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## Local values and fairness in climate change adaptation: Insights from marginal rural Australian communities

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### ABSTRACT

A key criterion of successful adaptation to climate change is that it avoids potential inequalities arising from climate impacts or from adaptation strategies themselves. Recent research on adaptation in developing and developed countries argues that the measures of such fairness cannot be captured by standard metrics of vulnerability and should be situated in the milieu of people's daily lives and temporalities. Yet there is little empirical evidence to support this theoretical argument. This paper describes a method, and presents findings from research that aimed to understand and classify the lived values of four marginal rural communities at risk of sea-level rise in Australia to inform adaptation planning and implementation. Our research finds that there are at least five types of primary residents and second homeowners attached to these four low-lying coastal communities. Some of these residents are more likely to be amenable to relocation if their needs for affordable living and belonging are met. For others, there may be little that can be done to compensate for the loss of place attachment, and implementing a measured approach that provides them time to adapt to the idea of change and form connections to new places is the best that could be achieved. We discuss the implications of place-specific and people-centric values for achieving fair adaptation.

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### 1. Introduction

Governments worldwide are preparing for climate change through the development of national adaptation strategies and plans (e.g. the 39 National Action Plans for Adaptation (NAPA) in least developed countries). There is also a proliferation of local adaptation plans being developed by municipalities (Baker, Peterson, Brown, & McAlpine, 2012; Carmin, Anguelovski, & Roberts, 2012). The concept of fairness<sup>1</sup> pervades adaptation plans, with many aspiring to achieve fair adaptation by prioritising the needs of those “most at risk”, “most at need” or the “most vulnerable”, particularly the poor, homeless, elderly, children, people with disabilities, and the mentally ill (Barrett, 2013; Collins, 2016; Huq & Khan, 2006; Klinsky, 2010; Smucker et al., 2015). However, it is

unclear how such people are identified and considered, how their needs and interests are identified and accommodated (Adger and Netlson, 2010; Hamin and Gurran, 2015; Markowitz, Grasso, & Jamieson, 2015), and how controls are put in place to ensure adaptation efforts reduce their vulnerability<sup>2</sup> (Holland, 2017) and do not overlook or exacerbate existing inequalities or create new inequalities (Barnett and O'Neill, 2010; Forsyth, 2014; Mikulewicz, 2017). Thus, despite the widespread recognition of the principle, it is unclear if and how fair adaptation is being pursued in practice at local scales in developing and/or developed countries.

In the last decade three emerging bodies of social science research have sought to understand how fair adaptation can be achieved (Fig. 1). This has involved: elaborating what fair adaptation is and how this relates to climate justice more broadly; identifying the challenges that governments face in developing and implementing (fair) local adaptation plans; and developing

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<sup>1</sup> We follow Grasso's (2007) definitions of fairness and justice. Justice principles exist independently of any process of judgment while fairness relates to individual's perceptions of a judgment process.

<sup>2</sup> Throughout this paper we discuss diverse ways that vulnerability can be interpreted. When we refer to traditional understandings and measures of vulnerability, we refer to the commonly-used definition of vulnerability to climate change as “the degree to which... systems are susceptible to, and unable to cope with, the adverse impacts” (Schneider et al., 2007, p. 782).

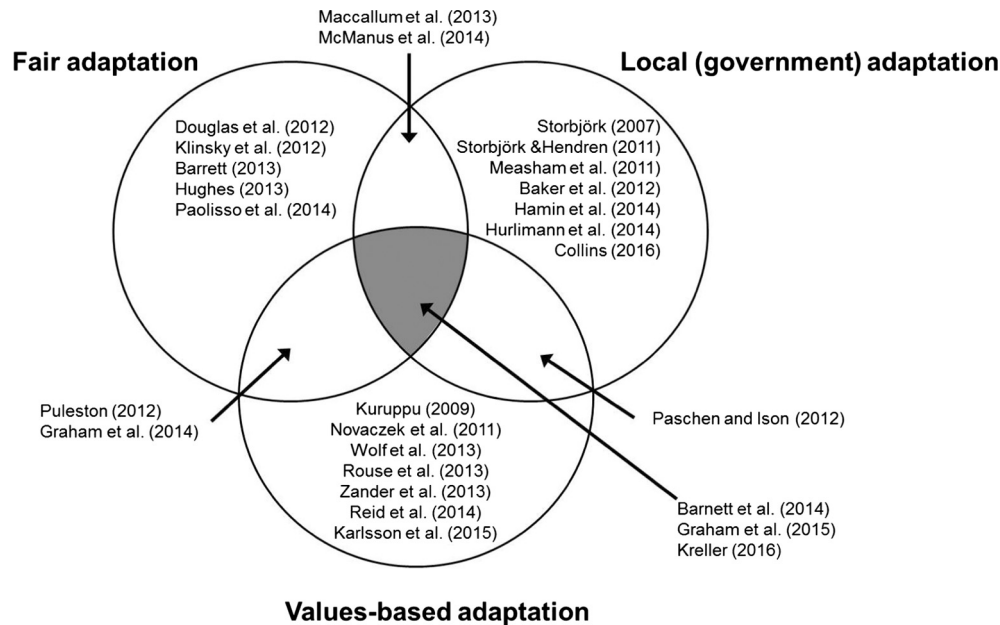


Fig. 1. Examples of empirical research conducted on fair adaptation, local government adaptation and values-based adaptation in Australia and internationally.

processes for democratising adaptation to ensure local values are incorporated into adaptation plans. While there is considerable scope for these three bodies of literature to inform one another and government policies to enhance adaptation outcomes in practice, there is little research at the nexus of these three domains – a contribution which this paper aims to make.

The aim of this paper is to consider how an understanding of lived values can inform fairer local adaptation plans. We do this through a study of values in four small coastal communities in a regional local government area in the state of Victoria, Australia, whose physical and social geography renders them highly vulnerable to sea-level rise. The large land area of the Local Government Area (10,924 km<sup>2</sup>) and long coastline (approximately 100 km) compared to the small population (41,355 residents) means the municipality has limited resources to protect its eight coastal settlements from sea-level rise. The residents are also among the most socially disadvantaged in Australia: their lack of political voice (Hurlimann et al., 2014) and little access to markets and services means their experiences and capacity to adapt is limited compared to their wealthier and more politically powerful counterparts in urban coastal Australia.

The article begins with a discussion about fairness, the challenges governments face in developing and implementing local adaptation to climate change, and the ways in which a values-based approach can assist governments to achieve fair local adaptation. Background information is then provided about the four marginal coastal communities that are at risk of sea-level rise in eastern Victoria, Australia, as well as details of the mixed-method approach adopted. The results describe five types of residents who live in the four communities and how they may be differentially affected by sea-level rise, challenging and expanding traditional notions of vulnerability. Finally, we elaborate the issues that these diverse values raise for fair adaptation policies and programmes in these four communities, and more broadly.

This study builds on past adaptation research undertaken in eastern Victoria which has sought to understand how fairness is understood by people in marginal coastal rural communities (Graham, Barnett, Fincher, Mortreux, & Hurlimann, 2015) and local governments (Graham & Barnett, 2017), how local communities understand sea-level rise in relation to their everyday lives

(Fincher, Barnett, Graham, & Hurlimann, 2014) and how regional governments can better plan for adaptation (Barnett et al., 2014; Hurlimann et al., 2014). Previous research has sought to understand the values of different types of residents who live within a larger community along the same coastline in an adjoining jurisdiction, and that has a wider range of adaptation options available to it (Graham, Barnett, Fincher, Hurlimann, & Mortreux, 2014). Here we seek to understand how residents in four remote and small communities (fewer than 300 residents in each) with few resources and adaptation options, value their everyday lives. This study also builds on past research in developing countries that has sought to understand the values of small island and remote coastal communities in the context of climate adaptation (e.g. Karlsson & Hovelsrud, 2015; Kuruppu, 2009; Mortreux & Barnett, 2009).

## 2. Fairness, values and local government adaptation efforts

Climate change invokes questions of fairness, blame and responsibility because, like other environmental “bads”, it affects ‘where we live, work and play’ (Agyeman, Schlosberg, Craven, & Matthews, 2016). Climate change raises questions about who causes, benefits and loses from its impacts and who is required to pay to mitigate or adapt (Adger, 2016; Gardiner, 2011; Markowitz et al., 2015). These questions are at the heart of climate justice scholarship, which seeks to find solutions to the perceived inequities in who has caused climate change and who is most affected by its impacts (Barrett, 2013; Thomas & Twyman, 2005). Such questions also relate to broader theories of justice that seek to identify how justice can be advanced beyond developing just institutions and rules by being attentive to people’s everyday lives (Sen, 2009; Agyeman et al., 2016). To date, the majority of research on climate justice has focused on the international politics of mitigation and the developed/developing and present/future generational divides (Caney, 2005; Schlosberg & Collins, 2014). More recently, the concept of fair adaptation has received increased attention in recognition of the formidable justice challenges that climate adaptation creates, especially at local scales (Adger, 2016; Paavola & Adger, 2006). We seek to add to the latter body of research, which highlights the importance of fairness to vulnerable local communities regardless of their level of development.

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