



bushfire&natural
HAZARDSCRC

HOW DO LIVESTOCK PRODUCERS PERCEIVE 'RISK' DURING NATURAL DISASTERS?



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LIVESTOCK PRODUCERS

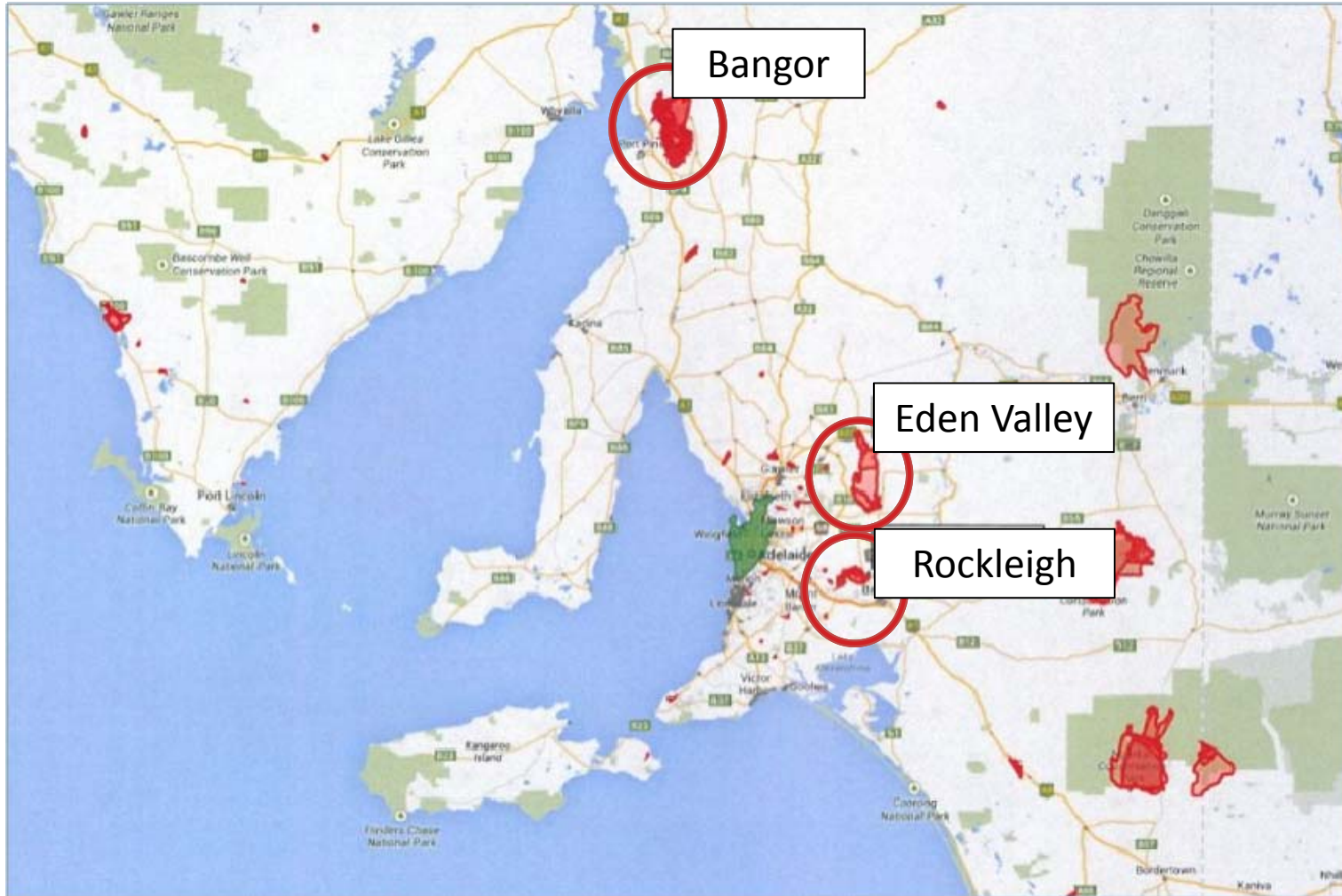
- Livestock producers represent a unique population in that they:
 - Live in remote and isolated locations
 - Highly susceptible to natural disasters
 - Have a strong attachment to, investment in, and responsibility toward all:
 - Persons
 - Property (dwelling, fences, paddocks, equipment)
 - Pets,
 - Livestock
 - Difficult to evacuate their animals
 - Loss of animals and property damage represents a significant financial/economic, & psychological loss.
 - Typically underprepared and underinsured

AIM

- Determine the levels of preparedness, expectations and experiences of Australian livestock producers during the 2014 South Australian bushfires.



LOCATION OF 2014 SA FIRES



SUMMARY OF THE SA JANUARY BUSHFIRES

Location (SA)	Duration (days)*	Size (fire scar)	Livestock losses^	Significant Details
Southern Flinders Ranges (Bangor)	31 (Jan 14- Feb 14)	35,000ha	Cattle: 80 Sheep: 1,800	6 homes lost. Declared contained after 15 days, then reignited
Barossa Valley (Eden Valley)	4 (Jan 17- Jan 20)	25,000ha	Cattle: 0 Sheep: 2,700	4 homes, 12 sheds, 1 car
Murraylands (Rockleigh)	4 (Jan 14- Jan 17)	4,500ha	Cattle: 0 Sheep: 340	1 home lost. 3 rd time under threat in 12 months

* Ignition to declared “contained”. ^Source: PIRSA

BANGOR FIRE



EDEN VALLEY FIRE



ROCKLEIGH FIRE



METHODOLOGY

- **Semi-structured interviews** were conducted with land owners in and around the fire scar of all three sites
- Interview protocol similar to those used in other 'task forces'
- Teams consisted of an experienced researcher and a CFS community engagement officer (in uniform and marked vehicle)
- Researcher conducted interview, CFS completed a corresponding questionnaire
- Research was advertised 2 weeks before interviews
- Field teams were assigned to designated areas with detailed maps, ensuring thorough coverage and no overlap.
- Participants were interviewed on their properties, either at their house or a nearby part of the property between 0900 and 1700 hours.
- Interviews conducted May 2014 (12 weeks after fires)

METHODOLOGY

- During the interviews, respondents were asked about:
 - their demographic characteristics;
 - Perception of the local community
 - their awareness of bushfire risk and previous experience;
 - their preparations for and knowledge of bushfire behaviour;
 - both formal (written) and informal (mental) bushfire planning
 - their awareness of official and informal warnings
 - communication channels used to send and receive information relevant to bushfire safety;
- Participants were then asked to 'walk' [the researcher] through what happened on the day(s) of the fire, detailing what they had done, and why..
- A total of 171 interviews were conducted and audio recorded.
 - 46 included livestock producer (more than 200 sheep, or 20 cattle)

DEMOGRAPHICS

Fire	Interviews
Bangor	20
Eden Valley	14
Rockleigh	12
Total	46

Gender	
Male	46%
Female	54%

Age	
18-40	14%
41-50	17%
51-60	26%
61-70	24%
70+	19%

Past experience with bushfires	
Yes	82%
No	18%

Member of the CFS	
Yes	23%
Previous	20%
No	57%

Participation in community bushfire safety activities	
Yes	27%
No	73%

DEMOGRAPHICS

Type of Property	
Residential Block*	2%
House and large lifestyle block	7%
Farm or agriculture business	91%

* Farm located nearby

Property in the fire scar?	
Yes	60%
Near edge	21%
No	19%

Years resided at the bushfire affected addresses	
Less than 10	20%
11-30	39%
31-50	18%
50+	23%

INSURANCE

Type of cover	Level of insurance		
	Fully covered	Under insured	No insurance
House	85%	7%	7%
Contents	84%	9%	7%
Machinery/equipment	68%	16%	16%
Livestock, pets, other animals	49%	5%	46%

LEVEL OF CONCERN ABOUT BUSHFIRES

Thought home/family was at risk (prior to 2014 fires)	
Yes	No
42%	54%

	Level of concern				
	1 Not at all	2	3	4	5 Extremely
Prior to 2014 fire	22%	15%	30%	22%	9%
During 2014 fire	15%	20%	24%	24%	15%

BUSHFIRE ACTION PLAN

	Yes (written)	Yes (mental)	No
Bushfire action plan in place	4%	69%	27%

Was the Bushfire plan...	Yes	No
Discussed	61%	39%
Practised	13%	87%
Inclusive of pets	61%	39%
Inclusive of a backup plan	33%	67%
Derived from CFS material	24%	76%

BUSHFIRE ACTION PLAN: WHAT HAPPENED?

What was the Bushfire plan in relevance to the 2014 fires	Prior
Everyone stay and defend	39%
Wait and see how bad it is before deciding	9%
Some people leave early, other stay and defend	16%
Whole household leaves	16%
No concrete plan	20%

BUSHFIRE ACTION PLAN: WHAT HAPPENED?

What was the Bushfire plan in relevance to the 2014 fires	Prior	Initially
Everyone stay and defend	39%	50%
Wait and see how bad it is before deciding	9%	13%
Some people leave early, other stay and defend	16%	20%
Whole household leaves	16%	3%
No concrete plan	20%	15%

BUSHFIRE ACTION PLAN: WHAT HAPPENED?

What was the Bushfire plan in relevance to the 2014 fires	Prior	Initially	Ultimately
Everyone stay and defend	39%	50%	40%
Wait and see how bad it is before deciding	9%	13%	14%
Some people leave early, other stay and defend	16%	20%	31%
Whole household leaves	16%	3%	14%
No concrete plan	20%	15%	0%

WHAT HAPPENED?

Fire damage (householder assessment)	
No damage/loss	16%
Fire threatened, no damage	20%
Minor damage	38%
Major damage	22%
House destroyed	2%

Bushfires kill or injure any pets or livestock	
Yes	No
36%	64%

WOULD THEY CHANGE THEIR PLAN?

As a result of the 2014 fire, have you...

	Yes	No
Changed your Bushfire plan	27%	75%
Altered your original Bushfire plan	57%	43%

FACTORS INFLUENCING RISK PERCEPTION

- Many prepare property early against bushfires as a routine behaviour, but is it enough?
- Mostly 'mental' plans based on 'common sense' not on materials available to them
- Experience of fires, local knowledge, and preparations lead to:
 - low levels of concern
 - high self-efficacy
- Unpredictability of fires
- Leave early not practical (its always a fire warning day)
- More anxiety leaving and not knowing, than staying
- Insurance (more likely to perform risky behaviour if uninsured)
- Sheep behaviour (ability to protect themselves)
- Luck!

CHALLENGES & SOLUTIONS TO MANAGING LIVESTOCK PRODUCERS

- How do you manage a population that doesn't have plans, don't think fires are dangerous, and already think they are doing enough to prepare for bushfires?
- Knowing how they prepare, and act will aid development of strategies to assist them
 - No point continuing on the same path!
- Only offer financial assistance for those with a registered bushfire plan (or compulsory attendance to training)
- Target 'new' and inexperienced farmers to the area
- Community 'champions' (respected community members)
 - Foster community awareness and plans
 - Inform others of dangers of fires
- Don't rely on emergency services
- Encourage a plan b!
- Networks for assisting in the recovery phase (vet care, land sharing, fodder donations, community/neighbour debrief)

QUESTIONS?

