

# National Fire Danger Rating and Multi Hazard Warning System Social Research Research Report | Northern Territory Stages 1 to 3



November 2019

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# Scope of Engagement

# Project background and objectives

The key objective of the Social Research Project for a New National Fire Danger Ratings System (NFDRS) and Warnings System is to provide sound evidence for the development of consistent national risk and warning systems to **communicate bushfire risk and subsequently increase community safety and promote desired protective behaviours**.

This involves seeking the knowledge, views and understanding of the public themselves, rather than emergency services personnel. Specifically, the aims of this project are to identify the features of communication tools for:

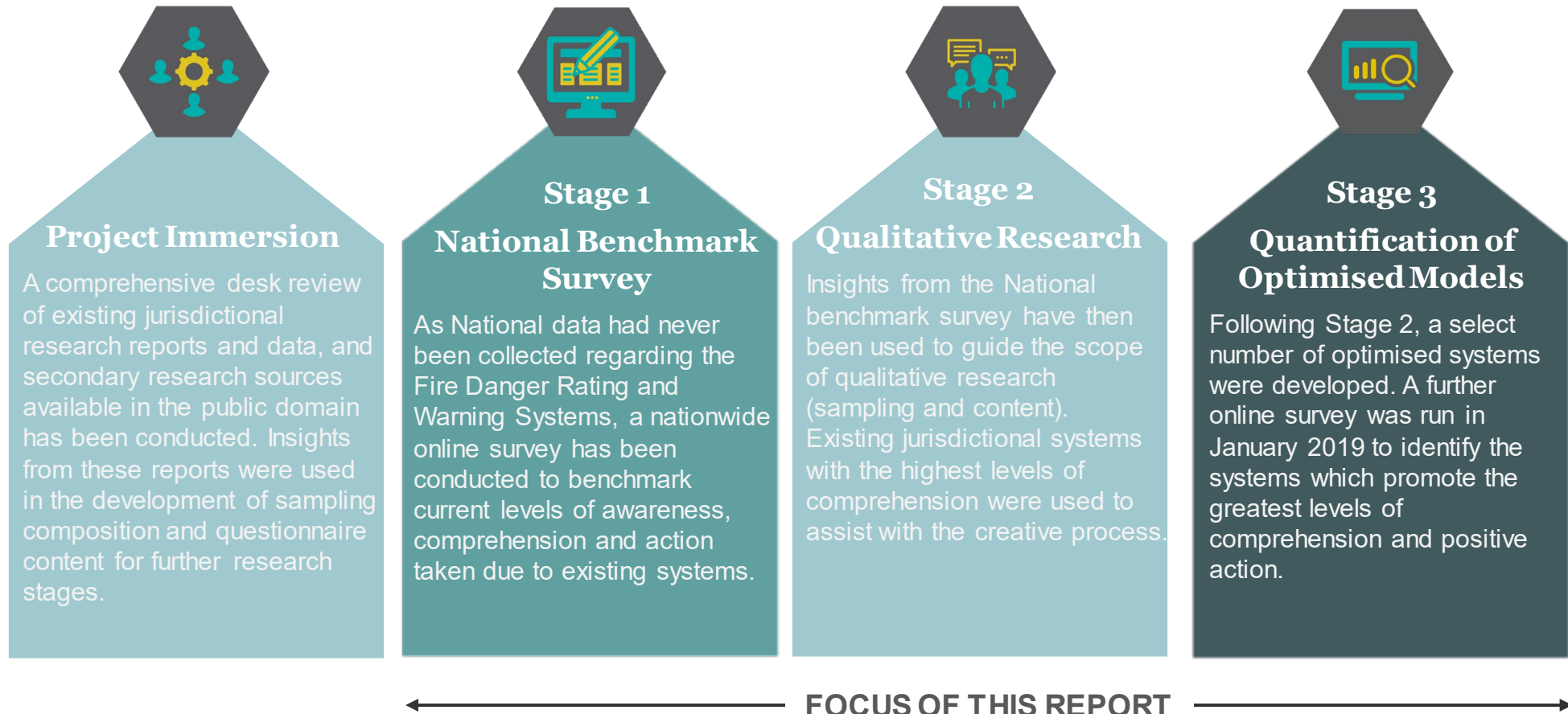
- the New Fire Danger Rating System, and
- the warning systems for fire, cyclone, flood, extreme weather and extreme heat that would best facilitate community understanding of fire and hazard risk and appropriate protective action.

**Full research reports have been developed for each research stage\* with analysis and findings presented at a national level. This report focuses on research findings specific to the Northern Territory, with comparisons to national averages where relevant.**



<sup>4</sup>\*See page seven for a summary of research stages

# A four stage methodology was developed, with this report summarising findings from Stages 1 to 3



Note: The project Steering Group (see appendix) provided input to ensure the collaborative development of questionnaires and discussion guides used in research Stages 1 through 3.

# Sample summary



## Stage 1

### National Benchmark Survey

Fieldwork conducted from 14 to 27 September 2018.

A sample of **n=98** was achieved in Northern Territory providing a maximum margin of error of  $\pm 9.90\%$  at 95% confidence.

	n=	Weighted %
Metro	75	77%
Regional	23	23%
18 – 34 years	25	26%
35 – 49 years	27	33%
50 – 64 years	30	29%
65+ years	16	12%
Male	42	52%
Female	56	48%
<b>Total</b>	<b>98</b>	<b>100%</b>

Data has been weighted by age and gender to ensure representativeness of the national and state populations.



## Stage 2

### Qualitative Research

Fieldwork conducted from 15 to 19 October 2018.

To maximise engagement and participation, a cash incentive between \$80 and \$100 was provided to participants of focus groups.

Location	Date	Attendance
Darwin	15-Oct 2018	7
Katherine	16-Oct 2018	4
Alice Springs	19-Oct 2018	8



## Stage 3

### Quantification of Optimised Models

Fieldwork conducted from 24 May and 9 June 2019.

A sample of **n=100** was achieved in Northern Territory providing a maximum margin of error of  $\pm 9.80\%$  at 95% confidence.

	n=	Weighted %
Metro	79	79%
Regional	21	21%
18 – 34 years	29	38%
35 – 49 years	31	30%
50 – 64 years	84	88%
65+ years	16	12%
Male	48	52%
Female	52	48%
<b>Total</b>	<b>100</b>	<b>100%</b>

Data has been weighted by age and gender to ensure representativeness of the national and state populations.

# Key Figures Snapshot

# Key figures snapshot | Fire Danger Ratings

## Fire Danger Ratings | Stage 1

Awareness and understanding of the Fire Danger Rating System aligns with the national average. There is room to improve comprehension of desired actions at each Fire Danger Rating. Four in ten don't feel the current system is relevant, and just three in ten are using the system.

	National	Northern Territory	
Unprompted awareness	72%	75%	See page 12
Prompted awareness	93%	96%	
Understanding of the FDRS purpose:			
Predicts how likely a fire is to occur	52%	47%	See page 12
Predicts how dangerous a fire could be if it did occur	39%	43%	
Don't know	9%	9%	
Understanding of required actions by rating:			
Low-Moderate to High	56%	53%	See page 14
Very High to Severe	24%	23%	
Extreme	33%	32%	
Catastrophic/Code Red	72%	65%	
Feel the Fire Danger Rating System is relevant		61%	See page 15
Currently use the Fire Danger Rating System	37%	29%	

## Optimised Fire Danger Rating | Stage 3

Familiarity with the current Fire Danger Rating System is driving an optimised and simplified version of the existing system.

Shape	National	Northern Territory	
Semi – Circle	63%	66%	See page 25
Triangle	26%	26%	
Rectangle	10%	8%	
Colour Set			
Green, yellow, orange, red	56%	57%	See page 25
Green, orange, red, black	24%	19%	
Yellow, orange, red, black	20%	24%	
First 3 Levels			
Low, moderate, high	59%	60%	See page 26
Low, high, very high	41%	40%	
Top Level   Total Preference			
Extreme	65%	71%	See page 26
Severe	51%	65%↑	
Catastrophic	50%	55%	
Code Red	31%	18%↓	
Disastrous	29%	23%	
Major	22%	23%	
Maximum	19%	18%	
Code Black	17%	8%↓	
Red Flag	16%	19%	



# Key figures snapshot | Warning Systems

## Warning Systems | Stage 1






Prompted awareness of various Warning Systems sits between 41% (bushfire) and 87% (cyclones). Awareness and impact of current warnings systems is significantly higher for cyclones compared to national averages.

Bushfire	National	Northern Territory	
Prompted awareness	44%	41%	See page 16
Have taken action in past due to warning^	49%	44%	
Cyclone			
Prompted awareness	41%	87%↑	See page 16
Have taken action in past due to warning^	58%	96%↑	
Flood			
Prompted awareness	45%	61%↑	See page 16
Have taken action in past due to warning^	35%	34%	
Extreme Weather			
Prompted awareness	56%	86%↑	See page 18
Have taken action in past due to warning^	52%	59%	
Extreme Heat			
Prompted awareness	55%	62%	See page 18
Have taken action in past due to warning^	56%	60%	

↑↓ Significant difference to National figures at 95% confidence

## Optimised Multi Hazard Warning System | Stage 3

The proposed visual design for a Multi- Hazard Warning System is clearer than the accompanying warning names.

Shape		National	Northern Territory	
Triangle		58%	58%	See page 34
Diamond		42%	42%	
Colour Set				
Yellow, orange, red		35%	39%	See page 35
Yellow red, black		36%	39%	
Blue, yellow, red		29%	22%	
Icon Type				
Hazard specific icon that visually increases in severity as warning type increases		69%	79%↑	See page 34
Action icons (e.g. information 'i')		19%	16%	
Consistent hazard specific icons		12%	5%↓	

There is no clear preference for most effective names for level 1 and 2 warnings. See page 36 for further details.

## Level to indicate danger has lessened

Reduced threat	47%	49%	See page 37
Reduced risk	33%	34%	
All clear	20%	16%	

# Awareness and Understanding of Current Systems

Topline insights from Stages 1 and 2

# Cyclones and floods are front of mind for many across the Territory

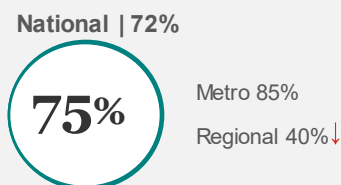
Though these hazards are recognised to hold personal risk, there is a perception that they are a way of life in the Northern Territory. Similarly while other hazards such as extreme weather, heat and bushfire are recognised to occur, they are thought to pose less of a threat to life and property.

<b>Darwin</b>	<p>Cyclones, floods and tidal surges are top of mind with many affecting the community in recent times (e.g. Cyclone Marcus, 2018). Of all natural hazards, these are considered of highest risk and concern due to frequency of occurrence and potential impact to life and property.</p> <p>However, there was a perception that cyclones are often a threat but rarely impact, thus breeding complacency among participants.</p> <p>While bushfires are recalled, they are thought to pose less of a threat to property and life, with incidents often occurring outside the city area.</p>
<b>Katherine</b>	<p>Floods, bushfire, and extreme weather from the 'backend of a cyclone', are top of mind and cause the greatest concern for participants.</p> <p>While perceived as a core risk, floods were considered inevitable and a way of life living in Katherine, with many recalling times of previous flooding. Rather, concerns relating to floods are associated with other impacts such as mosquito outbreaks.</p>
<b>Alice Springs</b>	<p>Floods, bushfires and dust storms are the core hazards that are top of mind for participants in Alice Springs. Many recalled previous experience with the floods of 1986 and 1988, along with minor flooding more recently.</p> <p>While some had personal experience with floods and bushfires, perceptions of risk were limited due to their infrequent occurrence.</p> <p>While participants didn't consider extreme heat to be a threat, rather 'a way of life in Alice', they did recognise that it poses a risk for tourists visiting the area. Many recalled experiences of negative tourist behaviour during times of extreme temperatures (e.g. walking Kings Canyon without water during summer).</p>

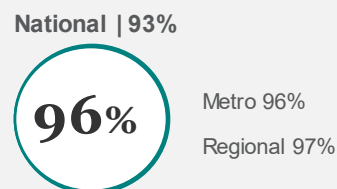
# Although awareness of the FDRS is strong, understanding of its purpose remains limited

There are no significant differences in awareness and understanding of the FDRS by metro or regional areas.

## Unprompted Awareness



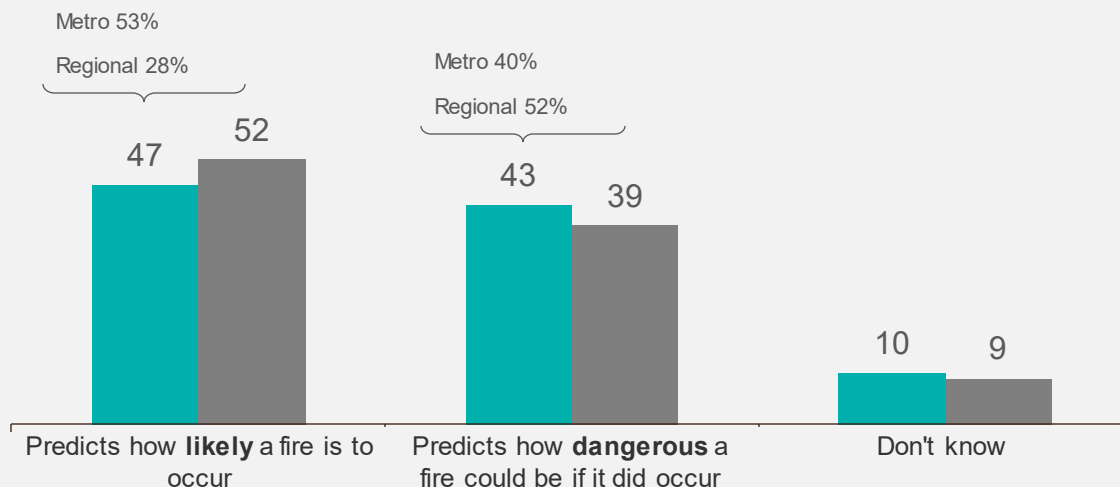
## Prompted Awareness



% of Northern Territory residents

## Understanding of FDRS purpose

■ Northern Territory ■ National



% of Northern Territory residents

NT n=98 | National 5,430

Q13a. Thinking about bushfires, do you recall any messaging from [jurisdiction] about days of increased bushfire risk?

Q13c. Have you seen or heard of these fire danger rating before today?

Q13b. Which of the following statements best describes what the Fire Danger Rating is?

↑↓ Significant difference to National figures at 95% confidence

# Awareness of the Fire Danger Rating was limited to road signage

Due to limited awareness, knowledge of the system and the desired behavioral outcomes was also limited.

## Darwin

Awareness was limited with most referring to it as the 'semi-circle sign on the side of the road'.

As a result, knowledge of the system is limited beyond recalling the 'Catastrophic' level.

The majority of participants reported not knowing what to do at each level, but assumed no action was required at the lowest level, while the top level meant no fires were to be lit and a total fire ban was in place.

## Katherine

Unprompted awareness of the FDR is limited, however once prompted most participants recalled the signs on the side of the road.

Beyond this, knowledge of the number of levels, colours (beyond red being for a high level) and the desired behavioural outcomes of each level is limited.

Many recall signs that are faded (e.g. the red colouring had turned to pink) and poorly maintained (e.g. the indicator had been removed) which leads to perceptions of unreliability and mis-use

## Alice Springs

Recall of the FDR is limited, with only a minority (2) recalling the system. While the majority are aware of the system once prompted, this is limited to road signage.

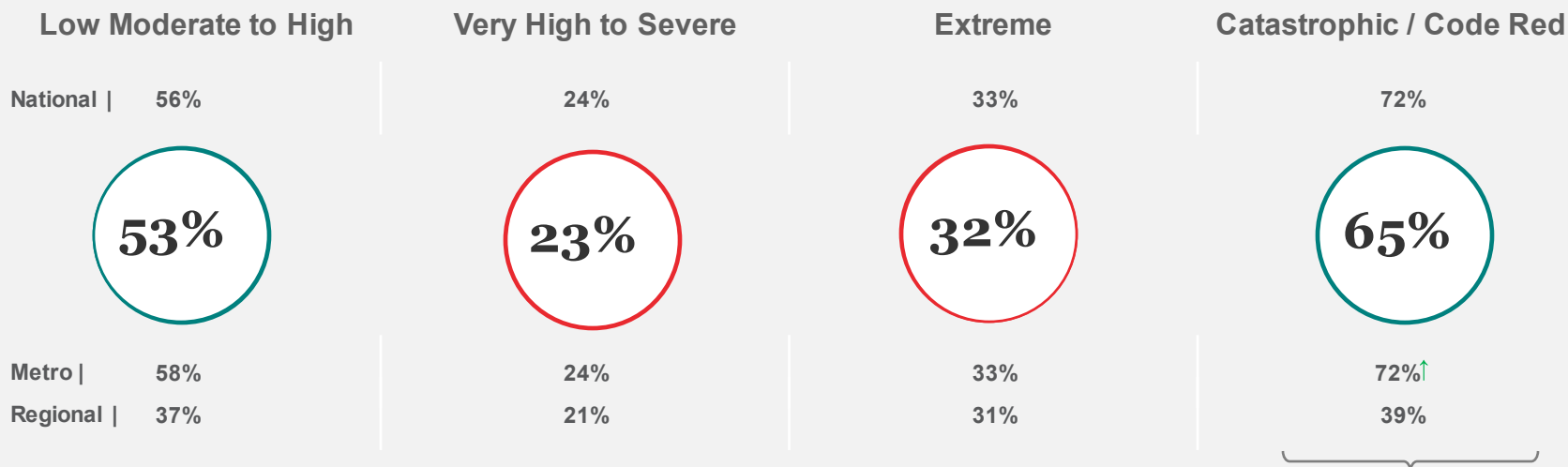
Knowledge and use of the system is limited to an assumption of total fire bans being in place once it's at a High rating.

Most participants feel the signs rarely change, which leads to perceptions of unreliability; this perception also bred complacency among participants.

# There is confusion surrounding the required behaviours for each FDR

The limited ability to correctly identify required actions suggests limited understanding of how the community should respond to the FDRs.

## % of NT residents who understand the correct protective actions at a given Fire Danger Rating



% of Northern Territory residents

More than a quarter of residents are unable to identify the required behaviour even at the most dangerous level.

NT n=98 | National 5,430

Q17. Which of these actions do you believe is required when the fire danger rating is ...?

↑ Significant difference to National figures at 95% confidence

# The majority recognise the FDRS as relevant, but few are using the system

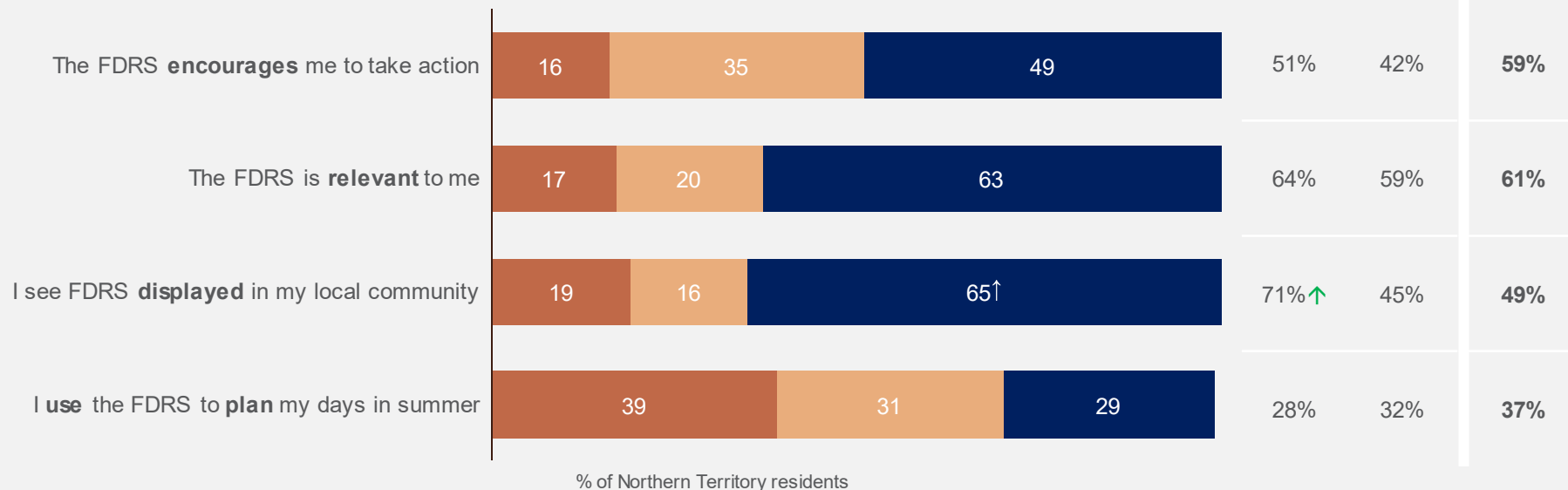
This suggests the current FDRS is not engaging enough to motivate action, which could be driven by comprehension issues as demonstrated by an inability to correctly identify required behaviours. Recognition of the FDRS being displayed in the local community is higher among metropolitan residents.

## NT | Fire Danger Rating System Sentiment

% Agree and strongly agree

■ Total Disagree ■ Neither agree nor disagree ■ Total Agree

NT Metro NT Regional\* National



NT Metro n=75 | NT regional n=23\* | National 5,430

Q13d. Thinking about the Fire Danger Rating System (FDRS) shown, how strongly do you agree or disagree with the following statements?

↑↓ Significant difference to between metro and regional figures at 95% confidence

↑↓ Significant difference to National figures at 95% confidence

\*Caution: results indicative only due to small sample size

# Awareness of cyclone and flood warnings are significantly higher in the Northern Territory than the national average

## Bushfire Warnings Prompted Awareness

National | 44%

**41%**

Metro 46%

Regional 23%

Increases to 49% for those who have had a personal experience with a bushfire.

### Have Taken Action in Past (%)

*Those who have been exposed to a bushfire*

National | 49%

**44%**

## Cyclone Warnings Prompted Awareness

National | 41%

**87%** ↑

Metro 95%

Regional 61%

Increases to 98% for those who have had a personal experience with a cyclone.

### Have Taken Action in Past (%)

*Those who have been exposed to a cyclone*

National | 58%

**96%** ↑

## Flood Warning Prompted Awareness

National | 45%

**61%** ↑

Metro 62%

Regional 58%

Increases to 81% for those who have had a personal experience with a flood.

### Have Taken Action in Past (%)

*Those who have been exposed to a flood*

National | 35%

**34%**

% of Northern Territory residents

NT n=98 | National 5,430

Q19. Have you seen or heard of these alerts before today?

Q26. When a cyclone threatens, community alerts and/or warnings are issued. The alert/warning level changes to reflect the increasing risk to your life and advises what you need to do before, during and after a cyclone. Have you seen or heard of these alerts?

Q30. When there is danger of flooding, a flood alert and/or warning may be issued to the community. Have you seen or heard of this warning before today?

Q21/27/32. Have you taken any action in the past after seeing, hearing or receiving a bushfire/cyclone/flood alert and/or warning?

↑ Significant difference to National figures at 95% confidence



# The majority are able to identify the required actions for each cyclone warning level

Ability to identify the required actions for flood warnings is also higher among participants in the Northern Territory, potentially due to higher reported exposure.

Understanding of required behaviour within Bushfire Warnings			Understanding of required behaviour within Cyclone Warnings			Understanding of required behaviour within Flood Warnings		
	National	NT		National <sup>^</sup>	NT		National*	NT
<b>Advice</b>	56%	<b>63%</b>	<b>Category 1</b>	55%	<b>77%↑</b>	<b>Minor flooding</b>	52%	<b>64%↑</b>
<b>Watch and Act</b>	53%	<b>68%↑</b>	<b>Category 2</b>	49%	<b>61%↑</b>	<b>Moderate flooding</b>	47%	<b>57%</b>
<b>Emergency Warning</b>	57%	<b>67%↑</b>	<b>Category 3</b>	48%	<b>62%↑</b>	<b>Major flooding</b>	57%	<b>60%</b>
			<b>Category 4</b>	48%	<b>66%↑</b>	<b>Flood watch</b>	36%	<b>46%↑</b>
			<b>Category 5</b>	60%	<b>83%↑</b>	<b>Flood warning</b>	22%	<b>29%</b>
			<sup>^</sup> Excluding WA and VIC as alternate system used.			<sup>*</sup> Excluding VIC, SA AND Tas as alternate system used.		

% of Northern Territory residents

NT n=98 | National 5,430  
Q25/Q29/Q31. Which of these actions do you believe is required when the alert level is ...?

↑ Significant difference to National figures at 95% confidence

# Awareness of extreme weather warnings are significantly higher than national averages

## Extreme Weather Warning Prompted Awareness

National | 56%

86% ↑

Metro 93%

Regional 65%

Increases to 94% for those who have had a personal experience with a severe storm.

### Have Taken Action in Past (%)

*Those who have been exposed to a severe storm*

National | 52%

59%

## Extreme Heat Warning Prompted Awareness

National | 55%

62%

Metro 59%

Regional 69%

Increases to 86% for those who have had a personal experience with extreme heat.

### Have Taken Action in Past (%)

*Those who have been exposed to extreme heat*

National | 56%

60%

% of Northern Territory residents

NT n=98 | National 5,430

Q34. When there is danger of severe weather and thunderstorms, alerts and/or warnings may be issued to the community. Have you seen or heard of this alert and/or warning before today?





Q38. When there is danger of a heatwave, an alert and/or warning may be issued to the community. Have you seen or heard of this warning before today?

Q36 - Have you taken any action in the past after seeing or hearing the severe weather alert and/or warning?

Q39 - Have you taken any action in the past after seeing or hearing a heatwave alert and/or warning?

↑ Significant difference to National figures at 95% confidence

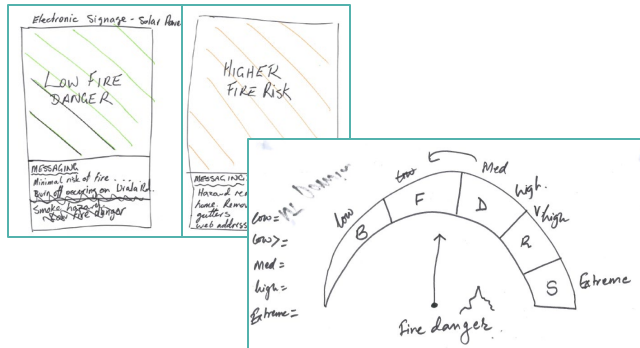
# Perceptions of existing warnings systems

	Perceptions of current Northern Territory system	Perceptions of systems from other jurisdictions
<b>Bushfire</b> <i>Northern Territory</i> <i>Queensland</i> 	<p>Awareness of bushfire warnings was highest from all hazards, however participants felt the visual representation required the following optimisation:</p> <ul style="list-style-type: none"> <li>Dislike the flame icon, too cartoonist, desire for more realistic icon.</li> <li>Desire for the flame to increase in size to communicate increasing risk.</li> </ul>	<p>Overall, preference fell to the visual representation of the Northern Territory bushfire warnings, as the Queensland warnings required similar optimisation:</p> <ul style="list-style-type: none"> <li>Dislike the flame icon, desired a more realistic icon.</li> </ul>
<b>Cyclone</b> <i>Western Australia</i> 	<p>No visual warning system in the Northern Territory.</p>	<p>Approximately half were aware of the WA cyclone warning system due to previous experience of cyclones in the state.</p> <p>Participants felt the system was simple, however felt the following required optimisation:</p> <ul style="list-style-type: none"> <li>Icon doesn't clearly represent cyclones.</li> <li>Consistency of shape, triangles to be used.</li> </ul>
<b>Flood</b> <i>Tasmania</i> <i>South Australia</i> 	<p>No visual warning system in the Northern Territory.</p>	<p>The blocked colours of the SA system impeded comprehension, while participants felt the rounded edges failed to communicate urgency.</p> <p>Participants felt the raising water levels of the Tasmanian system conveyed escalating risk and the incorporation of the house clearly communicated the hazard. The colour palette was considered appropriate.</p>
<b>Extreme Heat</b> <i>Victoria</i> <i>South Australia</i> 	<p>No visual warning system in the Northern Territory.</p>	<p>Participants liked the sharper edges and colour scheme of the Victorian system, but felt only one level was required for Extreme Heat (rather than three). They felt the 'i' caused confusion due to its similarity to the visitor information 'i'.</p> <p>The South Australian system was not liked by participants, with the icon and colour scheme/blocking needing optimisation. Specifically, participants found it hard to identify the icon on the blue background.</p>

# Exploring Fire Danger Rating and Warning Systems

Topline insights from Stage 2 creative  
sessions

# Exploring ratings and warnings in the Northern Territory



## Fire Danger Rating System

- The majority created a simplified version of the existing system. The visual representation/shape used did vary between a semi-circle and rectangle, in line with other jurisdictions.
- Four levels of FDR was most common, though some used five.
- A traffic light colour palette was used moving from cool to warm colours. Green was predominately used for the lowest level, however blue was used in one case.
- The majority of focus group locations discussed the importance of utilising technology such as LED displays to attract attention and remove the requirement for manually updating signs.



## Warning Systems

## Bushfire Warnings

- Most systems designed were 3 or 4 levels with a warm colour palette, which was reflective of the broader national view.

## Cyclone Warnings

- The visual representation of warnings was similar to that used in Western Australia. Sharp edged triangles were used, with a blue, yellow and red colour palate chosen. An icon that showed wind (or similar to WA's current icon) was preferred.

## Flood Warnings

- Preference on shape was split between diamond and triangle, however pointed corners were key. While some didn't include icons in the visual design, others felt an icon of raising water levels was appropriate.

## Extreme Heat Warnings

- The majority felt warnings related to heat were viewed as a single level of warning or 'on-off' system, while one location felt a four level system, based on intervals of degrees (e.g. 30-40 degrees) could be used if required for tourism. Use of the colour red was consistent.

# **An Optimised Fire Danger Rating System**

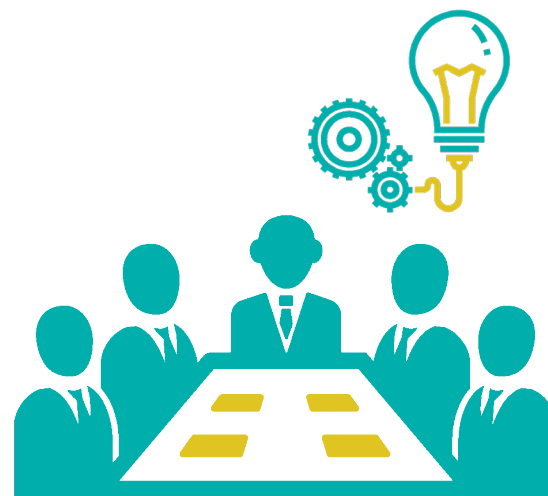
Quantification through Stage 3  
online survey

# Development of the optimisation survey was an inclusive process between Metrix and the Project Steering Group

Workshops were held to finalise the optimisation survey bringing together findings from Stage 1 and 2 research and knowledge from subject matter experts.

Due to the need to include an out of scale level and respect the outcomes of the 2009 Victorian Bushfires Royal Commission, it was agreed that **four levels** would be used to communicate the Fire Danger Ratings.

Similarly, due to potential conflicts regarding the name of the top level, the words Code Black, Red Flag, Maximum, Major and Disastrous were included for testing. Please note these were not developed from Stage 2 insights.



# The optimisation survey included four main development stages

Prior to developing their Fire Danger Rating System, respondents were provided with a description of the system's purpose along with how the system and its ratings are currently communicated. The purpose of the description was to set the scene on what the system's objectives are to assist respondents in developing a system. They were then asked to develop the following four stages.



## Shape

To set the base of their design, respondents first chose their preference between a semi-circle, triangle and rectangle as the shape for the system.



## Colour

Respondents then chose the colour set that best communicated the increasing fire risk and that would encourage preparatory action to stay safe. Three colour sets were developed using findings from Stage 2.



## Word Set

Two word banks were developed based on findings from Stage 2 to communicate the first three levels of the system. Respondents were then required to rank their top 3 preferences for the fourth level.



## Supportive Message

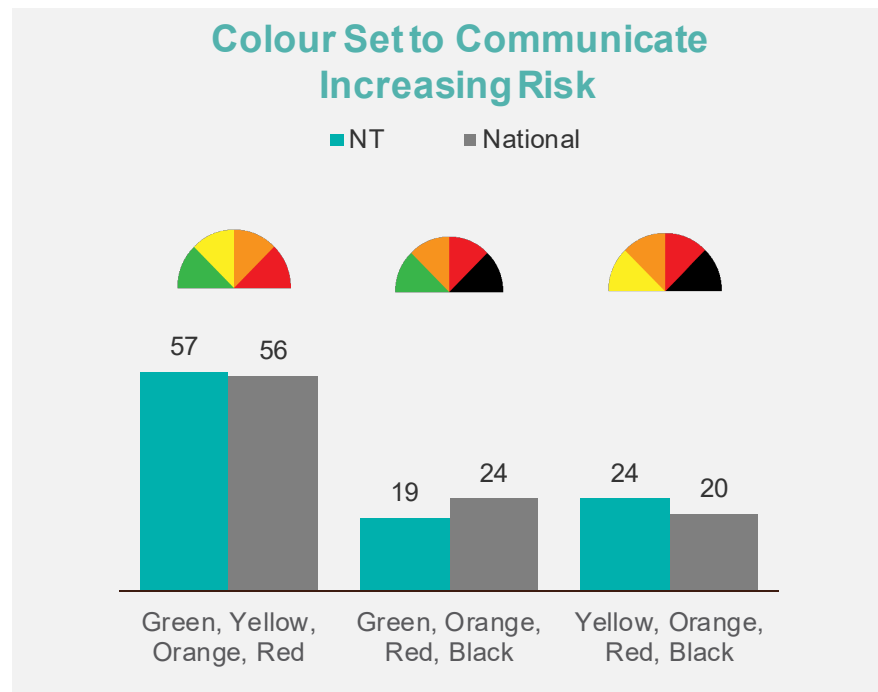
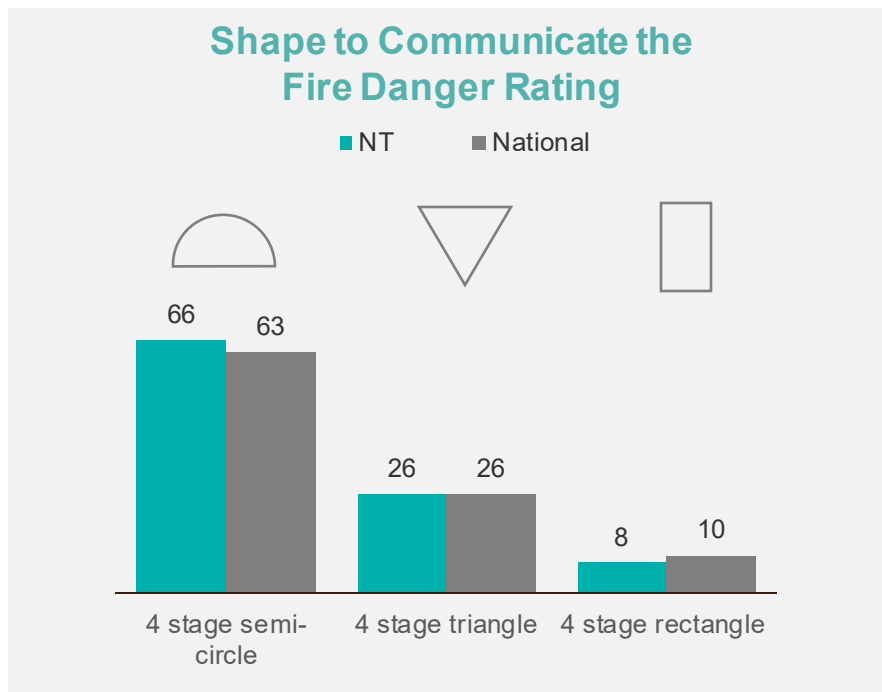
Finally respondents were asked to select the supportive message for each level of the system that would be most effective to encourage them to take action.

**To limit order bias, the order of choosing the colour and word sets was rotated for each respondent.**



# The majority feel the existing semi-circle design is most effective to visually represent FDRs

Shape preference differs slightly from Stage 2 as an online survey environment prompts respondents to select the most intuitive and effective option within a set time limit. Simplifying the existing colour set to include green, yellow, orange and red is most effective to indicate increasing risk.



% of Northern Territory residents

NT n=100 | National n=5,408

Q2. Which shape would be most effective to communicate the Fire Danger Ratings?

Q3. Now, which of these colour sets best communicates increasing fire risk and would encourage you to take action and stay safe at each Fire Danger Rating?

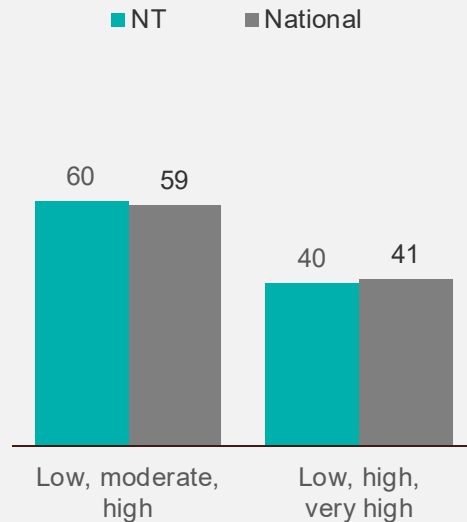
Note: Colour set figures are for general population. Semi-circle colour images are for display purposes only.

↑ Significant difference to National figures at 95% confidence

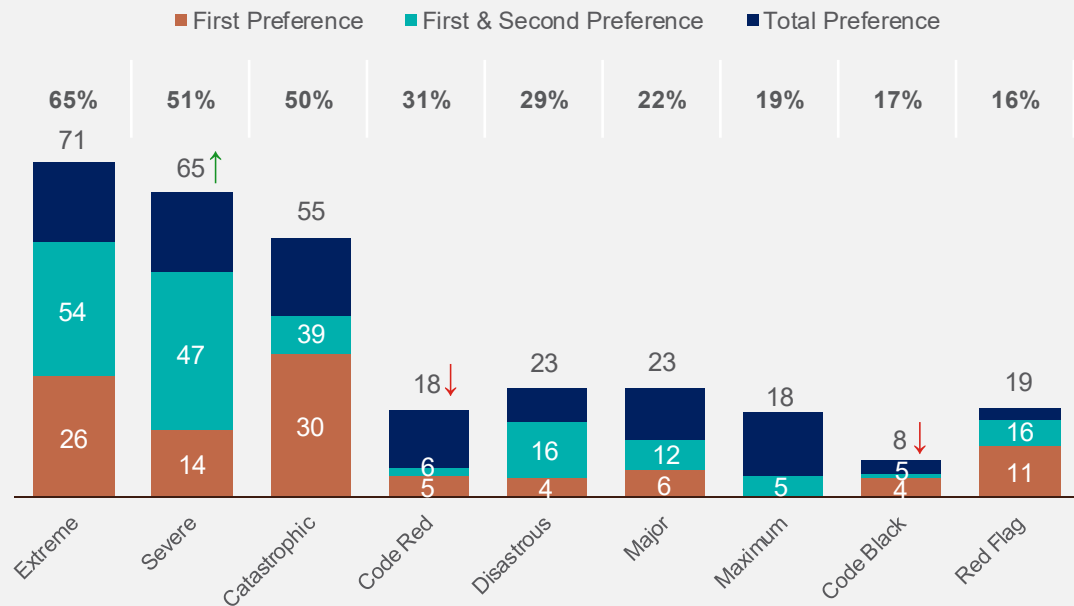
# The preferred names for FDR levels is a simplified version of the existing system

In the Northern Territory, Extreme is the preferred name for the top level of the FDR by top 3 preference, aligning with preference of national figures. Severe is also considered effective to communicate the top level, significantly higher compared to national figures.

Preferred Name of Fire Danger Rating Levels



Preferred Name for Top Fire Danger Rating Level



% of Northern Territory residents

NT n=100 | National n=5,408

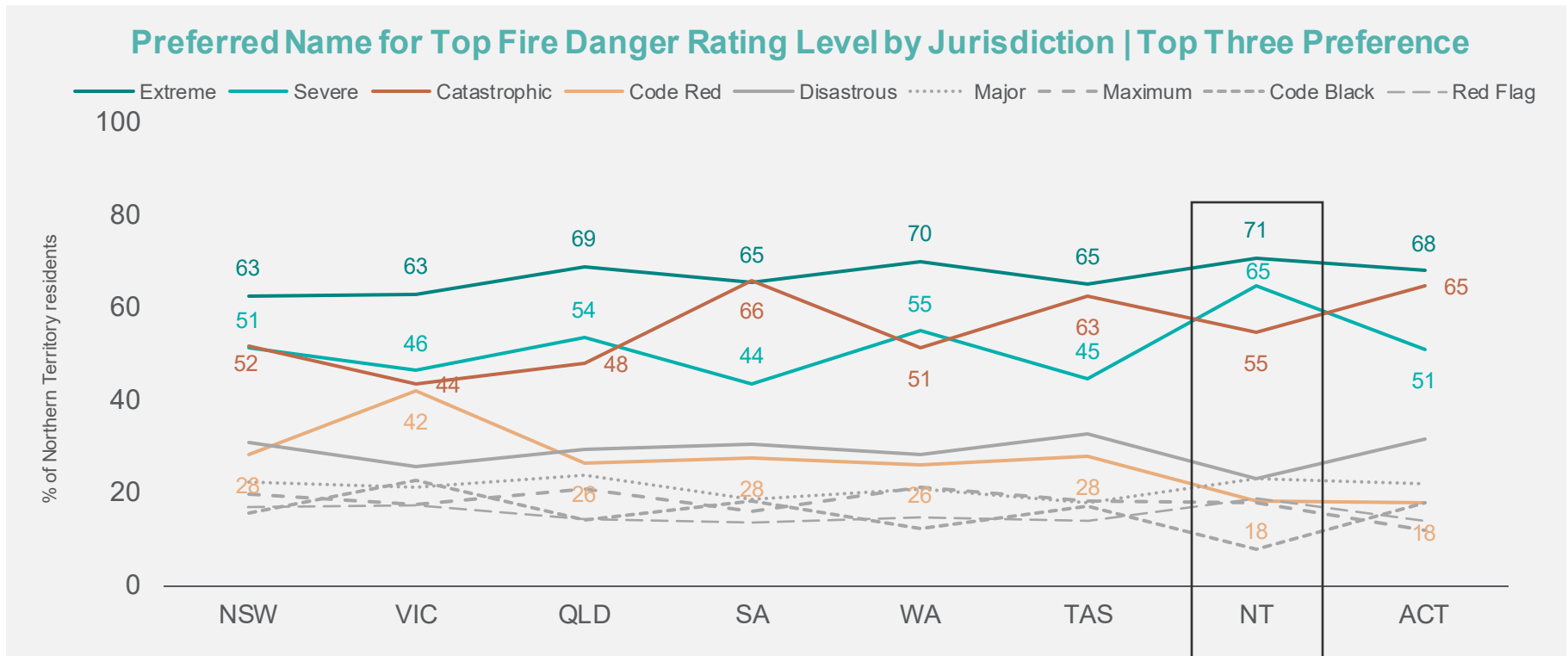
Q4a - Thinking about the purpose of this system (i.e. to effectively prompt individuals to take action), which of the following word-sets best communicates bushfire risk from least to most danger for the first 3 levels?

Q4b - Now please rank the following options from most to least preferred to communicate the highest level of bushfire danger.

↑ Significant difference to National figures at 95% confidence

# Preferred naming of the top rating is broadly consistent across jurisdictions

Northern Territory residents have a marginally higher preference towards Severe, however this name remains the second preferred option behind Extreme.

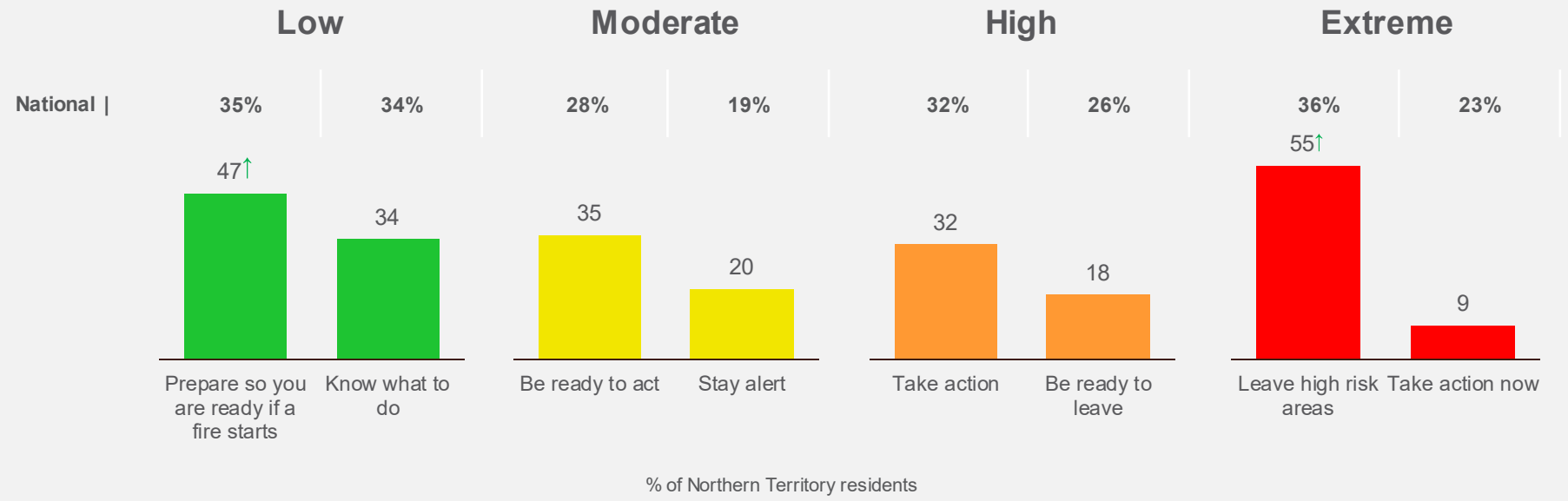


NSW n= 1,004 | VIC n= 1,007 | QLD n= 1,001 | SA n= 1,002 | WA n= 995 | TAS n=199 | NT n= 100 | ACT n= 100  
Q4b - Now please rank the following options from most to least preferred to communicate the highest level of bushfire danger.

# Action orientated statements are preferred to ensure supporting messages are effective

Northern Territory residents have significantly higher preference towards '*prepare so you are ready if a fire starts*' to support a Low rating, and '*leave high risk areas*' to support an Extreme rating.

## Top Two Supporting Messages for Desired Levels of the Fire Danger Rating



NT n=100 | National n=5,408

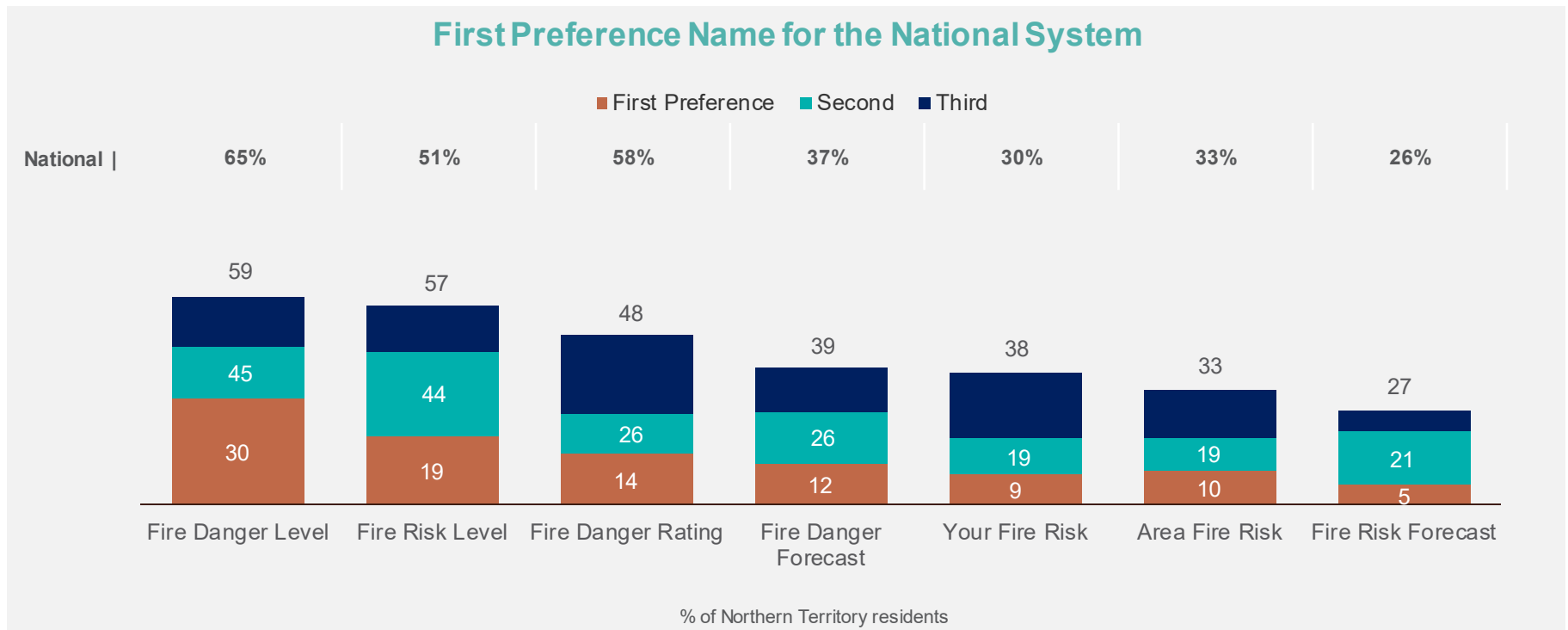
Q5a - Which of the following would be most effective to encourage you to take action and stay safe at each Fire Danger Rating?

↑ Significant difference to National figures at 95% confidence

**Note: Extreme has been used to describe the highest rating as the majority preference nationally.**

# Fire Danger Level was the first preference for the overarching name for the system

However it should be noted that order biases could have been experienced due to the use of the word 'level' throughout the question wording in the survey. Once the final system is agreed upon, we would recommend conducting a monadic preference question in a national omnibus to confirm these findings.



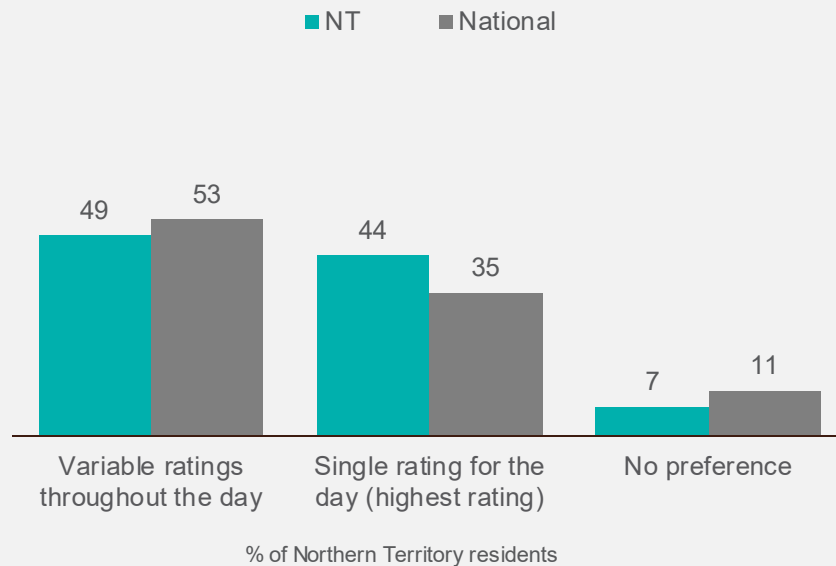
NT=100 | National n=5,408

Q5b - When Fire Danger Ratings are displayed on signs and other visual means, which of the following is most effective to describe ratings?

↑↓ Significant difference to National figures at 95% confidence

# Though the majority would prefer ratings to update with conditions, there is danger in overcomplicating the system

## Preference for Number of Daily Communications of Fire Danger Ratings



As found in Stage 1 and 2 of the research, there are issues surrounding the comprehension of the system. Variable messaging throughout the day has the potential to amplify these issues.

If variable messaging is to be used, this would need to be a key focus of the education and communications strategy due to its large departure from the existing system. All residents would have to re-learn how to use and respond to ratings.

NT n=100 | National n=5,408

Q5c - If the Fire Danger Rating varied throughout the day (e.g. Low in the early morning and High in the hottest part of the day) would you prefer to be told a single rating for the day (highest rating), or receive multiple ratings throughout the day?

Significant difference to National figures at 95% confidence

# **An Optimised Multi Hazard Warning System**

Quantification through Stage 3 online  
survey

# Development of the optimisation survey was an inclusive process between Metrix and the Project Steering Group

Workshops were held to finalise the optimisation survey bringing together findings from Stage 1 and 2 research and knowledge from subject matter experts.

Warning shape, icon sets and colour sets were drawn direct from research findings. Potential word sets were tested with the highest level of warning set at 'Emergency Warning'. As the majority issue was with 'Watch and Act' as an instruction, respondents were also asked a ranked preference question with both 'Advice' and 'Emergency Warning' locked.

Warning systems were designed for bushfire, cyclone, flood, extreme weather and extreme heat to ensure a multi hazard approach.





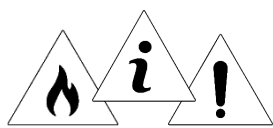
# The optimisation survey included five main development stages

Prior to developing their warning system, participants were provided with a description of the system's purpose along with how warnings are currently communicated. Each participant was randomly assigned a natural hazard to create their warning system.



## Shape

To set the base of their design, participants chose their preference between a triangle and diamond as the shape for the system.



## Icon

Participants were asked to select an icon set from a hazard specific icon (e.g. flame), a hazard specific icon that visually showed increasing severity, or an action specific icon set (similar to that used in Victoria).



## Colour

Participants chose the colour set that best communicated the escalation of warning and that would encourage action. Three colour sets were developed using findings from Stage 2.



## Word Set

Word sets were developed based on findings from Stage 2 the first two levels of warning. Participants were asked two questions, a single response, and a ranked top 3 preference to understand the most intuitive warning names.



## Supportive Message

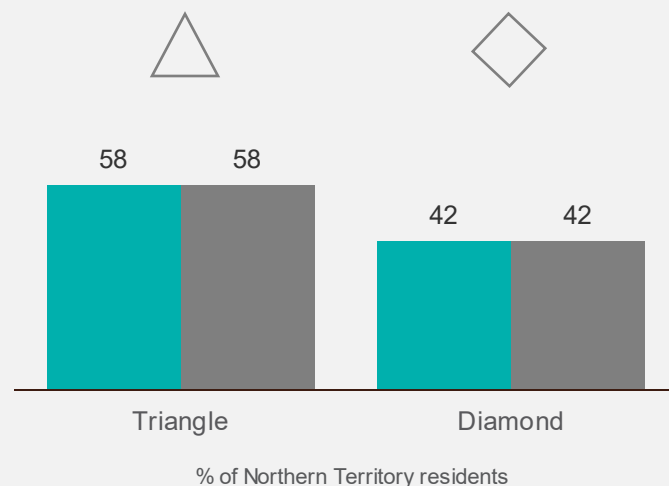
Finally, participants were asked to select the supportive message for each level of warning that would be most effective to encourage them to take action.

# The majority feel a triangle system with hazard specific icons that increase in severity is most effective

Perceptions of the hazard specific icon being the most effective icon set are significantly higher than the national average.

## Shape to Communicate the Warnings

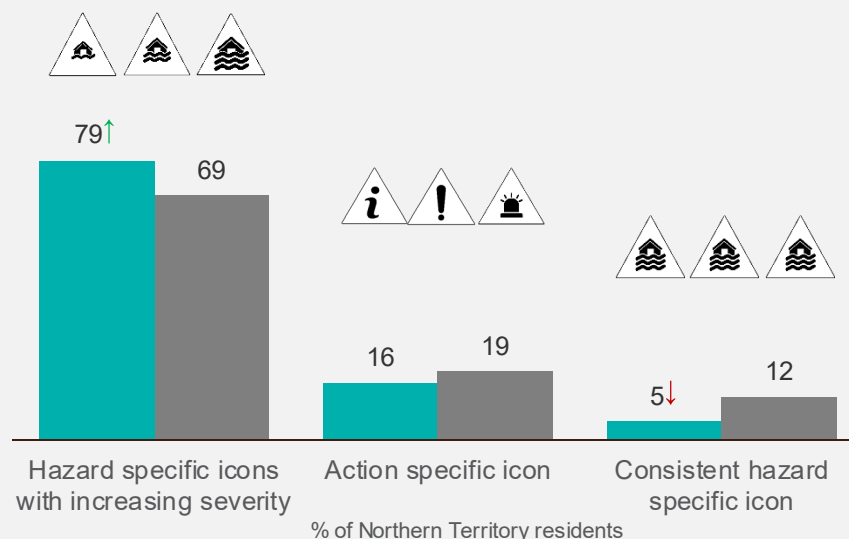
■ NT ■ National



## Icon Set to Communicate Increasing Warning

Floods shown as example

■ NT ■ National



NT n=100 | National n=5,408

Q7. Which of the following variations of shape would be most effective when showing a [insert hazard] warning?

Q8. Which of the following options would be most effective when showing a [insert hazard] warning?

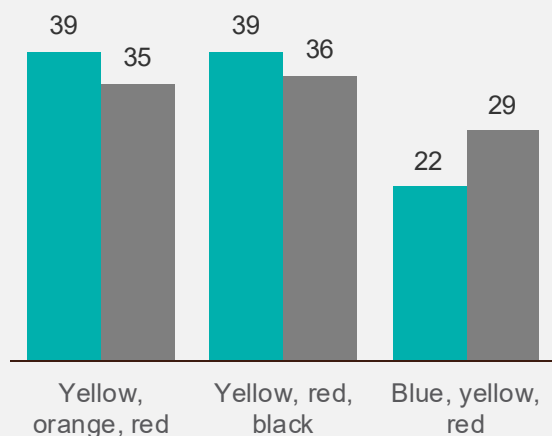
↑↓ Significant difference to National figures at 95% confidence

# The most effective colour set varies by hazard type, though a warm palette is most intuitive for most

We recommend that a palette of yellow-orange-red is used to show escalation of risk. Red is associated with high danger, supported by previous stages of research. Black is currently used to communicate prescribed burns and showing the burn areas on mapping platforms. This aligns with Stage 2 research showing associations with burnt areas and post danger. Blue is currently used for bushfires but isn't supported in survey data, it is not recommended for use.

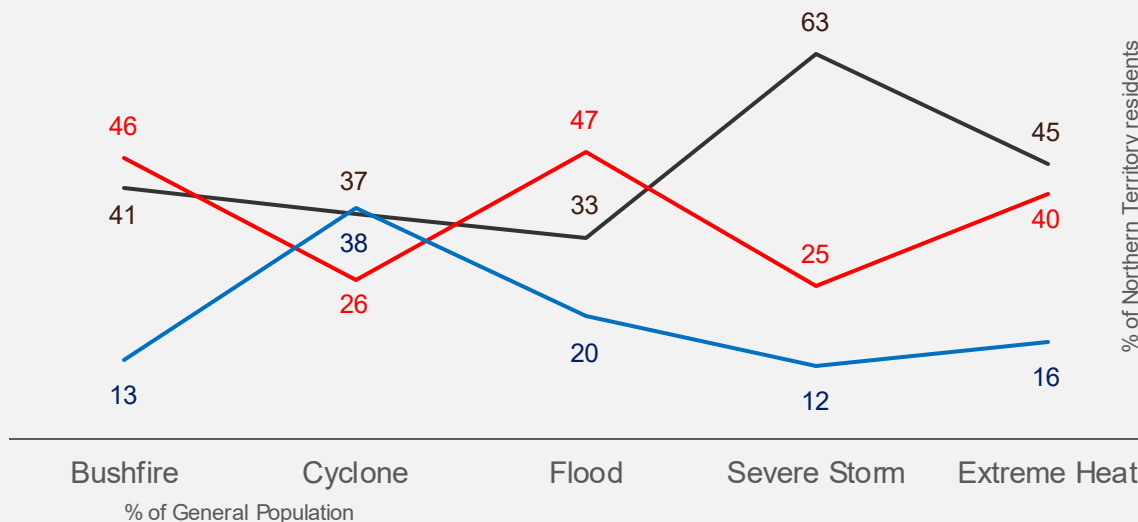
## Preferred Colour Set

■ NT ■ National



## Preferred Colour Set by Hazard Type

— Yellow, red, black — Yellow, orange, red — Blue, yellow, red



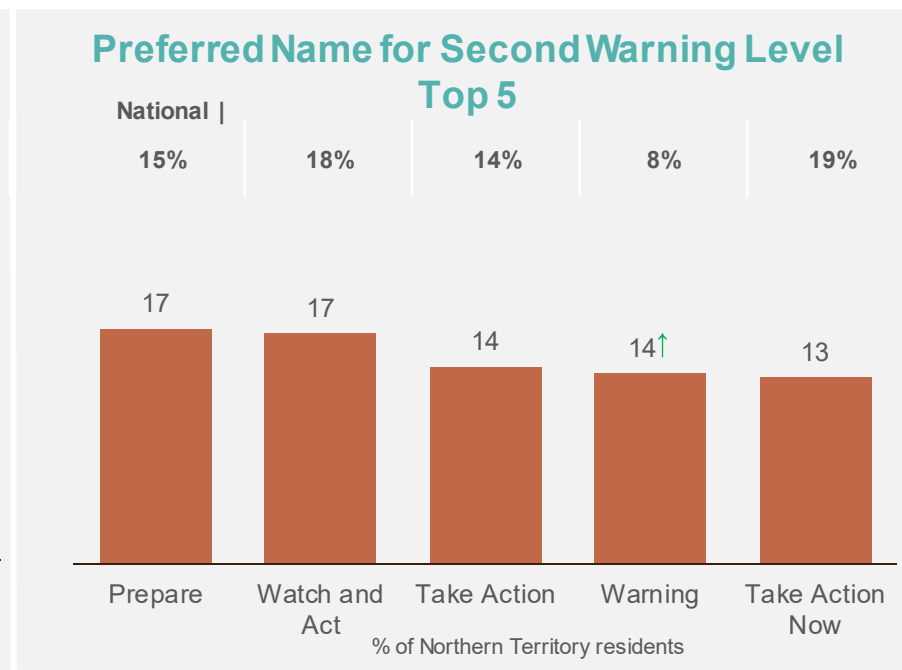
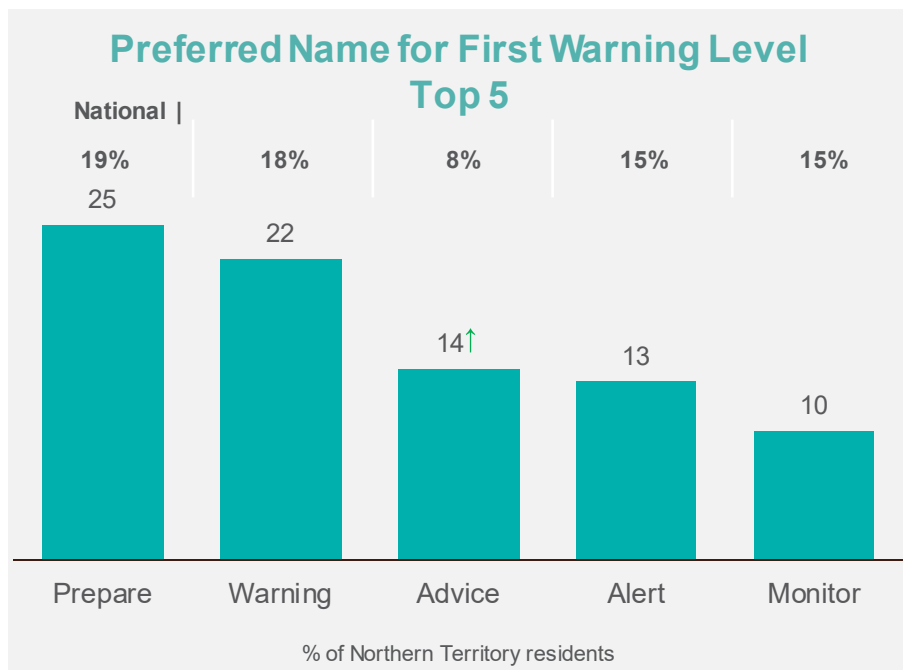
NT n=100 | National n=5,408

Q9. Now, which of these three colour sets best communicates increasing [insert hazard] risk and would encourage you to take action when a warning is issued?

↑ Significant difference to National figures at 95% confidence

# There are no clear-cut preferences for warning names

Stage 2 research highlighted that the first level of warning is associated with alerting the community that something is happening and to seek information and/or monitor conditions. This correlates with preferences for names such as warning and alert. The most effective warning names for the second level centre around the word 'act' suggesting this is key for inclusion. Though familiar and top of mind, Stage 2 highlighted the significant confusion associated with 'Watch and Act' suggesting maintaining the name poses a risk to community understanding.



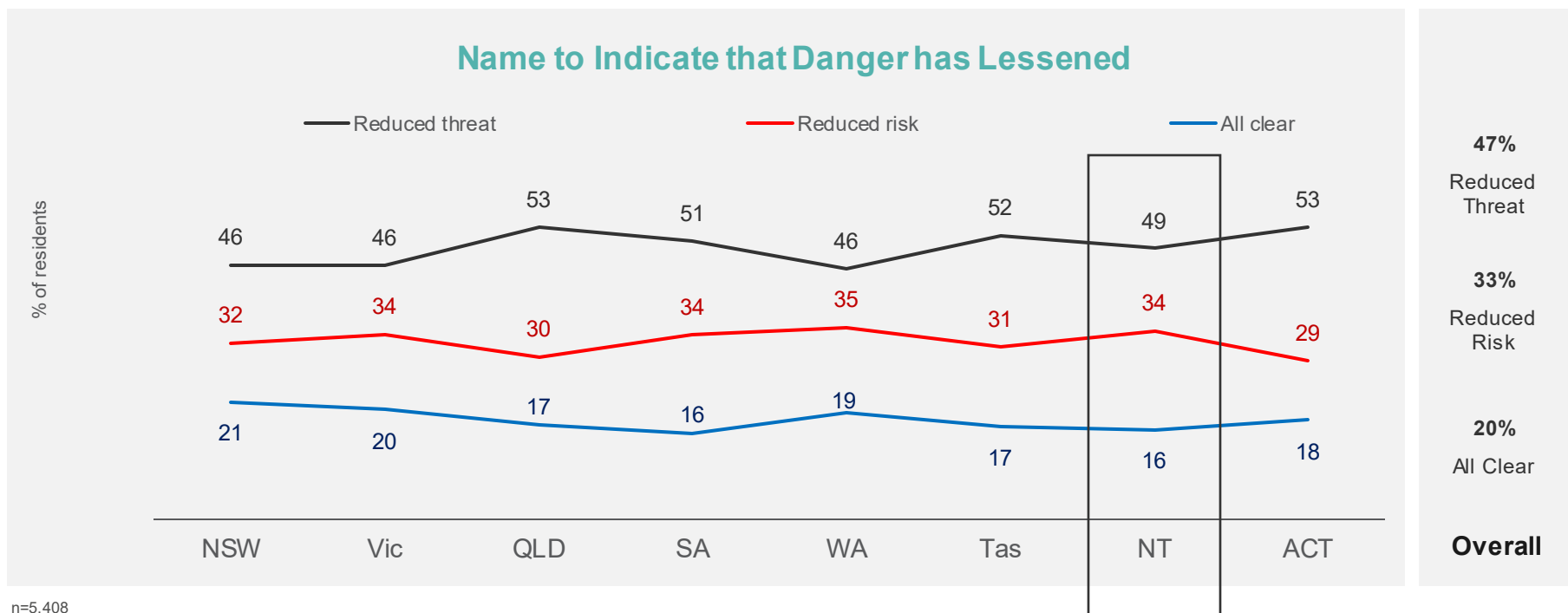
NT n=100 | National n=5,408

Q10a. If the highest level of risk is named EMERGENCY WARNING, which of the following words best communicates the first two levels?

↑↓ Significant difference to National figures at 95% confidence

# ‘Reduced threat’ is seen to effectively communicate a warning de-escalation message

‘Reduced Threat’ is seen to be most effective across all hazards in the Territory; bushfires (47%), cyclones (44%), floods (45%), severe storms (78%) and extreme heat (71%).

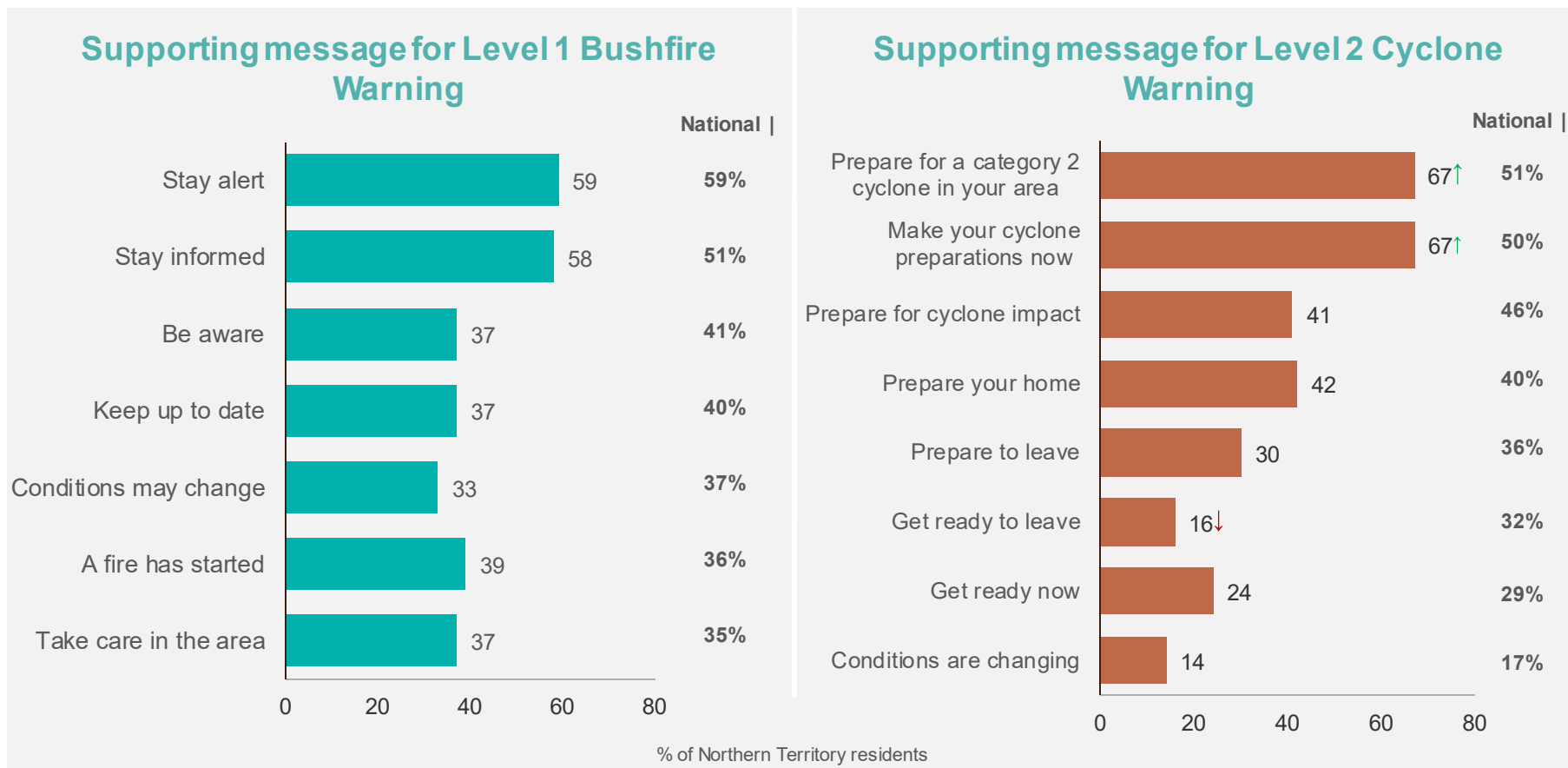


n=5,408

Q11. Which of the following options best describes the final message to indicate that the danger has lessened?

# Action orientated statements are seen as most effective for supporting messages

Though there is no clear cut preference for warning level names, care should be taken to ensure language used does not overlap with supporting messages.



NT n=100 | National n=5,408

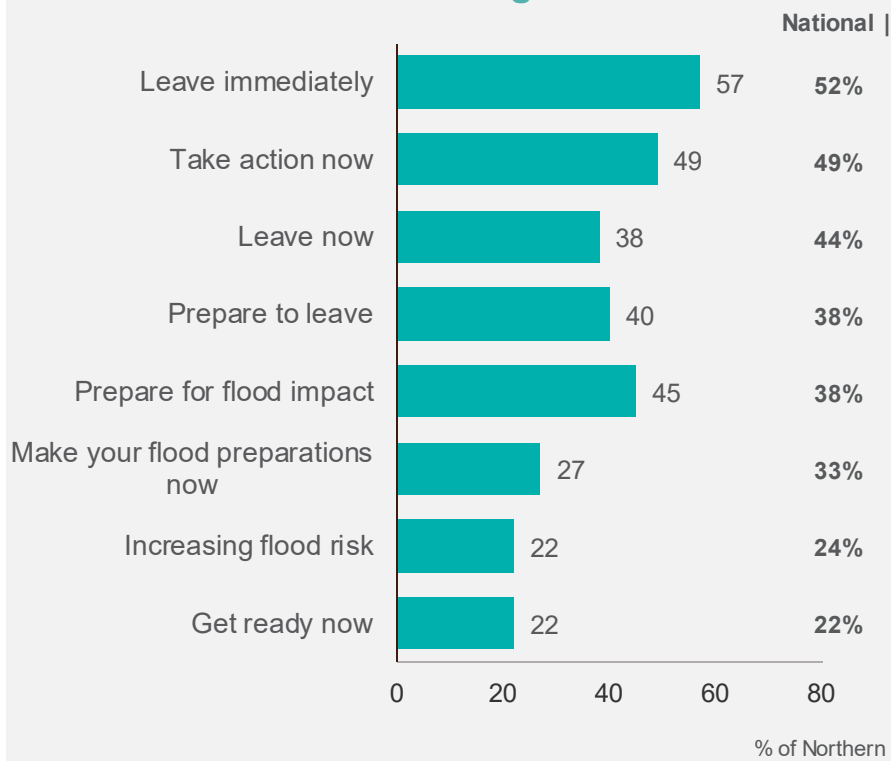
Q12. For the next question you will be shown a number of scenarios. For each please select your top 3 phrases that would encourage you to take action.

38

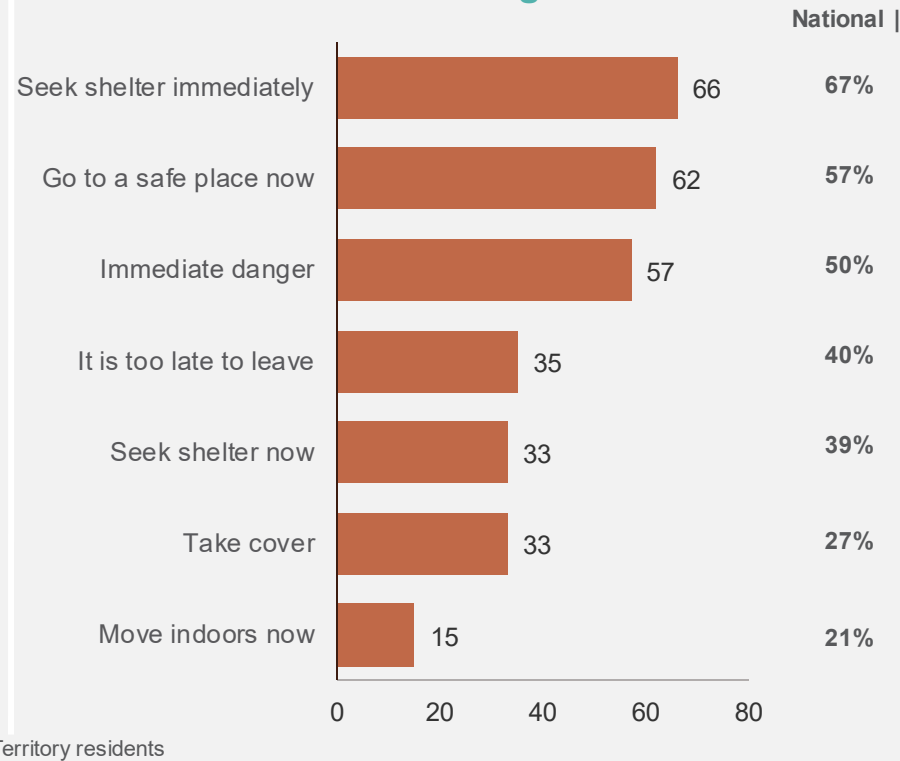
↑↓ Significant difference to National figures at 95% confidence

# Supporting messages for Emergency Warning situations are focused on taking immediate action

## Supporting message for Level 3 Flood Warning



## Supporting message for Level 3 Bushfire Warning



NT n=100 | National n=5,408

Q12. For the next question you will be shown a number of scenarios. For each please select your top 3 phrases that would encourage you to take action.

39

↑↓ Significant difference to National figures at 95% confidence

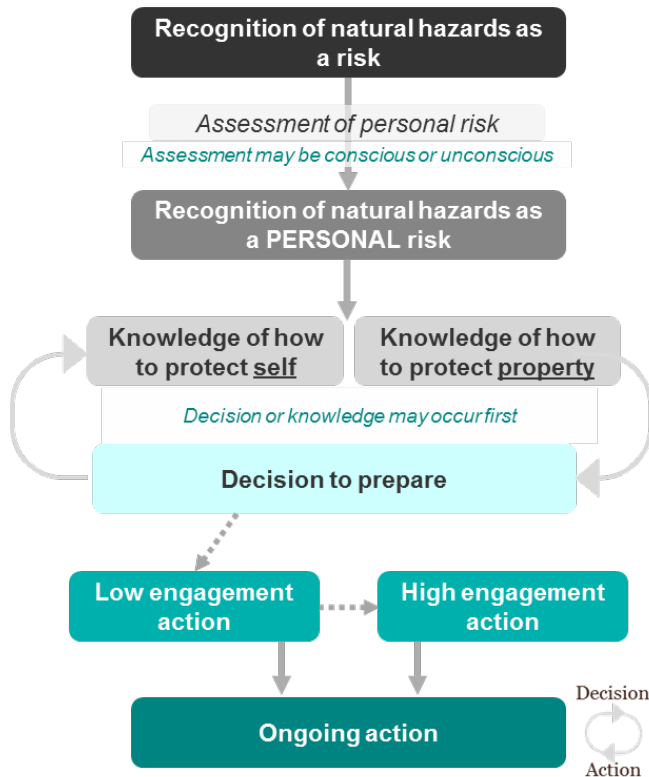
# Appendices



# Appendix 1:

## *Behaviour Change Model*

# The behaviour change model underpins thinking on hazard preparedness and response to forecast and warning systems



The natural-hazard behaviour change was developed from the transtheoretical model, but differs in three ways.

1. Recognition of risk is more **complex**, and transitions from general risk recognition, through (typically) an assessment of personal risk, to recognition of what that level of personal risk is.
2. The decision to prepare does not always follow knowledge – in some cases, it may precede it – typically where geography (at-risk location) and/or cultural background (upbringing) play a part.
3. Action is separated into two distinct categories; with the decision to take low engagement actions often made without a connection to natural hazards preparation.

# Risk recognition and behaviour is strongly influenced by the type and location of an individuals home

This is a national trend. Risk recognition is highest amongst those living in regional areas, which tend to be larger properties with stand alone homes.



## Property size

Perception of risk increases with property size.



## Metro / regional location

Those in regional locations tend to have greater risk recognition and actions taken regarding hazard response preparation.



## Distance to bushland

For bushfires - perception of risk increases the closer distance to open bushland or grassland areas.



## Home type

Those with standalone homes have greater risk recognition than those in shared buildings.



## Exposure to Hazards in the Past

Where there is limited visibility of recent incidents, or an emergency warning has not been issued for a number of years, individuals become complacent and perception of risk decreases.








## Distance to water

For water based hazards - perception of risk increases the closer distance to open water areas.

# Recognition of personal risk from bushfires is limited, and just a third state they have the knowledge on how to respond to warnings

Recognition of risk from cyclones, is stronger, with over nine in ten stating they have knowledge on how to respond to warnings.

## Northern Territory Behaviour Change Model

	Bushfire		Cyclone		Flood		Severe Storms		Extreme Heat	
	Metro	Regional	Metro	Regional	Metro	Regional	Metro	Regional	Metro	Regional
 Risk Recognition	81	81	98	65	51	73	75	83	68	91
 Personal Risk Recognition	22	67	93	39	35	66	87	70	66	88
 Knowledge on how to respond to warnings	20	63	91	35	34	62	82	70	62	88
 Decision to prepare	17	52	89	21	28	62	76	66	56	80
 Future intention to prepare	16	42	72	14	18	35	64	55	45	73

# Appendix 2

## *Steering Group and Reference Group Members*

# Steering Group and Reference Group Members

Name	Jurisdiction	Agency	Position	Reference Group	Steering Group	Project group
Andrew Stark	SA	SACFS	Deputy Chief Officer			
Fiona Dunstan	SA	SACFS	Manager Information Operations			
Peta O'Donohue	SA	SACFS	Project Manager Partners in Bushfire Safety			
Amanda Leck	National	AFAC	Director, Community Safety and Resilience AFAC & AIDR			
Greg Esnouf	National	AFAC	Program Director National Fire Danger Ratings System		Changed	
Anthony Clark	NSW	NSWRFS	Director, Corporate Communications			
Nicholas Kuster	NSW	SES	Coordinator Planning, Warnings and Intelligence			
Hayley Gillespie	QLD	QFES	A/Director, Media, Communications and Engagement			
Troy Davies	QLD	QFES	Director, Volunteer Capability and Coordination, QFRS			
Christina Hanger	VIC	CFA-VIC	Senior Engagement Advisor Analysis & Strategy			
Dawn Hartog	VIC	DEWLP	Senior Advisor			
Rachel Bessell	VIC	CFA-VIC	Bushfire Research and Development			
Reegan Key	VIC	EMV	Manager, Emergency Management Community Information			
Amy Miller	VIC	EMV	Acting Manager, Emergency Management Community Information	Changed		
John Gilbert	VIC	CFA-VIC	Program Manager Research & Evaluation			
Jill Downard	WA	DFES	Director Media and Corporate Communications			
Kaylee Rutland	ACT	ACT-ESA	Acting Manager, Education Media			
Carla Mooney	National	BOM	Project Manager, National Flood Warning Infrastructure Working Group			
Sascha Rundle	National	ABC	Acting Manager, Emergency Broadcasting & Community Development			
Leighton Morvell	National	EMA	Director Capability and International	Changed		
Ailsa Schofield	NSW	SES	Senior Manager Community Planning and Readiness			
Phil Lindsay	NSW	FRNSW	Assistant Commissioner Operational Capability			
Leanne Lewis	NT	NTFRES	Staff Officer to Executive Director, NTFRES			
Colin Lindsay	SA	MFS	ACFO Community Safety & Resilience			
Mhairi Revie	TAS	TAS-SES	Regional Manager (North)			
Peter Middleton	TAS	TFS	Coordinator Community Development			
Tamsin Achilles	VIC	VICSES	Senior Advisor, Readiness & Intelligence	Changed		

# Appendix 3

## *Focus Group Details*

# Focus group attendance summary | 340 participants

Jurisdiction	Location	Date	Total attendance	Jurisdiction	Location	Date	Total attendance
ACT	Gungahlin	14-Nov 2018	8	SA	Clare Valley	5-Nov	8
ACT	Kambah	13-Nov 2018	7	SA	Riverland (Berri)	6-Nov	7
ACT	Central Canberra	15-Nov 2018	8	SA	Gawler	7-Nov	6
NSW	Batemans Bay	22-Oct 2018	6	SA	Adelaide Hills	8-Nov	18
NSW	Dungog	29-Oct 2018	8	SA	Port Lincoln	9-Nov	5
NSW	Katoomba	26-Oct 2018	5	SA	Mt Gambier	12-Nov	7
NSW	Moree	23-Oct 2018	6	TAS	Kingston	2-Nov	8
NSW	Grafton	17-Oct 2018	6	TAS	St Helens	31-Oct	6
NSW	Sydney	24-Oct 2018	5	TAS	Launceston / Invermay	30-Oct	7
NSW	Richmond	25-Oct 2018	5	TAS	Eaglehawk Neck	1-Nov	5
NSW	Albury	23-Oct 2018	6	VIC	Churchill	12-Nov	6
NT	Darwin	15-Oct 2018	7	VIC	Rye/Rosebud	8-Nov	7
NT	Katherine	16-Oct 2018	4	VIC	Horsham	19-Nov	8
NT	Alice Springs	19-Oct 2018	8	VIC	Wodonga	15-Oct	7
QLD	Brisbane	15-Oct 2018	7	VIC	Bannockburn	20-Nov	6
QLD	Gold Coast Hinterland	16-Oct 2018	6	VIC	Emerald	22-Nov	8
QLD	Rockhampton	11-Oct 2018	7	VIC	Elwood	7-Nov	7
QLD	Mt Isa	30-Oct 2018	8	VIC	Bairnsdale	13-Nov	8
QLD	Bundaberg	10-Oct 2018	7	WA	Kalgoorlie	16-Oct	6
QLD	Cairns	29-Oct 2018	8	WA	Waroona	3-Oct	7
QLD	Charleville	25-Oct 2018	8	WA	Broome	8-Oct	8
QLD	Mackay	12-Oct 2018	7	WA	Albany	9-Oct	8
QLD	Toowoomba	9-Oct 2018	7	WA	Kununurra	12-Oct	7
				WA	Newman	1-Oct	8
				WA	Perth Hills	1-Oct	8



# Appendix 4

## *Fire Danger Rating definition*

# Fire Danger Rating purpose

## Definition provided by the South Australian Country Fire Service for focus groups.

The Fire Danger Rating tells you how dangerous a fire would be if one started. The higher the Fire Danger Rating, the more dangerous the fire conditions.

Fire Danger Ratings indicate how difficult it will be to control a fire under the forecast weather conditions.

It is not a predictor of how likely a bushfire is to occur.

Ratings are forecast using Bureau of Meteorology data for up to four days in advance, based on weather and other environmental conditions such as fuel load.

The Rating is your prompt to take action to stay safe.

The Fire Danger Rating should be used as an early indicator to trigger your plans.

The Fire Danger Rating table will help you understand the predicted bushfire behaviour, potential impacts and recommended actions you should take for each category level (e.g. CFS web page [Fire Danger Ratings](#) based on Appendix 3 of the National Framework for Scaled Advice and Warnings to the Community).

# Fire Danger Rating purpose

**Definition provided by the South Australian Country Fire Service for Stage 3 quantitative survey.**

## INTRODUCTION 1

The first section of questions will be asking you about Fire Danger Ratings. This is a **forecast system** used to inform the community of how dangerous a bushfire would be **if** one started. It is **not** an indicator that a bushfire has started.

There are a number of ratings that **indicate how difficult it will be to control a fire** under the forecast weather conditions. The higher the Fire Danger Rating, the more dangerous the fire conditions.

Though there are multiple Fire Danger Ratings to show increasing danger, only a single rating will be issued to show the bushfire danger for that day.

Ratings are forecast using Bureau of Meteorology data for up to four days in advance, based on weather (e.g. temperature and wind) and other environmental conditions such as how much dry grass and undergrowth there is.

**The Fire Danger Rating should be used as an early indicator to trigger you to take action and stay safe.**

## INTRODUCTION 2

You may see or hear the Fire Danger Rating in a number of ways, including:

- Interactive online maps
- Official Websites and Apps
- Social Media (e.g. Facebook)
- TV
- Text messages
- Roadside signage
- Radio

The existing system is being reviewed to ensure the design is highly effective at **prompting you to take action** to protect against the risk of bushfires.

Research has been conducted nationally to develop a set of potential designs for the new system. **In the following questions we'd like you to select from these designs based on what you think is the most effective system to promote action.**

# Appendix 5

## *Questionnaires*

# 2337 – National Alerts and Warnings

## Stage 1 - Online Survey

Client Contact Name:	Fiona Dunstan, Peta O'Donohue, Andrew Stark
Version:	V3 21.8.18
Methodology:	Online
Survey Length:	15 minutes

STATE	Quotas	
	METRO	REGIONAL
QLD	400	600
NSW	500	500
VIC	600	400
SA	800	200
WA	500	500
TAS	200	
ACT	100	
NT	100	
TOTAL PER VERSION	5400	

Send out all survey invitations in line with the population profile – age, gender, income, region etc.

### PROGRAMMER INSTRUCTIONS

<input type="radio"/>	Denotes single response question
<input type="checkbox"/>	Denotes multiple response question

Thank you for agreeing to take part in this **15** minute survey regarding alerts and warnings for **natural hazards in Australia**. All information you provide will remain completely confidential and only be used for research purposes.

When completing the survey please read each question carefully, answer the questions below as accurately as you can and select the answers that best reflect your views. Some questions allow more than one answer. There are also several opportunities to type in open-ended responses. To move to the next question, click on the next button at the bottom of the screen, please note that there is no opportunity to go back to a previous question once you have moved to the next page.

## SECTION 1 – SCREENING

<b>S1</b> Do you, a relative or a close friend work or have recently worked:  <b>RANDOMISE</b>	In market research	<b>Terminate</b>	<input type="checkbox"/> 01
	In advertising or media	<b>Terminate</b>	<input type="checkbox"/> 02
	In emergency services (e.g. police, firefighter, ambulance)	<b>Terminate</b>	<input type="checkbox"/> 03
	As a volunteer in emergency services (e.g. firefighter)	<b>Terminate</b>	<input type="checkbox"/> 04
	For an insurance company		<input type="checkbox"/> 05
	For a telecommunications provider		<input type="checkbox"/> 06
	None of the above		<input type="radio"/> 07

<b>S2</b> How old are you?	Under 18	<b>Terminate</b>	<input type="radio"/> 01
	18-24		<input type="radio"/> 02
	25-29		<input type="radio"/> 03
	30-34		<input type="radio"/> 04
	35-39		<input type="radio"/> 05
	40-44		<input type="radio"/> 06
	45-49		<input type="radio"/> 07
	50-54		<input type="radio"/> 08
	55-59		<input type="radio"/> 09
	60-64		<input type="radio"/> 10
65+		<input type="radio"/> 11	

<b>S3</b> Are you...	Male	<input type="radio"/> 01
	Female	<input type="radio"/> 02
	Other	<input type="radio"/> 03

<b>S4</b> What is your postcode?  <b>PROGRAMMER – RESTRICT TO NUMERIC, 4 DIGITS</b>  <b>TERMINATE IF DO NOT FALL INTO AU POSTCODE RANGE</b>	<div style="border: 1px solid black; height: 40px; width: 100%;"></div>
---------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------

## CREATE HIDDEN VARIABLE BASED ON LOCATION TO MATCH GEOGRAPHICAL SEGMENT



## SECTION 2 – Recognition of Risk

<b>Q1</b> Which of the following natural hazards do you believe are a risk in [insert jurisdiction]?  <b>RANDOMISE, LOCK CODE 98 AT BOTTOM</b>	Bushfire	<input type="checkbox"/> 01
	Cyclone	<input type="checkbox"/> 02
	Flood	<input type="checkbox"/> 03
	Severe Weather - Severe Storms	<input type="checkbox"/> 04
	Severe Weather - Extreme Heat	<input type="checkbox"/> 05
	Other (please specify)	<input type="checkbox"/> 06
	None of the above	<input type="radio"/> 98

## SECTION 3 – Recognition of Personal Risk

<b>Q2</b> What level of <u>personal risk</u> do you associate with each of the following natural hazards?					
	<b>a. Bushfire</b>	<b>b. Cyclone</b>	<b>c. Flood</b>	<b>d. Severe Storms</b>	<b>e. Extreme Heat</b>
<b>No risk to me</b> <i>I feel that it is <b>not</b> a risk to me at all</i>	<input type="radio"/> 1	<input type="radio"/> 1	<input type="radio"/> 1	<input type="radio"/> 1	<input type="radio"/> 1
<b>Low risk to me</b> <i>I feel <b>very little</b> personal risk            (e.g. Don't live, work or travel in an at-risk area, I am well prepared, hazards are infrequent, etc.)</i>	<input type="radio"/> 2	<input type="radio"/> 2	<input type="radio"/> 2	<input type="radio"/> 2	<input type="radio"/> 2
<b>Moderate risk to me</b> <i>I feel <b>some risk</b>            (e.g. Hazards are unpredictable, I may be prepared, I live, work or travel in an area of some risk, etc.)</i>	<input type="radio"/> 3	<input type="radio"/> 3	<input type="radio"/> 3	<input type="radio"/> 3	<input type="radio"/> 3
<b>High risk to me</b> <i>I feel I am <b>at risk</b>            (e.g. Live, work or travel in a high-risk area, hazards occur frequently, I am not prepared, etc.)</i>	<input type="radio"/> 4	<input type="radio"/> 4	<input type="radio"/> 4	<input type="radio"/> 4	<input type="radio"/> 4



**Ask if DO NOT recognise personal risk - Codes 1-2 @ Q2**

**Q3** Why do you feel you are not at **personal risk** from these hazards?

**RANDOMISE, LOCK CODES 4 AT BOTTOM.**

	a. Bushfire	b. Cyclone	c. Flood	d. Severe Storms	e. Extreme Heat
This hazard doesn't occur in the part of <b>[INSERT JURISDICTION]</b> where I live, work or travel	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
My type of property isn't at risk of this hazard	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2
This hazard has never occurred where I live	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3
Other (specify)	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 4

**SKIP TO SECTION 8 – ALERTS AND WARNINGS IF ALL CODE 1-2 @ Q2**

**SECTION 4 – Knowledge**

**INSERT NATURAL HAZARDS SELECTED CODE 3-4 AT Q2 (RECOGNISE PERSONAL RISK)**

**Q5** In some situations, you may receive information about the forecast or current danger of a natural hazard. These alerts and/or warnings can come from official sources (e.g. fire service), websites, the media, or by telephone...

With this in mind, how **knowledgeable** are you on how to respond and protect yourself if an **alert and/or warning** was **issued** for the following hazards?

	a. Bushfire	b. Cyclone	c. Flood	d. Severe Storms	e. Extreme Heat
I have <b>no</b> knowledge	<input type="radio"/> 1	<input type="radio"/> 1	<input type="radio"/> 1	<input type="radio"/> 1	<input type="radio"/> 1
I have <b>a little</b> knowledge	<input type="radio"/> 2	<input type="radio"/> 2	<input type="radio"/> 2	<input type="radio"/> 2	<input type="radio"/> 2
I have <b>moderate</b> knowledge	<input type="radio"/> 3	<input type="radio"/> 3	<input type="radio"/> 3	<input type="radio"/> 3	<input type="radio"/> 3
I have a <b>high level</b> of knowledge	<input type="radio"/> 4	<input type="radio"/> 4	<input type="radio"/> 4	<input type="radio"/> 4	<input type="radio"/> 4

**SKIP TO SECTION 8 – ALERTS AND WARNINGS IF ALL CODE 1 @ Q5 (NO KNOWLEDGE)**

## SECTION 5 – Decision to Act

### INSERT NATURAL HAZARDS SELECTED CODE 2-4 AT Q5 (KNOWLEDGE)

<b>Q7</b>	Have you taken, or are you planning to take, any action to prepare yourself to <b>respond</b> to an alert and/or warning for the following hazards?				
	<b>a. Bushfire</b>	<b>b. Cyclone</b>	<b>c. Flood</b>	<b>d. Severe Storms</b>	<b>e. Extreme Heat</b>
Yes, I have prepared myself	<input type="radio"/> 1	<input type="radio"/> 1	<input type="radio"/> 1	<input type="radio"/> 1	<input type="radio"/> 1
I have not prepared before, but am planning to	<input type="radio"/> 2	<input type="radio"/> 2	<input type="radio"/> 2	<input type="radio"/> 2	<input type="radio"/> 2
No, I have no intention to prepare myself	<input type="radio"/> 3	<input type="radio"/> 3	<input type="radio"/> 3	<input type="radio"/> 3	<input type="radio"/> 3

### Ask if NOT made decision to act – Code 3 @ Q7

<b>Q8</b>	Why do you feel you do not need to prepare yourself to respond to an alert and/or warning for the following hazards?				
<b>RANDOMISE, LOCK CODE 97 AT BOTTOM.</b>					
	<b>a. Bushfire</b>	<b>b. Cyclone</b>	<b>c. Flood</b>	<b>d. Severe Storms</b>	<b>e. Extreme Heat</b>
This hazard doesn't occur in the part of <b>[INSERT JURISDICTION]</b> where I live	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
I am capable of dealing with all the disruptions this hazard might cause	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2
This hazard has never occurred where I live	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3
It is too difficult to prepare	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 4
I have other priorities	<input type="checkbox"/> 5	<input type="checkbox"/> 5	<input type="checkbox"/> 5	<input type="checkbox"/> 5	<input type="checkbox"/> 5
It's too expensive to prepare	<input type="checkbox"/> 6	<input type="checkbox"/> 6	<input type="checkbox"/> 6	<input type="checkbox"/> 6	<input type="checkbox"/> 6
It isn't my responsibility to prepare	<input type="checkbox"/> 7	<input type="checkbox"/> 7	<input type="checkbox"/> 7	<input type="checkbox"/> 7	<input type="checkbox"/> 7
I feel I need more information on how to prepare	<input type="checkbox"/> 8	<input type="checkbox"/> 8	<input type="checkbox"/> 8	<input type="checkbox"/> 8	<input type="checkbox"/> 8
Other (specify)	<input type="checkbox"/> 97	<input type="checkbox"/> 97	<input type="checkbox"/> 97	<input type="checkbox"/> 97	<input type="checkbox"/> 97
<b>SKIP TO SECTION 8 – ALERTS AND WARNINGS IF <u>ALL</u> CODE 3 @ Q7 (NO DECISION TO ACT)</b>					

## SECTION 7 – Ongoing Action

### INSERT NATURAL HAZARDS SELECTED CODE 1-2 AT Q7 (DECISION TO ACT)

**Q12** Thinking ahead, how often do you anticipate you will prepare to protect yourself when an alert and/or warning is issued for the following natural hazards?

	a. Bushfire	b. Cyclone	c. Flood	d. Severe Storms	e. Extreme Heat
Yearly or more frequently	<input type="radio"/> 1	<input type="radio"/> 1	<input type="radio"/> 1	<input type="radio"/> 1	<input type="radio"/> 1
Every 2 years	<input type="radio"/> 2	<input type="radio"/> 2	<input type="radio"/> 2	<input type="radio"/> 2	<input type="radio"/> 2
Every 3 years	<input type="radio"/> 3	<input type="radio"/> 3	<input type="radio"/> 3	<input type="radio"/> 3	<input type="radio"/> 3
Every four years	<input type="radio"/> 4	<input type="radio"/> 4	<input type="radio"/> 4	<input type="radio"/> 4	<input type="radio"/> 4
Every 5 years or less frequently	<input type="radio"/> 5	<input type="radio"/> 5	<input type="radio"/> 5	<input type="radio"/> 5	<input type="radio"/> 5

## SECTION 8 – ALERTS AND WARNINGS

We'd now like to get some more information regarding natural hazard alert and/or warning systems you may be aware of.

Each natural hazard – bushfire, cyclone, flood, and severe weather (e.g. severe storms, extreme heat) – will be examined one at a time.

### BUSHFIRE

<b>Q13a</b> Thinking about bushfires, do you recall any messaging from [jurisdiction] about days of increased bushfire risk?	Yes, seen <b>and</b> heard	<input type="radio"/> 01
	Yes, heard only	<input type="radio"/> 02
	Yes, seen only	<input type="radio"/> 03
	No, I have not seen or heard of this	<input type="radio"/> 04

<b>Q13b</b> Which of the following statements best describes what the Fire Danger Rating is?	Predicts how <b>likely</b> a fire is to <b>occur</b>	<input type="radio"/> 01
	Predicts how <b>dangerous</b> a fire could be <b>if it did occur</b>	<input type="radio"/> 02
	Don't know	<input type="radio"/> 99

Fire Danger Ratings



[EXAMPLE IMAGE ONLY – SEE SEPARATE FILE FOR IMAGES BY JURISDICTION]  
DISPLAY RATING SCALE ON THE RIGHT-HAND SIDE OF THE SCREEN

<p><b>Q13c</b> A fire danger rating system is used to advise the community of the level of <b>bushfire</b> danger on a particular day, based on the forecast weather conditions.</p> <p>The rating levels are: Low-moderate, High, Very High, Severe, Extreme, [Catastrophic / Code Red – Victoria only].</p> <p>Have you seen or heard of these fire danger ratings before today?</p>	Yes, seen <b>and</b> heard	<input type="radio"/> 01
	Yes, heard only	<input type="radio"/> 02
	Yes, seen only	<input type="radio"/> 03
	No, I have not seen or heard of this	<input type="radio"/> 04

### KEEP IMAGE OF FDRS ON SCREEN

<p><b>Q13d</b> Thinking about the <b>Fire Danger Rating System (FDRS)</b> shown, how strongly do you agree or disagree with the following statements.</p> <p><b>RANDOMISE</b></p>					
	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1 The FDRS is <b>confusing</b>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5
2 The FDRS is <b>relevant</b> to me	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5
3 I <b>use</b> the FDRS to plan my days in summer	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5
4 The FDRS <b>encourages</b> me to <b>take action</b>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5
5 The FDRS has <b>too many</b> levels	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5
6 I <b>see</b> FDRS <b>displayed</b> in my local community	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5

<p><b>Q14</b> Have you taken any action in the past after seeing or hearing the Fire Danger Rating level?</p>	Yes	<input type="radio"/> 01
	No	<input type="radio"/> 02

### KEEP IMAGE OF FDRS ON SCREEN

#### ASK IF CODE 1 @ Q14

<p><b>Q15</b> Thinking about the <b>last</b> time you took action, at what Fire Danger Rating level did you take action; what actions did you take and why?</p>	<b>RATING LEVEL</b>	<b>ACTION TAKEN</b>
	Low-Moderate <input type="radio"/> 1	OPEN _____
	High <input type="radio"/> 2	_____
	Very High <input type="radio"/> 3	
	Severe <input type="radio"/> 4	

<p><i>Please provide as much detail as possible including what the event/incident was, what you felt the warning was telling the community, and what actions you took.</i></p> <p><b>PROGRAMMING NOTE – code 6 read ‘Code Red’ for Victoria</b></p>	<p>Extreme <input type="radio"/> 5</p> <p>Catastrophic <input type="radio"/> 6</p> <p>Don't know <input type="radio"/> 99</p>	
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## KEEP IMAGE OF FDRS ON SCREEN

<p><b>Q16</b> Thinking about the fire danger rating system (FDRS) shown, at what level of the FDRS would you...?</p> <p><b>RANDOMISE</b></p>								
		<b>Low moderate</b>	<b>High</b>	<b>Very High</b>	<b>Severe</b>	<b>Extreme</b>	<b>Catastrophic</b>	<b>Never</b>
	1 Become concerned about the safety of my property	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 98
	2 Become concerned about the safety of myself and family	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 98
	3 Check for information about fires in my area	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 98
	4 Leave the area	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 98
	5 Reconsider travel through a bushland or forested area	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 98
	6 Cancel my plans	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 98
	7 Ensure my property is well prepared for fire	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5	<input type="radio"/> 6	<input type="radio"/> 98



EXAMPLE IMAGE ONLY – SEE SEPARATE FILE FOR IMAGES BY JURISDICTION]

DISPLAY RATING SCALE ON THE RIGHT-HAND SIDE OF THE SCREEN FOR THE FOLLOWING 3 QUESTIONS.

WA WORDING ONLY – OTHER JURISDICTIONS TO BE ADDED ONCE INFORMATION PROVIDED

#### RANDOMISE ORDER

**Q17a** Which of these actions do you believe is required when the fire danger rating is **Low moderate to Very High**?

**Q17b** Which of these actions do you believe is required when the fire danger rating is **Severe**?

**Q17c** Which of these actions do you believe is required when the fire danger rating is **Extreme**?

**Q17d** Which of these actions do you believe is required when the fire danger rating is **Catastrophic**?

#### YOU NEED TO ACT NOW

Put your survival first and leave bushfire risk areas ☐ 1

#### YOU NEED TO GET READY TO ACT

Only stay if you are prepared to the highest level. You must be prepared to actively defend your home if a fire starts. ☐ 2

#### CHECK YOUR PLAN NOW

Check your bushfire survival plan. If you are not prepared, leaving bushfire prone areas early in the day is your safest option. ☐ 3

#### YOU NEED TO BE AWARE

Monitor conditions and be aware action may be needed. ☐ 4

Something else (specify) ☐ 5

I don't know ☐ 99

**Q18a** Have you seen or heard messaging related to a **total fire ban**?

Yes, seen **and** heard ☐ 01

Yes, heard only ☐ 02

Yes, seen only ☐ 03

No, I have not seen or heard of this ☐ 04

**Q18b** What should an individual do (or not do) if a total fire ban was in place?

*Please provide as much detail as possible including what you feel this warning is telling the community, and what actions need to be avoided or taken.*

#### OPEN ENDED



[EXAMPLE IMAGE ONLY – SEE SEPARATE FILE FOR IMAGES BY JURISDICTION]

INSERT ALERT LEVEL IMAGE FROM SEPARATE FILE

<b>Q19</b> <u>During</u> a bushfire, community alerts and/or warnings are issued for <b>bushfires</b> that threaten lives and property. The alert level changes to reflect the increasing risk to your life.  Have you seen or heard of these alerts before today?	Yes, seen <b>and</b> heard	<input type="radio"/> 01
	Yes, heard only	<input type="radio"/> 02
	Yes, seen only	<input type="radio"/> 03
	No, I have not seen or heard of this	<input type="radio"/> 04

## KEEP IMAGE OF ALERTS ON SCREEN

**Q20** Thinking about the alert/warning levels shown, how strongly do you agree or disagree with the following statements.

### RANDOMISE

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1 The alert/warning levels are <b>confusing</b>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5
2 The alert/warning levels are <b>relevant</b> to me	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5
4 The alert/warning levels <b>encourage</b> me to <b>take action</b>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5
5 The alert/warning levels have <b>too many</b> levels	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5
6 The alert/warning levels are <b>closely linked</b> to the <b>Fire Danger Rating System</b>	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5

<b>Q21</b> Have you taken any action in the past after seeing, hearing or receiving a <b>bushfire</b> alert and/or warning?	Yes	<input type="radio"/> 01
	No	<input type="radio"/> 02

## ASK IF CODE 1 @ Q21

<b>Q22</b> How did you receive this alert and/or warning?	Landline telephone warning	<input type="checkbox"/> 1
	SMS message	<input type="checkbox"/> 2

<b>RANDOMISE, LOCK CODE 97 AT BOTTOM</b>	Radio new alert	<input type="checkbox"/> 3
	TV news alert	<input type="checkbox"/> 4
	Contact from friend, family or neighbour	<input type="checkbox"/> 5
	Direct contact (door knock) from emergency services	<input type="checkbox"/> 6
	Internet/online (Please specify)	<input type="checkbox"/> 7
	Social media (Please specify)	<input type="checkbox"/> 8
	Other (specify)	<input type="checkbox"/> 97

**KEEP IMAGE OF ALERTS ON SCREEN**  
**ASK IF CODE 1 @ Q21**

<b>Q23</b> Thinking about the <u>last</u> time you took action, at what <b>bushfire</b> alert/warning level did you take action; what actions did you take and why?  <i>Please provide as much detail as possible including what the event/incident was, what you felt the warning was telling the community, and what actions you took.</i>	<b>ALERT LEVEL</b> Advice <input type="radio"/> 1 Watch and Act <input type="radio"/> 2 Emergency Warning <input type="radio"/> 3 Evacuation ( <b>FOR VIC ONLY</b> ) <input type="radio"/> 4 Don't know <input type="radio"/> 99	<b>ACTION TAKEN</b> OPEN _____ _____

**DISPLAY IMAGE OF ALERTS ON SCREEN**

<b>Q24</b> Thinking about the alert/warning system shown, at what alert level would you...? <b>RANDOMISE</b>				
	<b>Advice</b>	<b>Watch and Act</b>	<b>Emergency Warning</b>	<b>Never</b>
1 Become concerned about the safety of my property	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 98
2 Become concerned about the safety of myself and family	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 98
3 Check for information about fires in my area	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 98
4 Leave the area	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 98
5 Reconsider travel through a bushland or forested area	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 98
6 Cancel my plans	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 98
7 Ensure my property is well prepared for fire	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3	<input type="radio"/> 98





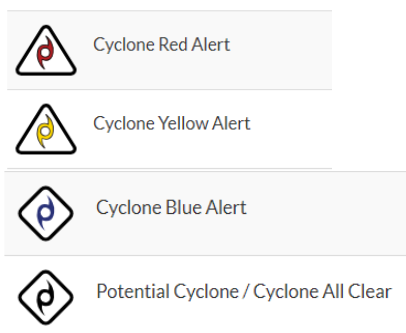
[EXAMPLE IMAGE ONLY – SEE SEPARATE FILE FOR IMAGES BY JURISDICTION]

DISPLAY ALERT LEVELS ON THE RIGHT HAND SIDE OF THE SCREEN FOR THE FOLLOWING 4 QUESTIONS.  
INTRODUCTION

WA WORDING ONLY – OTHER JURISDICTIONS TO BE ADDED ONCE INFORMATION PROVIDED FOR QLD, NSW AND TAS – DON'T ASK Q25a (ALL CLEAR) – NOT APPLICABLE IN QLD AND NSW AND TAS  
ONLY ASK Q25e FOR VIC

<p><b>RANDOMISE ORDER</b></p> <p><b>Q25a</b> Which of these actions do you believe is required when the alert level is <b>All Clear</b>?</p> <p><b>Q25b</b> Which of these actions do you believe is required when the alert level is <b>Advice</b>?</p> <p><b>Q25c</b> Which of these actions do you believe is required when the alert level is <b>Watch and Act</b>?</p> <p><b>Q25d</b> Which of these actions do you believe is required when the alert level is <b>Emergency Warning</b>?</p> <p><b>ONLY FOR VICTORIA</b></p> <p><b>Q25e.</b> Which of these actions do you believe is required when the alert level is <b>Evacuation</b>?</p>	<p><u><b>A fire has started but there is no known danger</b></u></p> <p>Consult general information to keep up to date with developments <input type="radio"/> 1</p> <p><u><b>There is a possible threat to lives and homes</b></u></p> <p>You need to leave the area or prepare to actively defend your home to protect you and your family <input type="radio"/> 2</p> <p><u><b>You are in danger and your area will be impacted</b></u></p> <p>You need to take immediate action to survive. Listen carefully as you will be advised whether you can leave the area or if you must seek shelter <input type="radio"/> 3</p> <p><u><b>The danger has passed</b></u></p> <p>The danger has passed and the fire is under control, but you need to remain vigilant in case the situation changes <input type="radio"/> 4</p> <p>Something else (specify) <input type="radio"/> 5</p> <p>I don't know <input type="radio"/> 6</p>
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## CYCLONE



[EXAMPLE IMAGE ONLY – SEE SEPARATE FILE FOR IMAGES BY JURISDICTION]

INSERT ALERT LEVEL IMAGE FROM SEPARATE FILE ONLY WA AND VIC HAVE ICONS FOR CYCLONES

We would now like you to think about cyclones.

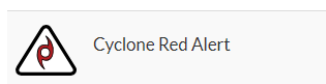
<p><b>Q26</b> When a <b>cyclone</b> threatens, community alerts and/or warnings are issued. The alert/warning level changes to reflect the increasing risk to your life and advises what you need to do before, during and after a cyclone.</p> <p><b>SHOW FOR WA ONLY</b> The four alert/warning stages are – blue, yellow, red and all clear.</p> <p><b>SHOW FOR VIC ONLY</b> The four alert/warning levels are advice, warning, emergency warning and evacuation.</p> <p><b>SHOW FOR ALL OTHER JURISDICTION</b> The five alert/warning levels are category 1-5 cyclones.</p> <p>Have you seen or heard of these alerts/warnings before today?</p>	<p>Yes, seen <b>and</b> heard <input type="radio"/> 01</p>
	<p>Yes, heard only <input type="radio"/> 02</p>
	<p>Yes, seen only <input type="radio"/> 03</p>
	<p>No, I have not seen or heard of this <input type="radio"/> 04</p>

Q27	Have you taken any action in the past after seeing or hearing the <b>cyclone</b> alert and/or warning level?	Yes	<input type="radio"/> 01
		No	<input type="radio"/> 02

## KEEP IMAGE OF ALERTS ON SCREEN

### ASK IF CODE 1 @ Q27

<b>Q28</b> Thinking about the <b>last</b> time you took action, at what <b>cyclone</b> alert and/or warning level did you take action; what actions did you take and why?  <i>Please provide as much detail as possible including what the event/incident was, what you felt the warning was telling the community, and what actions you took.</i>	<b>WA ALERT LEVEL</b> Blue Alert <input type="radio"/> 1 Yellow Alert <input type="radio"/> 2 Red Alert <input type="radio"/> 3 Don't know <input type="radio"/> 99	<b>ACTION TAKEN</b> OPEN _____     
	<b>FOR VIC ONLY</b> Advice <input type="radio"/> 4 Warning <input type="radio"/> 5 Emergency Warning <input type="radio"/> 6 Evacuation <input type="radio"/> 7 Don't know <input type="radio"/> 99	
	<b>FOR ALL OTHER JURISIDICATION</b> Category 1 <input type="radio"/> 8 Category 2 <input type="radio"/> 9 Category 3 <input type="radio"/> 10 Category 4 <input type="radio"/> 11 Category 5 <input type="radio"/> 12 Don't know <input type="radio"/> 99	



Cyclone Red Alert



Cyclone Yellow Alert



Cyclone Blue Alert



Potential Cyclone / Cyclone All Clear

**[EXAMPLE IMAGE ONLY – SEE SEPARATE FILE FOR IMAGES BY JURISDICTION]**

**DISPLAY ALERT LEVELS ON THE RIGHT-HAND SIDE OF THE SCREEN FOR THE FOLLOWING 4 QUESTIONS.**

**INTRODUCTION**

## WA VERSION – OTHER JURISDICTIONS TO BE ADDED ONCE INFORMATION PROVIDED

RANDOMISE ORDER	
<b>Q29a</b> Which of these actions do you believe is required when the alert/warning level is <b>(For WA: All Clear/For VIC: Advice/For All other Jurisdictions: Category 1)?</b>	<p><u>Get ready for a cyclone</u></p> <p>You need to start preparing for cyclonic weather <input type="radio"/> 1</p> <p><u>Take action and get ready to shelter</u></p> <p>You need to prepare for the arrival of the cyclone <input type="radio"/> 2</p> <p><u>Take shelter from the cyclone</u></p> <p>You need to go to shelter immediately <input type="radio"/> 3</p> <p><u>The danger has passed</u></p> <p>Wind and storm surge dangers have passed but you need to take care to avoid the dangers caused by damage <input type="radio"/> 4</p> <p>Something else (specify) <input type="radio"/> 5</p> <p>I don't know <input type="radio"/> 99</p>
<b>Q29b</b> Which of these actions do you believe is required when the alert/warning level is <b>(For WA: Blue Alert/For VIC: Warning/For all other jurisdictions Category 2)?</b>	
<b>Q29c</b> Which of these actions do you believe is required when the alert/warning level is <b>(For WA: Yellow Alert /For VIC: Emergency Warning /For all other jurisdictions Category 3)?</b>	
<b>Q29d</b> Which of these actions do you believe is required when the alert/warning level is <b>(For WA: Red Alert/For all other jurisdictions Category 4)?</b>	
<b>FOR ALL JURISIDICATION EXCEPT WA</b>	
<b>Q29e.</b> Which of these actions do you believe is required when the alert/warning level is <b>(For VIC: Evacuation/For all other jurisdictions: Category 5) ?</b>	

## FLOOD



Flood Warning

[EXAMPLE IMAGE ONLY – SEE SEPARATE FILE FOR IMAGES BY JURISDICTION]

WA VERSION – OTHER JURISDICTIONS TO BE ADDED ONCE INFORMATION PROVIDED

ONLY WA, VIC, SA, ACT AND TAS HAVE ICONS FOR FLOODS

Now we'd like you to think about floods.

<b>Q30</b> When there is danger of flooding, a flood alert and/or warning may be issued to the community.  Have you seen or heard of this warning before today?	Yes, seen <b>and</b> heard	<input type="radio"/> 01
	Yes, heard only	<input type="radio"/> 02
	Yes, seen only	<input type="radio"/> 03
	No, I have not seen or heard of this	<input type="radio"/> 04

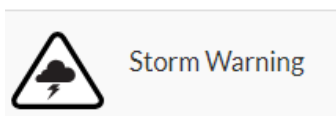
<b>RANDOMISE ORDER</b>		
<b>Q31a</b> Which of these definitions do you believe reflects an alert for <b>minor flooding (For SA: Flood Advice/For VIC: Advice/For TAS: Advice)?</b>  <b>Q31b</b> Which of these definitions do you believe reflects an alert for <b>moderate flooding (For SA: Flood Watch and Act/ For Vic: Warning/For TAS: Act Now)?</b>  <b>Q31c</b> Which of these definitions do you believe reflects an alert for <b>major flooding (For SA: Flood Emergency Warning/For VIC: Emergency Warning/For TAS: Emergency Warning)?</b>  <b>Q31d</b> Which of these definitions do you believe reflects a <b>flood watch (For SA: Flood Advice – Reduce Threat/For VIC: Evacuation)?</b>  <b>Q31e</b> Which of these definitions do you believe reflects when a <b>flood warning</b> is issued?	Low-lying areas next to water courses are inundated. Minor roads may be closed. Backyards and buildings below floor level may be affected.	<input type="radio"/> 1
	Main traffic routes may be affected. Some buildings may be affected above floor level. Evacuation of flood affected areas may be required.	<input type="radio"/> 2
	Extensive rural and/or urban areas are inundated. Many buildings may be affected above floor level. Major rail and traffic routes may be closed. Evacuation of flood affected areas may be required.	<input type="radio"/> 3
	Early advice of a developing situation that may lead to flooding	<input type="radio"/> 4
	Advice that flooding is occurring or expected to occur in a geographical area	<input type="radio"/> 5
	Something else (specify)	<input type="radio"/> 6
	I don't know	<input type="radio"/> 7

<b>Q32</b> Have you taken any action in the past after seeing or hearing the <b>flood</b> alert and/or warning?	Yes	<input type="radio"/> 01
	No	<input type="radio"/> 02

**ASK IF CODE 1 @ Q32**

<b>Q33</b> When and what actions did you take and why?  <i>Please provide as much detail as possible including what the event/incident was, what you felt the warning was telling the community, and what actions you took.</i>	OPEN ENDED <hr/> <hr/> <hr/>
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## SEVERE WEATHER | STORMS



**[EXAMPLE IMAGE ONLY – SEE SEPARATE FILE FOR IMAGES BY JURISDICTION]**

**WA VERSION – OTHER JURISDICTIONS TO BE ADDED ONCE INFORMATION PROVIDED**

**ONLY WA, VIC, ACT AND SA HAVE ICONS FOR SEVERE WEATHER**

Now we'd like you to think about severe weather and thunderstorms

<b>Q34</b> When there is danger of severe weather and thunderstorms, alerts and/or warnings may be issued to the community.  Have you seen or heard of this alert and/or warning before today?	Yes, seen <b>and</b> heard <input type="radio"/> 01 Yes, heard only <input type="radio"/> 02 Yes, seen only <input type="radio"/> 03 No, I have not seen or heard of this <input type="radio"/> 04
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<b>Q35</b> Which of the following severe weather alerts and/or warnings have you seen or heard of before today?  <b>RANDOMISE, LOCK CODE 99 AT BOTTOM</b>	Severe thunderstorms <input type="checkbox"/> 1 Large hail <input type="checkbox"/> 2 Sustained winds of gale force (63 km/h) or more <input type="checkbox"/> 3 Wind gusts of 90 km/h or more <input type="checkbox"/> 4 Very heavy rain that may lead to flash flooding <input type="checkbox"/> 5 Abnormally high tides (or storm tides) expected to exceed highest astronomical tide <input type="checkbox"/> 6 Unusually large surf waves expected to cause dangerous conditions on the coast <input type="checkbox"/> 7 Widespread blizzards in Alpine areas <input type="checkbox"/> 8 None of the above <input type="radio"/> 99  <b>FOR VIC</b>
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	Advice	<input type="checkbox"/> 9
	Warning	<input type="checkbox"/> 10
	Emergency Warning	<input type="checkbox"/> 11
	Evacuation	<input type="checkbox"/> 12
	None of the above	<input type="radio"/> 99

<b>Q36</b> Have you taken any action in the past after seeing or hearing the <b>severe weather</b> alert and/or warning?	Yes	<input type="radio"/> 01
	No	<input type="radio"/> 02

#### ASK IF CODE 1 @ Q36

<b>Q37</b> Thinking about the <b>last</b> time you took action, for what type of alert and/or warning did you take action; what actions did you take and why?  <i>Please provide as much detail as possible including what the event/incident was, what you felt the warning was telling the community, and what actions you took.</i>	<b>WARNING LEVEL</b> <u>Insert codes 1-8 @ Q35</u> <b>FOR VIC</b> <u>Insert codes 9-12 @ Q35</u> Don't know <input type="radio"/> 99	<b>ACTION TAKEN</b> OPEN _____ _____
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## EXTREME HEAT

[SEE SEPARATE FILE FOR IMAGES BY JURISDICTION]

**ONLY SA AND VIC HAVE ICONS FOR EXTREME HEAT**  
**NO ICON TO BE SHOWN FOR ALL OTHER JURISDICTIONS**

And finally, please now think about extreme heat

<b>Q38</b> When there is danger of a heatwave, an alert and/or warning may be issued to the community.  Have you seen or heard of this warning before today?	Yes, seen <b>and</b> heard	<input type="radio"/> 01
	Yes, heard only	<input type="radio"/> 02
	Yes, seen only	<input type="radio"/> 03
	No, I have not seen or heard of this	<input type="radio"/> 04

<b>Q39</b> Have you taken any action in the past after seeing or hearing a heatwave alert and/or warning?	Yes	<input type="radio"/> 01
	No	<input type="radio"/> 02

#### ASK IF CODE 1 @ Q39

<b>Q40</b> What actions did you take and why?  <i>Please provide as much detail as possible including what the event/incident was, what you felt the warning was telling the community, and what actions you took.</i>	OPEN ENDED

### SECTION 9 – FINAL PROFILING

And just a few final questions about yourself.

<b>D1</b> Which of these best describes your household?	Young person living at home with parents	<input type="radio"/> 01
	Young single/couple – no children at home	<input type="radio"/> 02
	Single/couple with youngest child under the age of 6 yrs	<input type="radio"/> 03
	Single/couple with youngest child between 6 and 12 yrs	<input type="radio"/> 04
	Single/couple with youngest child 13 yrs+	<input type="radio"/> 05
	Older single with no children at home	<input type="radio"/> 06
	Older couple with no children at home	<input type="radio"/> 07
	Other	<input type="radio"/> 08
	Prefer not to answer	<input type="radio"/> 99

<b>D1b</b> Do you identify with any of the following groups?	Person living with a disability	<input type="checkbox"/> 01
	Primary carer for someone with a disability	<input type="checkbox"/> 02
	None of the above	<input type="radio"/> 98

<b>D1c</b> Do you identify as?	Aboriginal	<input type="checkbox"/> 01
	Torres Strait Islander	<input type="checkbox"/> 02
	Aboriginal and Torres Strait Islander	<input type="checkbox"/> 02
	None of the above	<input type="radio"/> 98



<b>D2</b>	Which of the following best applies to you?	Own my home (no mortgage)	<input type="radio"/> 01
		Paying off my home (have a mortgage)	<input type="radio"/> 02
		Renting	<input type="radio"/> 03
		Other (e.g. live with parents/ boarding)	<input type="radio"/> 04
		Prefer not to answer	<input type="radio"/> 99

<b>D3</b>	Which of these best describes your current employment situation?	Working full time	<input type="radio"/> 01
		Working part-time/casual	<input type="radio"/> 02
		Unemployed	<input type="radio"/> 03
		Student	<input type="radio"/> 04
		Retired	<input type="radio"/> 05
		Home duties	<input type="radio"/> 06
		Prefer not to answer	<input type="radio"/> 99

<b>D4</b>	Do you currently have home, contents or business insurance?	Contents insurance	<input type="checkbox"/> 01
		Home insurance	<input type="checkbox"/> 02
		Business insurance	<input type="checkbox"/> 03
		I have no insurance	<input type="radio"/> 04

<b>D5</b>	What is the size of your property?	Small - Less than ¼ acre (less than 1,100m2)	<input type="radio"/> 01
		Medium - Between ¼ and 1 acre (1,010m2-4,040m2)	<input type="radio"/> 02
		Large - Between 1 and 10 acres (4,040m2-40,400m2)	<input type="radio"/> 03
		Regional – Larger than 10 acres	<input type="radio"/> 04

<b>D6</b>	Which of the following property type is your home?	Standalone house	<input type="radio"/> 01
		Duplex/townhouse	<input type="radio"/> 02
		Unit/apartment	<input type="radio"/> 03
		Transportable house	<input type="radio"/> 04

<b>D7a</b>	How far is your home from the nearest bushland or grassland area (an area of forest, trees, bush or	Less than 100 metres	<input type="radio"/> 01
		Between 100 and 500 metres	<input type="radio"/> 02
		Between 500 metres and 1 km	<input type="radio"/> 03

grasslands)?	Further than 1km	<input type="radio"/> 04
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<b>D7b</b> How far is your home from the nearest river or coast	Less than 100 metres	<input type="radio"/> 01
	Between 100 and 500 metres	<input type="radio"/> 02
	Between 500 metres and 1 km	<input type="radio"/> 03
	Further than 1km	<input type="radio"/> 04

<b>D8</b> Were you born or did you spend your childhood years living in Australia?	Yes, I was born in Australia	<input type="radio"/> 01
	I was not born in Australia but spent my childhood	
	years living here	<input type="radio"/> 02
	No, I did not move to Australia until I was an adult	<input type="radio"/> 03
	Other (specify)	<input type="radio"/> 04

<b>D9</b> What personal experience have you had with the following hazards? <b>RANDOMISE</b> <b>LOCK CODE 6 AT THE BOTTOM</b>					
	<b>a. Bushfire</b>	<b>b. Cyclone</b>	<b>c. Flood</b>	<b>d. Severe Storms</b>	<b>e. Extreme Heat</b>
I <b>was injured</b> due to this hazard	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
I have had <b>property damage</b> from this hazard	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2
I have had to <b>evacuate</b> due to this hazard	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3
I have experienced this <b>close to my home</b> but did not have to evacuate	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 4
I have ongoing <b>trauma or stress</b> due to this hazard	<input type="checkbox"/> 5	<input type="checkbox"/> 5	<input type="checkbox"/> 5	<input type="checkbox"/> 5	<input type="checkbox"/> 5
I <b>have no personal experience with this hazard</b>	<input type="radio"/> 6	<input type="radio"/> 6	<input type="radio"/> 6	<input type="radio"/> 6	<input type="radio"/> 6

### IF CODE 05 AT D9 PLEASE SHOW

*If anything in this survey has triggered an issue for you, please contact a support line or your trusted GP.*

*Life Line: 13 11 14*

*Beyond Blue: 1300 224 636*

# 2337 – SA CFS – NFDRS and Warnings Systems

## Stage 3 | Online Survey | Creative Optimisations of Systems

Client Contact Name:	Fiona Dunstan, Peta O'Donohue, Andrew Stark
Version:	V3 29.04.19
Methodology:	Online
Survey Length:	20 minutes

	Quotas	
Jurisdiction	Metro	Regional
QLD	400	600
NSW	500	500
VIC	600	400
SA	800	200
WA	500	500
TAS	200	
ACT	100	
NT	100	
TOTAL PER VERSION	5400	

NOTE – The survey will be pilot tested with n=150 from each major jurisdiction (QLD, NSW, VIC, SA, WA) giving n=750 total sample; then paused for initial FDR analysis. Should there be clear FDR designs leading amongst responses, the FDR section will be adjusted to monadic or triad testing for the remaining sample of n=4,650.

*Send out all survey invitations in line with the population profile – age, gender, income, region etc.*

### **PROGRAMMER INSTRUCTIONS**

<input type="radio"/>	Denotes single response question
<input type="checkbox"/>	Denotes multiple response question

Thank you for agreeing to take part in this **20-minute** survey regarding how the community receives forecasts and warnings for **natural hazards in Australia**. Please note that you may be asked about a natural hazard that is not the primary risk in your area.

All information you provide will remain completely confidential and only be used for research purposes.

When completing the survey please read each question carefully, answer the questions as accurately as you can and select the answers that best reflect your views. Some questions allow more than one answer. There are also several opportunities to type in open-ended responses. To move to the next question, click on the next button at the bottom of the screen, please note that there is no opportunity to go back to a previous question once you have moved to the next page.

## SECTION 1 – SCREENING

<b>S1</b> Do you or anyone you know well work or have recently worked:  <b>RANDOMISE</b>	In market research	<b>Terminate</b>	<input type="checkbox"/> 01
	In advertising or media	<b>Terminate</b>	<input type="checkbox"/> 02
	In emergency services (e.g. police, firefighter, ambulance)	<b>Terminate</b>	<input type="checkbox"/> 03
	As a volunteer in emergency services (e.g. firefighter)	<b>Terminate</b>	<input type="checkbox"/> 04
	For an insurance company		<input type="checkbox"/> 05
	For a telecommunications provider		<input type="checkbox"/> 06
	None of the above		<input type="checkbox"/> 99

<b>S2</b> How old are you?	Under 18	<b>Terminate</b>	<input type="radio"/> 01
	18-24		<input type="radio"/> 02
	25-29		<input type="radio"/> 03
	30-34		<input type="radio"/> 04
	35-39		<input type="radio"/> 05
	40-44		<input type="radio"/> 06
	45-49		<input type="radio"/> 07
	50-54		<input type="radio"/> 08
	55-59		<input type="radio"/> 09
	60-64		<input type="radio"/> 10
	65+		<input type="radio"/> 11

<b>S3</b> Are you...	Male	<input type="radio"/> 01
	Female	<input type="radio"/> 02
	Other	<input type="radio"/> 03

<b>S3</b> What is your postcode?  <b>PROGRAMMER – RESTRICT TO NUMERIC, 4 DIGITS</b>  <b>TERMINATE IF DO NOT FALL INTO SPECIFIC POSTCODE RANGE</b>	<div style="border: 1px solid black; height: 40px; width: 100%;"></div>
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**CREATE HIDDEN VARIABLE BASED ON LOCATION TO MATCH GEOGRAPHICAL SEGMENT**

## SECTION 2 – NFDRS OPTIMISATION

### PROGRAMMING NOTE:

- 10 SECOND TIMER ON EACH INTRODUCTION PAGE

### INTRODUCTION 1

The first section of questions will be asking you about Fire Danger Ratings. This is a **forecast system** used to inform the community of how dangerous a bushfire would be **if** one started. It is **not** an indicator that a bushfire has started.

There are a number of ratings that **indicate how difficult it will be to control a fire** under the forecast weather conditions. The higher the Fire Danger Rating, the more dangerous the fire conditions.

Though there are multiple Fire Danger Ratings to show increasing danger, only a single rating will be issued to show the bushfire danger for that day.

Ratings are forecast using Bureau of Meteorology data for up to four days in advance, based on weather (e.g. temperature and wind) and other environmental conditions such as how much dry grass and undergrowth there is.

**The Fire Danger Rating should be used as an early indicator to trigger you to take action and stay safe.**

<b>Q1a</b> Based on this description, have you heard of the Fire Danger Rating System before today?	Yes	<input type="radio"/> 1
	No	<input type="radio"/> 2
	Don't Know	<input type="radio"/> 99

### PROGRAMMING NOTE:

- ASK IF CODE 1 @ Q1a (YES)
- NUMERIC ENTRY FIELD

<b>Q1b</b> How many Fire Danger Rating levels are there in the existing system?	[ <input type="text"/> ] levels
	Don't Know <input type="radio"/> 99

### INTRODUCTION 2

You may see or hear the Fire Danger Rating in a number of ways, including:

- Interactive online maps
- Official Websites and Apps
- Social Media (e.g. Facebook)
- TV

- Text messages
- Roadside signage
- Radio

The existing system is being reviewed to ensure the design is highly effective at **prompting you to take action** to protect against the risk of bushfires.

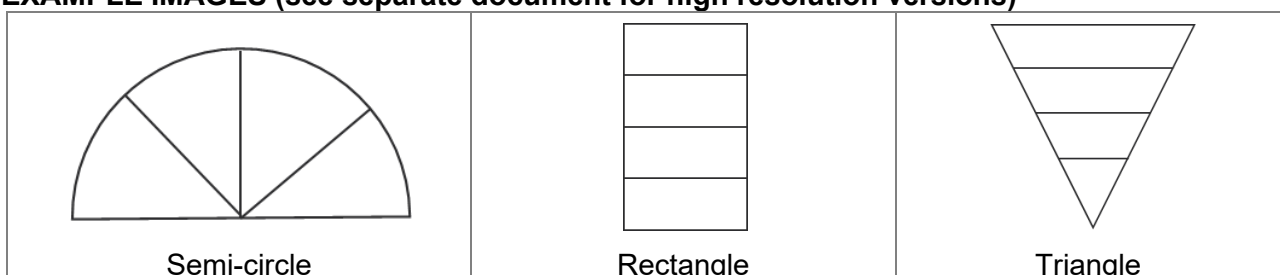
Research has been conducted nationally to develop a set of potential designs for the new system. **In the following questions we'd like you to select from these designs based on what you think is the most effective system to promote action.**

**PROGRAMMING NOTE:**

- **DISPLAY IMAGES WITH TEXT BELOW**
- **RANDOMISE ORDER OF SHAPES SHOWN**

<p><b>Q2</b> Firstly, we'd like you to think about the following variations of shape when presenting Fire Danger Ratings as a sign or picture (e.g. online or roadside signage).</p> <p>The new system will have four Fire Danger Rating levels. Each segment within the shapes represents a level. The higher the Fire Danger Rating, the more dangerous the fire conditions.</p> <p><b>Which shape would be most effective to communicate the Fire Danger Ratings?</b></p> <p><i>Click <a href="#">here</a> to view further information on the purpose of this system.</i></p>	<table> <tr> <td>4 stage semi-circle</td> <td><input type="radio"/> 1</td> </tr> <tr> <td>4 stage rectangle</td> <td><input type="radio"/> 2</td> </tr> <tr> <td>4 stage triangle</td> <td><input type="radio"/> 3</td> </tr> </table>	4 stage semi-circle	<input type="radio"/> 1	4 stage rectangle	<input type="radio"/> 2	4 stage triangle	<input type="radio"/> 3
4 stage semi-circle	<input type="radio"/> 1						
4 stage rectangle	<input type="radio"/> 2						
4 stage triangle	<input type="radio"/> 3						

**EXAMPLE IMAGES (see separate document for high resolution versions)**



**PROGRAMMING NOTES: Rotate the order of testing for Q3 and Q4a/b**










- Half Q3, Q4a, Q4b
- Half Q4a, Q4b, Q3

**PROGRAMMING NOTES:**

- **DISPLAY THE 3 COLOUR OPTIONS BASED ON RESPONSE TO Q2**
- **DISPLAY IMAGES WITH TEXT OF COLOURS WRITTEN BELOW**

<p><b>Q3</b> Now, which of these colour sets best communicates increasing fire risk and would encourage you to take action and stay safe at each Fire Danger Rating?</p> <p><i>Click <a href="#">here</a> to view further information on the purpose of this system.</i></p> <p><b>RANDOMISE</b></p>	<p><b>Show if code 1 @ Q2</b></p> <p>Semi-circle   green, yellow, orange, red <input type="radio"/> 01</p> <p>Semi-circle   green, orange, red, black <input type="radio"/> 02</p> <p>Semi-circle   yellow, orange, red, black <input type="radio"/> 03</p>
	<p><b>Show if code 2 @ Q2</b></p> <p>Rectangle   green, yellow, orange, red <input type="radio"/> 04</p> <p>Rectangle   green, orange, red, black <input type="radio"/> 05</p> <p>Rectangle   yellow, orange, red, black <input type="radio"/> 06</p>
	<p><b>Show if code 3 @ Q2</b></p> <p>Triangle   green, yellow, orange, red <input type="radio"/> 07</p> <p>Triangle   green, orange, red, black <input type="radio"/> 08</p> <p>Triangle   yellow, orange, red, black <input type="radio"/> 09</p>

**EXAMPLE IMAGES (see separate document for high resolution versions)**

<p><b>Green, Orange, Red, Black</b></p> 	<p><b>Green, Orange, Red, Black</b></p> 	<p><b>Green, Orange, Red, Black</b></p> 
<p><b>Green, Yellow, Orange, Red</b></p> 	<p><b>Green, Yellow, Orange, Red</b></p> 	<p><b>Green, Yellow, Orange, Red</b></p> 
<p><b>Yellow, Orange, Red, Black</b></p> 	<p><b>Yellow, Orange, Red, Black</b></p> 	<p><b>Yellow, Orange, Red, Black</b></p> 
<p><i>(Show if code 1 @ Q2)</i></p>	<p><i>(Show if code 2 @ Q2)</i></p>	<p><i>(Show if code 3 @ Q2)</i></p>

## PROGRAMMING NOTES:

- **DISPLAY IMAGE OF OPTION SELECTED AT Q3 AT TOP OF PAGE**
- **DISPLAY Q4A AND Q4B ON THE SAME PAGE**

<p><b>Q4a</b> Thinking about the purpose of this system (i.e. to effectively prompt individuals to take action), which of the following word-sets best communicates bushfire risk from least to most danger for the first 3 levels?</p> <p><i>Click <a href="#">here</a> to view further information on the purpose of this system.</i></p> <p><b>ROTATE</b></p>	<p><u>Low, moderate, high</u> <input type="radio"/> 01</p> <p><u>Low, high, very high</u> <input type="radio"/> 02</p>
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<p><b>Q4b</b> Now please rank the following options from most to least preferred to communicate the highest level of bushfire danger.</p> <p><b>RANKED PREFERENCE – LIMIT TO 3</b></p> <p><b>RANDOMISE</b></p>	<p><u>Extreme</u> <input type="radio"/> 01</p> <p><u>Severe</u> <input type="radio"/> 02</p> <p><u>Catastrophic</u> <input type="radio"/> 03</p> <p><u>Code Red</u> <input type="radio"/> 04</p> <p><u>Major</u> <input type="radio"/> 05</p> <p><u>Maximum</u> <input type="radio"/> 06</p> <p><u>Disastrous</u> <input type="radio"/> 07</p> <p><u>Red Flag</u> <input type="radio"/> 08</p> <p><u>Code Black</u> <input type="radio"/> 09</p>
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<p><b>Q5a</b> An additional instruction will accompany each Fire Danger Rating. Which of the following would be <b>most effective</b> to encourage you to take action and stay safe at each Fire Danger Rating?</p>			
<p>Insert level 1 response from Q4a</p>	<p>Insert level 2 response from Q4a</p>	<p>Insert level 3 response from Q4a</p>	<p>Insert #1 response from Q4b</p>
<ul style="list-style-type: none"> <li>• <u>Know what to do</u></li> <li>• <u>Be aware that fires can start</u></li> <li>• <u>Prepare so you are ready if a fire starts</u></li> <li>• </li> </ul>	<ul style="list-style-type: none"> <li>• <u>Be ready to act</u></li> <li>• <u>Stay informed</u></li> <li>• <u>Know what you will do</u></li> <li>• <u>Stay alert</u></li> <li>• <u>Monitor conditions</u></li> <li>• <u>Be prepared</u></li> </ul>	<ul style="list-style-type: none"> <li>• <u>Take action</u></li> <li>• <u>Be ready to leave</u></li> <li>• <u>Conditions can change quickly</u></li> <li>• <u>If a fire starts, take action right away</u></li> <li>• <u>Know where you will go</u></li> <li>• <u>Protect your life and property</u></li> </ul>	<ul style="list-style-type: none"> <li>• <u>Leave high risk areas</u></li> <li>• <u>Protect your life</u></li> <li>• <u>Take action now</u></li> <li>• <u>Know how to stay safe</u></li> <li>• <u>Leave the night before or early on the day</u></li> <li>• <u>Conditions will change quickly</u></li> </ul>



<p><b>Q5b</b> When Fire Danger Ratings are displayed on signs and other visual means, which of the following is <b>most effective</b> to describe ratings?</p> <p>Please rank your top three preferences.</p> <p><b>RANKED PREFERENCE – LIMIT TO 3</b></p> <p><b>RANDOMISE</b></p>	Fire Danger Forecast	<input type="radio"/> 1
	Your Fire Risk	<input type="radio"/> 2
	Fire Risk Level	<input type="radio"/> 3
	Fire Danger Rating	<input type="radio"/> 4
	Fire Danger Level	<input type="radio"/> 5
	Area Fire Risk	<input type="radio"/> 6
	Fire Risk Forecast	<input type="radio"/> 7

<p><b>Q5c</b> If the Fire Danger Rating varied throughout the day (e.g. Low in the early morning and High in the hottest part of the day) would you <b>prefer</b> to be told a <b>single rating</b> for the day (highest rating), or receive <b>multiple ratings throughout the day</b>?</p>	<b>Single rating</b> for the day (highest rating)	<input type="radio"/> 01
	<b>Variable ratings</b> throughout the day	<input type="radio"/> 02
	No preference	<input type="radio"/> 03

## SECTION 3 – WARNINGS OPTIMISATION

### PROGRAMMING NOTES:

- QUESTIONS TO BE ASKED OF ONE NATURAL HAZARD ONLY
- RANDOMISE SELECTION OF HAZARD
- Weighting of hazard to be confirmed, initial recommendation as:
  - 30% bushfire, 25% flood, 25% cyclone, 10% severe storm, 10% extreme heat
- 10 SECOND TIMER ON EACH INTRODUCTION PAGE

### BUSHFIRE

#### INTRODUCTION 1

We'd now like you to think about when a **bushfire has started**.

During a bushfire, you may receive an official warning when there is a potential threat to property or life. The bushfire warning system is made up of a number of levels and the warning level increases to reflect the increasing risk to life.

**These warnings act as a trigger for you to take action and protect yourself against the bushfire.**

You may see or hear a warning in a number of ways, including:

- Interactive online maps
- Official Websites and Apps
- Social Media (e.g. Facebook)
- TV
- Text messages
- Radio

Warnings include information on the current bushfire situation and outline the actions individuals should take.

<b>Q6a</b> Based on this description, have you heard of these Bushfire Warnings in the past?	Yes	<input type="radio"/> 1
	No	<input type="radio"/> 2
	Don't Know	<input type="radio"/> 99

### PROGRAMMING NOTE:

- ASK IF CODE 1 @ Q6a (YES)
- NUMERIC ENTRY FIELD

<b>Q6b</b> Have you ever received one of these warnings before today?	Yes [ ] number received	<input type="radio"/> 1
	No	<input type="radio"/> 2
	Don't Know	<input type="radio"/> 99

## INTRODUCTION 2

The existing system is being reviewed to ensure the design is highly effective at prompting individuals to take action to protect against the bushfire that is occurring.

Focus group research has been conducted nationally to develop a set of potential options for the new warning system. **In the following questions we'd like you to select from these options to design the most effective bushfire warning system to promote action.**

**When thinking about the warning system keep in mind that only one level of warning will be received at a given time rather than the full system with all levels being shown together.**

## CYCLONE/FLOOD/EXTREME HEAT/SEVERE STORM ----- INTRODUCTION 1

We'd now like you to think about [cyclones/floods/extreme heat/severe storms]. Specifically, think about if you were in an area where [a cyclone/ a flood/extreme heat/a severe storm] has been forecast to impact.

You may receive an official warning when there is a potential threat to property or life. The [cyclone/flood/extreme heat/severe storms] warning system is made up of a number of levels and the warning level increases to reflect the increasing risk to life.

**These warnings act as a trigger for you to take action and protect yourself against the danger.**

You may see or hear a warning in a number of ways, including:

- Interactive online maps
- Official Websites
- Social Media (e.g. Facebook)
- TV
- Text messages
- Radio

Warnings issued include information on the current situation and outline the actions individuals should take.

## PROGRAMMING NOTE: SHOW FOR CYCLONE ONLY

You may have heard of terms such as Category 1, Category 2, etc. to describe the severity of cyclones. These warnings are designed to show the severity of a cyclone and differ from the community warning system we'd like you to review. Category information will be issued within the warnings we are asking you to review.

## PROGRAMMING NOTE: SHOW FOR FLOOD ONLY

You may have heard of terms such as Minor, Moderate or Major Flooding to describe the severity of floods. These warnings are designed to show the severity of a flood and differ from the community warning system we'd like you to review. Severity information will be issued within the warnings we are asking you to review.

<b>Q6a</b> Based on this description, have you heard of these [Cyclone/Flood/Extreme Heat/Severe Storm] Warnings in the past?	Yes	<input type="radio"/> 1
	No	<input type="radio"/> 2
	Don't Know	<input type="radio"/> 99

**PROGRAMMING NOTE:**

- **ASK IF CODE 1 @ Q6a (YES)**
- **NUMERIC ENTRY FIELD**

<b>Q6b</b> Have you ever received one of these warnings before today?	Yes	<input type="radio"/> 1
	No	<input type="radio"/> 2
	Don't Know	<input type="radio"/> 99

**INTRODUCTION 2**

The existing system is being reviewed to ensure the design is highly effective at prompting individuals to take action to protect against potential danger.

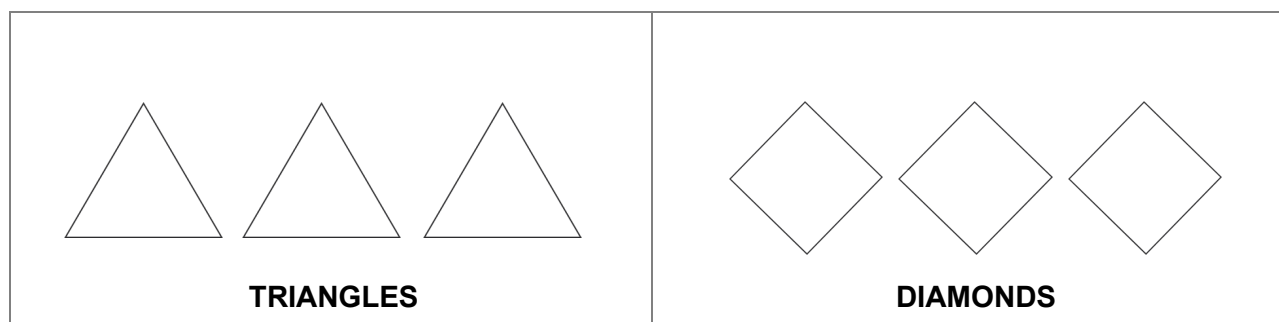
Focus group research has been conducted nationally to develop a set of potential options for the new warning system. **In the following questions we'd like you to select from these options to design the most effective warning system to promote action.**

**When thinking about the warning system keep in mind that only one level of warning will be received at a given time rather than the full system with all levels being shown together.**

**PROGRAMMING NOTE:**

- **DISPLAY IMAGES WITH TEXT BELOW**
- **ROTATE ORDER OF SHAPES SHOWN**

<b>Q7</b>	A core of three levels will be used for the warning system.  Which of the following variations of shape would be most effective when showing a <b>[bushfire, cyclone, flood, extreme heat, severe storm]</b> warning?  <i>Click <a href="#">here</a> to view further information on the purpose of this system.</i>	<u>3 stage triangle</u>	<input type="radio"/> 1
		<u>3 stage diamond</u>	<input type="radio"/> 2



**EXAMPLE IMAGES (see separate document for high resolution versions)**

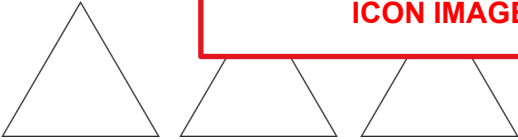
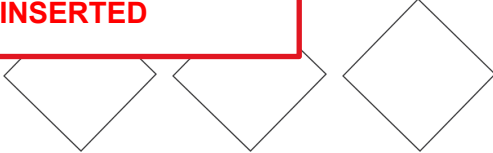
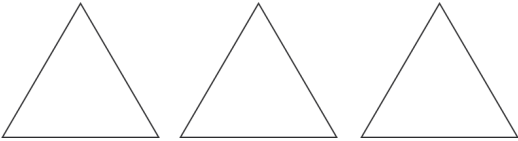
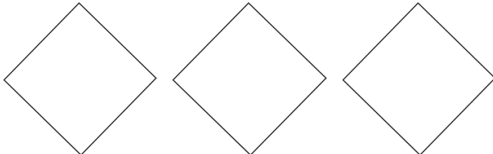
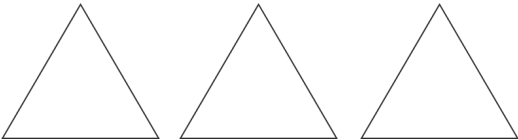
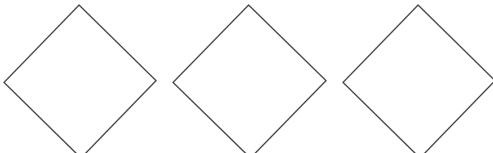
**PROGRAMMING NOTE:**

- **DISPLAY IMAGES IN SHAPE SELECTED AT Q7**
  - **IF CODE 1 @ Q7 SHOW TRIANGLES**
  - **IF CODE 2 @ Q7 SHOW DIAMONDS**
- **RANDOMISE SHOW ORDER CODES 1-4**

<b>Q8</b>	The warning system will use icons inside each shape when warnings are issued through visual channels (e.g. TV, social media, online interactive maps).  Which of the following options would be most effective when showing a <b>[bushfire, cyclone, flood, extreme heat, severe storm]</b> warning?	<u>Consistent hazard specific icon</u>	<input type="radio"/> 1
		<u>Hazard specific icons with increasing severity</u>	<input type="radio"/> 2
		<u>Action specific icon</u>	<input type="radio"/> 3

Click [here](#) to view further information on the purpose of this system.

**EXAMPLE IMAGES (see separate document for high resolution versions by hazard type)**

<div>ICON IMAGES TO BE INSERTED</div>	
 <p><b>Consistent hazard specific</b></p>	 <p><b>Consistent hazard specific</b></p>
 <p><b>Hazard specific increasing severity</b></p>	 <p><b>Hazard specific increasing severity</b></p>
 <p><b>Action specific</b></p>	 <p><b>Action specific</b></p>

**PROGRAMMING NOTES:**

- **DISPLAY THE SHAPE AND ICONS SELECTED BASED ON RESPONSE TO Q8 (e.g. triangles with hazard specific icons for Code 1 @ Q8)**
- **DISPLAY IMAGES WITH TEXT OF COLOURS BELOW**

<p><b>Q9</b> Now, which of these three colour sets best communicates increasing [<b>bushfire, cyclone, flood, extreme heat, severe storm</b>] risk and would encourage you to take action when a warning is issued?</p> <p><i>Click <a href="#">here</a> to view further information on the purpose of this system.</i></p> <p><b>RANDOMISE</b></p>	<table> <tr> <td>Yellow, orange, red</td> <td style="text-align: right;"><input type="radio"/> 01</td> </tr> <tr> <td>Blue, yellow, red</td> <td style="text-align: right;"><input type="radio"/> 02</td> </tr> <tr> <td>Yellow, red, black</td> <td style="text-align: right;"><input type="radio"/> 03</td> </tr> </table>	Yellow, orange, red	<input type="radio"/> 01	Blue, yellow, red	<input type="radio"/> 02	Yellow, red, black	<input type="radio"/> 03
Yellow, orange, red	<input type="radio"/> 01						
Blue, yellow, red	<input type="radio"/> 02						
Yellow, red, black	<input type="radio"/> 03						

**EXAMPLE IMAGES (see separate document for high resolution versions)**

ICON IMAGES TO BE INSERTED								
								
<b>YELLOW, ORANGE, RED</b>	<b>BLUE, YELLOW, RED</b>	<b>YELLOW, RED, BLACK</b>						

### PROGRAMMING NOTES:

- **DISPLAY IMAGE OF OPTION SELECTED AT Q9 AT TOP OF PAGE**
- **INSERT SINGLE RESPONSE SELECTION OPTION UNDER EACH LEVEL**

**Q10a** Again, thinking about the purpose of this system being to effectively prompt individuals to take action, we'd like you to think about the best words to describe each level.

If the highest level of risk is named EMERGENCY WARNING, which of the following words best communicates the first two levels?

Click [here](#) to view further information on the purpose of this system.

#### RANDOMISE

	Level 1	Level 2	Emergency Warning
1 Warning	<input type="radio"/> 1	<input type="radio"/> 2	
2 Advice	<input type="radio"/> 1	<input type="radio"/> 2	
3 Monitor	<input type="radio"/> 1	<input type="radio"/> 2	
4 Alert	<input type="radio"/> 1	<input type="radio"/> 2	
5 Act	<input type="radio"/> 1	<input type="radio"/> 2	
6 Prepare	<input type="radio"/> 1	<input type="radio"/> 2	
7 Act Now	<input type="radio"/> 1	<input type="radio"/> 2	
8 Watch and Act	<input type="radio"/> 1	<input type="radio"/> 2	
9 Take Action	<input type="radio"/> 1	<input type="radio"/> 2	
10 Take Action Now	<input type="radio"/> 1	<input type="radio"/> 2	

### RANKED PREFERENCE – RANDOMISE CODES

**Q10b** And if the highest level of the **[bushfire, cyclone, flood, extreme heat, severe storm]** warning is named EMERGENCY WARNING and the lowest ADVICE, which are your top 3 preferences to describe the middle level?

Click [here](#) to view further information on the purpose of this system.

**Please select three options.**

	Advice	Level 2	Emergency Warning
1 Warning		<input type="radio"/> 2	
2 Take Action Now		<input type="radio"/> 2	
3 Take Action		<input type="radio"/> 2	
4 Act		<input type="radio"/> 2	
5 Prepare		<input type="radio"/> 2	
6 Act Now		<input type="radio"/> 2	
7 Watch and Act		<input type="radio"/> 2	



<p><b>Q11</b> In some situations an additional message will be issued once the danger of <b>[a bushfire/a cyclone/ a flood/extreme heat/a severe storm]</b> has lessened.</p> <p>Which of the following options best describes the final message to indicate that the danger has lessened?</p> <p><b>RANDOMISE</b></p>	All clear	<input type="radio"/> 1
	Reduced threat	<input type="radio"/> 2
	Reduced risk	<input type="radio"/> 3

**Q12** For the next question you will be shown a number of scenarios. For each please select your top 3 phrases that would encourage you to take action.

**SCENARIO 1**  
 You are busy today with a number of errands planned. The weather is mild and winds are slowly increasing. You hear a message on the radio about a fire that has started in the region.  
 (LOW LEVEL) WARNING

**SCENARIO 2**  
 A cyclone is moving down the coast and will likely impact on land. It is forecast to get to Category 2. Emergency services are advising you to prepare yourselves and your property for potential impact.  
 (MIDDLE LEVEL) WARNING

**SCENARIO 3**  
 Major flooding is occurring in the river near your home and the river is rising. Heavier rainfall is expected this afternoon and into the evening. A warning has been issued that includes your area. Emergency services are advising everyone to leave with flooding likely to cut off more roads and damage homes tonight.  
 EMERGENCY WARNING

**SCENARIO 4**  
 You are visiting an area which is surrounded by bushland. It is a hot, windy day. A fire starts, and you receive a message saying the fire is heading in your direction. It is too dangerous to leave and roads have been cut off.  
 EMERGENCY WARNING

**Which of the following phrases would best encourage you to take action in this scenario? Please rank your top three preferences.**

**RANDOMISE STATEMENTS**

Scenario 1 (LOW LEVEL) WARNING	Scenario 2 (MIDDLE LEVEL) WARNING	Scenario 3 EMERGENCY WARNING	Scenario 4 EMERGENCY WARNING
--------------------------------------	-----------------------------------------	---------------------------------	---------------------------------

Stay informed <input type="radio"/> 01	Get ready now <input type="radio"/> 01	Leave now <input type="radio"/> 01	Seek shelter now <input type="radio"/> 01
Stay alert <input type="radio"/> 02	Prepare for cyclone impact <input type="radio"/> 02	Prepare to leave <input type="radio"/> 02	Go to a safe place now <input type="radio"/> 02
Be aware <input type="radio"/> 03	Conditions are changing <input type="radio"/> 03	Leave immediately <input type="radio"/> 03	It is too late to leave <input type="radio"/> 03
A fire has started <input type="radio"/> 04	Make your cyclone preparations now <input type="radio"/> 04	Take action now <input type="radio"/> 04	Immediate danger <input type="radio"/> 04
Take care in the area <input type="radio"/> 05	Get ready to leave <input type="radio"/> 05	Get ready now <input type="radio"/> 05	Seek shelter immediately <input type="radio"/> 05
Keep up to date <input type="radio"/> 06	Prepare your home <input type="radio"/> 06	Prepare for flood impact <input type="radio"/> 06	Move indoors now <input type="radio"/> 06
Conditions may change <input type="radio"/> 07	Prepare to leave <input type="radio"/> 07	Increasing flood risk <input type="radio"/> 07	Take cover <input type="radio"/> 07
	Prepare for a Category 2 cyclone in your area <input type="radio"/> 08	Make your flood preparations now <input type="radio"/> 08	

## SECTION 4 – MAP APPLICATION

### PROGRAMMING NOTE:

- **DISPLAY MAP BASED ON JURISDICTION AT TOP OF PAGE**
- **DISPLAY FINAL WARNINGS SYSTEM DESIGNED**

<b>Q13</b> Each state and territory has an interactive map where the community can view current warnings and incidents.  The warning system you constructed is shown on the map to demonstrate this.  Do you think the system you designed is optimised for visual display on a map, or would an alternative be better?	The existing design is optimised <input type="radio"/> 1
	An alternative approach would be needed <input type="radio"/> 2

### ASK IF CODE 2 @ Q13 (an alternate approach is required)

<b>Q14</b> Why is an alternate approach required?
OPEN ENDED

## DISPLAY WARNINGS SYSTEM IMAGES IN COLOUR SELECTED AT Q9

ASK IF CODE 2 @ Q13 (an alternate approach is required)

<b>Q15</b> Which of the following options would be most effective when showing warnings on an interactive online map?  <i>Click <a href="#">here</a> to view further information on the purpose of this system.</i>	<a href="#">Triangle</a>   Consistent hazard specific icon	<input type="radio"/> 1
	<a href="#">Triangle</a>   Hazard specific icons with increasing severity	<input type="radio"/> 2
	<a href="#">Triangle</a>   Action specific icon	<input type="radio"/> 3
	<a href="#">Diamond</a>   Consistent hazard specific icon	<input type="radio"/> 4
	<a href="#">Diamond</a>   Hazard specific icons with increasing severity	<input type="radio"/> 5
	<a href="#">Diamond</a>   Action specific icon	<input type="radio"/> 6

### Q15 – further information link

You may receive an official warning when there is a potential threat to property or life from a natural hazard. Natural hazards include bushfires, cyclones, floods, extreme heat and severe storms. The warning system is made up of a number of levels and the warning level increases to reflect the increasing risk to life.

**These warnings act as a trigger for the you to take action and protect yourself against the danger.**

You may see or hear a warning in a number of ways, including:

- Interactive online maps
- Official Websites
- Social Media (e.g. Facebook)
- TV
- Text messages
- Radio

Warnings issued include information on the current situation and outline the actions individuals should take.

**SURVEY CLOSE**

Thank you, this is the end of the survey.

*All information you provided will remain completely confidential and only be used for research purposes. This study has been conducted in accordance with the Australian Market and Social Research Society (AMSRS) Code of Professional Behaviour which includes The Privacy Act 1998. If you have any concerns about the legitimacy of this study please contact Surveyline on 1300 364 830.*

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