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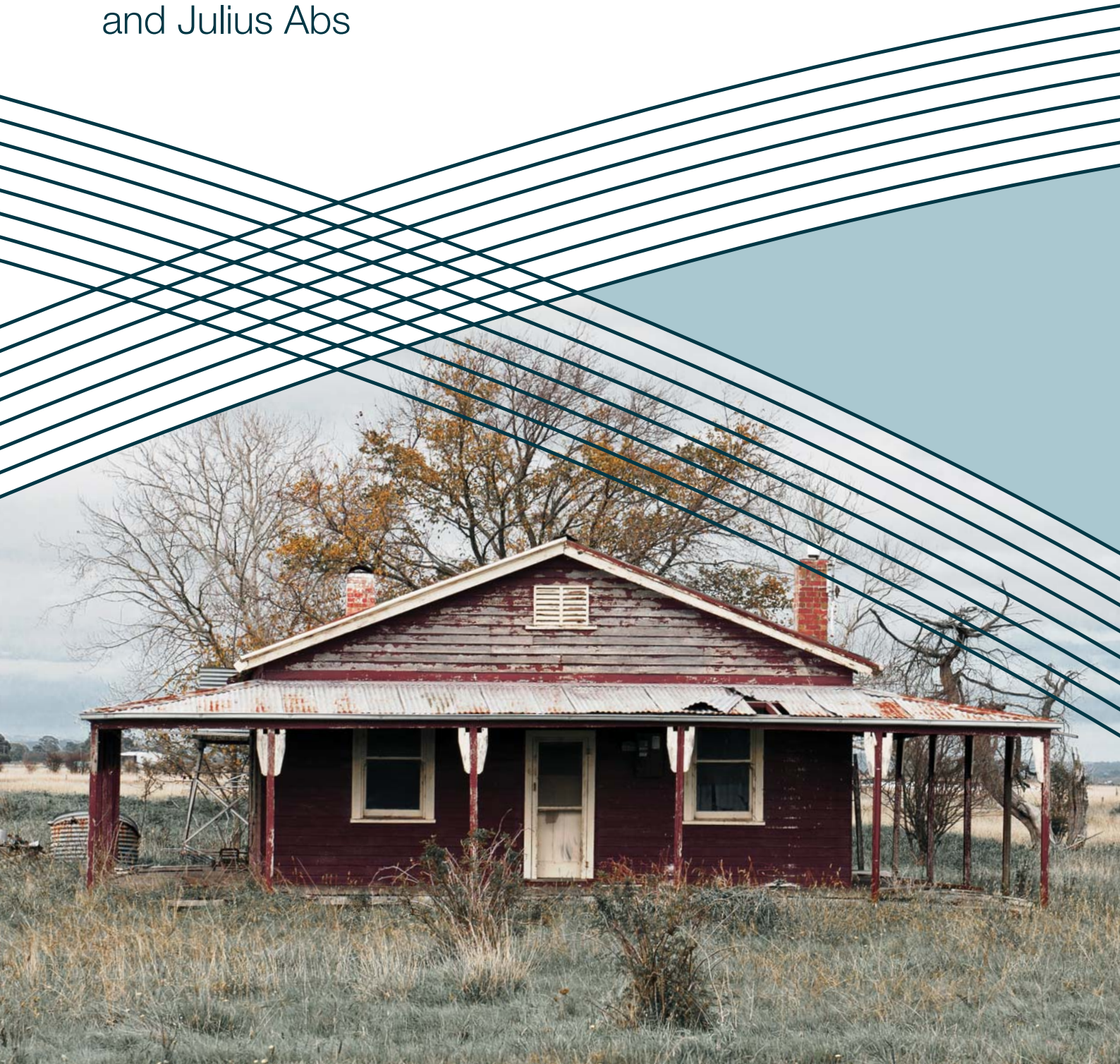
Adapting the community sector for climate extremes

Final Report

Karl Mallon, Emily Hamilton, Manu Black, Betsi Beem and Julius Abs



Adapting the Community Sector for Climate Extremes

Extreme Weather, Climate Change & the Community Sector – Risks and Adaptations

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The role of NCCARF is to lead the research community in a national interdisciplinary effort to generate the information needed by decision-makers in government, business and in vulnerable sectors and communities to manage the risk of climate change impacts.

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Glossary of terms and abbreviations

ABS	Australian Bureau of Statistics
ACOSS	Australian Council of Social Service
ACSS	Australian Community Sector Survey. The ACSS is the only annual survey that collects data about the non-government, not-for-profit community services sector in Australia.
ACTCOSS	Australian Capital Territory Council of Social Service
Adaptation	Measures to reduce the adverse impacts on human wellbeing resulting from changes in the climate that do occur as well as to regulatory attempts to mitigate climate change.
Adaptive capacity	The ability of a system to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take advantage of opportunities, or to cope with the consequences (Preston & Stafford-Smith 2009).
AIHW	Australian Institute of Health and Welfare
Carbon price	Cost or right to emit carbon by liable entity and equivalent cost pass through to other commodities and services, for example the Clean Energy Futures Package.
Community sector	The community sector in Australia comprises large and small non-government, not-for profit organisations that provide social and welfare services, including aged care and disability support, refuge and accommodation services, drug and alcohol rehabilitation, emergency relief and financial support, community legal and advocacy services, child welfare and family services and employment services. The community sector makes up a substantial component of Australia's not-for-profit sector, which contributes 5% of GDP and 8% of employment nationally.
CSIRO	Commonwealth Scientific and Industrial Research Facility
CSO	Community Service Organisation. For the purposes of this project, CSOs are conceptualised as 'black box' organisations such that their functionality is viewed only in terms of inputs required to operate and outputs in the form of social services provided by them.
Exposure	The elements subject to the potential impact of a hazard, in the case of CSOs, exposure includes buildings, offices and service centres, assets, staff and volunteers.

Flood	An excess flow of water beyond its normal confines. Flooding generally occurs from inland catchments following extreme precipitation, or from storm surge generated by low-pressure systems.
Grey literature	Written information such as reports that cannot be accessed through traditional means such as published journals. Grey literature remains an important source of information because it tends to be recent and original.
Hazard	A source of potential harm or loss. A hazard may also be referred to as a potential or existing condition that may cause harm to people or damage to property or the environment. In this project hazards are confined to primary, secondary and tertiary impacts arising from extreme weather and climate change.
IPCC	United Nations' Intergovernmental Panel on Climate Change
Mitigation	Measures to reduce the pace and magnitude of the changes in global climate caused by human activity, through the reduction of greenhouse gas emissions.
NCCARF	National Climate Change Adaptation Research Facility
NCOSS	New South Wales Council of Social Service
NTCOSS	Northern Territory Council of Social Service
Poverty and inequality	ACOSS uses an established poverty line of less than 50% of median household income to define poverty. In Australia, those most at risk of poverty and inequality include people with a disability, people who are unemployed or living in low-income households, single parents, the homeless, people living with chronic mental and physical ill-health, Aboriginal and Torres Strait Islander people and migrants, refugees and asylum seekers.
Primary hazard	Climate change related physical weather or climate impacts. Examples include individual weather events (e.g. windstorms, hailstorms or cyclones), changes in climate norms or means (e.g. reduced average annual precipitation), or shifts in climate-linked systems (e.g. El Nino Southern Oscillation effects or ocean acidification).
QCOSS	Queensland Council of Social Service
Resilience	The ability of a social or ecological system to absorb disturbances while retaining the same basic infrastructure and ways of functioning, the capacity for self-organisation and the capacity to adapt to stress and change.

Resilience indicator	This project developed and tested an indicator of CSO resilience to climate change and extreme weather impacts. This indicator measures resilience based on the breadth and sophistication of organisations' responses to risk through management, mitigation and transfer.
Risk	Exposure to danger, harm or loss.
Risk management	Actions to manage risks cover the identification and prioritisation of risks and the development and implementation of plans to cope with the possible impacts. Risk management actions include actions that would be triggered in the event of adverse impacts to the organisation.
Risk mitigation	Actions to mitigate risks aim to reduce or avoid altogether an organisation's exposure to a risk. Avoiding exposure effectively means removing the organisation from exposure to hazards.
Risk transfer	Actions to transfer risks result in risks being shared with or transferred to others. The most obvious way for organisations to transfer risk is to purchase insurance to provide coverage for losses sustained if the risk occurs.
SACOSS	South Australian Council of Social Service
Sea level rise	An increase in the mean level of the ocean.
Secondary hazard	Describe regulatory interventions by government or industry to address climate change. Examples include greenhouse gas emissions trading schemes or new building standards.
SME	Small and medium-sized enterprises
TASCOSS	Tasmanian Council of Social Service
Tertiary hazard	Refer to societal reactions to climate change and regulation. This includes auto-adaptation, such as urban residents coping with an increase in the number of very hot days by installing air conditioners.
VCOSS	Victorian Council of Social Service
Vulnerability	Degree to which a system or element is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes.
Vulnerability indicator	This report developed and tested one indicator of CSO vulnerability to climate change and extreme weather impacts. This indicator measures CSO vulnerability based on the length of time organisations need to recover or maintain services after an extreme weather event that causes damage and disruption to infrastructure and critical services.
WACOSS	West Australian Council of Social Service

ABSTRACT

People experiencing poverty and inequality will be affected first and worst by the impacts of climate change to infrastructure and human settlements, including those caused by increasingly frequent and intense extreme weather events and natural disasters. They have the least capacity to cope, to adapt, to move and to recover. Community service organisations (CSOs) play a critical role in supporting individuals, families and communities experiencing poverty and inequality to build resilience and respond to adverse changes in circumstances. As such, the services they provide comprise a critical component of social infrastructure in human settlements. However, very little is understood about CSOs own vulnerability to – or their role in managing and mitigating risks to their clients and the community from – climate change impacts to physical infrastructure.

The *Extreme Weather, Climate Change and the Community Sector – Risks and Adaptations* project examined the relationship between physical and social infrastructure (in the form of CSO service provision). Specifically, the ways in which the climate-driven failure of CSO service delivery worsens risks to the individuals and communities they serve and, on the other hand, how preparedness may reduce vulnerability to climate change and extreme weather impacts to human settlements and infrastructure.

The research comprised a comprehensive and critical scoping, examination and review of existing research findings and an audit, examination and judgment-based evaluation of the current vulnerabilities and capacities of CSOs under projected climate change scenarios. It employed three key methods of consultation and data collection. A literature review examined research conducted to date in Australia and comparative countries internationally on the vulnerability and climate change adaptation needs of CSOs. A program of 10 *Community Sector Professional Climate Workshops* consulted over 150 CSO representatives to develop a qualitative record of extreme event and climate change risks and corresponding adaptation strategies specific to CSOs. A national survey of CSOs, which resulted in the participation of approximately 500 organisations, produced a quantitative data set about the nature of CSO vulnerability to climate change and extreme weather impacts to infrastructure, whether and how CSOs are approaching the adaptation task and key barriers to adaptation.

While the methods employed and the absence of empirical data sets quantifying CSO vulnerability to climate change impacts create limitations to the evidence-base produced, findings from the research suggest that CSOs are highly vulnerable and not well prepared to respond to climate change and extreme weather impacts to physical infrastructure and that this underlying organisational vulnerability worsens the vulnerability of people experiencing poverty and inequality to climate change. However, the project results indicate that if well adapted, CSOs have the willingness, specialist skills, assets and capacity to make a major contribution to the resilience and adaptive capacity of their clients and the community more broadly (sections of which will be plunged into adversity by extreme events). Despite this willingness, the evidence presented shows that few CSOs have undertaken significant action to prepare for climate change and worsening extreme weather events. Key barriers to adaptation identified through the research are inadequate financial resources, lack of

institutionalised knowledge and skills for adaptation and the belief that climate change adaptation is beyond the scope of CSOs core business. On the other hand, key indicators of organisational resilience to climate change and extreme weather impacts include: level of knowledge about extreme weather risks, past experience of an extreme weather event and organisational size.

Given its size, scope and the critical role the Australian community sector plays in building client and community resilience and in assisting communities to respond to and recover from the devastating impacts of extreme weather events and natural disasters, the research identifies serious gaps in both the policy frameworks and the research base required to ensure the sector's resilience and adaptive capacity – gaps which appear to have already had serious consequences. To address these gaps, a series of recommendations has been prepared to enable the development and implementation of a comprehensive, sector-specific adaptation and preparedness program, which includes mechanisms to institutionalise knowledge and skills, streamlined tools appropriate to the needs and capacity of a diverse range of organisations and a benchmarking system to allow progress towards resilience and preparedness to be monitored. Future research priorities for adaptation in this sector have also been identified.

EXECUTIVE SUMMARY

The rich will find their world to be more expensive, inconvenient, uncomfortable, disrupted, and colourless – in general, more unpleasant and unpredictable, perhaps greatly so. The poor will die (Smith, 2008: 1).

People experiencing poverty and inequality in both developing and developed countries will suffer the greatest harm from climate change, including increasingly frequent and intense extreme weather events. They have the least capacity to cope, to adapt, to move and to recover. In October and November 2012, this fact was borne out by the experience of public housing residents in New York City in the aftermath of Hurricane Sandy, thousands of whom, unable to evacuate without assistance, were left without power, heating, hot water, food and medical care for almost two weeks when the organisations in place to support them failed (New York Times, 9 December 2012).

Every day, thousands of large and small community service organisations (CSOs) provide essential social services and support to people experiencing poverty and inequality in Australia including, people with a disability, people who are unemployed or living in low-income households, frail older people, single parents, women and children at risk of violence and abuse, the homeless, people living with chronic mental and physical ill-health, Aboriginal and Torres Strait Islander people and migrants, refugees and asylum seekers amongst others. They are embedded within the communities they support and comprise a critical component of the social infrastructure in human settlements. Their role in building community resilience and in supporting individuals and communities to respond to and recover from extreme events and natural disasters is also increasingly recognised. And yet, despite the crucial support they provide to those most in need, both day-to-day and in response to crisis, very little is understood about the capacity that CSOs have to withstand climate change and extreme weather impacts.

The *Extreme Weather, Climate Change and the Community Sector – Risks and Adaptations* project investigated and addressed this significant knowledge gap. Its key objectives were to understand the extent to which CSOs are aware of and prepared for climate change, particularly extreme weather risks to physical infrastructure and critical services; to investigate the consequences of climate-driven CSO service delivery failure for the people reliant on them to meet basic needs; to identify a comprehensive set of adaptation options to increase the resilience of CSOs and their clients; and to explore barriers to implementing adaptation.

The research comprised a comprehensive and critical scoping, examination and review of existing research findings and an audit, examination and judgment-based evaluation of the current vulnerabilities and capacities of CSOs under projected climate change scenarios. It employed three major methods of consultation and data collection. Firstly, to ground the project in existing knowledge, a comprehensive, integrative review of the Australian and international (limited to developed countries) research addressing climate change adaptation for CSOs was conducted. In its second phase, a program of 10 workshops was conducted in each state and territory with over 150 representatives from a diverse range of CSOs. These produced rich qualitative data about the specific ways in which climate-driven infrastructure disruptions trigger the failure or strain of CSO service delivery and the strategies that organisations can implement to maintain service delivery in the event of serious climate change and extreme weather impacts. Thirdly, the *Climate Change and the Community Sector National Survey* – the largest of its kind ever undertaken – produced quantitative and qualitative data about the impacts of physical infrastructure failure on the capacity of CSOs to deliver services;

the impacts of service failure on client groups; the actions taken by CSOs to adapt; the major barriers to adaptation; and the inherent capacity within organisations to support community resilience to impacts. The survey established two measures to identify indicators of CSO vulnerability and resilience to climate change and extreme weather impacts, which were tested using linear regression analysis.

Major findings from the project include:

1. CSOs are highly vulnerable and not well prepared to respond to climate change or extreme weather events, with many small and medium-sized organisations at risk of permanent closure as a result of major damage to physical infrastructure and disruptions to critical services. For example, the survey results demonstrate that one week after an extreme weather event 50% of organisations that sustain serious damage to their premises would still be out of operation; 25% might never provide services again;

2. The detailed consequences of major disruptions to social service provision for people experiencing poverty and inequality – for whom CSOs are the shock absorbers for every day adversity as well as crises – are very serious as they impact the basic needs for human survival: homelessness, deprivation, hunger, isolation and death;

3. Despite the size of the problem of CSO vulnerability and the severity of its consequences, the literature review clearly shows that to date the community sector has been overlooked in the climate change adaptation policy settings and research agendas of developed economies as evidenced by major gaps in the academic and grey literature;

4. CSOs have a stated desire to prepare for and adapt to climate change and extreme weather impacts and if well prepared, they have inherent skills, assets and capabilities to contribute to community resilience to climate change and in response to disasters. These include the ability to educate, contact, locate and evacuate vulnerable people with specialist needs; specialist skills such as counselling, case management and volunteer management; and specialist assets and facilities such as disability transport;

5. At present, CSOs perceive an overwhelming range of barriers to action. Key amongst these is a lack of financial resources and skills and the concern that adaptation is ‘beyond the scope’ of the sector’s core business. The issue of scope is central to establishing if increasingly frequent and intense extreme weather events represents a new ‘normal’ for CSO operation; and

6. Knowledge of the risks, past experience of an extreme event and organisational size are indicators of organisational resilience to climate change impacts, including extreme weather events. Given that organisations have little or no control over their size or the occurrence of extreme events, raising awareness about the direct and serious ways in which climate change and worsening extreme weather events will affect their ability to provide services and therefore to fulfil their mission to people experiencing poverty and disadvantage becomes critical.

To raise awareness about the risks to service delivery from climate change and to support capacity building within the community services sector, the project produced a series of outputs and resources, which are immediately available for implementation by organisation to assist with the process of identifying, analysing and responding to climate change and extreme weather risks:

- The first national survey data set covering the vulnerability of CSOs and their clients to climate change and extreme weather impacts to infrastructure;

- A set of CSO Failure Mode and Adaptation Mode Exemplars, which identify and codify the mechanisms by which service delivery is disrupted in response to infrastructure failure and, conversely, the processes for and consequences of implementing adaptation for organisations, clients and the broader social system; and

- Community Sector Risk and Adaptation Registers, which describe and catalogue over 200 discrete risks and 450 adaptation actions specific to four key areas of CSO activity and operation.

This report concludes with a set of recommendations about what is required to address the risk and adaptation needs of CSOs. These recommendations focus on four key areas for action: resources, preparedness, building resilience to direct impacts and sharing risks through insurance and collaboration. Directions for future research on this important topic are also suggested. Critically, an urgent and significant investment of funds to the community sector is required to enable organisations to begin the resilience-building task.

1. INTRODUCTION

The rich will find their world to be more expensive, inconvenient, uncomfortable, disrupted, and colourless – in general, more unpleasant and unpredictable, perhaps greatly so. The poor will die (Smith, 2008: 1).

Internationally, it is accepted that people in poverty, particularly in developing countries, will be worst affected by climate change impacts, including increasingly frequent and intense extreme weather events. The most recent example of this recognition occurred at the Doha round of climate talks in December 2012 with industrialised nations agreeing to provide finance, technology and capacity building for loss and damage caused by climate change impacts to the world's most vulnerable nations.

There is also increasing recognition that people experiencing poverty and inequality in developed countries such as Australia are more vulnerable to the adverse impacts of climate change than the general community, having the least ability to cope, to adapt, to move and to recover. Even in New York, amongst the most sophisticated and wealthy cities in the world, the human face of this problem became apparent in the aftermath of Hurricane Sandy, which saw thousands of public housing residents unable to leave their homes for weeks, rationing their medications because they were unable to replenish supplies, living in darkness because their power supplies had failed and they had no way to evacuate or relocate (New York Times, 9 December 2012). That these people were adversely affected and had poor coping capacity is no surprise. That they were left unattended by the organisations that normally provide their care is shocking. The causes of this type of failure and its remedies are the focus of this report, which finds that such situations are evidence of a systemic deficiency.

In Australia, tens of thousands of large and small community service organisations (CSOs) provide a diverse range of essential social services to people experiencing poverty and inequality, including: people experiencing physical and intellectual disabilities, mental and chronic physical illness, homelessness, domestic and family violence and abuse, unemployment and social exclusion; refugees, asylum seekers and others from culturally and linguistically diverse communities; Aboriginal and Torres Strait Islander communities; and those in financial crisis. These services comprise a critical component of social infrastructure in human settlements.

However the vulnerability of CSOs to climate change as well as the role they do or could play in mitigating and managing such impacts to vulnerable individuals and communities is still poorly understood in Australia and internationally in equivalent countries. This knowledge gap, identified in the literature review for this project, is important because of the size and scope of the sector, its influence, the range of services it provides and the critical role it plays in increasing resilience and reducing vulnerability to non-climate change-related adversity and in supporting individuals and communities to respond to and recover from the often devastating impacts of extreme weather events and natural disasters. On the one hand, if highly vulnerable to climate change impacts themselves, CSOs may worsen climate impacts to social infrastructure and human settlements through the disruption or cessation of service provision. On the other hand, if well prepared and resilient, they may lessen the risks from climate-driven physical infrastructure failure faced by people experiencing poverty and inequality, thereby shielding decision-makers from the true extent of these risks.

1.1 Conceptualising community service organisations

The community services sector in Australia comprises thousands of large and small non-government, not-for profit organisations that provide social and welfare services, and often form a key part of the social infrastructure in the communities they serve. Services provided include amongst others: information, advice and referrals, aged care and disability support, refuge and accommodation services, drug and alcohol rehabilitation, emergency relief and financial support, community legal and advocacy services, child welfare, youth and family support and employment services. These organisations operate in almost every community across Australia, no matter how small or remote.

To maintain the project's scope and focus on external impacts on organisations' ability to operate, CSOs were conceptualised as a 'Black Box' requiring inputs – such as staff and infrastructure – to operate and providing outputs in the form of services to the community. This black box approach deliberately seeks to exclude consideration of internal processes and relationships that may affect the functioning of the system or organisation.[1]

In light of the project's aims to investigate the vulnerability and resilience of CSOs to physical infrastructure failure caused by direct climate change or extreme weather impacts, inputs focussed on the essential services and infrastructure organisations require to function, including: building integrity, accessible roads and telecommunications, power and water services. Outputs were defined as the services provided by CSOs including information and referral, advocacy, social and welfare services – services that may or may not be impacted by the disruption or failure of the identified inputs.

This conceptualisation purposely excludes an examination of the ways in which direct climate change and extreme weather impacts on internal organisational function, actors and processes. For example, the project does consider the impact of an extreme event on the ability of staff to get to work, but not the impact of staff trauma in response to climate change or extreme weather events on CSO functionality. Equally, it does not consider other internal processes that affect an organisation's ability to deliver services, including governance arrangements, internal communications or human resources management. Essentially, it assumes that a CSO will function adequately provided that it has undisrupted access to the requisite physical infrastructure and critical infrastructure services.

This conceptualisation of CSOs as 'black box' organisations has the associated weakness of overlooking important internal strain and failure – that is impacts that may occur regardless of the standing of the inputs, for example a breakdown in governance arrangements caused by absenteeism in response to an extreme weather impacts on staff and their families.

The approach taken is not in any way intended to imply that these issues are minor. They are simply beyond the scope of what could be achieved in this project because: individual CSOs across the sector are so diverse in their size, structures and functions; and the impacts of psychological responses to severe disruption on individuals and organisational function is highly complex and worthy of examination in its own right.

[1] Note that some internal processes such as risk mitigation, management and transfer practices were raised in the survey insofar as they influence resilience and therefore the impact of input disruption on outputs.

Finally, it should be noted that this approach also assumed an objective approach to personal perception of climate change, which sets aside subjective influences. Though there has not been any modification of the data to compensate for such influences, there is a growing body of relevant literature within the social sciences, particularly the field of community psychology covering:

- How CSOs view, understand and are influenced by changing public risk perceptions and psychological responses to the threats and environmental impacts of climate change (Leviston et. al., 2011; Leviston & Walker 2011; Ashworth et. al., 2011; Collins, 2009; Preston & Stafford-Smith, 2009);

- Individual and community subjective experiences of vulnerability to climate change impacts, as opposed to objective, scientific assessments of vulnerability (Renn, 2011; Reser et. al., 2012; Reser and Swim, 2011; Roser-Renouf and Nisbet, 2008); and

- The social amplification and attenuation of climate change risks – that is, the ways in which the social construction and representation of climate change through the media and political discourse for example, amplify and attenuate individual, community and societal processes and responses to climate change (Smith & Joffe 2012; Leviston & Walker, 2011; Collins, 2009).

This literature highlights the complexity of public understandings and responses to climate change as well as the importance of psychological perspectives and framings of climate change and its impacts (Reser et. al., 2012), including psychological adaptation, which examines the influence of values, attitudes, social influences, institutional processes and cultural identity on risk perception and responses (Renn, 2011; Reser and Swim, 2011; Roser-Renouf and Nisbet, 2008). It clearly has relevance to developing a deeper understanding of organisational vulnerability to climate change and extreme weather events. Particularly through its enabling of a thorough analysis of the role that individual beliefs, attitudes and perceptions about climate change have on organisational responses to it: after all, individuals are the building blocks of organisations.

However, the ‘black box’ conceptualisation of CSOs employed deliberately focussed the definition of the problem being analysed by excluding an examination of these influences on organisational functioning in response to direct climate change impacts.

1.2 Conceptualising climate change and extreme weather

As the above discussion of individual and public understandings of climate change demonstrates, it is a complex phenomenon, which many in the community struggle to conceptualise. According to behavioural science research, most individuals relate to climate change through personal experience, knowledge, the balance of benefits and costs and trust in other societal actors (Lorenzoni & Pidgeon, 2006). Personal experience in particular is a powerful driver of behaviour and worry or anxiety caused by negative personal experiences increases both levels of individual and community concern and willingness to take action to manage perceived risks (Weber, 2004; Weber, 2006). However, by definition climate change is a gradual modification of average climate conditions over long periods of time and as such its impacts are not easily or accurately observed or detected by the lay public using the normal tools of personal experience, observation and inference (Spence et. al., 2011; Weber, 2010). Indeed, in many if not most regions, personal experience with noticeable and serious consequences of climate change remains rare. As a result, most people's knowledge and experience of climate change is almost entirely mediated by external information – news coverage, films and documentaries of geographically distant impacts and events (Smith & Joffe, 2012; Leviston & Walker, 2011; Weber, 2010; Collins, 2009).

Research undertaken in the behavioural sciences field also demonstrates that individuals' and communities' beliefs about climate change are influenced by local weather conditions and variability and the public tends to see and understand climate change in terms of recent extreme weather events (Weber & Stern, 2011; Reser et. al., 2012). For example, in a study conducted by Ashworth (2011), participants cited extreme weather events as evidence that climate change is already happening. Similarly, a UK study found that participants who reported personal experience of flooding expressed a greater degree of concern about climate change, viewed it as less uncertain, felt more confident that their actions would have an effect on it and were more likely to have engaged in actions to improve energy efficiency (Spence et. al., 2011).

Whilst learning through recent personal experience can lead to systematic bias in understanding climate change, for example by causing people to over-react to relatively rare extreme events but to underestimate the future, adverse consequences of climate change (Weber & Stern, 2011), Spence et. al. (2011) concludes that highlighting the links between local extreme weather events and climate change may be a useful strategy for engaging communities on climate change.

These research findings support anecdotal evidence from the within the community services sector that organisations and professionals within it – not necessarily conversant with the details and complexities of climate science – tend to understand climate change largely in terms of its causes; and to understand climate change risks in terms of policy, regulatory and legislative attempts to mitigate emissions through mechanisms such as the carbon price. Therefore their focus is usually on the associated risks to social service delivery caused by increased overhead and operational costs.

As a result of both the lack of expertise and understanding of climate change impacts and the tendency to associate impacts with policy risks, the approach to data collection employed in the project deliberately sought to:

a) Identify the association between climate change, causes and mitigation amongst community services sector professionals; and

b) Circumvent variable conceptions of climate change by engaging participants directly on its end risks and impacts in forms available from experience or familiar knowledge. For example the risk of an increased frequency of extreme precipitation events was discussed in terms of flooding; and the risk of an increase in daily mean maximum temperatures and the change in this distribution towards higher numbers of hot days was discussed in terms of heat waves.

To this end, workshop activities and the survey were structured to elicit information about participants' primary associations with climate change risks and adaptation and to flush out biases towards mitigation. Results from these processes largely confirmed the assumptions outlined above.

In addition, in some aspects of the workshop program and national survey, impacts and adaptation were deliberately dissociated from climate change by engaging participants on issues related to extreme weather events and natural disasters such as severe storms and cyclones, floods, bushfires and extreme heat events without recourse to climate change drivers. Simply, in an attempt to engage the largest sample of CSOs possible in an exploration of the potential impacts of climate change on service delivery, the project used extreme weather events as a proxy for climate change.

To a more limited extent, participants were also encouraged to explore the impacts of incremental changes on social service delivery, such as utility service cost increases, once again dissociated from climate change as a driver of such changes. Despite the fuse of the extreme weather proxy, the project team is of the view that the results and findings produced are directly applicable to climate change. However, it is important to note the limitations, particularly in the national survey of CSOs: namely that the project does not do realistic justice to the impacts of the less concrete and acute and more chronic and persistent stressors of climate change on CSOs, the individuals that comprise them and the clients they assist.

1.3 Research objectives

The purpose of the *Extreme Weather, Climate Change and the Community Sector – Risks and Adaptations* project was to explore the persistent knowledge gaps identified in the Australian context, including: the extent to which CSOs are aware of and prepared for climate change and extreme weather risks; the mechanisms by which the climate-driven failure of CSO may worsen risks to the individuals and communities they serve (and conversely how their preparedness may reduce vulnerability); what CSO-specific adaptation strategies exist and their anticipated efficacy; and what the barriers to adaptation are. Specifically, it sought to answer four, inter-related questions:

1. Will a significant change in or failure of physical infrastructure (e.g. water, energy, transport, telecommunications) adversely impact the capacity of CSOs to deliver services?

2. Will the failure of CSO service delivery worsen the underlying vulnerability of people experiencing poverty and social disadvantage?

3. Do CSOs have inherent or latent capacity to ameliorate or compensate for the impacts of physical infrastructure failure on communities?

4. What are the barriers to CSO adaptation and are there ways to promote adaptive capacity, responsiveness and resilience?

Project methods included a review of Australian and international literature on the vulnerabilities and adaptation needs of CSOs and direct consultation with over 150 community sector representatives via 10 workshops held in every state and territory. It also included a world-first survey of Australian CSOs, which sought to understand organisations' specific vulnerabilities to physical infrastructure failure, the flow-on consequences of service delivery failure for people experiencing poverty and inequality, the actions that have been and can be taken to reduce vulnerability and increase resilience and the key barriers to adaptation.

This report is divided into three sections. The first provides an overview of the methods employed to develop and implement the literature review, workshop program and survey. The second presents key findings from each of these project components and the third synthesises these results into key findings and recommendations about this critical sector's adaptation needs, the barriers it faces and the opportunities and benefits presented to CSOs, people experiencing poverty and inequality and the community as a whole by a resilient and prepared sector.

2. RESEARCH ACTIVITIES AND METHODS

2.1 Methodological context

Before setting out the methodological approach used in this report, it is important to set out the challenges in pursuing the topic. There have been changes in the climate throughout recorded history. Human-induced climate change that threatens the climate beyond the experience of recorded history began with industrialisation in the 1800s and only the initial impacts of these changes are discernable in the present day. The major risks from climate change are still to come. As a result, no meaningful empirical data is available on climate change impacts to CSOs or the people they support. To develop an understanding of these risks, an alternative approach must be pursued.

Another more concerning issue that is discussed further in section 3.1, is the absence of academic research about the direct impacts of climate change, as well as those of extreme weather events, on the service delivery capacity of CSOs. While people experiencing poverty and disadvantage have been identified as being at higher risk from climate change, one of their critical sources of resilience and capacity – community-based organisations that provide essential social services – appear to have been ignored.

Failing to analyse the impacts of climate change on CSOs is akin to testing the impacts of a high-speed car crash on a test dummy, but without the car. The car is the critical factor that determines the wellbeing – or otherwise – of the individual. Similarly, CSOs are a critical determinant of wellbeing, resilience and coping capacity for people experiencing poverty and social disadvantage in developed economies.

Due to these limitations, the project has served as both a 'scoping study' to map the field and also an initial source of data to begin populating the map. The scoping component of the project is an exploratory study, as defined by Arksey and O'Malley (2005): one that aims to map the key concepts underpinning a field of research and the main sources and types of evidence available. Such projects are particularly useful where an area is complex or has not been reviewed comprehensively before. Arksey & O'Malley (2005) identify four common reasons for undertaking scoping studies:

- To examine the extent, nature and range of previous research activity;
- To determine the value of undertaking a full, systematic review;
- To summarise and disseminate research findings; and
- To identify research gaps in the existing literature.

A key strength of scoping studies is that they can provide a rigorous, transparent and relatively quick method for mapping areas of research. Employing them, researchers are able to illustrate the volume, nature and characteristics of primary research in a particular field of interest. In turn, this analysis enables an identification of gaps in the evidence base as well as the summary and dissemination of results. 'By presenting the results in an accessible and summarised format, policy makers, practitioners and consumers are better placed to make effective use of the findings' (Arksey & O'Malley 2005). As such, this study comprises a comprehensive and critical scoping, examination and review of existing research findings through the literature review, which maps the research to date on CSO vulnerability and resilience to climate change and identifies critical gaps in the evidence base.

Building on the work of Arksey & O'Malley (2005), Levac et. al. (2010) suggests that direct consultation with stakeholders should be a required component of scoping study methodology. Following this recommendation, the project also includes an audit, examination and judgement-based evaluation and vulnerability assessment of the current capacities of CSOs under projected climate change scenarios based on qualitative data obtained through direct consultation with representatives from CSOs via a series of face to face workshops and quantitative data obtained through an online, self-report survey. The purpose of this audit and evaluation process is to create the best possible evidence-base and information-base given the absence of empirical data sets related to CSO vulnerability and resilience to direct climate change impacts to infrastructure.

Within this methodological context, the project employed three methods of consultation and data collections. The first comprised a comprehensive review of the national and international (limited to developed countries) literature specifically addressing the community services sector's vulnerability and responses to and preparedness for climate change. The second comprised a program of 10 workshops, which produced a qualitative record of climate change risks and adaptation options for CSO. The third was the national *Climate Change and the Community Sector Survey* which produced quantitative data about the vulnerability of CSO service delivery to physical infrastructure failure, the impacts of service failure on client groups, the level of action taken by CSOs to adapt to climate change and extreme weather risks and the major barriers to adaptation, from the perspective of CSOs. Each of these methods is discussed in greater detail below.

2.2 Literature review

An integrative review of the Australian and international literature examining climate change impacts and adaptation options for the community services sector was conducted to inform the development of the both the workshop program and the national survey of CSOs described below. Its key aims were to summarise and evaluate Australian and international research on the community services sector's capacity to cope with climate change (including incremental and extreme impacts) and to identify major gaps in the research.

Specifically, the review aimed to address the following research questions:

Research question 1
Are people experiencing poverty and social disadvantage in developed countries more susceptible than the general community to climate change impacts, particularly extreme weather events?

Research question 2
Is there evidence that CSOs increase the resilience of people experiencing poverty and social disadvantage?

Research question 3
Has the potential role and importance of the community sector in climate change adaptation been addressed in the literature?

Research question 4
Are CSOs at risk of failure or strain from climate change, particularly impacts to infrastructure?

Research question 5
Do specific adaptation strategies exist for CSOs to allow them to continue carrying out their role in supporting people experiencing poverty and social disadvantage under climate change?

The research questions were addressed through electronic searches of academic databases and online sources to find both peer reviewed academic literature and 'grey' – non-peer reviewed – literature from credible sources. The geographical focus was developed countries. The search revealed relevant work in Australia and the UK. The search focused on literature published between 2000 and 2012. More than 350 articles, guides, tools, reports and websites were reviewed and over 100 of these have been included in this review.

The search terms included various combinations of the following: ‘climate change’, ‘community services sector’, ‘community organisations’, ‘social services’, ‘adaptation’, ‘surveys’, ‘vulnerability’, ‘extreme weather’, ‘flood’, ‘heat wave’, ‘bush fire’, ‘Cyclone Yasi’, ‘Black Saturday bush fires’, and ‘Hurricane Katrina’. Electronic literature searches using these terms revealed no empirical studies have previously been conducted to document the vulnerability of CSOs to these types of climate change or extreme weather impacts. However, the searches did reveal a growing body of grey literature, predominantly produced by the community services sector itself, about the impacts of climate change and particularly extreme weather events on its organisations’ capacity to delivery services and on their clients. As such, grey literature forms an important basis for the conclusions drawn in this review.

The review deliberately excluded much of the international development literature because, although an extensive and important body of research, adaptation issues faced by the poor in developing countries are highly compounded by other pre-existing conditions such as extreme poverty, low levels of education and inadequate health and community service systems which overall render the research pertaining to the adaptation needs of these countries too different to be reasonably compared.

The review is structured into five parts. The first part presents the evidence for projected climate change impacts, and introduces mitigation and adaptation as the key policy responses to climate change. It provides the background, which informs the rest of the review. The second part examines the concept of vulnerability to climate change, the role that poverty and social disadvantage plays in increasing vulnerability and the relationship between adaptive capacity and vulnerability (Research question 1). The third part examines the role of the community services sector in enhancing the resilience of people experiencing poverty and social disadvantage and the role and importance of CSOs in climate change adaptation (Research questions 2 and 3). The fourth part examines the impact of climate change on community social service provision and whether climate change will increase the risk of failure or strain (Research question 4). The final part addresses what has been done in Australia and internationally to prepare CSOs for climate change (Research question 5).

Key findings from the literature review are summarised in section 3.1. The literature review is included in full in Appendix 1.

2.3 Workshop program

A major part of the research project was to use face-to-face workshops to get a detailed understanding of CSO exposure and vulnerability to extreme weather, natural disasters and the effects of climate change. The objectives for the workshop program were to:

1. Undertake a literature review and consultation on the latest adaptation tools;

2. Develop sector-focussed systems tools; and

3. Refine and publish sector-specific risk framework materials.

The workshop approach was derived from equivalent training and investigation workshops developed by insurance companies to engage small and medium-sized enterprises (SMEs) on climate change risks. SMEs are in many ways the private sector equivalent for CSOs: staff numbers ranging from a handful to a few hundred; business types too diverse to enable purpose-designed solutions; and many risk management and forward planning limitations compared with larger corporations.

The insurance sector has also identified that intermediate groups – in the insurance context, brokers – are critical to the resilience and coping capacity of SMEs. As such, rather than trying to directly engage SMEs about climate change risks, insurance companies such as Zurich Financial Services have chosen to engage with, consult and train insurance brokers about SME vulnerability to climate change impacts (Zurich, 2008, 2010).

To facilitate this project, ACOSS was given access to Zurich Financial Services workshop materials, which were adapted for use with CSOs. Using these materials, a total of 10 workshops were held with over 150 participants from CSOs in every state and territory, based mainly in capital cities or major population centres: Sydney, Melbourne, Brisbane, Cairns, Darwin, Perth, Adelaide and Hobart. Most of these workshops (8) were structured as *Welfare Professional Climate Workshops*, which allowed researchers and participants to:

1. Work through identifying the particular risks from climate change and extreme weather events to CSOs;

2. Work together to develop example adaptation strategies; and

3. Consider the opportunities that might arise from successful adaptation and evolution.

In this way the workshops were structured as an exchange in which information relevant to the research task was gained, while participants were educated about emergent risks using tools adapted from the private and local government sectors. The *Welfare Professional Climate Workshops* are described in greater detail below.

The two final workshops were held in September and October 2012. The purpose of these workshops was to test the preliminary results emerging from the national survey of CSOs with sector experts and to identify the adaptation priorities for the sector and the resources required to achieve them.

2.3.1 Welfare Professional Climate Workshops

2.3.1.1 Preparation and pre-reading

A week before each workshop, participants were provided with a pre-reading report, which was originally prepared for the training of insurance brokers, and generously made available for this project by Zurich Financial Services Australia. This report introduced key facts and concepts related to extreme weather and published research about incremental climate change impacts. Climate change impacts were divided into three groups – 'primary' (direct) physical impacts, secondary (indirect) regulatory impacts and tertiary (auto-adaptive) social response impacts. The impacts covered in the pre-reading are listed in Figure 1.

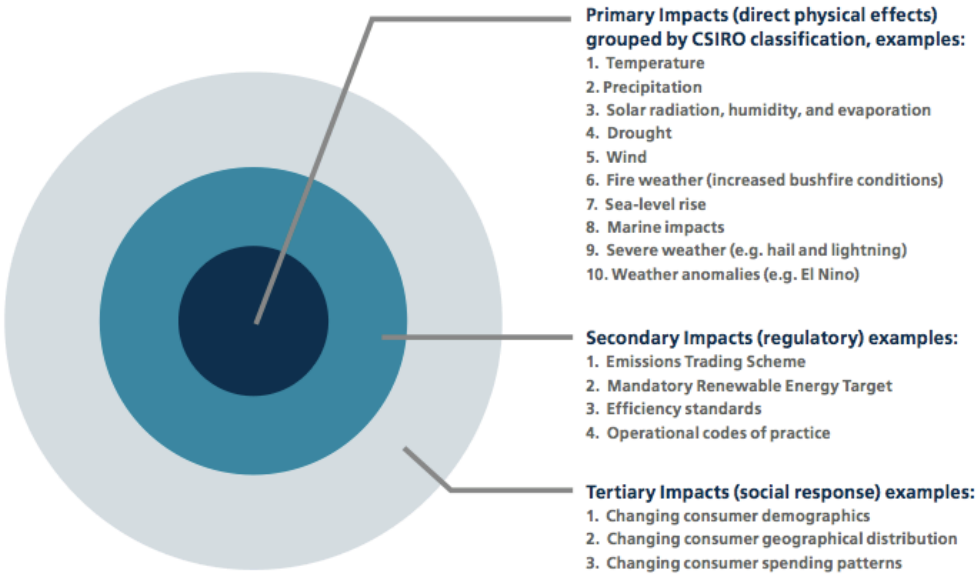


Figure 1: Hazards covered in the ACOSS workshops pre-reading and presentations (Climate Risk, 2009)

2.3.1.2 Introductory presentation

Each of the *Welfare Professional Climate Workshops* began with a presentation, which was tailored to the specific geographic location in which it was held (Figure 2). This enabled a relevant conversation about natural hazards and organisational exposure to these hazards. The presentation recapped the pre-reading, focussing on locally relevant hazards from familiar derivative impacts such as bushfires, heat waves, and extremes of precipitation leading to flooding.

Table 1. This table indicates the average number of very hot days per year above 35°C at selected sites. Numbers are given for the "current" climate (average for 1971-2000), and for 2030 and 2070 (from CSIRO & Bureau of Meteorology 2007).

	Current	2030	2030	2030	2070	2070	2070	2070	2070	2070
					lower emissions scenario			higher emissions scenario		
		low	median	high	low	median	high	low	median	high
Adelaide	17	21	23	26	24	26	31	29	36	47
Alice Springs	90	102	109	118	112	122	138	132	155	182
Brisbane airport	1.0	1.5	2.0	2.5	2.1	3.0	4.6	4.0	7.6	20.6
Broome	54	71	86	107	89	119	173	147	220	281
Cairns	3.8	5	7	9	8	12	22	19	44	96
Canberra	5	7	8	10	8	10	14	12	18	26
Darwin	11	28	44	69	49	89	153	141	227	308
Dubbo	25	31	35	39	35	40	51	44	61	87
Hobart	1.4	1.6	1.7	1.8	1.7	1.8	2.0	2.0	2.4	3.4
Melbourne	9	11	12	13	12	14	17	15	20	26
Mildura	32	36	39	43	39	45	51	48	60	76
Perth airport	28	33	35	39	36	41	46	44	54	67
St George	47	56	63	72	64	74	91	80	103	135
Sydney	3.5	4.1	4.4	5.1	4.5	5.3	6.6	6	8	12
Wilcannia	63	71	77	82	79	85	96	92	106	129

Figure 2: Sample information from the pre-reading and presentations used to localise the discussion of present and future hazards (Climate Risk, 2008)

2.3.1.3 Mapping the organisational journey

Following the presentation, participants were guided through an exercise, which encouraged them to locate their organisation on a hypothetical vulnerability – resilience map (Figure 3). The map plots an organisation's journey from a low resilience – high vulnerability to a high resilience – low vulnerability situation. Case studies drawn from the organisations participating in the workshop were used to explore the relationships and interdependencies between an organisation and its clients, funders, associates, utility service providers and the broader community.

Initially participants were asked to place their own organisation on the map, and then a case study volunteered from the group was used as an example for more general discussion, with the group discussing possible influences on the placement decision. Thereafter, participants were asked to consider the impacts of climate change and extreme weather trends – drawn from the presentation and background reading – to suggest the direction that these trends would be likely to push the organisation. In most cases this tended to be toward increased vulnerability or reduced resilience, but sometimes positives were identified, and these were noted for later uptake in the workshop.

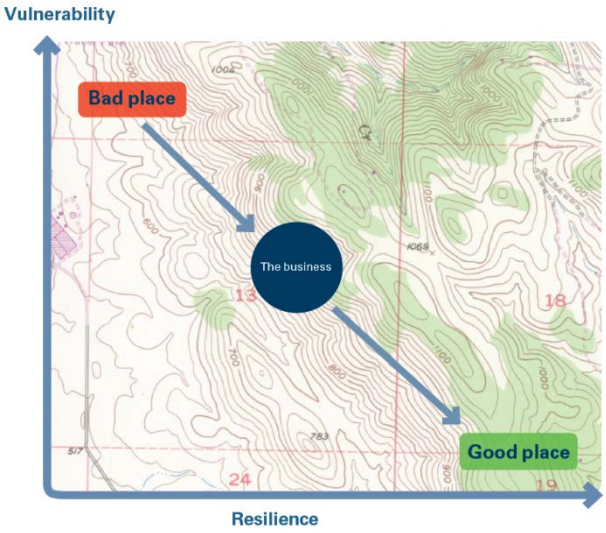


Figure 3: The vulnerability – resilience map (Climate Risk 2009)

2.3.1.4 Unpacking risk

A structured approach to risk analysis was then presented based on Crichton's Risk Triangle (Climate Risk, 2009). In groups participants separated out the causal climate change hazards associated with risk, considered the requirement for there to be a level of exposure and gave careful consideration to the ways in which an organisation might be vulnerable to each relevant hazard (Figure 4).

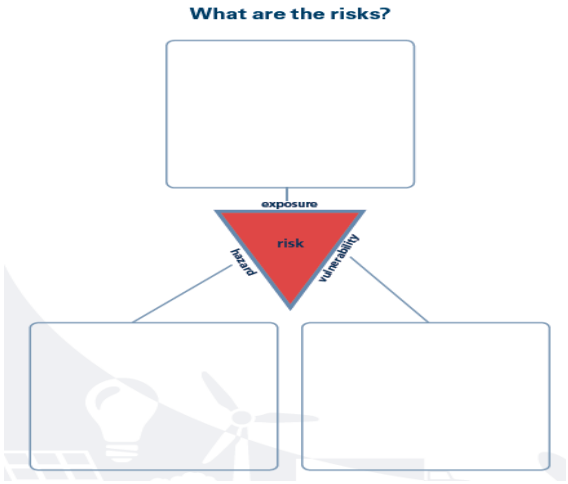


Figure 4: Crichton's Risk Triangle (Climate Risk 2009)

There were three important realisations for the group and the project:

7. Hazards are largely beyond the reach of CSOs to affect or change;

8. Exposure to hazards through location and the types of activity is something that few CSOs currently consider or even know and

9. The types of vulnerability though apparently infinite in diversity, are in fact quite common across most organisations, with many organisations brought to a halt by the same types of impacts and the loss of critical services and infrastructure they need to operate.

The examples of how CSOs are strained or fail because of damage or disruptions caused by extreme events or incremental changes were developed during these activities and recorded for analysis in the project. These exemplars and failure modes are presented later in the report.

2.3.1.5 Developing a Systems Analysis for CSOs

Once the risks to service delivery had been identified, a 'rich pictures' approach was used to analyse and identify all of the elements that contribute to CSOs capacity to operate effectively. This included people such as staff and volunteers, essential infrastructure, financial services, government and peer organisations and then more abstract influences such as the economy or societal wellbeing. Noticing the strong commonality in elements for many CSOs, they were refined to form the basis of a common system for CSOs.

Thereafter analysis was conducted to consider how a systems perspective might change participants' understandings of the risks faced by their organisations, often bringing to their attention organisations' dependence on elements largely beyond their control. To capture the change in perceived risk, following this exercise participants were asked to re-plot their organisations on the 'resilience-vulnerability' map. These results were also captured as an insight into a suitable generalised systems analysis to be used in the research (see Figures 6 and 7 in Section 3.2).

2.3.1.6 Risk reduction through adaptation

Using the tools developed thus far, participants were invited to consider the routes toward risk reduction through organisational adaptation. To aid this process an 'Adaptation Diamond' (Climate Risk, 2009) was introduced which encouraged discussion about:

1. How risk might be reduced though reducing the drivers of risk; and

2. How new opportunities for an organisation might be realised though adaptive opportunity identification and developing adaptive capacity (Figure 5).

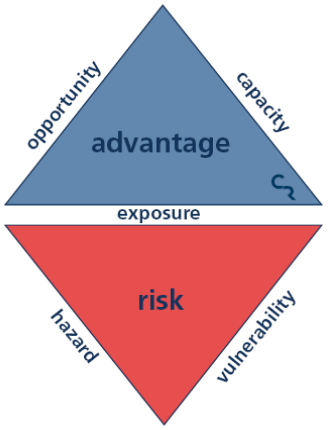


Figure 5: The 'Adaptation Diamond' (Climate Risk 2009)

As a result of these processes a number of important sets of information became evident for the project:

1. That most risk response actions could be separated into hazard reduction, exposure reduction and vulnerability reduction;

2. That there are many risks and adaptation actions present for CSOs, which are very common across the sector and are therefore suitable to be catalogued and shared;

3. Risk reduction actions generally group according to mitigation through reducing exposure or vulnerability, risk management and risk transfer; and

4. There are some opportunities for organisations to provide new or expanded services in the light of many of the society-wide risks identified in the project.

The systems analysis, risk and adaptation registers and failure and adaptation modes derived from the workshops that were codified following each workshop and the workshop program as a whole are presented in the next section.

2.4 National survey

The *Climate Change and the Community services sector National Survey* was the first of its kind in Australia, and apparently internationally in its attempt to measure the impacts of climate change and extreme weather events on CSOs. The aim was to understand whether and how the sector is approaching the task of climate change adaptation and to identify barriers to adaptation for the sector. The survey also sought to understand the role a well-adapted sector could play in providing a resilience mechanism for people experiencing poverty and social disadvantage – and the community more broadly – to climate change impacts, using extreme weather as proxy. This section presents the survey's objectives, the CSO classification system employed, sampling methods and limitations.

2.4.1 Survey objectives

The *Climate Change and the Community services sector National Survey* had three key objectives:

1. To identify organisational vulnerability and resilience indicators;

2. To identify the subsectors, geographic and organisational features of CSOs most vulnerable and least able to adapt to the impacts of climate change and extreme weather events; and

3. To identify adaptation options and key barriers to implementation for CSOs.

2.4.2 Survey development

The survey was developed in April and May 2012. Key considerations, which informed its design included:

- **Survey objectives** (see above);

- **Length:** most organisations' priority and focus is service provision to clients and they are often time poor. Based on ACOSS experience administering the Australian Community Sector Survey (ACSS) each year, it was decided that the survey must comprise fewer than 50 questions and take no more than 20-30 minutes to complete. As a result, an attempt was made to strike a balance between incorporating a series of questions that would yield meaningful results, while ensuring that the survey's overall length was not prohibitive to its completion;

- **Plain English:** To ensure its relevance to the sector and to enhance the survey completion rate, the survey needed to effectively convey complex concepts related to climate change, extreme weather and adaptation in clear, simple language, relevant and familiar to the sector. In each version of the survey, an attempt was made to present concepts and questions in language familiar to the community services sector; and

- **Accessibility**: It was essential that the survey be accessible to people with a disability. As a result, a printable version of the survey was created using the PDF format, which could be completed manually and submitted by post. A Microsoft Word version was also created, which could be completed electronically offline and submitted by email.

The first version of the survey was designed using the systems analysis of a typical CSO, which emerged from the workshop program (discussed in section 2.4). Using this systems analysis, a matrix of questions was developed related to key organisational infrastructure and systems elements in an attempt to identify which were a potential source of risk for organisations and which a potential source of adaptive capacity. A second matrix of questions was then developed, with a view to identifying how the risks and opportunities resulting from infrastructure failure might impact on clients.

During the drafting process, it became apparent that the survey evolving from the organisational and client matrices was too long, too complex and too repetitive to achieve the required response rate. To illustrate, using just one system element from the organisational matrix and one question from the client matrix resulted in the development of 16 questions. Repeating this process for each of the system elements in the organisational matrix and each of the questions in the client matrix would have resulted in a survey of over 100 questions, not including questions designed to gather essential demographic data.

Version two of the survey was designed using scenarios to focus questions about organisations' vulnerability and resilience to climate change impacts, their adaptive capacity and barriers to adaptation. In the first stage of development, two scenarios were drafted: one describing extreme weather impacts to infrastructure and the other describing indirect impacts to organisations caused by incremental climate change and regulatory responses to it over time. Sets of questions were then developed, which required respondents to consider whether and how their organisation's service provision might be disrupted by the impacts to infrastructure described; how clients might be impacted; and whether there were ways in which organisations could contribute to client preparedness for such impacts. To capture data relevant to the full set of survey objectives, these scenario-based questions were complemented with a series of questions related to respondent organisations' levels of understanding about and action in response to climate change and the barriers to action.

The survey relied exclusively on self-reports from individual representatives within each participant organisation to generate data for the project. A copy of the final version of the survey is included in Appendix 2.

2.4.3 Measuring outcomes

2.4.3.1 Terms and definitions

First, key terms used to express the survey objectives were defined as per Table 1.

Table 1: Survey objectives - key terms defined

Term	Definition
Adaptation	Measures to reduce the adverse impacts on human wellbeing resulting from changes in the climate that do occur as well as to regulatory attempts to mitigate climate change.
Barriers to adaptation	This report uses the Productivity Commission's (2013) definition of a barrier as something that restricts an organisation's ability to identify, evaluate or manage risks in a way that maximises wellbeing.
Resilience	The ability of a social or ecological system to absorb disturbances, or return to its original state, while retaining the same basic infrastructure and ways of functioning.
Vulnerability	Degree to which a system or element is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes.

2.4.3.2 Measuring vulnerability and resilience

A key objective of the survey was to identify indicators of organisational vulnerability and resilience to climate change and extreme weather impacts. Two dependent variables were established to create these indicators:

1. Dependent Variable One (Resilience Indicator): this indicator measures resilience using the breadth and sophistication of risk management, mitigation and transfer practices.

2. Dependent Variable Two (Vulnerability Indicator): this indicator measures vulnerability based on the length of time a CSO could maintain service delivery following a loss or disruption of essential infrastructure services or assets.

To attach a quantity to these indicators a system of scoring was created based on responses to survey questions. In general, the weighting of responses was avoided; rather the scoring sought simply to ascertain the presence or absence of action consistent with the intent of the indicator.

It is also important to note that due to the original nature of the research, the identification and testing of these indicators is necessarily exploratory. Further research is required to test the validity of these indicators of CSO vulnerability and resilience to extreme weather impacts and to identify additional ones. The methodology used to establish these exploratory indicators is outlined below.

1. Resilience Indicator: CSO responses to risk

To develop the resilience indicator, the project drew on private sector and insurance industry expertise on risk management, mitigation and transfer, particularly Manning's (2004) academic analysis of private sector processes related to risk transfer and insurance. Dr Alan Manning, professor and risk consultant to the Australian insurance industry, asserts that adequate levels of insurance as well as specific types of insurance cover – particularly business interruption insurance – are critical to the ability of a company to re-open for business after a major disruption. This project assumes that his findings are directly transferable to CSOs.

The CSO resilience indicator measures the level of active risk reduction practice engaged in by CSOs in response to both climate change and extreme weather risks. Broadly, risk management is concerned with the identification, assessment, and prioritisation of risks followed by concrete actions to minimise, monitor, and reduce the probability or impacts to harm or loss (Hubbard & Douglas 2009). Strategies to manage risk include mitigating risks through reducing vulnerability or exposure to negative impacts for example by relocating premises or installing protective structures; managing risk, for example through contingency planning; and sharing or transferring risk to third parties or partners, for example by taking out adequate insurance cover or having contracted contingency arrangements with peer organisations.

Risk assessments and response/adaptation planning provides a clear process by which CSOs can identify, plan for, and take action to prevent damage or loss of services caused by specific risks, including climate change and extreme weather risks, and thereby increase their resilience. The survey measured CSOs activities in relation to three key strategies: mitigate (avoid); manage (reduce impacts); and transfer (share). An explanation of each of these elements, their importance to vulnerability reduction and an overview of how they were measured in the survey are discussed below.

a) Risk mitigation

Actions to mitigate risk aim to reduce or avoid altogether an organisation's exposure to a risk. Avoiding exposure effectively means removing the organisation from exposure to hazards. This might mean moving a residential aged care facility out of a bush land setting where bushfires might occur and into an area where no such risk is present. On the other hand, mitigating a risk through vulnerability reduction for the same facility might involve establishing a large cleared area around the facility, or a heatproof refuge within it to ensure residents could stay in the facility during a bushfire without loss of life.

The survey measured three risks mitigation actions available to CSOs, which had been identified through the workshop program, to reduce their exposure or vulnerability to climate change impacts:

1. Change method of service delivery (e.g. from office-based to outreach service delivery);

2. Relocate service centres (e.g. out of areas highly exposed to specific climate change impacts); and

3. Upgrade organisational infrastructure (e.g. to be more resilient to climate change and extreme weather impacts).

These actions were scored equally, with organisations that had undertaken any one receiving a maximum resilience score of three (3). Organisations that reported having undertaken none of the actions received a resilience score of zero (0), indicating low resilience to climate change and extreme weather impacts based on lack of action to mitigate risks (Table 2).

Table 2: Scores for risk mitigation actions

Risk mitigation action	Score
None	0
Change method of service delivery	3
Relocate service centre away from high risk area	3
Upgrade organisational infrastructure	3

b) Risk management

Actions to manage risk cover the identification and prioritisation of risks and the development and implementation of plans to cope with possible impacts. Risk management actions include those triggered in the event of adverse impacts to the organisation. Using the example of the residential aged care facility in the bushfire zone again, risk management approaches would cover the actions implemented if a bushfire was imminent or occurring, for example removing all residents if a catastrophic warning was issued or collecting all medicines and resident records and placing them in the fire refuge. In many cases, risk management comes as a precursor to mitigation and risk management plans may address future aims to reduce exposure or vulnerability.

Two questions in the survey measured the degree to which respondent organisations had engaged in three types of risk management action: looking for information, undertaking risk assessments and developing risk management or adaptation plans.

To develop a suitable indicator of resilience to climate change and extreme weather, a cumulative scoring system was applied. Each type of risk management action was given a score of one (1), with organisations that had taken one action receiving a score of one (1), those that had undertaken two actions receiving a score of two (2) and those that had undertaken all three actions receiving the maximum possible score of three (3). Organisations that reported having taken no action received a score of zero (0), indicating low resilience (Table 3).

Table 3: Scores for risk management actions

Risk management action	Score
None	0
Look for information (about climate change OR extreme weather risks)	1
Climate change assessment	1
Planning (develop a climate change or disaster management plan; help clients to prepare)	1

c) Risk transfer

Actions to transfer risk result in risks being shared with or transferred to others. The most obvious way for organisations to transfer risk is to purchase insurance to provide coverage for losses sustained if the risk occurs. Planning for and acting to reduce vulnerability to risks in partnership or collaboration with others is another way to transfer or share risks.

The first measure of risk transfer actions in the survey was level of insurance cover. As discussed above, Manning (2004) asserts the importance of comprehensive insurance cover and business interruption cover in particular in increasing the resilience of businesses to major events and disruptions. According to Mervyn Rea of Zurich Financial Services[2], under-insurance is the single biggest reason why approximately 50% of businesses affected by a major event such as a storm or fire do not survive. Similarly, only one in 10 businesses that do not have business interruption insurance stay open for business following such an event.

To develop this measure, respondents were asked indicate whether they were insured against losses caused extreme weather impacts to: assets, business continuity, income, contracts, staff and volunteers. Organisations that held no insurance cover against losses caused by extreme weather were given a score of zero (0), those that held only one type of insurance cover were given a score of one (1) and those that held two or more types of insurance were given a score of two (2) (Table 4).

Table 4: Scores for risk transfer action (insurance)

Level of insurance cover	Score
None/don't know	0
1 type of insurance only	1
2 or more types of insurance	2

The second measure of risk transfer in the survey was collaboration. Organisations that reported having partnered with other organisations to plan for collaborative service provision during extreme events were given a score of one (1). Those that did not report undertaking collaborative planning were given a score of zero (0). The total transfer score was established by summing respondents' scores on each of these two measures, creating a range from 0-3, where zero (0) indicates low resilience and three (3) indicates high resilience/low to extreme weather impacts based on risks transfer practices.

[2] Zurich Financial Services Podcast, *Risky Business – Changing the way you look at risk management,* 25 September 2007.

In order to create a single measure of resilience to extreme weather impacts based on risk management practice, respondents' scores against each of the three types of actions were aggregated with an equal weighting of one-third or 33.33% (Table 5). As a result, the resilience measure for risk management practice is a scale from 0-9 where zero (0) indicates low resilience and nine (9) indicates high resilience.

Table 5: Weightings for each type of risk response action

Risks management action	Weighting
Management	33.33%
Mitigation	33.33%
Transfer	33.33%

2. Indicator two: vulnerability to physical infrastructure failure

A key focus of the research was to better understand the relationship between physical and social infrastructure and whether social infrastructure, represented by CSOs, is vulnerable to the climate-driven failure of physical infrastructure, including buildings, roads and transport systems, power, water and telecommunications.

Thus, the second indicator of CSOs vulnerability to climate change and extreme weather impacts established was the vulnerability of CSO service delivery to the total failure of each type of physical infrastructure caused by extreme weather impacts. The specific measure employed in the survey was the ability or otherwise of CSOs to recover or maintain service provision after an extreme weather event, judged by the duration of service provision after disruption.

The survey measured CSOs vulnerability to extreme weather impacts to 5 infrastructure types: buildings, roads and transport infrastructure, power, water, and telecommunications. For example, question 12 measured whether it would take a day, a week, a fortnight, a month, or not be possible at all to make alternative arrangements for service provision arrangements if their buildings were inaccessible because of damage caused by extreme weather impacts.

Responses to the question were scored so that organisations with the shortest recovery time received score of 20 and organisations for which it might not be possible to make alternative arrangements received a score of zero (0). Organisations that responded 'don't know' also received a score of zero (0) because lack of knowledge about exposure to and impacts of climate change and extreme weather on an organisation's ability to provide services was deemed to be an indicator of vulnerability in its own right (Table 6).

Table 6: Scores for length of time to recover from building damage

How long to recover from building damage	Score
1 day	20
1 week	15
1 fortnight	10
1 month	5
It might not be possible/don't know	0

Question 15 measured whether organisations could maintain service provision for a day, a week, a fortnight or a month if they were unable to access power and water supplies, telecommunications and roads and transport infrastructure. Responses were scored so that organisations able to provide services for a month without access to each type of infrastructure received a score of 20 and organisations able to provider services for a day received a score of five (5). Organisations that provided a 'don't know' response received a score of zero (0) because lack of knowledge about the impact of infrastructure failure on an organisation's ability to provide services was deemed to be an indicator of vulnerability in its own right (Table 7).

Table 7: Scores for length of service continuity during infrastructure failure

Service maintenance capacity	Power	Telco	Water	Roads
1 month	20	20	20	20
1 fortnight	15	15	15	15
1 week	10	10	10	10
1 day	5	5	5	5
Don't know	0	0	0	0

Respondents' scores for each of the infrastructure types and services were then aggregated, with each infrastructure type/service given an equal weighting of 20% (Table 8).

Table 8: Weighting of scores for each infrastructure type

Infrastructure type	Weighting
Buildings	20%
Power	20%
Telecommunications	20%
Water	20%
Roads/transport	20%

As a result, the measure for vulnerability to total infrastructure failure is a scale from 0-100, where zero (0) indicates high vulnerability and 100 indicates low vulnerability to total infrastructure failure caused by extreme weather events.

These dependent variables establish one measure of organisational resilience (response to risk) and one measure of organisational vulnerability (vulnerability to total infrastructure failure) to extreme weather impacts. The next section discusses the subsectors, geographic and organisational features (or independent variables) that may facilitate or frustrate CSO resilience.

2.4.3.3 Independent variables: organisational characteristics

The survey also sought to identify the subsectors, geographic and organisational features that impact vulnerability, resilience and adaptive capacity. The features selected were:

- Service type.
- Service location.
- Method of service delivery.
- Size.
- Main sources of income.
- Knowledge about climate change risks.
- Past experience of extreme weather events.

The rationale for the selection of each of these organisational characteristics is presented below.

a) Service type

CSOs provide a wide range of social services targeting different groups and needs within the community. These include services for the aged and people with a disability, crisis accommodation services, child care, child welfare and youth services, employment services, domestic and family violence services, emergency relief and financial support services, services for asylum seekers, refugees and migrants and legal and advocacy services amongst others. Analysing survey responses according to service type enabled the identification of subsectors within the community services sector most vulnerable and least able to adapt to climate change impacts and to different types of infrastructure failure. For example, residential aged care facilities might be more susceptible to disruption to their water supply than an organisation that primarily provides outreach services in clients' homes. Such analysis was also intended to consider if it was possible to identify the client groups within the community that might be most impacted by CSO service delivery failure.

b) Location

A stated objective of the survey was to identify the geographic locations most vulnerable and least able to adapt to climate change impacts. This was in part to understand whether and how the different climate change and adaptation policy landscapes in each state and territory impacts on organisational vulnerability or resilience to impacts. Similarly, an overarching objective of the project was to research the sectors in society that are most vulnerable and least able to adapt to climate change in urban, regional and remote settlements. As a result, the survey sought to understand whether organisations providing services in urban, regional or remote locations were more or less vulnerable to climate change impacts.

Organisations operating in regional and remote areas face a range of issues that could potentially increase their vulnerability to impacts. These include:

- Increased exposure to climate variability and climate extremes such as extreme heat, drought, bushfires and floods; increased risk of isolation caused by extreme weather impacts such as floods;

- Increased costs of essential goods such as fuel, food and groceries, partly due to the cost of transporting them long distance and therefore increased exposure to rising fuel costs and logistical impacts; and

- Lack of access to services for the community such as health services, due to the high cost of service provision to small communities, which would in turn affect the availability of resources to the community to respond to impacts.

On the other hand, increased experience of climate variability and extremes in regional and remote areas might result in increased action by organisations to mitigate, manage and transfer risks, thereby reducing vulnerability and increasing resilience to climate change impacts and extreme weather events.

c) Service delivery method

CSOs provide services to clients, constituents and members in a variety of ways, including through face-to-face appointments in offices or service centres, through outreach visits to clients' homes, within residential facilities such as aged care or crisis accommodation centres, over the telephone and online. All organisations rely on a combination of infrastructure and utilities to support service provision, including water, energy, telecommunications systems, buildings and roads and transport infrastructure. However, each of the different methods of service provision have increased dependence on particular types of infrastructure and infrastructure services, for example crisis telephone lines particularly rely on functioning telecommunications systems, whereas outreach services are more heavily dependent on accessible roads and transport infrastructure. Therefore, understanding the different ways that various methods of service delivery are vulnerable to the failure of different infrastructure and services is an important component of service continuity, adaptation and disaster management planning.

d) Size

According to ACOSS (2012a) organisational size has emerged as an issue of increasing interest and debate within the community services sector. Particular focus and concern is directed at the sustainability of small organisations and their ability to compete with larger organisations for funding and to engage effectively in advocacy.

Larger organisations are more likely than smaller ones to have greater operational budgets; the ability to generate their own funds (e.g. through direct public donations and commercial enterprises) and thus more control over how they expend those funds; offices dispersed widely across a state, several states or the country; and have specific internal departments dedicated to managing operations, including finance, administration and risk management. As such, it might be expected that that larger organisations would have greater resilience to climate change and extreme weather impacts than smaller ones. On the other hand, small, locally-based organisations can be more embedded within their communities, more accessible and more responsive to local needs, making them better placed to contribute to community resilience to climate change and extreme weather events.

Currently, there is no uniform measure of organisational size for community services sector and not-for-profit organisations. Some states have developed typologies that include both income and assets; others consider only income. The size of an

organisation's workforce and the scope of its social impact are additional characteristics that can be used to define organisational size (ACOSS 2011).
For the purposes of this survey, organisational size was determined based on annual income. Respondents were asked to report their annual income for the financial year ending 30 June 2011. In order to analyse survey responses according to organisational size, responses were categorised into income deciles:

- **Decile 1:** $0 - $85,000.
- **Decile 2:** $85,001 - $200,000.
- **Decile 3:** $200,001 - $300,000.
- **Decile 4:** $300,001 - $450,000.
- **Decile 5:** $450,001 - $650,000.
- **Decile 6:** $650,001 - $1.1million.
- **Decile 7:** $1,000,001 - $1.8million.
- **Decile 8:** $1,800,001 - $3million.
- **Decile 9:** $3,000,001 - $7million.
- **Decile 10:** $7million and above.

e) Main sources of income

According to the 2011 ACSS, 'the majority of organisations relied heavily on government funding, but most organisations indicated that this funding was insufficient to cover the true costs of delivering services, nor did it enable forward planning or innovation' (ACOSS 2011b). The 2012 ACSS found that underfunding of services and funding uncertainty were the two top issues facing the sector as a whole (ACOSS 2012a). The literature review for the present study also highlights the significant role that CSOs play in delivering government funded social services to the community. It found that in 2005-6 the nation spent $29 billion on 'welfare services' additional to social security benefits and allowances, 71% of which was funded by the government (AIHW, 2007). This is reflective of the fact that federal and state governments contract CSOs to deliver the majority of government-funded social services to the community. As the major funders of CSOs, federal and state governments in particular have a critical role to play in supporting the resilience and preparedness of CSOs to climate change and extreme weather impacts.

Knowledge of climate change risks

The survey also sought to understand how organisations perceive their level of knowledge about climate change impacts and the ways in which knowledge interacted with action to respond to risks. A recent study conducted by CSIRO in Australia reveals that adaptation activity appears to be linked to knowledge and beliefs about climate change issues (Gardner et. al. 2010). As a result, it was anticipated that higher levels of self-reported knowledge about risks would correlate with higher levels of action and resilience to climate change and extreme weather events. However, the survey was also interested to test whether there was a contradiction between organisations' self-reported levels of knowledge and levels of action taken to respond to risks.

It is important to note, however that the survey was 'opt-in' and therefore the data is not representative of the sector as a whole. As such the results may be biased towards organisations that have higher levels of concern, awareness and engagement with climate change and extreme weather issues.

g) Experience of extreme weather impacts

Australia's climate is highly variable, climate change notwithstanding, and many regions are exposed to a range of extreme weather events, particularly heat wave, drought, bushfires, floods and cyclones, particularly regional and remote areas.

A growing body of social science and behavioural research has also identified a clear relationship between direct experience of perceived climate change impacts, often in the form of extreme weather impacts, on levels of concern about and action to respond to climate change risks (see for example: Weber 2010; Weber & Stern 2011; Spence et. al. 2011). As a result, it was considered that exposure – measured in terms of previous experience of extreme events – may correlate with higher levels of knowledge about risks, higher levels of action to respond to risks and therefore higher levels of resilience to climate change and extreme weather impacts. These were propositions that were tested in the analysis.

2.4.3.4 Identifying adaptation actions and barriers

The survey used a set of simple methods to identify adaptation actions and barriers. Questions 7 and 9 asked respondents to identify the adaptation actions they had already undertaken to respond to climate change and extreme weather risks from an established list. Question 9 also asked them to identify adaptation actions they would like to take if adequate resources were made available, those they would not like to take and those they perceived to be 'not applicable' to their organisation. Many of the actions identified are best described as precursor actions or actions that indicate intent and assignment of responsibility or authority rather than direct risk controls, for example discussing risks at an executive meeting. Some actions were also included to flush out actions more associated with carbon mitigation than adaptation in order to identify those respondents with a specific perception of climate change risk.

Question 11 asked respondents to identify barriers to climate change adaptation for their organisation from an established list. According to Preston & Stafford Smith (2009), the evaluation of limits or barriers to adaptation is one of the most neglected areas of adaptation research. They define barriers to adaptation as constraints arising from the way a society is organised or because of the values it propagates. Such barriers are often tied to measures of wealth – such as access to financial capital and credit, technology, education and knowledge. These barriers are attracting increasing attention from researchers because addressing these social, cultural and economic phenomena is fundamental to facilitating adaptation (Preston & Stafford-Smith 2009: 24).

The barriers included in the survey question were drawn from a range of sources, including the ACSS conducted annually by ACOSS and the CSIRO Adaptation Benchmarking Survey, which was designed to benchmark the level of adaptation action in public, private and non-government organisations to allow for tracking of changes in adaptation activities (Gardner et. al. 2010: 1). The ACSS was used to identify sector-specific challenges to organisational capacity and operation. For example, the 2012 ACSS identified lack of financial resources and funding uncertainty as key challenges for the sector (ACOSS 2012). These items were included in order to identify which of these standard challenges to CSO operations and functionality also operate as barriers to adaptation and thereby to facilitate a sector-specific understanding of barriers.

The CSIRO Adaptation benchmarking survey was used to identify broader organisational barriers to adaptation. It found that a lack of information and knowledge as a widely identified barrier to adaptation, including a lack of knowledge about climate change impacts, which was incorporated into the list of barriers above. Other barriers identified by Gardner et. al. (2010: 8) includes: misinformation, uncertainty and scepticism, negative emotional reactions, expectations a solution will be provided and lack of resources. Roser-Renouf & Nisbet (2008) conducted a further breakdown of the components of knowledge about climate change impacts. They suggest that knowledge comprises awareness, belief and understanding of both climate change impacts and the actions that can be taken to mitigate or adapt to them, knowledge of the institutional and political actors involved in decision-making about adaptation and the skills to undertake action and to engage with decision makers. It was assumed that the absence of each of these component parts of knowledge, could also act as a barrier to adaptation.

Drawing from these sources, the barriers identified within the survey include items related to financial capacity, knowledge and understanding, awareness and belief and skill:

- Lack of financial resources and the high cost of adaptation.
- Concern about client reactions to use of organisational resources.
- Lack of knowledge about climate change impacts and adaptation actions.
- Lack of skills to implement actions.
- Lack of consensus or internal mandate.
- Lack of policy guidelines from governments.
- Lack of belief in climate change.
- Beyond the scope of the organisation.

2.4.4 Classification of CSOs and services

The survey adopts the classification system used by the 2011 ACSS (ACOSS 2011b) to define and classify community services sector organisations and services in Australia. ACOSS developed this classification system in response to the lack of a national data standard for information collection about the Australian not-for-profit sector. The ACOSS classification system combines elements from a number of national and international classification systems that are commonly used to define the community services sector, including the Australian Institute of Health and Welfare's (AIHW) National Classification of Community Services (NCCS); the Australian Bureau of Statistics (ABS) classification system; the Australia and New Zealand Standard Industry Classification (ANZSIC) community services definition; and the International Classification of Non-Profit Organisations (ICNPO) scheme.

The ACOSS typology of service types was selected for use in this survey for a number of reasons. Firstly, the ACSS is the only annual national survey that collects data about the non-government, NFP community services sector. In addition, the service classification scheme it employs is more exhaustive than other options, particularly the ABS and AIHW schemes, which do not enable data capture for specific subsectors within the community services sector such as health, housing, employment and aged care services. Table 9 identifies and defines the classification scheme used in the *Climate Change and the Community Sector National Survey 2012*.

Table 9: ACSS service classification scheme

ACSS service classification scheme
Employment/training services
Disability services (other than employment or mental health)
Housing/homelessness services
Child welfare, child services and day care
Domestic violence and sexual assault
Family and relationship services
Emergency relief services for those experiencing financial crisis
Financial support services (e.g. financial counselling, financial literacy, NILS, gambling)
Mental health services
Other health services
Information, advice and referral services
Advocacy (other than legal services)
Legal services
Migrant, refugee and asylum seeker services
Indigenous support services
Residential aged care and nursing homes
Services for the aged and elderly (other than residential)
Community development
Alcohol and other drugs support services
Provision of employment or volunteering through social enterprise
Other

2.4.5 Sampling, distribution and sample limits

The sampling frame for the survey comprised members and sector networks of ACOSS and state and territory COSS. This frame comprises approximately 3000 community organisations nationally.

The sampling method employed here mirrors that used in the annual ACSS: non-probability availability and snowball sampling. ACOSS National Member and Associate Members organisations were sent direct email invitations to complete the survey, including the survey link and instructions on how to complete it. Direct invitations were also sent to all respondents to the ACSS over the previous 3 years as well as all participants in the project workshop program. These invites were followed up with a reminder in the final week of the survey. Both the initial invite and the reminder emails requested that recipients circulate the invitation to individuals and organisations within their community services sector networks. All versions of the survey were accessible via the homepage of the ACOSS website and it was also promoted through its e-bulletin and via its twitter feed. The COSS in each state and territory distributed invitations to participate in the survey direct to member organisations and via relevant policy and practice networks and forums. Each COSS published information about the survey and the link to the online survey in their regular e-bulletins to members, online noticeboards and blogs during June and July 2012. The survey was also promoted at the Queensland COSS (QCOSS) Conference on July 23.

In addition, peak bodies and larger organisations with a national presence, such as National Disability Services Australia, the Salvation Army and Mission Australia were approached to distribute the survey link to their membership and promote it through internal networks. This process enabled particularly hard to reach sub-sectors of the community services sector to be targeted to ensure their representation in the survey sample.

Additional measures were also undertaken to gain a strong sample and ensure that information about the survey was disseminated beyond the 3000 organisations comprising the national ACOSS and state COSS networks. Information about the survey was made available on the ProBono Australia website, the Green Cross Australia website and a national press release was issued announcing the launch of the survey.

Since the sample was non-probability derived, there are potential sources of response bias beyond sampling error. However, with almost 500 responses, the survey cross-section represents a large sample from CSOs across the sector.

2.4.6 Fieldwork

The survey was in the field between June and August 2012. Results were analysed using SPSS survey software.

2.5 Limitations

There are a number of limitations to the data presented in this report. This section presents a frank discussion of the limitations to the survey and to the overall strength of the evidence-base produced through the project.

2.5.1 Survey limitations

There are a number of limitations to the survey data, beyond the sampling limitations discussed above. Key amongst these limitations is that the survey relies on the self-reports of organisational representatives to generate data and, therefore, evidence.

According to Schwartz (1999), self-reports can generate large volumes of information for social scientists, however the way questions are asked, the types of questions used and the context provided for the question can influence the way participants respond to individual questions, and to the survey itself, and are therefore critical to producing good quality, reliable information. For example, a CSIRO self-report study of Australians' views and beliefs about climate change and their support for various policy responses to it found that question framing influenced the results obtained. Specifically, they found that acceptance levels are strongly affected by:

- Distinguishing between natural variations and anthropogenic climate change;
- Distinguishing between current climate change and possible future climate change;
- Asking whether climate change is not happening, rather than whether it is; and
- Allowing respondents to indicate that climate change is partly caused by human activities (Leviston et. al., 2011).

As demonstrated by the findings above, given the critical role that question framing has on results, the reliance on self-reports to generate data can limit the quality of that data in a number of ways. For example, in this project, the representativeness of the survey sample depends upon the self-definition of organisations according to specified criteria. Boundaries around what types of organisations are included within the community services sector are not precise and similar caveats apply to the definition of sub-sector boundaries. In this case, limitations are inherent in the sector itself and are therefore reflected in any efforts to analyse and research it, including through the methodology and conduct of this survey.

More importantly, the project's reliance on self-reports to generate data may also have contributed to the high variability in the response rate to questions within this survey, the high volume of 'don't know' responses submitted and the fact that a large number of those attempting the survey did not complete all the questions. Of the 650 organisations that commenced the survey, approximately 150 were removed from the sample because either they were not CSOs or they completed less than 10% of the questions. 492 organisations were considered to have made valid attempts at the survey and 293 completed it in full. It should be noted that it was anticipated that some respondents would not be able to complete all of the questions in the survey due to lack of data collection or access to relevant information.

Another reason for the high variability in response rates is the limited capacity of many community services to collect, compile and collate the data requested by the survey. As a result, certain information is based on considered estimates from respondents rather than rigorous and precise data collection at an organisational level. For example, several questions ask respondents to provide information about how their organisation and clients might be impacted by future extreme weather events. However, there is also a risk some questions asked respondents more than they could know, particularly those that required them to make an educated guess about how their organisation would function during and after a hypothetical extreme weather event. Indeed, a handful of respondents who attempted the survey, but did not complete it, provided feedback that they did not feel qualified to answer the questions asked.

Other limitations in the survey's design may also have contributed to the variability of the response rate as well as the high rate of don't know responses to some questions, including: the overall length of the survey; the expectation of significant knowledge from some questions; and the number of questions that asked respondents to provide answers about multiple variables on a single matrix. Other factors that may have contributed to the variability in the question completion rate include:

- Survey fatigue: the 2012 ACSS was to field immediately prior to this survey, from April to June 2012. ACOSS also undertook another short survey during July 2012 and WACOSS had several sector-specific surveys to field in Western Australia in June 2012;

- Time constraints: organisations within the sector are often time and resource poor and may have been unable to commit the time required to complete the survey; and

- A lack of belief in climate change – or the belief that, while important, climate change is not relevant to the sector's core mission of delivering direct services to people experiencing poverty and social disadvantage: for example, a handful of respondents provided feedback that they felt the survey implied assumptions about the links between climate change and extreme weather events and chose not to complete it because they did not share those assumptions.

As a result of these limitations the survey data should be considered indicative and cannot be assumed to be representative of the sector as a whole.

2.5.2 Limitations to the evidence base

The literature review conducted as part of the project revealed that no empirical evidence exists about the way in which climate change impacts will affect CSO infrastructure and service delivery in Australia or in equivalent countries. This is, in part, because it is very difficult to create an empirical data set about vulnerability to climate change impacts, precisely because inadequate direct evidence for specific climate change events or impacts yet exists. Essentially, the direct evidence of how climate change will affect the physical infrastructure required by CSOs to operate must wait until climate change has worsened. This circumstance creates room for a debate about what constitutes 'evidence' and what does not.

On the other hand, given their occurrence in the past and present, it is possible to create an empirical data set about the effects of extreme weather events on CSOs physically and operationally and thereby to analyse the vulnerability of their infrastructure and service delivery to such events. If such a data set existed, it would provide an adequate proxy for understanding the likely effects of a range of climate change impacts on CSOs. Unfortunately, as revealed by the literature review, no such data set has yet been created and it was beyond the scope of this project to do so. Instead, using extreme weather as a proxy for climate change, the project sought to understand organisational impacts and preparedness by examining the past actual and potential future experiences of organisations affected by extreme weather events.

In light of these circumstances and constraints, the evidence base produced through this project is necessarily limited. However, the project aimed to create the best evidence base possible as a platform and springboard from which further, strictly empirical research can be conducted about the vulnerability of CSOs to both extreme weather events as well as the less concrete and acute and more chronic, ongoing stressors of climate change. There is a clear need for further research to test the validity of the indicators developed through this project and to establish an empirical data set for the performance of CSOs in response to extreme weather impacts as a basis for understanding their likely performance under a range of climate change scenarios.

3. RESULTS AND OUTPUTS

3.1 Literature review

The literature review examined the community services sector's capacity to cope with climate change by examining how climate change will impact on people experiencing poverty and social disadvantage and how CSOs themselves will be impacted. Starting from the assumption (based on increasing evidence) that climate change is occurring, is accelerated by human activity and will affect the intensity and frequency of extreme weather events, the review sought to answer the following five questions:

Research question 1
Are people experiencing poverty and social disadvantage in developed countries more susceptible than the general community to climate change impacts, particularly extreme weather events?

Research question 2
Is there evidence that CSOs increase the resilience of people experiencing poverty and social disadvantage?

Research question 3
Has the potential role and importance of the community sector in climate change adaptation been addressed in the literature?

Research question 4
Are CSOs at risk of failure or strain from climate change, particularly impacts to infrastructure?

Research question 5
Do specific adaptation strategies exist for CSOs to allow them to continue carrying out their role in supporting people experiencing poverty and social disadvantage under climate change?

The literature review was focussed exclusively on CSOs in Australia and equivalent developed countries. It found:

- **People experiencing poverty and inequality in developed countries are more susceptible than the general community to climate change impacts and particularly extreme weather events**. While the evidence discovered, in the form of academic literature in peer-reviewed journals, was strong, the review also found more literature focused on the needs of particular groups, such as elderly and frail people, than on others, such people experiencing homelessness.

- **CSOs increase the resilience of people experiencing poverty and social disadvantage**. This finding was based on evidence in the forms of analysis conducted by the community services sector and grey literature. There is a gap in the academic literature.

- **Evidence from sector analysis and grey literature suggests the potential roles and importance of CSOs in climate change adaptation**. However, the evidence base is more limited and there is a significant gap in the academic literature.

- **CSOs are at risk of failure or strain from climate change.** There is a significant gap in the academic literature addressing this issue and this finding was reached using proxy-based evidence from the disaster management, health and small and medium-sized enterprise (SME) sectors.

- **A major gap in policy and research into how CSOs need to adapt to climate change to continue carrying out their role in providing support to people experiencing poverty and inequality**. The evidence is limited to research being undertaken by the sector in the United Kingdom (UK) and Australia.

The review identified several areas that warrant further research including:

- Whether CSOs are at risk of failure or strain from climate change, particularly impacts to infrastructure;

- Whether CSOs will be able to continue delivering services to people experiencing poverty and social disadvantage due to their vulnerability to climate change; and

- Whether a well-adapted sector can play a role in increasing the resilience of people experiencing poverty and social disadvantage to climate change impacts.

The results of the review and the significant weaknesses in the literature and research base suggest the community services sector should be identified as a priority for adaptation research and policy making in Australia within the context of its role in providing support to the high risk cohorts of people experiencing poverty and disadvantage.

The literature review is included in full at Appendix 1.

3.2 Workshop program

This section of the report presents the information generated from the workshop program about the vulnerability of CSOs to climate change impacts and the key characteristics of resilient organisations. The information is presented as the following series of outputs:

1. A generalised CSO systems analysis.
2. A series of failure modes.
3. A series of adaptation modes.
4. A register of CSO-specific risks.
5. A register of CSO-specific adaptation strategies.

A key aim of the workshop program was to develop tools and information to help CSOs undertake climate change risk assessments and adaptation. It has become apparent in the research that:

- Many types of tools exist and therefore organisations have many from which to choose that can be selected based on suitability; and

- There is a shortage of detail on actual risks, with many examples but no systematic catalogue of known risks and known responses or controls.

As a result, the outputs developed through this part of the project have been structured to help CSOs to identify the climate change risks to which they are exposed, to analyse their vulnerability to those risks and to identify and plan appropriate actions to respond to or manage those risks and, thus, to build resilience to impacts and ensure they have the ability to continue to provide effective support to service users and communities to respond to climate change and extreme weather events.

3.2.1 Participant representation results

In total, over 150 representatives from CSOs participated in the workshop program. Organisations represented provided a range of services including: community legal, community health, disability, aged care, domestic violence and sexual assault, sexual health, migrant, refugee and asylum seeker legal and support, emergency relief, housing and homelessness, Aboriginal and Torres Strait Islander-specific, child care, youth and family, and consumer advocacy. A number of peak bodies and information services were also represented.

3.2.2 CSO systems analysis

The first output developed using the workshop data is the *Generalised CSO Systems Analysis*. It examines the major relationships and interdependencies between an organisation, its funders, peers and associates, suppliers, clients, utilities, public and private sector institutions and the broader community, as well as key physical elements such as assets and critical infrastructure. The systems analysis examines the ways in which these relationships are modified by or reliant on different kinds of critical infrastructure and infrastructure commodities.

The aim of the systems analysis is to ensure that all key elements that affect CSOs' ability to operate have been identified and to provide a strong foundation of ubiquity, which individual organisations can nuance to better reflect their own situation.

3.2.2.1 Developing the CSO systems analysis

As discussed in the previous discussion the systems analysis was developed based on exercises used in the workshop program. The exercises were used to facilitate individual respondents and larger groups to identify the prerequisites for a CSO to operate effectively.

After the workshops, the 'rich pictures' provided by participants were analysed and categorised and the areas of strong commonality identified. The key elements that make up an organisation's operational system identified by workshop participants are summarised in Table 10 (see pg. 43).

3.2.2.2 Generalised system diagrams

Once the key system elements were identified the systems analysis was represented diagrammatically using non-hierarchical classification software (Figures 6 and 7; pg. 45). This approach enabled the system elements and interactions to be re-centred and considered from the perspective of different elements within the system, such as staff, volunteers, clients and suppliers. Diagrammatic representations of the systems analysis from these different perspectives are presented in Figures 8 and 9 (pg. 46).

The connections between the various elements of the system were created for different types of interactions between them however, the fact that there is an exchange of services for payment means that financial flows provide a good indicator of dependency chains and so these are often used to define the direction of the dependency.

Table 10: Elements of archetypal CSO operational system

Upstream system elements	
Government	Federal government State government Local government Emergency services Public health system Police and criminal justice system Planning bodies Child protection agencies Centrelink
Private Sector	Philanthropic/private donor bodies Private sector/corporations Private Landlords
Financial Services	Banks Insurance Companies
Utilities	Telecommunications providers Electricity providers Water providers Roads Other transport infrastructure Gas and fuel providers
Economic	Local economy National economy
Organisation	
Staff	Direct service workers Volunteers Administrative and Management staff Casual staff and contractors
Assets	Buildings Vehicles General operational equipment and furniture Specialist equipment
Natural Environment	
Natural Environment	Weather Weather extremes Food production and prices
Peers	
Suppliers and external	Consumable suppliers Administrative and IT support services Operational suppliers e.g. waste disposal services

Peer organisations	Related and partner government bodies and organisations (e.g. Departments of Housing, Disability, Community Services) Related and partner NGOs (e.g. community services, health agencies, community housing, refuges, family support services, respite services, disability services, employment services) International partners (e.g. advocacy organisations in the Asia/Pacific region)
Broader community	People/Community Schools Families
Downstream system elements	
Clients (not an exhaustive list)	Individuals and families experiencing financial hardship Migrants, refugees and asylum seekers People with a disability Frail and aged people in home and residential care People with mental illness People experiencing homelessness Aboriginal and Torres Strait Islander peoples

Table 11: Generalised CSO System Analysis legend

System element	Legend
CSO	Red
Clients	Blue
Community	Green

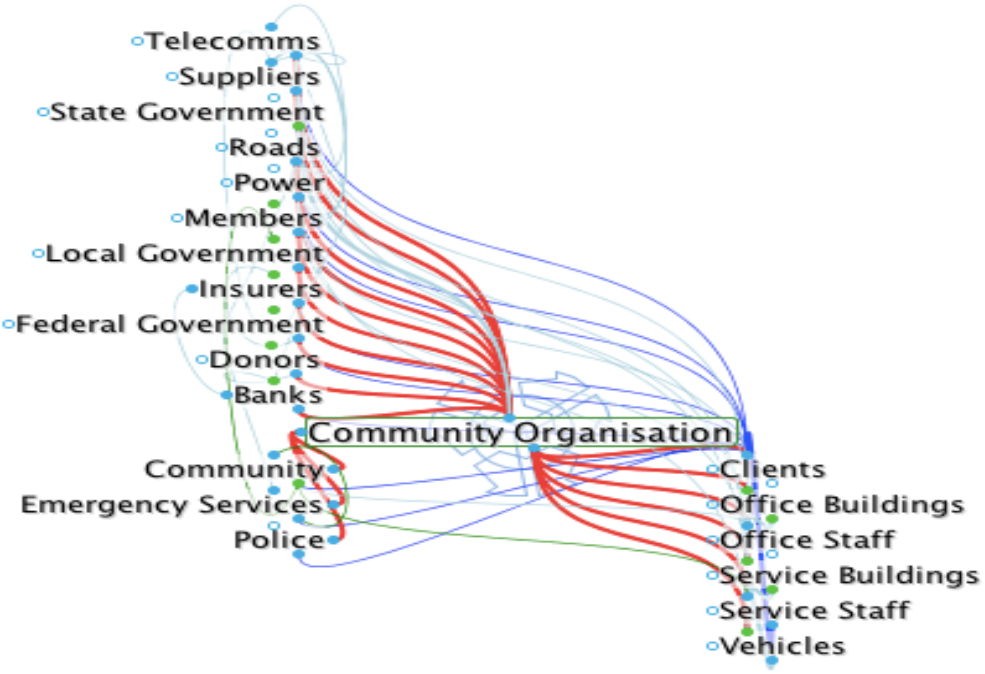


Figure 6: Generalised CSO Systems Analysis (organisation-centric)

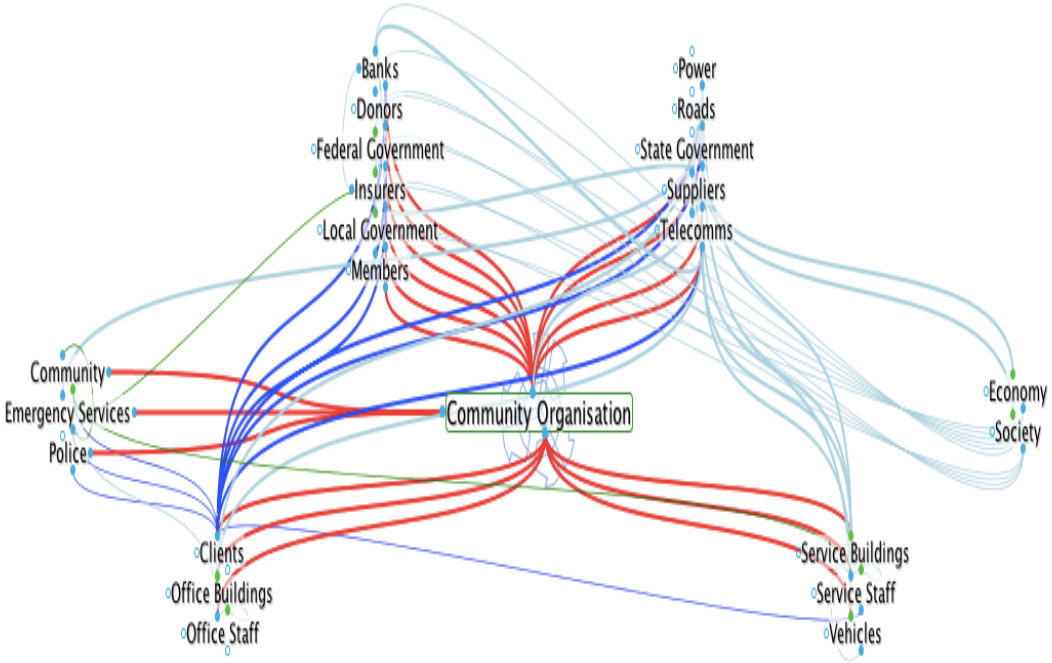


Figure 7: Generalised CSO Systems Analysis (organisation-centric)

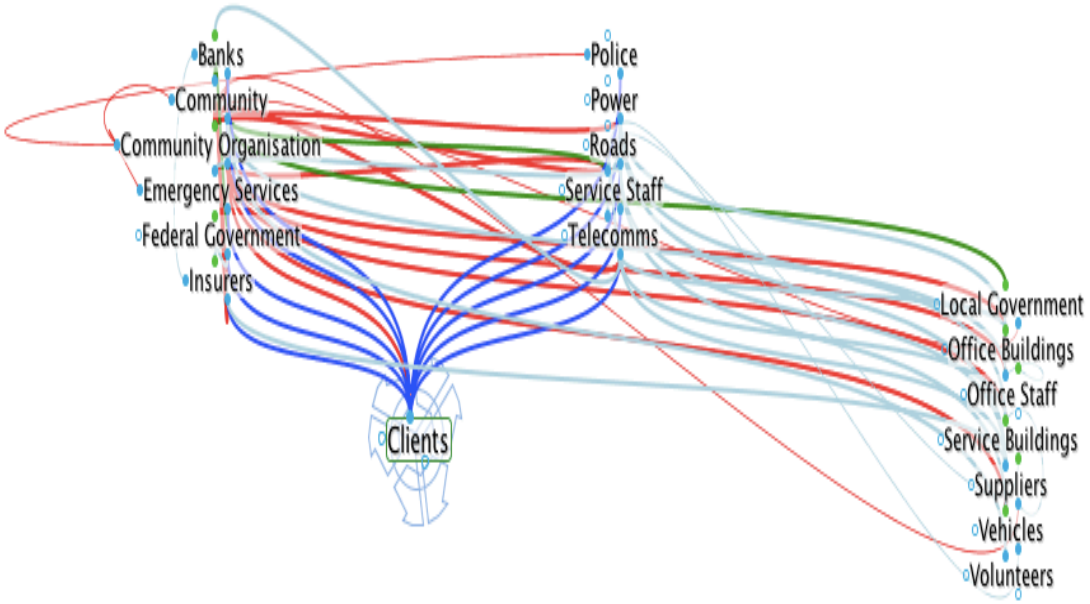


Figure 8: Generalised CSO Systems Analysis (client-centric)

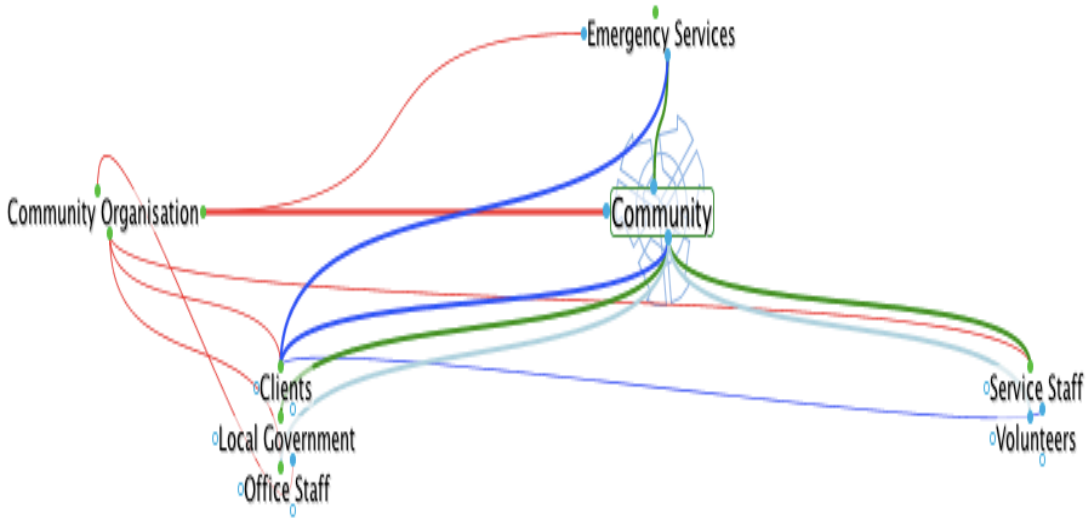


Figure 9: Generalised CSO Systems Analysis (community-centric)

3.2.2.3 System analysis of impacts

The CSO Systems Analysis enables organisations to locate their services within a broader physical, societal and economic context and to facilitate consideration of the various ways that disruptions to different parts of that system, and particularly disruptions caused by infrastructure failure, could adversely impact their capacity to provide services to clients. For example, how the collapse of a major employment industry in their region (e.g. tourism in a region impacted by drought) causing mass unemployment, could lead to a surge in demand for emergency relief services and the depletion of organisational resources, which in turn could lead to service strain or failure.

A clear finding from the workshops was that CSOs of all complexions and sizes share 90% of their system elements in common. They almost all work with governments for funding, rely on the major types of utility infrastructure and are highly interconnected with the community for staff, clients, volunteers and service providers. This means that many will experience similar pressures from changes to these elements and the interactions they have with them.

Equally almost every organisation is unique – some with specialist staff or equipment, some are unique in where they are based and with whom they work. This means that the systems analysis diagram for each organisation will also be unique. Nevertheless, the strong commonality means that developing a generalised CSO systems analysis and understanding how particular organisations and service types will respond to various impacts will provide significant insights for the work of many CSOs.

3.2.3 Failure Mode Analysis

Once developed, the *Generalised CSO Systems Analysis* was applied to organisational case studies in order to explore the processes by which climate change and extreme weather impacts to infrastructure might lead to disruptions to an organisation's operational system and, eventually, to the failure of service delivery.

In each workshop, participants were asked to present their organisation as a case study for the group to explore the full range of ways in which disruptions to infrastructure and critical infrastructure services caused by specific, geographically relevant primary climate change hazards might lead to the failure of service delivery. The five exemplars described below synthesise and present some of the common service delivery 'failure modes' identified. While based on the characteristics, service types, locations and exposure to specific climate change impacts of the actual organisations that participated in the project, the exemplars themselves represent hypothetical or potential series of cascading consequences, rather than actually occurring past events.

Table 12: Failure mode legend

Impact type	Legend
Mechanism of organisational failure/strain	Red
Flow-on effects for clients	Yellow
Flow-on effects for other system elements	Blue

Exemplar one: Impacts of extreme heat on homelessness and social service provision in central Australia

This exemplar was developed from a case study provided by the peak body for South Australian homeless services at the *Welfare Professional Climate Workshop* held in Adelaide. It describes the way in which the impacts of extreme heat on transient Aboriginal communities in SA lead to homelessness and social service strain.

Extreme heat in remote areas causes Aboriginal peoples to move from remote communities to coastal areas and beaches, where they are homeless. This leads to an increase in the numbers of homeless people and the Aboriginal community at the coast/beaches. In turn, his increases demand for crisis accommodation and other community services in coastal service areas.

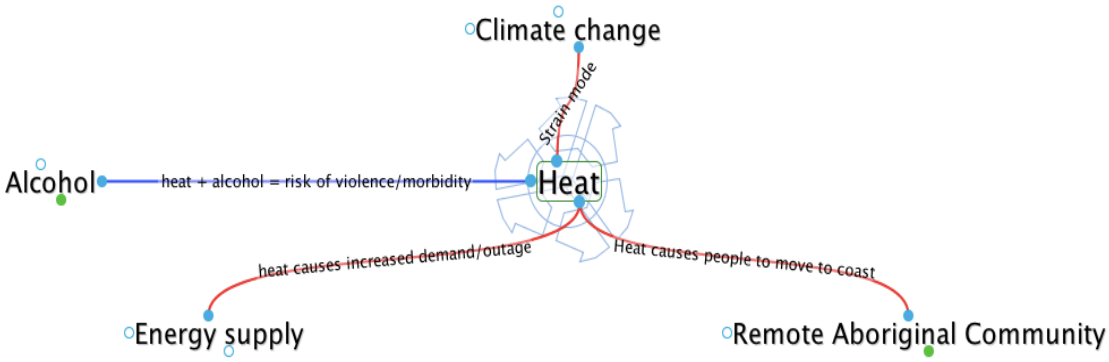


Figure 10: Failure mode exemplar one (stage one)

At the coastal beaches, homeless Aboriginal peoples come into more frequent contact with the police, leading to increased arrests and interaction with the criminal justice system, including increased rates of incarceration and engagement with juvenile justice and child protection systems. These interactions with the criminal justice system have flow-on impacts for individuals in terms of future employment options, recidivism, family separation etc., which in turn increase referrals to and demand on CSOs.

The effects of extreme heat also lead to increased morbidity and even heat-related deaths within exposed homeless populations and Aboriginal communities, leading to increased pressure on public and community-based health systems. The combined impacts of extreme heat and alcohol consumption may also contribute to disproportional rates of morbidity and death within these groups.

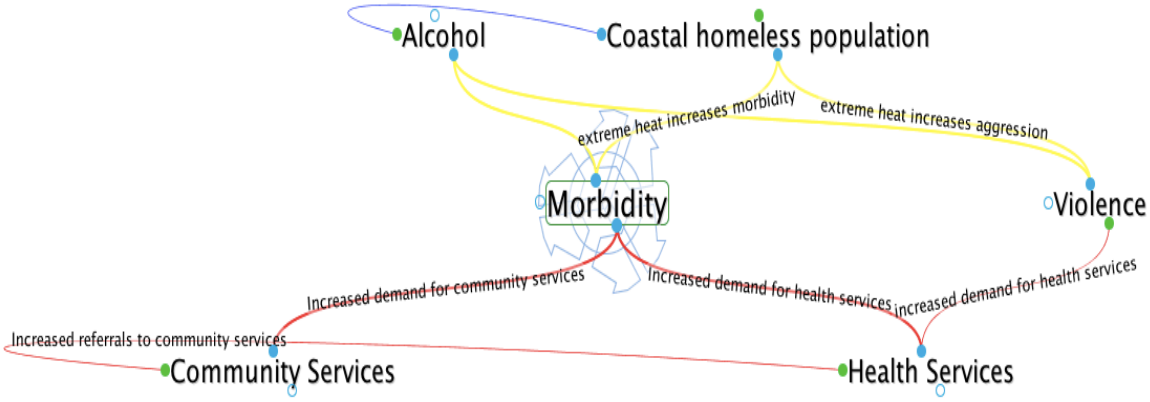


Figure 11: Failure mode exemplar one (stage two)

The impacts of extreme heat and alcohol consumption may also lead to increased incidence of violence. Within Aboriginal communities and homeless populations, increased violence may lead to increased engagement with the police, the health system and the community service system, thus increasing demand for services on all of these sectors, as well as significant negative direct and indirect impacts for individuals. Workers within each of these sectors may also face an increased risk of violence from clients, who are suffering the combined impacts of extreme heat and alcohol.

It should be noted that this exemplar only considers one or two interplays of impacts and it is not suggested that all impacts are considered. For example, a more complex understanding of heat impacts would include the fact that extreme heat will also affect energy supplies, leading to increased costs for power (e.g. through increased air-conditioning use) and also to increased power outages in periods of peak demand. Increased costs and power outages will place further strain on organisational finances at a time when they are responding to increased demand for their services.

Exemplar two: Impacts of bushfire on outreach home and community care (HACC) service provision

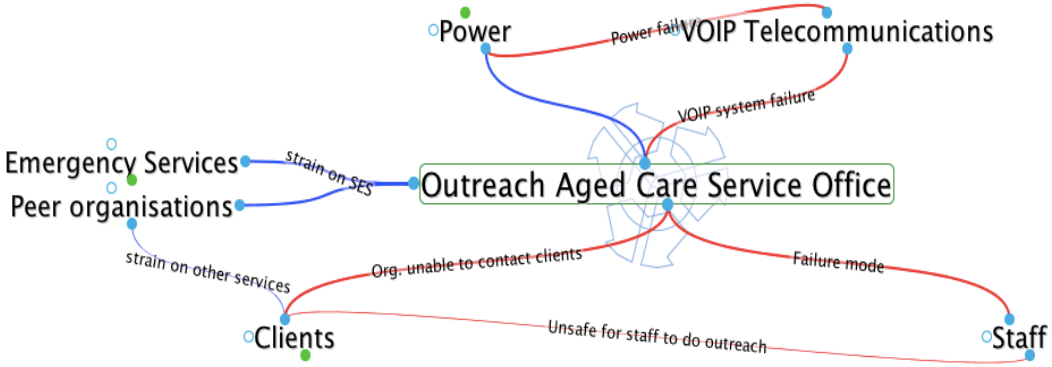


Figure 12: Failure mode exemplar two

This exemplar was developed from a case study provided by a community-based provider of Home and Community Care services at the *Welfare Professional Climate Workshop* held in Melbourne. It describes the ways in which bushfire impacts lead to service failure in an outreach aged care service provider reliant on Voice Over Internet Provided (VOIP) communications technology and the consequences for its clients.

A bushfire in Victoria causes a complete and indefinite power outage to the organisation. It also leaves key roads in the service area inaccessible. As a result, the organisation loses access to its electronic client records database and to its VOIP telecommunications system. Without access to its client database and telecommunications system, the organisation is unable to contact its clients, who number in the several hundred, unless they send workers and volunteers to their homes. However, with key roads inaccessible, this represents an occupational health and safety risk for workers and the organisation. Under these circumstances, the only course of action available to the organisation is to contact emergency services to alert them to the risks faced by their clients. Thus the failure of the CSO directly increases the demand on the emergency services, which would not have been the case if alternative telecommunications systems had been available.

The loss of the VOIP system also means that clients cannot contact the organisation, as both outgoing and incoming calls are affected. This may lead to increased demand for assistance from other aged care service providers in the region that are not reliant on VOIP telecommunications. It may also lead to increased demand on emergency services to check the safety of elderly people in their homes.

Direct consequences for clients include loss of a range of services essential to meeting their basic needs, including shopping, meal provision, bathing and personal care and administration of medications. Without access to these services, vulnerable aged clients face isolation in their homes, increased risk of infection and disease and even death.

A key role of CSOs that would not be captured in the transfer of responsibility to emergency services is an intimate knowledge of the people affected and their circumstances. For example, where evacuation is required, the process may be complicated by frail older people and people with a disability refusing to leave their homes. Due to social isolation, such people can have very strong bonds with companion and assistance animals and if they are forced to evacuate without them it may result in severe distress and grief with subsequent implications for CSOs who look to their long-term care.

Exemplar three: Impacts of flood on residential aged care service provision

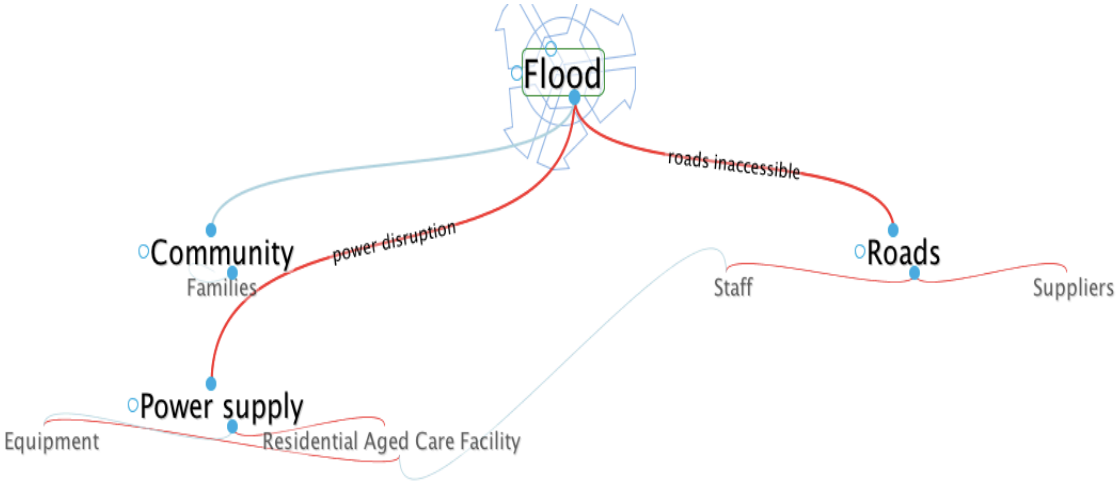


Figure 13: Failure mode exemplar three (stage one)

This exemplar was developed from a case study volunteered by a community-based provider of residential aged care services at the *Welfare Professional Climate Workshop* held in Brisbane. It describes ways in which flood impacts lead to service failure in a residential aged and disability care facility and the consequences for its clients.

A flood in Brisbane causes extensive damage to key access roads to the organisation's main residential care facility. The power supply to the organisation is also disrupted. The organisation has an alternative, though smaller, facility in a nearby area and has backup generators that can meet some of the facility's power needs for a few days.

Some high-needs patients are moved to the alternative facility, which faces a lower risk of flooding, before the flood occurs. This places additional strain on that facility, which is already operating at full capacity, leading to increased pressure for staff, increased discomfort for clients and increased use of goods and services in that facility, including food, energy and medical supplies.

After the floods, key roads are inaccessible which leaves workers unable to access the facility, including health care and administrative staff, cooks and cleaners. This results in one shift of workers being on call 24 hours a day to meet clients' needs until the facility becomes accessible again.

The organisation is also inaccessible to suppliers, on whom they rely to provide food and medical supplies, and to external service providers such as waste and medical waste disposal. The organisation faces the depletion of its stores of food and medical supplies, which will lead to deteriorating health outcomes and even death for clients. The failure of waste disposal systems will result in the build-up of regular and medical waste on the premises, exposing the organisation and its clients to increased risk of infection and disease outbreaks.

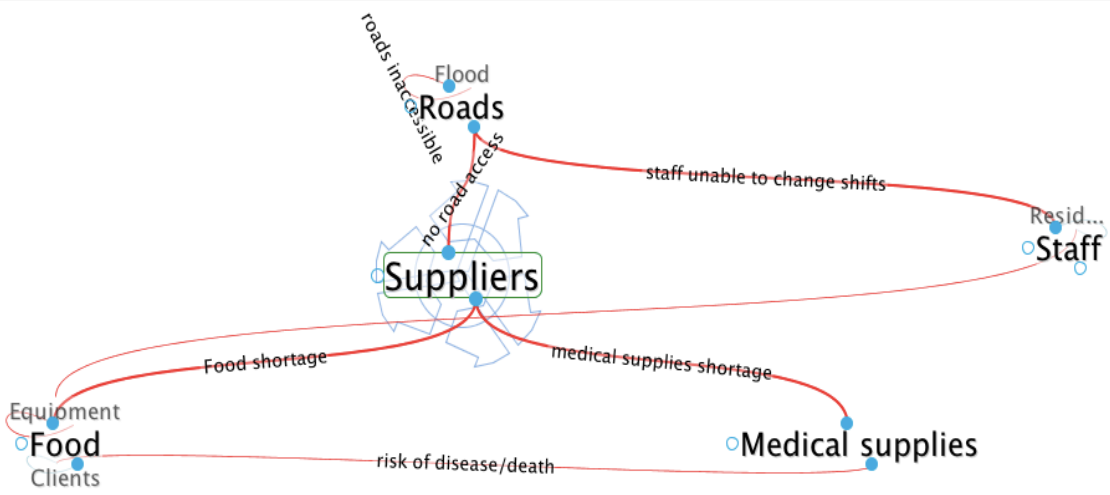


Figure 14: Failure mode exemplar three (stage two)

Disruption to the power supply also increases the risk of being unable to run essential and life-saving medical equipment and to refrigerate food and medical supplies. Impacts to clients include increased risk of infection and poisoning from spoiled food and contaminated water supplies and to increased risk of death due to the failure of life-saving medical equipment.

When the organisation can be evacuated, clients are transferred to alternative care facilities, peer organisations and the public health system. As a result these other organisations face increased demand for and strain on their own services, to the detriment of current and incoming clients. A ripple of strain is seen to flow through the system.

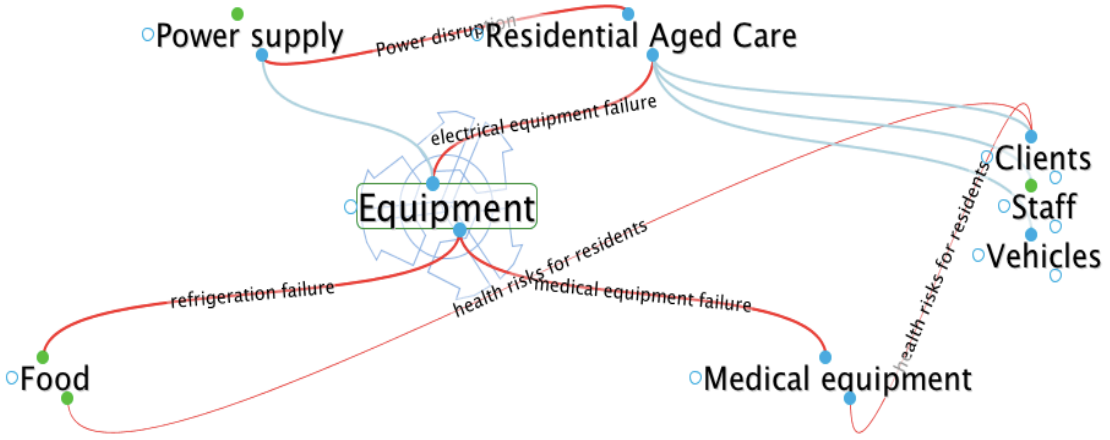


Figure 15: Failure mode exemplar three (stage three)

Exemplar four: Impact of cyclone on emergency relief service provision

This exemplar was developed from a case study provided by an Emergency Relief provider at the *Welfare Professional Climate Workshop* held in Darwin. The organisation provides emergency relief, financial counselling and gambling addiction support services to people living on low incomes and experiencing financial hardship. The case study describes the impact of a cyclone on emergency relief provision.

A cyclone in Darwin causes major damage to the built environment and significant disruptions to critical infrastructure services, including power, water and telecommunications. Many local businesses, including significant numbers in the tourism industry are caught unprepared, suffering major losses including to offices, vehicles and equipment. Many local employees are also directly affected by the cyclone and are unable to work. As a result of these losses, many businesses are forced to close temporarily. As the recovery process begins, some discover they are inadequately insured for the losses they have sustained; faced with the high costs of recovery, up to 20% close permanently. With fewer tourists coming to the region in the aftermath of the cyclone, more businesses in that industry are forced to reduce staff working hours, introduce redundancies and even to close.

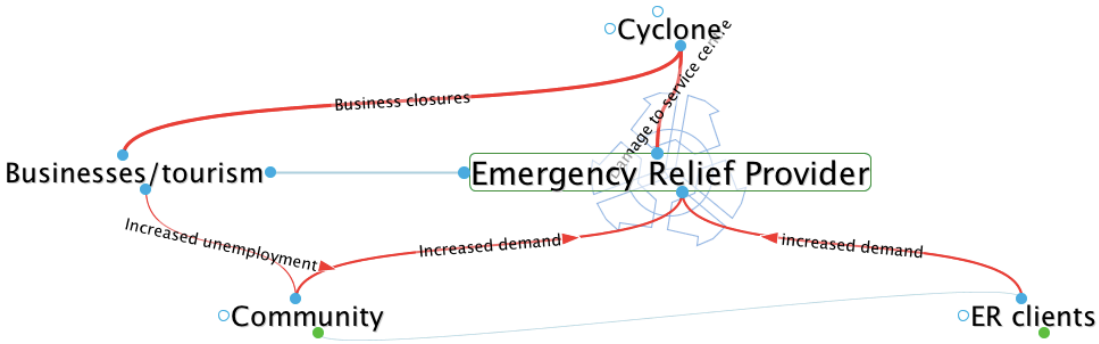


Figure 16: Failure mode exemplar four (stage one)

The local emergency relief provider also sustains damage to its premises and remains closed for two weeks. A number of other local community services are unable to provide services in the immediate aftermath of the cyclone. Several remain closed up to a month later. When the emergency relief provider is able to resume service provision, it does so with 50% of its normal staffing capacity, as workers and volunteers resign or take extended leave to deal with the direct impacts of the disaster. However, it experiences an immediate surge in demand for food, clothing and financial assistance as people already in financial crisis prior to the cyclone struggle to recover. At the same time, it also experiences a surge in demand from members of the community who have lost their jobs due to business closures and who are unable meet their financial obligations, including mortgage payments. These are people who have never before had to seek charitable assistance to meet their basic needs.

With limited resources and with several other community services still closed, the emergency relief provider is unable to meet demand for services and begins to place strict limitations on the amount of assistance it provides to individuals. People are turned away from the service if they have requested assistance within the previous 6-month period. Without access to the assistance that enables them to manage their weekly and monthly budgets, the rates of poverty and homelessness in the community increases as mortgages are foreclosed, tenants are evicted from rental properties for failing to meet rent payments and families struggle to buy sufficient food to feed their children. As people fall further into financial hardship and crisis, rates of depression also increase. As a result, other parts of the social service system become strained, as people present at hospitals, community mental health and other crisis centres for assistance.

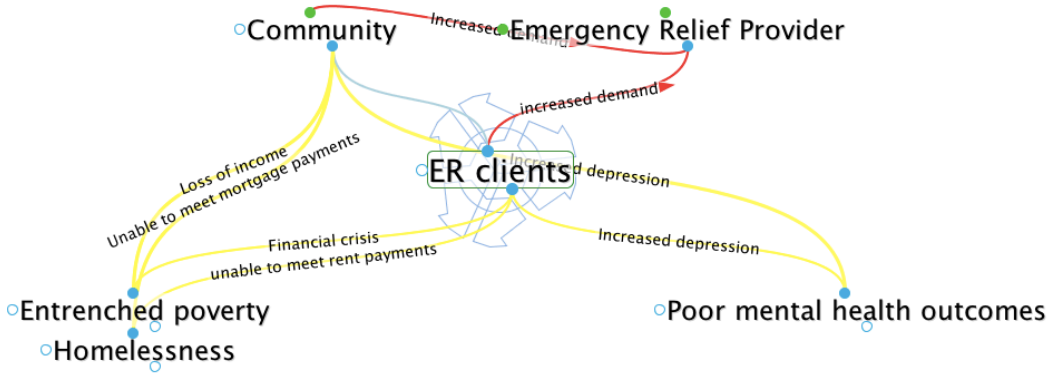


Figure 17: Failure mode exemplar four (stage two)

The increasing numbers of people approaching the service and the growing complexity of their needs begins to affect staff morale; several workers suffer burnout and the rates of staff turnover also increase. Already critically strained by the increase in demand and the loss and turnover of its staff, the organisation is at risk of closing altogether.

Exemplar five: Impact of extreme heat on a provider of Out of Home Care (OOHC) services to children and families

This exemplar was developed from a case study provided at the *Welfare Professional Climate Training Workshop* in Perth by a youth and family service that delivers Out Of Home Care services to young people and children in foster care, their foster parents and families. Services provided include parenting support for families at risk of having children removed; respite care for foster parents; and health care, counselling and education support services for vulnerable children and young people in foster care. It describes the impact of extreme heat on Out Of Home Care service provision.

The youth and family service provider has an internal workplace health and safety policy, which prevents staff from providing in-home services to children and families in extreme temperatures if clients' homes are not maintained at adequately comfortable temperatures (e.g. if temperatures inside clients' homes match or exceed outside temperatures).

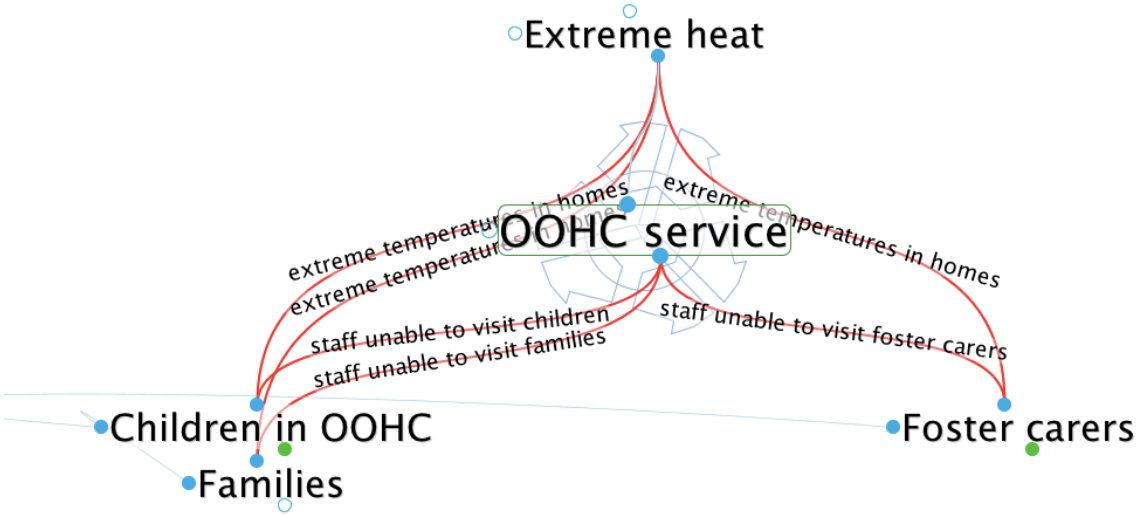


Figure 18: Failure mode exemplar five (stage one)

An extreme heat event occurs in Perth, resulting in temperatures of 40 degrees and above for a record number of consecutive days. As a result, staff members are forbidden by the organisation's policy to provide in-home services to clients whose homes are known to lack air conditioning or adequate cooling, also known as 'hot houses'. As a result, families, children and foster carers are denied access to counselling, parenting support, supervision, respite and other support services.

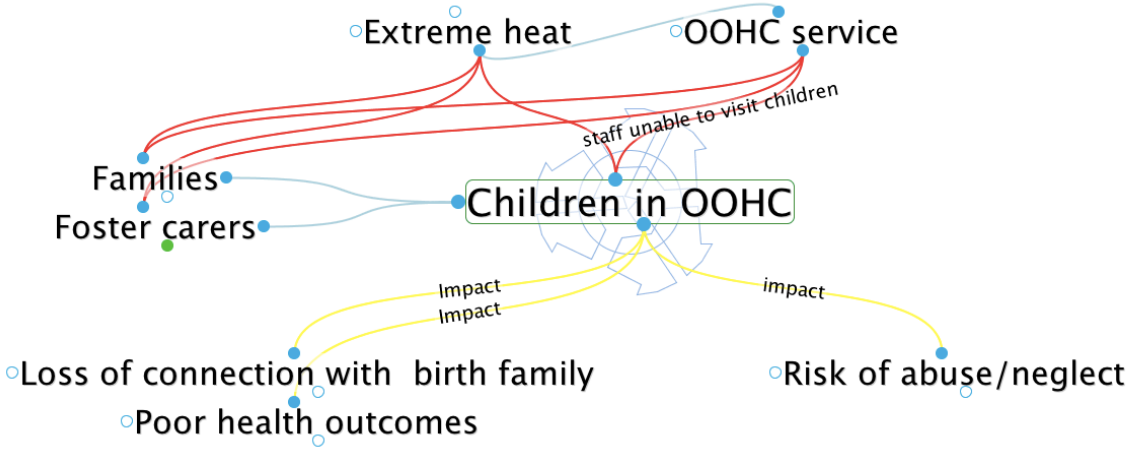


Figure 19: Failure mode exemplar five (stage two)

For families, lack of access to parenting and other support service provision may increase the risk of children experiencing abuse and neglect or being removed by child protection authorities. Alternatively, children who have been assessed as able to return to their families may be unable to do so due to the disruption of transition support services. Without access to respite care, foster parents may be unable to manage their caring responsibilities and return children to state care. Without access to counselling, healthcare and other support services, children may experience adverse impacts to their health and wellbeing.

3.2.3.1 Conclusions from Failure Mode Exemplars

It is possible to use the CSO Systems Analysis to work through the impact of climate change and extreme events until a detailed understanding of impacts on clients is achieved. The effects on clients outlined in the exemplars indicate serious consequences, including mortality, morbidity, increases in incarcerations and the numbers of children taken into state care, which can occur as a logical consequence of impacts on unadapted organisations. The loss of capacity from CSOs will cause a ripple of strain through the community services sector, the wider health care sector and emergency service providers.

3.2.4 Adaptation Mode Analysis

Identifying system elements that are exposed or vulnerable to failure as a result of climate change impacts to infrastructure in turn enables the identification of appropriate strategies to reduce risks or even new opportunities, that is, to adapt. The following five 'adaptation mode' exemplars apply some of the adaptation strategies identified in the workshop program to the five failure modes described above, to develop a picture of the processes by which organisations can increase resilience or adapt to climate change and extreme weather events.

Table 13: Adaptation mode legend

Adaptation action type	Legend
Planning action	Blue
Adaptation action	Green
Collaboration action	Purple
Impact of adaptation on CSO systems	Orange

Exemplar one: Adapting homeless services to extreme heat

This adaptation mode exemplar corresponds to failure mode exemplar one (pp. 49-50). It outlines the planning, adaptive and collaborative actions that the homeless service can take to mitigate, manage and transfer risks to remote Aboriginal communities and to its own service delivery from extreme heat impacts and describes the benefits to clients, the broader social service system and the community that result from these actions.

Firstly, the organisation identifies and undertakes a number of risk management or planning actions to increase the resilience of remote Aboriginal communities to extreme heat impacts. These activities include: advocating to state and federal governments to ensure that all new and existing housing in the community is heat-adapted (e.g. is well insulated, uses passive cooling techniques to reduce reliance on air-conditioning and is fitted with energy efficient heating, cooling and appliances); and providing outreach community development services to remote Aboriginal communities to educate residents about energy efficiency and how to manage on extremely hot days, including identifying the signs and symptoms of heat stress and the relationship between alcohol consumption and heat stress. These activities build the community's understanding of, and resilience to, extreme heat and result in reduced population migrations during extreme heat events and reduced presentations at health services due to heat stress.

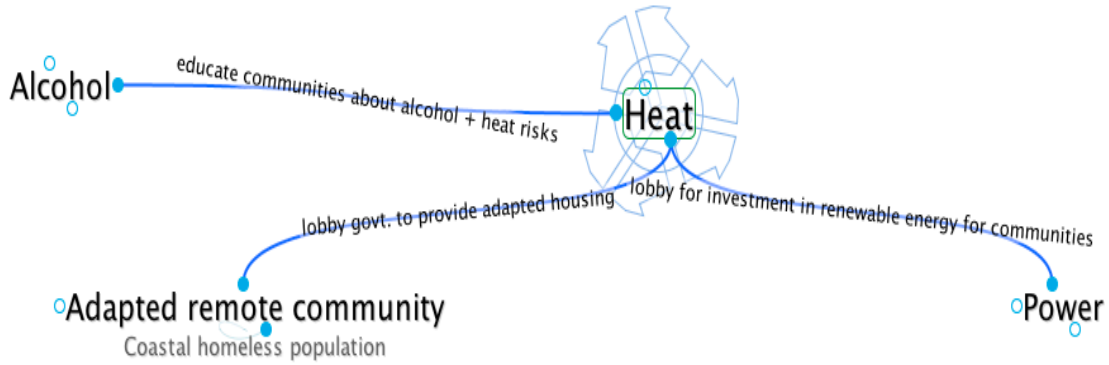


Figure 20: Adaptation mode exemplar one (stage one)

At the same time, the organisation identifies and implements a number of risk management or planning actions to adapt its own service delivery to extreme heat events. First, it develops a workplace health and safety policy for staff and volunteers during extreme heat, which establishes guidelines about taking breaks and monitoring staff and volunteers' water consumption and the signs and symptoms of heat stress in the workforce. It also develops an extreme heat access and response plan for homeless clients in the service areas, which includes provisions for conducting outreach to people sleeping rough, encouraging clients to access CSO drop-in facilities, guidelines for monitoring clients for signs of heat stress or aggression during periods of extreme heat and establishes clear referral pathways to local health and other social services for clients experiencing heat stress.

Finally, the organisation also invests in training and development for staff and volunteers to enable them to identify the signs and symptoms of heat stress, the relationship between heat stress, alcohol consumption and aggression and to manage heat-induced aggressive behaviours.

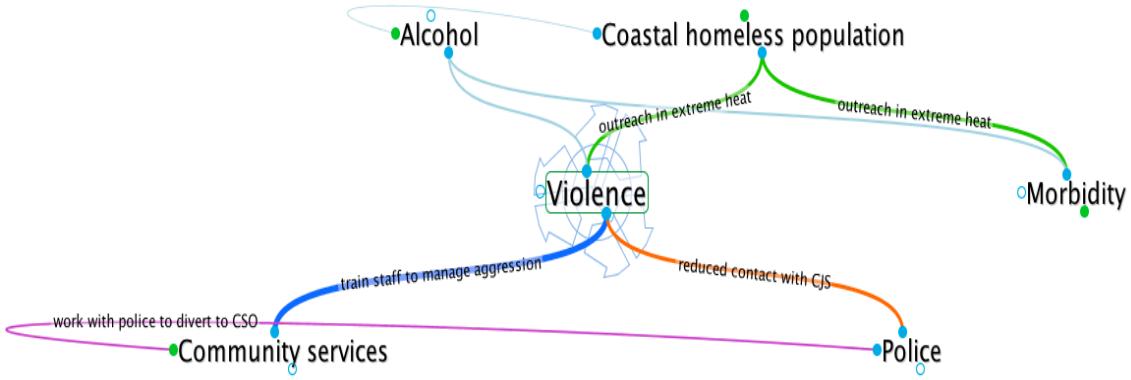


Figure 21: Adaptation mode exemplar one (stage two)

The organisation also undertakes a number of measures to adapt its service premises to direct and indirect heat impacts, particularly its drop-in facilities for people experiencing homelessness. It secures funding to upgrade to energy efficient cooling and appliances, install insulation and to introduce passive cooling techniques, such as planting a roof garden and erecting shade cloths in outdoor areas. It also installs water dispensers in all drop-in facilities for homeless people. These actions ensure that drop-in facilities are cool and reduce the risks for staff and clients of heat stress and heat-induced aggressive behaviours. They also increase the energy efficiency of the organisation thereby reducing its energy consumption and its vulnerability to cost spikes caused by increasingly frequent and intense extreme heat events. This increased resilience ensures that the organisation is able to continue providing effective services and reduces the demand on other services triggered by service strain and failure.

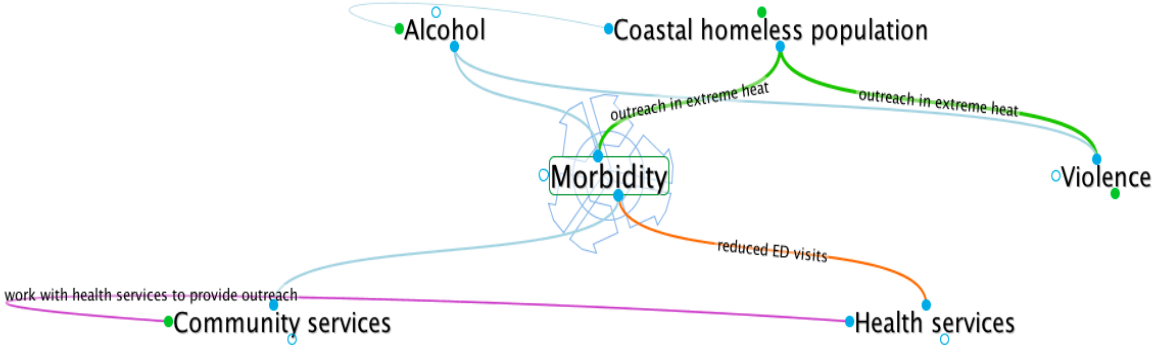


Figure 22: Adaptation mode exemplar one (stage three)

Finally, the organisation collaborates with a range of services and institutions within the community to increase the resilience of people experiencing homelessness, including Aboriginal people who have migrated temporarily from remote communities, to extreme heat events. First it works with the local police to develop an extreme heat strategy, which diverts homeless and transient Aboriginal people to the organisation's cool drop-in facilities in the first instance. This reduces confrontational contact between these groups and the police and diverts them away from the criminal justice system. The organisation also partners with local health services to develop collaborative extreme heat service provision plans in order to reduce heat-related presentations at hospital emergency departments, thus relieving pressure on the public health system.

Exemplar two: Adapting outreach home and community care (HACC) service provision to bushfire impacts

This adaptation mode exemplar corresponds to failure mode exemplar two (pp. 51-52). It outlines the planning, adaptive and collaborative actions an outreach provider of home and community care services can take to manage, mitigate and transfer the risks to service provision from flood impacts and describes the benefits to clients, the broader social service system and the community from these actions.

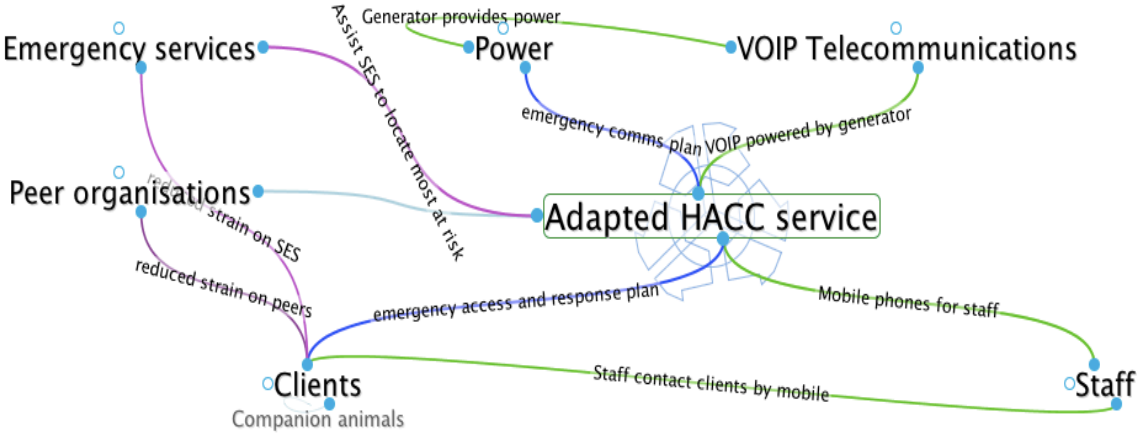


Figure 23: Adaptation mode exemplar two

Firstly, the organisation undertakes a climate change risk assessment, which includes an assessment of bushfire risks. This assessment clearly identifies the organisation's vulnerability to power and telecommunication system failures. In response to this assessment, the organisation develops an emergency management plan, which includes a contingency action plan in the instance of power and communications failures. The organisation also develops an associated emergency client access and response plan, which requires the production of a register of vulnerable clients and prioritises access and response to those who are most at risk during emergencies.

The planning process identifies a number of adaptive strategies that will increase the resilience of the organisation to infrastructure failure caused by bushfires. It purchases a power generator to use during power outages, mobile phones for staff to use during emergencies and creates hard copy records of clients' contact details, copies of which are stored in a fire refuge as well as in offsite locations. The emergency management and communications failure contingency plans prioritise the charging of mobile phones using generated power during blackouts. These actions ensure that organisations are able to contact those clients that are most exposed and most vulnerable to bushfire impacts during emergencies.

Finally the organisation works with local and state emergency services to develop emergency management plans that include information sharing protocols. These protocols enable the organisation to assist emergency services to identify, locate and assist the most vulnerable members of the community during a bushfire. It also partners with other providers of aged-care services in the area to develop an emergency response network. This network develops collaborative emergency service delivery and communications plans to ensure that clients receive the care they need during and after emergencies and to ensure that the service network is not strained by the failure of single organisations within the network.

Exemplar three: Adapting residential aged care service provision to flood impacts

This adaptation mode exemplar corresponds to failure mode exemplar three (pp. 53-54). It outlines the planning, adaptive and collaborative actions a provider of residential aged care services can take to manage, mitigate and transfer the risks to service provision from flood impacts and describes the benefits to clients, the broader social service system and the community from these actions.

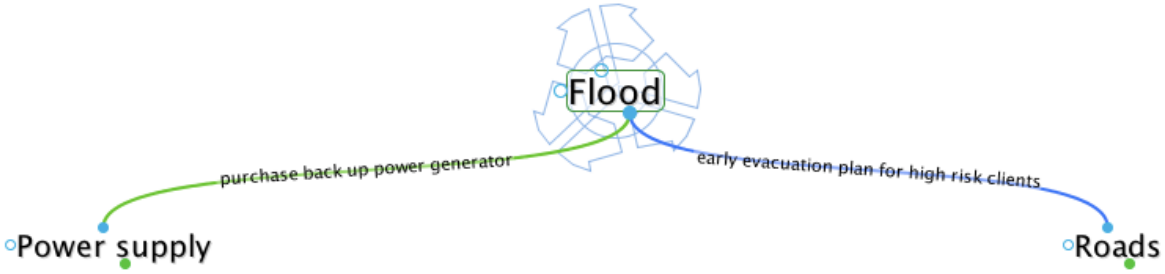


Figure 24: Adaptation mode exemplar three (stage one)

The organisation undertakes a climate change risks assessment, which includes an assessment of its exposure and vulnerability to extreme weather risks. This assessment reveals that the organisation is highly vulnerable to flood impacts to infrastructure, particularly to power failure and to isolation caused by the flooding and closure of key access routes. Based on this assessment, it develops a flood disaster management plan. The plan includes guidelines about identifying and evacuating highly vulnerable residents early and contingency staffing arrangements to ensure that quality care can be provided to clients and that the health and safety of workers is protected. It quantifies the facility's energy requirements and identifies essential equipment that must be maintained during disruptions to the power supply. Finally, it provides guidelines relating to appropriate food storage and handling, hygiene and disease prevention during floods.

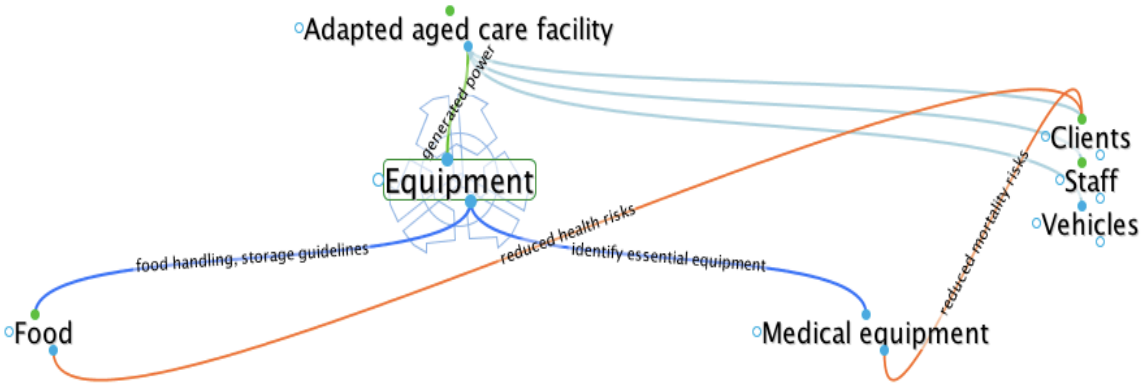


Figure 25: Adaptation mode exemplar three (stage two)

Based on the planning process, the organisation purchases a generator for backup power and invests in solar panels with a battery bank to ensure that it is able to power essential equipment during disruptions to the power supply (e.g. medical equipment and refrigeration). At the same time it upgrades all appliances within the facility to meet the highest energy efficiency standards in order to reduce the amount of generated power required to maintain them during power outages. The organisation also creates stockpiles of non-perishable food items and medications to enable it to maintain service provision for two weeks if it becomes isolated from suppliers due to road closures. Finally, it creates a register of vulnerable clients and associated guidelines for its regular review and maintenance.

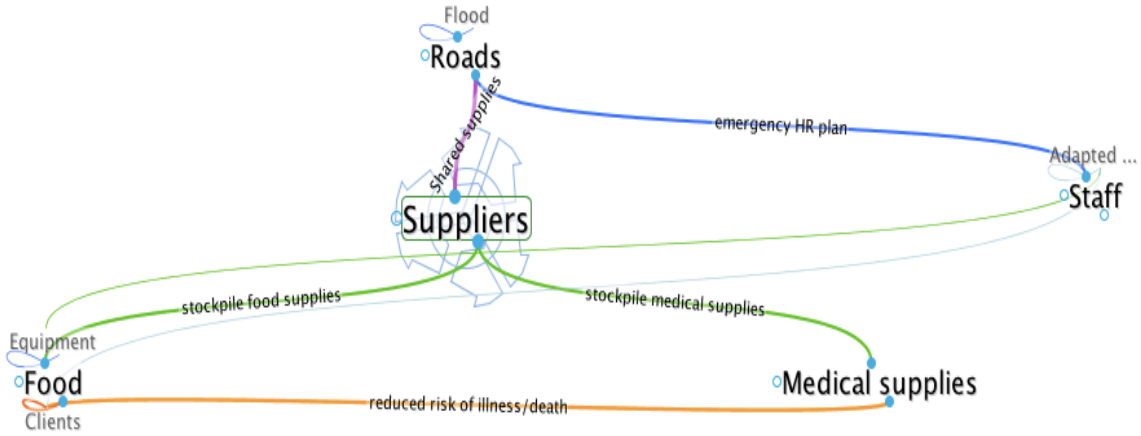


Figure 26: Adaptation mode exemplar three (stage three)

The organisation also partners with other aged care and health service providers in the area to develop collaborative emergency response plans. These plans include procedures for evacuating highly vulnerable clients to alternative locations, including hospitals, prior to floods occurring as well as arrangements for sharing staff and supplies during emergencies. They also establish shared food and waste storage and refrigeration facilities.

By engaging in these activities the organisation ensures that it is able to evacuate its most vulnerable clients prior to a flood occurring and to maintaining the highest possible standards of care for those that remain in the facility by reducing the health risks associated with food spoilage and the failure of critical medical equipment. It also reduces the likelihood that all residents and staff will need to be evacuated from the centre, thus reducing the strain on emergency services as well as other aged care service providers and hospitals. Finally, in the case that the organisation is not directly affected or isolated by the flood, it is well prepared to accept and care for residents from affected services nearby and to second specialist staff, equipment and supplies to the response and recovery effort.

Exemplar four: Adapting emergency relief (ER) service provision to cyclone impacts

This adaptation mode exemplar corresponds to failure mode exemplar four (pp. 55-56). It outlines the planning, adaptive and collaborative actions an emergency relief provider can take to manage, mitigate and transfer the risks to service provision from cyclone impacts and describes the benefits to clients, the broader social service system and the community from these actions.

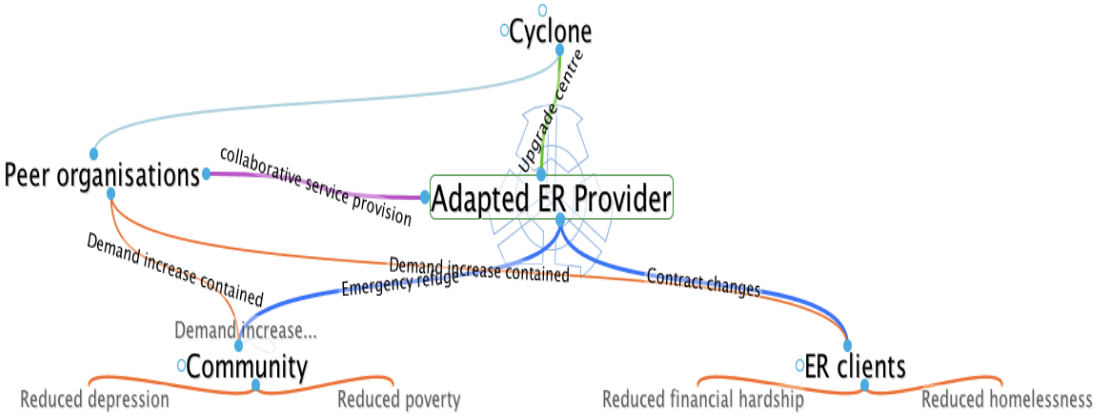


Figure 27: Adaptation mode exemplar four

Operating in a location prone to severe storms and cyclones, the organisation is acutely aware of the physical impacts they cause to the built and natural environments as well as the financial hardship caused by consequent spikes in unemployment through business closures and impacts to the tourism industry in particular, which in turn create increased demand for emergency relief. As a result it undertakes a climate change and extreme weather risk assessment, which focuses specifically on the direct and indirect risks to service continuity caused by cyclones. The assessment identifies that the organisation's premises need to be upgraded to be more resilient to severe storms.

Based on the climate change risks assessment, the organisations secures a government grant to upgrade its facilities, which it uses to install reinforced windows and to purchase a new roof, made of materials highly resilient to strong winds. As a result of taking this action, it is able to extend its insurance cover against losses caused by cyclones and is also rewarded with a reduced insurance premium in recognition of the increased resilience of its premises.

The organisation also notifies the SES and the Red Cross about the upgrade to its facilities and enters into a formal agreement with the state government for its premises to be used as an emergency shelter in the event of a cyclone. As part of the agreement, the organisation negotiates for the insertion of new clauses into its funding agreement with the state government, which ensure that it cannot be penalised for failing to meet contractual obligations when it is engaged in response and recovery efforts and also trigger a 15% increase in funding when a cyclone is deemed to be a natural disaster to enable the organisation to respond to the short-term increase in demand for emergency relief. The additional funds can be used both to purchase material aid and to cover increased staffing costs.

Given the major disruptions to business continuity that cyclones have caused in the past, the organisation also develops a disaster management plan. The plan includes a communication strategy to warn clients about predicted events and to make sure they know that the organisation's premises can be accessed as an emergency shelter. Another key element of the plan is that it establishes collaborative arrangements for service provision with other CSOs as well as the local government during and after disasters. These arrangements include provisions for seconding staff from organisations in unaffected areas and sharing premises and resources. Finally, the plan also establishes a contingency fund for staff and volunteer, which it uses to provide crisis leave to those directly impacted by future disasters.

By undertaking these actions the organisation establishes itself as a place of refuge for clients and community members during cyclones and reduces the risk that it will be forced to close for a lengthy period in the aftermath of a cyclone due to damage caused to its premises. By securing additional funding for core service provision in the aftermath of a disaster, it also ensures that it is well placed to meet the short-term increase in demand for emergency relief. By including provisions to assist staff and to boost staffing levels to respond to increased demand, the organisation improves its ability to attract and retain staff and reduces the likelihood that they will burn out.

Finally, by ensuring that it is able to assist clients and members of the community affected by disruptions to their employment and income flows to meet their financial obligations, including power, fuel and grocery bills and mortgage and rent payments, the organisation helps to reduce the risks of homelessness and financial crisis faced by individuals and of increased, entrenched poverty within the community more broadly.

Exemplar five: Adapting an out of home care (OOHC) service provision to extreme heat

This adaptation mode exemplar corresponds to failure mode exemplar five (pp. 57-58). It outlines the planning, adaptive and collaborative actions a provider of Out Of Home Care services can take to manage, mitigate and transfer the risks to service provision from extreme heat impacts and describes the benefits to clients, the broader social service system and the community from these actions.

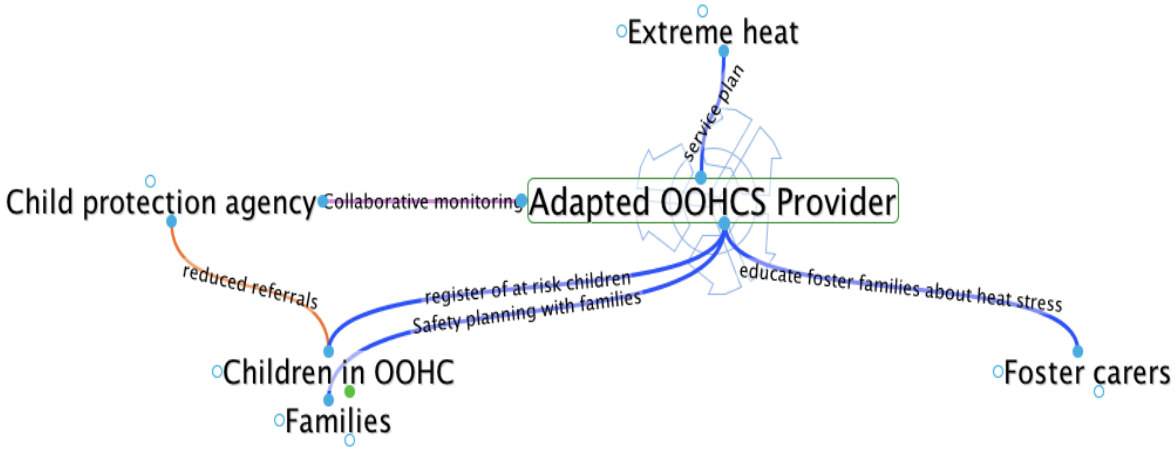


Figure 28: Adaptation mode exemplar five

The organisation undertakes a number of activities to assist children, their families and foster carers to prepare for and manage extreme heat events. It educates families and carers about the impacts of extreme heat, including the signs and symptoms of heat stress, the relationship between extreme heat, alcohol consumption and the risk of aggressive behaviour and violence, as well as about simple strategies families can implement at home to keep cool on extremely hot days.

It works specifically with families in which children are at risk of abuse, neglect and being removed into foster care to develop extreme heat safety plans, which identify local cool spaces the family can go to keep cool and formal and informal respite care options for children, including low-cost or supported child care centres and play groups or members of the extended families. It also works with foster carers to identify options for respite care for children in their care during extreme heat events.

The organisation also develops and implements plans and actions to adapt its own service delivery to extreme heat events. First, it establishes a system for monitoring weather predictions to enable the early identification of upcoming periods of extreme heat and the timely implementation of its newly developed extreme heat service delivery plan. This plan incorporates access and response plans for vulnerable families and foster carers, including the development of a register of at risk children and families, guidelines for scheduling appointments immediately prior to and after extreme heat events, maintaining regular phone contact to monitor their wellbeing during periods of extreme heat and the establishment of an emergency hotline for children or families to call if there is a crisis during an extreme heat event. It also identifies a range of alternative cool locations convenient to children, their families and foster carers that appointments can take place during periods of extreme heat, such as other CSOs, schools and child care centres.

The organisation also builds partnerships with other service providers in the area and formalises memorandums of understanding with them regarding the shared use of office space and meeting rooms during periods of extreme heat. Further, it partners with the state department of community services to develop collaborative system for monitoring and supporting at risk families during heat waves to reduce the risk of negative outcomes for children.

All of these actions result in the continuity of high quality care for children, their families and foster carers during extreme heat events. With adequate support to manage the heat, children are at reduced risk of violence and abuse and of being separated from their families. The risk of foster care arrangements breaking down is also reduced as is families' contact with child protection services and the criminal justice system. Better health and education outcomes for children are achieved.

3.2.5 Registers of risks and adaptation actions

The risks to CSOs from climate change and extreme weather events and the adaptation actions to manage and reduce those risks identified through workshop program have been combined with existing Climate Risk Pty. Ltd. data to create registers of risks and adaptation actions specific to the operations of CSOs. These registers enable CSOs to easily identify and plan for specific risks to which they are exposed and vulnerable.

3.2.5.1 Community Sector Risk Register

The *Community Sector Risk Register* categorises risks according to four spheres of activity common to the majority of CSOs: client and community (front-line services); policy and advocacy; service continuity and administration; and governance and finance. Each of these spheres of activity contains a number of sub-spheres, which enable a more detailed classification and identification of risks. The risk classification system is presented in Table 14. Some examples of the specific risks included in each sphere and sub-sphere of activity are provided in Table 15.

The Community Sector Risk Register is included in full in Appendix 3.

Table 14: Classification of risks by CSO spheres of activity

Client and community (Front line services)	**Policy and advocacy**	**Service continuity & administration**	**Governance & finance**
Client health & resilience	Sector development	Premises/service centres	Assets (other)
Community health & resilience	Client/consumer advocacy	Energy supply	Financial management
Financial resilience	Policy advocacy	Communications systems	Governance
Client & community service provision		Roads and transport access	Legal liability
		Water supply	Staff and volunteers
Client and community (Front line services)	Policy and advocacy	Service continuity & administration	Governance & finance

Table 15: Examples of climate change risks according to sphere and sub-sphere of CSO activity

Client and community (front line services)	Policy/advocacy	Service continuity & administration	Governance & finance
Client health & resilience Injury/ill-health Stress/mental health Social isolation Homelessness Domestic violence	**Sector development** Disruption to inter-organisation collaboration & support (peaks) Disruption to professional development Loss of sense of shared purpose	**Premises/service centres** Lack of access for clients, staff, suppliers WHS risks Evacuation risks	**Assets** Loss of specialist assets e.g. transport for people with a disability, medical equipment, personal care hoists, crisis accommodation facilities
Community health & resilience Loss of food security Disease outbreaks Change in community character Increased demand for services	**Consumer advocacy** Disruption to information provision and advocacy – e.g. for people with an intellectual disability	**Energy supply** Loss of e-records, communications, Loss of heating/cooling, refrigeration Unable to process pay, invoices	**Financial management** Cost of adaptation/preparedness not reflected in funding agreements Lack of or inadequate insurance
Financial resilience Impacts to industries providing employment leads to increased unemployment, decreased incomes etc.	**Policy advocacy** Disruption to advocacy to governments. Risk of legislative change with adverse consequences for clients	**Communications systems** Loss of access to clients Unable to coordinate service delivery Loss of crisis support lines	**Governance** Relationships with govt./ funders Regulation/red tape Increased responsibility Increased expectations
Client & community service provision **I**ncreased demand Volunteer service strain Social service provision strain Strain to wider community service provision – e.g. health system		**Roads and transport** Unable to provide outreach services Isolation of entire communities, esp. remote communities	**Legal liability** Exposure to litigation due to lack of preparedness or WHS failures
		Water supply WHS risks (sanitation), particularly for accommodation/ residential services	**Staff and volunteers** Loss of staff and volunteers due to direct impacts Physical, emotional distress WHS obligations

Table 16: Categorisation of adaptation actions and examples

Exposure mitigation	Vulnerability mitigation	Management/planning	Risk transfer/share	Evolutionary opportunity
Relocate services or clients away from areas highly exposed to direct climate change impacts	Conduct climate change risks assessments for organisations, services and clients	Develop and test disaster management plans	Negotiate contracts to include specific funding and compensation arrangements for disaster response/recovery	The critical role of CSOs in community resilience and disaster recovery is recognised by all levels of government
Relocate service to well-adapted premises	Conduct engineering and sustainability audits on buildings and premises	Develop and implement adaptation plans	Ensure CSO adequately insured against losses caused by climate change impacts	Additional funds for adaptation, core service delivery and disaster response secured.
Decentralise service delivery and communications, e.g. work from home arrangements, mobile phones	Educate organisations and clients about climate change, extreme weather and adaptation	Develop and test service continuity and contingency plans, including access and support plans for clients during extreme events	Engage in disaster response and recovery planning with local, state and federal governments	Climate justice: the needs of people experiencing poverty are recognised in institutional responses to climate change
	Adaptation actions: Extend insurance Upgrade office	Invest in staff and volunteer training in climate change, adaptation and disaster management	Partner with peers, local councils, private sector to develop collaborative disaster management plans	The sector's operations are carbon neutral

3.2.5.2 Community Sector Adaptation Register

Complementing the *Community Sector Risk Register* is the *Community Sector Adaptation Register*, which catalogues the actions that organisations can take to manage different climate change and extreme weather risks. The *Community Sector Adaptation Register* categorises adaptation actions into five specific action types: exposure mitigation; vulnerability mitigation; management and planning; risk transfer or share; and evolutionary opportunity. Examples of each type of action are presented in Table 16. It further categorises these specific action types according to the CSO spheres and sub-spheres of activity used to catalogue risks within the *Community Sector Risk Register*. Table 17 provides examples of each the five adaptation action types for one sub-sphere from each sphere of CSO activity from the *Community Sector Risk Register*. For example, the second column provides an example of exposure mitigation, vulnerability mitigation, management/planning, risk transfer/share and evolutionary opportunity actions for climate change risks to client health.

The *Community Sector Adaptation Register* is included in full at Appendix 4

Table 17: Risks and adaptation actions

Area of risk Adaptation action	Client and community (e.g. client health/resilience)	Policy/advocacy (e.g. sector development)	Service continuity/ administration (e.g. premises)	Governance/finance (e.g. staff and volunteers)
Exposure mitigation	Individual advocacy to relocate clients from areas highly exposed to direct impacts	Advocate for relocation of highly exposed social housing	Relocate Direct impacts Energy efficiency	Decentralise communications, service delivery
Vulnerability mitigation	Client/community education/information	Advocate for sector-wide funding for adaptation planning	Risk/sustainability assessments Adapt buildings	Training and development
Management/ planning	Screening and early identification of 'at risk' clients	Integrated, sector-wide adaptation/advocacy plan	Service continuity/disaster management planning	Mental health strategy for staff and volunteers
Risk transfer/ share	Client sensitive disaster management planning	Collaborate with governments/private sector on adaptation projects	Contracts Insurance Collaboration	Staff/volunteer sharing scheme between orgs and locations during disasters
Evolutionary opportunity	Contracts for post-disaster services for expanded client base	Recognition of role/ resilience of sector in disasters	High resilience premises available in times of crisis	Staff training funded through federal or state disaster preparedness funds

3.2.6 Conclusion

This section addresses the extent to which the results and outputs from the workshop program meet the program's original objectives, which were to undertake a literature review and consultation on the latest adaptation tools, develop and test sector-focussed systems tools; analyse the content of 10 workshops; and refine and publish risk framework materials.

The project literature review included a consideration of adaptation tools available in Australia and internationally, which identified whether or not they specifically addressed or responded to the needs of people experiencing poverty and inequality and the organisations that support them (see pp. 165-166). While the list of tools generated is extensive, it is not comprehensive because of the large numbers of 'tool-based' resources available. It reveals that the majority of adaptation tools currently available target governments, the private sector and the 'community' generally and do not directly address the particular adaptation needs of and barriers faced by people experiencing poverty and inequality or the CSOs they rely on for essential social services. The review process also raised concerns about the extent to which such tools had actually been proven by extensive and sustained use. However, it was beyond the scope of the current project to do a comprehensive analysis of the relevance, adaptability and situational performance of each tool to the specific needs of CSOs – though such research would be very useful.

In addition to the scan of published tools, there was an awareness of the explosion of new adaptation resources emerging from the current focus on tools development, testing and evaluation within the adaptation research field, including projects specifically addressing the needs of CSOs. For example, researchers from the Royal Melbourne Institute of Technology (RMIT) are currently conducting a research project entitled *Implementing Adaptation and Capacity Building for the Community and Natural Resource Management Sectors*, which aims to develop a better understanding of the adaptation capabilities and needs of government service providers and funded agencies and to facilitate the implementation and testing of tools to support climate change adaptation planning and action (VCCCAR 2012). Similarly, researchers at the Australian National University are currently assessing the strengths and weaknesses of Australian and international web-based adaptation tools as part of an NCCARF-funded project titled *Web-based tools for adaptation in Australia – an international and Australian review.*

An original aim of the project was to develop a publication ready, community sector-specific adaptation tool in the form of a *Systems Analysis-Based Workshop and Consultation Framework* and associated guidelines and materials. A prototype framework was produced based on risk management training materials originally developed for the insurance industry by Climate Risk Pty. Ltd. This framework is described in detail in section 2.2. This prototype framework was then tested in the eight *Welfare Professional Climate Workshops* conducted as part of the project.

The use of the *Systems Analysis-Based Workshop and Consultation Framework* proved to be extremely effective in allowing organisations to work through the contributing factors in the form of hazards, exposure and vulnerability. The development of a sophisticated systems analysis allowed a comprehensive understanding of failure mode-based risks to be established. In turn, these became the springboard for adaptation analysis, including risk mitigation, management and transfer, as well as opportunity identification and adaptive capacity development. The effectiveness of the approach has been evidenced by the very deep insight into failure and adaptation modes (see the Exemplars in Section 3.2.2) and the extensive risk and

adaptation registers catalogued by the project team and included in full in Appendices 3 and 4.

In light of the literature review, which identified the sudden expansion of adaptation tools becoming available and the imminent publication of research comparing and recommending such tools, the team felt it necessary to reconsider the value of providing an additional tool and the rationale for promoting this framework ahead of other tools, which may in fact be better for the particular circumstances of some organisations.

After careful consideration, it was decided that while the prototype tool should be made available for consideration, the project should focus on delivering the unique resources that the research has provided in such a way that they can be applied by any adaptation tool framework. Therefore, the decision was taken to refocus the development of the tool framework and guidelines towards:

- The use of software to express the CSO Systems Analysis;
- Failure mode and adaptation mode exemplars; and
- The publication of the risk and adaptation registers.

Despite the decision to refocus the development of the *Systems Analysis-Based Workshop and Consultation Framework*, the implementation and testing of the prototype activities and materials in the context of the project's workshop program produced a high volume of rich qualitative data about the exposure and vulnerability of CSOs to a range of climate change impacts, particularly extreme weather impacts to infrastructure. Specifically, the data provides insight into the ways in which physical infrastructure failure strains, or triggers the failure of, social service delivery; the impacts on clients of the disruption or failure of CSOs in response to climate change impacts to infrastructure; strategies CSOs have used or could use to adapt to climate change and extreme weather events; and the barriers to and opportunities presented by adaptation.

Key findings from the workshop program include:

1. The ways in which CSOs are exposed to climate change hazards through location and types of activity are largely beyond their control and few people in the sector know about or consider these external drivers of risk;

2. There is a high degree of similarity in the ways in which a broad range of CSOs are vulnerable to climate change and extreme weather impacts, with many brought to a halt by the same types of impacts and the loss of critical services and infrastructure;

3. As such, many of the risk and adaptation actions available and relevant to CSOs are common across the sector and therefore suitable to be catalogued and shared;

4. When directly engaged and supported to do so, CSOs are able to identify a range of ways to promote organisational and client resilience to climate change and extreme weather impacts and to identify the opportunities presented by adaptation to individual organisations and the sector as a whole; and

5. There is a clear need within the sector for information about specific risks and adaptation options to be synthesised, documented and disseminated in accessible formats.

These findings guided the synthesis of specific data about risks, adaptation options and opportunities generated through the workshop program into three sector-specific adaptation tools, not originally specified in the project's objectives: the Generalised CSO Systems Analysis; the CSO Failure and Adaptation Modes; and the CSO Risk and Adaptation Registers. These resources can be immediately and practically applied by a diverse range of CSOs to their current operations and within their current resource constraints and will assist them to identify, analyse and respond to a range of climate change and extreme weather-related risks to service provision. They are summarised briefly below. As stated above, they have been structured so that they can be applied to expedite a range of risk and adaptation analysis frameworks.

The Generalised CSO Systems Analysis

The *Generalised CSO Systems Analysis* is a body of information within the dependency framework that enables organisations to locate their services within the broad physical, societal and economic context and to facilitate consideration of the various ways that disruptions to different parts of that system – particularly those caused by infrastructure failure – could adversely impact CSOs capacity to provide services to clients and to contribute to failure or strain in the broader community and societal systems. It is envisaged that this output could be made available to the public in the form of an interactive web-based tool.

The CSO Failure and Adaptation Mode Analysis

Using the *Generalised CSO Systems Analysis* as a reference point, the CSO Failure and Adaptation Mode analyses were used to develop and represent diagrammatically five exemplars of climate-driven CSO failure and five corresponding exemplars of adaptation. The failure modes exemplify the major processes by which physical infrastructure failures lead to the failure or disruption of service delivery in poorly adapted CSOs, and describe some of the impacts of service failure on client groups and connected system elements. In contrast, the adaptation modes exemplify the ways in which different adaptation strategies – including planning, implementation and collaborative actions – enable CSOs to maintain effective service delivery in extreme conditions, thereby reducing negative outcomes for their clients and reducing the strain caused by climate change and extreme weather events to the broader community and societal systems.

The exemplars cover key extreme weather and climate hazards, including flood, extreme heat, bushfire and cyclone, as well as a range of service types such as residential and outreach aged care, outreach services to children in foster care, emergency relief, and services for Aboriginal and Torres Strait Islander communities and people experiencing homelessness. While these exemplars do not address every type of risk faced by, or adaptation strategy available or suitable to, the very broad range of CSOs within the sector and types of services they deliver, in combination with the *Generalised CSO Systems Analysis* and the Risk and Adaptation Registers, they provide approximately 80% of the content organisations require to develop failure and adaptation modes specific to their own locations, operational systems, services and clients. Once developed, they can then be used not only to explore organisations' exposure and vulnerability to climate change hazards, but also to plan for positive solutions and opportunity capture.

The Community services sector Risk and Adaptation Registers
The CSO Risk and Adaptation Registers catalogue over 200 discrete risks and 450 discrete adaptation actions. The registers employ a sector-specific cataloguing system to identify and exemplify risks and adaptation strategies appropriate to manage, mitigate and transfer risks to organisations from climate change and extreme weather. They are concrete information sets, which will assist individual organisations to develop tailored risk and adaptation plans, using a system that reflects the core areas of activity and operation within the sector.

These three adaptation resources are ready to be disseminated throughout the sector in hard copy and electronic formats however, it is envisaged that they be 'living documents' that should be revisited and expanded as the knowledge base about risks and adaptation for CSOs evolves. This is particularly the case for risks to sector policy and advocacy work and corresponding adaptation actions. The current project focused largely on direct service delivery and as a result did not capture the full range of risks to sector policy and advocacy work. The development of the registers into online resources would also greatly enhance their accessibility, and hence their value and benefit to the sector and its organisations.

3.3 National survey

3.3.1 Responses

A total of 650 respondents attempted to complete the survey in July 2012. Of these, 492 survey responses were included in the final sample.

The following measures were taken to protect the quality of the sample. A screening question at the start of the survey eliminated responses from for-profit and government organisations and agencies (n=58). Duplicate responses were identified using respondents' IP address and were deleted, with the more complete response being kept in the sample (n=24). Responses from organisations that completed less than 10% of the survey were also deleted (n=97). However, responses from multiple individual service centres operating under the umbrella of organisations with statewide or national presence such as the Salvation Army were not considered duplicates and were retained within the sample.

3.3.1.1 Positions held by individual respondents

Respondents were asked to self-report their position within the organisation. The following code was used to analyse responses:

Table 18: Coding for respondents' roles

Code	Roles included
Executive	Chief Executive Officer, Executive Officer, Director, General Manager, President, Chair, Vice Chair, Treasurer.
Manager	Service program or section/network manager, program coordinator, and senior/principal solicitor.
Service worker	Team leader, counsellor, caseworker, family worker, project officer, advocate.
Other	Research/policy, administration, communications/marketing, human resources, bookkeeping.

It is important to know the roles held within organisations by individual survey respondents for a number of reasons. Members of an organisation's executive and management teams are responsible for making decisions about its vision, mission and strategic direction as well as overseeing its day-to-day operations. They are responsible for negotiating and reporting against contract requirements, managing operational budgets, risk management and ensuring the organisation meets legal requirements relating to incorporation, insurance, contracts for service and workplace health and safety, amongst others. As such, they are more likely to know or have access to accurate information about the organisation's operations, such as income and expenditure, insurance cover and human resources. They also have the authority to make decisions about the organisation's priorities and direction, including whether to take action to prepare for climate change and extreme weather impacts. As such, responses from respondents holding executive or management roles were considered to be more reliable than those from respondents holding other positions.

Most respondents held management or executive positions within the organisation

The majority of individual respondents identified themselves as managers (48%), with a further 36% of respondents identifying themselves as members of the organisation's executive (Figure 29).

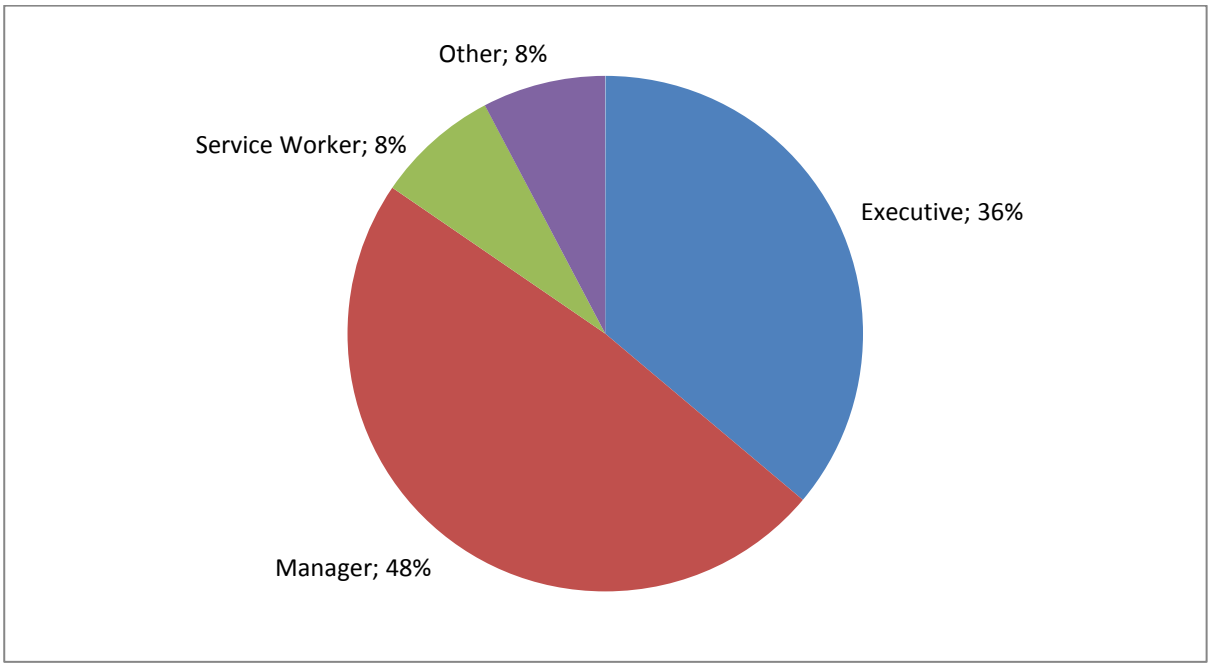


Figure 29: Position held by respondents (n=285)

3.3.2 Characteristics of respondent organisations

In reporting the characteristics of respondent organisations and the degree to which they indicate organisational vulnerability or resilience to climate change impacts it is important to note the limitations of the survey sample in providing a representative picture of the community services sector nationally. This is partially due to the non-probability sampling method used. This sampling method was used because of the difficulty in selecting a randomised sample of CSOs, which arises from the lack of a comprehensive set of national data about the community services sector. The development of comprehensive map of the sector, preferably by the sector itself, so that its size, scope, distribution and social and economic contributions can be fully understood would enable researchers within and without the sector to employ representative survey sampling methods and to develop best practice benchmarks against which the sector could plot its progress in a range of areas, including climate change adaptation and extreme weather preparedness. Where possible, comparisons are made with the samples obtained by ACOSS in recent ACSS (ACOSS 2011b, 2012a).

3.3.2.1 Types of services provided

Information, advocacy and disability services were the most commonly reported on services

Respondents were asked to report on their organisations' main activities by selecting as many areas of service provision from the service classification system used in the survey (see section 2.3) as applied to their organisation.

The majority of respondent organisations delivered multiple services simultaneously. For example, 74% reported providing more than one service and 58% reported providing more than two services. Only 26% of respondent organisations reported providing one service exclusively. This is important because it demonstrates the various roles that CSOs play within their communities and the breadth of support they provide. It also has implications for understanding the impacts of climate-driven service failure on clients and the community: organisations that provide a number of different types of services are likely to be engaged with a broader range of client groups who may be exposed to negative consequences if there is a failure of service provision.

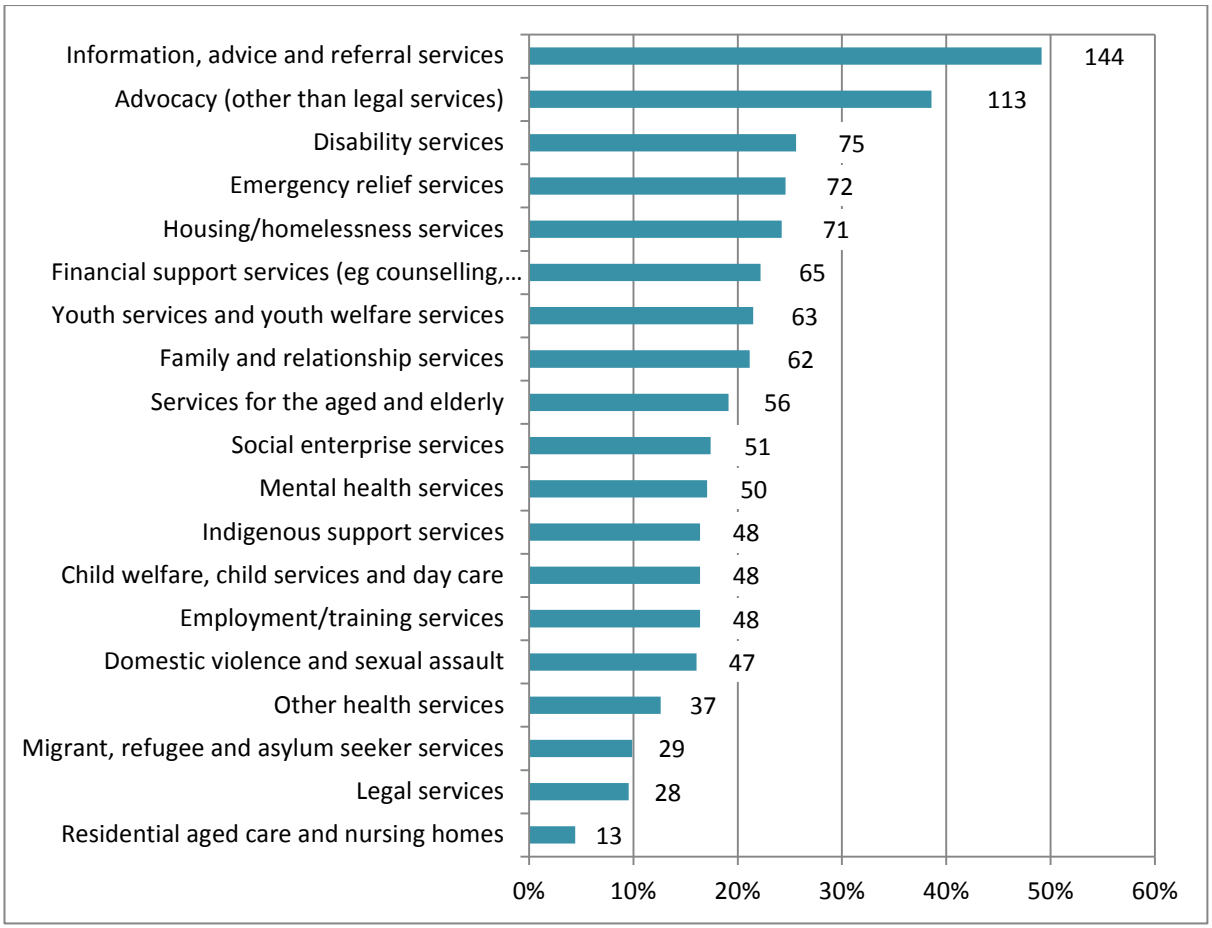


Figure 30: Main types of services provided (n=293)

The most commonly reported services were information, advice and referral services (n=144), advocacy (other than legal services) (n=113), and disability (other than employment or mental health) (n=75) services (Figure 30). Of the 144 respondents who provided information, advice and referral services, 142 or 98.6% also provided at least one other type of service.

Respondents were not asked to identify the type of organisation they were reporting answers for, that is whether it was a direct service provider, a peak or consumer advocacy body or an organisation mainly dealing with subcontractors. Given the survey's focus on the impacts of organisational failure on service provision to clients, some respondents reported finding some parts of the survey difficult to complete. For example, peak organisations that primarily engage in policy advocacy and sector development work were unable to answer questions about the effects of climate change on clients and the survey provided no function for them to indicate that such questions were not applicable to them. Climate-driven infrastructure failure will impact differently on different types of organisations. Future studies should examine these differential impacts on subsectors of the community services sector and particular organisational types in greater detail.

3.3.2.2 Where service provision occurred

Responses were received from organisations operating in all states and territories, with NSW providing the highest number of respondents (n=94) and Tasmania and the Northern Territory providing the least (n=17). A small number of respondents reported providing services in every state and territory in Australia (n=10) (Figure 31).

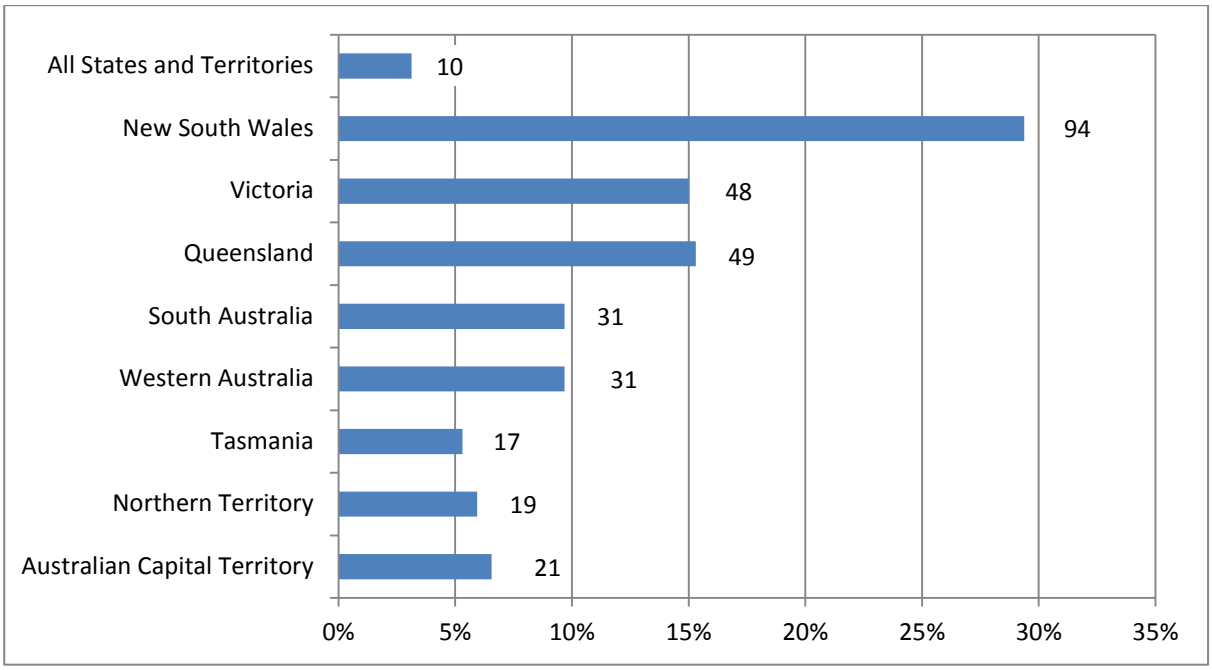


Figure 31: Location of respondent organisations by state and territory (n=293)

Most organisations provided services in regional or remote locations

Respondents were also asked to self-report on whether services were provided in urban, regional or remote locations or a combination. Definitions of urban, regional and remote were not provided. Because organisations were able to select as many locations as were relevant to their organisation, in the original data set there was considerable overlap between categories. In this report, the data presented has been disaggregated into three discrete categories: organisations that only provided services in urban areas; organisations that provided services in all areas; and organisations that only provided services in regional or remote areas. Table 19 shows a state-by-state breakdown of respondent organisations according to whether they provided services only in urban areas, in all areas, or only in regional or remote areas.

Table 19: Breakdown of service delivery locations (urban, regional and remote)

State/Territory	Urban	All	Regional/Remote
All States and Territories	30.0%	**70.0%**	0.0%
New South Wales	26.6%	12.8%	**60.6%**
Victoria	39.6%	10.4%	**50.0%**
Queensland	22.4%	20.4%	**57.1%**
South Australia	**41.9%**	19.4%	38.7%
Western Australia	29.0%	25.8%	**45.2%**
Tasmania	23.5%	**47.1%**	29.4%
Northern Territory	10.5%	42.1%	**47.4%**
Australian Capital Territory	**76.2%**	19.0%	4.8%

Respondents from NSW (60%) and Queensland (57%) reported the highest rate of regional/remote service provision. A majority of respondents from Victoria, the Northern Territory and Western Australia also reported providing services in regional or remote areas. The only place where service provision in urban areas was dominant was the Australian Capital Territory, where 76% of organisations reported providing services only in urban areas and 4.8% reported providing services only in regional or remote areas. As shown in Figure 32, overall a majority of respondent organisations provided services in regional or remote locations. These findings reflect those of the 2011 ACSS where two-thirds of respondents reported providing services in regional, remote or very remote locations.

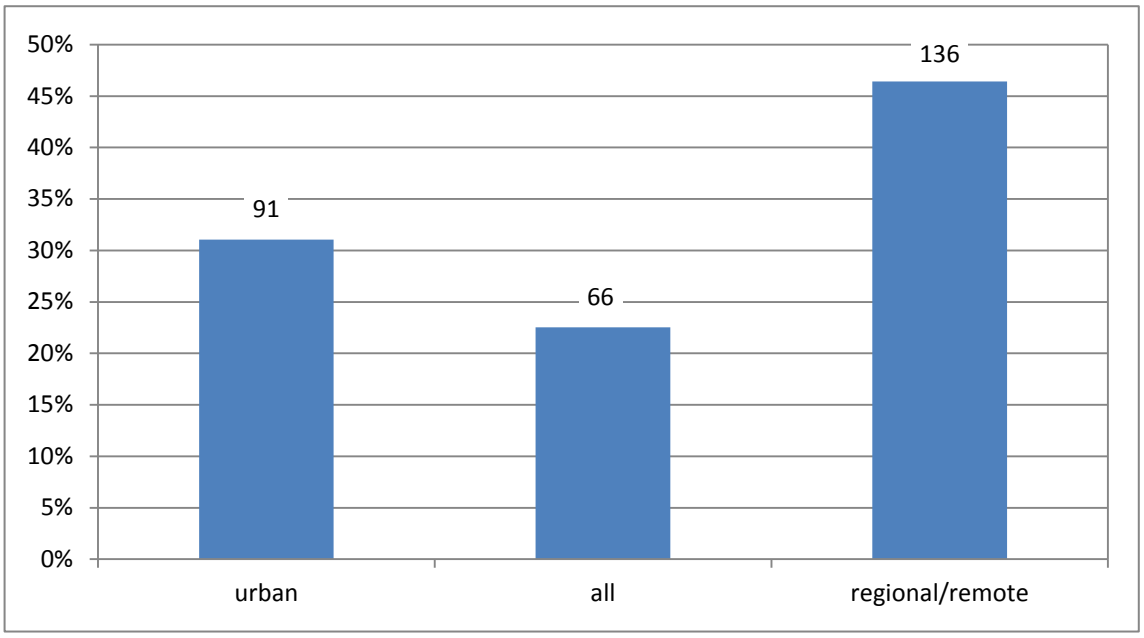


Figure 32: Overall distribution of service location (urban, regional and remote) (n=293)

3.3.2.3 Main method of service delivery

Most respondents reported providing services primarily from a centre or office

Over half the organisations surveyed reported that they engaged primarily in office or centre-based service provision to clients. A further 22% indicated that they used all of the methods listed to provide services to clients (Figure 33).

3.3.2.4 Sources of income

Most organisations relied on a combination of state and federal funding

Respondents were asked to identify up to two primary sources of funding from which they received most of their income. State governments were identified as the major funders for respondent organisations with almost 80% receiving at least some state funding (Figure 34) and 25% receiving all of their funding from the state government.

Over 50% of respondents reported receiving at least some funding from the federal government, however only 6% reported being solely reliant on federal funding. Most respondents (65%) reported receiving income from more than one source, with a majority receiving funds from both their state and the federal government (41%)(Figure 35). A small number of respondents reported receiving income from sources other than those listed. These sources included: membership and client fees; revenue from investments and fundraising activities; revenue from sales, for example from charity shops or the sale of goods produced by clients; university grants; Indigenous land use agreements; and bequests.

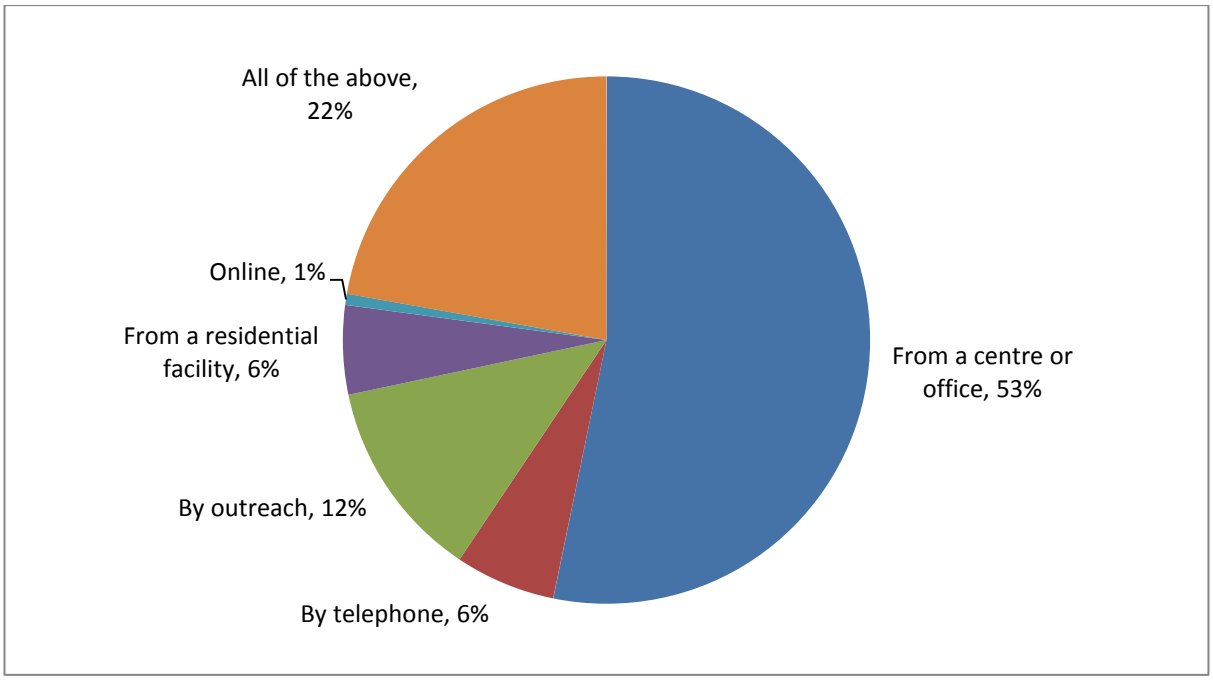


Figure 33: Main method of service delivery (n=293)

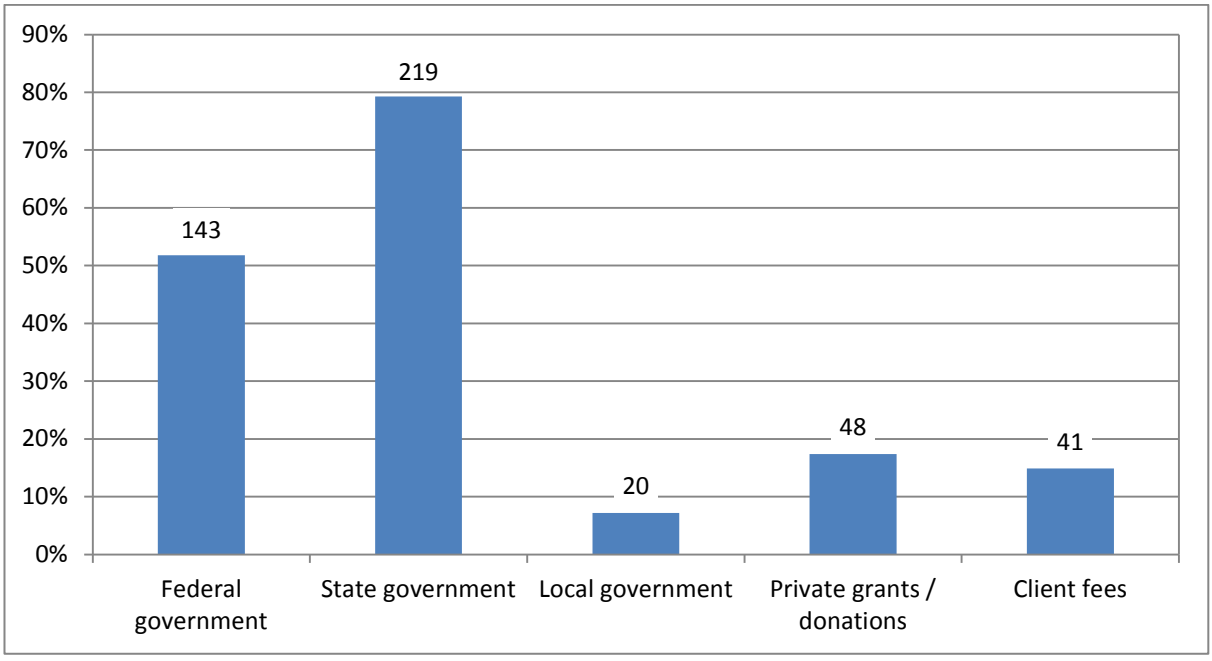


Figure 34: Main sources of income (n=251)

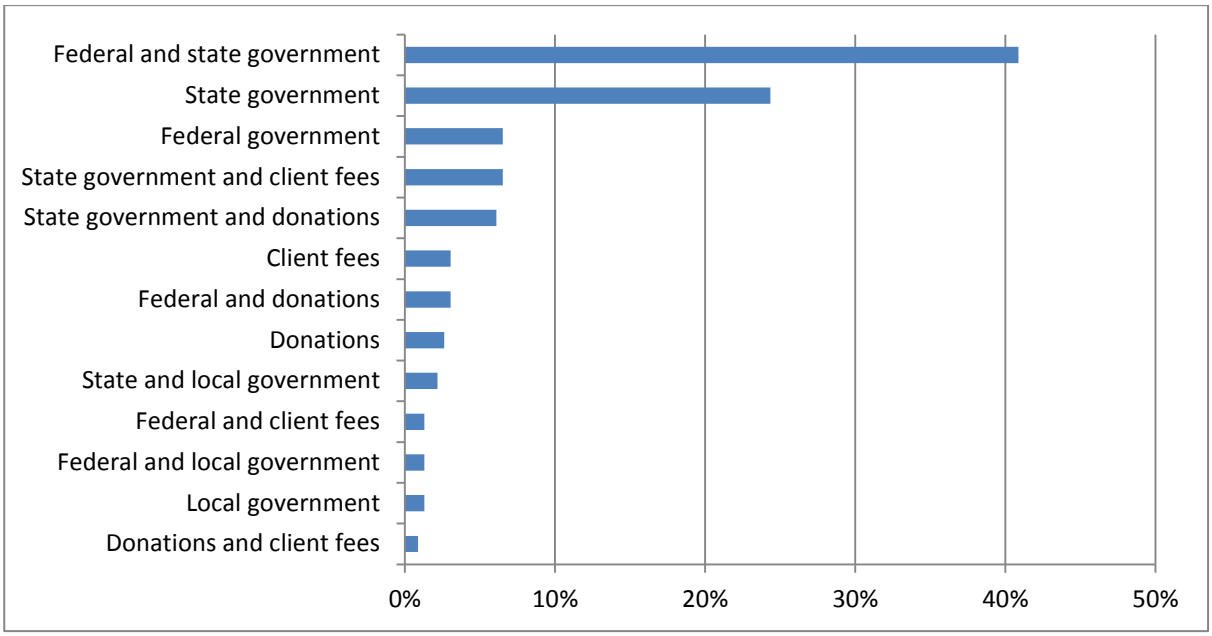


Figure 35: Most commonly reported income combinations (n=230)[3]

3.3.3 Climate change and extreme weather – understanding and experience

The survey was interested to understand the relationship between organisations' self-reported level of understanding about climate change risks, their experience of extreme weather events and the level and range of actions they had taken to respond to climate change and extreme weather risks. Drawing from findings from behavioural science research that personal experience is a powerful driver of behaviour (Weber, 2004; Weber, 2006), it was hypothesised that there would be a strong relationship between experience of an extreme weather event and action to respond to climate change and extreme weather risks. Similarly, there was an expectation that higher levels of awareness about climate change and extreme weather risks would also be related to higher levels of action to respond to them.

3.3.3.1 Level of understanding about climate change risks

Most organisations reported a moderate understanding of local climate change risks

Respondents were asked to assess their organisation's overall knowledge about local climate risks. A definition of climate change risk was not provided. 65% assessed that their knowledge was either moderate or high, with 45% indicating a moderate understanding of local climate change risks within their organisation. 26% of respondents reported low levels of knowledge about local extreme weather risks (Figure 36).

[3] Responses from organisations that selected more than two main sources of income have been excluded from this figure

A small number of respondents (n=8) expressed a personal lack of belief that climate change is occurring, or that human activity is contributing to its acceleration. These views were expressed via questions that asked for qualitative responses or in personal emails to the project team explaining why respondents chose not to complete the survey. Most common amongst these beliefs were:

- Climate change is cyclical and not affected by human activity; and
- Climate change is a myth.

Other respondents also reported that climate change is not a priority issue for sector organisations and the people they assist and that the risks presented by climate change and extreme weather events for people experiencing poverty and social disadvantage are similar to those faced by the community more broadly.

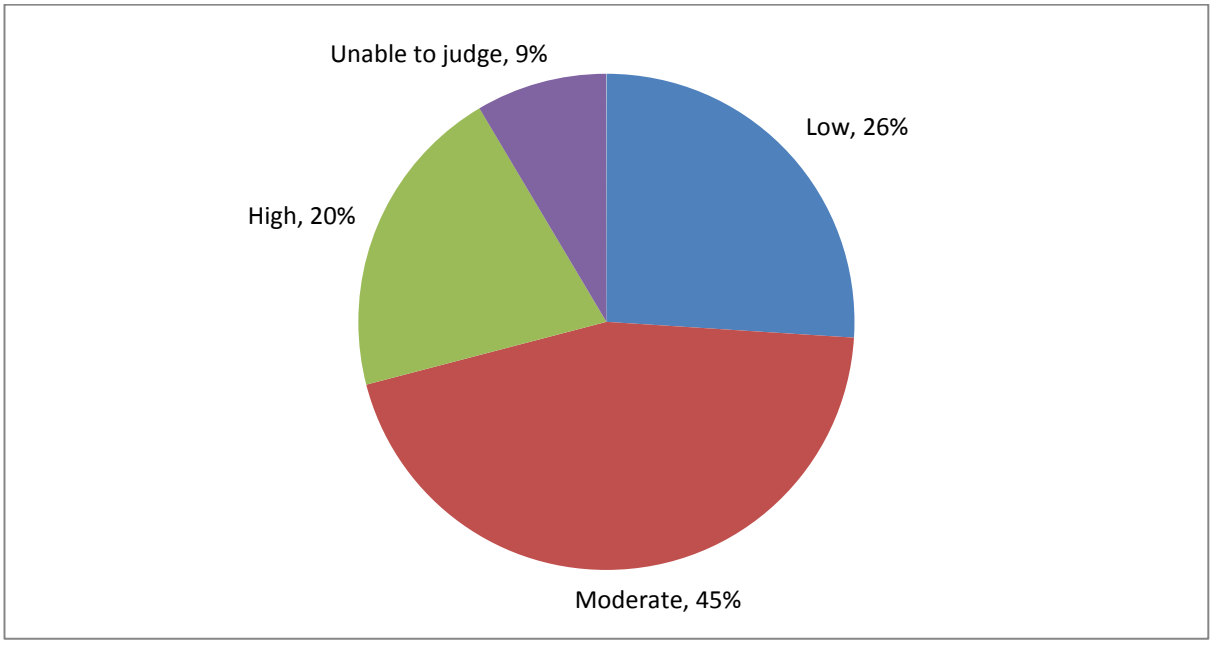


Figure 36: Knowledge of local climate change risks (n=492)

3.3.3.2 Experience of extreme weather events

Over half of respondent organisations had experienced at least one extreme weather event

Respondents were asked to report whether their organisation had experienced an extreme weather event in the previous 10-year period. They were able to select as many events as they had experienced in that period. A slight majority of respondent organisations (54%) reported experiencing at least one extreme weather event, with 29% reporting experiencing one event and 25% reporting experiencing more than one event. 46% of respondents reported experiencing no extreme weather events in the past 10 years (Figure 37).

Of the 267 organisations that reported experiencing an extreme weather event 30% (n=150) had experienced flood. The next most commonly experienced events were drought and bushfire (Figure 38). Respondents from organisations that provided services in regional or remote locations were more likely to have experienced at least one extreme weather event than those operating in urban areas only (Figure 39). This higher level of exposure may explain the higher rates of participation by organisations that provide services in regional and remote areas. As discussed in section 3.3.8.1 below, organisations that reported moderate and high levels of understanding about climate change and those that reported past experience of an extreme event also reported higher levels of action to respond to risks. This suggests that levels of exposure to climate change and extreme weather risks may correlate more strongly with resilience than with vulnerability.

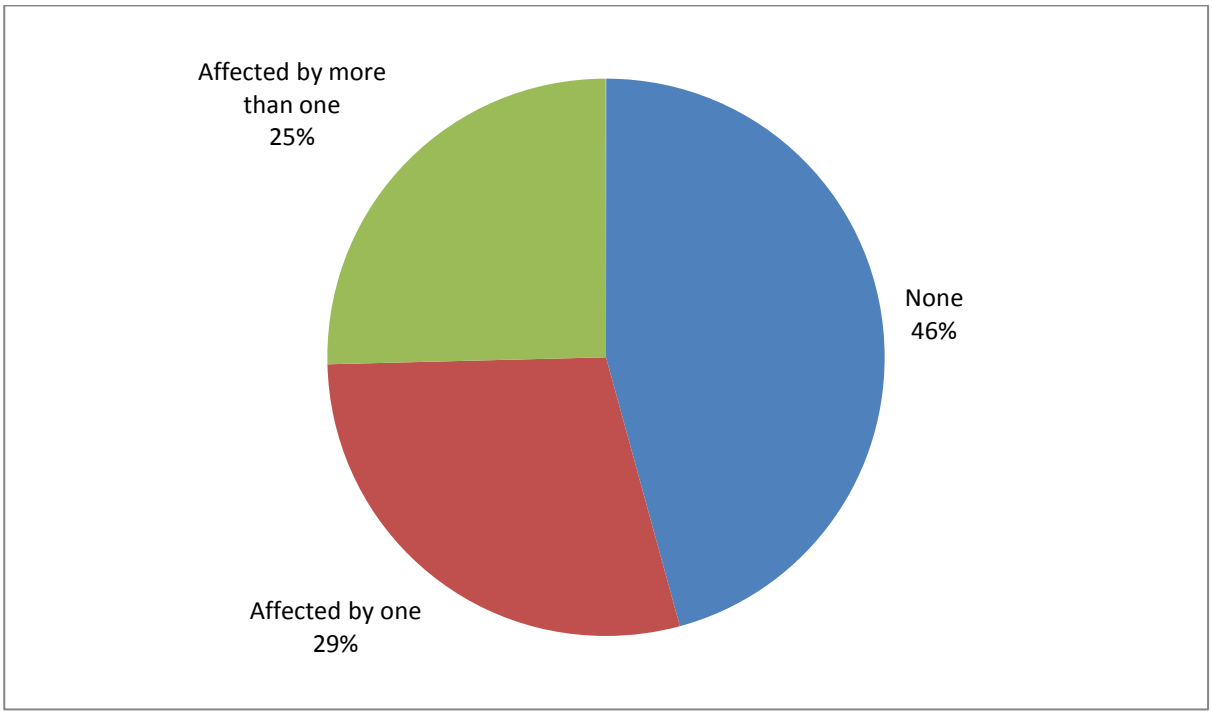


Figure 37: Experience of an extreme weather event (n=492)

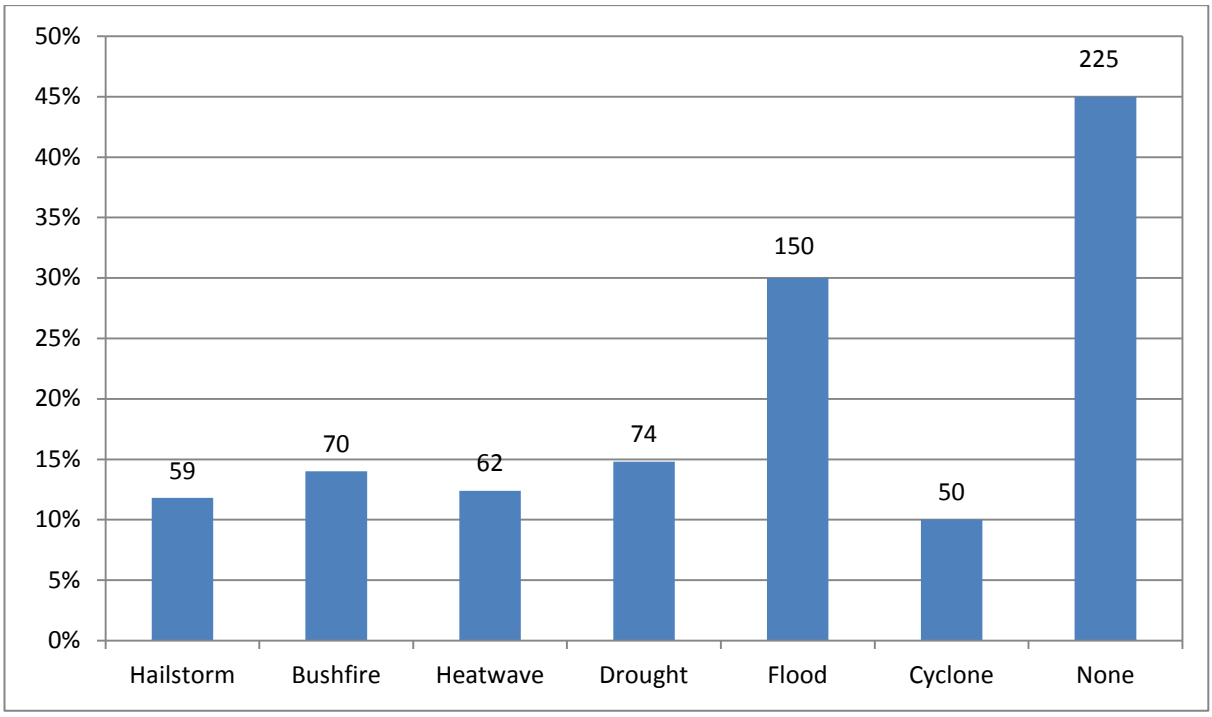


Figure 38: Types of extreme weather events experienced (n=492)

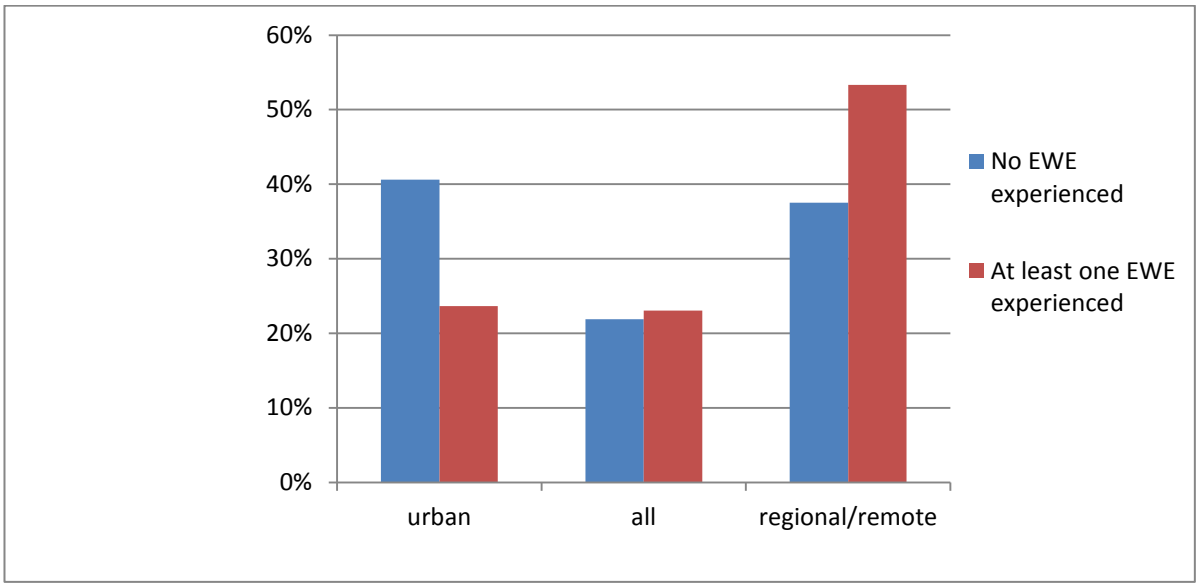


Figure 39: Experience of extreme weather events by urban, regional, remote location (n=293)

3.3.4 Extreme weather impacts to CSO service delivery

In order to measure the likely effects of increasingly frequent and intense extreme weather events on CSO service provision, the survey presented respondents with a scenario, which described the impacts of a hypothetical event to local infrastructure. The scenario was followed by a series of questions, which asked respondents to estimate the level of service disruption that different types of infrastructure failure would cause their organisation.

3.3.4.1 Impact of damage to premises and service buildings

CSOs are highly vulnerable to impacts to premises and service buildings

Respondents were asked to estimate how long it would take their organisation to make alternative arrangements for service provision if their premises were inaccessible due to an extreme weather event. Figure 40 reveals that a week after an event, 50% of organisations would still be out of operation. 25% of respondents reported that they would need two weeks to one month to make alternative service provision arrangements; a further 25% reported that it might not be possible to make alternative arrangements for service provision, that is, they would never again be able to provide services. This mirrors research findings from the small and medium-sized enterprise (SME) sector, presented in the literature review as a proxy for the community services sector, which revealed that up to 20% of SMEs that close because of damage or disruption caused by extreme weather events never re-open for business.

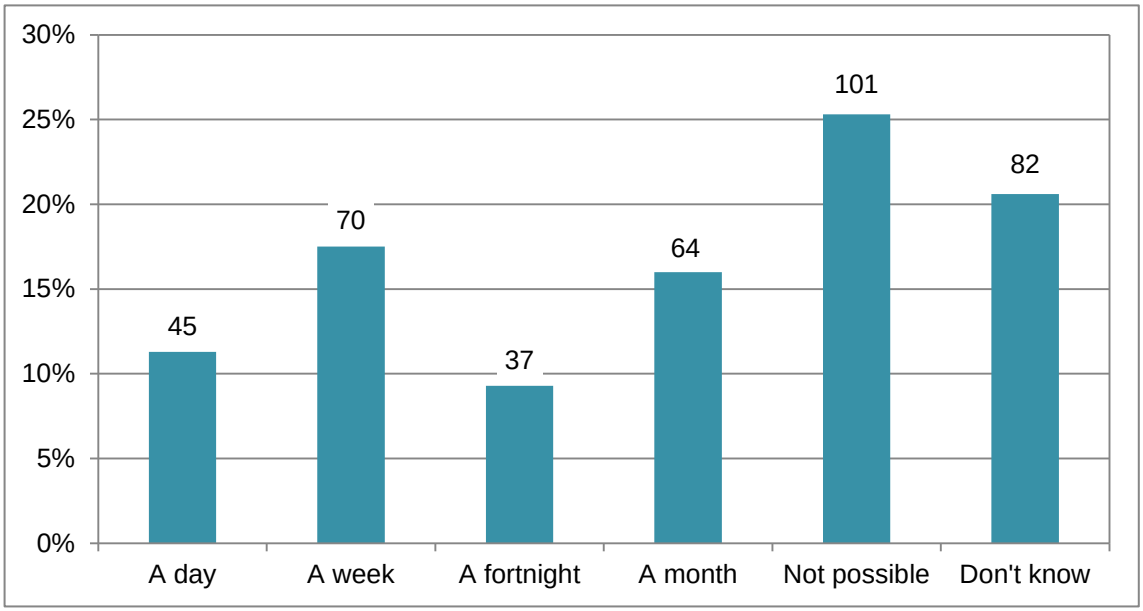


Figure 40: Length of time to find alternative premises for service provision if buildings inaccessible (n=399)

In order to further examine the vulnerability of organisations that primarily provide services from a centre or office to extreme weather events, responses to this question were analysed according to main type of service provision. This analysis revealed that organisations that primarily provide services from a centre or office, were more likely than organisations that primarily provide services in another way (i.e. by telephone, outreach, from a residential facility, online or using a combination of all service delivery types) to report that it might not be possible for alternative arrangements for service provision to be made (Figure 41). This finding suggests that other types of service provision may be more adaptable. It requires further investigation.

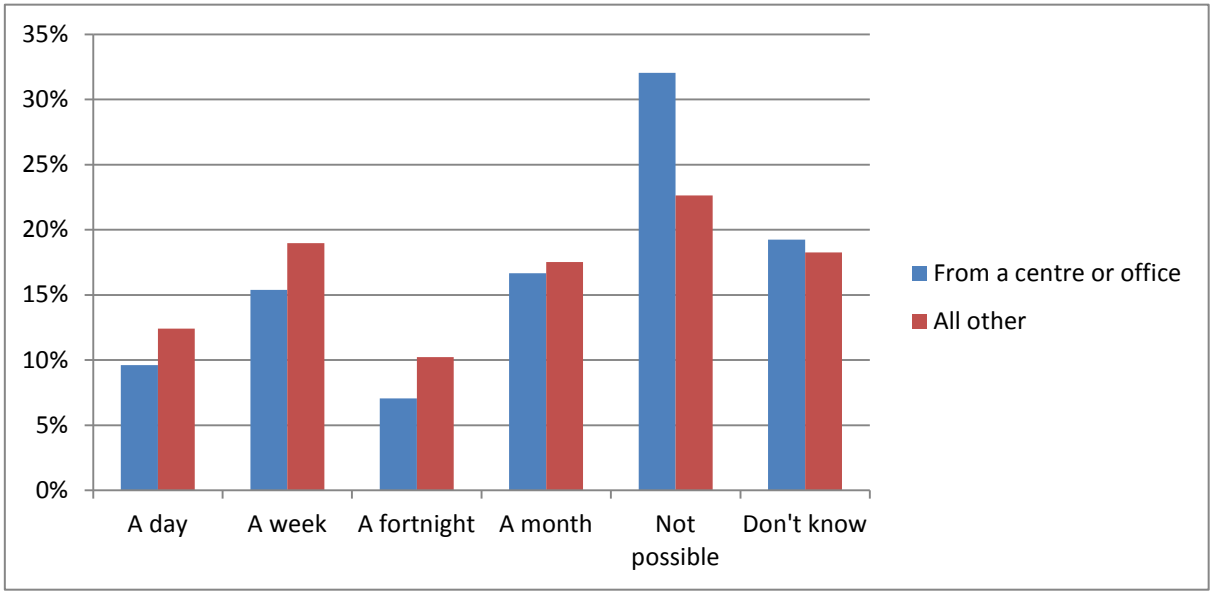


Figure 41: Length of time to find alternative premises for service provision if buildings inaccessible by main method of service delivery (n=293)

Figure 42 shows how long respondents predicted it would take for their organisations to make alternative arrangements for service provision if their main buildings or service centres were damaged by an extreme weather event according to organisational size. For the purpose of this analysis, income quintiles were used. It demonstrates that a while 20% of organisations in the highest income quintile reported it might not be possible to make alternative arrangements, over 40% of organisations in the lowest income quintile face the very real risk of permanent service closure if their premises become inaccessible because of damage caused by extreme weather events. Just over 20% of organisations from all income quintiles predicted that it could take up to one month to recover service delivery.

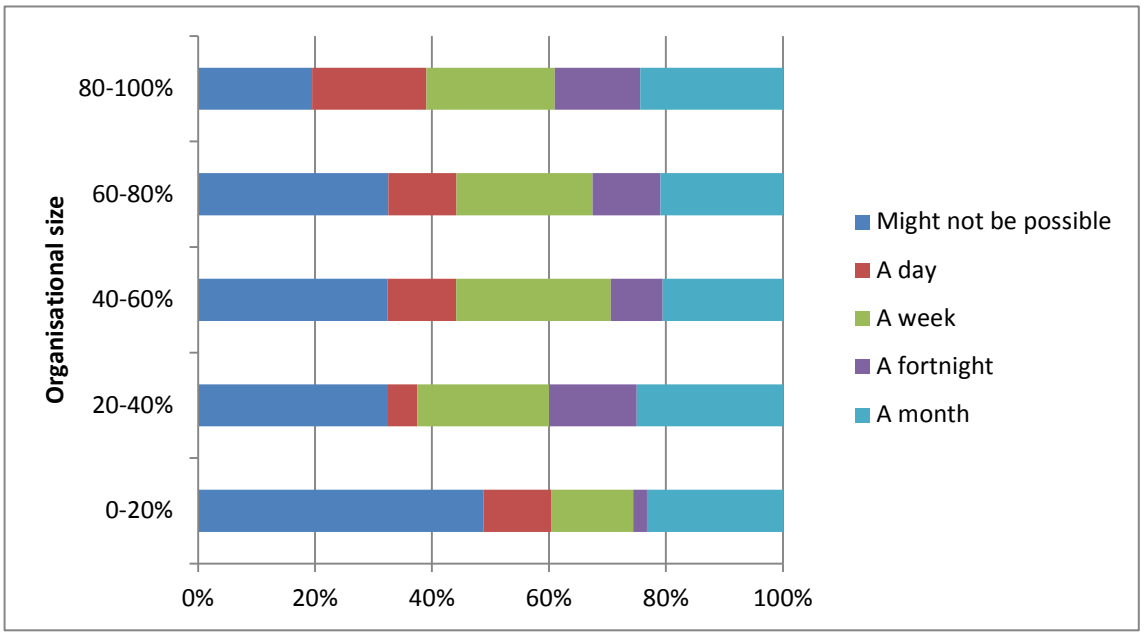


Figure 42: Length of time to find alternative premises for service delivery by organisational size (n=241)

3.3.4.2 Impact of utility service and transport infrastructure failure on service provision

The failure of critical infrastructure and utility services would seriously disrupt social service provision to clients

Respondents were asked to indicate whether the failure for an indefinite period of different infrastructure types would seriously disrupt their organisation's ability to provide services to clients, including: roads and transport networks, electricity, water supply, and telecommunication systems. Respondents were able to select more than one response to the question.

An overwhelming majority of respondents (93%) reported that loss of power would seriously disrupt their ability to provide services. Loss of telecommunications, roads or transport networks and water supply were reported as likely to cause serious disruption to service provision by 89%, 69% and 65% of respondents respectively (Figure 43).

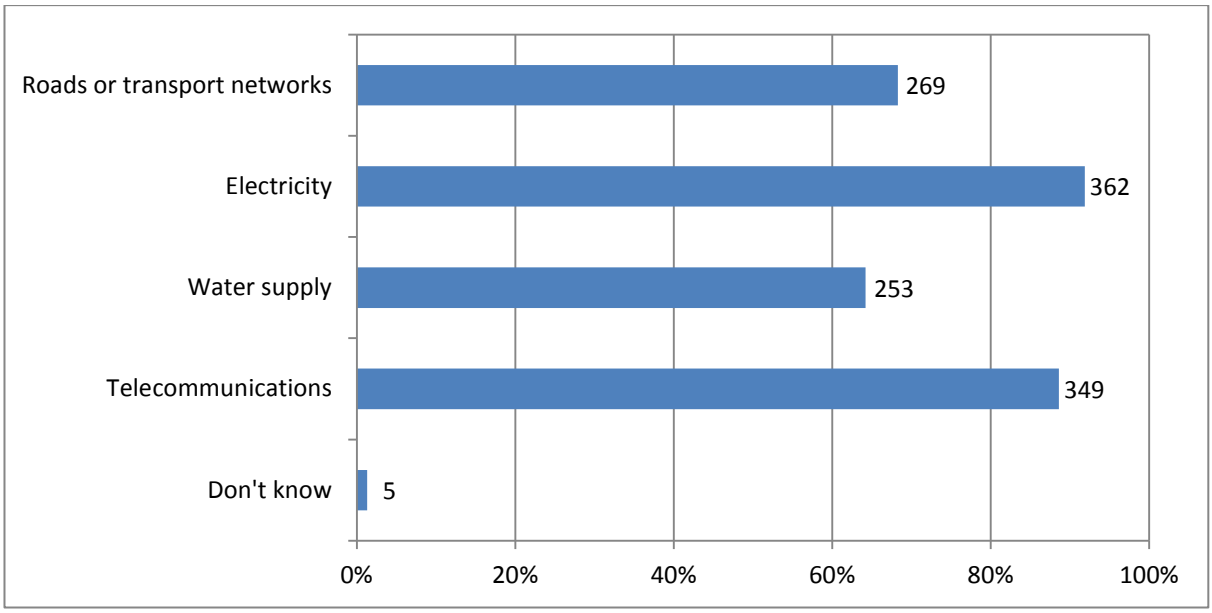


Figure 43: Infrastructure failure leading to serious disruption to service provision (n=390)

Most organisations would be unable to operate for more than one day without electricity, water or telecommunications

Respondents were then asked to estimate for how long their organisation could continue to provide services if they lost access to electricity and water supplies, roads and transport networks and telecommunications. Approximately 40% of respondents estimated that they would be unable to operate for more than a day without access to electricity, telecommunications and water, with up to 30% of respondents reporting they were unable to judge for how long they could provide services without access to these utilities. In contrast, approximately 20% of respondents estimated they would be able to provide services for up to a fortnight if roads or transport networks were disrupted, with over 50% unable to judge (Figure 44).

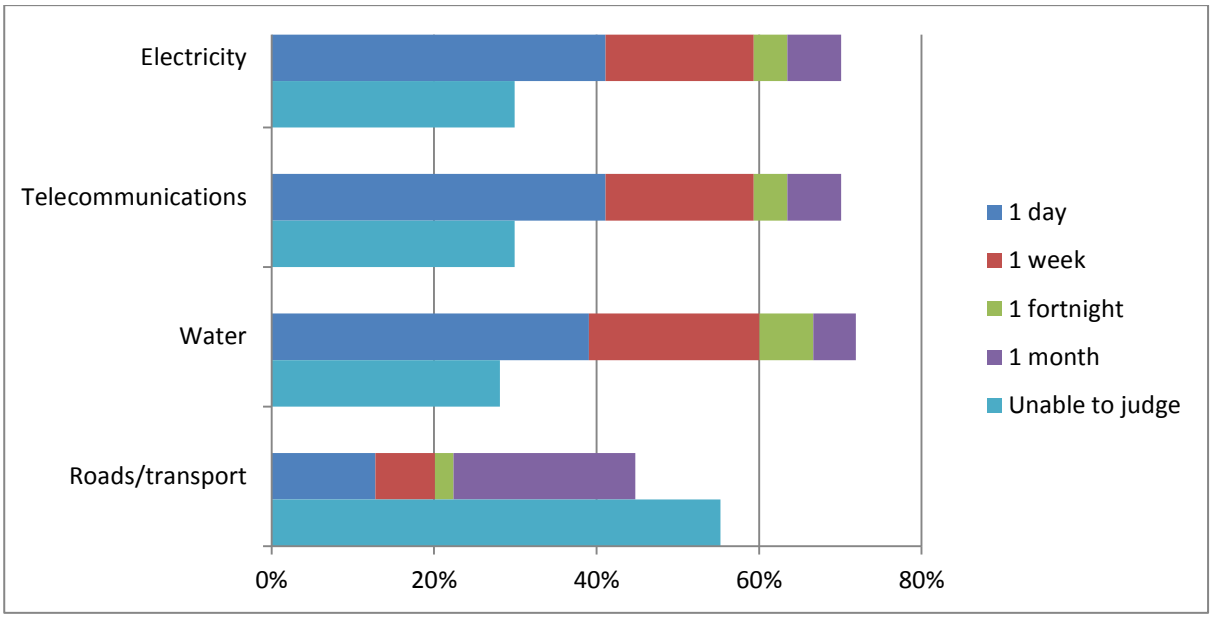


Figure 44: How long could organisations provide service without access to transport infrastructure and utilities? (n=390)

3.3.5 Impact of physical infrastructure failure on service provision

Respondents were asked to describe in their own words how infrastructure failure that they identified as seriously impacting their organisation's ability to provide services would affect service provision. A sample of responses is provided below.

General

We would close.

The office would be inoperable without electricity, water and telecommunications. Could not operate from these premises and provide the services required according to funding agreement.

When there has been a major disruption in the past we have seen a major drop off of clients walking ins and appointments. Then when issue resolved a major influx of clients that were in mild need go to extreme need for assistance.

Our clients are in isolated areas in the outback. Disruption to communications and roads means that we cannot contact clients [and] project could not continue. Some of our staff is located in isolated areas. Extreme weather events present real risks to our staff, with some already having close shaves.

Communications

Lack of communications would prevent operations.

Telecommunications damage would make services difficult to coordinate.

Telephone crisis support is our core service hence without telecommunications or the power to run them would totally disrupt our service.

Electricity

All health records are on computer so we would be annihilated if electricity was not functioning.

We would have to charge mobile phones via a generator and only respond to urgent issues.

Without electricity hoists could not be used to provide personal care to support clients and computers would not work which would affect managers and staff ability to do their job effectively.

No computers would mean no staff pay or invoicing.

Freezers full of food would spoil.

Water

We could not accommodate young people if we did not have power and water. It would be unsanitary.

Outage of water supply will make offices unusable from OHS point of view.

Showers for the homeless not possible.

Roads/transport infrastructure

Workers would not be able to support clients in their homes.

Outreach to clients would be impossible.

Volunteers and staff could not access clients' homes or the organisation's offices.

We would be unable to travel from Alice Springs out to remote communities for service provision.

Some clients would miss critical treatments (i.e. chemotherapy, blood transfusions). Our area of service delivery is 870,000sq.km. It would be difficult to get to the affected areas other than by air.

3.3.6 Impacts of service failure on clients

Clients would experience increased hardship and reduced wellbeing if service provision was disrupted by an extreme weather event

Respondents were asked to provide a qualitative response to the question, 'please tell us how clients would be affected if your organisation could not provide services immediately after a natural disaster.' A sample of responses grouped according to service type is presented below.

Homelessness and housing services

Worst-case scenario is death due to lack of shelter/food for homeless individual [sic].

People would simply remain homeless.

Young people would return to being homeless.

Disability and carers' services

We work with people with a cognitive disability where an understanding of the event may be limited, there may be a heightened sense of fear in general…My concern would be their lack of knowledge of what is safe i.e. is it safe to drink the water?

No supported work for people with a disability – therefore a loss of social contact and reduced income.

Carers would not be provided with respite from their caring responsibility of their disabled relative, thus putting additional pressure on the family when trying to recover from the impact of the disaster. Carers would indeed require more respite at such a traumatic time.

Aged care services

There is a real possibility of resident death.

They would die (no eating, no toileting, no showering, no getting out of bed).

Elderly people who are in care in their homes would be deprived of HACC [Home and Community Care] services.

Unable to deliver meals on wheels or other community support to socially isolated older people.

Legal services

We surmise that a client could be imprisoned without advice or representation. Homes could be lost, goods repossessed. Court battles would increase without that advice, representation or mediation.

Women's crisis and domestic violence services (including legal)

Immediate impact might be loss of safety from court orders not being established to loss of children in longer term.

Women and their children would be more vulnerable than ever to violence and homelessness.

We provide high security accommodation for women and children at immediate risk from domestic and family violence. We are the only service of its type for 1500km. Women and childrens [sic] safety in the region would be extremely compromised.

Peak and advocacy bodies

They would cease to be informed of changes to policy and legislation affecting them or their stakeholders, would cease to meet to advocate, would cease to attend professional development activities, and would cease to have an active sense of shared purpose and belonging.

We don't have clients but our work on collaborating with other service providers would be much more difficult without telecommunications, we would be limited in our ability to support other organisations who do work with clients.

Mental health services

Those at risk of suicide could be at higher risk. Those with depression could become further depressed.

Any big event often triggers paranoia and an increase in other symptoms experienced by people with mental illness including panic and suicidal ideation.

Could decide to take own life if not able to access the crisis line.

Health services

Our health services would not be able to do outreach to remote communities, who would be completely cut off from support.

As a health provider there could be significant consequences for patients or they may have to divert to the emergency department, which may have other consequences.

Emergency Relief services

A lot of our clients who are already vulnerable and have limited resources would have nowhere else to go for emergency relief and would lose lines of communication and advocacy support. Some families would not be able to access basic services for needs including food, shelter, transport.

Aboriginal and Torres Strait Islander services

I would be most concerned for the elderly, people with disabilities and the homeless people who sleep rough in the river and hills around town. Many of these people have serious and multiple chronic health issues that require regular monitoring and medication.

Essential services such as food and access to health, cleaning, legal service etc. would be compromised.

It is important to note that not all respondents reported that clients would be adversely impacted if their organisation were unable to provide services immediately after an extreme weather event. For example, one respondent commented:

[The] reality is that in the immediate aftermath following an extreme weather event clients are not requiring our regular services … they are requiring emergency services responses with food and shelter. Our responses would need to be quite different in the crisis period for us to be relevant; it is much later in the recovery phase that demand on services like ours increases and become necessary.

3.3.7 Other factors contributing to organisational vulnerability to climate change and extreme weather impacts

The survey asked a number of questions about how an organisation's staff and volunteers and demand for services would be affected by an extreme weather event.

3.3.7.1 Impact of extreme weather events on demand for services

Findings presented in the literature review, including those from recent ACSS demonstrate that increased demand for services and the inability of CSOs to meet demand is a critical issue for the community services sector. For example, the 2012 ACSS reports that in 2010-11 community legal services turned away 11,693 people or 14% of those in need of their services and that housing and homelessness services turned away 20,496 people or 8% of those in needs (ACOSS 2012a). As such, a significant increase in demand for services over the short or long-term caused by extreme weather events and other climate change impacts is likely to be a serious cause of strain (or even failure) for CSOs.

Most organisations reported that an extreme weather event would increase demand in the short term

Respondents were asked to assess whether an extreme weather event would impact on demand for their organisation's services. Available responses included that:

- Demand would increase during the crisis period but then return to normal.
- Demand would increase during the crisis period and be maintained at an increased level long term.
- Demand would decrease during the crisis period but then increase and be maintained at the increased level long term.
- Demand would decrease during the crisis period but then return to normal.
- Demand would decrease during the crisis period and be maintained at a decreased level long term.
- Demand would not be affected by an extreme weather event.

Over 30% of respondents reported that after an initial spike during the crisis period, demand would return to normal in the aftermath of an extreme weather event. Approximately 20% of organisations felt that demand would increase during the crisis period and that this increase in demand would be maintained over the long term (Figure 45).

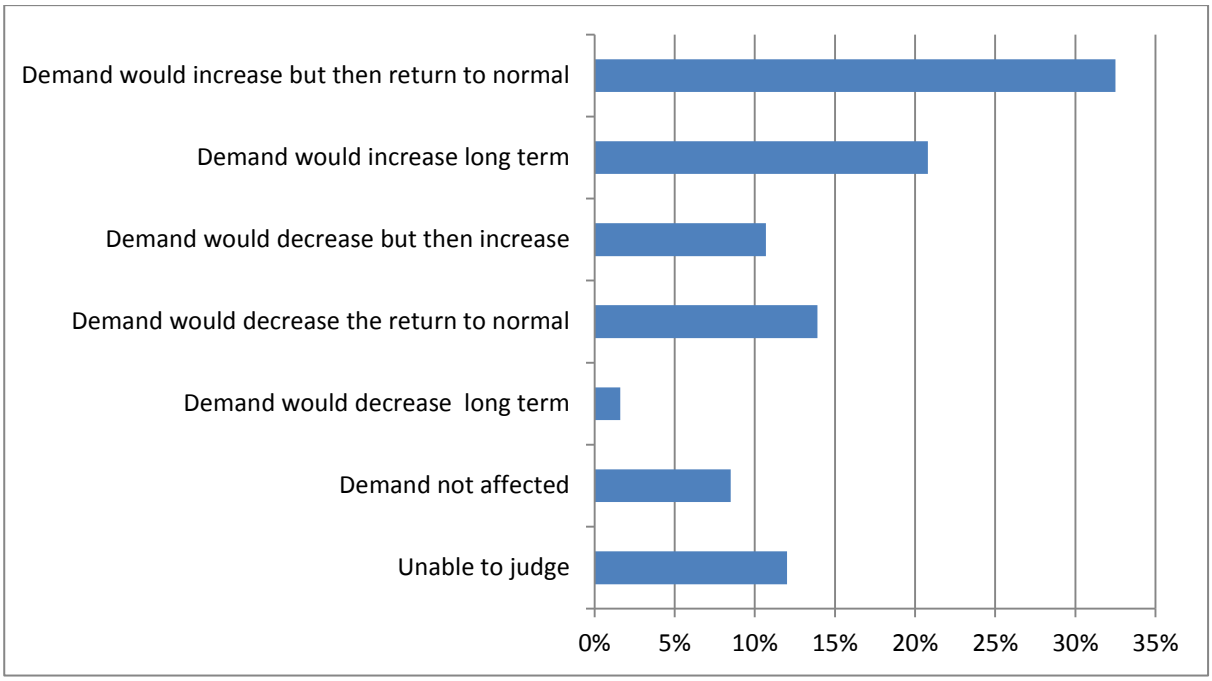


Figure 45: Impact of extreme weather events on demand for services (n=366)

30% of organisations reported an extreme weather event would cause a long-term increase in demand for services

Further analysis was conducted to examine the predicted overall impact on demand over the short and long term. First, responses that predicted the same overall impact on demand were aggregated using the following code:

- A short-term increase in demand.
- A long-term increase in demand.
- No impact on demand (over the long-term). Responses that predicted no effect on demand at all as well as those that predicted a return to normal levels of demand after a short term increase or decrease were included in this category.

Figure 46 shows that a majority of respondents predicted that an extreme weather event would cause a short-term increase in demand for services. Over the long term, a majority of respondents reported an extreme weather event would not affect demand for services (Figure 47). However a large minority (over 30%) of organisations reported that an extreme weather event would lead to a long-term increase in demand for services.

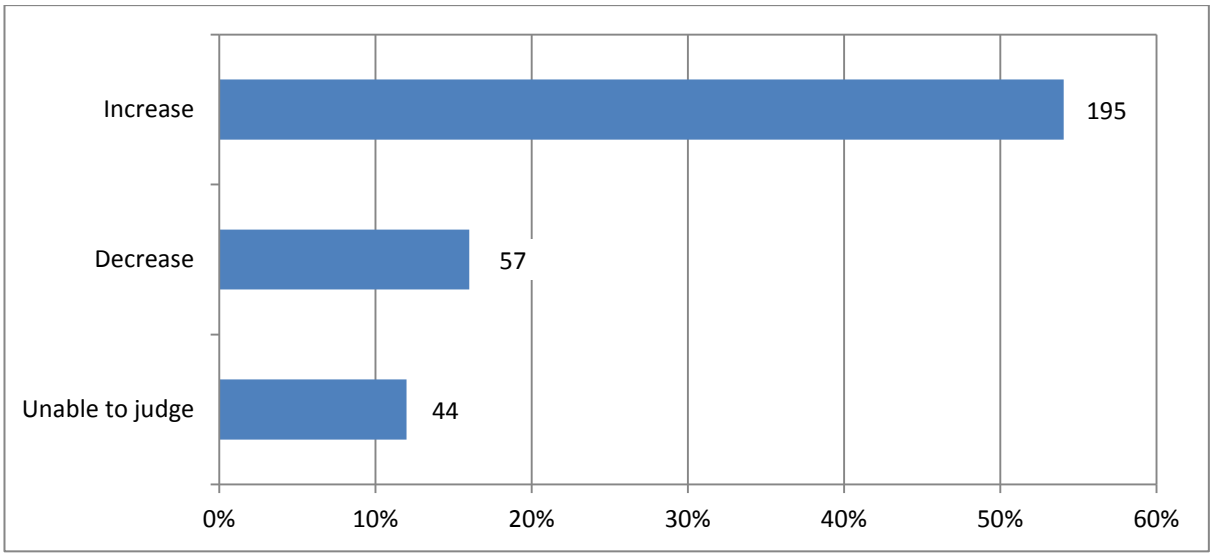


Figure 46: Impact of extreme weather events on demand for services (short term) (n=366)

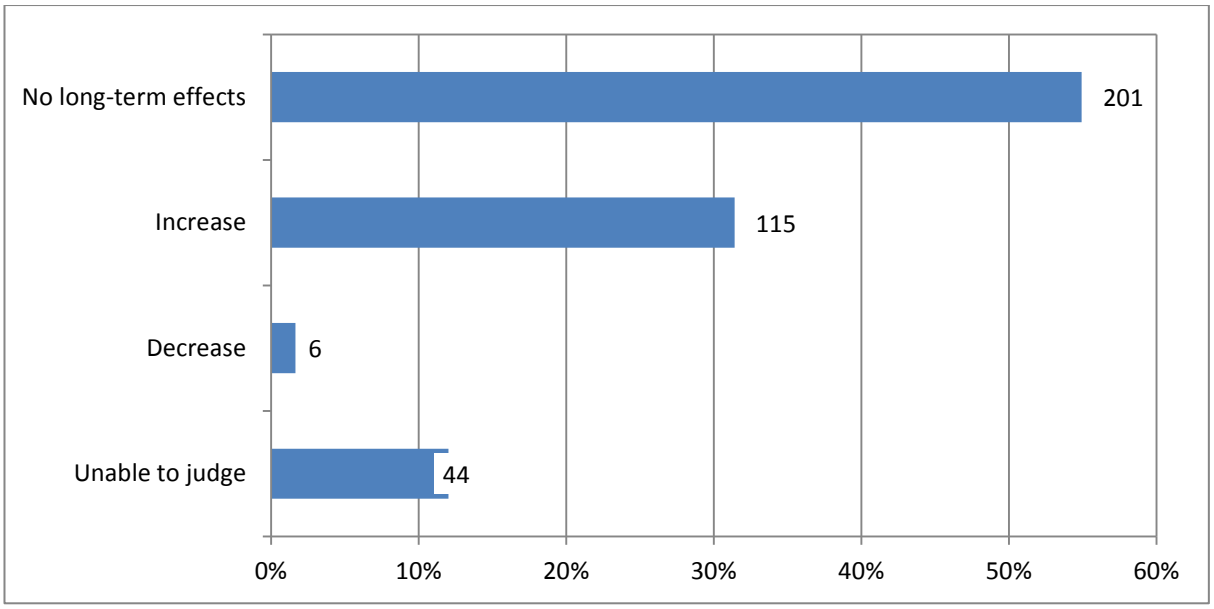


Figure 47: Impact of extreme weather events on demand for services (long term) (n=366)

To examine this finding further, predictions about the long-term impacts of an extreme weather event on demand for services were analysed according to whether respondent organisations had experienced an extreme weather event in the past. Figure 48 shows that past experience of an extreme weather event had little impact on the way respondents predicted that demand would be affected. This suggests that organisations are able to accurately predict the impact of extreme events on demand for social services regardless of whether they have directly experienced an event or not.

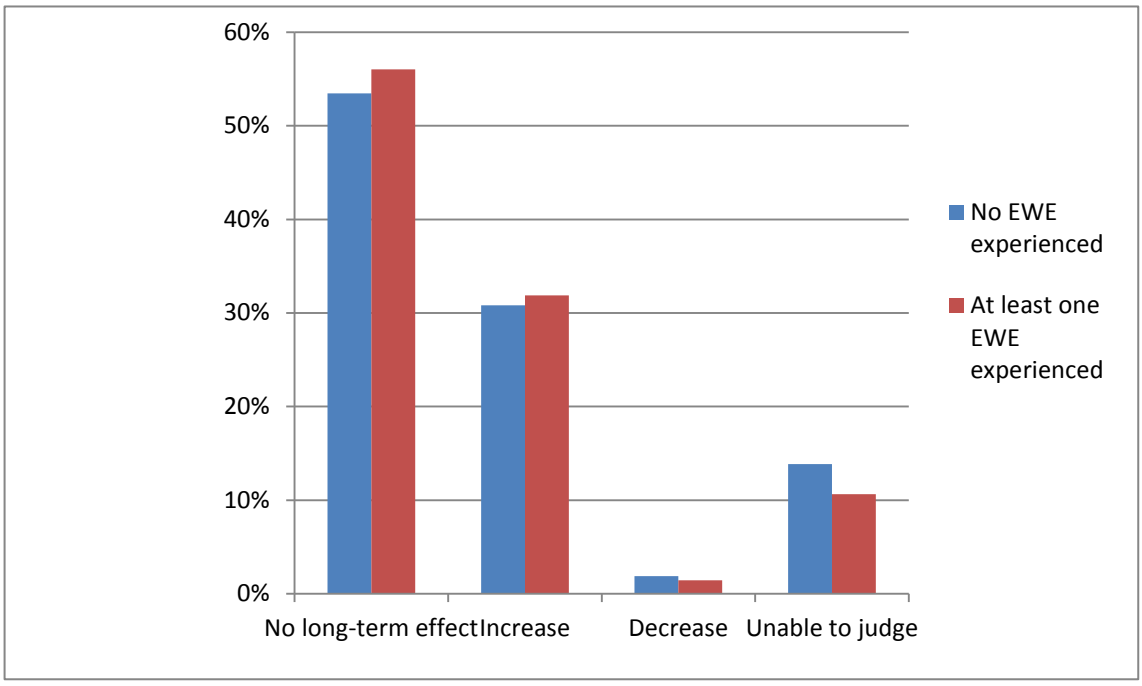


Figure 48: Predictions of the long-term impacts on demand caused by an extreme weather event by past experience of an extreme weather event (n=366)

Responses were also analysed according to types of services provided. This analysis reveals that organisations that provide information, referral and advice services, client advocacy (other than legal), and emergency relief were most likely to report a long-term increase in demand for services after and extreme weather event. Almost 35% of organisations that provide housing and homelessness and financial support and literacy services also reported that a long-term increase in demand would likely follow an extreme event (Figure 49).

3.3.7.2 Impact of disruption to staff and external service providers on service provision

Disruptions to staff availability would have a serious impact on organisations' ability to provide services

Respondents were asked to estimate for how long they could continue to provide services if their staff, volunteers, suppliers (e.g. of food or medicine) or external service providers (e.g. cleaners or waste disposal services) were disrupted because of the impacts of an extreme weather event. Disruptions to staffing arrangements are identified as a key source of strain for CSOs and highlight the importance of contingency planning to ensure staffing continuity in the aftermath of extreme events.

Approximately 60% of respondents indicated they would be unable to operate for more than one day if staff were unable to work because of extreme weather impacts. 35% of respondents reported they would be able to provide services for up to a month if external service providers stopped operating as a result of extreme weather impacts (Figure 50).

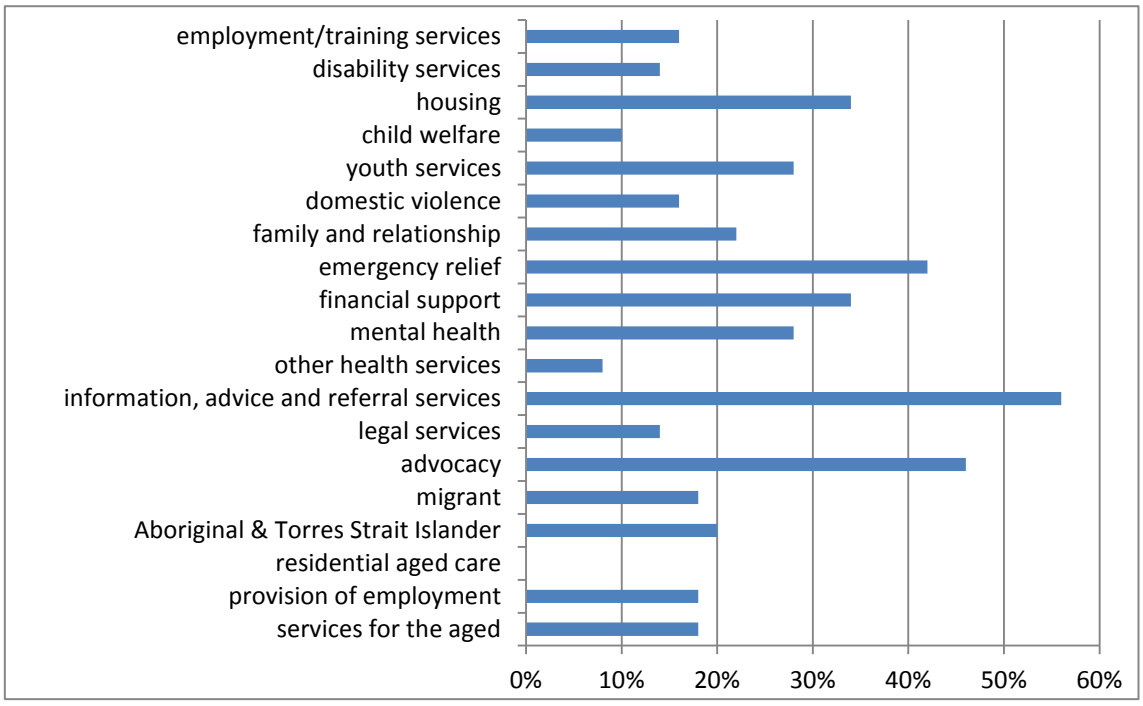


Figure 49: Predictions of the long-term impacts on demand caused by an extreme weather event by service type (n=366)

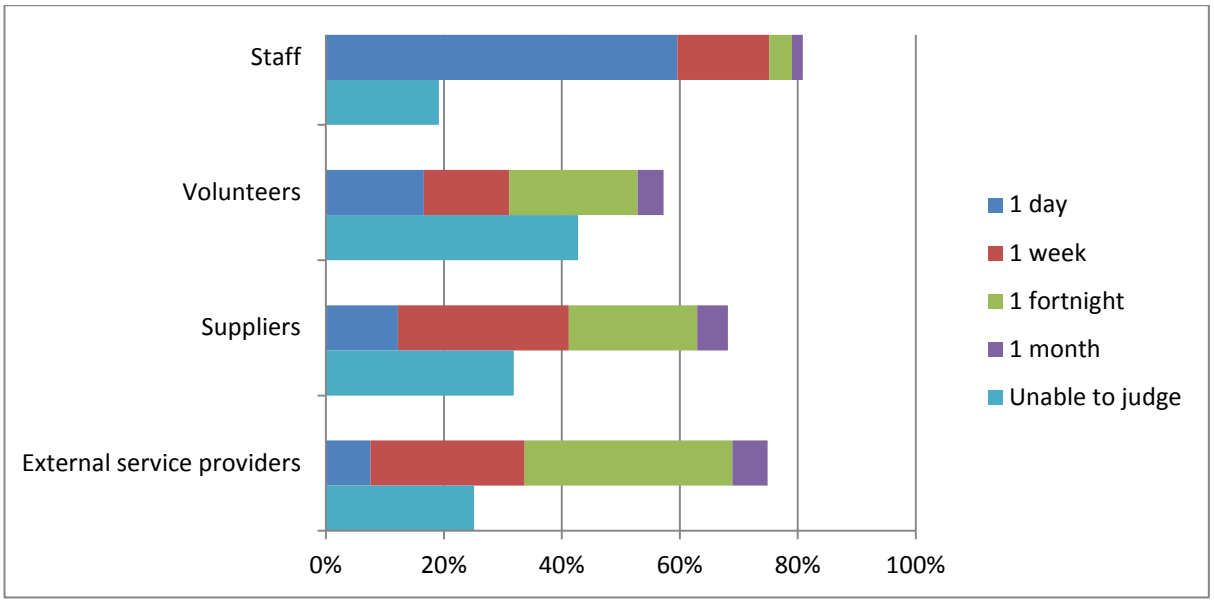


Figure 50: How long could organisations provide services if staff, suppliers or external service providers were disrupted (n=382)

3.3.8 Climate change adaptation – action and barriers

Being prepared for, or well adapted, to climate change and extreme weather risks is an indicator of organisational resilience. As such, the survey asked several questions, which aimed to gauge what organisations understand climate change adaptation actions to be and what actions they had already taken in response to concerns about climate change, including whether they had taken out insurance against specific losses caused by climate change and extreme weather impacts and whether they had specific budget funds allocated to climate change adaptation. It also sought to understand whether there was a willingness within the sector to take action to respond to climate change risks and, if so, what barriers were preventing them from doing so.

3.3.8.1 Action on climate change

Organisations that had experienced at least one extreme weather event were more likely to report taking action on climate change

Respondents were asked to report on what, if any, action they had taken because of concern about climate change or extreme weather impacts. Actions listed included mitigation actions such as reducing carbon emissions; advocacy actions such as advocating for local, state or federal government action on climate change; and information seeking actions such as looking for information about local climate change or extreme weather risks. Respondents were able to select more than one action that their organisation had engaged in.

The most common action undertaken by respondent organisations was measures to reduce carbon emissions (38%). This finding supports the initial assumption that CSOs primarily understand climate change in terms of its causes and responses to climate change in terms of mitigation. 35% of organisations reported having undertaken none of the listed actions. Over 30% of respondents reported having discussed extreme weather risks at a management committee or board meeting.

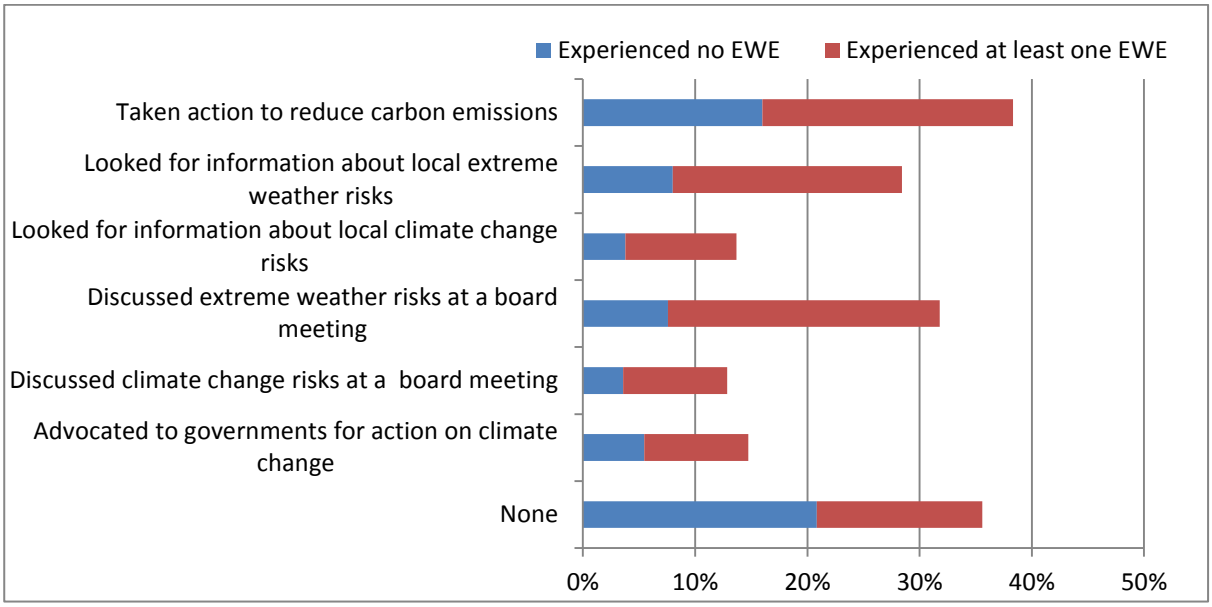


Figure 51: Action on climate change by experience of an extreme weather event (n=475)

Responses were then disaggregated according to whether respondents had experienced at least one extreme weather event or had not experienced any extreme events (Figure 51). This analysis revealed that organisations that had experienced at least one extreme weather event were more likely to have undertaken the listed actions and were less likely to have undertaken no action. For example, most of the organisations that reported discussing extreme weather risks at a management committee and looking for information about local risk had experienced at least one extreme weather event. These organisations were also more likely to have undertaken action to reduce carbon emissions. This finding research conducted by Spence et. al. (2011) who found that people who reported direct experience of flooding in the UK were more likely to report both increased levels of concern about climate change and increased action to reduce their energy use and improve energy efficiency.

Organisations with higher levels of knowledge about climate change risks were more likely to have taken action to respond to them

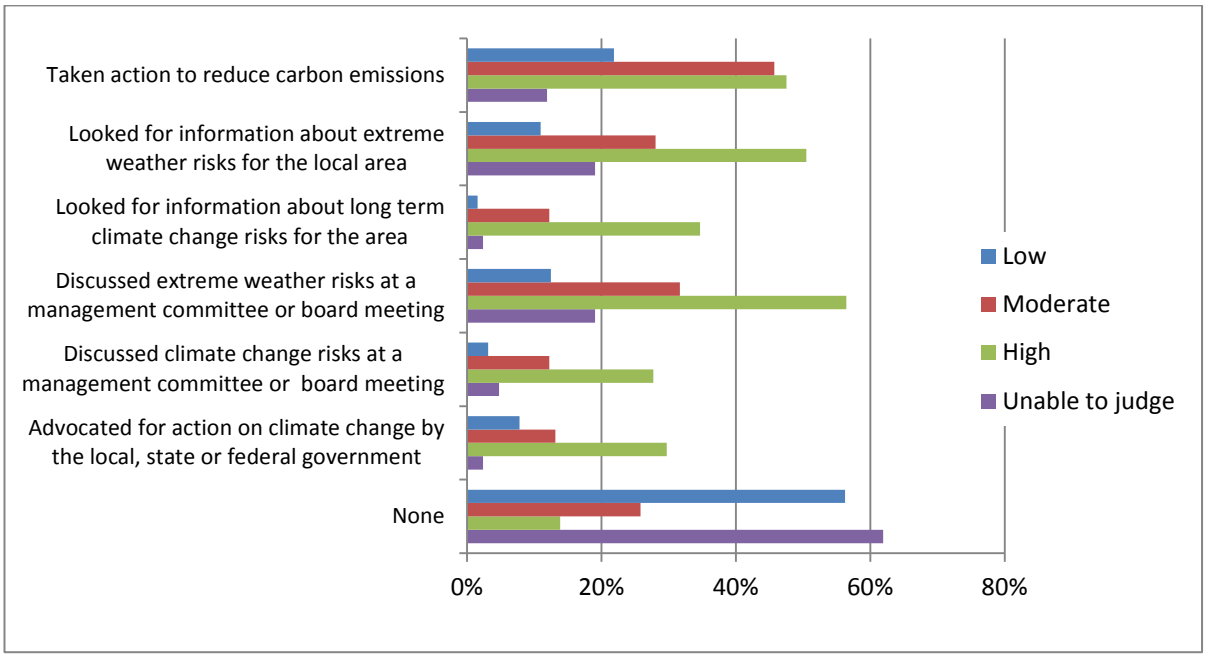


Figure 52: Action on climate change by level of knowledge about climate change risks (n=475)

Figure 52 shows an analysis of the relationship between reported levels of knowledge about climate change impacts within the organisation and whether it had already taken action to respond to those impacts. It reveals that respondents that reported high and moderate levels of knowledge about climate change risks were more likely to report that their organisation had taken action because of concern about climate change and less likely to have taken no action at all. However, these organisations were still most likely to have undertaken action to reduce their carbon emissions or to learn about or discuss extreme weather risks at the board or management committee level.

These findings suggest that a majority of CSOs currently think about climate change issues through the lenses of mitigation, energy efficiency and disaster preparedness. There are several factors that may have contributed to this. Firstly, Australia is already highly exposed to extreme events, including extreme heat, bushfires, drought, severe storms and cyclones. In the period since January 2009, the country has experienced a series of devastating events, including the Victorian heatwave and bushfires in 2009, the Queensland floods and extensive flooding in NSW and Victoria in 2010-11, Cyclone Yasi in Queensland in 2011, and the record breaking heatwave in South-Eastern Australia in 2013 and associated bushfires in Tasmania and NSW. The human and economic toll from these events has been great and CSOs have been directly impacted as well as being involved in the community response and recovery to each of them.

Secondly, increasing energy prices have been the focus of much media attention throughout 2012. In addition, the federal government's *Clean Energy Futures* package, including the price on carbon emissions, came into effect during the period in which the survey was to field and also generated a lot of media interest and public concern about its likely impact on already increasing energy prices. CSOs are particularly susceptible to price increases for goods, services and utilities in much the same way that people on low incomes are susceptible to cost of living increases because they have limited disposable income and spend a greater proportion of that income on essentials such as energy, fuel and food. Similarly, most CSOs operate on small, static budgets and, as discussed elsewhere in the report, underfunding and funding uncertainty remain major concerns for the sector. In addition, significant recent increases in energy costs have not been addressed through provisions for indexation in funding arrangements and come at a time when most CSOs are experiencing growing demand for their services. Finally, because of the nature of their work, the majority are unable to pass on cost increases through charging for services (ACOSS 2011a).

3.3.8.2 Budgeting for action on climate change

Most organisations do not have a specific budget for climate change action

Over 80% of respondents reported that their organisation did not have specific budget dedicated to climate change action. Fewer than 7% of organisations reported that their organisation's budget included allocated funding for action on climate change (Figure 53).

This finding is not surprising given that many CSOs, particularly smaller organisations, report being unable to meet demand for their core services within their current funding arrangements. For example, the most recent ACSS identified underfunding of services, funding uncertainty and unmet demand for services as the three key stressors for sector organisations into the future (ACOSS 2012, 13). If services are unable to secure adequate funding to provide core services, it is unlikely they will have surplus resources to allocate to climate change adaptation.

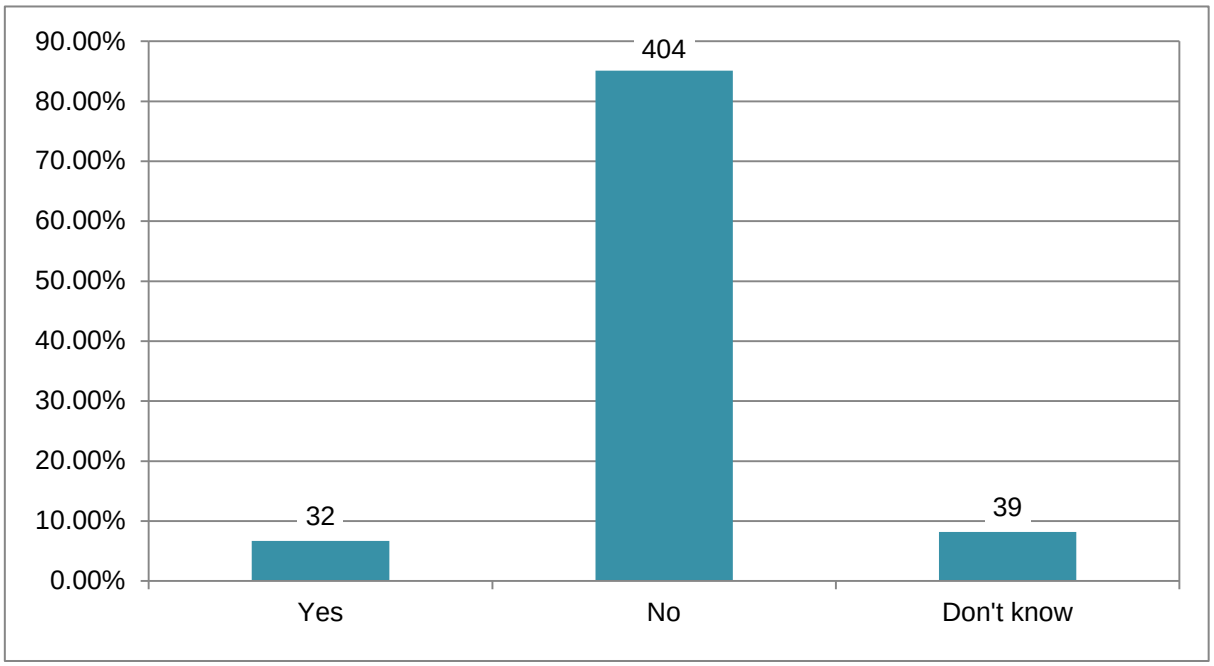


Figure 53: Have organisations budgeted for action on climate change? (n=475)

3.3.8.3 Insurance against extreme weather events

Many organisations reported underinsurance against extreme weather events

Respondents were asked to report on whether their organisations were insured against different types of losses caused by extreme weather impacts, including: assets, contracts, income, business continuity, staff absence and volunteers.
While approximately 65% of organisations reported being fully or partly insured against the loss of assets caused by an extreme weather event, just 40% reported full or partial business continuity insurance and fewer than 30% reported having full or partial insurance cover for contract losses. In addition, fewer 20% were fully or partially insured against local staff absences.

Responses about insurance levels were also analysed according to organisational size. Figure 54 shows the percentage of organisations within each size category that reported not having insurance against specific losses caused by extreme weather impacts. It reveals that respondents from very small organisations were most likely to report being uninsured against the each of the variables measured, with the exception of local staff absence. Large organisations were most likely to report being uninsured against local staff absence and were equally as likely as very small organisations to report being uninsured against the loss of volunteers.

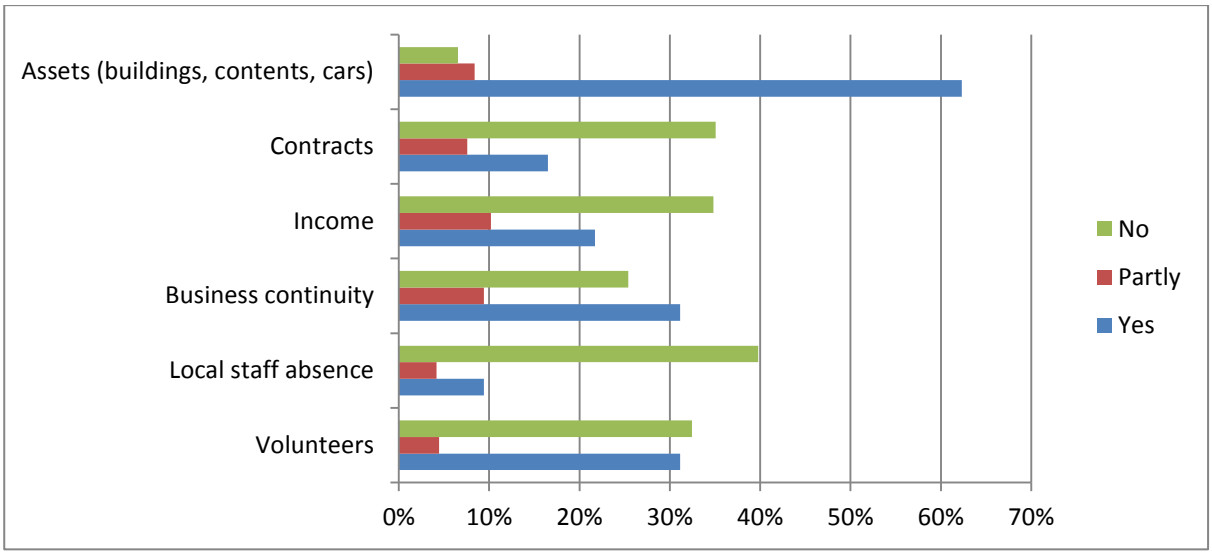


Figure 54: Insurance against losses caused by extreme weather events (n=382)

3.3.8.4 Willingness to act: what would CSOs like to do to respond to climate change and extreme weather impacts?

Organisations reported a strong desire to undertake adaptation actions in future

Respondents were asked to identify the adaptation actions that their organisation had already undertaken, the actions they would like to undertake if they had sufficient resources to do so, and the actions they would not like to undertake, even if resources were available. As Figure 55 indicates, the actions that organisations were most likely to have undertaken already included: action to reduce utility bills (42%) and develop a disaster management plan (27%). Fewer than 10% of organisations reported having developed a climate change adaptation plan, relocated their service centres, or undertaken a climate change risk assessment.

However, respondents reported a strong desire to take action to adapt to climate change risks if adequate resources were available. For example, over 40% of organisations reported they would like to: assist clients to prepare for climate change; develop a climate change adaptation plan; work with other organisations to plan collaborative service provision during disasters (over 60%); take action to reduce their utility bills; upgrade organisational infrastructure to be resilient to climate change and extreme weather impacts; develop a disaster management plan; and undertake a climate change risk assessment.

Approximately 80% of respondents reported that switching to a different method of service delivery and relocating offices or service centres[4] were actions they would not like to take to respond to climate change risks or identified them as not applicable to their circumstances. Over 40% of respondents reported that extending or renegotiating the organisation's insurance cover was an action they would not like to take or not applicable to them.

[4] Data from the workshop program suggests that CSOs are bound to provide services where need is greatest and where their clients are located. Some view moving services to new geographic locations as a breach of their social contract with clients.

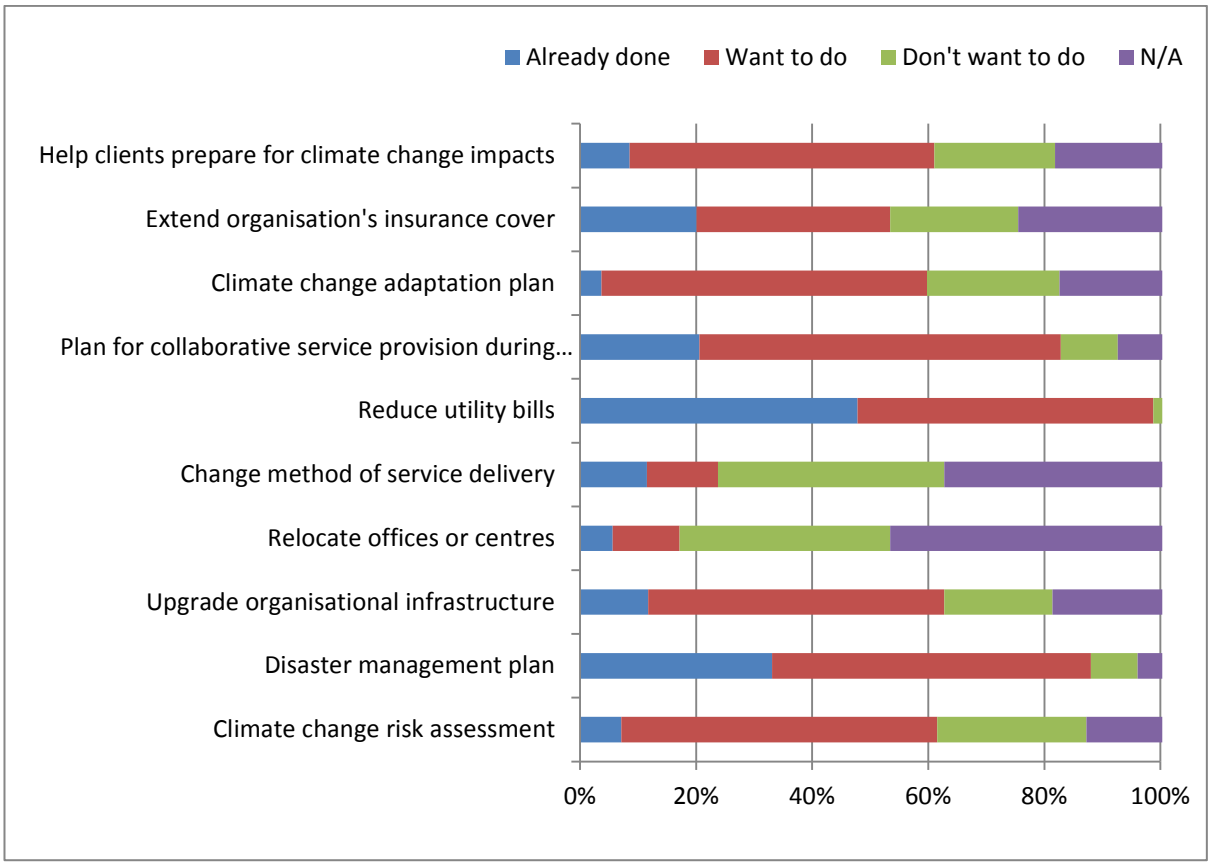


Figure 55: What adaptation actions organisations would like to take if resources were available (n=408)

3.3.9 Barriers to adaptation

Most organisations identified lack of funds as the key barrier to adaptation

Respondents were asked to identify the main barriers to their organisation engaging in climate change adaptation action. They were able to select more than one response.

An overwhelming majority of respondents (73%) identified lack of funds as a major barrier to adaption (Figure 56). Other commonly cited barriers included that climate change adaptation is beyond the scope of the organisation's work (52%), a lack of clear government policies and guidelines (48%), lack of staff (48%), and lack of information about relevant adaptation actions (47%). Only 11% of organisations identified a lack of belief about climate change within the organisation as a barrier to adaptation.

It is unsurprising that lack of financial resources is identified as the key barrier to climate change adaptation for CSOs in light of the fact that over 80% of survey respondents reported not having a discrete budget for climate change action and that the 2012 ACSS conducted by ACOSS identified underfunding of services and funding uncertainty as one of the greatest challenges for the sector into the future (ACOSS 2012a). A key factor contributing to underfunding and funding uncertainty for CSOs is government contracting processes for social service delivery. For example, a recent ACOSS national survey of CSOs about their contracting relationships with government revealed high levels of funding uncertainty and a degree of financial risk involved in contracting for services, which impact on the sector's ability to deliver services or to undertake evaluation, advocacy, community development or capital expenditure (ACOSS unpublished).

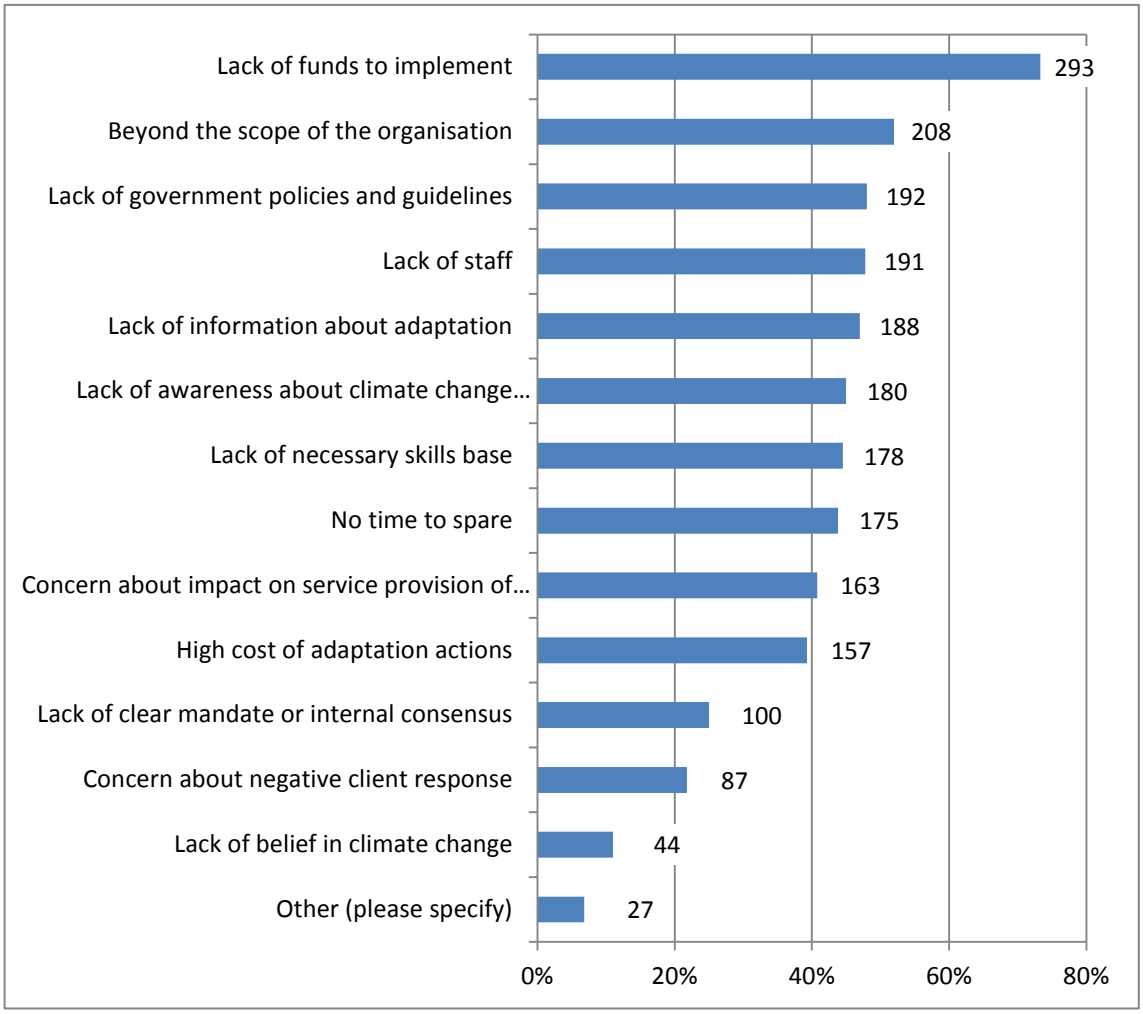


Figure 56: Barriers to adaptation (for organisations) (n=400)

3.3.10 Role and contribution of well-adapted organisations

The survey also sought to understand how a well-adapted community services sector could contribute to client and community resilience to climate change and extreme weather events. This section of the report presents the findings related to services and assistance respondents felt their organisation could provide to clients to build resilience to climate change and extreme weather disasters, if well adapted themselves, and adequately resourced to do so.

Well-adapted organisations could provide a range of services to enhance client and community preparedness for extreme weather events

Respondents were asked to indicate whether they would be able to provide a range of services or assistance to their clients before and after an extreme weather event occurred to help them prepare for and respond to its impacts. An overwhelming majority of respondents reported that, with sufficient resources, they could provide such assistance (Figures 57 and 58).

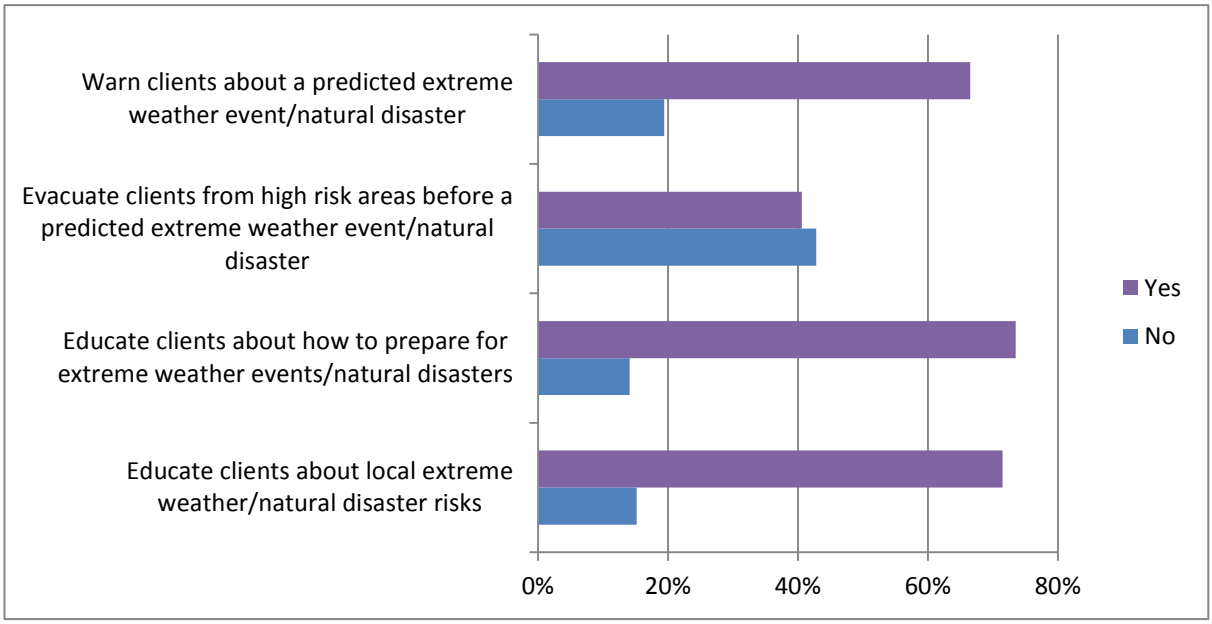


Figure 57: Assistance CSOs could provide BEFORE an extreme weather event (n=355)

Over 70% of respondents reported that they could provide community education programs to teach clients about local extreme weather risks and to prepare for their potential impacts. Over 60% of respondents also reported that they could warn their clients about a predicted extreme weather event. Approximately 40% of respondents reported an ability to evacuate clients from high-risk areas before a predicted extreme weather event occurred (Figure 57).

High numbers of respondents also reported that their organisations could provide services to clients after an extreme weather event that would help them to cope with its impacts (Figure 58). For example, almost 80% of respondents reported that with adequate resources they could provide specialist services related to their main area of service provision and over 70% of respondents reported an ability to contact and locate clients in the aftermath of an extreme weather event. Over 50% of respondents reported being able to provide volunteer management services, general or trauma counselling services and emergency relief to organisations and clients in need.

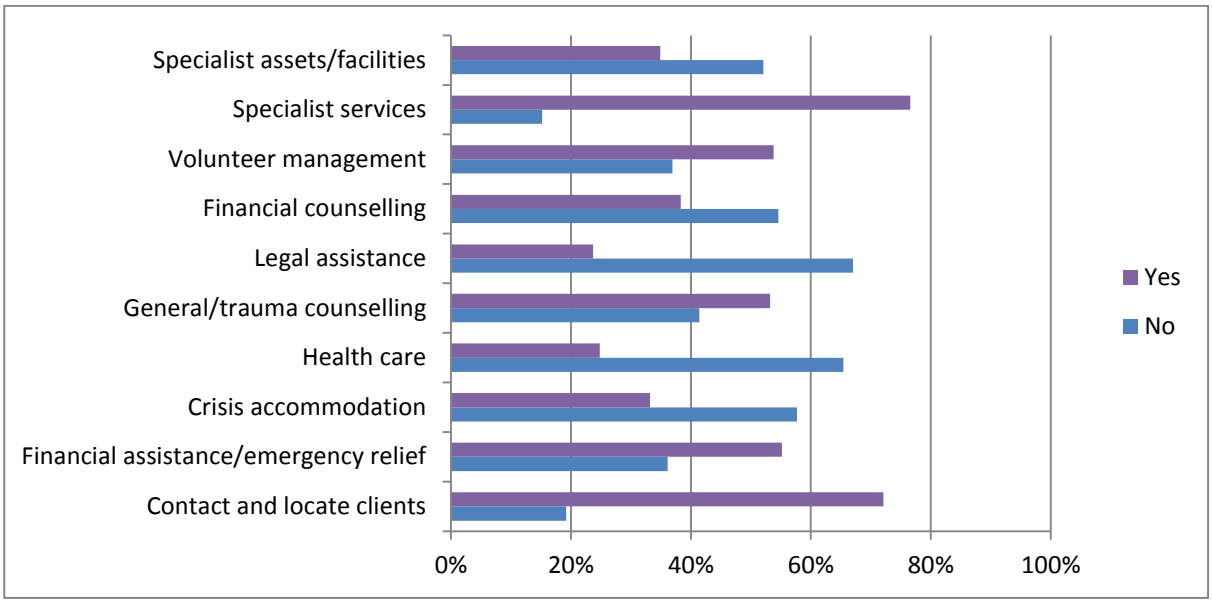


Figure 58: Assistance CSOs could provide AFTER an extreme weather event (n=355)

The services that the fewest respondents reported being able to provide to clients after an extreme weather event included health care, legal assistance and crisis accommodation. However, given the specialised nature of these services, it is possible that this is related to the overall number of such service providers in the survey sample.

Well-resourced organisations could educate clients about energy efficiency measures to help them meet rising costs

Over 60% of respondents reported that they could provide community education about energy and water efficiency measures to assist clients to meet rising utilities costs associated with climate change mitigation and adaption. Approximately 40% also felt their organisation could provide financial counselling services and practical energy efficiency programs, such as assisting clients to insulate their homes or purchase energy efficient whitegoods (Figure 59).

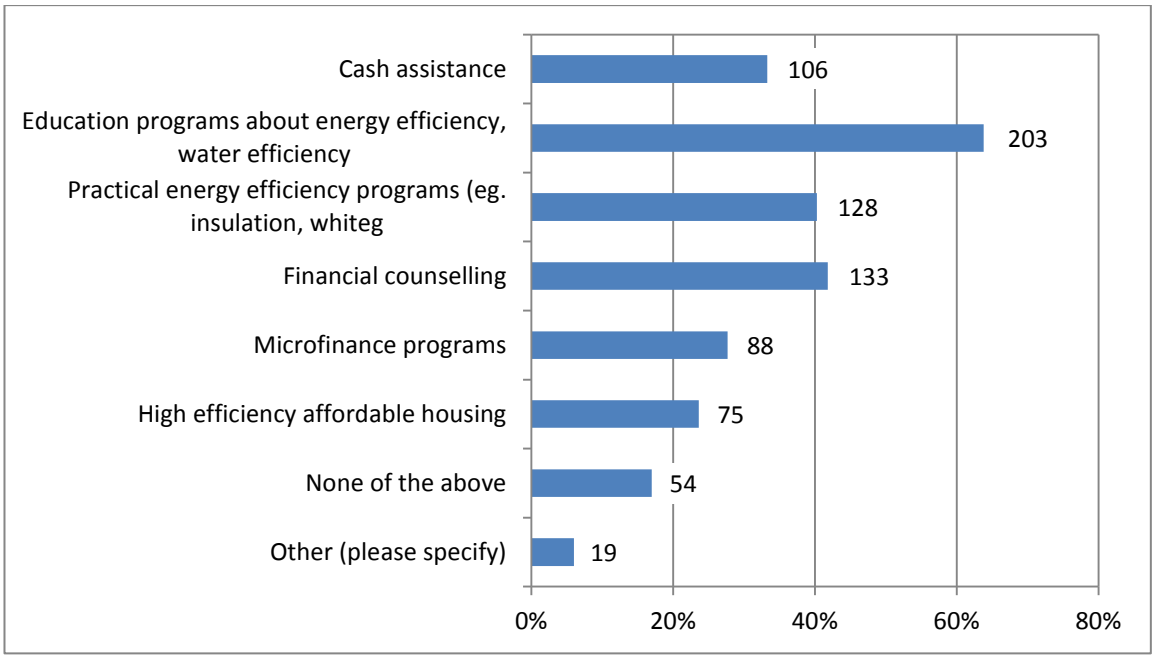


Figure 59: Assistance CSOs could provide to help clients meet cost increases (n=318)

However, some respondents used the 'other' response option to report the difficulties they had experienced in engaging clients in education programs about disaster preparedness and climate change. Comments included the following:

We have run workshops on preparing for climate change and reducing home energy costs and the community do not respond. The classes failed through lack of interest.

You can educate but if clients don't have the resources / money to access these services it is pretty pointless - clients probably wouldn't attend education as they see new technologies as out of their reach financially.

Another respondent also commented that some issues, such as homelessness, would not be resolved by an increase in resources to CSOs alone; a change in community attitudes and responses is required:

All the suggestions above are predicated on the notion that if extra money is provided the situation will change - for many people being homeless can only change if there is more housing built/available. If you are aged, isolated and lonely then money doesn't always change it - it requires a change in society's thinking.

These responses highlight the need to address climate change as a social justice issue and to think creatively and innovatively about how to engage different groups within the community about climate change adaptation and extreme weather preparedness.

3.3.11 Measuring CSO vulnerability and resilience

3.3.11.1 Resilience Indicator: CSO responses to risk

The resilience of organisations to climate change and extreme weather impacts was measured according to level of action they had taken to respond to risks. Three types of responses to risk were measured: mitigation, management and transfer. The measure comprised a scale of 0-9, where a score of zero (0) indicates low resilience and a score of nine (9) indicates high resilience. The figures below present the scores achieved by survey respondents on the three types of risk response actions. Figure 63 provides an aggregated picture of the sector's resilience to climate change and extreme weather impacts.

a) Risk mitigation
Risk mitigation actions measured included: relocating service centres; changing method of service delivery; and upgrading organisational infrastructure to increase resilience to extreme weather impacts. Organisations that had taken no action (or provided 'don't know' responses) received a resilience score of zero (0). Organisations that had taken at least one of each type of action received the maximum resilience score of three (3). Figure 61 below demonstrates that the majority of organisations received a score of zero (0), indicating that they had undertaken none of these mitigation actions.

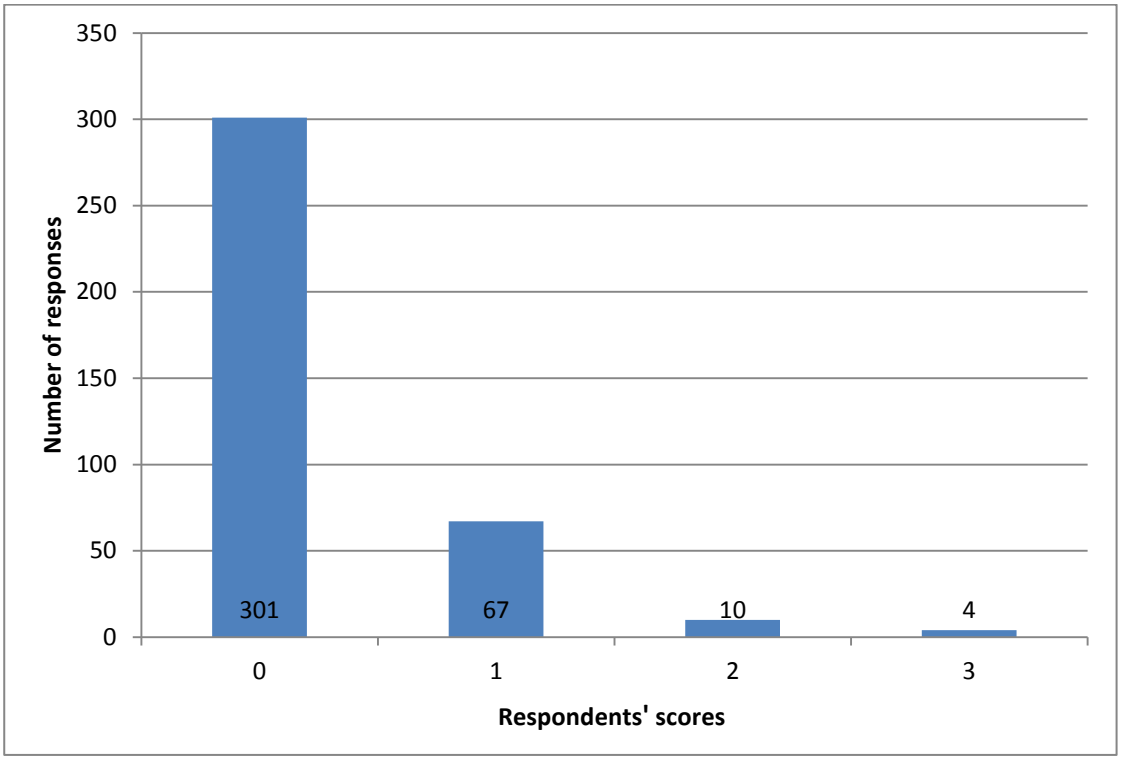


Figure 61: Risk mitigation scores for survey respondents

b) Risk management

Risk management actions measured included: looking for information on climate change or extreme weather risks, undertaking a climate change risk assessment, and developing a climate change adaptation or disaster management plan (including helping clients to prepare for impacts). Each type of action received a resilience score of one (1). Organisations that had taken all three actions received the maximum resilience score of three (3). Organisations that reported taking none of the actions – or submitted a 'don't know' response – received a score of zero (0). Figure 60 below demonstrates that the majority of organisations had undertaken little action to manage risks.

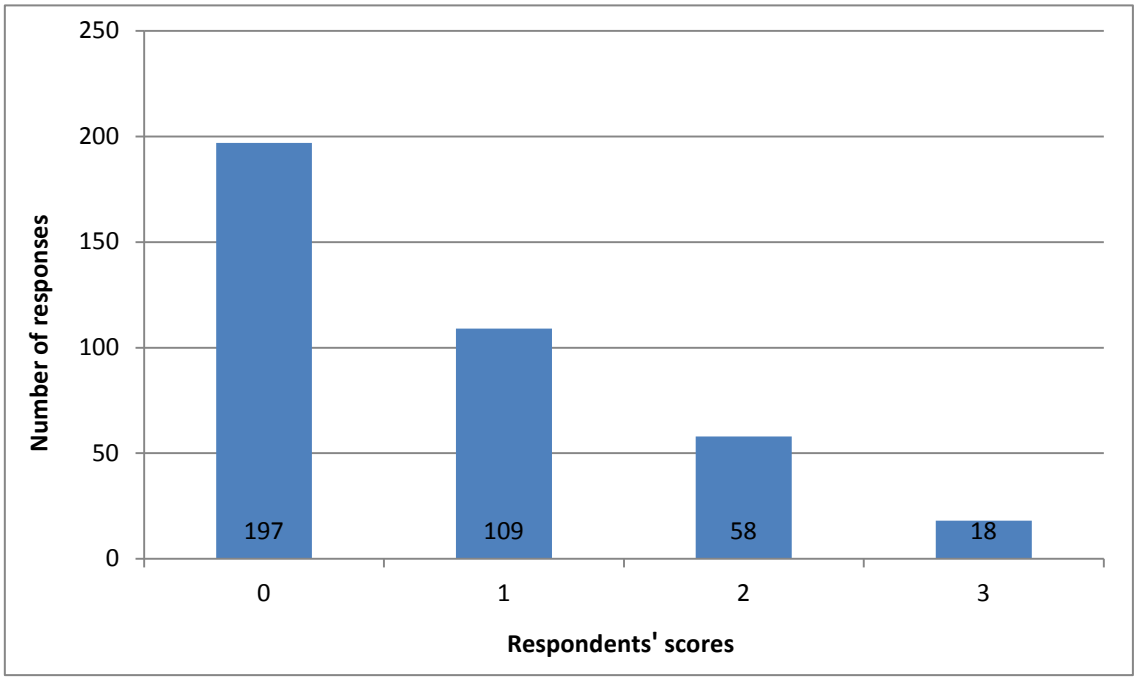


Figure 60: Respondent scores for risk management practice

c) Risk transfer

Risk transfer actions measured included insurance cover and partnering with peers to plan for collaborative service provision during emergencies. Respondents were asked to report whether they had insurance cover against losses caused by extreme weather events to: assets, business continuity, income, local staff, volunteers and contracts. Organisations with insurance cover against two or more losses caused by extreme weather events and received a resilience score of two (2). Those that reported no insurance cover or submitted 'don't know' received a score of zero (0). Organisations that had partnered with others to plan for collaborative service delivery received a score of one (1). Respondents' scores for level of insurance cover were added to their collaboration score to come up with a total risk transfer score, with three (3) being the maximum attainable score. Figure 62 below demonstrates that the majority of organisations received a score of two (2) for risk transfer, indicating above average resilience to extreme weather events on this measure.

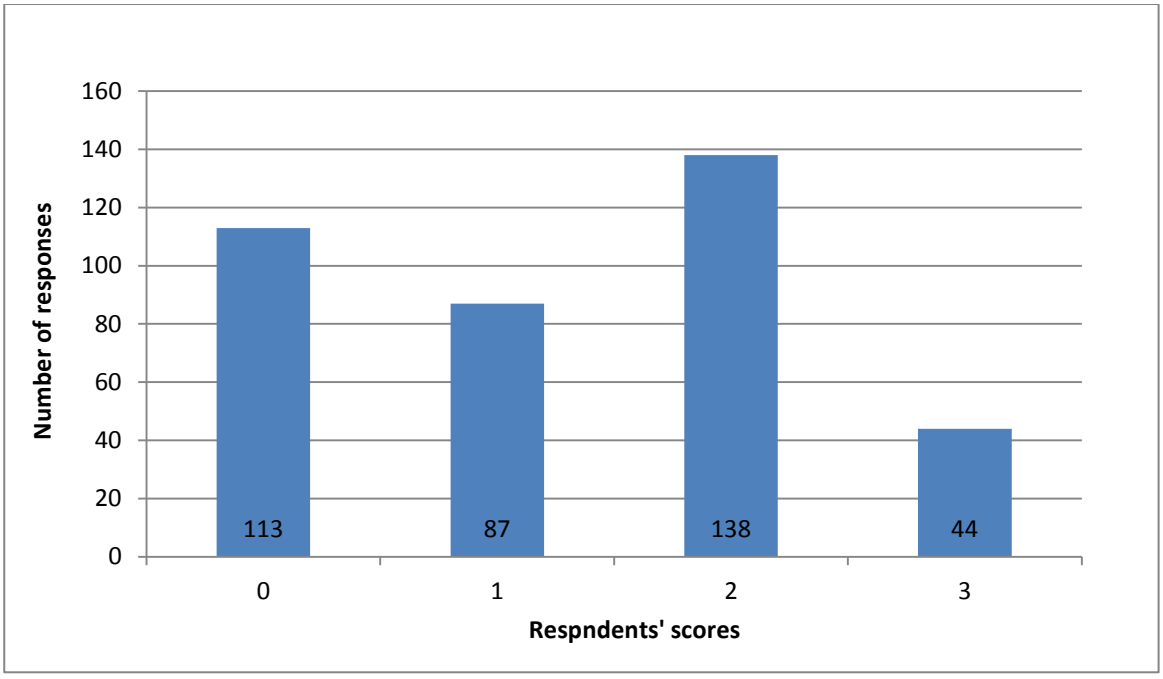


Figure 62: Risk transfer scores for respondent organisations

Response to risk as an indicator of resilience

Respondents' scores for each type of action (manage, mitigate, transfer) were then aggregated, with each given an equal weighting of 33.33%. This created an aggregated resilience scale of 0-9, where zero (0) represents low resilience and nine (9) represents high resilience.

Figure 63 below demonstrates that the majority of organisations received a resilience score of 0-2, indicating low resilience within the sector. As stated previously, 'don't know responses' were considered to reduce resilience, particularly in light of the fact that the vast majority of respondents held executive or management positions within the organisation and could therefore be expected to have direct access to information about organisations' risk practices. However, it is important to note that issues with the survey's design may also have contributed to the rate of 'don't know' responses provided and therefore the reliability of the findings.

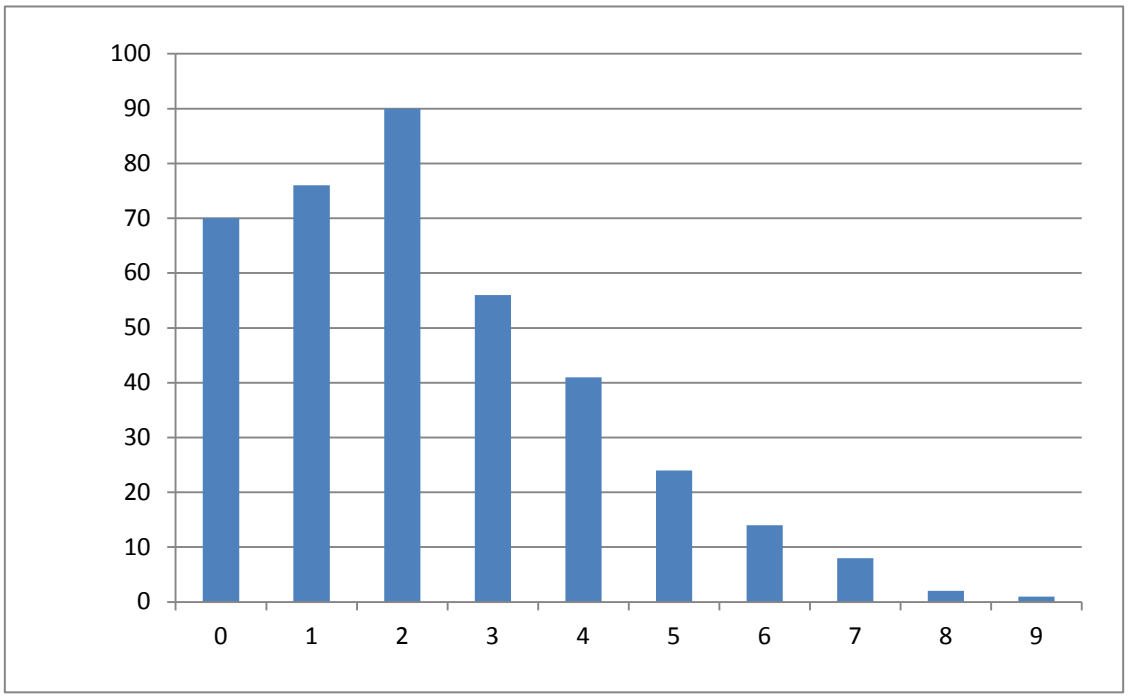


Figure 63: Aggregated risk response scores for respondent organisations

3.3.11.2 Vulnerability Indicator: vulnerability to physical infrastructure failure

CSO vulnerability to climate change and extreme weather impacts was measured based on the length of time organisations could maintain services (or recover service delivery) in the event of significant disruptions to infrastructure, including: buildings, power supply, telecommunications, water supply, and roads/transport infrastructure. The measure comprised a scale of 0 to 100, where zero (0) indicates high vulnerability to climate change and extreme weather impacts and 100 indicates low vulnerability.

Figure 64 below shows an aggregated picture of the survey sample's scores for vulnerability to total infrastructure failure caused by extreme weather impacts. The majority of respondents obtained a score of 45 or less, with the highest number of respondents receiving scores of 30 to 40. This suggests community services sector service delivery is highly vulnerable to climate-driven physical infrastructure disruption and failure.

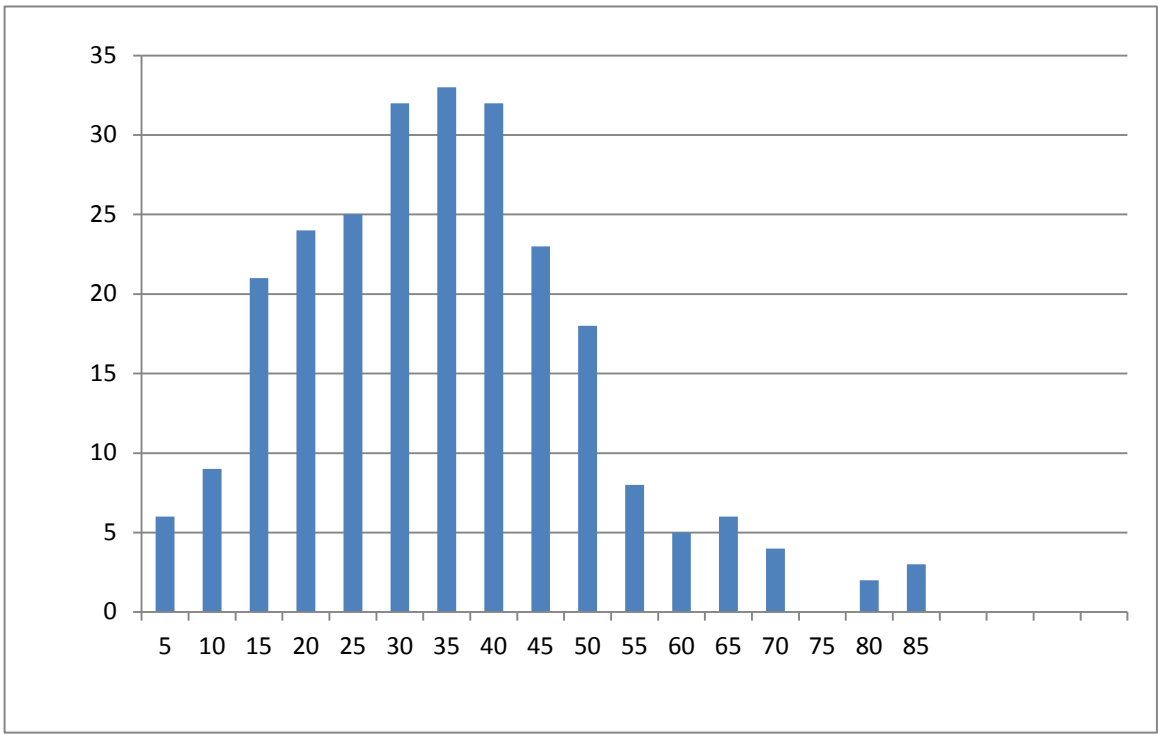


Figure 64: Aggregated vulnerability scores for respondent organisations

3.3.11.3 Measuring organisational vulnerability and resilience to climate change

In order to identify the subsectors, geographic and organisational features most vulnerable and least able to adapt to climate change and extreme weather impacts, linear regression analysis was used to test each of the independent variables against the resilience and vulnerability indicators. To recap, the independent variables were: service type, service location, method of service delivery, organisational size, source of income, knowledge about climate change, and past experience of an extreme weather event.

Linear regression analysis proved the resilience indicator to be a robust measure of organisational resilience to climate change and extreme weather events, able to account for approximately 25% of the variation between low and high resilience to impacts based on actions taken in response to risk. The model identified three indicators of resilience: level of knowledge of local climate change risks, organisational size, and experience of an extreme weather event. That is, higher levels of knowledge, experience of an extreme event in the previous 10-year period and larger size all had a significant positive correlation with broad and sophisticated responses to risk. This finding supports behavioural science research, which clearly demonstrates the links between personal experience of extreme weather events and increased belief in and activity in response to climate change (Spence et. al., 2011; Weber & Stern, 2011; Weber, 2010).

Two factors – being located in NSW and being located in WA - were found to have a small but significant negative correlation with risk response. That is, being located in NSW or WA was indicative of weak responses to risk and therefore low resilience. Being located in all other states and territories did not have an impact on organisational practices in response to risk. This finding requires further, detailed examination to reveal the specific factors that cause organisations in these two states to have less robust risk responses in place.

All other organisational characteristics were found to have no effect on the breadth and sophistication of CSO responses to risk, including: geographic location (urban, regional or remote), type of services provide, method of service delivery and primary sources of income.

Linear regression analysis proved the vulnerability to total infrastructure failure indicator to be a poor measure of CSO vulnerability to extreme weather-driven infrastructure failure. Using this model to test each of the independent variables revealed no statistically significant explanations for organisational vulnerability to the failure of physical infrastructure, including buildings, power supply, water supply, telecommunications systems and roads/transport. Possible explanations for the model's weakness include the high degree of don't know responses provided by survey respondents, which may indicate a low level of engagement and a high degree of uncertainty within the sector about how service delivery will be affected by extreme weather impacts to infrastructure. This measure of vulnerability clearly needs to be further refined, strengthened and retested in future studies.

3.3.12 Conclusion

The survey produced a rich data set of international significance. The results shed valuable light on the level and specific nature of CSO vulnerability to climate change and extreme weather impacts, with a particular focus on the impact of physical infrastructure failure on organisations' capacity to delivery services to those most at risk from climate change within the community. This section discusses the extent to which the survey was successful in meeting its original objectives and what additional knowledge the data reveals regarding CSO vulnerability as well as the opportunities presented by adaptation to organisations and the sector as a whole.

3.3.12.1 Objective one: identify vulnerability and resilience indicators

A key objective of the survey was to identify indicators of CSO vulnerability and resilience to climate change impacts and extreme weather events. To do so, one resilience indicator and one vulnerability indicator were developed. Given the original research conducted in the present study, these indicators were necessarily exploratory and they should be interpreted as indicators only and not absolute measures of resilience or vulnerability.

The resilience indicator used the breadth and sophistication of organisations' risk management, mitigation and transfer practices as an indicator of risk response and resilience building by the organisation. The vulnerability indicator used the self-estimated length of time to recover or maintain service delivery when exposed to infrastructure disruption as a measure of vulnerability.

Figures 63 and 64 represent graphically the spread of scores achieved across the survey's sample. With the majority of respondents achieving resilience scores of zeros (0) to two (2) (from a maximum possible score of nine (9)) and vulnerability scores of 45 or less (from a maximum possible score of 100), these figures suggest that the sector broadly has low resilience and high vulnerability to climate change impacts and extreme weather events.

Linear regression analyses revealed the resilience indicator to be robust predictor of CSO resilience to climate change impacts based on strong correlations between the survey results across the breadth and depth of their responses to risk. On the other hand, the vulnerability indicator (based on self-assessed organisational operability) proved to be a poor measure, revealing no significant explanations for organisational vulnerability to physical infrastructure failure. Though the choice of parameters would appear to be sound for this indicator, it is considered that the self-assessment process may represent a weakness that must be overcome through other approaches and testing in future research.

Since resilience and vulnerability are closely related, it was concluded that identifying one robust indicator was a valuable result from the data analysis and indicator testing.

3.3.12.2 Objective two: organisational features most vulnerable and least able to adapt

Linear regression analysis of each of the independent variables against the resilience indicator identified three indicators of organisational resilience to climate change impacts: size, knowledge and experience. That is, larger organisational size, higher levels of knowledge about climate change and past experience of an extreme weather event were all positively correlated with robust responses to risk and, thus, higher levels of resilience to climate change and extreme weather impacts.

Interestingly, being located in NSW and WA had a small but significant negative relationship with risk response practices. That is, organisations in NSW and WA were less likely to have engaged in risk management, mitigation and transfer practices and were therefore less resilient to climate change and extreme weather impacts than organisations in other states. This peculiar finding warrants further research, perhaps by research teams in those states.

Despite the failure of the vulnerability measure to identify indicators of CSO vulnerability to physical infrastructure failure, an examination of the quantitative and qualitative data obtained through the survey still paints a vivid picture of the sector's vulnerability to climate-driven physical infrastructure failure as well as the vulnerability of the people and communities they support. As shown in Figure 40, respondent organisations reported high levels of vulnerability to the loss of buildings and service centres, with 50% of respondents predicting their CSO would still be out of operation after a week and 25% indicating they would be at risk of permanent closure.

Figure 41 shows that organisations that primarily provide direct services to clients from an office or building are most at risk of permanent closure. This suggests that diversifying and mobilising service provision may be an effective way to reduce the vulnerability of CSO service delivery. Figure 42 shows that organisations in the lowest income quintile were almost twice as likely as those in the highest quintile to report that significant damage to service centres and offices might cause the permanent closure of the affected services.

Respondents also reported high levels of CSO vulnerability to the failure of infrastructure services, particularly electricity, water and telecommunications, with disruptions to these services having the potential to cause the complete cessation of service provision for some organisations (Figures 43 and 44). Qualitative responses provide an insight into the specific ways in which the failure of these services could lead to service disruptions. For example, power and telecommunications failures could also result in loss of access to client records and contact details, potentially causing a total loss of contact with clients during disasters. Loss of power would also disrupt organisations' ability to coordinate programs and appointments, to meet their contractual obligations and to pay their staff. Disruptions to water supplies could lead to serious workplace health and safety breaches, particularly for organisations providing accommodation and meal services, causing significant disruptions to service provision.

A number of other factors were also revealed to have an impact on organisations' capacity to provide effective services in the aftermath of an extreme event, including staff losses and increased demand for services. For example, Figure 50 shows that 60% of respondents would not be able to provide services for more than a day if an extreme weather event seriously impacted or disrupted their staff. Further, 50% of organisations also predicted an extreme weather event would cause a short-term increase in demand for services (Figure 46); with 30% predicting that increase would be maintained long-term (Figure 47). Organisations most likely to report long-term increased demand included those providing housing and homelessness, emergency relief and advocacy services (Figure 49). With CSOs typically struggling to meet demand for services with inadequate resources, such increases in demand would also likely lead to a considerable strain on organisational resources.

The impacts on people experiencing poverty and social disadvantage of CSO strain or failure in response to climate change and extreme weather events revealed through the survey are also serious. According to the organisations surveyed, clients face an increased risk of homelessness, financial hardship and deprivation, hunger, adverse health outcomes and social isolation if the organisations they rely on to meet basic needs are disrupted. In the worst case scenario, respondents predicted that some groups are at increased risk of death if services were to fail, particularly those experiencing homelessness and residents of aged care facilities or people with a disability with high levels of reliance on service providers to meet their day to day personal and health care needs.

3.3.12.3 Objective three: adaptation actions and barriers to implementation

The survey sought to identify the types of adaptation actions that respondent organisations perceived to be most relevant to their operations. Figure 55 shows that, while only a minority of respondents had already taken a range of adaptation actions, respondents reported a high degree of willingness to implement adaptation measures if support was available. For example, a large majority expressed willingness to:

- Develop a disaster management plan (54%).
- Plan for collaborative service provision during extreme events (over 62%).
- Help clients to prepare for climate change and extreme weather impacts (52%).
- Upgrade organisational infrastructure (51%).
- Undertake a climate change risk assessment (54%).
- Develop a climate change adaptation plan (56%).

The adaptation actions that were least relevant to the majority of respondents were relocating premises out of geographical areas highly exposed to climate change and extreme weather risks and changing method of service delivery. Feedback from participants in the workshop program suggests that a key reason for this is that organisations view moving away from where their clients are located as a breach of the social contract they hold with these groups.

Survey respondents identified a range of barriers to implementing adaptation. The key barrier identified by almost three quarters of survey respondents was lack of financial resources, which makes it difficult for organisations – and their clients – to invest in measures to reduce vulnerability to climate change and extreme weather risks. Other barriers to adaptation for CSOs identified through the survey included lack of information and guidance about adaptation, lack of skills and the belief that climate change adaptation is 'beyond the scope of the organisation' (Figure 56).

However, the survey data also has a positive story to tell: that with adequate resources and the right support, CSOs have the desire and the potential to contribute to client and community resilience to climate change impacts. Respondent organisations reported a strong desire to undertake a range of actions to adapt their services to climate change and extreme weather impacts to ensure that they can continue to provide services to clients under changed climate conditions. They also reported having specialist skills and assets to assist clients to better prepare for climate change impacts and extreme weather events and to respond to them after they occurred. These include the ability to educate, contact, locate and evacuate vulnerable people with specialist needs; specialist skills such as case management, counselling and volunteer management; and specialist assets such as disability transport (Figures 57 and 58). These findings strongly suggest that a well-adapted community services sector can play a critical role in client and community resilience to climate change and extreme weather events.

4. DISCUSSION

This section of the report comprises a discussion of the findings against the four research question that guided the project followed by a broader discussion of the implications of these findings for CSOs, the people and communities they support and for decision-makers.

4.1 Impacts of physical infrastructure failure on CSO service delivery

The first research question examined by the project asked whether a significant change in or failure of physical infrastructure (e.g. water, energy, telecommunications, transport) would adversely impact the capacity of CSOs to deliver services. This section discusses the methods used to investigate this question and the outcomes achieved.

The literature review specifically examined what research, if any, had been undertaken in Australia and equivalent countries to understand how CSOs will be affected by climate change and whether or not they are prepared to respond. It revealed a major knowledge gap related to the impact of climate-driven physical infrastructure and essential services failure on the capacity of CSOs to deliver services. However, using proxy evidence from the health and SME sectors, the review demonstrated that it is very likely that CSOs are highly vulnerable to climate change impacts, particularly extreme weather events and that further research into understanding this vulnerability is warranted. Results from the workshop program and the national survey comprise the first attempt to fill this gap and create an information base that demonstrates the ways in which physical infrastructure failure caused by climate change and extreme weather impacts can be expected to seriously and adversely impact the ability of CSOs to deliver services to people experiencing poverty and inequality.

The failure mode exemplars developed using qualitative data from the workshop program, clearly demonstrate they key ways in which physical infrastructure failure causes service delivery strain and failure. For example, *Failure Mode Exemplar Two* (pp. 52-53) shows how power failure caused by a bushfire could lead to the total failure of service delivery by an outreach provider of Home and Community Care services to the elderly and people with a disability. In this case the failure mode is through the reliance on Voice Over Internet Provided (VOIP) telecommunications for all incoming and outgoing communications with clients, other service providers and the emergency services. This exemplar also shows how the failure of CSO service delivery impacts on other elements of the social service system, including peer organisations and the state emergency services, which in turn become strained by increased demand for their services.

The risks to service delivery caused by infrastructure failure identified via the workshop program have been catalogued in the *Community Sector Risk Register*. This register itemises and describes over 200 specific risks to CSO service delivery (see Appendix 3).

The *Climate Change and the Community Sector National Survey* also asked a series of questions about the impact of physical infrastructure failure on CSO capacity to deliver services. Its purpose was to help the research team understand CSO vulnerability to infrastructure failure as a function of the time they would need to recover from or to maintain service provision after sustaining significant disruptions to physical infrastructure and utility services. The results obtained demonstrate that organisations perceive themselves to be highly vulnerable to physical infrastructure failure, including damage or loss of access to buildings and disruptions to power and water supplies and telecommunications systems. For example, the survey reveals that one week after an extreme event, 50% of organisations estimated they would still be out of operation if their buildings were inaccessible because of damage or disruption caused by extreme weather events; 25% of respondents might never provide services again (Figure 40).

Similarly, over 80% of respondent organisations reported that service delivery would be seriously disrupted by the failure of their telecommunications systems and power supplies. Over 60% reported that the failure of water supplies and roads and transport infrastructure would also result in serious disruptions to service delivery (Figure 43). Approximately 40% of respondents would only be able to provide services for one day if their power or water supplies or telecommunications systems were to fail because of damage or disruptions caused by extreme weather impacts; approximately 20% could provide services for a week and approximately 10% for more than a week if roads and transport infrastructure was disrupted (Figure 44).

The project also sought to understand the underlying causes of CSO vulnerability and resilience to climate change and extreme weather impacts. As such, a key objective of the *Climate Change and the Community Sector National Survey* was to 'identify indicators of CSO vulnerability and resilience to climate change and extreme weather impacts'. Through the research, two indicators were developed: a resilience indicator which measured organisations' response to risk through management, mitigation and transfer actions; and a vulnerability indicator which measured organisations' self-estimated vulnerability to climate-driven infrastructure failure as a function of the time required to recover or maintain service delivery.

Once established, linear regression analysis was used to test a number of independent variables against each of the indicators to identify the significance or otherwise of their contribution to an organisation's vulnerability or resilience to climate change and extreme weather impacts. The independent variables were: service type, service location, service delivery method, organisational size, primary sources of income, knowledge of climate change risks and past experience of extreme weather events.

As discussed in the results section, the vulnerability indicator was found wanting in terms of its ability to identify the organisational characteristics influencing vulnerability. However, the resilience indicator successfully identified three factors that contribute most to organisational resilience to climate change and extreme weather risks, which together accounted for 25% of the variation between low and high resilience. In order of significance, these indicators are: high levels knowledge of climate change risks; experience of an extreme weather event in the previous 10-year period; and larger organisational size.

Despite the failure of the vulnerability measure to establish indicators of CSO vulnerability to physical infrastructure disruptions and failure, an examination of the survey data using simple cross tabulations still paints a disturbing picture of the nature and consequences of CSO vulnerability to infrastructure failure.

4.2 Impacts of CSO service failure on clients

The second research question examined by the project asked whether the failure of CSO service delivery would worsen the underlying vulnerability of people experiencing poverty and social disadvantage to climate change and extreme weather impacts. This section discusses the methods used to investigate this question and the outcomes achieved.

A key question addressed in the literature review was whether evidence existed to demonstrate that people experiencing poverty and inequality in developed countries are more susceptible to adverse climate change impacts than the general community. The literature review revealed clear evidence in the form of peer-reviewed academic research to support this statement. For example, the table on pages 150-151 summarises a range of specific negative climate change impacts – both primary and secondary – to human health and wellbeing and the geographic locations, individuals and groups within the community most likely to be affected. As shown in the final column, the following individuals and groups are consistently identified as most vulnerable: people on low incomes and the unemployed, people living in poor quality housing and renters, frail older people, Aboriginal and Torres Strait Islander peoples, single parents, newly-arrived migrants and refugees and people with a disability and their carers.

However, the review also revealed that there is greater understanding about the vulnerability of some groups – such as the frail aged – than others – such as people experiencing homelessness, people with a disability and people experiencing domestic and family violence. As such, there is a clear need for further research into the particular ways that different groups within the community will be affected by climate change in order to identify and implement the most appropriate and effective responses.

Despite the growing body of research suggesting that people experiencing poverty and inequality in developed countries are most vulnerable and least able to adapt to climate change, the literature review identified a gap in the knowledge about the impact of CSO service delivery failure on the client groups they support, particularly in terms of their vulnerability to climate change and extreme weather impacts. This was found to be a significant gap given the demonstrated critical role CSOs play in supporting resilience to non-climate related adversity as well as the increasing recognition of its role in supporting individuals and communities to respond to and recover from the devastating impacts of extreme weather events and natural disasters. As discussed below, qualitative data obtained through the workshop program and survey clearly demonstrates that from organisations' perspectives at least, the climate-driven failure or disruption of CSO service delivery would lead to a significant deterioration in wellbeing amongst their clients.

The Failure Mode Exemplars, which comprise a synthesis of qualitative data about the mechanisms and consequences of organisational failure in response to climate change impacts, clearly demonstrate that social service failure has the potential to worsen the underlying vulnerability of people experiencing poverty and inequality. For example, *Failure Mode Exemplar Three* (pp. 54-55) shows how power failure and isolation due to road closures caused by flooding can lead to service strain and failure at a residential aged care facility. The outcomes for frail-aged residents in this exemplar included increased risk of infection, disease and, in the worst-case scenario, death through food-borne poisoning and the failure of essential medical equipment reliant on power and fuels.

In order to validate the qualitative data obtained through the workshop program and the hypothesis, the national survey asked respondents to describe in their own words how their clients would be affected by service delivery failure caused by extreme weather events. With some exceptions, these responses suggest that CSO service failure would likely result in a worsening of circumstances for clients. Key themes that emerged include that people would be at increased risk of homelessness, financial hardship, hunger, disease and ill-health; that those with pre-existing mental health conditions would likely suffer a deterioration in their condition (including an increased risk for suicide); that women and children already exposed would be at increased risk of experiencing domestic and family violence; and, in the worst case scenario, that people with high level personal and health care needs and the homeless would be at increased risk of death if service provision failed (see pp. 96-98). While further research needs to be conducted directly with client groups to verify these findings and to more clearly identify the nature of their vulnerability to climate change and extreme weather impacts, these findings have been corroborated by the experience of social housing residents in New York City during and in the weeks following Hurricane Sandy's devastation of America's east coast (see the case study below).

Case study: Hurricane Sandy

A recent article in the New York Times (9 December 2012) provides an account of the experience of thousands of public housing residents in New York City in the aftermath of Hurricane Sandy. This case study documents the consequences of physical infrastructure failure and the New York City Housing Authority's (NYCHA) lack of preparedness for residents, and the role that CSOs played in supporting NYCHA's response and recovery efforts. Experiences from this extreme event show a strong correspondence to the conclusions drawn from this project's survey results in terms of disruption timings, types and consequences. As such, it can be concluded that without adaptation, an event with similar impacts on infrastructure in Australia would cause similar outcomes for highly vulnerable cohorts.

Hurricane Sandy devastated the east coast of the United States on October 29, 2012. In New York City, where 45% of public housing stock is located in low-lying evacuation zones, the extensive flooding directly impacted 402 public housing buildings causing damage to electrical systems and the loss of power to 77,000 residents across the city. 34,565 residents also lost access to their water supply and heating. Without power, lifts and lights in the affected buildings could not operate, effectively stranding thousands of residents – many of whom were elderly or living with a disability – in freezing and pitch black apartments. People in wheelchairs were unable to leave their buildings, diabetics were left without insulin and residents attempting to heat their homes using their stoves suffered carbon monoxide poisoning. Crucially, residents were not able to leave the building to access food and medical supplies provided in the emergency shelters set up around the city. One person died after falling on a wet staircase as he attempted to evacuate.

In the storm's immediate aftermath, the NYCHA struggled to respond in a timely manner due to poor long-term planning. Without 'standby contracts' in place to secure emergency generators and in the face of extensive damage caused to electrical and other systems, it took almost two weeks for power to be restored to the affected towers and for a coordinated approach to locating and supporting residents' needs to be established. The extent of the damage was exacerbated by the failure to adequately maintain and to relocate from the buildings' basements key electrical, heating and hot water systems.

In the days after the storm, not-for-profit (NFP) groups played a critical role in accessing and supporting residents. They were enlisted to canvas affected high-rise buildings to locate affected residents however their efforts were hampered by the lack of pre-established protocols to guide the collaboration between NYCHA and NFPs: many volunteer teams were sent out without National Guard escorts and so were unable to gain access to the buildings. On the other hand, volunteer groups also quickly set up curb-side medical clinics and rallied groups to go from door to door searching for trapped residents and, in some cases, appeared to be better organised than the city's local government.

While some criticised residents themselves for being unprepared to evacuate, others recognised that they have little choice in where they live and for some, particularly those in wheel chairs, with high level care needs or with intellectual disability, simply having a bag packed would have had very little impact on their ability to respond or evacuate without assistance.

4.3 CSO capacity to compensate for physical infrastructure failure

The third research question examined by the project asked whether CSOs have inherent or latent capacity to ameliorate or compensate for physical infrastructure failure over time and in response to emergencies. This section discusses the extent to which the research addressed this question and the outcomes achieved.

The literature review examined current knowledge about the potential role and importance of the community services sector in climate change adaptation and extreme weather preparedness. It revealed a clear gap in the peer-reviewed literature about the sector's capacity to ameliorate or compensate for changes in or failure of physical infrastructure over time and in response to emergencies. However, it did uncover a growing body of grey literature emerging primarily from within the sector itself, which addresses the critical role CSOs play in supporting individual and community resilience to non-climate related adversity as well as in the response and recovery efforts in recent natural disasters, including the Queensland floods in 2011 and the 2009 Victorian Bushfires. It also found an increasing recognition of the important role CSOs play in disaster response and recovery outside the sector, for example in the Victorian Bushfires Royal Commission Report (2010a, 2010b) and the *National Strategy for Disaster Resilience* (COAG, 2011).

Findings from this project show that CSOs do indeed have the capacity to ameliorate or compensate for changes in or failure of physical infrastructure, over time and in response to emergencies. However they also show that organisations face a range of barriers, which they currently perceive to be insurmountable and which prevent them from pursuing the opportunities presented by adaptation and making further contributions to community resilience to climate change and extreme weather impacts. The Adaptation Mode Exemplars developed using qualitative data from the workshop program provide insight into some of the key ways in which well-adapted organisations can reduce the severity of climate change and extreme weather impacts for their clients and for the community more broadly. For example, *Adaptation Mode Exemplar One* (pp. 60-62) shows how a CSO working with people experiencing homelessness in central Australia, including Aboriginal people from remote communities, can reduce the vulnerability of these groups to extreme heat through advocacy, planning and collaboration with their peers, public health services and the local police. It shows how each of these activities can reduce the exposure of clients to heat impacts, thereby reducing negative outcomes caused by direct and indirect impacts, including by reducing clients' engagement with the criminal justice system, and leading to better outcomes for clients and reducing strain on diverse elements of the social service system.

The survey was also used to understand what inherent capacities CSOs possess to lessen the severity of climate change and extreme weather impacts to their clients and the community. Through the survey, respondents expressed a strong desire and willingness to engage in a range of adaptation actions to improve both organisational and client resilience to impacts, assuming they were adequately resourced to do so.

As Figure 55 demonstrates, 50% or more of respondents stated that they would like to: develop a disaster management plan (54%); plan for collaborative service provision during extreme events (62%); help clients to prepare for climate change and extreme weather impacts (52%); upgrade organisational infrastructure (51%); undertake a climate change risk assessment (54%) and develop a climate change adaptation plan (over 56%). Figures 57 and 58 also demonstrate the capacity that is inherent within CSOs to build client and community resilience to and aid in their recovery from climate change and extreme weather impacts. These figures show that CSOs have a range of specialist skills, capabilities and resources, including:

- **Skills**: to provide community education and development (over 70%); general and trauma counselling (over 50%); volunteer management (over 50%);

- **Capabilities**: to warn (over 60%) and evacuate (40%) vulnerable clients prior to an event and to contact and locate them afterwards (over 70%); to provide specialist services related to their main areas of service provision (almost 80%), which include health and legal services, services for the aged and people with a disability, employment support services, accommodation services, financial counselling and emergency relief, domestic and family violence crisis services, child care and child welfare services; and

- **Resources**: to make available for response and recovery efforts such as specialist assets and facilities (over 30%); emergency relief resources (almost 60%); and skilled workers and volunteers.

These findings regarding the willingness and inherent capabilities of CSOs clearly demonstrate that there are ways to promote adaptive capacity, responsiveness and resilience within the sector and to reduce the vulnerabilities of the individuals and communities of which they are a part as a result.

4.4 Barriers and adaptive capacity

The final research question asked by the project examined the barriers to adaptation and whether ways exist to promote organisational adaptive capacity, responsiveness and resilience. This section discusses the extent to which the research addressed this question and the outcomes achieved.

4.4.1 Barriers to adaptation

The project sought to understand the key barriers to adaptation, as organisations perceive them. The workshop program enabled a qualitative exploration of participants' views about the barriers to adaptation for CSOs. The three key barriers identified were:

- **Lack of awareness** within the sector about organisations' exposure to climate change impacts and the flow on consequences for service delivery and client wellbeing. The workshop program highlighted that most participants had not previously thought about their organisation's exposure and vulnerability to climate change and extreme weather and their likely severe impacts on the 'core business' of CSOs;

- **Lack of resources** in the form of knowledge, skills and funds – to commit to adaptation; and

- **Contracts for service delivery** – particularly with governments, on which the majority of organisations rely for funding – that contribute to funding uncertainty and risks for contract losses through their failure to recognise, accommodate or compensate for the impacts of natural disasters on CSOs, including as a result of the role they play in response and recovery.

The survey also measured respondents' perceptions of the key barriers to climate change adaptation for CSOs. Figure 56 reveals that organisations see numerous barriers to adaptation however, key amongst them were: resources and funding arrangements, the view that responding to climate change impacts is 'beyond the scope' of CSOs activities and the lack of clear government adaptation policies and guidelines. The survey identified lack of financial resources as the main barrier to CSOs undertaking action to adapt service delivery and to assist their clients to adapt to climate change and extreme weather impacts. This result is supported by the two most recent annual ACSS', which in 2011 and 2012 identified underfunding and lack of funding certainty as the key challenges for the sector into the future.

The resourcing issue becomes particularly important in light of the survey's findings in relation to the impact of extreme weather events on demand for services. As shown in Figures 45, 46 and 47, CSOs perceive that extreme events will have significant impacts on demand for services in both the short and the long-term. Specifically, 50% of organisations predicted that an extreme weather event would lead to increased demand in the short term, and 30% predicted that the increased demand would be maintained long term. With organisations already struggling to meet demand with limited resources (ACOSS 2012a, 2011b), this increase in demand may itself become a source of strain or failure for CSO service delivery – at a time when their services will be needed more than ever.

Beliefs about relevance of climate change adaptation to core mission of CSOs and the sector (but not about the veracity of climate science itself) were also perceived by survey respondents to create a significant barrier to climate change adaptation. Findings reported in the literature review about projects underway in the UK to raise CSO awareness about climate change and adaptation, and this project team's experience of facilitating the *Welfare Professional Climate Workshops* suggest that when they are engaged directly on the issues, CSOs are quickly able to identify the ways in which climate change and extreme weather events will impact their clients and their service delivery and to recognise the serious risks they face from these impacts and the need for action to reduce vulnerability and increase resilience to those risks. In light of the project's finding about the vulnerability of CSO service delivery to climate-driven physical infrastructure failure, the likelihood that service failure will worsen the underlying vulnerabilities of their clients and that both knowledge about climate change risks and past experience of extreme weather events are indicators of resilience to climate change impacts, it appears central to the success of any adaptation efforts that the sector is supported to develop engaging awareness raising and adaptation programs that clearly link climate change impacts with CSO core business and service delivery and support them to implement practical and cost-effective strategies to adapt.

4.4.2 Adaptation to reduce vulnerability

Initially, the literature review sought to uncover research in Australia and other developed countries that addressed the specific adaptation needs of CSOs. This search revealed only a limited amount of research and project work undertaken in Australia and UK, some of which were still underway at the time of publication and for which results are not yet available. These include the *Climate Ready Communities* project conducted by WACOSS in Western Australia and *The Big Response* and *Vulnerable People and Climate Change* projects conducted by NCVO, the Baring Foundation and others in the UK. Largely, these projects have worked with CSOs to build their commitment to climate change adaptation through direct engagement with CSOs and awareness-raising about climate justice and the ways in which their client groups will be further disadvantaged by climate change, including increasingly frequent and intense extreme weather events. In light of the finding that knowledge about climate change risks is a strong indicator of resilience these projects comprise good models for future knowledge-building projects with Australian CSOs.

According to the comprehensive scan of the literature conducted, this project is the first of its kind in Australia in its attempt to develop a national picture of the adaptation needs of and strategies appropriate to CSOs. It produced and synthesised a large volume of rich data about adaption strategies relevant to CSOs through the workshop program and the national survey. Through the workshop program, participants identified a broad range of adaptation actions CSOs can implement to build resilience to climate change and extreme weather impacts to infrastructure. An overview of the types of actions organisations can take to reduce vulnerability to these impacts is provided in Tables 16 and 17. A comprehensive set of adaptation actions drawn from the research findings as well as from existing Climate Risk Pty. Ltd. databases have been synthesised to create the *Community Sector Adaptation Register*, which catalogues over 450 separate adaptation strategies according to five distinct types of actions and four discrete spheres of CSO activity and operation. It is reproduced in full in Appendix 4.

While the workshops produced a high volume of data about what organisations *could* do to adapt to climate change, feedback from participants suggested that very few organisations within the sector had already begun to implement strategies to reduce vulnerability and increase resilience to impacts. In order to quantify the level of adaptation implementation within the sector, the national survey asked a series of questions requiring respondents to report on what action they had already taken because of concern about climate change or extreme weather impacts. The survey data shows that only a very small number of organisations have actually begun to take action to mitigate, manage and transfer climate change risks. As the findings below demonstrate, action is urgently needed to harness organisations' willingness to act (discussed above) and to ensure that more organisations are able to turn willingness into concrete action:

- Approximately 10% of survey respondents had upgraded organisational infrastructure to be resilient to extreme weather, changed their method of service delivery or relocated service centres to reduce vulnerability to climate change impacts (Figure 55);

- Approximately 30% of respondents had looked for information about local extreme weather risks and discussed extreme weather impacts at a board or management committee meeting; and 10-15% of respondents had looked for information about climate change risks or discussed them at a board or management committee meeting (Figure 51);

- 30% of organisations had taken out business continuity insurance (Figure 54); and

- 20% of respondents have worked with other organisations to develop plans for collaborative service provision during extreme weather events (Figure 55).

The survey results also clearly demonstrate that to date CSOs have focussed on taking action to mitigate climate change impacts through measures to reduce carbon footprints (almost 40%) and reduce energy costs (50%). They also show that, where organisations are taking a proactive approach to risk, the focus of these actions is directed more towards responding specifically to extreme weather risks and less towards responding to general climate change risks. When contemplating these results, it is also important to be mindful of the 'opt in' nature of the survey, that these findings are not necessarily representative of the sector as a whole and that they may indeed suggest a greater level of activity in response to climate change within the sector than is actually taking place because more 'climate aware' organisations took the time to complete the survey.

As discussed above, the project identified three indicators of resilience to climate change through robust responses to risk: larger organisational size, greater knowledge about climate change risks and past experience of extreme weather events. Taken in combination with the low levels of action revealed by the survey, this begs the question: will building sufficient knowledge and commitment to climate change adaptation within the sector be predicated on all organisations within the sector being directly impacted by an extreme weather event, or is there another way?

4.5 Conclusion

In order to continue carrying out its mission, the sector must adapt to climate change and extreme weather impacts. The project identified three key indicators of organisational resilience: knowledge of the risks, past experience of extreme weather impacts and organisational size. With organisations already struggling to meet demand for services with insufficient financial resources, a significant investment of funds is required to support the adaptation of this critical sector, particularly the thousands of small and medium-sized organisations that are integral to the cohesion and resilience of their communities. These funds must be tied to urgent and concrete action to reduce vulnerability through preparedness, resilience building and sharing risks. Specific recommendations in relation to each of these spheres of activity are outlined in Section 5. However, priority areas for investment and action include:

- Ensuring proper awareness across the community services sector about the direct and indirect risks people experiencing poverty and inequality face from climate change and extreme weather and the ways in which the climate-driven failure of social service provision will exacerbate those risks;

- Ensuring proper awareness within governments and the broader community about the critical role of CSOs in supporting community resilience, particularly in response to disasters;

- Reviewing and renegotiating funding contracts to recognise the increased costs to CSOs of adaptation and participation in disaster response and recovery;

- Taking action to improve the insurability of CSOs and identify and access affordable and adequate insurance cover against risks;

- Facilitating the development and implementation of robust action and plans, particularly: risk assessments; service continuity, climate change adaptation, disaster management and contingency plans; and access and response plans for clients, particularly during and after extreme events;

- Developing a benchmarking system to plot organisational and sector progress towards resilience;

- Institutionalising knowledge, skills and adaptation and risk management practices within organisational governance structures and across the sector;

- Assisting clients with increased exposure and vulnerability to impacts to plan, adapt and respond; and

- Developing and strengthening networks within the sector, with governments and the private sector and with non-traditional partners such as utilities and emergency services to respond to climate change and extreme weather impacts, focussing on the specific needs of people experiencing poverty and inequality.

5. RECOMMENDATIONS

The project identified a series of recommendations about the resources and action required to prepare and adapt CSOs – and the community service sector broadly – to climate change and extreme weather impacts. Their full implementation by CSOs and their government and private sector partners will ensure that the sector is able to:

- Fulfil its service delivery mission to people experiencing poverty and inequality sustainably and over the long term as the climate changes and the frequency and intensity of extreme weather events worsens;

- Make a positive contribution to the resilience of the individuals and communities with which they work to climate change and extreme weather impacts; and

- Participate effectively in adaptation and emergency management planning, relief, response and recovery efforts when impacts occur.

These recommendations fall under four key adaptation themes: resources, sector preparedness, building resilience and sharing risks. Further priority research issues have been listed under a fifth theme.

5.1 Resources

The Commonwealth should establish a Community Sector Adaptation Fund to support capacity and resilience building projects for CSOs and their clients.

5.2 Sector preparedness

Contracts for service delivery must provide greater flexibility to CSOs and enable them to participate effectively in disaster response and recovery efforts. Specifically, CSO contracts should include mechanisms that:

- Ensure timely compensation for their contributions to response and recovery efforts; and

- Ensure they are not penalised for failing to meet contractual obligations due to their participation in disaster response and recovery.

The community services sector must be resourced and supported to:

- Raise awareness about the serious risks to its service delivery and to people experiencing poverty and inequality from climate change and worsening extreme weather impacts;

- Undertake climate change and extreme weather risks assessments and develop and implement disaster management and service continuity plans; and

- Invest in climate change and extreme weather preparedness and response training for staff and volunteers engaged in direct service provision as well as management and administrative roles.

5.3 Building resilience

The community services sector must be resourced and supported to develop:

- A set of easily accessible, practical adaptation and preparedness tools that meet the needs of a broad spectrum of community service organisations and can be implemented and institutionalised within their current operational arrangements;

- Adaptation and preparedness benchmarks specific to community service provision that enable organisations, their funding agencies and insurers to plot progress towards risk reduction, resilience and adaptive capacity; and

- Sector level initiatives to adapt CSOs and the sector as a whole that ensure inclusiveness and recognise the particular barriers faced by small and medium-sized organisations to engage in risk assessment, adaptation planning and implementation.

5.4 Sharing risks

- In partnership with the insurance sector, national and state sector peaks must develop affordable, sector-specific insurance packages that specifically address the climate change and extreme weather risks identified in this report;

- The sector must be supported to build on existing relationships and to develop new links and partnerships with peer organisations, including those that are experienced in climate change adaptation and emergency management, as well as non-traditional partners such as local councils, state government departments of environment and climate change, emergency services and utilities in order to create strong adaptation and preparedness ‘networks’ at the local level; and

- Formal federal, state and local government recognition of the critical role the community services sector can and does play in climate change adaptation and emergency management with commensurate resources to facilitate and support its effective participation in planning, response and recovery at all levels.

5.5 Future research directions

In addition to the recommendations outlined above, the project also identified major gaps in the knowledge base about the vulnerability of CSOs to climate change impacts, particularly extreme weather events. The existence of these gaps has serious implications for the community services sector as well as for governments and emergency services that may be entirely unaware of the role that CSOs play in supporting the resilience and coping capacities of high-risk individuals, families and communities.

While the findings and outputs produced from this project make an important contribution to filling those gaps, there is a clear need for further research in a range of areas, particularly to identify robust indicators of organisational vulnerability and resilience to climate change and extreme weather impacts. This project established and tested two such measures. The resilience measure developed using risk mitigation, management and transfer practices successfully identified three indicators of organisational resilience – knowledge, experience and size.

However, the self-reported vulnerability measure was found not to be robust, failing to identify indicators of organisational vulnerability to infrastructure failure. One potential risk indicated by this outcome is that CSOs may be poor judges of their own resilience.

- It is recommended that further research be conducted to refine and retest these and other vulnerability metrics in order to develop a deeper understanding of the factors inherent to CSOs that render them more vulnerable and less able to cope with impacts to infrastructure.

Other areas for further research identified through the project include:

- A quantified analysis of CSO operation duration, strain, failure rates during recent extreme events and natural disasters, the aim of which would be to contrast estimates of survival time obtained in the surveys for this report with the actual performance during equivalent real events;

- Further investigation of the vulnerability of CSOs and clients to the full range of projected change impacts, especially including ongoing stressor characteristics such as coastal erosion, drought and policy and regulatory responses to mitigate and adapt to risks and other secondary impacts such as price rises for essential services;

- Differentiated investigation of the specific vulnerabilities of different groups of people at risk of poverty and inequality to a range of climate change and extreme weather impacts, to build a more specific evidence base about the relationship between poverty, inequality and vulnerability to climate change impacts and to understand their particular adaptation needs and barriers. For example, women and children at risk of domestic and family violence, people experiencing homelessness, people with a physical or intellectual disability and migrants, refugees and asylum seekers;

- Direct qualitative research with CSO clients – i.e. people experiencing poverty and inequality – to validate the findings from this project about the ways in which they have been or would be affected by the failure of CSO service delivery during and after extreme events as well as by primary, secondary and tertiary climate change impacts; and

- Further development of the information base through case study documentation about the critical roles CSOs already play in planning for, responding to and recovering from disasters within their local communities and constituencies, with a particular focus on their role in supporting short and long-term resilience.

APPENDIX 1: LITERATURE REVIEW

1. Key findings

This integrative literature review examines the community services sector's capacity to cope with climate change. It does so by examining how climate change will impact on people experiencing poverty and social disadvantage and how CSOs themselves will be impacted. Starting from the strong evidence that climate change is occurring, is accelerated by human activity and will affect the intensity and frequency of extreme weather events, the review found:

- **People experiencing poverty and inequality in developed countries are more susceptible than the general community to climate change impacts and particularly extreme weather events**. While the evidence discovered, in the form of academic literature in peer-reviewed journals, was strong, the review also found more literature focused on the needs of particular groups, such as elderly and frail people, than on others, such people experiencing homelessness.
- **CSOs increase the resilience of people experiencing poverty and social disadvantage**. This finding was based on evidence in the forms of analysis conducted by the community services sector and grey literature. There is a gap in the academic literature.
- **Evidence from sector analysis and grey literature suggests the potential roles and importance of CSOs in climate change adaptation**. However, the evidence base is more limited and there is a significant gap in the academic literature.
- **CSOs are at risk of failure or strain from climate change.** There is a significant gap in the academic literature addressing this issue and this finding was reached using proxy-based evidence from the disaster management, health and small and medium-sized enterprise (SME) sectors.
- **A major gap in policy and research into how CSOs need to adapt to climate change to continue carrying out their role in providing support to people experiencing poverty and inequality**. The evidence is limited to research being undertaken by the sector in the United Kingdom (UK) and Australia.

The review identified several areas that warrant further research including:

- Whether CSOs are at risk of failure or strain from climate change, particularly impacts to infrastructure;

- Whether CSOs will be able to continue delivering services to people experiencing poverty and social disadvantage due to their vulnerability to climate change; and

- Whether a well-adapted sector can play a role in increasing the resilience of people experiencing poverty and social disadvantage to climate change impacts.

The results of the review and the significant weaknesses in the literature and research base suggest the community services sector should be identified as a priority for adaptation research and policy making in Australia within the context of its role in providing support to the high risk cohorts of people experiencing poverty and disadvantage.

2. Introduction

This report is an integrative literature review. Its purpose is to summarise and evaluate Australian and international research into the community services sector's capacity to cope with climate change (including incremental and extreme impacts), to identify major gaps in the research and to inform the development and analysis of a national survey of Australian CSOs about climate change impacts to organisational infrastructure and service delivery.

Specifically, the review aimed to address the following research questions:

Research question 1
Are people experiencing poverty and social disadvantage in developed countries more susceptible than the general community to climate change impacts, particularly extreme weather events?

Research question 2
Is there evidence that CSOs increase the resilience of people experiencing poverty and social disadvantage?

Research question 3
Has the potential role and importance of the community sector in climate change adaptation been addressed in the literature?

Research question 4
Are CSOs at risk of failure or strain from climate change, particularly impacts to infrastructure?

Research question 5
Do specific adaptation strategies exist for CSOs to allow them to continue carrying out their role in supporting people experiencing poverty and social disadvantage under climate change?

The research questions were addressed through electronic searches of academic databases and online sources to find both peer reviewed academic literature and grey literature. The geographical focus was developed countries. The search revealed relevant work in Australia and the UK. The search focused on literature published between 2000 and 2012. More than 350 articles, guides, tools, reports and websites were reviewed and over 100 of these have been included in this review.

The search terms included various combinations of the following: 'climate change', 'community services sector', 'community organisations', 'social services', 'adaptation', 'surveys', 'vulnerability', 'extreme weather', 'flood', 'heat wave', 'bush fire', 'Cyclone Yasi', 'Black Saturday bush fires', and 'Hurricane Katrina'. Electronic literature searches using these terms revealed no empirical studies have previously been conducted to document the vulnerability of CSOs to climate change or extreme weather impacts.

However, the searches did reveal a growing body of grey literature, predominantly produced by the community services sector itself, about the impacts of climate change and particularly extreme weather events on its organisations' capacity to delivery services and on their clients. As such, grey literature forms an important basis for the conclusions drawn in this review.

The review deliberately excluded much of the international development literature because, although an extensive and important body of research, adaptation issues faced by the poor in developing countries are highly compounded by other pre-existing conditions such as extreme poverty, low levels of education and inadequate health and community service systems which overall render the research pertaining to the adaptation needs of these countries too different to be reasonably compared.

The review is structured into five parts. The first part presents the strong evidence about climate change and its impacts, and introduces mitigation and adaptation as the key policy responses to climate change. It provides the background, which informs the rest of the review. The second part examines the concept of vulnerability to climate change, the role that poverty and social disadvantage plays in increasing vulnerability and the relationship between adaptive capacity and vulnerability (Research question 1). The third part examines the role of the community services sector in enhancing the resilience of people experiencing poverty and social disadvantage and the role and importance of CSOs in climate change adaptation (Research questions 2 and 3). The fourth part examines the impact of climate change on community social service provision and whether climate change will increase the risk of failure or strain (Research question 4). The final part addresses what has been done in Australia and internationally to prepare CSOs for climate change (Research question 5).

3. Background: Climate change and its impacts

The scientific consensus now supports the findings of the United Nations Intergovernmental Panel on Climate Change (IPCC 2007) that climate change is unequivocal (Collins et al. 2007; Peterson et al., 2012; Somerville 2010; Field et al. 2012; IPCC, 2012). There is also increasing consensus that climate change will alter the frequency and intensity of extreme weather events (Nature Publishing Group 2011; IPCC 2001, 2007b, 2012; Alexander et al. 2006; Meehl et al. 2009; Hansen et al. 2012), including the number of extremely hot and cold days and nights, droughts and floods, hail and thunderstorms, tropical cyclones, bushfires and extreme winds (NCCARF, 2012; Lynch et al., 2008; IPCC, 2012).

Australia's large geographical area means that while some climate change impacts – such as increased average temperatures – will be experienced across the nation, others may vary widely, with some regions being more sensitive than others to particular impacts. Generally however, climate change is expected to make Australia's climate hotter with average temperatures predicted to increase by up to 1.3°C by 2020 and 6.7°C by 2080 (IPCC, 2007). Precipitation is expected to be more variable: rainfall events, when they do occur, will be more intense, while the number of dry days is also likely to increase (CSIRO and BoM, 2007; Climate Institute, 2013; Penman and York, 2010). Australia will also experience more extreme weather events with a marked increase in the number of very hot days and warm nights (CSIRO and BoM, 2007; Climate Institute, 2013; Penman and York, 2010). In addition, the bushfire risk is set to rise under climate change with a 15-70% increase in high or extreme fire days by 2050 in south-eastern Australia (CSIRO and BoM, 2007; Climate Institute, 2013; Penman and York, 2010).

The recent Productivity Commission (2013: 43) report, *Barriers to Effective Climate Change Adaptation,* highlights, 'infrastructure for a wide range of services may be affected by climate change via increases in the frequency or intensity of extreme weather events, higher sea levels, and higher temperatures and decreased rainfall.' According to the Commission's report, the most severe climate change impacts will be on industries and infrastructure involving large-scale water and energy demands. In this review 'infrastructure' refers to both traditional definitions including buildings, roads, electricity and water as well as other infrastructure such as health, internet and telecommunications. Infrastructure and essential services failure due to extreme weather events under climate change includes:

- Disrupted transport or access.
- Power outage.
- Inadequate or blocked storm-water infrastructure leading to increased risk of flooding in populated areas.
- Failure, damage or increased strain on solid waste treatment plants.
- Loss of potable water.

- Food security issues.
- Saltwater intrusion leading to infrastructure failure such as roads, electricity, hospitals.
- Increased demands on water and sewerage during heat waves and floods.
- Communication failure due to infrastructure damage or destruction, or power outage (Productivity Commission, 2013).

Table 2 outlines some infrastructure failures that have occurred during recent extreme weather events in Australia including the 2008 Queensland floods, the east coast low event of 2007-2008 and the 2009 Victorian heat wave.

Table 2: Summary of infrastructure and essential services failures in documented events

Event	Failures
Queensland floods (2008)	Emergency management services cut off from workplace or base by floods Mobile telephone network overloaded Food security issues
East coast low event (2007-2008)	Black outs and brown outs Emergency management services isolated by flood waters
Heat wave, southern cities including Adelaide and Melbourne (2009)	Interdependencies of critical infrastructure exposed, for example between power and telecommunications Black outs and brown outs Disruptions to public transport Computer and air conditioner failures

Source: Kiem et al. (2010: 27), Carthey and Chandra (2007).

There are two key policy responses to climate change. Mitigation refers to human intervention to reduce greenhouse gases in the atmosphere (IPCC, 2012). In contrast, adaptation to climate change involves acting to tolerate its unavoidable effects. Not all effects of climate change will be able to be avoided and hence mitigation and adaptation are both required responses: 'adaptation to deal with the effects of warming already in train and mitigation to diminish future emissions and greater climate change effects' (Walker et al., 2011: 6).

As consensus has grown that we are 'locked into inevitable changes to climate patterns' (IUCN et al., 2003: 1), the focus of climate change scientists, policymakers and practitioners around the world has shifted to include adaptation as a key response to climate change (Pielke et al., 2007; Ayers and Dodman, 2010; Ford et al., 2010). According to the Stockholm Environment Centre and International Institute for Sustainable Development (IUCN) et al. (2003: 1), 'adaptation is about – and must build from – the actions of people' – an acknowledgement of the importance of the local context for both appropriate and effective adaptation measures (McNamara et al., 2011). Garnaut (2008: 363) reinforced this sentiment, arguing that 'adaptation is best seen as a local, bottom up response' and noting that 'households, communities and businesses are best placed to make the decisions that will preserve their livelihoods and help maintain the things they value.'

Two important concepts in adaptation that greatly influence the vulnerability of communities and regions to climate change impacts are resilience and adaptive capacity (Adger, 2006; Adger et al., 2005; Rapport et al., 1998). The emergence of vulnerability and adaptation as central topics for climate and society research and policy setting reflects the convergence of several factors, including:

- Acceptance that adaptation to climate change has already become a necessity in many regions and that many more regions will need to adapt in the near future;
- Recognition of the fundamental uncertainties associated with climate change, particularly in terms of the prediction of precise changes in temperature and precipitation at the regional and local scales; and
- Realisation that physical changes and exposure to these changes are not the sole factors determining climate impacts, and that social, economic, cultural and political conditions and processes play a decisive role in influencing sensitivity to climate stress (Leichenko et al., 2010; O'Brien and Leichenko, 2007).

Policy choices will also have a big impact on populations and people's experience of climate change. Over the next decade or so, the social implications of climate change will flow most strongly not from the direct impacts of climate change itself, but from the policies adopted to mitigate it, for example from decarbonisation policies (Chapman and Boston, 2007). The social implications will depend strongly on the nature of the policies adopted and are likely to be influenced by the degree of foresight exercised in government policy, private sector and individual repositioning (Chapman and Boston, 2007), as well as the response of the not-for-profit sector including CSOs. As mentioned previously, some regions in Australia may be more sensitive than others to particular impacts. An important corollary of this is that adaptation needs to incorporate responses specific to regions and locations (Bai et al., 2009) and to ensure that the interests of people experiencing poverty and social disadvantage are specifically considered and protected in the policy development process.

4. Vulnerability, adaptation and social disadvantage

This section addresses the first research question:

Research question 1
Are people experiencing poverty and social disadvantage in developed countries more susceptible than the general community to climate change impacts, particularly extreme weather events?

First, it examines the concept of vulnerability to climate change impacts, including general impacts and health impacts, and the way in which poverty and social disadvantage affect vulnerability. The impacts of poverty and social disadvantage on resilience and adaptive capacity are then explored. The literature demonstrates a growing awareness within developed countries that poverty and social disadvantage increases vulnerability to climate change impacts and reduces adaptive capacity.

4.1. Vulnerability: a scientific definition

The character and severity of impacts from climate change depend not only on the changes themselves but also on exposure and vulnerability to those changes (IPCC, 2012). The IPCC defines vulnerability to climate change impacts as a function of three elements: exposure, sensitivity, and adaptive capacity (IPCC, 2012). Exposure is characterised by the magnitude, frequency, duration or spatial extent of a weather event or pattern (IPCC, 2007). The sensitivity of social systems depends on economic, political, cultural and institutional factors (Fenton et al., 2007). Adaptive capacity describes the ability to respond to challenges through learning, managing risk and impacts, developing new knowledge and devising effective approaches (Marshall et al., 2010).

4.2. Poverty, social disadvantage and vulnerability to climate change impacts

The rich will find their world to be more expensive, inconvenient, uncomfortable, disrupted, and colourless – in general, more unpleasant and unpredictable, perhaps greatly so. The poor will die (Smith, 2008:1).

While the particular impacts of climate change on people experiencing poverty and social disadvantage is not the primary focus of this study, a brief discussion of the topic is relevant to establish the importance of investigating the preparedness and adaptive capacity of CSOs, given their role of providing essential support services to people experiencing poverty and social disadvantage.

There is a wealth of literature on the differential impacts climate change will have on developed versus developing nations (see for example: UNFCCC, 2006a, 2006b; UNFCCC, 2007a, 2007b). This literature clearly demonstrates that developing countries are most vulnerable to climate change impacts because they have fewer resources to adapt: socially, technologically and financially. As stated in the introduction, this body of literature is excluded from the present review because the adaptation issues faced by people experiencing poverty and social disadvantage in developing and developed countries are too different to be compared.

There is a more limited, but growing, body of literature about the particular ways that climate change will impact people experiencing poverty and social disadvantage living in developed countries (e.g. Smith, 2008; Stanley, 2009; Ensor and Berger, 2009; Porter and Abbott, 2010). The literature examined in this section clearly identifies that people experiencing poverty and social disadvantage are more likely to be adversely affected by climate change, in particular:

- Frail older people and those with chronic health conditions (Victorian Government, 2009; Horton et al., 2010; Oven et al., 2012; Edwards et al., 2009);
- People with a disability (USGCRP, 2008);
- Homeless people (Kleinberg, 2003; Ramin and Svoboda, 2009);
- Residents of places where extreme weather events such as cyclones, bushfires, storms and storm surges are likely to be more frequent or intense (McMichael and Butler, 2009);
- Aboriginal and Torres Strait Islander people (McMichael, 2009; Green et al., 2012; Altman and Jordan, 2008; Hennessey et al., 2007; Macchi et al., 2008); and
- Rural communities and farmers exposed to more frequent droughts and floods (McMichael and Butler, 2009).

The review also found evidence that climate change impacts may lead to an increase in interpersonal violence, including domestic and family violence in some social, community and family contexts (Sety, 2012; Enarson, 1999; Jenkins and Phillips, 2008; Walker, 2012).

Edwards et al. (2009: 86) argue that CSOs must respond to climate change and that such a response must be science-based and underpinned by ethical principles of both intergenerational and intra-generational equity. Table 3 was developed using research by Edwards et al. (2009) and the Global Change Research subcommittee of the United States Climate Change Science Program (USGCRP, 2008). This table clearly demonstrates that people experiencing poverty and social disadvantage are amongst those most likely to be negatively impacted through both direct and indirect climate change impacts (e.g. through policy decisions).

O'Neill et al. (2003) argue that the greatest health burdens related to climate change are likely to fall on those with the lowest socioeconomic status. Most affected are people with inadequate shelter or resources to find alternative shelter in the event their community is disrupted (O'Neill et al., 2003). USGCRP (2008) also identifies groups within the community that will be particularly affected. Again, people experiencing poverty and social disadvantage are identified as being highly susceptible to negative health outcomes caused by climate change. For example, in a table entitled 'Climate Sensitive Health Outcomes and Particularly Vulnerable Groups' the 'poor, pregnant women' and people with 'chronic medical conditions, mobility and cognitive constraints' are identified as most likely to suffer illness and death as a result of extreme weather events (USGCRP, 2008: 2-67).

4.3. Poverty, social disadvantage and extreme weather events

There is growing consensus within the literature that people experiencing poverty and social disadvantage will also be worst affected by extreme weather impacts (IPCC, 2012), particularly in developing countries (e.g. UNFCCC, 2006a, 2006b, 2007a, 2007b). The susceptibility of people experiencing poverty and disadvantage in developed countries to extreme weather impacts is briefly quantified in the following three case studies: Hurricane Katrina in 2005 (New Orleans, US); the Victorian heat wave of 2009; and the Queensland floods of 2010-11.

In a case study of the impacts of Hurricane Katrina on vulnerable groups in New Orleans in 2005, USGCRP reports that the event caused more than 1,500 deaths, with many of the victims 'members of vulnerable subpopulations, such as hospital and nursing-home patients, older adults who required care within their homes, and individuals with disabilities' (USGCRP, 2008: 2-57). Similarly, the case study reveals, 'more than 45 per cent of the state's identified victims were 75 years of age or older; 69 per cent were above age 60' (USGCRP, 2008: 2-57).

In 2009, the Victorian heat wave had a substantial impact on the health of Victorians, particularly the elderly (National Climate Centre, 2009; Parliament of Victoria, 2010a, 2010b). Reported deaths in people 65 years and older more than doubled compared to the same period in 2008 (Parliament of Victoria, 2010a, 2010b). Victoria's chief health officer Dr John Carnie today revealed 980 people had died during the week compared to a mean of 606 deaths for the previous five years (The Age, 2009).

The Queensland floods in 2010-11 also had a disproportionate effect on people experiencing poverty. The Queensland Council of Social Service (QCOSS) (2011:3) highlights that prior to the floods, 10 per cent of Queenslanders lived in poverty, with a further 20 per cent at risk of poverty. According to its analysis, the broader impacts of the floods included loss of employment, lack of insurance payouts, difficulty finding affordable housing, all of which could trigger significant increases in poverty. QCOSS

argues that unless community resilience to extreme weather events is enhanced, up to 30 per cent of Queenslanders, or 1.2 million people, could be forced into poverty due to the state's high exposure to climate and weather extremes (QCOSS, 2011: 3).

4.4. Poverty, social disadvantage and adaptive capacity

Work to date on climate change adaptation has given little consideration to the ways in which adaptive capacity is affected by socio-economic factors generally, nor to the resource limitations of particular groups in Australia (Stanley, 2009). This is a key gap in the adaptation literature, which warrants further research for a number of reasons. Given the growing disparity in household wealth in Australia (ABS 2005–06) some authors have begun to argue that there is a high risk that climate change, and the policy responses developed to manage its impacts, will increase this growth in inequality (Stanley, 2009).

This is due to the fact that people experiencing poverty and social disadvantage will not only be worst affected by climate change impacts, but also may have the most difficulty adapting to them (ACOSS 2010; Stanley 2009; Brotherhood of St Laurence, 2007). According to Stanley (2009) people who are likely to have the greatest difficulty adapting to climate change include those who are at risk of social exclusion, those who lack knowledge about climate change and possible sources of assistance, those who lack financial resources and those with a physical or mental condition. The Brotherhood of St Laurence (2007) also identifies a number of areas in which people experiencing poverty and social disadvantage might have difficulty undertaking adaptation actions due to their high cost:

- As the magnitude and frequency of natural disasters goes up, the cost of insuring houses, buildings and infrastructure against extreme events will also increase. In some areas the cost of insurance cover may become prohibitive or may even be withdrawn, leaving housing assets stranded and some areas abandoned; and

- The focus on shifting energy resources to low carbon alternatives is likely to result in more widespread introduction of minimum energy performance standards, for electrical appliances, cars and buildings, all of which have the potential to increase capital costs for users, which may be prohibitive to those on low-incomes – putting the benefits of lower running costs out of reach.

There is also research indicating that food prices can be expected to increase as a result of climate change – driven by changes in rainfall, less stable growing conditions and damage to crops due to extreme weather events (IPCC, 2012).

Table 3: Direct and indirect impacts of climate change on vulnerable people

Determinants of community health/welfare	Direct climate change impacts (inevitable)	Indirect climate change impacts due to policy issues (preventable)	Vulnerable places	Vulnerable people
Social and health inequalities	Heat-related illnesses and deaths. Diseases and deaths related to air quality. Illnesses, injuries and deaths due to extreme weather events. Water- and food-borne illnesses. Vector-borne illnesses (e.g. Lyme disease, malaria). Mental health outcomes.	People with limited income, assets and access to credit have less capacity to avoid climate change impacts and will be disproportionately affected by increased prices resulting from climate change mitigation policies. Increased scarcity of resources within current market system will lead to greater social exclusion as those who can afford to pay higher prices for goods and services will do so and those who cannot risk greater exclusion.	Socio-economically disadvantaged communities.	Population groups at increased risk of poverty, including: older people; people who are unemployed; people with a disability; single parents; carers; newly arrived communities and refugees; Aboriginal and Torres Strait Islander communities; and people who are new to an area.
Work and un-employment	Adapting to the impacts of climate change will require major changes to climate vulnerable industries such as agriculture and tourism.	Changes to emissions intensive industries such as energy production, transport, agriculture, mining and heavy industry to reduce greenhouse gas emissions will also impact on employment.	Agricultural and tourism based communities. Fossil fuel intensive employment centres (mining towns, heavy industry).	People with low levels of education and training or limited work history. People facing existing barriers to workforce participation.
Social support	Climate change impacts such as extreme weather events, displacement, economic restructuring and heat waves all require networks of social support to assist individuals and communities to respond and adapt.	People who are socially excluded will find it harder to adapt.	Physically isolated (remote) communities. Areas with poor social capital.	People experiencing social exclusion, particularly: • Isolated older people; • People with mental health issues; and • People with a disability.

Food	Increased droughts and extreme weather events will impact on Australia's local and imported food supply leading to price rises and scarcity.		Areas with low capacity for local food production e.g. inner city or drought affected areas.	People living on low incomes.
Water	Climate change will reduce the amount of water available for much of Australia's population.	Infrastructure investment to increase water supply raises water cost. People on low incomes will struggle to afford water tanks or water saving technologies.	Much of southern and eastern Australia.	People living on low incomes.
Energy		Transforming the energy system to withstand impacts of climate change and transition to renewable energy will increase energy costs.	Rural areas with higher energy costs.	People living on low incomes, especially those in poor quality housing and renters.
Transport		Higher costs of fuel and public transport due to increasing energy costs and policies to reduce emissions will make mobility more expensive.	Rural, regional and outer suburban areas with poor transport options.	People living on low incomes; People who rely on motorized transport including people with disabilities, frail older people.
Cultural participation	Climate change will alter land and seascapes, which are important to the cultural beliefs and practices of some communities.		Drought affected and coastal communities.	Aboriginal and Torres Strait Islander communities. Long-term farming families.
Housing		As the climate alters, housing will need to alter to provide adequate protection from heat and extreme weather events. Costs make retrofitting prohibitive for people on low incomes.	Everywhere – especially built up urban areas due to heat island effect and flood prone areas.	People living on low incomes, especially renters.

Source: Edwards et al. (2009: 83-84); USGCRP (2008: 2-63), Reser et al. (2011).

In 2008 ACOSS, Choice and the Australian Conservation Foundation partnered to produce a report on equity and climate change in Australia titled *Energy and Equity: Preparing households for climate change: efficiency, equity, immediacy* (ACOSS, ACF and CHOICE, 2008). The report found low-income households will be adversely affected by climate change for reasons including that they:

- Tend to live in areas more likely to be adversely affected by climate change and have far less ability to move or make other necessary adjustments to their living circumstances;
- Spend a greater proportion of total weekly household budget on energy and water; and
- Are often less able to introduce measures to improve energy efficiency and are less likely to have the financial capacity for purchasing disaster-related adaptations such as insurance and preparedness kits (ACOSS, ACF and CHOICE, 2008).

As such, Stanley (2009: 14) suggests that a key risk from climate change is the exacerbation of relative poverty in Australia as people on low incomes struggle to meet the rising costs associated with adapting to climate change.

Garnuat (2008) also identifies that lower-income families and households, who spend a high proportion of their income on essential goods and services, are likely to be more adversely affected by climate change impacts than those earning higher incomes. Garnaut (2008) presents an adaptation story line about the rising cost of carbon and this is presented in Table 4. This story line demonstrates how people experiencing poverty are potentially impacted by climate change.

Table 4: An adaptation story line – rising cost of carbon

Chain of effects	**Potential Responses**
A carbon-trading scheme raises the cost of electricity, transport and food.	
Greatest impact is on the poorest people.	Income support and help with household adaptation.
Less money for food, transport, heating, cooling and adaptation.	Health promotion regarding changing diet e.g. eating less meat, food gardens, reduced household energy use.
Health effects of poverty.	Services for the effects of poverty.

Source: Garnaut (2008), Walker et al. (2009)

This part of the review has demonstrated, through the academic literature and CSO analysis, that people experiencing poverty and social disadvantage in developed countries are more susceptible than the general community in climate change impacts, particularly extreme weather events.

5. The role of CSOs in fostering resilience and climate change adaptation

> The third sector holds the key to success in tackling climate change. It can provide individuals with the collective opportunities to act that are so vital to securing individual action. Its responsibility – and opportunity – is to provide the leadership that can secure the action needed from governments and others to put us on track to securing a sustainable future (HM government, 2010: 26).

This section of the review addresses the following research questions:

> **Research question 2:** Is there evidence that CSOs increase the resilience of people experiencing poverty and social disadvantage?
>
> **Research question 3:** Has the potential role and importance of the community sector in climate change adaptation been addressed in the literature?

This section begins with an examination of the nature and scope of the Australian community services sector and provides evidence of its importance in supporting people and communities experiencing poverty and social disadvantage to build resilience. It then presents relevant literature discussing the potential role and importance of CSOs in climate change adaptation.

5.1. Importance of the sector in supporting people experiencing poverty and social disadvantage

The types of services provided by the sector include: housing and homelessness services; community health and mental health services; services for people with a disability; emergency relief and financial support services; child, youth and family services; information and advocacy services; community legal services; aged care services; services for Aboriginal and Torres Strait Islander people and those from culturally and linguistically diverse (CALD) communities; alcohol and other drugs support; and support for people experiencing domestic violence and sexual assault. There is significant evidence that CSOs may be critical in building resilience in these groups because of its role as a 'key influencer' in parts of society that are often outside the reach of traditional governmental and market mechanisms.

There is a large body of evidence that demonstrates the crucial role that the community services sector plays in supporting people experiencing poverty and social disadvantage to manage adversity. The Australian Institute of Health and Welfare (AIHW) estimated that in 2005-2006 the nation spent $29 billion on 'welfare services' additional to social security benefits and allowances. Their overview notes that governments funded 71% of these services, with the non-government sector funding the remaining 29%. The non-government sector actually delivered two thirds of the value of services provided (AIHW, 2007). Expenditure on community services in 2005-2006 was 3.0% of GDP. The share has varied between 2.8% (in 1999-00 and 2001-02) and 3.0% (over the past three years) (AIHW, 2007).

Each year, ACOSS conducts the Australian Community Sector Survey (ACSS), a national survey of CSOs, which provides the most comprehensive picture of how the sector is travelling. According to the 2011 ACSS, CSOs provided services on 6,180,282 occasions in 2009-10 compared to 5,513,780 instances in 2008-09, an increase of 12%. This suggests that more people have been turning to the sector for help. However, respondent organisations also reported difficulty in meeting the increased demand for their services, with 55% indicating that they were unable to do so. People were denied services on approximately 345,000 occasions, equating to more than 1 in 20 people seeking social services being turned away. This represents a 19% increase on the 298,000 people turned away in 2008-09. These figures demonstrate that the community services sector is already experiencing difficulties in providing services and therefore has little residual capacity for the unforeseen or for expanded demand.

5.2. The role and importance of CSOs in climate change adaptation

Edwards et al. (2008:58) argue that the 'community welfare sector has a vital role to play in ensuring that actions adopted to prevent dangerous climate change are both effective in their outcomes and socially just in their implementation' (2008: 58). ACOSS and the network of councils of social service (COSS) in the states and territories have also identified this important role.

ACOSS and its counterparts in the states and territories have advocated the importance of the community services sector in helping people experiencing poverty and disadvantage adapt to climate change and prepare for and respond to extreme weather events and have also developed policy recommendations to increase the resilience of the sector and its organisations to climate change. These analyses and recommendations are often published as grey literature and therefore a literature gap remains for rigorous scientific or systematic analysis of the issue. However, the work done by the COSS network, which is summarised below, identifies some key research areas and questions that can be addressed in the future.

In April 2011 the South Australian Council of Social Services (SACOSS) made a draft submission to the Government of South Australia's Climate Change Adaptation Framework (SACOSS, 2011). One of its key findings was that although the 'sector is well placed to add growing climate risks to the issues on which it relentlessly responds… at this point in time there is a low level of connection with the concept of climate change within the sector' (SACOSS, 2011). The submission argues:

> The sector needs help to understand in very practical ways the roles it can play and functions it can have in adapting to the impact of climate change. The sector remains a critical pathway to access members of the community who otherwise would be overlooked, or may not see themselves as needing to adapt to climate change' (SACOSS, 2011).

QCOSS (2011) argues that the community services sector is a key pillar in maintaining and enhancing resilience to climate change and extreme weather impacts at a household and community level—providing, with governments and others, a 'safety net' for the most vulnerable in society (QCOSS, 2011). For example, CSOs played an integral role in the initial disaster response to the floods of 2010-11, working alongside and supporting a range of other sectors, individuals and industries (QCOSS, 2011). QCOSS (2011:13) recommendations to ensure that the sector is able to continue making its vital contribution to the community's recovery from climate impacts and extreme events, include that the government:

- Recognise that services support their employees to provide immediate disaster assistance in a range of ways not covered in funding arrangements;
- Recognise there will be an increased demand for all local services in flood affected areas, including from people who have not traditionally accessed the community services sector. Many services will be at or over capacity in managing the projected volume and scope of need;
- Work with locally based community organisations to establish where they could redirect services to meet emerging needs, and allow variations in funding agreements based on local need. This could include allowing the flexible use of unexpended funds to deliver recovery-related services;
- Recognise that disasters will impact on the income generation capacity of many organisations. This includes diminished availability of volunteers and competing demands on people's capacity to donate, as well as the effects of the disasters on the operations of those social enterprises that help to finance service delivery; and
- Use the experiences of the 2010-11 floods as an opportunity to further break down rigid program boundaries and allow a 'whatever it takes' style of casework, which is most appropriate for people in need.

According to QCOSS, the implementation of these recommendations will increase the capacity and resilience of CSOs to continue delivering their services to people experiencing poverty and social disadvantage and the broader community during and after extreme events under climate change (QCOSS, 2011).

Evidence gathered by the Victorian Council of Social Service (VCOSS) following the January 2009 Victorian heat wave and bushfires indicates that people experiencing poverty and social disadvantage will be worse off if CSOs fails in response to climate change (VCOSS, 2009). VCOSS (2009) identifies a number of issues arising from this extreme event, which had a direct effect on vulnerable people in the community, as well as on the community services sector, including:

- The withdrawal of home based services to vulnerable population groups in some areas;
- Concern about organisations' capacity to ensure the safety of older people in their homes, especially those with cognitive impairment;
- The impacts of heat related stress on vulnerable families and carers without adequate support;
- Loss of power from brownouts and blackouts for people with medically required cooling or other essential equipment resulting in increased morbidity and mortality;
- Failure of cooling and other essential equipment due to the severity and duration of the heat wave;
- Inconsistent responses to the heat wave across different organisations, which potentially indicates a lack of information and planning guidance; and
- A lack of coordination of local responses to vulnerable population groups in some areas.

In 2009 the New South Wales Council of Social Service (NCOSS) and the Department of Environment and Climate Change (DECC) held a joint forum in which participants were asked to consider the key issues for the sector and the role for government in responding to those issues. Outcomes from the forum informed the development of the state's Climate Change Action Plan (NCOSS, 2009). The workshop identified a list of key concerns within the sector about the impacts of climate change on their clients and on service provision. To summarise, with organisations already facing resource limitations, they will struggle to manage costs associated with climate change adaptation. This may lead to organisations needing to make difficult decisions between funding client services and funding sustainability measures, a potential outcome of which is to compound existing disadvantage (NCOSS, 2009).

A body of grey literature relating to the role of the community services sector in climate change adaptation is also emerging from the UK. According to the Baring Foundation (2009), the sector's size, its reach into people's lives, independence and influence, and its status as a role model, combine to make it a potentially critical component in the global response to climate change. The Wales Council for Voluntary Action (WCVA) (2012) also asserts that the sector is uniquely placed to reach citizens, especially the most disadvantaged and vulnerable to the impacts of climate change.

Similarly, Ensor and Berger (2009) state social networks are the glue between many of the elements of adaptation. Bajayo (2012: 32) argues that the capacity of a community to adapt depends in part on 'its stock of social capital i.e. the sum or potential resources embedded within social relationships'. Social networks and social capital draw attention to the relationship between actors, which can be visualised as a web of connections that link diverse individuals and institutions, either directly or via other actors (Ensor and Berger, 2009: 27). Ensor and Berger (2009) argue that a community's social network will define the proportion of available climate change knowledge that reaches it as well as the complexity, accuracy and relevance of the information received. CSOs can be a crucial part of a household or community's social network, bringing knowledge, ideas, experiences and resources from the outside. Significantly, NFP organisations are also able to stimulate the growth of local networks by building contacts and relationships between previously unconnected actors, and by building capacity to interact with and access different actors and networks (Ensor and Berger, 2009).

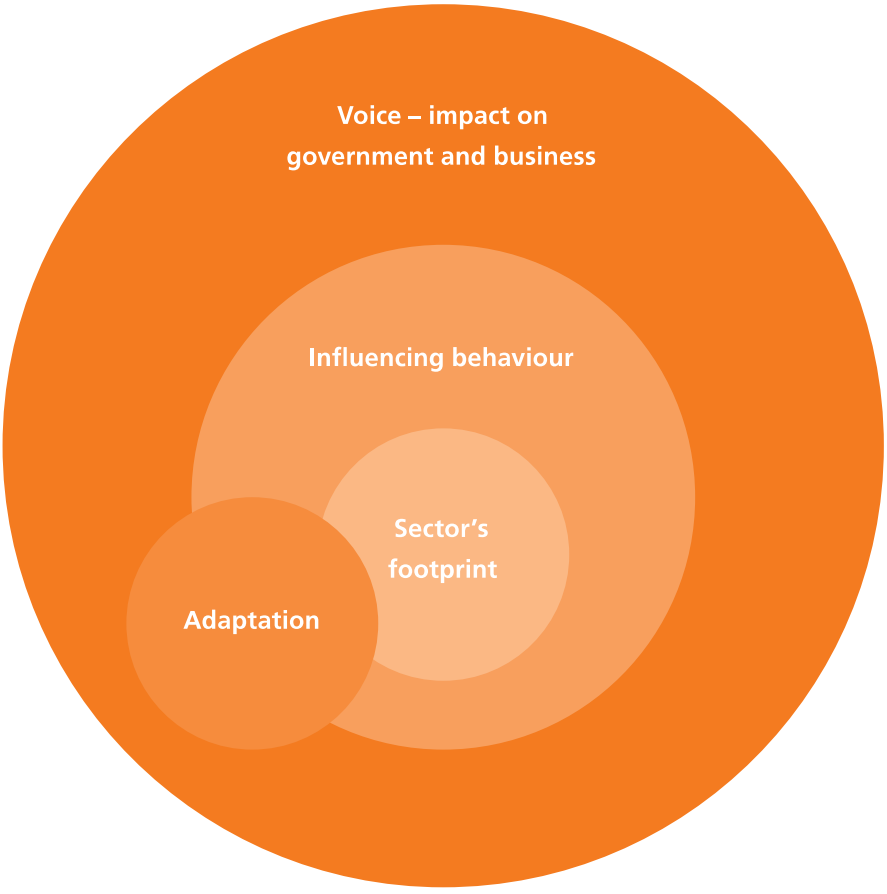
Figure 1 (below) comes from the UK government's *Shaping Our Future* report (a joint ministerial and third sector Task Force on climate change). It demonstrates the many different roles that the sector plays in relation to climate change, the links between them, and above all their relative importance (HM government, 2010: 27). It demonstrates the fact that the sector's most significant role is in the impact that it has on others, through voice and advocacy (HM government, 2010: 27).

The role of CSOs in recent natural disasters caused by extreme weather events can also be used as a proxy for understanding their importance in climate change adaptation because the critical role they play disaster management is increasingly well documented (Parliament of Victoria, 2010a, 2010b). *The National Strategy for Disaster Resilience* (COAG, 2011: 4) clearly identifies that non-government and community organisations are 'at the forefront of strengthening disaster resilience in Australia.' COAG (2011: 9) also identifies that these organisations have experience and expertise in building resilience in communities and 'their existing networks and structures reach far into communities, and can effect real change.' The 2009 Victorian Bushfires Royal Commission also identifies the importance of CSOs in implementing community recovery programs after the 2009 Victorian bushfires. For example St Vincent de Paul was very active immediately after the bushfires, with volunteers from 80 conferences providing food or food vouchers, clothing and furniture to over 50,000 people as well

as fulfilling other roles. Further, the Quality of Life and Social Justice Research Centre (2009) identifies that organisations such as the Australian Red Cross were very well organised and prepared to respond to the disaster.

There is evidence in the literature that CSOs increase the resilience of people experiencing poverty and social disadvantage however this mainly comes from sector analysis and grey literature. Similarly, the potential role of CSOs in climate change adaptation has also begun to be addressed although much of the evidence remains as sector analysis and grey literature rather than academic literature.

Figure 1: Areas of community services sector impact on climate change (HM government, 2010:27).



6. Impacts of climate change on CSOs

More stormy weather, higher energy prices and reduced transport reliability are just some of the climate-related trends that are likely to have a direct impact on every organisation (WCVA, 2012: 1).

This section addresses the following research question:

Research question 4
Are CSOs at risk of failure or strain from climate change, particularly impacts to infrastructure?

The review found no formal literature directly linking climate change impacts, both direct (including infrastructure failure) and indirect (resulting from policy decisions) with the capacity of CSOs to provide services. However there is a growing evidence base being documented by the Australian community services sector that infrastructure failure caused by recent extreme weather events such as bushfires and floods has impacted service delivery (see for example QCOSS, 2011; VCOSS, 2009).

Further, ACOSS (2011) has stressed that CSOs will be affected by climate change and policy responses such as a carbon price. Organisations have limited capacity to pass through cost increases and to invest in energy efficiency improvements due to resource constraints. The services provided by these organisations are of critical importance to low income, disadvantaged and vulnerable individuals and families (ACOSS, 2011). As a result, it is highly likely that the failure of the sector will impact greatly on these groups. In the absence of academic literature about the impact of climate change on CSOs, proxy-based evidence from the health and small and medium-sized (SME) organisation sectors is presented below to examine how climate change might impact on CSOs.

7. Proxy-based evidence of the impact of climate change on CSOs

According to Carthey et al. (2009) identify that healthcare infrastructure faces risk from climate change. They found 'there is little if any research on the ability of health care facilities to adapt to the physical and health care demands of [extreme weather events]' and that there is a:

Major gap in our current response capability for such events [which] is a reflection of the relative immaturity of facilities management as an academic field of study and a more general ignorance in the health sector of the role of hospital infrastructure in delivering quality healthcare services.

Carthey and Chandra (2007) identify documented health sector infrastructure failures resulting from past extreme weather events, which have had negative impacts on health service provision. For example heatwaves have caused computer and air conditioner failures; floods have caused power outages and access problems for physicians and other staff; and storm surges have caused forced closures of hospitals and difficulties in access. These types of infrastructure are applicable to CSOs seeking to provide services using the same infrastructure base.

SME organisations can also serve as proxies to identify some of the potential impacts of climate change on CSOs. White and Cahill (2008) found that fifty per cent of SME organisations that suffer serious damage or disruption during or after an extreme weather event or disaster never recover due to physical infrastructural failure or strain on human capital. This suggests that CSOs, many of which have similar characteristics to SMEs in terms of size and resource levels, are also likely to be at risk of failure or strain from climate change. It is clear that there is a gap in the literature in relation to the direct and indirect impacts of climate-driven infrastructure failure on community service provision, which warrants further research.

Based on sector analysis and health and SME sector proxies, there is evidence that CSOs are at risk of failure or strain from climate change, particularly impacts to infrastructure and that there is a gap in the academic literature related to this issue.

8. Progress to date: Adapting CSOs to climate change

This section examines the literature about adapting the community services sector to climate change in order that it can continue providing support to people experiencing poverty and social disadvantage. It addresses the following research questions:

Research question 5
Do specific adaptation strategies exist for CSOs to allow them to continue carrying out their role in supporting people experiencing poverty and social disadvantage under climate change?

An initial literature search revealed limited academic literature that directly addresses the adaptation needs of community services sector. In light of this finding, a review of strategies, programs, projects and tools related to the community services sector and climate change was undertaken. This section presents an analysis of what has been done within Australia, and internationally, to prepare the community services sector for climate change.

8.1. Australian government initiatives

The National Climate Change Adaptation Research Facility (NCCARF) was established in 2008 'to harness and coordinate the capabilities of Australia's researchers, to generate and communicate the knowledge decision-makers need for successful adaptation to climate change' (NCCARF, 2012).

Since its inception, NCCARF (2012) has funded a body of adaptation research including the present study, under several key programs including one dedicated to examining the social, economic and institutional dimensions that affect climate change adaptation. Some of these studies are relevant to our present research but to date are largely unpublished. These include:

- Pathways to climate adapted and healthy low-income housing (Guy Barnett, CSIRO)
- Displaced twice? Investigating the impact of Queensland floods on the wellbeing and settlement of a cohort of men from refugee backgrounds living in Brisbane and Toowoomba (Ignacio Correa-Velez, La Trobe University).
- A spatial vulnerability analysis of urban populations to extreme heat events in Australian capital cities (Margaret Loughnan, Monash University).
- Australia's Country Towns 2050: What will a climate adapted settlement pattern look like? (Andrew Beer, University of Adelaide).
- A Framework for adaptation of Australian households to heat waves (Wasim Saman, University of South Australia).

Although these studies are relevant in terms of how climate change will impact on vulnerable groups and people experiencing poverty or social disadvantage, the current study is the only one that examines the impacts of climate change on the community services sector and its specific adaptation needs.

The Australian Government's 2010 position paper *Adapting to Climate Change in Australia* recognises that adaptation is the shared responsibility of governments and the community (Australian Government, 2010). It sets out the Commonwealth's priorities for adapting to the impacts of climate change and identifies six key areas for action: water, coasts, infrastructure, natural ecosystems, natural disaster management, and agriculture (Australian Government, 2010). We identify that the human element, including the community services sector, are not included in the government's adaptation priorities.

In April 2012 the Productivity Commission released its draft report, *Barriers to Effective Climate Change Adaptation.* The Commission identified six key barriers to effective climate change adaptation: market failures, regulatory barriers, governance and institutional barriers and behavioural barriers (Productivity Commission, 2012). In its submission to the Commission's inquiry, the Brotherhood of St Laurance (2012) suggests that two more barriers be included to enable effective climate change adaptation for low-income and disadvantaged Australians:

- Insufficient financial resources.
- Lack of community readiness.

The report states:

> Generally speaking, households, businesses and other organisations are capable of managing the climate variability and the risks they face. This is because people have an incentive to assess the costs and benefits of taking action to mitigate the impacts of climate change on themselves (Productivity Commission, 2012:5).

This statement that individuals will be able to adapt to climate change by themselves deeply concerned some organisations in the community services sector. For example in their submission to the inquiry, the Brotherhood of St Laurance cautioned against the Commission's interpretation of effective adaptation as that which 'maximises the net benefit of the community as a whole' (Brotherhood of St Laurence, 2012). This is because climate change will disproportionately impact already disadvantaged groups who require additional consideration in climate change adaptation planning (Brotherhood of St Laurence, 2012).

Similarly, Good Shepherd expressed its concern about the exclusion of the community services sector from the Productivity Commission report. Its submission recommends that the government 'increase support to the community services sector to proactively anticipate a rise in needs specifically from low-income and culturally diverse communities in climate change adaptation' (Good Shepherd, 2012).
This review identifies a gap in the federal government's approach to adaptation: the human element. This gap is clearly identified by QCOSS in its submission to the Queensland Government's Climate Change Adaptation strategy:

> The human element is critical to any discussion on climate change adaptation, and that vulnerable groups need to be a central focus in any adaptation strategy (QCOSS, 2011: 2).

In 2009 the Australian government set up three programs for not-for-profit (NFP) community organisations through its Climate Change Action Fund. The fund's aim is to engage and empower community organisations to improve their operational energy efficiency (AusAID, 2009). It provides grants of $5,000 - $25,000 to NFP community organisations to put in place energy efficient technologies, equipment and other complimentary measures. This fund focuses largely on energy efficiency and is not accessible for adaptation programs.

In 2008, the Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA) developed a not-for-profit sector-specific toolkit called *Building Resilience through Business Continuity and Pandemic Planning (for non-government organisations)*. This kit includes information and tools to assist non-government organisations to prepare for business continuity during a human influenza pandemic. For example, it explains the impact a pandemic could have on an organisation, the community and the provision of services, how important it is to have a plan in place to help an organisation cope and provides guidance on how to develop a business continuity plan. The business continuity principles and planning tools included in the kit could be easily adapted to assist CSOs to plan and prepare for a range of climate change and extreme weather risks. However, to date this work has not been undertaken in a systematic way at the national level.

8.2. Resources, tools and links – Australia and internationally

In 2006, the federal government released a guide to assist businesses and governments to manage climate change and its risks. The guide was designed to integrate climate change and its impacts into risk management and other strategic planning activities in Australian public and private sector organisations (Australian Greenhouse Office, 2006). Although the guide does not address the specific needs and constraints of non-government, community-based organisations, it sets out a clear process based on standard risk assessment, which could be applied to the operations of most organisations. Similarly, in 2004 the UK Met Office released a report examining the impacts of climate change on businesses and the economy, but not on the third sector (Tonkin 2004).

In addition to the initiatives outlined above, a plethora of tools and guides focusing on climate change risk management and adaptation have been produced in Australia and internationally in recent years, including those presented in Table 5. Although this list is extensive, it is not comprehensive because of the high volume of available resources. Most of these tools target governments, the private sector and the 'community' as a whole, with very few addressing the specific needs of the community services sector or people experiencing poverty and disadvantage. As such, the review identifies a gap in the climate change adaptation resources and tools pertaining to the particular needs and operational constraints of CSOs.

8.3. Initiatives for the not-for-profit sector in Australia

At present in Australia, there are very few initiatives that address climate change adaptation for the community services sector. Our search uncovered only one initiative – the *Climate Change Readiness for Community Services* program (Western Australia). This program was a joint initiative between the West Australian Council of Social Service (WACOSS) and the WA Peaks Forum (WACOSS, 2012). It aimed to increase employment in areas worst affected by the economic downturn at the same time as increasing the preparedness of CSOs for climate change (WACOSS, 2012). It To achieve these aims, it trained people experiencing unemployment as a result of the economic downturn to conduct energy efficiency audits and then employed them to conduct free climate change and energy efficiency audits for participating CSOs and provide recommendations on how to reduce energy and water use.

There may be other initiatives being undertaken at the organisational level but if this is the case, there is no published academic or grey literature relating to them.

Table 5: Guidance resources for climate change risk management

Name	Source	Focus/target audience
Technical guidance for assessing climate change impacts and adaptations	IPCC	Governments (International)
Guidelines for the preparation of National Adaptation Programs of Action	United Nations Framework Convention on Climate Change (UNFCCC)	Governments (International)
Handbook on Methods for Climate Change Impact Assessment and Adaptation strategies	United Nations Environment Program (UNEP)	Governments (International)
Adaptation Policy Framework	United Nations Development Program (UNDP)	Governments (International)
Climate Change Impacts and Risk Management a Guide for Business and Government	Department of Climate Change (Australia)	Business and government (Australia)
Adapting to Climate Change: A Queensland Government Guide	State of Queensland Government (Australia)	Local government (QLD)
Sustainable Regional and Urban Communities Adapting to Climate Change	Planning Institute of Australia; Department of Climate Change (Australia); Environmental Protection Agency (State of Queensland, Australia)	Local government (QLD)
Adapting to Climate Change – an introduction for Canadian Municipalities	Natural Resources Canada	Local government (Canada)
Climate Adaptation: Risk, Uncertainty and Decision Making	Climate Impacts Program (United Kingdom)	Government and business (UK)
Costing the Impacts of Climate Change in the UK	Climate Impacts Program (United Kingdom)	Government and business (UK)
Assessments of Impacts and Adaptations to Climate Change in Multiple Regions and Sectors	Agency for International Develop (United States)	Developing countries
Preparing for Climate Change: A guidebook for local, regional and state governments	Climate Impacts Group, University of Washington King County (State of Washington); ICLEI (USA)	Multi-levels of government (USA)
UNFCCC Toolkit	UNFCCC	Vulnerable groups, developing countries
ACT Energy Wise program	ACT government	Homeowners (ACT)
Affordable water and energy efficiency program	NSW Council of Social Service and NSW Department of Energy	Vulnerable groups (low income households) (NSW)

Energy Efficiency Program for Low Income Households program	SA Government's Department of Transport, Energy and Infrastructure	Vulnerable groups (low income households) (SA)
Energy Task Force	Sustainability Victoria	Vulnerable groups (low income households and pensioners) (Victoria)
'Fridge Buy Back'	NSW government's Energy Savings Fund and Greenhouse Abatement Scheme	Vulnerable groups (low income householders) (NSW)
Home Energy Efficiency Trial	Country Energy and AMPY Email Metering	Homeowners
Queensland EnergyWise program	State of Queensland Government (Australia)	General population (i.e. not specifically targeting vulnerable groups)
Reach for the Stars program	WA State Government	General population (i.e. not specifically targeting vulnerable groups)
Small Business and Household Climate Change Action	Federal Government (Australia)	Small businesses and general population (i.e. not specifically targeting vulnerable groups)
Heat wave planning projects – heat wave resources	Department of Health (Victoria)	General population (i.e. not specifically targeting vulnerable groups)
Climate Change Adaptation: a framework for local action	Southern Grampians and Glenelg Primary Care Partnership	General population including specific vulnerable groups
Future Coasts Program	Department of Sustainability and Environment and Department of Planning and Community Development, Victorian Government	Coastal populations (Victoria)
Health impacts of climate change: Adaptation strategies for Western Australia	Department of Health (Western Australia)	General population including specific vulnerable groups
Sydney Coastal Councils – System Approach to Regional Climate Change Adaptation Strategies in Metropolises	Sydney Coastal Councils	Coastal populations (NSW)
Assessing Resilience and Vulnerability in the Context of Emergencies: Guidelines	Department of Human Services (Victoria)	Government agencies
Emergency REDiPlan: four steps to prepare your household	The Australian Red Cross	General population

Sources: Jones and Preston (2010:9); Brotherhood of St Lawrence (2007); VLGA (2011); Australian Red Cross (2009)

8.4. International initiatives

The literature review found evidence of initiatives and programs addressing climate change and the community services sector in the UK only. Relevant work may be currently underway in other developed countries but none was revealed in the searches conducted as part of this review.

In recent years, the UK government has begun to recognise the role that the voluntary and community services sectors can play in climate change adaptation as demonstrated by the development of a joint taskforce on climate change in 2009 titled *Shaping our Future: the joint ministerial and third sector Task Force on climate change, the environment and sustainable development*. The Task Force aims to explore cross-government and cross-sector opportunities for tackling the issues climate change presents for third sector organisations. The Taskforce Secretariat identifies that helping communities to understand the impacts of expected changes to their local environment and ways of building resilience is an essential part of engaging communities with climate change, environmental and sustainability issues. Community organisations already active at the local level are best placed to support communities on this (HM government, 2010: 73). These organisations, including the British Red Cross, already play key roles in on-the-ground responses to extreme weather events in the UK such as the flooding events in 2007 and 2009 and the snow in December 2009 (HM government, 2010).

The review revealed a number of projects currently underway or recently undertaken in the UK, which aim to engage voluntary and community services sector organisations on climate change and adaptation issues. The most relevant program, *The Big Response*, was funded by the Baring Foundation and led by the National Council of Volunteer Organisations (NCVO), Green Alliance and Global Action Plan – three peak NFP bodies. Another key program is NCVO's *Vulnerable People and Climate Change*. This is an ongoing program with initial results due to be released in early 2013. These four projects were funded by the Baring Foundation, the grant-making arm of ING Bank, and had no direct link to or support from government (K. Damiral pers. comms, 2012).

In 2010 the Baring Foundation set up a *Special Initiative on Climate Change and the Third Sector*. The special initiative funded four projects to work with different parts of the non-environmental third sector on climate change (Smerdon, 2010), which are summarised in Table 6. The initiative funded NCVO, Green Alliance and Global Action to jointly deliver the *Big Response* project. Importantly, it is the only *completed* project that is of direct relevance to the present research. The project worked with four voluntary and community organisations (VCOs) whose work focused on specific vulnerable communities: Friends of the Elderly, Royal National Institute for Blind People, the British Red Cross and Equinox Care (working with people with alcohol, drug and mental health issues) (Smerdon, 2010; Baring Foundation, 2009). The rationale for focusing on vulnerable communities included that:

- Vulnerable and low-income communities are most likely to be exposed to climate change impacts and least likely to have the adaptive capacity to cope (Simms and Johnson, 2007);
- There has been very little research on the effects of climate change impacts in the UK on the basis of social and economic class (Burkeman, 2008); and
- Links to climate change are not immediately obvious or a current priority for vulnerable communities, whose concerns tend to focus on more immediate issues of meeting basic economic needs, health and their immediate environment (Joseph Rowntree Foundation, 2001).

The project recruited four organisations to take part and supported them to:

- Appreciate better the relevance of climate change to their work and the urgency of responding;
- Develop their policies and behaviours to protect their beneficiaries' long-term interests in a changing world; and
- Influence other stakeholders, especially policy makers, about the relevance of climate change and the urgency of responding (Smerdon, 2010).

The project offered three key messages:

- A changing climate is likely to have a huge impact on the beneficiaries that many VCOs seek to help. Members of vulnerable communities are likely to be hardest hit. Equally it will have a significant impact on VCOs operations and service delivery. For some VCOs, climate change will threaten the very ability of the organisation to deliver its core mission. VCOs of all kinds need to work out what this will mean for them so that they can continue to achieve the most for their cause in the future (Baring Foundation 2009: 3);
- Organisations can be galvanized to address this issue in a strategic way by taking senior staff and trustees through a guided process with experts to examine the impact of climate change on their beneficiaries and operations; and
- Organisations will need external support to start engagement on this process, whether this is from central and local government through direction; from funders through financial support to look at the issue; or from sector bodies to provide information, advice and support. This will help provide the conditions necessary for VCOs to address the issue effectively and to make informed responses (Baring Foundation, 2009:3).

Table 6: Special initiatives on climate change and the third sector – Baring Foundation

Project title	Area of third sector	Lead organisations	Partner organisations that received support
The Big Response	Organisations working with vulnerable communities	NCVO, Green Alliance and Global Action Plan	British Red Cross, Equinox Care, Friends of the Elderly and the Royal National Institute of Blind People
Building a climate smart future	Children and young people's organisations	National Children's Bureau and Institute for Development Studies	Action for Children, Pre-School Learning Alliance and the National Youth Agency
Shared Energy	Community anchor organisations	bassac, New Economics Foundation, Community Welfare Sector Coalition and Groundwork	Community organisations in London, Yorkshire and Humber and the South West
The Third Sector Initiative	Refugee and human rights organisations	Climate Outreach and Information Network	Refugee Council, Refugee Action, Asylum Aid and the International Secretariat of Amnesty International

Source: Baring Foundation (2009)

One of the clear outcomes of the project was the realisation that when supported CSOs can and will engage with the issue of climate change. Once they are made aware of the potential impact it will have on their beneficiaries, the links between climate change and an organisation's core purpose become irrefutable. As one of the project's participants commented, 'you can't afford not to be involved, simple as that' (Baring Foundation, 2009: 24). A key success of the project was that the British Red Cross agreed to incorporate climate change into its strategic plan for the first time. All four organisations explored options for advocating on climate change and two are taking forward specific work in this area (Smerdon, 2010).

Climate change is one of four major themes in NCVO's ten-year strategy, *Civil Society: a framework for action* (NCVO, 2009). Their focus is raising awareness of the likely impact that climate change will have on the work of front line third sector organisations. This ongoing project is, again, key as it is directly interested in climate change impacts on CSOs (NCVO, 2012).

An online guide for organisations thinking about climate change has been developed and the issue is built into key events and publications, as well as informing NCVOs analysis of trends that will affect the sector and the support they provide to their members (HM Government, 2010: 32). Currently, NCVO is over half way through a project, called *Vulnerable People and Climate Change*. Through the project, NCVO is working with organisations that support vulnerable people, and will be producing a range of reports from the program in 2013 (Kate Damiral pers. comms, 2012). The project aims to help VCOs to explore the implications of climate change for their work and beneficiaries, including older people, people with a disability and mental health needs, black and minority ethnic communities and people on low incomes by:

- Investigating the implications of climate change trends;
- Considering how to respond to these emerging challenges;
- Helping service users to understand the particular risks they face from climate change;
- Taking action; and
- Sharing experiences with others in their field (NCVO, 2012).

The project concludes in early 2013 with a final sharing workshop for all participants and a policy event at which service users and providers can give their perspectives on the implications of climate change to key decision makers (NCVO, 2012).

The Wales Council for Voluntary Action (WCVA) has also taken steps to engage non-environmental third sector organisations with climate change and supporting them to address its impacts. WCVA have produced a series of information sheets for third sector organisations engaging with climate change for the first time. These resources are designed to provide an introduction to the key concepts and issues of climate change, why it is important to the third sector, including those who do not normally consider environmental aspects to their work, how it impacts key areas of work and beneficiaries and what organisations can do to take action on climate change (WCVA, 2012). Publications of relevance include:

- *Why climate change issues are important for the third sector?* (www.wcva-ids.org.uk/wcva/2272).
- *Climate change and energy* (www.wcva-ids.org.uk/wcva/2276).
- *Climate change social justice - impacts on vulnerable groups* (www.wcva-ids.org.uk/wcva/2274).

Supported by the Welsh Assembly Government, WCVA also established a third sector leadership group on climate change in 2009 to involve organisations from the across the sector in addressing the implications of climate change within their organisations. A key aim was to focus on the engagement of the 'non–green' third sector to identify what works and how to further support the sector to engage with climate change. Case studies from organisations involved in this group have been developed to provide examples of how the third sector is responding to climate change. Organisations used as case studies included Disability Wales and Displaced People in Action (WCVA, 2012).

The Scottish Council for Voluntary Organisations (SCVO) has been embedding climate change in its work and its support for members, with a focus on human rights and climate justice. It has websites dedicated to climate change, a green agenda officer, incorporates a climate change sessions into its events schedule and is developing a green reference group. It also offers training on tackling climate change as part of their wider training program (HM government, 2010: 54).

The search revealed a limited number of projects that specifically examine the impacts of climate change on the work of CSOs. The majority are exploratory, with a focus on raising awareness within the sector about the relevance of the issue to their work and their beneficiaries. Preliminary findings from these projects suggest that climate change will have a significant impact on organisational operations and service delivery. These findings suggest there is a clear case for further research to be undertaken on this issue.

9. Conclusion

The literature review has identified some significant gaps in the literature and government positions, regarding the impact of climate change on the community services sector and, by extension, the people it supports. Some of these gaps are in areas that have direct relevance to the ability of CSOs to cope with climate related events and incremental change, and thus their ability to continue to provide essential support to people experiencing poverty and social disadvantage. In many areas of the community services sector the impacts of climate change on their mission and beneficiaries are potentially dramatic.

Based on a range of evidence, the review has demonstrated that people experiencing poverty and social disadvantage are more likely to be negatively affected by climate change impacts and that CSOs serve to increase the resilience of these groups. In fact the sector is critical for the wellbeing of this cohort of society, essentially acting (a) as 'shock-absorbers' against the negative impacts of climate change, particularly extreme weather events and (b) 'key-influencers' to cohorts in society which are almost unreachable by traditional economic interventions.

Specifically, in relation to the research questions outlined at the outset of this report, the review found:

- **People experiencing poverty and inequality in developed countries are more susceptible than the general community to climate change impacts and particularly extreme weather events**. While the evidence discovered, in the form of academic literature in peer-reviewed journals, was strong, the review also found more literature focused on the needs of particular groups, such as elderly and frail people, than on others, such people experiencing homelessness.

- **CSOs increase the resilience of people experiencing poverty and social disadvantage**. This finding was based on evidence in the forms of analysis conducted by the community services sector and grey literature. There is a gap in the academic literature.

- **Evidence from sector analysis and grey literature suggests the potential roles and importance of CSOs in climate change adaptation**. However, the evidence base is more limited and there is a significant gap in the academic literature.

- **CSOs are at risk of failure or strain from climate change.** There is a significant gap in the academic literature addressing this issue and this finding was reached using proxy-based evidence from the disaster management, health and small and medium-sized enterprise (SME) sectors.

- **A major gap in policy and research into how CSOs need to adapt to climate change to continue carrying out their role in providing support to people experiencing poverty and inequality**. The evidence is limited to research being undertaken by the sector in the United Kingdom (UK) and Australia.

The review also identified several areas that warrant further research including:

- Whether CSOs are at risk of failure or strain from climate change, particularly impacts to infrastructure;

- Whether CSOs will be able to continue delivering services to people experiencing poverty and social disadvantage due to their vulnerability to climate change; and

- Whether a well-adapted sector can play a role in increasing the resilience of people experiencing poverty and social disadvantage to climate change impacts.

The results of the review and the significant weaknesses in the literature and research base suggest the community services sector should be identified as a priority for adaptation research and policy making in Australia within the context of its role in providing support to the high risk cohorts of people experiencing poverty and disadvantage.

APPENDIX 2: SURVEY QUESTIONNAIRE

WELCOME TO THE 'CLIMATE CHANGE & THE COMMUNITY WELFARE SECTOR' NATIONAL SURVEY

Thank you for participating in this survey, which is being conducted by the Australian Council of Social Service (ACOSS) and Climate Risk P/L and is funded by the National Climate Change Adaptation Research Facility (NCCARF).

What is this survey for?

Climate change, extreme weather events and natural disasters cause impacts to infrastructure services (power, water, telecommunications, transport) and the built environment (buildings, roads).

Understanding how these impacts affect the ability of community welfare organisations to provide services to people experiencing poverty and disadvantage is the aim of this survey. This includes actions that organisations can take or are already taking to adapt to climate change impacts and identifying barriers, if any.

Why is this survey important?

People experiencing poverty and disadvantage will be affected first and worst by climate change, including the worsening impacts of extreme weather events and natural disasters. The community welfare sector provides essential services to those struggling to meet basic needs; as climate change impacts worsen, more people will turn to our organisations for assistance. And yet we have very little understanding about how the sector itself is placed to cope with climate change risks.

Your participation in this survey will help us establish how vulnerable the sector is to extreme weather/natural disasters, to demonstrate the important role the sector already plays in disaster response locally, and to make recommendations about how the sector can become part of the national response to such events.

What to expect from this survey

The survey is made up of 38 questions. Most are multiple choice or simple rating scales. A limited number of questions ask for qualitative responses.

It should take about 20-30 minutes to complete.

Information that will help you complete this survey

- Your organisation's insurance policy and annual income.
- Your organisation's expenditure on utilities for the year ending 30 June 2012.
- Whether your organisation has experienced an extreme weather event or disaster in the past 10 years and the name of a current staff member who worked with the organisation at the time the event occurred.

Who should complete this survey

The survey should be filled in by a senior staff member who has access to information about your organisation's services, workforce, insurance policies, finances and operational context.

How to complete this survey. Please:

- Answer all questions on behalf of your organisation, rather than from your personal point of view.
- If you get stuck, give a best guess estimate and move on to the next question.
- Remember, you can exit the survey and return to it at another time before you submit your answers. To return to the survey, click on the link in the email notification you received about the survey.
- To choose a box, please click on it with your mouse or with the space bar. This will create a cross in that box.
- To fill out the text boxes, please click in the required box and start to type.

Protecting your privacy

Your participation in this survey is completely voluntary. You can exit the survey at any time.

Information you provide will be kept confidential. When reporting the information gathered in this survey, we will make sure no individual or organisation can be identified.

If you have any questions about the survey, contact Emily Hamilton at ACOSS: emily.hamilton@acoss.org.au or 02 93106200.

A QUICK QUESTION BEFORE YOU START

1. Is your organisation:

☐ Not for profit

☐ For profit

☐ Government

2. If you selected “Government” or “For profit” in Q1, you are not eligible to complete this survey. Thank you for your interest. If you would like to receive updates about the project and information about the release of the final report, please provide an email address below.

Click here to enter text.

6. YOUR ORGANISATION, EXTREME WEATHER AND NATURAL DISASTER

In this section we would like to know whether your organisation has experienced an extreme weather event or natural disaster in the recent past, and if you or a colleague are willing to provide further information about your experience of that event.

6.1 3. Has your organisation been directly or indirectly affected by any of the following extreme weather events in the past 10 years? (Please choose all that apply.)

☐ Hailstorm

☐ Bushfire

☐ Heatwave

☐ Drought

☐ Flood

☐ Cyclone

☐ None

☐ Other (please specify)

Click here to enter text.

6.2 4. If you selected an event in Q3, are you or a colleague willing to provide further information about the impact the event had on your organisation?

☐ Yes

☐ No

6.3 5. If you answered yes to Q4, please provide contact details below. A member of the project team will contact you for a further discussion about your experiences.

Name: Click here to enter text.

Phone number: Click here to enter text.

Email address: Click here to enter text.

7. YOUR ORGANISATION AND CLIMATE CHANGE

This survey is particularly important to our understanding of how prepared community welfare organisations are for the impacts of climate change, extreme weather events and natural disasters; and their ability to become a part of the community's overall resilience to these impacts.

In this section you will be asked about any actions your organisation is taking or could take because of concerns about climate change and extreme weather/natural disaster impacts, and what are the barriers to action, if any.

*7.1 * 6. How would you describe your organisation's overall knowledge of local climate change risks?*

Choose an item.

*7.2 * 7. Has your organisation done any of the things listed below because of concern about climate change and extreme weather events/natural disasters? (Please choose all that apply)*

☐ Taken action to reduce carbon emissions

☐ Looked for information about extreme weather or natural disaster risks for the local area

☐ Looked for information about long-term climate change risks for the local area

☐ Discussed extreme weather or natural disaster risks at a management committee or board meeting

☐ Discussed climate change risks at a management committee or board meeting

☐ Advocated for action on climate change by the local, state or federal government

☐ None

☐ Other (please specify)

Click here to enter text.

*7.3 * 8. Does your organisation's budget include specific funding for climate change-related activities or costs?*

☐ Yes

☐ No

☐ Don't know

8. YOUR ORGANISATION AND CLIMATE CHANGE (CONT.)

The list below describes some more responses to climate change and extreme weather/natural disaster risks.

*8.1 * 9. Please tell us which of the actions listed below your organisation has already done, which it would do if funding was available, and which it would not do.*

	Already done	Would do	Would not do	N/A
Relocate offices or centres (e.g. move your organisation out of a flood-prone area)	☐	☐	☐	☐
Extend or renegotiate your organisation's insurance cover	☐	☐	☐	☐
Create new services or programs to help clients prepare for climate change impacts	☐	☐	☐	☐
Work with other organisations to plan for collaborative service provision during natural disasters	☐	☐	☐	☐
Develop a disaster management plan	☐	☐	☐	☐
Switch to a different method of service delivery (e.g. from centre-based to outreach)	☐	☐	☐	☐
Upgrade organisational infra-structure (e.g. to increase resilience to extreme weather)	☐	☐	☐	☐
Develop a climate change action plan	☐	☐	☐	☐
Take action to reduce utility bills	☐	☐	☐	☐
Undertake a climate change risk assessment	☐	☐	☐	☐

8.2 10. Is there anything else your organisation is doing or wants to do to respond to climate change risks that is not on the list above? (If yes, please list up to 3 actions)

Action one: Click here to enter text.

Action two: Click here to enter text.

Action three: Click here to enter text.

9. YOUR ORGANISATION AND CLIMATE CHANGE (CONT.) - BARRIERS

We are also interested to hear if there are any reasons that make it hard for your organisation to prepare for climate change impacts.

*9.1 * 11. Which of the following reasons make it difficult for your organisation to take action to prepare for climate change risks? (Please choose all that apply).*

☐ Lack of awareness about the impact of climate change in the local area

☐ Lack of information about relevant adaptation actions

☐ Beyond the scope of the organisation

☐ Lack of funds to implement adaptation actions

☐ Concern about impact on service provision of diverting funds from service to adaptation

☐ Lack of staff

☐ High cost of adaptation actions

☐ Lack of organisational belief in climate change

☐ No time to spare

☐ Lack of necessary skills base

☐ Lack of clear government policies and guidelines

☐ Lack of clear mandate or internal consensus

☐ Concern about negative client response if funds diverted from services to adaptation

☐ Other (please specify)

10. SCENARIO: EXTREME WEATHER DISASTER

Different types of extreme weather events such as cyclones, hailstorms, heatwaves, bushfires, floods, droughts and tsunamis occur in different parts of Australia and have different impacts on communities and the built environment.

Natural climate variability continues to play a role in shaping extreme events. However, human-caused climate change is predicted to increase the frequency and intensity of many types of extreme events.

In this section, you will be presented with a scenario that describes some of the impacts to infrastructure caused by extreme weather and natural disasters. Please read it carefully and answer the questions that follow.

Extreme Weather Event Scenario

Later this year, an extreme weather event occurs in the area your organisation is located and provides services. The event is classified as a localised natural disaster and causes widespread damage to the built environment.

There is significant disruption to local infrastructure, including loss of power, water, telecommunications systems and road access. It is not clear for how long these services will be lost.

The following questions ask about the impacts of such a disaster on your organisation's service provision, workforce and clients.

*10.1 * 12. If the building/s from which your organisation provides its main services was inaccessible due to damage caused by a natural disaster, how long do you think it would take to find a new building/s and start providing services again? (Please provide a best guess estimate.)*

☐ A day

☐ A week

☐ A fortnight

☐ A month

☐ It might not be possible for the organisation to make alternative arrangements for service provision

☐ Don’t know

11. SCENARIO (CONT.) – IMPACTS ON SERVICE PROVISION

*11.1 * 13. Which of the following infrastructure services would seriously disrupt your organisation's service provision if they stopped operating for an indefinite period? (Please choose all that apply).*

☐ Water supply

☐ Electricity

☐ Telecommunications

☐ Roads or transport networks

☐ Gas

☐ Don’t know

11.2 14. Please tell us how service provision would be disrupted if the infrastructure you selected in Q12 stopped operating for an indefinite period. (For example, if roads were damaged or the transport network disrupted, staff and clients could not access the service centre)

Click here to enter text.

*11.3 * 15. Please estimate how long your organisation could continue to provide services for if the following infrastructure stopped operating for an indefinite period?*

	1 day	1 week	1 fortnight	1 month	Unable to judge
Gas	☐	☐	☐	☐	☐
Electricity	☐	☐	☐	☐	☐
Telecommunications	☐	☐	☐	☐	☐
Water	☐	☐	☐	☐	☐
Roads/transport	☐	☐	☐	☐	☐

12. SCENARIO (CONT.) – IMPACTS ON SERVICE PROVISION

Most organisations rely on a network of people and external service providers to operate. These can include staff members, volunteers, cleaners and delivery services. Some of these people and service providers could also be disrupted by damage to or loss of different types of infrastructure caused by extreme weather/natural disasters. For example, if the roads were damaged, staff members, volunteers, clients and delivery services might not be able to reach the organisation.

*12.1 * 16. Please ESTIMATE for how long your organisation could continue to provide services if the following people or service providers stopped operating for an indefinite period?*

	1 day	1 week	1 fortnight	1 month	Unable to judge
Suppliers (e.g. food, medicine)	☐	☐	☐	☐	☐
External service providers (e.g. cleaners, waste disposal)	☐	☐	☐	☐	☐
Local staff	☐	☐	☐	☐	☐
Volunteers	☐	☐	☐	☐	☐

13. INSURANCE

*13.1 * 17. Is your organisation insured against losses caused by extreme weather/natural disasters?*

	Yes	Partly	No	Don't know
Contracts	☐	☐	☐	☐
Volunteers	☐	☐	☐	☐
Business continuity	☐	☐	☐	☐
Income	☐	☐	☐	☐
Staff absence	☐	☐	☐	☐
Assets (buildings, contents, cars)	☐	☐	☐	☐
Other (please specify) Click here to enter text.				

14. SCENARIO (CONT.) – IMPACTS ON CLIENTS

Climate change will impact different people in different ways, depending on where they live, the nature of the climate change event, the resources they have available, contingency planning and personal factors such as access to information about risks and adaptation.

People experiencing poverty and disadvantage could be the most vulnerable to climate change impacts and least able to cope without targeted resources and support.

In this section, we are interested in your understanding of the capacity of clients to cope with extreme weather/natural disaster impacts.

*14.1 * 18. Please tell us how clients would be affected if your organisation could not provide services immediately after a natural disaster? (For example, they could miss a supervised visit with their children, leading to a change to their family court orders.)*

Click here to enter text.

*14.2 * 19. Would demand for your services be affected by an extreme weather event/natural disaster?*

☐ Demand would likely increase during the crisis period, but then return to normal

☐ Demand would likely increase during the crisis period and be maintained long term

☐ Demand would likely decrease during the crisis period, but then increase and be maintained at the higher level long term

☐ Demand would likely decrease during the crisis period, but then return to normal

☐ Demand would likely decrease during the crisis period and be maintained long term

☐ An extreme weather event would not affect demand

☐ Other (please specify)

Click here to enter text.

15. SCENARIO (CONT.) – IMPACTS ON CLIENTS

*15.1 * 20. Which of the following reasons make it difficult for clients to prepare for the impacts of an extreme weather event/natural disaster that causes damage to the build environment and disruption to infrastructure services? (Please choose all that apply).*

☐ Health conditions that prevent preparation for extreme weather/disaster risks

☐ Lack of awareness about the likelihood and impacts of local extreme weather/disaster risks

☐ Lack of financial resources to prepare for extreme weather/disaster risks

☐ Circumstances beyond their control (e.g. Unable to move away from high-risk areas such as coastal caravan parks)

☐ Lack of access to information about how to prepare for extreme weather/disaster risks

☐ Lack of necessary skills to prepare for extreme weather/disaster risks

☐ Lack of access to transportation to escape extreme weather/disaster impacts

☐ More pressing needs

☐ Other (please specify)

Click here to enter text.

*15.2 * 21. With enough resources, could your organisation provide assistance to clients that would help them to better prepare BEFORE an extreme weather event/natural disaster?*

	Yes	No	Don't know
Educate clients about local extreme weather/natural disaster risks	☐	☐	☐
Educate clients about how to prepare for extreme weather events/natural disasters	☐	☐	☐
Evacuate clients from high-risk areas before a predicted extreme weather event/natural disaster	☐	☐	☐
Warn clients about a predicted extreme weather event/natural disaster	☐	☐	☐
Other (please specify) Click here to enter text.			

16. SCENARIO (CONT.) – IMPACTS ON CLIENTS

*16.1 * 22. With enough resources, could your organisation provide services to help clients better cope with the impacts of an extreme weather event/natural disaster AFTER it had occurred?*

	Yes	No	Don't know
Contact and locate clients	☐	☐	☐
Financial assistance/emergency relief	☐	☐	☐
Crisis accommodation	☐	☐	☐
Health care	☐	☐	☐
General/trauma counselling	☐	☐	☐
Legal assistance	☐	☐	☐
Financial counselling	☐	☐	☐
Volunteer management	☐	☐	☐
Specialist services related to your main areas of service provision	☐	☐	☐
Specialist assets/facilities (e.g. disabled transport)	☐	☐	☐
Other (please specify) Click here to enter text.			

17. LONGER-TERM CLIMATE CHANGE IMPACTS

You are now over halfway through the survey!

Over the medium and long term, climate change will cause steady, non-extreme changes. For example, gradual increases in average temperatures in summer, increased evaporation leading to less water for agriculture and higher food costs.

There will also be increases in the cost of utilities such as power and water as providers try to adapt their infrastructure to manage the changing climate. As costs increase, they will be passed on to consumers, including community welfare organisations and members of the community who access their services.

17.1 23. If possible, please tell us how much you spent on the following infrastructure services in the year ending 30 June 2011:

Telecommunications Click here to enter text.

Fuel Click here to enter text.

Water Click here to enter text.

Electricity Click here to enter text.

Gas Click here to enter text.

18. LONGER-TERM CLIMATE CHANGE IMPACTS (CONT.)

*18.1 * 24. If the cost of the following infrastructure services were to increase over the next 10 years, what percentage increase could your organisation absorb before its ability to provide services was seriously impacted? (Please give a best guess estimate).*

	5%	10%	25%	50%	Don't know
Telecommunications	☐	☐	☐	☐	☐
Water	☐	☐	☐	☐	☐
Gas	☐	☐	☐	☐	☐
Electricity	☐	☐	☐	☐	☐
Fuel	☐	☐	☐	☐	☐

Research shows that people living on low incomes struggle to manage costs increases for infrastructure services like electricity and water on their own. This can result in increased demand for a wide range of social services.

*18.2 * 25. Please tell us what consequences your clients face if they cannot meet increasing utilities costs. (For example, do they face being disconnected, being unable to cook or wash, becoming homeless?)*

Click here to enter text.

19. LONGER-TERM CLIMATE CHANGE IMPACTS (CONT.) – IMPACTS ON CLIENTS

*19.1 * 26. Which of the following reasons make it difficult for your organisation's clients to meet cost increases for things like power and water? (Please choose all that apply.)*

☐Lack of access to information about ways to reduce consumption

☐Health conditions that require high consumption

☐Insufficient funds

☐Lack of necessary skills

☐ Lack of financial resources to invest in new technologies or products that reduce consumption

☐ Lack of awareness about the relationship between consumption and costs

☐ Circumstances beyond their control (e.g. live in poor quality, poorly maintained rental or social housing stock).

☐ More pressing concerns

☐ Other (please specify)

Click here to enter text.

*19.2 * 27. With enough resources, could your organisation provide assistance to clients that could help them to adjust to rising utilities costs? (Please choose all that apply).*

☐ Cash assistance

☐ Education programs about energy efficiency, water efficiency etc.

☐ Financial counselling

☐ Practical energy efficiency programs (e.g. insulation, whitegoods, water efficiency technology)

☐ Microfinance programs

☐ High efficiency affordable housing

☐ None of the above

☐ Other (please specify)

20. ABOUT YOUR ORGANISATION

You have almost completed the survey! Just a few simple questions about your organisation to go.

In this section, you will be asked for some basic information about the organisation you are responding for. This information will not be used to identify you or your organisation individually. Your personal details may be used to contact you about your responses to the survey.

Information about your organisation will only be used in aggregate form to describe the different types of organisations that participated in the survey and the different risks they face.

*20.1 * 28. Please enter the following details:*

Name of person completing this survey: Click here to enter text.

Position: Click here to enter text.

Organisation name: Click here to enter text.

Organisation principal business address: Click here to enter text.

City/Town: Click here to enter text.

State: Click here to enter text.

Postcode: Click here to enter text.

Your email address: Click here to enter text.

Phone number: Click here to enter text.

*20.2 * 29. Did your organisation fill in the ACOSS Australian Community Sector Survey this year?*

☐ Yes

☐ No

☐ Don’t know

21. ABOUT YOUR ORGANISATION (CONT.) - SERVICES

*21.1 * 30. Please tell us whether you are providing answers for:*

☐ A network of services or agencies

☐ A specific service or workplace

*21.2 * 31. Which of the following service areas are you reporting answers for? (Please choose all that apply).*

	Urban	Regional	Remote
All States and Territories	☐	☐	☐
New South Wales	☐	☐	☐
Victoria	☐	☐	☐
Queensland	☐	☐	☐
South Australia	☐	☐	☐
Western Australia	☐	☐	☐
Tasmania	☐	☐	☐
Northern Territory	☐	☐	☐
Australian Capital Territory	☐	☐	☐

*21.3 * 32. What is the main way in which your organisation provides services to clients?*

☐ By telephone

☐ From a centre or office

☐ Online

☐ From a residential facility

☐ By outreach

☐ All of the above

Other (please specify)

Click here to enter text.

22. ABOUT YOUR ORGANISATION (CONT.) – SERVICES

*22.1 * 33. Please tell us which of the following make up your organisation's main areas of service provision. (Please choose all that apply).*

☐ Disability services (other than employment or mental health)

☐ Residential aged care and nursing homes

☐ Youth services and youth welfare services

☐ Child welfare, child services and day care

☐ Provision of employment or volunteering opportunities through social enterprise

☐ Employment/training services

☐ Indigenous support services

☐ Other health services

☐ Advocacy (other than legal services)

☐ Mental health services

☐ Migrant, refugee and asylum seeker services

☐ Legal services

☐ Information, advice and referral services

☐ Family and relationship services

☐ Financial support services (e.g. counselling, financial literacy, NILS, gambling)

☐ Emergency relief services for those experiencing financial crisis

☐ Domestic violence and sexual assault

☐ Housing/homelessness services

☐ Services for the aged and elderly (other than residential)

☐ Other (please specify)

Click here to enter text.

23. ABOUT YOUR ORGANISATION (CONT.) - WORKFORCE

Some basic information about staffing levels will help answer this question.

*23.1 * 34. Thinking about your organisation's staff:*

How many staff do you employ?

Click here to enter text.

What percentage is engaged in direct service provision?

Click here to enter text.

*23.2 * 35. Thinking about your organisation's volunteers, on average:*

How many work with the organisation each year?

Click here to enter text.

For how many hours each week do they work?

Click here to enter text.

*23.3 * 36. What age bracket do most of your volunteers fall into?*

☐ Under 30

☐ 30-44

☐ 45-64

☐ Over 65

☐ Volunteers are from a range of age groups. There is no dominant age group.

24. ABOUT YOUR ORGANISATION (CONT.) - INCOME

All information provided in this survey is confidential. Financial information is used to compare the size of organisations that participate in the survey and differences in vulnerability to utility cost increases. It will only be reported as aggregate data.

*24.1 * 37. What was your organisation's total annual income for the year ending 30 June 2011?*

Click here to enter text.

*24.2 * 38. Where does your organisation receive most of its income from? (Please choose up to TWO main sources)*

☐ Local government

☐ Private grants/donations

☐ State government

☐ Federal government

☐ Client fees

☐ Other (please specify)

Click here to enter text.

25. FEEDBACK

Finally, is there anything we missed?

25.1 39. Is there anything we didn't raise in the survey that you think it is important for us to consider?

Click here to enter text.

You have now completed the survey. The project team sincerely thanks you for your participation.

APPENDIX 3: COMMUNITY SECTOR RISK REGISTER

Code	Title	Standardised Statement of Risk
Client and Community		
RCHR		**CLIENT HEALTH / RESILIENCE CLUSTER**
1	**IMPAIRED PHYSICAL HEALTH ACUTE & SHORT TERM (EXCL. DISEASE OUTBREAKS/ VECTORS)**	IMPAIRED PHYSICAL HEALTH ACUTE & SHORT TERM (EXCL. DISEASE OUTBREAKS/ VECTORS): Risk of death, injury and illness from more intense and frequent extreme events. This includes heat waves, fires, floods and extreme weather events. E.g., heat stress and heat or cold related morbidity/mortality (e.g. increased urban island heat effect) in aging populations, homeless populations; allergies/respiratory distress from poor air quality during increased bushfires or dust storms.
2	**DETERIORATING PHYSICAL HEALTH MEDIUM & LONG-TERM (EXCL. DISEASE OUTBREAKS/ VECTORS)**	DETERIORATING PHYSICAL HEALTH MEDIUM & LONG-TERM (EXCL. DISEASE OUTBREAKS/VECTORS): Increase in respiratory and other health problems due to medium or long-term climate change hazards. E.g., increase in energy prices causes individuals and families to reduce their electricity consumption by limiting use of heating, cooling, electric cook tops, resulting in increased heat or cold-related morbidity and increased infections caused by consuming uncooked foods.
3	**REDUCED SOCIAL CONTACT**	REDUCED SOCIAL CONTACT: Reduced health and wellbeing and increased social isolation due to loss of access to centre-based activities, including physical activity, social activity and education / life skills activities.
4	**IMPAIRED INDIVIDUAL MENTAL HEALTH**	IMPAIRED INDIVIDUAL MENTAL HEALTH: Negative effects on individual mental health due to increased climate change morbidity/mortality. At the individual level, this includes increased risk for suicide occurrence, domestic & family violence or alcohol and other drug abuse due to an increase in exposure to extreme events and their impacts. Also includes increased financial stress resulting from cost of living pressures and increased unemployment due to climate change hazards.

5	MALADAPTATION	MALADAPTATION: Clients exposed to additional risks from climate change impacts because it is beyond their control to make or enforce adaptation choices. E.g. governments and private landlords fail to adequately adapt social housing and private rental dwellings. Includes lack of financial resources to invest in adaptation options independently. Includes making poor adaptation choices (such as choosing not to heat or cool homes on extreme days) because of lack of information or knowledge about climate change impacts or financial resources.
7	INADEQUATE EVACUATION PLANS & SHELTERS	INADEQUATE EVACUATION PLANS & SHELTERS: Risk of death or injury due to inadequate evacuation plans, evacuation points and shelters. Including social housing complexes, homeless shelters and refuge/temporary accommodation, residential care facilities and for client groups with particular needs. E.g. physical or intellectual impairments, mental illness, frail and aged clients.

RCoH		**COMMUNITY HEALTH CLUSTER**
1	IIMPAIRED COMMUNITY MENTAL HEALTH	IMPAIRED COMMUNITY MENTAL HEALTH: Negative effects on community mental health due to increased climate change morbidity/mortality. At the community level, this includes increased violence/antisocial behaviour and conflict. Also includes general community dissatisfaction, anxiety, distress associated with climate change health impacts and loss of employment, homes or other assets.
2	DISEASE VECTORS	DISEASE VECTORS: Appearance of or increase in tropical mosquito-borne and other disease-vector species and pests due to climate change. E.g., dengue fever and malaria. Includes rodent infestations. The risk of communicable disease outbreaks may be heightened in high density/low-income housing stock such as social housing or in residential care facilities such as nursing homes and other aged-care facilities.

3	**DISEASE OUTBREAKS**	DISEASE OUTBREAKS: Public health impact/disease outbreaks from contamination of waterways and food sources. Water contamination may stem from flooding and algal blooms, increased use of water from rainwater tanks, reduced water availability, and reduced water quality. Contamination of food sources may stem from power failure and food poisoning, increased heat, inappropriate storage and food handling practices and increased inappropriate use of grey water. Lack of access to safe food and water may lead to increased demand for services, including emergency relief. Organisations that provide outreach or residential meal services may be at heightened risk of contributing to disease outbreaks. Regional and remote locations, including Aboriginal and Torres Strait Islander communities, may be particularly impacted by disease outbreaks due to lack of adequate water supplies, food storage and refrigeration facilities.
5	**FOOD SECURITY / INCREASED COST OF FOOD**	FOOD SECURITY / INCREASED COST OF FOOD: For people on low incomes or experiencing poverty or social disadvantage, food security is directly linked to the cost of food. Increased cost of food leads to increased demand for food relief. At the same time, reduced food security leads to CSOs having less food to distribute to people in need. Food shortages are likely to be particularly acute in remote areas, including Aboriginal and Torres Strait Islander communities, due to isolation, lack of adequate storage and refrigeration, and associated difficulties for CSOs to provide adequate services to remote locations.
6	**INCREASED COST OF LIVING**	INCREASED COST OF LIVING: Living costs rise due to increases in the cost of goods and services, including electricity, fuel, food and health care, due to climate change forcing increasing numbers of people into financial hardship. Includes increased demand for social service assistance from existing clients and from others unable to manage rising costs, particularly emergency relief, emergency accommodation, and financial assistance to pay energy and other bills and other financial services.
7	**DISRUPTION TO WASTE COLLECTION SERVICES**	DISRUPTION TO WASTE COLLECTION SERVICES: Disruption of council and other waste collection services caused by extreme weather events and flooding. Includes CSO service disruption or closure due to hygiene concerns. CSOs providing residential care services or health services may be particularly impacted. E.g. a health service unable to dispose of biological waste appropriately may face disruption to services.

8	FORCED DEVELOPMENT CHANGES	FORCED DEVELOPMENT CHANGES: State or federal government allow development in known high-risk areas. E.g. social housing infrastructure. Includes the risk that the revision of the Building Code of Australia will not recommend best practice changes and will continue to allow inappropriate dwellings to be constructed.
9	INDIGENOUS CULTURAL AND / OR HERITAGE LOSS	INDIGENOUS CULTURAL AND / OR HERITAGE LOSS: Loss of culture resulting from loss of entire ecosystems due to extreme weather, sea level rise; including cultural erosion due to population migration/fluctuations. Including increased distress within indigenous communities associated with loss of culturally significant sites.

RCR		COMMUNITY RESILIENCE CLUSTER
11	CHANGE IN URBAN CHARACTER	CHANGE IN URBAN CHARACTER: Change in urban or community character due to climate change. Includes community backlash, increased antisocial behaviour, increased use of resources to maintain status quo and the creation of 'climate change ghettoes' of low-income and disadvantaged groups unable to adapt to the changing climate or relocate to areas of lower risk.
12	GENERALISED IMPACTS	GENERALISED IMPACTS: Change in business patterns due to short and long-term impact from extreme weather events. Includes closure of schools, business etc., workers not showing up to work due to impacts of extreme events or reduced productivity; also includes response to customer demand to support adaptive measures; decreased attractiveness of region for new business development and / or new employees; flooding of whole industrial areas and its detrimental economic impact that includes mass stranding of workers in flood liable areas.
13	INCREASED PUBLIC HEALTH COSTS	INCREASED PUBLIC HEALTH COSTS: Increase in public health costs due to climate change. Includes increased demand for community-based health services due to low-income and disadvantaged groups being excluded from the public health system due to increased costs.

14	**CHANGE IN POPULATION SIZE & DEMOGRAPHICS**	CHANGE IN POPULATION SIZE & DEMOGRAPHICS: Negative economic effects due to temporary or permanent inward and outward migrations and changes in population demographics in response to climatic change. Includes movement in response to disease risks and extreme and prolonged weather events. Includes climate change refugees, and communities forced inland by coastal flooding or other forms of inundation ("Atlantis Effect"). Includes shifts in industry requiring fewer workers - reducing population size e.g. passive agricultural enterprise. Includes increased isolation of disadvantaged and vulnerable groups unable to relocate away from high-risk areas.
15	**INCREASED GAP BETWEEN SOCIO-ECONOMIC CLASSES**	INCREASED GAP BETWEEN SOCIO-ECONOMIC CLASSES: Increased split between socio-economic classes driven by impacts of climate change. Includes social inequity and public conflict brought about due to prolonged exposure to extreme weather events e.g. drought leading to water theft.
16	**RISING INSURANCE COSTS**	RISING INSURANCE COSTS: Economic hardship due to increased cost of insurance for clients and CSOs. Includes the impact on future demand for CSO services of increasing numbers of uninsured or under-insured people in the community.
17	**INABILITY TO OBTAIN INSURANCE**	INABILITY TO OBTAIN INSURANCE: Detrimental impact on service provision due to inability to acquire insurance to cover extreme weather events. For organisations, an inability to obtain adequate insurance could result in an inability to continue service provision, with flow-on effects for clients.
18	**UNDERINSURANCE**	UNDERINSURANCE: Reduced ability of low-income individuals and households to recover from extreme events due to lack of or under-insurance. Leads to increased demand for CSO services, including financial assistance, accommodation, emergency relief, child and youth welfare services etc.
19	**DAMAGE TO NATURAL ECOSYSTEMS PROVIDING FOOD**	DAMAGE TO NATURAL ECOSYSTEMS PROVIDING FOOD: Damage to ecosystems that provide the main source of food for people. This is critical in the Tropics/Northern Territory, where it would have a huge effect on all aspects of the community.
20	**INTER-AGENCY COOPERATION**	INTER-AGENCY COOPERATION: Possible shortfall in cooperation required to mitigate expected increases in intensity of bushfire.

21	**INCREASED POPULATION LIVING IN VULNERABLE AREAS**	INCREASED POPULATION LIVING IN VULNERABLE AREAS: Increased areas of high density population residence deemed vulnerable under climate change conditions
22	**RESISTANCE TO CHANGE**	RESISTANCE TO CHANGE: Community resistance to development controls in high-risk areas, which are perceived as too onerous and/or cause short-term loss to value.

RFR		**FINANCIAL RESILIENCE CLUSTER**
1	**DISRPUTION TO INDUSTRY & EMPLOYMENT -**	DISRUPTION TO INDUSTRY AND EMPLOYMENT: Economic decline in key industries, including tourism, mining, manufacturing, agriculture, marine and coastal industries and the power sector, due to climate change hazards leads to increased unemployment and financial insecurity. Detrimental impacts of economic decline in particular industries exacerbated in communities that rely on single industries as major employment providers. Includes increased demand for financial assistance and other welfare services from CSOs.
2	**GENERALISED IMPACTS ON EMPLOYMENT / WORKFORCE PARTICIPATION**	GENERALISED IMPACTS: Change in business patterns due to short and long-term impact from extreme weather events. Includes closure of schools, business etc., and workers not showing up to work due to impacts of extreme events or reduced productivity. Also includes decreased attractiveness of region for new business development and / or new employees; flooding of whole industrial areas and its detrimental economic impact that includes mass stranding of workers in flood liable areas.
3	**JOBS REDUCTIONS**	JOBS REDUCTIONS: Reduction in job opportunities due to generalised pressures or impacts on the local economy, and or loss of livelihood due to health impacts of climate change. Includes greater demand for welfare services.

RCSD		CLIENT/COMMUNITY SERVICE DELIVERY CLUSTER	
	1	CLIENT NEED VS ENVIRONMENTAL CONFLICT	CLIENT VS ENVIRONMENTAL NEED: Client and community backlash due to conflict between meeting client needs / demands and climate change mitigation and adaptation. E.g. if organisational resources are diverted from direct service provision towards long-term sustainability measures.
	2	ACCESS TO SERVICES BLOCKED	ACCESS TO SERVICES BLOCKED: Access to services disrupted due to increased flooding of low-lying bridges and other transport corridors. Includes isolation of vulnerable communities who are cut off from community welfare and emergency services.
	3	DECLINE/ STRAIN/ DISRUPTION TO SOCIAL AND WELFARE SERVICE PROVISION	DECLINE/ STRAIN/ DISRUPTION TO SOCIAL & WELFARE SERVICE PROVISION: General decline in community health and wellbeing due to general strain on services. Includes increased demand for services, diversion of resources to respond to extreme events, disruption of CSOs ability to deliver services. Including staff shortfalls during periods of demand caused by extreme events. E.g., health risks arising from inability to distribute food or medication or to provide outreach and home care services.
	4	ISOLATION OF CSOs	ISOLATION OF CSOs: Physical isolation of CSOs due to extreme weather events, including organisations providing residential services such as aged care or short, medium or long-term accommodation
	5	INCREASED DEMAND FOR EMERGENCY / TEMPORARY ACCOMMODATION	INCREASED DEMAND FOR EMERGENCY / TEMPORARY ACCOMMODATION: Increased demand for emergency accommodation due to climate change impacts, including homeless shelters, accommodation for families, refuge accommodation for women and children experiencing domestic & family violence, and youth refuge accommodation. Also includes increased demand for emergency accommodation from social housing residents if social housing stock is damaged as a result of exposure to climate change hazards.
	6	INCREASED DEMAND FOR MEDIUM / LONG-TERM ACCOMMODATION	INCREASED DEMAND FOR MEDIUM / LONG-TERM ACCOMMODATION: Increased demand for medium- and long-term accommodation due to climate change impacts, including increased length of waiting times for access to community and social housing. Also includes increased demand for medium- and long-term accommodation from families, women and children experiencing domestic and family violence and young people.

7	**INCREASED DEMAND FOR RESIDENTIAL DISABILITY SERVICES**	INCREASED DEMAND FOR RESIDENTIAL DISABILITY SERVICES: Increased demand for residential disability services, including in community-based group homes due to climate change impacts. Includes increased demand caused by the inability of family members to continue providing home-based care due to property damage or increased stress or family breakdown due to climate change impacts.
8	**INCREASED DEMAND FOR FAMILY & RELATIONSHIP SERVICES**	INCREASED DEMAND FOR FAMILY RELATIONSHIP SERVICES: Increased demand for family and relationship services. Includes family breakdown and increased incidence of domestic and family violence due to climate change impacts.
9	**INCREASED DEMAND FOR FINANCIAL COUNSELLING SERVICES**	INCREASED DEMAND FOR FINANCIAL COUNSELLING SERVICES: Increased demand for financial counselling services. Includes increasing numbers of people experiencing financial hardship due to losses sustained during extreme weather events. Also includes increased debt collection proceedings against low-income Australians unable to manage rising living costs and increased declarations of bankruptcy.
10	**INCREASED DEMAND FOR EMERGENCY RELIEF / MATERIAL AID**	INCREASED DEMAND FOR EMERGENCTY RELIEF / MATERIAL AID: Increased demand for emergency relief / material aid. Includes increased need due to increased financial hardship and due to losses sustained as a result of extreme weather events.
11	**INCREASED DEMAND FOR AGED / SUPPORT CARE SERVICES**	INCREASED DEMAND FOR AGED / SUPPORT CARE SERVICES: Increased demand for aged care services. Includes as a result of family members no longer being able to provide care at home due to family breakdown or other losses sustained as a result of climate change impacts.
12	**CHILDCARE SERVICES**	CHILDCARE SERVICES: Inability of community run services to meet long term demand and / or provide continuity of care due to disruption of services. Includes flow on effects of parents not being able to attend work, e.g. increased financial stress leading to increased demand for other community and social welfare services or family breakdown.
13	**INCREASED DEMAND FOR DOMESTIC VIOLENCE SERVICES**	INCREASED DEMAND FOR DOMESTIC AND FAMILY VOLENCE SERVICES: Increased demand for domestic and family violence services. Includes as a result of family breakdown and violence in response to stress caused by extreme heat or extreme weather events.

14	**INCREASED DEMAND FOR DRUG & ALCOHOL SERVICES**	INCREASED DEMAND FOR DRUG AND ALCOHOL SERVICES: Increased demand for drug and alcohol services. Includes as a result of increased drug and alcohol use in the general population in response to stress or trauma caused by extreme events, as well as increased risk of relapse and overdose amongst existing clients.
15	**INCREASED DEMAND FOR COMMUNITY LEGAL SERVICES**	INCREASED DEMAND FOR COMMUNITY LEGAL SERVICE PROVIDERS: Increased demand for legal services, particularly in response to extreme weather events.
16	**DISRUPTION TO OTHER SERVICE PROVIDERS**	DISRUPTION TO OTHER SERVICE PROVIDERS: Disruption to the operation of other services providers due to extreme weather events and flooding leading to disruption to CSO services. Includes disruptions to other CSOs. CSO service disruption or closure due to hygiene concerns. CSOs providing residential care services or health services may be particularly impacted. E.g. a health service unable to dispose of biological waste appropriately may face disruption to services.
19	**HEALTH SYSTEM STRAIN**	HEALTH SYSTEM STRAIN: Reduced ability of the public health system to cope and increased health costs to the community due to increased mortality and morbidity. This increased strain may be associated with extreme or other weather event stress and disease outbreaks from waterborne and food-borne disease and disease vector movements. Increased strain on the public health system may lead to increased demand for community-based health services and for financial assistance to meet the rising costs of health care.
20	**EMERGENCY SERVICES INADEQUATE**	EMERGENCY SERVICES INADEQUATE: Inability of emergency services or groups to cope with increased demand. Increased demand for localised emergency response, including from CSOs, due to increased severity and/or frequency of extreme events including tropical cyclones, extended duration of fire season, increases in home assist visits, inadequate numbers of volunteers (or too many 'spontaneous volunteers' during a crisis and inadequate management plans or capabilities), inadequate emergency response procedures in place.
21	**DISRUPTION TO COOMUNITY SERVICE**	DISRUPTION TO COMMUNITY SERVICE PROVISION: General decline in community health and wellbeing due to general strain on services. Includes increased demand for services, diversion of

	PROVISION	resources to respond to extreme events, disruption of CSOs ability to deliver services. Including staff shortfalls during periods of demand caused by extreme events. E.g. health risks arising from inability to distribute food or medication or to provide outreach and home care services.
22	**INADEQUATE / INCREASED DEMAND FOR EMERGENCY RESPONSE CENTRES**	INCREASED DEMAND FOR EMERGENCY RESPONSE CENTRES: Increased demand for emergency shelters may lead to CSO buildings being used as ad hoc emergency shelters during extreme weather events. CSO infrastructure may provide inadequate shelter against particular events, e.g. few CSO buildings are cyclone proof. Lack or redundancy of infrastructure if existing buildings destroyed by fire or storm.
23	**INCREASED DEMAND FOR EMERGENCY RELIEF / MATERIAL AID**	INCREASED DEMAND FOR EMERGENCTY RELIEF / MATERIAL AID: Increased demand for emergency relief / material aid due to climate change impacts. Includes increased need due to increased financial hardship and due to losses sustained as a result of extreme weather events.
24	**SERVICE PROVISION VS. PROTECTION AGAINST CLIMATE CHANGE HAZARDS**	SERVICE PROVISION vs. PROTECTION: Conflict between service provision objectives and requirements to protect CSO against climate change hazards, e.g. bushfires, flooding, cyclones etc. Includes client backlash against CSO investment in climate change adaptation.

Policy and advocacy

RPSD	**TITLE**	**SECTOR DEVELOPMENT CLUSTER**
1	**DISRUPTION TO COLLABORATION**	DISRUPTION TO INTERORGANISATIONAL COLLABORATION AND SUPPORT
2	**LOSS OF SHARED PURPOSE AND BELONGING**	LOSS OF SENSE OF SHARED PURPOSE AND BELONGING
3	**DISRUPTION TO TRAINING**	DISRUPTION TO STATE AND SECTOR WIDE TRAINING AND DEVELOPMENT PROGRAMS COORDINATED BY PEAK BODIES

RPCA			**CONSUMER ADVOCACY CLUSTER**
	1	**DISRUPTION TO INFORMATION PROVISION**	DISRUPTION TO INFORMATION PROVISION TO CONSUMERS
	2	**DISRUPTION TO ADVOCACY**	DISRUPTION TO ADVOCACY ON BEHALF OF CONSUMERS: For example, with and on behalf of people with a disability, with mental illness, for carers, low-income consumers of energy and other utilities etc.

RPA			**POLICY ADVOCACY CLUSTER**
	1	**LOBBYING FOR POLICY CHANGE**	LOBBYING FOR POLICY CHANGE: Requirement for the sector to advocate for state and federal climate change and adaptation policies that ensure the specific need and circumstances of disadvantaged and vulnerable groups are adequately recognised and addressed.

Service continuity and administration

RSPA		**TITLE**	**PREMISES / SERVICE CENTRE CLUSTER**
	1	**DAMAGE TO COMMUNITY SERVICE BUILDINGS**	DAMAGE TO COMMUNITY & SOCIAL WELFARE SERVICE BUILDINGS: Damage to community service buildings from climate change hazards, including community health centres, mental health, disability, housing and homelessness, youth and family, domestic violence, emergency relief, community legal services and others. Damage to buildings leads to disruptions residential, office or centre-based and outreach services. Significant damage may lead to service closure if CSOs lack the resources to repair damage or relocate, leaving clients without access to crucial services.

2	**BUILD/RELOCATE INFRASTRUCTURE**	BUILD/RELOCATE INFRASTRUCTURE: Infrastructure may need to be built or relocated to accommodate adaption to climate change risks.
3	**UNFIT LOCATIONS/MAL-DEVELOPMENT**	UNFIT LOCATIONS/MAL-DEVELOPMENT: Current or planned locations of infrastructure may be unfit for purpose and unviable in the future. Includes possible reduction in the life of infrastructure. [More generalised category required, i.e. Not water specific. Location will relate to where buildings are built or purchased and where they are located on major infrastructure supply lines. Lack of buying power and choice also a factor for CSOs in terms of where to locate / purchase infrastructure.
4	**REDUCED ACCESS/AMENITY**	REDUCED ACCESS/AMENITY: Loss or altered client access to community and CSO facilities, reducing client wellbeing. This includes office-based and outreach CSO facilities as well as public facilities such as parks, gardens, coastal areas, libraries, swimming pools and recreational facilities, particularly for young people. Includes access changes due to degradation of outdoor facilities (e.g. parks, gardens) due to flooding, water shortage, and exacerbated drought. Includes associated increase in social isolation. Includes physical and mental health impacts where clients are unable to access services that provide essential health services or distribute and monitor prescription medication.
5	**CHANGED/INCREASED USAGE OF CSO FACILITIES**	CHANGED/INCREASED USAGE OF CSO FACILITIES: Changes or increases in use of CSO facilities due to degradation or non-viability of private facilities or due to changed climate conditions. E.g. increased pressure on indoor facilities during extreme weather. Changed demand for leisure/cultural facilities due to changed climate e.g., where it increases heat stress risk.
6	**PROPERTYDAMAGE OR LOSS**	PROPERTY DAMAGE OR LOSS: Property damage or destruction of residential, commercial and industrial buildings. Includes rising water table causing movement or cracking of building plumbing.
7	**DEVALUATION OF PROPERTY**	DEVALUATION OF PROPERTY: Devaluation of land and property in areas identified as high risk under climate change.

9	BUILDING USE DISRUPTION	BUILDING USE DISRUPTION: Building users suffer more disruption due to various climate change impacts. E.g., frequent / severe flooding, stormwater drains being inadequate to provide proper drainage.
10	BUILDING STABILITY	BUILDING STABILITY: reduced stability of housing foundations due to contraction/expansions of soils, increased acid sulphate soils.
11	UNFIT LOCATIONS	UNFIT LOCATIONS: Current or planned locations for infrastructure may be unfit for purpose.

RE		**ENERGY CLUSTER**
1	ENERGY SECURITY	ENERGY SECURITY: Energy supply issues negatively impacting CSOs ability to provide residential or centre-based services to clients. Includes increased demand from clients for financial assistance from CSOs to meet rising private energy costs.
2	ENERGY COSTS & DEMAND	ENERGY COSTS & DEMAND: Increase in energy costs for CSOs. Includes climatic controls, increased energy demand due to hotter temperatures, increased risk of blackouts and other power outages. Includes increased demand from clients for financial assistance to meet rising energy bills.
3	POWER OUTAGE	POWER OUTAGE: Disruption to service provision due to power outages and associated loss of facilities.
4	ENERGY COSTS DUE TO AIRCON	ENERGY COSTS DUE TO AIRCON: Increased energy costs associated with increased energy demand due to need for cooling. Includes impact to CSO operating costs. Includes impact on CSO of increased demand for financial assistance from clients to meet increasing private energy costs.
5	CARBON COSTS	CARBON COSTS: Increase in fuel and energy costs to run CSO facilities and vehicles due to a price on carbon.

	6	MALDEVELOPMENT	MALDEVELOPMENT: Current or planned locations for developing CSO infrastructure and placing communities may be unviable in the future due to sea level rise or other climate change hazards.
RP			**PLANNING CLUSTER**
	1	INADEQUATE EMERGENCY RESPONSE PLANNING	INADEQUATE EMERGENCY RESPONSE PLANNING: increased frequency of extreme weather events requires improvements to CSO emergency response.
	2	INADEQUATE UNDERSTANDING OF RELATIONSHIP BETWEEN EXTREME WEATHER EVENTS	INADEQUATE UNDERSTANDING OF RELATIONSHIP BETWEEN EXTREME WEATHER EVENTS: Lack of understanding of climate hazards leads to inadequate understanding or climate change risks. E.g. Drought + high wind = fuel accumulation for bushfires. Wind drives severity and speed of bush fire.
	3	LACK OF HAZARD MANAGEMENT	LACK OF HAZARD MANAGEMENT: Lack of hazard management by CSOs due to lack of knowledge about climate change risks, lack of staff, expertise or resources.
	4	INADEQUATE FLOOD PROTECTION FOR FUTURE EVENTS	INADEQUATE FLOOD PROTECTION FOR FUTURE EVENTS: Inadequate riverine and coastal flood protection for future extreme flooding events may place CSOs at high risk of disruption.
	5	POOR FLOOD MONITORING & MODELLING	POOR FLOOD MONITORING & MODELLING: Current models fail to reflect extent of inundation incorporating predicted climate change scenarios.
	6	DATA GAPS	DATA GAPS: Lack of information about climate change hazards; also data gaps/loss due to the impact of extreme weather events.
	7	INADEQUATE PLANNING / DUE DILIGENCE	INADEQUATE PLANNING: CSO liability due to failure of planning to account for flood threat or bushfires threat to development. E.g. failure to account for threats under climate change worst-case scenario modelling. Includes increased pressures on CSO to provide services to growing numbers of clients, including emergency relief and disaster response.
	8	DISPLAN OBLIGATIONS	DISPLAN OBLIGATIONS: CSO unable to meet its obligations under the DISPLAN, putting a strain on / exhausting CSO ability to deliver regular services and to respond to emergency call outs. [Relevant if DISPLAN requirements applicable to CSOs now or in future; alternatively - the

			risk could be that CSOs do not have DISPLAN obligations and therefore are more vulnerable to disaster impacts].
	9	**EMERGENCY SERVICE COMMUNICATION**	EMERGENCY SERVICE COMMUNICATION: Legal risks related to the need to fulfil the requirement for CSO to have more communications with emergency services in light of climate change related disasters.
RC			**COMMUNICATIONS CLUSTER**
	1	**INADEQUATE INTER (EMERGENCY) AGENCY COMMUNICATION**	INADEQUATE INTER (EMERGENCY) AGENCY COMMUNICATION: Agencies unable to communicate sufficiently to cope with increased mental and physical health needs due to extreme weather, temperature.
	2	**COMMS FAILURE DUE TO POWER**	COMMS FAILURE DUE TO POWER: Communications outages and computer shutdown due to power failure during extreme weather events.
	3	**COMMS FAILURE DUE TO DAMAGE / DESTRUCTION**	COMMS FAILURE DUE TO DAMAGE/DESTRUCTION: Damage/destruction of fixed lines and mobile towers due to extreme weather events and subsurface infrastructure damage due to ground, movement, shifts.

RRT			**ROADS AND TRANSPORT CLUSTER**
	1	**INCREASED COST PUBLIC TRANSPORT**	INCREASED COST OF PUBLIC TRANSPORT: Increased cost of public transport due to governments passing on higher operating costs (e.g.. increased cost of fuel, road and route maintenance, vehicle maintenance) resulting from climate change onto customers. Includes increased isolation of vulnerable individuals and groups unable to access public transport due to increased costs).
	2	**INCREASED COST OF PRIVATE TRANSPORT**	INCREASED COST OF PRIVATE TRANSPORT: Increased cost to CSO of maintaining private vehicles required for service provision, e.g. cars to provide outreach services, soup vans, buses etc., due to increasing fuel and maintenance costs resulting from climate change impacts.

3	**TRANSPORT / ACCESS DISRUPTION**	TRANSPORT / ACCESS DISRUPTION: Disruption of road, rail or air transport due to closure or damage to roads, rail lines and airstrips. Damage or loss of access may stem from more frequent/severe inundation and lack of sufficient stormwater systems for drainage; from erosion, or landslides that block/damage roads or erode unsealed roads; from soil expansion and contraction or other sources of softening/shrinkage/damage to land transport infrastructure (including roads, rail, bridges and pedestrian infrastructure e.g. buckling of rail tracks); also includes secondary impacts of extreme weather events e.g. damage incurred from trees falling, or root movement due to high stress on branches etc.; damage or destruction of coastal roads; and damage to sea transport infrastructure such as ferry piers, from sea level rise; damage from loss of traffic control systems due to heat stress or other factors including loss of power; also includes damage / flooding of underground car parks.
4	**FAILURE / DAMAGE OF TRANSPORT INFRASTUCTURE**	DISRUPTION TO SERVICE PROVISION DUE TO DAMAGE / FAILURE OF TRANSPORT INFRASTRUCTURE: Disruption to CSO service provision due to transport infrastructure failure, e.g.. Damage or inundation to roads or loss of access to transport routes due to bushfires. Includes disruption to office-based services because staff members are unable to get to work. Includes inability to provide outreach services due to loss of access to key routes, isolation of communities etc.
5	**ISOLATION OF VUNERABLE COMMUNITIES**	ISOLATION OF VUNERABLE COMMUNITIES: Disruption of travel and blocked access for areas with limited transport corridors as they are cut off due to extreme events and other climate change impacts. Includes emergency evacuation routes. Includes disruption to transport services due to loss of power to transport infrastructure, including traffic lights, rail signals etc.
6	**BUILD/RELOCATE INFRASTRUCTURE**	BUILD/RELOCATE INFRASTRUCTURE: The need to build new or relocate existing infrastructure to accommodate adaption to climate change risks to transport infrastructure. E.g. CSO buildings need to be relocated away from particular roads that are at high risk of inundation due to climate change impacts or from areas at high risk bushfires with a single entry / exit road. Includes impact of relocation of CSO on ability to reach highest-risk client groups. Includes impact of relocation costs on ability to continue service provision.

	7	**DECREASED ACCESS TO PUBLIC TRANSPORT**	DECREASED ACCESS TO PUBLIC TRANSPORT: Reduced access to public transport due to climate change, resulting in isolation of disadvantaged groups and those reliant on public transport system to access services. Includes increased demand on outreach services.
	8	**INCREASED COMMUNITY TRANSPORT DEMAND**	INCREASED COMMUNITY TRANSPORT DEMAND: Increased demand due to prolonged warmer temperatures, or disruptions to public transport systems.

RW			**WATER CLUSTER**
	1	**INCREASED COST OF WATER SUPPLY & WASTE WATER SERVICES**	INCREASED COST OF WATER SERVICES: Increased costs of water operations, water supply and wastewater services passed on by councils to CSOs. Includes impact of increasing operational costs on CSOs ability to continue adequate service provision to meet client need / demand.
	2	**DAMAGE TO OR FAILURE OF WATER INFRASTRUTURE**	DAMAGE TO OR FAILURE OF WATER INFRASTRUCTURE: Damage to or failure of water infrastructure, including sewerage systems, potable water infrastructure, storm water systems, drainage systems and water storage and supply infrastructure due to climate change leads to disruption or failure of service provision. E.g. through flooding, backflow of sewerage or contamination of potable water. Includes impacts to residential aged-care and disability services, centre-based services, childcare services and flow-on effects for individuals and families.
	3	**CONTAMINATION OF POTABLE WATER**	CONTAMINATION OF POTABLE WATER: Potable water quality decrease due to pollution from overwhelmed storm water treatment systems, drought impacts, algal blooms in reservoirs and waterways, contamination of groundwater sources through inundation or landfill leaching etc. Includes increased risk of disease outbreaks in residential facilities or at CSOs that provide meal services or health services.
	4	**RESIDENTIAL WATER TANK QUALITY**	CSO WATER TANK QUALITY: Decreased water quality in private water storage, e.g. rainwater tanks. Leads to increased risk of disease and flow-on effects for clients.
	5	**LOST AMENITY**	LOST AMENITY: Loss of water amenity and function to households (including small remote communities) and business due to drought or other extreme weather events.

6	SEWERAGE ODOR ISSUES	SEWERAGE ODOR ISSUES: Increased odour emissions from sewerage systems leadings to reduced community wellbeing.
7	INCREASED WATER CONSTRAINTS	INCREASED WATER CONSTRAINTS: Lack of water to maintain services, including residential care facilities and accommodation services. Includes decline in amenity due to water shortages from increased frequency and severity of drought, resulting in loss of community access to essential services, particularly in regional and remote areas subject to drought where water shortages may be more acute.
8	FAILURE OF SUPPLY	WHS ISSUES RELATED TO WATER SUPPLY FAILURE: Disruption of water supplies due to extreme events and climate change impacts leading to service closure because of health and safety concerns related to hygiene and the increased risk of spreading disease, particularly for services providing accommodation and meals.

Governance and finance

RA	TITLE	ASSETS CLUSTER
1	PROPERTY DEVALUATION FROM CONTROLS	PROPERTY DEVALUATION FROM CONTROLS: Reduced property values where development controls in high-risk areas become onerous. Includes impact on CSOs ability to relocate services due to declining value of assets.
2	LOSS OF OR DAMAGE TO ASSETS & EQUIPMENT	LOSS OF OR DAMAGE TO ASSETS AND EQUIPMENT: Property damage or destruction and loss of specialist equipment. E.g., damage to hoists for personal care services for people with a disability, disability transport vehicles, and medical equipment.
3	BUILDING COSTS	BUILDING COSTS: Increased capital costs due to building, structure and infrastructure repairs, retrofits, redesign and upgrading. Includes changes in regulatory requirements, e.g., new requirements for buildings in bushfire or flood prone areas.

4	**LOSS OF VALUE & / OR REDUCED LIFE SPAN**	LOSS OF VALUE & / OR REDUCED LIFE SPAN: Loss of capital wealth due to damage to CSO assets, or a reduction in their economic life from climate change. Includes buildings, vehicles and recreation facilities. Causes may be primary impacts of general climatic changes and extreme events. Causes may also include knock-on effects of reduced CSO expenditure on maintenance if it is compelled to increase expenditure in other areas heavily impacted by climate change.
5	**DAMAGE OR DEGRADATION OF CSO PROPERTY**	DAMAGE OR DEGRADATION OF CSO PROPERTY: Property damage to or destruction of CSO buildings and / or lands due to climate change. Includes damage from non-extreme events changes such as ground movement / shifting foundations / water table effects, as well as from extreme events.
6	**FLEET DAMAGE COSTS**	FLEET DAMAGE COSTS: Increased operational costs incurred due to damage of CSO vehicles from extreme weather events.

RFM		**FINANCIAL MANAGEMENT CLUSTER**
1	**REDUCED GOVERNMENT FUNDING FOR CSOs -**	REDUCED GOVERNMENT FUNDING FOR CSOs: General economic decline due to climate change hazards or policy responses to climate change leads to reduced government funding for CSOs reliant on government contracts to provide essential services to low-income and disadvantaged groups.
2	**REDUCED PRIVATE & PHILANTHROPIC FUNDING FOR CSOs -**	REDUCED PRIVATE & PHILANTHROPIC FUNDING FOR CSOs: General economic decline and increased financial hardship due to climate change hazards or policy responses to climate change leads to reduced donations or grants to CSOs from private individuals and philanthropic organisations. Organisations reliant on these funds may be unable to continue service provision to low-income and disadvantaged groups.
3	**RISING INSURANCE COSTS**	RISING INSURANCE COSTS: Economic hardship due to increased cost of insurance for clients and CSOs. Includes the impact on future demand for CSO services of increasing numbers of uninsured or under-insured people in the community.

4	**INABILITY TO OBTAIN INSURANCE**	INABILITY TO OBTAIN INSURANCE: Detrimental impact on service provision due to inability to acquire insurance to cover extreme weather events. For organisations, an inability to obtain adequate insurance could result in an inability to continue service provision, with flow-on effects for clients.
5	**UNDERINSURANCE**	UNDERINSURANCE: Reduced ability of low-income individuals and households to recover from extreme events due to lack of or under-insurance. Leads to increased demand for CSO services, including financial assistance, accommodation, emergency relief, child and youth welfare services etc.
6	**CARBON PRICE ON FUEL AND ENERGY**	CARBON PRICE ON FUEL AND ENERGY: Increase in operating and transport costs associated with carbon pricing and other climate related policies. Includes increase in fuel and energy costs to run CSO facilities and vehicles due to a price on carbon.
7	**REDUCED INCOME STREAM**	REDUCED INCOME STREAM: Reduced CSO income relative to demand for or cost of service delivery. Includes reduced income from federal, state & local governments and private and philanthropic donors.
8	**INCREASED RATE CHARGES**	INCREASED RATE CHARGES: Increased overhead / operational costs due to increased council rates.
9	**INCOME BASE DOWN WITH ECONOMY**	INCOME BASE DOWN WITH ECONOMY: Reduced income from government / other funding sources due to general economic decline. Includes increased competition for government and other funding between organisations and between the community service sector and other sectors within the economy.
10	**REDUCED PRIVATE CHARITABLE DONATIONS TO CSO**	REDUCED PRIVATE CHARITABLE DONATIONS TO CSO: Reduced ability of private individuals to make charitable donations to CSO due to financial hardships caused by impacts of climate change. Impacts include drought, low snowfall, flooding, extreme weather events, heat waves, etc. Includes in kind as well as monetary donations.

11	INSURANCE COSTS	INSURANCE COSTS: Increased cost of insurance for CSO for both assets and operations due to climate change. Includes increased premiums for more frequent or extreme weather events. Includes higher premiums due to more property damage (e.g. damage to vehicles) and personal injuries sustained by staff or clients in CSO facilities, e.g. residential aged-care and disability centres, community-based child-care centres, youth recreation spaces, etc.
12	NON INSURABLE LOSSES	NON-INSURABLE LOSSES: Increased expenditure on non-insurable losses such as those arising from buildings and assets in coastal areas, near river and on flood plains, or areas at high risk from bushfires.
13	CAPITAL EXPENDITURES	CAPITAL EXPENDITURES: New and increased capital costs to CSO due to a range of climate change hazards. Including building, structure and infrastructure repairs, retrofits, redesign and upgrading (e.g. accelerated upgrades due to changed standards to accommodate changed climatic conditions, water shortages etc.)
14	COMMODITY COST	COMMODITY COST: Increase in commodity costs to CSO due to climate change. E.g. increased expenditure on food in residential care facilities, increased expenditure on medicines or other equipment in community health settings.
15	MALADAPTATION COST	MALADAPTATION COST: Cost blowouts for CSO due to poor infrastructure investment decisions and the cost of mal-adaptation.
16	ASSET RELOCATION	ASSET RELOCATION: Costs incurred due the need for CSO asset relocation to reduce exposure to risks or relocation due to already incurred damage.
17	COMMERCIAL FACILITIES	COMMERCIAL FACILITIES: Financial cost of upgrading CSO operated commercial assets to be fit-for purpose E.g. aged care facilities, opportunity costs.

18	OPERATIONAL EXPENDITURES	OPERATIONAL EXPENDITURES: Increased operational costs due to a range of climate change hazards. Includes increased maintenance of CSO buildings and infrastructure, increasing fuel/energy costs; increased staffing & wage increases; rising utility costs; increased staff diversion to extreme weather event impact mitigation scenarios; increased demand for emergency response. Also includes increased costs for other extreme event management & recovery, including emergency response and tracking and managing vulnerable people during these events. Also includes increased costs associated with emergency housing. Includes increased clean-up costs after extreme weather events.
19	COST OF ECONOMIC RECOVERY	COST OF ECONOMIC RECOVERY: Incurred costs to CSO to support clients recovering from economic impacts of climate change.
20	COST OF PLANNING DILIGENCE	COST OF PLANNING DILIGENCE: Financial costs related to requirements attached to funding contract for CSO to engage in disaster management planning.
21	COSTS OF DISPLAN OBLIGATIONS	COSTS OF DISPLAN OBLIGATIONS: Cost to CSO associated with introduction of disaster planning (DISPLAN) requirements in funding contracts.
22	STAFF TRAINING COSTS	STAFF TRAINING COSTS: Increased costs for staff training to upgrade skills and knowledge to handle climate change. E.g. new standards in building, GHG reporting, low carbon economy, emergency response, public buildings becoming shelters during extreme weather events, staff response training.
23	COMMUNITY EDUCATION COSTS	COMMUNITY EDUCATION COSTS: Costs to prepare community for appropriate response during extreme weather events. Costs of education to help with mitigation and adaptation, as well as educating community on leading healthy lifestyles in changed weather conditions. Includes community concern & demand for education on all aspects of climate change. Includes costs associated with conducting community education programs in rural or remote areas or with isolated or hard-to-reach groups or communities.
24	INCREASED DEMAND FOR SERVICES	INCREASED DEMAND FOR SERVICES: Increased CSO expenditure on service provision to meet changing client / community needs due to changed usage patterns or impacts of long-term weather trend changes.

25	COST OF POOR POLICY DECISIONS	COST OF POOR POLICY DECISIONS: Increased cost to CSO caused by past poor policy decisions.
26	REDUCED ECONOMY	REDUCED ECONOMY: Effect on CSO of reduced economic activity and / or economic erosion due to population shift from areas due to long- and short-term climate change impacts. Includes impact on demand for services from CSO.
27	INWARD MIGRATION RELATED COSTS	INWARD MIGRATION RELATED COSTS: Increased costs to CSOs due to extra population moving to area generated by increased demand for services.
28	PRODUCTIVITY LOSSES	INCREASED SERVICE DISRUPTION: Increased disruptions to service provision due to outage of power or communications, and other climate change impacts. Includes disruptions due to prolonged elevated temperatures, more fire bans, redirection of staff to extreme event response and recovery down time for staff after bushfires to build and replace incurred damage on private and public property.
29	LOSS OF GOVERNMENT FUNDING	LOSS OF GOVERNMENT FUNDING: Loss of federal or state government support if unable to continue to provide services in light of climate change events.
30	ACCOUNTING PROTOCOLS & FINANCIAL PLANNING	ACCOUNTING PROTOCOLS & FINANCIAL PLANNING: Need to address current accounting protocols in light of climate change. These will be inadequate because of climate change impacts such as faster depreciation of assets, increased risks to operations. Includes the need to accommodate changes in large sudden spikes in cost associated with response to and cleanup of extreme weather events.
31	CARBON PRICE IMPACTS	CARBON PRICE IMPACTS: Increased costs for CSO due to carbon pricing instrument. This may increase the cost for CSOs of service delivery, overheads, fleet costs, auditing costs etc.
32	INABILITY TO GET INSURANCE	INABILITY TO GET INSURANCE: Legal issues due to CSO inability to get insurance for extreme weather events.

33	FUNDING CONTRACTS	FUNDING CONTRACTS: Increase in operational costs not reflected in government funding agreements. Leads to reduced ability to meet demand for services and increased service disruption. Reduced ability to engage in strong lobbying / advocacy work in relation to crucial social justice issues.

RG		GOVERNANCE CLUSTER
1	CLIENT DISSATISFACTION / RESISTANCE	CLIENT DISSATISFACTION / RESISTANCE: Client dissatisfaction due to changes to service provision, including hours of operation, modes of service delivery and amounts of assistance available due to climate change risks. Includes client resistance to accepting climate change hazards as relevant to their lives and to climate change adaptation at the policy, organisational or personal level.
2	STEREOTYPING	INCREASED STEREOTYPING OF CSO CLIENTS DUE TO INCREASED ANTISOCIAL BEHAVIOUR: Community backlash against CSOs and client groups. Includes blaming specific groups such as social security recipients for an increase in antisocial or aggressive behaviour in the aftermath of extreme climate events.
3	GREATER EXPECTATIONS	GREATER EXPECTATIONS: Increasing service expectation from clients with increasing costs to CSO to provide base level services. Includes the risk of increasing numbers of people facing falling into the lowest income quintiles and a corresponding increase in demand for social welfare services.
4	CLIENT / COMMMUNITY EDUCATION	COMMUNITY EDUCATION: Education to prepare disadvantaged and vulnerable clients and communities for appropriate response during extreme weather events, to help with mitigation and adaptation (e.g. modifying energy consumption, safety / evacuation planning). Includes client resistance to climate change and adaptation education.
5	INADEQUATE CONTINUITY PLANNING	INADEQUATE CONTINUITY PLANNING: Risk of inadequate planning to maintain electricity for essential services.

	6	COMMUNITY DEVELOPMENT RESPONSE	COMMUNITY DEVELOPMENT RESPONSE: Whole communities severely impacted by extreme weather events will require community development response plans (E.g. those where the majority of homes are lost, and residents left grief stricken, as in the Black Saturday Victorian bushfires).
	7	DECREASED CAPACITY TO UNDERTAKE REGULAR WORK	DECREASED CAPACITY TO UNDERTAKE REGULAR WORK: Increased demand for emergency response by CSO reducing / exhausting the capacity of CSO to critical services (financial constraints reduce CSOs ability to provide services to community).
	8	INCREASED RESPONSIBILITY	INCREASED RESPONSIBILITY: Shift of additional responsibilities from state & federal governments to CSOs for essential service provision to low-income and disadvantaged groups. E.g. increased responsibility for respite care or to provide emergency services during and after extreme weather events.
	9	INCREASED RED TAPE	INCREASED RED TAPE: More onerous/rigorous red tape related to risk management due to increased insurance costs and regulations.

RL			**LEGAL CLUSTER**
	1	LITIGATION DUE TO UNDER-ACTION or OVER-ACTION	LITIGATION DUE TO UNDER-ACTION or OVER-ACTION: Legal actions against CSO due to economic loss or physical injury by clients due to inadequate action on climate change risks. E.g. inadequate evacuation plans for frail or elderly residents of aged-care facilities in the event of flooding or bushfires, leading to client injury or death.
	2	INJURY LITIGATION	INJURY LITIGATION: Increased personal injury, damage to private property and associated litigation as a result of rising climate change hazards, including extreme weather events, on CSO property. Includes trip hazards in footpaths, roads resulting from ground movement and tree roots, falling trees and tree limbs and extreme weather events.
	3	MALADAPTATION-RELATED LITIGATION	MALADAPTATION-RELATED LITIGATION: Risk of litigation due to increasing CSO and client exposure to additional climate change and extreme weather. (E.g. new residential aged-care

			facility built in bushfire-prone area).
	4	WORKPLACE HEALTH & SAFETY REQUIREMENTS	WORKPLACE HEALTH & SAFETY REQUIREMENTS: Increased legal risks to CSOs as a result of being unable to meet workplace health and safety requirements.

RSV			**STAFF AND VOLUNTEERS CLUSTER**
	1	STRESS / STRAIN ON VOLUNTEER SERVICES	VOLUNTEER SERVICES STRAINED: Increased strain on volunteer-based services due to increased need, or to lack of availability of volunteers who are impacted by local extreme events.
	2	REDUCED STAFF	REDUCED STAFF: Reduction in level of CSO staffing due to greater amounts of leave taken due to climate hazards, e.g. increasing numbers of hot days.
	3	OH&S OBLIGATIONS TO STAFF AND VOLUNTEERS	WHS OBLIGATIONS: Difficulty in meeting workplace health and safety obligations to staff, volunteers and contractors under changed climatic conditions and severe weather events.
	4	OH&S OBLIGATIONS FOR CSOs	WHS OBLIGATIONS FOR CSOs: Disruption to CSO services due to the difficulty of meeting workplace health and safety obligations to staff and volunteers under changed climatic conditions and severe weather events.
	5	INCREASED DEMAND FOR FLEXIBLE WORKING HOURS AND CONDITIONS	INCREASED DEMAND FOR FLEXIBLE WORKING HOURS AND CONDITIONS: Increased demand and enterprise bargaining impacts to human resource procedures for CSO staff and others.
	6	REDUCED STAFF	REDUCED STAFF: Reduction in level of CSO staffing due to greater amounts of leave taken due to climate hazards, e.g. increasing numbers of hot days.

7	**PHYSICAL AND EMOTIONAL DISTRESS TO STAFF**	PHYSICAL AND EMOTIONAL DISTRESS TO STAFF: Adverse impacts to CSO emergency staff and staff who assist with recovery work. This may occur if CSO buildings become shelter during extreme events as workers manage community and the response to the emergency situation - resulting in emotional and physical distress to staff. Includes stress caused by increased staff responsibility during emergencies. Includes increased rates of burnout, as level and complexity of client need increases in response to climate change impacts.

APPENDIX 4: COMMUNITY SECTOR ADAPTATION REGISTER

Code	Title	Standardised Statement of Adaptation Action
Client and community		
Client health/resilience		
1. Exposure Mitigation		
ACHRE1	**MINIMISE CLIENTS' EXPOSURE TO RISKS**	MINIMISE CLIENTS' EXPOSURE TO RISKS: Minimise exposure of clients by moving service centres away from areas at high risk from climate change and extreme weather events, particularly residential aged and disability care facilities, crisis, temporary and community accommodation facilities, child care centres etc. Pay particular attention to groups with increased vulnerability to climate change and extreme weather impacts, including, but not limited to, children, the sick and elderly, people with a disability.
ACHRE2	**ADVOCATE FOR RELOCATION OF HOUSING STOCK**	ADVOCATE FOR RELOCATION OF SOCIAL HOUSING STOCK FROM HIGH RISK AREAS: Advocate to state and federal governments to relocate social housing infrastructure and government funded services out of highly exposed areas. Advocate for the development of new social and community housing stock in low-risk areas.
ACHRE3	**ADVOCATE FOR FINANCIAL ASSISTANCE FOR RELOCATION**	ADVOCATE FOR FINANCIAL ASSISTANCE FOR RELOCATION: Advocate state and federal governments to provide financial and other assistance to people on low incomes, people with a disability, the frail aged to relocate away from high risk areas, such as coastal caravan parks. Includes assistance to find temporary and long-term accommodation and to connect with services in the new area.
ACHRE4	**SCREEN CLIENTS TO MITIGATE SPREAD OF DISEASE**	SCREEN CLIENTS TO MITIGATE THE SPREAD OF DISEASE: Establish a method of screening people coming into the organisation from areas identified as having a high risk to tropical or vector borne diseases. Quarantine infected individuals as necessary.

2. Vulnerability Mitigation		PHYSICAL INTERVENTIONS
ACHRV1	**RETROFIT SERVICE CENTRE TO BE RESISTANT TO EXTREME WEATHER EVENTS**	RETROFIT SERVICE CENTRES TO BE RESISTANT TO EXTREME WEATHER EVENTS: Identify service centres and buildings that could be successfully retrofitted to become resistant to fire and extreme weather events. Identify and prioritise for retrofit buildings in high-risk areas and those that provide residential care such as accommodation refuges and aged care facilities.
ACHRV2	**RETROFIT SERVICE CENTRES TO FUNCTION AS REFUGES DURING EXTREME WEATHER EVENTS**	RETROFIT SERVICE CENTRES TO FUNCTION AS REFUGES DURING EXTREME WEATHER EVENTS: Where feasible, retrofit service centres to double as emergency refuges during extreme weather events e.g. community respite care centres that function continuously including at times of risk.
ACHRV3	**PURCHASE GENERATORS FOR ESSENTIAL SERVICES**	GENERATORS FOR ESSENTIAL SERVICES: Ensure emergency generators are available for high priority buildings such as crisis and community accommodation and residential care facilities. Identify priority equipment to maintain with generated power such as medical equipment, personal care hoists and telecommunications systems.
ACHRV4	**PLAN FOR ALTERNATIVE SERVICE DELIVERY LOCATION**	PLAN FOR ALTERNATIVE SERVICE DELIVERY LOCATION: develop plans to operate services from an alternative location immune to natural disaster in case of an extreme weather event. Develop plans to identify the staff that would run the services from the alternative location in an emergency and how they will be transported to and from it.
ACHRV5	**REDUCE FIRE RISKS**	REDUCE FIRE RISKS: Undertake regular maintenance to reduce fire risks, including clearing gutters and removing foliage and debris, particularly at centres that provide residential, respite and onsite service such as residential aged care facilities, youth drop-in centres and child care centres.
ACHRV6	**INCREASE SHADE AREAS AND WATER OUTDOORS**	INCREASE SHADE AREAS & WATER OUTDOORS: Prepare open space strategy plans to include provision of shade in communal areas such as playgrounds and recreational areas etc. and ensure availability of drinking water.

		CLIENT EDUCATION
ACHRV7	**CLIENT EDUCATION – CLIMATE CHANGE**	CLIENT EDUCATION - GENERAL CLIMATE CHANGE: Develop educational and training programs to explain to the clients about climate change, how it will affect their lives and health and simple, accessible and affordable things they can do to adapt. The Work collaboratively with other service providers, local councils, universities and state agencies to design these programs. Programs should cover self-sufficiency, energy and water collection and conservation, how to manage increased domestic costs due to climate change (including the impacts of the carbon price, how it will affect them and compensation available), back yard and community gardening, community building, front end separation. Programs should also cover grants and assistance available to support people on low incomes and with particular needs (e.g. medical conditions) to increase energy efficiency and adapt to climate change.
ACHRV8	**CLIENT EDUCATION – EXTREME EVENTS**	CLIENT EDUCATION – EXTREME EVENTS: Building on existing material from the SES, regional emergency service agencies, local councils and the Australian Emergency Management Institute (AEMI), develop programs to educate different client groups about how to prepare for extreme weather events (bushfires, floods, cyclones, heatwaves and storms). For example evacuation routes, contacting the emergency services for assistance, dangers in trying to forge floodwaters and use bridges, the risk of respiratory illness caused by fires etc. Clearly convey the issue of climatic uncertainty and the need to adopt a precautionary approach when dealing with high consequence risks like fire, flood and cyclone. Strong focus should be placed on working with child and aged care facilities, accommodation services, services for people with a disability and CALD, refugee and migrant groups to educate them about risks and planning. The plan should target those most at risk and cover both morbidity and mortality during extreme events. Prepare information sheets about these emergencies in relevant community languages, which include: a clear list of events that trigger an emergency response; how to behave during and after an emergency including location of safe shelters; and how and when support services are available to respond.
ACHRV9	**CLIENT EDUCATION – DISEASE VECTORS**	CLIENT EDUCATION - DISEASE VECTORS: Educate clients about the threats of mosquito and water borne infectious diseases as well as algal blooms, and how to minimise transfer of diseases.

ACHRV10	**CLIENT EDUCATION – WATER USE/ EFFICIENCY**	CLIENT EDUCATION - WATER USE/EFFICIENCY: Conduct client and community education about how to achieve more efficient water use, including informing them about incentives provided by governments and councils to promote uptake of rainwater tanks and recycling systems.
ACHRV11	**CLIENT EDUCATION – WASTE REDUCTION**	CLIENT EDUCATION - WASTE REDUCTION: Employ community development practices to educate clients and communities about reducing waste. Include information about why it's important to reduce greenhouse gas emissions and on recycling and composting.
ACHRV12	**MONITOR AND ADDRESS CLIENT INFORMATION AND OTHER NEEDS**	MONITOR & ADRESS CLIENT INFORMATION AND OTHER NEEDS: Use existing mechanisms to monitor clients' needs in response to climate change hazards. Work collaboratively with relevant state government agencies and research institutions to ensure that adequate information is provided and is easily accessible.
ACHRV13	**ASSIST CLIENTS TO ACCESS INFORMATION ABOUT HEALTH RISKS**	ASSIST CLIENTS TO ACCESS INFORMATION ABOUT HEALTH RISKS: Ensure greater access to information relating to health issues and climate change by assisting clients to access information produced by governments and health services. For example include online links to DHS brochures and AEMI fact sheets and have brochures and fact sheets available at service receptions. Advocate to health services and governments to ensure that this information is available in relevant community languages.
ACHRV14	**CLIENT EDUCATION - INSURANCE**	CLIENT EDUCATION – INSURANCE: Provide clients with information about purchasing adequate insurance to mitigate risks. Make sure clients understand insurance benefits. Work with insurance providers to identify low-cost, high-cover insurance options for people on low-incomes.
ACHRV15	**INSTALL EMERGENCY BULLETIN BOARDS**	INSTALL EMERGENCY BULLETIN BOARDS: Establish an emergency bulletin board to provide information to clients about disease outbreaks, heat waves or predicted extreme weather. Consider including replication in other places and in relevant community languages such as websites or e-Newsletters to maximise contact with the clients.
ACHRV16	**DEVELOP CREATIVE INFORMATION DISSEMINATION STRATEGIES**	CREATIVE INFORMATION DISSEMINATION STRATEGIES: Develop creative ways to disseminate information about climate change and extreme weather risks to clients, e.g. through outreach services such as meals on wheels, HACC services, ER home visits; or through centre-based social programs.

		STAFF TRAINING
ACHRV17	**STAFF TRAINING – HEAT STRESS**	STAFF TRAINING – HEAT STRESS: Train CSO staff and volunteers to identify the signs and symptoms of heat stress in clients and develop response guidelines, including immediate actions they can take and appropriate referral pathways.
		PLANNING - GENERAL
ACHRV18	**DEVELOP EXTREME HEAT PLAN**	EXTREME HEAT PLAN: Develop an extreme temperature plan, which addresses the needs of workers and clients. Communicate the plans to clients and educate them about how to plan for and cope with extreme heat.
ACHRV19	**PLAN FOR FOOD SAFETY DURING POWER FAILURES**	FOOD SAFETY DURING POWER FAILURES: Develop a plan for food handlers on actions to take in the case of electricity failure using information developed by state government and workplace health and safety agencies, particularly for organisations that provide meal services such as meals on wheels, accommodation services and services that provide centre-based meals to people experiencing homelessness and financial hardship.
ACHRV20	**DEVELOP FOOD AND POWER OUTAGE TOOLKIT**	FOOD & POWER OUTAGE TOOLKIT: Using information available through local councils and workplace health and safety agencies, develop a power failure that includes information about how to prevent spoilage, reduce loss and increase food security during power outages. This is particularly relevant for organisations that provide meals or meal services.
ACHRV21	**RESEARCH NEEDS AND PARTICULAR VULNERABILITIES OF CLIENTS**	RESEARCH NEEDS AND PARTICULAR VULNERABILITIES OF DIFFERENT CLIENT GROUPS: Partner with universities or the private sector to conduct needs analysis and develop vulnerability indicators for particular client groups.
3. Management/ Planning		**RESEARCH**
ACHRM1	**RESEARCH VULNERABILITY**	RESEARCH VULNERABILITY: Research the individuals and groups within the service area that are particularly vulnerable to relevant climate change and extreme weather risks. Map areas where there is a high concentration of highly vulnerable people and collaborate with emergency services and councils to ensure this information is incorporated into formal emergency management plans.

		MANAGE CLIENT HEALTH RISKS
ACHRM2	**IMPROVE COMMUNITY HEALTH SERVICE RESPONSES TO CLIMATE CHANGE**	IMPROVE COMMUNITY HEALTH SERVICE RESPONSES TO CLIMATE CHANGE: Improve community health service responses to climate change. This includes mental health, emergency management, health of vulnerable members of community and well as education of the community of these risks and improvements within the system.
ACHRM3	**ADVOCATE TO GOVERNMENTS & HEALTH SECTOR TO IMPROVE RESPONSE TO CLIMATE CHANGE**	ADVOCATE TO GOVERNMENTS & HEALTH SECTOR TO IMPROVE RESPONSES TO CLIMATE CHANGE: Advocate to state and federal governments, the public and private health sectors to fund improvements to public and private health system responses to climate change. Advocate for the specific needs of clients groups with increased vulnerability to climate change impacts, including the frail aged, people with a disability, people experiencing homelessness, Aboriginal and Torres Strait Islander communities and CALD communities.
		SUPPORT & MONITOR CLIENT HEALTH
ACHRM4	**MONITOR VULNERABLE CLIENTS**	MONITOR VULNERABLE PEOPLE: Implement monitoring and measurement processes for key climate change indicators and metrics for exposed and vulnerable people.
ACHRM5	**INCREASED SERVICES AND MONITORING FOR THE ELDERLY, PEOPLE WITH A DISABILITY**	INCREASED SERVICES & MONITORING FOR THE ELDERLY, PEOPLE WITH A DISABILITY: Work with local councils, health service providers, families and carers to increase the frequency and availability of services for frail older people and people with a disability and develop a process for monitoring them during heat wave conditions, possibly using volunteers.
ACHRM6	**DEVELOP HEAT PLANS FOR VULNERABLE CLIENT GROUPS**	HEAT PLANS FOR VULNERABLE CLIENT GROUPS: Establish a framework and comprehensive heatwave plan for identification of clients particularly vulnerable to extreme heat events, such as people experiencing homelessness, young children, people with a disability and the frail aged. Develop programs and services to provide heat reduction measures for these groups and for social housing projects. Investigate ways to identify and contact vulnerable clients on days of extreme heat stress, including through outreach services. This need is based on projected large increase in the annual number of days over 35°C.

ACHRM7	**INCREASE SUPPORT FOR MIGRANTS AND REFUGEES**	INCREASED MIGRANT & REFUGEE SUPPORT: Ensure the provision of increased migrant support services, including for refugees and recent migrants. Includes providing information about climate change impacts and extreme weather events in relevant community languages and in culturally sensitive ways.
ACHRM8	**MONITOR DROP-IN CENTRE USAGE DURING HEAT WAVES**	MONITOR DROP-IN CENTRE USAGE DURING HEATWAVES: Monitor the usage of drop-in centres and indoor facilities during heat waves. Investigate the possibility of changing operating hours and staffing arrangements during periods of extreme heat. Identify service centres that have the capacity to expand and develop a long-term plan for use as heat refuges for exposed clients in line with predicted increases in frequency and severity of heatwaves.
ACHRM9	**SUPPORT CLIENT MENTAL HEALTH**	SUPPORT CLIENT MENTAL HEALTH: Provide support for clients experiencing emotional stress caused by climate change and extreme weather impacts. E.g. partner with organisations that provide counselling and mental health services to develop support programs and referral pathways to address client needs.
ACHRM10	**SUPPORT CLIENT ECONOMIC RESILIENCE**	SUPPORT CLIENT ECONOMIC RESILIENCE: Assist clients to identify and pursue alternative employment options beyond those traditional to a particular area to provide economic resilience during difficult times, particularly in agricultural communities.
		EMERGENCY PLANNING
ACHRM11	**DEVELOP CLIENT COMMUNICATION PLANS FOR EXTREME HEAT**	DEVELOP CLIENT COMMUNICATION PLANS FOR PERIODS OF EXTREME HEAT: Develop a communications strategy to ensure effective communication with clients during periods of extreme heat, in particular those at high risk for heat stress and heat-related morbidity, such as the very young, the frail aged and people experiencing homelessness.
ACHRM12	**DEVELOP EMERGENCY EVENT PLANS**	EMERGENCY EVENT PLANS: Develop a rigorous emergency plans for relevant extreme events such as bushfires, cyclones and floods, which details the actions to be taken by staff and volunteers in the event of an emergency, evacuation times and routes as well as protective measures which should be taken in preparation for a fire. Communicate the plan to clients and, where appropriate, include them in testing and revising plans to fully address their needs.

ACHRM13	**ADVOCATE FOR COMPANION ANIMALS IN EMERGENCY CENTRES**	COMPANION ANIMALS IN EMERGENCY SHELTERS: Partner with local councils, the SES and the RSPCA to establish a plan for allowing companion and assistance animals such as guide dogs in evacuation shelters during emergencies. Assist clients to develop emergency action plans that include their companion and assistance animals.
ACHRM14	**DEVELOP PARTNERSHIPS WITH OTHER SERVICE PROVIDERS**	DEVELOP PARTNERSHIPS WITH OTHER SERVICE PROVIDERS: Identify particularly vulnerable clients and groups and develop partnerships between all service providers (councils, health services, government agencies) that work with vulnerable groups such as frail older people, people with a disability, children, CALD and Aboriginal and Torres Strait Islander communities. Maintain effective communication with each other and with these groups in relation to climate change impacts and responses in emergency situations.
		OTHER PLANNING FOR HEALTH & SAFETY
ACHRM15	**INCREASE ACCESS TO INDOOR DROP-IN CENTRES**	INCREASE ACCESS TO INDOOR DROP-IN CENTRES: Increase the availability of and promote access to droop-in centres and services that would be appropriate under a new climate regime. This would include extending opening hours in times of extreme weather and promoting these changes to client groups.
4. Transfer/ Share		**EMERGENCY RELATED TRANSFER/SHARE**
ACHRT1	**ADVOCATE FOR INCREASED EMERGENCY SERVICES RESOURCES**	INCREASE EMERGENCY SERVICES IN EXTREME EVENTS: Advocate to local emergency services (RFS, SES, Police Ambulance services) to increase resources to ensure they have adequate capacity to deal with worst case scenario extreme weather events and to allocate specific resources to responding to people with particularly high vulnerability during extreme events, including the frail aged, people with a disability and people experiencing homelessness.
ACHRT2	**COLLABORATE WITH LOCAL & STATE EMERGENCY RESPONSE BODIES**	COLLABORATE WITH LOCAL AND STATE EMERGENCY RESPONSE BODIES: Build and maintain relationships with local organisations, councils and state government and review response frameworks and relationships to identify existing limitations related to responding to the needs of particular clients and groups such as people with a disability, Aboriginal and Torres Strait Islander people, CALD communities, and people experiencing homelessness. Include a focus on the ability of key service providers to continue to deliver community services during and after extreme events.

ACHRT3	**ADVOCATE FOR FUNDING FOR SPECIALIST EMERGENCY RESPONSE EQUIPMENT ETC**	FUNDING FOR SPECIALIST EMERGENCY RESPONSE EQUIPMENT, BUILDINGS AND PLANNING: In collaboration with other organisations, secure funding for more investment in equipment (disability transport, personal care hoists). Also, review national and international emergency response case studies to identify best practice in responding to the needs of people with particular vulnerabilities in the context of emergencies.
ACHRT4	**SECURE FUNDING TO RESEARCH CLIENT BEHAVIOUR DURING EXTREME EVENTS**	SECURE FUNDING TO RESEARCH CLIENT BEHAVIOUR IN EXTREME WEATHER: Collaborate with research institutions, governments and the private sector to undertake research to improve understanding of risk perceptions and behaviour in the event of heat waves and other extreme weather events. The research should focus on the perceptions and responses of particular client groups.
		SHARING / COLLABORATING ON WORK
ACHRT5	**PROMOTE DISEASE PREVENTION & VACCINATION**	PROMOTE DISEASE PREVENTION & VACCINATION: Community health services to work with governments on promoting vaccination, distributing vaccines and disease outbreak prevention (public health campaigns).
ACHRT6	**COMMUNITY MENTAL HEALTH SUPPORTS**	COMMUNITY MENTAL HEALTH SUPPORTS: Support the mental health of communities during difficult periods, particularly drought, which can result in social isolation and community fragmentation (unlike sudden onset disasters such as fires, floods and cyclones.)
ACHRT7	**PARTNER WITH HEALTH SERVICES TO ENSURE SERVICE CONTINUITY**	PARNTER WITH HEALTH SERVICES TO ENSURE SERVICE CONTINUITY FOR CLIENTS: Build partnerships with public and private hospitals, GPs and other health services to plan for collaborative service provision during extreme events to ensure service continuity for clients with chronic health conditions.
		HEALTH ADVOCACY
ACHRT9	**ADVOCATE FOR INCREASED SERVICE CAPACITY FOR CSOs**	ADVOCATE FOR INCREASED SERVICE CAPACITY FOR CSOs: Advocate to state government departments of community services to review and increase capacity of community services for people experiencing poverty and inequality in light of the health effects of climate change.

		INSURANCE
ACHRT10	**ADVOCATE FOR APPROPRIATE & AFFORDABLE INSURANCE COVERAGE**	ADVOCATE FOR APPROPRIATE & AFFORDABLE INSURANCE COVERAGE FOR CLIENTS: Work with insurance providers to develop affordable insurance packages that provide adequate coverage for people on low-incomes or experiencing disadvantage.
		RESEARCH
ACHRT11	**STUDENT RESEARCH PARTNERSHIPS**	STUDENT RESEARCH PARTNERSHIPS: Undertake partnerships with honours students and universities to access research on climate change impacts relevant to the community services sector and its clients.
5. Evolutionary Opportunity		
ACHREO 1	**BUILD CLIENT RESILIENCE TO ADVERSITY**	BUILD CLIENT RESILIENCE TO ADVERSITY**:** Build client resilience to non-climate change-related adversity through awareness raising and education programs about climate change adaptation and extreme weather preparedness.
6. Adaptive Capacity		
ACHRA1		

Community health/resilience	
1. Exposure Mitigation	
ACoHRE1	**SEE CLIENT HEALTH/RESILIENCE ACHR1-4**

2. Vulnerability Mitigation		
		COMMUNITY DEVELOPMENT
ACoHRV1	**BUILD COMMUNITY RESILIENCE TO IMPACTS**	BUILD COMMUNITY RESILIENCE TO IMPACTS: Use community development principles and strategies to build resilience to climate change and extreme weather impacts. Particular focus should be given to communities with heightened vulnerability to climate change and extreme weather impacts, such as Aboriginal and Torres Strait Islander communities, public housing developments and rural and remote communities.
		COMMUNITY EDUCATION
ACoHRV3	**COMMUNITY EDUCATION – CLIMATE CHANGE**	COMMUNITY EDUCATION - CLIMATE CHANGE: Develop educational and training programs to explain to the community about climate change and how it will affect their lives and positive things they can do to respond. Work collaboratively with governments, universities and state agencies to design these programs and ensure they raise community awareness about the particular needs of people experiencing poverty and disadvantage.
ACoHRV4	**COMMUNITY EDUCTATION – EXTREME EVENTS**	COMMUNITY EDUCATION - EXTREME EVENTS: Work with the SES, other emergency services, government departments and local councils, to ensure that community education programs about preparedness for extreme weather (bushfires, floods, cyclones, heatwaves and storms) address the specific needs of different client groups during and after emergencies. Stress the need to develop emergency plans that target those most at risk and cover both morbidity and mortality. Prepare information sheets about these emergencies, which include: a clear list of events that trigger an emergency response; how to behave during and after an emergency including location of safe shelters; and how and when council support services are available to respond. A strong focus should be placed on working with community services that provide respite care, centre-based programs, residential aged care and other crisis and longer-term accommodation, e.g. for people with a disability, experiencing homelessness or domestic and family violence.

ACoHRV5	**STAKEHOLDER EDUCATION – CLIENT NEEDS**	STAKEHOLDER EDUATIONS - CLIENT NEEDS: Work with other organisations and state and national sector peaks to develop education programs for the general community, business, governments and emergency services about the particular needs of different client groups in extreme weather events and in the context of climate change.
3. Management/ Planning		
ACoHRM 1	**PROMOTE LOCAL FOOD PRODUCTION**	PROMOTE LOCAL FOOD PRODUCTION: Promote local agriculture and local programs, which connect suburban citizens and organisations with local food production. Educate clients and communities about the relationship between food production and transport and greenhouse gas emissions and rising food prices. Develop a food coop to increase fresh food choices and reduce costs for people on low incomes.
ACoHRM 2	**COMMUNITY SUPPORT**	COMMUNITY SUPPORT: Provision of increased community support services including coordinated, linked services with clear pathways for those unused to accessing services. This should include counselling, financial counselling and service continuity planning. Establish/strengthen relationships with other organisations and councils to facilitate raising awareness and participation in adaptation strengthening activities. Particular attention to smaller geographically isolated groups within the area that may be isolated for a longer period during an extreme weather event.
ACoHRM 3	**MONITOR POPULATION CHANGE & TRENDS**	MONITOR POPULATION CHANGE & TRENDS: Monitor net population changes in the region and the impact of these changes for demand for particular services.
ACoHRM 4	**RESEARCH AND DEVELOP EMERGENCY PLANS**	RESEARCH AND DEVELOP EMERGENCY PLANS: Research and develop/amend emergency and disaster management plans, which take into consideration climate change impacts including: storm surge, fire, flood, cyclones, extreme heat etc. Includes the need to assess the resilience of service centres and identifying individual clients that are most vulnerable. Work with other organisations in the region to develop a collaborative emergency response and disaster management plan for the area. Regularly review and update plans based on changes to climate change predictions.

ACoHRM 5	**DEVELOP CONTINGENCY PLANS FOR EXTREME EVENTS**	CONTINGENCY PLAN FOR EXTREME EVENTS: Develop contingency plans for sudden and extreme events. Include, for example, securing fuel for essential and emergency services, reciprocal arrangements with other organisations during emergency, emergency relief distribution plan and emergency communications. Identify locations suitable for use as distribution points for emergency relief and undertake measures to prepare these distribution points. Build or maintain relationships with local councils and emergency service providers to ensure that an adequate level of functionality can be developed to meet basic needs during and post major extreme weather events. Ensure that adequate food stocks are available for isolating incidents of increasing duration, including plans for shared refrigeration of perishable goods, with back-up power at pre-agreed locations. Contingency contracts should be established as required. Develop list of high priority services that must be maintained during emergency events. Ensure the organisation has the human resources to deliver these essential services during an emergency.
ACoHRM 6	**DEVELOP BUSHFIRE RECOVERY PLANS**	BUSH FIRE RECOVERY PLAN: Develop a bushfire recovery action plan for staff and volunteers in collaboration with other organisations, councils, and relevant government agencies and fire services.
ACoHRM 7	**DEVELOP CLIMATE CHANGE RISKS IN PUBLIC HEALTH PLANS**	CLIMATE CHANGE RISKS IN PUBLIC HEALTH PLAN: Incorporate climate change risks into public health plans, including client and community education programs regarding risks associated with coastal storms, strong winds, intense rainfall and flooding. Investigate highly subsidized environmentally friendly air conditioning systems for residential care facilities (for example).
4. Transfer/ share		
ACoHWT 1	**SECURE FUNDING TO RESEARCH COMMUNITY BEHAVIOUR DURING EXTREME EVENTS**	SECURE FUNDING TO RESEARCH COMMUNITY BEHAVIOUR DURING EXTREME EVENTS: Collaborate with local councils and state governments to undertake research to improve understanding of community risk perceptions and behaviour in the event of heat waves and other extreme weather events. The research should focus on the perceptions and responses of particular client groups.
ACoHWT 2	**REGIONAL COLLABORATION ON BUSHFIRE RECOVERTY PLANS**	REGIONAL COLLABORATION ON BUSHFIRE RECOVERY PLAN: Build and maintain relationships with local councils, fire services, other organisations and relevant government agencies and contribute to collaborative regional bushfire recovery plans, particularly through

		identifying and the needs of particular client groups and developing strategies to meet those needs in the context of bushfire.
ACoHWT 3	**COORDINATE WITH COUNCILS/STATE GOVERNMENTS ON HEATWAVE PLANS**	COORDINATE WITH COUNCILS AND STATE GOVERNMENTS ON HEATWAVE PLANS: Work collaboratively with local council and state governments to develop a heatwave plan. Improve coordination amongst relevant services as part of the plans with focus on the provision of accessible locations safe from the heat.
ACoHWT 4	**REGIONAL COLLABORATION ON CLIMATE CHANGE ADAPTATION**	REGIONAL COLLABORATION ON CLIMATE CHANGE ADAPTATION: Coordinate with other organisations, councils and other stakeholders to build a standard approach to climate change risks across the region.
ACoHWT 5		BASIC NEEDS WATER PLANNING: Advocate to relevant water authorities to ensure service provision to meet basic human needs and emergency requirements are met in light of predicted changes in rainfall and climate.
5. Evolutionary opportunity		
ACoHREO1	**ADVOCATE FOR EFFICIENT, AFFORDABLE HOUSING**	ADVOCATE FOR EFFICIENT, AFFORDABLE HOUSING: Work collaboratively with Housing Associations, local councils and peer organisations to advocate to the state and federal governments to increase support for public and affordable housing options for people on low incomes, experiencing poverty and inequality and with other specific needs so that they meet the highest building, energy and water efficiency and disaster resilience standards.
ACoHREO2	**COLLABORATE WITH KEY STAKEHOLDERS TO 'CLIMATE PROOF' COMMUNITY**	COLLABORATE WITH KEY STAKEHOLDERS TO 'CLIMATE PROOF' COMMUNITY: Collaborate with state governments, local councils and businesses across the region to 'climate-proof' the area to harness potential advantages: water and food security, power security, increased resilience of the local economy and communities.
ACoHREO3	**INCREASE CLIENT PARTICIPATION IN COMMUNITY**	INCREASE CLIENT PARTICIPATION DISADVANTAGE IN THE COMMUNITY

ACoHREO4	**INCREASE COMMUNITY COHESION**	INCREASE COMMUNITY COHESION
6. Adaptive capacity		
ACoHRA1	**INVESTIGATE ADAPTATION FOR RESILIENCE**	INVESTIGATE ADAPTATION FOR RESILIENCE: In partnership with local councils, state and national peak bodies and support from state and federal governments, undertake climate change case studies for particular client groups. Each case study will identify potential impacts of climate change on the relevant groups and examine strategies to build resilience to those impacts.
Financial resilience		
1. Exposure Mitigation		
AFRE1	**ADVOCATE FOR SPECIFIC ADAPTATION STRATEGIES FOR CLIENT GROUPS**	ADVOCATE FOR SPECIFIC ADAPTATION STRATEGIES FOR CLIENT GROUPS: Advocate to governments and local employment providers to allocate adequate resources for adaptation in order to minimise the impacts of climate change and extreme weather events on employment opportunities and financial resilience for clients and the community. E.g. to reduce the vulnerability of key employment industries to climate change and extreme weather impacts to reduce the risk of spikes in unemployment and financial hardship caused by the closure of major employment providers in a region.
2. Vulnerability Mitigation		
AFRV1	**EDUCATE CLIENTS ABOUT MANAGING INCREASING COSTS OF GOODS & SERVICES CAUSED BY CLIMATE CHANGE**	EDUCATE CLIENTS ABOUT MANAGING INCREASING COSTS OF GOODS & SERVICES CAUSED BY CLIMATE CHANGE: Educate the community and client groups about improving energy, fuel and water use efficiency to reduce costs and build financial resilience to climate change impacts.
AFRV2	**EDUCATE CLIENTS & COMMUNITIES ABOUT SUSTAINABLE PRACTICES**	EDUCATE CLIENTS & COMMUNITIES ABOUT SUSTAINABLE AGRICULTURE PRACTICES: Educate communities about improving energy, fuel and water use efficiency and utilising sustainable farming practices to reduce costs and build financial resilience to climate change impacts.

AFRV3	**SUPPORT FOR COMMUNITIES DURING DROUGHT**	SUPPORT FOR COMMUNITIES DURING DROUGHT: Provide support services to communities to help to deal with drought, including counselling support, material aid and emergency relief, particularly rural and farming communities.
AFRV4	**ENGAGE WITH MAJOR EMPLOYMENT PROVIDERS**	ENGAGE WITH MAJOR EMPLOYMENT PROVIDERS: Engage with key economic actors and employers in the community at risk from climate change hazards, particularly those that provide unskilled employment to people on low-incomes such as manufacturing, supermarkets and advocate that they take early action to prepare for climate change risks to prevent losses, particularly of employment for people on low-incomes in the community to ensure that people are not forced into financial hardship and poverty by loss of employment.
AFRV5	**SUPPORT CLIENTS TO DEVELOP SKILLS/ SECURE EMPLOYMENT IN LESS EXPOSED INDUSTRIES**	SUPPORT CLIENTS TO DEVELOP SKILLS / SECURE EMPLOYMENT IN LESS EXPOSED INDUSTRIES: Develop training and employment assistance programs that assist service-users to develop skills in industries that are less exposed to climate change impacts.
3. Management/ Planning		
AFMP1		
4. Transfer/ Share		
AFRT1	**PARTICIPATE IN LOCAL ECONOMIC DEVELOPMENT PLANNING**	PARTICIPATE IN LOCAL ECONOMIC DEVELOPMENT PLANNING: Engage in local council processes to review the existing planning schemes to ensure their flexibility for a diversified localised economy. Ensure that the employment needs of people experiencing poverty and inequality, including older people, people with a disability and migrants and refugees are addressed in these plans.

AFRT2	**PUBLIC/PRIVATE COORDINATION OF SERVICES**	PUBLIC/PRIVATE CO-ORDINATION OF SERVICES: Engage private-sector partners in arrangements with essential services providers to ensure security of service provision where possible.
AFRT3	**SECURE FUNDING FOR ADDITIONAL SERVICES**	SECUREFUNDING FOR ADDITIONAL SERVICES: Source funding to deliver additional services to clients and to the broader community in times of high unemployment from the state and federal governments to ensure that adequate services can be provided to clients and the community to reduce financial hardship.
5. Evolutionary Opportunity		
ALEO14	**HELP CLIENTS CAPITALISE ON ECONOMIC OPPORTUNITIES**	HELP CLIENTS CAPITALISE ON ECONOMIC OPPORTUNITIES: Promote economic opportunities created by climate change, particularly for people experiencing poverty and inequality.
6. Adaptive Capacity		**INCREASE CLIENTS' ADAPTIVE CAPACITY**
AFRA1	**MITIGATE CLIMATE CHANGE RISKS THROUGH INNOVATION**	MITIGATE CLIMATE CHANGE RISKS THROUGH INNOVATION: Initiate a review of clients' understanding of and ability to respond to climate change. Organisations should then partner with researchers and governments to investigate and demonstrate strategies to develop climate change resilience. Secure funding to educate local clients in climate change adaptation strategies.
AFRA2	**DEVELOP OR SUPPORT A LOCAL FOOD NETWORK**	DEVELOP OR SUPPORT A LOCAL FOOD NETWORKS: Secure council permission to convert unused open spaces near organisations and within communities experiencing poverty and inequality into community gardens and farms. Develop a local food cooperative to provide access to low-cost fresh foods and to provide an additional income stream for organisations and clients. Offer employment opportunities to clients in community gardens and food cooperatives.

AFRA3	**EDUCATE THE COMMUNITY ABOUT SUSTAINABILITY**	EDUCATE THE COMMUNITY ABOUT SUSTAINABILITY: Provide training to community development practitioners in climate change and sustainability for different parts of the community. Encourage communities and organisations to adopt sustainable practices through such mechanisms as a Community Service Excellence Awards program.

Client/community service provision		
1. Exposure Mitigation		
ACCSE1	**AVOID LOCATING AGED CARE FACILITIES IN AREAS WITHOUT ACCESS TO TRANSPORT**	AVOID LOCATING AGED CARE FACILITIES IN AREAS WITHOUT ACCESS TO TRANSPORT: Avoid locating aged housing and retirement villages in areas that are a long distance from community facilities and where these facilities cannot be accessed by public transport.
2. Vulnerability Mitigation		
ACCSV1	**PURCHASE EMERGENCY POWER GENERATOR**	PURCHASE EMERGENCY POWER GENERATOR: Purchase backup generators to mitigate more frequent power outages, especially for residential and refuge services.
3. Management/ Planning		
ACCSM1	**INTEGRATE CLIMATE CHANGE INTO ORGANISATIONAL POLICY & PLANNING**	INTEGRATE CLIMATE CHANGE INTO ORGANISATIONAL POLICY & PLANNING: Integrate climate change management and adaptation strategies into all planning policies & guidelines.
ACCSM2	**INTEGRATE CLIMATE CHANGE RISKS INTO SERVICE DELIVERY PLANNING**	INTEGRATE CLIMATE CHANGE RISKS INTO SERVICE DELIVERY PLANNING: Incorporate climate change risks into decisions when reviewing service delivery guidelines and policies.
ACCSM3	**DEVELOP STRATEGY FOR HEAT WAVES & HEAT STRESS**	DEVELOP STRATEGY FOR HEAT WAVES AND HEAT STRESS: Schedule outdoor activities for cooler times of the day or year. Train staff to manage heat-induced aggression and conduct anti-violence outreach programs.

ACCSM4	**DEVELOP FLOOD MANAGEMENT PLANS**	DEVELOP FLOOD MANAGEMENT PLANS: Develop flood management plans, which include access and response plans for clients, particularly in areas likely to be affected by more frequent and lengthy road flooding and isolation. Plans should include strategies for securing basic needs on-site, and management/response plans to ensure the wellbeing of clients and service continuity.
ACCSM5	**DEVELOP EMERGENCY COMMUNICATION PLANS**	DEVELOP EMERGENCY COMMUNICATION PLANS: Establish a communications plan to ensure accurate messages can be quickly delivered to staff, volunteers and clients in times of an emergency. E.g. using SMS, calling rosters.
ACCSM6	**DEVELOP BUSHFIRE MANAGEMENT PLANS**	DEVELOP BUSHFIRE MANAGEMENT PLAN: Develop a bushfire management plan to deal with the increased frequency of bushfires expected due to climate change.
ACCSM7	**DEVELOP FIRE PREVENTION ACTION PLANS**	DEVELOP FIRE PREVENTION ACTION PLAN: Using existing resources such as local council Municipal Fire Prevention Action plans to develop and implement fire prevention action plans.
ACCSM8	**DEVELOP PLAN FOR SERVICE LOSS**	DEVELOP PLAN FOR SERVICE LOSS: Develop a plan for maintaining service provision that addresses loss of services due to climate change impacts.
ACCSM9	**IDENTIFY SUPPLY AND ACCESS ROUTES FOR USE DURING EMERGENCY EVENTS**	IDENTIFY SUPPLY AND ACCESS ROUTES FOR USE IN EMERGENCY EVENTS: Identify alternative routes and modes for goods transport, emergency relief provision, and evacuations for use during and after an emergency. Provide information to clients about alternative transport and evacuation routes during different types of extreme events. Plan to cater for clients with particular needs, including people with a physical or intellectual disability, frail older people who need help with mobility and CALD communities.
ACCSM10	**MONITOR DEMOGRAPHIC CHANGE**	MONITOR DEMOGRAPHIC CHANGE: Monitor demographic changes in the service area and identify how to respond to new trends. E.g. research potential population increase and plan for provision of services to cater for this increased population.
4. Transfer/ share		

ACCST1	**ENSURE EMERGENCY EVENT SUPPLY CHAIN**	ENSURE EMERGENCY EVENT SUPPLY CHAIN FOR SERVICES: Encourage suppliers of 'basic needs' to properly address and adapt to climate change risks. Includes suppliers of food, water, buildings, and 'essential services' such as power, communications and transport.
ACCST2	**DEVELOP DIRECT COMMUNICATION LINES**	DEVELOP DIRECT COMMUNICATION LINES: Develop direct lines of communication with state and federal governments in relation to 'state of emergency' triggers with State and Federal governments to ensure that organisations have as much time as possible prior to an emergency occurring to implement disaster management plans.
5. Evolutionary Opportunity		
ACCSEO 1	**CREATE CARBON NEUTRAL SECTOR**	CREATE CARBON NEUTRAL SECTOR: The sector should aim to achieve carbon-neutral service provision.
ACCSEO 2	**CREATE SUSTAINABLE SERVICES**	CREATE SUSTAINABLE SERVICES: Investigate new technologies and their incorporation into operations as well as promoting sustainability amongst clients and the broader community.
6. Adaptive Capacity		
ACCSA1	**SECURE ENERGY SELF-SUFFICIENCY FOR SERVICES**	SECURE ENERGY SELF-SUFFICIENCY FOR SERVICES: Introduce policy changes so that organisations can transition into energy self-sufficiency (e.g. solar PV, solar hot water). Organisations need to determine the degree of transitioning and the timeframe and ensure that strategic infrastructure development and maintenance plans include an assessment of climate change.
ACCSA2	**VOLUNTEER TRAINING AND COORDINATION**	VOLUNTEER TRAINING AND CO-ORDINATION: In collaboration with local councils and other organisations, develop a volunteer training and co-ordination plan that is inclusive of all people in the community. Work with partners to simplify and create different roles based on volunteer skill level and how much time they have to contribute. Maximise effectiveness of the program by creating an inter-agency sharing system for volunteers.

Policy and Advocacy		
Sector development		
1. Exposure Mitigation		
APSDE1	**ADVOCATE FOR THE RELOCATION OF VULNERABLE HOUSING STOCK**	ADVOCATE FOR THE RELOCATION OF VULNERABLE SOCIAL HOUSING STOCK
2. Vulnerability Mitigation		
APSDV1	**ADVOCATE FOR SECTOR-WIDE FUNDING FOR ADAPTATION PLANNING & IMPLEMENTATION**	ADVOCATE FOR SECTOR-WIDE FUNDING FOR ADAPTATION PLANNING & IMPLEMENTATION
3. Management/ Planning		
APSDM1	**DEVELOP AN INTEGRATED, SECTOR-WIDE ADAPTATION & ADVOCACY PLAN**	DEVELOP AN INTEGRATED, SECTOR-WIDE ADAPTATION AND ADVOCACY PLAN
4. Transfer/ Share		
APSDT1	**COLLABORATE WITH GOVERNMENTS & PRIVATE SECTOR ON ADAPTATION**	COLLABORATE WITH GOVERNMENTS & PRIVATE SECTOR ON ADAPTATION PROJECTS FOR THE SECTOR: Work collaboratively with state to ensure that proposed policies/strategies do not constrain CSOs adaptation responses to climate change.
5. Evolutionary Opportunity		
APSDEO1	**ADVOCATE FOR RECOGNITION OF ROLE OF SECTOR IN RESPONSE/RECOVERY**	ADVOCATE FOR RECOGNITION OF THE ROLE OF THE SECTOR PLAYS IN DISASTER RESILIENCE, RESPONSE AND RECOVERY
6. Adaptive Capacity		

APSDA1		
Consumer advocacy		
1. Exposure Mitigation **APCAE1**		
2. Vulnerability Mitigation **APCAV1**		
3. Management/ Planning **APCAM1**		
4. Transfer/ Share **APCAT1**		
5. Evolutionary Opportunity		
APCAEO 1	**ADVOCATE INCLUSION OF CLIMATE JUSTICE PRINCIPLES IN POLICY RESPONSES**	ADVOCATE INCLUSION OF CLIMTE JUSTICE PRINCIPLES IN POLICY RESPONSES: The needs of people experiencing poverty and inequality are recognised and comprehensively addressed in all policy responses to climate change.
6. Adaptive Capacity **APCAA1**		
Policy advocacy		
1. Exposure Mitigation **APAE1**		
2. Vulnerability Mitigation		

APAV1		
3. Management/ Planning		
APAM1		
4. Transfer/ Share		
APAT1	**INPUT SECTOR PERSPECTIVES TO CLIMATE CHANGE POLICY**	INPUT SECTOR PERSPECTIVES TO CLIMATE CHANGE POLICY: Participate in processes to review emerging state and federal climate change policy instruments (e.g. the Clean Energy Futures Package). Advocate to all levels of government to ensure that such policy instruments don't increase the underlying vulnerability of clients and people experiencing poverty and inequality.
5. Evolutionary Opportunity		
APAEO1		
6. Adaptive Capacity		
APAA1	**ADVOCATE INCLUSION OF CLIMATE JUSTICE ISSUES INTO TERTIARY CLIMATE STUDIES**	ADVOCATE INCLUSION OF CLIMATE JUSTICE ISSUES INTO TERTIARY CLIMATE STUDIES: Advocate to universities and TAFE for the integration of climate change and climate justice issues into social policy, social work and community service courses, including the increased vulnerability of people experiencing poverty and disadvantage to climate change impacts and the likelihood that climate change impacts will increase inequality in the community.

Service continuity and administration		
Premises/service centres		
1. Exposure Mitigation		

ASCP1	**RELOCATE OFFICES & SERVICE CENTRES**	RELOCATE OFFICES AND SERVICE CENTRES: Relocate office and service centres in response to climate change risks, e.g. relocating away from low-lying areas or areas at high risk for bushfires, flooding and cyclones. (The next step is to retrofit exposed buildings to improve resilience in response to climate change risks. E.g., ensuring buildings have appropriate drainage works to remove significant volumes of water quickly. Seek funding to help cover increased operational and maintenance costs.)
ASCP2	**ADVOCATE TO LANDLORDS TO RETROFIT PREMISES**	ADVOCATE TO LANDLORDS TO RETROFIT PREMISES: Where CSOs are tenants, they should advocate to national and state property owners' associations to retrofit and maintain rental premises to reduce vulnerability to climate change and extreme weather impacts. E.g. heating, ventilation and air-conditioning systems, drainage systems, insulation.
ASCP3	**UPGRADE ORGANISATIONAL INFRASTRUCTURE**	UPGRADE ORGANISATIONAL INFRASTRUCTURE: Upgrade organisational infrastructure to increase resilience to extreme events and other climate change impacts, e.g. install cyclone-resistant windows, insulation to increase resilience to extreme heat and rising average temperatures.
2. Vulnerability Mitigation		**BUILDINGS**
ASCPV1	**PROTECT BUILDINGS FROM CLIMATE CHANGE IMPACTS**	PROTECT BUILDINGS FROM CLIMATE CHANGE IMPACTS: Identify properties at risk from sea level rise and investigate the feasibility of undertaking design modifications to mitigate risks.
ASCPV2	**UNDERTAKE PREVENTATIVE MAINTENANCE**	UNDERTAKE PREVENTATIVE MAINTENANCE FOR VULNERABLE BUILDINGS: Develop a preventative maintenance system for existing infrastructure with a focus on bush fire areas and those susceptible to erosion and/or silting up of drains.
ASCPV3	**REDUCE VULNERABILITY TO STRONG WINDS**	REDUCE VULNERABILITY TO STRONG WINDS: Identify and apply protective measures from potential flying/falling debris during high wind or storms.

ASCPV4		EMERGENCY RISK MANAGEMENT PLANS FOR EXPOSED BUILDINGS: For exposed buildings, ensure that disaster management plans address the location specific climate change risk and maintain a current emergency risk management plan, to manage the impacts on people and property from climate change related events. Increase cleaning regime for drains to ensure maximum capacity. Identify high-risk areas for rapid modifications (storm damage costs). Ensure that no new organisational structures and assets (particularly emergency response centres) are located in high-risk areas. Ensure that organisational infrastructure is properly insured for damages associated with extreme weather events.
ASCPV5	**MAINTAIN WATER SYSTEMS**	BUILDING WATER SYSTEMS: Ensure existing building pumping systems are properly maintained and in a workable state of repair. Repair or replace damaged pumping systems as appropriate. Revise design specifications for new buildings to minimise the likelihood of water ingress.
ASCPV6	**UPGRADE VENTILATION SYSTEMS**	UPGRADE VENTILATION SYSTEMS TO COPE DURING HEATWAVES: Audit CSOs heating, ventilation and air-conditioning systems and develop a maintenance program to help prevent system failure under increased peak temperatures and long heatwave events. The plan should prioritise building insulation and thermal design over the expansion of existing HVAC systems. On-site renewable energy sources should be considered to provide power for CSO buildings requiring additional capacity.
ASCPV7	**INVESTIGATE REFLECTIVE PAINT**	INVESTIGATE REFLECTIVE PAINT: Investigate the use of reflective paints on CSO buildings to reduce heat loads.
ASCPV8	**MOSQUITO-PROOF RESIDENTIAL FACILITIES**	MOSQUITO-PROOF RESIDENTIAL FACILITIES: Ensure all CSO-owned housing and accommodation facilities are fitted with insect screens. Advocate to governments to ensure that all government-owned residential and accommodation facilities are fitted with insect screens.
ASCPV9	**REDUCE, RE-USE, RECYCLE**	**WASTE MANAGEMENT** REDUCE, REUSE, RECYCLE: Take action to reduce carbon emissions from waste. Techniques may include improved waste separation, composting, energy recapture and increased recycling collection etc.

ASCPV10	**DEVELOP EMERGENCY WASTE MANAGEMENT PLANS**	DEVELOP EMERGENCY WASTE MANAGEMENT PLANS: Develop plans to mitigate vulnerability to climate change hazards with regard to refuse, that includes guidelines on: temporary storage of waste, including biological and medical waste; how to dispose of green waste and debris following an extreme weather event (who to call, where it should be placed, wether waste should be separated into certain piles). Provide education to clients about managing waste during disasters.
ASCPV11	**PRIORITISE WASTE CLEAN UP AFTER EXTREME EVENTS**	PRIORITISE WASTE CLEAN UP AFTER EXTREME EVENTS: Priories the quick disposal of putrescent waste above other wastes in the aftermath of an extreme event to prevent health risks to clients, staff and volunteers.
3. Management/ Planning		**BUILDINGS**
ASCPM1	**UPGRADE BUILDINGS TO MAXIMISE WATER & ENERGY EFFICIENCY**	UPGRADE BUILDINGS TO MAXIMISE WATER & ENERGY EFFICIENCY: When upgrading and developing new buildings, incorporate design and products to maximise water and energy efficiency, e.g. insulation, solar panels, passive heating and cooling design principles.
ASCPM2	**MEET 5 STAR GREENHOUSE RATINGS FOR NEW BUILDINGS**	MEET 5 STAR GREENHOUSE RATINGS: Construct all new buildings to a performance standard to meet the Australian 5 star Greenhouse Building Rating.
ASCPM3	**INCORPORATE CLIMATE PROOF PRINCIPLES INTO BUILDING DEVELOPMENT, SITE SELECTION & DESIGN**	INCORPORATE CLIMATE PROOF PRINCIPLES INTO BUILDING DEVELOPMENT, SITE SELECTION & DESIGN: Into site selection and design of new buildings and assets or major refurbishment projects relating to: increased peak wind speed, increased rainfall intensity, increased bushfire risk, increased heatwaves and sea level rise.
ASCPM4	**USE PROJECTED DATA TO PLAN FOR RISKS**	USE PROJECTED DATA TO PLAN FOR RISKS: Develop risk management plans for CSO infrastructure and service provision to cope with projected rather than historical risk levels of weather-related events.

ASCPM5	**PERFORM COST-BENEFIT ANALYSES OF UPGRADING TO RESILIENT MATERIALS**	PERFORM COST BENEFIT ANALYSES OF UPGRADING TO RESILIENT MATERIALS: Undertake a cost-benefit analysis for options to increase resilience of organisations' infrastructure with new materials. This is important given expected increases in the frequency and severity of extreme flooding, landslip and temperature events.
ASCPM6	**PRIORITISE BUILDING MAINTENANCE FOR EXTREME EVENTS**	PRIORITISE BUILDING MAINTENANCE FOR EXTREME EVENTS: Review maintenance schedules and prioritise at-risk buildings/service centres.
ASCPM7	**AUDIT CSOs FOR CONTINGENCY PLANS**	AUDIT CSOs FOR CONTINGENCY PLANS: Audit existing CSO premises and service centres and develop plans to provide contingency facilities for centres/offices that may become unusable due to climate related factors such increased as bushfire risk, rising sea level, and high intensity storms.
ASCPM8	**DEVELOP ASSET REGISTER FOR AT RISK BUILDINGS**	DEVELOP ASSET REGISTER FOR AT RISK BUILDINGS: Develop, maintain and regularly update an asset register that rates the function and climate risk exposure of all major CSO assets and indicates whether existing standards are met.
ASCPM9	**IDENTIFY BUILDINGS AT RISK OF SEA LEVEL RISE/ INUNDATION**	IDENTIFY BUILDINGS AT RISK OF SEA LEVEL RISE/INUNDATION: Identify buildings and service centres at risk of inundation as a result of sea level rise and freshwater flooding.
		WASTE MANAGEMENT PLANNING
ASCPM10	**DEVELOP HAZARDOUS WASTE EMERGENCY MANAGEMENT PLAN**	DEVELOP HAZARDOUS WASTES EMERGENCY MANAGEMENT PLAN: Develop a Hazardous Wastes Management Plan for emergency situations (e.g. biological and medical waste).
ASCPM11	**DEVELOP CONTINGENCY PLAN FOR DISRUPTION TO WASTE COLLECTION**	DEVELOP CONTINGENCY PLAN FOR DISRUPTIONS TO WASTE COLLECTION: work with local council to develop a contingency plan that identifies what measures can be taken to manage long-term disruption to waste services.
ASCPM12	**MINIMISE POST-EVENT CLEAN UP**	MINIMISE POST-EVENT CLEAN UP: Ensure buildings exceed climate compliance thresholds and therefore reduce post-event clean up. Review and research other events and responses by organisations in the area and develop a best practice strategy.

ASCPM13	**CONDUCT DEBRIS REDUCTION BEFORE EXTREME EVENTS**	CONDUCT DEBRIS REDUCTION BREFORE EXTREME EVENTS: Identify and apply protective measures from potential flying/falling/floating debris. Develop a policy that requires the clean up of debris from the organisation and its surrounds before cyclones, floods and storms etc.
4. Transfer/Share		**PARTNER / COLLABORATE / SHARE**
ASCPT1	**INTER-ORGANISATIONAL FACILITY SHARING DURING EMERGENCIES**	INTER-ORGANISATIONAL FACILITY SHARING IN EMERGENCIES: Build partnerships with local organisations, councils and businesses and plan for facility sharing during and just after emergencies.
		FUNDING / FINANCIAL MEASURES
ASCPT2	**SECURE FUNDING TO PROTECT/UPGRADE BUILDINGS**	SECURE GOVERNMENT FUNDING TO PROTECT/UPGRADE BUILDINGS: Negotiate for state and federal funding for measures to reduce exposure and increase resilience of CSO buildings/service centres that receive government funding/contracts to provide services.
ASCPT3	**ADVOCATE FOR GOVERNMENT FUNDING TO PROTECT/ UPGRADE SOCIAL HOUSING STOCK**	ADVOCATE FOR GOVERNMENT FUNDING TO PROTECT/UPGRADE SOCIAL HOUSING STOCK: Negotiate for State and Federal funding for measures to reduce exposure and increase the resilience of all social housing stock.
ASCPT4	**ADVOCATE FOR DEVELOPER-FUNDED PUBLIC HOUSING**	ADVOCATE FOR DEVELOPER FUNDED PUBLIC HOUSING: Advocate developer contributions towards public housing.
		RISK TRANSFER
ASCPT5	**NEGOTIATE APPROPRIATE & AFFORDABLE INSURANCE COVER**	NEGORIATE APPROPRIATE & AFFORDABLE INSURANCE COVER: Ensure appropriate insurance coverage for CSO buildings, offices and service centres. Research and identify anticipated market insurance changes. Work with insurance providers to ensure that all organisations are affordably insurable and where insurers have specific concerns about risks such as flooding and bushfires, review options within CSOs control to reduce these risks to levels acceptable to insurers. Promote full insurance cover within the community.
5. Evolutionary Opportunity		
ASCPEO1		

6. Adaptive Capacity		
ASCPA1		
Water		
1. Exposure Mitigation		
ASCWE1	**REDUCE EXPOSURE TO WATER SUPPLY DISRUPTION**	REDUCE EXPOSURE TO WATER SUPPLY DISRUPTION: Invest in water tanks and water storage and purification technology to ensure access to water if water supplies are disrupted during an extreme event.
2. Vulnerability Mitigation		**WATER SUPPLY VULNERABILITY REDUCTION**
ASCWV1	**STAFF TRAINING – WATER EFFICIENCY**	STAFF TRAINING – WATER EFFICIENCY: Collaborate with local councils and water utilities to provide training to staff about water efficiency and the appropriate storage and use of grey water. Invest in water collection, storage and recycling systems, such as water tanks and maintain an alternative water supply for use in times of need.
ASCWV2	**WATER COLLECTION – MATCH CHANGE IN SEASONAL RAINFALL & TEMPERATURES**	WATER COLLECTION - MATCH CHANGE IN SEASONAL RAINFALL & TEMPERATURES: Water storage capacities must be sufficient to capture periods of increased rainfall and periods that become drier. Investigate and implement measures to mitigate the impacts of increased temperatures on water quality, such as measures for aeration of stored water.
ASCWV3	**UPGRADE IRRIGATION**	UPGRADE IRRIGATION: Continue to progressively replace inefficient irrigation systems with more efficient ones.
3. Management/ Planning		**WATER USE MANAGEMENT**

ASCWM1	**DEVELOP POLICY & TARGETS FOR LOW WATER USE**	DEVELOP POLICY & TARGETS FOR LOW WATER USE: Develop and implement water use policy, strategy and sustainable water use for own assets to lead by example, e.g. use of bores, different plants, artificial turf, rainwater tanks, recycled & 'fit for purpose' water to transition the organisation to alternative water supplies. Introduce targets that decrease water use within the organisation and across all service types. Measures include all or any of the following: water saving devices, rainwater collection, grey water use, water use targets, and irrigation management strategies for facilities (Replace inefficient with more efficient technology including anti-evaporative measures such as covers and mulching), place covers on all water tanks, and outside water containers. Increase and facilitate better state and federal grant schemes.
ASCWM2	**ADVOCATE WATER EFFICIENCY & SUPPLY VULNERABILITY REDUCTION MEASURES FOR SOCIAL HOUSING**	ADVOCATE WATER EFFICIENCY & SUPPLY VULNERABILITY REDUCTION MEASURES FOR SOCIAL HOUSING: Advocate to state government departments of housing to develop and implement water use policy, strategy and sustainable use measures in social housing stock.
ASCWM3	**DEVELOP LONG-TERM WATER SECURITY STATEGY**	DEVELOP LONG-TERM WATER SECURITY STRATEGY: Develop a long-term water strategy, which responds to predicted climate change impacts. It should include: an identification of the need for additional or alternative water supply and storage and purification requirements.
ASCWM4	**EDUCATE WATER UTILITIES ABOUT THE NEEDS OF PEOPLE ON LOW INCOMES**	EDUCATE WATER UTILITIES ABOUT THE NEEDS OF PEOPLE ON LOW INCOMES: Engage with water providers to ensure they understands the needs of communities and people on low-incomes and to ensure equity and adequate assistance for those required to purchase water, including people and communities in regional and remote areas.
		FLOOD MANAGEMENT AND PLANNING
ASCWM5	**INTEGRATE CLIMATE CHANGE PROJECTIONS INTO FLOOD PLANNING**	INTEGRATE CLIMATE CHANGE PROJECTIONS INTO FLOOD PLANNING: Integrate climate change projections into flood management and planning processes, using publicly available information about flood risk management such as the NSW Department of Environment and Climate Change - Flood Risk Management Guide.
		GENERAL MANAGEMENT AND PLANNING

ASCWM6	**RESEARCH WATER SCARCITY & ADAPTATION STRATEGY**	RESEARCH WATER SCARCITY AND ADAPTATION STRATEGY: Conduct research into the effects of climate change on the likely impacts of water scarcity on the economy and on specific client groups and communities such as remote Aboriginal communities and agricultural communities. Studies should also focus on how water scarcity will affect the sector and how CSOs can adapt.
4. Transfer/Share		
		FUNDING / FINANCIAL MEASURES
ASCWT1	**ADVOCATE GOVERNMENT GRANTS FOR HOUSEHOLD WATER CONSERVATION**	ADVOCATE GOVERNMENT GRANTS FOR HOUSEHOLD WATER CONSERVATION: Advocate to relevant federal, state and local authorities to provide grants to assist with community/household water saving projects that target individuals and households with low incomes.
ASCWT2	**ADVOCATE CRISIS FUNDING FOR WATER SHORTAGES**	ADVOCATE CRISIS FUNDING FOR WATER SHORTAGES: Establish a policy to trigger DHS 'Crisis Funding' to assist with financial burden of purchasing water during extreme shortages.
5. Evolutionary Opportunity		
ASCWEO1		
6. Adaptive Capacity		
ASCWA1	**INFORMATION PROGRAM ON WATER USE**	INFORMATION PROGRAM ON WATER USE: In partnership with local councils and utilities, develop and deliver information and capacity building programs to promote water use efficiency amongst organisations and clients.
Roads and transport		
1. Exposure Mitigation		
ASCRE1	**RELOCATE SERVICE CENTRES**	RELOCATE SERVICE CENTRES: Relocate service centres away from areas with only one access road to reduce risk of isolation by floodwaters or of being unable to evacuate in cases of bushfire, particularly residential aged-care, disability and accommodations services.

2. Vulnerability Mitigation		
ASCRV1	**ADVOCATE FOR UNSEALED ROADS TO BE SEALED**	ADVOCATE FOR UNSEALED ROAD TO BE SEALED: advocate to state and local governments to seal unsealed roads where it is an effective solution to frequent stormwater damage or will assist the swift evacuation of clients from flood or fire-prone areas.
ASCRV2	**ESTABLISH CONTINGENCY FUEL RESERVES**	ESTABLISH CONTINGENCY FUEL RESERVES: Ensure sufficient fuel storage capacity to supply vehicles during extreme events.
ASCRV3	**REDUCE VULNERABILITY OF FLEETS**	REDUCE VULNERABILITY OF FLEETS: Develop standby mobilisation of community transport fleets with early warnings for extreme events, to enable organisations to assist with locating and evacuating clients and community members with specific needs related to health or mobility.
3. Management/ Planning		
ASCRM1	**ADVOCATE IMPROVEMENTS TO PUBLIC TRANSPORT INFRASTRUCTURE**	ADVOCATE IMPROVEMENTS TO PUBLIC TRANSPORT INFRASTRUCTURE: Advocate for improvements to the public transport system, including increased services to suburban and regional areas, increased accessibility for people with a disability.
ASCRM2	**UPGRADE TO DISASTER RESILIENT FLEETS**	UPGRADE TO DISASTER RESLIENT FLEETS
ASCRM3	**TRANSPORT FOR VOLUNTEERS & EMPLOYEES**	TRANSPORT FOR VOLUNTEERS AND EMPLOYEES
4. Transfer/Share		
ASCRT1	**COLLABORATE WITH UNIVERSITITES ON PUBLIC TRANSPORT RESEARCH**	COLLABORATE WITH UNIVERSITIES ON PUBLIC TRANSPORT RESEARCH: Work with local councils and universities to ensure that the needs of people experiencing poverty and inequality are considered in the investigation and planning of suitable public transit technology, particularly in poorly serviced areas in urban, rural and remote area.

ASCRT2	**ADVOCATE FREE PUBLIC TRANSPORT DURING EMERGENCIES**	FREE PUBLIC TRANSPORT DURING EMERGENCIES: Advocate to STA buses/ferries for a plan for freebie buses (hop, skip, and jump) during extreme weather. This should include a widespread and early storm warning and communication system incorporating transportation status information. Should also identify critical road locations and routes for control and access for emergency procedures and devise a response plan to ensure emergency passage and access. Ensure these plans specifically and adequately address the needs of clients, particularly people with a disability, ill health, the frail-aged and people with companion and assistant animals such as guide dogs.
5. Evolutionary Opportunity		
ASCREO1		
6. Adaptive Capacity		
ASCRA1	**DEVELOP LOW-COST EMERGENCY MOBILITY PLANS FOR CLIENTS**	DEVELOP LOW-COST EMERGENCY MOBILITY PLANS: Develop a low cost mobility strategy to ensure that clients with mobility impairments have access to timely, affordable and suitable transport in emergencies.
ASCRA2	**DEVELOP TRANSPORT ALTERNATIVES TO CAR USE**	DEVELOP TRANSPORT ALTERNATIVES TO CAR USE: Actively discourage individual car use amongst staff and volunteers and actively supply alternatives, e.g. car-pooling or workplace cycle groups, reduce available car parking space.

Energy		
1. Exposure Mitigation		
ASCEE1	**ADVOCATE TO GOVERNMENTS TO GROUND POWER LINES**	ADVOCATE TO GOVERNMENTS TO GROUND POWER LINES: Advocate for power lines to be buried underground, particularly in areas and regions that are highly exposed to extreme weather impacts that are likely to cause power outages, such as cyclones, bushfires and floods.

2. Vulnerability Mitigation		
ASCEV1	**DEVELOP REPEATED EXTREME EVENT MANAGEMENT PLANS**	DEVELOP REPEATED EXTREME EVENT MANAGEMENT PLANS: Develop action plans to ensure service continuity in the face of the high likelihood of repeated extreme weather events causing power outages.
ASCEV2	**SECURE ENERGY INDEPENDENCE**	SECURE ENERGY INDEPENDENC: Ensure offices and service centres are energy independent (ideally, having their own source of renewable energy) to reduce vulnerability to power failures and to minimise disruptions to service provision caused by power outages.
ASCEV3	**PURCHASE BACK-UP POWER**	PURCHASE BACK-UP POWER: Install uninterruptible power supplies (UPS), back-up power storage, and back-up generation in offices and service centres that provide critical systems for operations and core services. Encourage energy efficiency within the sector under a 'lead by example' model.
ASCEV4	**STAFF TRAINING – POWER USE & DISRUPTION**	STAFF TRAINING – POWER USE & DISRUPTION: Educate staff and volunteers on how to manage increased disruptions to CSO power supply. Identify high-risk offices, service centres and clients (e.g. clients who need power to run essential medical equipment or mobility aids) and ensure they have continuity management plans that will enable them to cope with loss of power over extended periods. Programs should include information on energy efficiency and renewable energy.

3. Management/ Planning		**MANAGE AND PLAN FOR ENERGY EFFICIENCY**
ASCEM1	**DEVELOP & IMPLEMENT ENERGY EFFICIENCY PROGRAM**	DEVELOP & IMPLEMENT ENERGY EFFICIENCY PROGRAM: Carry out a comprehensive energy audit and develop an energy efficiency strategy, including installation of solar panels, upgrading to energy efficient appliances etc. Continually monitor for new energy efficient technology and for grants to assist covering purchase costs. Monitor operation of vehicles to ensure fuel efficiency.

ASCEM2	**INSTALL PASSIVE HEATING & COOLING SYSTEMS**	INSTALL PASSIVE HEATING & COOLING SYSTEMS: Utilise passive heating and cooling mechanisms to avoid the need for energy-intensive heating and cooling, including urban and rooftop gardens, lighter building colours and creation of shaded spaces.
ASCEM3		COMMUNITY EDUCATION – ENERGY EFFICIENCY: Partner with local councils, state and federal governments and energy providers to develop targeted education programs for social clients about energy efficiency and the need to manage power demands.
		MANAGE AND PLAN FOR RENEWABLE ENERGY
ASCEM4	**IDENTIFY & ACCESS GRANTS TO SUPPORT TRANSITION TO ENERGY EFFICIENCY**	IDENTIFY & ACCESS GRANTS TO SUPPORT THE TRANSITION TO ENERGY EFFICIENCY: Identify and apply for grants that provide funding and resources to assist organisations and households to improve energy efficiency (e.g. the Energy Efficiency Information Grant and the Community Energy Efficiency Program administered by the federal Department of Energy Efficiency and Climate Change.)
		MANAGE AND PLAN FOR INCREASED USAGE & COSTS
ASCEM5	**INCORPORATE FUTURE ENERGY CONSUMPTION INTO CURRENT PLANNING & POLICY**	INCORPORATE FUTURE ENERGY CONSUMPTION INTO CURRENT PLANNING & POLICY: Develop energy use policies, which include recognition of potential increases in energy usage and costs due to climate change.
ASCEM6	**DEVELOP STRATEGIES TO MONITOR ENERGY CONSUMPTION**	DEVELOP STRATRGIES TO MONITOR ENERGY CONSUMPTION: Research and identify strategies and technologies that enable the monitoring of energy consumption and management of increasing costs.
ASCEM7	**REVIEW ENERGY USE TARGETS**	REVIEW ENERGY USE TARGETS: Develop, implement and monitor energy use targets and efficiency measures across operations.
4. Transfer/Share		**PARTNER / COLLABORATE / SHARE**
ASCET1	**DEVELOP ENERGY SECURITY STRATEGY**	DEVELOP ENERGY SECURITY STRATEGY: Develop an energy security strategy and objectives in conjunction with energy utilities, regarding options for load shedding, priority supply locations, embedded generation, and undergrounding of cables, to reduce exposure to physical hazards.

ASCET2	**ADVOCATE REDUNDANCY FOR HIGH RISK POWER INFRASTRUCTURE**	ADVOCATE REDUNDANCY FOR HIGH RISK POWER INFRASTRUCTURE: Request and encourage utilities to introduce secondary power lines around high-risk links, to introduce redundancy into the power supply chain.
		FUNDING / FINANCIAL MEASURES
ASCET5	**SECURE FUNDING FOR REGIONAL ENERGY EFFICIENCY & EMISSIONS REDUCTION**	SECURE FUNDING FOR REGIONAL ENERGY EFFICIENCY & EMISSIONS REDUCTION STRATEGY: In partnership with local networks, secure funding for the development and implementation of local and regional energy and water efficiency and emissions reduction strategies for CSOs including: audits of energy consumption in facilities; energy efficiency measures for identified high priority facilities; an accurate and consistent approach to benchmarking energy consumption and emissions to ensure accurate monitoring and assessment of energy and emission reductions pursued through energy efficiency measures; and guidelines and design specifications for new (or upgraded) buildings to ensure high levels of thermal comfort and energy efficiency.
		TRANSFER / CLARIFY
ASCET6	**IDENTIFY INFRASTRUCTURE RESPONSIBILITIES**	IDENTIFY INFRASTRUCTURE RESPONSIBILITES: Identify infrastructure responsibilities (e.g. state, local, or external provider) and ensure that they are: a) across the issues, particularly as they relate to people on low incomes; b) have developed infrastructure which meets projected climate change conditions; and c) have developed an adaptation plan.
5. Evolutionary Opportunity		
ASCEEO1	**ALTERNATIVE RENEWABLE ENERGY**	ALTERNATIVE RENEWABLE ENERGY: Investigate options for alternative / renewable energy supply to organisations including essential social services such as health care and residential/accommodation services.

ASCEEO2	**ALTERNATIVE FUEL PRODUCTION**	ALTERNATIVE FUEL PRODUCTION: Investigate options for alternative fuel production and partnerships to ensure adequate fuel supplies within the region.
6. Adaptive Capacity		
ASCEA1		
Communications		
1. Exposure Mitigation		
ASCCE1	**RELOCATE COMMUNICATIONS INFRASTRUCTURE TO LOW-RISK SITES**	RELOCATE COMMUNICATIONS INFRASTRUCTURE TO LOW-RISK SITES: Develop controls to ensure communication systems are in locations at low risk of climate change enhanced natural hazards. This could include and relocation of systems out of areas prone to floods, bushfires and sea level rise, e.g. moving servers and backup systems offsite.
ASCCE2	**DECENTRALISE OR DIVERSIFY COMMUNICATIONS SYSTEMS**	DECENTRALISE OR DIVERSIFY COMMUNICATIONS SYSTEMS: Decentralise telecommunications systems through investment in mobile phones, laptops, tablets, wireless internet.
2. Vulnerability Mitigation		
ASCCV1	**DEVELOP COMMUNICATIONS STRATEGY FOR EXTREME EVENTS**	DEVELOP COMMUNICATION STRATEGY FOR EXTREME EVENTS: Develop a communication strategy to inform clients about predicted extreme weather events or likely disruptions to communication services due to climate change impacts. Clearly communicate these plans to clients and assist them to develop their own emergency communications plans.
ASCCV2	**BACKUP INFRASTRUCTURE TO REDUCE RISK**	BACKUP INFRASTRUCTURE TO REDUCE RISK: Ensure diversified alternative communications avenues (i.e. redundancy) are in place that can be easily accessed by organisations, staff and volunteers (e.g. radio stations, SMS) to provide redundancy in the event of failure in the fixed line or mobile telecommunications systems, assuming expected increases in the severity and frequency of disruptive events.

ASCCV3	**BACKUP POWER SUPPLIES TO MAINTAIN COMMUNICATIONS SYSTEMS**	BACKUP POWER SUPPLIES TO MAINTAIN COMMUNICATIONS SYSTEMS: Invest in measures to provide back-up power supplies such as solar panels or generators. Identify key communications infrastructure that must be maintained in the event of communications failure, e.g. mobile phones, computers.
3. Management/ Planning		
ASCCM1	**ESTABLISH EMERGENCY COMMUNICATIONS SYSTEM TO CONTACT CLIENTS**	ESTABLISH EMERGENCY COMMUNICATIONS SYSTEM TO CONTACT CLIENTS: Develop a register of highly vulnerable clients and prioritise contact with them in the event of an emergency. Develop actions to ensure clear, reliable and consistent communications with clients. Develop a joint communications plan with other service providers to facilitate information sharing during emergencies.
ASCCM2	**PLAN FOR COMMUNICATIONS ROBUSTNESS**	PLAN FOR COMMUNICATIONS ROBUSTNESS: Update the emergency action plan to ensure communications during emergencies are protected.
4. Transfer/Share		
ASCCT1	**DEVELOP INTER-ORGANISATIONAL COMMUNICATIONS PLANS FOR EXTREME EVENTS**	DEVELOP INTER-ORGANISATIONAL COMMUNICATIONS PLANS FOR EXTREME EVENTS: Partner with other CSOs, local councils, the SES and local emergency services to develop collaborative emergency communications plans, which ensure the functionality of communications channels in emergencies and the flow of accurate, timely information.
5. Evolutionary Opportunity		
ASCCEO 1	**EXPLORE TELE-COMMUNITING/ WORKING FROM HOME**	EXPLORE TELECOMMUTING/WORK FROM HOME: Capture the opportunity to increase the quality and bandwidth of communications as a way to increase telecommuting, which would reduce carbon emissions. Investigate opportunities to increase telecommuting for employees and volunteers.

6. Adaptive Capacity		
ASCCA1		
Finance and Governance		
Assets		
1. Exposure Mitigation		
AFGAE1	**RELOCATE ASSETS FROM HIGH RISK AREAS**	RELOCATE ASSETS FROM HIGH RISK AREAS: Relocate/store portable CSO assets, such as cars, equipment, IT servers in areas at reduced risk from climate change and extreme weather impacts.
2. Vulnerability Mitigation		**REDUCE VULNERABILITY OF ASSETS (GENERAL)**
AFGAV1	**REDUCE FOSSIL FUEL USE**	REDUCE FOSSIL FUEL USE: Implement carbon reduction activities in order to minimise cost increases associated with carbon emissions legislation. Investigate ways to reduce the reliance on fossil fuel based supplies. Conduct an energy use audit; upgrade all technology to be low emissions.
AFGAV2	**PROTECT PRIORITY ASSETS**	PROTECT PRIORITY ASSETS: Prioritise the importance of CSO assets and implement measures to protect them according to importance.
AFGAV3	**INVESTIGATE ALTERNATIVE ELECTRICITY PRODUCTION**	INVESTIGATE ALTERNATIVE ELECTRICITY PRODUCTION: Install solar panels to supplement or replace grid supplies. Seek funding grants to help meet the up-front costs of purchasing the panels.
AFGAV4	**SECURE FUNDING FOR UPKEEP OF ASSETS**	SECURE FUNDING FOR UPKEEP OF ASSETS: Allocate additional funding in future budgets for renewal, repair and maintenance of CSO assets at risk from extreme events.
AFGAV5	**MANAGE ASSETS THAT CANNOT BE RELOCATED**	MANAGE ASSETS THAT CANNOT BE RELOCATED: Where buildings and assets cannot be relocated, research and implement measures that reduce their sensitivity and vulnerability to climate change and extreme weather impacts.

3. Management/ Planning		
AFGAM1	**IDENTIFY HIGH RISK ASSETS & ALTERNATIVE LOW RISK LOCATIONS**	IDENTIFY HIGH RISK ASSETS & ALTERNATIVE LOW RISK LOCATIONS
		GENERAL ASSETS: REDUCE CARBON FOOTPRINT
AFGAM2	**PURCHASE CARBON OFFSETS**	PURCHASE CARBON OFFSETS: Purchase carbon credits to offset emissions from CSO fleet.
AFGAM3	**REDUCE CARBON EMISSIONS**	REDUCE CARBON EMISSIONS: Collect emissions and water use data on service centres and activities to understand consumption patterns. Include carbon reduction targets in corporate planning.
AFGAM4	**REDUCE ENERGY USE**	REDUCE ENERGY USE: Improve energy use efficiency/reduce energy use. Research alternative technologies for assets (e.g. for solar power).
4. Transfer/Share		**PARTNER / COLLABORATE / SHARE**
AFGAT1	**DEVELOP RECIPROCAL SERVICE PROVISION ARRANGEMENTS**	DEVELOP RECIPROCAL SERVICE PROVISION ARRANGEMENTS: Discuss and organise shared service provision arrangements and the minimisation of resource use (water, energy) with other organisations and service providers in the area.
		FUNDING / FINANCIAL MEASURES
AFGAT2	**INVESTIGATE/MONITOR RENEWABLE ENERGY FUNDING OR INCENTIVES**	INVESTIGATE/ MONITOR RENEWABLE ENERGY FUNDING OR INCENTIVES: Monitor upcoming grants/incentives for small-scale renewable energy infrastructure for public and private use.
		TRANSFER RISK OR RESPONSIBILITY

AFGAT3	**SECURE APPROPRIATE INSURANCE FOR ASSETS**	SECURE APPROPRIATE INSURANCE FOR ASSETS: Discuss identification and minimisation of climate change risks with insurer. Investigate risks of non-insurance of assets.
AFGAT4	**TRANSFER COSTS TO FUNDING BODIES**	TRANSFER COSTS TO FUNDING BODIES: Develop plans to minimise cost and out of pocket losses for CSOs. This should include annual review on what is available from the state government.
5. Evolutionary Opportunity		
AFGAEO 1	**INCLUDE GREEN PARAMETERS IN CSO MOTOR VEHICLE POLICIES**	INCLUDE 'GREEN PARAMETERS' IN CSO MOTOR VEHICLE POLICIES: Develop a motor vehicle policy, which includes 'green parameters' such as purchasing of vehicles that use alternative, cleaner (low emission) fuels and total life-cycle (purchase and operating) costs of the vehicle. Invest in training for staff focussing on driving behaviour to reduce fuel consumption, particularly for outreach services and in regional and remote areas where distances travelled are greater.
6. Adaptive Capacity		
AFGAA1	**REDUCE CAR TRIPS**	REDUCE CAR TRIPS: Develop teleworking policies and utilise information communications technology to reduce car trips, i.e. allow staff to work from home.
AFGAA2	**DEVELOP RENEWABLE ENERGY TRANSITION PLAN**	DEVELOP RENEWABLE ENERGY TRANSITION PLAN: Introduce policy changes to guide CSO transition to energy self-sufficiency. Policies should outline the degree of transitioning and the timeframe required.
AFGAA3	**ENSURE AFFORDABLE INSURANCE**	ENSURE AFFORDABLE INSURANCE: Invest in resilience measures to ensure that assets are maintained to a level that is affordably insurable (certain resilience measures may attract lower premiums). Encourage clients and communities to do the same.
AFGAA4	**PERFORM PREVENTATIVE MAINTENANCE & FUTURE PROOFING**	PERFORM PREVENTATIVE MAINTENANCE & FUTURE-PROOFING: Progress towards preventative rather than reactive maintenance activities. Maintain assets to account for future climate change projections not yet incorporated into regulations.

AFGAA5	**STAFF TRAINING – CLIMATE CHANGE & PLANNING**	STAFF TRAINING - CLIMATE CHANGE AND PLANNING: Invest in professional training courses for relevant staff to promote understanding and application of available research and tools to assist with integrating climate change considerations into service planning and maintenance processes.

Financial Management		
1. Exposure Mitigation		
AFGFME1		
2. Vulnerability Mitigation		
AFGFMV1	**MINIMISE GREENHOUSE GAS EMISSIONS**	MINIMISE GREENHOUSE GAS EMMISSIONS: Develop and implement plans to reduce CSO economic vulnerability to legislative and policy measures which regulate/reduce carbon emissions, such as pricing carbon emissions. E.g. through minimising energy and fuel use. Conduct a comprehensive analysis of future budget requirements, which considers increased consumption of energy and water in response to climate change (and increased client demand), increased demand for services, and increased need for maintenance as a result of extreme weather events.
AFGFMV2	**REDUCE FINANCIAL EXPOSURE TO EXTREME EVENTS**	REDUCE FINANCIAL EXPOSURE DUE TO EXTREME EVENTS: Reduce CSO financial vulnerability to increased extreme events, which cause disruption to services and damage to assets. Act on a range of strategies to ensure resilience of services. E.g. negotiate changes to funding contracts, which enable expanded funding for CSOs during extreme events and protect CSOs from losses arising from failing to meet contractual obligations as a result of participating in extreme event response and recovery efforts.
AFGFMV3	**ALLOCATE RESOURCES FOR RECOVERY FROM EXTREME EVENTS**	ALLOCATE RESOURCES FOR RECOVERY FROM EXTREME EVENTS
AFGFMV4	**IMPLEMENT MAINTENANCE PROGRAM**	IMPLEMENT MAINTENANCE PROGRAM: Review the maintenance program for CSO assets, increase maintenance budgets where necessary and seek grants to cover the increase in cost due to climate change and extreme weather impacts.

AFGFMV5	**REDUCE WATER/ENERGY CONSUMPTION**	REDUCE WATER/ENERGY CONSUMPTION: Plan for and implement improvements to water and energy efficiency to reduce exposure to increased costs of resources.
3. Management/ Planning		
		INTEGRATE CLIMATE CHANGE COSTS INTO BUDGETS
AFGFMM1	**REASSESS ANNUAL BUDGET IN LIGHT OF CLIMATE CHANGE**	RE-ASSESS ANNUAL BUDGET IN LIGHT OF CLIMATE CHANGE: Re-assess annual budget allocations as part of financial management planning, and incorporate climate change risks into budget reviews.
AFGFMM2	**IMPLEMENT A POLICY OF 'SHADOW PRICING' BASED ON CARBON PRICE FORECASTS**	IMPLEMENT SHADOW PRICING BASED ON CARBON PRICE FORECASTS: Implement a policy of 'shadow pricing' across decision-making to include Federal Treasury estimates for forward carbon prices under a two degrees Celsius warming scenario.
AFGFMM3	**UNDERTAKE FINANCIAL ANALYSIS OF CLIMATE CHANGE COSTS TO OPERATIONS**	UNDERTAKE FINANCIAL ANALYSIS OF CLIMATE CHANGE COSTS TO OPERATIONS: Include the cost of climate change in financial analysis for purchase and maintenance of assets and for new and existing programs and operations. Allow more funds in budgets as buildings and assets will deteriorate more rapidly due to flooding and increase in hot days and there will be either higher build costs or more frequent replacement required.
AFGFMM4	**ASSESS IMPACT OF EMPLOYMENT LOSS ON FINANCIAL STABILITY**	ASSESS IMPACT OF EMPLOYMENT LOSS ON FINANCIAL STABILITY: Assess how the loss of local employment will impact CSO financial sustainability (e.g. through increased demand for services, including emergency relief, employment and accommodation services etc.)
AFGFMM5	**BULK PURCHASE TECHNOLOGY**	BULK PURCHASE TECHNOLOGY: Undertake a scoping study to develop a bulk-purchasing model for energy efficient technology.
AFGFMM6	**FORECAST WATER AND POWER PRICE INCREASES**	FORECAST WATER & POWER PRICE INCREASES: Increase utility cost estimates in CSO financial management processes to reflect upcoming increases in water and energy use, including factoring in shadow costs from carbon pricing. Conduct an energy price risk assessment for the next 5-10 years to inform budgetary and capital investment decisions (e.g. buildings and vehicles).

		LONG-TERM FINANCIAL PLANNING
AFGFMM7	**UNDERTAKE LONG-TERM FINANCIAL PLANNING**	UNDERTAKE LONG-TERM FINANCIAL PLANNING: Undertake long term financial planning to maximise resources available to CSO, including service continuity planning. Service continuity plans should include strategies to follow in the event of crises including weather-related emergencies (heat waves, floods, storms and fires and power and telecommunications outages). Issues associated with risks to staff and resourcing in the event of emergencies should also be addressed. Monitor anticipated changes to the carbon price in the short, medium and long term and incorporate predictions into financial planning.
		FUNDING FOR EXTREMES AND NATURAL DISASTERS
AFGFMM8	**ESTABLISH CONTINGENCY FUND FOR EXTREME EVENTS**	ESTABLISH CONTINGENCY FUND FOR EXTREME EVENTS: Gather data and present the business case to governments and funding bodies to increase CSO resources to assist with the response to and recovery from extreme events and natural disasters, including floods, fires and storm surge. Investigate the development of an emergency rollover fund in the operational budget to deal with unexpected increases in emergency response. Aim to avoid use of operational fund for extreme weather event response and recovery.
AFGFMM9	**IDENTIFY DEGREE OF INSURANCE COVERAGE ACROSS THE SECTOR**	IDENTIFY THE DEGREE OF INSURANCE ACROSS THE SECTOR: Work with national and state peak bodies and in conjunction with insurers to identify the degree of under insurance and un-insurance across the sector.
4. Transfer/Share		**PARTNER / COLLABORATE / SHARE**
AFGFMT1	**BUILD REGIONAL RESOURCE CAPACITY**	REGIONAL RESOURCE CAPACITY BUILDING: Build resource capacity through coordination and alliances with other organisations within the sector, with governments and with private sector bodies.
AFGFMT2	**SUPPLEMENT SERVICE PROVISION THROUGH PARTNERSHIPS**	SUPPLEMENT SERVICE PROVISION: Supplement service provision through partnership with councils, other organisations, state or federal government to respond to increased demand.

		FUNDING / FINANCIAL MEASURES
AFGFMT3	**EXPLORE FUNDING MEASURES TO COVER INCREASED COSTS**	EXPLORE FUNDING MEASURES TO COVER INCREASED COSTS: Secure state or federal government funding to cover costs related to adapting to climate change. If funding is not secured organisations should explore other options for securing funds or raising revenue to support adaptation, e.g. through local councils, private sector organisations, or fundraising activities.
AFGFMT4	**SECURE FUNDING TO COMPENSATE FOR HIGHER COSTS / DEMAND**	SECURE FUNDING TO COMPENSATE FOR HIGHER COSTS / DEMAND: Advocate for increased state and federal funding or access alternative funding to compensate CSOs for increased operational costs due to government policy responses to climate change. Seek financial assistance from federal and state governments to fund regular programs and activities. Make provisions for increasing operational costs to address climate change risks. Seek grant funding to support climate change adaptation actions.
AFGFMT5	**ADVOCATE INCREASED VOLUNTEER INCENTIVES**	VOLUNTEER INCENTIVES: Advocate to governments to pay/provide incentives for volunteers to increase personal responsibility and compensate for lost time.
		TRANSFER RISK TO INSURERS
AFGFMT6	**INVESTIGATE INSURANCE SOLUTIONS**	INSURANCE SOLUTIONS: Work with insurers to develop alternative, mutually acceptable insurance solutions. E.g. weather derivatives, loss of income insurance. Review insurance policies for at-risk assets and work with insurers to ensure there is adequate insurance in place. This includes sufficient insurance for disaster clean-up costs and maintenance. Keep abreast of insurance industry analysis regarding climate change risks.
AFGFMT7	**CLARIFY EXTREME EVENT DEFINITIONS FOR INSURANCE PURPOSES**	CLARIFY EXTREME EVENT DEFINITIONS FOR INSURANCE PURPOSES: clarify distinction between different types of extreme events and seek consistent application of insurance cover in each case. E.g. overflow vs. storm surge, cyclone vs. high wind speed.
5. Evolutionary Opportunity		
AFGFMEO1	**INVEST IN CARBON TRADING**	INVEST IN CARBON TRADING: Investigate financial potential for CSO investment in carbon trading and energy generation or technology revenue streams.

6. Adaptive Capacity		
AFGFMA1	**IMPLEMENT LOW CARBON FUTURE ACTIONS**	IMPLEMENT LOW CARBON FUTURE ACTIONS: Identify and implement cost effective actions from the Low Carbon Future Strategy.

Legal		
1. Exposure Mitigation		
AFMLE1	**AVOID USE OF HIGH-RISK LOCATIONS**	AVOID USE OF HIGH-RISK LOCATIONS: Reduce future legal and financial risks by avoiding development or purchase of service centres in high-risk locations, particularly residential aged-care and other accommodation facilities.
2. Vulnerability Mitigation		
AFMLV1	**COMPLY WITH RELEVANT INDEMNIFICATION LEGISLATION**	COMPLY WITH RELEVANT INDEMIFICATION LEGISLATION: Ensure CSO complies with state benchmarks for indemnification.
AFMLV2	**UPDATE/CREATE EMERGENCY PLANS**	UPDATE/CREATE EMERGENCY PLANS: Update extreme event management plan to avoid litigation, loss of services, and to satisfy insurance requirements.
AFMLV3	**DEMONSTRATE RESPONSIBLE/ REASONABLE DECISION-MAKING**	DEMONSTRATE RESPONSIBLE/REASONABLE DECISION MAKING: Document processes and actions that demonstrate reasonable decision-making in light of information that is known in relation to climate change risks.
3. Management/ Planning		
	RESEARCH/REVIEW LEGAL REQUIREMENTS & LIABILITY	**RESEARCH/REVIEW LEGAL REQUIREMENTS & LIABILITY**

AFMLM1	**REVIEW INSURANCE POLICY REQUIREMENTS RELATED TO CLIMATE CHANGE & EXTREME WEATHER**	REVIEW INSURANCE POLICY REQUIREMENTS RELATED TO CLIMATE CHANGE & EXTREME WEATHER: Review CSO insurance policy (including professional indemnity) requirements for climate change risks to minimise potential litigation. Review staff and volunteer insurance policy requirements for climate change risks to minimise potential litigation
AFMLM2	**INCLUDE CLIMATE CHANGE CLAUSES IN CONTRACTS FOR SERVICE**	INCLUDE CLIMATE CHANGE CLAUSES IN CONTRACTS FOR SERVICES: Review CSO contracts and investigate the inclusion of clauses to safeguard against key projected climate change impacts, such as rising electricity prices and more frequent extreme events such as bushfire and storm events.
AFMLM3	**MONITOR CHANGES IN LEGISLATION**	MONITOR CHANGES IN LEGISLATION: Legislative requirements on CSOs to be taken into account when developing disaster management plans.
AFMLM4	**EVALUATE IMPACTS OF DECISIONS ON INSURANCE**	EVALUATE IMPACT OF DECISIONS ON INSURANCE: Research the impacts of CSO decisions on staff and volunteer insurance premiums.
		ADDRESS LEGAL REQUIREMENTS
AFMLM5	**EVALUATE SHORT-TERM COSTS VS. LONG TERM LITIGATION**	ADDRESS SHORT TERM COSTS vs. LONG TERM LITIGATION: Develop a legal transition strategy based upon legal opinion to minimise short-term litigation. This can be folded into the process of introducing measures that would address climate-related legal risks for in the long term.
AFMLM6	**MINIMISE CHANCE OF FUTURE LEGAL CHALLENGES**	MINIMISE CHANCE OF FUTURE LEGAL CHALLENGES: Minimise CSO exposure to future legal challenges, such as negligence-based torts. This can be done by minimising the number of properties at risk to future climate change impacts. E.g. by developing and implementing climate change adaptation and disaster management plans, service continuity plans etc.
4. Transfer/Share		
5. Evolutionary Opportunity		
6. Adaptive Capacity		

Governance		
1. Exposure Mitigation		
AFGGE1		
2. Vulnerability Mitigation		
AFGGV1	**EDUCATE STAFF & CLIENTS ABOUT CSO RESPONSES TO CLIMATE CHANGE**	EDUCATE STAFF & CLIENTS ABOUT CSO RESPONSE TO CLIMATE CHANGE: Raise staff and client awareness about the impacts of climate change and CSO responses through information and education programs.
3. Management/ Planning		
AFGGM1	**PRIORITISE GOVERNANCE STRATEGIES**	PRIORITISE GOVERNANCE STRATEGIES: Develop a methodology to determine and prioritise financial, environmental and social strategies when planning responses to climate change and extreme weather impacts.
AFGGM2	**REVIEW GOVERNANCE FRAMEWORKS**	REVIEW GOVERNANCE FRAMWORKS: Integrate and embed climate change risk mitigation and adaptation into CSO governance framework.
AFGGM3	**LEAD BY EXAMPLE**	LEAD BY EXAMPLE: Develop a clear policy position on climate change adaptation to guide staff, volunteers, clients and the local community.
AFGGM4	**INCORPORATE CLIMATE CHANGE & SUSTAINABILITY INTO DECISION-MAKING**	INCORPORATE CLIMATE CHANGE & SUSTAINABILITY INTO DECISION-MAKING: Review relevant CSO strategies, plans and reporting frameworks to ensure they incorporate sustainability and the potential effects of climate change. Incorporate climate change scenarios into policy and decision making processes.
AFGGM5	**IMPLEMENT RISK MANAGEMENT ACTION**	IMPLEMENT RISK MANAGEMENT ACTION: Develop and implement risk management plans for CSOs and clients, to manage changes in mean climate, as well as the increasing severity and frequency of extreme events under climate change.
AFGGM6	**IMPROVE INFORMATION MANAGEMENT**	IMPROVE INFORMATION MANAGEMENT: Develop information management arrangements to support the implementation of climate change actions and strategies.

AFGGM7	**ADDRESS CLIENT & COMMUNITY EXPECTATIONS OF SERVICE DELIVERY DURING EXTREME EVENTS**	CHANGE CLIENT & COMMUNITY EXPECTATIONS OF SERVICE DELIVERY DURING EXTREME EVENTS: Manage client and community expectations through community awareness and education program outlining the levels of service CSOs can feasibly provide during different types of extreme weather events.
4. Transfer/Share		
AFGGT1	**ESTABLISH SERVICE DELIVERY PARTNERSHIPS**	ESTABLISH SERVICE DELIVERY PARTNERSHIPS: Establish partnerships with federal and state governments, local councils, and private sector and peer organisations to prepare for increase in demand for community-based services (including aged care, accommodation, health, mental health, counselling, disability and childcare services and emergency relief).
5. Evolutionary Opportunity		
AFGGEO1	**DEVELOP SECTOR-WIDE COLLABORATION**	DEVELOP SECTOR-WIDE COLLABORATION: Collaborate with all CSOs in the area, the state and nationally to 'climate-proof' the sector, which would increase resilience and also enable potential advantages to be harnessed.
AFGGEO2	**PROMOTE SECTOR AS CLIMATE CHANGE LEADER**	PROMOTE THE SECTOR AS CLIMATE CHANGE LEADER: Promote the sector as a leader in progressive action in response to climate change. E.g. the use of innovative water and energy efficiency technologies; development and implementation of disaster plans; participation in institutional planning and response processes for extreme events and disasters.
AFGGEO3	**BUILD SECTOR AWARENESS OF CLIMATE CHANGE**	BUILD SECTOR AWARENESS OF CLIMATE CHANGE: Strengthen the profile of climate change within the sector at national, state, regional and local levels, by building and maintaining the knowledge base about how climate change will impact clients and organisations, developing case studies, sharing information etc.

6. Adaptive Capacity		
AFGGA1	**ESTABLISH LOCAL DISASTER RESILIENCE COMMUNITY DEVELOPMENT PROGRAM**	ESTABLISH LOCAL DISASTER RESILIENCE COMMUNITY DEVELOPMENT PROGRAM: Consider implementing a local disaster resilience community development program, drawing on similar programs implemented by local councils. The program should aim to build a sense of community by encouraging people to get to know their neighbours, support local networks, participate in local community activities and organisations and encouraging social harmony as groups and people with different needs move into the area. Programs of this nature are instrumental in reducing social isolation and enabling the monitoring and assistance of vulnerable groups and individuals as well as the development of multiculturalism.
Staff and volunteers		
1. Exposure Mitigation		
AFGSE1	**VARY WORK TIMES DUE TO WEATHER**	VARY WORK TIMES DUE TO WEATHER: Modify work patterns to allow work at different times of the day or night to avoid the hottest part of the day, or to otherwise suit climate conditions. E.g. Schedule outreach visits for early in the morning or later in the day, avoiding the midday heat on extremely hot days.
2. Vulnerability Mitigation		
AFGSV1	**MANDATE WATER & REST BREAKS**	MANDATE WATER & REST BREAKS: Mandate regular, increased water and rest breaks for staff and volunteers.
AFGSV2	**STAFF WHS TRAINING & MONITORING**	STAFF WHS TRAINING & MONITORING: Conduct regular staff and volunteer training about CSO Workplace Health and Safety (WHS) procedures regarding extremely hot weather and extreme weather conditions and about how to identify and respond to potential climate change risks. Monitor staff and volunteer health and safety incidents in extreme heat and weather events.
AFGSV3	**IMPLEMENT STAFF HEAT STRESS POLICY**	IMPLEMENT STAFF HEAT STRESS POLICY: Develop a policy to manage uncomfortable indoor temperatures in CSO offices and service centres.

AFGSV4	**MANAGE STAFF & VOLUNTEER EXPOSURE TO MOSQUITOES**	MANAGE STAFF & VOLUNTEER EXPOSURE TO MOSQUITOES: Establish work practices that reduce vulnerability to mosquito attacks. Ensure all outside staff are supplied with adequate protective clothing and insect repellent. Limit outside work during early morning and evening when mosquitoes are prevalent.
3. Management/Planning		**COORDINATE AND MANAGE STAFF**
AFGSM1	**FORECAST STAFFING REQUIREMENTS**	FORECAST STAFFING REQUIREMENTS: Know the staffing and volunteer levels required for each 24 hour/2Day/one week period and plan rosters, meeting schedules and programs, taking into consideration staff and volunteer health, weather and extreme events. Develop a rescheduling program and contracting processes for periods when extra staffing is required.
AFGSM2	**CONTINGENCY STAFFING ARRANGEMENTS FOR DISASTERS / OUTAGES**	CONTINGENCY STAFFING ARRANGEMENTS FOR DISASTERS / OUTAGES: Develop a contingency plan for accessing additional staff to respond to natural disasters and power failures, including post-disaster clean up requirements. Develop a contingency plan for CSO staff and volunteers in the event of power outages and communications failures etc. Work collaboratively with local councils and electricity authorities to monitor the risk of blackouts as demand increases due to hotter conditions. Review CSO roles and resourcing for emergencies - e.g. how many staff can be released as volunteers to support relief and recovery efforts.
AFGSM3	**MAXIMISE COLLABORATION & CROSS-FERTILISATION OF IDEAS**	MAXIMISE COLLABORATION & CROSS FERTILISATION OF IDEAS: Develop strong partnerships and networks across the sector to improve sectoral communication to maximise cross-fertilisation of ideas and strategies to respond to climate change and extreme weather risks.
AFGSM4	**IMPLEMENT WORK FROM HOME POLICIES.**	WORK FROM HOME: Where practical, develop additional working from home policies for CSO staff specific to climate change and extreme weather risks, including extremely hot days, heat waves, floods etc.
		MOTIVATE, INCENTIVISE & SUPPORT STAFF

AFGSM5	**INCENTIVISE KEY POSITIONS**	INCENTIVISE KEY POSITIONS: Offer incentives to retain key personnel at locations where staff are hard to retain (e.g. scholarships). Employ appropriately skilled/experienced local people by preference.
AFGSM6	**MODIFY AWARD STRUCTURE**	MODIFY AWARD STRUCTURE: Modify award structure to cater for heat wave events (i.e. Penalty rates not applicable for making up hours lost to heat wave).
AFGSM7	**SUPPORT CULTURE CHANGE**	SUPPORT CULTURE CHANGE: Encourage a culture change within CSO to cultivate cleaner service provision and operation techniques. Educate staff and volunteers about the benefits of climate change adaptation. Ensure there is institutional support and policies to guide internal adaptive measures (e.g. telework protocols) to encourage acceptance and interest within staff. Promote resilience among staff.
AFGSM8	**ESTABLISH SUPPORT PROGRAM FOR EMERGENCY WORKERS**	ESTABLISH SUPPORT PROGRAM FOR EMERGENCY WORKERS: Establish a support program for staff and volunteers who participate in emergency response and recovery efforts to identify and manage burnout and trauma.
	OPTIMISE PRODUCTIVITY	OPTIMISE PRODUCTIVITY: Investigate existing and continue research on conditions for optimum productivity in the context of climate change risks.
		PROTECT STAFF
AFGSM9	**DEVELOP VULNERABLE STAFF REGISTER**	DEVELOP VULNERABLE STAFF REGISTER: develop register for staff and volunteers that may vulnerable in extreme events.
AFGSM10	**AMEND WHS POLICY TO REFLECT CLIMATE CHANGE RISKS**	AMEND WHS POLICY TO REFLECT CLIMATE CHANGE RISKS: Review and ensure CSO WHS guidelines comprehensively address climate change risks. E.g., outreach and outdoor work during severe storm events; potential impact of mosquito borne infectious diseases. Increase awareness of these guidelines through regular training and reminders.
AFGSM11	**MONITOR STAFF PRODUCTIVITY IN HEAT**	MONITOR STAFF PRODUCTIVITY IN HEAT: Monitor the frequency of heat waves and their impact on staff and volunteer.

		TRAIN AND INFORM STAFF
AFGSM12	**STAFF EDUCATION – CLIMATE CHANGE**	STAFF EDUCATION – CLIMATE CHANGE: Educate staff and volunteers across all program and service areas about climate change risks, and their implications for the organisation and its clients. Embed climate change skills into the CSO workforce now. Collect and disseminate up to date data about climate change to staff, volunteers and clients. Data collection should follow established themes of interest: impacts, latest projections, adaptation options etc. Ensure data is accessible to all clients and community members. For example, establish a system for managing and storing the data collected, possibly a 'one stop shop' website where organisations and community members can access the information.
AFGSM13	**STAFF EDUCATION – CARBON PRICE**	STAFF EDUCATION – CARBON PRICE: Educate staff and volunteers about the impact of the carbon price (or carbon tax) on CSO and how to minimise the impacts associated with it.
AFGSM14	**STAFF EDUCATION – EXTREME WEATHER**	STAFF EDUCATION – EXTREME WEATHER: Increase awareness of issues associated with work conditions and climate change. Develop and implement a comprehensive communications strategy to raise awareness of climate change impacts and the advantages of early attention to adaptation, including partnerships with key national professional and interest groups to develop best practice networks.
4. Transfer/Share		**PARTNER / COLLABORATE / SHARE**
AFGST1	**REGIONAL STAFFING COLLABORATION**	REGIONAL STAFFING COLLABORATION: Partner with organisations in the local area and neighbouring areas to share staff during and after extreme events.
AFGST2	**COLLABORATE ON ORGANISATIONAL SUPPORT**	COLLABORATE ON ORGANISATIONAL SUPPORT: Work with national and state peak bodies, state and federal governments and other institutions to identify best practice tools for organisational support. Work through the existing networks to develop skills.
		FUNDING / FINANCIAL MEASURES

AFGST3	**SECURE GOVERNMENT FUNDING FOR STAFF INCREASES**	SECURE GOVERNMENT FUNDING FOR STAFF INCREASES: Advocate to State and federal government for funds to employ additional staff to respond to climate change risks to CSO and clients.
AFGST4	**SECURE ENVIRONMENTAL EDUCATION FUNDING**	SECURE ENVIRONMENTAL EDUCATION FUNDING: Seek funding for a sustainability/environmental education officer for the region.
		TRANSFER / OUTSOURCE
AFGST5	**IDENTIFY INSURANCE REQUIREMENTS FOR HEAT STRESS**	IDENTIFY INSURANCE REQUIREMENTS FOR HEAT STRESS: Work with insurers to identify new requirements under the new weather conditions to ensure adequate cover.
AFGST6	**ENCOURAGE VOLUNTEERING**	ENCOURAGE VOLUNTEERING: Encourage volunteering in local community to provide key services without need for professional staff (e.g. Meals on Wheels program).
5. Evolutionary Opportunity		
AFGSEO1	**DEVELOP STAFF RETENTION POLICY**	DEVELOP STAFF RETENTION POLICY: Develop a strategy to attract and retain staff.
AFGSEO2	**SHARE INTRANET & DATABASE RESOURCES**	SHARE INTRANET & DATABASE RESOURCES: integrate intranet and databases into work strategy to allow work from home, remote locations.
AFGSEO3	**DEVELOP MULTI-SKILLED WORKFORCE**	DEVELOP MULTI-SKILLED WORKFORCE: Have professional training requirements for staff to increase their skills. E.g. how to integrate climate change considerations into service delivery with specific client groups. Diversification of staff, for example, admin staff trained as emergency relief staff.
6. Adaptive Capacity		

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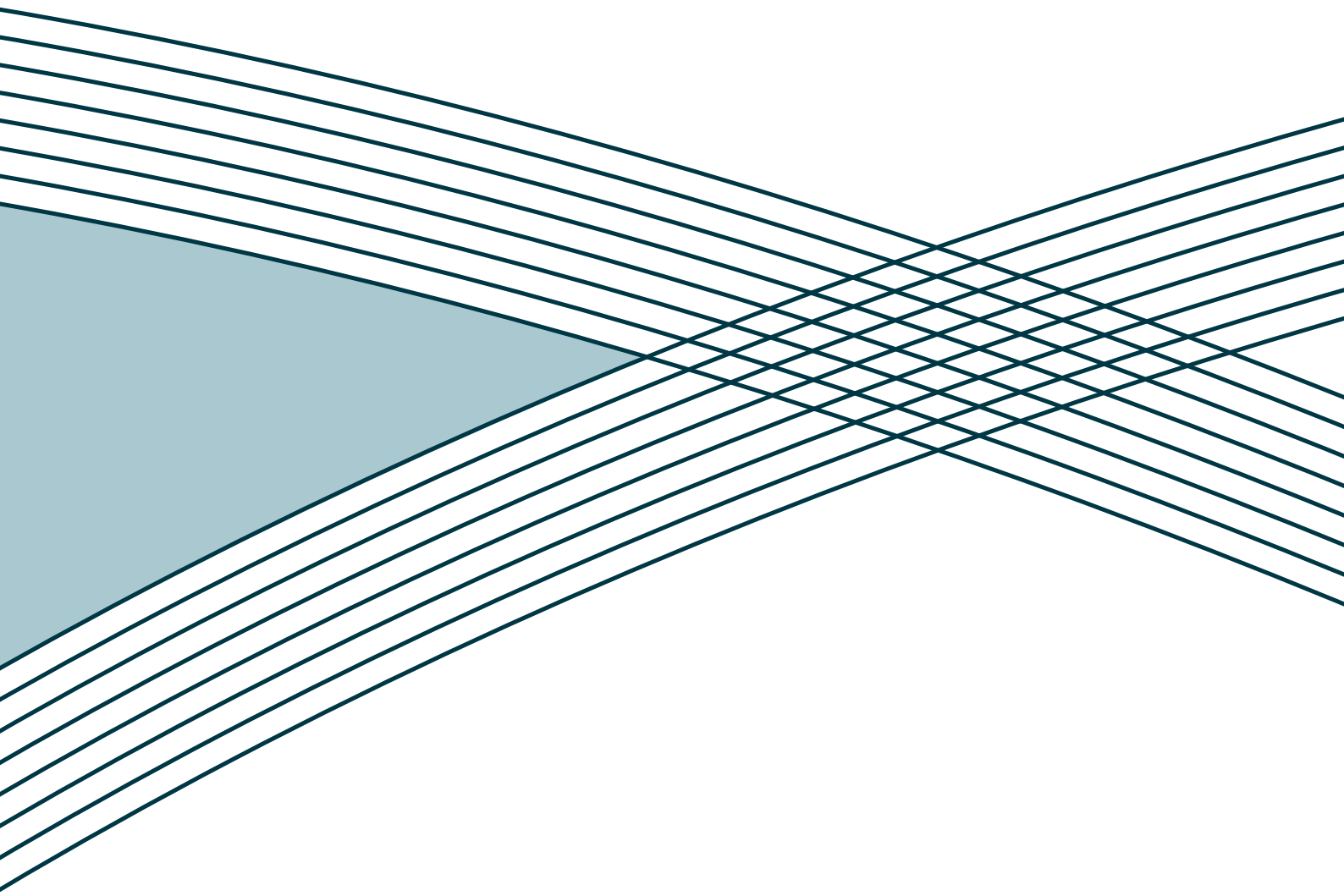

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Climate Risk

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