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# Co-constructing bushfire: Trust, Memory and Landscape on a 'Code Red' day

# Outline of Presentation



Photo: Michael Pegg

- background to study
- description of case studies
- preliminary findings
  - synthesis
- future research



# Background to study

Many studies of homeowner response to bushfire, especially in peri-urban areas -- still no adequate explanation of why so few take mitigating actions (Brenkert-Smith 2006)

On 'Code Red' days, residents are advised to leave their homes – about half of Victorian residents plan to do so (OESC 2010)

'Deficit' in community understanding of fire science? **OR....**

People don't misunderstand, but weigh up diverse social, environmental & topographical factors, as well as official communications (McCaffrey 2008)

# Two Case Studies

## Residents of Halls Gap, Victoria

- tourist town in Grampians National Park
- bushfire burned 130 000ha of Park in 2006, but no homes lost in Halls Gap
- 'Code Red' day January 2010
- interviews with residents "in place" during June/July 2010

## Fire scientists, Victoria

- scientists doing bushfire research in Victorian universities and fire agencies
- fire ecology, forestry, psychology, meteorology
- 6 semi-structured, in-depth interviews

Research concerned with practice:

How do all participants understand and use FDRs under 'Code Red' bushfire conditions?

# Case Study 1: Halls Gap, Victoria



# Preliminary Findings: Halls Gap

1 participant left home on 'Code Red' day:

- to a safer house within the township, near swamp, on main road (landscape thinking)
- with friends better than being alone (social thinking)
- 'our forest' may not burn like Mountain Ash (social-ecological thinking)

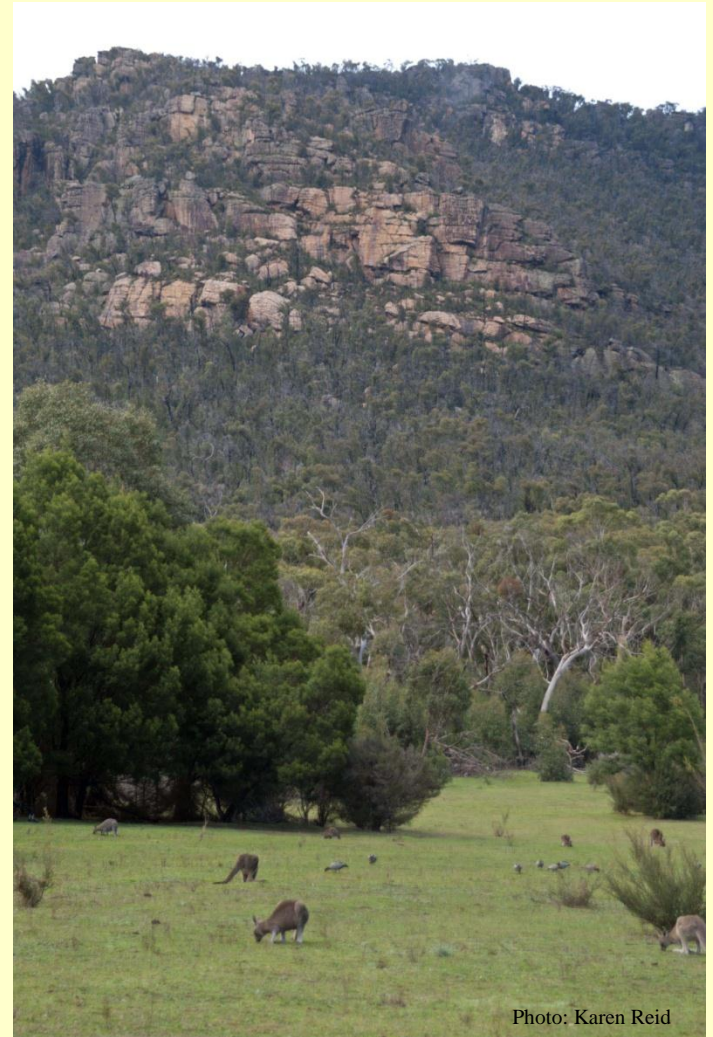


Photo: Karen Reid



# The local bushfire narrative

“Here in Halls Gap we’re actually relatively safe...you might laugh at that but...the town has to be defended at two points which makes it easier to defend”

– Glenda

“...we know in this area here that if a fire is coming from the north-west on a very hot windy day then you must consider evacuating...”

–Peter

## Action in response to 'Code Red' FDR

"I wasn't all that concerned on that Code Red day. Just based on what was happening around me. I wasn't ignorant of the warnings going out, and I was paying attention...but I wasn't panicked to the point where I thought, I've gotta go"

- John



# Trust and Transparency

FDRs a “knee-jerk response”  
governments had to be “seen to  
do something”

Code Red rating didn't match  
local weather observations – just a  
nice hot summer day

lack of local context – decisions  
made “down in Melbourne” by a  
process that is not transparent





# Case Study 2: The expert view

## The usefulness of FDRs

FDRs “intoxicating” in their simplicity, but need to correlate with the landscape

FDR lacks local landscape context:

- FDRs apply differently across landscapes (eg. Mallee very different from East Gippsland)
- FDR not high during 2011 Perth bushfire

# Case Study 2: The expert view


## The usefulness of FDRs

FDR being “stretched” -- FFDI  
inappropriately applied to contexts  
for which it isn't designed

scientific basis of FDR “hidden” from  
public who are meant to respond to  
it – creates a lack of community  
trust -- comes through in Halls Gap  
study







# How do the experts use FDRs on a high risk day?

“...FDI 70 or more,  
probably tend to stay at  
home...that's the limit of  
my use of it, it's just for  
that initial decision...”

– Jasper (assesses bushfire impacts on  
property & business)

Some would leave, some would stay:  
– based on understanding of landscape and  
social factors (McCaffrey 2008)

## Social and ecological memory: contributions from resilience thinking


Ecological memory: a 'toolbox' of the seeds, genes, adaptive capacity to create a system similar to pre-disturbance

(Bengtsson *et. al.* 2003)

Social memory: accumulated experience, management practice, 'rules-in-use' that enable social systems to respond to environmental signals

McIntosh (in Folke *et. al.* 2002)

Fire = physical reality  
Response = social reality



Landscape is the place  
where social and ecological  
systems entwine



# Summary of findings and future directions

- message of FDRs too simple to be meaningful
- FDRs are a trigger to assess and monitor local conditions
- participants (experts and local residents) rely on cues from social and ecological memory, and the landscape when deciding what to do on a high risk day
- research and engagement with communities should incorporate respect for local knowledge and interpretations
- co-constructed meaning of bushfire --  
co-constructed bushfire knowledge

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