



Research Paper

How do planners deal with barriers to climate change adaptation? A case study in Queensland, Australia

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ABSTRACT

Spatial planning at the local government level has a widely recognized role and responsibility to address the impacts of climate change. However, there are significant barriers to climate change adaptation and planning institutions and professionals are at the forefront of confronting these obstacles. This research documents how planners have responded to barriers to climate change adaptation at a professional level. The focus of this research is on the conditions of uncertainty and volatility of institutional policy frameworks for climate change adaptation; and the low prioritization of climate change adaptation among competing institutional objectives. The paper investigates how planners respond to these conditions and the resulting impact of their decisions on local level climate change adaptation. We report on a case study of the experiences and perspectives of local planners across Queensland, Australia. The contribution of this research is to document how planners respond to conflicts between institutional constraints and professional responsibilities for climate change adaptation. The case study identifies strategies that were employed by planning professionals to overcome common institutional barriers to climate change adaptation. Planners responded to problematic conditions by engaging alternative authorities, identifying substitute rationales, employing existing mechanisms, altering the framing of terminology and establishing regional coordination forums. These strategies provide options for professionals to overcome the barriers to climate change adaptation within their work and political environments.

1. Introduction: local level planning and climate change adaptation

Adapting to climate change is a critical and mounting challenge for contemporary spatial planning (Crane & Landis, 2010; Davoudi, Crawford, & Mehmood, 2009; Wilson & Piper, 2010). Climate change is now being realised and steps are being taken to adapt to changing conditions (Pielke, Prins, Rayner, & Sarewitz, 2007). This involves reducing the exposure and vulnerability of human settlements to climate change impacts (Schipper & Burton, 2009).

Planning is widely regarded by scientific and professional communities as having a critical role in facilitating climate change adaptation. For example, the Intergovernmental Panel on Climate Change (2007) calls for to a more effective consideration adaptation measures in land-use planning and infrastructure design. Similarly, the Stern Review (2007) identifies the planning system as the main means by which investments in public infrastructure and private property can be directed away from vulnerable localities. Responding to climate change has become a professional responsibility. The Planning Institute of Australia

(2015, p1) advises that planners ‘have a responsibility to integrate planning for climate change into their work and be proactive in the development of mitigation and adaptation strategies.’

Local level municipal planning is often looked to as the instrumental framework and delivery mechanism for climate change adaptation (Measham et al., 2011; Mukheibir, Kuruppu, Gero, & Herriman, 2013). Planning has responded to climate change, local climate change adaptation plans have been implemented (Baker, Peterson, Brown, & McAlpine, 2012; Hurlimann & March, 2012), and regional planning has incorporated climate change concerns (Matthews, 2015). However, a number of barriers have also been identified (Bulkeley et al., 2011). Many of these barriers are more pronounced under the institutional contexts in which local planning takes place (Measham et al., 2011). The barriers to climate change adaptation identified in a review of the literature include the characteristics of established planning processes; the competition between planning objectives; the influence of economic development agendas; and the predominance of ill-suited institutional frameworks. Institutional dimensions are particularly significant factors when adjusting practices in adapting to climate change (Matthews, Lo,

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& Byrne, 2015). While the extant literature has studied these barriers (Moser & Ekstrom, 2010), research has only recently begun to explore possible solutions and offer guidance for planners experiencing these conditions.

In the face of climate change, how do planners deal with barriers that impede their efforts to facilitate adaptation? This research examines the operational level experiences and practices of local government planners in Queensland, Australia in response to strong political and institutional barriers to climate change adaptation. The context includes uncertainty and volatility within the institutional policy frameworks, and the low prioritisation among institutional responsibilities and objectives. The neoliberal political environment and the ensuing conditions are illustrative of commonly experienced obstacles to climate change adaptation. Our research draws on key informant interviews that focused on how planning institutions and professionals responded to the conditions that they identified as barriers. The contribution of this research is to establish an understanding of how planners respond to conflicts between institutional/political constraints and professional responsibilities in relation to climate change adaptation, and to identify a number of pragmatic strategies that have been, and can be used by planners to overcome barriers to climate change adaptation. The empirical findings from this study support the growing international literature on how local governments attempt to deal with climate change in the face of political denial at the state and federal levels.

2. Literature review: barriers to planning for climate change adaptation

The literature identifies a wide range of barriers to pursuing climate change adaptation through planning. While it is widely recognised that planning needs to respond to climate change, a number of factors are identified as continually constraining planners from achieving this objective. The following four themes characterise the literature on barriers to planning for climate change adaptation and summarise the obstacles that planners most commonly encounter.

2.1. Technical appropriateness of planning processes

Established planning processes may be technically unsuited to the challenge of climate change. One difficulty is the mismatch between planning horizons and climate change scenarios (Bedsworth & Hanak, 2010). Present political cycles, planning timeframes and social and economic objectives promote short to medium term planning horizons, but climate change requires that long-term conditions be considered (Wilson, 2006). As a result, more immediate objectives are prioritised over climate change adaptation that is limited to addressing current hazards (Wilson, 2006).

A second articulated challenge is the suitability of traditional predict and plan models of planning in the context of the uncertainty and complexity introduced by climate change. Standard planning approaches forecast future needs based on historical data and trend modelling, however, climate change introduces complex variables and multiple uncertainties that undermine our ability to forecast future conditions (Bedsworth & Hanak, 2010; Quay, 2010). The rate at which planning interventions can influence actual spatial patterns is another factor that potentially limits climate change adaptation. Planning generally produces incremental change to overall spatial patterns along current development trajectories. However, this may prove insufficient, as climate change will likely require more dramatic adjustments or transformations (Kates, Travis, & Wilbanks, 2012).

2.2. Competition between planning objectives

Planning may fail to deliver climate change measures because of the multiple complex objectives that need to be considered in an

institutional environment. Bulkeley (2009) identifies the tensions between climate change adaptation and other legitimate dimensions of planning. He cites climate change adaptation objectives such as limiting development in floodplains, conflicting with other social objectives such as increasing housing supply (Bulkeley, 2009). Similarly, the scarcity of public resources can lead to conditions where planning objectives compete for limited resources, where conflict and competition between institutional objectives can constrain efforts to adapt to climate change (Measham et al., 2011). These situations are attributed to competing interpretations of sustainability and divergent conceptions of the public good (Owens & Cowell, 2010). Adaptation may be supported at the strategic level - but not implemented in any meaningful way. The balancing of various objectives is a legitimate function of planning and may reasonably qualify the achievement of some objectives. However, this process has historically resulted in the prioritisation of economic interests and the subordination of social and environmental objectives (Owens & Cowell, 2010).

2.3. Influence of economic development agendas

Economic development agendas may also undermine the potential for significant levels of climate change implementation. Climate change policy is subject to strong political influences (Giddens, 2009). Howard (2009, p. 30) argues that adaptation is 'not a task for which planning is constitutionally well equipped' because of the persistent influence of political and economic forces. Economic interests drive the dominant development agenda and threaten to condition approaches to climate change adaptation (Grist, 2008). The rhetoric of climate change adaptation may fail to question the fundamental sustainability of economic objectives and development patterns (Brooks, Grist, & Brown, 2009). Efforts to operationalise concepts of sustainability have similarly fallen short. Unsustainable patterns of urban sprawl and automotive dependence contributed to climate change, planning failed to address and in some ways perpetuated these patterns (Brooks et al., 2009). Howard (2009, p. 30) terms these patterns as 'a century of disastrous planning' for which planning is attributed 'historic culpability in the emergence of climate change'. Concepts of sustainability have been appropriated and redeployed in support of existing development patterns (Davoudi, 2000; Gunder, 2006). Climate change adaptation risks similar problems because it is open to wide interpretation and difficult to translate into policy (Brown, 2011).

2.4. Institutional limitations and challenges

Local municipal planning is central to climate change action, and as a result, much research has focused on the institutional barriers at this level. A synthesised list of barriers to climate change adaptation put forward by Moser and Ekstrom (2010) based on a meta study includes: lack of information, lack of resources, institutional limitations, communication problems, and beliefs and values. Measham et al. (2011) identified a number of institutional impediments to climate change adaptation both internal to local government and from higher levels of government. First, the conceptualisation of climate change is often considered an environmental issue, and climate change adaptation is assigned to environmental rather than planning departments (Measham et al., 2011). Within this context, path dependency becomes a barrier in itself, as there is resistance to change within agencies and at the local level (Matthews, 2011). Second, the reliance of local planning practice on state policy to provide strategic direction, leads to a lack of motivation for climate change adaptation under existing policy frameworks that are silent on climate change (Measham et al., 2011). Third, the complicated place-based nature of local governance means that climate change adaptation objectives compete for resources against other local government responsibilities (Measham et al., 2011; Taylor, Harman, & Inman, 2013). These institutional barriers relate to the availability of information, the allocation of resources, and the setting of priorities.

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