Individual and community resilience to natural disasters: a comparison of bushfire and drought events in Victoria
Outline

• Background to research project
• Case study methods
• Results
• Conclusions
• Questions!
Our research project (2010-2012)

Recovery from disaster experience: its effect on perceptions of climate change risk and adaptive behaviours to prevent, prepare and respond to future climate contingencies

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Lead organisation: James Cook University

Research team: Dr Helen Boon, Prof Bob Stevenson, Dr Alison Cottrell, Assoc Prof David King and me!

Case Studies: Flood 2009 (Ingham), Cyclone 2006 (Innisfail), Fires (Beechworth 2003 & 2009) and Drought (Bendigo 2000-2009)
Bronfenbrenners model
(see Boon et al. 2012 in Natural Hazards)

Macrosystem
Societal, Cultural, Political, Welfare, Economy

Exosystem
Community based services, hospitals, Media, Economy

Microsystem
family, workplace, church, neighbourhood

Individual

Australian & New Zealand Disaster and Emergency Management Conference
Research Design

**Lit Review** (journal paper)

187 Qualitative interviews 2010

Pilot test of quantitative survey 2011 (112 responses)

4 reports 3 papers (ANZDMC)

Quantitative survey 2011 (1008 responses)

Analysis of all findings in relation to community and individual resilience across different natural disaster events (triangulation using literature and Bronfenbrenners model)
Victorian Case Studies

Bendigo

10 Key informants
4 Focus groups (19 people)
Total 29

Business, landcare, community health, council, state govt depts, welfare, counsellors, garden club

Beechworth

9 Key informants
4 Focus groups (30 people)
Total 39

Business, farmers, womens group, council, state govt depts, youth, CFA health services, community d’ment
Questions asked

BEFORE THE EVENT
• How did you find out about the event? Have you been through similar events in the past?

DURING THE EVENT
• What was your experience of the fires/drought? How was your business impacted?
• Who or what helped you during the fires? (services, people, groups)

AFTER THE EVENT
• What sort of things helped you recover after the event?
• Who do you think were most or least affected by the event? And why?
• How do you think different people/groups coped with the event? And why?
• In your view has the community got better, worse or remained the same as a result of the event? What sorts of things have made things better or worse?

IN THE FUTURE
• Do you think you (and the community) are now better prepared to face future similar events? Why or why not?
• Do you think there is a risk of more disasters occurring? Are the disasters linked to climate change in your view?
Results

The fire events demonstrated individual AND community resilience at all levels

Microsystem level (individuals/family/networks)

• Need to be self sufficient (can’t rely on services)

“I think it’s better to be self reliant. You can trust yourself, you know where things are. You know how to deal with all those things...” (FG2)

• Prior experience helps (eg farmers)

“I grew up on a farm and you know, you were told; keep an eye out on those days, and don’t leave the property. It’s a sort of responsibility; for yourself, your family, your community, your livestock. We had a different way of thinking. We took it very seriously. So, you grew up and it was a part of your life.” (KI8)
• Support from family, friends, neighbours is crucial

“...we had some friends and (friend’s) dad and uncle. They were fighting the fire and I was back at the house with the girls filling their fire trucks and making sure everything was right at the house...” (FG2)

• Newcomers to rural areas, elderly and children seen as most vulnerable

“...they have a different way of thinking – more likely to be expecting someone to come and help than the farmers (KI6)”
Exosystem level (Community, govt, media)

- Improved government and CFA services

“There was less ‘process’ and more action, which was really great. Usually it is all process!” (K17).

- Negative city media

“I find the press very damaging and still to this day and we’re seven years down the track... we have people ring and say ‘North East Victoria is on fire’ and it’s not on fire!” (FG1)

- Community support (emotional and physical) was vital to recovery of individuals and small towns

“Personality wise, friendship wise, even people that you’ve hardly met and talked together, we’re closer because we’ve got things to talk about and a commonality. I think that’s made us stronger” (FG3)
Macrosystem level (cultural, political, economic)

- Cultural activities to aid recovery
  “I went on one of those weekends down to Lorne and it was lovely... it was three hundred women and I enjoyed it very much, and it was very sobering for me because everybody I spoke to had lost their home...” (FG2)

- Recognition of mental health needs
  “Certainly the Commonwealth Government through the division of general practice have put in what they call the ATAC division, and so they’ve actually bolstered up the numbers of medical or allied health practitioners to pick up that high level of stress which probably has never been picked up before in past events...” (FG4)
Drought tested individual resilience but did not build community resilience

Microsystem level

- Loss of control and sense of despair
  “When people saw dead trees, or noticed that the quality of the sports ground was deteriorating, it depressed them. There was a sense of lost control, that they no longer had the ability to maintain their garden the way they wanted to” (K21)

- Increased workload, lost income, prolonged health issues
  “…a lot of families had never had to confront an emergency and admit that they weren’t coping, we knew they weren’t coping” (K9).
Meso and exosystem support

- Agribusiness, information and counselling support

“We supported a lot of our commercial farmer members through the drought financially by way of giving them things that they needed and carrying the debt until they could come good”. (K1)

“The group members were mostly women in their 70’s. They saw their native gardens as being part of a network that supported the wider environment, created a refuge for native plants and animals. They created a corridor through Bendigo which isn’t really recognised” (K2).

“We’ve had drought, fire and now flood. Had the lot. It doesn’t get easier having experienced these things before, it just tests your resilience” (FG1)
Macrosystem level

- Difficult to maintain services and build trust
  
  “I didn’t come across these people (small landholders) at work, probably because they’re not networked as much. I don’t think they came in to counselling and we didn’t go out to them” (FG4)

- Lack of community connection
  
  “It was difficult to run meetings because people wouldn’t come on watering night, or they would have to leave early to get home to water, which was affecting people’s lives and careers. How those watering restrictions ran our lives!” (FG3)
Conclusions

• Fire events can rapidly build individual and community resilience to disasters but responsive support networks and services are crucial during and after the event.

• Newcomers need to be identified and supported along with more known vulnerable groups.

• Drought can encourage individual adaptation but does not translate to community resilience.

• Efforts are needed to create community support networks before and during drought periods and focus on wellbeing of town residents as well as farmers.
Questions?