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Climate change perceptions and adaptive strategies: reflections from two remote Aboriginal communities

Matthew Campbell^A, Digby Race^B, Karl Hampton^{BC}, Denise Foster^A, Clara Fejo^C and David Robertson^C

^ATangentyere Council, Alice Springs, NT, 0870. E: matthew.campbell@tangentyere.org.au

^BFenner School of Environment & Society, ANU, Canberra, ACT. 0200. E: Digby.Race@anu.edu.au, M: 0419 638 406.

Formerly CRC-REP and CSIRO.

^CNinti One Ltd, Alice Springs, NT, 0870.

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Background: A dynamic context

Change has always been a central feature of life in central Australia. For millennia Aboriginal people had to deal with a variable climate in which great fluctuations in rainfall and temperature were typical. With the arrival of Europeans in the mid 19th century the ubiquitous change that had primarily related to the environment was now extended to social and cultural realms. Today people and businesses in remote Australia continue to experience profound change from multiple sources (Tonkinson 2007). Critical driving forces that continue to shape the day to day lives of Aboriginal people in central Australia are the intensifying impacts of climate change, the diminishing affordability of conventional energy supplies to households, and the ongoing socio-economic disadvantage that they experience (SCRGSP (Steering Committee for the Review of Government Service Provision) 2014).

People's lives are dynamic, and particularly so for communities in remote central Australia where a variety of factors are intersecting and driving change – causing uncertainty at many levels (Petheram et al, 2010). Aligned with this is the fact that change is often discussed in pejorative terms, suggesting at the desirability of the maintenance of a 'status quo' that does not exist in this climate context. Change in central Australia is a certainty that must be dealt with. Aboriginal people across Australia have had to be resourceful and adept at managing change, so much so that the positive attributes of resourcefulness, self-reliance and social agility are often mentioned in relation to them, even as the difficulties they face are acknowledged (Buhrich, 2010). The interaction of these factors leads to a dual narrative of vulnerability and resilience (Maru et al, 2014), which are critical to understand when re-imagining the possibilities for adaptation to the new climate of central Australia. Others have reported that while the health of the country can be stressed and vulnerable to climate change, the traditional owners can be highly resilient and adept at adaptation (Nurse-Bray et al, 2013).

Perceptions of climate change

People generally use a variety of social and physical strategies to cope and adapt to the many smaller changes that happen in their daily lives. This is also true in relation to how people adapt to climate change, which by its nature is a gradual process, however it depends on people's knowledge about the phenomenon. While many in remote Aboriginal communities have heard of climate change, it is both variously and poorly understood (Green, Bily and Tapim 2010). A better understanding of how climate change affects people's lives should inform effective adaptation so that they can maintain or improve the comfort of their lives. This paper draws on research conducted with two communities that are distantly located from each other yet are both in the wider central Australia region. The first community resides in the Alice Springs Town Camps and the second is the community of living in the remote town of Lajamanu, located in the Tanami Desert around 900km north-west of Alice Springs. The two communities were selected for this study due to the contrasting settings and the authors' existing relationships with a cross-section of people within each community. The Town Camps are comprised of various social groups and are located in specific areas of the town of Alice Springs; most

people who live within them retain strong links to Aboriginal communities around central Australia, meaning that the resident population is linguistically diverse. Lajamanu is a Warlpiri community, and although some of the residents speak other languages it is more culturally homogenous than the Town Camps.

Our research asked people about their perceptions of the climate and whether they felt it had changed during their lifetime. Our research teams interviewed a range of people in several Town Camps (n= 37) and Lajamanu (n= 35).

Most people interviewed reported that the climate had changed during their lifetime, with the dominant patterns of change including:

- Longer, hotter and drier summers, and warmer shorter winters.
- the environment drying out
- less bush tucker, more weeds and more dust

“Summer is longer, winter is now shorter. Summer in 2013 was warmer” (Warlpiri Female aged 26-35)

“Summer was longer, winter was really short” (Western Arraranta Female aged 36-45)

“Not the same summer it’s more hotter and drier, less rain, warmer winter” (Warlpiri Female aged 56+)

Adapting to the future climate

Projections of future climate for central Australia indicate an increase in temperature leading to extended periods of very hot weather (summer) and shorter periods of cold weather (winter) (Bureau of Meteorology and CSIRO, 2014). For example, some climate projection models indicate that average summer daytime temperatures could increase by as much as 7°C by 2100 (from a baseline of 1990, Addison 2013: 25). Also, more intense storms are predicted that may lead to more frequent flooding although annual rainfall may remain similar (CSIRO, 2014). These projections mean that Aboriginal people are faced with a set of difficult dilemmas as they try to maintain comfortable living conditions in the face of a significantly warmer climate.

Our research asked people about how they manage during extreme weather events (e.g. extended cold/heat, floods and storms). There was a strong consistency among the people interviewed in both Alice Springs and Lajamanu, that conventional housing had greatly improved the comfort of their lives in relation to extreme weather events. Most people interviewed reported staying indoors at home or public buildings (e.g. art centre, shopping centre) to keep cool in very hot weather, warm in cold weather, or to avoid storms. Air-conditioners and heaters, along with houses with functional windows, window coverings and doors have made a marked difference in people’s ability to cope with extreme weather events than was previously the case. However, no one raised concerns or doubts about the effectiveness of their housing in relation to the future climate projections. Even if current housing is sub-optimum in terms of design and quality for occupants it appears that the physical shelter provided by housing represents a considerable improvement for many interviewees in Alice Springs and Lajamanu. However, given that the climate projections for central Australia reveal a strong likelihood of an extending and intensifying heat during summer, maintaining housing comfort will be challenging.

Conclusion

The research focused on obtaining qualitative data about the perceptions of past and current climate change and experiences of adaptation to extreme weather from a mix of residents from the Alice Springs Town Camps and the remote community of Lajamanu. In terms of this research, we are

interested in exploring the changes that people made to maximise their comfort in their day to day lives and the possibilities this holds for ongoing adaptation into the future. We acknowledge that there are other changes required to enable Aboriginal people to maintain comfortable lives in the face of ongoing climate change, such as technical or policy related, but these are not the focus of our discussion here.

There appears some doubt that interviewees fully appreciate the trajectory of climate change, and that current housing comfort and operating costs may be relatively transient, with marked increases in energy costs in the medium term (e.g. 10-15 years) if housing quality and behaviour stays the same. Further attention to exploring this issue is warranted, however it is made more difficult given that most housing in both locations of the study (and indeed across central Australia) is now managed by the government, meaning that residents and their Aboriginal Housing Associations (where they still exist) are restricted in the extent they can directly invest in upgrading their housing.

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