

COMMUNITY MEMBERS' RESPONSES TO BUSHFIRE THREAT

AN ANALYSIS OF FIVE YEARS OF POST-BUSHFIRE INTERVIEWS

Jim McLennan

School of Psychological Science, La Trobe University, Victoria, Australia & Bushfire Cooperative
Research Centre

SOURCE DATA: BLACK SATURDAY AND SINCE – BCRC INTERVIEWS WITH RESIDENTS IMPACTED BY BUSHFIRES

| Fires | Predicted FDR | Interviews |
|--------------------------------|---------------------|--------------------|
| 2009, Victoria, Black Saturday | Extreme* | 496/457 |
| 2011, WA, Lake Clifton | High | 40/36 |
| 2011, WA, Perth Hills | High | 395/361 |
| 2013, Tasmania | Catastrophic* | 245/217 |
| 2013, Jan, NSW | Extreme | 238/212 |
| 2013, Oct, NSW | Very High - Extreme | 194/150 |
| 2014, WA, Mundaring | Extreme | 91/80 |
| TOTAL | [*Code Red] | 1,699/1,513 |

PERCENTAGE WHO REPORTED NON-ZERO BEFORE-FIRE PERCEIVED RISK

| Fires | % Reporting Pre-fire perceived risk |
|-------------------------------------|-------------------------------------|
| 2009, Feb, Victoria, Black Saturday | 89% |
| 2011, Jan, WA, Lake Clifton | 93% |
| 2011, Jan, WA, Perth Hills | 79% |
| 2013, Jan, Tasmania | 92% |
| 2013, Jan, NSW | 85% |
| 2013, Oct, NSW | 67% |
| 2014, Jan, WA, Mundaring | 91% |
| UNWEIGHTED AVERAGE | 85% |

PERCENTAGE REPORTING A BEFORE-FIRE BUSHFIRE PLAN TO LEAVE OR TO STAY & DEFEND

| Fires | % Before-fire Leave/Stay Plan | % Written plan |
|--------------------------------|-------------------------------|----------------|
| 2009, Victoria, Black Saturday | 72% | 2% |
| 2011, WA, Lake Clifton | 75% | 2.5% |
| 2011, WA, Perth Hills | 52% | nk |
| 2013, Tasmania | 73% | 4% |
| 2013, Jan, NSW | 63% | 9% |
| 2013, Oct, NSW | 54% | 7% |
| 2014, WA, Mundaring | 74% | 8% |
| UNWEIGHTED AVERAGE | 66% | 5.4% |

PRE-FIRE PLAN/INTENTION

| Fires | Leave | Stay | Wait | None |
|--------------------------------|------------|------------|------------|------------|
| 2009, Victoria, Black Saturday | 24% | 48% | 6% | 22% |
| 2011, WA, Lake Clifton | 65% | 10% | 5% | 20% |
| 2011, WA, Perth Hills | 32% | 20% | 20% | 28% |
| 2013, Tasmania | 47% | 26% | 15% | 12% |
| 2013, Jan, NSW | 29% | 34% | 29% | 8% |
| 2013, Oct, NSW | 26% | 28% | 14% | 32% |
| 2014, WA, Mundaring | 55% | 20% | 7% | 19% |
| U-A | 40% | 26% | 14% | 20% |

- **LEAVE – DANGER POSED TO SELF/FAMILY**
- **STAY & DEFEND – MOST: PROTECT VALUED ASSETS, ACCEPT SOME LEVEL OF RISK (FEW: EGRESS UNDER THREAT TOO DANGEROUS)**
- **WAIT & SEE – PERCEIVED RISK LOW; BELIEVE WAITING DOES NOT ADD TO RISK; LEAVING UNNECESSARILY AND SURVIVING SERIOUS BUSHFIRE THREAT BOTH UNATTRACTIVE; HOPE FOR THE BEST THAT THE FIRE DOES NOT THREATEN; AVOID MAKING A DECISION!**

PRE-FIRE PLAN X % WITH A HIGH LEVEL OF PREPARATION TO IMPLEMENT THAT PLAN

| Fires | Leave | Stay |
|--------------------------------|-------|------|
| 2009, Victoria, Black Saturday | 8% | 48% |
| 2011, WA, Lake Clifton | 6% | 6% |
| 2011, WA, Perth Hills | nk | nk |
| 2013, Tasmania | nk | nk |
| 2013, Jan, NSW | nk | nk |
| 2013, Oct, NSW | 27% | 17% |
| 2014, WA, Mundaring | 24% | 70% |
| U-A | 16% | 35% |

PERCENTAGE WHO LEFT ON THE BASIS OF PREDICTED FIRE DANGER (BEFORE ANY FIRE)

| Fires | Predicted FDR | % Left Before Fire |
|--------------------------------|--------------------|--------------------|
| 2009, Victoria, Black Saturday | Extreme* | 2% |
| 2011, WA, Lake Clifton | High | 0 |
| 2011, WA, Perth Hills | High | 0 |
| 2013, Tasmania | Catastrophic* | 1% |
| 2013, Jan, NSW | Extreme | 10% |
| 2013, Oct, NSW | Very H. - Extreme | 1% |
| 2014, WA, Mundaring | Extreme | 0 |
| U-A/Median | [*Code Red] | 2% /1% |

FIRST INDICATIONS OF A BUSHFIRE THREAT?

- 1. CUES FROM THE ENVIRONMENT SIGHT/SMELL OF SMOKE.**
- 2. CALLS FROM NEIGHBOURS/FRIENDS/FAMILY.**
- 3. (MOST RECENTLY) PHONE ALERTS**

FIRST REACTIONS?

- 1. WAIT**
- 2. ACTIVELY TRY TO FIND OUT MORE: AGENCY WEB SITE; PHONE NEIGHBOURS/FRIENDS/FAMILY; (MOST RECENTLY: AGENCY FACEBOOK); RADIO.**

BLACK SATURDAY: 18% OF RESIDENTS INTERVIEWED SAID THEY COMPROMISED THEIR SAFETY AS A RESULT OF FEELINGS OF ANXIETY/PANIC. MOST: LEAVING AT THE LAST MOMENT

STRESS DEGRADES:

- 1. PERCEPTUAL/MOTOR SKILLS: TUNNEL-VISION/CLUMSINESS.**
- 2. ATTENTION CONTROL: DISTRACTION/CONCENTRATION.**
- 3. MEMORY: KEEPING THINGS IN MIND/REMEMBERING**
- 4. JUDGEMENT & DECISION MAKING: THINKING THINGS THROUGH.**

HOME ON THE DAY: PERCENTAGE IMPLEMENTATION OF PRE-FIRE PLAN

| Fires | Leave - Left | Stay - Stayed |
|--------------------------------|---------------------|----------------------|
| 2009, Victoria, Black Saturday | 89% | 80% |
| 2011, WA, Lake Clifton | 100% | 75% |
| 2011, WA, Perth Hills | nk | nk |
| 2013, Tasmania | nk | nk |
| 2013, Jan, NSW | nk | nk |
| 2013, Oct, NSW | 89% | 90% |
| 2014, WA, Mundaring | 91% | 90% |
| | | |

DIFFERENT 'WORLDS', DIFFERENT PRIORITIES – Community bushfire safety professionals *versus* Householders →

HOW BUSHFIRE INDUSTRY PERSONNEL SEE THE WORLD



HOW THE AVERAGE HOUSEHOLDER SEES THE WORLD

**JOB; FAMILY; TEENAGERS; ELDERLY
PARENTS; MORTGAGE; KIDS'
SCHOOL FEES; COUNCIL RATES;
SISTER'S DIVORCE; HIGH BLOOD
PRESSURE; ESSENDON FOOTBALL
CLUB SCANDAL; CAR; GARDEN;
WIFE'S HEALTH; DOG'S VET BILL;
RETIREMENT....**

?→ BUSHFIRE THREAT?←?

'TAKE-HOMES' ABOUT RESIDENTS OF AT-RISK COMMUNITIES IMPACTED BY SERIOUS FIRES:

1. APPRECIABLE NUMBER: PERCEIVED BUSHFIRE RISK = **ZERO** (~15%?)
2. APPRECIABLE NUMBER: **NO** BUSHFIRE PLAN (~20%?)
3. **FEW** HAVE A WRITTEN PLAN (~5.4%?)
4. OF THOSE WITH A BUSHFIRE PLAN, **A MINORITY** ARE WELL PREPARED TO IMPLEMENT THAT PLAN: TO LEAVE ~16%?; TO STAY & DEFEND ~35%?
5. **ALMOST NOBODY** LEAVES SIMPLY ON THE BASIS OF PREDICTED FIRE DANGER WEATHER: ~2%?
6. INITIAL RESPONSE: WAIT - SEARCH ACTIVELY FOR INFORMATION
7. APPRECIABLE NUMBER: SAFETY WILL BE COMPROMISED BY PANIC/ANXIETY UNDER IMMINENT SERIOUS THREAT.