# Integrating Place Attachment into Local Government Climate Change Adaptation: Barriers & Implications for Equity

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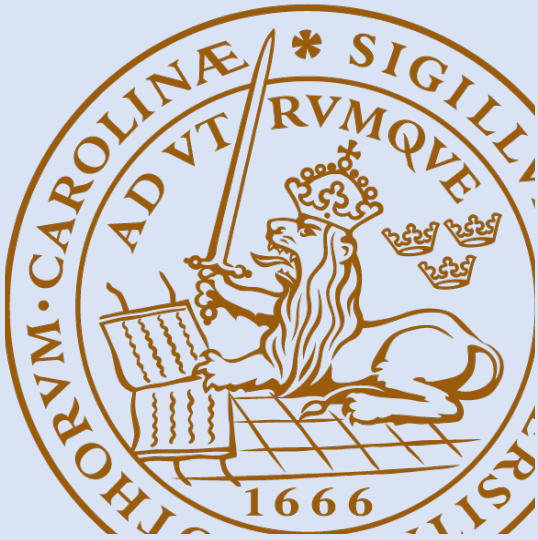

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**Abstract**
This research examines how consideration of place attachment and community values can inform the development and implementation of fair and equitable climate change adaptation (CCA) practices in the Australian local government context. The research adopts a qualitative approach, using semi-structured interviews with expert interviewees and reflective thematic analysis to answer three research questions. The study found that practitioners have a strong intent to apply community values and consider place attachment in CCA processes, but this is often done in an ad-hoc, non-systematic way and not integrated across council functions. Place attachment is understood in reference to the impact of disasters and extreme weather events that have occurred recently within the locality, while community values are more likely to be considered if they align with risk management processes, financial benefits, community expectations or if co-benefits can be identified. The study also identified six challenges that constrain the ability of practitioners to consider community values and place attachment in CCA processes. Practitioners would need to navigate the barriers and constraints to enable a fairer and more equitable CCA process. Lastly, the research suggests that place attachment could provide a tool to ensure fair and equitable CCA processes, however, it is difficult to see how this could be done effectively without structural changes to the multi-governance systems that local government exists within. The study contributes to the understanding of the role of place attachment and community values in CCA processes and offers insights into the barriers and implications for equity.



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**Summary**

Climate change threatens the places that we live, our identity, community well-being, and our sense of place. The emotional bonds formed between people and their important places (referred to as place attachment) are deeply interconnected to the physical and social characteristics of a place. These attachments have been shown to motivate people to protect these places, adapt to changes and are important for wellbeing and feelings of safety. When people feel connected to a place and share these values within the community, they are also more likely to collaborate to address climate risks.

As climate change is recognised to be mainly experienced locally, there has been an increasing focus on local climate adaptation and the role of local government in this response. Local government is said to have access to local knowledge about place-based impacts and vulnerabilities that should enable decisions to be made based on community needs and values. However, it is recognised that these decisions sit within a complex socio-political system that can constrain how community values are integrated into climate change adaptation processes. There has been less of a focus in literature on the issue of equity in decision-making, and the social reproduction of power in adaptation at the local level. This has implications for how adaptation processes occur in practice and in understanding the implications for individual and community adaptation.

This research attempts to fill the gap in understanding of how local governments apply knowledge about community values and attachment to place in the context of CCA, and to understand how the variety of decisions and choices that are made throughout this process can be made fairer and more equitable. This is undertaken through the use of semi-structured interviews with experts to explore three research questions (1. Is consideration of place attachment and community values applied by local government climate change practitioners in their work? 2. What barriers do local government practitioners face in effectively considering the varied experiences of community and place attachment in climate change adaptation processes? 3. In the context of local government in Australia, can place attachment theory provide a tool to ensure fair and equitable climate change adaptation processes?). Local government climate change adaptation practitioners were asked to share their professional perspectives and experiences on CCA practices, decision-

making processes, and the challenges and barriers to integrating community values and consideration of place attachment in the local government context.

The research found that while there was a strong intent to apply community values and to consider place attachment in climate change adaptation processes, this is not undertaken in an integrated, systematic way, leading to ad-hoc responses. Place attachment was found to be understood most prominently in reference to the impact of disasters and extreme weather events that had occur recently within the locality and can act as a driver for climate response. Community values are more likely to be considered in decision-making if they align to risk management processes, financial benefits, community expectations or if co-benefits to an initiative can be identified. However, this recognition does not always translate into the consideration of the full spectrum of community views and needs across the local government structure or CCA processes. There were six broad challenges identified in the research that constrains the ability of practitioners to consider community values and place attachment in CCA processes. These are uncertainty and complexity in risk communication, difficulties reaching everyone in the community, scepticism and buy-in, differing and competing priorities, capacity and resource constraints, and unclear roles and responsibilities. While place attachment could provide a tool to ensure fair and equitable climate change adaptation processes, it is difficult to see how this could be done effectively without structural changes to the multi-governance systems that local government exists within. While the research found that there is a strong willingness and intent to integrate fairness and equity principles, especially driven through the recognition of the importance and necessity of involving the community in decision-making processes, there are significant gaps how decisions are made and what, or who's, interests and values are prioritised. The socio-political system that local governments exist within have implications for how adaptation processes occur in practice and this in turn has implications for individual and community adaptation. It is hoped that greater consideration of the challenges that practitioners have to navigate can be used as a catalyst for structural and institutional changes in order to allow for more effective processes.

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## 1. Introduction

Climate change threatens the places where we live, our identity, community well-being, and our sense of place. Climate change related extreme weather events and disasters can modify both the physical characteristics of a location, as well as the social characteristics such as their associated meanings, identities and emotional connections (Devine-Wright, 2013; Feng et al., 2022). As the climate changes our important places, we need to redefine these bonds, and this can lead to feelings of loss and grief. These social characteristics are deeply intertwined and interconnected with the physical characteristics of place. The term 'place attachment' is used to define the bonds and relations that people form with places (Devine-Wright, 2013; Scannell & Gifford, 2010; Sebastien, 2020). The process of forming these bonds involves the emotional connections and feelings that influence perceptions of the place, as well as the meanings, values and experiences that people use to make sense of their environment, which in turn then influence attitudes and behaviours (Moulay et al., 2018; Scannell & Gifford, 2010). These attachments have been shown to also motivate people to protect these places (Manzo & Perkins, 2006; Quinn et al., 2015; Seamon, 2021). The rapid and uncontrollable changes to places, including large-scale man-made physical changes to the environment, can also lead to a range of negative social and mental health outcomes such as trauma and loss of social networks (Devine-Wright, 2013). Place attachment have been recognised as central to well-being and can encourage feelings of safety. These connections to place are also known to be significant determinants of a person's resistance to change, and can mediate disaster and climate adaptation responses (Quinn et al., 2015). Understanding the social dimensions and emotional relations that people have with places also needs to be recognised in parallel with the political aspects of climate change adaptation (CCA) processes (Quinn et al., 2015; Williams & Miller, 2021). Both climate change and adaptation responses can also modify the places that are important to people, so it is important that these values are integrated into decision-making processes.

The commonly accepted definition of CCA presented by the Intergovernmental Panel on Climate Change (IPCC) is a "process of adjustment to actual or expected climate and its effects in order to moderate harm or take advantage of beneficial opportunities" (IPCC, 2022, p. 5). As a process, it also moderates how individuals and collectives take action against societal and environmental challenges (Eriksen et al., 2015) and can contribute to a

resilient community. However, there are ultimately choices that need to be made about which adaptation responses are most appropriate, what will be protected and how. The process to make the decisions and choices require certain trade-offs due to the distribution of financial (and other) resources, with the outcomes of these decisions not always being beneficial for everyone (Atteridge & Remling, 2018). These choices are value judgements. It has been suggested that CCA focuses more on the hazards and consequences, overlooking consideration of lived experiences, what people value, and how these values are at threat from climate change (Tschakert et al., 2017). This includes the consideration of indirect and intangible losses, such as knowledge, sense of place, social cohesion and identity (Tschakert et al., 2017). Key to making fair and equitable CCA decisions require acknowledgement, understanding and consideration of what the community values so that they can be adequately considered within these processes.

As climate change impacts are experienced locally, there needs to be a focus on localisation of climate adaptation. Within the Australian context, local governments have been leading the way on climate response. Historically, this has been largely due to a perceived lack of policy progress at the national and state levels (Measham et al., 2011). Effects of climate change are experienced in particular localities and places, and felt specifically by different communities, requiring a local response (Kennedy et al., 2010; Measham et al., 2011). Due to the close connection to the public, local government is said to have access to the local contextual knowledge about place-based impacts and vulnerabilities that should enable decisions to be made based on community needs (Vogel & Henstra, 2015). As a core institution, it is also said that local governments are seen as legitimate actors, with mandates to act on behalf of their constituents, and have a key role in mediating responses to local vulnerabilities and the governing of resources for action (Kennedy et al., 2010; Measham et al., 2011). Public policymaking is said to be a deliberative activity that "involves choices about whether and how public authority and resources will be used to address problems" (Vogel & Henstra, 2015, p. 111). These choices are somewhat complicated by the social and political environments in which they are made due to the number of actors involved in the decision-making and adaptation processes, the various public functions that interact, and the complexity of the institutional arrangements where local government resides (Vogel & Henstra, 2015). However, it can be said, that within these decisions certain interests, experiences and values are prioritised and some voices are recognised, included or

excluded other others (Eriksen et al., 2015; Schlosberg, 2012). There is a responsibility on local governments to consider what the community values and how the decisions that they make impact on both the values, and the connections people have with these places. Additionally, the Australian local government was chosen as the context for this research due to the researcher's familiarity with CCA processes in this context. As a previous local government CCA practitioner, pre-existing trusted networks of the researcher offered an opportunity to gain access and insight into the knowledge and experiences of practitioners which might otherwise be more difficult for outsiders to achieve.

There has been significant research into how place attachment manifests to promote pro-environmental behaviours and how this can be leveraged to increase public participation and motive collective action against environmental threats (Feng et al., 2022; Manzo & Perkins, 2006; Moulay et al., 2018). When people feel connected to a place and share these values within the community, they are more likely to collaborate to address climate risks. A previous literature review undertaken by Feng et al. (2022) into the relevance of place attachment to environment-related behaviours indicated that place attachment is an emerging factor for CCA and that it should be given more consideration in the management of natural environmental risks. This would require knowledge and information about what the community values and how this might change through climate impacts so that this can inform decision-making. For local government, these decisions sit within a complex socio-political system that can constrain how community values and needs are integrated into governance processes. Within the literature there has been less attention on the issues of equity, the social reproduction of power and effective adaptation processes at the local level (Blackburn & Pelling, 2019; Sachan, 2020). This has implications for how adaptation processes occur in practice and in understanding the implications for individual and community adaptation. This research attempts to fill the gap in understanding of how local governments apply knowledge about community values and attachment to place in the context of CCA, and in understanding how the variety of decisions and choices that are made throughout this process can be fairer and more equitable.

### *1.1 Research Purpose and Questions*

The purpose of this research is to contribute to the understanding of how consideration of place attachment and community values can inform the development and implementation of fair and equitable CCA practices in the Australian local government context. It is concerned with how local government CCA practitioners consider and integrate what is valued by the community, and the differing values. This distinction in the research means that what is valued by the community or how their place attachment manifests, is not necessary to understand or assess. To explore this topic, the following research questions were posed:

- Research question 1: Is consideration of place attachment and community values applied by local government climate change practitioners in their work?
- Research question 2: What barriers do local government practitioners face in effectively considering the varied experiences of community and place attachment in climate change adaptation processes?
- Research question 3: In the context of local government in Australia, can place attachment theory provide a tool to ensure fair and equitable climate change adaptation processes?

## 2. Context

### *2.1 Climate change adaptation processes and public policy*

CCA as a process includes, but is not limited to, aspects related to knowledge synthesis, preparation of guidance materials, policy development, operation of finances, design of projects and monitoring (Atteridge & Remling, 2018). It has been recognised that all adaptation measures influence, and are influenced by, social structures, governance systems and how resources are distributed (Eriksen et al., 2015). This includes the purposeful activity of public policymaking involving decisions and a cumulation of choices related to resource allocation undertaken by governments to address a problem (Vogel & Henstra, 2015). Public officials, which includes employees of local governments, are instrumental in setting policy agendas and decision-making processes. It has been suggested that if policy platforms attract little public attention, then policy processes are “dominated by technical experts

acting on their sense of the public interest" (Vogel & Henstra, 2015, p. 114). By targeting a deeper understanding of the public policy process concerning CCA, we can seek to analyse how policy solutions are formulated and selected, and how actors and institutions influence these policy choices (Vogel & Henstra, 2015). This also allows us to consider policymaking as a socio-political process and to recognise that this opens the adaptation process to perpetuating existing inequalities and social justice issues.

### *2.2 Australian local government context*

The Australian governance system consists of three tiers of government, with constitutional power shared between the national government and the states and territories. It is the state and territory governments that establish the legal and regulatory frameworks for the establishment and operation of local governments under their respective jurisdictions. This also includes mandating the roles and responsibilities of local governments to act as implementing agencies for the higher levels of government (Measham et al., 2011). While this creates differences in the legislative framework between the states and territories, the main functions of local government overlap and involve planning, governance, community development, service provision, asset and facility management and regulation. The legislation also dictates how the local government elected members are appointed and outlines the delegated authority to make and enforce local laws, as well as the delegation of the administration of the formal decisions to the chief executive officer and other non-elected employees of the council (Parliamentary Education Office, 2022).

Regarding CCA, there is a general consensus between the government levels for a 'shared responsibility' model (Hussey et al., 2013; Measham et al., 2011). While research has indicated that there is a general acceptance of the importance of CCA within government risk frameworks, it is also suggested that adaptation investments are undertaken within systems that lack policy capacity or mechanisms to determine the appropriate level of investment (Hussey et al., 2013). Local governments have a duty of care to incorporate climate risks and uncertainties to reduce unmanaged exposure to hazards in decision-making (Measham et al., 2011). The state-delegated regulatory and non-regulatory functions of local government influence risk management, including through planning functions, business activity, provision of services and critical infrastructure management (Measham et

al., 2011). Local governments make strategic decisions about these service delivery functions which are directed towards providing community value. Research into community attitudes suggests that Australians have strong emotional connections to the places where they live, contributing to their personal identity (Ryan et al., 2015). This highlights the important role of local government in meeting the needs of the community as a 'place shaper', facilitating the attachment to place (Ryan et al., 2015).

## 3. Theoretical Framework

### *3.1 Place attachment theory*

Place attachment is defined as the positive bonds and relationships people have with their important places (Devine-Wright, 2013; Quinn et al., 2015; Scannell & Gifford, 2010; Sebastien, 2020). The research follows the conceptual model of place attachment depicted in Figure 1, adapted based predominantly on the tripartite model of people-place-process from Scannell and Gifford (2010, p. 2).

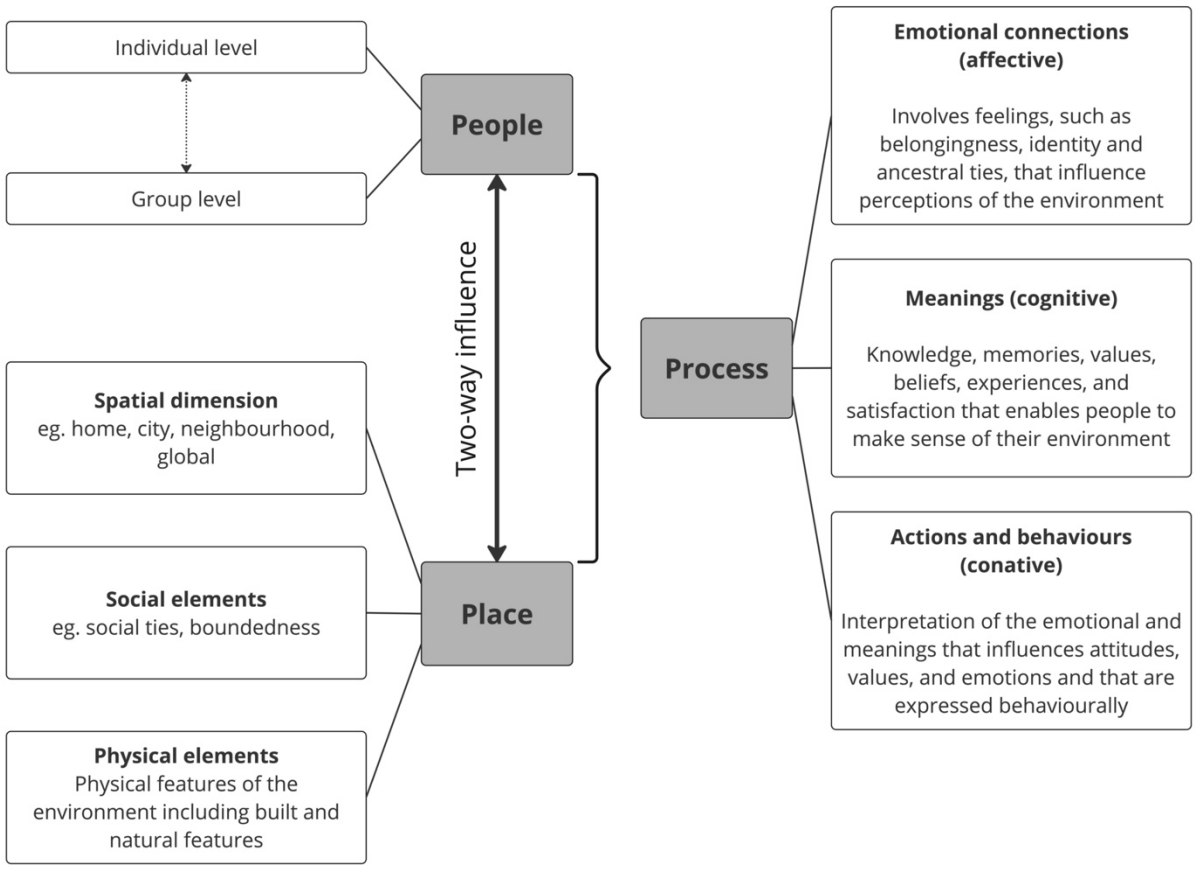


*Figure 1: Model of place attachment (Adapted from Devine-Wright, 2013; Moulay et. al., 2018; Scannell & Gifford, 2010, p. 2).*

The first dimension within the model refers to the people, both an individual's connection to place, as well as the collective, symbolic meanings shared among members of a group (Scannell & Gifford, 2010). There is a two-way level of influence between people and place (Sebastien, 2020). Place characteristics, as the second dimension, are considered to relate to social-ecological systems, with both social elements such as cultural ties, and physical elements of the place on which the meanings are derived and the emotional attachment is formed with a location (Scannell & Gifford, 2010; Sebastien, 2020). As a social construct, people can develop different attachments to multiple places at the same time, and at multiple scales, such as a home, neighbourhood, region, and city (Devine-Wright, 2013). The third dimension of the model is the creation of the bonds driven by a process involving emotional connections, constructed meanings and behavioural actions (Moulay et al., 2018; Scannell & Gifford, 2010). This involves the feelings that influence a person or group's perceptions which enable people to create meanings and make sense of their environment, which in turn influence values, attitudes and emotions that are expressed through behaviours and actions (Moulay et al., 2018). These attachments, the meanings and actions that arise are constantly being influenced and redefined by people's lived experiences and changes to these places.

The research will seek to understand whether place meanings and community values are incorporated into local government CCA processes through a lens of public policy and decision-making structures. Examining the issues from this perspective allows consideration of the larger socio-political context that influences meanings and use of place and how existing systems distribute power and resources (Manzo & Perkins, 2006; Williams & Miller, 2021, p. 24). As the climate changes, familiar and important aspects of places can be altered, leading to feelings of loss and grief due to the attachments to these places (Comtesse et al., 2021). For instance, sea level rise can erode coastlines, or wildfires can destroy communities and biodiversity, changing the ability for people to visit these areas, or in more extreme cases, leading to the loss of homes, and disrupting social connections and cultural traditions. This disruption to social connections after a loss can lead to the dissolution of relationships and over time, can negatively impact social supports and mental well-being (Comtesse et al., 2021). Previous research has questioned why place attachment has not played a greater role in community planning processes, especially when the person-place transactions are

important for building community (Manzo & Perkins, 2006). Communities may be more likely to collaborate and cooperate to address climate risks, adapt to changes, or take action to protect areas if they share a common attachment to the places that they value. Understanding how place attachment affects people's willingness and ability to adapt is important in informing effective policy and planning efforts and in promoting fairness and equity through climate change adaptation processes.

### *3.2 Values and valuing*

This research is not concerned with measuring what is valued by the community within each municipality, but rather how practitioners consider and integrate these values into CCA processes. This distinction impacts how the term value is used in the research. A consideration of valuing as a process (Tschakert et al., 2017) can encompass both the recognition that values are embedded in the decisions that are made, as well as understanding how differing values can be linked to place attachment. The ethical responsibilities of public officers when delivering 'public value' can enhance the outcomes of democratic and service delivery for local communities by recognising public preferences in these decisions (Alford & O'Flynn, 2009; Ryan et al., 2015). This 'public value' is considered to have a broader focus than just the delivery of services to the community or the outputs of policy-making, but also what has meaning for people and as an active process of "adding value, rather than a passive sense of safeguarding interests" (Alford & O'Flynn, 2009, p. 176). Of the five value types identified by Tschakert et al. (2017), values as a relational construct to place within the everyday experiences of people can provide insight into how loss is given meaning through these place-based experiences.

### *3.3 Principles of fairness and equity*

The concept of climate justice is based on the ethics and values of society to ensure moral and legal principles are applied for the fair and equitable treatment of all people, as well as recognising the differences in duties and responsibilities associated with ensuring these rights (IPCC, 2022; Saraswat & Kumar, 2016; Schlosberg, 2012). There are considered to be three equity forms or objectives within the framework of climate justice:

- Distributive justice - seeks to ensure the consequences of decisions and actions including the distribution of resources, benefits and consequences, are equitable (ICLEI, no date; Paavola & Adger, 2002; Sachan, 2020),
- Procedural justice - decision-making that is democratic, participatory and inclusive (Paavola & Adger, 2002, p. 2; Sachan, 2020, p. 828), and
- Structural equity - considers the structural and institutional systems that underlie existing inequalities (ICLEI, no date).

One of the key elements of addressing climate justice requires the consideration of both those who are responsible for designing adaptation measures and policies, as well as those affected by climate-related issues (Sachan, 2020). It ensures that there is fair and equal distribution of both the benefits and costs and that everyone has an opportunity to participate in the decision-making processes.

## 4. Methodology

### *4.1 Data collection*

Data was collected through semi-structured interviews with 11 experts during February and March 2023. A purposeful sampling strategy was used to select interviewees that would be able to contribute to the research topic and matched these criteria:

1. they either work, or have worked, in the Australian local government sector, and
2. their role involves CCA processes, providing them with expert knowledge on the research topic.

Experts have access to information about decision-making processes, and high levels of specific knowledge that might be otherwise difficult to access. It is also said that experts have "institutional authority to construct reality" (Meuser & Nagel, 2009, p. 19). Potential interviewees were identified from pre-existing personal networks, supplemented by snowball sampling where these initial contacts were asked to forward the invitation to their networks. This method allowed the researcher to make use of accessible and available data sources and to choose the most relevant interviewees that have rich information and insights on the research topic (Blaikie, 2010; Knott et al., 2022).

Of the 11 interviewees, one works in the state of NSW, and 10 work in the state of Victoria, of which 2 have roles within a Regional Victoria Greenhouse Alliance (Alliance). All participants are employed directly by a local government at the time of the interview, besides one Alliance staff member due to the governance arrangement of that Alliance. An Alliance is a formal partnership between local governments within a specific region, working together to deliver regional CCA and mitigation projects (Victorian Greenhouse Alliances, 2018). While the governance structure can vary between Alliances, each member local government contributes financially to the partnership and have representation on governance committees. These interviewees provided a broader perspective on the research questions as the Alliances act as a conduit between state and local governments and could offer a wider perspective of their region. As the majority of the participants were from the researcher's existing local government professional network, this resulted in the majority of participants currently working in the state of Victoria. Invitations to participate were sent within State based and broader Australia-wide local government community of practice networks in an attempt to broaden the scope of participants beyond the researcher's network.

An initial email invitation was sent to potential interview participants requesting their involvement. All those that responded were then contacted to arrange a suitable date and time for the interview and were provided with a copy of the 'Participant Information Sheet and Consent Form' (Appendix A). One interview that had been arranged ended up not being able to occur due to scheduling challenges. The interviews were conducted remotely online using Zoom video teleconferencing and lasted between 45 to 75 minutes. Interviews were audio recorded for transcription and handwritten notes were also taken during the interview. A responsive interviewing model, as identified in Creswell (2013) was used as it allowed for flexibility in the interview questions based on the responses from the interviewees. An interview guide (Appendix B) was developed with several open-ended, non-directive main questions and several probing questions for seeking further clarification. This method aimed to understand the breadth of experiences and to have flexibility in the method to allow for new ideas to be explored as they emerged in the interviews. It also allowed for the interviewee to participate in the process through conversation and their perspectives, ultimately allowing for a deeper understanding of the views of the interviewees (Ahlin, 2019). This method is useful for data collection through expert

interviews as they have direct insights into practices and it provides first-hand accounts of perspectives, perceptions and actions (Ahlin, 2019). The focus of some of the key interview questions were modified for those interviewees that had roles related to a broader regional level to capture this perspective. Any modification of questions or probes did not alter the overall focus of the interviews which remained aligned with the research questions. During the interviews, the participants were asked about their professional experiences and perspectives on CCA practices and processes, place attachment and community values, decision-making processes, and the challenges to integrating community values and consideration of place attachment in climate change processes in the local government context.

### *4.2 Data analysis*

The interviews and interview notes were transcribed and uploaded into NVivo, a data analysis software to support the data analysis phase of the research. A thematic analysis approach was undertaken for the data analysis using the process shown in Figure 2. While it is presented here in a linear format, it is noted that the data analysis was an iterative process where the text was recoded multiple times, and the themes revised throughout this process. This reflects that active nature as Braun and Clarke (2022) describe as a recursive process where the researcher goes back to the different phases, enabling checks on the viability of the overall analysis.

The first phase was data set familiarisation. It involved becoming familiar with the content of the interviews, notetaking during the interview and journaling. The journal was used to document the researcher's reflections on the interview experience such as general themes that arose from the interview, methodological issues that could be considered in future interviews, and reflections on observations the researcher in the process. This was done immediately following the interview, as well as additional note-taking during the transcription process. The journaling continued through all phases of the data analysis to document methodological approaches taken and to contribute to the reflexivity process (see also Section 4.3 Ethical Considerations).

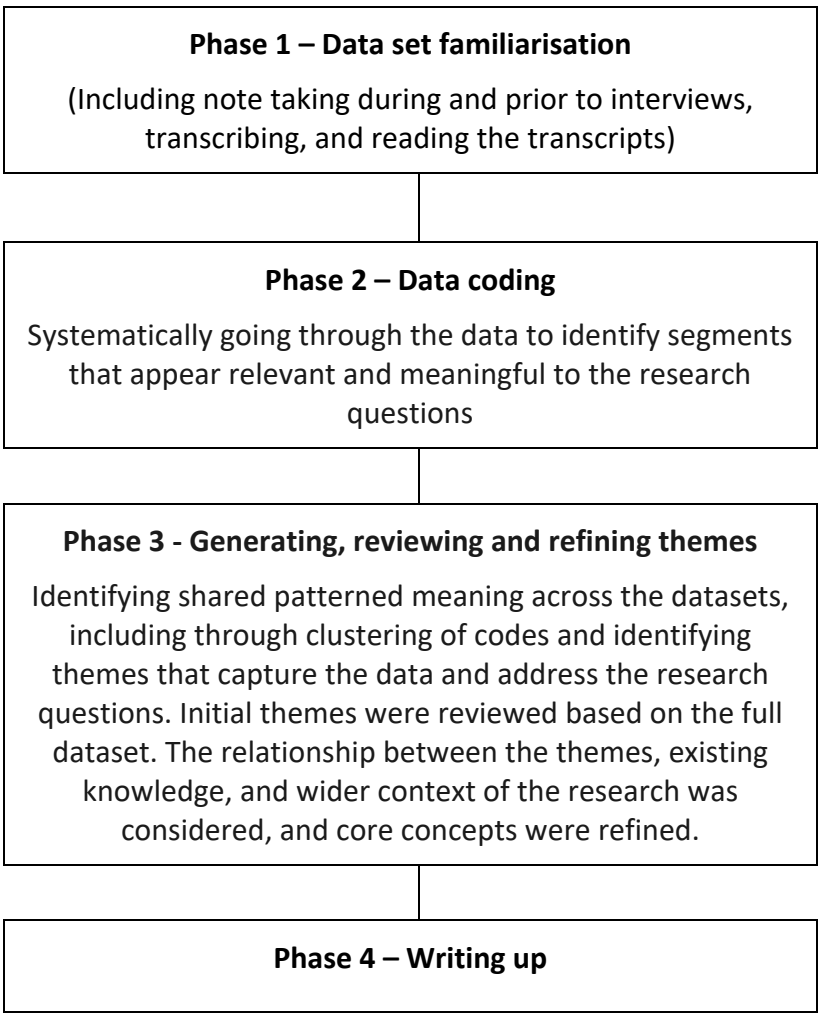


*Figure 2: Data analysis phases (adapted from Braun & Clarke, 2022).*

The data set familiarisation phase also facilitated the development of a codebook which contained the initial set of codes that were used in the data coding phase (Appendix C). The initial codes were based on researcher experience, literature, research questions, and ideas generated during the interviews documented in the research journals. These initial codes were applied to each interview transcript through systematic analysis of the text. This allowed for a broader, coarse coding of the data initially, with this further refined and expanded in later coding phases. The data was then recoded up to two times by considering each coding label individually, further refining and categorising the data into sub-codes, then clustering them into shared ideas, experiences or concepts.

The final phase before the writing up of the results and discussion was to generate, review and refine the themes. Phases 2 and 3 allowed for patterns, similarities, and relationships to be identified across the dataset. These patterns which are anchored by shared meanings and

concepts are considered to be themes that are actively produced by the researcher through systematic engagement with the data (Braun & Clarke, 2022). Thematic maps were also created to provide a visual representation of the data and to consider interconnections between features of the data and potential patterns in the themes. During this phase, the relationship between the themes was also considered in terms of existing knowledge and the research questions.

### *4.3 Ethical considerations*

*Consent and Confidentiality*

All participants were provided with information to allow for written informed consent to be provided before the interview. A copy of the participant guide and consent form is found in Appendix A. It included whether participants agreed to be quoted anonymously with no reference to their name or affiliations, as well as consent to record the interview. There was one participant who did not check the box related to quotes, so no direct quotes from their interviews were included in the thesis. Any direct quotes used were shared with the interviewee that said them before the publication of the thesis to ensure they were comfortable with the quote being used. Only the researcher can link responses to individual participants, with data aggregated for use and anonymous quotes used. This limits the likelihood that identifying information and sensitive personal views can be connected to one individual. Data from the audio recordings and participant information were stored on the researcher's personal computer only within separate password-protected files and deleted at the end of the research.

*Positionality and Reflexivity*

The research acknowledges, and embraces the subjective nature of the research, with active reflection throughout the research process used as a tool for the research. This is in line with ideas presented by Olmos-Vega et al. (2022) which highlights that as "subjectivity is a productive result of all human interaction, it can be an asset to actively co-construct data and results" (p. 3) and reflexivity can be used to capitalise on the researcher's position and knowledge in the research. Reflexivity is important so that the researcher's biases, values and experiences are considered or situated in the writing and how these influence the research and shape knowledge production (Braun & Clarke, 2022; Creswell, 2013). Relevant

aspects for reflective engagement, as highlighted by Knott et al. (2022) that were considered during the research included disciplinary biases, political and social values, and lived experiences that construct our identities. In line with this practice, it included considering the researcher's own beliefs, judgements and practices, as well as the power relations and how the researcher was perceived by the interview participants. This also included considering how the findings might impact the interviewees, as well as undertaking measures to maintain the anonymity of participants. As a previous local government CCA practitioner, active reflection of the role of the researcher and assumptions in knowledge production processes was an important consideration throughout the research process. Having worked in a strategic climate change role developing policy and driving the implementation of climate mitigation and adaptation projects provides the researcher with their own personal experiences related to how CCA processes occur in practice. This offers the interviewees with a level of trust, cultivates understanding and openness between the researcher and the interviewees that might otherwise not be accessible to someone outside of the practitioner network. Active reflection was undertaken throughout, including through journaling and note-taking during the interviews to capture and consider assumptions and preconceptions, with these revisited during the analysis of the interviews. From a methodological position, questions were framed to avoid bias in the question wording and ensure that the opinion of the interviewee was captured without being swayed by the research question. By doing this, the researcher attempted to reduce "normalising certain assumptions that might be contested by participants and in the research context" (Knott et al., 2022, p. 6).

### *4.4. Limitations*

One important consideration of this research is the subjective nature of the approach, which was a deliberate and important aspect of the study design. As a qualitative study using thematic analysis, the research was focused on understanding the experiences and perspectives of the participants, identifying themes and patterns and drawing meanings from the data, the findings are situated in the contexts of the participants and the researcher. Unlike quantitative studies, the primary goal was not to generate statistically representative results that can be easily generalised to larger populations (Braun & Clarke, 2022). The subjective nature of the analysis allowed for a more nuanced understanding of

the complex and multifaceted issues explored in this study, and reflexivity was employed to enhance the rigour of the analysis. While every effort was made to ensure rigour in the data collection and analysis process, the sample size was relatively small and limited to a specific geographic region, this approach also means that the findings may not be easily generalisable to other contexts or populations. Although, it should also be considered that while the practitioners stated that they worked for a specific local government, often they noted that they had previously worked at other local governments during their careers, and so would have also been drawing on that experience when answering the interview questions. In addition, the study was also conducted within a particular timeframe, which may have impacted the findings. For instance, when practitioners were talking about recent extreme weather events, the focus of their answers may change if they had been asked at a different time when these events were not as prominent in their minds. Future research should explore these findings in different contexts and with larger, more diverse samples to enhance the generalisability of the results.

## 5. Findings

The purpose of the research was to develop an understanding of the experiences of local government practitioners in applying place attachment theory and community values within their CCA work. It also attempted to fill the gap in understanding of how decisions made throughout this process can be fairer and more equitable. The research questions were considered during the expert interviews and focused on questions related to professional experiences and perspectives on CCA practices, decision-making processes, and the challenges and barriers to integrating community values and consideration of place attachment in the local government context.

This section of the report describes the key themes (as follows) and sub-themes identified from the data analysis:

- State of understanding around climate change adaptation, place attachment and the integration of community values
- Drivers of change
- Challenges and opportunities to integrate place attachment and community values into CCA

### *5.1 State of understanding around climate change adaptation and integration of community values*

In order to understand how place attachment and community values are considered in CCA responses by local government, it was first important to understand the context of this work. This includes understanding how climate adaptation is defined and how integrated, and how practitioners consider fairness and equity approaches are within CCA processes. This has important implications for decision-making practices including how conversations around climate change are framed and how community engagement practices seek to consider what is valued by the community in the places that they live and find important. How these topics are understood also determine how they are considered in practice and provide some guidance into how different values are considered in decision-making. This general understanding can then be used as a basis for further discussion around how decisions are made in relation to community values and CCA processes. Sections 5.1.1 and 5.1.2 below explore this understanding and provides context for further discussion in Section 6.

#### *5.1.1 General understanding and definitions*

How CCA is described was broadly aligned across practitioners, with most referring to adaptation as a response to the changing climate and actions to prepare for the consequences of a future climate. There was often a split between the organisation (council) and community adaptation, with a focus more on internal or corporate adaptation. This response tended to include aspects of resilient assets, infrastructure and open spaces, and corporate greenhouse gas emissions reduction (climate mitigation). Some also referred to modifications to community service delivery and provision of a *"social safety net"* (Interviewee 2). Community adaptation included community resilience, reducing greenhouse gas emissions and raising awareness. Resilience wasn't defined specifically, however, participants mentioned the importance of building community connections while also considering vulnerabilities and hazards. While the focus of the definition may not have been consistent across practitioners, there was a strong recognition of the need for adaptation both at an internal organisational level and in the community. The urgent need to act and to fast track responses was also highlighted.

The experiences highlighted that there is considerable work being done by local government in the adaptation space. When speaking about the extent to which CCA processes are integrated across the local government's functions, responses suggest that in some areas it is well integrated but in others it was not as integrated as it could be, however it was often acknowledged that there was more work that could be done in the adaptation space despite approaches being ad-hoc currently. However, discussions also suggested that the local governments and the practitioners themselves were trying to work towards more integrated approaches which is taking time and effort to achieve. This is reflected in a statement by Interviewee 5:

> *"so people are becoming increasingly aware and the Council's becoming more and more supportive of that, and so the organisation is falling into line"*

### *5.1.2 Integration of fairness and equity principles*

There is a strong intent to integrate fairness and equity principles, recognising the importance and necessity of involving the community in decisions and processes. This included references to being inclusive in responses and respecting the values and differences of the community. There is also a clear understanding as to why CCA processes should integrate action to address community vulnerability to climate impacts. This is evidenced in this quote from Interviewee 3:

> *"From the project I'm working on I guess it's helped to show me that understanding what sectors of the community are affected and who are most vulnerable is really important work, because otherwise we're making recommendations and policy decisions based on the majority or based on a certain average of the community, but there can be a lot of people left behind and so then it's not a very effective process, so I think that's an important thing to understand, your community as a whole."*

Often this understanding of community vulnerability was identified during risk assessments, for instance, Interviewee 7 highlighted that for their risk assessment they *"really looked at our vulnerable cohorts first… they all came straight to the fore and programmes are considering climate for them"*. Some identified that there are still gaps in their understanding, however, they are hopeful that future work will consider vulnerability to a

greater extent as well as where improvements can be made in service provision based on the needs of the community.

More active engagement with the community is also undertaken as part of broader climate change programming within local governments. Discussions highlighted that more traditional community engagement practices tend to occur (often due to several barriers that will be further discussed in Section 5.3) while there has been some slow progress towards more inclusive practices. Traditional practices include listening to the loud voices in the community as it is easier than seeking out those not engaging, and a focus on raising awareness and information sharing using surveys, information on the website, and advisory groups. Some acknowledge that they hadn't had conversations about what is valued by the community. However, there was a general recognition that there have been some community engagement practices that are more inclusive of those in the community that are often missed in traditional methods, and that they want to work more in an inclusive space. This includes using co-design processes and public participation tools to engage with harder-to-reach groups (such as youth, people from culturally and linguistically diverse backgrounds and First Nations Australians) and using others in the organisation that work directly with vulnerable groups to share messaging. It was also identified that there is a need to spend more time actually going into the community to where people live and feel safe, for instance maternal and child health centres, community gardens or libraries so that different voices from the community can also be heard.

While it was identified that there was a need for inclusion and the consideration of community values, there was also some uncertainty about how to apply fairness and equity to their work. This was often noted in conjunction with gaps in accessibility of resources, knowledge about risk and vulnerabilities, understanding of community values or ability to reach the community. When speaking about the accessibility of programmes within the community they work, Interviewee 8 noted:

> *"I see barriers like that constantly in my work which definitely have an unequal impact… We have a diverse community…one thing we don't do well or at all as a council is translate any of our resources [into different languages] so it's hugely inaccessible to probably the parts of the community that often need their services the most…No, I don't think we are very equitable at all in programme access."*

*5.1.3 Connections to place*

When talking about places and the community's attachment to places, there was a focus on threats to the natural environment, biodiversity and social connections. It was recognised that place attachment is highly localised with people drawing different meanings and connections to a place, meaning it can be very complex to talk about. This included questions about agency for people to express attachment to place, where it is recognised that people do not necessarily make the connection between the places that are important to them, why these places are important, and what impact the places have on their actions and lives. It was also acknowledged by multiple practitioners that when speaking about climate grief and *"solastalgia* [distress over loss] *and people mourning this land"* (Interviewee 2) requires sensitivity, especially during times following a disaster and discussing climate hazards and fears related to loss of natural areas. It was also recognised that changes to the natural environment might lead to long-term behaviour change in the community and a loss of appreciation of these areas. One example that was shared was related to recent flooding in the state, drawing the connection of the isolated community and loss of access to places for recreation as potentially leading to a disconnection from the natural environment. It was also highlighted that this might cause negative changes to people's behaviours and alter their perceived value of the place. Another participant highlighted the importance of the emotional connections and bonds people have to place and if the whole landscape changes, or people are forced to move due to climate impacts, that grief and loss can be felt. They also raised pertinent questions about changes to landscape impacting

> *"how they experience the place is likely to also change so then, does their place attachment change along with that? Do they have that same connection that they have with that place?"* (Interviewee 9).

Social connections were referenced in terms of social bonds, social cohesion and building community connections to promote and support community resilience. Trust within the community and when talking about these issues with the community was also identified as an important consideration. This requires knowledge specific to the local context and can be facilitated by someone who is part of that community and the location. Practitioners leverage place attachment and people's love for the places they live to frame conversations

with the community and better form connections with individuals. This was expressed by Interviewee 2 when saying:

> *"relying on a people's love of the natural world and their connection with nature and place to be a way in to talk about these really complex issues… we have this shared value of place and this love of this land and we want to see ourselves as stewards."*

### *5.2 Drivers of change*

To understand the factors and motivators that lead to decisions related to CCA processes, practitioners were asked questions about which factors they consider to be important when making decisions, as well as their understanding of the key drivers of adaptation for their local government.

This theme identified several key factors that drive CCA processes and how community values and attachment to place are considered within decision-making processes. These key factors are identified in Figure 3 and further explained below. 'Drivers of adaptation' refer to the key drivers that can contribute to the elevation of climate change considerations into strategic decision-making processes and relates to formal adoption of policy and changes to governance requirements. 'Decision-making processes' are those factors that motivate day-to-day decision-making and how prioritisation of decisions are made within all levels of the organisational structure.

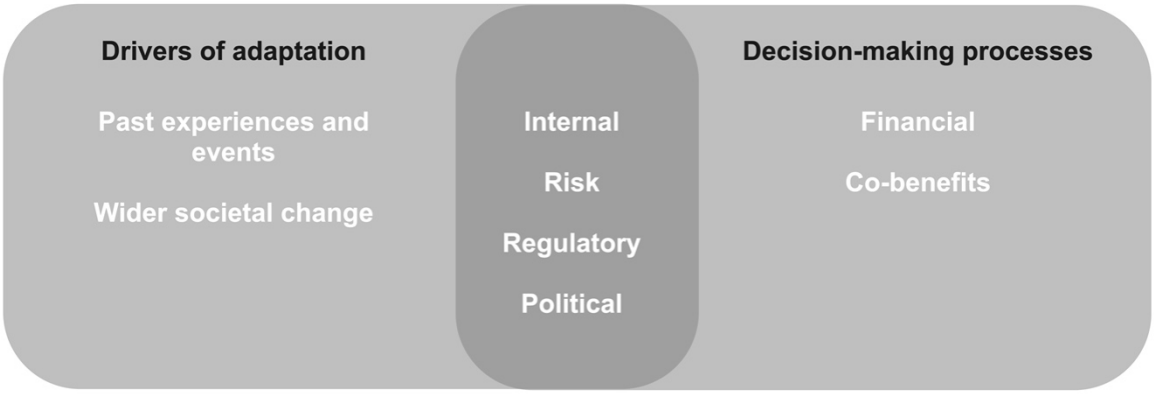


*Figure 3: Key drivers of adaptation and key motivations for decision-making identified in the data. The overlapping shaded area shows the factors that are similar for both driving adaptation and decision-making processes.*

### *5.2.1 Internal factors*

For both drivers of adaptation and decision-making processes, internal factors include the practitioner's education, background and interests, the quality of information available to inform decision-making, the level of influence of the staff within the organisational structure, as well as organisational culture and general understanding of climate change within the organisation.

### *5.2.2 Risk management*

Risk was acknowledged by the greatest number of practitioners to be driving adaptation in their local government. Also, as a consideration in decision-making, risk was said to be driven from a legal liability perspective and acknowledgement of responsibility that once the risk is known it cannot be ignored, as well as an increasing understanding that a lack of action may impact the organisation in profound ways. These statements by two practitioners highlight this:

> *"increasing understanding that lack of action, that includes adaptation, is going to have greater costs down the track, and that's including legal liability as well".* (Interviewee 3)
>
> *"What is the actual or perceived risk of this actually happening, what are the risk consequences, basically, what is the cost of doing nothing."* (Interviewee 4)

From a decision-making point of view, some also noted how it was important for this understanding of risk to be passed onto the community to enable them to respond to climate impacts. Interviewee 5 stated:

> *"So that we're honest with people so they know what's coming, so that they can make their own decisions around what it is that they want to do and how they're going to respond to climate change."*

Additional drivers for adaptation were stated to be reducing risks to financial sustainability, assets and property, and human life (referred to more in the context of disasters and extreme weather events). This is also being felt through increases in insurance premiums as well as what the future impacts will be on insurability, especially linked to community assets and property.

There was an emphasis on the integration of climate risk into risk management processes, for instance through modelling and risk assessments, to facilitate decision-making processes. This is reflected in this statement from Interviewee 11:

> *"We do a fair bit of risk analysis and embed those into the Council Risk Register and that then gives us the political kind of push to be able to enact some of those adaptations."*

### *5.2.3 Regulatory*

One key driver to adaptation is the regulatory mandate the State Government imposes on local government through legislative mechanisms. This includes requirements to manage climate risks, and the integration of climate change considerations into certain strategic documents, such as impacts on community health within Health and Wellbeing Plans. However, how this is achieved and how this is interpreted is largely left up to individual local governments, and there are several barriers related to roles and responsibilities regarding this which are further considered in Section 5.3.

When considering regulatory factors concerning decision-making processes, key is the degree of alignment with wider organisational policy and more specific climate change strategies.

This extract from Interviewee 9 highlights the need for strong policy direction for adaptation options to be able to be initiated:

> *"the guiding principle of what I can recommend is what the policy says or what the climate emergency plan says or what the Council plan says. We're really lucky to have a really strong presence in all these strategic documents, and so we can point to the policy position that says we can't put gas in this building, that kind of thing, and so there's a lot of really easy decisions that we just follow that."*

This reflects what others said about the need for everything that is done to fed back to the local government's key strategic documents.

### *5.2.4 Political*

Community expectation was a reoccurring factor identified for both driving adaptation and decision-making processes. It was highlighted that an increase in community understanding and community support leads to decisions in favour of climate adaptation actions and

advocacy drives more ambitious action. The influence of the community on elected representatives was identified as a strong motivator for change. This statement by Interviewee 11 highlights the impact that advocacy by the community can have on decisions by elected representatives towards CCA:

> *"The community push to declare a climate emergency was run completely via the community, it had nothing to do with Council, there was no one spearheading it from inside council. There is a really engaged group of community out there, which is amazing."*

For decision-making processes, political motivations around community expectation and political risk, advocacy, and public opinion were the most common factor cited. This understanding of community expectations can often also be identified through engagement processes initiated by a local government. When discussing community engagement during the development of a key strategy, it was expressed that:

> *"Climate change came up as a really important issue, so the community are tuning into this, and I think the views of the Councils are starting to reflect that and same with the organisation."* (Interviewee 5)

### *5.2.5 Past experiences and events*

The past experiences of extreme weather events and disasters were also referenced by several participants as driving adaptation, especially those events that have recently occurred so are still front of mind and holding people's attention. Actual events that had happened recently within the region of the local government, including bushfires, flooding and heat waves were often referenced. Interviewee 11 noted that *"people don't have to look very far outside of their neighbourhood to see genuine, really bad impacts for not acting".* The discussions were also centred around the fear of these events and the fear of loss and changes motivating action. Change is also driven by an awareness that climate change impacts are already occurring and that the impacts are tangibly impacting on local government resourcing. In particular to changes in local government action and processes, these tangible impacts are:

> *"still really apparent in people's minds and Council's still forking out heaps of money for recovery, so you know it's hurting them financially, so it's still really top of mind"* (Interviewee 10).

### *5.2.6 Wider societal change*

It was the opinion of some, that often neighbouring local governments are looked upon as a benchmark for comparing ambitions and action in the climate change space in an effort to ensure that they are "*keeping up with the Joneses*" (Interviewee 8) so as not to be left behind. Slower adaptation responses were also identified to be occurring through wider societal change rather than necessarily action by the local government in driving this change. There was also an acknowledgement that collaboration and shared learning also takes place at different levels in the organisational structure which may positively influence CCA. This collaboration is also facilitated by the Alliances in the state of Victoria that work with several neighbouring local governments. When speaking about an Alliance program which their local government participates in, Interviewee 3 states "*it's an example of where it's sort of building that collaboration and that's quite inspirational*."

### *5.2.7 Financial*

Financial reasons were one of the most common factors identified that influences decision-making within local government. This also was highlighted as *"best bang for buck"* (Interviewee 1 and 11) in reference to actions that were considered to be low cost and easy to implement and more easily prioritised for delivery. Framing from a financial perspective was identified as an important tool when presenting options to decision-makers in the organisation. This also includes the use of cost/benefit analysis for the prioritisation of options. Additionally, if these projects have been integrated into longer-term financial and budget planning processes, it makes it easier to justify them over another option that might not have existing resource commitment by decision-makers.

### *5.2.8 Co-benefits*

Co-benefits (typically related to emissions reductions and climate mitigation) were referred to as being important in decision-making for how choices between different project activities are made. An example related to shifting people to more alternative modes of transportation where co-benefits of health and the provision of public transport options for more vulnerable members of the community were highlighted:

> *"When I was designing the actions… if there was more than one co-benefit, even if it didn't get emissions down as much as maybe another action, it got a higher*

*weighting in what we would do for those co-benefits to help for those other areas as well."* (Interviewee 11)

### *5.3 Challenges and opportunities to integrate place attachment and community values into CCA*

To understand the barriers that practitioners face in effectively considering the varied experiences of community and place attachment in CCA processes they were asked questions relating to the challenges that they have encountered as well as if they could offer any recommendations to changes to CCA processes that might help overcome these challenges. More often, conversations about challenges in CCA processes were raised by practitioners at other times in the interviews. Table 1 summarises the main challenges and possible measures to overcome the challenges as identified by practitioners. The measures presented include actions that were highlighted during the interviews. As they were not explicitly asked what has worked in the past to overcome the challenges, it is not an exhaustive list of recommendations but highlight some tactics and practices which the practitioners felt were worthy of sharing.

*Table 1: Summary of the main challenges and possible measures to overcome the challenges as identified by practitioners.*

| | Challenge | Measures to overcome challenges |
|---|---|---|
| **Uncertainty and complexity in risk communication** | • Risk communication<br>• Messaging difficult<br>• Hard for people to make connections to their work<br>• Lack of localised data | • Understanding local context and local experience |
| **Difficulties reaching everyone** | • Language barriers<br>• Need cohesive messaging that appeals to different people<br>• No shared definitions of terms or understanding<br>• Engagement takes time and human resources to do it effectively and to have meaningful conversations<br>• Social media challenges with negative comments | • Engage others with direct face-to-face roles to act as a conduit and gain access to different groups<br>• Acknowledging differences and listening to the different voices |
| **Scepticism and buy-in** | • Buy-in from decision-makers<br>• Distrust of government and authority<br>• Climate scepticism | • Framing adaptation in a different way<br>• Leveraging discussions about shared values |
| **Differing and competing priorities** | • Focus on climate mitigation<br>• Adaptation is not embedded across the organisation<br>• Competing in a resource constrained environment<br>• Local government mandate and extensive service provision role<br>• Risk perceptions and risk management prioritisation | • Framing adaptation in a different way<br>• Sensitivity when discussing confronting issues to build efficacy<br>• Leveraging support from management and others with influence |
| **Capacity and resource constraints** | • Financial constraints<br>• Workload of practitioners<br>• Practitioner feelings of agency and influence | • Collaboration and learning between practitioners<br>• Regional coordination |
| **Unclear roles and responsibilities** | • Working in silos<br>• Considered the responsibility of the environment and sustainability teams instead of being embedded across the organisation<br>• Reliance on State Government to drive policy, funding, guidance and data provision | • Understanding what other teams are doing to be able to leverage and collaborate more effectively |

### *5.3.1 Uncertainty and complexity in risk communication*

One of the key roles the practitioners undertake is climate risk communication both internally across the organisation and within the community. The uncertainty and complexity around future climate projections and impacts was identified as a challenge. There was a consensus that the complexity of CCA means that it is harder to define adaptation especially as it can't be quantified, making messaging difficult. This can lead to confusion and difficulties in how to frame and define adaptation, climate change or place attachment, challenges in understanding what it means for people and how they can adapt. This also relates to the localised nature of the climate impacts, making modelling of hazards and impacts difficult for local government who might not have access to quality data at the scale required. Applying it to a local context through those that are engaged at that level and have a connection with the community to understand the local changes and impacts was identified as an opportunity:

> *"we aren't everywhere on the ground and people in the community are, and their personal experience of what is happening to the places that they love and what it's like to live there is unique to them"* (Interviewee 11)

### *5.3.2 Difficulties reaching everyone*

There was a general consensus that one key challenge is difficulty reaching everyone in their community. Those hard-to-reach groups vary between local governments but are often also discussed in terms of those disengaged or lacking time to participate, but also the more vulnerable members of the community, such as homeless, older persons, and First Nations Australians. In those local governments that are well-known as tourist destinations, there was also a tension identified between the transient community that visit the area and those that live there. While both are recognised to have a connection to the place, there are difficulties in being able to communicate with those that do not live there. It is recognised that the community in their municipality is diverse, with equally diverse opinions and values that should be considered in programming. This statement from Interviewee 2 reflects this:

> *"you don't reach as many people as you need to you, don't hear from the diversity in the community".*

This challenge was also discussed in Section 5.1.2 in relation to existing community engagement practices which can restrict a practitioner's ability to effectively engage with all parts of their community. This was often discussed in relation to not being able to craft

messages that appeal to everyone due to differences in approaches, values, and understanding. Time pressures to deliver strategy and policy outcomes are restrictive, which reduces their ability to engage across the organisation and in the community as it takes considerable time and human resources to be able to have meaningful conversations. Language barriers were also considered a barrier, with a lack language skills and resources to hire translators restricting efforts to translate documents and information into relevant language groups. Opportunities to use social media to promote understanding and engage with the community also come with barriers. It was suggested that prior bad experiences with negative comments have made communications teams reluctant to share climate change related content due to reputational risks.

One key opportunity raised that can potentially increase the reach of climate communications was to engage with other departments that have more customer service and community facing roles. It was suggested that they could act a conduit to communicate with the hard-to-reach groups that traditional engagement methods tend to miss.

#### *5.3.3 Scepticism and buy-in*

Need to get community buy-in from both the community and decision-makers in the organisation was presented as a challenge. Especially for the community, some suggest that distrust in authority and the government *"does a lot to undermine the work that we do in trying to build trust and rapport and trying to educate and do outreach"* (Interviewee 2). Without community buy-in, it is more difficult to engage with new initiatives, or to leverage community advocacy for policy change. Climate scepticism was also raised as a significant barrier, especially when these opinions are held by decision-makers or those with influence in the organisation.

The way that climate change messaging is framed was identified as a way to overcome issues around scepticism, and also for the challenge of differing and competing priorities (Section 5.3.4). By framing communications in a different way, either not directly referring to adaptation, or using a different lens that matters to the audience, such as cost, it was suggested that can improve buy-in for projects. This includes leveraging conversations around shared values to make connections with those that might having differing opinions

on climate change, such as *"we have this shared value of place and this love of this land and we want to see ourselves as stewards"* (Interviewee 2).

### *5.3.4 Differing and competing prioritises*

A consistent theme was the challenge of differing and competing priorities, especially in a context of the diverse portfolio of services which local government is mandated to provide to the community. Differing priorities often become competing in resource constrained environments when prioritisation of the resources, including money and human resources, is required (this also links to "capacity and resource constraints" discussed below). This is amplified for local government as they are required to deliver a vast number of services to the community. As Interviewee 4 notes, it makes it hard to *"balance how we present climate, environmental sustainability issues in the context of basic services"*.

It was also identified that there is a tension between the prioritisation of risk management, with Interviewee 7 stating that this can sometimes come down to the *"collective perception of what is a risk, different levels of risk appetite".* It was also recognised that discussions around differing risk perceptions needs to be handled with sensitivity, especially when discussing confronting issues related to disaster events, fear and loss. This statement highlighted this importance:

> *"this is a really confronting issue, and how do you bring that home to people without making them feel powerless and apathetic. How do you build that sense of efficacy?"* (Interviewee 2)

For some local governments, the focus has traditionally been on climate change mitigation rather than adaptation, so adaptation response is lagging. This focus was identified partly due to the strong messaging that has been coming from media, governments and the scientific community to reduce emissions. This leads to the focus being more on climate mitigation rather than adaptation. While not the case for all, others also suggest that the political agendas of elected members can constrain policies and adaptation projects. This level of influence is described by Interviewee 8:

> *"we have a green action plan and we stick to that action plan and the fact that all the Councils are currently really interested in mitigation and want to see us doing all these projects on community emission reduction means that there is no political*

*support for doing anything that isn't directly tied to community emission reduction and all my bosses and my bosses-bosses want to do is keep the councillors happy."* They go onto say that *"adaptation is a 'nice to have', mitigation is a 'have to have'".*

When speaking of methods to reach those that might not agree or when trying to influence the decisions that are made, some found that they had success framing the conversation using a different lens towards what that person values, for example liability risk or financial aspects. Others also had success in leveraging the work of others that might have more influence or finding ways to do cross promotion with other teams.

### *5.3.5 Capacity and resource constraints*

Both financial and human resource constraints was the key challenge impacting the practitioner's work. They spoke of heavy workloads, small teams and a lack of time as underlying barriers to effectively engage with all members of the community and when discussing competing priorities. Often these constraints lead to prioritisation of opportunities that are easier to get approval for. In reference to working with financial constraints, this is highlighted by Interviewee 11 by the statement *"so can we get money for that? Yes, we can, so therefore we'll do that".* It is also acknowledged that adapting during the response phase of a disaster or extreme weather event isn't possible:

> *"you don't have the capacity to do both, because the pressure on you to provide immediate services and get people back into houses means* [….] *you are just going to replace it with what was there before"* (Interviewee 5).

Practitioners also need to feel like that they have the time and authority to act to be able to drive organisational change. Feelings of efficacy and ability to influence change was not consistently high amongst practitioners. As they are not the ultimate decision-makers, some felt that they could only advise, and others felt that there were other departments who were higher on the political agenda and who had more power. This was also connected to whether or not they had been involved in the development of their council's key climate change strategies. To overcome this, Interviewee 8 found that having allies *"who have power in the council, who can advocate and influence"* on their behalf could overcome challenges related to influence in the formal organisational structure. Sharing knowledge and learning

from each other, especially through networks such as the Alliances was also identified as a way to leverage existing knowledge in an effort to become more efficient in their work.

### *5.3.6 Unclear roles and responsibilities*

It is understood that CCA should take a shared responsibility approach between all levels of government and the community. Practitioners spoke of a tension and disconnection between levels of government and difficulties in understanding the responsibilities in a complex system. This included concerns with the division of responsibility, as well as adapting to things happening outside their municipal boundary that is the responsibility of government at other levels. Having multi-scalar policy frameworks where local government relies on the state government to drive policy, and to provide funding, guidance and data to manage risk.

At the organisational level there were challenges identified related to responsibilities across the organisation. This included a need to embed action and effort across departments when there was a culture of working in silos and competing against other core responsibilities. However, it was often noted in association with opinions that other departments considered the core responsibility for adaptation to sit with the sustainability or climate change department:

> *"staff across the organisation in a lot of cases didn't feel like climate change was their responsibility, or if they did, they didn't feel like they could deliver on it because they had their other work to do"* (Interviewee 9)

Often addressing this challenge was connected to having an understanding of who else in the organisation is best to influence and at which stage of the decision-making process. Without that knowledge it was understood to be difficult to share the responsibility or to embed CCA considerations in the work of other departments.

## 6. Discussion

The consideration of place attachment theory in CCA processes can be a valuable resource and can facilitate fairness and equity through ensuring decision-making is democratic, participatory and inclusive. Those responsible for CCA processes should look to ensure that

the consequences of the decisions that they make consider the distribution of the benefits and consequences on those affected by climate-related issues.

The research has shown that place attachment and community values are considered to some extent within local government CCA processes. It is also recognised in the research that communities are diverse, with equally diverse opinions, needs and values. There is a clear intention to integrate fairness and equity principles into adaptation responses through the involvement of the community in decisions. However, this recognition does not always translate into the consideration of the full spectrum of community views and needs across the local government structure or CCA processes. Community values are more likely to be considered in decision-making if they align to risk management processes, financial benefits, community expectations or if co-benefits to an initiative can be identified. This was demonstrated through the identification of key factors for decision-making in Section 5.2. However, it is also recognised that this consideration is undertaken in an ad-hoc way, often when opportunities arise as it is not always clear how to apply fair and equity principles. As it is not undertaken systematically, or embedded in CCA processes, it is difficult to argue that these processes can be always considered fair and equitable. Considering this from a climate justice lens offers some insight into this. Choices related to adaptive responses such as timing, the distribution of the cost and benefits, and prioritisation of decisions have justice implications relating to who has the power to make decisions and who is involved or excluded from participating in these processes. The challenges identified in Section 5.3 provides some insight into the constrained organisational, structural and political environments that practitioners have to navigate during their work. These challenges constrain the effectiveness of this work and act to stifle the passion of climate change practitioners over time.

***How challenges constrain CCA in practice***

As highlighted in Section 5.3, there the significant challenges faced by practitioners in undertaking their roles. In order to effectively be able to consider place attachment and community values for a fairer and more equitable CCA process, it means that practitioners would need to navigate these barriers and the constraints in their work. With practitioners, as "active agents in embedded in particular institutional, normative and political contexts" (Moser, 2009, p. 315), it is difficult to see how this could be done effectively without

structural changes to the multi-governance systems that local government exists within. This position is also supported by Mukheibir et al. (2013) who propose that the actual effectiveness of planned CCA by local government is potentially limited by these wider multi-governance structures. They identify increasing expectations on local government, unclear roles for taking action and poor communication related to power inequalities between the different levels of government (Mukheibir et al., 2013). This research confirms this point, while not explicitly stating the power imbalances, there was a reoccurring theme in the data that pointed to concerns about the heavier burden placed on local government. Due to the shared responsibility model of adaptation mandated within governance frameworks and state-delegated regulatory and non-regulatory functions of local government, many of the challenges identified in this research reflect previous research in the field and would not be unsurprising to public officers. Other challenges identified in this research including issues related to complexity and uncertainty around climate change knowledge and information, and competing priorities due to limited operational resourcing (budgets, time and human resources) were also identified in previous research by Measham et al. (2011) and Mukheibir et al. (2013).

While it is important to acknowledge what the challenges are, what is less frequently discussed in adaptation literature is how these challenges impact on CCA processes in practice. Findings from this research point to significant gaps in how decisions are made and what, or who's, interests and values are prioritised. These choices in decision-making are value-driven and said to be coded within social norms and expectations, enabling legislation and management responsibilities (Moser, 2009). A lack of integration across council functions results in siloed programmes and ad-hoc adaptation responses. This also results in a lost opportunity to gain resource efficiencies by collaborating on community engagement or programmes initiated by other departments across the organisation that have resources to do this work.

The challenges such as limited time and lack of financial and staff resources, also impact on how community engagement is undertaken, resulting in only a small section of the community being engaged with during CCA processes. Community advocacy also plays an important role in decision-making in local government. This provides an important function to drive change, and for the community to vocalise their needs and values to decision-

makers. It becomes an issue to ensuring fair and equitable processes when only a small number of individuals or groups are providing the lever for decision-making and without a deliberative process to include the diversity of values within a community are not adequately considered. Without inclusive engagement practices, decision-makers will not be in a position to adequately understand, consider or integrate what the community values and how they relate to their important places and how these places might be impacted by climate change.

***How are place attachment and community values considered in CCA processes***

The place attachment model described in Section 3.1 has been applied to the outcomes of the data analysis to better understand how place attachment is defined and considered by local government practitioners. Figure 4 provides a summary of the elements of place attachment that were identified in the research as important to consider in relation to how CCA is considered within this context.

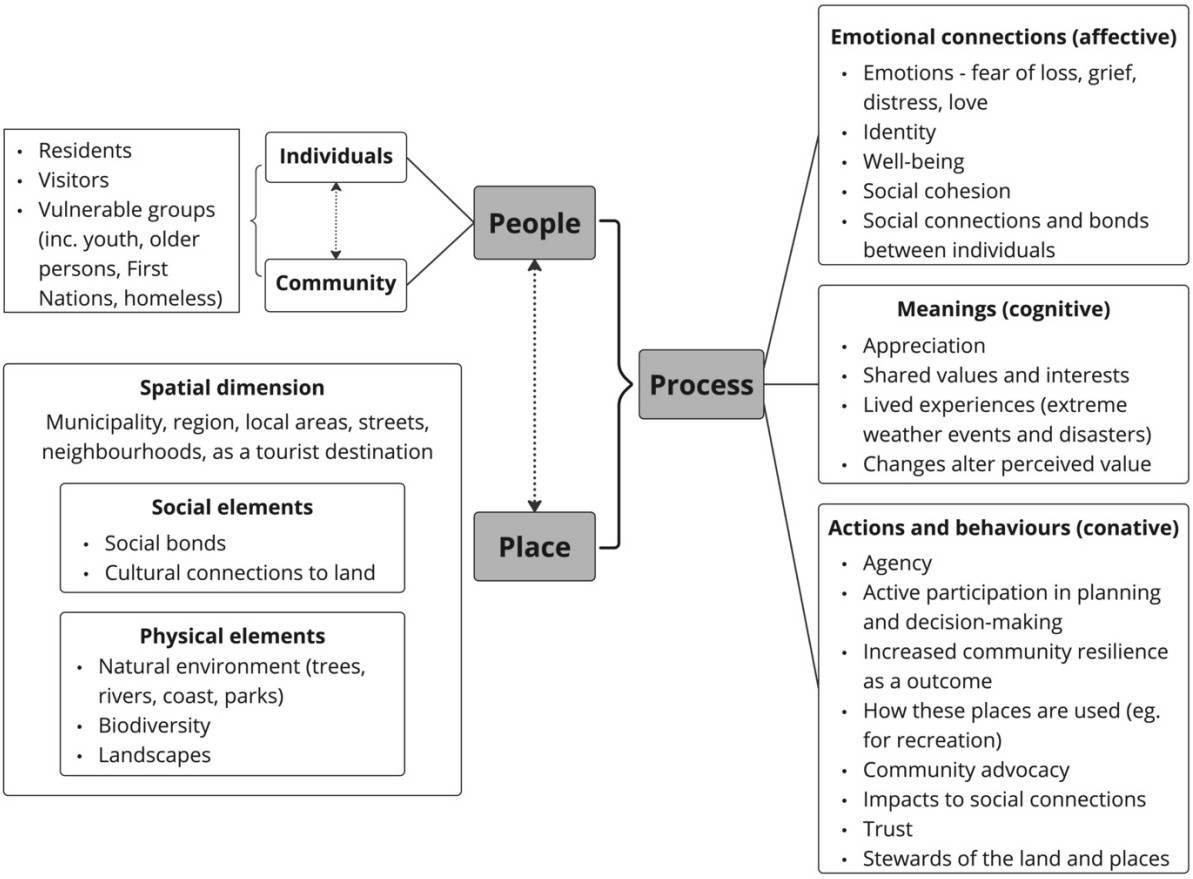


*Figure 4: Application of the place attachment model described in Section 3.1 to the outcomes of the data analysis describing how local government practitioners understand place attachment.*

Place attachment was found to be understood most prominently in reference to the impact of disasters and extreme weather events (lived experiences) that had occur recently within the locality. It was identified that these events can act as a driver for climate adaptation response by bringing these issues to the fore. Spatial elements of place provided the context to the place attachment from a local perspective (municipal level, region, streets, neighbourhoods, and also as a tourist destination) and where the social (social bonds and cultural connections to land) and physical elements (natural environment, biodiversity and landscape) sit within.

Extreme weather events and disasters exacerbated by climate change can modify the physical characteristics and social structures of a place (Quinn et al., 2015). This research found that place attachment was often discussed in terms of loss, grief and fear, as well as love towards place and impacts on wellbeing. It was found that these emotional connections might impact on identity and change people's behaviour and their connections to the place. This aligns to Tschakert et al. (2017) when they say that loss is felt and given meaning through lived and place-based experiences. This was discussed in relation to recent events, including bushfires and flooding, that have impacted the region and severed social connections, and impacted of the mental health and wellbeing of communities. Long-term impacts on behaviours and attitudes towards these places and potential loss of appreciation were mentioned, but this is not considered in adaptation planning. This aligns to literature that proposes disruptions to attachments to place can lead to negative social and psychological impacts including loss of social networks and trauma (Devine-Wright, 2013). Research by Sebastien (2020) also highlights this loss from changing places also includes a loss of self-identity due to the way that place identity is formed through the creation of place attachment. Adaptation responses and decisions can also have a similar effect of changing the places that people value (Ilovan & Markuszewska, 2022). This could also be from decisions to prioritise one value over another, or when it is perceived that a risk is not high enough to warrant action. Devine-Wright (2013) discusses examples where failure of governments to include residents in coastal restoration projects resulted in feelings of alienation in the community.

Place attachment based on shared values and concerns has been suggested in previous research to promote a sense of community, and contribute to empowerment and

participation at both individual and group levels (Ilovan & Markuszewska, 2022; Manzo & Perkins, 2006). In this regard, place attachment can be a tool to catalyse community action based on mutual interest and values. This action could be both individual participation in community engagement programs, individual adaptation action, or community advocacy to push local government adaptation response into the policy agenda.

A focus on recent disaster and extreme weather events was identified as a driver for initiating adaptation planning and decision-making. This was largely framed through a risk management perspective which focused on reduction in financial and legal liability risks to the local government. This reflects research that suggests there is a general acceptance of CCA within government risk frameworks (Hussey et al., 2013). However, there is a risk that if they are too focused on these 'front-of-mind' events and hazards, then they could miss the identification of other risks. For local governments geographically situated in a more urban environment that might be more prone to slow onset climate risks, there is also a risk that using historical climate related data might cause them to have a lower risk perception. This is supported by Kennedy et al. (2010) when they propose that actions to reduce risk can undermine resilience when a system is "so tuned to a particular type of shock that it becomes vulnerable to other unknown shocks" (p. 809). Also, without adequate involvement of community into the decision-making processes, councils cannot adequately understand what is valued by the community and how these values might be impacted by climate change in the future. This means that the prioritisation of actions to address climate impacts will be based on other factors deemed important by decision-makers. While some local governments indicated that vulnerability assessments form part (or will be used in the future) of climate risk assessments, this was not consistently applied across local governments and there was no indication that the community is directly engaged in this process. With little consideration of vulnerabilities or the impact of climate change on these vulnerabilities, Kennedy et al. (2010) argue that the outcomes of these processes are unlikely to adequately build resilience of underlying systems.

Place attachment in the community was also referenced in terms of social bonds, social cohesion (emotional connections) and increasing community resilience, agency, active participation and trust as resulting actions and behaviour. In particular, using a place attachment frame was used by some practitioners to form better connections with

individuals in the community in order to increase climate awareness. This reflects the perspective that the "qualities of settings and place attachments affect people's relationships to each other and their neighbourhood" (Manzo & Perkins, 2006, p. 338). Sharing similar values promotes the affective connections such as belongingness and social ties which in turn influence attitudes and shape behavioural tendencies. Importantly, community advocacy was identified as an important driver for adaptation response in local government. The research showed that place attachment is recognised as a motivator for behaviour in the community, but that it might not always be discussed in these terms. Rather it was likely to be associated with how people use local areas for recreational activities, positive feelings about specific aspects of their natural environment, such as a local park, the trees or a specific river in their area, or fear of loss of these areas if they had seen similar impacts elsewhere. The findings also suggest that there might be barriers in understanding if, or how, communities can express what place attachment means to them. This raises an important question, even if local governments are able to use more innovative approaches such as co-design to determine what is valued and important for all parts of their communities, if people do not have a way of expressing this attachment to place, then there is still a risk that these values will not be appropriately considered. While out of scope for this research, future research could consider exploring how practitioners can help communities verbalise place attachment and to advocate for what is valued by them.

The social ties and bonds between individuals and groups as part of how place attachment is manifested, contributes to the ability for people to come together to organise and advocate for their needs. Strong connections to a place can also facilitate active participation in planning and decision-making processes by the community (Manzo & Perkins, 2006). However, it is fair to assume that a strong place attachment alone is not enough to ensure this participation and it is argued that the traditional methods of community engagement undertaken by local government is a barrier to this participation. This includes practices that rely wholly on simple feedback mechanisms such as surveys or information on the council's website, rather than directing resources to try to reach those with less capacity to engage in these ways. This was as identified as common practise in traditional community engagement methods utilised by local governments, which results in only a margin of the community being heard. In some instances, this reduced level of engagement may be due to individuals not being interested or willing to engage with a municipality, especially if they hold a distrust

towards government. Voting in local government elections is not compulsory in Australia, as such this distrust can also challenge the legitimacy that local government has in relation to their mandate to act on their constituents' behalf, and the willingness of people to participate in local government processes. In other cases, when considering the wider socio-political context, it is a question of whether or not people feel empowered or have the agency to participate. As supported by Manzo and Perkins (2006) this could include if people feel marginalised or if people feel that they have "a place, or a right to a place, at the bargaining table" (p. 340). This is a greater issue for ensuring fairness and equity in CCA which requires the consideration and representation of those affected by climate-related issues through inclusive decision-making. Without this, it could be argued that a lack of agency to participate that is a result of existing socio-political structures that are exclusionary, and the process considered procedurally unjust.

***We need to talk about choices, power and influence***

Local government climate change practitioners are passionate and aim to use inclusive practices in the development of adaptation initiatives. There is no denying that there is considerable work being undertaken to strengthen the adaptive capacity of both the organisations and their communities. However, this work, as previously stated, is undertaken in a very constrained institutional and political environment. Adaptation decisions often have a long-term time horizon and sit adjacent to the portfolio of services local government are mandated to provide to the community. Climate change practitioners act as technical experts, requiring them to advise, persuade and embed action at all levels of the organisation, from staff, managers, executives up to the elected members. While adaptation decisions are not made in isolation, nor does one individual have the sole responsibility for adaptation response, the role of a climate change practitioner comes a certain level of power and influence, whether practitioners recognise this or not. It can be said that public officers have a recognised ethical responsibility when delivering public value to consider community values in decision-making (Ryan et al., 2015). Through a climate justice lens, this related to the power of those responsible for CCA and the decisions that are made for or on behalf of those affected by climate-related issues.

The way in which climate change is framed and the language used is often driven by the practitioners themselves. These frames define and diagnose problems, make moral

judgements about the causes and effects of the problems and can be used to justify solutions (Funfgeld & McEvoy, 2014). Those who do the framing choose, organise, interpret and conceptualise what is being considered and how it should be defined. Set within the political environment of local government, as Nightingale et al. (2021) proposes, adaptation is a political choice which directs the attention of decision-makers to some impacts over others. The research identified significant barriers to how framing related to CCA. This included challenges in defining adaptation, the complexity of climate risk, understanding what it means for people and how they should respond. It is recognised that this can impact how climate change is framed and what priorities are recommended. These are then filtered into decision-making processes at higher levels within the organisation. They can also become normalised within institutional discourse and practices (Funfgeld & McEvoy, 2014) and a barrier to effective adaptation as responses are a direct outcome of this knowledge and discourse (Eriksen et al., 2015). It is necessary for inclusive, fair and equitable CCA processes, that this power of framing and the influence of practitioners on this framing and how decisions are made, as they can still have the ability to affect those in the wider community who do not have the agency to be involved in the decision-making process.

## 7. Conclusion

This research explored how place attachment and community values are understood and applied to CCA processes in the Australian local government context and how they can be used to inform fair and equitable practices. Semi-structured interviews with expert climate change practitioners working in the Australian local government sector were used to answer the three guiding research questions of this project. The research questions were:

- Research question 1: Is consideration of place attachment and community values applied by local government climate change practitioners in their work?
- Research question 2: What barriers do local government practitioners face in effectively considering the varied experiences of community and place attachment in climate change adaptation processes?
- Research question 3: In the context of local government in Australia, can place attachment theory provide a tool to ensure fair and equitable climate change adaptation processes?

To answer the first question, the interviewees were asked questions related to their professional experiences and perspectives on CCA processes, how they understood and applied CCA, place attachment and community values, and perspectives on decision-making processes. The research found that while there was a strong intent to apply community values and consider place attachment to CCA processes, however they were often undertaken in an ad-hoc, non-systematic way, nor were they integrated across organisational functions. When speaking about places and the community's attachment to places, there was a focus on threats to the natural environment, biodiversity and social connections. Place attachment was found to be understood most prominently in reference to the impact of disasters and extreme weather events that had occur recently within the locality and can act as a driver for climate response. Community values are more likely to be considered in decision-making if they align to risk management processes, financial benefits, community expectations or if co-benefits to an initiative can be identified. However, this recognition does not always translate into the consideration of the full spectrum of community views and needs across the local government structure or CCA processes. Attachment to place could be leveraged in discussions about shared values with the community, if community engagement practises are inclusive of the diversity that exists in the community. Without inclusive engagement practices, decision-makers will not be in a position to adequately understand, consider or integrate what the community values and how they relate to their important places and how these places might be impacted by climate change.

To answer the second research question, interviewees were asked questions relating to the challenges and barriers that they have encountered in implementing CCA processes and in considering community values in their work. There were six broad challenges identified in the research that constrains the ability of practitioners to consider community values and place attachment in CCA processes. These are uncertainty and complexity in risk communication, difficulties reaching everyone in the community, scepticism and buy-in, differing and competing priorities, capacity and resource constraints, and unclear roles and responsibilities. Through sharing of experiences, the practitioners also identified ways in which they have been able to overcome or circumnavigate some of these challenges in specific situations that they have encountered. However, the application of these practices is not undertaken consistently, nor would they be enough to completely overcome the

challenges identified. These were included in Table 1 of this research and could form the basis of future research into potential mechanisms or tools that can utilised by practitioners or embedded into practice to ensure more effective CCA processes in the future.

Lastly, findings from the research suggest that place attachment could provide a tool to ensure fair and equitable CCA processes (research question 3), however, it is difficult to see how this could be done effectively without structural changes to the multi-governance systems that local government exists within. Findings from this research point to significant gaps in how decisions are made and what, or who's, interests and values are prioritised. The research found that there is a strong intent to integrate fairness and equity principles, especially driven through the recognition of the importance and necessity of involving the community in decision-making processes, by local government practitioners. In order to effectively be able to consider place attachment and community values for a fairer and more equitable CCA process, it means that practitioners would need to navigate the barriers and constraints identified in the research.

Through these findings, this study attempts to fill a gap in understanding of how Australian local governments apply knowledge about community values and attachment to place in the context of CCA. The findings also try to shed light on how the magnitude of decisions and choices that are made throughout CCA processes affect whether these processes are fair and equitable. The socio-political system that local governments exist within have implications for how adaptation processes occur in practice and this in turn has implications for individual and community adaptation. It is hoped that greater consideration of the challenges that practitioners have to navigate can be used as a catalyst for structural and institutional changes in order to allow for more effective processes.

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## APPENDIX A - Participant Information Sheet and Consent Form

**Project title:** Developing equitable climate change adaptation practices through an understanding of place attachment.
**Researcher:** Paula Haro
**Email:** pa6805ha-s@student.lu.se

### Participant Information Sheet

**Research Project**

The research project "Developing equitable climate change adaptation practices through an understanding of place attachment" is the final part of my Master's Thesis in the programme Disaster Risk Management and Climate Change Adaptation at Faculty of Engineering, Division of Risk Management and Societal Safety, Lund University, Sweden.

The research projects aims to investigate how consideration of place attachment and community values can inform the development and implementation of fair and equitable climate change adaptation practices in the Australian local government context. The research focuses on how place attachment and community values are understood and applied by practitioners, the barriers to effective consideration of the varied experiences of community, and how climate change adaptation processes can be fair and equitable. The results of the research will be published in a Master's Thesis by Lund University. There are no third parties involved in the project.

**Invitation**

The data collection method of the research project is based on semi-structured interviews with stakeholders currently or previously involved in climate change adaptation processes in a local government in Australia. As you were identified to meet these criteria, you are being invited to participate in this research project.

Before you agree or not to participate in this research, it is important you understand why the research is being done and what it will involve. Please take time to read the following information carefully and if you are willing to participate in the research, to sign the attached consent form.

**Data collection and storage**

During the semi-structured interview which will take 30 to 60 minutes, you will be asked to share your professional experiences and perspectives on climate change adaptation practices, and place attachment and community values in the local government context.

Interviews will be undertaken online via Zoom and recorded, however if you do not wish to be recorded, written notes will be taken instead. The interview will be transcribed and coded using Microsoft Office and NVivo. The data will only be used for the purpose of the research and will be aggregated for use. Only the primary researcher, her supervisor and academic colleagues with whom she may collaborate will have access to interview transcripts.

Extracts from this interview may be quoted in the planned dissertation and potential future publications. Any direct quotations from the interview or summaries of comments made will be anonymised, with care taken to ensure any information that could reveal your identity is concealed.

The data, interview recordings and consent forms will be stored in password-protected files on the researcher's personal computer. Interview recordings will be deleted after the research process has ended (expected to be June 2023).

**Project title:** Developing equitable climate change adaptation practices through an understanding of place attachment.
**Researcher:** Paula Haro
**Email:** pa6805ha-s@student.lu.se

**Confidentiality and anonymity**

Participation in the interview is voluntary, and the consent to participate can be withdrawn at any time until the publication of the thesis, without giving a reason or any consequences. When consent is withdrawn, any data obtained from the participant, including recordings or notes, will be deleted and no data will be included in the research project.

To ensure anonymity, your name and the name of your affiliations/organisation will be replaced by numbers in both the research project and interview transcripts. For confidentiality, identifying details will be kept separate from interview transcriptions. No information attributable to you or your organization shall be included in the research project.

If you wish to be given a copy of any reports resulting from the research, please ask us to put you on our circulation list.

**Contacts for further information**

Should you have any questions regarding the thesis, interview or this consent form, feel free to contact me for clarifications at any time.

Primary Researcher: Paula Haro, pa6805ha-s@student.lu.se

Thesis supervisor: Professor Misse Wester, Division of Risk Management and Societal Safety, Lund University, misse.wester@risk.lth.se

**Thank you for participating in this research!**

**Project title:** Developing equitable climate change adaptation practices through an understanding of place attachment.

**Researcher:** Paula Haro
**Email:** pa6805ha-s@student.lu.se

## Consent Form

By signing this form, I, _____:
(Participant's name)

1. Confirm that I have read and understood the *Participant Information Sheet* provided for the above research project. I have had the opportunity to consider the information, ask questions and have has these answered satisfactorily.

2. Understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason.

3. Understand that my data will be securely stored in line with the Lund University's Data Protection Management Policy.

4. Agree to take part in the above research project.

5. Consent: Please tick relevant choices

   a) For my interview to be audio recorded and transcribed. ☐

   b) To be quoted anonymously with no reference to my name or affiliations. ☐

   OR

   Not to be quoted at all. ☐

| _____ | _____ | _____ |
|---|---|---|
| Name of Participant | Date | Signature |

## APPENDIX B – Interview Guide

**Interview Guide**

Goal: To understand how CC practitioners understand and consider community values and place attachment to CCA processes, what challenges they face in applying these principles and how CCA processes can be made fairer and more equitable.

| Introduction | |
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| Overview of interview:<br>During the semi-structured interview which will take 30 to 60 minutes, you will be asked to share your professional experiences and perspectives on climate change adaptation practices, and place attachment and community values in the local government context.<br><br>Consent:<br>Confirm their consent selections (video recording, anonymous quotes) from the Participant Information Sheet and Consent Form. Let them know that they can have video on or off. Ask if they have any further questions about the form, the research or the interview.<br><br>Start the recording of the interview. | |
| **Interview Questions** | |
| **Background questions** | 1. Please describe your role / job function.<br>*Seek clarification in relation to climate change adaptation processes specifically if not mentioned.*<br>2. How long have you worked in CCA? |
| **CCA processes**<br>*Determine what practitioners value in the processes, do they consider fairness or equity aspects.*<br><br>*Through these processes someone decides what is valuable and what should be protected.* | 3. How do you define CCA?<br>- Is it considered as a process?<br>- Main aim of CCA processes.<br>4. In your opinion, what do you consider to be the most important aspects/parts of CCA processes?<br>*(eg. CCA processes include knowledge synthesis, modelling, preparation of guidance materials, policy development, operation of finances, design of projects (action – infrastructural, technological, institutional, behavoiural, cultural, nBs) and monitoring and evaluation).*<br>- Elaborate on the answer.<br>- Least important aspects?<br>5. From your experience, what are the main drivers of adaptation in your council (region)?<br>- Main drivers for the community<br><br>*In the Australian Government's National Climate Resilience and Adaptation Strategy 2021-2025 it states that the "Australian Government's consideration of adaptation issues will seek to improve equality and fairness for vulnerable communities." It points to idea that choices ultimately require trade-offs due to the distribution of resources, with these outcomes not always being beneficial for everyone.*<br>6. While not a legislated requirement, do you see that this addressed in your work?<br>- Elaborate<br>- What parts of the process facilitates this?<br>- How do you make sure it is "fair" and equitable*?* |

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| **Place attachment and values**<br>*PA is relevant for understanding how people respond to changes to their environments and to the indirect impacts of policies designed to prevent or minimise these changes (Devine-Wright, 2013).*<br><br>*Understanding how the different attachments and values are considered.* | *Place attachment refers the emotional bonds between people and places. Places can be at different scales and refers to social and physical elements. As a process it involves meanings, values and experiences that people use to make sense of their environment, which influence their attitudes and behaviours. Both places that people value, and their bonds with those places are at risk from climate change.*<br>7. Of that definition, is there anything that relates or overlaps with your work?<br>- What role do you think place attachment plays in your work?<br>8. To what extent do you think place attachment (and what the community values) is integrated into CCA processes?<br>9. How do you determine what is valued by the community (in relation to CCA)?<br>- Varying experiences<br>- In your opinion, what are some reasons for integrating consideration of community values into CCA processes?<br>- Common engagement methods<br>- What do you feel about the existing ways of engagement?<br>- What are the conditions/elements which should be in place for meaningful participation to occur? |
| **Decision-making**<br>*Understand how decisions made and how are different values prioritised.* | 10. What level of influence do you feel you have in your role in CCA decision-making processes in your Council?<br>- Expand on that<br>11. The decisions you make in CCA processes matter, when you are making decisions, what influences your decisions?<br>- When are these values integrated?<br>- How are different options prioritised?<br>- *Understanding what trade-offs are made between adaptation options and how different values prioritised*<br>12. What level of impact do you think CCA has on policy making within the Council (region)? |
| **Challenges**<br>*Understand what challenges practitioners face and identify opportunities for fairer practices* | 13. If any, what barriers or challenges do you think exist for CCA practitioners in integrating community values and consideration of place attachment in CCA processes?<br>- *Ask about specifications/clarifications.*<br>- *Implications of these barriers.*<br>- *Which of the challenges you mentioned have you experienced directly in your work?*<br>14. Can you suggest any changes to CCA processes that might overcome these challenges?<br>- *Enabling factors, best practices, opportunities?* |
| Closing | |
| Ask if the participant has any further comments or anything else that they would like to add.<br>Ask them if they are open to be contacted by email if I have any additional questions.<br>The interviewee is thanked for their time.<br>Recording ends. | |

**APPENDIX C – Initial Codebook**

**Codebook**

***Notes on the transcription***

During the transcription process, the researcher added certain conventions within the transcription, these are as follows:

| | |
|---|---|
| -- | Where the interviewee has stopped mid-sentence and changed the focus of what they were saying. |
| [ ] | Designate lengthy pauses or other non-verbal communication such as laughter that may not be picked up by the text. |
| ' ' | When the interviewee was quoting something that they said to another person, something someone else has said to them, or when the interviewee was indicating that they were thinking something. This was determined by a change in tone which dictated the quotation marks, or by the use of "they said" or "says" ect. |
| (?) | Used after a word if it was not clear that this was exactly the word used or not |
| [inaudible] | Used when the word was not clear enough to understand at all |
| *Italicize words* | Used when the respondent emphasizes it in their speech |

***Definition of place attachment provided to the interviewees***

Place attachment was defined for the interviewees, both in text form via the chat function, as well as verbally by the researcher. This is the definition used:

*Place attachment refers the emotional bonds between people and places. Places can be at different scales and refers to social and physical elements. As a process it involves meanings, values and experiences that people use to make sense of their environment, which influence their attitudes and behaviours. Both places that people value, and their bonds with those places are at risk from climate change.*

***Initial codes***

| | |
|---|---|
| Challenges | Any reference to different challenges, barriers or obstacles faced by practitioners in their work, or the council more broadly |

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| | References to having a lack of something that stopped another action from being able to happen. |
| Practitioner | Specific reference to the practitioner's role, interests or passions, influence or wellbeing |
| Roles and responsibilities | References to roles or responsibilities of an individual, team, council, organisation, government (local, state or federal/national), references to unclear roles and responsibilities, what they do, what their focus is |
| Risks | References made to a specific natural hazard, disaster event or climate change impact or risks (eg. flooding, heatwave, heat island) (or these terms are directly used).<br>References to impact or risk more generally. |
| Decision-making | How or why a decision might be made, use of terms such as "decided", "choice", how things are prioritised |
| Place | Any place related comments, use of the terms place attachment, place-based, place, or reference to a specific location (eg. X River or park), or general terms such as nature, biodiversity, buildings |
| Values | Values, what is valued, references to prioritisation or concerns related to community issues or values |
| Timing | Any comments related to temporal aspects (long-term, short-term, timely). |
| Drivers | Any mention of what is driving the adaptation, or the decisions are made by the practitioner or council, or the programs that are run<br>Demanding action<br>Statements around an issue not being a driver |
| Climate change adaptation process | This could include reference to any part of the climate change adaptation processes, including knowledge synthesis, modelling, data, preparation of guidance materials, plans or strategies, policy development, operation of finances, design |

| | |
|---|---|
| | of projects, implementation of actions and monitoring and evaluation. |
| Fairness and equity | Use of the words “fairness”, “equity”, “equality”, “justice” or similar |
| Vulnerable | References to vulnerable groups, vulnerable communities, vulnerability |
| Community engagement | Discussion around engagement processes, understanding the community, talking to the community |