

Operationalising Community Disaster Resilience: The Role of Place-Based Community Organisations

Laurelle Muir

**BA
GradDipMgt
MSWAP**

Submitted in fulfilment of the requirement of the degree of Master of Philosophy

School of Design
Creative Industries Faculty
Queensland University of Technology
2020

Keywords

Community disaster resilience, case study research, community engagement, cross-sector collaboration, disaster resilience, disaster management system, place-based community organisations, qualitative, reflexive thematic analysis, severe weather event, social capital, disaster preparation, recovery and response

Abstract

This thesis reports on the findings of research that explored how place-based community organisations can play an effective role in the operationalisation of community disaster resilience. The devastating flood that was experienced in Brisbane in 2011 saw a number of community and neighbourhood centres lead their community's response, recovery and preparedness efforts in the absence of a formal local response from disaster management agencies. Australian government frameworks advocating for a disaster resilience approach to disaster management do not provide a defined role for community organisations, and do not reflect the shift in policy and practice frameworks occurring internationally, to actively build the capacity of communities to complement the roles of disaster management agencies. This study utilises a combined case study and qualitative methodological approach to understand how community disaster resilience can be strengthened at the local level through the active involvement of place-based community organisations. In contributing to existing research on community disaster resilience, this study drew on the experiences of two place-based community organisations who responded to the flood event in Brisbane in 2011. The analysis of these experiences utilized semi-structured interviews and a reflexive thematic analysis methodology. Existing research on the characteristics of social capital that support community disaster resilience, the learnings from studies on international disasters, and a cross sectoral approach involving a range of agencies and organisations, have informed the development of a framework to support the integration of place-based community organisations, and by extension, their communities, as active stakeholders in the disaster management system. A strong belief in the capacity of communities to lead sparked this thesis, as I explored how two local place-based organisations responded – and how we might better equip them for future disasters.

Contents

Keywords	i
Abstract	ii
List of Figures	iv
List of Tables	v
List of Abbreviations	vi
Statement of Original Authorship	vii
Acknowledgements	viii
Forward	ix
CHAPTER 1: INTRODUCTION	1
1.1 COMMUNITY LED RESPONSES TO DISASTER SITUATIONS	1
1.2 CASE STUDY AREA – BRISBANE, AUSTRALIA	2
1.2.1 Case Studies – Place-based community organisations	4
1.3 RESEARCH QUESTIONS	5
1.4 THESIS STRUCTURE	6
CHAPTER 2: UNDERSTANDING COMMUNITY DISASTER RESILIENCE	8
2.1 COMMUNITY RESILIENCE - THE EVOLUTION OF A CONCEPT	9
2.2 RESILIENCE BASED DISASTER MANAGEMENT FRAMEWORKS	9
2.3 ACHIEVING COMMUNITY RESILIENCE – IDENTIFYING COMMUNITY STRENGTHS	11
2.3.1 Characteristics of disaster resilience - Key elements of social capital	13
2.4 RESPONDING TO DISASTER – A COMMUNITY LED APPROACH	16
2.4.1 Place based community organisations	17
2.4.2 Community led responses to disaster situations – flexibility and an ability to adapt	18
2.4.3: Developing resilience at the local level	24
2.5 A SHIFTING PERSPECTIVE – LESSONS LEARNT FROM MAJOR DISASTERS INTERNATIONALLY	28
2.5.1 A shift in emergency management policy approaches	28
2.5.2 Cross Sector Collaboration	29
2.6 CHAPTER CONCLUSION	31
CHAPTER 3: RESEARCH METHODOLOGY	33
3.1 QUALITATIVE RESEARCH DESIGN	33
3.1.1 Methodology – Reflexive Thematic Analysis	34
3.2 PARTICIPANTS	35
3.2.1 Recruitment and in-depth interviews	37
3.3 CASE STUDIES SITES	38

3.3.1 Organisation A – The existing case study organisation.....	39
3.3.2 Organisation B – The emergent community organisation.....	40
3.3.3 Participants from Community Organisations.....	41
3.3.4 Practitioners and Policymakers/Policy Officers	42
3.4 DATA COLLECTION AND ANALYSIS	43
3.4.1 Data Collection.....	43
3.4.2 Analysis Methodology – Reflexive Thematic Analysis	43
3.5 CHAPTER SUMMARY.....	43
CHAPTER 4: THE FLOOD EVENT	45
4.1 COMMUNITY LED RESPONSES.....	45
4.1.1 The Place-Based Community Organisations	45
4.2 ORGANISATION A RESPONSE – TIME TO ACT!	45
4.3 ORGANISATION B – THE ORGANIC GRASSROOTS RESPONSE	52
4.4 CHAPTER SUMMARY.....	56
CHAPTER 5: COMMUNITY LED RESPONSE – <i>WE DID IT OURSELVES</i>	58
5.1 BUILDING COMMUNITY DISASTER RESILIENCE	59
5.2 CHAPTER CONCLUSION.....	76
CHAPTER 6: OPERATIONALISING COMMUNITY DISASTER RESILIENCE	78
6.1 PREPARATION - UNDERSTANDING THEIR PLACE IN THE SYSTEM.....	79
6.1.1 We did it ourselves here	79
6.1.2 We’ve got this... You don’t need to worry about it	81
6.1.3 An Alternative Approach – Supporting Local Leaders	82
6.2 OPERATIONALISING COMMUNITY DISASTER RESILIENCE – A FRAMEWORK	86
6.2.1 The need for communities to respond – Acknowledgement, but no strategy.....	86
6.3 THE FRAMEWORK – CHARACTERISTICS AND PRINCIPLES	87
<i>Principle 1: Community and stakeholder engagement.....</i>	89
6.3.2 Principle 2: Empowering communities to self-organise through a collaborative framework.....	93
6.3.3 Principle 3: Sustaining a culture of awareness amongst the community.....	95
6.4 FINDING OUR PLACE IN THE SYSTEM	96
6.5 CHAPTER CONCLUSION.....	97
CHAPTER 7: DISCUSSION AND CONCLUSION.....	99
7.1 DISCUSSION	99
7.1.1 Overview of Discussion.....	99
<i>“Collaboration may be necessary and desirable, but the research evidence indicates that it is hardly easy.” (Bryson et al., 2006, p. 44).....</i>	99
7.1.2 Strong Working Relationships.....	99

7.1.3	Finding our place in the system - integration	100
7.1.4	Resourcing.....	101
7.1.5	Acknowledging the Value of Flexibility, Creativity and Adaptability	102
7.2	SUMMARY OF FINDINGS	103
7.2.1	Research Questions.....	103
7.2.2	Research Question One	103
7.2.3	Research Question 2	106
7.2.4	Research Question 3	111
7.3	CONTRIBUTIONS OF THE STUDY	115
7.4	LIMITATIONS OF THE STUDY.....	117
7.5	SUGGESTIONS FOR FUTURE RESEARCH	117
7.6	CONCLUSION.....	118
8:	REFERENCES	120
9:	APPENDIX.....	128

List of Figures

<i>Figure 1: Operationalising Community Disaster Resilience</i>	88
---	----

List of Tables

<i>Table 1: Characteristics of a Disaster Resilient Community</i>	<i>12</i>
<i>Table 2: Participants and their affiliations</i>	<i>36</i>
<i>Table 3 - Brisbane City Council Ward Profile – Gabba Ward (Queensland Government Statistician’s Office Queensland Treasury http://www.qgso.qld.gov.au - downloaded 21 June 2019)</i>	<i>41</i>
<i>Table 4: Lack of Preparation, chaos, and working in chaos.....</i>	<i>59</i>
<i>Table 5: The different levels of trust in action during the crisis.....</i>	<i>66</i>

List of Abbreviations

CBD	Central Business District
NSDR	National Strategy for Disaster Resilience
ACOSS	Australian Council of Social Services
NCDR	National Science & Technology Centre of Disaster Reduction
NTU	National Taiwan University
GFDRR	Global Facility for Disaster Reduction and Recovery
P&C	Parents and Citizens Association
CALD	Culturally and Linguistically Diverse
NVOAD	National Voluntary Organisations Active in Disaster

Statement of Original Authorship

The work contained in this thesis has not been previously submitted to meet requirements for an award at this or any other higher education institution. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made.

Signature: [QUT Verified Signature](#)

Date: _____27 March 2020_____

Acknowledgements

I would like to thank my supervisor, Professor Evonne Miller, for her guidance, her unwavering confidence, and her encouragement. Without your support I don't think I would have made it. I would also like to thank Professor Laurie Buys for her support and feedback early in this journey. Thanks must also go to my husband, my son and our Irish Setter, Flynn for their support and encouragement.

My gratitude must also go to the research participants from the community organisations who were so keen to talk about their experiences in the 2011 flood event, and for their sense of the importance of undertaking this research. My thanks also goes to those policy makers and practitioners who took the time to participate in this research. Their interest in the topic, together with their honest and open comments have greatly contributed to the completion of this research.

Forward

My motivation for undertaking this study resulted from my experience during the flood event in Brisbane in 2011. I held a coordination role at one of the city's two evacuation centres at the time of the flood, and was then assigned to work on the recovery effort. Brisbane had not experienced a flood of this magnitude in almost forty years, since the 1974 flood event. A sense of being unprepared, and of working in chaos, was a common sensation for people working in the front line at the height of the event, and certainly reflects my experience. Everyone did the very best they could. However, most of us had limited experience, leaving us to learn as we went.

At the height of the crisis there were 1500 people at the evacuation centre, supported by a range of non-Government agencies, including the Australian Red Cross, the Salvation Army, Save the Children and St John's Ambulance. Operational issues became obvious as we proceeded, and we worked through these as they arose. Once the immediate crisis was over, the drama continued for those who had been flooded. It was during the recovery phase that I became aware of the efforts of the place-based community organisations that had led their communities in the response phase at the height of the crisis, provided local leadership and support through the recovery phase, and then began to address preparation for the next event.

Following the chaos of the flood, and the lengthy period of recovery for those areas of the city that had been affected, I became more aware of the need to build resilience to deal with future events. While Brisbane has always experienced severe storms, changes in the climate have increased the severity and the frequency of events. The need to ensure that communities are prepared for the next big event requires a new approach that considers a continuity of awareness and preparation at the local level, as well as support for operationalisation of community disaster resilience in practice. As the Secretary of a place-based community organisation north of Brisbane, and with a background in social planning, community development and community engagement, I have confidence in the ability of communities to lead through disaster situations, given the appropriate support.

CHAPTER 1: INTRODUCTION

The frequency and severity of extreme weather events across Australia over the past ten years has had a significant and ongoing impact on affected communities, and has highlighted the importance of a well-managed disaster management system that considers, (1) how all aspects of emergency management will be delivered, and (2) how key stakeholders contribute as part of the system. A report released by the Climate Council of Australia (2017) argues that “extreme weather events are projected to worsen as the climate warms further” (p. iii). This prediction heightens the need to focus on the resilience of communities to deal with the continuing threat of severe weather and extreme climate conditions.

Over the past decade there has been a global recognition of the significance of community resilience in dealing with all stages of disasters. The United Nations *Hyogo Framework* (2005) was the first plan to outline a resilience based approach to disaster management, with a review of this document and a commitment to building resilience to disasters adopted in March 2015 (*Sendai Framework for Disaster Reduction*). In Australia, the Council of Australian Governments (COAG) released a *National Strategy for Disaster Resilience* (NSDR) in 2011. The framework outlined in the NSDR (2011) has an emphasis on community disaster resilience, advocating for collective responsibility across government, business, the non-government sector and individuals. Additionally, the concept of *resilience* has been the focus of many academic studies seeking to define the term, initially from an ecological perspective, then across socio-ecological strands of thought (Holling, 1973; Adger, et al., 2005; Gallopin, 2005; Folke, 2006; Berkes & Ross, 2013). More recent studies have been in the context of the resilience of communities, and particularly their ability to withstand and recover from emergency situations and natural disaster events. (Norris et al, 2008; Mayunga, 2007; Aldunce, et al., 2014; Arbon, 2014; Manyena, 2006).

1.1 COMMUNITY LED RESPONSES TO DISASTER SITUATIONS

The increasing occurrence and severity of disaster situations, such as the September 11, 2001 terrorist attack, and the devastating outcome of Hurricane Katrina, is driving governments to expand their views on how resilience is developed at a local level (Bach et al., 2010; Waugh & Streib, 2006; Kapucu, 2007). Attention is therefore being directed to acknowledging the value of communities that have the capacity to self-organise, that is, to lead and deliver response,

recovery and preparation activities in the absence of a formal response from emergency services agencies. The significance of the involvement of community organisations as part of a community led response has been highlighted in the literature (Patterson et al., 2010; Cretney, 2016; Kim & Kang, 2010; Murphy, 2007; Kusumasari, 2012; Thornley et al., 2013; Kapucu et al., 2018). These studies have emphasised the value of local knowledge, pre-existing relationships, and organisational skills, as three critical assets in the context of disaster response.

While Australian government frameworks emphasise the responsibility of the community to be disaster ready and to “prepare for and deal with disasters” (COAG, 2011, p5), the absence of any defined role for community organisations does not fully reflect the learnings outlined in the literature, where community led response and recovery efforts have complemented the roles of disaster management agencies. Nor do these plans and strategies provide a mechanism to support a growing understanding of the need to build the capacity of communities in hazard prone areas, to support their ability to respond. While the NSDR (2011) outlines a vision of a disaster resilient community, unfortunately it does not provide any guidance on how this vision will be achieved, or operationalised to strengthen community disaster resilience in practice. This study, through exploring the roles played by place-based community organisations in leading response, recovery and preparedness as part of a flood disaster, aims to address this critical knowledge gap.

1.2 CASE STUDY AREA – BRISBANE, AUSTRALIA

The context for this study is a severe weather event that occurred in Brisbane, Australia in January 2011. Flooding in Brisbane is acknowledged as a natural part of the environment, and much of Brisbane is built on a flood plain (Brisbane City Council, 2012). However, the flood event in January 2011 was the city’s second highest river flood in over 100 years, resulting in the deaths of 35 people. Before describing the flood event, it is important to understand the circumstances that contributed to this disaster event, and the local context at that time.

Brisbane is located on the east coast of Australia, and is the capital city of the State of Queensland. The Brisbane local government area has a population of approximately 1.2 Million (Brisbane City Council), and is the largest local government area in Australia (Australian Local government Association). The City is set in the subtropics and experiences hot, humid and wet summers, with frequent storm events. Brisbane also experiences the impacts of cyclones, and the remnants of cyclones as they track down the east coast. The last

event of this kind occurred when ex-tropical cyclone Debbie passed through Brisbane in March 2017.

Brisbane residents are therefore accustomed to wild weather. However, from 2001 to 2009, the city had experienced the worst drought in recorded history for South East Australia, in what has become known as the Millenium Drought (Van Dyk et al., 2013). Sarachik and Cane (2010) describe the El Nino-Southern Oscillation (ENSO) as a coupled atmosphere-ocean phenomenon that affects the eastern Pacific Ocean to cause warm sea-surface temperatures, creating dry conditions. The ENSO that affected Queensland at that time produced the lowest rainfall across this part of the Australian continent since 1900 (Van Dyk et al., 2013).

This was followed by a strong La Nina event in early 2010. La Niña refers to a phenomenon that causes extensive cooling of the central and eastern tropical Pacific Ocean. This is often accompanied by warmer than normal sea surface temperatures to the north of Australia. These events are accompanied by increased rainfall, particularly over eastern and northern Australia (Australian Government, Bureau of Meteorology, Climate Glossary). With the coming of the La Nina, December 2010 and January 2011 saw torrential rain fall across Queensland.

A report on the hydrological aspects of the January 2011 flood (Sinclair Knight Mertz, 2011) indicates that the flood event of January 2011 was proportionately larger than the previous two recorded flood events in 1893 and 1974, with the 2011 event “almost double that of the January 1974 flood” (p. ii). Wivenhoe and Somerset Dams are the chief water supply for Brisbane and South East Queensland. Wivenhoe Dam was also constructed to serve as a flood mitigation mechanism. However, the rainfall experienced over those two months resulted in the need for water to be released from the dams, exacerbating already swollen river systems (Sinclair Knight Mertz, 2011).

Many of the suburbs of Brisbane, including the central business district (CBD), are located on the banks of the Brisbane River. On January 11, the Brisbane River broke its banks, forcing evacuations of suburbs close to the river. The river peaked on January 13, with 94 suburbs affected by the flooding (Brisbane City Council, 2011). The volume of water flowing out of both dams, together with severe rainfall in areas further downstream, caused severe flooding.

During the flood crisis, six community and neighbourhood centres responded to community need, linking their communities to critical information and resources, and providing outreach services to vulnerable residents after the flood had subsided (West End Community House, 2011). To date however, these community led response and recovery efforts have not triggered

any recognition of the role for community organisations as part of emergency management frameworks in Queensland. Given the ongoing vulnerability of Brisbane to flooding, and the broader global context of increasing frequency of natural disasters, the aim of this study is to complement existing research, specifically to explore how the strengthening of community disaster resilience can be actively achieved, or operationalized, through the roles that place-based community organisations can play in disaster preparedness, response and recovery in their communities.

This study also seeks to contribute to existing studies on cross-sectoral approaches to disaster management, through the development of a collaborative framework, designed to support the operationalisation of disaster resilience at the community level. This framework will help foster a shift in policy and practice, through supporting the integration of place-based community organisations as stakeholders in the emergency management system, and by extension, their communities. This study will address the social and governance context of disaster management in Brisbane and Queensland, with the intention that it may be able to be adapted to meet the needs of other locations and communities.

1.2.1 Case Studies – Place-based community organisations

A multi-case approach has been utilized, involving two place based community organisations that responded to the flooding in Brisbane in January 2011. In-depth, semi-structured interviews were undertaken with participants from the two organisations, as well as with a range of other key policy-makers who were able to inform the study through their experience during the flood working in disaster management areas of the Queensland State Government or with Brisbane City Council.

The term “*place based community organisations*” refers to what are commonly called community and neighbourhood centres. These organisations have a physical presence in the communities where they deliver their services. They operate in a localised way, responding to local issues and opportunities, and usually practice from a community development framework. In this study, one of the case study organisations was an established community centre, with existing strong local connections and relationships. In contrast, interestingly, the second case study organisation emerged during the flood experience, later becoming established as a community centre.

As was the situation across the flooded areas of the city, both organisations responded with no previous experience of dealing with disaster, leading their community's response, recovery and preparedness efforts with very little support from emergency management agencies. To preserve the anonymity of the organisations and the participants, the organisations have been referred to as Organisation A and Organisation B. All interview participants have also been given pseudonyms.

1.3 RESEARCH QUESTIONS

The overarching goal of this research was to explore how the strengthening of community disaster resilience can be operationalised through place-based community organisations working with their communities in the delivery of preparedness, response and recovery efforts. A critical element of this research is therefore the need to provide an understanding of the role the two case study organisations were able to play as part of the flood event in Brisbane in 2011. While acknowledging the importance of the role of community organisations in disaster response (Adger, et al., 2005; Kapucu, 2012; Norris et al., 2008; Paton and Johnston, 2001), the literature provides limited research that clarifies the details of those roles, and the critical elements that influenced delivery under crisis conditions. This study will contribute to the literature through a detailed exploration of the experiences of the two case study organisations in delivering response, recovery and preparedness efforts in their communities. An in-depth examination of how these roles were delivered will also make a significant contribution to the literature in providing a better understanding of the scope of the efforts achieved by each organisation, as well as the challenges they experienced. In this regard, therefore, the first research question explores:

How place-based community organisations played a role as part of the flood event in Brisbane in January 2011?

An understanding of the characteristics of a disaster resilient community, and the influence of those characteristics on the delivery of the roles played by both case study organisations is also key to informing a pathway to developing mechanisms to operationalise the strengthening of community disaster resilience in both policy and practice. A strong link has been established between community disaster resilience and the concept of social capital (Magis, 2010; Norris et al, 2008; Maguire & Hagan, 2007; Mayunga, 2007; Murphy, 2007). In this context, a range of characteristics related to the concept of social capital have been identified as supportive elements of community disaster resilience (Berkes & Ross, 2013; Magis, 2010; Norris et al,

2008; Maguire & Hagan, 2007; Murphy, 2007). Drawing from the literature, these characteristics will inform an analysis of the scope of their influence on the ability of the two case study organisations to deliver their roles, and to enable the operationalisation of community disaster resilience in practice. The second research question thus follows:

How was the operationalization of community disaster resilience influenced by the roles played by the place-based community organisations as part of the flood event in Brisbane in 2011?

The exploration of how disaster resilience can be operationalized at the community level is also critically related to an absence of a recognition of the roles delivered by place-based community organisations in emergency management frameworks. The final question will therefore explore how these organisations can play an effective role within the emergency management system at an appropriate level:

How can place-based community organisations play an effective role in the operationalisation of community disaster resilience as part of the disaster management system?

This question will contribute to the existing literature through informing the development of a framework that will utilise a collaborative, cross-sectoral approach to explore how place-based community organisations can be integrated as an active stakeholder within the disaster management system. The exploration of this question will address policy and practice issues relating to how these organisations can be supported in the effective delivery of the roles and issues explored through the first two research questions.

1.4 THESIS STRUCTURE

The introduction to this study has presented key concepts central to this thesis, and provided an outline of the context for the research. The relevance of the case studies that will underpin this thesis has been explained, along with the proposed research questions, and explanatory text in relation to their significance to this study.

Chapter Two will explore the literature informing the key concepts associated with community disaster resilience. This will include studies that have explored links between community disaster resilience and the concept of social capital, research on community led response, recovery and preparedness efforts, models of community disaster management programs, and cross-sector collaboration theory, as it applies to supporting community disaster resilience. The

findings of these studies have greatly informed the development of this study and directed the approaches taken, particularly in terms of data analysis and in the development of the central arguments.

Chapter Three explains the methodology followed in the development of this thesis. This discussion will include the qualitative case study approach that has been taken to develop this research, as well as the Reflexive Thematic Analysis methodology applied to the analysis of the data gathered to inform the study. This research was approved by the QUT human research ethics committee (ethical approval number 1700000122). Full ethics approvals are included as an appendix.

In addressing the first research question, Chapter Four (The Flood Event), will detail the roles played by the two case study organisations. This discussion will explore the context in which these roles were developed and delivered in response to the crisis conditions, as well as other factors that impacted their recovery and preparedness roles. This discussion will provide the basis for the analysis that follows in Chapter Five.

Chapter Five (Community Led Response – We did it ourselves) will address research question two with an analysis of how the delivery of those roles influenced the strengthening of community disaster resilience at the local level. This analysis will be supported by utilising the characteristics of community disaster resilience.

Research question three will be addressed as part of Chapter Six (Operationalising Community Disaster Resilience). This chapter explores the attempts of the two place-based community organisations to understand their place in the disaster management system as part of their preparation planning. This will be followed by a discussion of shifting policy trends internationally on emergency management practices that support communities to respond in the absence of emergency service agencies, as well as how this is approached in the national and Queensland context. Finally, research question three will be addressed through the proposal of a framework, to operationalise community disaster resilience in the context of hazard prone communities in Brisbane.

Chapter Seven (Discussion and Conclusion), will discuss policy and practice issues relating to the framework provided in response to research question three. A summary of the key findings of this thesis and its overall contribution to the existing research on community disaster resilience will also be provided.

CHAPTER 2: UNDERSTANDING COMMUNITY DISASTER RESILIENCE

The last decade has seen a focus in the literature on a resilience-based model of disaster management. The concepts of resilience and community resilience, within a disaster management context, are central to the development of this study, and will form a key focus of this review. The meaning of the concept of resilience is contentious throughout the literature. However, the aim here is not to determine or develop a definition of community resilience, but to gain an understanding of the concept in terms of the characteristics that support the ability of communities to deal with disaster. This study will then utilise these characteristics in Chapter 5 in an analysis of the roles played by the two case study organisations to identify how these characteristics supported the response, recovery, and preparedness efforts of each organization. The development of a deeper understanding of these characteristics to achieving disaster resilience will serve to guide policy frameworks and practice on how the operationalisation of community disaster resilience at the local level can be enhanced.

Critical to exploring how community organisations can play a role in the building of community disaster resilience at the local level, this chapter will also focus on the existing research on community led response efforts, and the role that community organisations have played in those. The review of this research will also support the identification of how and why these organisations can be integrated into the Disaster Management system at an appropriate level. As part of this aspect, an overview of national, state and local government disaster management frameworks will provide a context for how the roles of community organisations and communities, are viewed by those plans and strategies.

A review of models that support the operationalisation of community disaster resilience, as well as the principles that support these models, will inform the development of the policy and practice framework that will be central to this study. A growing body of literature exploring the learnings from major disasters, such as Hurricane Katrina, and the Canterbury earthquakes, also raise significant issues in relation to building the capacity of communities to deal with future events. Also central to the development of the framework, will be a review of research on cross-sector collaboration as an enabler in the operationalisation of community disaster resilience, and how it can be applied to the goals of this research.

2.1 COMMUNITY RESILIENCE - THE EVOLUTION OF A CONCEPT

The concept of resilience has been traditionally used in psychology, and in the literature of ecology and the earth sciences. More recently the concept has been used as part of the climate change literature, and in the social sciences in a disaster management context. However, the key and consistent theme throughout the literature is that there is no commonly agreed definition of the concept of resilience. The ecological discourse focused on resilience in the context of the ability of natural systems to withstand a disturbance, and to absorb change (Holling, 1973). This concept evolved to apply the concept of resilience across both the societal, and ecological strands, acknowledging socio-ecological systems as linked systems, with much of the discussion focusing on the resilience of human communities, particularly in the disaster resilience context. Discussing the resilience of socio-ecological systems with a focus on the social resilience of communities living in coastal regions, Adger et al. (2005) argue the significance of the ability of communities to learn from their experiences, and to develop adaptive responses that engage “*assets, networks, and social capital*” to build resilience to ongoing natural hazards.(p.1037).

The discourse on the diversity of interpretations of resilience, and a lack of consensus on an agreed definition by the research community (Mayunga, 2007; Yoon & Kang 2013; Aldunce et al., 2014) has contributed to a growing sense of uncertainty around the use of the concept. Researchers have labelled the concept as “vague” (Manyena, 2006), and “ill defined” (Goode et al., 2015; Mayunga, 2007), and have questioned its applicability both in a theoretical sense, or in practice, and have also questioned how it could be measured (Mayunga, 2007; Manyena, 2006). That said, resilience in this context is perhaps best understood and defined as “*individual and community ability to respond to change*” (Magis, K; 2010; p. 403). The key outcome of these discussions for informing this study, is the emergence of a set of common characteristics and concepts that relate to, and support resilience. These characteristics can assist in understanding the strengths that contribute to community resilience in a disaster management context, and provide a guide to the operationalisation of disaster resilience at a local level.

2.2 RESILIENCE BASED DISASTER MANAGEMENT FRAMEWORKS

In spite of the challenges outlined in the literature in relation to the contention around the concept of resilience (Manyena, 2006; Berkes & Ross, 2013; Mayunga, 2007; Yoon et al., 2016; Aldunce et al., 2014), it has become a key platform of disaster frameworks, government plans and strategies. The *Sendai Framework for Disaster Risk Reduction 2015-2030* (United

Nations, 2015) defines resilience as “*The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions*” (Preamble, 2 and 3K, 2).

In Australia, the NSDR (COAG, 2011) has adopted a “coordinated and cooperative” approach to community disaster resilience, that views resilience as a collective responsibility across all sectors of Australian society (p.V). In this context, the document outlines a description of a resilient community, as well as acknowledging a role for community organisations in building disaster resilience through the delivery of their core programs. Critically, the Strategy outlines and expectation of a level of capacity within the community that would enable and empower self-organisation. This level of capacity anticipates the ability to establish links to access, and to understand, critical information, as well as possessing disaster preparation and response expertise. However, the absence of any detail on how this capacity will be realised, seriously weakens the intent of the aspirations stated in the Strategy. While the concept of shared responsibility has also become embedded as a principle of State and local government policies since the 2011 flood event, the absence of a policy and practice framework to support this principle presents a major challenge to the ability of the community to deal with future events.

The NDRS (2011) also lacks clarity around the role of community organisations in building resilience, and offers no indication of where the community sector sits in an operational sense in the disaster management system. This absence of detail presents a loss of opportunity to indicate how these outcomes can be achieved in practice.

The Queensland State Government’s Disaster Management Plan (Queensland State Government, 2018) seeks to “*empower and support local communities to manage disaster risks, respond to events and be more resilient*” (p. 03). As indicated above, this document also lacks an indication as to how this will be achieved in practice. The document does however, assign engagement with the community as a role of local government. As the local government authority for the capital city of Queensland, the Brisbane City Council’s Disaster Management Plan (Brisbane City Council, 2018) promotes a prepared and resilient community approach, which acknowledges that communities can provide “rapid, readily available and effective relief while external assistance may be limited due to resource capacities.” (p.15). However, again, no supporting strategies or processes are outlined as part of this Plan.

It should be noted that at the time of writing in November 2019, there are recent State Government initiatives that recognise the need to build resilience at the community level as part of their strategic intent, eg. Burnett Catchment Flood Resilience Strategy (Queensland Reconstruction Authority, 2018), as well as utilising the concept of working in a partnership approach to build resilience. However, there remains a focus on limiting key stakeholders to local governments and State Government departments, without a clear strategy to operationalise disaster resilience at the local level.

2.3 ACHIEVING COMMUNITY RESILIENCE – IDENTIFYING COMMUNITY STRENGTHS

The absence of practical pathways to achieving the outcomes set out in the frameworks discussed in the previous section leaves a major gap between the aspirations outlined in these documents and the means to realise disaster resilience at a community level. Studies identifying the key characteristics of disaster resilience discuss these as community strengths (Berkes & Ross, 2013), community capacities (Norris et al., 2008; Mayunga, 2007; Aldunce et al., 2014), or simply as characteristics (Magis, 2010). Significantly, researchers argue that many of these characteristics are identified as elements of the concept of social capital (Manyena, 2006; Magis, 2010; Norris et al., 2008; Mayunga, 2007; Maida, 2011; Aldunce et al., 2014).

The concept of social capital is a significant theme across the literature in relation to the characteristics associated with a disaster resilient community. The concept of social capital was made popular by Robert Putnam (2000), with a focus on the importance of mutual support, cooperation, trust, and institutional effectiveness. Aldrich (2012) argues that social capital is “an asset held by both individuals *and* communities” (p.34), and suggests that it is social capital that underpins a community’s response to disaster situations.

Also discussing social capital in a disaster resilience context, Chamlee-Wright & Storr (2011) argue that the presence of social capital is utilised to prepare for a disaster, in the form of community planning, while it serves to provide a coordinated approach to recovery, post disaster. These characteristics are significant, not only as indicators of a level of resilience to disaster, but also in their ability to support aspects of the delivery of a community’s efforts in response, recovery and preparedness activities. Table 1 below, sets out the characteristics of social capital that have been identified in the research as supporting community disaster resilience, together with the features that define them, and how they link to, or support the

delivery of activities in a disaster management context. This next section provides a discussion, supported by the literature, on the summary information set out in Table 1.

Table 1: Characteristics of a Disaster Resilient Community

Characteristics	Defining Features	Links/Supports
Community Capacity	Development of community resources; Communities recover with little external assistance; Leadership; Skills & knowledge; The number of not-for-profit organisations; Inter-organizational networks	Adaptive capacity Collective action Citizen participation Self-organisation Sense of community
Adaptive Capacity	Social learning; Learning from past experiences; Readiness and ability to change;	Community capacity Self-organisation
Existence of community organisations	Social networks; Not-for-profit organisations; Leadership; Mutual support; Cooperative decision making; Access to resources	Community Capacity Social support Inter-organisational networks Effectiveness of response & recovery efforts Sense of community Trust
Pre-existing organizational networks/ relationships	Collective action; Access to resources; Leadership	Community Capacity Self-organisation Social support Sense of community Effectiveness of response & recovery efforts
Social support	Access to assistance, information and resources	Social networks Community Organisations Sense of community

		Trust
Sense of community/ belonging/place attachment	Citizen participation; Trust in other members of the community and organisations; Mutual concern	Social networks Community organisations Social support Trust
Community resources	Community capacity; Skills and knowledge; Information; Leadership	Pre-existing networks and relationships Social support
Leadership	Community Capacity; Citizen participation; Community organisations	Collective action Self-organisation Trust
Self-organisation	Community Capacity; Citizen participation; Community action; Community organisations	Adaptive Capacity
Citizen participation	Community members engaged in community organisations	Collective action Community capacity Social support Trust
Collective Action	Inter-organisational networks; Citizen participation; Leadership; Social networks	Community capacity Social support Trust

2.3.1 Characteristics of disaster resilience - Key elements of social capital

Community Capacity

A key characteristic of a disaster resilient community is community capacity, also recognised as a key element of social capital. The concept of capacity reflects the knowledge, skills and resources embedded within a community that are utilised to support a community to self-organise, to cope with disaster situations (Magis, 2010; Mayunga, 2007; Coles & Buckle, 2004;

Plough & Chandra, 2015; Aldunce et al., 2014; Norris et al., 2008). The disaster resilience literature also argues that the key to the process of becoming resilient relies not only on having capacity, but more significantly, on the influence that is applied to those capacities.

This influence can take the form of learning from experience, problem solving, and the ability to re-organise following a disaster event, with the active utilisation of community capacity leading to adaptation, or “adaptive capacity”, in the form of strategies to reduce the impact of future events (Magis, 2010; Mayunga, 2007; Berkes & Ross, 2013; Norris et al., 2008; Paton & Johnson, 2001; Yoon & Kang, 2013). The notion of adaptation, originating in the ecological and socio-ecological discourse, measures resilience by the degree to which a system can build capacity to learn and adapt (Adger et al., 2005). It has also been suggested that the concept has a history in business management where leadership, characterized by the ability to solve complex problems, is a key attribute (Engle, 2011).

Leadership researchers, Lord and Maher (1993) have provided a conceptual notion of leadership as “*resulting from a social-perceptual process – the essence of leadership is being seen as a leader by others*” (p3). While most of the literature on leadership has a business management or an industry focus, the concept of community leadership has been described as “*leadership in and for the community*” (Creyton & Erich, 2008, p. 3), or with an emphasis on being “*based in place, and so is local*” (Anderson, et al., 2001, p. 8). Definitions of community leadership also include the idea of active citizenship. This concept relates to people taking up different roles in the community, from advocacy for vulnerable communities, to participation in community projects (Erich & Creyton, 2008). The literature on disaster community resilience also identifies leadership as a key element of social capital and as a key capacity supporting resilience (Norris et al., 2008; Berkes & Ross, 2013; Maquire & Hagan, 2007; Goodman et al., 1998).

Social networks, social support and a sense of community

The concepts of social networks, and social support are recognized in the literature as crucial community strengths, and key characteristics of disaster resilient communities (Berkes & Ross, 2013; Maida, 2011). Linking both of these concepts, Norris, et al. (2008) describe social support as “*social interactions that provide individuals with actual assistance*”, arguing that the relationships built through social interaction can then provide access to key resources (p.138). In the context of a disaster situation, these resources can take the form of information regarding evacuation, or advice from a trusted source (Norris et al., 2008). The connection

between the two elements is also supported by Maida (2011), who argues that structures such as social networks become more important in times of crisis, when there is a need for access to mutual aid.

These characteristics also relate closely with the development of a sense of community, characterized by a high level of concern around community issues, community service, and having a sense of connection (Norris et al., 2008; Berkes & Ross, 2013; Goodman et al., 1998; Paton & Johnston, 2001). Paton and Johnston (2001) describe this concept as “*feelings of belonging and attachment for people and places*” (p.273). They argue that a sense of belonging can contribute to people becoming involved in the response phase of disasters, as well as becoming more likely to be a part of, and access social networks in disaster situations.

Community organisations, inter-organisational networks and existing relationships

The existence of community groups and not-for-profit organisations operating in a community are identified as an indicator of social capital, and of community resilience, with an emphasis on social structure, and as a source of community cooperation (Mayunga, 2007). Goodman et al. (1998) describes these as “*mediating structures*”, supporting the development of connectedness within a community (p.268). The literature argues that community organisations can be vehicles for providing capacity, as well as leadership, also recognized as a key characteristic of a disaster resilient community (Norris et al., 2008; Maida, 2011; Yoon & Kang, 2013; Goodman et al., 1998; Murphy, 2007; Kapucu, et al., 2018).

Putnam (1993) theorized that residents of a neighbourhood will be more inclined to become involved in formal and informal local organizations when they perceive that these are deeply rooted in the community, and can be counted on and trusted to work for the community on a consistent and long-term basis. He argued that trust between community organisations and their communities becomes established the longer local organisations remain in place, and the more they become integrated into the neighbourhood, increasing the resiliency of the community.

Linked to the existence of community organisations is the concept of citizen participation. Also recognised in the literature as a key element of social capital, this concept supports community resilience through the participation and involvement of community members in community organisations and groups (Norris et al., 2008). Goodman et al. (1998) discuss the linkage between the concepts of participation and leadership with the evidence of community organisations, suggesting that leadership is supported through “*a strong base of actively involved residents*” (p.262).

The literature also emphasises the significance of community organisations working together, arguing that inter-organisational networks are an aspect of community capacity, and of social capital. Collaboration between organisations can result in an enhanced ability to draw on a broad range of information, resources and knowledge, facilitating the rapid mobilization of support during an emergency (Norris et al., 2008). Magis (2010) focuses on the bonding, bridging and linking elements of social capital as underpinning the capacity of people to broaden their networks, arguing that these three elements represent the social ties that support interconnections between groups, as well as providing interactions or linkages between networks.

Pre-existing networks and relationships are seen as an element of social capital that can support a community's resilience to disaster situations (Magis, 2010; Norris et al., 2008; Goodman et al., 1998; Kapucu, 2007; Murphy, 2007). Manyena (2006) has argued that the strength of a community's capacity to recover from a disaster event, is dependent on recovery with "little or no external assistance" (p.433). In a time of crisis, the ability to be able to access resources, knowledge and support through a range of established networks, and relationships with key individuals or enterprises, can make a major impact on response and recovery efforts. Magis (2010) argues that existing knowledge of which organisations and individuals are important, is therefore significant in supporting the outcome of collective action in responding to disaster.

This section has provided an understanding of how these characteristics associated with the resilience of communities can support the mobilisation of a response to a disaster situation, as well as how they could be significant in the recovery phase. The next section will have a focus on the concept of collective action and self-organisation in the context of community led responses to disaster situations.

2.4 RESPONDING TO DISASTER – A COMMUNITY LED APPROACH

The focus of this section will be on community led responses to disaster situations. I will review several case studies where communities have taken the initiative to lead a local response in the absence of emergency management support. These case studies have a focus on the significance of the role of community organisations in leading these efforts. This will be followed with an exploration of how government frameworks view community led response to disaster situations in the Australian context, as well as what support there is in terms of building the capacity of communities to deliver local response and recovery efforts. International perspectives will then be explored. The section will provide an overview of what is meant by

the term “place-based community organisations”, how they operate, and how they work with their communities to deliver their core business.

2.4.1 Place based community organisations

The term “place-based community organisation” refers to what are commonly called community and neighbourhood centres. These organisations have a physical presence in the communities where they deliver their services, operating in a localised way, responding to local issues and opportunities, and they usually practice from a community development framework. The role most commonly played by community and neighbourhood centres has been outlined by the Australian Neighbourhood Centres and Houses Association (ANHCA) in a 2011 report, as a *“community development and socially inclusive approach to the delivery and provision of services, as well as activities for socially isolated and disadvantaged local communities.”* (p2)

The report also notes the collaborative nature of these organisations, and particularly the existence of networks and partnerships as defining the way in which they operate (ANHCA, 2011). The significance of social infrastructure, such as meeting and activity spaces, the delivery of services and responses that meet the needs of the local communities they service, as well as community ownership and governance provided by volunteer community boards, also provides a basis for the traditional role played by these organisations (ANHCA, 2011).

Rooney (2011) notes that while these Australian organisations generally receive their core funding from State Governments, they also rely on multiple sources of funding to deliver their services, and are heavily reliant on a volunteer base to support the services they deliver. His report notes that *“Location matters! Interviewees concur – as one said, its about place”* (p.212). The place-based nature of these organisations provides them with strong local knowledge, and relationships with their communities, as well as with other organisations operating in their areas.

Neighbourhood centres are also community owned, and operate with volunteer based community management committees or boards of directors. The reliance on unpaid volunteers as management committee members means that the recruitment of members holding professional qualifications and experience, as well as the capacity to manage finances, strategic direction and legal responsibilities, is generally influenced by the demography and socio economic status of the area in which the organisation is located. The capacity of the management committee and other key volunteer positions is therefore a crucial factor, not only for the viability of the organisation, but will also play a key role in the ability of the organisation

to respond to crisis situations, such as disaster events. The next section will explore incidents where place based community organisations have been part of a community led disaster response.

2.4.2 Community led responses to disaster situations – flexibility and an ability to adapt

This section will explore the concept of a community led response, with a focus on case studies exploring how these have occurred and the critical elements that supported their efforts. The discussion aims to build an understanding of how the research views the significance of the involvement of community organisations as part of a community led response (Patterson et al., 2010; Cretney, 2016; Kim & Kang, 2010; Murphy, 2007; Kusumasari, 2012; Thornley et al., 2013; Kapucu et al., 2018). An exploration of the concept of “community” in discussions of response to disaster is discussed first.

Who are the “community” in disaster response?

While a definitive description of a community led response was not found in the literature, Murphy (2007) explored the notion of community emergency management, noting the flexibility associated with the way the terms “community” and “local level” are generally used in this context, and noting that the distinction between communities and neighbourhoods is often not clearly defined in the literature. She makes the observation that communities can be place based or kinship based, but highlight that both of these are social systems where members share a level of commonality. In describing her understanding of community emergency management, Murphy (2007) takes the view that it is not necessarily the case that the community has a role in disaster planning or mitigation in the formal sense. She does however highlight the importance of horizontal and vertical relationships. She suggests that this enables interaction between stakeholders, as well as allowing for interaction with other levels of organisations, particularly with local government emergency management groups. This is a significant issue for this thesis, particularly in considering the role that community organisations can play as a link between the communities they service, other stakeholders in the community, and State and local government disaster management agencies.

Titz et al. (2018) also discuss the use and complexity of the terms “*community based*” and “*place based*” in the context of disaster risk reduction. While also questioning the vagueness of these terms, they did acknowledge the relevance of applying these terms in the context of urban neighbourhoods as subdivisions of society at a local level (Titz et al., 2018). Walters

(2015) explores community disaster resilience in the context of an urban setting through a comparison between urban communities in Brisbane and in Dhaka, both of which have experienced major floods. While also raising the vagueness of the term “community”, he questions the validity of the concept of a local response in a city such as Brisbane, where he argues that resilience is better viewed at a city wide level than at the local level, given the size of the city and its resources. In this thesis, however, I challenge that city-centric view, and focus on the role of two place-based organizations during the Brisbane floods.

The role of communities in disasters

In exploring the role of community in disaster response in the context of Hurricane Katrina, Patterson et al. (2010) draw on social capital to emphasise the importance of social networks, and of social organisations as vehicles for people to work together, and to realise achievements that may not be possible at the individual level. That study emphasises the role played by community organisations and community based networks, and points to flexibility, and an ability to adapt, as key to their effective involvement. Other elements such as organisational skills, knowledge of their communities, and the existing trust held by their communities, are also highlighted as key to their effectiveness in response (Patterson et al., 2010). These factors highlight the reality around the significance of the level of capacity required by communities to be able to effectively self-organise, and this thesis will explore how this capacity can be strengthened to address this expectation.

In her study on social capital as part of community level emergency management, Murphy (2007) discusses two case studies where communities have had to lead response and recovery efforts in the absence of a formal response. These examples from events that occurred in Canada highlight the role of place-based community networks, including community organisations, in providing assistance at the neighbourhood level during both events. An evaluation of the community response to a widespread power blackout affecting 50 million people in Ontario in 2003 indicated a strong tendency among respondents to utilise place based networks at a neighbourhood level. Similarly, Murphy (2007) outlines an incident relating to an E.coli disaster in the town of Walkerton in 2000, explores how social capital contributed to community emergency management for that event, highlighting the significance of local participation in community groups as a key factor in supporting the community response. In a small town where involvement in community activity is high, community organisations were able to harness a high level of citizen support to respond to the crisis. The study highlights that

this level of support was facilitated by “established, formal networks formed around community groups” utilising their existing community relationships to meet community need (Murphy, 2007, p. 309).

Murphy reports that a formal emergency response from the municipality was not forthcoming in this incident. However, the effort was supported by an “*emergent organisational structure*” based on pre-existing relationships, but which also resulted in the establishment of a new organisation (Murphy, 2007, p. 313).

Murphy’s study also explores the challenges that may affect a local government in the extent to which it is able to build the capacities of all communities within its jurisdiction. For example, in the case of local government areas with smaller populations and discrete boundaries, such as the case study on Walkerton outlined above, there should be an enhanced ability for local governments to work collaboratively across their communities. However, the issue of the identification of what constitutes a community can be a critical issue for a city with both a broad geographical spread, and a large and diverse population. Murphy notes the benefit of using existing community channels and “pre-existing organisation capacity to enhance resilience or to aid in the response to a risk event” (Murphy, 2007, p. 301) as a means of communicating with an identified group of people. This argument is pertinent to a city the size of Brisbane, where existing community organisations can present that opportunity, particularly in identified hazard areas.

The study concludes that a community led disaster response can be seen as an additional support to government led responses, and suggests a more interactive approach within the system, that recognises community capacity. Murphy’s analysis challenges current policy and practice in Australia, where a significant level of interaction and integration is yet to be developed.

The devastating earthquakes that occurred in New Zealand in 2010 and 2011 have also provided examples of communities taking the lead in disaster response. Thornley et al. (2013) discuss the participation of community as part of the disaster response and recovery process for the Canterbury earthquakes at that time. This study notes that “social connectedness and a sense of community” were key to the resilience of residents (Thornley et al. 2013, p.26). They argue the existence of established community organisations as a key factor in the organisation of the response and recovery efforts, with existing community organisations taking a role as the predominant leaders of community responses. Significantly, the study highlights the “*flexibility and rapid responsiveness*” as key elements of their response efforts (Thornley et

al., 2013, p.27). Another critical element reported by participants in the study, was the enhancement of the community recovery through a sense of being heard by external organisations who respected local knowledge and community identified need (Thornley et al., 2013).

Another study on the Canterbury earthquakes explores the role of what Cretney (2016) describes as “*community grassroots organisations*” in supporting community led response to disaster (p.28). The study describes how an existing organisation in the Christchurch suburb of Lyttelton was able to initiate a community led response to the earthquake, followed by recovery support. The mission of this community organisation related to community and resilience building. These were strengths utilized by the organization, together with their connection with the community, to facilitate a range of projects that addressed the needs of that community at the time. A well-known grassroots example is Lyttelton Hearts. A week after the earthquake, two Lyttelton residents set up a drop-in space in the playground with a sign saying, “*Join us, have a chat*” and started making little hearts from pieces of felt and fibre, buttons and old woollen blankets, handing them out to people passing by (Cretney, 2016). People started dropping by, to talk, and to make and share hearts, with the site becoming a valued and much needed local hub of support that was active every day for six weeks. Some of these hearts are now on display in Te Papa Tongarewa, the Museum of New Zealand.

In identifying why this community was so resilient, Cretney’s research highlights the pre-existing relationship between the community organisation and the Lyttelton community as a critical factor in being able to “*link people very quickly*” to support provided from within the community (Cretney, 2016, p.34). Significantly, participants in the response and recovery phase indicated that they valued the opportunity to participate, in spite of being untrained volunteers. The study describes how people presenting to volunteer in other parts of New Zealand were turned away. Consistent with other studies reviewed, this research also emphasises the significance of pre-existing community organisations, together with local knowledge as key to supporting local action in responding to the needs of individual communities (Cretney, 2016). The researcher subsequently suggests a movement away from the traditional command and control approach of government emergency management agencies, advocating for closer relationships between those agencies and community organisations (Cretney, 2016).

A further example of community led response and recovery efforts, once again in the context of the Christchurch earthquakes in New Zealand, highlights the influence of social capital associated with Maori cultural practices on disaster response frameworks. Kenny and Phibbs (2014) discuss how the Maori community self-organised a community led response and recovery effort. In this case, the response was delivered by the local tribe, who utilised a mission statement reflecting the Maori value of “*extend love to all people*” to assist the mobilization of their community (Kenny & Phibbs, 2014; p. 48). The recovery effort in that community was taken up by local groups who worked together to provide basics of food and water, as well as coordinating volunteers, and supporting the broader response effort.

In highlighting the significance of existing traditional organisations in the Christchurch area in the delivery of response and recovery efforts, Kenny and Phibbs (2014) discuss how existing networks, infrastructure, and relationships with government agencies, also supported a broader recovery. This was delivered through an established Maori organisation that was able to coordinate this much broader effort. Their research stresses collective and collaborative leadership as a key aspect of the success of this community led response and recovery effort. Importantly, these aspects are described as both *a value and a practice* in a cultural sense (Kenny & Phibbs, 2014; p. 49). They also stress how this collective agency approach was inclusive, and took on a whole of community approach to community led disaster management. As well as, or as part of, the cultural aspect of this community led case, the researchers highlight the role of social capital, including social support, the building of social networks, sense of community, and community capacity as significant factors in the community’s ability to deliver a rapid mobilization of people and resources (Kenny & Phibbs, 2014).

The informal response to the Hurricane Katrina disaster in the United States in 2005 also provides key examples of where local community-based organisations have provided response and recovery efforts, with the formal response unable to cope with the situation. Karger et al. (2012) discuss the role of local faith-based organisations as they became first responders in their communities. Their research describes an effectively delivered effort that incorporated not only the delivery of basics such as food and water, but a much more complex effort that included the provision of shelter, children’s services, case management, and medical services. Key aspects of the success of these significant efforts have been discussed as relating to pre-existing networks and social infrastructure, as well as the existing relationships that these organisations held with the community (Karger et al., 2012).

The literature exploring lessons from major disasters such as Hurricane Katrina and the September 11, 2001 attacks have also highlighted flexibility and adaptability as being critical in responding to crisis conditions. These have been identified as key attributes demonstrated by community place-based organisations in their role as responders, and in recovery, strengthening their decision making capabilities, an increasing an ability to mobilise quickly (Patterson et al., 2010; Stys, 2011; Thornley et al., 2013; Bach et al., 2010). Specifically, Kendra and Watchendorf (2003) argue that creativity is an important aspect of disaster response in terms of the ability to improvise and to adapt to changing circumstances. They stress that while training and preparation are vital to responding to disaster situations, “...*creative thinking, flexibility and the ability to improvise in newly emergent situations is vital*” (p. 52). Further to this, their view is that creativity is part of the practice of community organisations emerging as responders to disasters (Kendra & Watchendorf, 2003).

The examples outlined above highlight how communities have taken the initiative to lead a local response, particularly in situations where there was an absence of formal emergency management support. These examples have provided an emphasis on the importance of pre-existing social networks as being critical to the success of a community led response and recovery efforts. Troy, et al. (2007) emphasise the importance of place-based organisational structure in disaster response, recovery and preparedness. Describing the unique role of place-based community organisations, underpinned by the traditional role they play in meeting the needs of their communities, they emphasise their role as existing social resources to facilitate the mobilization of communities.

While these examples have highlighted the significance of a set of unique characteristics held by community organisations operating in place that supported effective response and recovery efforts, there is limited information in the literature that explores how these characteristics have influenced the success, or challenged, the delivery of these roles.

Community organisations have taken key roles in the cases outlined above, utilising the advantage of knowing and understanding their communities, having existing capacity to reach community members, and harnessing local knowledge and local resources. The next section will explore how government frameworks view community led response to disaster situations, as well as what support there is in terms of building the capacity of communities to deliver local response and recovery efforts.

2.4.3: Developing resilience at the local level

Expectations of communities

As the review of the key Australian government documents has revealed, disaster management plans and strategies at all levels of government do not appear to recognise local communities as integrated stakeholders in the disaster management system. The concept of community disaster resilience is represented as a cornerstone of these frameworks, with the recognition of the need for all sectors to work together, with the notion of shared, or collective responsibility included as a key aspect of Federal and State frameworks. However, there remains no clear articulation of how a cross sectoral approach would work in practice, how communities can be supported to meet the expectations outlined in these strategies and plans, or how community and stakeholder engagement can be utilised to support these concepts. Place-based community organisations are only loosely mentioned in the NDSR (2011) and State frameworks. The Australian Council of Social Services (2015) argues that these organisations are rarely even included in conversations about what role they could play. Bach et al. (2010) suggest that by capitalising on how place-based community organisations work with their communities under normal conditions, a role for those organisations to lead “*local collective action*” in disaster situations can be achieved (p. 8).

Further, the limited role advocated by these documents for community organisations in supporting their communities, is not accompanied by any advice on how these organisations can be better connected and engaged with the disaster management system. There is also no indication of how a community led response and recovery effort would sit within the current frameworks.

The disaster resilience literature emphasizes that the clarification of roles and responsibilities is considered essential to the success of community led preparedness, response and recovery efforts (Kapucu et al., 2018; Harris et al., 2018). Research undertaken following the Hurricane Katrina tragedy has demonstrated that the development of a shared understanding of clearly defined roles between all stakeholders in the disaster management system, particularly between disaster management agencies and hazard prone communities, will increase the efficiency and coordination of response and recovery efforts (Stys, 2011; Patterson et al., 2010; Harris et al., 2018).

Supporting this perspective of closer connection between stakeholders, the literature has also explored how these community led responses can be enhanced to support the disaster phases

of preparedness, response and recovery, and the strengthening of community disaster resilience going forward. In this context, a growing body of literature has adopted the view that the increasing need to respond to major disaster events cannot be addressed by disaster management agencies acting on their own. (Bach et al., 2010; Waugh & Streib, 2006; Simo & Bies, 2007; Kapucu & Garayev, 2012). In recognizing the value of, and the necessity for locally organized efforts, there has been an accompanying focus in the literature on the need to support these local efforts through building the capacity of communities to self-organise (Simo & Bies, 2007; Harris et al., 2018; Bach et al., 2010; Berkes & Ross, 2013; Chen et al., 2006). A critical strategy supporting this argument has been a cross-sectoral approach to building disaster management capability, where community organisations are included as a stakeholder as part of a collaborative group. Some examples of models that utilise a cross sectoral approach have been developed internationally, as discussed below.

Community based disaster management models – Community and Stakeholder Engagement

Chen et al. (2006) explored a study on community based disaster management programs delivered in Taiwan, describing a participatory process, and the development of a partnership arrangement that capitalised on existing response experience at the local community, or neighbourhood level. In a country where earthquake and floods are prevalent, the program focused on building community capacity at the village level to prepare for and respond to disaster, particularly where government responses may not be immediately available. The program was developed through a partnership between Taiwan's National Science & Technology Centre of Disaster Reduction (NCDR) and the National Taiwan University (NTU) (Chen et al., 2006). They report that the focus of this program was on building the capacity of pilot communities in preparedness and response capabilities, with pre-disaster planning designed to reduce vulnerability and promote resilience. In addition to the NCDR and the NTU, a range of other experts were also involved to provide information and expertise to the ten pilot communities (Chen et al., 2006).

This project is an example of how Australian frameworks can be influenced to consider a program that utilises extensive community and stakeholder engagement, together with a cross sectoral approach, as key principles of a model enabling and empowering each community with the skills for enhanced self-organisation and improved long term disaster resilience outcomes through the involvement of experts, a respect for local knowledge, and a sustained culture of awareness. Significant aspects of this community based disaster management approach

included an initial participatory event designed to recruit local participants, a focus on the collection of existing disaster experience, building hazard identification skills, development of response strategies, and the establishment of a community-based disaster management organization (Chen et al., 2006). They also report that the final preparation plan was presented publicly, with the aim of raising awareness across the community. The outcome of this project has resulted in the development of a community-based disaster management organisation with the capacity to prepare for and respond to disasters in the absence of external support (Chen et al., 2006).

Based on an analysis of this program, the research resulted in the development of a community-based disaster management model that emphasises the role of collaboration, with the promotion of collaborative relationships between community leaders, interested community members, experts in various fields of hazard mitigation, government and academia, working together over a staged process (Chen et al., 2006). Their model is supported by engagement with the pilot community, a planning team that consists of a community working group, and an advisory team who act in a facilitation role for the implementation of the program. Their model stresses the importance of continuity of education and training to support community awareness and capacity, as well as administrative and financial support to sustain the program.

Japan is also a country where earthquakes and tsunamis have had disastrous effects, and where communities have centuries of disaster experience. A model documented by the Global Facility for Disaster Reduction and Recovery (GFDRR) and the World Bank, has a focus on community based organisations as key responders in their communities. Consistent with the previous example, lessons gained from major disaster events have also recognised the value of engaging at the local level to access local knowledge, and the need to empower local communities in their role as first responders (GFDRR). The model argues for the realisation that the large number of local responders is often far in excess of what could be expected from a professional emergency response. The program is supported with regular training with the assistance of national agencies and other partners. Sustained awareness raising for the broader community is delivered through opportunities such as local events (GFDRR).

In a resilience initiative delivered in Los Angeles County in the USA, a model described as community-partnered participatory research was used in the development of a disaster plan for the area (Wells et al., 2013). As with the previously discussed models, this model incorporates the use of intensive community engagement techniques, and organisational partnerships and

networks. Key stakeholders included the key County disaster management organisations, the County public health agency, local government, community based organisations, and community members (Wells et al., 2013). They report that facilitated discussions explored what current resilience based activities were being undertaken by the attending organisations, as well as discussing the challenges to enhancing community resilience, and what would make the community more resilient. Working groups considering the outcomes of those discussions highlighted concerns on a lack of knowledge around preparedness in the community, as well as general uncertainty around the roles of emergency agencies in preparedness (Wells et al., 2013).

The study documents a focus on action planning, involving community based organisations and community members followed. They also report that a major concern raised by this group was around the issue of financial support for community organisations to assist them to deliver community resilience action plans. Discussion also addressed challenges to the adoption of a shift to a community engagement approach from the traditional top down planning models. A community resilience toolkit and preparedness package was developed as part of a pilot project, involving “neighbourhood coalitions”, who assisted in the mapping of community assets and hazards. Implementation of the toolkit at the community level was undertaken by resourced community (Wells et al., 2013; Wells et al., 2013).

These models provide a range of strategies where the concept of shared and collective responsibility, raised as part of Australian frameworks, have been clearly demonstrated with a focus on empowering communities to develop strategies for the delivery of self-organised preparation, response and recovery efforts that work at the community level. They also highlight that the benefits of local knowledge, local networks and relationships, together with the provision of support in recognising risks and developing strategic preparation plans, are becoming foundations to strengthen community disaster resilience. These models also have an emphasis on the development of strategies that support the sustainability of a culture of awareness, involving the ongoing identification and management of hazards and risks, and the understanding of roles and responsibilities. Examples of where these models have been developed are unsurprisingly found in countries that have a history of experiencing natural hazards, such as earthquakes and tsunamis. With an increase in flooding and bush fires, effective disaster management in Australia has also become more critical.

Another significant distinguishing feature of the models outlined above have been the inclusion of communities as partners in the development of preparation planning, capitalising on local experience and knowledge, and initiating practical ways of empowering communities to self-organise as first responders. These partnership approaches have incorporated community based organisations as key stakeholders in collaborative initiatives. The centrality of these organisations in these models reflects the recognition of a range of key strengths they bring to the building and strengthening of community disaster resilience. The discussion in the next section will pursue this focus, with a review of how lessons from major overseas disasters have influenced disaster management.

2.5 A SHIFTING PERSPECTIVE – LESSONS LEARNT FROM MAJOR DISASTERS INTERNATIONALLY

2.5.1 A shift in emergency management policy approaches

At an international policy level, attention is also being directed to acknowledging the value of communities that demonstrate self-organisation to lead and deliver response, recovery and preparation activities. The increasing occurrence and severity of disaster situations, such as the September 11, 2001 terrorist attack, and the devastating outcome of Hurricane Katrina, is driving governments to expand their views on how resilience is developed at a local level (Bach et al., 2010; Waugh & Streib, 2006; Kapucu, 2007).

In a paper delivered to the London Workshop of the Multinational Community Resilience Policy Group, (Bach, et al 2010) Robert Bach commented on the centrality of community led disaster efforts in the building of community disaster resilience. Bach et al.(2010) argued that: *“successful resistance and adaptation point to the value of local, self-organized efforts in preparing for crises, responding quickly, and recovering more effectively. Many of these local efforts arise because of perceived failures of top down emergency management plans and an overreliance on central authorities.”* (p.2)

Acknowledgement of the effectiveness of community led responses and the need to build the capacity of communities to prepare for these actions has been discussed across the literature, (Simo & Bies, 2007; Kapucu & Garayev, 2012; Stys, 2011; Coles & Buckle, 2004; Patterson et al., 2010; Harris et al., 2018). These studies emphasise the need for an approach that incorporates *“coordination, collaboration, and communication”* (Kapucu & Garayev, 2012 p313).

Critical to an understanding of how community place-based organisations could be integrated into the Australian disaster management system, particularly in the Brisbane context, the literature argues that a collaborative approach should be accompanied by practical support to develop capacity at the community level, to build and manage those multiple relationships (Cutter et al., 2008; Wells, et al., 2013; Simo & Bies, 2007). As indicated in the previous section, collaborative approaches to strengthening the capacity of communities in hazard prone areas in an international context, have delivered models based on formal training programs that capitalise on the existing capacity and experience of communities who have experienced and responded to disaster events.

2.5.2 Cross Sector Collaboration

Bryson, Crosby and Stone (2006) describe a cross sectoral collaborative approach as *“the linking or sharing of information, resources, activities, and capabilities by organizations in two or more sectors to achieve jointly an outcome that could not be achieved by organizations in one sector separately”* (p. 44). This approach is utilised as a strategy for addressing social problems, and for achieving community outcomes following the failure of separate sectors acting independently to address a societal problem (Bryson et al, 2006).

Simo and Bies (2007) note that a defining feature of the concept of cross sector collaboration is the striving for outcomes that meet the mutual goals of the stakeholders. They also note that the structures that underpin this approach can be variable, *“from informal and episodic activity, such as onetime taskforces, to highly formalised contracts between organisations”* (Simo & Bies, 2007, p. 125).

The literature discussing a cross sector approach argues that the formation of a functional and effective collaboration requires the support of what Bryson, et al. (2006) describe as linking mechanisms. They argue that a significant linking mechanism is the role of a broker, or a convenor, who brings legitimacy to the facilitation process during the formation phase. Another key linking mechanism they identify is that of a powerful sponsor who can *“draw attention to an important public problem and can accord it legitimacy within a stakeholder group”* (p. 46). They also suggest that this role is important in terms of providing leadership and authority, as well as having the ability to access resources that will support the achievement of the outcomes of the collaboration. The development of strong relationships between stakeholders, supporting *“trusted interactions”* is also seen as central to mitigating conflict in decision making and in supporting the success of the collaboration (Bryson et al., 2006, p. 48). In this regard, they

suggest that conflict can arise where there is a perception of an imbalance in the power or status of stakeholders, and recommend the use of available resources, such as information or capacity building tools, as an equalising agent.

A cross sector collaborative approach has gained support as part of a growing international trend in the disaster management sector, reflecting the recognition of the failure of traditional systems to respond to major events, and a recognition that the response to disaster situations cannot be addressed by the resources of a single agency (Kapucu & Garayev, 2011; Waugh & Sylves, 2002; Simo & Bies, 2007; Bach et al., 2010). Kapucu and Garayev (2012) argue that reforms in the United States have resulted in an approach to emergency response and recovery that stresses the importance of disaster resilient communities, supported through working relationships between a range of sectors, including different levels of government, non-government, and not-for-profit organisations. Other arguments for cross sector collaborations include the opportunity for role clarification across the disaster management system, information and resource sharing during disasters, and improved coordination, and the enhancement of functionality during disasters (Kapucu, et al, 2018; Goode et al., 2015; Redshaw, et al , 2017; Simo & Bies, 2007).

Waugh & Sylves (2002) also note the importance of integrating volunteer groups and not-for-profit organisations into the disaster management system as key resources during disaster situations. There are existing examples of integration of the community sector, both in Australia (Redshaw et al. 2017) and internationally. Kapucu et al. (2018) discuss collaborative approaches to disaster management in the United States context, referring to the September 11, 2001 attacks as a catalyst for the integration of non-profit organisations into the emergency management system under the umbrella of the National Voluntary Organisations Active in Disaster (NVOAD). As an arm of the Federal Emergency Management Agency, Kapucu, et al. (2018) describes NVOAD as *“a platform for non-profit organisations to coordinate their activities and share information and resources in helping (potential and actual) disaster victims through the preparedness, response and recovery phases of emergency management”* (p. 84).

Under this arrangement, non-profit organisations are involved in standing committees that perform a coordination role for the activities of member organisations, as well as enabling the sharing of information and resources as part of disaster response, and building strong working relationships between sectors. Kapucu et al. (2018) further argue that the integration of the non-

profit sector into a cross sector collaborative structure facilitates access to the building of capacity, and delivers a model that provides more efficient decision making. Their study also identifies the opportunity for community involvement through the integration of the non-profit sector, and report that non-profits involved in NVOAD have experienced enhanced communication outcomes, as well as access to resources that support their roles during disaster response and recovery (Kapucu et al., 2018).

Simo and Bies (2007) discuss a cross sectoral collaboration that was developed in the aftermath of Hurricane Katrina. Their evaluation of the resulting organization highlights the outcomes that were able to be delivered through the establishment of formal collaborations between faith-based and community organisations, but stress that this approach requires constant effort to maintain the collaboration, and to be ready for future events (Simo & Bies, 2007).

The approaches discussed in this section have similar elements to the community disaster management programs outlined earlier in this Chapter, with the involvement of stakeholders from across a range of sectors working collaboratively toward a mutual goal of community disaster resilience. Unfortunately, the concept of cross sector collaborations, facilitating the integration of place-based community organisations as key stakeholders in the disaster management system, has not yet been demonstrated as a significant influence in the Australian context.

2.6 CHAPTER CONCLUSION

The research that has been reviewed to inform this study has been extensive and has covered key areas that support the development of a framework to be discussed in Chapter 7 of this study, (note, there is a large body of literature on the experience of disaster, and other specific issues, such as the disaster cycle, the use of social media, training of first responders, and many other important issues that are beyond the scope of this thesis). This review has identified characteristics of social capital that can support the delivery of response, recovery and preparedness activities by communities who are able to self-organise their efforts. Studies of where communities have led their own disaster response have highlighted the significance of these characteristics in the mobilization of their communities.

The review has also explored how shifts in policy and practice internationally are focusing their attention on the strengthening of the capacity of communities to self-organise in the absence of a formal response from the emergency management sector. In highlighting a shift in approach to the role of communities in responding to disaster situations, the use of focused

community engagement, the development of a culture of disaster preparation awareness, and the concept of a cross sectoral approach involving a range of government agencies, academic institutions and community organisations have also been raised in response to the realisation that disasters can no longer be managed by one agency acting on its own.

CHAPTER 3: RESEARCH METHODOLOGY

The previous chapter presented the topic of this thesis, and identified its contribution to the literature. The aim of this chapter is to explain the methods utilized to undertake this research. This includes a discussion on the use of Reflexive Thematic Analysis, including the rationale for utilizing this methodology, with references to key elements of theory and method outlined by Braun and Clarke (2006) and others.

Also included in this chapter is an explanation of the research design, covering the use of semi-structured interviews and the design of the interview questions, as well as relevant materials supplied by the interview participants. Case study design and its relevance to the methodology of this study will also be covered. This will be followed by an overview of information relating to the recruitment of the interview participants. Ethical issues that were considered as part of the development of the interview process are also discussed. An overview of the significance of each participant to this study will be discussed, including their roles at the time of the flood and at the time of the interview. The method applied to data collection will also be discussed.

This chapter also provides an overview of the two case study organisations. This will include a brief outline of their history and purpose, and their location within the flood affected area of Brisbane. A sense of each of the communities in which the organisations are located is also provided through some brief demographical information.

3.1 QUALITATIVE RESEARCH DESIGN

The research undertaken to inform this study has utilised two distinct methods aimed at gathering data, data analysis, and framework development. First, a literature review has been undertaken to explore the concept of community disaster resilience, and resilience based approaches to disaster management. The literature review has also explored how the building of community disaster resilience has been applied, or operationalised in a practical setting, with the involvement of place based community organisations, and through community based disaster management frameworks. The information gathered through the literature review will inform a set of characteristics and principles related to operationalising the strengthening of disaster resilient communities.

Additionally, the insights from the literature will be used to support the analysis of the data, and to identify and understand the themes that will underpin the development of a framework to operationalise community disaster resilience.

Second, the gathering of data has been undertaken using a case study approach, utilizing two case studies. Case study research is a social research method using a qualitative approach (Yin, 2012). Helen Simons (2015) views the purpose of case study method as a means to “*generate in-depth understanding of a specific topic (as in a thesis), program, policy institution or system to generate knowledge and/or inform policy development, professional practice and civil or community action*” (p. 176).

This case study approach focuses on the experiences of two community place based organisations located in the inner south of Brisbane, Australia. A series of semi-structured, in-depth interviews were undertaken with participants who were central to the response, recovery and preparation efforts led by the two organisations. Additionally, using purposive snowball sampling, interviews were also undertaken with emergency management practitioners and policy makers who were involved in the major flood event in Brisbane in 2011. These participants were critical in terms of gaining a disaster management and policy perspective. The purpose of these interviews was to gain insight into the unique experiences and perspectives of participants with the approach described in detail below.

3.1.1 Methodology – Reflexive Thematic Analysis

Data analysis and the development of a framework for this study has been supported by the use of Reflexive Thematic Analysis¹. Braun and Clarke (2006) describe thematic analysis as a qualitative research method, where the researcher plays an active role in the identification of themes from the data. (p. 591).

This method employs an interpretative analysis technique, that involves the initial coding of material from the interview transcripts. As part of this approach, coding is an iterative process that labels thoughts and concepts, followed by reflection on the data, to generate themes that support the interpretation of meaning from the data.

¹ A note on terminology: in their influential 2006 paper Braun and Clarke originally outlined the process of thematic analysis. Over the last decade or so, they have clarified and revised some of the ways they phrased or conceptualised thematic analysis, as well as the processes, and now prefer to call this method *reflexive* TA (Braun and Clarke, 2019)

Boyatzis (1998) describes themes as patterns that are identified in the data that, “*at the minimum describes and organizes possible observations or at the maximum interprets aspects of the phenomenon*” (p. vii). As Braun and Clarke (2019) have outlined in detail in their reflexive thematic analysis approach, the researcher’s role in the process of knowledge production is acknowledged. The often-used phrase, “themes emerged”, is inappropriate, as they are identified, developed and created by the researcher. The researcher and their skills and assumptions, intertwine with the data to determine what stories are told. Thus, it is important to acknowledge my background, and the perspective I bring to data collection and coding. As outlined earlier, my background is in community engagement, and as I coordinated a formal evacuation centre during the flood event, I have a good sense of what those at the frontline experienced during the disaster.

The coding process requires a continual bending back on oneself, questioning and querying the assumptions we are making in interpreting and coding the data. Themes are analytic *outputs* developed through and from the creative labour of our coding. They reflect considerable ‘analytic’ work, and are *actively* created by the researcher at the intersection of data, analytic process, and subjectivity. Themes do not *passively* emerge from either data or coding. They are not “in” the data, waiting to be retrieved by the researcher. Themes are creative and interpretative *stories* about the data, produced at the intersection of the researcher’s theoretical assumptions, their analytic resources and skills, and the data themselves (Braun & Clarke, 2019; p. 594).

The themes generated from the systematic review of the interview transcripts will seek to reflect the experiences of the interview participants. Importantly, these themes seek to reflect patterns of meaning and concepts in the context of the events described by them, as well as the impacts and implications of those events on the building of community disaster resilience. This active analytical process also establishes information as a conceptual basis for development of the framework that will underpin this study. The interpretation of the experiences and perspectives of the participants supported the development of ideas that will influence the arguments made in this thesis, and the responses to the research questions.

3.2 PARTICIPANTS

In order to explore the research questions, the two case studies have had a focus on investigating the roles played by community place based organisations in response to the flooding in Brisbane in 2011, and how those organisations have worked with the community

to build community disaster resilience since that time. During the flood event, two large formal evacuation centres were established by the Brisbane City Council, (one of which I coordinated). In addition to these centres, local community centres either served as key local bases for evacuees, or response and recovery efforts in flood affected communities. Where their own premises were inundated, they led community responses from other locations across their communities. This thesis documents the experience of two of these community organisations. The other interview participants are emergency management practitioners and policymakers, who were also involved in the flood. The inclusion of these participants was important to gain a perspective from a disaster management context.

Table 2 illustrates the participants, and their affiliation at the time of the flood, as well as at the time of the interview. For the purposes of this study, the anonymity of participants has been preserved, with pseudonyms provided for each participant.

TABLE 2: PARTICIPANTS AND THEIR AFFILIATIONS

Participant	Organisation (2011)	Role in 2011 Flood	Organisation at time of interview
P#1: Councillor	Case Study 1: Organisation A	Brisbane City Council Ward Councillor for the flooded area	Retired
P#2: Manager	Case Study 1: Organisation A	Manager, Community Centre	Community sector organisation
P#3: Coordinator	Case Study 2: Organisation B	Coordinator, Recovery Centre	Manager, Community Centre
P#4: Executive	Policy Maker: Queensland State Government, Department of Communities	Department of Communities; Recovery Program	Queensland State Government, Department of Communities, Disability and Seniors, Recovery Branch
P#5: Recovery Officer	Practitioner: Queensland State Government, Department of Communities	Department of Communities; Recovery Program	Local government – Community Development
P#6: Engagement Officer	Practitioner/Policy officer: Brisbane City Council	Community Engagement – Brisbane City	Brisbane City Council, Disaster Management

		Council, Disaster Management	
P#7: Community Support Officer	Practitioner/Policy officer: Australian Red Cross	Red Cross Volunteer, Bundaberg Evacuation Centre	Local government, Disaster Management

3.2.1 Recruitment and in-depth interviews

After obtaining formal ethical clearance from the University's Human Research Ethics Committee (QUT approval number 1700000122), I used a targeted purposive snowball sampling approach (using professional contacts and word of mouth) to recruit participants. I initially sought to recruit six participants. With a focus on the role of local community centres, I was able to locate the three key people involved in the two case study organisations at the time of the flood through my professional networks. These three participants were critical to the study in terms of their experiences, both during and after the flood. All of the participants were also extremely keen to discuss their experiences as part of the study. Staff working with Organisation A at the time of the interviews did not wish to participate in the study.

The remainder of the participants were accessed through my professional networks. Their recruitment as part of the study was important in order to gain a perspective from within the Disaster Management system, as well as providing their own personal experiences of the flood. A seventh participant, also from within the Disaster Management system, was recommended by an existing participant. Two of these participants had been involved in the Recovery program delivered by the then Department of Communities. Participant #7, the Community Support officer, was volunteering with the Australian Red Cross during the time of the flood, and working in disaster management for Brisbane City Council at the time of the interview. The flood experience of Participant #6 related to liaising with community groups in flood affected areas as part of his role with Brisbane City Council at the time. He continues to work in disaster management with Brisbane City Council.

Each participant was asked to participate in a semi-structured in-depth interview, which can be described as a 'conversation with purpose' (Minichiello, 1990). In-depth interviews aim to elicit rich information from the perspective of a particular person on a particular topic under investigation (Liamputtong, 2007), and purposely allow for a more flexible structured discussion that is responsive to emergent issues. This was important in providing an avenue for the participants to share their stories, experiences and perspectives. Participants were

approached initially through either a phone call or email. Information sheets for participants provided the purpose of the research, as well as details of the interview process. Participant sheets were tailored for each of the targeted participant groups, ie community organisations, and practitioners/policymakers. (See Appendix A).

Once participants had agreed to be interviewed, I asked each to nominate a time and place for the interview that would suit their circumstances. Each participant was made aware of the ethical guidelines, my credentials as a researcher for this study, and an overview of the project. Each participant signed a consent document. (See Appendix A) One of the seven participants experienced some mild emotional discomfort during the interview, triggered by discussing events that he had not thought about for some time. At those points, I offered to either terminate the interview, or proposed a break.

As part of the interviews conducted with the three case study participants, a range of questions were designed to gain an understanding of the traditional role of each organisation, how events developed during the crisis, and the role that each organization adopted as part of the response, recovery and preparedness phases. The interviews also explored what support was provided by the disaster management agencies during and after the crisis. Questions developed for the interviews with the practitioners and policymakers were designed to understand their roles during the flood, as well as any interaction or relationships they may have established with the community organisations, during and after the flood. Other questions related to their perspective on the role of community organisations in response, recovery and preparedness efforts.

3.3 CASE STUDIES SITES

Before I describe the participants, this section will provide an outline of the two case study organisations, including a brief history and overview of the purpose of the organization. This section will also provide an snapshot of the make-up of the community in which each organization operates, as well as their situation in the context of the flood affected areas of the city. The two community organisations targeted for the purposes of this case study offer the opportunity to address the research questions from divergent perspectives in terms of how an established place-based community organisation and an emergent organisation were able to deliver their roles, and this perspective will be explored as part of the analysis process. Both led community response and recovery efforts in their areas, and sought to develop preparation plans for any future event. They are described in detail below.

3.3.1 Organisation A – The existing case study organisation

Organisation A operates as a community centre located in an inner South suburb of Brisbane. The area serviced by Organisation A was one of the earliest settled areas of the city, and is renowned for its history and character. These have included a strong Indigenous cultural heritage, a history as an industrial area, and a significant migrant history, particularly with settlement from the Greek community. Due to its proximity to the city's central business district (CBD), the area has experienced a significant annual average growth rate over the past decade, while still featuring a culturally diverse community.

At the time of the flood in 2011, the area was beginning to experience a transformation from its history of industry, with an increase in high density residential development. Many of the apartment blocks in the area at the time were already constructed on, or near the banks of the Brisbane River, to take advantage of the proximity to the city centre, local park and entertainment areas, cultural hubs, and views of the river. The Brisbane City flood gauge recorded the river peaking at 4.46 metres at 4am on Thursday 13 January (Brisbane City Council, 2001). With the suburb bounded by the river to the west and south to form a peninsula, flooding in the suburb was extensive. The rate of development of apartment buildings in the suburb has continued since 2011, with the number of apartments in the area now forming a large percentage of the occupied private dwellings.

As a place based community centre, the core business of Organisation A at that time included a community development program, tenancy advice and advocacy program, as well as operating a number of venues as community space. The Manager also advised that the centre delivered outreach to community in the streets of the suburb. As the manager of the centre, he coordinated the delivery of that work, and the staff who delivered it, as well as managing the organisation's external relationships, and working with the organisation's committee. As a not-for-profit community owned organisation, the committee were all volunteers who gave their time and expertise.

The clientele at that time were highly represented by vulnerable community members, some with mental health issues. The Manager raised the issue of community centres in general as being under resourced, "*despite their very pivotal role*" in the community. In a reference to the diversity and history of the area, he described it as being characterised by the "*haves and the have nots that's gone on for 200 odd years*". For this reason, he emphasised that a focus of the centre was on bringing both those groups together. Other key target groups comprised

disadvantaged community who were boarding in the area, or who were public housing tenants who required support and tenancy advice. The area also continues to have a strong cultural connection for Aboriginal community, and some Indigenous organisations are also located in the area. Other significant cultures include Maori community and a strong Greek immigrant history, with the Greek Club serving as a major cultural centre.

The Manager also spoke of a strong network of volunteers who did not require support, but instead offered their support and expertise to the centre, with participation on boards, or providing a range of skills. He felt that the core of the organisation's business was about "*locals participating in better outcomes in that community*". The centre also ran the local interagency network at that time, in an area that was home to a range of not-for-profit community service organisations. Organisation A was able to refer and receive clients from these other organisations, depending on the need, and this in turn facilitated some strong inter-organisational networks.

As already indicated, the Councillor had a strong existing relationship with Organisation A, and contacted the Manager as soon as it became apparent that the flood was coming down the Brisbane River. She was keen to work with Organisation A, and became a driving force behind its efforts.

3.3.2 Organisation B – The emergent community organisation

The suburb in which Organisation B is based, is also located on the Brisbane River, and subsequently also experienced extensive flooding. At approximately 6.6 km from the city, it is slightly farther from the CBD. Consequently, this suburb has experienced much less growth than that of Organisation A. The area is characterized by leafy streets, and the predominance of separate houses. Table 3 provides an overview of the key features of both case study areas, with the information based on the local government Ward Profiles.

At the time of the flood in January 2011, the Coordinator was working at her local State Primary School in this inner South suburb of the City. The Coordinator's role at the time was as a community liaison officer and manager of the Parents and Citizens (P&C) Association, and "*kind of a general dog body at the school*". She was also a parent, with her two children attending the school. As will be seen, the Coordinator was the driving force behind the response and recovery effort for the area. She has worked since that time to establish a community centre in the same suburb.

**TABLE 3 - BRISBANE CITY COUNCIL WARD PROFILE – GABBA WARD (QUEENSLAND GOVERNMENT STATISTICIAN’S OFFICE QUEENSLAND TREASURY
HTTP://WWW.QGSO.QLD.GOV.AU - DOWNLOADED 21 JUNE 2019)**

Organisation A		
Brisbane Community Profile Category	Ward Profile	Brisbane Average
Average Annual Population Growth (2008 – 2018)	3.4%	1.8%
Number of Persons Born Overseas	37.1%	30.6%
Number of Occupied Private Dwellings – Apartments	65.8%	21.3%
Organisation B		
Brisbane Community Profile Category	Ward Profile	Brisbane Average
Average Annual Population Growth (2008 – 2018)	2.4%	1.8%
Number of Persons Born Overseas	25.2%	30.6%
Number of Occupied Private Dwellings – Separate houses	60.3%	67.4%

3.3.3 Participants from Community Organisations

Now I will describe the participants. Participant #1 was the local government ward councillor at the time of the flood and since her election in 2003. For the purposes of this study, Participant #1 will be known as the Councillor. In her role as the local councillor, and a resident, she had developed a strong relationship with Organisation A. Her recruitment as a participant in this study was based on her role as a member of the community led response, recovery and preparedness effort led by Organisation A. While the Councillor was a member of, and held some strong political connections within the serving political party governing Queensland at the time of flood, that political party was in opposition in the Council Chamber, and consequently limited her ability to influence Council policy.

Participant #2 was the manager of Organisation A at the time of the flood, and for the purposes of this study will be known as the Manager. His recruitment as part of this study was based on the key role he played in leading the development and delivery of his organisation’s efforts. For the purposes of this study, Participant # 3 will be known as the Coordinator. She played a key role in the establishment, initially of an evacuation centre, and then of a recovery centre,

that operated for some five months following the flood. The experiences of these three participants provided critical data that formed the basis for this research. Additional information was provided by the Councillor in the form of a Preparedness Plan that had been developed by Organisation A following the flood. The Manager also provided a copy of his personal record of the flood event.

3.3.4 Practitioners and Policymakers/Policy Officers

This section discussed the participants who were recruited to take advantage of their experience of the 2011 flood, and more critically, to provide a perspective from different levels within the Disaster Management system. These include Participant #4, the Executive, who now holds a senior role in the Community Recovery Branch of the Queensland State Department of Communities, Disability Services and Seniors. He has significant experience in working with community organisations, and with flood recovery. Participant # 5, the Recovery Officer, was employed by the Queensland State Government in the (then) Department of Communities at the time of flood. Her role at that time involved engagement with the community in the South West of the City around a range of diverse community service related programs. Once the flood crisis began to subside, she was diverted to a role as part of the recovery effort by the Queensland State Government.

Her role at that time involved engagement with the community in the South West of the City around a range of diverse community service related programs. Once the flood crisis began to subside, she was diverted to a role as part of the recovery effort by the Queensland State Government.

Participant #6, the Engagement Officer, was working in disaster management within Brisbane City Council at the time of the flood, as well as at the time of the interview. His role during the flood included communication with the community operated evacuation centres that had emerged across the flooded city. The flood experience of Participant #7, the Community Support Officer, was initially with her volunteer role with the Australian Red Cross, who operated an evacuation centre in flooded Bundaberg as part of the State wide flooding in 2011. She participated in the interview for this study during her employment with Brisbane City Council, where she worked in Disaster Management.

3.4 DATA COLLECTION AND ANALYSIS

3.4.1 Data Collection

All interviews were audio-recorded and later transcribed verbatim into text for analysis (resulting in 62 pages of material for analysis), ensuring that participants' views, experiences and feelings were accurately represented in their own words. To preserve anonymity, numbers and pseudonyms are used for each participant. Following the interviews with the research participants, it was critical to ensure that the experiences of the two case study participants were explored and interpreted in a way that would convey an understanding of the roles they delivered, as well as how those roles were influenced by the characteristics of disaster resilience. The exploration and representation of the perspectives of how those roles can support the operationalization of community disaster resilience from a policy position was critical to this study. In the context of the interview material from the practitioners and policy makers, it was important to capture their views on the role of place based community organisations from the perspective of the disaster management system, and their perspective on how these community led efforts could be best placed within the system.

3.4.2 Analysis Methodology – Reflexive Thematic Analysis

Preliminary analysis of the data commenced following each interview using a Reflexive Thematic Analysis qualitative research methodology. This approach involved intensive familiarity with the data, analysis, iterative coding of the data, linking codes, and identifying or generating themes from the codes. This process was supported by existing concepts and theory from the literature. The characteristics of community disaster resilience, together with principles associated with community based disaster management programs were utilized to develop the framework underpinning this study.

3.5 CHAPTER SUMMARY

For the purposes of this study I followed a Reflexive Thematic Analysis qualitative research methodology to analysis data and to develop the framework. The development of the theory was also informed utilising existing concepts and characteristics associated with community disaster resilience provided through the literature review.

The primary data collection method was through a series of semi-structured in-depth interviews with research participants who had either been involved in community led responses to the Brisbane flood in 2011, with participants who were part of the disaster management system at

the time, and who were involved in the disaster management system at the time of the interviews.

The case studies involved two place based community organisations who were situated in the flood affected areas of the city. A description of the setting of the city of Brisbane as a hazard prone area, subject to severe storms, flooding and cyclones, and with much of the city built on flood plain, has also provided context for this study.

CHAPTER 4: THE FLOOD EVENT

This Chapter will have a focus on Research Question 1: *How place based community organisations responded to their communities as part of the Brisbane flood emergency in January 2011*. Specifically, it explores the experiences of the two case study organisations as they led a community response during the flood crisis in January 2011, and recovery and preparedness efforts in the months following.

In-depth interviews held with Participants from the two case study organisations produced detailed information on the roles they delivered through the stories they shared of their experiences during the crisis. An examination of these roles, and how they were delivered, has been utilised to assist with an understanding of the scope of the response, recovery and preparation efforts achieved by each organisation, including the challenges that confronted them. The identification of themes from the interview data will be made using an interpretative analysis technique that will support the development of the concepts that relate to the operationalisation of community disaster resilience at the local level (Braun & Clarke, 2006).

The themes interpreted from the data in relation to how the two case study organisations responded to their communities in the January 2011 flood event are reflected through five themes discussed below, ie. Leadership; Community Resources and Capacity; Creating Organisation from Chaos; Social Support; Pre-Existing Networks and Relationships.

4.1 COMMUNITY LED RESPONSES

4.1.1 The Place-Based Community Organisations

This thesis documents the experiences of two community place-based organisations located in Brisbane's inner South. Organisation A operates as a community centre located approximately 3.5 kms from the Brisbane CBD, in an iconic Brisbane suburb on the south bank of the Brisbane River. This organisation has been operating in that area since 1983. In contrast, Organisation B emerged in response to the flood crisis.

4.2 ORGANISATION A RESPONSE – TIME TO ACT!

Theme 1: Leadership

A significant role identified through the interview process for both organisations was that of providing leadership. This was a key factor influencing and underpinning the initiation of both

responses, as well as supporting the maintenance of both efforts through to planning for preparedness for the next event.

Proactive Contact and Strategic Conversations

In the case of Organisation A, leadership was evidenced through a range of approaches that directed the way in which, first the response and then the recovery effort, were delivered. The collaboration between the Councillor, as the local government representative for the Ward, with the Manager of the Community Centre, began immediately it became obvious that a flood predicted to be of 1974 proportions was on its way down the Brisbane River. The Councillor's recognition of the connection of Organisation A with the community, prompted her to contact the Manager to see what information he had regarding the situation in the community. Initiating action at this critical point in the flood event, together with the formation of a collaborative response, reflects the notion that community leadership is linked to locals working within their communities of place, and significantly, purposefully working in a collective manner (Ehrich & Creyton, 2008). Together with the Chair of the Centre's management board, they immediately adopted a proactive, as well as strategic approach to the initiative: *"And so we started to talk about what roles and responses we needed to have."* (Manager).

The establishment of clear roles and responsibilities was a key strategy throughout the response led by Organisation A. The presence of structure, and the establishment of roles and responsibilities are elements that have also been linked to the concepts of leadership and citizen participation, identified as being key aspects of capacity (Norris et al, 2008; Goodman et al., 1998). Definitions of citizen participation emphasise the opportunity for individuals to take part in decision making at the local level in organisations and programs where they have an interest (Florin & Wandersman, 1990). Goodman, et al. (1998) link citizen participation to the element of leadership, arguing that the active involvement of community members can enhance community capacity through the provision of structure and direction for participants. They argue further, that participation without direction and structure can result in disorganisation.

As a result of the discussions around roles and responsibilities, it was agreed that the Manager's team would manage the provision of food and water through operating a sausage sizzle, while the Councillor would recruit a team to deal with the gathering of information, and responding to requests for assistance. Both the Councillor and the Manager recalled a sense of motivation and commitment to initiating a response in the suburb; *"I have to get out on the street"* (Councillor); *"At last it was time to act!"* (Manager).

Theme 2: Community Resources and Capacity

The ability of the group to pull resources together began with the recruitment of local volunteers whom the Councillor knew were skilled in engagement and consultation. The concept of community capacity, defined as a set of strengths or resources possessed by a community, is often encapsulated under knowledge, skills and learning, leadership, problem solving and the ability to identify and address community need (Goodman et al., 1998; Norris et al, 2008; Magis, 2010; Berkes & Ross, 2013; Maida, 2011; Mayunga, 2007). These elements were distinguishing features demonstrated by the volunteer base associated with this response effort. The Councillor reports that this group of high capacity women were keen to provide support to the response effort and formed her team.

Flexibility and Innovation

Once the marquees had been set up, residents began to emerge, as well as other local volunteers who were connected to the Community Centre. These volunteers had not been impacted by the flood and were eager to support the response effort. The Manager recalls: *“a lot of the people that were working with us were just coming straight from their homes and showing up, you know and doing it whether they had a connection to the area, to people or just to the community generally.”*

A key contributor to the success of the response effort was local knowledge. Identified as a key community resource and an element of community capacity (Magis, 2010), local knowledge contributed to an understanding of where to position the “staging point” to enable the most effective engagement with the community and other key stakeholders. Two marquees, one housing a barbeque, and the other with material for gathering data, were set up *“where the most impacts had been in that community”* (Manager). This location provided maximum access to impacted community, and critically, to visibility should other services arrive. The two facets of the staging point also complemented each other in a practical sense. The provision of food and water initially not only served to provide essentials to a flooded community with no power or services, but also served as an attractor for community to come to a central location. There would be access to food, as well as the opportunity to access support and information and to share their experiences with others. Flexibility and improvisation as part of emerging situations have been identified as an important element of the response phase (Kendra & Watchendorf, 2003; Dynes, 2003). In this context, the strategic blending of functions in this arrangement formed a creative and effective aspect of the response by Organisation A.

Significantly, the large volume of volunteers who began arriving to offer their assistance all reported to the staging point. The volume was such that the Manager reports that by the afternoon, hundreds of jobs had been allocated. On the next day the volunteers continued to stream in, with people arriving in trucks and utes. Volunteers who were being coordinated through the Brisbane City Council were arriving in buses, which also pulled up and dropped the volunteers at the staging point. Importantly, key emergency services such as the SES, service groups such as the Lions and Rotary Clubs, as well the Army, also all reported to the staging point. The proposal made by Lord & Maher (1993) that “the essence of leadership is being seen as a leader by others” would appear to be validated through the recognition that the response led by Organisation A received from all agencies and volunteers at that time (p4).

Theme 3: Creating Organisation from Chaos

Activating volunteers and directing the police – leadership in action

The coordination of the huge number of volunteers, the so called “Mud Army”, was a key role delivered by the group, and a critical aspect of the leadership provided by Organisation A. The group utilised a multi-faceted approach to this coordination. The first part of the approach comprised a group of “scouts” who were local to the area, and who knew the community, knocking on doors in the flood impacted streets to identify what jobs needed to be done, and who needed support. Information was also being provided by flood affected community members arriving at the staging point seeking help. This information was collated and then used to direct the volunteer effort in a very structured way. The coordination of the work also extended to providing direction to the Service Groups, the Army and to the Police. The Councillor commented: “*The Police came and found out what was happening, so then we were able to say, ‘Go out and draw lines of chalk on the road as to where the flood came to, or take a photo.’ So you were doing a bit of that documentation that we sent in as well.*”.

Coordinating the volunteers was a huge undertaking, given the vast numbers of people who turned up to assist with the response by Organisation A. An article in the *Brisbane Times* (2016) entitled “*Queensland floods 2011: Mud Army shows city spirit*” was written by Brisbane City Councillor, Krista Adams, who held the portfolio for issues relating to community services at the time. The article describes the generosity of people who were willing to help with the response effort and reports that approximately 25,000 volunteers registered their assistance during the crisis (*Brisbane Times*, June 13, 2016).

The Manager recalls the stream of volunteers arriving at their staging point: *“Not just in trucks and utes, but now bus loads of BCC recruited volunteers ready to go wherever they were needed. And locals wandering the road, equipment in hand. Hundreds and hundreds of people kept arriving, asking where they could help.”*

However, the Councillor’s recollection reflects the challenge of coordinating this volume of volunteers, particularly once the buses began to arrive at the staging point.

“The Mud Army arrived in a busand dropped everybody. They were given no instruction. They had no one in control and they weren’t actually told what to do. So our role was to say, ‘Go down there, do not go to the left.’ Because at this stage you not only had the Mud Army, you had all of the people coming by themselves who were going into one area.” (Councillor).

Theme 4: Social Support

Supporting the vulnerable – the hoarders and the homeless

Local knowledge was also an important factor that informed the response led by Organisation A. A key issue to deal with as part of that response was the number of vulnerable people in that community. The Community Centre worked with these locals as part of their traditional core business. They knew those who were experiencing mental health issues, or were experiencing disadvantage. They also had a strong relationship with the Indigenous community and the Maori community through their outreach work.

This local knowledge was significant in providing an understanding of, and dealing with the complexities that would arise in leading a crisis response effort. An example of this complexity involved residents who were hoarders, and often living in squalor, who were refusing help, and refusing to leave their homes as the water was rising. The Councillor emphasised this as an issue: *“Their house was filthy and they weren’t letting people come in and help them... and other people distressing that they weren’t moving”*

Reflecting on the difficulties of responding to these issues, the Councillor stressed the importance of capitalising on the rapport that the Community Centre already had with that group of residents, but also the importance of respecting people’s circumstances: *“They’re the hoarders. You’ve got all of those problems. You’ve got people who don’t want people in their private area and that I thought was a very, very important role.”*

Theme 5: Pre-Existing Networks and Relationships

Strategically, the group adjusted their response to meet the needs of the community, and the situation as circumstances changed. An example of this was around the decision to focus their effort on the coordination of the clean-up, and identifying where support was required once other groups arrived to cook sausages, and they no longer needed to operate the sausage sizzle. At that time another staging point was established in a location that became accessible once the water receded, and was used to distribute water and bread, as well as to provide the community with information.

Following a week of response, the decision was made to move into recovery mode. The group applied the same planned and considered approach to this next stage. Significant aspects of this approach comprised the identification of issues through consultation and data collection, the ability to harness relevant stakeholders, the identification of what resources were becoming available for the community, the planning of what recovery would look like, and the dissemination of information to the community. The Manager described the situation:

“So we came together, started to get a sense of the information that was available, agree around distribution of that information, agree that we still needed to be clear on what needs were out there that needed to be addressed, and set ourselves a bit of a task of trying to get that information clarified, as well as what assistance was starting to become available in the local community.”

At the time of moving into recovery mode, phones in the area were not working, and electricity was still unavailable. The Manager was working from his mobile phone. Initially, in the absence of broader information from the authorities, the Manager commented that the group were developing local information drawn from what was happening in the community. Once broader information became available, they were able to circulate that, but were also providing information on what services and resources the other local organisations were able to provide. The community were anxious to know when power would become available.

Information from a trusted source has been identified as perhaps the most critical asset supporting community disaster resilience (Norris et al, 2008; Longstaff, 2005). The provision of information was carried out through a structured system of door knocking and letter box drops by the Organisation’s volunteer base. Information around access to emergency payments from the State Government, as well as information on the emergency situation, was also circulated at that stage.

A key role the group was able to deliver was the ability to obtain key resources to support the response and recovery efforts, as well as in the planning phase. This role was supported by a range of pre-existing networks and relationships held by members of the group. In the initial response phase, food and water were supplied by local service groups, prior to donations arriving from outside sources. While the power was unavailable in the area, the provision of office space and access to equipment was provided by other local groups who were part of the network of community organisations operating in the area. A critical pre-existing relationship was an association with a large engineering company who were based in the area, and who were able to provide professional community engagement expertise to assist with consultation around needs identification during the recovery phase.

Local businesses in the area were also part of the Organisation's local networks, and were able to support a flood appeal as part of the recovery phase, and assisted with storage space during the height of the crisis. A significant relationship held by the group was with the State Premier, who was the local Member at the time of the flood. This relationship was a key factor in obtaining significant resources over time. The flood recovery committee continued to meet for well over twelve months. The Manager recalls that as the recovery effort wound back, the group refocussed their role to address preparation: *"...we really wanted to just make sure we're better organised for next time and so aggressively over time, you know, as the direct recovery effort started to naturally slow down, it became a focus on disaster resilience."*

The group obtained funding to commission a skilled worker from Volunteering Queensland to assist with the development of a Disaster Plan for the area. The Councillor reports that there were four or five meetings to identify local resources and infrastructure that would meet local needs during a crisis, including a central place where the community would know to come for assistance and information, as well as getting access to sandbags without the need to leave the area. The Plan addressed a range of issues that had been identified as risks during the flood crisis. The Plan was published through the Councillor's office, but unfortunately was never trialled.

The next section will analyse the response, recovery and preparedness activities delivered by Organisation B. This analysis will also have a focus on the role played by Organisation B, as well as how the characteristics supporting community disaster resilience emerged to support this community led effort.

4.3 ORGANISATION B – THE ORGANIC GRASSROOTS RESPONSE

Theme 1: Leadership

From school to shelter – unplanned, under-resourced chaos

The leadership role provided by the Coordinator as part of the response provided by Organisation B, was demonstrated not only by her acceptance of the responsibility of operating an evacuation centre in the first instance, but also through the capacity she brought to the role. This was particularly evidenced over time, as she delivered a sustained recovery effort with limited resources.

Employed by the local State Primary School as a liaison officer for the P&C, and coordinating an after-school care service, establishing an evacuation centre, initially only with the help of her family, was a significant request. The situation was difficult, with around 50 people sheltering at the evacuation centre. Many of these people were from a Culturally and Linguistically Diverse (CALD), or refugee background, with no previous connection to the school or the local community, and in many cases they had simply been dropped off by SES or the Police. Similarly, the elderly residents of a nearby nursing home which was forced to evacuate, were also brought to the centre.

Faced with a situation where some of the evacuees were traumatised or distressed, the Coordinator was able to deal with this situation through early recruitment of volunteers who had an association with the school, who were social workers or psychologists. These volunteers were able to take on the role of providing assistance to these people. In demonstrating the leadership and capacity to take on the challenge presented to her, the Coordinator was able to recruit over 100 local volunteers to support the evacuation centre initially, as well as the recovery effort over a prolonged period of time.

In response to the initial crisis, the evacuation centre operated for a period of 36 hours to meet the needs of the flooded community. During this time Organisation B faced the key challenge of establishing the evacuation centre with no outside support. To meet this challenge, the Organisation utilised some key relationships and pre-existing networks during that initial phase. These networks were able to provide basic equipment for the evacuation centre, including essentials such as food and bedding. The changing needs of the community as the

flood receded supported the decision to change the direction of the response, to operate as a Recovery Centre.

Theme 2: Social Support

Recovery Mode – support from locals, but fighting for funding

Once the Organisation went into recovery mode after 36 hours, as the flood retreated more quickly in this area, it continued to operate with the aid of a strong volunteer base that played a significant role in the operation of the Centre. The Organisation continued to meet the needs of that community, but as an unfunded group. The Coordinator described the situation: *“people still needed somewhere to plug their phone in, somewhere to come and have something to eat. So we continued on providing kind of a respite for people to come.”*

At this point, the Coordinator’s role was the only funded position through her role with the school as an after-school care coordinator, not for emergency support. In order to sustain this effort without any external resourcing, the volunteers provided food and essentials such as toiletries, to the flood affected community members. The Coordinator recalls: *“People will just arrive with boot-fulls of food and stuff. It became this real community driven thing and people said – it wasn’t something we planned to do but it was one of the most important things that we did during that time.”*

As a key indicator of social capital, social support derives from a sense of concern for others in a community, and involves the provision of assistance in times of need, drawing people into social interactions with others who are able to provide support and assistance. This concept is also characterised by a sense of generosity and service to the community, and is strongly linked to community resilience (Norris et al, 2008). Norris et al. (2008) note that the provision of what they term as “received support” increases following a disaster, and is typically provided by “family, followed by other primary support groups, such as friends, neighbours, and co-workers, followed by formal agencies and other persons outside if the victim’s immediate circle.” (p 139).

In this instance, the social support provided to flood victims in the community through a collective effort by the volunteer base of the Organisation was characterised by a deep sense of caring and generosity, and seen as *“one of the most important things”* they were able to do as part of underwriting the continued operation of the Recovery Centre. Goodman, et al. (1998) link this type of collective action to the concept of sense of community. As well as being

characterised by a feeling of belonging, and the motivation to ensure that the needs of people in the community should be met through the community, they argue that the concept of sense of community is linked to community capacity, with an emphasis on the capacity to address local concerns (Goodman et al., 1998).

Theme 3: Building New Relationships

Leveraging connections to stay afloat – and learning to play the political game

By mid-February, the Recovery Centre was operating seven days a week. During this time the Centre hosted two State Government Recovery officers who managed the provision of relief funding to members of the community. With the State urging the Centre to remain open, but without the provision of any financial support, the Organisation was able to build new relationships to support the operation of the Recovery Centre. Describing the Organisation as a “*conduit*”, the Coordinator reports that a relationship was forged with an independent supermarket chain, as well as with local churches in the area, and local “op shops”. Through these relationships, flood affected community members were able to obtain clothes and other essentials with a letter from the Recovery Centre. These relationships proved to be critical to the ongoing operation of the Recovery Centre.

The strength of the Coordinator’s leadership was reflected in the length of time the Centre was able to operate without government support. The Coordinator noted, “*We had no funding. It was really grassroots people.*” The Recovery effort was maintained for five months following the flood event, opening for five days a week, and with between 15 to 25 people attending each day. However, by the end of June the Coordinator recalls how difficult it had become to maintain the support the community required. She recalls that the feeling across the broader Brisbane community was that the flood was over. “*It was harder to get money. It was harder to get food. It was harder to get all the things that we were trying to access*”.

Theme 4: Community Competence

With support more difficult to access, the decision was made to begin to put pressure on the government to provide the funding that was required to maintain the Recovery effort. The Organisation placed a sign on the front of the Centre advising that the Centre would close on 30 June, and provided a contact number for the State Government Member of Parliament and the Brisbane City Council Ward Councillor, for the community to contact should they wish the Centre to remain operational. The response from the community to the politicians was

overwhelming. The Coordinator recalls a conversation with the State Government Member, where he asked her to take the sign down: *“I said I won’t take it down. We will not take it down. Until I have a cheque in my hand, this is it.”*

In the context of community resilience, the decision to take action in the face of a continual lack of political support, with a concomitant expectation that the Centre would continue to service the community in an unfunded capacity, demonstrates a high level of community competence. The notion of community competence has been linked to resiliency through human agency, or the *“capacity for meaningful, intentional action”* (Norris et al, 2008, p141). As part of their research on community resilience, and the emphasis their model has on networked resources, Norris et al. (2008) argue that community competence is a key element of community resilience. It involves the identification of issues and community need, the ability to work together to develop goals, and the means of working together to realise outcomes.

Partnering with, and learning from, established community organisations

In taking action to challenge government expectations and lack of support, Organisation B also utilised a relationship they had developed with Organisation A. As an established organisation with a well developed network of community organisations, and people in positions of political power, Organisation A was able to support Organisation B to meet with the State Premier to discuss the potential closure of the Recovery Centre. Through working together to take collective action to mobilise political support, Organisation B received sufficient funding through the State Government to continue the Recovery operation. They were also successful in receiving Neighbourhood Centre funding through the following State Budget, and now operate as a Community Centre.

Once they were able to operate with funding from the State Government, preparation for the next event became a focus of the Organisation. This was approached through a number of avenues. The Coordinator reports that she attended training on flood recovery and the operation of an evacuation centre, delivered by Emergency Services Queensland. The Organisation was interested to find out about the State’s emergency plan, and they also made contact with Brisbane City Council’s Disaster Management Office in an attempt to develop a connection with Council officers. The Organisation’s attempts to plan for, and to develop a preparedness strategy through connecting with the State and Council were not as successful as hoped. However, the Organisation did work with Volunteering Queensland to develop a documentary. The Coordinator describes the documentary as including *“how people connected and what a*

difference it made having a grassroots community group involved with them during that time". The Coordinator spoke of the documentary with pride, and explained "*there was lots of really great stories that came out of that about people just – everyone assumed what everybody needed and what people actually needed was some respect and some dignity*".

4.4 CHAPTER SUMMARY

Through an exploration of how both place based community organisations played a role in responding to the Brisbane flood event of January 2011, this chapter has outlined their roles in the initial phase of the crisis, refocussing their efforts to the recovery phase, and ultimately to preparation for the next event. The leadership provided by both Organisations was a key aspect of both community led responses, producing strategic approaches to the delivery of their roles, and incorporating elements of flexibility to meet the changing needs of the crisis. Supporting this leadership was the participation of a significant local volunteer base who were able to bring a range of capacities to both of these efforts. The coordination of large numbers of volunteers was a significant role that underpinned the ability of the organisations to meet the needs of their communities. In the case of Organisation A, this role also introduced a sense of order and organisation amongst the chaos of the situation, as jobs were registered, allocated and then completed.

The provision of social support was also a key role for both organisations, particularly for those vulnerable members of the community, and for people experiencing trauma due to the flooding. The provision of information from a source that was known to, and trusted by the community has been identified as one of the most important issues for people during a disaster (Norris et al, 2008). Both organisations were able to obtain information, but also to disseminate the information in a way that targeted the people who needed it most. The ability to obtain the necessary resources to sustain the response and recovery efforts was also critical for those communities.

This analysis has also explored how the existence of pre-existing networks and relationships influenced the delivery of the roles of Organisation A, while Organisation B, as an emergent organisation, was able to build new networks to support their efforts.

Through exploring how both organisations delivered roles that addressed response, recovery and preparedness efforts as part of the flood event in Brisbane in 2011, this chapter has also highlighted how the concept of social capital, and the characteristics of social capital have

supported the delivery of these roles, emphasising the significance of these characteristics to the delivery of the community led efforts.

CHAPTER 5: COMMUNITY LED RESPONSE – *WE DID IT OURSELVES*

The discussion in Chapter 4 focussed on the identification and analysis of the components of the roles played by two place based community organisations in response to the January 2011 flood event in Brisbane. These roles were explored utilising the characteristics that have been identified in the literature as key elements of community disaster resilience.

A key characteristic of community disaster resilience that featured heavily as part of both responses related to the leadership clearly demonstrated by each organisation as they self-organised their efforts *in the absence of a formal response from emergency services agencies*. Both organisations were also able to demonstrate a strategic approach to the delivery of a range of roles, resulting in the direction and coordination of large numbers of volunteers, as well as to meeting the needs of vulnerable community members, and to acquire the resources necessary to support their efforts. Equipped with the advantage of knowing and understanding their communities, each organisation was successful in harnessing local capacity, local resources, and building new networks.

This chapter will now undertake a deeper exploration of how the operationalisation of response, recovery and preparation efforts at the local level was achieved by the two case study organisations. This analysis will once again utilise the characteristics of social capital as elements of community disaster resilience, but in this analysis they will be utilised to explore and better understand the scope of their influence on the delivery of the roles of each organisation. As part of this analysis, the similarities and differences between the two response and recovery efforts will be considered. Drawing on the data from interviews with Participant #1 (Councillor), Participant #2 (Manager) and Participant #3 (Coordinator), who were at the centre of the community led responses, this more intense analysis will aim to address the second research question:

How was the operationalization of community disaster resilience influenced by the roles played by the place-based community organisations as part of the flood event in Brisbane in 2011?

Four key themes, synthesised from the discussion in Chapter 4, are explored under the overarching theme of building community disaster resilience. These themes are: community

capacity and competence (with a focus on existing and emerging community organisations); the significance of trust in disaster situations; the importance of existing relationships and networks; human connection.

5.1 BUILDING COMMUNITY DISASTER RESILIENCE

“We should have been more prepared”: The Chaos of Crisis

Following a gap of almost forty years since the record flooding of 1974, the 2011 flood event in Brisbane was an experience for which the entire city was unprepared. The comments from interview participants outlined in Table 4 below, provide their voices to reflect the impact of this lack of preparation, as well as conveying a sense of an experience of chaos, and the challenges of working in chaos.

The critical lack of preparation for a major flood event, and the chaos that ensued across the flooded areas of the City, provides a meaningful context to understanding the significance of the roles that Organisations A and B played in their communities, described in Chapter 4. In the context of this analysis, these circumstances of unpreparedness and chaos are also significant in providing the opportunity to gain a deeper understanding of the characteristics influencing community disaster resilience that were critical for the two case study organisations in their role in these community led responses, as well as other circumstances that challenged or supported their efforts. This understanding will support the development of mechanisms to strengthen community disaster resilience and to facilitate operationalisation at the local level.

TABLE 4: LACK OF PREPARATION, CHAOS, AND WORKING IN CHAOS

Lack of Experience	Learning by Doing	Support from the Community
<i>I and my family kind of went, “I don’t even know what this means.” We just got some food and went, I don’t know how this works but we’ll learn as we go along . So it really was just a learning – we had no idea what we were doing.(Coordinator)</i>	<i>So we really felt we needed to get some focus in on that community need....So it was a quick and harsh exercise in one sense, but it needed to be to get out and get as much feedback...(Manager)</i>	<i>In the community there was some great, genuine hearts what would see he disadvantage around them that would engage with people with mental health issues, people with disabilities, people who were using the street and they’d want to contribute in some way. Businesses like that too.... (Manager)</i>

<i>We found thatin hindsight, we kind of would have thought about it a bit more. (Coordinator)</i>	<i>This was not a perfect exercise. So it was imperfect, but it was effective.(Manager)</i>	<i>There was myself and my family, so I have three children and a husband but then people that came to the school to pick up kids from after vacation care went, "What are you doing?" So then it just rolled on. So we had over 100 volunteers that volunteered during that time with us. They just went, "You tell me what you need to do, when you want me here." (Coordinator)</i>
<i>You start an evacuation centre and go, 'We need food' and then it gets dark and you go, 'Crap, we need beds'. We were running around going, essentials of life. It wasn't about what's the best way to run a flood recovery centre. It was really like, 'We need food. They need shelter, food, bedding and to be in a safe place.' (Coordinator)</i>	<i>It was time to move the muck out...but then we hear that a near miss in the dark almost saw a woman fall down a man hole. (Work on that)apartment has to stop. Others keep cleaning, now with more caution. (Manager)</i>	<i>So the Greek Community for example, wer starting to immediately develop packs for people and (local organisation) was trying to get some fundraising around food, I think some toiletries and those sorts of thigs at that stage. Manager)</i>
<i>"...it was fairly chaotic obviously because we weren't quite sure what was needed, what was going on."(Manager)</i>	<i>One of the major problems is all these bloody cars because people have time to get their cars out of the space, but they were putting them in stupid places. They were blocking up further transport.(Councillor)</i>	<i>What was also lovely was the coffee shop was there.... and he had a bit of a shed that he keeps his storage stuff in. So we were able to put our stuff (for the staging point) just in and bring it out again. (Councillor)</i>
<i>But most importantly, that next day I think, was when the Barmy Army arrived and the Barmy Army arrived in a bus and the bus came to where our thing was and dropped everybody. They were given no instructions, they had no one in control and</i>	<i>Every bloody one of the units built in (the area) is on a flood plain. They had major problems with being flooded and many of them had body corporates that were new. The water had gone down...and they were saying to people..."You can't go up." So we got (an organisation) that gives voluntary legal</i>	<i>We got there very early in the morning, and the residents were starting to emerge at that stage,. We had a lot of volunteers beginning to show up who were connected to the Centre, who realised and who hadn't been effected by the floods, and wanting to support and help. (Manager)</i>

<i>they weren't actually told what to do. (Councillor)</i>	<i>advice,...and gave them advice for the future. (Councillor)</i>	
<i>because most of us hadn't been there for a major disaster of this magnitude (Recovery Officer)</i>	<i>So I think just having information with key people in the community, not just politicians, not just EMQ, the grassroots people who would be on the ground come a disaster..(Coordinator)</i>	<i>I suppose we were lucky because we had a couple of volunteers who came very early who were social workers or a psychologist and parents from the school who said, "This is what we need to do. We need to be at the school to help with this role as well". So it was really about grassroots people going, "We need to be getting help for people as well." (Coordinator)</i>
<i>I guess I was given a whole heap of stuff and I didn't really know the process because it was my first time in community recovery, so it's a bit like, its quite chaotic, but its very regimental at the same time. (Recovery Officer)</i>	<i>She said, "I need to give you some advice." She said what you need to be – Don't do things that other people do really well. Do things that no one else is doing and connect with people that are doing things that you're not – be the conduit. Be the hub that people can come to and then you can go, "To get those, you can go here, here and here". (Coordinator"</i>	<i>And telling us, "Look, this is what's going on here. I'm concerned about this person. This person needs help. This person doesn't have any food." Or whatever it might have been. And so, we really just started to then find that great wave of volunteers started to show up and at that stage they weren't Council volunteers, they were just people showing up from everywhere. We had a line of ute down the road and they all wanted jobs. (Manager)</i>

Theme 1: Community Capacity and Competence – Existing and emergent community organisations

Critical to the delivery of both responses was existing community capacity, which is often discussed in the literature in the context of social capital, as a resource to be utilised as part of collective action and decision making. (Norris et al, 2008; Mayunga, 2007; Goodman et al., 1998). It is also recognised as an element that supports community disaster resilience, where intentional action is taken to recover from disruptive events, and to develop strategies to mitigate against future negative impacts (Norris et al, 2008; Berkes & Ross, 2013; Paton & Johnston, 2001). Drawing on the diversity of existing skills and knowledge from within their communities proved to be a significant aspect influencing the efficacy of the initiatives of both

organisations. Here I argue that community capacity to respond to this crisis varied, depending on whether there was an existing and well-functioning community centre operating in place.

Established community capacity – an existing community centre

As an established place based community organisation, Organisation A was embedded in the community it had served for many years. The Community Centre was experienced in operating a not for profit organisation, and delivering human service programs targeting vulnerable community. The team who worked for this organisation would therefore be accepted as having an existing level of capacity they were able to draw on to support the response. Additionally, the Organisation was also fortunate to work in place, in a community where the demographic was extremely diverse. While the area hosts a sizeable population of rough sleepers at any one time, it is also serviced by several agencies delivering programs for the homeless. The suburb has also traditionally attracted a range of socially aware professional people.

The Manager indicated that the Community Centre was fortunate to have many of these professional people volunteering their expertise to support the community. The Councillor was also very aware of the central role of the Community Centre in the area, and contacted them immediately she became aware there was going to be a crisis. Her confidence in their ability to act at the time of the crisis provided the opportunity for her to become a key player in the community led response by Organisation A.

Her strong network of pre-existing relationships facilitated her ability to access additional local human resources to support the response. Organisation A was therefore able to recruit a volunteer base that was distinguished by community members who possessed a very high level of capacity. The Councillor describes these volunteers: *“And then I had the advantage of some wonderful women all who’d been in (Brisbane City) Council. All who’d been trained in how to talk to people and organise data. The beauty of it!”*

The existing relationships and networks held by Organisation A were also a critical factor supporting the success of the delivery of their response, recovery and preparation efforts. As a key aspect of community capacity, access to inter-organisational networks held by the Organisation played a critical role in the provision of support (Norris et al., 2008; Goodman et al., 1998). This also proved to be the case with co-operation from local businesses, and support from a key local politician in the recovery phase.

Emergent community capacity – a grassroots centre

Organisation B initiated the response and was eager to take on the role, in spite of a sense of uncertainty on how to proceed initially. Also, while the Coordinator was asked (and in fact almost directed) to take on the role of opening an evacuation centre, she accepted and took on the challenge: *“I look back on it now and it was a lot of responsibility that I took on myself. I was working at the school. Lucky for me they said, “We’re happy for you to do this. It’s an important role”.*

After the immediate first few chaotic days post-flood, Organisation B demonstrated an extraordinary ability to operate a Recovery Centre for six months with no funding. Under these circumstances, the Coordinator was able to obtain the resources to meet the needs of the flooded community through developing a range of strategic connections, and to coordinate a significant volunteer base that was required to maintain the operation of the Centre.

The volunteer base supporting Organisation B also appeared to be made up of a diverse group, who had varying levels of experience and capacity. Recruited chiefly from parents of the children attending the State School, some of the volunteers had a background in social work and psychology, and were able to assist with people who were experiencing trauma, particularly in the initial phase. Others contributed their time and worked to meet the needs of their community in the best way they could. The core group appeared to be representative of a broad cross-section of the community, sharing a strong sense of community, and a concern for other members of the community. The Coordinator described the volunteer base at that time as *“grassroots people going, ‘We need to be getting help for people as well’”*.

Critically, a strategically executed campaign resulted in the key outcome of funding to keep the centre operational for a further year, as well as success in being recognised as a Neighbourhood Centre, with ongoing State Government funding. This was a critical outcome, facilitated through the newly developed relationship with Organisation A, and significant to the future resilience of that community.

Theme 2: The Significance of Trust in Disaster Situations

Organisation amidst the chaos and the building of trust

What was very clear from the interviews was the importance of trust. Both groups were also able to work collectively with their volunteer base to plan and deliver their actions at each stage. The link between leadership as a key element of social capital, and as a key capacity

supporting resilience, has been highlighted in the previous chapter. In this context, Organisation A demonstrated leadership and collective action as a key feature of their overall response. Decisions were made collectively at every stage of the effort. Planned action was based on the analysis and prioritisation of needs, with the information being collected through a range of methods. The coordination of large volumes of volunteers supported the completion of tasks in an intentional way that enabled assistance to much of the flooded community.

A critical outcome from this approach was the creation of a very public sense of organisation amidst the chaos. With the staging point in an easily accessible and visible location, the community was able to see that the situation was being dealt with in a very well ordered manner. As the Councillor reflected, Organisation A took a very organised approach to leading during the crisis, modelling calm authority throughout the crisis in a positive manner that supported the community.

“So people were giving us information on the trust and because it was set up so they could see how it was working and they could see people taking information and they could see the sheet for tomorrow. We’ve gone through that. We’ve checked up all the problems, they’re all done. But there was that trust because they could see the organisation that was actually going on. They came in, they didn’t see chaos, they saw sort of organisation as well. ”

Building Connection

The generation of a sense of trust in this response effort can be seen as a key contributor to the building of disaster resilience in that community. Putnam (1993) reminds us that trust is a key element of social capital, facilitating community cooperation by providing an underlying motivation for communities to work together. This sense of trust was also developed through connections built between flooded community members, which were initially made as part of their shared experience. These connections were facilitated by both organisations through the opportunities they provided for people to come together. The staging points established by Organisation A took on the role of community centres where people naturally came to get food, water and information, and to report on what jobs they needed assistance with. The Councillor explained: *“They wanted to talk and so the fact there was a sausage sizzle, and that was a talking shed.”*

Similarly, the Recovery Centre operated by Organisation B was described by the Coordinator as becoming a *“hub for people”*, as they continued the long process of rebuilding their homes.

These hubs became points of connection for people to gather and to link with others who they may not normally have come across. In the case of Organisation A, the Manager notes that the local community who were presenting at the staging point were not the normal clientele of the Community Centre: *“magistrates, we had judges, we had students, we had people with mental health issues, ...we had old ladies, young families.”*

The broad cross section of the community coming together and connecting with each other would suggest that a disaster becomes a great leveller, bridging social circles and bringing different parts of the community together. Evidence provided in the literature suggests that these new connections can facilitate new ideas and knowledge that support those connections to work collectively in recovery (Kima et al, 2016). The Manager recalls that in some instances the experience resulted in people strengthening their relationship with the Community Centre, while others ultimately took up positions as volunteers. Organisation B reported similar outcomes for their community, with community members expanding their interactions to include other groups. The Coordinator explains: *“So it was even just that connection of people sharing stories, knowing that if you did cry people weren’t judging you.”*

Interview Participants further supported this tendency toward bridging and bonding, through reports of many incidences of the forming of lasting friendships and social connection as a key outcome of those initial interactions, strengthening social support within those communities. The Councillor recalls *“Lovely stories of friendships. Yeah, friendships. Still having drinks because, yeah, a young gay couple helped an older woman who quite happily said, ‘I would never talk to gay women.’”*. While the Coordinator noted: *“... but some people say – it used to upset me that people would say this – they never felt more connected in the community until after the flood. They’ve connected with people. They know their neighbours”*.

The Coordinator describes the change in her community as significant in terms of what she expresses as *“respectful help”* being offered freely through a network of people, with support that respects people’s wishes and needs. These connections are also obvious to her with the transition of the Recovery Centre to a Neighbourhood Centre. The Coordinator reports that while lots of different people come to the centre, the *“floodies”*, and the volunteers still come to take part in a range of activities offered by the Centre.

The broad trust and confidence in these local responses was also evidenced through the level of support Organisation A received from within the community, as well as from across the city, influencing and enhancing their ability to attract the necessary resources and expertise. The

ability of the community led response to provide organisation amongst the broader sense of chaos at the time, was also not only a reflection of the level of social support that this community was capable of, but also provided an indication that this community could support themselves should another event occur in the future. Critically, as the Councillor herself noted, pre-existing bonds meant they “..were very lucky. Had a community, had trust in the community”. This understated observation is that communities with lower levels of social connections, interrelationships and trust would have had a much more difficult time navigating the crisis.

Putnam (2000) further argues that participants working together can facilitate the building of connection and trust that is then more likely to be replicated in later events. The organisation and capacity obvious to the community in this instance, therefore had the potential to provide a sense of confidence in their community’s ability to replicate this response should it be required in the future. In a state and city where severe weather and natural disasters are increasingly common, (as well as the Brisbane floods, subtropical Queensland frequently experiences heavy rainstorms and the remnants of cyclones), the importance of residents having confidence in their community’s capacity to proactively respond to, and adeptly manage natural disasters cannot be overstated.

The existing trust embedded in both communities and the trust created through the roles played by the two organisations were topics that arose consistently throughout the interview texts with the Councillor, the Manager, and the Coordinator. The quotes in Table 5 below illustrate the importance of trust, and how it operated at different levels.

TABLE 5: THE DIFFERENT LEVELS OF TRUST IN ACTION DURING THE CRISIS

In the Community	Between Key Stakeholders	Local Organisation as Leaders
<i>“I never had a doubt in my mind that there was friends, family, people in the community that would come behind me and help. It wasn’t me by myself. I always knew that it would be a group of people.”</i> (Coordinator)	<i>We had this tremendous moment where the army showed up. Everyone cheered. (The Councillor) got on the bus, on front of their bus and said, “This way!”. It was awesome, it was absolutely awesome.</i> (Manager)	<i>And then the next day people (Mud Army volunteers) didn’t go in the (Council) bus because that was a waste of time, but they’d come straight to our shed. So there was that understanding and it obviously went through the community. So the trust was there, the coordinating.</i> (Councillor)

<i>Where a lot of the people that were working with us were just coming straight from their homes and showing up, you know and doing it whether they had a connection to the area, to people, or just to the community generally. (Manager)</i>	<i>There was trust between us, and trust with the Community Centre and the community. (Councillor)</i>	<i>So people knew they could ask us for things and we will try and find – we were kind of like the conduit. (Coordinator)</i>
<i>One of the local ...people... was in New Zealand. His house under. He had friends who had access to a key and they went in and they cleaned the house up. So when they came back three days later they had essentially a house that was de-mudded and things were dry. (Councillor)</i>	<i>But, as I was saying before, we were very lucky. Had a community, had trust in the community... (Councillor)</i>	<i>They kind of came in and in true government style kind of went, “We’ve got this now. You can go home.” It was really interesting because people were like, “Yes, you’ve got the back stuff but you don’t have the stuff that we need immediately – food, company, someone to hear someone, someone to know exactly how they were feeling. The centre really became a hub for people to connect (Coordinator)</i>

Trust in the local community – locals responding to local need

The first level of trust was in the local community’s ability to respond to, and to care for each other. These leaders had trust in their local community and networks to help out, to ‘step up’, and to help however they could – whether it was by sharing food, resources, or company, and ensuring that someone who truly understood the trauma of the experience was ready to listen and to help where they could. Local community involvement in the recovery effort proved to be a critical factor in the generation of a sense of trust and confidence.

Both organisations experienced the willingness of their communities to support each of the efforts right from the outset. The Manager comments on “*the great wave of volunteers*” who arrived, based on their connections to the Community Centre, and to their community. Local businesses, also recognised as a part of the community by the Manager and the Councillor, were also involved in providing support to each stage of their effort. A similar demonstration of trust was experienced by the Coordinator, who had around 100 community members volunteering as soon as they realised she had been asked to take on a major task. These

community members were involved in the operation of the Recovery Centre for a period of five months.

Local community involvement proved to be a crucial factor in the generation of a sense of trust and confidence. This is consistent with a large body of community disaster resilient literature, which argues that communities must utilise their existing resources in the absence of an emergency management response (Chen, 2006; Bach, 2010). The reality is, that the disruption caused by a disaster event often means that the first response is provided by local responders – generally a group of people who are located in the community, who volunteer spontaneously, and who are untrained in emergency management practices (Harris et al., 2018). In this case, as local responders, the volunteer base of both organisations, had the advantage of knowledge of the locality, familiarity with the community, and the local infrastructure. Significantly, they also had an understanding of, or “sense” of the community.

The literature relating to community disaster resilience identifies that the ability to deal with adversity is impacted by the level of social support that individuals receive from a range of sources, from immediate networks such as family and friends, through to broader connections within their community (Norris et al, 2008; Berkes & Ross, 2013; Sippel, et al.; 2015). The notion of social support as described by Cohen (2015), relates to processes involving social relationships that promote health and well-being, These processes often involve “*the provision or exchange of emotional, informational, or instrumental resources in response to the perception that others are in need of such aid.*” (p. 4), and indeed, that is what occurred here.

The social support generated by both responses was provided through the volunteer base of local responders from each organisation, and crucially, through the opportunities provided locally for people to come together. The concept of the staging point, described by the Councillor as the “talking shed”, and of the Recovery Centre as a “hub”, were examples of opportunities where people were able to seek the social interaction that underpinned access to friends, other flood affected community and experts. The Councillor describes the scene: “*and people were caring for each other and, so even if you went under, you were cared for. And that’s really what people want. For mental health, that’s really what people want.*”

Developing trust between key organisational stakeholders

The second level of trust in operation was between key stakeholders. In general, there was an acknowledgement that the local organisations had unique place-based knowledge and connections, which were valuable. Significantly, recognition of the ability demonstrated by

Organisation B, came from Organisation A, who were able to support them to gain funding. The Manager recalls: ... *“that recovery centre very quickly was the recipient of hundreds of thousands of dollars’ worth of donations. But they were doing it on a voluntary basis and it was probably more than they’d ever expected. So..I said to them, “Do you need a hand?”*. This assistance, provided key connections held by Organisation A, ultimately led to funding for Organisation B to evolve into a Neighbourhood Centre, as well as their Centre becoming part of a larger organisation involving a number of community services across the South of the city.

Trusting the local organisation as authoritative ‘local leader’

The third element of trust was how each local organisation was acknowledged by other authorities (politicians, the Army, and the Police), and by volunteers as the local *in situ* leader. This sense of confidence was particularly evident in the broad recognition of the leadership role played by both organisations, with not only the community and volunteers recognising their leadership, but the politicians, the Army and the Police consulting and taking direction from them. The quote in Table 5 describes how the “Mud Army” (volunteers from across the city), instinctively went directly to Organisation A to get directions on what jobs were needed to be done. The Manager also describes a moment when the Australian Army arrived, explaining how the Councillor got on their bus, and directed them to the area where they were needed.

The notion of trust was also perceived by the Councillor as having an integral influence on how their response, recovery and preparation efforts were able to be delivered by the group. This was reflected in her comments on how the Organisation was able to work together, and with other participants: *“There was trust between us and trust with the Community House and the community.”*

Trust was also critically important for Organisation B, but enacted in a different way. As the on-site coordinator of the outside school hours program, her role and networks were very different from those of an established community centre. However, the element of trust that existed between Organisation B and their community, was also a key factor contributing to the longevity of the operation of the Recovery Centre. While the community continued to come to the Recovery Centre for many months, the volunteer base also continued to support the Centre, which was operating at a punishing pace of up to seven days a week at times.

The Coordinator used the term “*grassroots*” several times during her interview. The prime use of this term emerges in her descriptions around the community, and the community members

who supported her to lead the operation of the Recovery Centre, as well as to other local groups. This strong connection with her community appears as one of the key factors influencing the trust that supported the recovery effort for so long. This was demonstrated initially through the advice by the School Principal to the Police, of the Coordinator's capacity to undertake such a daunting endeavour. The Coordinator recalled that the Police contacted her and asked her to initiate the evacuation centre: *"I said I don't have permission to give permission for that, and they said 'We've already rung Ed Queensland and the principal of the school and they told us to ring you.'"*

Trust in the leadership of Organisation B by the community became obvious immediately, with the response from parents arriving to collect their children committing themselves to support her without question. This support continued, even in the absence of funding as time went on, and basics became harder to acquire. The Coordinator recalls the community's reaction to her leadership: *"You're doing that? I'll go to Woolies....It became this real community driven thing and people said it wasn't something we planned o do, but it was one of the most important things that we did during that time..."*

State agencies also demonstrated their confidence in Organisation B. When the Department of Communities' Recovery Service made the decision to move their operation to a more inner city location, it became harder for people to access those services. In recognition of the recovery effort by Organisation B, they quickly arranged for counselling personnel from the Red Cross to attend the Recovery Centre to talk with flood affected community, as well as with the volunteer base. The Coordinator notes that *"It became really therapeutic for everybody. Even volunteers who were going into people's houses and seeing everybody losing everything and then coming back..."*. These counselling staff attended the centres for two days a week for four months, on the basis that the centre was considered as "a safe place" by community members.

Additionally, in spite of being unable to provide badly needed resources, the local politicians were adamant that the Recovery Centre should continue operating. When the Organisation advised they were closing the doors on the 30th June that year, the Coordinator remembers how the local politicians panicked: *"(the local State Member) rang and said, 'What the hell have you done?.... My phone hasn't stopped all morning'.."*

Theme 3: The Importance of Existing Relationships and Networks

A critical facet of the response from both Organisations was the use of networks and relationships that supported each of the response and recovery efforts. While the existing

relationships held by Organisation A were critical to their early efforts, the need to quickly forge valuable new networks was a crucial action for Organisation B. The literature highlights the existence of social networks as a key element of social capital, facilitating opportunities for cooperation and collective action to address local issues. (Mayunga, 2007; Berkes & Ross, 2013; Magis, 2010; Goodman et al., 1998; Yoon & Kang, 2013). In the context of community disaster resilience, access to a range of networks and relationships is critical for the provision of support and resources, including knowledge, new ideas and access to new networks and relationships. (Norris et al., 2008). Norris, et al (2008) argue that the existence of pre-existing organisational networks and relationships are essential to enable “*rapidly mobilizing emergency and ongoing support services for disaster survivors*”, and that was certainly the situation for these two Brisbane based organisations (p143),.

The power of existing relationships and networks during crisis

As a key outcome of working in place, the Community Centre had developed a range of relationships and networks over time. As part of their core business, they held a significant relationship with the vulnerable members of the community. These relationships proved to be critical to the response effort for that community, supporting a significant understanding of how to manage a caring and respectful response for people who were experiencing mental health issues, ensuring that the response was inclusive, and creating a tailored response for that community. The Manager recalls the concern that arose for that sector of the community:

“I suppose particularly for the (Centre), our concern was very much around the vulnerable residents at that point as well, because often you’d see – there were a range of things going on for some vulnerable residents that - Yeah, we were very concerned, and that were potentially life threatening, some of the inactions or actions that they were taking.”

As the chair of the local interagency network, the Community Centre also had long held and strong relationships with other organisations in the area. These relationships provided a range of opportunities and resources as the event unfolded. Local service clubs provided food and water during the immediate response. Other local organisations who had not been impacted by the flood offered the use of office space and equipment, critical to the collection and dissemination of information. Offers of professional assistance for the recovery effort were forthcoming from local businesses.

A key pre-existing partnership held by the Community Centre was with a large engineering firm who had offices in the area, and saw the provision of professional expertise to support the collection of information, and the prioritisation of the needs assessment effort during the recovery phase. Offers of accounting assistance and financial advice for flood-affected community members was provided by a local accountancy firm. Other significant networks and relationships held by the Community Centre facilitated strong support for the recovery effort, with local businesses, schools, the local Greek community, and the major institutions located in that area, taking part as members of the recovery group.

As the local government representative for the area, the Councillor had an established relationship with the Community Centre, and as the crisis commenced, she knew that this group would have an understanding of what was happening on the ground. Her role as Ward Councillor also provided her with access to a large network of people and groups throughout the community. These relationships supported her role in responding to complex situations caused by the flooding.

This was demonstrated when the Councillor's relationship with the manager of one of the apartment blocks along the River alerted her to the complex issue of a lack of understanding by body corporates, facility managers, apartment owners and tenants, on rights to accessing flood-affected apartment buildings. This issue had never arisen, prior to the 2011 flood, with the much lower density development that existed there in the 1974 event. Risk was a major concern, with no power for lifts, and flooded properties. At the same time residents were desperate to access their apartments. Utilising existing relationships and networks, the Councillor was able to play a key role in facilitating the provision of information and advice from professional groups, who met with both the body corporates and the management groups to provide pro bono legal advice.

Ability to forge new relationships

With no financial support to sustain their recovery effort, and in the absence of any existing key networks, Organisation B was experiencing difficulty in meeting the needs of their community. The existing relationships that the Coordinator did hold, had proved initially useful in enabling her to mobilise the response effort, with a contact at the ABC radio putting out the call for bedding for the evacuation centre, while her relationships within the community assisted with the provision of food at that time.

Critically, their ability to build new relationships meant that resources for the community were acquired through connections that were built with local “op shops” for access to clothing, with an independent supermarket chain, and with churches and service groups for the provision of food, other essentials and support. These new relationships proved to be a critical factor in the ability of Organisation B to maintain the recovery effort over time. However, the lack of pre-existing local networks had proved to be a challenge, as the Coordinator recognised: *“So I think just having information with key people in the community, not just politicians, not just EMQ. The grassroots people who would be on the ground come a disaster. Scouts, churches. I think those networks, having those key people that are even in charge of those networks in the community.”*

However, the most crucial new relationship that Organisation B was able to build was with Organisation A, the Community Centre. The Manager explains how they were able to assist Organisation B: *“So we started doing a bit of work with them and helping them organise a little bit around their recovery, and then advocated to Anna Bligh, and explained to Anna what an amazing social capital, and that they were going to close but the people in (the community) weren’t ready for them to close.”*

The relationships that the Community Centre had built with local, senior politicians over time, proved to be critical in assisting Organisation B with an opportunity to state their case for funding, and to ultimately achieve neighbourhood centre status, as well as an alliance with a group of community centres in the inner south of the city. The Manager commented on this outcome: *“So I think on that broader city level that was a pretty strong piece of connectivity”*

Theme 4: Human Connection

The fabric of the Community – genuine hearts and local businesses

There is no doubt that a significant level of social capital was already evident in the community supported by Organisation A. However, the strength of the fabric of this community emerged as a significant factor that influenced how their roles developed, as well as the delivery of the response, recovery and preparation efforts by the Organisation.

The Manager mentioned early in the interview that there were *“some great genuine hearts”* in the community who were prepared to contribute to work with people experiencing disadvantage in the community. Significantly he states, *“Businesses like that too.”* Local businesses were involved as part of the Recovery Group, and with the initiation of the local

flood relief appeal. Significantly, in this community, the response effort was also targeted to the local business community, who were recognised as being a vital part of the community

However, the Councillor recalls that when the volunteers from the “Mud Army” were asked to assist the local businesses, the requests were met with some resistance: *“We’re here to help people. I said, ‘the businesses are people. The businesses live in (this suburb). They’re working in (this suburb). So all along the road we were directing people into businesses. There was a barrier for some.’”*

A similar reaction was experienced when the Councillor asked “Mud Army” volunteers to remove the mud from the park. The Councillor was concerned that this community infrastructure would be needed to be utilised as a place where the community could come together once the crisis was over. She recalls the initial reaction of some volunteers : *“And they said, ‘No, no. We’re here to help little old ladies.’”*

The Councillor’s recognition of the need to restore the park as a priority, identified the significance of how social infrastructure could contribute to the building of social capital, as a place for events, and bringing a flood-affected community together. She explained her intentions: *“And I was saying to everyone, ‘Look, as soon as people are back together they will want to come back into this area.’”*

In addition to responses around the significance of “connection” in relation to a direct question on community disaster resilience, the three case study Participants also identified the encompassing concept of “social capital” as a dominant theme throughout the interviews. An example provided by the Coordinator involved an incident where the school community had supported a family following the death of one of the parents, based on consultation with several other families, where a parent had also passed away. This existing level of social capital in the community, was identified by the Coordinator as one of the key factors influencing her acceptance the role initially, with this decision based on the trust that she would be supported by people in the community in taking on this role: *“Its about going.... There’s somebody who needs something. I’ve got that”*.

What is disaster resilience? : It’s about human connection

Kima et al. (2017) argue that *“disaster recovery studies support the proposition that a community with stronger existing social capital is likely to stimulate active community participation and collective action, which in turn leads to a faster and better recovery”* (p904). As discussed in previous chapters, there is no common view across the literature on the

meaning of the concept of disaster resilience, but there is an understanding of a set of common characteristics associated with the term. These characteristics, recognised as aspects of social capital, are key facets supporting the concept of community disaster resilience. (Berkes & Ross, 2013; Norris et al, 2008; Maquire & Hagan, 2007; Mayunga, 2007). The approach taken to the analysis of this study has therefore had a significant focus on social capital as a filter through which much of the analysis has been undertaken.

Each participant was asked for their perspective on what a disaster resilient community was, with comments below showing that all believed it was about connections between people. The Manager described it as “*about human connection. I think the people who are connected were the ones who probably got through and survived it strongly*”, as did the Coordinator “*I think we really connected people together*”. While the Councillor explicitly labelled it as social capital: “*They know each other. The social capital. Social capital, organisations. Social capital builds on knowledge of individuals. So then the social capitals.*”

Critically, the theme of “*connection*” was the strongest aspect of a disaster resilient community raised by each of the case study Participants in response to this question. Connections built between flooded community members were initially made as part of their shared experience. These connections were facilitated by both organisations through the opportunities they provided for people to come together. The staging points established by Organisation A took on the role of community centres where people naturally came to get food, water and information, and to report on what jobs they needed assistance with.

Similarly, the Recovery Centre operated by Organisation B became “*a hub for people*” as they continued the long process of rebuilding their homes. These “hubs” became points of connection for people to gather and to link with others who they may not normally have come across. The Manager of the Community Centre notes that the local community who were presenting at the staging point were not the normal clientele of the Community Centre. “*magistrates, we had judges, we had students, we had people with mental health issues,...we had old ladies, young families.*” .

This cross section of the community coming together and connecting with each other would suggest that a disaster becomes a great leveller, bridging social circles and bringing different parts of the community together. There is an emphasis in the literature to suggest that following a disaster, there is a tendency for members of a community to extend their connections beyond their usual groups to include other community members. The evidence also suggests that this

facilitates new ideas and knowledge that supports those connections to work collectively in recovery (Kima et al; 2016; p904). The Manager recalls that in some instances the experience resulted in people strengthening their relationship with the Community Centre, while others ultimately took up positions as volunteers. Organisation B reported similar outcomes for their community, with community members expanding their interactions to seek support from other groups.

5.2 CHAPTER CONCLUSION

This chapter has provided an in-depth analysis of how the operationalisation of community disaster resilience was influenced by the roles played by the place based community organisations, through a deeper exploration of how the supporting elements of social capital influenced the outcomes for community disaster resilience from their response, recovery and preparation efforts. Four key themes assisted in the development of this discussion.

The first theme explored community capacity and competence as one of the strongest supporting characteristics of social capital to emerge in influencing the roles of these two organisations, and was a characteristic that was particularly crucial in supporting the leadership demonstrated by both organisations. This resulted in leadership that was very clear to all stakeholders involved in the response and recovery phases delivered by Organisation A. This included flood affected community who arrived at the staging points to seek their assistance, other local organisations and community groups who directed their resources to the Organisation, local volunteers who provided their expertise, and the Mud Army who took direction and continued to work directly with Organisation A.

The strength of leadership shown by the emerging organisation, Organisation B, was evident in the readiness of the local political representatives and State Government departments to allow the organisation to continue to deliver their recovery effort. These stakeholders recognised the capacity that enabled that effort in the absence of funding, and with limited support. This was particularly evident in their reaction when the Coordinator advised their intention to close.

The second theme, the significance of trust during a disaster situation, was a key characteristic demonstrated from within both communities, influencing the willingness to provide support to both efforts, and in the recognition of leadership of both organisations. Trust between key stakeholders also proved a crucial aspect that influenced working relationships and the ability

to deliver their outcomes. Trust within both communities went hand in hand with the level of social support that was made available to other members of each community.

The importance of existing relationships and networks was evidenced in the support provided to Organisation A, particularly in the recovery phase, through their well established networks with other community organisations, as well as with local businesses and through local political connections. The need to build networks and relationships to sustain the recovery effort for the community of Organisation B was also a critical step for that group.

Human connection stood out as the major element of social capital influencing community disaster resilience, as identified by all three case study Participants. They noted the significance of connections in supporting the long term recovery of flood affected community, and identified community connections as a key factor that supported the social capital that underpinned their efforts.

CHAPTER 6: OPERATIONALISING COMMUNITY DISASTER RESILIENCE

The analysis undertaken in the last chapter explored the roles played by the two place based community organisations, with a focus on how these roles influenced the operationalisation of community disaster resilience. This chapter will focus on addressing Research Question 3:

How can place based community organisations play an effective role in the operationalisation of community disaster resilience as part of the disaster management system?

This Chapter will respond to Research Question 3 through the proposal of a policy and practice framework to support the operationalisation of community disaster resilience at the local level. To provide further context to the development of the framework, the chapter will initially explore the attempts of the two place-based community organisations to understand their place in the disaster management system, and their roles in community led response efforts. In addition to the material from the interviews with the case study participants, the semi-structured in-depth interviews held with the four other key informants to this study will be drawn on to broaden the perspective on the response to the research question.

A brief discussion on the development of another community led recovery effort, in this case supported by a State Government disaster management agency in January 2011, will provide a different perspective to a State agency approach. This discussion will be supported through material from the interview held with Participant #5, the Recovery Officer. In complementing this State Government perspective, a discussion of the interview material provided by Participant #4, the Executive, will follow. The Executive holds a senior position in a State Government disaster management agency.

The framework itself will be supported by three key principles drawn from the literature exploring community based disaster management models, as well as studies examining the shift in emergency management policy approaches internationally. In detailing how the framework can be delivered, material from the interviews with the Community Support Officer and the Engagement Officer will provide perspective on the development of the approach outlined to support the framework.

6.1 PREPARATION - UNDERSTANDING THEIR PLACE IN THE SYSTEM

6.1.1 We did it ourselves here

We did it ourselves here, and if it happens again, we're going to have to do it ourselves again, We can't wait for some guy in a uniform to show up and save us, it's not going to happen that way. (Manager)

Following their experiences during the crisis, both case study Organisations quickly realised the importance of preparing for a future event. Preparation is recognised across the literature as a key element of disaster resilience, and is linked to the concept of adaptive capacity. Discussed earlier in this study, adaptive capacity relates to the ability of communities to influence disaster resilience through self-organisation, utilising the resources and strengths embedded in the community, and the capacity to learn from past events. (Berkes & Ross, 2013; Manyena, 2006; Adger et al., 2005; Mayunga, 2007). Both organisations adopted a reflective approach to the event they had just experienced, looking for learnings from the chaos. Critically, they were both keen to better understand their role, and their place in the system, in preparation for the next event.

In considering the preparation phase for Organisation B, and their role in response and recovery in a future event, the Coordinator reflected on the extent of the lack of preparation and information available to them at the time of the flood crisis. She highlighted the arbitrary way in which the evacuation centre was initiated: *"I'm kind of like, even that chain should have had more information about what happens when we have a disaster. Not just, 'Yes, ring this person because I think she can do it.'"*

Contributing to this sense of uncertainty around their role in a future event, the Coordinator also described her experience with representatives from the disaster management system as part of a training session she attended. Seeking to add some professional training to supplement the knowledge she had gained from her experience, the Coordinator attended the training session, for which she had received an email invitation. The course was dominated by representatives from services such as the Army and the Police, and the Coordinator reported that the presenter questioned her presence at the course. She recalls the reception she received: *"And I was the only female too. I walked in and the guy said, 'I don't even know why you're here.' I said, 'What do you mean?'. This is the guy that was running the course. He said, 'Because we've got this. You don't have to worry about it.' I said, 'Did you have it in 2011?'"*

She commented that there was also strong opinion expressed at that session in relation to the operation of evacuation centres, as being solely the function of government agencies. This perspective was also supported by comments from (Participant #7) the Community Support Officer during the interview session regarding the role of community organisations, *“As long as they know what their role is. And their role is not an evacuation centre,,,,,”*.

In light of the view expressed at the emergency management training session, Organisation B were still very keen to understand exactly what their role might encompass. At this point in time they decided to make contact with Brisbane City Council. Council provided them with forms that were designed to assist with their preparation, encouraging community groups to think about their key contacts, as well as other information that may be useful should a crisis occur. The Coordinator felt that the contact with Council was helpful in raising awareness of the Organisation’s willingness to assist should there be an event in the future.

In the case of Organisation A, the flood recovery committee changed their focus to preparedness, and were able to develop a Disaster Plan for the area. The Disaster Plan recognised the capacity, resources, infrastructure and social capital embedded in their community. Their aim was to ensure that should there be another event, those attributes would benefit from a planned approach.

Learnings from their recent experience influenced the development of the Plan, addressing the challenges they had faced during the height of the crisis. The Councillor recalls: *“What we need to do is get our local community support centre. Don’t have it on the road. If we have another one of these coming we set up a local community support centre and people know where its going.”*

They were able to identify a local school, located on higher ground, that contained facilities that would be suitable for providing appropriate spaces for a support centre. These spaces would include an information desk, a place for people to sleep on site, and an area in the grounds where sandbags could be filled and picked up by residents. Access to sandbags had been a major issue for that community in the initial phases of the crisis, where residents were driving across the city to council depots, only to find they had run out due to demand. The Plan also considered an area for accessing healthcare, moving cars to higher ground, charging mobile phones, as well as “friendly” areas, and the identification of other infrastructure in the suburb that could be utilised in a crisis, such as the St Vinnies hostel. A range of local groups involved in the development of the Plan were assigned a role as part of the Disaster Plan. The

Councillor explained: *“Unless there was an earthquake or a fire where we have no capacity to it, but even with roofs off, or flood, which is the most likely, we as a community have huge resources and it should be acknowledged as such.”*

The Manager discussed the development of the Disaster Plan as an attempt to ensure they would be better organised for the next event, and as a focus on disaster resilience. However, in discussing their objective to be better organised, the Manager also expressed concern at the ambiguity and uncertainty around their role and place in the system: *“And then working out our place in the system around that, because there was a lot of push back from disaster experts about our local community having its own approach to recovery..... It was like, ‘No, no, no. (Disaster Management) do this process.’”*

6.1.2 We’ve got this... You don’t need to worry about it

The Manager recalls that the attitude expressed by the emergency management personnel was in contrast to how his Organisation saw their role, as well as the role of the disaster management agencies: *“We felt that there needed to be local responses and the framework that the Disaster Management brought was a global, or a city wide response and it didn’t provide, it didn’t recognise the social capital. It didn’t recognise the volunteerism. It didn’t recognise the very important social infrastructure that had played out very strongly here and in (Organisation B), and in other communities obviously. So they really discouraged us from developing anything.”*

In expressing these concerns, the Manager acknowledged that in his view, the disaster management service had a major role in information, warnings and critical life and death situations. However, he expressed concern that in the event of a major crisis, it would be unreasonable to expect that a government agency would have the resources to respond to every community: *“2,130 premises in (the suburb). Has Disaster Management got 2,130 staff? No, of course not. So how are they going to be able to support people? So you need to have that local caring presence.”*

Both participants from Organisation A expressed concerns about a perceived lack of respect for, or confidence in their response and recovery effort. The Councillor also expressed the view that because they were a community who did have the capacity to *“do it themselves”*, resources could have been diverted to other suburbs where the capacity was not as high, or where there were no community organisations: *“Not every community can do it, but this can.”*

While copies of the “Be Prepared!” Plan were printed and placed on the Ward Office website, a trial run of the plan was never held. The Councillor has since retired from politics and the

Manager no longer works for the Community Centre. Neither were aware of any ongoing preparation work being undertaken in the area at the time of the interviews.

6.1.3 An Alternative Approach – Supporting Local Leaders

In contrast to the reports from the case study organisations on the perspectives expressed by personnel from the disaster management agencies, the interview with the Recovery Officer revealed a totally different approach to a community led recovery effort that had been delivered in the Western suburbs of the city. She was working for the Department of Communities at the time of the flood. As the flood subsided, she was moved to the Recovery program. She explained that the evacuation centres were in operation, and the Department now had to initiate the community recovery centres. The Western suburbs had been badly affected by the flood, and her recollection was that two community centres in the south west of the city were actively supporting their communities in response to the flooding there, in spite of one centre having been inundated itself.

However, the Recovery Officer explained that in the area she was working in, there were no community or neighbourhood centres, and no community halls at that time. Consequently, the temporary community recovery hub was set up on the top floor of a major shopping centre in the area. She recalled the challenges of working in flood affected communities in the absence of a community centre: *“so in (the area), that was challenging because we didn’t have a community or neighbourhood centre, so we didn’t have that coordinator role there... coordinating resources and mobilising people and partnerships is the key one... knowing who to liaise with to bring the right people in for that local response....So what was an interesting observation is to watch then how local people step up and how local leadership come into practice, so it’s like they took on that coordination role.”*

These local leaders worked with officers from the Department of Communities, the local State Member of Parliament, and the local Ward Councillor, on the recovery effort. Significantly, the Recovery Officer explained that the representatives from the Department did not assume a controlling role: *“No, and I think that was crucial because we stepped back and led from behind. ‘What do you need us for in this local area at the moment? What resources do we need? This is what we have, is this what you need?’ And we were just there as a collaborator, but we did not lead the meetings. We did not make the decisions, but we were there as a commitment to that recovery and that area, but also we sort of provided a bit of an administrator function.”*

The Recovery Officer explained that not taking the lead in that situation was a key decision that resulted in the community led recovery group operating for two years, building their capacity and strengthening their community. The difference in examples of recognition and support for community led efforts in 2011 may have been a reflection of the chaos of the time. However, the approach described by the Recovery Officer demonstrated how the building of capacity of key people in the community could result in significant outcomes. In fact, due to the efforts of this group, the area eventually also gained a community hub.

6.1.4 A State Government perspective – Place-based organisations are critical

The sections above have presented both a strong narrative of concern from the case study Participants regarding a lack of recognition from the disaster management system of their community led efforts, while the previous section has introduced a different perspective and approach, as described by the Recovery Officer in her role working with community in the recovery phase of the flood event. This section will discuss material from the interview with the Executive, who is a senior officer in a Queensland Government disaster management agency, as well as further material from the Recovery Officer, to provide a broader State Government perspective.

Comments from the Executive regarding the role of place-based community organisations were very supportive: *“Place-based community organisation are critical. They are the people who are actually there. They are part of the fabric of the community”*. In supporting this statement, he noted the transient nature of the role that State Government disaster management agencies play as part of a disaster situation, commenting that their teams *“roll in and out”*, while as part of the community, he felt that place-based organisations experience the events with the community. Local knowledge and connections with the community were also key attributes that he raised in supporting their role. *“Why should someone who has multiple problems be made to repeat their circumstances to outsiders when people who know them can assist them. These organisations can act as a single point of contact, relating clients to people they know.”*

Similar observations were provided through the interview with the Recovery Officer. Speaking to her knowledge of the response and recovery roles played by the place-based community organisations in the south-west of the City during the flood event, she noted the significance of their connections with, and knowledge of their communities. She expressed the view that this had provided them with the ability to work with community who were already vulnerable, but now affected by flood. Even more significantly, she noted that these connections enabled

them to quickly initiate a response, with the mobilisation of people, and getting resources out to the community, as a role that the Recovery Officer felt was most important at that point in the crisis.

“Most of them knew the community very, very well, more so than the authorities coming in, so they were able to quickly mobilise resources and rather than almost wait for the authorities to come in, they just got into action and started to do what they could with what they had.”

The issue of building community disaster resilience for the future, and developing a sustainable culture of preparation and awareness, was raised as part of the interview. The Recovery Officer reported that the community groups she had worked with had developed capacity through their experiences at that time, and were able to secure some recovery and resilience grants. However, she raised her concerns about whether the awareness of a need to build resilience had been sustained. *“If I was to go back to those communities now I don’t know whether that would be something that’s a daily or a yearly consciousness and that’s my biggest worry.”*

She also raised the prospect of *“opportunities to engage with community on an annual basis around thinking consciously about disaster preparedness”*, and expressed her view that relevant stakeholders in that process should include the Disaster Management Office in Brisbane City Council and State Government agencies, with the assistance of community development workers. Using the term *“a constant consciousness”* when discussing the significance of a culture of awareness, she felt that there were also opportunities to take advantage of existing community activities and projects to allow broad engagement with communities to be *“reminded and ready for when that hits again”*. Sustainability, in her view, would only be possible if residents met regularly to discuss preparedness, and developed resources to support that, such as a local vulnerability index. From her experience, she felt that the neighbourhood and community centres were in an ideal position to lead the preparation phase at the local level, and recommended that engagement with those organisations should be a key activity of the disaster management agencies. She suggested that this engagement could take the form of a community workshop: *“I think its easy to forget after a disaster and the longer the time is, the longer we forget about what we did.”*

In commenting on a question around his knowledge of any ongoing connection between the community disaster agencies with communities and community organisations between disaster events, the Executive reported that his agency had commissioned a community services peak body organisation to develop and workshop a toolkit with community-based organisations

around how they can support themselves and their clients for emergency situations (Disaster Management and Recovery; CSIA; 2017). The toolkit outlines preparation planning, with a focus on an organisation's business continuity challenges, particularly where their own infrastructure is threatened during an event. Emphasising the significance of this piece of work, the Executive regarded the training as important for the community organisations, given that *“all government organisations walk in and walk out again, so this is an essential piece of work.”*

The Executive was also asked for his view on the concept of the integration of the place-based organisations in the disaster management system. He felt that involvement of the community organisations already existed, but that this was *“not necessarily seen as the done thing or the most positive thing”*. The Executive described some situations where the State disaster management agencies had experienced challenges in working with community organisations, where cooperation had been an issue, and where he had experienced a culture of competition amongst them that was not helpful. However, he also discussed other examples of positive collaborative experiences. He expressed the view that the community organisations should be involved in local responses, and described his own practice of *“working with those who are best placed to assist”*. He suggested that locally led responses could best be led by local councils, with their disaster management officer bringing organisations together. The Executive also expressed a very strong perspective that trust from the community was the key factor in having community organisations as responders, and that trust between all parties – government agencies, councils, community organisations and communities - was a key factor in making this approach work.

This section has demonstrated a level of support from the interview Participants from the State agencies for place-based community organisations to play a key role in preparation, response and recovery efforts. This support was accompanied by a note of caution expressed by the Executive following his experiences in dealing with some community organisations across the State. His view on the critical role of trust in supporting the viability of community led efforts was significant to this study. The role of the element of trust in the development of community disaster resilience is raised as a key issue in the literature. The interview material from the Participants of the place-based organisations, and from the Executive in particular, reinforce the criticality of the place of trust and strong relationships across sectors to the success of the framework.

The next section will present material from the Brisbane City Council Participants on the approach adopted by Council to engaging with communities as part of their disaster management strategy. This discussion will then lead into the presentation of the framework, the elements supporting its delivery, and how the data and the literature has supported its development.

6.2 OPERATIONALISING COMMUNITY DISASTER RESILIENCE – A FRAMEWORK

6.2.1 The need for communities to respond – Acknowledgement, but no strategy

An earlier chapter identified the ambiguity around the role of community organisations as part of the *National Strategy for Disaster Resilience* (COAG 2011), where the role of these organisations is ill-defined and nebulously described. The discussion also highlighted how the NSDR lacks any clear pathway to how disaster resilience could be actioned, supported or achieved. Similarly, while one of the two objectives of the Queensland State Government’s Disaster Management Plan (2018) is to “empower and support local communities to manage disaster risks, respond to events and be more resilient” (p. 03), the Plan does not reference how this will be achieved in practice. However, the Plan assigns the role of engaging with communities to local government (p04). In that regard, Brisbane City Council’s Disaster Management Plan (2018) has a focus on the responsibility of individuals to ensure their preparation plans are in place should a disaster occur. Significantly, the Plan does acknowledge that communities can provide “rapid, readily available and effective relief while external assistance may be limited due to resource capacities” (p.15).

The need for communities to lead response efforts was also acknowledged by the interview participants from Brisbane City Council. The Engagement Officer (Participant #6) expressed his view that: *“Most of the time Council is going to do a lot, but what happens when there is something that is very significant that is going to have an impact far greater than 2011, where Council is going to be stretched for resources a lot more, and they’re unable to provide, and people are going to have to be more self-sufficient.”*

The view of the Community Support Officer reflected a similar approach: *“Disaster resilience for me is about a community being able to get through an event, if need be on their own. So, unfortunately in a really, really big event that hits, even if you said state wide, or majority of Brisbane event, you’re not going to get the police, the ambulance, the fire brigade at your door”*.

While it would appear that governments at all levels share a general acknowledgement of the need for communities to respond in the absence of external assistance, their strategies and frameworks are still no closer to providing support to enable this in practice, perhaps due in part to the political and financial realities of government, and the many competing priorities they are faced with. Too often, grassroots local-level preparedness is not a policy priority. (While I acknowledge that there are many significant initiatives and campaigns, it is rare for community organisations to be front and centre as part of those approaches.) However, an international shift in the approach to community led efforts, identified in the literature, has highlighted how models that focus on building the capacity of communities to self-organise through a cross sector collaborative approach, are being implemented internationally (Chen et al., 2006; Wells et al., 2013; Simo & Bies, 2007; Kapucu & Garayev, 2012; Stys, 2011; Coles & Buckle, 2004; Patterson, 2007; Harris, 2018). This approach, discussed in Chapter 2, demonstrates how communities can be supported to build disaster resilience to self-organise, and through having a clear understanding of their role in preparedness, response and recovery efforts. The relevance of this approach will be discussed in the context of the proposed framework in the next section.

6.3 THE FRAMEWORK – CHARACTERISTICS AND PRINCIPLES

This section responds to research question 3:

How can place based community organisations play an effective role in the operationalisation of community disaster resilience as part of the disaster management system?

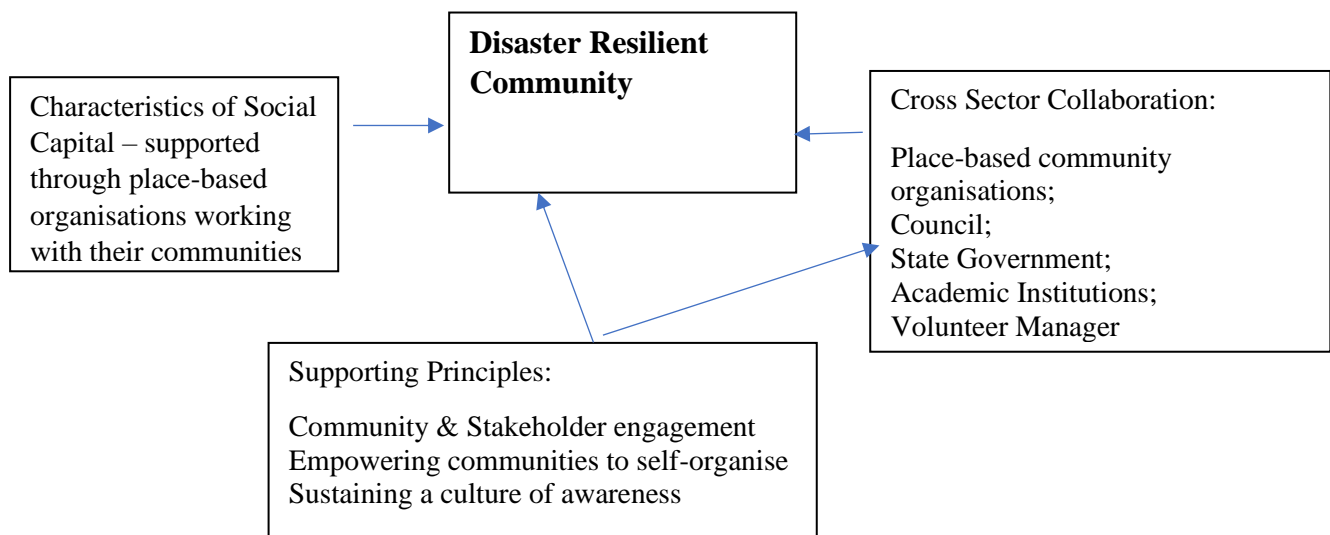
In responding to this question, this section proposes a framework that will act as a vehicle for the operationalisation of community disaster resilience at the local level. For the purposes of this study, the framework is targeted at communities located in hazard prone areas of Brisbane. However, I argue that the framework is also adaptable to other cities or localities, with significant features of the framework underpinning its transferability. The proposed framework has been designed to support the development of the key characteristics of community disaster resilience identified through the interview data, and also identified as being consistent with those acknowledged in the literature.

International community based disaster management models discussed as part of the review of the literature in Chapter 2, have provided a further significant influence in the development of the proposed framework. The approaches outlined in these models were supported by three key

principles, common to each model. I argue that the characteristics associated with a disaster resilient community can be enabled through the activation of these three principles. These relate to community and stakeholder engagement; empowering communities to self-organise through the support of multi-sector collaborations; and the sustainability of a culture of awareness amongst the community.

The next section will outline the framework, supported by a discussion of the role of each of the enabling principles in delivering the intent of the framework. The key aspects of the framework are illustrated through Figure1, below.

FIGURE 1: OPERATIONALISING COMMUNITY DISASTER RESILIENCE



6.3.1 Framework Foundation

A key principle underpinning this framework is the employment of a cross sector collaborative approach to support the operationalisation of community disaster resilience. In line with the literature discussed in Chapter 2, a framework based on this approach will require the support of a crucial foundational element designed to support the conditions for establishment. As a key linking mechanism, described in the literature as a “*brokering organisation, or a legitimate convenor*” (Bryson et al., 2006), a central facilitation role will need to be responsible for the development and delivery of significant processes that support the conditions for initial engagement with, and the recruitment of key stakeholders to enter into discussions toward the establishment of a collaboration.

Several factors support the assignment of this critical role in the context of this study to the Brisbane City Council. From a legislative perspective, the Council is responsible for engagement with the community (Queensland State Disaster Management Plan, 2018). The Council also has a strong legislative relationship with the Queensland State Government through the City of Brisbane Act 2010, placing the Council in a strategic position to negotiate the participation of the State agencies as key stakeholders. Acting in this role, Council would also be ultimately responsible for convening forums where the structure and key governance processes can be developed with the input of all stakeholders. The coordination of ongoing communication, sharing of information, and the delivery of collaboration meetings and events will form other significant aspects of this critical foundational role.

The next section will discuss how the framework is supported by the role of each of the enabling principles in delivering the intent of the framework. The key aspects of the framework have been illustrated through Figure 1.

Principle 1: Community and stakeholder engagement

A critical supporting principle of this framework is the use of extensive community and stakeholder engagement. Aimed at supporting the development of meaningful partnerships between all stakeholders, purposeful initial engagement can lay the foundation for the establishment of conditions that will support the process of collaboration between community level responders with stakeholders involved in the disaster management system. (Goode et al., 2015; Cretney, 2016; Kapucu et al., 2018; Redshaw et al., 2017; Wells et al., 2013; Patterson et al., 2010; Magis, 2010).

The analysis of the interviews with the two case study organisations highlighted their perceptions for the need to build connections, mutual understanding, and trust between the community and disaster management sectors, as a critical measure to develop efficiency in the delivery of preparedness, response and recovery efforts. In contrast, the process of engaging with, supporting, and collaborating with place-based community groups in the recovery phase of the 2011 flood event, outlined by the Recovery Officer, provided an example where this approach was taken by State agencies, resulting a strengthening of capacity at the local level. Additionally, the Executive also raised trust as a critical issue to the success of the development of community led efforts. This framework will aim to acknowledge both of these perspectives, with the aim of influencing policy and practice to bring the key stakeholders together to achieve these mutual goals.

As the initial step in this framework, the purpose of this stage of the engagement process with individual key stakeholder groups is aimed at securing their participation in the process. This role would best fall to local government, in this framework the Brisbane City Council, as the central facilitator in the framework. Further engagement at the community level will be described as a key process in the later stages of the framework.

Identifying and engaging key community organisations

One of the primary stakeholder groups for the purposes of this framework are place-based community organisations. A question raised with the Engagement Officer and the Community Support Officer during their interviews was whether there had been any discussion about engaging and connecting with community placed-based organisations who were involved in 2011, or who are based in areas at risk. The idea of inviting these organisations to attend a forum event that might be held once or twice per year to discuss preparedness, and their role during a disaster situation, was raised as part of this question. While the Community Support Officer expressed her support, she advised that this was not in the scope of her work at that time. The Engagement Officer was supportive of building relationships, but expressed some challenges he felt would make this a difficult task:

“I think there would be benefits. I think logistically it could be a bit of a challenge because a lot of, probably most people in the community groups – we’ve all got different schedules and what a community group looks like is going to be different to what the next community group looks like as well in terms of resources, in terms of numbers, in terms of commitment, in terms of the possible impact as well.”

Engaging with the broader community as a key aspect of building disaster preparedness was also discussed. Both participants described a current engagement approach that involved a presence at local and regional events, at local shopping centres, as well as at targeted locations in hazard prone areas, and supported by an online presence. In discussing this broad engagement approach, the Community Support Officer described the size of the local government area of Brisbane as being a major challenge in delivering effective community engagement activities. This challenges associated with the size of the city was a recurring theme through the interviews with both the Council Participants.

This study acknowledges that Brisbane is a large city, spread over a large area. Identifying the key stakeholders for the purposes of this context is an important aspect of ensuring engagement and participation of the most appropriate groups and individuals. In acknowledging the

challenges raised by both Council Participants, this framework advocates a targeted engagement process that will identify the key stakeholders, support a realistic scope of work, and increase the success factor of this initiative.

To support this approach, the identification of key community organisations who are in a position to influence community disaster resilience at the local level should take into consideration a number of criteria. The initial criteria would logically involve identifying the hazard prone areas of the city. From an all hazards approach to disaster management in the context of Brisbane, this should include areas that were affected by flooding in the January 2011 event, as well as other areas that can be assessed as at risk of flooding. Other key hazard prone areas are those at risk of bushfire.

The number of place-based community organisations in the hazard prone areas of the city is not extensive. Targeting these organisations would provide a practical number of organisations to approach, as well as prioritising hazard areas for engagement purposes. This approach is also supported by the community based disaster management models being delivered internationally, discussed in Chapter 2, where collaborations with an emphasis on capacity building and the ability to self-organise, were targeted at communities that often experienced the need to deliver response efforts in the absence of a formal response from disaster management agencies.

The initial engagement with the community organisations should outline the intent of the cross sector collaborative approach. The extension of an invitation to attend a Community Disaster Resilience forum as a follow-up engagement activity would provide an opportunity to facilitate ongoing discussions around expectations, and any challenges or barriers to the participation of the targeted organisations. From the perspective of the central facilitation role, a critical factor in securing the involvement of these organisations as key stakeholders in a cross sector collaboration should also consider how their potential role will relate to the traditional role of community and neighbourhood centres, particularly in terms of the building of social capital, and working with vulnerable community members.

Engaging the State agencies and identifying and engaging other key stakeholder groups

The other primary stakeholder group to support the framework in the context of Brisbane, are the State Government agencies with responsibilities for disaster management and recovery in Queensland. These agencies are considered as critical stakeholders, due to the centrality of their role in disaster management, their role in working with local government to support

community wellbeing following a disaster event, and to assist in building community resilience. Engagement with these agencies should be achievable through existing established relationships between the Council and the State agencies.

In line with the literature on the community based disaster management models explored in Chapter 2, a range of other experts in various fields, including hazard identification and mitigation, representatives from academic institutions, and public health agencies, formed key stakeholders in a collaborative approach (Chen et al 2006; Wells et al., 2013). The inclusion of other key stakeholders should therefore be identified for their strategic contribution to the framework. These could ideally include universities, institutions, and private organisations that can provide expertise, knowledge, resources, vision, and commitment. As a key stakeholder, an academic institution with a focus on disaster management would provide a significant contribution in supporting the development and delivery of training and capacity building as part of the framework. Any major facilitator of volunteer coordination and management in disasters, would also be a strategic stakeholder for the purposes of the framework.

Bringing the stakeholders together

Following the initial engagement with the key stakeholders, and the establishment of the participation of those sectors, the next key step toward the development of the proposed framework would entail engagement between all stakeholders. A key purpose of this engagement activity would be to provide the opportunity for crucial discussions on the establishment of a cross sector collaboration, including governance and structure, and agreeing on mutual goals (Simo & Bies, 2007; Crosby et al. 2010). This forum would also play a critical role in providing a space for all participants to hear the perspectives of other stakeholders, as part of a facilitated process, and aimed at supporting the development of an understanding of how the different sectors approach their roles.

The role of engagement will continue to be central to the ongoing development and functioning of the collaborative process. This key principle of the framework will also feature strongly in gaining the participation of the community in the building of community disaster resilience, and this approach will be outlined in a future section.

6.3.2 Principle 2: Empowering communities to self-organise through a collaborative framework

A key principle underpinning this framework, is the use of a cross sector collaborative approach to empower communities to self-organise and to build the capacity of the disaster management system. This approach is designed to facilitate the strengthening of disaster capacity, develop mutual goals across the sectors, build key relationships between stakeholders, and to create a shared understanding of roles and responsibilities (Chen et al., 2006; Wells et al., 2013; Kapucu & Garayev, 2012; Kapucu et al., 2018; Simo & Buys, 2007). This approach has been introduced internationally in response to perceptions of the failure of traditional systems to respond to major disaster events, and a recognition of the value of communities with the ability to respond locally in the absence of formal disaster management efforts.

Facilitating cross sector collaboration – Building Legitimacy and Trust

The use of linking mechanisms to support the establishment of a functional and effective collaboration has been raised earlier in this Chapter in discussing the importance of the role of a convenor. The literature identifies the role of a sponsor as another key linking mechanism critical to the success of a cross sector collaboration (Bryson, et al., 2006). As a newly formed entity, established through a network of organisations, and with structures and governance arrangements that may not necessarily reflect the processes found in the bureaucracy, the establishment of the collaboration as a legitimate and viable entity will be important, particularly in terms of the ability of the collaboration to attract resources and other support. The involvement of a powerful sponsor, who can “*draw attention to an important public problem and accord it legitimacy within a stakeholder group*” (Bryson et al., 2006, p. 46) can support this approach and its sustainability. In this regard, the support of a high ranking politician or key public figure would provide a sense of a high level of commitment to the establishment of the collaboration, as well as the importance of the involvement of the key stakeholders.

A critical aim of this collaboration is to share information, resources, activities, and capabilities. As primary stakeholders, the State agencies hold these capabilities, as well as having an overarching statutory role in disaster management. Their involvement is therefore crucial to the success of the framework, but also in terms of the high level of legitimacy that their participation and commitment will bring to the collaboration. The involvement of a prominent academic institution would also be seen as a key linking mechanism, in terms of

their role as a respected tertiary institution with the ability to draw attention to a key public issue (Bryson et al., 2006). Their participation would also be strategic in terms of any existing links to the disaster management agencies, further reinforcing the legitimacy of the collaboration. The involvement of a significant volunteer facilitation organisation would be a critical addition to the collaboration in terms of capacity building, and as a linking mechanism. As strategic partners in the collaboration, a formal expression of support from each of these key stakeholder organisations should be established at the outset.

As already indicated, the perceptions expressed by Organisations A and B of a lack of respect following their approaches to both the State and Council, would presume the need to build a level of trust between these key sectors. An approach designed to lay a foundation for the building of trust to support collaboration, will therefore be critical to success. Research conducted on not-for-profit involvement in cross sector collaborations indicates that pre-existing relationships can be an important factor in promoting perceptions of trust and legitimacy (Simo & Bies, 2007; Bryson et al., 2006). The community development area of local councils normally have strong pre-existing working relationships with place-based community organisations as part of their responsibilities. As a trusted source, they can play a key role in achieving initial commitment from the organisations. However, the building of trusting relationships will need to be an ongoing part of the culture of the collaboration, and their continued involvement may be useful.

The building of trust can also be developed through efficient communication systems to ensure all stakeholders share information, and through the facilitation of collaborative sessions to support the engagement of all sectors in discussion and decision making. This would include reaching a shared understanding on the problem being addressed, and defining the purpose of the collaboration. Stakeholders can then focus their attention on structure, roles and responsibilities, mutual goals and decision making mechanisms.

Empowering communities to self-organise

The focus of this framework is to operationalise community disaster resilience at the local level. In order to realise this goal, the cross sector collaboration at the centre of this framework should be the vehicle that empowers local communities, through facilitating disaster resilience capability. These capabilities include preparation skills, such as hazard identification and risk assessment, and the development of response strategies to enable communities to take action should a disaster event occur. The literature has identified a key role for community

organisations in building community disaster resilience, based on their relationship with, and access to, the communities they serve (Chen et al., 2006; Bach et al., 2010; Thornley et al., 2013).

Working collaboratively to develop a relevant and appropriate training program for the place-based organisations will support the establishment of clear roles and responsibilities, recognition of existing capacity, local knowledge, and any disaster response and recovery experience that still exists within the place-based community organisations. A training program that combines aspects of command and control, and community development principles, may provide a more appropriate approach to reflect the reality of conditions of shared responsibility, and the need for collaboration that occurs during a disaster situation (Waugh & Strieb, 2006).

As already discussed, a crucial factor for the success of this framework will depend on ongoing communication and interaction between collaboration partners through embedded communication structures (Kapucu & Garayev, 2012; Bryson et al., 2006; Kapucu, 2007). This can support the establishment of formal relationships between the stakeholder groups to facilitate more efficient disaster preparation, response and recovery activities, as well as the coordination of those activities, and the sharing of information and resources during disaster situations (Kapucu et al, 2018). To facilitate these ongoing relationships, the organisation of planning events and ongoing training, involving all collaboration stakeholders, should perhaps occur at least twice yearly. These events should include the updating of any training and capacity building, updating any organisational changes, checking that preparation planning is still unchanged, and the performance of scenario exercises to refine planning through practice scenarios and to raise awareness among the community (Chen et al, 2006).

6.3.3 Principle 3: Sustaining a culture of awareness amongst the community

Engaging and involving the community

Once the initial training has been completed, the engagement of local communities as participators in developing pre-disaster planning should commence as a priority action. The involvement of communities in developing plans for their areas is significant in terms of ensuring that community needs are identified, and that each plan is tailored to suit the needs of individual communities (Australian Red Cross, 2014; Thornley et al., 2013). Community organisations, delivering their traditional roles within their communities, will be able to engage their communities in pre-disaster planning, with support from the other partner agencies and organisations. This strategy recognises the local knowledge of the place-based community

organisation in understanding how to harness community participation, demonstrating appropriate engagement approaches toward those parts of the community who have experienced a major flood, and including more marginalised sectors of the community.

The development of the pre-disaster planning should also take a whole of community approach, encouraging participation from the local business sector, major institutions in the area, such as schools, tertiary institutions and faith-based organisations, as well as other place-based community services. Engagement at the community level should also include the involvement of disaster management agencies in the development of preparation planning. This will serve to incorporate their expertise, as well as providing those agencies with a level of confidence in the process and the outcome. Importantly, this engagement would also provide them with an opportunity to better understand the diversity of the communities in the hazard prone areas, and encourage the building of relationships and trust within the community (Thornley et al., 2013; Bach et al., 2010; Australian Red Cross, 2014).

Chen et al. (2006) support a public launch of the plan as a means to reinforce community awareness and ownership. The creation of a culture of awareness of the significance of pre-disaster planning within the target communities will work towards sustaining the effectiveness of community preparedness. This will require each plan to be socialised broadly across their community through a range of communication and engagement strategies tailored to each community (Paton & Johnston, 2001). A continued presence by the collaboration partners in community engagement activities at local events over time will assist in ensuring each plan is kept front of mind with the community between disaster events. This will also ensure that new residents moving to the area are aware of the plan.

6.4 FINDING OUR PLACE IN THE SYSTEM

This framework is aimed at achieving several key outcomes. In addition to the development of clearly defined roles for community led efforts, a key issue in operationalising community disaster resilience is the integration of place-based community organisations as stakeholders in the disaster management system. A key outcome of the integration of these organisations will be to formalise and legitimise the role of the community sector, and by extension, the community, as a partner in the building of disaster resilience.

Formal integration of the community sector will also strengthen the NSDR aspiration of *shared responsibility* (NSDR, 2011, p.2) and *resilient community* (NSDR, 2011, p.4). As a strategy to support the operationalisation of community disaster resilience, integration can provide the

context for consistent communication between disaster management agencies and the community. This can provide awareness of community need, complement traditional emergency management approaches, and reduce duplication and inefficiency (Magis, 2010; Stys, 2011; Kapucu et al., 2018).

In commenting on the idea of including place-based community organisations as part of the disaster management system, the Community Support Officer expressed the view that this would not be a viable approach in the context of Brisbane's disaster management structure. This observation highlighted the need for an appropriate context for the inclusion of place-based community organisations. In this regard, I argue that a formalised cross sector collaboration is an appropriate setting, and level of integration, for the place-based community organisations, particularly in the context of the local government area of Brisbane. The proposed cross sector collaboration will facilitate access to relationships with the relevant stakeholders at the relevant level in the disaster management system, critical to facilitating the operationalisation of community disaster resilience. As outlined above, this entry point also presents the opportunity for information sharing, both horizontally and vertically within the system, as well as capacity building, and potential resourcing. A significant outcome will also be the opportunity for place-based community organisations to continue to strengthen community disaster resilience within their communities, through the participation of communities in training activities and the development of preparation plans, as well as continuing to work with the community to build on those elements of social capital that are critical to support a successful community led effort.

6.5 CHAPTER CONCLUSION

This chapter has provided context around the preparedness efforts of the two case study organisations, and their resolve to better understand their roles and their place in the system, prior to another major event. In pursuing this objective, the Chapter has highlighted the need for the building of relationships between the disaster management sector and community led efforts. The discussion outlining a different approach from a State Government agency during the 2011 flood, has highlighted the success of applying a supportive role to strengthen the capacity of community leaders in another part of the city. This example, together with material from the interviews with the Executive and the Recovery Officer, have provided a State agency perspective to inform the development of the framework. Interview material from the Community Support Officer and the Engagement Officer from Brisbane City Council have also provided significant perspective.

In addressing Research Question 3, this Chapter has provided a detailed framework designed to achieve community disaster resilience at the local level. The framework is underpinned by community and stakeholder engagement, as well as the ability for place-based community organisations to work closely with their communities to build the characteristics that support disaster resilience, through their traditional roles working in place. It offers a strategy for self-organised preparation, response and recovery efforts at the local level that can be facilitated through community and stakeholder engagement, and with the support of multi sector collaborations that provide training, information sharing and the building of significant relationships. The framework has also highlighted the significance of a culture of awareness, and recommended ongoing community involvement in the development of, and broader awareness of disaster plans, through a strategy of engagement and socialisation. The integration of the community place-based organisations in the system has also been discussed as a key plank supporting this framework.

CHAPTER 7: DISCUSSION AND CONCLUSION

The final chapter will conclude this thesis with a discussion on recommendations designed to support the framework, as described in Chapter 6. These recommendations will be followed by a summary of the research findings in response to the three key research questions. An overview of how this study has contributed to the existing research will be followed by a discussion outlining the research limitations, implications, suggestions for future directions, and final conclusions.

7.1 DISCUSSION

7.1.1 Overview of Discussion

“Collaboration may be necessary and desirable, but the research evidence indicates that it is hardly easy.” (Bryson et al., 2006, p. 44)

This thesis has addressed three research questions exploring how community place-based organisations can play a role in the operationalisation of community disaster resilience at the local level. A framework based on principles of community and stakeholder engagement, the empowerment of communities to self-organise, and the importance of the development of a sustainable culture of awareness has developed a pathway to support the integration of community place-based organisations into the disaster management system, creating a link to communities located in hazard prone areas. The framework has also explored the fundamental benefits to be realised by a range of sectors working collaboratively to improve how disasters are managed, and to address issues that cannot be dealt with by one entity working on its own (Simo & Bies, 2007; Kapucu et al., 2018). In acknowledging that the establishment and maintenance of cross sector collaborations can be difficult, this section will discuss challenges that may affect the framework, as well as identifying opportunities for addressing those challenges.

7.1.2 Strong Working Relationships

This study has highlighted an absence of pre-existing relationships between place-based community organisations and the disaster management sector as a key challenge in the context of the development of community disaster resilience at the local level. The importance of these

relationships is also stressed by Bach, et al. (2010) when they suggest that, “you don’t want to meet for the first time during a disaster.” (p.44).

Perceptions of trust between key stakeholders in cross sector collaborations form a crucial foundation for effective partnering and cooperation, particularly in terms of influencing transparency, effective communication, and the sharing of knowledge (Bryson et al., 2006; Simo & Bies, 2007). The collaborative process recommended in the framework supports the building of trust and goodwill between the stakeholders, with the key goal of facilitating effective working relationships that are so critical during crisis.

The literature suggests that trust can be addressed through the process of stakeholders working together to plan and to develop a common purpose (Bryson et al. (2006). This process can be assisted through the use of a skilled independent facilitator who can manage conflict and cut through existing perceptions. Further, a process that identifies the key skills and capabilities of each sector can work towards building an awareness and acknowledgement of how these can be brought together to achieve the mutual goal of building community disaster resilience.

However, another critical issue for the establishment of effective planning and working relationships within a collaboration, is the capacity of the stakeholders to work effectively across sectors (Simo & Bies, 2007). Training sessions targeted at skill development in conflict management and in planning for mutual goals, should therefore form a key strategy to support the establishment of the collaboration. The strengthening of these skills will complement commitment from the stakeholders to achieve the success of the collaboration and build strong cross sectoral relationships.

7.1.3 Finding our place in the system - integration

This thesis argues that the integration of place-based community organisations as stakeholders in the disaster management system is a crucial step in operationalising community disaster resilience. The integration of these organisations, as part of the system at the appropriate level, will formalise and legitimise the role of the community sector , and by extension, the community, as a partner in the building of community disaster resilience. Formal integration of the community sector will also strengthen the NSDR aspiration of *shared responsibility* (NSDR, 2011, p.2) and *resilient community* (NSDR, 2011, p.4). A key functional outcome provided through the integration of the community sector would be the opportunity for consistent communication between disaster management agencies and the community. This will complement traditional disaster management approaches through providing the

opportunity for the disaster management sector to access an understanding of the needs of communities, reducing inefficiency and strengthening community resilience at the local level (Magis, 2010; Stys, 2011; Kapucu et al., 2018).

Another fundamental outcome of the integration of the place-based community organisations would be the clarification of roles and responsibilities of all key stakeholders. This was a critical issue in 2011, frequently highlighted through the interview material from the two case study organisations, and also raised by the Community Support Officer from a Council perspective. Resolution of this issue is also a vital aspect in influencing the strength of relationships between the stakeholders as they come to a shared understanding of those roles. Once this issue has been resolved, pre-disaster scenario exercises involving all stakeholders, can provide a valuable opportunity for refining roles and responsibilities, communication and coordination.

7.1.4 Resourcing

Studies on community disaster resilience that identify learnings from major events, have identified the importance of providing adequate financial resourcing to community organisations to enable the building of community resilience (Cretney, 2016, Kapucu et al., 2018, Goode et al., 2015). The resourcing of place-based community organisations as part of the proposed framework is a key issue that can be perceived as both a challenge, and an opportunity. The opportunities available to the organisations as part of their involvement in a cross sector collaboration include access to formal emergency training, the building of capacity across a range of skills, and the benefits that relationships with other key stakeholders can bring.

However, Community and Neighbourhood Centres have been historically under resourced in the delivery of their traditional roles within their communities. The participation of the sector as a key stakeholder in this framework will therefore rely on the availability of adequate resourcing to support their ability to sustain service delivery during training and other key commitments. Community organisations receive the majority of their funding through government programs, and are therefore practised in reporting on, and meeting government outputs and acquittals. In terms of accountability, resourcing could therefore be tied to attendance at training, and collaboration meetings, as well as to the development of a Preparation Plan.

Additionally, the experiences of Organisations A and B regarding access to resources to assist with the delivery of preparedness, response and recovery efforts has demonstrated that an absence of funding can also pose a key challenge in future events. The literature has discussed the involvement of non-profit organisations in response efforts following Hurricane Katrina, raising the implications of existing resourcing constraints for non-profits on their ability to fund disaster situations (Stys, 2011). Assistance in the provision of resources to communities during disaster events could be provided through the Council's disaster supply structures. An alternative approach is that of a liaison officer role that acts as a point of contact for non-profit agencies to assist with training, but also with access to resources to support long term recovery (Kapucu et al., 2018).

The provision of resourcing to the place-based community organisations as part of this framework is based on the practicalities of operationalising the building of community disaster resilience. This approach also considers the return on investment that Governments will achieve as communities build their capacity to respond to disasters, creating a more effective disaster response system. (Goode et al., 2015; Cretney, 2016).

7.1.5 Acknowledging the Value of Flexibility, Creativity and Adaptability

The strength of relationships between the stakeholders participating in the cross sector collaborative approach has been discussed consistently as being pivotal to the success of a collaborative framework. A key factor influencing the development of these relationships, will be the ability of the stakeholders to recognise the differences between the sectors in terms of how they operate, and how they can work together on the ground during a disaster event. This issue should be addressed as part of the planning phase of the collaboration, where stakeholders develop a shared understanding of roles and responsibilities.

A significant difference may arise in an approach to the ability to be flexible and adaptable. These characteristics are highlighted in the literature as being critical in responding to crisis conditions, and more significantly as key attributes demonstrated by community place-based organisations in their role as responders, and in recovery, strengthening their decision making capabilities, and increasing an ability to mobilise quickly (Patterson et al., 2010; Stys, 2011; Thornley et al., 2013; Bach et al., 2010; Kendra & Wachtendorf, 2003). The literature review has also discussed the potential conflict between this approach and the traditional command and control approach of the disaster management agencies.

The notion of “command and control” was discussed as part of the interview with the Executive. He commented that he could see “*how control and command does get in the way*”, but felt it was a question of *how* it was used. The cross sector collaborative framework proposed in this study is underpinned by shared understandings, strong relationships, respect for local knowledge and experience. As a key phase of the establishment of the collaboration, the planning process can provide an opportunity for all sectors to gain insight and understanding of how each partner group operates, providing the opportunity to capitalise on the strengths of each sector to improve the efficiency of how the stakeholders will work together during a disaster event.

7.2 SUMMARY OF FINDINGS

This section addresses the three research questions, providing a synopsis of the overall findings, and proposals for future research. A summary of the contributions of the study is presented, and limitations of the study are discussed. Recommendations for policy and practice are outlined, before a final summary is provided.

7.2.1 Research Questions

This study posed three research questions relating to the roles of place-based community organisations in supporting the operationalisation of disaster resilience at the local level. Chapter 2 of this study highlighted a gap in existing government frameworks, strategies and plans regarding how the characteristics of a disaster resilient community can be strengthened, or operationalised in a practical sense. The research methodology was developed to address this gap. A key aim of this study has been to contribute to the existing literature through the development of an alternative approach to activating community disaster resilience at the local level. The findings relevant to each research question are summarised in the following sections.

7.2.2 Research Question One

The first research question related to *how place-based community organisations played a role as part of the flood event in Brisbane in January 2011*. The material from the two case study organisations, presented in Chapter 4, drew upon semi-structured in-depth interviews with three participants who were central to the delivery of the response, recovery and preparedness efforts of both organisations. The two case study organisations offered the opportunity to address this research question from the divergent perspectives of how an established place-based community organisation and an emergent organisation were able to deliver their roles. The interview questions provided each participant the opportunity to describe their experiences

of how they led their communities through the flood crisis and then into recovery, and preparedness, discussing the detail of their roles, as well as their reflections on the challenges and opportunities that influenced those roles.

The three Participants from both community case-study organisations were very keen to tell their stories of the response, recovery and preparation efforts they led at the time of the flood event in January 2011. This research provides an important contribution to the existing literature through providing the opportunity for the two case-study organisations to describe how they delivered their roles, particularly from the perspective of untrained and unprepared communities in responding to a major flood event. This data will be significant in informing policy on how future events can be supported at the local level.

The data provided by the Participants suggested that leadership emerged as a critical role in the efforts of both organisations. Participants reported that following the decision to act, both organisations were able to quickly mobilise the resources that were available within their communities. The Participants from Organisation A described a strategic approach that was clearly supported by collaborative decision making, high capacity volunteers and flexibility, applied to the planning of each stage of their efforts. The establishment of a visible presence at the outset of their response provided them with the ability to gather information on the needs of the flood affected community. The Participants described a systematic approach that facilitated the allocation of resources to address those needs. This work was supported through the management of what the Participants reported as a vast number of volunteers arriving from across the city. The data also indicated the flexibility demonstrated through the shifting of roles from what was required in the response effort, to initiate the recovery phase. Through drawing together a cross section of stakeholders from key community groups, businesses and institutions, the Participants again reported on the strategy applied to this phase. The need to continue to monitor emergent needs of the community, access information from public utilities and government agencies, and to then disseminate this information to their community, were described as critical elements of this role at that time.

The strength of leadership demonstrated by Organisation B was supported by the data through the willingness of the Coordinator, supported by local volunteers to undertake the challenge of initiating an evacuation centre without any prior knowledge of what was required, and with no formal support. This data indicates that this group very quickly began to adapt their roles and their approaches to those roles, to suit the needs of the situation. The evacuation centre was

quickly modified to meet the recovery needs of the community, with the Coordinator reporting the capacity demonstrated by the volunteer group to provide for the needs of the flood affected community. The leadership from this group was particularly evident from the data, in their ability to continue to service the community for a prolonged period through building the networks and relationships that this required, but also in challenging policy makers with the closure of the centre in the absence of the provision of any formal support to continue.

The Participants from both Organisations indicated the provision of social support as a key role throughout the response and recovery phases. In addition to the delivery of essentials, access to professional trauma support and the brokering of assistance from other professional services, the data indicated how the opportunities created by both groups for people to come together to discuss their experiences and to seek assistance, facilitated support between community members, with the Participants reporting the development of long term relationships in some instances. The data from reports on the role played by Organisation A, indicated that addressing the needs of vulnerable and disadvantaged community members was also a critical role for them. The ability to deal sensitively with people who experience disadvantage on a daily basis, known to them through the delivery of their traditional role as an established community organisation, was a significant aspect of the social support they were able to provide as part of the crisis.

Findings from the data also supported the significance of the role of managing the acquisition of and allocation of resources, with the emphasis from the data on the criticality of pre-existing relationships and networks to support the delivery of essentials, equipment and expertise. In addition to responses around the significance of “connection” in relation to a direct question on community disaster resilience, the three case study Participants also identified the encompassing concept of “social capital” as a dominant theme throughout the interviews. This is consistent with the literature. Kima et al (2017) argue that *“disaster recovery studies support the proposition that a community with stronger existing social capital is likely to stimulate active community participation and collective action, which in turn leads to a faster and better recovery”* (p904). Human connection therefore stood out as the major element of social capital influencing community disaster resilience. Participants noted the significance of connections in supporting the long term recovery of flood affected community, and identified community connections as a key element of social capital that had underpinned the delivery of their roles.

The data from the interviews with the three Participants also indicate the critical role of the preparation phase, with both organisations describing the significance of this role as critical for their communities to respond to a future event. The data indicates that these Participants considered a need to better understand their roles as a critical element of this preparation, as well as reflections on key learnings from their experiences in influencing their understanding of, and capacity to adapt their planning for a future event. As the literature currently provides limited research that explores the detail of the roles played by community led response, recovery and preparation efforts, this research provides an important contribution, particularly for insights on the challenges faced by untrained and unprepared communities in responding to a major flood event, and to inform policy on the planning of future events.

7.2.3 Research Question 2

The second research question asked how was the operationalisation of community disaster resilience influenced by the roles played by the place-based community organisations as part of the flood event in Brisbane in 2011?

The findings from the analysis of the data has identified three key roles as significant to influencing the building of community disaster resilience through the efforts of the two case study organisations. These roles are leadership, the ability to access resources through a range of pre-existing relationships, or the building of new relationships, and the significant influence of the role of building community connection.

Chapter 5 undertook a deeper analysis of the case study material, unpacking the data on the roles delivered by the two organisations. This analysis was supported by the concepts of social capital associated with the characteristics of a disaster resilient community (Manyena, 2006; Magis, 2010; Norris et al., 2008; Mayunga, 2007; Maida, 2011; Aldunce et al., 2014). The analysis highlighted how these characteristics influenced and enabled the delivery of the roles played by both case study organisations. The experiences reported by the case study Participants on the challenges they encountered and the opportunities they utilised in the delivery of their roles, provided significant data on how disaster resilience was influenced at the local level through those roles, with these findings discussed below.

Leadership – Building community confidence and trust

The leadership demonstrated by both case study organisations has been revealed through the data as a key role that influenced the activation of community disaster resilience. A critical

outcome was the influence of this role on building the confidence and trust of their communities in their ability to self-organise in the absence of a formal response from disaster agencies.

Organisation A presented their community with a well resourced, visibly organised and systematic approach to identifying and addressing community need, while also modelling a calm authority. The Reports from the Participants described a community that recognised their staging point as the central response area, trusting that information they provided on their needs was being addressed through the allocation of tasks to volunteers. Reports from the Participants indicate the level of support offered to this local leadership from across the community, extending to the other phases of recovery and preparation. They report that this support came from included local volunteers, local businesses and other community organisations. The level of this support described by the Participants, also indicated broad community confidence in the ability of Organisation A to activate collective action and to self-organise. The concepts of leadership and the participation of actively involved community members has been linked to the presence of community organisations (Goodman, et al., 1998). In this instance, the data strongly suggests that the recognition of the leadership demonstrated by this well established community organisation strengthened disaster resilience in this community, with the Participants indicating their confidence that this effort once delivered, could be delivered in a future event.

Similarly, while the effort of Organisation B was initially activated through a request from the Police to open an evacuation centre, the data indicates the leadership demonstrated by the Coordinator to undertake this task. This initial effort was then followed by an ability to adapt the response to address the needs of the community, through the establishment of the recovery centre. The interview data reporting the sustained support of a local volunteer base for over five months, demonstrates the confidence of that group in this recovery effort. Flood affected community members demonstrated their trust in this effort through their continued attendance of the recovery centre over that period. This sense of trust was also evident in the data, particularly through the description of the community's sense that the hub was considered as "a safe place" where they could talk with other flooded community members about their experiences, and to gain the support they needed.

As an emergent community organisation, the recognition of the leadership of this recovery effort became more broadly established through sustained delivery over time. The data supports this recognition through the support Organisation B was able to build through developing new

relationships, and ultimately through the recognition of the State Government in providing funding for the establishment of the community centre.

Putnam (2000) emphasises mutual support, cooperation and trust as key elements of social capital. The data indicates that these characteristics were activated through the leadership of both organisations to activate their community's to respond to the flood crisis, and to manage the challenges they encountered in the absence of any training or preparation.

Accessing Resources – Pre-existing networks and relationships

The process of the development of community disaster resilience involves the utilisation of the resources available within a community, contributing to a community's capacity to respond to crisis (Magis, 2010). Access to resources utilising established networks and relationships with key individuals or businesses can therefore provide a community led response with access to expertise, information and the essentials to meet the needs of the community during a crisis.

As an established place-based community organisation, Organisation A was able to utilise their relationships within the community to access a high capacity volunteer base who possessed the skills to engage sensitively with flooded community members, and to utilise their organisational skills to manage the tasks necessary to meet community need. The analysis of the data from the interview Participants clearly demonstrated the breadth of the relationships across the local community sector, businesses and local institutions that Organisation A were able to call upon to support their effort. As the chair of the local community organisation network, they gained access to resources such as equipment and office space which were readily provided. Established relationships with local businesses and professionals provided expertise to assist with the planning and delivery of the recovery effort, and with the preparation for a future event. Their capacity to access pre-existing relationships also supported community disaster resilience through enabling collective action, demonstrated through organisations working together to solve problems and to respond to the crisis as a group (Patterson et al. 2010). This was evidenced through reports of Organisation A bringing together community groups, cultural organisations, business owners and managers, and representatives from local institutions to plan for the recovery effort and develop a preparation plan for the future.

The significance of pre-existing relationships to support disaster resilience is also made more significant through the analysis of the data on the role that Organisation B was forced to play in building new networks and relationships. The significance of the challenges that organisation faced to resource their community during recovery was highlighted through the data on the

reduction in their ability to access essentials as the sense of crisis diminished across the broader community. As a grassroots, emergent community organisation, the accessing of community capacity through a considerable volunteer base was able to be achieved through existing local relationships within the school community. However, the data highlights that access to resources to meet the needs of flood affected community, striving to restore their lives following the flood, became more difficult over time in the absence of broader networks.

The Coordinator also described the lack of established networks as a major difficulty in accessing information and resources, and reported the need to strengthen this level of resilience through the identification and establishment of strategic relationships. The development of organisational networks and other key relationships resulted in a positive impact on their ability to continue to resource the community. A critical relationship for Organisation B was developed through an approach made by Organisation A. The outcome of this connection was the provision of support through the relationships Organisation A held with key politicians, resulting in a meeting with State Premier who was instrumental in securing their ongoing funding as a community centre. Over time, these newly formed relationships can impact the resilience of this community's ability to resource their response, recovery and preparation efforts in any future event.

Building community connection

The identification of the concept of community connection emerged as a significant theme from the analysis of the data. This concept was raised by all three of the case study Participants, and in the context of its significance as an element of social capital. Linked to the community strengths of social support and a sense of community, community connection is also recognised as a key characteristic of community disaster resilience (Norris et al., 2008; Berkes & Ross, 2013; Goodman et al., 1998; Paton & Johnston, 2001). The significance of the strengthening of community connection to community disaster resilience is also found in the establishment of a broader base for the provision of, and access to support in times of crisis (Norris et al., 2008).

The influence of the roles of the two case study organisations on the building of community connection was identified throughout the interview material through reports of the efforts of both organisations to facilitate opportunities for the broadening and strengthening of social networks. The Participants' descriptions of the staging point established by Organisation A as a "talking shed", and the Recovery Centre operated by Organisation B as a "hub for people",

illustrated the significance that this opportunity created for community to come together to share their experience and to expand their relationships with other community members they may not normally have interacted with.

The data indicates that the relationships developed through this flood crisis did result in an increase in the support that people were able to provide to each other. The data demonstrated the significance of an existing level of connection within the community of Organisation A, with the Participants reporting theirs as a connected community, and as a critical strength that supported their efforts. The strengthening of connections across the community of Organisation B were reflected in the data as supported through relationships with the Recovery Centre, with the data describing how these connections resulted in the establishment of a network of people who were able to provide mutual support across the community. The Coordinator reported that these connections were also accompanied by a change in the attitude of people, where assistance was offered in an approach that respected the wishes and needs of others. The data also indicated that both organisations experienced an increase in volunteers following the crisis, as well as in stronger relationships between their organisations and flooded community members, through connections made during the crisis.

The literature identifies that the ability to deal with adversity is impacted by the level of social support that individuals receive from a range of sources, including family and friends, but also from broader connections within their community (Norris et al, 2008; Berkes & Ross, 2013; Sippel, et al.; 2015). The significance of the strengthening of connections, and the indication of the accompanying increase in the level of social support emerging from the data, indicates that these strengthened connections can provide a critical influence on the resilience of these communities in dealing with any future event, dependant of course on the endurance of those connections over time. However, the continued operation of the two case study organisations in the delivery of their traditional roles in their communities can facilitate the conditions for the sustainability of these connections. Their role in building social capital at the local level will also be significant to the building of new connections as their communities change over time. From the perspective of the operationalisation of community disaster resilience, the data from this study supports the existing literature in indicating that the level of connection within these hazard prone communities can be critical to their capacity to replicate their response, recovery and preparation efforts as part of any future event.

7.2.4 Research Question 3

The third research question asked *how can place-based community organisations play an effective role in the operationalisation of community disaster resilience as part of the disaster management system?* In response to the third research question, the development of a framework to provide a mechanism to operationalise community disaster resilience at the local level was informed by the findings from the review of the literature and the analysis of the data from the interviews with the six Participants. The framework has been developed in response to a gap in policy and practice, where the *National Strategy for Disaster Resilience* (COAG 2011) and in frameworks at other levels of government, lack a practical pathway or mechanism to develop disaster resilience in communities, as set out in their vision. In response to the context of this thesis, the framework is targeted at communities located in hazard prone areas of Brisbane. However, the principles on which the framework has been established are transferable to most locations and government structures.

The findings from the analysis of the interview data with Participants from the two case study organisations indicated that as part of their preparation efforts, they perceived that there was a need to better understand their role and place in the system, and to clarify their roles in community led response efforts. Both organisations reported that they felt that their efforts would have been enhanced through relationships and better communication with disaster management agencies. Their perspectives on the likelihood that they would need to deliver their roles again, influenced their view that the establishment of a working relationship with these agencies was something they perceived as important to their preparation efforts.

Following her report of the work she was involved in to support the strengthening of local leadership following the flood, the Recovery Officer also expressed her clear support for the integration of place-based community organisations as part of the system. Significantly, the Recovery Officer reported that this should be developed with the support from Brisbane City Council and State Government agencies. The data from the interview with the Executive also indicated his support for a role for place-based community organisations, but with the expression of a more cautious approach, based on some previous experiences in working with community organisations. The Executive expressed similar support, suggesting that locally led responses could best be achieved by local councils bringing organisations together. The findings from the interviews with the two Brisbane City Council Participants had indicated their acknowledgement of a need for communities to lead response efforts. Significantly, this

acknowledgement was supported on the basis of a recognition of the limitations of Council's resources to respond to a significant event.

The literature review highlighted international trends toward a recognition of the limitations of emergency management systems (Bach et al., 2010; Waugh & Streib, 2006; Simo & Bies, 2007; Kapucu & Garayev, 2012). This recognition was accompanied by a policy shift with a focus on the necessity to provide support to locally organised efforts, through building the capacity of communities to self-organise (Simo & Bies, 2007; Harris et al., 2018; Bach et al., 2010; Berkes & Ross, 2013; Chen et al., 2006). A key feature of this approach was the building of capacity at the local level through the support of a range of sectors working together with the community. Findings from the research on community based disaster management approaches also describe the utilisation of collaborative approaches to building the capacity of local responses, where non-profit organisations are integrated as a stakeholder into the emergency management system (Kapucu et al., 2018; Waugh & Sylves, 2002). To support the utilisation of this approach to working with communities, the literature on the development and operation of cross sector collaborations then provided critical insights on the opportunities and challenges of this model, as it could be applied as a key operational feature of the framework proposed in this study (Bryson et al., 2006; Simo & Bies, 2007).

The key role of facilitating the cross sector collaboration, central to the success of the framework, was supported through key pieces of legislation that assign the critical role of engaging with the community to local government as part of their disaster management responsibilities, as well as the strong legislative relationship between local government with the State (Queensland State Disaster Management Plan, 2018; City of Brisbane Act 2010). The significance of this facilitation role to the formation and operation of a cross sector collaborative approach was emphasised in the literature in terms of the provision of legitimacy this role could bring to the collaboration as an operational entity, influencing their ability to recruit the key stakeholders to participate as part of the collaboration and to attract funding and resources. (Bryson et al., 2006).

However, a key theme emanating from the interview data with the two Council participants had highlighted their perceptions of the challenge to their ability to engage effectively with the community, due to the size of the city. To address this challenge, the framework proposes the utilisation of purposeful engagement through identifying and targeting only those place-based community organisations operating in the hazard prone areas of the city. This is a significant

approach that provides Council with a workable scope for the engagement process, as well as providing a strategic opportunity to work with those communities where their involvement will have the most impact.

The identification from the literature of three key principles, consistent with those supporting community based disaster management models internationally, were considered to be critical to the success of the framework proposed in this study. The first of these, community and stakeholder engagement, is crucial to supporting the cross sector collaboration from inception to implementation of their goals. Engaging key stakeholders to gain their initial involvement in the establishment of the collaborative process will be a pivotal point to securing the involvement of the community organisations and the State agencies, both primary stakeholders. As well as highlighting the strengths of these two groups as stakeholders in a collaborative process, a key component of the engagement role will be to support the early identification of any key issues that may create challenges to the building of strong working relationships between them.

This will be important to the building of trust between stakeholders, particularly as part of the establishment phase. An indication of an underlying lack of confidence in the disaster management system, identified through the data from the Participants from the community organisations, was also reflected in the data from the interview with the Executive, and to some extent from the data from Council Participants on their expressions of the challenges they perceived to building operational relationships with community organisations. An intensive engagement process will determine whether these perceptions provided by the Participants in this study are shared more broadly by the other community organisations in the targeted areas, and with staff in the disaster management system. Ongoing engagement as part of the cross sector collaborative process will therefore form an important aspect of the sustainability of stronger relationships between stakeholders.

Engagement with other key stakeholder groups, including academic institutions and volunteer management organisations will also be critical to their inclusion as part of the collaboration. It is assumed that Council will already have a relationships with a key volunteer management organisation as part of its preparation planning and from its experience with the 2011 flood event. Community engagement, one of most critical features of this framework and of the role of Council, can be enhanced through the support of the community organisations, developing

strong relationships with communities in hazard prone areas, and creating vertical relationships with the community and the disaster management system.

These second key principle supporting the framework, empowering communities to self-organise, was found to be a key component of international models of community based management (Chen et al., 2006; Wells et al., 2013; Simo & Bies, 2007; Kapucu & Garayev, 2012; Stys, 2011; Coles & Buckle, 2004; Patterson et al., 2010; Harris et al., 2018). The support of the cross sector collaborative approach to achieve this goal, was described throughout this literature as a vehicle to the provision of practical support to strengthen disaster resilience at the community level, including the delivery of formal training programs that capitalise on the existing capacity and experience of communities who have experienced and responded to disaster events, and the building of working relationships between a range of sectors (Kapucu & Garayev, 2012) .

The third principle of significance to supporting the proposed framework is the sustainability of a culture of awareness of disaster risk and preparation arrangements amongst the community at the local level. Concern around the weakening of the capacity that was built through the participation of community organisations in the 2011 flood event over time, was a critical issue raised by the Recovery Officer, and in the literature (Chen et al., 2006; Paton & Johnston, 2001). The framework proposed in this study capitalises on the integration of the place-based community organisations which, through the delivery of their traditional roles in working with their communities, can continue to strengthen the characteristics of social capital that support community disaster resilience, and can also support the other stakeholders in the collaboration to involve communities at the local level in the development of disaster planning, and in training scenarios. Ongoing community engagement with these communities, facilitated through the community organisations, can also utilise local events to maintain awareness of disaster planning as front of mind to the community.

The critical outcome of this framework is as an instrument to enable the operationalisation of community disaster resilience at the local level, and with the integration of place-based community organisations as stakeholders in the emergency management system. Other key outcomes that can be achieved through the framework include the development of clearly defined roles for community led efforts as a key operational issue, and practical support and capacity building for communities located in hazard prone areas in preparation for future events. In addressing the gap in policy and practice identified in the NSDR (2011) and other

key government frameworks, a key outcome of the integration of place-based community organisations as part of the disaster management system will be to formalise and legitimise the role of the community sector, and by extension, the community, as a partner in the building of the characteristics associated with a disaster resilient community.

7.3 CONTRIBUTIONS OF THE STUDY

This thesis makes a number of significant contributions to the field of community disaster resilience and the role of place-based community organisations in supporting its activation at a local level. A review of the literature identified a gap in policy and practice at the national level in the *National Strategy for Disaster Resilience* (COAG 2011), and in frameworks at other levels of government, in relation to the absence of any mechanism to operationalise the vision for community disaster resilience outlined in those documents. The Strategy also articulated only a limited role for community organisations in supporting the strengthening of community disaster resilience.

A comprehensive review of the literature documented the characteristics of social capital that can support community disaster resilience, including the existence and support of community organisations. This review also highlighted limited research currently available that explores the roles of communities who have self-organised a response, recovery and preparation effort in the absence of a formal response from disaster management agencies. This study has explored the roles delivered by an established place-based community organisation, as well as that of an organisation that emerged from the flood crisis in Brisbane in 2011, providing important new knowledge on the components of those roles, as well as identifying the influence that the characteristics of community disaster resilience had in supporting their delivery. The study highlights the importance of a number of key elements of social capital that enabled self-organisation at the local level by untrained and unprepared communities. The delivery of their efforts were also significant in being delivered by communities who were unprepared, and had no training in disaster management response. However, as communities change and evolve, the sustainability of social capital and community capacity that can support the replication of their ability to self organise in any future event, is not guaranteed. The findings of this study will inform policy and practice through providing a deeper understanding of the role that place-based community organisations can play in supporting the key strengths that need to be developed and sustained in communities in hazard prone areas to operationalise disaster resilience at the local level.

This study has also developed a framework that addresses the identified policy gap, through providing a pathway for key stakeholders in the disaster management system to deliver the vision of a disaster resilient community through the integration of place-based community organisations as a stakeholder within the system. The findings from the research have identified a recognition internationally of the limitations of the disaster management system to respond to the increasing number and severity of disasters, accompanied by a policy shift with a focus on the necessity to provide support to locally organised efforts, through building the capacity of communities to self-organise (Simo & Bies, 2007; Harris et al., 2018; Bach et al., 2010; Berkes & Ross, 2013; Chen et al., 2006). Community managed disaster resilience models, incorporating a cross sector approach to build the capacity of communities in hazard prone areas, and with the assistance of community organisations integrated into the system, has also influenced the development of the framework. The recognition of the limitations of the system were also reflected through the data from the interviews with the Participants in this study. The framework has also utilised that data, together with the literature on a cross sectoral approach, to address the challenges identified in the incorporation of community organisations as a key stakeholder within the system, and to empower communities to be able to self-organise in the absence of assistance from outside.

The findings of this study also highlight the significance of strong working relationships between stakeholders in the system that can be facilitated through the implementation of the framework. The study also highlights the importance of engaging communities, and suggests that this engagement process can be supported by the community organisations utilising their existing relationships with their communities. This aspect of the framework provides a critical link to communities living in hazard prone areas and importantly, supports a practical pathway to developing a sustainable culture of awareness of local disaster risk and preparation arrangements.

This research has highlighted the significance of the role that place-based community organisations can play in the operationalisation of community disaster resilience, and provided a practical and viable framework to activate the vision of disaster resilience outlined in policy frameworks in Australia. While this study had a focus on the flood event in Brisbane in January 2011, and has developed the framework to the statutory context of the city of Brisbane, this framework can be adapted to suit other locations and governance models. The increase in disasters across Australia underlines the urgency in implementing policy that will activate the national vision for disaster resilient communities.

7.4 LIMITATIONS OF THE STUDY

While this study has enhanced existing knowledge in this critical area, a number of limitations exist. Firstly, as an estimate, there would have been only around five place-based community organisations who led their community's efforts in response and recovery as part of the January 2011 flood event in Brisbane. Locating participants who were involved with these organisations during the event was challenging, particularly given that people have moved to different roles over time. It was also only possible to locate and contact participants through professional networks. In spite of the lapse of time since the flood event, all six participants were interested and keen to take part in this study. However, it is acknowledged that the sample size is small. It was also not possible to include participants who are currently employed by Organisation A, who declined to be involved in the research.

From a methodological perspective, another limitation is presented through the utilisation of a case study approach. While this supported the collection of in-depth data from the participants, it also posed limitations on the ability of the results to be generalised across other locations. It is however, considered that the sample size does allow for theoretical generalisation, as reflected in the reported results and the findings from the data. Additionally, while the case study organisations are located in Brisbane, it is considered that the findings may be able to be generalised to other geographic locations across Australia and internationally where place-based community organisations are operating in their communities.

7.5 SUGGESTIONS FOR FUTURE RESEARCH

This study has increased the body of knowledge regarding how the roles played by place-based community organisations in leading response, recovery and preparedness efforts can influence the operationalisation of community disaster resilience at the local level. A framework that provides a pathway for the integration of place-based community organisations as a key stakeholder in the disaster management system has detailed how this can support communities living in hazard prone areas to self-organise their efforts, and to develop a culture of disaster awareness and preparation. While the aims of this research have been addressed, an opportunity for future research could explore changes in the level of social capital, that may have occurred in the two communities of the case study organisations over time since 2011, based on the findings of this research,. As a critical aspect of the strengthening of community disaster resilience, an understanding of current levels of social capital, supported by theories around any changes, would be particularly useful in understanding how communities can maintain those characteristics that have been identified as supporting disaster resilience. Given the

increase in disaster events since 2011, this is particularly relevant to the operationalisation of community resilience at the local level. Of course, an understanding of different natural disaster contexts (cyclones, bushfire, heatwaves) is also an important next step.

7.6 CONCLUSION

This study makes a number of significant contributions to the field of community disaster resilience. An exploration of the key roles that place-based community organisations have played in the response, recovery and preparedness efforts following the 2011 flood event in Brisbane has provided data on how those roles were delivered, enhancing existing research on community led responses, through an in-depth exploration of these roles. Of significance to the contribution of this study to existing research, are the findings on how that delivery was influenced through the characteristics of social capital that existed in their communities, and the importance of strengthening those characteristics to support responses to future events.

This study has been informed through a qualitative methodological approach that has utilised two distinct methods aimed at gathering data, data analysis, and framework development. A case study approach utilised two place-based community organisations who led community based responses to the flood event in Brisbane in January 2011. A series of semi-structured, in-depth interviews were undertaken with participants who were central to the response, recovery and preparation efforts led by the two organisations, as well as with participants representing the perspectives of State government and local government disaster management agencies. The research has presented data from those interviews with participants from all three sectors. An extensive literature review has informed a set of characteristics and principles related to operationalising the strengthening of disaster resilient communities. Additionally, the insights from the literature were used to support the analysis of the data, and to identify and understand the themes that supported the development of the framework.

Through the framework, this study has suggested a departure from a traditional “top down” approach to disaster resilience, presenting a crucial opportunity to strengthen the capacity of the disaster management system to respond to an increasing frequency of disaster events, through the empowerment of communities living in hazard prone areas, and assisted through the relationships held by place-based community organisations with their communities. The framework has considered the integration of place-based community organisations as stakeholders in the disaster management system at an appropriate level, utilising a cross sectoral approach to support their roles at the local level, and to enhance relationships between

the stakeholders in the system. The framework presented in this study has provided a significant contribution to the research through providing a mechanism to activate the vision of community disaster resilience outlined in key national strategies and frameworks at different levels of government in Australia.

8: REFERENCES

- Adams, K. *Brisbane Times* article. MUD ARMY. Updated January 14, 2016 — 1.11pm first published January 13, 2016—10.21am. Available at:
<https://www.brisbanetimes.com.au/national/queensland/queensland-floods-2011-mud-army-shows-city-spirit-20160113-gm4q0r.html>.
- Adger, W.N., Hughes, T.P., Folke, C., Carpenter, S.R., Rockström, J. (2005). Social-Ecological Resilience to Coastal Disasters. *Science* 309(5737), 1036-1039. Available at: DOI: 10.1126/science.1112122
- Aldrich, D. P. (2012). *Building Resilience: Social Capital in Post-Disaster Recovery*. University of Chicago Press.
- Aldunce, P., Beilin, R., Handmer, J., Howden, M. (2014). Framing disaster resilience The implications of the diverse conceptualisations of “bouncing back”. *Disaster Prevention and Management* Vol. 23 No. 3, 2014 pp. 252-270 r Emerald Group Publishing Limited 0965-3562 DOI 10.1108/DPM-07-2013-0130. Available at www.emeraldinsight.com/0965-3562.htm
- Anderson, L., O’Loughlin, P., Salt, A. (2001). Community leadership programs in New South Wales. UTS Shopfront, for the Strengthening Communities Unit. NSW: NSW Premier’s Department.
- Arbon, Paul. Developing a model and tool to measure community disaster resilience [online]. *Australian Journal of Emergency Management*, The, Vol. 29, No. 4, Oct 2014: 12-16. Availability: <<https://search.informit-com-au.ezp01.library.qut.edu.au/documentSummary;dn=682982745103928;res=IELAPA>> ISSN: 1324-1540. [cited 05 Aug 19].
- Australian Council of Social Services. The Community Sector’s Role in Building Disaster Resilient Communities. *Six steps to resilience*. ACOSS Resilience. Available at:
<http://resilience.acoss.org.au/the-six-steps/introduction/the-community-sectors=role-in-building-disaster-resilient-communities>
- Australian Government. Bureau of Meteorology. Climate Glossary
<http://www.bom.gov.au/climate/glossary/>
- Australian Local Government Association <https://alga.asn.au/facts-and-figures/>
- Australian Neighbourhood Centres and Houses Association (ANHCA). Strengthening Local Communities: Neighbourhood Houses & Centres: Who we are and What we do. (2011), (2, 14).
- Australian Red Cross. 21 October 2014. National Disaster Resilience Roundtable Report, Beyond the Blanket: The role of not-for-profits and non-traditional stakeholders in emergency management, 2nd National Disaster Resilience Roundtable Repo. Available at:
https://www.redcross.org.au/getmedia/e93ca7b3-efa5-4874-b75d-8b62a7fa908e/2014-Disaster-Resilience-Roundtable-report_1.pdf.aspx

- Bach, R., Doran, R., Gibb, L., Kaufman, D., Settle, K. *Policy Changes in Supporting Community Resilience*, presented at the London Workshop of the Multinational Community Resilience Working Group, November 4-5, 2010. Available at: https://www.fema.gov/media-library-data/20130726-1752-25045-8947/policy_challenges_in_supporting_community_resilience_london_2010for_release122210.pdf
- Berkes, F., Ross, H. (2013). Community Resilience: Toward an Integrated Approach, *Society & Natural Resources*, 26:1, 5-20, DOI: 10.1080/08941920.2012.736605
- Boyatzis, R.E.; 1998; *Transforming Qualitative Information: Thematic Analysis and Code Development*; Sage Publications Inc.
- Braun, V., Clarke, V. (2006). Using Thematic Analysis in Psychology. *Qualitative Research in Psychology*. Volume 3, 2006 – Issue 2.
- Braun, V., Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*. Volume 11, 2019 – Issue 4. Available at: <https://www.tandfonline.com/doi/full/10.1080/2159676X.2019.1628806>
- Brisbane City Council. Brisbane's Floodsmart Future Strategy 2012-2031; 2012. Available at <https://www.brisbane.qld.gov.au/community-and-safety/community-safety/disasters-and-emergencies/be-prepared/flooding-in-brisbane/flood-strategy/brisbanes-floodsmart-future-strategy>
- Brisbane City Council's Disaster Management Plan (Brisbane City Council 2018). Available at <https://www.brisbane.qld.gov.au/community-and-safety/community-safety/disasters-and-emergencies/disaster-management-plans>
- Brisbane City Council Key Economic Facts. Available at: <https://www.brisbane.qld.gov.au/about-council/governance-and-strategy/business-in-brisbane/growing-brisbanes-economy/brisbanes-key-economic-facts>
- Brisbane City Council Local Disaster Coordinating Centre. Brisbane River Flooding Disaster, January 2011, Concept for Recovery. (25 January 2011) (3). Available at http://www.floodcommission.qld.gov.au/_data/assets/file/0005/6458/BCC_Attachment_28_-_Concept_for_Recovery.pdf
- Brisbane City Council Ward Profile – Gabba Ward (Queensland Government Statistician's Office Queensland Treasury <http://www.qgso.qld.gov.au> - downloaded 21 June 2019)
- Bryson, J.M., Crosby, B.C., Stone, M.M. (2006). The Design and Implementation of Cross-Sector Collaborations: Propositions from the Literature; *Public Administration Review*, 66(SUPPL. 1), 44-55. <https://doi.org/10.1111/j.1540-6210.2006.00665.x>
- Chamlee-Wright, E. and Storr, V. H. (2011), Social capital as collective narratives and post-disaster community recovery. *The Sociological Review*, 59: 266–282. doi:10.1111/j.1467-954X.2011.02008.x

Chen, L., Liu, Y., Chan, K., (2006). Integrated Community-Based Disaster Management Program in Taiwan: A Case Study of Shang-An Village. *Natural Hazards* (2006) 37:209–223 Springer 2006 DOI 10.1007/s11069-005-4669-5.

Climate Council of Australia Limited (2017); *Cranking Up The Intensity: Climate Change And Extreme Weather Events*; p. iii

Cohen, S., Underwood, L. G., & Gottlieb, B. H. (Eds.). (2000). Social support measurement and intervention: A guide for health and social scientists. New York, NY, US: Oxford University Press. <http://dx.doi.org/10.1093/med:psych/9780195126709.001.0001>

Coles, Eve and Buckle, Philip. Developing Community Resilience as a Foundation for Effective Disaster Recovery [online]. *Australian Journal of Emergency Management, The*, Vol. 19, No. 4, Nov 2004: 6-15.
Availability: <<https://search.informit.com.au/documentSummary;dn=375435145094637;res=IELHSS>> ISSN: 1324-1540. [cited 05 Aug 19].

Council of Australian Governments, (February 2011), National Strategy for Disaster Resilience – Building the Resilience of our Nation to Disasters.

Cretney, R.M. (2016) "Local responses to disaster: The value of community led post disaster response action in a resilience framework", *Disaster Prevention and Management*, Vol. 25 Issue: 1, pp.27-40. available from: <https://doi.org/10.1108/DPM-02-2015-0043>.

Cutter, S.L., Barnes, L. Bertr, M., Burton, C., Evans, E., Tate, E., Webb, J. (2008). A place-based model for understanding community resilience to natural disasters. *Global Environmental Change*. Volume 18. Issue 4, October 2008. Pages 598-606. Available at: <https://www.sciencedirect.com/science/article/abs/pii/S0959378008000666>

Dynes, R.R., (2002), Disaster Research Center Preliminary Paper #327 The Importance Of Social Capital In Disaster Response. Available from: <http://udspace.udel.edu/handle/19716/292>

Ehrich, L.C., Creyton, M. (2008); *Understanding community leadership: Insights from a community leader* in ALA 48th Annual National Conference 2008, 30 October – 1 November 2008; p. 3 Fremantle, WA. Available from: <https://eprints.qut.edu.au/17132/>.

Engle, N.L. (2011). Adaptive capacity and its assessment. *Global Environmental Change* 21 (2011) 647–656. 0959-3780/\$ – see front matter 2011 Elsevier Ltd. All rights reserved.
doi:10.1016/j.gloenvcha.2011.01.019. Available at: <https://pdf.sciencedirectassets.com/27>

Florin, P., & Wandersman, A. (1990). An introduction to citizen participation, voluntary organizations, and community development: Insights for empowerment through research. *American Journal of Community Psychology*, 18(1), 41-54. Available from: <http://dx.doi.org/10.1007/BF00922688>

- Folke, C. (2006). Resilience: The emergence of a perspective for social–ecological systems analyses. *Global Environmental Change* 16 (2006) 253–267. Available from: <https://pdf.sciencedirectassets.com>
- Gallopín, G.C. (2005). Linkages between vulnerability, resilience, and adaptive capacity. *Global Environmental Change* 16 (2006) 293–303. Available from: <https://pdf.sciencedirectassets.com>
- Goode, N., McArdle, D., Archer, F., Salmon, P., Spencer, C. Characteristics of a disaster resilient Victoria: Consensus from those involved in emergency management activities [online]. *Australian Journal of Emergency Management, The*, Vol. 30, No. 3, Jul 2015: 42-47.
Availability: <<https://search.informit.com.au/documentSummary;dn=365601659472873;res=IELAPA>> ISSN: 1324-1540.
- Goodman, R.M., Speers, M.A., McLeroy, K., Fawcett, S., Kegler, M., Parker, E., Smith, S.R., Sterling, T.D., Wallerstein, N. (1998). Identifying and Defining the Dimensions of Community Capacity to Provide a Basis for Measurement. *Health Education & Behavior*, Vol. 25 (3): 258-278 (June 1998) © 1998 by SOPHE. Available at: <https://journals-sagepub-com.ezp01.library.qut.edu.au/doi/pdf/10.1177/109019819802500303>
- Harris, C., McCarthy, K., Liang Liu, E., Klein, K., Swienton, R., Prins, P., Waltz, T., (2018). Expanding Understanding of Response Roles: An Examination of Immediate and First Responders in the United States. *Int J Environ Res Public Health*. 2018 Mar; 15(3): 534. Published online 2018 Mar 16. Available from: doi: [10.3390/ijerph15030534](https://doi.org/10.3390/ijerph15030534).
- Holling C.S., (1973) Resilience and Stability of Ecological Systems; *Annual Review of Ecology and Systematics*, Vol. 4:1, (1-23). Available from: <https://www.annualreviews.org/doi/10.1146/annurev.es.04.110173.000245>
- Kapucu, N. (2007). Non-Profit response to catastrophic disasters, *Disaster Prevention and Management*, Vol. 16 No.4, pp. 551-561. <https://doi-org.ezp01.library.qut.edu.au/10.1108/09653560710817039>
- Kapucu, N. (2012). Disaster Resilience and Adaptive Capacity in Central Florida, US, and in Eastern Marmara Region, Turkey. *Journal of Comparative Policy Analysis: Research and Practice*. 14. 202-216. Available from: <https://doi.org/10.1080/13876988.2012.687620>
- Kapucu, N., Garayev, V. (2012). Designing, Managing, and Sustaining Functionally Collaborative Emergency Management Networks. *The American Review of Public Administration* 43(3) 312–330 © The Author(s) 2012 Reprints and permissions: sagepub.com/journalsPermissions.nav DOI: 10.1177/0275074012444719 arp.sagepub.com
- Kapucu, N., Garayev, V. (2011). Collaborative Decision-Making in Emergency and Disaster Management. *International Journal of Public Administration* Volume 34, 2011 Issue 6 Pages 366-375. Published online: 18 May, 2011. Available from: <https://doi-org.ezp01.library.qut.edu.au/10.1080/01900692.2011.561477>

- Kapucu, N., Yuldashev, F., Feldheim, M.A. (2018). "Nonprofit Organizations in Disaster Response and Management: A Network Analysis," *Journal of Economics and Financial Analysis*, Tripal Publishing House, vol. 2(1), pages 69-98.
- Karger, H., Owen, J., van de Graaff, S. (2012). Governance and disaster management: the governmental and community response to hurricane Katrina and the Victorian bushfires. *Social Development Issues: Alternative Approaches to Global Human Needs*(Vol. 34, Issue 3.). Lyceum Books
- Kendra, J.M., Wachtendorf, T. (2003). Elements of resilience after the World Trade Center disaster: Reconstituting New York City's Emergency Operations Center. *Disasters*. Volume 27, Issue. 1 March 2003. Pages 37-53. <https://doi-org.ezp01.library.qut.edu.au/10.1111/1467-7717.00218>
- Kenny, C.M., Phibbs, S. (2014). A Māori love story: Community-led disaster. *International Journal of Disaster Risk Reduction* 14 (2015) 46–55. Available at <https://pdf.sciencedirectassets.com/>
- Kim, Y.C., Kang, J. (2010). Communication, neighbourhood belonging and household hurricane preparedness; *Disasters*, vol.34, no 2, (470-488). Available from: <https://doi.org/10.1111/j.1467-7717.2009.01138.x>
- Kima, C., Nakanishib, H., Blackmanc, D., Freyensa, B., Benson, A.M. International High-Performance Built Environment Conference – A Sustainable Built Environment Conference 2016 Series (SBE16), iHBE 2016 The effect of social capital on community co-production: Towards community-oriented development in post-disaster recovery. (904).
- Kusumasari, B. (2012). Network organisation in supporting post disaster management in Indonesia; *International Journal of Emergency Services*, Vol. 1 issue: 1, pp.71-85, available from: <https://doi.org/10.1108/20470891211239326>
- Liamputtong, P. (2007). Researching the Vulnerable. DOI: <https://dx-doi-org.ezp01.library.qut.edu.au/10.4135/9781849209861>
- Longstaff, P. (2005). Security, Resilience, and Communication in Unpredictable Environments Such as Terrorism, Natural Disasters, and Complex Technology. Harvard University.
- Lord, R.G., Maher, K.J. (1993). *Leadership and Information Processing : Linking Perceptions and Performance* 1st edition. Published by Routledge (1993).
- Magis, K. (2010). Community Resilience: An Indicator of Social Sustainability, *Society & Natural Resources*, 23:5, 401-416, DOI: [10.1080/08941920903305674](https://doi.org/10.1080/08941920903305674)
- Maguire, B., Hagan, P. (2007). Disasters and Communities: understanding social resilience. *The Australian Journal of Emergency Management*, Vol.22 No. 2, May, 2007.
- Maida, C.A. (ed) (2011). Sustainability, Local Knowledge, and the Bioregion (Introduction). *Sustainability and Communities of Place*. Published by Berghahn Books.
- Manyena, S.B., *The Concept of Resilience Revisited*; *Disasters*, 2006, 30(4): 433–450. © The Author(s). Journal compilation © Overseas Development Institute, 2006. Published by

Blackwell Publishing, 9600 Garsington Road, Oxford, OX4 2DQ, UK and 350 Main Street, Malden, MA 02148, USA

- Mayunga, J.S. (2007). Understanding and Applying the Concept of Community Disaster Resilience: A capital-based approach Joseph S. Mayunga Department of Landscape Architecture and Urban Planning, Hazard Reduction & Recovery Center, Texas A&M University, College Station, TX, 77843-3137, USA
- Minichiello, V. (1990). In-depth Interviewing: Researching People. Longman Cheshire. 05827 12726, 9780582712720
- Murphy, B.L. (2007) Locating social capital in resilient community-level emergency management. *Natural Hazards* 41. (297, 301), DOI: : [10.1007/s11069-006-9037-6](https://doi.org/10.1007/s11069-006-9037-6)
- Norris, F.H., Stevens, S.P., Pfefferbaum, B., Wyche, K.F., Pfefferbaum, R.L. (2008). Community Resilience as a Metaphor, Theory, Set of Capacities, and Strategy for Disaster Readiness. *American Journal of Community Psychology* 41(1):127-150
- Paton, D., Johnston, D. (2001). Disasters and communities: vulnerability, resilience and preparedness. *Disaster Prevention and Management: An International Journal* 10(4):270-277. available from: <https://doi.org/10.1108/EUM0000000005930>.
- Patterson, O., Weil, F., Patel, K. The Role of Community in Disaster Response: Conceptual Models; (p129) (p137/138). *Popul Res Policy Rev* (2010) 29:127–141 Available from: <https://doi.org/10.1007/s11113-009-9133-x>
- Plough, A.L., Chandra, A. (2015). What Hurricane Katrina Taught Us About Community Resilience. Available at: <https://www.rand.org/blog/2015/09/what-hurricane-katrina-taught-us-about-community-resilience.html>
- Putnam, R.D. (2000). *Bowling Alone: The Collapse and Revival of American Community*. Simon & Schuster; New York.
- Putnam, R. (1993). The Prosperous Community: Social Capital and Public Life. *The American Prospect* [Internet]. 1993;(13) :35-42. Available from: <https://prospect.org/article/prosperous-community-social-capital-and-public-life>
- Queensland State Government. City of Brisbane Act 2010
- Queensland State Government's Disaster Management Plan. Prepared by the Queensland Disaster Management Committee (Queensland State Government 2018). Available from: <https://www.disaster.qld.gov.au/cdmp/Documents/Queensland-State-Disaster-Management-Plan.pdf>.
- Redshaw, S., Ingham, V., Hicks, J., Millynn, J. (2017) *Emergency preparedness through community sector engagement in the Blue Mountains*; *Australian Journal of Emergency Management*; Volume 32, No. 2, April 2017; (pp35 – 40)
- Rooney, D. (2011). Centres 'Down Under': mapping Australia's neighbourhood Centres and learning, *Australian Journal of Adult Learning*, Volume 51 (2), 203-255. Scottish Community Alliance (2011) Community Anchor Org

- Sarachik, E.S., Cane, M.A. The El Nino-Southern Oscillation Phenomenon. Publisher Cambridge University Press. Date 18-02-2010
- Shaw. R. (Kyoto University), Ishiwatari, M., Arnold, M. (World Bank). Prepared by Ikeda. M., Asian Disaster Reduction Center GFDRR, World Bank. knowledge Note 2-1: Cluster 2: Nonstructural Measures – Community-based Disaster Risk Management. Available at:
- Simo, G., Bies, A.L., (2007). The Role of Nonprofits in Disaster Response: An Expanded Model of Cross-Sector Collaboration. Public Administration Review. Volume 67, Issue s. Pages: 5-210. December 2007. Available at: <https://onlinelibrary-wiley-com.ezp01.library.qut.edu.au/doi/full/10.1111/j.1540-6210.2007.00821.x>
- Simons, H. (2015). Interpret in context: Generalizing from the single case in evaluation 2015, Vol. 21(2) 173–188 © The Author(s) 2015 Reprints and permissions: sagepub.co.uk/journalsPermissions.nav DOI: 10.1177/1356389015577512 evi.sagepub.com
- Sinclair Knight Mertz SKM for SEQWater; 11 March 2011; January 2011 Flood Event: Report on the operation of Somerset Dam and Wivenhoe Dam. Review of Hydrological Issues; pii. Available from: http://www.floodcommission.qld.gov.au/_data/assets/file/0020/3944/001_006_0264_Seqwater_Submission_Vol_5.pdf
- Singh-Peterson. L., Salmon. P., Baldwin. C., Goode. N. Deconstructing the concept of shared responsibility for disaster resilience: a Sunshine Coast case study. Nat Hazards (2015) 79:755–774 DOI 10.1007/s11069-015-1871-y
- Sippel, L. M., Pietrzak, R.H., Charney, D.S., Mayes, L.C., Southwick, S.M., (2015). How does social support enhance resilience in the trauma-exposed individual?; Copyright © 2015 by the author(s). Published here under license by the Resilience Alliance. How does social support enhance resilience in the trauma-exposed individual? Ecology and Society 20(4):10. <http://dx.doi.org/10.5751/ES-07832-200410>.
- Stys, J.J., Strategic Decision Associates; January 17, 2011; Non-Profit Involvement in Disaster Response and Recovery Prepared for the Center for Law, Environment, Adaptation and Resources (CLEAR) at the University of North Carolina School of Law
- Thornley, L., Ball, J., Signal, L., Lawson Te-Aho, K., Rawson, E. (2013) Building Community Resilience: Learning from the Canterbury Earthquakes. Research Report. March 2013. New Zealand. 27. Available from: <http://www.communityresearch.org.nz/research/building-community-resilience-learning-from-the-canterbury-earthquakes/>
- Titz, A., Cannon, T., Kruger, F.; Uncovering ‘Community’: Challenging an Elusive Concept 2018. Societies, ISSN: 2075-4698 (Print) Publisher: MDPI AG. Societies. Received: 1 August 2018; Accepted: 28 August 2018; Published: 31 August 2018; 8(3):71 DOI 10.3390/soc8030071 <https://doaj.org/article/839c00a72c354627a002a51525770e3e>
- Troy, D.A., Carson, A., Vanderbeek, A., Hutton, A. (2007). Enhancing community-based disaster preparedness with information technology. doi:10.1111/j.0361-3666.2007.01032.x Available at: <https://onlinelibrary-wiley-com.ezp01.library.qut.edu.au/doi/pdf/10.1111/j.1467-7717.2007.01032.x>

- United Nations Office for Disaster Risk Reduction (2005). *Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters*. Available from: <https://www.unisdr.org/we/inform/publications/1037>
- United Nations Office for Disaster Risk Reduction, (2015) *Sendai Framework for Disaster Reduction 2015-2030*.
Available from: https://www.preventionweb.net/files/43291_sendaiframeworkfordrren.pdf
- Van Dijk, AIJM., Beck, HE., Crosbie, RS., de Jeu, RAM., Liu, YY., Podger, GM., Timbal, B., Viney, NR. The Millennium Drought in Southeast Australia (2001-2009): Natural and Human Causes and Implications for water resources, ecosystems, economy and society. First Published 6 February 2013. Available at: <https://doi.org/10.1002/wrcr.20123>
- Walters, P. (2015). The problem of community resilience in two flooded cities: Dhaka 1998 and Brisbane 2011. *Habitat International*, 50 51-56. doi:10.1016/j.habitatint.2015.08.004
- Waugh Jr. W.L., Streib. G. Georgia State University Collaboration and Leadership for Effective Emergency Management. *Public Administration Review*. Volume 66 Issue s1. December 2006 (131-140) Available at: <https://doi.org/10.1111/j.1540-6210.2006.00673.x>
- Waugh, Jr. W.L., Sylves, R.T. Organising the War on Terrorism. *Public Administration Review*. Volume 62 Special Issue. September 2002 (145-153)
- Wells, K.B., Tang, J., Lizaola, E., Jones, F., Brown, A., Stayton, A., Williams, M., Chandra, A., Fogleman, S., Plough, A. (2013). Community Resilience and Public Health Practice Applying Community Engagement to Disaster Planning: Developing the Vision and Design for the Los Angeles County Community Disaster Resilience Initiative. *American Journal of Public Health*. July 2013, Vol 103, No. 7
- West End Community House on behalf of Benarrawa Community Development Association, Sherwood Neighbourhood Centre, Acacia Ridge Community Support Inc, Yeronga Flood Recovery Centre, Communify and New Farm Neighbourhood Centre. 2011. Strengthening people and places: the role and value of community and neighbourhood centres.
- Yin, R.K. (2012). Applications of case study research. SAGE, 2012 - Social Science - 231 pages
- Yoon, D.K., Kang, J.E. (2013). A Measurement of Community Disaster Resilience in Korea. *Proceedings of International Symposium on City Planning 2013*. Available at: <http://www2.cpij.or.jp/com/iac/sympo/13/ISCP2013-24.pdf>

9: APPENDIX

 Queensland University of Technology Brisbane Australia	PARTICIPATE IN RESEARCH Information for Prospective Participants
<p><i>The following research activity has been reviewed via QUT arrangements for the conduct of research involving human participation. If you choose to participate, you will be provided with more detailed participant information, including who you can contact if you have any concerns.</i></p>	
Building Resilient Communities: The Role of Place Based Community Organisations in Disaster Preparation, Response and Recovery	
Research team contacts	
Principal Researcher: Associate Researcher:	Ms Laurelle Muir – Research Masters Student Associate Professor Evonne Miller – Principal Supervisor Creative Industries Faculty, Queensland University of Technology (QUT)
What is the purpose of the research?	
<p>My name is Laurelle Muir. My qualifications are in social planning and I have experience in community development and community engagement. I am also the secretary of a place based community organisation in the Pine Rivers area. The purpose of this research is to explore how place based community organisations operating in hazard prone communities can support those communities to build disaster resilience. The research also seeks to develop an operational approach to this developmental work through the development of a practice and policy framework.</p>	
Are you looking for people like me?	
<p>The research team is looking for community development staff who worked with your community during the 2011 flood crisis and community development staff who have worked with the community since that time.</p>	
What will you ask me to do?	
<p>Your participation will involve an interview that should take no longer than one hour of your time. For those workers who were at the Centre at the time of the flood, I would like to discuss what assistance you were able to offer to the community at that time, your thoughts on what community disaster resilience might look like in your community and if there has been any work delivered around building community resilience since 2011. For those workers who have come to the Centre since that time, I would be interested to hear if you currently deliver any work on community resilience and how that work is delivered.</p>	
Are there any risks for me in taking part?	
<p>The research team does not believe there are any risks associated with your participation in this research. It should be noted that if you do agree to participate you can withdraw from participation at any time during the project without comment or penalty.</p>	
Are there any benefits for me in taking part?	
<p>It is expected that this project will benefit you directly through your assistance with research that will explore the role of organisations such as yours in building community resilience in areas that experience hazards such as flooding.</p>	
Will I be compensated for my time?	
<p>No, but we would very much appreciate your participation in this research.</p>	
I am interested – what should I do next?	
<p>You can contact the researchers for details of the next step: Laurelle Muir email: laurelle.muir@hdr.qut.edu.au Ph: 0418196003 You will be provided with further information to ensure that your decision and consent to participate is fully informed.</p>	
<div style="display: flex; justify-content: space-between;"> Thank You! QUT Ethics Approval Number: 1700000122 </div>	



PARTICIPATE IN RESEARCH

Information for Prospective Participants

The following research activity has been reviewed via QUT arrangements for the conduct of research involving human participation.

If you choose to participate, you will be provided with more detailed participant information, including who you can contact if you have any concerns.

Building Resilient Communities: The Role of Place Based Community Organisations in Disaster Preparation, Response and Recovery

Research team contacts

Principal Researcher: Ms Laurelle Muir – Research Masters Student

Associate Researcher: Associate Professor Evonne Miller – Principal Supervisor
Creative Industries Faculty, Queensland University of Technology (QUT)

What is the purpose of the research?

My name is Laurelle Muir. My qualifications are in social planning and I have experience in community development and community engagement. The purpose of this research is to explore how place based community organisations operating in hazard prone communities can support those communities to build disaster resilience. The research also seeks to develop an operational approach to this developmental work through a practice and policy framework.

Are you looking for people like me?

The research team is looking for Disaster Management staff who responded to the 2011 flood crisis and staff who have worked in the Team since that time.

What will you ask me to do?

Your participation will involve an interview that should take no longer than one hour of your time. For those officers who were in the Disaster Management Team at the time of the flood, I would like to hear about your role at that time, particularly regarding any contact you may have had with the community organisations who worked with the community during the flood event and what contact you may have maintained with those or other community organisations since then, as well as your thoughts on building community disaster resilience. For those officers who have come to the Team since that time, I would be interested to talk with you, particularly regarding any involvement you may have with those community organisations.

Are there any risks for me in taking part?

The research team does not believe there are any risks associated with your participation in this research. It should be noted that if you do agree to participate you can withdraw from participation at any time during the project without comment or penalty.

Are there any benefits for me in taking part?

It is expected that this project may benefit the work that you deliver through your assistance with research that will explore the role of place based community organisations in building community resilience in areas that experience hazards such as flooding.

Will I be compensated for my time?

No, but we would very much appreciate your participation in this research.

I am interested – what should I do next?

You can contact the researchers for details of the next step:

Laurelle Muir Email: laurelle.muir@hdr.qut.edu.au Phone: 1418196003

You will be provided with further information to ensure that your decision and consent to participate is fully informed.

Thank You!

QUT Ethics Approval Number: 1700000122



PARTICIPANT INFORMATION FOR QUT RESEARCH PROJECT
– Interview –

Building Resilient Communities: The role of place based community organisations in disaster preparation, response and recovery

QUT Ethics Approval Number 1700000122

RESEARCH TEAM

Principal Researcher:	Laurelle Muir	Masters student
Associate Researcher(s):	Associate Professor Evonne Miller	Principal Supervisor

Creative Industries Faculty, Queensland University of Technology (QUT)

DESCRIPTION

This project is being undertaken as part of a Masters study by Laurelle Muir.

The purpose of this project is to investigate the role that place based community organisations play in building community resilience in disaster preparation, response and recovery. The study has a focus on local community/neighbourhood centres in Brisbane who were involved in the January 2011 flood event and who continue to work with their communities.

You are invited to participate in this project because you were a State Government officer responding to the flood in 2011 as part of the Department of Communities Recovery Support Unit, and have continued to work in that team. We are also interested in your participation if you are currently working in the Recovery Support Unit since the flood.

PARTICIPATION

Your participation will involve an audio recorded interview at an agreed location that will take approximately an hour of your time.

Questions will include:

- Getting an understanding of your role as part of the Recovery Support Unit at the time of the flood and the scope of your role's relationship with local community organisations at that time and since.
- Your perceptions on community disaster resilience
- Getting an understanding of the how your role contributes to assisting community organisations to build community resilience and disaster preparation

Your participation in this project is entirely voluntary. If you do agree to participate you can withdraw from the project without comment or penalty. You can withdraw anytime during the interview. If you withdraw with four weeks after your interview, on request any identifiable information already obtained from you will be destroyed. Your decision to participate or not participate will in no way impact upon your current or future relationship with QUT (for

example your grades) or [associated external organisation].

EXPECTED BENEFITS

It is expected that this project will benefit you directly through exploring how place based community organisations can develop or refine a practice framework around building community disaster resilience and preparation and how they might be better supported by government emergency management systems.

To compensate you for your contribution should you choose to participate, the research team will provide you with any out-of-pocket expenses associated with participating in the interview process.

RISKS

There are no risks beyond normal day-to-day living associated with your participation in this project.

PRIVACY AND CONFIDENTIALITY

All comments and responses will be treated confidentially unless required by law. The names of individual persons are not required in any of the responses.

As the project involves an audio recording:

- You will have the opportunity to verify your comments and responses prior to final inclusion.
- The audio recording will be destroyed 5 years after the last publication.
- The audio recording will not be used for any other purpose.
- Only the named researchers will have access to the audio recording.
- It is possible to participate in the project without being audio recorded.

Please note that non-identifiable data from this project may be used as comparative data in future projects or stored on an open access database for secondary analysis.

CONSENT TO PARTICIPATE

We would like to ask you to sign a written consent form (enclosed) to confirm your agreement to participate.

QUESTIONS / FURTHER INFORMATION ABOUT THE PROJECT

If you have any questions or require further information please contact one of the researchers listed below.

Laurelle Muir	laurelle.muir@hdr.qut.edu.au	0418196003
Evonne Miller	e.miller@qut.edu.au	3138 9011

CONCERNS / COMPLAINTS REGARDING THE CONDUCT OF THE PROJECT

QUT is committed to research integrity and the ethical conduct of research projects. However, if you do have any concerns or complaints about the ethical conduct of the project you may contact the QUT Research Ethics Advisory Team on +61 7 3138 5123 or email

humanethics@qut.edu.au. The QUT Research Ethics Advisory Team is not connected with the research project and can facilitate a resolution to your concern in an impartial manner.

**THANK YOU FOR HELPING WITH THIS RESEARCH PROJECT.
PLEASE KEEP THIS SHEET FOR YOUR INFORMATION.**



PARTICIPANT INFORMATION FOR QUT RESEARCH PROJECT
– Interview –

Building Resilient Communities: The role of place based community organisations in disaster preparation, response and recovery

QUT Ethics Approval Number 170000012

RESEARCH TEAM

Principal Researcher:	Laurelle Muir	Masters student
Associate Researcher(s):	Associate Professor Evonne Miller	Principal Supervisor

Creative Industries Faculty, Queensland University of Technology (QUT)

DESCRIPTION

This project is being undertaken as part of a Masters study by Laurelle Muir.

The purpose of this project is to investigate the role that place based (local) community organisations play in building community resilience in disaster preparation, response and recovery. The study has a focus on local community/neighbourhood centres in Brisbane who were involved in the January 2011 flood event and who continue to work with their communities.

You are invited to participate in this project because you were a community worker at the centre at the time of the flood, and you have continued to work with that community. We are also interested in your participation if you were a community worker at the centre at the time of the flood, but have since left for other employment.

PARTICIPATION

Your participation will involve an audio recorded interview at an agreed location that will take approximately an hour of your time.

Questions will include:

- Getting an understanding of your role and the assistance provided to the community at the time of the flood
- Your perceptions on community resilience
- Getting an understanding of the how the work you do with the community has been able to build on community resilience and disaster preparation

Your participation in this project is entirely voluntary. If you do agree to participate you can withdraw from the project without comment or penalty. You can withdraw anytime during the interview. If you withdraw with four weeks after your interview, on request any identifiable information already obtained from you will be destroyed. Your decision to participate or not participate will in no way impact upon your current or future relationship with QUT (for

example your grades) or [associated external organisation].

EXPECTED BENEFITS

It is expected that this project will benefit you directly through exploring a practice framework around building community disaster resilience and how the work that you do might be better supported by government emergency management systems.

To compensate you for your contribution should you choose to participate, the research team will provide you with any out-of-pocket expenses associated with participating in the interview process.

RISKS

There are no risks beyond normal day-to-day living associated with your participation in this project.

PRIVACY AND CONFIDENTIALITY

All comments and responses will be treated confidentially unless required by law. The names of individual persons are not required in any of the responses.

As the project involves an audio recording:

- You will have the opportunity to verify your comments and responses prior to final inclusion.
- The audio recording will be destroyed 5 years after the last publication.
- The audio recording will not be used for any other purpose.
- Only the named researchers will have access to the audio recording.
- It is possible to participate in the project without being audio recorded.

Please note that non-identifiable data from this project may be used as comparative data in future projects or stored on an open access database for secondary analysis.

CONSENT TO PARTICIPATE

We would like to ask you to sign a written consent form (enclosed) to confirm your agreement to participate.

QUESTIONS / FURTHER INFORMATION ABOUT THE PROJECT

If you have any questions or require further information please contact one of the researchers listed below.

Laurelle Muir	laurelle.muir@hdr.qut.edu.au	0418196003
Evonne Miller	e.miller@qut.edu.au	3138 9011

CONCERNS / COMPLAINTS REGARDING THE CONDUCT OF THE PROJECT

QUT is committed to research integrity and the ethical conduct of research projects. However, if you do have any concerns or complaints about the ethical conduct of the project you may contact the QUT Research Ethics Advisory Team on +61 7 3138 5123 or email humanethics@qut.edu.au. The QUT Research Ethics Advisory Team is not connected with the

research project and can facilitate a resolution to your concern in an impartial manner.

**THANK YOU FOR HELPING WITH THIS RESEARCH PROJECT.
PLEASE KEEP THIS SHEET FOR YOUR INFORMATION.**



Building Resilient Communities: The role of place based community organisations in disaster preparation, response and recovery

QUT Ethics Approval Number 1700000122

RESEARCH TEAM

Laurelle Muir	laurelle.muir@hdr.qut.edu.au	0418196003
Evonne Miller	e.miller@qut.edu.au	3138 9011

STATEMENT OF CONSENT

By signing below, you are indicating that you:

- Have read and understood the information document regarding this project.
- Have had any questions answered to your satisfaction.
- Understand that if you have any additional questions you can contact the research team.
- Understand that you are free to withdraw without comment or penalty.
- Understand that if you have concerns about the ethical conduct of the project you can contact the Research Ethics Advisory Team on +61 7 3138 5123 or email ethicscontact@qut.edu.au.
- Understand that non-identifiable data from this project may be used as comparative data in future projects.
- Agree to participate in the project.

Please tick the relevant box below:

- ☐ I agree for the interview to be audio recorded.
- ☐ I do not agree for the interview to be audio recorded.

Name _____

Signature _____

Date _____

PLEASE RETURN THIS SIGNED CONSENT FORM TO THE RESEARCHER.

