

## Rural communities experiencing climate change: a systems approach to adaptation

**Glenda Verrinder<sup>1</sup>, Lyn Talbot<sup>2</sup>**

<sup>1</sup>La Trobe University, VIC, <sup>2</sup>City of Greater Bendigo, VIC

**Introduction:** Rural areas are vulnerable to climate change because of their direct dependence on natural resources, weather-dependent activities, and their inequitable access to services. Communities are affected in two main ways: firstly, extreme weather events that impact on infrastructure and cause loss of life and secondly, the impact on ecosystems and agriculture. Furthermore, in different locations people's health is at greater or lesser risk, but over and above these vulnerabilities all sub-groups of the rural population are influenced by unique characteristics of rural settings.

The inextricable link between rural people and the effects of climate on their daily lives is illustrated in this presentation. Some creative programs build optimism about capacity to meet the health needs of rural people, despite the diversity of the climate, geography, economy, demography and culture. Adaptation potential will vary between locations.

**Method:** The issues that challenge the wellbeing of rural people and their communities in the face of climate change was explored using a conceptual framework developed by Bourke et al. (2012 a,b). The framework was then used to explore 'ways forward' for health and community service organisations. This systems approach examined climate change and rural communities in terms of the interrelationships between six key concepts: rural locale; local health actions; broader health systems and broader social structures in the context of power relations.

**Results and discussion:** Research on the current impacts of climate change in inland Australian settlements is at an early stage and somewhat fragmented and we are only beginning to understand the issues and how to manage them effectively. We do know that direct and indirect health impacts of climate change amplify the health challenges already faced by rural communities.

Adaptation for health in rural communities cannot be too prescriptive because rural Australia is diverse. However, building community resilience requires health and social services to develop knowledge of, and attachment to, rural culture. Health and social service workers need to have capacity to relate to rural communities and have a specific rural focus.

Although stakeholders within rural communities differ in their vulnerabilities and adaptive capacities, they are bound by similar dependence upon critical infrastructure and resources, economic conditions, government policy direction, and societal expectations (Loechel et al. 2013).

In essence we need to:

- assist health and social service agencies to adapt their services to meet the needs generated by the impacts of climate change
- build on rural communities' local knowledge, resources and networks
- assist communities to plan and implement adaptation strategies for major vulnerabilities such as agriculture, service management and communication.

Only interdisciplinary, collaborative approaches that draw on the wisdom of rural people are likely to be effective in health enhancement.