

## Primary elements...



### 1. Monkeys in the zoo

- Australian approaches to bushfires and how it compares to the U.S.



### 2. If I ran the zoo...

- How I'd change their (and our) way of managing fire

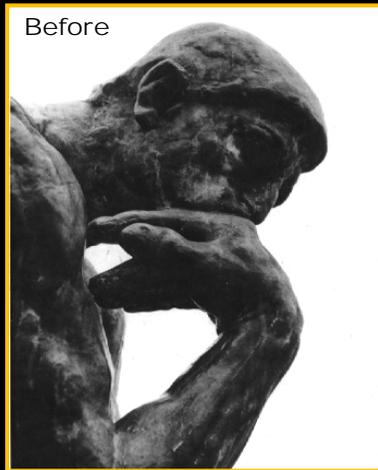


### 3. Zoo's gone wild...

- When bad fires happen to good people

## Challenged my paradigms...

- Leave EARLY or...
- PREPARE, Stay, and Defend



## California dreamin'...

- Build it and they will burn (2003)



304,000 ha burned  
22 Deaths  
4803 Homes lost

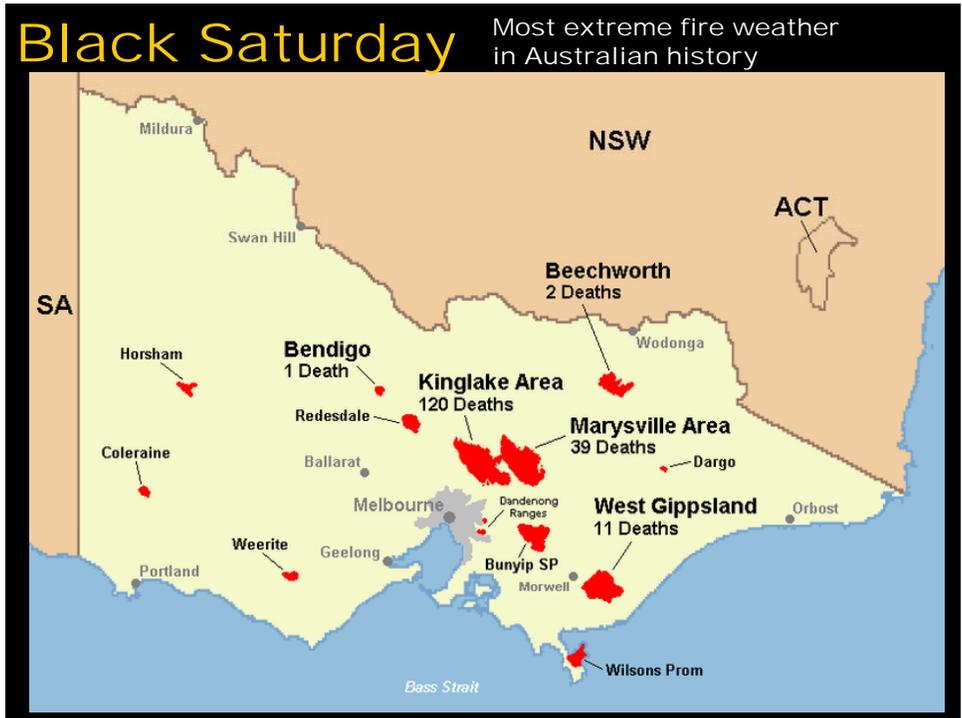
## California dreamin'...

- Build it and they will burn (2007)



## Put another town on the barbie...





## ♪ I've seen fire... I've seen rain... ♪

- More damaging Queensland & New South Wales floods mostly overlooked

The top image is an aerial photograph showing a residential area completely inundated with brown floodwater. The bottom image is a satellite view of a coastal region in Queensland, Australia, showing extensive flooding and a large area of water covering the land. A small inset map in the top left corner of the satellite image shows the location within Australia.

## Better late than never...



## Bushfire CRC Research



Biophysical component



## Fires are necessary, fire disasters are not...

If I ran the (holistic fire management) zoo...



Eucalyptus sprouting, Victoria



## Need holistic approach



Breakdowns at  
all levels

- Before the fire
  - Prevention
  - Mitigation
  - Preparation
- During the fire
  - ~~Response~~
    - Agencies
    - Residents
- After the fire
  - Recovery
    - Biophysical
    - Socioeconomic



## Prevention • Education (passive)

ABC Radio interview

Guidelines for Development in Bushfire Prone Areas of Tasmania

Juvenile Fire Lighter Intervention Program

Helping families solve the problem of child fire lighting

JFLIP  
Juvenile Fire Lighter Intervention Program

## Prevention • Education (active)



Bushfire Blitz, South Australia



Community Fire Safe, South Australia



"Firey" Women, South Australia

## Prevention



Erected AFTER 2009 bushfires



Cause of 2 fires at Cal Poly



- Eliminate ignition sources
  - Power lines
  - Rubbish burning
- Fuels less receptive
  - Roadsides cleared or irrigated
- Civil and criminal liability
  - Arsonist likely safer in jail

• *Appropriate Fuels Management*



A land of extremes...

Stupid bogans wanna  
pave the world, mate!

Dang greens like bushes  
more than people!



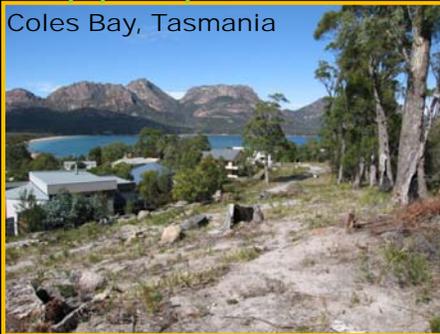
## Head scratcher...

- Greens largely HATED fire
  - (even in fire-dependant ecosystems)



## • *Appropriate Fuels Management*

Coles Bay, Tasmania



- Landscape-level treatments
  - Limits spread to community
  - Aids responders

Snug Tiers, Tasmania



- Irony in Victoria...
  - Deviant lawbreaker later seen as hero
  - "Pyro" fireys blamed for not enough fire
- Does NOTHING for individual structures

## • *Appropriate Fuels Management*

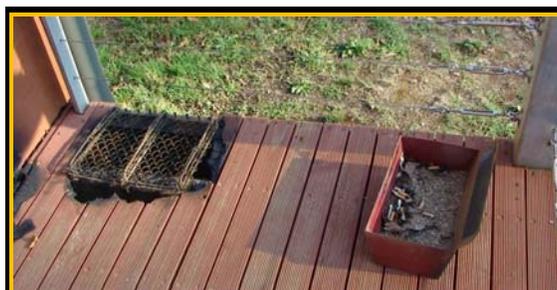
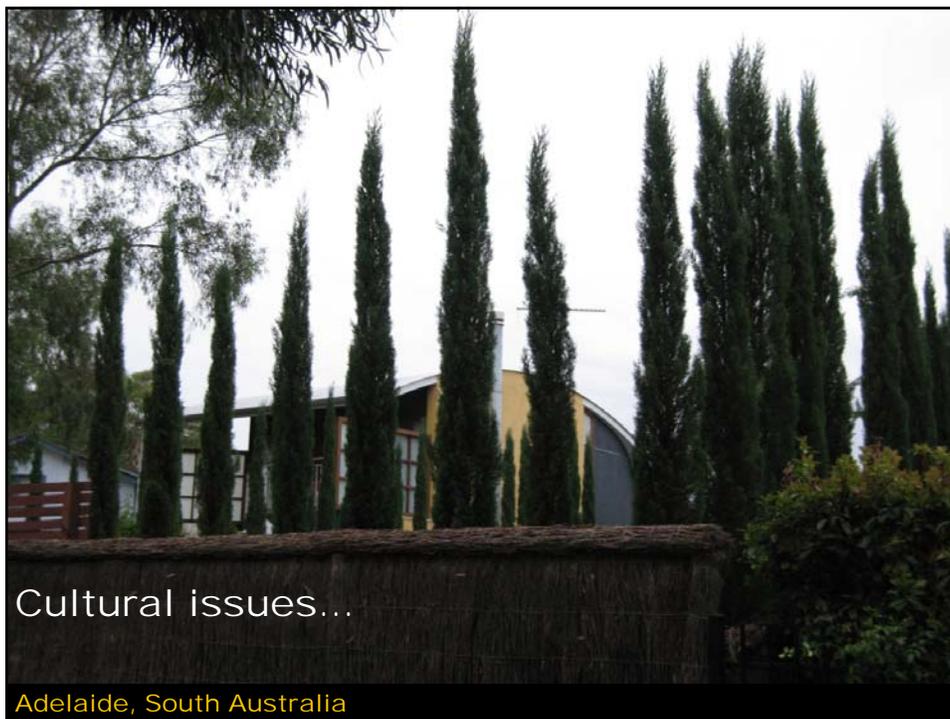


- Landscaping-level more important
  - If you live in the bush, know that it burns



Construction standards

- Radiation and flames (fix via fuels)
- EMBERS!!!



## Construction standards

- Embers
  - Most roofs corrugated iron (with sprinklers)
    - “Mind the gap” not just for Sydney trains
- Be careful of CRC data interpretation

My home in Hobart, Tasmania

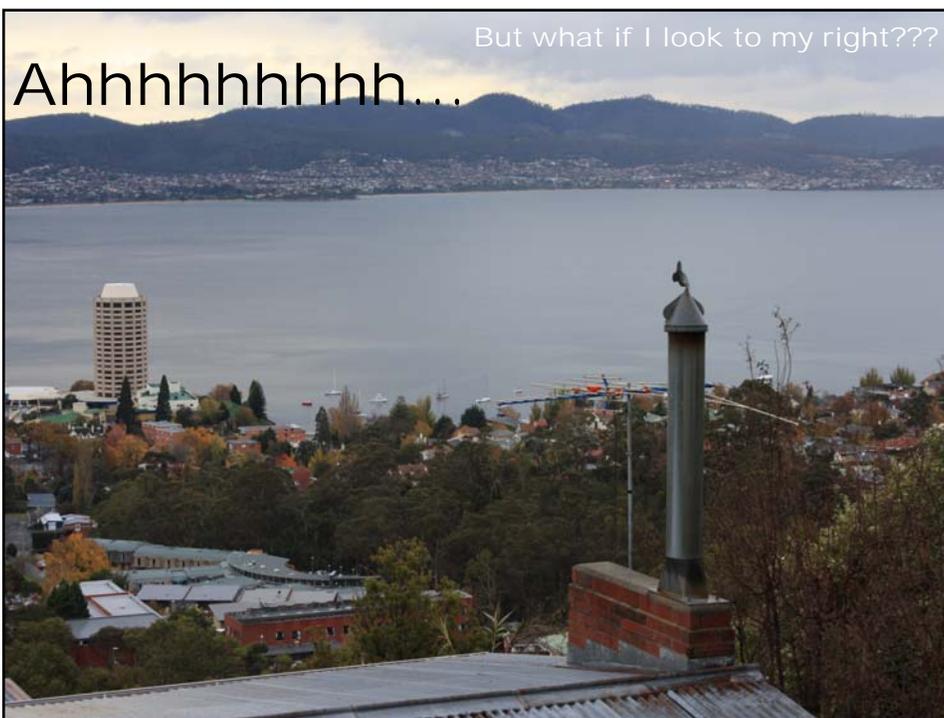


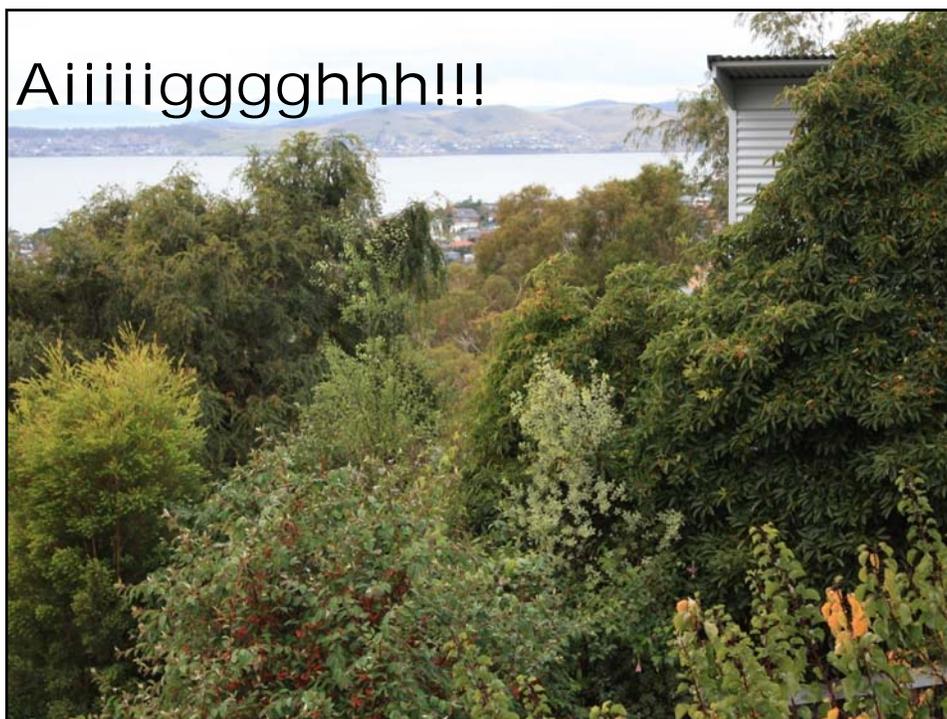
## Sound Land Use Planning

- Tassie way
  - Roads BAD
    - Crazy narrow
    - Crazy winding
    - Crazy scary
  - Home density facilitates structure-to-structure
  - Homes overlook gorges
- 2 fires in last 10 years spook residents
  - (but not enough)
- Why live there?



Roads scary on a good day





**A little delusional of risk...**

Fire Hazzard Free???

Hobart, Tasmania (snow just melted)

Adelaide Hills, South Australia

Adelaide Hills, South Australia

VANTAGE WAY  
NO THROUGH ROAD

COMMUNITY  
FIRE SAFE  
NEIGHBOURHOOD

## Preparation



"Non-combustible" water tanks

- Training
  - Volunteer brigades with few drills
  - Residents *expected* to have bushfire plan
    - Some plain bad
- Infrastructure
  - Water
  - Communications
- Daily hazard
  - They didn't know in Marysville???

## Response



Photo: AFP



Photo: ABC

- Agencies
  - No one in charge
    - CFA fights with Melbourne?
    - DSE lights backfires without CFA knowing?
    - Police act independent of CFA
- No warning
  - Marysville CFA received text 30 minutes before
  - Websites overwhelmed and outdated

- Residents flee to sports oval
- Hero cops lead convoy out
- Some safely spend night in oval

## Response



Marysville, Victoria



Photo: ABC

## Response

- Residents
  - Leave EARLY!!!
  - Many waited to see "just how bad it was going to be"
    - Some unlikely to change
- Common triggers?
  - Roar of fire
  - Ember storm
  - "Parrots started falling out of the sky"



Parrot that left early

- Residents
  - PREPARE, Stay, & Defend **Response**
    - Many prepared for *response* (and needlessly die)
    - How do you prepare for mentally for fire???
    - Suggestion: Decisions based on Fire Index???

Train wins 99.9999% of time



Successful defense by 76-year-old

## Recovery

- Biogeophysical



Clean-up

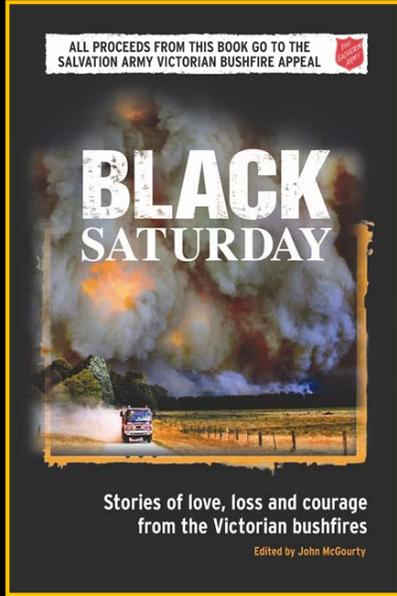


Rain threatens catchments



Rebuilding infrastructure

Recovery • Socioeconomic



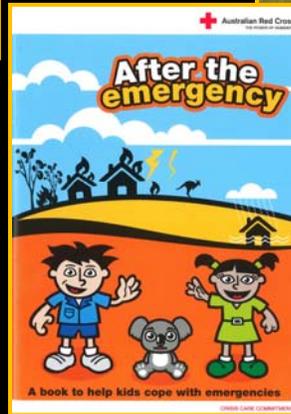
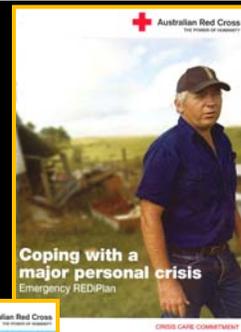
Plenty to help the masses



Recovery • Socioeconomic



Little to help individuals



## Recovery



- Living with "What if" ...

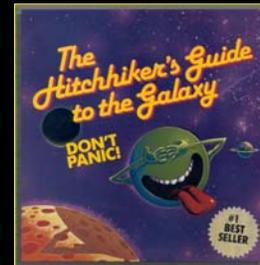
Where there is HOPE, there is LOVE.  
Where there is LOVE, there is LIFE.  
Where there is LIFE, there is ... MARYSVILLE

CFA Captain  
Glen Fiske



Human beings, who are almost unique in having the ability to learn from the experience of others, are also remarkable for their apparent disinclination to do so.

-- Douglas Adams, 1952 - 2001



Hobart, Tasmania 2006



