG).

8.5 Summary

Older people have capabilities, skills, knowledge and resources that contribute to recovery and to building up community resilience. Participants used and developed new skills, while some gained confidence in managing challenging situations. Several were literally the only ones on the spot when the floods hit and became important first responders.

Generally, participants considered that older people can and want to be prepared. Some have taken additional steps to flood proof and make their homes more resilient. Several

considered that older people have skills and knowledge they can contribute to helping others to be better prepared. They wanted older residents to have more opportunity to share their skills and local knowledge, as well as contribute ideas to emergency planning and implementation.

9. SENSE OF HOME, PLACE AND FUTURE

One of the biggest impacts of a flood is not just the physical ways in which the dwelling, section and neighbourhood are changed, but how a person's sense of home changes. A flood can also change one's expectations for the future. This is about the emotional as well as material impacts.

People of all ages can develop strong attachments to their surroundings, but there are aspects of attachment specific to retired people as they tend to spend more hours at home than working age people. Consequently, home is the focus of much of their everyday life. Furthermore, some older people have lived in their homes and localities for most of their lives. Home and home life can take on special meanings for them: a space where things are constant, ordered and expected, and where the individual can exert control. Having one's own home space becomes very much part of one's identity.³⁶ All these things are challenged in a flood. Everyday routines are thrown into disorder, life is no longer predictable or controllable, and with the loss of a familiar home environment, older people can experience a loss of identity and purpose.

On an emotional scale I'm still affected. I was drawing a map for someone and I was about to put in a bridge and I thought, hang on, that's not there anymore (FG).

Every day we saw next door's house which was destroyed. It was a continuing reminder. I feel completely different about being here now (interview).

9.1 The meaning of home

Some participants said that their losses in the flood and afterwards changed the way they viewed their home and surroundings. These feelings, they considered, were belittled by organisations involved in response and recovery. What was important to them, and what they valued were not acknowledged.

It was not just the loss or damage to the dwelling that had an impact on people. For some, the loss of a productive vegetable garden and fruit trees, or plants and trees with special meaning were more important than the dwelling itself. Others spoke of the loss of tools, hobby materials, collections and memorabilia; treasures acquired over the years that cannot be replaced.

Half the garden has gone down the hill, and the orchard and native plants. I had a lot of threatened species. I can't restore them because the land has gone (interview).

³⁶ Dupuis and Thorns, 2002.

It was our sanctuary garden and self-reliance ... People don't understand what we've been through, they don't understand why you don't get over it quickly. They make light of it. Our property was our whole life, I couldn't face looking at the garden after it was damaged ... The property has changed so much. We've had to develop a new garden and orchard. New weeds have come in which we didn't have before. That's a huge amount more work. Even in an insignificant rain now, we get a sewer discharge warning (interview).

In some ways it's back to normal, but the huge thing was the garden disappearing, it was covered with 1.5m of sand. First response was to re-create temporary gardens to rescue what we could (FG).

Valued recreational and food gathering activities have also been lost, as two focus groups explained:

- *Ever since then the fishing's been affected. It's gone off, it's not the fishing grounds we once had.*
- *That's what we've got to get back to. Native trees clean the waterways. Things like harakeke. The river is now unsafe for our children ... we should be planting harakeke all around so it cleans the water that comes off the hills.*
- *It's mother nature, don't forget. Many things are different since the flood – the slips, the rivers (FG).*
- *It took months for the seafood to come back ...*
- *Silt is still coming down the creek (FG).*

There is also the loss of home as a safe place. In particular, one person talked of feeling invaded, not so much by the flood as by the prolonged disruption of clean-up and site restoration afterwards. Others also perceived a loss of physical security where previously they had enjoyed being comfortable and safe:

One of the worst things was that the biggest digger came and flattened our whole entrance. We were invaded. I lost it that day, it was completely inconsiderate of our situation (interview).

I felt very vulnerable because of the empty house next door covered in mud. Young guys were using it as a right of way (interview).

9.2 Changing views of vulnerability

As the quotes above show, the sense of home as a safe and secure haven is threatened by floods. While a lot of the participants are aware they live in areas at risk of flooding, nevertheless, some were surprised at the ferocity, nature and extent of flooding that occurred:

Didn't think much of it at the time, we had heavy rain before that would run down the road. This time, the rain was so steady and heavy (interview).

I got a lot of water in because of the low-lying site. I didn't realise how bad it was (interview).

- *We got flooded where it's never been expected before. Twice. It had never happened there before.*
- *We were flooded the same time. It wasn't surface flooding it was internal flooding through a spring which had never occurred before (FG).*

After the floods, there was a generally heightened awareness of the on-going possibility of flooding. The new normal for some, is flooding or land slips as a fact of life:

In 2011 we had flooding down the neighbour's driveway sluicing into our place, up through the floor, to the top of the skirting board in the back bedroom. We put up boards all along the driveway fence. Then we had that extremely heavy rain in April and it happened again, this time into all the bedrooms and the garage (interview).

I'm very exposed to slips from the neighbour's property (interview).

This house is built on unstable land, the piles have dropped in the lounge ... my property has no storm water drains, whereas my neighbours have (interview).

One couple decided to move because they did not want to continue living in a flood prone area:

We wouldn't have been happy continuing to live in that area. We'd be worried every time it rains. Our new location is not going to get washed away and there's nothing behind it to cause a land slide. We have thought about it very carefully (interview).

Some had made considerable efforts to find out about their site prior to buying. They felt let down, because despite their diligence, they had been caught up in flooding:

We hadn't heard about any risks with slips ... there was nothing on the LIM but there should have been because we later found out about engineers' reports for three house lots on the sub-division said they should have additional engineering work – this was not on the LIM (interview).

There was no flooding identified on the LIM report (FG).

Some are also now worried about other hazards:

We are more aware that things can happen. We're not too worried about big floods again because so much work has been done on the channels. But we are worried about fire in the gorse on the hills. There's been a lot of new development and a lot of regrowth after being cleared (interview).

The place is vulnerable to floods, sea-level rise. It's a matter of when. Gaping gouges in the hills. Biggest issue is access. Potential fire (FG).

I take the dog for a walk. We're walking on the beach and I think if a tsunami comes now, what would I do? ... I'm more worried about tsunamis ... I've asked for them to paint a blue line [to indicate where safe ground would be during a tsunami] (FG).

Participants in both urban and rural areas expressed anger at their council's flood management practices over the years and expanded their views, often repeatedly, on why the flooding had occurred. For them, the cause was not just an extraordinary weather event, but due to policy and planning decisions resulting in changing rural land use practices, urban sub-division or inadequate infrastructure maintenance. Some were concerned about what they perceived as poor monitoring of development and land use practices, as well as compliance requirements.

The comments are presented below to illustrate the scope of those concerns:

Sure it was an adverse event but this was made so much worse from adverse human policies. ... allowing buildings to be placed on unstable areas ... farming leading to further development ... there was a mini debris slide in 2007 or 2008. At that point I asked the council, what was happening with the logging operation. Consent conditions were to not leave debris in the water course, council was not monitoring those conditions (interview).

It was man caused. Failure of the landowner above me to deal with the first lot of problems on his section ... He's got several council notices to fix it ... the council hasn't got the balls to enforce it (interview).

There's no stormwater on this property. The backyard floods any time there's a lot of rain. The neighbour doesn't have stormwater drains either. Ponded water from other properties drains into my place. I get annoyed with the council not sorting out the stormwater. The bottom of my section used to be a creek and when it was sub-divided, it was just filled in ... I don't think that any of the neighbourhood has stormwater drains (interview).

I have a theory personally that's not popular. It's to do with draining the wetlands (interview).

I would've thought council could have been a bit more active in looking at drainage and runoff ... The place is growing, new sub divisions. The stormwater isn't coping (interview).

Council is appalling. They are really not prepared to think about it. The problem is the bend and the culvert downstream (interview).

Slips were caused by over-grazing on the hills. The road has slumped before. Slips came down the gullies and took out the road (interview).

And the road up there no storm water. Council hasn't rectified that (interview).

- *The regional council, how they changed the flow of our river, has a lot to answer for.*
- *It was sad to see the devastation. Over the years the councils have done so much damage trying to deal with earlier floods (FG).*

9.3 Uncertain Futures

We had our retirement all worked out, then the flood happened! Everything we've worked for in a comfortable retirement has gone (interview).

Money and accommodation worries threaten the sense of a secure home. For some of those who were relatively financially secure prior to floods and expected a financially secure future, the floods have changed all that. Participants reported being stressed about the on-going financial impacts that they were still contending with. These include the on-going expenses associated with dwelling repairs and site remediation, which are not always covered by insurance payouts:

I've been running backwards with all the bills ever since (interview).

I haven't replaced some of my possessions because I can't afford to. I've just done the essentials with the payout, like the plumbing and retaining work (interview).

Several participants also experienced financial stress due to paying rates on uninhabitable property, or property with severely reduced services since the floods. Eventually they were able to get rates relief.³⁷

For a few participants, their retirement dream home has turned into a nightmare. The flood has threatened their financial security, which was primarily tied up in their property, and consequently this has restricted the choices they can make about their future. They described their situation as “*having to start all over again*”. Others talked about having limited time, because of their age, to deal with set-backs.

Participants expressed fears about flood repairs and remediation being unmanageable both financially and in terms of organising and managing the processes involved. They talked about having to make big changes in their housing situation. This could involve a mortgage, or selling up and moving to rental housing, a retirement village or into aged residential care. Several were reluctant to leave their area because of attachments, even though the possibility of more flooding looms, as do worries about future expenditure on flood repairs on top of routine running costs such as rates, insurance and home maintenance. The flood has prompted thoughts about moving or reducing their housing expenditure, as these comments show:

³⁷A similar issue has arisen in Christchurch, where Christchurch City Council is developing criteria for rates relief to assist householders who have had to move out of their homes because of flooding. <http://www.ccc.govt.nz/thecouncil/newsmedia/mediareleases/2014/2091405013.aspx>

I'm thinking about blocking off the garage, I need to live in the garage and rent the house out. I'm overcommitted ... I have to stay, I have no choice (interview).

I have to take out a mortgage, at my age! I am going to have to move, I've got to buy a cheaper house so I can pay back the loan I will have to get to pay for all the work needed (interview).

I'm still concerned about run-off in a big rain. My sons are going to come and see it in the next big rain to see how things could be improved. But at my age, I don't want to spend too much money on the house. I don't want to be a worry to the family, maybe I should go to live at a retirement village (interview).

We have built a new drain and a swale to divert water. We won't know until the next big rain. If we have a problem, we'll work out another solution. I have thought of moving to a pole house, but I don't really want to move (interview).

Things that had to be fixed here in the house went to the bottom of the list because of the flood, other things had to be done. I don't want to leave this area, because I have my family, the dentist and shops right here. But my property is getting too big for me. I can't keep up with the upkeep. My gardener costs \$30 an hour and on top of that it costs to take green waste to the tip. The flood brought the rats, which have eaten my water pipes. That cost me \$800, and the insurance wouldn't accept that. These are the sort of things that drive older people out of their homes (interview).

9.4 Summary

The floods have changed participants' sense of home and attachment to their area. Their views about the safety and security of their home have been changed, not only because of physical damage to their house, but also because of the loss of treasured items and changes to the natural environment. Many felt that their losses of valued items and places were not understood by recovery organisations.

Participants also have a heightened sense of vulnerability to natural hazards that upsets their sense of home as a safe place. Most were very critical of organisational responses to flood mitigation and management, and considered that continued mismanagement threatens the safety and security of their home. Some were considering a move because of fears about future flooding. On-going financial worries, a direct result of dealing with flood impacts, are also forcing some to reconsider their future security in their current house. Overall, the flood has limited future choices and options.

These experiences show the potential for adverse natural events to make older people's housing and financial circumstances uncertain, increase their vulnerability, threaten their independence, and detach them from their communities.

10. FINDINGS: IMPROVING RECOVERY

I want something good to come of this at a community level, see the causes, to make some change, to improve things for the future (interview).

I'm glad the lessons are being recorded and exposed to others (interview).

A growing body of research, as well as evaluation of disaster responses, contribute to our increasing understanding that recovery from adverse natural events can take years, even decades.³⁸ However, policy, planning and operational practice do not always incorporate and act on that knowledge. One of the reasons participants in this study have talked about their struggles is because they want organisational responses to be improved for those caught up in floods.

Organisations with a role in response and recovery are wide ranging, including councils, government agencies, insurance companies, utilities companies, building and construction companies, materials, furnishings and equipment suppliers, community organisations, health services, transport providers, churches and other local groups. Participants' experiences have shown that inadequate organisational responses can increase people's vulnerabilities, create new barriers and challenges, affect the way they feel about their recovery and impact on their ability to engage and take responsibility for themselves. These have been called the 'secondary stressors' resulting from the poor organisational management of recovery.³⁹

Participants' stories show that their lives have been changed significantly by their flood experiences. There have been material, physical and emotional struggles. At times people have felt angry, frustrated, overwhelmed and exhausted. Stress has continued over long periods. But they have also helped themselves and others, managed, organised, coped, used and developed skills, and shown a tenacity to get through.

For some, those changes are still happening years later and will influence future decisions about where they live. A few have said they feel that they will never recover. It can probably be said that there is no clear 'end date' when recovery is completed and things are 'back to normal' for them. Some things will never get back to how they were. Some people reported aspects of their lives that are worse, although others reported positive changes too.

A number of participants noted that the problems they faced are not unique to older people, but can affect people of all ages who experience floods. These include: the stresses and strains of prolonged recovery journeys, disruption to everyday life and routines, adjusting to temporary accommodation, living with damaged infrastructure,

³⁸ Cabinet Office, 2008; Gray, 2008; Lloyd's, nd; Whittle *et al.*, 2010; McLean *et al.*, 2012.

³⁹ Whittle *et al.*, 2010.

reduced services and utilities, money worries and anxiety when there is heavy rain. On the positive side, they acknowledge that the strength of family, community networks, help and support are important contributors to recovery for everyone.

Participants also recognised through their own experiences, and the experiences of others they know, that some older people are especially vulnerable in an emergency. This is due to age-related frailty and disability, reliance on a fixed income, lack of relatives nearby or detachment from local networks, as well as living alone. Also, older people living independently may be less visible in their communities and consequently their specific needs easily overlooked.

The reality is that in an adverse natural event all residents, including older people must be able to manage at home. Civil defence and emergency services cannot be expected to respond immediately. If evacuation is not likely and essential services and infrastructure are cut, then the need for ‘shelter in place’ strategies and localised plans to assist older residents become particularly important.⁴⁰ It is also essential to ensure that older people’s housing is made as resilient as possible both to protect them during and event and to allow them to recover more quickly.

Through their stories, participants have identified a range of issues for organisations to address in their planning and responses. These include:

- What can be done to support older people to recover well from adverse natural events.
- Information needs of older people about emergency preparation and response.
- How flood-affected communities can be supported.

10.1 Organisations and Improved Response

Participants suggested actions for organisations to consider that are specific to older people:

- Work with older people feeling isolated and alone, or having to deal with the flood aftermath by themselves. Identify how help can be offered to those needing assistance with clean-up and repairs. This may include help with assessing and organising what needs to be done, as well as help with the physical work.
- Ensure that personnel in response and recovery roles have the appropriate skills and approaches to work with older people. Personnel should acknowledge and understand the emotional impacts of losing treasured items, gardens, and changes to home surroundings.
- Identify vulnerable older people living independently in the community and plan for how they will be reached and what support they will need in an emergency.

⁴⁰ Greenberg, 2014.

Identify those reliant on care services, and/or with health conditions, those without family support or who are not linked into any organisations such as churches.

- Identify and plan for assisting older residents in locations especially at risk of natural hazard events.
- Work with older people's networks through organisations such as Grey Power, Age Concern, RSA, U3A, CAB, churches and service clubs to identify the particular supports and information older people need.
- Insurance has an important role in recovery. Insurers may need to tailor their responses to older people, particularly those who are vulnerable, to help them resolve their claims and get repairs dealt with quickly. Currently there is a high take-up of insurance among older people, and this needs to be maintained to support their resilience. But this high coverage could be threatened in future by affordability problems, under-insurance and loss of trust in insurers.
- Involve older people more in emergency planning and response. Many have knowledge, skills, life experience and resources that contribute to the ability of a community to deal with an emergency.

10.2 Older people's information needs

Participants identified information about emergency preparation and response that would benefit older people:

- Information on what to do with their pets if evacuation is required, and whether there are evacuation or other facilities available for pets.
- Assist older people to become more aware of the natural hazards or risks in their location and how they can live with those risks.
- Ensure that older people can access information easily and through channels other than electronically as many older people do not use computers, cellphones or other digital devices.
- Many older people want to be well prepared and to be able to help themselves as much as they can in an emergency. However, they may need specific information and advice that is tailored to their circumstances and capabilities.
- Ensure that older people know what assistance is available to them in an emergency and how they can access it.

10.3 Support Communities

Participants identified issues that affect people of all ages when there are floods. They considered that the following need to be addressed:

- Policies and operational practices need to allow sufficient recovery time. Timeframes placed on the provision of support often does not reflect the real, extended time periods during which help and support is required.

- Improve coordination and management of road and site access for flood-affected residents.
- Improve the management of drainage and flood mitigation infrastructure, including giving residents information about planned flood mitigation works.
- Review how regulation, management and monitoring of changing land use and land use practices, such as forestry, farming, roading and subdivision can reduce the frequency and intensity of flood events.
- Help people to make simple and practical changes to increase their household resilience to adverse natural events.

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