'Strengthening community from the inside out': Transformative possibility for climate change resilience and adaptation in Te Awa Kairangi-Hutt City

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Finally, to Sitto, my grandmother. I dedicate this thesis to you and carry you in my heart.

ABSTRACT

How do we organise society and adjust our human relationships with the natural environment to adapt to a changing climate? How do we decide to make these adjustments? These questions shape Aotearoa-New Zealand climate change discourse across adaptation research and central and local government policy. A resilience approach to adaptation is one conceptual response that has gained popularity over the past decade. However, some critical geographers argue that the dominant typologies of resilience have been normalised as neoliberal capitalist strategies and positioned as 'neutral processes', and that these strategies can perpetuate inequity and unsustainability. Critical geographers therefore suggest focusing on addressing the root causes of inequity and unsustainability through transformative resilience and adaptation.

This research builds on critical geography work by exploring how Common Unity Project Aotearoa (CUPA), a charitable trust located in Te Awa Kairangi-Hutt City, is fostering a community that understands and performs transformative possibilities for resilience and adaptation. For community members of CUPA, ethical actions of a community economy, a process of collective learning and an ability to make sustainability accessible contribute to transformative adaptation and resilience. Exploration of these themes provides a grounded example of how communities can adapt to climate change in ways that also seek to transform inequitable and unsustainable capitalist relations with one another and with the natural environment. CUPA's transformative work poses implications for councils and decision-makers seeking to build resilience and the capacity to adapt in community, offering alternate possibility for discourse, decision-making, participation and engagement.

I approach this project as a scholar-activist in recognition that research is a performative, political act. Through a scholar-activist methodology I use participant observation and interviews to gather insight and information. I ground my critical geography lens in care in order to contribute to a knowledge-

making around climate change based in possibility and multiplicity, rather than of authority and judgement.

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LIST OF ABBREVIATIONS

CUPA – Common Unity Project Aotearoa, also referred to as Common Unity

GWRC – Greater Wellington Regional Council

HCC – Hutt City Council

IPCC – Intergovernmental Panel on Climate Change

MfE – Ministry for the Environment

MoU – Memorandum of Understanding

NIWA – National Institute of Water and Atmospheric Research Ltd.

NZTA – New Zealand Transport Association

PCE – Parliamentary Commissioner for the Environment

SES – Socio-ecological systems (resilience)

SLR – Sea level rise

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GLOSSARY[1]

Ahi kā *te reo Māori* 'keeping the home fires burning', continuous occupation and influence on land

Kapa haka *te reo Māori* cultural group or performing group

Karakia *te reo Māori* an incantation, ritual chant, blessing or prayer

Kia ora *te reo Māori* more informal hello, thanks and/or cheers

Koha *te reo Māori* donation/gift

Mana whenua *te reo Māori* Māori hapū or iwi with authority over the area, territorial rights and occupation of the area

Tangata whenua *te reo Māori* Alternative name for Māori people, people born of the land with ancestral connection to the land

Taniwha *te reo Māori* powerful beings that can be guardians and/or dangerous and destructive forces

Te Awa Kairangi *te reo Māori* Māori name for the Hutt Valley and Hutt River and the place of focus for this thesis

Timebank a system where instead of money, time is the currency. CUPA has its own timebank system where community members can donate time in exchange for the different facilities and resources available at The ReMakery

The ReMakery CUPA's main centre, a converted plaster factory open to the public

Rohe *te reo Māori* territorial region where Māori claim the rights and duties as mana whenua (traditional guardians)

Tautoko *te reo Māori* to support

Waiata *te reo Māori* song

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[1] Translations for te reo Māori come from maoridictionary.co.nz and teara.govt.nz.

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Chapter 1 The research

Truly, we live with mysteries too marvellous
to be understood.

How grass can be nourishing in the
mouths of the lambs.

How rivers and stones are forever
in allegiance with gravity
while we ourselves dream of rising.

How two hands touch and the bonds
will never be broken.

How people come, from delight or the
scars of damage,
to the comfort of a poem.

Let me keep my distance, always, from those
who think they have the answers.

Let me keep company always with those who say
"Look!" and laugh in astonishment,
and bow their heads.

- *Mystery, Yes* by Mary Oliver (2009)

Figure 1 Enjoying the presence of
a bumblebee after gardening

1.1 Introduction: A resilience approach to adaptation

How do we comprehend and develop responses to the harmful, complex and interwoven change we have created on our planet? How do we adapt and become resilient to climate change?[2] These are questions surrounding climate change governance globally and across Aotearoa-New Zealand. Resilience and adaptation refer to our human interactions with the wider social and ecological environment and our ability to adjust to climate-related impacts (IPCC, 2014; Pelling, 2011).

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[2] "We" here refers, first and foremost, to Global North, colonial-settler audiences and secondly, to anyone who identifies differently but is also grappling with these questions.

Resilience and adaptation are interconnected responses to climate change (Wilson, 2011; Wise et al., 2014). This research understands resilience as a qualifier for adaptation; decisions around how our social and ecological systems change with the changing climate are approached with resilience in mind (Bahadur, Ibrahim, & Tanner, 2013). Since C.S. Holling conceived ecological resilience as a theory in 1973, it has risen in popularity to the point that it permeates across multiple disciplines and is now a "pervasive idiom of global governance" (Walker & Cooper, 2011, p. 144). In Aotearoa-New Zealand, across district, regional and national government, there is a growing trend to better incorporate resilience thinking to develop stronger climate change adaptation (Greater Wellington Regional Council [GWRC], 2015; Hutt City Council [HCC], 2015; Ministry for the Environment [Mfe], 2017c). Resilience also guides other policies related to the environment across central government ministries (e.g. Ministry for Primary Industries, 2018; The Treasury, 2018).

As resilience has gained traction, certain understandings and applications have become normalised, made dominant in climate change governance through discourse across academic research, international development and government policy. This research draws on the works of critical geographers, (e.g. Cote & Nightingale, 2012; Cretney, 2014; Leitner, Sheppard, Webber, & Colven, 2018; MacKinnon & Derickson, 2013; Nelson, 2015), which understand normative resilience as naturalising capitalism and therefore silencing or 'othering' different expressions of governance, economy and sustainability. In extension, equity and social justice focused climate change action is not always occurring in regulatory decision-making processes around Aotearoa-New Zealand (Hayward, 2017). Because normative resilience and adaptation policies perpetuate and affirm the "hegemonic political and ideological discourses" of global capitalism, and premise these processes as neutral and a-political, they may conversely prove damaging to the communities and natural environment they are supposed to assist (Cretney, 2014, p. 632). Additionally, normative understandings do not necessarily speak for the multiplicity of Indigenous peoples who have their own ways of knowing and being regarding resilience and adaptation. In response to these issues, this research proposes there is opportunity in community-led, collective development to resist

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these normalised resilience and adaptation strategies in ways that transform root causes of unsustainability and inequality.

Before unpacking the implications of the proliferation of resilience it is important to first establish that resilience is ambiguous and highly contextual (Akamani & Wilson, 2011). This next section will navigate the complexity and variety of the normative *learnings* of resilience, charting the ways a resilience approach to adaptation is understood in theory.

1.1.1 *Learning* resilience and adaptation

The value and rationale for the dominant *learnings* of resilience emerges from a growing critique across human and physical geography and ecology that static, linear and state-centric management responses to climate change are not fit-for-purpose (Akamani, 2016; Lawrence et al., 2015; Manning, Lawrence, King, & Chapman, 2015; Tyler & Moench, 2012). These responses often assume we live in a static natural and social environment and can create linear regulations and plans to match. They assume the expertise of physical sciences, the technological capabilities of climate modelling and new infrastructure development, will be sufficient adaptation strategies (Akamani & Wilson, 2011). Instead, literature on adaptation proposes resilience thinking better suits the uncertainty and complexity that comes with climate change (Berkes, Colding, & Folke, 2008; Walker & Salt, 2006).

Resilience thinking recognises that unforeseen changes and risks are an inherent part of the dynamic, ever-shifting human and ecological system (Folke, 2007; Nelson, Adger, & Brown, 2007). Decisions focused on resilience plan for multiple accepted systems of functioning and centre on key relationships and interactions. This method of decision-making increases our capacity to adapt by increasing our capacity "to cope with change characterised by surprises and unknowable risks" (Berkes, 2007, p. 283). Policy-makers following a resilience framework can better focus on the abilities of systems to be flexible and adjustable in the face of climate-related crises, reducing negative impacts of surprises, risks and hazards (Agarwal, 2015; Berkes, Colding & Folke, 2008).

There is strong academic accord that resilience is popular amongst academia and policy but there is very little agreement "about what exactly it is that has proliferated, how and why" (Anderson, 2015, p. 60; see also Cretney, 2014; Walker & Cooper, 2011). Duit, Galaz, Eckerberg, and Ebbesson (2010) describe resilience as a "multifaceted and diverse set of perspectives" (p. 364). Its use fluctuates between theory, concept, metaphor and framework. I understand the different uses and kinds of resilience as typologies, which serve to enhance communication between the sciences and across to policy (Meerow, Newell, & Stults, 2015; Tierney, 2015; Welsh, 2014).

Four main typologies of resilience emerge in literature and connect across the social and physical sciences and policy: social-ecological resilience, disaster resilience, urban resilience and community resilience (see Appendix A for definitions and associated disciplines). These typologies are the dominant *learnings* of resilience, the most applied and most criticised threads. Together, these typologies of resilience reflect a convergence of what Welsh (2014) identifies as the "mind-body disciplines, principally psychology, and [the] nature-society disciplines, principally ecology and economy" (p. 15). Welsh also points out that resilience understandings that "promise a means of capturing complexity are seductive" and that resilience has been applied beyond its capacity or appropriateness (p. 15). Similarly, these dominant typologies, the normative *learnings* of resilience, do not necessarily represent Indigenous approaches to resilience and adaptation.

1.1.2 Indigeneity, resilience and mātauranga Māori

Along with the typologies above, resilience has also appeared in literature produced by Pacific-Rim Indigenous peoples (Johnson & Beamer, 2013; King et al., 2013; King, Goff, & Skipper, 2008; Wexler, 2014). This includes the collective body of work *Asserting Native resilience: Pacific rim Indigenous nations face the climate crisis* (Grossman & Parker, 2012), and Donald Fixico's *Indian resilience and rebuilding: Indigenous nations in the modern American West* (2013). Significant here is for non-Indigenous/Pākehā, myself included, to remember that a piece of written work cannot speak for the multiplicity of understandings around climate change for certain Indigenous peoples. Nor can non-Indigenous readers view 'Indigenous' as

the sole identifier for hugely different nations. We need to regard 'Indigeneity' attentively and with contextual consideration (Pihama, Southey, & Tiakiwai, 2015; Thomas, Mitchell, & Arseneau, 2016; Tuhiwai Smith, 2013).

Grossman and Parker (2012) write, "Indigenous nations are on the frontline of the climate crisis … Native peoples are the first to experience climate change, and the peoples who feel it the deepest" (p. 13). Literature outside of Aotearoa-New Zealand has connected resilience with Indigenous pathways of adaptation and responses to climate change (Thomas et al., 2016; Wexler, 2014). To a lesser extent, this is also the case in Aotearoa-New Zealand, where research has explored Māori experiences of climate change impacts (GWRC, 2001; HCC, 2012; MfE, 2017c). There is, however, a key distinction between literature that merely includes Māori 'consultation,' or a single Māori perspective and/or example, and Kaupapa Māori research that comes from, and adds to, mātauranga Māori (Māori knowledge) (Pihama et al., 2015).

Pihama et al. (2015) identify Kaupapa Māori as "a theoretical framework that has grown from both mātauranga Māori and from within Māori movements for change" (p. 6). Aotearoa-New Zealand climate adaptation and resilience literature that includes Māori perspective in an otherwise Pākehā platform, is not "distinctive to Māori society" and not Kaupapa Māori (Pihama et al., 2015, p. 6). In Kaupapa Māori research on climate adaptation and resilience, King et al. (2013) identify four main factors which influence whānau and the wider community's ability to adapt. The four factors identified are, "social-cultural networks and community change, resourcing, self-reliance and innovation, knowledge, skills and expertise, community-based structures, and decision-making" (p. 109). While these factors are place-based, specific to the whānau and hapū of the Mitimiti, Hokianga area, these four determinants are an example of a Kaupapa Māori framework for approaching climate resilience and adaptation (King et al., 2013).

Mātauranga Māori that more critically examines the appropriateness of a Pākehā concept for a Māori experience has also been developed. Jordan Waiti and Te Kani Kingi (2014) apply a Kaupapa Māori approach to look at whānau and resilience, raising the question, are "generic resilience concepts or factors in fact applicable to Māori?" (p. 127). Significant in this framework is the clear purpose and importance

of te reo in creating a for-Māori, as-Māori framework. Waiti and Kingi call for critical examination of resilience's global and local potential and the "manner in which these are able to embrace the unique experiences of Māori" (p. 127). They instead offer four key themes that together represent a for-Māori, as-Māori *Whānau Resilience Framework*, or whakaoranga whānau (family wellbeing). These four concepts are whanaungatanga (networks and relationships), pūkenga (skills and abilities), tikanga (meanings, values and beliefs) and tuakiri-ā-Māori (secure cultural identity). While not explicitly linked to climate change adaptation, the *Whānau Resilience Framework* does speak to unique Māori history and builds on previous Māori health and wellbeing movements. Waiti and Kingi show that 'resilience' may be unable to properly express full meaning and varied interpretation for Māori and other Indigenous peoples. Alternative, language-celebrating concepts and/or completely different frameworks and narratives to resilience are better suited.

As seen through the literature, māturanga Māori and resilience's development, rejection and alteration vary based on those gathering the knowledge and those providing the experiences. This section is meant to remind non-Indigenous readers, particularly Pākehā and the accompanying colonial-settler mindset, that the analysis from a critical geography perspective to follow is not the only way of challenging, creating and sharing resilience knowledge. Neither is it necessarily the 'best' way forward. Understandings of resilience are deeply context dependent.

1.2 Theoretical grounding and rationale: Unlearning and relearning resilience

1.2.1 *Un*learning resilience and adaptation

Critical geography and climate justice literature raise awareness on the need to *un*learn aspects of the dominant *learnings* of resilience and adaptation. Climate justice perspectives emphasise that climate change is a result of the exploitative and socially unjust globalised systems, predominantly perpetuated by colonialism and Global North institutions (Chatterton, Featherstone, & Routledge, 2013; Grossman & Parker, 2012; Webber, 2016). Cultivating resilience and adaptation means confronting social and environmental injustice (Bulkeley, Carmin, Castán Broto,

Edwards, & Fuller, 2013; Forsyth, 2014). Critical geography offers a broad lens that incorporates climate justice. Both climate justice and critical geography aim to address issues of power and inequity, to "reject social realities as given and to question why they exist and how they can be changed" (Biermann, Hillmer-Pegram, Knapp, & Hum, 2016, p. 61). These critical perspectives ask, "what are the broader implications of resilience discourses and their growing popularity – and what dangers might they bring?" (Leach, 2008, p. 2) And together their responses contribute to an overall argument towards *un*learning unequitable and unsustainable aspects of a resilience approach to adaptation.

The first point of *un*learning is that resilience and adaptation governance does not adequately recognise the resilience process as power-filled and misrepresents its development as neutral and a-political (Bahadur & Tanner, 2014). Imperiale and Vanclay (2016) argue that decision-makers do not sufficiently reflect on their "internal social process and normative and ethical factors" (p. 206). Other critical geographers further argue that decision-makers do not sufficiently reflect on the ways these factors influence the *kinds* of resilience being created and *who* benefits from these kinds of resilience (Cretney, 2014; Davoudi et al., 2012; Eriksen, Nightingale, & Eakin, 2015). Simply put, decision-makers do not critically ask, "when we attempt to build resilience, who do our pre-existing parameters aid and who do they silence or exclude?" Hayward (2012, 2017) broadens these critiques to maintain that in Aotearoa-New Zealand, Pākehā-colonial settler politics of climate change do not include meaningful action around inequity, injustice and unsustainability.

The second criticism is that, while in theory and in a descriptive sense, resilience and adaptation appear to spur deeper changes, in application, their developments have been found to normalise and reinforce neoliberal capitalist ways to organise society (Cretney & Bond, 2014; Grove, 2013; MacKinnon & Derickson, 2013; Nelson, 2014; Walker & Cooper, 2011; Welsh, 2014). Weber (2016) argues adaptation development is a "spatially bounded, intentional, and interventionist project that emerged over the last fifteen years" (p. 408). In their capitalist manifestation, resilience and adaptation are paired with growth and development in ways that still

lead to an overemphasis on technocratic engineering pathways, infrastructure lock-in and trade-offs between short term stability and long term unsustainability (Grove, 2013). Strategies relying on "economic capital" can "allow communities to respond in the short to medium term through technological solutions," but usually at the expense of "increasing erosion of social and environmental capital" (Wilson, 2011, p. 73). This shorter-term trade-off limits possibilities of adaptation. Increasing dependence on infrastructure development and technological growth constricts possibilities for different kinds of adaptive transitions and reduces community thresholds in the long run (Kythreotis & Bristow, 2017; Wilson, 2011; Wise et al., 2014).

A-political, capitalist-orientated resilience and adaptation application can result in too much responsibility without sufficient power and a mis-scaling between solution and issue (Kythreotis & Bristow, 2017; Nalau, Preston, & Maloney, 2015). 'Local' scales (i.e. district, regional governments, community groups, and individuals) are accountable for adaptation without having the adequate resources, political decision-making capacity or transparency to effectively carry out adaptation changes (Nalau et al., 2015). This issue connects to the value of self-help agency, where societally we value individual responsibility and ownership of climate change action over other more social forms of action (Hayward, 2012, 2017). From this mismatch in responsibility and value of self-help agency, issues of mis-scaling also arise. Mis-scaling happens when policy systems situate responsibility in the local scale to cope and adapt, but do so without considering the wider-scale issues, particularly global drivers of issues (MacKinnon & Derickson, 2012 in Cretney, 2014; Peck & Tickell, 2002).

A-political, capitalist-orientated resilience and adaptation can also normalise disaster and crises, sidestepping the justice issue of climate change and contributing to the creation of normative 'resilient' subjects (Fabinyi, Evans, & Foale, 2014; Leitner et al., 2018; Peck & Tickell, 2002). Cretney (2014; 2017) and Welsh (2014) contend that resilience language can normalise disasters and construct them as windows of opportunity, without looking at the wider issues of disparity regarding the causes of these increasing frequent and intense natural hazards. Normalising

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hazards and de-politicising adaptation influences 'resilient' subjects to "abandon political agendas that could improve their own conditions" (Biermann et al., 2016, p. 63). Normative 'resilient' subjects are flexible and malleable and value self-help agency; wellbeing is the sole responsibility of the individual based on the merits of their self-reliance and individual strength (Cretney, 2014; Fabinyi et al., 2014). This is not to say that being flexible and open to change is negative but rather, the individual is seen as responsible for moulding to the system instead of instigating change of the harmful system itself (Arora-Jonsson, 2016; Imperiale & Vanclay, 2016; Welsh, 2014).

1.2.2 *Re*learning resilience and adaptation

Critical geography arguments towards *un*learning demonstrate that normative understandings of resilience, poised as neutral processes and enacted through neoliberal capitalist strategies, "suppress deeper changes in the institutions and values" and maintain "the wider status-quo" (Pelling, 2011, p. 51). Surfacing here is a distinction between business-as-usual strategies and mechanisms and the call for transformative possibilities, what this research calls *re*learning resilience and adaptation. Transformative resilience and adaptation directs researchers and decision-makers to go beyond short-term provisional changes and address root causes of unequal drivers and impacts of climate change (Pelling, 2011; Winkler & Dubash, 2016). Cretney and Bond (2014) offer transformation as "a more extreme form of change in which a system switches to a completely different developmental path" (p. 21). Blythe et al. (2018) define transformation as a "significant reordering, one that challenges existing structures" (p. 1207). For example, Hayward (2012, 2017) describes transforming institutional root values around agency, decision-making, justice, political change and citizenship to pursue a fairer, sustainable future.

However, transformation as a concept, also currently rising in popularity across climate change discourse, runs the same risk as resilience and adaptation (Blythe et al., 2018); it raises the question of transformation to *what* and for *whom*. Winkler and Dubash (2016) stress that a critical eye must be cast on *who* decides what counts as transformation. Their analysis affirms that transformation can only

challenge the status quo of climate change action if it challenges global norms around decision-making authority and power. For transformative resilience and adaptation then, what occurs in application and practice is just as, if not more, important than what resilience and adaptation means in theory (Eriksen et al., 2015; Holland, 2017). Grassroots initiatives or community-led initiatives can challenge global norms around decision-making authority and power (Cretney, 2016; Cretney & Bond, 2014; Welsh, 2014). Initiatives which centre the economy around ethical considerations of one another and the planet resists and reimagines neoliberal capitalism as the centre of growth and development (Gibson-Graham, 2006; Gibson-Graham, Cameron, & Healy, 2013). By transforming *what* counts as resilience and *who* decides what counts as resilience into a collective, locally-focused and ethical process, these types of initiatives offer possibility for equitable and sustainable adaptation and resilience.

In summary, the narrative of *learning, un*learnin*g and re*learning resilience and adaptation forms the theoretical foundation and rationale of this research. Dominant *learnings* of resilience, SES (Socio-ecological systems) resilience, disaster resilience, urban resilience and community resilience, bridge social and physical sciences and connect academia with policy. In these dominant *learnings*, resilience and adaptation may be understood and applied a-politically and via neoliberal capitalist mechanisms. These understandings and applications require *un*learning because they can perpetuate inequity and lead to unsustainable trade-offs. The gaps, aims and questions of this research focus on the *re*learning possible through community-led, non-capitalist transformative resilience and adaptation.

1.3 Gap, guiding question and aims

Critical geography literature underscores a need for continued deconstruction of normative understandings of resilience and adaptation (Biermann et al., 2016; Ensor, Park, Attwood, Kaminski, & Johnson, 2018; Meerow & Newell, 2016). In addition to continued deconstruction, there is a further need to not only challenge certain uses, but also to offer successful alternatives to transform these inequitable and unsustainable interpretations (Burke & Shear, 2014). Some critical geographers

propose a shift in research away from ontological debates over resilience and adaptation implications towards recognition of community-led enactments that arise in context to lived experiences (Imperiale & Vanclay, 2016). In response to these gaps I offer a critical geographic interpretation of one community's process of adaptation and resilience as experienced by current practitioners and members. I ask:

- How do Te Awa Kairangi-Hutt Valley community members understand climate change?
- How do they enact and build adaptation and resilience?
  - What are the existing community assets that contribute to adaptation and resilience?

The theoretical aims of this research are three-fold: 1) to contribute to the critical body of theory around the ways resilience and adaptation are produced and reinforced; 2) to contribute to a wider exploration of the intersection between community-led[3] development, sustainability and climate change resilience and adaptation; and 3) to counter the meta-narrative around capitalism, and subsequently neoliberalism, as a totalising, all-encompassing system by connecting this case of transformational resilience and adaptation to discourses of community economies (Gibson-Graham, 2006; Gibson-Graham, Cameron, & Healy, 2013). In pursuing these aims I follow the words of Mary Oliver's *Mystery, Yes* (2009):

Let me keep my distance, always, from those
who think they have the answers.

Let me keep company always with those who say
"Look!" and laugh in astonishment,
and bow their heads.

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[3] The term 'community-led development' emphasises the transformative, justice-orientated aspect of work that begins within, is carried out by, and aims to benefit the specific community (over community development initiatives critiqued as carried out primarily by external agencies) (Imperiale & Vanclay, 2016; Lozano, 2018; Webber, 2016).

This project refrains from providing answers or solutions to climate change adaptation and resilience. It is about exploring and appreciating the possibility performed through Common Unity Project Aotearoa (CUPA) as an example of community-led, transformative adaptation and resilience. CUPA is a charitable trust in Te Awa Kairangi-Hutt City that began in 2012. Under of the visions of "together we grow" and "together, we grow our own solutions", CUPA's grassroots work sits in an intersection of community-led development and sustainability action (CUPA, n.d.). Chapter Two will introduce CUPA in greater detail.

Scholar-activist methodology guides the design of this research and seeks to celebrate community voices as experts and as generators of important climate change knowledge. Research results come from qualitative, ethnographic methods and critical geography analysis. CUPA member insights from interviews offers personal, detailed accounts of the work that CUPA is doing and how it connects to climate change. Participant observation conducted while volunteering supports the personal accounts with specific, grounded events and witnessed general trends. Critical geography literature, particularly climate justice and community economies discourses, frames analysis on how CUPA's practices promote wellbeing, create material and knowledge commons, meaningfully negotiate difference and equity, and expand understandings of activism and sustainability.

1.4 Thesis structure

The rest of this research unfolds in four parts. Chapter Two introduces CUPA and the human and physical landscapes of Te Awa Kairangi-Hutt City. It also discusses what climate change means for this area and maps Greater Wellington Regional Council (GWRC) and Hutt City Council's (HCC) current adaptation policies. Chapter Three delves into the research process, mapping my epistemological foundations, a scholar-activism methodology, semi-structured interviews, participant observation and thematic analysis. Chapters Four, Five and Six discuss responses to the research questions on the ways community understands climate change and enacts *re*learning resilience and adaptation through CUPA. These chapters offer examples on, and analysis of, the ways CUPA facilitates community economy, collective

learning and making sustainability accessible, and the possibility each of these thematic findings hold for more transformative resilience and adaptation. To conclude, Chapter Seven will summarise what further possibility CUPA's work poses for wider critical geography theory and local government climate governance.

Chapter 2 Te Awa Kairangi-Hutt City and the changing climate

This chapter begins with a tour through The ReMakery and a history and description of CUPA, the community of this research. It then moves on to describe important aspects of the human and physical geography landscape that constitute Te Awa Kairangi-Hutt City. The final sections explore what climate change means for Te Awa Kairangi-Hutt City, both in terms of impacts on natural and human-built environments, and the current policy approaches for adaptation by local government.

2.1 Introducing Common Unity Project Aotearoa

Figure 2 The ReMakery front sign

2.1.1 Nau mai haere mai, welcome to The ReMakery

The ReMakery, home to CUPA, stands in the Fairfield neighbourhood as a physical symbol of kotahitanga (unity and togetherness).[4] Entering The ReMakery's front

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[4] See Figure 12, p. 27, for The ReMakery's location on a map.

yard you will pass under Te Puni (a carving of rangatiratanga, Te Atiawa chief), welcoming you and reminding you of the legacy of mana whenua.[5] To your left the front space is filled with veggie and flowerbeds, sometimes with chickens or ducks inquiring for food. Throughout, piles of wood, seedling trays, or compost bags mark ongoing projects. To your right is a large, black container commercial kitchen, Unity Kitchen, one of CUPA's most recent projects, built to consistently provide meals to children and whānau throughout Te Awa Kairangi. As you walk through the front door, three manaia (guardians, carved wooden statues) wearing korowai (cloaks representing prestige) stand as a family. Once inside, a friendly "Hello!" or "Kia ora!" greets you, perhaps from inside the office where the main facilitators pop in and out, or from anyone sitting at the large dining table near the front window.

Figure 3 Manaia watching out the front window

Immediately, you notice all the colour; The ReMakery is a colour-filled space. Murals and art by youth cover the walls. Buntings hang from the ceiling. Knitted and sewn bags and clothing are on display. Flyers and posters explaining different projects and upcoming events are taped up. The smell of coffee from the koha coffee bar hangs in the air and there is usually baking or snacks on the bench that someone has brought in. Just behind the coffee bar is a lounge area, complete with knitted throws,

[5] The use of 'you' in this section reflects the welcoming and informal atmosphere of The ReMakery so that the reader gains a deeper sense of place in this research.

a coffee table, usually with children's' toys around, and perhaps a couple of people sitting and chatting while eating their lunch or knitting. Just beyond the lounge you would notice another cosy room with another kitchen table and a small child's table with the sign "Library" above it. Along with a book swap library, there is also a seed library and a donated yarn and needles library.

Figure 4 Lounge area

If you are a new face, you might still be taking in all the things to see when someone asks if you would like a coffee, or if there is anything in particular you would like to do or see. If it is your first time and you are curious about what happens at The ReMakery, someone would readily offer to show you around while they explain the different activities. They would probably first talk about the Common Grocer just to your left. Common Grocer is a grocery cooperative that seeks to provide affordable basic foods, including fresh vegetables, without using plastic or generating waste. There are different opportunities to volunteer time to help run the Common Grocer in exchange for the opportunity to shop there. Or, you can exchange timebank credit from another project you have

Figure 5 The Common Grocer

worked on, say volunteering at Recycled Rides or sewing bin liners from repurposed billboard vinyl.

If you are curious about sewing, they will take you upstairs, but remember to sign the Sew Good book on your way up for health and safety! Once upstairs they will explain all the different projects and spaces of Sew Good, with its own fabric library, full of donated fabric diverted from landfill. If you are interested in sewing but are inexperienced, you can come along to a Friday morning class and pay or use timebank credits to learn sewing skills. If you are already a skilled sewer, you may want to join the Thursday morning class, where different commercial projects generate funds for CUPA projects or help other sewers and community members earn a living wage.[6]

Figure 6 Sew Good Cooperative Room

Heading through Sew Good and through a large multipurpose space, the Kotahitanga Room, you will go back a different set of stairs into the back workshop spaces. These are large rooms, with high ceilings and cement floors. Different projects, from decorated and creative Lucid Bikes to pallet furniture, may be going

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[6] Living wage is a response to government-controlled minimum wage deemed as not meeting the financial needs of standard living situations (Waldegrave, King, & Urbanová, 2018).

on. People, mostly men, are moving through the spaces focused on their work at hand. There may be a group of building students, young adults, learning the skills of the building trade. Or there may be a group of "PD guys", helping at CUPA for their probationary community service. More murals and colour contrast the grey of the cement floors and the brown of the timber lying around. A quick peek through the large warehouse doors shows a glimpse of a tiny house being built in the back drive. You might even notice a few bees flying around from the hives kept alongside the back.

Figure 7 The workshop area with Lucid Dreams art

Figure 8 Bicycle mid-repair for ReCycled Rides

As you are led through this space, you will see ReCycled Rides, a project which fixes up donated and rescued bikes for the community to hire out or buy at low cost. Through timebank, you can exchange hours earned to take one out, or even bring your own bike in for maintenance or repair on a Wednesday evening or Saturday day. Heading back through into the front space, the Community Café Manager or one of the baristas-in-training will have your koha coffee ready to sit and enjoy. There is almost always someone else doing the same with whom you can share a chat. Perhaps it's one of the Urban Kai gardening volunteers. They may have just come back from working at one of the community micro-farms where produce for local children and families is grown. If you are a keen gardener, or have always wanted to learn about growing food, you will quickly be invited to come along on Saturday morning. Whatever your needs or interests are, there is space here to share your gifts and learn from others. Nau mai haere mai!

Figure 9 Unity Garden Epuni Primary School, CUPA's origins

2.1.2 More about CUPA

CUPA's beginnings kick back to an old soccer field at Epuni Primary School. The field was transformed into a school garden (Figure 9 above) where students grew vegetables and fruits under the oversight and teachings of Julia Milne, CUPA's main founder. With the help of parents and interested community volunteers the food

grown in the garden was turned into meals for the school kids. Alongside the gardening, there was also a sewing group where parents and community members could meet and sew together. From the gardening, cooking and sewing based out of Epuni Primary, CUPA has expanded into 23 different but connected enterprises, run out of its own space called The ReMakery (Rochelle interview, 4 October 2018). CUPA now employs 12 people, whose responsibilities vary from daily operations to project management (Personal research journal).[7] Along with CUPA's directly employed staff, there is a Community Corrections employee, who oversees probationary workers, and a National Trade Academy employee, who oversees high school students learning trade skills. A Board of Trustees provides directional and financial oversight, comprising six professionals who meet regularly and volunteer their time. Alongside these set positions, there is also a cohort of regular volunteers who help run projects, maintain The ReMakery and have strong bonds with the paid staff. The majority of the people who facilitate, coordinate and volunteer at CUPA reside in Te Awa Kairangi-Hutt Valley, with a slightly lesser but significant number of people coming throughout Te Whanganui a Tara-Wellington region.

The guiding mission of CUPA is to "create local models of abundance, collaboration, leadership and enterprise" (CUPA, 2018). CUPA envisions community-led development as "the community works together to meet all their needs through local action with the resources from the community" (CUPA, 2018). The initiative fosters work that is *by* the community *for* the community; resources come from the community and all outputs are for community. It pursues 'development' premised on growing skills, leadership and community enterprise towards the communal and individual wellbeing (CUPA, 2018). Five value pillars uphold CUPA's vision and mission: we welcome everyone, we share, we grow from what is, we are courageous and we expect great things. The mural painted on a wall of The ReMakery (Figure 10, next page), tells the story of CUPA's values, mission and vision at work. At the centre is community of all ages working together within natural and built

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[7] Note: Personal research journal refers to participant observation findings, explained in Chapter Three. Unless otherwise cited, the information about CUPA presented in this section is from my personal research journal.

environments. I understand CUPA's 'community' as a place based group focused on a common purpose. While its members span neighbourhoods and cities, all coming to participate in a shared purpose, its mission and aims are strongly rooted in local place. It seeks to serve and involve its neighbourhood and other community organisations in the area. The organisation does not describe itself as a climate change initiative.

Figure 10 CUPA mission, visions and values mural

In the past few years, aligned with its move to The ReMakery, interest and support for CUPA's work has grown immensely, rapidly opening up possibility and increasing scale. In only one growing season, Urban Kai expanded from single micro-farm at Epuni Primary, to 11 working micro-farms and backyard gardens, including two at Epuni Care and Protection (Oranga Tamariki) and Rimutaka Prison. The Common Grocer celebrated its first birthday in September 2018, with over 150 members and a strong group of regular volunteers. The Sew Good Cooperative has expanded from one morning to two to cater for more interested beginner sewers and expand the product line. Perhaps most visible of all, Unity Kitchen opened in an off-grid container kitchen in September 2018 and now has several contributing cooks. Unity Kitchen takes food harvested from the micro-farms and makes daily

meals for purchase that in turn support meals for children at several schools across Te Awa Kairangi. To make sense of the success, and be strategic around growth, the Board, facilitators, and coordinators participate in a constant process of trialling, reflecting and learning (Personal research journal).

As CUPA continues to settle into more formalised processes, there is a strong focus on solidifying the viability and sustainability of the organisation. One constant area of attention is creativity and flexibility around providing living wage incomes to paid staff and resourcing the enterprises. Partnerships are vital to CUPA's work, and a lot of energy is invested in building and maintaining partnerships. CUPA holds partnerships with a range of government agencies, community groups and businesses. Some of these partnerships are established through funding and grants, others through a Memorandum of Understanding (MoU), and others more informally through friendships and community connections. Individual donations and product purchasing is another important partnership. ReCycled Rides and Sew Good are resourced almost entirely through individually donated goods. Individuals who purchase finished products such as beeswax wraps, bin liners, honey or repaired bikes, also help generate revenue for the enterprises. This revenue may go back to helping community members earn a living wage or to resourcing the enterprise as a whole. Through partnerships and individual support each enterprise aims to be self-sustaining and meet the living wage needs of its participants. The rest of this chapter will situate CUPA and The ReMakery in Te Awa Kairangi and the implications of climate change for this place.

2.2 Introducing Te Awa Kairangi-Hutt City

To fully grasp what climate change and adaptation means for Te Awa Kairangi-Hutt City and the community of CUPA, this section begins over 800 years ago, briefly exploring past generations that have called this place home, and some of the land-use changes that have occurred throughout these centuries. Social and physical history and climate change context lay the groundwork to explore the ways in which community members in Te Awa Kairangi-Hutt City understand and live adaptation and resilience.

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Dual place names, such as Te Awa Kairangi-Hutt City, Te Whanganui a Tara-Wellington and Aotearoa-New Zealand acknowledge the long history of Māori and non-Māori interactions with the land, waters and with each other. Te Whanganui a Tara, the name for the harbour and wider Wellington region derives from Ngāi Tara, the early Māori of the area (Bayly, 1988; Love, n.d.). For 29 generations from around 1200 AD, Ngāi Tara and, later, Ngāti Ira lived in the region (GWRC, 2018a). These early people named the two main freshwater features of the valley: Waiwhetu, 'starry waters', and Te Awa Kairangi, 'highly esteemed river' (Bayly, 1988; GWRC, 2018a).[8] Māori history also attributes the creation of key natural features of Te Awa Kairangi-Hutt City and Te Whanganui a Tara-Wellington Harbour to four taniwha. Two taniwha made the Waiwhetu stream, and its after them that the stream derives its name (Bayly, 1988). Two taniwha, Whataitai and Ngake, formed Haitaitai, Motukairangi-Mount Victoria, Te Awa Kairangi-Hutt River and the mouth of the harbour to Cook Strait (Bayly, 1988; Royal, 2006).

The 1820s onward saw immense change for peoples of Te Whanganui a Tara and Te Awa Kairaingi. Pākehā-European occupation, beginning in the 1800s with the scattered arrival of whalers and traders and later in larger numbers, instigated migration of iwi throughout Aotearoa (Bayly, 1988). During the 1820s–1830s, several tribes of Taranaki Whānui ki Te Upoko o Te Ika (Taranaki Whānui), Ngāti Tama, Ngāti Mutunga and Te Ati Awa, migrated south into the region as a part of this movement (Bayly, 1988).[9] When Tiriti o Waitangi–Treaty of Waitangi was signed in 1840, Te Ati Awa claimed mana (authority and power) over Te Awa Kairangi and Waiwhetu areas (Port Nicholson Block Settlement Trust, 2012a). However, whānau of other Taranaki subtribes, such as Ngāti Ruanui, Ngāti Tama, Ngāti Mutunga, continue to live and maintain ahi kā in the region (Port Nicholson Block Settlement

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[8] Te Awa Kairangi is the name for both the valley and the river. The river is also called Heretaunga (GWRC, 2018a).
[9] This wider shift south is known as the Amiowhenua Raid. Ngā Puhi, Ngāti Whātua and Ngāti Toa, led by Chief Te Rauparaha, also moved south into Te Whanganui a Tara after being pushed from their northern rohe by migrating Waikato tribes (Bayly, 1988). Ngāti Toa claim mana over Te Whanganui at Tara-Wellington region as well, primarily the Kāpiti coastline.

Trust, 2012a). Figure 11 (below) outlines Taranaki Whānui ki te Upoko o te Ika rohe and key points of cultural and social importance. Referring to Figure 11, Te Awa Kairangi-Hutt Valley is the large area of flat green to the northeast of Te Whanganui a Tara-Wellington Harbour. It is home to several significant pā (fortified refuge) and kāinga (village settlement) sites.
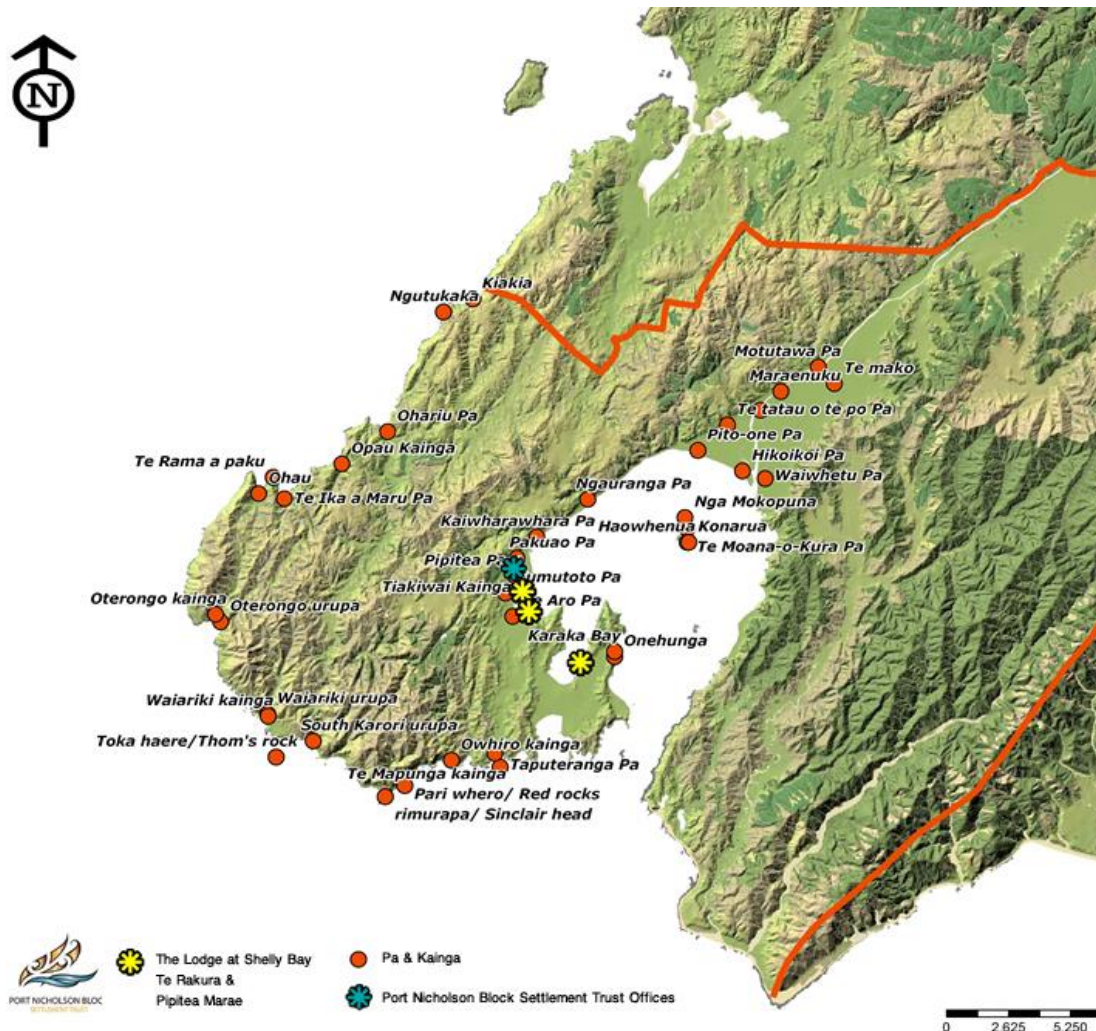
Figure 11 Taranaki Whānui ki te Upoko o te Ika rohe (adapted from Port Nicholson Block Settlement Trust, 2012b)

The story of Great Britain's 'New Zealand Company', chaired by British MP Sir William Hutt, weaves directly into changes of Māori rohe occurring during this time. In 1839, the New Zealand Company contentiously 'purchased' Te Whanganui a Tara

and renamed the area Port Nicholson (Bayly, 1988).[10] Although Hutt never set foot in Aotearoa-New Zealand, Te Awa Kairangi was given the English names Hutt River and Hutt Valley (HCC, 2017). After its 'purchase' of Te Whanganui a Tara, through the introduction and enforcement of British laws the New Zealand Company instituted major shifts in the way land ownership was structured. By 1840, absentee landlords residing in Great Britain owned over 65% of landholdings in Te Awa Kairangi (Bayly, 1988). The decline of Māori landholdings continued throughout the latter half of the 1800s.

A history of more than 150 years of deforestation, industrialisation, suburbanisation and urbanisation has dramatically modified Te Awa Kairangi's landscape (Ballinger, Jackson, Reisinger, & Stokes, 2011; Lawrence, Reisinger, Tegg, & Quade, 2011). As different iwi and hapū were alienated from their rohe and dispossessed of their land through violence and Eurocentric laws, pā (fortified villages), kāinga (dwellings), gardens and waahi tapu (sacred) sites were taken over and used for colonial-settler development, particularly large-scale agriculture. By the 1920s the valley had been completely deforested and turned into a major region of food cultivation and industrial business (GWRC, 2001; HCC, 2018; Port Nicholson Block Settlement Trust, 2012). The 1920s to 1960s saw significant population growth and accompanying land-use change. Large tracts of agricultural land were converted into housing, from state housing in the valley floor areas of Naenae, Epuni and Taita, to private middle-upper income developments in Maungaraki and Western hills area (HCC, 2018). A majority of the area's roads and public facilities, including Hutt City Hospital, were also built during this time. The layout of the area today, including current socioeconomic divide, harks back to development of this time period (HCC, 2018).

2.2.2 Current physical and human landscapes

Hutt City District is divided into six wards, Western, Northern, Central, Eastern, Harbour and Wainuiomata, each with two elected representative councillors that

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[10] The New Zealand Company was a commercial operation founded in 1830s England. It facilitated large-scale immigration and occupation in Aotearoa-New Zealand.

make up HCC (HCC, 2018). The district encompasses 38,000 hectares, which consists of the large low-lying, valley floodplain, extensive coastline and foreshore, and surrounding hills to the west, east and north (see Figure 12, next page). Te Awa Kairangi-Hutt River is the main natural catchment and flows through the valley into Te Whanganui a Tara-Wellington Harbour (GWRC, 2001). As described in Ballinger et al (2011), "its main channel is 54 km and is generally aligned with the Wellington Fault and is influenced by both tectonic activity and significant human modification" (p. 9, adapted from GWRC, 1995). Waiwhetu stream is the second largest catchment, flowing 18 kilometres long along the eastern side of the valley into the mouth of Te Awa Kairangi-Hutt River (Watts, 2004). The most populated part of Hutt City can be described as a coastal, urban area consisting of mostly "residential, industrial and commercial development" (Lawrence et al., 2011, p. 9). Figure 12 (next page) is an aerial image of the physical landscape of Te Awa Kairangi-Hutt City. The image shows the population concentration and corresponding infrastructure in the valley floor and along the river and the shoreline. The ReMakery is located in the eastern side of the valley near Waiwhetu stream.

Te Awa-Kairangi-Hutt City has high socioeconomic diversity and high socioeconomic disparity. An estimated 104,700 people call this place home, including mana whenua and mātāwaka (non-mana whenua Māori) (17.1%), Pasifika (11%), Asian (11.7%), Pākehā/European peoples (71%) and other ethnicities (4.4%) (HCC, 2018). Ethnic diversity is predicted to increase; there will be a greater "proportion of Māori, Asian and Pacific populations" and these populations will be younger than the Pākehā populations (HCC, 2018, p. 123). High decile, low deprivation neighbourhoods make up 23% of the population, while 20% of the population live in socioeconomically 'deprived' areas, mainly the eastern and north-eastern neighbourhoods (HV-DHB, 2017, p. 5; see also Massey University, 2018). A higher proportion of Māori, Pasifika and Asian communities live in these higher deprivation areas, and this disparity is predicted to increase (HV-DHB, 2017).

While statistical data provides points of comparison to identify wider trends, it does not always represent the complexity of community and the multiplicity of strengths and needs. Alongside the community of CUPA, Te Awa Kairangi is home to

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communities based in shared ethnicity and culture, communities centred around similar socioeconomic status. It is also home to communities of shared interest and purpose that cross cultural and socioeconomic distinctions. Examples of community include marae and their whānau, religious communities, environmental groups, homeowners' associations, neighbourhood groups, sports clubs, playcentre groups and refugee support organisations. These are just a few examples to demonstrate the breadth and variety of ways connection occurs across Te Awa Kairangi.
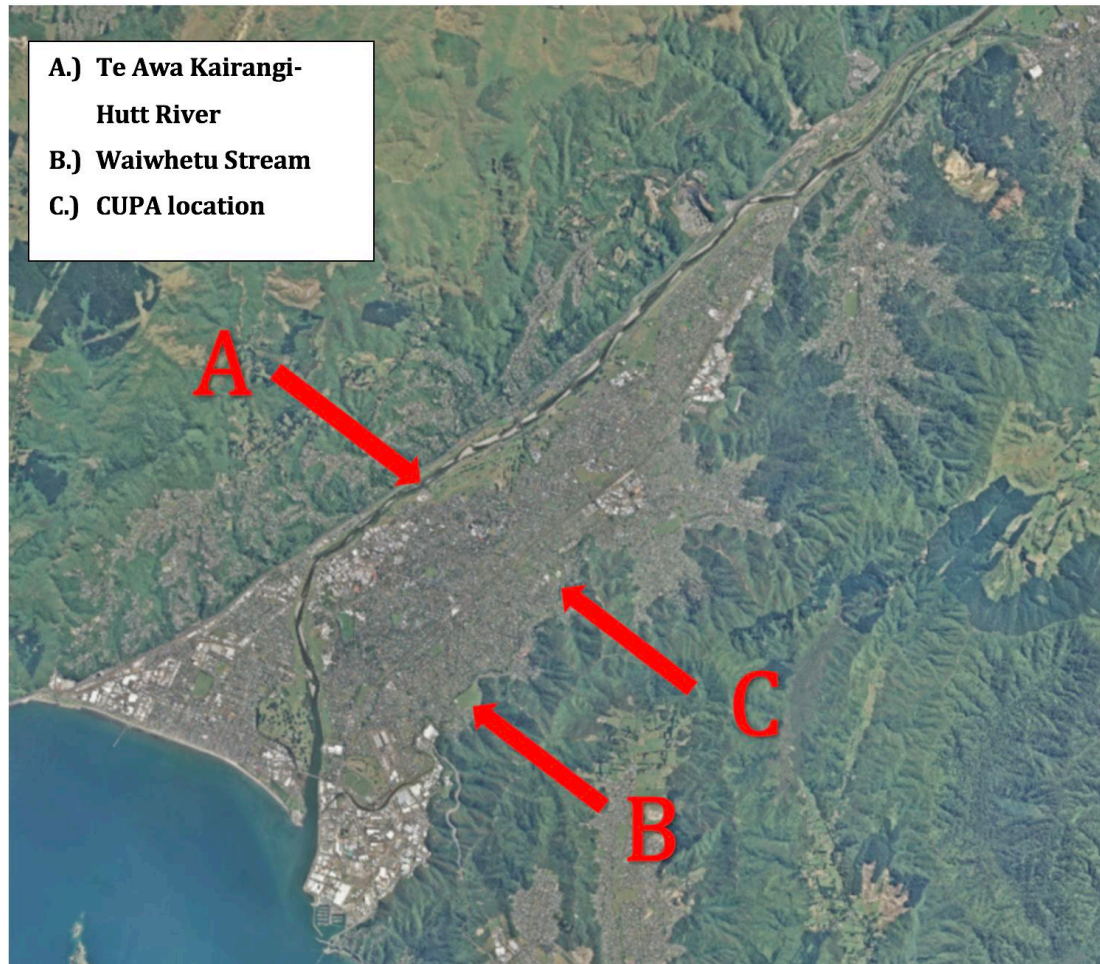
Figure 12 Aerial image of valley plain, Te Awa Kairangi-Hutt River, Waiwhetu Stream and CUPA location (adapted from Hutt City Council, 2017a)

Te Awa Kairangi-Hutt City has a long history of human interaction with the natural environment and a long history colonial processes that have prioritised Pākehā-European systems and livelihoods. The current physical and human landscapes of Te Awa Kairangi point to a diverse set of impacts by climate change and a diverse set of adaptation needs and capacities, including a need to address existing disparities and inequities. It also frames the purpose of CUPA's work around serving

community members of Te Awa Kairangi who are in need and seeking long-lasting, equitable change. The next section explores what climate change means for Te Awa Kairangi.

2.3 Climate change hazards

When thinking about the most impactful hazards and risks of climate change, Aotearoa-New Zealand is considered a "coastal nation" (Parlimentary Commisisoner for the Environment [PCE] 2015, p. 9). The country has the world's seventh largest coastline and the majority of the population live within five kilometres of the coast (Rouse et al., 2017; Schneider, Glavovic, & Farrelly, 2017). Identity, culture, livelihood, and health and wellbeing are all tied to a coastal lifestyle (MfE, 2017). The main areas of human-built environments of Te Awa Kairangi-Hutt City face significant impact by coastal climate change hazards. The primary observed and predicted climate change hazards relevant to the area are coastal erosion, coastal inundation and storm surge, and freshwater flooding (see Appendix B). Although these are not new types of hazards, it is widely upheld that their impact and the degree of risk that they pose will increase as a result of climate change (Bell et al., 2017, p. 18; see also IPCC, 2014; King et al., 2013). Sea level rise (SLR) directly exacerbates all of Te Awa Kairangi's climate hazards. SLR has been observed in Aotearoa-New Zealand for decades and is expected to rise 10% higher than global average predictions (McMillan, Jackson, & Poyck, 2010; MfE, 2017). [11] Because SLR exacerbates other coastal hazards, it is the central point of focus for adaptation decision-making and action across Aotearoa-New Zealand.

Along with the coast-specific impacts, freshwater flooding is predicted to increase in frequency and intensity. This is due in large part to abnormal rainfall and more extreme storm events, exacerbated by SLR and high levels of water at the harbour river mouths (IPCC, 2014; Lawrence et al., 2011; NIWA, 2018). Te Awa Kairangi-Hutt City's history of floods speak to the intensity of risk and impact for this area.

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[11] By 2100, globally, the mean sea level may rise anywhere from .28 metres to .98 metres (IPCC, 2014).

Between 1855 and 2005, 14 major events were recorded; on average there is a flood every almost every two years (Ballinger et al., 2011; GWRC, 2001). The largest of these floods in 1898 covered the entire valley floor and led to the development of stopbanks (Khan, 2012). While flood recording and monitoring technologies and large-scale infrastructure serve to mitigate impact, flood hazard is still significant (Ballinger et al., 2011,; Lawrence et al., 2011). The GWRC's *Floodplain management plan* (2001) notes that current conditions pose a "substantial flooding hazard, which directly affects 106,000 residents of the Hutt Valley, including all 75,000 floodplain occupants (estimated 2000), and up to $6 billion of public and private property" (p. 37). The plan also concludes that current structural strategies, such as stopbanks and bridges, and non-structural strategies, such as land use and emergency planning, are insufficient for the increasing frequency and magnitude of flooding (GWRC, 2001).

Waiwhetu stream, near The ReMakery, also has a history of large floods, the most recent of which occurred in 2004 (GWRC, 2017). Depending on this intensity of its modifications, Waiwhetu's flood-carrying capacity varies between a one-in-20 years flood event and a one-in-40 years flood event (GWRC, 2017; Watts, 2004) (see Appendix B). Like Te Awa Kairangi-Hutt River, GWRC is responsible for Waiwhetu's floodplain management. In 2010, GRWC carried out the Waiwhetu Remediation and Widening and Deepening Project to restore the health of the stream and improve flood prevention (GWRC, 2017). However, unlike Te Awa Kairangi-Hutt River, there is no current public flood management plan and much less information available regarding impacts of climate change on this catchment. GRWC's publicly available map of flood hazard areas does show almost all the eastern neighbourhoods affected by a medium likelihood (1 in every 100 years) flood event.[12]

Within coastal and flooding hazard prediction there is uncertainty around the exact degree to which Te Awa Kairangi-Hutt City communities will be impacted by and

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[12]According to GWRC's flood hazards map, the eastern neighbourhoods here include the ones with highest socioeconomic deprivation, Naenae and Epuni. The other affected neighborhoods are Fairfield, Waterloo, Waiwhetu Gracefield, Moera and Seaview.

need to adapt to the increasing hazards. However, given the already observed SLR and the certainty in continued SLR, there is enough confidence to conclude that Aotearoa-New Zealand and Te Awa Kairangi-Hutt City will experience all of the above hazards with increased frequency and severity. The diversity, disparity and pre-existing inequities in the human landscape of Te Awa Kairangi mean these hazards will not be felt in the same ways, nor felt equally across communities.

2.4 Climate change adaptation

2.4.1 Governance structure and current understandings

Increasingly, Aotearoa-New Zealand central and local governments recognise that climate change observations and modelling predictions warrant adaptation action. MfE is the leading national agency for developing, communicating and coordinating non-regulatory guidance for climate change adaptation (Rouse et al., 2017). Its most recent guiding document provides an overview of the main coastal climate change impacts and offers a framework for developing adaptation strategies (Bell et al., 2017). As shown in Figure 13 (next page), MfE understands adaptation for local government as a cyclical process that emphasises community engagement and is sensitive to local needs. Although it is comprehensive and designed to fit Aotearoa-New Zealand's governance structure, this report is not a statutory requirement; clear action and explicit pathways are left open. Instead, local governments' adaptation decision-making is heavily influenced by hierarchical, regulatory jurisdiction.

Aotearoa-New Zealand has a decentralised government structure in which key pieces of legislation allocate responsibility regarding "land-use activities, natural-hazard management, infrastructure and urban development" (Lawrence et al., 2015, p. 302). At a national level, significant legislation includes the Resource Management Act (1991) and the related National Coastal Policy Statement (2010), Local Government Act (2002) and the Civil Defence Emergency Management Act (2008)

(Lawrence et al., 2015; MfE, 2017c; Rouse et al., 2017).[13] These regulatory documents outline regional, district, and city level responsibility and requirements. They dictate development of policy around natural hazards strategies, emergency management plans, and resource and asset management regulations.
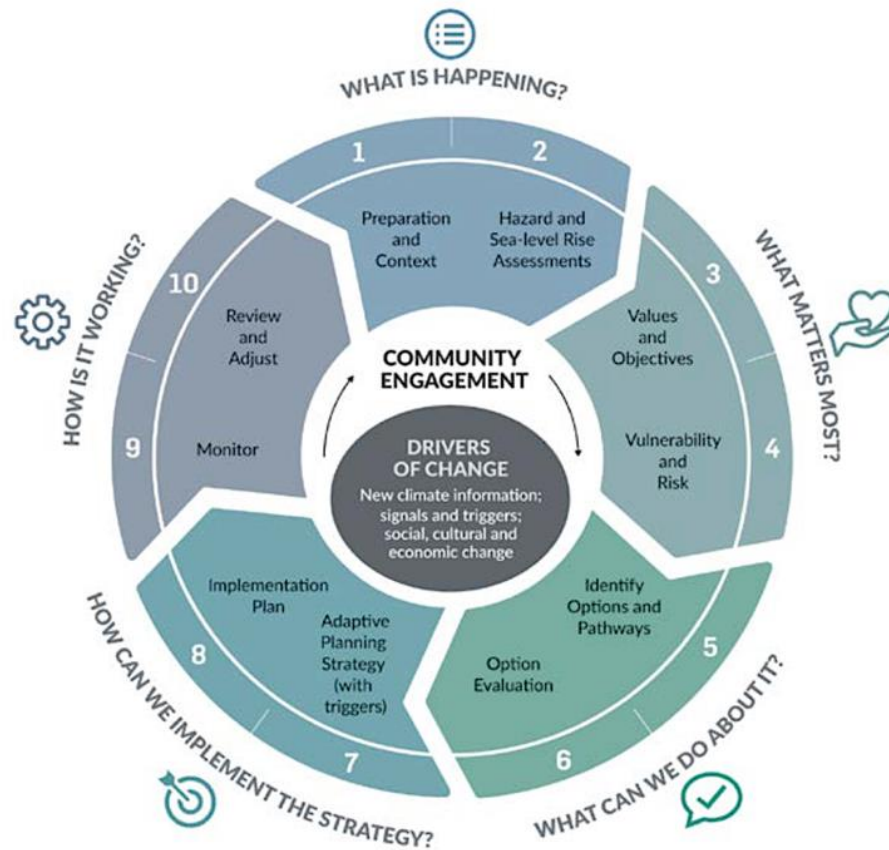
Figure 13 Adaptation framework (Bell et al., 2017; adapted from
Oulton, University of Waikato & UN-Habitat, 2014)

Looking more specifically at local government division of responsibility, regional councils (e.g. GWRC) govern emergency and disaster risk management and asset management. District and city councils (e.g. HCC) govern land-use zoning and development strategies. The national government is responsible for wider climate change strategic direction, including predictions and science communication and district levels are responsible for planning and enacting adaptation changes in their

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[13] GWRC (2015) also identifies the Reserves Act, Soil Conversation and Rivers Control Act and Land Transport Management Act as guiding legislation.

areas (Manning et al., 2011, 2015). Central government ministry initiatives are generally the main sources of funding for regional and district adaptation-related projects, particularly hazards-management focused projects (Lawrence et al., 2015). For Te Awa Kairangi, GWRC and HCC have undertaken policy work around natural hazards, infrastructure, growth and development, and sustainability that, to various degrees, address climate change hazards and risk (see Appendix C).

Overall, GWRC and HCC's policies demonstrate an understanding of adaptation as primarily about hazards risk management (e.g. GWRC, 2000, 2001, 2016; HCC, 2018). The focus in this sense is on infrastructural changes, and using climate science to guide these changes. Although not as prominent, there is also discourse on raising community awareness and engagement, as well as increased alignment across councils (GWRC, 2015). Within this policy, GWRC's (2015) *Climate change strategy* sets an important precedent as the region's first overarching regional stance regarding climate change adaptation decision-making. Greater Wellington makes four recommendations regarding adaptation in local government planning:

> 2.1 consider the effects of climate change as an integral part of planning and decision-making;
> 2.2 increase long-term adaptive capacity through the use of adaptive planning tools and techniques;
> 2.3 identify key climate change information requirements;
> 2.4 implement planning and policy measures that increase long-term resilience to climate change impacts. (p. 12)

Although this language signals clear direction from GWRC to incorporate climate change impacts into all local government decisions and focus on the long-term, how these statements transform into planning and action is unclear. There is a noticeable absence of consistent and specific indicators identified by GWRC or HCC to indicate effective implementation of the strategies and recommendations. Instead, many of the actions are around research, process planning and information gathering. A gap in explicit adaptation action shown here is representative of a wider trend throughout local government in Aotearoa-New Zealand (Lawrence et al., 2015; Manning et al., 2015; Rouse et al., 2017). The following section will explore potential

reasons why local government-led adaptation is still in this planning and information gathering stage.

2.4.2 Implementing adaptation

In her PCE report (2015) on SLR and connected coastal hazards, Dr. Wright aptly summarises the daunting task of adaptation action for local government:

> For a start, it is technically complex, and the size and timing of impacts are uncertain. Perhaps the most difficult aspect is the impact on people's homes, which for many are not just their homes, but also their financial security. (p. 10)

For HCC and GWRC, the task described by Dr. Wright is even trickier when adding the increased risk of flooding and the population density of the exposed areas. The rest of this section will more explore the challenges and opportunities that currently exist for local government.[14]

There have been several studies across Aotearoa-New Zealand undertaken to identify contextual factors that influence a local government's ability to realise adaptation planning and implementation (e.g. Bell et al., 2017; King et al., 2012, 2013; Lawrence et al., 2011; Manning et al., 2015). A summary of these studies by Rouse et al. (2017) confirms that local governments face a wide variety of challenges, including things like lack of funding and high costs of projects, lack of clear direction from central government, expectations from community around private property protection and general lack of awareness of issues and risk. More positively, Rouse et al. (2017) note that for each challenge, there are corresponding opportunities and strengths to encourage and enable adaptation. Local government has access to consistent information and guidance around hazards management. There are a number of tools available for engaging community and building public awareness. Additionally, opportunities exist across Aotearoa-New Zealand to

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[14] Local government here refers to regional, district, and city councils.

collaborate and share information and experiences – internationally, nationally and locally with community groups.

Collaboration between central, regional and district government is one pathway towards adaptation currently being pursued in Te Awa Kairangi-Hutt City. For example, RiverLink project is led by GWRC in collaboration with HCC and New Zealand Transport Association (NZTA). Currently in its planning and investigations phase, RiverLink will make changes to Te Awa Kairangi-Hutt River promenade and river channel along Hutt City CBD in order to improve flood protection (GWRC, 2018b). Although still in the early stages, the RiverLink project indicates a shift towards more adaptive and resilient planning and development through shared information and resources. It exemplifies possibilities to achieve infrastructure-based adaptation through shared, cross-governmental efforts and funding. Where this project falls short is in its ability to go beyond infrastructure and contribute to shifting wider community perceptions, expectations and behaviour. Lawrence et al. (2015) draw attention to the need for a cultural shift around what dictates *good* "access to services and utilities" (p. 304). There is still a large focus on maintaining access to services through infrastructure-intensive processes, to protect public and private assets and provide certainty. Communities receive the message that "existing responses can continue to be adjusted indefinitely, e.g. raising levee height or floor levels, and that this will be a sufficient and sustainable response" (Manning et al., 2015, p. 584).

A message of relying solely on infrastructure and enabling business as usual proves particularly problematic when it comes to the issue of private property rights, relocation and forced retreat that may need to take place due to SLR. Referring back to Dr Wright's quote, shifting community expectations and behaviour, while also mediating conflicting values is a challenge not solved with a sea wall or stopbank. Ostrom (2010) further points out that even if significant attention is spent on adaptation and resilience-building from government through policy, that policy as a mechanism will never have enough scope. This is not to say that government does not have a significant role to play, but instead that there is a function only community mechanisms of change, like CUPA, can serve. Both need to occur

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simultaneously with multiple centre points alongside of government (Ostrom, 2010), and in ways that are not "divorced from the socio-political realities of state authority and unequal power relations" (MacKinnon & Derickson, 2013, p. 261). These kinds of changes fall under transformative resilience and adaptation approaches.

2.5 Conclusion

A history of Te Awa Kairangi and Te Whanganui a Tara provides perspective on the processes of migration and occupation, and accompanying deforestation, agricultural development and urbanisation that have led to the current human and physical landscapes. The urbanised, disparate, yet socially complex and interconnected landscape shapes CUPA's transformative resilience and adaptation. The physical geography and human-built environments of Te Awa Kairangi pose complex needs for adapting to SLR, coastal inundation and erosion and increased frequency and severity of flooding. For the communities of Te Awa Kairangi, these hazards will vary in type of impact and severity of impact based on their pre-existing social, political and economic situations.

Current policy on adaptation across central, regional and district government is decentralised and premised on core pieces of legislation regarding resource and risk management. In this structure local government (GWRC and HCC in this case) holds primary responsibility for adaptation. Local government strategies for adaptation are rooted in infrastructure development and seek to protect assets and provide certainty and security. The context of current adaptation implementation reaffirms the premise of this research, that community-led adaptation and resilience can offer a space for *un*learning and *re*learning not being met through local government policy and planning.

Chapter 3 The research process and Common Unity Project Aotearoa

This chapter outlines the methodological process of this research. Section One opens with my transformative, decolonising and feminist epistemology and the ways I understand positionality. Section Two explains scholar-activist framework, its core aim of situated solidarity and how it informs reflexivity. Section Three and Four delve into the process behind choosing and carrying out participant observation and semi-structured interviews, and the thematic analysis that followed. Section Five reflects on limitations and other challenges.

3.1 Introducing myself, the researcher: Epistemology and positionality

Cameron and Hicks (2014) argue that "research is a generative and performative practice that contributes to shaping the world we come to live in" (p. 54). I position this research work as part of a collective action of knowledge-making and performing (Chilisa, 2012). To understand research as performative opens up ethical and political responsibilities around what as a researcher I choose to produce and how I choose to produce it (Law & Urry, 2004 in Cameron & Hicks, 2014). By seeking to make a difference in climate change discourse this research agenda draws from what McKinnon (2016) calls "matters of concern" (p. 346). A matter of concern embeds this thesis in a place of care, of caring for and with the human and non-human environment. I ground my critical approach in care in order to contribute to a knowledge-making around climate change of possibility and multiplicity, rather than of authority and judgement (Askins & Blazek, 2017; McKinnon, 2016).

This research project is informed by a triangular junction of feminism, decolonisation and transformation (next page). Together, the triangle of these three epistemologies illustrate the "philosophical underpinnings" of this research process (Chilisa, 2012, p. 40). They connect through a shared way of seeing reality as dynamic, situated, historically influenced, power filled and political (Chilisa, 2012).
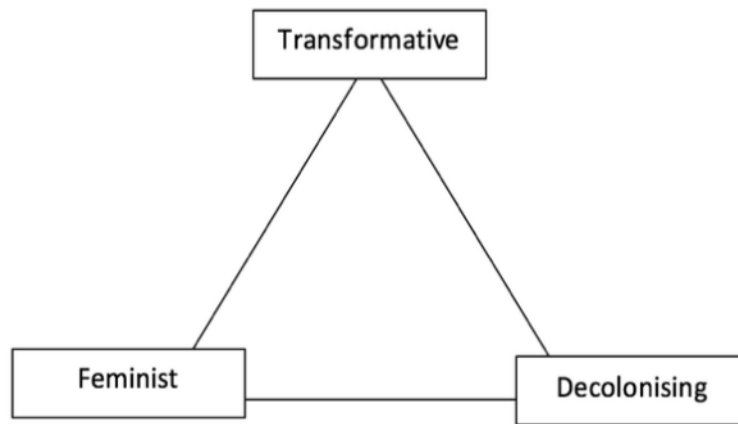
Figure 14 Epistemology triangle

Feminism offers a means to challenge norms by building knowledge from a place of care and from critical reflection on our own power as researchers (McKinnon, 2016). Decolonisation offers a means to change our reality by challenging norms and assumptions and finding solidarity in difference, rather than eradicating or subsuming it (Routledge & Derickson, 2015; Tuhiwai Smith, 2013). Transformation is centred at the top because both feminist and decolonising epistemologies ask how research can generate knowledge within and between difference and help create change without reproducing inequity (Chilisa, 2012; Nagar, 2014). Like transformative approaches to resilience thinking, a transformative approach to research is attuned to power relationships and enhancing justice.

As Nagar (2014) explains, positionality is relational; my role as a researcher and the perception of this role is dynamic and shifts to meet the needs of participating members and my own understandings and capacities. Positionality is also interlinked with social identity; internal and outward perceptions of social identity significantly influence the way in which people interact with researchers and the research process (Mott, 2015; Rose, 1997). Social identity can provide access to certain knowledge and limit access to other knowledge (Billo & Hiemstra, 2013). It is, therefore, an important concept to reflect upon and include in this thesis. While there are more layers to my social identity, particularly given my Lebanese-Syrian ethnicity and upbringing in queer spaces, as far as general societal perceptions, privilege and access are concerned, I am a Pākehā and colonial-settler (Mott, 2015).

To perform feminist, decolonising, transformative research I aim to be aware of the implications around my white-settler identity. There is risk I contribute to the problematic 'gentrification' of the activist field, which is seeing an increase in "white, middle-class, graduate and urban activists" (Lozano, 2018, p. 3). Although I am conducting research in Aotearoa-New Zealand, I have very limited understanding of the diverse array of Māori worldviews and knowledge. I am still developing awareness and understanding of the ways in which white-settler mentality creates ignorance (inspired by Katrina Pipi in Mertens, Cram, & Chilisa, 2014). In response to these implications, I aimed to intentionally and consistently reflect on my positionality in a way that questions and unsettles my privilege. My methodological choices arise from this aim.

3.2 Working with and for CUPA: A scholar-activist approach

In May 2018, I reached out to CUPA's coordinators to offer my services as a volunteer and discuss the possibility of aligning my thesis research to CUPA's work. I approached as a 'friendly outsider' (Rogers, Convery, Simmons, & Weatherall, 2012). I had never been to The ReMakery or been involved in any projects but was interested in supporting their work through my research. As a friendly outsider, I embedded myself into a community already in the process of enacting alternative possibility in their everyday lives (Kobayashi, 1994). Slowly, I began participating more regularly and familiarising myself with the organisation and the people who frequent The ReMakery. In the course of two months of volunteering, my understanding of the space grew and I became a familiar face to others. When ethics approval came through and formal information gathering began, I felt a strong sense of accountability to the people at CUPA with whom I had begun to form relationships. My chosen scholar-activist methodology reflects this care and accountability.

3.2.1 Methodological framework

A scholar-activist methodology critically considers relevance, purpose and what knowledge in the research process is taken seriously (Lozano, 2018).[15] By following a scholar-activist framework, I have committed my research to work in "dialogue, collaboration and alliance," prioritising participants' perspectives, processes and agency (Hale, 2008, p. 4). I explicitly move my research from *about* CUPA to *with* and *for* CUPA (Derickson & Routledge, 2015; Rocheleau, 2008). In this sense, this research is an act of situated solidarity. I have sought to be "[open] to what can be learned from what is happening on the ground" (Cameron & Hicks, 2014, p. 53) by letting go of authority, of "the power to name, to address and to critique" (Nagar et al., 2016, p. 153). However, even with these scholar-activist intentions, research is nevertheless performative and power-filled (Rose, 1997). Therefore, I have also sought to destabilise norms and make space for critique and difference (Hale, 2008) while weaving in reflexive practices on power, personal values and the needs of participating CUPA members. An affirmation and meaningful inclusion of emotions is one way I aimed to destabilise methodological norms and climate-change discourse norms.

Emotions are a driving factor in choosing a scholar-activist methodology. Emotions connect back to care and concern as key motivations in this research. Derickson and Routledge (2015) affirm the importance of emotions; "scholar-activist engagement frequently emerges from our deep emotional responses to the world. It is our ability to transform our feelings about the world into actions that inspires us to participate in political action" (p. 396). Emotions also play a significant role in collective, communal action; people's feelings affect decision-making and can be powerful sources of change (Ettlinger, 2004). I have written emotions into the research to account for the significance of care and concern and uphold research as a personal process (Berg & Mansvelt, 2010). Instead of discounting emotions as an

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[15] Scholar-activist research is synonymous with activist research (Rogers, Convery, Simmons, & Weatherall, 2012).

inconvenience I have weighed emotions as an important aspect to consider and actively incorporate into findings (Humble, 2012).

3.2.2 Weaving in reflexivity

Kemmis, McTaggart, and Nixon (2014) maintain that scholar-activist researchers seeking to merge academic research with activism need to critically reflect on the self and the ways difference affects generating and performing knowledge. Sultana (2007) describes reflexivity as an ongoing process of critically engaging with the ways power and politics are woven into research. Just as there is no straightforward formula for being open and letting go, Derickson and Routledge (2015) point out there is no straightforward process of reflexivity. To unsettle my white-settler identity and build situated solidarity, I sought a constant, collaborative reflexivity based in conversation and relationship (Nagar et al., 2016). I relied on the advice and expertise of my supervisors, who provided directional guidance and different methods to keep track of and work through emerging information and experiences. I relied on insights from fellow students, who were also working with similar reflections. In a less formal sense, I also looked to my friends at CUPA to help in this process. I observed and learned from the ways in which facilitators, coordinators and volunteers interacted with one another. They regularly modelled openness, patience and flexibility in working with different needs and different pressures. Their honesty, sincerity and willingness to teach and talk encouraged my own openness.

Alongside collaborative action, I reflected through journaling. Journaling usually resulted in a series of loose observations, some academic insight and many of my own questions. Questions drew attention to the ways I shifted my interactions based on the person and the space in an attempt to be relatable (Kearns, 2010). I made a continual effort to appear informal, down to earth and 'un-university' like, and was eager to prove my earnestness as a volunteer. I agreed to any job offered to me, especially more physically demanding or 'dirtying' tasks. These observations highlight the paradox of situated solidarity, of the differences of the university setting and The ReMakery, and the ways I moulded myself to leverage my relatability and positionality (Hale & Hale, 2008; Routledge & Derickson, 2015).

Situated solidarity became a fluid process of drawing on personal interests and skills beyond academia to consciously adapt my behaviour and avoid negative perceptions of university researchers.

Second, I reflected a lot on my position as a volunteer-based researcher and my place of living (outside Te Awa Kairangi-Hutt City), and how these factors placed distinct limits on the amount of time and energy I could spend as a volunteer. My foremost commitment as a student and to this thesis, and living a 30 minutes' drive away, meant I had to plan visits carefully. This shaped who I formed relationships with and was sometimes at odds with the ways participation and connection manifest at CUPA. Most members who are highly involved live nearby and can pop in as needed. Additionally, friendships and stronger connections seem to form informally via time spent together on different projects or activities. These differences led to negotiating a balance between allowing my volunteer-based research process to be organic and feel natural, and sticking to deadlines and honouring the thesis workload.

3.3 Gathering information: observing, doing and listening

3.3.1 Participant observation

Soon after I received ethics approval, I sat down with one of the board members and the Development Director to discuss possible methods and outcomes for this research project. Participant observation was agreed on given CUPA's strong ethos of reciprocity, emphasis on creating and doing, and my already established role as a volunteer. Walsh (2009) describes participant observation as a continuous process of "taking part" and "reflecting on what is happening" (p. 77). Lozano (2018) affirms the suitability of 'doing' alongside observing because social movement work is a "multidimensional" space where "emotion, action and thought intertwine in praxis" (p. 2). I increased my time with CUPA and volunteered three to five times a week. Weekday participation usually included doing odd jobs around The ReMakery, anything from grating beeswax to collecting opinions on CUPA's vision statement (Personal research journal). Quiet moments were spent sitting and chatting with

people. Saturdays I joined the Urban Kai group, gardening in one of micro-farms and sharing lunch afterwards. I observed a few staff meetings and a Board of Trustees meeting. I also photographed images that I felt represent the experience of CUPA. Throughout these three months, I additionally continued to help with CUPA's internal evaluations (separate to this research project).

For each visit to The ReMakery, I attempted to record at least one piece of information, either while there or shortly afterwards. Reflections came from recording what I saw, heard and felt, and connecting these sensations with previous experiences (Kearns, 2010). Based on my volunteer activities, observations varied from thorough recordings of specific events and detailed interactions to quick notes about what the different spaces looked like and who was there. Participant observation drew attention to the nuances of the spaces and relationships, including what was there and what was absent or missing. Overall, this method deepened my own understanding of how CUPA is made and of the subtleties that contribute to the lived experience of resilience and adaptation.

3.3.2 'Sitting down and talking', semi-structured interviews

Semi-structured interviews emerged as the best method to increase participating CUPA members' flexibility and agency. The interview schedule (see Appendix F) focused around the ways people appreciate and understand CUPA, their perceptions of the work it does for the wider community, and their own understandings of what resilience and adaptation mean. The topics discussed differed depending on the person, their area of participation and their areas of deepest understanding. For instance, someone in a paid position or coordinating a certain project was asked more specific questions around what goes on at CUPA. Whereas a casual volunteer who works in the environmental field was asked less about the organisational aspects and more around climate change adaptation needs for the wider community.

McDowell (2010) states "there are no easy guidelines about establishing contact and rapport [when interviewing] ... a certain degree of persistence and open-mindedness are essential" (p. 164). My experience mirrors her description. I

dedicated a lot of time towards building relationships and gaining familiarity with different people in the different spaces of CUPA. Instead of interviewing a large number of people, I hoped to connect with the 'right' people who, together, would represent the variety of work going on and the diversity of people (Bradshaw & Stratford, 2010, p. 43). However, I was dependent on friendships with the people I interacted with most as a volunteer. And when it came time to ask people to 'sit down and talk' I experienced a sort of stage fright. Although most people knew why I was there, because I had interacted predominantly as a volunteer, it felt disingenuous to switch to strictly a researcher capacity, even if only for 30 minutes to an hour.

I took heed of McDowell's (2010) words, stayed persistent and flexible and worked through my insecurities. Once I began asking people to talk, the effort to build trust and familiarity showed a positive effect. My original aim was to complete around 10 interviews, but I ended up completing eight. I let go of the ideal of reaching a 'special' number. I adopted the view that quality research in this case is bolstered by three months of participant observation and is not measured solely by quantity of interview participants. The eight contributing CUPA members are volunteers and coordinators from across the different enterprises. Some of them come daily and hold a number of roles. Some participate in specified projects and interact with CUPA in limited ways. Some have contributed to CUPA since its beginning and some have recently gotten involved. All of the contributing participants are residents of Te Awa Kairangi.

3.4 Where data meets the literature: Thematic analysis

3.4.1 Transcribing

Changing spoken word into a tidy, typed transcript is a value-laden act. It is a particularly powerful act for a space like CUPA, where knowledge is performed predominantly through doing, teaching and showing, and less through writing or reading. With a sense of this power-filled act, I attempted to account for style and unique personality that came out in the interview responses. I used *italics* to

represent a word with particular emphasis. I put moments of extended pause and other description of actions, i.e. laughing or gesturing in [brackets]. Like in other parts of the research, while transcribing I also attempted to account for uncertainty and confusion, and embrace messiness (Cloke et al., 2004). I put my own confusion about a word or sentence in **bold**. Additionally, some parts of the interviews I chose to paraphrase or leave out completely, particularly my own discussion, or if the interview had turned into more of a conversation and flowed into other areas.

3.4.2 Thematic coding

When the transcripts were completed and printed, I read and reread each interview and circled, underlined, scribbled, jotted down key words, and generally made a mess of the tidy typed lines. As I mapped connections between the codes, clusters of codes and wider themes emerged. I compared these thematic findings to the wider narrative around *learning*, *un*learning and *re*learning adaptation and resilience. What direction did community economies, climate justice and critical geography offer in terms of *re*learning transformative adaptation and resilience? Where did it crossover with what CUPA members were saying? Moving back and forth between the main points of interviews and the key concepts in the literature brought me to three potential pathways of *re*learning around community economies, collective learning and making sustainability accessible.

For analysis of my participant observation data, I loosely organised the research journal notes into four categories:

- What I saw and heard (what was there, who was there and what were the interactions);
- Wider changes witnessed over time;
- My own lived experiences and reflections, including emotional response and;
- Areas of learning, tensions and confusion.

These categories clustered the messy information and enabled comparison with the themes from the interviews and literature. Overall, the observations formed a comprehensive picture to support themes on community economy, collective learning and making sustainability accessible. They added broader evidence from CUPA's governance level and more specific evidence from daily interactions. They

also added nuance to participants' spoken statements and showed areas of tensions and contradiction.

3.4.3 Selection for final inclusion

The final phase of thematic analysis entailed selecting representative quotes and observations to include in this body of text. As McDowell (2010) points out, while participants are initially more active agents, choosing whether to participate, what their responses are and where conversation goes, they are much less active in the final stages of analysis and writing. I interpreted accounting for this power as a kind of balancing act. The final selections of quotes intend to account for difference and equitably represent varying interpretation and opinion while also denoting similarity and consistency.

3.5 Further considerations and limitations

Along with weaving in reflexivity as a constant part of the research process, there are other steps aimed to increase participants 'agency and show respect. In the consent process for interviews, participants were offered three choices around being named and identified with CUPA: using their actual name, choosing a different name but still being identified by specific role at CUPA, or staying completely anonymous and not associated with CUPA (see Appendix E). While the main facilitators of CUPA knew I was conducting participant observation, as well as the other volunteers at Urban Kai, there were too many different people in and out of The ReMakery to inform everyone. Therefore, anyone observed in participant observation is entirely anonymous. Another significant consideration was dealing with sensitive material that emerged during the research and determining what information and observations to include and what to leave out. In respect to my relationships with members of CUPA, and in acknowledgement of the public nature of this research, I have chosen to exclude certain pieces of information and observations that would be harmful or disrespectful to relationships and people involved.

There are two final points of negotiation regarding the structural format of thesis research. Briefly mentioned before, CUPA is a place where, as opposed to formal

writing, knowledge is performed predominantly through doing, showing, teaching and other more visual methods. For this reason, a number of photographs and other visual elements are included in the following chapters. The second area of negotiation relates to the limitations of a 12-month thesis timeframe. A condensed, yearlong process is restrictive for building deep relationships and engaging in collaborative reflexivity and more participatory, grounded methods.

3.6 Conclusion

Grounded in a triangulation of decolonising, feminist and transformative epistemologies, I seek to acknowledge and hold myself accountable to the understanding that research is performative and political. Coming from a place of care and concern, I offer a situated celebration of the possibilities of transformative resilience and adaptation practised by Te Awa Kairangi community members. I seek to do so in a way that prioritises trust, reciprocity and respect (Chilisa, 2012) for the people of CUPA. A scholar-activism methodology prompted volunteering my time at CUPA and fitting the research into the schedule and needs of the members, which in turn led to participant observation and semi-structured interviews. Woven into this process are reflections on position and identity as a researcher and the ways they inform the research process. Scholar-activism also informed thematic analysis of the information gathered through observation and interview. Thematic analysis converges what critical geography literature offers and what the information from CUPA demonstrates.

Chapter 4 Within and beyond capitalism: Community economy

> We have lost, and maybe never had, a moral compass to guide economic actions so that they reflect care and responsibility for one another, for living beings, and for our environment. We face a dilemma- whether to follow our present course to the bitter end, acting as if there is no alternative, or to try something new.
> (Gibson-Graham, Cameron, & Healy, 2013, p. xviii)[16]

Many critical geography scholars and activists have highlighted how neoliberal capitalism harms people and the non-human world (MacKinnon & Derickson, 2013; Ribot, 2014; Tierney, 2015; Welsh, 2014). Recent work has highlighted how neo-liberal capitalism is not all-encompassing nor all-powerful, but instead an ever-shifting assemblage of projects, constantly interfacing with assemblages of power and agency (Higgins & Larner, 2017). A shift in thinking from the neoliberal whole to interfacing assemblages multiplies the possibility for resistance and makes space for critical attention to non-capitalist interpretations and embodiments (Burke & Shear, 2014; Kousis & Paschou, 2017; Lewis, 2009; Williams, Goodwin, & Cloke, 2014). It directs attention towards sites where people perform different economic possibilities by working simultaneously within capitalism and out from "*under* capitalism*" (Cornwell, 2012, p. 727; see also Cretney, 2014; Gibson-Graham, 2006).

Diverse economies reimagines notions of transaction, labour, enterprise, property and finance to resist normative ideas of market transactions, wage labour, capitalist enterprise, private property and mainstream market finance (Gibson-Graham, 2006). A community economy is one such resistance and reimagining practised by CUPA. As a collective, CUPA considers ethical decisions that come with practising a community economy. Gibson-Graham, Cameron and Healy (2013) designate the ethical actions of a community economy as:

- *surviving* together well and equitably;
- *distributing surplus* to enrich social and environmental health;

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[16] "We" in this quote refers to Global North, colonial-settler authors and audiences.

- *encountering others* in ways that support their wellbeing as well as ours;

- *consuming* sustainably;

- *caring for* – maintaining, replenishing, and growing – our natural and cultural commons; and

- *investing our wealth* in future generations so that they can live well.

<div align="right">(p. xviii-xvii)</div>

Overall, these ethical actions of a community economy seek change towards "surviving well with each other and with other species on this planet" (Gibson-Graham et al., 2013, p. 138). This chapter will connect these community economy changes with CUPA's ability to *un*learn inequitable and unsustainable responses to climate change and *re*learn more transformative adaptation and resilience. It will explore the ways in which CUPA's structure, philosophy, activities, and community members' input demonstrates surviving together well and equitably, distributing surplus for environment and social health, and creating and sharing commons. For CUPA, these core practices facilitate the other three community economy activities of investing wealth in future generations, encountering others and consuming sustainably. Discussion of these three themes continues in Chapters Five and Six.

4.1 Beyond capitalism: Surviving together well and equitably

4.1.1 Surviving together well

Members of CUPA work towards surviving together well and in doing so, show possibility to *re*learn adaptation and resilience centred on collective wellbeing. Linda is an extremely talented sewer and regular at CUPA who helps in the Sew Good Collective. On a Friday afternoon, she and I sat in the library at The ReMakery, drinking tea and colouring while she talked about her life's journey, former hardships and her experience with state systems of supports:

> They don't care about the girl with three children and an abusive husband that ran off and left them with these children. Okay they've got, they'll get some money to pay the rent. They'll get subsidy. They'll get community card to help with the doctors or medications. But who's going to take the child camping or buy some tramping gumboots, or

where's you gonna get extra money for when the school trip comes on?
They can't go?
(Interview, 7 September 2018)

Linda's account of past difficulties and experience with state mechanisms of support sheds an important light in the distinction between surviving and surviving well. She criticises 'service delivery' government support in that they facilitate basic survival but do not afford quality of life, or surviving well (Chandler, 2014). Linda's description of surviving well includes opportunities for providing care for one's children and participating in experiences that increase mental and physical health and social inclusion. Her distinction echoes CUPA's distinction, to go beyond survival to fostering wellbeing. This is a holistic understanding of wellbeing, comprised of material, occupational, social, community and physical health (Gibson-Graham et al., 2013).

While at CUPA, I observed a wide range of examples that demonstrate work towards holistic wellbeing (from personal research journal). The two examples that follow are representative of practices intended to promote multiple areas of wellbeing.

Example 1: Twice in the past six months, members of CUPA have donated knitted goods and other products to put together care kits for patients in need at Hutt Valley Hospital. These efforts brought older people together to The ReMakery to knit slippers, mittens and hats, not only increasing the physical and material wellbeing of the patients, but also the communal and social wellbeing of the volunteers. It also increased the occupational health of the nurses, who originally connected with CUPA over their concern for their patients' lack of warm goods and necessities, and who expressed immense gratitude when receiving the care packages (Personal research journal).

Example 2: The Unity Kitchen makes predominantly plant-based food from ingredients grown in the Urban Kai's micro-farms. This is a deliberate decision to ensure people have greater access to healthy food that is affordable and generously portioned (for example, $6 for a vegetarian burger, see Figure 15 next page). The cooks who make the food are learning culinary and food safety skills and those paid

earn a living wage. Unpaid volunteers can timebank their hours to exchange for other services at The ReMakery. Purchased meals, like the vegetarian burger, directly sponsor meals for children at schools across Te Awa Kairangi-Hutt City. The Unity Kitchen enterprise increases physical and communal health of the people buying the food and of the students, as well as the occupational health of the educators at participating schools, whose work is improved by having healthy, fed students.

Figure 15 Vegetarian burger from Unity Kitchen

These two examples (the hospital care packages and Unity Kitchen) both illustrate the co-beneficial nature of CUPA's community economy wellbeing. It is not just about teaching gardening or cooking skills, or providing food and knitted goods. It is about helping people in a way that provides other services simultaneously to those creating and sharing. All scales of activity, from minor practices to wider, ongoing enterprises, contribute towards a holistic wellbeing. CUPA shows that, by developing holistic wellbeing across scale, community can create its own non-capitalist resilience and capacity to adapt (Vallance & Carlton, 2015; Williams et al., 2014).

As a community economy, CUPA is not just about surviving well as an individual, but about surviving well together. The broadest and, perhaps, most obvious example is its organisational identity as a charitable trust and social enterprise collective. The

opening description of CUPA's vision, created by the Board of Trustees and Development Director states:

> In our land of plenty no family should go without. Our solution – Together we grow food, skills, jobs, a community of connections and happier humans. We look after our environment, so that it can look after us. (CUPA, 2018)

In pursuit of this vision, two of the five CUPA's core values express the importance of togetherness:

We grow from what is:

- We grow solutions from within our community.

We expect great things:

- We are committed to making a difference – for our children, families and community.
- We expect the best from ourselves and from the communities we work with. (CUPA, 2018)

Radiating from these governing statements is an ethos of care, care for one another and care for the environment. This ethos of caring together, for human and the non-human, shows in the aims of larger enterprises and in more minor daily practices. For example, the food containers used for takeaway meals are compostable (Personal research journal). Cleaning products are non-toxic and all natural (Personal research journal). Comfortable couches and rocking chairs with colourful knit blankets create an inviting, positive feel (Personal research journal). More broadly, a strong tenet of care comes through in CUPA's founding purpose: children across Te Awa Kairangi have access to healthy meals (Personal research journal). Like wellbeing, care is also scalable. Care is scalable because it is of value to the people who contribute to CUPA. After a Saturday morning gardening session, I sat with Gordon, a fellow Urban Kai volunteer, and discussed the issues of care within a neoliberal capitalist economy:

> What we have at the moment is an anti-economy, where what is it does is it creates scarcity, it profits from it, it rewards really poor attributes of human behaviour. Like if you lie and cheat, steal, and you can get away with it, then you're rewarded. And so that rewarded behaviour

just gets you better and better at lying, cheating, stealing. So one of the
things we need is to just let our economy evolve in a way which
rewards better attributes of human behaviour.
(Interview, 6 October 2010)

In his criticism of a neoliberal capitalist economy, Gordon alludes to an important
contrast between the absence of care in the wider system and the emphasis on care
at CUPA. Like Gordon, many people are drawn to the sharing and receiving of care
at CUPA, an experience of which our wider economy does not always provide or
value (Personal research journal). John, a Te Awa Kairgani resident, also showed his
care indirectly as he explained his work with youth:

And so I exhort them to come here and do things, to enjoy themselves,
to learn a few things, to make, use your hands and use your brains.
Because most of 'em have got brains. They've all got brains a lot of
them. And you'd be surprised where you find the amazing ones.
(Interview, 19 October 2018)

John's care is multidimensional and pragmatic. He wants to ensure youth have a
positive experience while learning, have the skills to support themselves and feel
confident in using those skills. John is also alluding to accountability to others and a
trust in their potential. His obligation to facilitate young peoples' positive growth
denotes an ethical aspect of care. Gordon and John's input show that living together
well involves ethical decisions around the disruption of values of competition and
individual interest, and replacement with different sets of values around solidarity
and support (Gibson-Graham, 2006; Gibson-Graham et al., 2013; Kousis & Paschou,
2017).

By putting wellbeing and care for one another at the centre of their work, CUPA
members implicitly resist and remake the 'resilient' subject. They pursue a holistic
and collective wellbeing over a survivalist, a-political and individualistic identity.
For CUPA, adapting and building resilience by surviving well is not a process of
building the capacity to be better included in a neoliberal capitalist economy.
Instead, resilience and adaptation become a communal process of enhancing agency
to "live flourishing lives, of their own specification" (Scholsberg, 2009 as quoted in
Holland, 2017, p. 394). In this sense, CUPA's wellbeing and care is both highly

situated and deeply connected to social agency (Hayward, 2012, 2017). Social agency values transformative change via collective action and communal work rather than individual agency. Mutual care, strengthening community health, strengthening social networks and building social systems of support feeds into this social agency and can contribute to transformative resilience and adaptation (Cretney, 2016; Norris et al., 2008; Vallance & Carlton, 2015). The importance of situated wellbeing and social agency in CUPA also indicates that the ability for a community to thrive (in a changing climate) is a direct result of having access to govern their resources as they see fit (Berkes & Ross, 2013).

To re-centre adaptation and resilience around care, wellbeing and social agency requires delving into the social complexities of our ethical relationships with one another and with the natural environment (Gibson-Graham et al., 2013). Conversely, Chandler (2014) points out that neoliberal capitalist strategies are "ignorant of the complexity of relational connections in the reductionist search for profits and exclusion of externalities such as community wellbeing and the environment" (p. 59). Fabinyi et al. (2014) expand on this difference, noting a trend in normative resilience and adaptation strategy towards overgeneralisation and oversimplification around the socially complex ways people value and understand the environment and their resilience.

This gap raises questions in climate change policy and wider climate change discourse around what wellbeing in resilient and adaptive communities based in neoliberal development would look like, and what agency would look like in connection to this capitalist-orientated wellbeing. Otherwise put, in aiming to be resilient and adaptive, *who* or *what* decides what surviving well means and for *whom*? One possible response to this question is to look to the unique sets of politics and knowledge of a place or site of adaptation and recognise that qualities like wellbeing and care are not universally accepted or experienced similarly (Cote & Nightingale, 2012). A situated adaptation and resilience, grounded in community-specific understandings of wellbeing would help ensure that dominant, capitalist understandings of wellbeing do not subsume unique community values and expressions.

4.1.2 Surviving well together, and equitably

A main characteristic of a community economy from other non-capitalist economies is the recognition that surviving well together, equitably, is a political and ethical process and that ethical choices are complex and continuously negotiated (Burke & Shear, 2014). Even though a community economy like CUPA aims to hold ethics of care and support at the forefront, equity is not guaranteed. Equity requires critical reflection and negotiation, particularly given Aotearoa's history of Pākehā occupation and the strong ties between neoliberalism and colonialism (Bargh, 2007; Bargh & Otter, 2009). Critical reflection and continuous negotiation foster what Gibson-Graham (2006) call 'being-in-common'. Being-in-common makes space for differences, i.e. economic status, political affiliations, cultural backgrounds and ethnicities, and makes explicit an ethos of co-existence. The people that make up CUPA, from the Board through to casual volunteers, negotiate what equitably being-in-common looks like. At a governance level, one of the five core values indicates commitment to equitable change and just work.

"We are courageous:

- This is gritty stuff – it's tough but we won't give up;
- We demand the best for our children and families" (CUPA, 2018).

People participating in CUPA notice this value in action and appreciate the work done to address inequality. For example, Emily, a volunteer at the Common Grocer, has noticed CUPA's effort to provide resources that are affordable, while also providing opportunities to make an income or develop skills. As she talked about how CUPA supports individuals and its wider community, she explained:

> In terms of the community hub, I think being affordable is probably more of a draw card for maybe that area of the community. Supporting people in small enterprises. I think that's how I see its importance, that they're supporting small enterprises, people gaining skills in things they probably wouldn't have done before.
> (Interview, 13 October 2018)

Emily's observation speaks to CUPA's commitment to serve families with limited income and to the recognition that affordability is a major factor in living well equitably. Affordability increases accessibility by enabling participation (monetarily) for people with limited incomes. In critical review of accessibility,

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several people I interviewed discussed a need for greater engagement of people from The ReMakery's immediate neighbourhoods and the need for more diversity in the 'front' spaces.[17] For instance, when discussing her work and vision of Urban Kai, Rachel, the previous Urban Kai Coordinator, articulated two critical negotiations around equity and participation. First is the importance of addressing the needs of everyone in a way that prioritises those most in need: "We don't want this to be a project for the poor do we? We want this to be good food for everyone, that's an equaliser" (Interview, 11 October 2018). For Rachel, equity is about addressing poverty and hunger in lasting ways that avoid reinforcing disparity. Second, Rachel raised the ongoing conversation at CUPA around the *who*:

> And that's something else I don't think we've really nailed down, what our neighbourhood is. 'Cause I think we've been reasonably clear that we want other communities to have their own solutions and this is about our neighbourhood. Um but I'm not entirely sure what our neighbourhood is.
> (Interview, 11 October 2018)

At a Board of Trustees meeting, I observed a similar discussion around spatial and social boundaries of the neighbourhoods served and included in CUPA. The Board acknowledged that future recruitment for CUPA leadership should focus on people who call Te Awa Kairangi-Hutt City home, not just those who live in wider Whanganui a Tara (Personal research journal, 18 October 2010). These reflections illustrate that regular contributors to CUPA's work are critically thinking about how community economy is being made and who has access to the process of community change. More discussion on how CUPA negotiate being-in-common equitably is covered in Chapter Five.

The importance of care and the ethical consideration of equity that this community holds offers a more transformative way to account for issues of justice in adaptation and resilience decision-making. From a climate justice perspective, Hayward (2012,

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[17] 'Front' spaces represent the more public spaces of The ReMakery, where volunteers and walk-in visitors have access. This includes the Sew Good spaces upstairs but excludes the back workshop spaces, where the 'PD' groups and student trade groups work.

2017) argues Aotearoa-New Zealand's current governance systems based in a-priori universal justice and representative decision-making do not prioritise collective care and equity considerations. Alternatively, CUPA members are making ethical decisions through a decentred, deliberative process that fosters embedded justice. By considering the needs of future generations and non-human nature, embedded justice redirects adaptation and resilience decision-making towards equitable distribution of environmental harm and impacts (Hayward, 2017). Resilience and adaptation processes also become more sustainable when decision-making considers the needs of future generations and non-human nature. Local government adaptation and resilience processes shaped around embedded justice would prioritise engagement and relationship-building with different community groups and share decision-making authority across multiple generations (Hayward, 2012).

4.2 Beyond capitalism: Creating commons

For CUPA, living well, together also involves sharing and moving away from individual ownership that neoliberal capitalism tends to prioritise. From individual material items to water, land, education and healthcare, a neoliberal capitalist economy has systematically reduced the commons. Gibson-Graham et al. (2013) title this process the 'period of privatisation' and highlight the harm of privatisation when it comes to healing and learning to live with our negative impacts on the global environment:

> This period of privatisation is beginning at the very time that our global circumstances demand not just collective thinking and acting but a move away from the boundary making that separates mine from yours and you from me. (pp. 126–127)

Community economies create commons when they reclaim otherwise private or more restricted resources and redirect them for collective use. Gibson-Graham et al. provide the Commons Identi-Kit (Table 1 next page) as an analysis tool to see if an organisation's actions indeed create commons. The Commons Identi-Kit aims to

make the commons less abstract and better grounded in actual action and lived experiences (Gibson-Graham et al., 2013).

Table 1 Commons Identi-Kit (adapted from Gibson-Graham et al., 2013, p. 135)

COMMONS IDENTI-KIT					
ACCESS	USE	BENEFIT	CARE	RESPONSBILITY	PROPERTY
Shared and wide	Negotiated by a community	Widely distributed to community members (and beyond)	Performed by community members	Assumed by community members	Any form of ownership (private, state, or open access)

However, before applying this analytical tool and delving into CUPA's creation of commons, it is important to recognise the distinction between this academic concept and socially situated language. None of the interview participants specifically mentioned 'the commons', nor did I hear it said while volunteering. Instead, I heard words like reciprocity, giving and receiving, and tautoko (support) (Personal research journal). The Kete Wā mural (Figure 16, next page) is another way creation of the commons is understood and expressed at The ReMakery. People at CUPA might differently interpret of understand the following examples of each aspect of the Commons Identi-Kit. In my researcher position, and through a community economy lens, I am appreciating what I saw, heard and felt from a commons perspective.

Using this tool kit, it is evident that the CUPA's transformative resilience and adaptation involves a creation of commons. Considering the first commons aspect, access to CUPA and The ReMakery is shared and wide. At a governance level, "everyone is welcome" is one of the five core values (CUPA, 2018). This value is seen in practice in terms of the physical space of The ReMakery and in the people participating. Facilities are accessible to those with limited mobility and different mental needs and abilities. For example, I observed several groups of young adults visit and volunteer at CUPA who have a range of needs, from being in wheelchairs

to having more severe, non-verbal autism (Personal research journal). CUPA also provides facilities that are appropriate for younger people, from children's toys and a child-size table and chairs, to a sleeping cot for one of the staff's little ones who comes to work with her sometimes (Personal research journal).
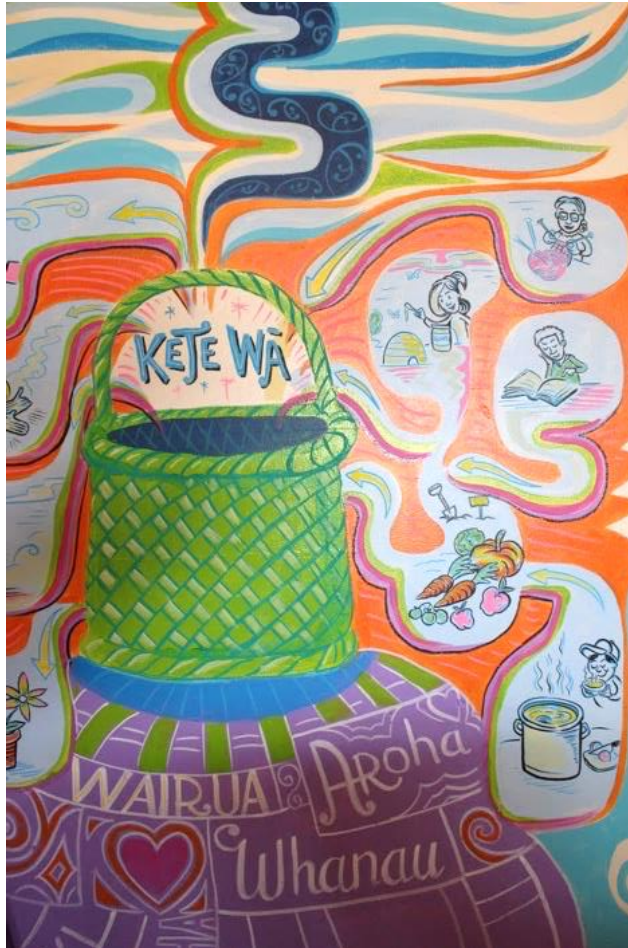
Figure 16 Kete Wā mural painted on the wall in the lounge

Second, use of the different resources that come in varies greatly on the type of resource and the pre-existing need for the resource. For instance, donated fabric goes up to the fabric library and the main volunteers and enterprise coordinators negotiate its use (Personal research journal). Whereas use of a monetary donation or grant would be negotiated between the Board of Trustees, the Development Director, the Operations Manager and possibly the enterprise coordinators (Personal research journal).

Considering the fourth and fifth commons aspects, everyone cares for the resources as they move between the different people and spaces of CUPA; volunteers and coordinators alike are for the donated goods, tools and equipment, finished products and all The ReMakery's spaces and facilities. For example, Saturday and mid-week volunteers, the youth at Epuni Primary School and Oranga Tamariki, individual property owners (where some of the smaller micro-farms are located), and the Urban Kai Coordinator all care for the Urban Kai micro-farms (Personal research journal). Caring for resources parallels responsibility of resources, which is shared across levels and spaces.

For the fifth commons aspect, property ownership, CUPA has private, state and open access elements. As has been said before, most material resources are donated, repurposed or obtained through creative partnerships. These partnerships vary, and ownership may be shared between CUPA and state organisations or private organisations, usually outlined through an MoU. For example, the building that houses The ReMakery is privately owned and CUPA has a rental agreement that enables access to a multipurpose space by the wider public (Personal research journal). Similarly, the Rimutaka Prison is a state facility, but CUPA facilitators and men at the prison jointly run the micro-farm and hives. The produce and honey from Rimutaka Prison is available to CUPA members and the wider public to purchase or receive in reciprocity for volunteer work (Personal research journal).

The third aspect, benefits of resources, align closely with the wider community economy action of distributing surplus to support social and environmental health (Gibson-Graham et al., 2013; Gibson-Graham & Roelvink, 2010). CUPA follows a social enterprise model for distributing surplus and benefits. The outputs of the different projects, whether a material good or income earned from that good, are directed towards increasing the wellbeing of those in need, across individuals, families and wider Te Awa Kairangi community. In distributing benefits across community, CUPA is also redirecting wider community material surplus that might otherwise go to landfill. As a part of this redirection of surplus from landfill into commons, community members take part in the ethical act of gifting and sharing (Gibson-Graham et al., 2013). Emily conveys the creation of commons and

distribution of surplus as a sharing community: "It's more like, sharing community, where it's not all about making the next buck. And I think that builds resilience, in people as well" (Interview, 13 October 2018). Four activities exemplify Emily's understanding of CUPA as a sharing community: The No Shit Sharing Shelf (Figure 17, next page), Book Swap Library, Knitting Library and the Kete Wā corner, where volunteers can take free food home twice a week (Personal research journal). All of these activities are premised on reciprocity. Members give the skills and time they are able and in return, benefit from the distribution of these common goods.

As CUPA shows, commoning contributes towards unlearning the hierarchical and regulatory forms of governance normalised in neoliberal capitalist governments. Instead, the deliberative and inclusive elements of commoning foster collective, collaborative forms of governance. This shift in governance is better aligned with the collective response that is needed in climate change adaptation and sustainable resilience more broadly (Chatterton, 2016). There is also a political component to commons, which comes from its interruption of privatisation and enabling of collective action. Miller (2013) explains this process, interpreting community economy as "an ethic of commoning, counterposed against an ethic of uncommoning that alienates singular plural beings from the means of ethical negotiation and political production" (p. 8). From Miller's perspective, the isolating act of privatisation puts political and transformational onus on the individual, reinforcing the identity of the 'resilient' subject. Through their creation of commons CUPA resists this ethic of alienation, locally reimagining change through social agency and collective action. However, just as much as CUPA is *un*learning neoliberal capitalist practices and *re*learning collective adaptation and resilience through commoning, the organisation also positions itself strategically in the wider social and political context to interact with a capitalist economy in unique ways.

Figure 17 The No Shit Sharing Shelf in front of The ReMakery

4.3 Working within capitalism: Structure, partnerships and positioning

Just as there is no one archetype of an adaptive and resilient society, there is no one perfect community economy, but rather multiple, unbounded possibilities (Gibson-Graham, 2006; Miller, 2013; Williams et al., 2014). The rest of this section will explore CUPA's more capitalist elements and the ways their ability to work within capitalism, while simultaneously beyond it, contributes to performing a *re*learning of adaptation and resilience.

CUPA's organisational structure lies somewhere between a cooperative and a traditional business hierarchy (see Chapter Two for further description of structure and funding). The individual social enterprises each have a paid coordinator who provides guidance and expertise, but a lot of decisions and work occurs collectively

and involves volunteers. For example, in Sew Good, projects vary between what participants would like to learn, what fabric is available for use, and what products could be made to sell (Personal research journal). Between the social enterprise coordinators, overall management level and Board of Trustees, there is a distinct hierarchy for decision-making, particularly for decisions that involve spending or making money (Personal research journal). However, while formal processes adhere to this hierarchy, informal conversation and advice moves fluidly through the pyramid based on personal relationships, backgrounds and area of expertise. I observed a clear sense of obligation and a willingness to listen and work through different opinions (Personal research journal). Among paid staff, I also observed a level of openness that comes with the strong ethos of care, togetherness and solidarity (Personal research journal). This ethos adds nuance, complexity and greater collective accountability to the simplified structure of a hierarchy model.

As a state registered charity, CUPA works within capitalist employment models; there are employee contracts, job descriptions that delineate responsibilities and jurisdictions, and individual employee goals (Personal research journal). However, anyone earning an income at CUPA receives a living wage (Personal research journal). In this regard, CUPA is working within a waged labour model but at the same time reimagining it. This is made more evident by the flexibility around developing income streams for members with refugee backgrounds. In their work with other community refugee-services partners, CUPA has offered several pathways to earning a living wage: catering and selling food, a nursery initiative, creating sewn products to sell in the Common Grocer or online, or upskilling and taking on larger sewing orders (Personal research journal). The different pathways for income across the enterprises exemplify one of Gibson-Graham et al.'s (2013) ethical considerations for a community economy: "making sure people work in safety and have enough to meet their needs" (p. 40).

Along with waged labour, money is still present and exchanged on a daily basis. For instance, people pay for meals from Unity Kitchen, for coffee at Koha Coffee, for Sew Good products, for access to the grocery cooperative, for repurposed bikes and for workshops led by other community members (Personal research journal).

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Additionally, financial stability is a core focus across the governing, management and volunteer spaces (Personal research journal). CUPA's continued use of money makes initial participation easier for some and recognises that people have different ways of showing support. However, there is a clear line drawn in the purpose of the monetary capital and there are clear boundaries around generating surplus, as outlined in the CUPA's creating and sharing of commons. This is an observation shared among volunteers. For example, Gordon noted CUPA's ongoing negotiation around working within the boundaries of a money-centric society:

> This place [is] trying to create a vibe where it's like, hey, we're recycling stuff. We've got our local artists putting stuff up. Nobody wears a suit and tie here. And that kind of breaks that tradition down, so that when you come here or if you do walk in the door that you know that you're not going to be sold something. I really hope we can kind of keep that. I think this is going to be the challenge is that, money, do we have to have it?
> (Interview, 6 October 2018)

Gordon's insight around negotiating the tension around using money while also keeping it out of the centre of focus offers a potential shift for climate change adaptation processes in Te Awa Kairangi.

Through their partnerships and strategic position, CUPA offers a way to negotiate the tension between recognising the need for monetary investments and capital while not allowing it to become the only consideration. Strategic positioning and partnerships make possible CUPA's ability to work within capitalism to find its own possibilities for waged labour and the role of money. Through state and private partnerships, CUPA can channel more traditional mechanisms of funding, like government or private grants, into community opportunities to grow skills and obtain affordable material goods. CUPA also works regularly with state services, especially the criminal justice system (Personal research journal). Sharzer (2017) asserts the potential of strategic partnerships, noting that "cooperative firms could grow by forming horizontal relationships with community groups, enforced by a sympathetic state and institutional structure" (p. 458). However, the Board and management staff at CUPA are very strategic in keeping government involvement

clearly defined and bounded. Increased involvement could influence a shift in priorities or pressures around deliverables and carry with it the potential to change the community economy possibilities of the organisation. For instance, when asked about the ways increased government involvement would affect CUPA, Rochelle, the Community Café Manager says: "Just money hungry. And that's what it would be. It wouldn't be a charity anymore. It would be like, where's the money?" (Interview, 4 October 2018)

The association between government and capitalist priorities directly ties to the disengagement and distrust CUPA members feel regarding government organisations. Linda's frank summary was "I don't trust them, sorry," and Emily was concerned around a gap in representation, "I don't always think they represent the community they're serving," summarise similar remarks said in both interviews and heard in observation (Interviews, 7 September, 13 October 2018). The feeling pose implications for adaptation governance. They call into question the efficacy of local government aims to facilitate inclusion and engagement on decision-making while the constituent community includes people who are disengaged and distrustful. Distrust and disengagement with government points to a strong need for strategic, non-governmental community organisations, like CUPA, that are able to channel the needed or beneficial resources and partnerships while also buffering more neoliberal aspects. Buffering entails strategically keeping certain aspects of funding and government partnerships to a governance level and out of volunteer spaces and projects so that coordinators and volunteers, especially those distrustful of government, feel the same vibe that Gordon discussed earlier- friendly, informal and non-commercial. CUPA's recent success and attraction to those who are detached from, or wary of, government also affirms what Maclean, Cuthill, and Ross (2014) advise, that local management bodies (local government in this case) are "aware . . . without intention to intervene" (p. 153).

CUPA's non-governmental, non-capitalist identity also raises potential around a strategic point of connection that community groups can play in building wider, societal networks across Te Awa Kairangi-Hutt City. Just as CUPA's focus on wellbeing and care strengthens social networks of support and community health,

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its strategic placement between government and community strengthens societal networks of knowledge and expertise (Williams et al., 2014). CUPA's wide variety of partnerships and blend of capitalist and community economy practices, contributes to a wider district network bridging different bodies of experience and knowledge. Maclean et al. (2014) call these bridges knowledge partnerships and recognise them as "fundamental to individual and community ability to cope and adapt to change" (p. 49). Networks of connection and understanding highlight the interdependence between private, non-governmental and governmental groups. Such networks also open up the possibility for more deliberative, inclusive decision-making and a collective, communal response to climate change. However, the process of building knowledge partnerships is not automatically equitable and, like CUPA, requires ethical negotiations around what it means to be-in-common.

4.4 Conclusion

Across governance, management, enterprise coordination and the volunteer base, CUPA members engage in ethical actions to create a community economy. CUPA members simultaneously work within and beyond a capitalist system, learn what it means to survive together well and equitably, pool common resources, and create new commons. The creation of the commons offers a situated example of resisting unsustainable privatisation and shows the power of collective action in transforming to be more adaptive and resilient. CUPA's success as an intermediary organisation speaks to the importance of strategic relationships between governmental and non-governmental organisations for directing resources and supporting holistic processes of resilience and adaptation. The dynamic ethical negotiation of surviving well together raises critical awareness of what the aims of resilience and adaptation may be for policy, and *who* gets to decide if and what kind of wellbeing is prioritised.

Through its community economy, CUPA shows that transformative adaptation and resilience is as much about community-led development as it is about 'hard' engineering, infrastructure and protecting private property assets. To create transformative resilience and adaptation processes at local government levels,

community development workers need to meaningfully be brought into discussions about climate adaptation and resilience. To improve engagement on climate adaptation and resilience, councils could work with existing community initiatives, like CUPA, and work within their existing networks and practices to connect more meaningfully with people who might otherwise be hard to reach. Chapters Five and Six will expand on the intersection between community-led development and resilience and adaptation by looking at the ways CUPA learns as a collective and makes sustainability accessible.

Chapter 5 Collective learning

We invite our parents and wider community to come to school each day and learn, share and educate one another. In turn, this has become a collective response to meeting the needs of our children and developing our own resilient solution within our community. (CUPA webpage)
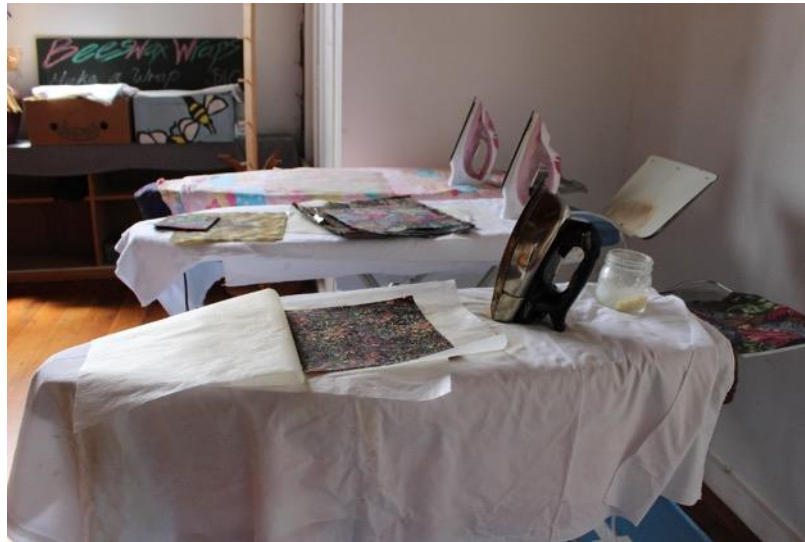
Figure 18 Beeswax wraps in the making (not pictured are the members there learning)

The concept of learning appears throughout the four dominant typologies of resilience. Rockefeller Foundation's Urban Resilience Framework, significant for its globally influential 100 Resilient Cities programme, incorporates the term 'active learning' to note the need for intention and engagement (Leitner et al., 2018; Spaans & Waterhout, 2017). Disaster resilience asks what can be learned from natural disaster events and community response to those events (Evans & Reid, 2013; Imperiale & Vanclay, 2016). Social learning is at the centre of community resilience, working in tandem with community agency and capacity (Berkes & Ross, 2013; Matarrita-Cascante, Trejos, Qin, Joo, & Debner, 2017). Perhaps most notably, learning appears in the IPCC's definition of resilience and as one of the 10 SES resilience characteristics (Bahadur et al., 2013; IPCC, 2014). Finally, in SES both adaptation and resilience are premised as iterative processes (Holland, 2017; Wise et al., 2014).

Through their collective learning, CUPA members expand on discourses of learning in the dominant resilience typologies. As the opening quote indicates, CUPA is a self-

declared place of learning. Learning is central to its work in community-led solutions. Just as much as different skills and capabilities are learned, people are learning to be in difference while sharing a common purpose. CUPA learns collectively in a way that is community led, appreciative of different ages, styles, skills and needs, and deeply interconnects with social support. I use the term collective learning to represent this process, of learning *from* being together while learning to *be* together. This chapter unfolds in three sections to explore the reclamation of knowledge performed intergenerationally, the meaningful connections that facilitate learning and the need for difference in learning. These themes link back to two main ethical actions of community economy: *"encountering others* in ways that support their wellbeing as well as ours; *investing our wealth* in future generations so that they can live well" (Gibson-Graham et al., 2013, p. xviii-xvii).

5.1 Reclaiming knowledge, intergenerationally

5.1.1 Intergenerational participation, intergenerational change

CUPA is an intergenerational space. On any given day at The ReMakery there may be a family bringing in its newborn, a group of teenagers coming by for community service work, or one of the regular elders well into their seventies and eighties dropping off knitting or helping with the odd 'fix-it' job (Personal research journal). The different enterprises and organised events appeal to different ages and offer a multiplicity of ways to participate. At the same time, the involvement of different ages is what makes CUPA attractive to volunteers. For example, while volunteering at Urban Kai's gardening day, I have seen families with children under the age of two all the way to people well into their sixties and seventies participating (Personal research journal). Feelings of acceptance of different physical abilities and different skill levels create a strong 'do what you can' and family-friendly environment, and both the coordinator and volunteers regularly express appreciation (Personal research journal). The volunteer pool at the Common Grocer provides another example of intergenerational participation. Early September 2018, the Common Grocer celebrated its first birthday and the coordinators hosted a lunch to celebrate

the volunteers and get their input on how the enterprise was going. Around 20 people were in attendance and I saw young adults, families with children, middle-aged people and older folks (Personal research journal). CUPA's success in engaging different ages speaks to community in Te Awa Kairangi's appreciation for multigenerational spaces.

Strong intergenerational participation helps generate collective action and collective action is an important factor in creating a community-led, community-situated resilience (Matarrita-Cascante et al., 2017). Collective action is also a powerful mechanism for exercising social agency and achieving political change towards more transformative resilience. Hayward (2017) articulates the often underappreciated but critical communal element in achieving political change:

> It concerns me as a teacher of democracy and citizenship that we often teach about transformative political change as if it comes about through the action of charismatic enlightened leaders, underestimating the collective, loosely coordinated struggles of ordinary people that sometimes involve many generations. (para. 77)

The shift in political change from the individual 'I' to the collective 'We' that Hayward describes is a process that requires all ages' input. Collective political transformation processes also require a longer outlook, a multigenerational scope. For example, when asked about what success would look like for Urban Kai, Rachel shared: "Are their more vegetables in their house? Is it something they took home and did? Is it something they took an interest in? Is it something that will be part of their futures?" (Interview, 11 October 2018) Rachel's questions point to the collective intention and long-term vision of CUPA; knowledge created across generations aims to create generational change. Rochelle's concern for future generations comes from a place of care and accountability and parallels Rachel's long-term thinking: "This is happening now and if we don't teach our children what we have done wrong, so they can start making it right. We're not going to have a world to live in, and it's really scary" (Interview, 4 October 2018). Rachel and Rochelle's accounts express a shared outlook on the importance of intergenerational change. Their thinking marks a movement from a mindset around

immediate change and immediate gratification towards longer, more transformative action focused on future wellbeing. It opens up discussion around what mentalities drive climate change adaptation and resilience decision-making; are policy-makers invested in a long-term, intergenerational approach? And if so, are there procedures in place at political sites of adaptation in Aotearoa-New Zealand to support intergenerational change?

As Chapter Two indicated, HCC, GWRC and central government engage in representative decision-making. Not all ages are able to participate in representative decision-making (Hayward, 2012). For some age ranges that do, their participation might be bounded by certain generalisations. For instance, youth may be consulted but hold no real political power; or are encouraged to be passive participants, exerting influence through voting or consumption choices (Hayward, 2012; Narksompong & Limjirakan, 2015; O'Brien, Selboe, & Hayward, 2018). Or the elderly, who may have more political and capital influence, may be generalised as vulnerable and requiring protective measures, limited in their ability to adjust and participate in transformational change (e.g. Khan, 2012). There is a noted difference between the observed and discussed intergenerational participation at CUPA and its facilitation of inclusive, decentred deliberation, and the political sites of adaptation in Te Awa Kairangi-Hutt City and Aotearoa-New Zealand. Of the GWRC and HCC policies and actions reviewed (see Appendix C) none discussed advantages of intergenerational input or specified actions to include more diverse age ranges in their decision-making processes. Certain pieces note the importance of collaboration and raised community awareness (e.g. GWRC, 2015), but no implementation actions are outlined.

The absence of overt discourse on generational input in current climate-change adaptation policies across GWRC and HCC highlights a wider harmful norm around dominant *learnings* of resilience and adaptation. While communities are promoted and encouraged to be sites of social learning in order to become resilient and increase their adaptive capacity, the same emphasis on social learning does not necessarily flow into political processes. The discrepancy represents a gap between community development and political sites of adaptation; community development

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sites are taking responsibility to be reflective and continuously engage in social learning while political sites of adaptation are not necessarily taking up the same processes. This gap reaffirms the prerogative of local community to undertake change as self-help agents and be 'resilient' subjects, without asking political sites to turn the same critical eye to themselves. CUPA offers possibility to resist and *re*learn the self-help prerogative by bridging its reclamation of knowledge with acts of sovereignty.

5.1.2 Reclaiming knowledge, acts of sovereignty

Collectively, members of CUPA are reviving ways of living that capitalist practices have subsumed and replaced. Every day I volunteered at CUPA I observed someone trying something new or working to develop a skill. I heard variations of "not sure how to do this" on numerous occasions – and said it myself many times (Personal research journal). And just as much as I observed learning, I observed teaching occurring. Alongside the coordinators teaching volunteers to make their own clothes, fix their bikes, grow their own food and shop plastic-free, casual volunteers share their skills. Volunteers teach anything from woodwork and making beeswax wraps to preserving jams and making skin care products (Personal research journal). CUPA members learn skills and build capabilities of their choosing, enacting autonomy as they create "real opportunities to do or achieve things [they] value" (Holland, 2017, p. 397). In their discussion of community-led resilience, Cretney and Bond (2014) connect autonomous activism with "the push to reinvigorate traditional skills to enact alternatives to current day society" (p. 30). From this perspective, the teaching and learning that occurs at CUPA is an act of reclaiming knowledge, of exerting social agency and developing skills towards community-led resilience.

When I asked about the ways CUPA was contributing to change in the wider Te Awa Kairangi community, members responded most often about the knowledge being reclaimed around growing food. Rose comes in twice a week to knit and help with various jobs around The ReMakery. One Friday, she and I sat down at a picnic table in the front yard and enjoyed the sunshine while talking. I asked her, how has CUPA and The ReMakery made community stronger? As part of her answer, Rose said:

The children learning about growing veggies because I grew up in an era where having a veggie garden was normal and mum doing preserves and freezing for winter, it was a normal part of life. And so for children to learn those skills again is really good because they will learn that they don't have to rely on the supermarket for food and that there is enjoyment of being outside and growing.
(Interview, 28 September 2018)

Emily likewise responded, though from the perspective of a young adult who has grown up without the experiences Rose described:

So I think with climate change occurring, and I think over time you'll be, you'll need to learn how to mainly produce your own food, which I think builds loads of resilience. Because especially with this organisation, this initiative, people are learning to do skills that back in the day, most people would have known. But you know, no offense to modern society and younger people, we don't know how to garden.
(Interview, 13 October 2018)

As a teacher of growing food, Rachel echoes a similar need for reclaiming knowledge and connects it with generational change:

"Get 'em early and hopefully, you'll save, you know it's not going to change the world right now, but generationally, we've lost these things just in this generation. We need to get it back. We need to start that"
(Interview, 11 October 2018).

Rose, Emily and Rachel all articulate the importance of youth learning about growing their own food. Their association between youth, modernity and loss of skill demonstrates an awareness on the subject of the dependent, modern consumer. CUPA seeks to help people reclaim lost skills, in the process enabling a shift in self-perception to producers as well as consumers.

Learning to grow food for oneself and the wider community is also an act of food sovereignty. CUPA's food sovereignty is a major stepping-stone of transformative adaptation. It directly addresses a root cause of vulnerability and does so in a way that resists a food security strategy, which may come without due respect for cultural heritage, political power or funding transparency (MacKinnon & Derickson,

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2013; Pelling, 2011). For CUPA, food sovereignty derives from reclamation of knowledge because it comes from building capabilities to grow food that have been 'othered' in a neoliberal economy, subsumed by agri-industrial food systems (Harris, 2009). While food security is a large focus of dominant resilience and adaptation typologies (e.g. Birkman, 2006; IPCC, 2014), there is an important distinction to make between food security and food sovereignty. The former emphasises certainty and stability and implies following global development standards (e.g. Food and Agriculture Organisation of the United Nations [FAO] et al., 2018). The latter implies "control over territory and biodiversity (commons); self-governance; ecological sustainability; [and] the articulation of cultural difference" (Routledge, 2011, p. 393). Figure 19 (next page) shows seedlings grown in repurposed takeaway coffee cups, planted by men at Rimutaka Prison. Figure 20 (next page) shows a Māori proverb at Epuni School micro-farm. These images represent CUPA's sustainable, community-driven and culturally inclusive process of changing food from a commodity into a common resource.

In summary, CUPA's reclamation of knowledge is a process of intergenerational learning that shifts subjectivity and generates a greater sense of agency for its participants. A reclamation of knowledge exemplifies the importance of spaces of collective action in which multiple ages and multiple skill sets can contribute. CUPA's processes behind reclaiming knowledge differs from the representative decision-making processes of local government. Here, CUPA offers an example of the ways resilience and adaptation can be made more inclusive. Their community's work probes academics and decision-makers to critically reflect on *who* is required to learn in processes of climate change resilience and adaptation, and *what* types of learning are promoted and affirmed.

Figure 19 Seedlings grown by men at Rimutaka Prison and volunteers, for Urban Kai farms and seedling sales

Figure 20 Māori proverb at Epuni School micro-farm on collective food-sharing

5.2 Meaningful connection

The social element of CUPA plays a significant role in learning and is what makes transformative resilience and adaptation a collective process. People are drawn to CUPA because in addition to learning different skills they can find social connection and support. Some come to CUPA because they are in a transition, period of change or healing, and are looking to find social support and care. For example, Rose explained that she is in the recovering from cancer and that CUPA is an important part of this process:

> Before I left work, I had thought of The ReMakery as a place I could go as part of my recovery with regards to coming out of my home environment where I'm very conscious of my recovery and coming into another environment where it's about people and community.
> (Interview, 13 October 2018)

And Linda, who, as she described losing her son said, "being grieved brought me to The ReMakery" (Interview, 7 September 2018). People also come to find connection as a part of their regular routine. Yukiko, who has recently arrived in Aotearoa-New Zealand and volunteered at CUPA, described the importance of having social connection while also learning new skills:

> It is really interesting for me. At that time, I really didn't have enough friends and felt really lonely. So at The ReMakery I felt like I could make some friends and improve my English too and also I can improve my barista skills.
> (Interview, 27 September 2018)

Yukiko's account of coming to CUPA as a way to offset isolation affirms my own observations as a volunteer, particularly for people who are not participating in the traditional nine to five work schedule. On weekdays, I witnessed many new parents come in while on parental leave (Personal research journal). I also chatted with people who work for themselves, work part-time or are looking for work or unable to work (Personal research journal). Gordon, who works for himself, explained the unique role CUPA plays for creating connection:

So like when I walk down the streets, and occasionally someone will smile at me or maybe someone will say 'Hello' or 'Hey, the weather's good', but you don't really get to engage- like it's very hard to meet new people. But when you come to a space like this community space, where there's so many different things going on and there's so many different people around, it gives you really, you know, you can stop and actually talk really properly with someone or can really properly meet them.
(Interview, 6 October 2018)

Meaningful connections included finding like-minded people (interview with Linda, 7 September 2018) or sharing similar life experiences (interview with Rose, 13 October 2018), or the labour of people sharing their skills and creations (interview with John, 19 October 2018). Emily linked these meaningful connections to resilience as she described how CUPA could help people cope with climate change: "I think building, even if it's a short term, connection with somebody in an environment where you're welcome, I think that builds not only resilience in the community, but even resilience within people as individuals" (Interview, 13 October 2018). As Emily and the other members show, when people build meaningful connections they contribute to their own resilience and ability to adapt (Berkes & Ross, 2013; Maclean et al., 2014; Matarrita-Cascante et al., 2017).

The significance of social connection for CUPA members reinforces the importance of social input in resilience and adaptation policy and planning, not as a modifier but equal to that of ecological, scientific and engineering inputs (Berkes, 2017). As I similarly noted in Chapter Four, to include social input with the same attention and weight provided the physical sciences means moving adaptation and resilience beyond overlooking or overgeneralising social connection. In many frameworks and policy plans for resilience and adaptation, the significance of meaningful connection is overlooked when its complexity, nuance and contradictions are overgeneralised into homogenous, usually Pākehā, Global North dominant values (Fabinyi et al., 2014). CUPA member experiences affirm the possibility of making space for deeper, situated understandings of social aspects in resilience and adaptation discourse, and its subsequent applications (Baibarac & Petrescu, 2017; Cote & Nightingale, 2012; Imperiale & Vanclay, 2016; Welsh, 2014). Figure 21 (next page) offers one situated understanding of social connection by a CUPA member. This poem diversifies how

values and experiences may be communicated in adaptation and resilience discourses. It expands possibility around what counts as knowledge in the process of fostering adaptive capacity and resilience.
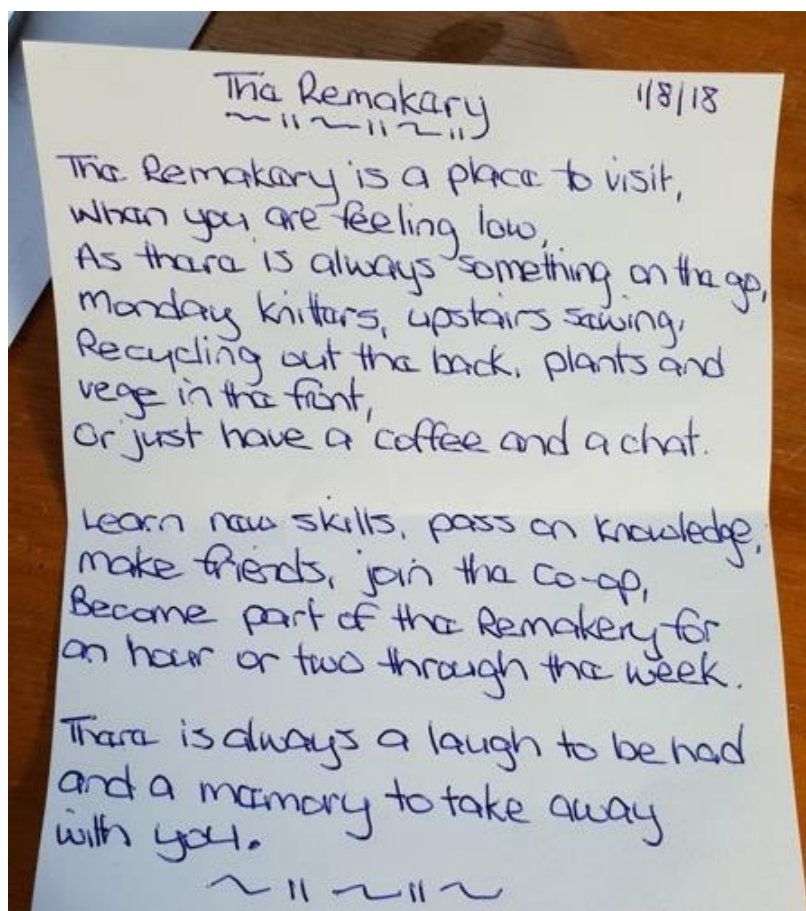
Figure 21 A poem written by CUPA member, hanging on the wall of The ReMakery

Accounts of members coming to CUPA for meaningful connections also broadens the scope of how and why people get involved in environmental and climate activism. While some members participate in CUPA to learn more sustainable lifestyles, others are involved primarily for the social component. Participation in environmental awareness and sustainable practices is a secondary benefit. The ability for CUPA's social connection to act as a stepping-stone for greater engagement with environmental issues opens up the potential for the success of other community groups or volunteer organisations as sites of embedded learning around sustainability and adaptation practices. It also opens up the question of whether CUPA would have the same success in drawing so many different people together if it were framed just as an environmental sustainability or climate-change

action group. Horton and Kraftl (2009) offer the concept of unintentional activism in their exploration of volunteers' conceptions of their own activism. This unintentional activism could transfer to the idea of unintentional environmentalism, or unintentional environmental activism. Through meaningful social connection, "discrete activist mindsets, dispositions, events, places, acts or identities [can] emerge, albeit unintentionally" (p. 19). When asked about how participating in CUPA has changed them, the majority of members spoke of feeling connected and as a result, empowered, confident and capable (e.g. Rochelle interview, 11 October 2017; Rose interview, 28 September 2018; Yukiko interview, 27 September 2018). These responses offer examples of discrete activist mindsets and dispositions, further discussed in Chapter Six.

5.3 Difference is needed

The diversity of identities, values, skillsets and backgrounds that constitutes difference in CUPA contributes to meaningful connection and is a core aspect of collective learning. This section will explore the ways members celebrate difference, negotiate equity in difference and appreciate emotions in this process.

5.3.1 Celebrating difference

In early October, I attended the opening celebration of the Unity Kitchen. A kapa haka group came from Epuni Primary School, sang waiata and performed a haka. Mana whenua and friends of CUPA blessed Unity Kitchen with a karakia. Two representatives of Transpower, the energy company who donated the kitchen's solar panels, spoke briefly. Representing CUPA, the Development Director gave thanks. Then, the first meals from the kitchen were passed around. The food was a mix of Indian and Somalian, representing the ethnicity of the chefs of Unity Kitchen. A local ukulele group, who occasionally holds practice sessions at The ReMakery, played festive tunes while people ate and chatted (Personal research journal). This celebration is just one event, a single moment at CUPA that represents the ongoing celebration of difference as good and needed. Yukiko's experience affirms this celebration:

> I came here last September and then at that time I felt like this was a really new zone for me, but because of The ReMakery people are really, really welcoming. They did not look at me as a foreigner. Or maybe because I'm wearing hijab and am Muslim, in the beginning I was wondering, this is not Muslim country, so will I be accepted or not? But here they are really open, so I can open up with them too. I feel so like, like a family. So it's really interesting to be here.
> (Interview, 27 September 2018)

Yukiko also refered to the importance of difference when she discussed Unity Exchange, CUPA's timebank system:

> I am interested in the timebanking system at The ReMakery … in my country no timebanking so that is a good idea, to do some volunteer and have a way to get another skill. For example, for me, I get another skill for sewing.
> (Interview, 27 September 2018)

Timebanking enables Yukiko to develop different skills, while also allowing her to contribute her skills by volunteering. Her words affirm timebanking as a system which fosters contribution of many skills, appreciating different needs and different strengths (Cretney & Bond, 2014). Rochelle similarly emphasised people's abilities to contribute different skills. She spoke about the ways in which CUPA welcomes people at different points in their lives and celebrates their different contributions:

> But it's just knowing that it's okay to be down in the dumps or not want to do anything. But just slowly get there. Because no one can force you to do anything. You have to want to do it yourself. So it's just giving that little [gestures a subtle nudge]. What's your superpower? Because that's what I call it. Everybody has a superpower. Everybody that walks in that door has a cool little superpower.
> (Interview, 4 October 2018)

Yukiko and Rochelle express distinct but interconnected ways of understanding and celebrating difference. Yukiko offers a celebration of difference as acceptance of identity and culture and a supportive environment where she can share her skills while learning from others. Rochelle offers a celebration of difference also as acceptance, with an emphasis on emotional support and cultivating people's importance and value. She envisions CUPA as a space where people can find their

unique contributions. Both Yukiko and Rochelle's articulation of difference sees CUPA as a generative space; difference continues to be generated, not subsumed and amalgamated into a pervading 'unity' (Routledge & Derickson, 2015).

Again, CUPA's community capacity for transformative adaptation and resilience is at work. Fabinyi et al. (2014) call attention to a core tension between the kind of difference celebrated at CUPA and discourses normalised in resilience of 'everybody wins' and perceptions of neutrality: "the analytical lens recommended by resilience scholars emphasizes consensus and homogeneity over contestation and difference" (para. 12). More dominant government or international development strategies may avoid calling into questions underlying and prevailing differences, skirting engaging in issues of equality and opting for generalisations around consensus and homogeneity (Pelling, 2011). In contrast, CUPA members are not aiming for consensus and homogeneity. They celebrate diversity and see diversity as important for resilience. When negotiating this diversity, they also seek to address equity.

5.3.2 Negotiating difference

As discussed in Chapter Four, Gibson-Graham et al. (2013) describe performing possibilities of community economy as a series of ethical negotiations on living equitably with one another and with the natural world. One of CUPA's ethical negotiations emerges from their ongoing learning around what difference means while being-in-common. Just as CUPA is a site of collectively reclaiming skills and capabilities, CUPA is also a site of learning to work with people across different personalities, backgrounds, expectations and needs. This learning is not linear. It is a constant negotiation between "authority and subjectivities" that are "fragmented and contradictory" (Tschakert et al., 2016, p. 192). Community spaces like CUPA are full of micro-politics, messiness and discrepancies (Chatterton & Pickerill, 2010; Maynard, 2017). For example, as Gordon and I talked about his involvement with CUPA, he articulated a tension between fostering the different attributes and strengths people bring while also trying to create an atmosphere of reclamation, away from a dependence on electronic technology:

I have a lot that I want to contribute to um, uh, like the general society, but there's a certain way in which things need to be done, or I don't know whether they need to be done in that way, but people responsible for the facilities [CUPA] see things need to be done a particular way. So that kind of excludes a lot of the skillsets that I have-like my additive of manufacturing, electronics- all this kind of thing that I could bring to the table.
(Interview, 6 October 2018)

John also expressed a tension that arises from different backgrounds and expectations in work environments:

I've had to adapt to various people here and to the way they are and the way they behave towards me. I've felt at times very unwelcome here. The way I adapt to that is to pretty much stay out the back here and do my job.
(Interview, 19 October 2018)

Certain interactions I observed parallel John and Gordon's experience. At times, people would come and offer their energy, resources or expertise, but it would not completely align with the ethos or vision fostered by leadership at CUPA. The coordinators or management would have to either redirect the focus by offering alternative ways to participate, or decline involvement entirely (Personal research journal). These accounts highlight the complexity of navigating difference without subsuming it. As a people-driven process, a celebration of difference can appear varied and contradictory, loaded with the messiness and contradictions of our human personalities and emotions (Askins & Blazek, 2017; Nagar, 2014).

With celebrating difference comes a tension around establishing CUPA as welcoming for everyone, and making the work relevant and useful for the immediate neighbourhood by being a community of *place*. Several people I spoke to expressed a desire to see greater diversity at The ReMakery, specifically more people from the surrounding eastern suburbs. While describing a shift in her role, Rochelle brought up this tension:

I said, 'Look, you want community. You want community in here.' I was raw and I was honest, and I said, 'All I see at the moment coming in here is people that know about the place and rich townie people.'

That's it. I didn't see community. I didn't see Naenae people. I didn't
see Epuni, Taita, nothing.
(Interview, 4 October 2018)

Rachel offered a similar concern in her observation of the Common Grocer as
"wrought by middle aged, middle class people" (Interview, 10 October 2018). Linda
also articulates this tension, noting an absence of Māori and Pasifika neighbours:

Some people I don't think it's [CUPA's] touched. They may like to be
involved- one thing I would feel really sad about is the fact that there
are a lot of different races come here, but I don't feel like Islander and
Māori people...[pause]...I'd like the ratio to be higher. Okay? Because
they've got so much to offer from their cultures, but they tend to see a
place like this as Pākehā for Pākehā. That's my opinion.
(Interview, 7 September 2018)

Rachel, Rochelle and Linda highlight the need for greater difference and
participation from immediate neighbourhoods and from Māori and Pasifika
communities. These accounts confirm that spaces seeking to celebrate difference
need to be mindful of 'white, middle-class takeover', in both community
development and environmental activism sites. Lozano (2018) affirms this risk,
noting that social movements in the Global North are "mostly populated by white,
middle-class, graduate and urban activists" (p. 3). Referring back to Gibson-Graham
et al.'s (2013) discussion on living together equitably (Chapter Four), gentrification
of activism and community development is one area of tension that needs to be
negotiated in spaces seeking to undertake transformational change. CUPA members'
critical considerations of diversity demonstrates this negotiation and contributes to
increasing equity in CUPA's aims and procedures. By engaging with difference, and
the tensions that emerge from it, members are critically engaging with justice-
oriented questions in adaptation and resilience around "who should take decisions
over what, by what means and on whose behalf" (Bulkeley et al., 2013, p. 917; see
also Holland, 2017). Member engagement with justice-orientated questions shows
how CUPA's community economy-centred resilience and adaptation is an on-going
negotiation over inclusion and processes of participation.

CUPA's negotiation of difference also raises the question of *what* counts as difference. Rachel, Rochelle and Linda are all extremely involved in CUPA and work at The ReMakery on an almost daily basis (Personal research journal). Their observations exemplify critical reflection on negotiating difference and critical thinking around what 'difference' looks like for CUPA. Interestingly, their insights vary from my own participant observation, in which I consistently noted different cultures, ethnicities and languages (Personal research journal). I observed women in hijabs regularly engaged in different spaces, many of whom are learning English. I noted the 'PD guys' out in the back workshop and the kapa haka students who have come to tautoko The ReMakery at different events. I also noted a clear gender division in the different spaces, but that both men and women (rather, who I perceived identify as men and women) participate in CUPA. There were tensions in learning to work collectively with different personalities and different cultural practices but overall, I came to consider CUPA a relatively diverse space (Personal research journal).

Variations between my observations and Linda's, Rochelle's and Rachel's reveal there are different understandings of what diversity means and what difference means, depending on background and perspective. Chapter One discussed how resilience and adaptation frameworks guaranteeing the ability to synthesize and effectively address complexity are deceptively attractive (Welsh, 2014). Earlier discussion of CUPA members' situated enactments of wellbeing and situated significance of social connection affirmed this critique. Here, the complex, situated negotiations of difference further reinforce this statement. Even if resilience and adaptation strategies maintain that qualities such as diversity or inclusion are valued, there is a need to be aware of *who* is deciding what counts as diversity and difference and the *kind* of value diversity and difference have in reaching decisions.

5.3.3 Learning from emotions

Learning to work as a collective while celebrating and negotiating difference is an emotional process (Askins & Blazek, 2017; Horton & Kraftl, 2009). In my time volunteering, I have heard words of encouragement and appreciation, bickering, arguments and strained silences (Personal research journal). I have seen smiles,

hugs, tears and tense faces (Personal research journal). I have also felt my own inner ups and downs of working with difference, from elation and adrenaline to doubt, sadness and social fatigue. Emotional responses are not just by-products of the process of negotiating difference, they are significant in creating connection, in learning how to sustain and deepen the collective. Like the way care contributes to surviving well, together (Chapter Four), emotions emerge in motivating members to collectively learn together with difference. Gordon articulates a similar interpretation to community economy ethical actions when he talks about love as the underlying mechanism for support and exchange:

> I think love works. It's a funny word to use. It's hard to define, but you know, if you spend some time with people and you've built that connection up with them, it is an emotion, that you come and say, I need help with this- of course I can.
> (Interview, 6 October 2018)

Gordon recognises the importance of love, emotions, and the difficulty of putting emotions into words. My own research experience supports Gordon's insight. Of the emerging themes, emotions have been the most difficult to document, analyse and articulate. They are intensely personal, varied and nuanced, require persistent mindfulness and run the risk of misinterpretation (Personal research journal). Even with these complications, recognising emotions as a part of collective learning in relation to climate change resilience and adaptation is important. For example, members of CUPA spoke about climate change as an emotional experience. When I asked John about climate change and future action, he expressed deep anger at the exploitation and harmful treatment of our planet:

> You know and if people aren't going to listen then maybe it's going to take something that's gonna make them listen. And that's just how I'll feel about it. I just get really, you know I get, not only do I get swept away by the emotion of it, but it really pisses me off when I see polluting, dropping rubbish or just stupid little things really piss me off...And you know, we are living on this amazing, amazing planet and they just got no respect for it at all. They couldn't buy a tree or those wonderful fish or something like that, but they can certainly drag them out of the seas in wholesale fucking slaughter. And sometimes you just feel like going up them and punching them in the face and say, 'Look

mate, do you really fucking understand what you're doing? Do you?
Really?'
(Interview, 19 October 2018)

John's anger is directed primarily at extractive industries as well as what he perceives as the lack of government accountability. His anger is also a strong force in wanting to take action. Linda expresses a similar anger and sadness at the environmental degradation that she associates with climate change:

> But I hate the fact that the fishes getting over fished and that the houses are encroaching on any little bit of natural forest that's left and that pollution, that man made, not animals, man-made pollution is going into our rivers. I don't like that. I don't like plastic bottles. I went for a walk down Petone Beach. I was disgusted and I didn't have a bag with me to pick up anything.
> (Interview, 9 September 2018)

Like John, Linda's connections to climate change are visible and visceral. Their experiences serve as a reminder around the emotional and embodied intensity of climate change. Their understandings also prompt the question of what power does emotion have in fostering transformative resilience and adaptation? Both literature and insight from community members of Te Awa Kairangi show that welcoming and harnessing the power of emotions can lead to a strong sense of solidarity (Routledge, 2011). A climate justice perspective recognises emotions as an important quality for activating equitable change (Routledge & Derickson, 2015; Tschakert et al., 2016). The importance of emotion contrasts adaptation policies and strategies in government that present change as rationale, linear and logical, and most highly value economic incentives (Singh, 2013). These contrasting ways of approaching change indicate a need to insert perspectives that acknowledge and appreciate emotions into government-led policy and strategies.

To include emotions opens possibility for a discursive shift in the ways we consider climate risk and uncertainty. Framing adaptation and resilience as an emotional process challenges understandings of adaptation and resilience that see risk and uncertainty as a result of incomplete scientific knowledge, a deficit to be managed and reduced (Sword-Daniels et al., 2018). Alternatively, members of CUPA show that

learning from emotions contributes towards orientating our ourselves back into the environment to be affected alongside human and non-human beings (Gibson-Graham & Roelvink, 2010). This possibility is not new. Many Indigenous ways of being already manifest this type of shift in subjectivity (e.g. Fixico, 2013; Grossman & Parker, 2012; King et al., 2013). For Global North, Pākēhā-centred ways of being, however, learning to be affected entails shifting subjectivities still defined by neoliberal capitalist relationships with the environment, managerial and focused on resources and assets, to living within the means of the natural environment and accepting of uncertainty (Gibson-Graham et al., 2013; Singh, 2013). CUPA's transformative adaptation and resilience is an emotional process of letting go of control while simultaneously taking ethical responsibility.

5.4 Conclusion

Collective learning affirms the inclusion of socially embedded knowledge into resilience and adaptation strategies. It challenges what types of knowledge is considered 'expert', how that knowledge is developed, and who can help create that knowledge. Just as CUPA creates a material commons, through collective learning it is also creating a knowledge commons. CUPA's commons knowledge is inclusive and premised in different ages, skillsets and abilities, ethnicities, and cultural backgrounds. CUPA's commons knowledge membership does not rest on a 'common identity' of politics or certain backgrounds. The transformative change occurring through commons knowledge is made possible through connection across difference and shared everyday practices (rather than a shared identity in the more conventional sense).

Members of Te Awa Kairangi show how learning to adapt and become resilient is also a process of negotiating difference and grappling with issues of equity, in ways that are more equitable. People across The ReMakery work with difference without seeking to erase or subsume it. Part of this process entails ethical decisions on who is included or excluded in projects, and in overall participation at CUPA. Varied and sometimes conflicting experiences do not undermine the work occurring at CUPA but instead speak to the non-linear, emotional and situation-specific ways in which

people approach difference and achieve change through difference. By centring learning in difference, and embracing the negotiations and the emotions that come with it, members are transforming what it means to be a subject of risk and uncertainty. They are in the process of resituating themselves in ethical responsibility to one another and to the planet. Finally, collective learning enables individual action and fosters connection to climate change issues.

This chapter has illustrated numerous ways members of CUPA provide localised, community-led examples for how resilience and adaptation might be alternatively understood and practised through community economy and collective learning. Chapter Six continues this discussion from a different standpoint, that people in Te Awa Kairangi engage with, and understand climate change resilience and adaptation as issues of sustainability.

Chapter 6 Making sustainability accessible

If to change ourselves is to change our worlds, and if the relation is reciprocal, then the project of history making is never a distant one but always right here, on the borders of our sensing, thinking, feeling, moving bodies.
(Gibson-Graham, 2006, p. 127)

Figure 22 Beeple Honey Collective hive boxes available for members to paint

In order to explore the ways CUPA makes sustainability more accessible, discussion shifts from an appreciation of collective processes to an emphasis on individual change and experience. Coming from an appreciation of situated understandings and community expertise, this chapter expands the idea of *re*learning adaptation and resilience to include sustainable action and behaviour. Individual members access climate change through sustainability and see adaptation and resilience actions as embedded in sustainability. At CUPA, sustainability entails working within the means of the natural environment to "fill gaps, close loops, reduce outputs and minimise waste" (CUPA, 2018).

Framed by the question, 'What do we *really* need?', Section One will explore the ways CUPA's consumption and waste reduction encourages people to question and redefine what their needs are, and how can they live within planetary means. Section Two will dive more deeply into the ways CUPA's collective learning environment increases individual self-confidence and honours personal choice. Section Three, 'Resistance can be joyful', discusses how CUPA's work encourages people to see resisting unsustainable systems and making different behaviour choices as something that can be creative, fun and joyful, not just challenging.

6.1 What do we really need?

There is a visible absence of plastic and of rubbish bins at The ReMakery. Apart from the two 'bin bags' sewn from repurposed vinyl billboards in the toilet facilities, there are no rubbish bins in any of the common spaces (Personal research journal). Nor is there any plastic wrapping or single-use plastic visible (Personal research journal). Waste is noticeably communicated as something to be reduced and redirected from the landfill. Similarly, the goods sold at the Common Grocer and through other enterprises of CUPA aim to help individuals consume less and with a smaller footprint (Personal research journal, see images below).

Figure 24 Sew Good reusable bags for sale at Common Grocer- from recycled fabric to reduce plastic use

Figure 23 Bulk items for sale at Common Grocer without single-use plastic

At The ReMakery, learning to reduce waste and change patterns of consumption is premised as a skill like any other, and one that can be learned together. From a sustainability perspective, collective learning helps individual members critically question their consumption and ask, 'what do I *really* need?' By asking this question, CUPA members are in the process of considering two additional ethical considerations: "Whether and how products are to be consumed? What is necessary to personal, social and ecological survival?" (Gibson-Graham & Roelvink, 2010, p. 331) From a consumption and production centred viewpoint, these questions approach one of the original questions of a community economy on what do we need to survive well, together (Gibson-Graham et al., 2013). In Chapter Five, Rose reflected on the reclamation of knowledge occurring as a way of getting back to basic skills. As a part of this reflection, she said:

> Like with using people's back yards for veggies, the farms, and with sewing, and knitting. They all went out of fashion but now they're coming back in again. And again, that's the thing with technology, it's made life so much easier on one level, but losing the skills on another level. I think The ReMakery is somewhere you can go back to basics if you choose to.
> (Interview, 28 September 2018)

Rose describes a trade-off between sewing, gardening and knitting and more 'modern' lifestyles, which she premises as technology. With this trade-off comes a dependence on purchasing and consumption of goods people could otherwise make themselves. The sewing, gardening and knitting learned at CUPA enables a shift away from consumption towards repurposing and recreating. Gordon offers a similar perspective on the idea of getting back to basics, with an emphasis on communal learning:

> I guess this is what we're learning. I have to learn how to work within a, within a community. This is why we go back to basic principles of 'I'm gardening' first, 'food', next thing. Then once everyone's fed, we've played in the garden, developed those relationships, and then we can start talking about other things- like housing or electronics and what have you.
> (Interview, 6 October 2018)

For Gordon, these skills are also a series of principles to live by, starting points that also involve learning to live together as a community. Gordon critically questions what is most important to produce, and the processes behind that production. Emily's interpretation of getting back to basics also involves a process of critically questioning patterns of consumption:

> I think it gives you opportunities to learn skills as well, like the section where they do Sew Good… you could learn how to fix your own clothes. You could learn how to repurpose fabrics, which over time we can't constantly be consuming stuff because unfortunately, A. it's ruined our planet and B. you know, the whole climate change thing, you're just using lots of energy to produce things that you're going to throw away. Why not repurpose things you've already thrown away?
> (Interview, 13 October 2018)

> "I think it does give you that perception of – things don't have to be beautiful in order for them to be useful. And to instantly buy it, doesn't actually make you any happier"
> (Interview, 13 October 2018).

Emily's critical analysis is, in itself, an answer to the question of what do we *really* need to live well. She shows how the learning at CUPA around repurposing and reducing waste, and the visibility of this process, helps raise individual critical thought around wellbeing and patterns of consumption. As described in Chapter One, transformative adaptation entails addressing the roots causes of our vulnerability, one of which is our unsustainable patterns of consumption and production (Pelling, 2011). Eriksen et al. (2011) add to this explanation and argue that climate change responses are only sustainable if they go beyond "one-time climate proofing measures, and question[s] the assumption that every adaptation to climate change will be beneficial" (p. 17). Members of CUPA are not only learning different ways of getting back to basics, they are also adapting to climate change in a way that addresses root over-consumption. By engaging with issues of sustainable consumption, CUPA's work represents longer-term cultural and institutional change. CUPA's sustainability work is an iterative process that is also transformational (Holland, 2017; Wise et al., 2014).

Rose's, Gordon's and Emily's earlier reflections express a positive experience, one based in support rather than punitive or isolating means. Their descriptions show how members are encouraged to learn how to reduce consumption and waste at their own pace and starting wherever they are at, regardless of skills, means and knowledge. A supportive, learning-focused and low-pressure environment encourages critical engagement with issues of sustainability and fosters reimagination of what a more resilient, adaptive lifestyle could look like. Shi et al. (2016) call for broadened channels of participation in government-led strategies in order to pay due attention to pre-existing inequities and create more just and inclusive resilience and adaptation measures. The concept of broadening channels of participation critically questions the accessibility and relevance of traditional local government approaches of engagement and communication to wider audiences. These kinds of participation usually involve written submissions, reports or large planning documents that value a certain kind of language and are organised around statutory deadlines (Lawrence et al., 2015; Rouse et al., 2017; Shi et al., 2016). Alternately, CUPA demonstrates one kind of learning-based, collective method for participation that is successful for drawing people in and inciting critical attention to climate adaptation issues.

6.2 Confidence in who we are and what we can do

It was a Thursday, mid-August. I was chatting with a community member who helps with Sew Good, a regular face at The ReMakery. We were looking out the front window watching work on Waiwhetu Road. All that week the city had been replacing the old wooden power line poles with cement ones, including the one in the front yard of The ReMakery. Casually I pondered, "I wonder what they do with the old poles." She answered that she had gone up to the workers replacing the poles and asked if CUPA could have the old wooden one from their front yard. They agreed and brought it around to the back workshop spaces. She said it was important to not only honour the history of the pole and all the changes it had seen, but also to turn it into something else and let it continue to be a part of The ReMakery. Before this conversation, I had not even considered the possibility of advocating to keep a power pole and turning it into a communal resource (Personal research journal).

One of the governing aims of CUPA is to 'awaken the lion', to embolden people to advocate and determine change in their places and spaces (CUPA, 2018). My exchange with the member is just one example of the ways community at The ReMakery cultivates capability and confidence in individuals towards sustainability. Not only was the member confident in approaching and performing difference in what might be considered a routine, completely separate practice, my own assumptions of what is possible was challenged and expanded. Responses from Rochelle and Yukiko offer similar personal accounts of how members experience learning new skills to grow confidence and capability:

> Because it taught me because I didn't know anything about anything before I came here and it was literally just J's little bits of guidance every now and then, 'Rochelle it's not hard to do this. That too'...If you do it this way and do it that way, you know, it will work for you and then you can grow 'blah blah' amount next year and keep going from there. But yea, but it's not even, just, it's so many other people and other people's knowledge and it's like you don't just take one person as Gospel, you take a little bit of knowledge of L and S and J and everybody and sorta make your decisions.
> (Rochelle, Interview, 4 October 2018)

> This is why The ReMakery is really good for finding new skills or experience. For somebody like for me too...I think I'm introvert but in here I am more open and talk more. Before I was really shy, I wanted to say something, but I was worried people wouldn't be able to understand what I say. But because of here, volunteering here, I meet different people and it teaches me and I learn a lot and I can improve....so many different things.
> (Yukiko, Interview, 27 September 2018)

Rochelle and Yukiko both articulate confidence and capability as a process that occurs overtime and comes with developing new skills. Rose offers a similar appreciation, drawing a connection between skills and the confidence to resist:

> The ReMakery is here for that sort of access to having skills, and skills are important to people. Or, they may not realize that, but having skills, knowing that you can do something, it encourages people and it also gives them confidence in who they are and what they can do...and they don't have to follow a trend, that they can go out on a limb.

For Rose, building skills directly and positively impacts on a person's sense of self, and a strong sense of self is an important step towards being able to resist and *re*learn. Member reflections describe sustainability as a felt learning process. They express that learning fosters the confidence to *feel* like they are capable of change; they *feel* empowered to critically question and resist unsustainable systems of over-consumption and waste production. In this way, confidence helps make sustainable action accessible. And while feelings of empowerment and self-confidence are personal and speak to individual capabilities, they are not qualities achieved in isolation. Individuals' sense of capability draws upon CUPA's collective support and comes from different members' participation and sharing unique skills and backgrounds. Collective support for an individual experience is a broader intention set by CUPA's leadership. One of the goals of the organisation is that members can say, "Common Unity believed in us and helped us develop our inherent skills and network with others" (CUPA, 2018). This example illustrates the importance of felt experiences of confidence and capability. Exploration of the connection between individual experiences and the communities and/or collectives that support them deepens adaptation and resilience discourses on social context.

From a climate justice perspective, I appreciate the confidence that CUPA members describe as an articulation of feeling empowered and able through self-determination. Self-determination means individuals and communities have agency to decide what capabilities to develop as they adapt and transform in the changing climate (Holland, 2017). Here it is importance to note the difference between self-determination and self-help agency. As Hayward (2012, 2017) explains, self-help agency is a reaction to a lack of choice, a value created from a deficit in formal support and resources (see Chapter One). Instead, members emphasise choice and demonstrate the importance of self-determination. When I asked, *who* is responsible for leading change towards sustainability, several people I spoke with made sure to clarify that the process is a personal choice. A person has to want and be ready to change. For instance, Emily said:

Because it's not like a beautiful café where you go, you know, 'I'm going to The ReMakery to have a coffee with my friends.' It's not like this. No, it's a choice. That's what creates a different sort of community. You choose to go there. You don't have to go there, but you 've chosen to.
(Interview, 13 October 2018)

Similarly, John stated:

Awe I think that's a personal choice. You gotta take steps, you known, to cut down the carbon footprint. Not use your car so much. Think about what you're doing when you're flushing stuff down the toilet or washing stuff down the sink. Could it be composted? . . . I think that's an absolute individual responsibility.
(Interview, 19 October 2018)

Emily associates participating and supporting CUPA with sustainability. For her, by choosing to go to The ReMakery and take part in its enterprises, someone is becoming more sustainable. John's response differs in that he understands sustainable action as external to CUPA, based on what a person does outside of The ReMakery. John's perspective illustrates another point of negotiation at CUPA, of upholding collective ethics while also supporting members' individuality and individual choice. This negotiation shows that, for CUPA, collective work towards sustainability does not equate to homogeneity of specific values and approaches. It means making space for individuality and difference. Recognising that sustainability is a process of choice acknowledges the individual in social agency and fosters feelings of confidence.

The importance of choice in feeling confident and capable adds to critical geography's critique that resilience and adaptive capacity strategies arising from external imperatives (i.e. government-led, or from external NGO or science research institute) do not necessarily entail self-determination and so do not generate the same self-perceptions of capability (MacKinnon & Derickson, 2013). From a situated understandings perspective, this potential disconnect raises questions around what constitutes choice in government-led participation and engagement strategies, and the ways this understanding might differ with community member understandings of meaningful choice. Thinking about the need for difference in transformative

adaptation and resilience (see Chapter Five), it also raises the question of what kinds of participation and engagement choices are available for non-Pākehā-European ways of being in Te Awa Kairangi, including the multiplicity of Pasifika cultures, Māori world views and systems-and so many more. As HCC or GWRC begin to realise the importance of engaging community (e.g. GWRC, 2015, 2017b), is there space in this engagement for culturally specific sustainability, resilience and adaptation?

Climate change resilience and adaptation building are felt and experienced at local and embodied scales (Cretney & Bond, 2017; Singh, 2013). Building from Chapter Five's discussion on the importance of emotions, positive individual experiences of sustainable action can shift subjectivities towards transformative resilient, adaptive identities. Gibson-Graham (2006) connect individual positive experiences of confidence, choice and self-determination, what they conceptualise as self-cultivation, with achieving longer-lasting change; "momentary swerves from negative to positive effect into a more permanent state of being" (p. 155). As this quote suggests, confidence to learn new skills towards sustainability can transition into confidence towards different ways of being in a changing climate. Feeling confident and capable is an important part of the emotional process of learning to be affected and achieve wellbeing with risk and uncertainty (Gibson-Graham & Roelvink, 2010). Engagement strategies and adaptation initiatives around climate change need to acknowledge and allow space for the expression of emotions. As CUPA member experiences show, learning new skills and behaviour and responding to change is emotional, and people need to feel safe to engage in this kind of change. Otherwise, emotions like fear and embarrassment may turn to anger and resentment and generate disengagement or apathy towards adaptation and resilience processes.

6.3 Resistance can be joyful

The ways climate change is experienced is diverse. And yet resisting technocratic adaptation responses often fixes people within certain subjectivities – whereby those who try to transform systems, or argue that systems need to transform, get framed as anti-development, anti-progressive (Chatterton & Pickerill, 2010; Horton

& Kraftl, 2009). This section will show how people resist in diverse ways and creative ways that can be positive, as well as characterised by anger and frustration. It offers possibility for transforming what is perceived as negative processes of resistance and the associated identities.

I asked Linda about climate change and how she understands it and has seen its impact in Te Awa Kairangi-Hutt Valley. She began her answer with:

> There's been change been going on for years and years and I think we've got enough to worry right inside my house than to worry about what's outside the door, but we still have to learn about it. I personally can't do anything about that.
> (Interview, 9 September 2018)

Linda's response is representative of so many of us who feel daunted and demoralised by what is needed to mitigate and adapt, including addressing issues of social and political inequity. Loh and Shear (2015) outline the personal and easily overwhelming nature of this work:

> Those who aspire to transform the structural underpinnings of persistent poverty, increasing inequalities, and environmental unsustainabilities are challenged with overcoming both the violence and deprivations of the capitalist market, as well as the mental (and emotional) handcuffs of capitalism that limit imagination and beliefs about what is possible. (p. 245)

They describe a fatigue from persistent resistance but also characterise hope as political; to belittle celebration and joy is a political act of limiting possibility (Solnit, 2016). CUPA resists the political act of cynicism and demeaning hope, seeking instead to create possibility through of creativity, fun and care. The rest of this chapter will explore the ways in which resistance can be made joyful through reimagination and how CUPA's joyful resistance offers an example of situated, unique practices of activism.

CUPA has an artist-in-residence, someone who spends their days painting images, signs, murals and beehives, and who turns bicycles into imaginative works of art, a project called Lucid Bike Dreams (Personal research journal, see Chapter Two). Figure 25 (cornhole board and beanbags, next page) is an imaginative repurposing

of an old piece of timber into an interactive game. Along with resident artist's creations that fill The ReMakery, other creative works come in forms of knitting, poetry, children's' drawings and paintings, and woodwork (Personal research journal). The repurposing, reducing consumption and skill building occurring is more than utilitarian. CUPA's sustainability is acts of creativity and creation.

Figure 25 Cornhole game at The ReMakery for visitors to play

The human expressions that fill The ReMakery affirm the joy of creativity and creation. I observed countless positive interactions between members, including words of encouragement, smiles and laughter, music playing, and singing (Personal research journal). Rochelle and Yukiko's words offer other accounts of how resistance and learning sustainability can be a positive experience:

> "So it's teaching people like it's not actually that hard. Yes, it's a little bit of work, but that it can be fun and you reap the rewards"
> (Rochelle, Interview, 4 October 2018).

> People who come here and work are happy. . . . I think because of The ReMakery it makes it so that people, like me, like at the time I didn't have a job, and other people who don't have a job can come here and do some activity and learn skills so I think they can learn many thing, Of course it makes them happy . . . and maybe more energy.
> (Yukiko, Interview, 27 September 2018)

From a coordinator perspective, Rochelle describes the importance of not only teaching people different skills to increase their capacity to be sustainable, but also that they have fun along the way and can notice the benefits. Yukiko affirms this from a volunteer member perspective, noticing that both she and other volunteers feel happy and energised from their learning and purpose.

Community members of CUPA show it is possible to participate in sustainable transformation without isolating oneself from wider society. Given the socially supportive nature of CUPA (see Chapter Five) and its extensive partnerships (see Chapter Four), participation in resistance and change actually strengthens individuals' connections with other types of community. Members are more supported, have an increased sense of solidarity and feel less isolated because, through CUPA, they can connect with wider networks across Te Awa Kairangi and Te Whanganui a Tara. This connection helps to form a wider Te Awa Kairangi community. In this sense, CUPA exemplifies that interrupting and resisting unsustainability (and inequity) through community economy can be an act of joy, and that the experience of joy leads to wider community participation and connection. Here, CUPA embodies Gibson-Graham et al.'s (2013) understanding of community, framed by a shared purpose in a changing climate: "trusting others as we jointly encounter a future of unknowns and uncertainties, and learning to allay our fears and conjure creativity" (p. xviii).

Chapter Five explored how meaningful connections made at CUPA could incite unintentional, environmental activism in members. Experiences of joy, fun and creativity lead to a similar connection; members of CUPA act out small-scale and implicit activism, embedded into the everyday (Chatterton & Pickerill, 2010; Cornwell, 2012). Maynard (2017) describes "small-scale, embedded activism" as acts of change which can fluctuate by circumstance and be transferred throughout different spaces (p. 209). At CUPA, everyday embedded activism is practical, works within the resources available and is grounded in strong social support.

Horton and Kraftl (2009) argue that activism is often understood as "an unconditional state" and from this viewpoint "there is a tendency to overlook the

complex, ambiguous blurrings and (dis)connections between any individual's 'activism' and everyday life" (p. 17). From this bounded understanding of activism, CUPA's embedded activism might appear passive and mundane. As previously discussed, CUPA is not explicitly a climate change activist organisation; most people I spoke with were disengaged from formal politics and did not consider themselves 'politically active' (see Chapter Four). As CUPA shows, adaptation and resilience can involve more nuanced, implicit resistance. A subtler, everyday kind of resistance increases accessibility for people to participate in change who do not otherwise consider themselves 'political' or as an 'activist.' Joy also enables participation in resistance from people who may be experiencing fatigue or continual trauma in other aspects of their lives. CUPA's joyful embedded activism opens up possibility on *who* gets to perform change and *what* is considered activist change.

6.4 Conclusion

Members of Common Unity and Te Awa Kairangi engage with climate change issues through sustainability. As a collective, CUPA serves as a point of access to individuals in making more sustainable choices. By approaching sustainability as a learning process, which welcomes mistakes and provides social support, individuals are able to engage with sustainability from different starting points. Positive learning experiences generate feelings of confidence and empowerment, increasing agency to perform change on an individual level and a communal level. CUPA members also show that through creative, collective works, resistance in transformative resilience and adaptation can be joyful. Their experiences exemplify implicit and embedded activism that stems from the courage to try non-capitalist, sustainable change without being certain, and have fun along the way.

The different ways in which CUPA's community economy and collective learning makes sustainability accessible, challenges normative understandings of who participates in adaptation and resilience-building policy strategy and what expertise holds weight. CUPA's implicit activism calls into question the efficacy of formal avenues available for community members to participate in policy change as 'activists' or 'environmentalists.' Paired to these challenges, CUPA member

experience opens up potential ways transformation might be practised. CUPA's success prompts exploration of other 'non-climate change' social organisation and initiatives as sites of learning and enacting sustainability, bridging community development work to climate adaptation and resilience.

Chapter 7 Conclusion: *Re*learning resilience and adaptation, performing possibility

"The best way to resist a monolithic institution or corporation is not with a monolithic movement but with multiplicity itself" (Solnit, 2016, p. 100).

The members of Te Awa Kairangi who constitute CUPA are resisting unsustainable, inequitable ways of adapting and building resilience. They are *re*learning their own localised, community-led resilience and adaptation by reimagining different manifestations of economy, learning and sustainable action. As I hope has been evident, I have approached this research from a place of care and concern, seeking to hold myself responsible to academic work as a politicised act of performing knowledge. As an appreciative outsider, I offered an academic platform to community practitioners and experts at CUPA already carrying out transformative practices. My aim was to explore the possibility CUPA's work holds for challenging and transforming inequitable and unsustainable ways of organising society and our human relationship with the natural environment.

The final pages of this thesis will summarise the central points of discussion and the implications these points hold for the theory and policy that constitute climate change adaptation and resilience. This includes reflecting on limitations to this research process and where there may be opportunities for further areas of work. I will conclude with more personal reflections on the process.

7.1 Summary

Chapter Four opened considerations of reimagining resilience and adaptation by appreciating the ways CUPA members engage in the ethical actions of a community economy. Ethical actions involve learning to live well together and equitably, and redirecting private resources into common goods. CUPA's organisational structure and strategic use of money highlights the interwoven and subtle ways that transforming towards more diverse and non-capitalist resilience and adaptation often involves strategically working within capitalism. Through extensive

partnerships, and by positioning themselves as a 'non-political' intermediary, CUPA's leadership and management skilfully create a space that encompasses a variety of ways for people to contribute and participate. The ethical negotiations of living together well and equitably are in contrast to wellbeing in normative adaptation and resilience policy, raising questions around who holds the power to decide whose wellbeing is prioritised, and what kind of wellbeing is included. As opposed to a-political and capitalist strategies, which may either ignore or homogenise wellbeing, situated understandings of wellbeing are more equitable and better rooted in specific community needs.

CUPA community economy shows there is possibility for transformation performed in community-led, non-capitalist projects. To use and grow local capabilities and resources as a community collective is to resist inequitable and unsustainable global privatisation and capitalisation. Here, CUPA's work deepens the argument from critical geography approaches; capitalist strategies for resilience and adaptation centred around private property asset protection and large-scale infrastructure are only one piece of the pie, only a minor action towards the resilient and adaptive future envisioned by community.

Premised in the ethical work of community economy, Chapter Five mapped the ways CUPA members collectively learn, across generations, to reclaim knowledge and celebrate difference. The learning at CUPA is made possible through participation of different ages, styles, skills and needs. Learning deeply interconnects with strong social support. Through collective learning, CUPA members create a knowledge commons. CUPA's knowledge commons transforms and reimagines institutional norms on what counts as learning for climate change adaptation and who can learn in these processes. To learn as a collective supports a wider community economy aim to organise and make decisions in different ways to more dominant neoliberal political decision-making, which is representative, managerial and/or technocratically 'expert-driven.' CUPA's collective models inclusive and deliberative processes of iteration and reflection.

CUPA's inclusive and deliberative reclamation of knowledge enables a longer-term shift away from the reliance on the need to purchase and consume in order to live well, particularly through acts of food sovereignty and the Urban Kai micro-farms. The acts of food sovereignty affirm the difference between self-help agency and social agency and contribute to transforming institutional values around how power as citizens is understood and agency expressed (Hayward, 2012, 2017). Important in their collective learning, members celebrate difference by negotiating the challenging and emotional terrain of difference without erasing or subsuming it. In this sense CUPA's adaptation and resilience becomes a process of negotiating difference and grappling with issues of equity, in ways that are more equitable. Members of CUPA continuously negotiate difference in varied and sometimes conflicting, non-harmonious ways. Their experiences emphasise the mixed, situation-specific ways in which people approach difference and can make change through difference.

Chapter Six considered resilience and adaptation from the perspective of individual understandings of climate change. For community members of CUPA and Te Awa Kairangi, sustainability is an access point for climate change. Members connect to making more sustainable changes in their lives by feeling confident and able. It gives them a sense of influence on what is often represented as a global, complex and massive problem, a message that can demoralise and isolate people. By making sustainability accessible, CUPA fosters individual connection to climate change action and cultivates individual resilience. The collective learning at CUPA makes sustainability accessible to individuals by supporting one another as they learn to critically ask, what do we *really* need?

Members encourage this critical awareness around consumption and production by fostering positive experiences with learning new skills (described in Chapter Five). This leads to a sense of confidence around being capable of enacting sustainability and resisting systems of overconsumption and waste generation. Members also appreciated this sense of confidence in who they are and what they can do as self-determination and choice, further affirming the difference between self-help agency and social agency. Learning, creative works and social support makes

transformation a creative process that is joyful and fun. Joyful resistance contributes to embedded and implicit activism and expands ways of understanding environmental and climate activism.

7.2 Implications and further research

The transformative possibility illustrated in this research spans policy discourse, decision-making processes, and strategies for engagement and participation. This research also illustrates possibility in critical geography discourses for reimaging identities and subjectivities of activism and agency. In what follows I similarly outline potential implications relating to subjectivity and identity, policy discourse, decision-making and strategies for engagement and participation.

Considering critical geography discourse, CUPA members transform norms on resilience and adaptation by creating different subjectivities around citizenship, environmentalism and activism. As demonstrated throughout Chapters Four, Five and Six, CUPA provides different ways for people to be active, engaged and live more sustainably. These subjectivities do not have to be an all-encompassing identity that politicises and isolates, or is exclusive to a specific group of people (Horton & Kraftl, 2009; Maynard, 2017). The work of an engaged citizen or a climate activist can be nuanced, embedded in daily projects and social interaction, and might not be explicit or described using dominant terms (Chatterton & Pickerill, 2010). Further work in critical geography could explore broadened understandings of activism and environmentalism to continue to make space for community-led understandings in resilience and adaptation discourses.

The transformation occurring through CUPA affirms the significance of empirical examples of resilience and adaptation and challenges the perception that local, situated change is small or insignificant (Cameron & Hicks, 2014; Imperiale & Vanclay, 2016). Critical geographies can continue to deepen deconstruction and resistance of dominant climate change discourse through an appreciation of community sites of resistance and reimagination already occurring. Here, critical resilience and adaptation discourses strongly benefit from the continued intersection with community economies research. Community economies work can

provide more grounded instances and case studies of how social and economic difference may be negotiated in more ethical ways. However, as CUPA members have shown, transformative adaptation and resilience is political, emotional and constantly negotiated. Community economies research needs to continue to engage with the political and emotional aspects of ethically organising community and economy, focusing on negotiations of equity, inclusion and authority.

This research also has implications for adaptation and resilience policy discourse and associated frameworks and strategies. CUPA's examples of situated understandings (wellbeing, social connection and negotiating difference) speak to a need to move away from "abstract institutional criteria" that do not critically consider the political aspects of *who* decides meaning, *how* those meanings are decided and *what* implications those meanings pose (Cote & Nightingale, 2012, p. 481). To situate resilience and adaptation, local government needs to take steps to appreciate community-led development as a viable means of building resilience and adaptive capacity (Matarrita-Cascante et al., 2017). This is not a call to subsume community-led development projects into a climate change agenda, as this would only perpetuate the issue of state authority and externally impose the imperative of building resilience (Biermann et al., 2016; Leitner et al., 2018). Instead, local government can provide support to, and be aware of, development work, like CUPA's, without intervening or imposing (Maclean, Cuthill, & Ross, 2014; Matarrita-Cascante et al., 2017). A community-led development perspective diversifies *who* participates in adaptation and resilience, *how* participation and engagement come about and *what* kinds of climate change knowledge is generated.

Rather than climate adaptation and resilience projects developed primarily with information and input from engineers or physical scientists, community development practitioners and/or community engagement staff should meaningfully participate in any conversation and initiative at Council level. Meaningful inclusion of community development groups, public health groups and other social service experts can contribute to decentring decisions towards a more deliberative process, and help make strategies more relevant, dynamic and holistic (Sanchez, Osmond, & van der Heijden, 2017). What the word 'meaningfully' means

here is important. For diversified inclusion to actually transform decision-making processes, Shi et al. (2016) assert it needs to go beyond the usual forms of engagement, consultation on vulnerability assessment and climate risk education, towards fundamentally shaping what resilience and adaptation mean. This entails participation in designing, framing and assessing the strategies. Changing *who* is involved in climate change decision-making then also means changing *how* local government engages with community and understands participation. A community-led, transformative *how* moves away from starting with global development organisations' or central government's frameworks and bringing in community representatives as advisors, or, developing strategies and later informing community of risks and hazards. A community-led, transformative *how* calls for local government to apply a ground-up approach and develop situated terminology, frameworks and processes.

This kind of ground-up approach requires strong government-community relationships and mutually-agreed upon partnerships with community groups (Berkes, 2017; Shi et al., 2016). While less straightforward and potentially more time-consuming, premising the participation and engagement process in relationships and partnerships is more equitable. It is also a more authentic representation of the embedded, interconnected lives of local government practitioners and community members. And where there is separation, connection via partnerships can help deconstruct that binary. CUPA is one site of connection between government, community development organisations and individual community members, and demonstrates that this deconstruction is possible in adaptation and resilience.

Diversifying and situating *how* climate adaptation and resilience knowledge is generated also diversifies and situates *what* counts as knowledge. As CUPA shows, a commons knowledge, based in making, doing, sharing and teaching, is successful in drawing in people who might otherwise be disengaged or left out of formal Council engagement processes. Via mutual partnerships and community relationships local government can move beyond relying primarily on written forms of knowledge (see Chapter Six) and encourage spoken, visual and/or activity-driven

ways of understanding adapting to climate change. This goes beyond a climate scientist or local government practitioner diversifying the ways community is informed about the risks they face; this is about fundamentally reshaping *what* counts as a climate change conversation. Broadening and diversifying *what* counts as climate knowledge also means broadening *what* counts as enacting change. Local government can recognise and support community's enactment of implicit, embedded activism and support transformative resilience work for members of wider Te Awa Kairangi not directly involved in formal channels of participation. Alongside recognising overt citizenship and agency through local council meetings, forums, petitions, protests and direct action, local government can support more nuanced, situated activism through strategic partnerships like the ones which support CUPA's work.

For critical geography theory, CUPA diversifies what environmentalism and activism means, affirms the importance of exploring lived adaptation and resilience experiences and calls for further exploration of the political, negotiated aspects of community economies. For local government climate governance, CUPA illustrates the importance of supporting ground-up, situated understanding by expanding *who* participates in climate adaptation, *how* that participation is enacted and *what* counts as knowledge in this process.

7.3 Limitations

The limitations of this research connect to two main constrictions, the yearlong timeframe and being the sole researcher. As described in Chapter Three, I conducted a limited number of interviews and only worked with CUPA. The project therefore has the usual limitations of a single case study. Had I the time or capacity to include public service and local government practitioners' understandings, hopes and visions for a resilient and adaptive Te Awa Kairangi, I could have provided a more holistic exploration of possibility and the challenges local government practitioners in particular face. Another significant limitation is that throughout this research I was unable to engage with Indigenous works and Indigenous ways of knowing, particularly Māori ways of knowing and being as much as I had originally hoped. So,

although I come from a transformative and decolonising epistemology, I run the risk of reinforcing Pākehā ways of knowing as dominant. Finally, another limitation mentioned in Chapter Three but worth repeating, is that the format of a thesis, an individualised, written means of producing knowledge, is not the best representation of CUPA's work, which is centred in creating, doing and making as a collective.

7.4 Final reflections

As I hope this research has shown, to approach possibility in climate change also means to acknowledge accountability. To seek transformative action is to grapple with Global North, Pākehā forms of colonisation, exploitation and environmental degradation. For me, and any Pākehā, Global North and/or non-Indigenous readers, accountability means engaging with the ways we benefit from and are implicit in this process. Accountability means finding each of our own ways to answer the question, "what can I do?" Or rather, "what can we do?"

Members of CUPA, different people from around Te Awa Kairangi, and wider Te Whanganui a Tara, are answering "what can we do?" in a multiplicity of ways. As individuals and as a collective, CUPA members are holding themselves accountable to a more just, more equitable and more sustainable future. And they do this in a way that creates joy. So if anything, I have sought to show that CUPA is one situated manifestation of multiplicity. Rebecca Solnit (2016) maintains that multiplicity in the face of climate change is possible and performable, and that with multiplicity comes resistance and hope. Members of CUPA and Te Awa Kairangi have undertaken to make space, create a community economy, and learn as a collective and foster sustainability. And for members of CUPA, the possibility continues.

You do not have to be good.

You do not have to walk on your knees

for a hundred miles through the desert repenting.

You only have to let the soft animal of your body

love what it loves.

Tell me about despair, yours, and I will tell you mine.

Meanwhile the world goes on.

Meanwhile the sun and the clear pebbles of the rain

are moving across the landscapes,

over the prairies and the deep trees,

the mountains and the rivers.

Meanwhile the wild geese, high in the clean blue air,

are heading home again.

Whoever you are, no matter how lonely,

the world offers itself to your imagination,

calls to you like the wild geese, harsh and exciting -

over and over announcing your place

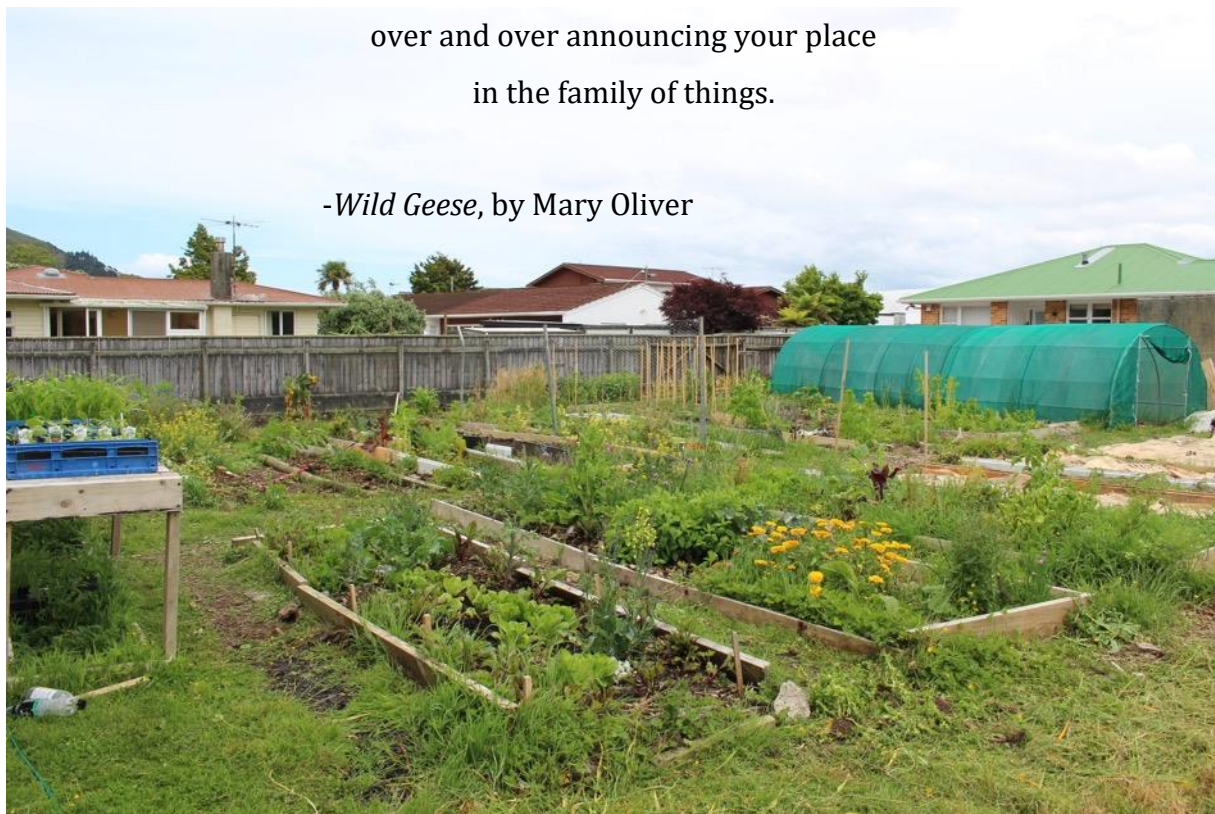in the family of things.

-*Wild Geese*, by Mary Oliver

Figure 26 The micro-farm at Epuni Care and Protection (Oranga Tamariki)

Appendix A: Typologies of resilience

Typology	Definition	Connected disciplines
Socio-ecological systems (SES) resilience	"The capacity of social, economic, and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity, and structure, while also maintaining the capacity for adaptation, learning, and transformation" (IPCC, 2014, p. 5).	Community development-international development; Disaster risk management; Ecology; Economics; Engineering; Human geography; Resource management- environment management
Disaster resilience	"The capacity, in the first place, to prevent or to mitigate losses and then secondly, if damage does occur to maintain normal living conditions as far as possible, and thirdly, to manage recovery from the impact" (Buckle, Marsh and Smale, 2000 in Thywissen, 2006, p. 468). Focused on process of "prevention/mitigation, preparedness, response and recovery" (Kapucu, Hawkins, & Rivera, 2013, p. 1).	Community development-international development; Disaster risk management; Engineering; Human geography; Resource management-environment management
Urban resilience	"The ability of an urban system-and all its constituent socioecological and socio-technical networks across temporal and spatial scales-to maintain or rapidly return to desired functions in the face of a disturbance, to adapt to change, and to quickly transform systems that limit current or future adaptive capacity" (Meerow, Newell & Stults, 2015, p. 45).	Community development-international development; Disaster risk management; Business and finance; Engineering; Human geography; Resource management-environment management
Community resilience	"The existence, development and engagement of community resources by community members to thrive in an environment characterised by change, uncertainty, unpredictability and surprise" (derived from Magis, 2010 in Berkes & Ross, 2013, p. 6).	Community development-international development; Disaster risk management; Human geography; Public health; Psychology; Resource management-environment management

Appendix B: Summary of coastal hazards for Te Awa Kairangi

Key term	What	Causation	Potential impact	Source
Sea level rise (SLR)	An observed and predicted change in our climate that the mean sea level (MSL) is rising.	Caused by expansion of warming ocean water, melting mountain glaciers, and melting polar ice sheets as a result of rising oceanic and atmospheric temperatures due to increased greenhouse gas emissions.	Will exacerbate all the hazards below.	MfE, 2017; PCE, 2015
Ocean acidification	An observed and predicted change of the decrease in pH levels and increase in acidity throughout ocean surface waters.	Caused by increasing carbon dioxide (CO2) levels in the atmosphere leading to increasing CO2 levels entering ocean surface waters.	Varying changes to biodiversity and habitat loss for ocean life. High uncertainty around Aotearoa-New-Zealand specific risks and hazards of ocean acidification.	NIWA, 2009b; Rouse et al., 2017
Increased storm frequency and intensity	An observed and predicted impact that singular or clustered storm events will occur with increased frequency and severity.	Caused by rising oceanic and atmospheric temperatures due to increased greenhouse gas emissions.	Will exacerbate all the hazards below.	MfE, 2016, 2017b
Coastal erosion	A temporary or permanent retreat of the shoreline, which consists of sediment, sand and/or rock.	There are both natural and anthropogenic causes to coastal erosion. Anthropogenic causes include: -Sea level rise	Increases risk of damage to ecosystems and biodiversity, local infrastructure, community health and cultural health, private property and business.	MfE, 2017a, 2017b

		-Manipulating sediment flows from catchments -Dredging -Mining nearby sand and/or gravel -Building artificial coastal protection.	Increases risk of displacement and relocation of people.	
Coastal inundation	Flooding of low lying coastal areas by seawater.	Caused by high tides, storm surge and/or large waves occurring simultaneously. Frequency is rising due to SLR and increased variation in seasonal sea levels.	Increases risk of salinisation, damage by large waves and storm water drainage blocked. Also exacerbates coastal erosion.	MfE, 2017b; NIWA, 2011
Storm surge	A temporary increase in ocean and estuary levels during storm event.	Caused by strong onshore and anticlockwise (with the coast on the left) winds and low air pressure during storms.	Increases risk of coastal erosion and coastal inundation. If coinciding with a high spring tide may also cause flooding.	MfE, 2017
Flooding-freshwater	When water breaches the banks of a river channel and overflows onto land that is normally dry. Categorised by cumecs (measurement of waterflow). 1 cumec= 1 cubic metre passing a given point every second. Flood events are labelled as a 1 in every X year event given their intensity and probability.	A flood event is usually caused by heavy and/or prolonged rainfall. High sea levels at river mouths, landslides, earthquakes and dam/hydraulic infrastructure failure can also cause flooding. Increased storm frequency and severity and SLR will exacerbate these causes.	Risk of injury and death to human and non-human life and psychological trauma. Damage to homes and private property, businesses, infrastructure and farmland. Debris and pollution spread. Land saturation.	GWRC, 2001; NIWA, 2012

Appendix C: Summary of adaptation measurements across GWRC & HCC policy

Policy piece	Adaptation measurement
Regional coastal plan for the Wellington Region (GWRC, 2000)	That "adequate" and "appropriate allowance" be made for the effects of sea level rise and its Associated hazards in resource consent, structure design and development of any "major public works". (p. 41–42, 51–52)
Hutt River floodplain management plan – for the Hutt River and its environment (GWRC, 2001)	Policy 20 (of 28 policies total): Designing for Climate Change and Earthquakes, the Regional Council will account for climate change and the earthquake hazard by: incorporating climate change scenarios by designing major stopbanks to 2800 construction standards providing the city councils and the public with information about the potential effects of climate change and earthquakes on the flood protection system. (p. 82) Infrastructure spending to enact Policy 20: "The Plan proposes to spend an estimated $78 million on physical works over the next 40 years to achieve this standard*". (p. xii) * Standard here means a mix of 2800 cumec, 2300 cumec and 1900 cumec flood event stopbanks depending on the area and population density.
Climate change strategy (GWRC 2015)	Objective 2 of strategy: Risks from climate change-related impacts are managed and resilience is increased through consistent adaptation planning and actions based on best scientific information. Objective 3 of strategy: Community awareness of climate change mitigation and adaptation solutions increases and organisations and individuals know what they can do to improve the long-term resilience and sustainability of the region. (p. 2)

Wellington region draft natural hazards management strategy (GWRC, 2016)	Agree on planning time horizons to ensure that climate change and sea level rise is built into all plans. Build GWRC's climate change strategy into natural-hazards risk reduction management decision-making. (p. 22)
Long term plan 2018-2028* (HCC, 2018) *This document is connected to four strategy streams also published separately: • The Leisure and Wellbeing Strategy 2012-2032 • The Urban Growth Strategy 2012-2032 • The Environmental Sustainability Strategy 2015-2045 • The Infrastructure Strategy 2018-2048	$200,000 to work with other councils in the region to map and identify places, communities and assets threatened by sea level rise, to develop response options and to begin engagement with Hutt City communities on the threat of climate change. (p. 4) "A Sustainable Water Source study undertaken" to look into additional water supply sources available by about 2035. (p. 125) Long-term plans should be in place to ensure the resilience of property and infrastructure against the projected sea level rise. Extracting water from the aquifer must be actively managed to mitigate the salination risk. (p. 127) 5 response options for natural hazards and effects of climate change: 1. Strengthening at risk infrastructure 2. Robust emergency preparedness 3. Providing back up networks (secondary storm and wastewater networks and alternative transport routes) 4. Developing protective infrastructure 5. Regulation and monitoring Alternative option 1: Borehole water Alternative option 2: Desalinated water. (p. 129-130) For the roading network, Council has commissioned a resilience study to examine parts of the network at risk from earthquake and other hazards, as well as possible mitigation measures. (p. 139)

Appendix D: Information sheet

'Strengthening community from the inside out': **Transformative possibility for climate change resilience and adaptation in Te Awa Kairangi-Hutt City**

INFORMATION SHEET FOR PARTICIPANTS

You are invited to take part in this research. Please read this information before deciding whether or not to take part. If you decide to participate, thank you. If you decide not to participate, thank you for considering this request.

Who am I?
My name is Katy Simon and I am a master's student in Environmental Studies at Victoria University of Wellington. This research project is work towards my thesis and a wider report on climate change adaptation and community engagement funded by the Deep South National Science Challenge.

What is the aim of the project?
This project wants to look at your understanding of climate change and how your community prepares and adapts to these changes. It aims to highlight and celebrate community knowledge and action.
This research has been approved by the Victoria University of Wellington Human Ethics Committee [Reference #26054]*.*

How can you help?
You have been invited to participate because of your work with Common Unit Project Aotearoa. If you agree to take part I will interview you at The ReMakery, or another place you agree with. I will ask you questions about Common Unity Project and climate change. The interview will take about an hour. I will audio record the interview with your permission and write it up later. You can choose to not answer any question or stop the interview at any time, without giving a reason. You can withdraw from the study by contacting me at any time before 1st October 2018. If you withdraw, the information you provided will be destroyed or returned to you.

What will happen to the information you give?
There are three options:
1. This research is confidential. This means that only I and my supervisors will be aware of your identity. The research data will be combined (you will be described

only as at Hutt Valley community member) and your identity will not be revealed in any reports, presentations, or public documentation.

2. Your name and involvement in CUPA will be included in the final report.
3. You will not be named in the final report but you will be described through your work with CUPA. If you choose this option, you can select a different name that you'd like to be called in the final report.

Only my supervisors and I will read the notes or transcript of the interview. The interview transcripts, summaries and any recordings will be kept securely and destroyed on 2 January 2020.

What will the project produce?
1. The information from my research will be used in my Masters dissertation and, with your approval, may be included in a wider Deep South National Science Challenge report on climate change, community engagement and wellbeing.
2. If you do decide to participate in this research you have the option of <u>only</u> being included in the thesis, and not in the wider Deep South report. You also have the option of being included in the Deep South report, but <u>without your name or any affiliation that would identify you</u>.

If you accept this invitation, what are your rights as a research participant?
You do not have to accept this invitation if you don't want to. If you do decide to participate, you have the right to:

- choose not to answer any question;
- choose not to be recorded and have written notes taken instead;
- ask for the recorder to be turned off at any time during the interview (if it is recorded);
- withdraw from the study before 1 October 2018;
- ask any questions about the study at any time;
- receive a copy of your interview recording (if it is recorded);
- receive a copy of your interview transcript (if it is recorded)*;*
- read over and comment on a written summary of your interview*;*
- be able to read any reports of this research by emailing the researcher to request a copy.

If you have any questions, either now or in the future, please feel free to contact me or my supervisor.

Katy Simon

katy.simon@vuw.ac.nz

Human Ethics Committee information

If you have any concerns about the ethical conduct of the research you may contact the Victoria University HEC Convenor: Dr Judith Loveridge. Email hec@vuw.ac.nz or telephone +64-4-463 6028.

Appendix E: Interview consent form

'Strengthening community from the inside out': **Transformative possibility for climate change resilience and adaptation in Te Awa Kairangi-Hutt City**

CONSENT TO INTERVIEW

This consent form will be held for 2 years.
Researcher: Katy Simon, School of Geography, Environment and Earth Sciences, Victoria University of Wellington*.*

- I have read the Information Sheet and the project has been explained to me. My questions have been answered to my satisfaction. I understand that I can ask further questions at any time.

- I agree to take part in an audio recorded interview.
  Check here □
OR
- I agree to take part but prefer my interview to be written only and not recorded.
  Check here □

I understand that:

- I may withdraw from this study at any point before 1 October 2018, and any information that I have provided will be returned to me or destroyed.

- The identifiable information I have provided will be destroyed on 2 January 2020.

- Any information I provide will be kept confidential to the researcher and the supervisors.

- I understand that the results will be used for a master's dissertation and, with permission, may be used in the Deep South National Science Challenge reports.

Identity and confidentiality in thesis:

- My name will **not** be used in the thesis, nor will **any information** that would identify me.   Yes   No

  OR   □   □

- I consent to my **name** and **association** with CUPA to be included with my contribution to the thesis.   Yes   No

  OR   □   □

- I **do not** consent to my name but I **do** consent to association with CUPA to be included with my contribution to the thesis.   Yes   No
                                                                              □   □

- My contribution can be included in the reports for Deep South Challenge.   Yes   No

  OR   □   □

- My contribution can be included in the reports for Deep South Challenge, but my **name will not be used** in the thesis, nor will **any information** that would   Yes   No
  identify me.   □   □

- I would like a copy of the recording of my interview: Yes   No
                                                                              □   □

- I would like a copy of the transcript of my interview: Yes   No
                                                                              □   □

- I would like a summary of my interview: Yes   No
                                                                              □   □

- I would like to receive a copy of the final report and have added my email address below.   Yes   No
                                                                              □   □

Signature of participant: Date:

Name of participant:

Contact information:

Appendix F: Interview schedules

Interview schedule for adult individuals:

- Can you tell me about how you joined up with Common Unity Project?
- Can you tell me about the ways your time and work with CUPA has changed or helped you?
- In what ways is CUPA helping the community of Epuni and making it stronger?
- What does climate change mean to you?
- What does the word "resilience" mean to you?
- What about the words, "adapt or adaptation"?
- Do you think CUPA plays a role in increasing your resilience and ability to adapt to climate change?
- Do you think CUPA plays a role in increasing your wider community's resilience and ability to adapt to climate change?
- Do you feel like you can rely on council/local government to help support you and your community? What about when it comes to climate change action (preparing and reacting)?

Additional interview schedule for leadership and coordinators:

- Can you talk a little bit about what climate change means for this group?
- What kinds of connections do you see between social and economic justice and climate change?
- Can you talk a little bit about the importance of sustainability in CUPA's work?
- How do you feel the council has done overall with supporting CUPA or engaging with members of Epuni to listen to their needs around climate change?
- What would you like to see from council and local government in general in terms of supporting communities in the area?
- What would you like to see from council and local government in terms of preparing and adjusting to the changes of climate change?

Appendix G: Participant observation information sheet

'Strengthening community from the inside out': **Transformative possibility for climate change resilience and adaptation in Te Awa Kairangi-Hutt City**

My name is Katy and I am volunteering for Common Unity Project Aotearoa and gathering some observations for research. My research looks at the ways people understand climate change and work with their community to prepare for and adapt to these changes. It aims to highlight and celebrate community knowledge and action (like work at CUPA!).

Observations from these volunteer activities will contribute to my master's thesis and a wider report on climate change adaptation and community engagement, funded by the Deep South National Science Challenge.

This part of the research is just a chance for me to get a better sense of what CUPA volunteering looks and feels like. Any observations I make will be written down later as notes. I am not recording or taping any of these activities. I may take some pictures, but this will only involve you with your permission, and will not include your face. Unless you would like me to, I will not mention your name, or any other way to identify you besides your work with CUPA.

If you feel uncomfortable with any part of this, please let me know and I will adjust my observation notes and research. Please feel free to email me if you want more information, have any questions or change your mind and would like not to be recorded in my observations. If you do change your mind, please let me know before 1st October 2018.

Katy Simon
Katy.simon@vuw.ac.nz

(All observation notes and any other data collected will be permanently destroyed on 2nd January 2020. This research has been approved by the Victoria University of Wellington Human Ethics Committee, Reference #26054*.*)

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