

November 2019



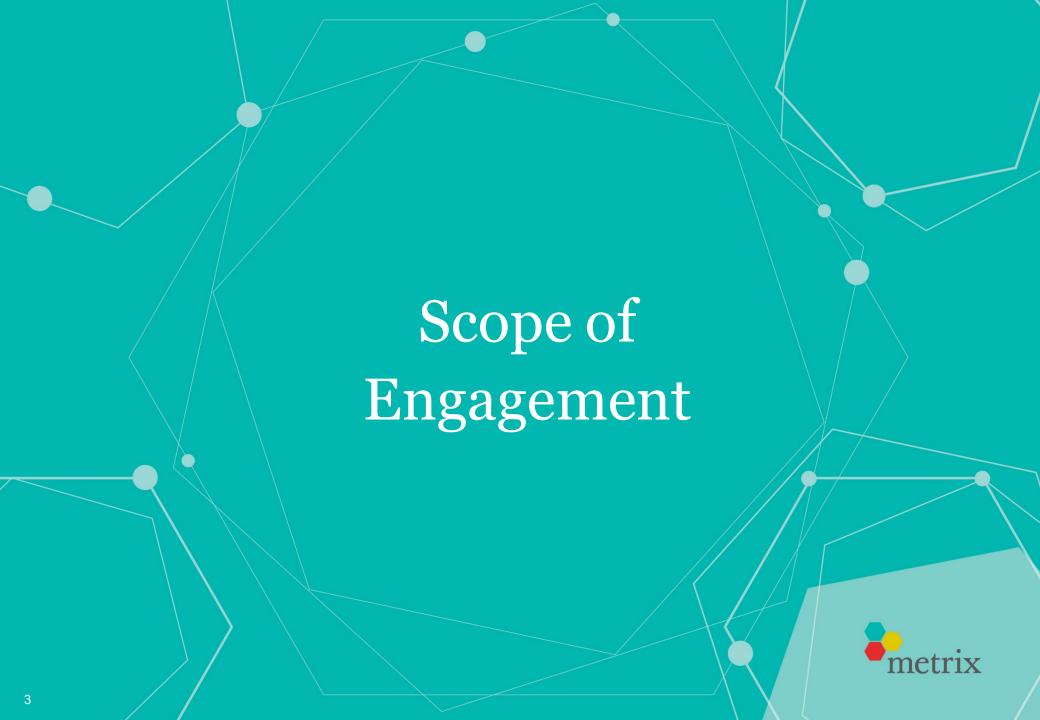
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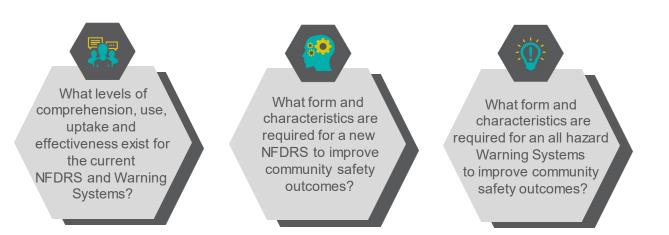
Project background and objectives

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 Tasmania, with comparisons to national averages where relevant.





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



Project Immersion

A comprehensive desk review of existing jurisdictional research reports and data, and secondary research sources available in the public domain has been conducted. Insights from these reports were used in the development of sampling composition and questionnaire content for further research stages.



Stage 1

National Benchmark Survey

As National data had never been collected regarding the Fire Danger Rating and Warning Systems, a nationwide online survey has been conducted to benchmark current levels of awareness, comprehension and action taken due to existing systems.



Stage 2

Qualitative Research

benchmark survey have then been used to guide the scope of qualitative research (sampling and content). Existing jurisdictional systems with the highest levels of comprehension were used to assist with the creative process



Stage 3

Quantification of Optimised Models

Following Stage 2, a select number of optimised systems were developed. A further online survey was run in January 2019 to identify the systems which promote the greatest levels of comprehension and positive action.





Sample summary



Stage 1
National

Benchmark

Survey

Fieldwork conducted from 14 to 27 September 2018.

A sample of n=198 was achieved in Tasmania providing a maximum margin of error of ±6.96% at 95% confidence.

	n=	Weighted %
Metro	86	44%
Regional	112	56%
18 - 34 years	48	25%
35 - 49 years	43	22%
50 - 64 years	69	34%
65+ years	38	19%
Male	91	48%
Female	107	52%
Total	198	100%

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



Stage 2

Qualitative Research

Fieldwork conducted from 30 October to 2 November 2018.

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

Date	Attendance
2-Nov 2018	8
31-Oct 2018	6
30-Oct 2018	7
1-Nov 2018	5
	2-Nov 2018 31-Oct 2018 30-Oct 2018

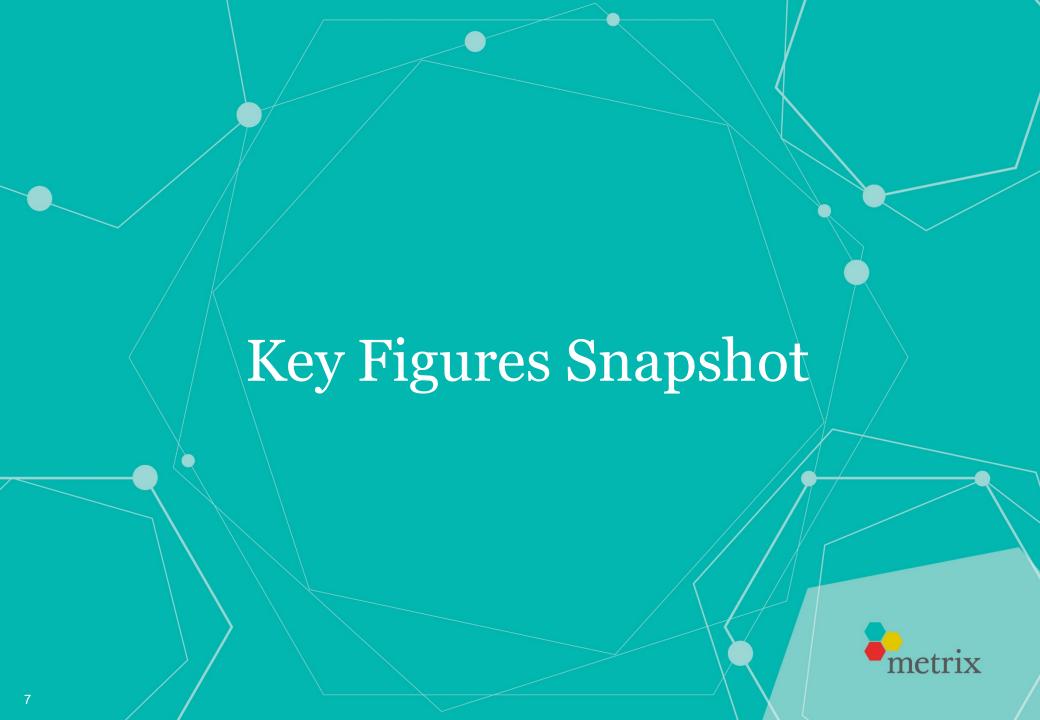


Fieldwork conducted from 24 May and 9 June 2019.

A sample of n=199 was achieved in Tasmania providing a maximum margin of error of ±6.95% at 95% confidence.

	n=	Weighted %
Metro	93	44%
Regional	106	56%
18 - 34 years	49	25%
35 – 49 years	46	23%
50 - 64 years	58	29%
65+ years	46	23%
Male	95	48%
Female	104	52%
Total	199	100%

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



Key figures snapshot | Fire Danger Ratings

Fire Danger Ratings | Stage 1

There is room to improve comprehension of the desired actions at each Fire Danger Rating. A third don't feel the current system is relevant, and just three in ten are using the system.

	National	Tasmania		
Unprompted awareness	72%	74%	See page	
Prompted awareness	93%	91%	12	
Understanding of the FDRS purpos	se			
Predict how likely a fire is to occur	52%	47%	See page	
Predict how dangerous a fire could be if it did occur	39%	46%	12	
Don'tknow	9%	6%		
Understanding of required actions by rating:				
Low-Moderate to High	56%	77%↑		
Very High to Severe	24%	23%	See page 14	
Extreme	33%	26%		
Catastrophic/Code Red	72%	62%↓		
Feel the Fire Danger Rating System is relevant	61%	67%	See page	
Currently use the Fire Danger Rating System	37%	30%	15	

Familiarity with the current Fire Danger Rating System is driving an optimised and simplified version of the existing system. Although Tasmania showed a significantly higher preference for the name Catastrophic, Extreme was still the overall preference by top 3.

Shape	National	Tasmania		
Semi – Circle	63%	55%↓		
Triangle	26%	33% ↑	See page 25	
Rectangle	10%	12%		
Colour Set				
Green, yellow, orange, red	56%	53%		
Green, orange, red, black	24%	24%	See page 25	
Yellow, orange, red, black	20%	23%		
First 3 Levels				
Low, moderate, high	59%	59%	See	
Low, high, very high	41%	41%	page 26	
Top Level Total Preference)			
Extreme	65%	65%		
Severe	51%	45%		
Catastrophic	50%	63% ↑		
Code Red	31%	28%		
Disastrous	29%	33%	See page 26	
Major	22%	18%		
Maximum	19%	18%		
Code Black	17%	17%		
Red Flag	16%	14%		

Optimised Fire Danger Rating | Stage 3

Significant difference to National figures at 95% confidence

Key figures snapshot | Warning Systems

Warning Systems | Stage 1

Prompted awareness of bushfire warnings is significantly higher than the national average, but awareness and response to flood warnings is significantly lower than the national average.

Bushfire	National	Tasmania		
Prompted awareness	44%	63% ↑	Soo naga	
Have taken action in past due to warning^	49%	49%	See page 16	
Cyclone				
Prompted awareness	41%	29%↓	Soo naga	
Have taken action in past due to warning^	58%	70%↑	See page 16	
Flood				
Prompted awareness	45%	21%↓	See page	
Have taken action in past due to warning^	35%	15%↓	16	
Extreme Weather				
Prompted awareness	56%	63%	See page	
Have taken action in past due to warning^	52%	48%	18	
Extreme Heat				
Prompted awareness	55%	43%↓	See nage	
Have taken action in past due to warning^	56%	52%	See page 18	

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	Tasmania	
Triangle	58%	61%	See page
Diamond	42%	39%	34
Colour Set			
Yellow, orange, red	35%	36%	
Yellow red, black	36%	40%	See page 35
Blue, yellow, red	29%	24%	
Icon Type			
Hazard specific icon that visually increases in severity as warning type increases	69%	62%	See
Action icons (e.g. information 'i')	19%	21%	page 34
Consistent hazard specific icons	12%	16%	

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%	52%	
Reduced risk	33%	31%	See page 37
All clear	20%	17%	

Significant difference to National figures at 95% confidence



metrix



Flooding and bushfires are top of mind across the state

Tasmania's mild climate softened concerns of bushfires amongst those who hadn't had personal experience with a hazard, though it is important to note that groups were held before the summer of 2019/20, when bushfires affected several areas throughout Tasmania.

	Flooding was top of mind in the area, however few thought they posed any great risk to life and property.
Launceston	Bushfires were also considered a risk to the local area; however risk was considered higher for the outer areas of Launceston, rather than the inner metro area.
St Helens	Bushfires were the primary concern in St Helens, particularly with minimal exit roads in the event of an emergency and the risk of these roads becoming blocked by fire.
Ottilelelis	Floods were also considered, though they were thought to be of greater risk to tourists than locals who know what to look for when it comes to floods.
Eaglehawk Neck	Though relatively infrequent, bushfires were a concern for the area given the difficulty accessing the mainland in an event of a major bushfire. Some participants recall being trapped on the peninsula during past bushfire emergencies.
NECK	Storms and wild weather were also noted as a hazard, though do not attract concern or perceptions of personal risk.
Kingatan	Storms and floods were recognised to impact the area. However, those living in metropolitan parts of the Hobart area did not have risk caused by natural hazards top of mind.
Kingston	Bushfires were known to impact the area, but due to Tasmania's mild climate perceived risk was lower in comparison to other jurisdictions.

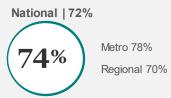




Although awareness of the FDRS is strong, understanding of its purpose remains limited

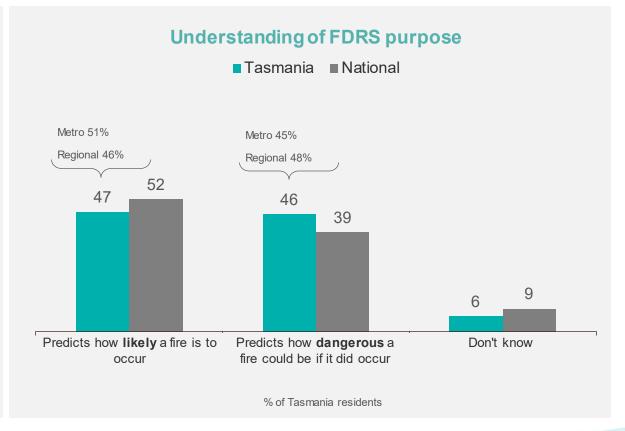
While not significant, metropolitan residents have a higher incidence of believing the FDRS predicts how likely a fire is to occur

Unprompted Awareness



Prompted Awareness





TAS n=198 | 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





Road signage prompts awareness of the FDRS, though corresponding behavioural action is limited to fire bans

Launceston	The FDRS was known amongst participants once prompted but was not mentioned top of mind. When describing its purpose the FDRS was seen as a prevention system. Understanding of behavioural actions associated with FDRS was limited to associations with total fire bans. However, participants noted that total fire bans were seasonal and in place throughout the summer months, resulting in questions regarding the relevance of the FDRS.
St Helens	Participants were generally aware of the FDRS including its visual format and colour scale, but were less familiar with FDR names. The overall consensus was that the FDRS was familiar and easy to understand. As in Launceston, understanding of behavioural actions associated with the FDRS was limited to requirements of total fire bans.
Eaglehawk Neck	Participants were aware of the FDRS and its display through signage, but could not recall if signage was used in the local area. Few were able to identify how many FDRs there are or their associated names. The perceived purpose of the FDRS was to make people more cautious on high risk days, and help communicate dangerous conditions to tourists who visit the peninsula.
Kingston	Participants had strong unprompted awareness of the FDRS and could recall the semi-circle shape used on signage, most colours, and most rating names. The purpose was perceived to be a visual reminder of potential risk, and prompt to pay greater attention to surroundings on higher danger days. However, the only behavioural action associated with FDRs was to be on higher alert if the rating was on 'red'. The FDRS was seen as most relevant when travelling through regional areas.





There is confusion surrounding the required behaviours for each FDR

The most confusion exists regarding the required actions for very high to extreme ratings, suggesting limited understanding of how the community should respond to the FDRS. There are no significant differences between metropolitan and regional areas.



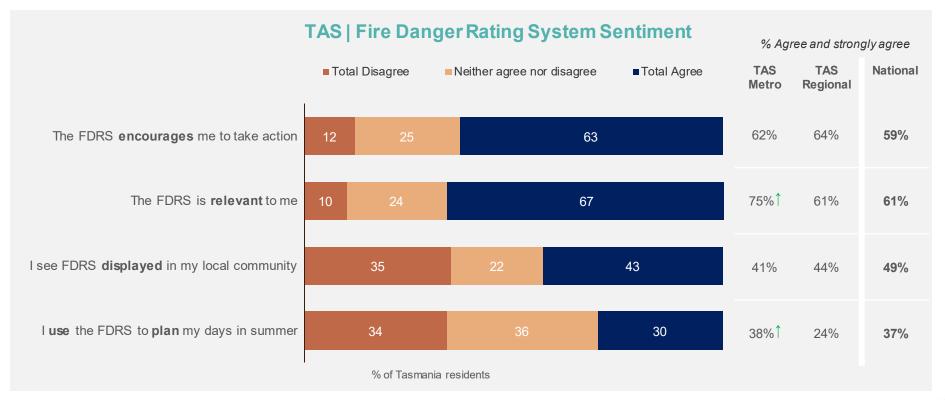


TAS n=198 | National 5,430 Q17. Which of these actions do you believe is required when the fire danger rating is ...?



The FDRS is recognised as relevant by the majority, but few are using the system

This suggests the current FDRS is not compelling enough to motivate action, potentially driven by comprehension issues as demonstrated by an inability to correctly identify required behaviours.





Q13d. Thinking about the Fire Danger Rating System (FDRS) shown, how strongly do you agree or disagree with the following statements? \$\frac{1}{2}\significant difference to between metro and regional figures at 95% confidence

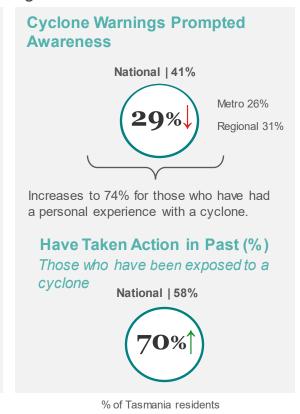


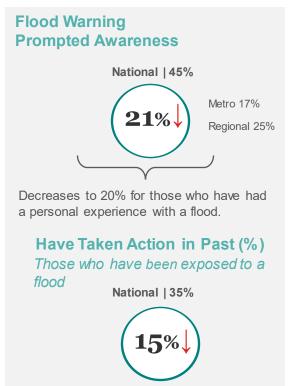


Awareness of bushfire warnings is significantly higher than the national average

Awareness of warnings for cyclones and floods are significantly lower compared to the national averages. Awareness increases amongst those who have had a personal experience with bushfires or cyclones, however remains low for flood warnings.

Bushfire Warnings Prompted Awareness National | 44% Metro 67% Regional 60% Increases to 73% 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%





TAS n=198 | 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?





Many are unable to identify the required actions for each warning level across hazards

However, understanding of the required actions to take at a Bushfire Emergency Warning are significantly higher compared to the national average. While the limited understanding of cyclone warnings is influenced by limited exposure and incidence of this hazard.

Understanding of	of required
behaviour within	Bushfire
Warnings	

	National	Tasmania
Advice	56%	56%
Watch and Act	53%	54%
Emergency Warning	57%	68%↑

Understanding of required	
behaviour within Cyclone	
Warnings	

	National [^]	Tasmania
Category 1	55%	46%
Category 2	49%	39% ↓
Category 3	48%	36% ↓
Category 4	48%	36% ↓
Category 5	60%	49%↓
^Excluding WA and VIC	as alternate syst	emused.

Understanding of required behaviour within Flood Warnings

	National*	Tasmania
Advice	n/a	46%
Act Now	n/a	36%
Emergency Warning	n/a	35%
*National comparison is not warning system is used.	t possible as a	n alternate

% of Tasmania residents





Awareness of extreme heat warnings is significantly lower than national averages, likely influenced by the local climate



% of Tasmania residents

TAS n=198 | 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?

↑↓Significant difference to National figures at 95% confidence





Participants liked the clear visual escalation of risk in the current flood system, but questioned the appropriateness of the colours for bushfires













Launceston	Participants had general awareness of warning names for bushfires and floods, particularly 'watch and act'. However, awareness of the visual representation of warnings was not present. Once prompted with visual bushfire warnings the system was not thought to show the escalation of increasing danger through the icon symbols used. Red was the only colour used that is associated with danger and warnings. The visual representation of flood warnings was well liked as it clearly communicated the escalation of danger as warnings intensify.
St Helens	The visual representation of bushfire warnings had some recognition though the use of blue was disliked as it is not associated with danger and does not attract attention. Warning names were seen as appropriate across both bushfires and floods. Participants particularly like the clear escalation of danger/risk shown visually through flood warnings.
Eaglehawk Neck	Prompted awareness of current warning systems was minimal beyond familiarity with the term 'watch and act'. However, some individuals within the group had higher awareness of bushfire warnings and were able to replicate the Tasmanian fire warning system unprompted.
Neck	The current use and effectiveness of 'watch and act' for bushfires polarised the group. Those who have had a direct experience with a bushfire emergency felt the warning was compelling, while others felt the term was overused and encouraged complacency.
Kingston	Awareness of current bushfire warnings was mixed. Those who did recall the warning system knew about it through previous online searches. All agreed that the colours used do not clearly show the escalation of danger and disliked this within the existing system.
	As with other locations, the clear escalation of risk shown in the flood warning system was well liked. However, some felt the icon sizing and combination of multiple colours was too busy and cluttered.



Exploring Fire Danger Rating and Warning Systems

Topline insights from Stage 2 creative sessions



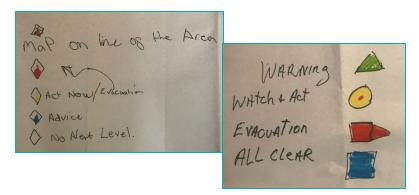


Optimising ratings and warnings in Tasmania





- Four levels were slightly more preferred over three levels.
 Four levels were felt to be more appropriate in encouraging action at the half-way point.
- A traffic light colour system was commonly used in the group. There was debate over the use of the black in the system for the final level (e.g. TAS). There was also debate over the name of the final level – code red, catastrophic or extreme were all names mentioned.
- It was suggested the final level should be joined to a particular shape, otherwise it minimised the danger of the other ratings.
- Participants designed a mix of shapes, with the current semi-circle shape and a vertical bar being the most popular as it showed an increasing scale of danger.
- Participants suggested the use of digital technology to build trust in the system being up to date.



Warnings

Bushfire Warnings

 Most designs reflected the Victorian system with some integration of the hazard (e.g. flame, flood) which was generally thought to be an optimised version. However, one group preferred an optimised version of the current system with improved graphics and tweaks to the wording.

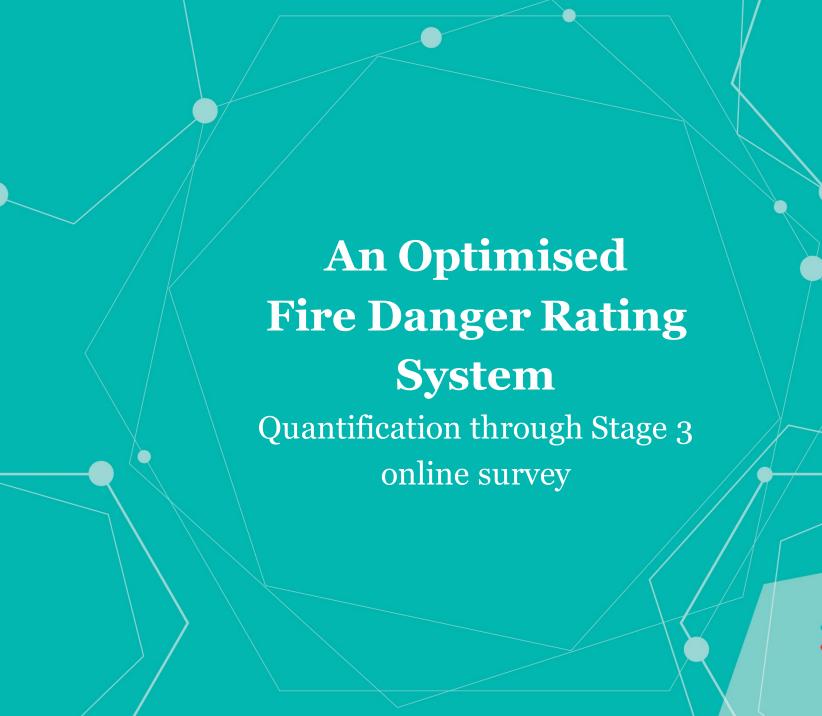
Flood Warnings

 Designs were split between a 2 or 3 level system. 'Warning' and 'Emergency Warning' were thought to be confusing as the difference between both was unclear. It was expressed that there was a need for it to be linked to specific flood types and sites.

Extreme Weather Warnings

 A 2 or 3 level system were the most common designs. Similar to flood warnings the words 'Warning' and 'Emergency Warning' were viewed as confusing as the difference is unclear.







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.



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.

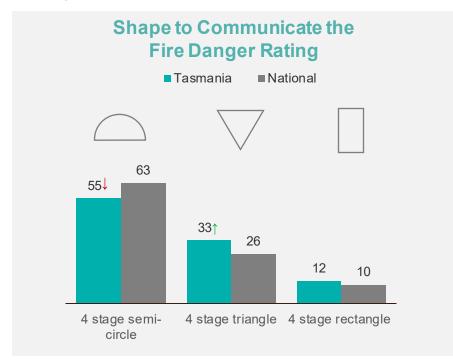
To limit order bias, the order of choosing the colour and word sets was rotated for each respondent.

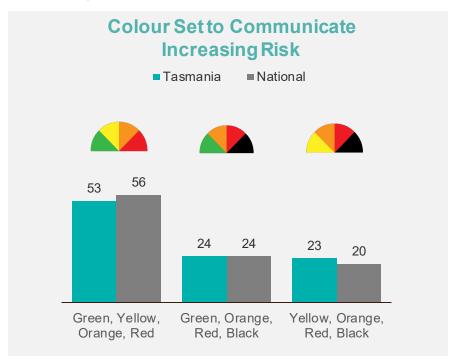




The majority feel the existing semi-circle design is most effective to visually represent FDRs

However, Tasmanian residents had a significantly higher preferences for a triangle to represent the shape of the FDRS, compared to the national average. Simplifying the existing colour set to include green, yellow, orange and red is considered most effective to indicate increasing risk.





% of Tasmania residents

TAS n=199 | National n=5,408

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.



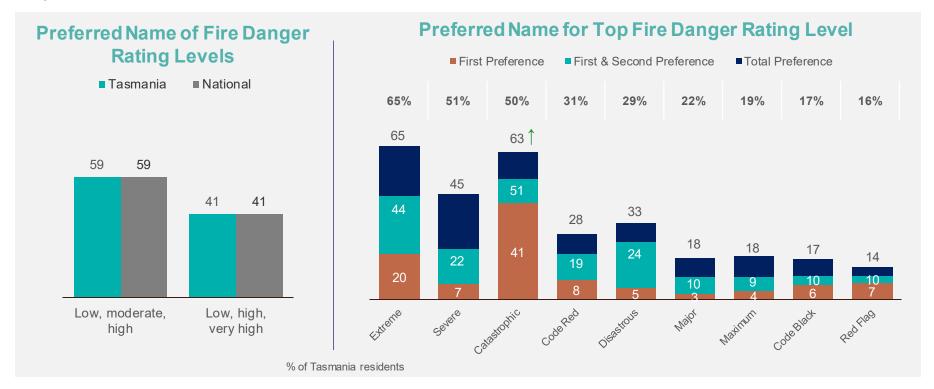


Q2. Which shape would be most effective to communicate the Fire Danger Ratings?



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

In Tasmania, preference for Catastrophic as the name for the top FDR level (by top 3 preference) is significantly higher compared to national figures. Extreme is also considered as effective to communicate the top level.



TAS n=199 | 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.

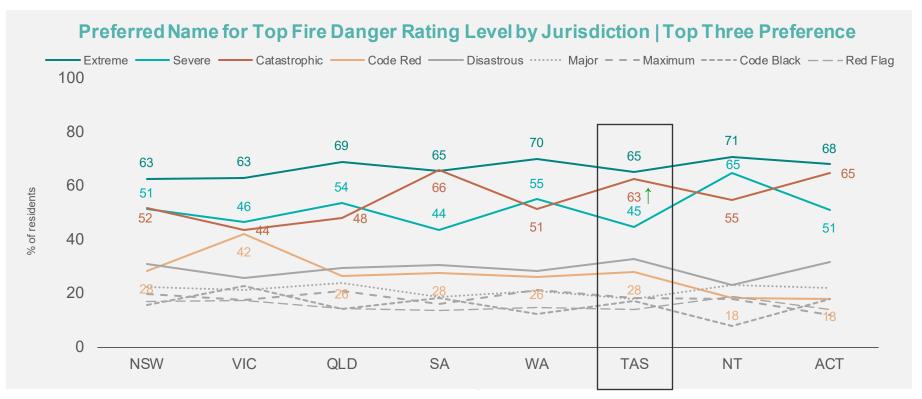


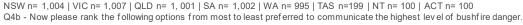




Preferred naming of the top rating is broadly consistent across jurisdictions

Tasmanian residents have a marginally lower preference towards Extreme compared with WA, Qld and NT, though this is not a significant.



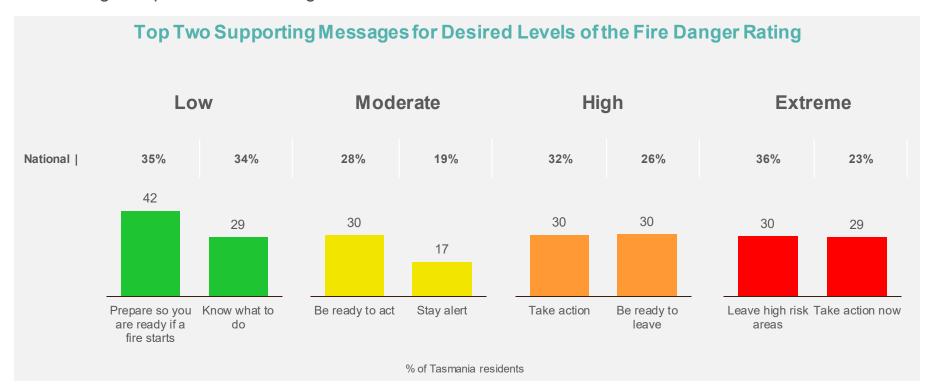






Action orientated statements are preferred to ensure supporting messages are effective

Tasmanian residents have a higher preference towards 'prepare so you are ready if a fire starts' to support a Low rating compared to national figures.



TAS n=199 | 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?

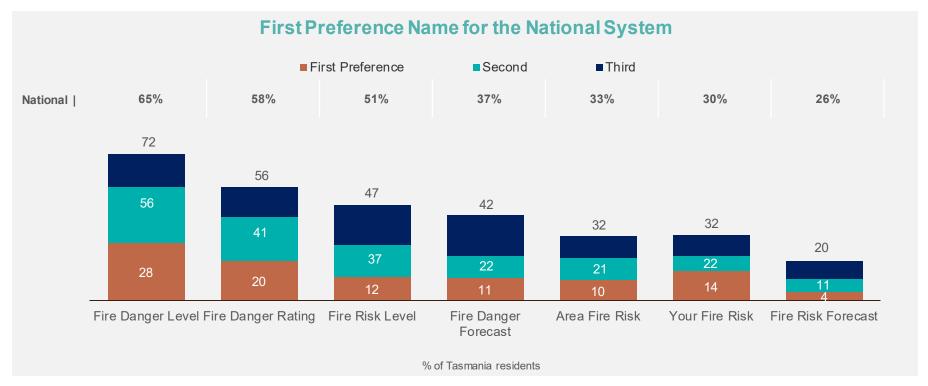


[↑] Significant difference to National figures at 95% confidence



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.



TAS n=199 | National n=5,408

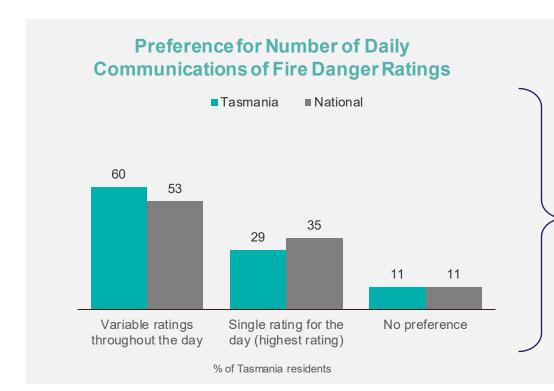
Q5b - When Fire Danger Ratings are displayed on signs and other visual means, which of the following is most effective to describe ratings?



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



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 <u>use</u> and <u>respond</u> to ratings.

TAS n=199 | 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?





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.







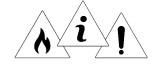
The optimisation survey included five main development stages

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



Supportive Message

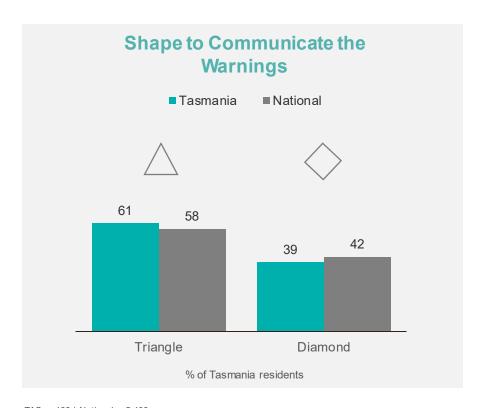
Finally, participants were asked to select the supportive message for each level of warning that would be most effective to encourage them to take action.

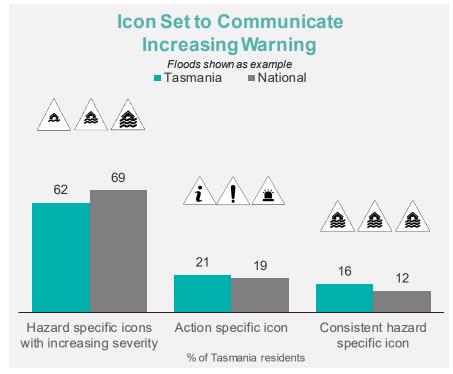




The majority feel a triangle system with hazard specific icons that increase in severity is most effective

Perceptions of the most effective shape and icon are consistent across hazard type.





TAS n=199 | National n=5,408

 ${\tt Q7. \ Which \ of \ the \ following \ v \ ariations \ of \ shape \ would \ be \ most \ effective \ when \ showing \ a \ [insert \ hazard] \ warning?}$

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

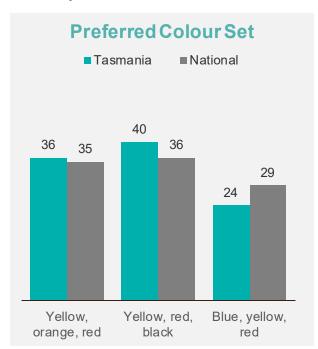


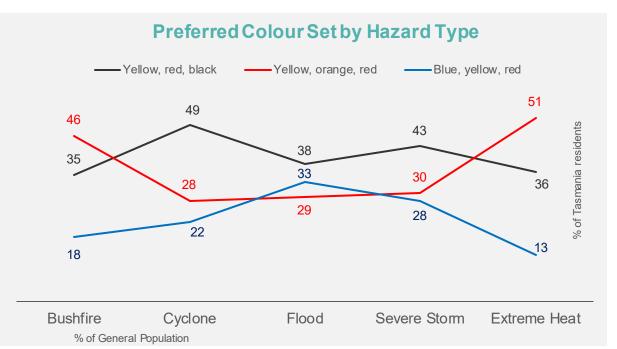
[↑] Significant difference to National figures at 95% confidence



The most effective colour set varies by hazard type, though a warm palette was 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.





TAS n=199 | 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?

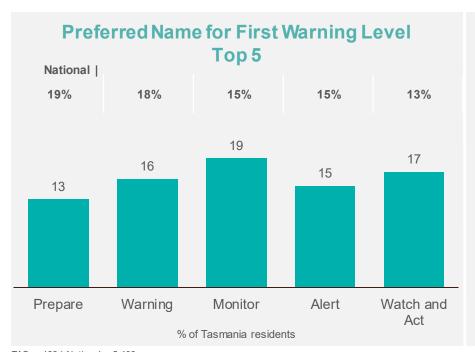






There are no clear-cut preferences for warning names

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.





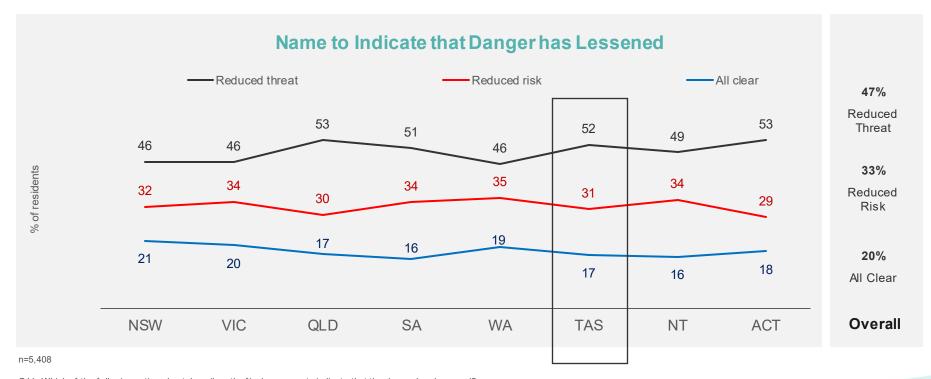
TAS n=199 | National n=5,408 Q10a. If the highest level of risk is named EMERGENCY WARNING, which of the following words best communicates the first two levels?

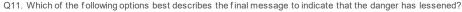




'Reduced threat' is seen to effectively communicate a warning de-escalation message

Although this is the first time a de-escalation message has been explored nationally, findings are consistent across jurisdictions.



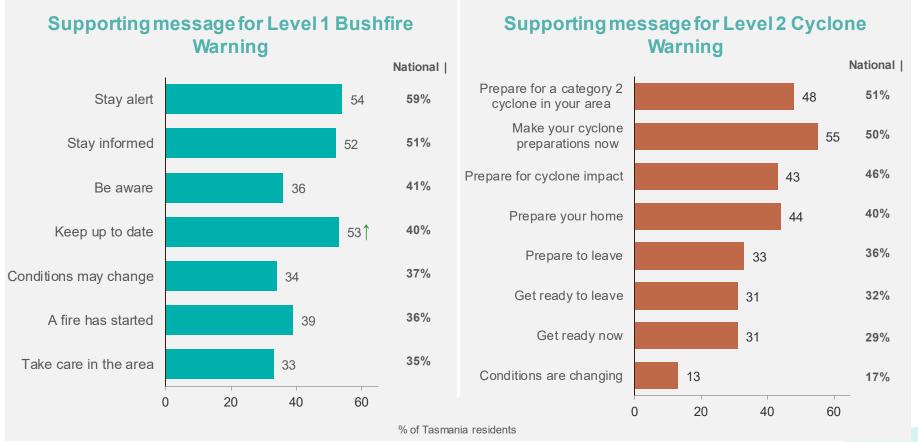






Action orientated statements are seen as most effective for supporting messages

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.



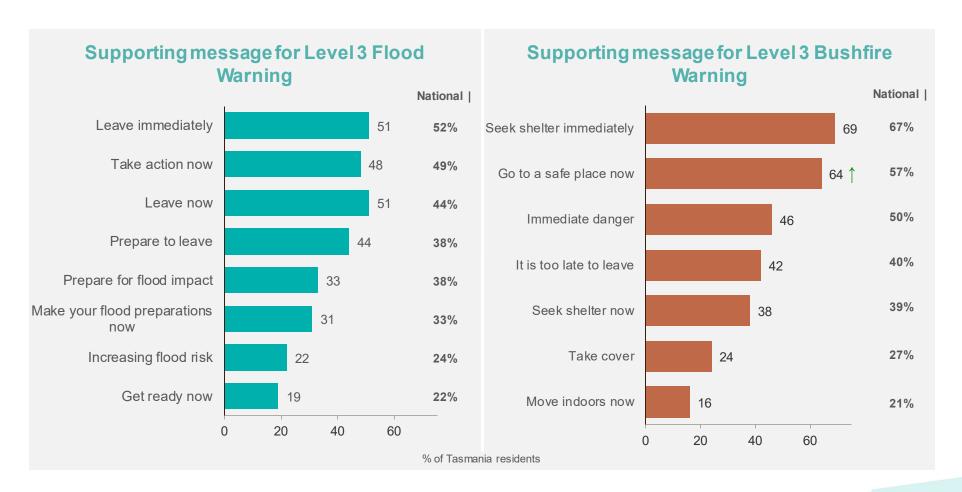


Q12. For the next question you will be shown a number of scenarios. For each please select your top 3 phrases that would encourage you to take action.

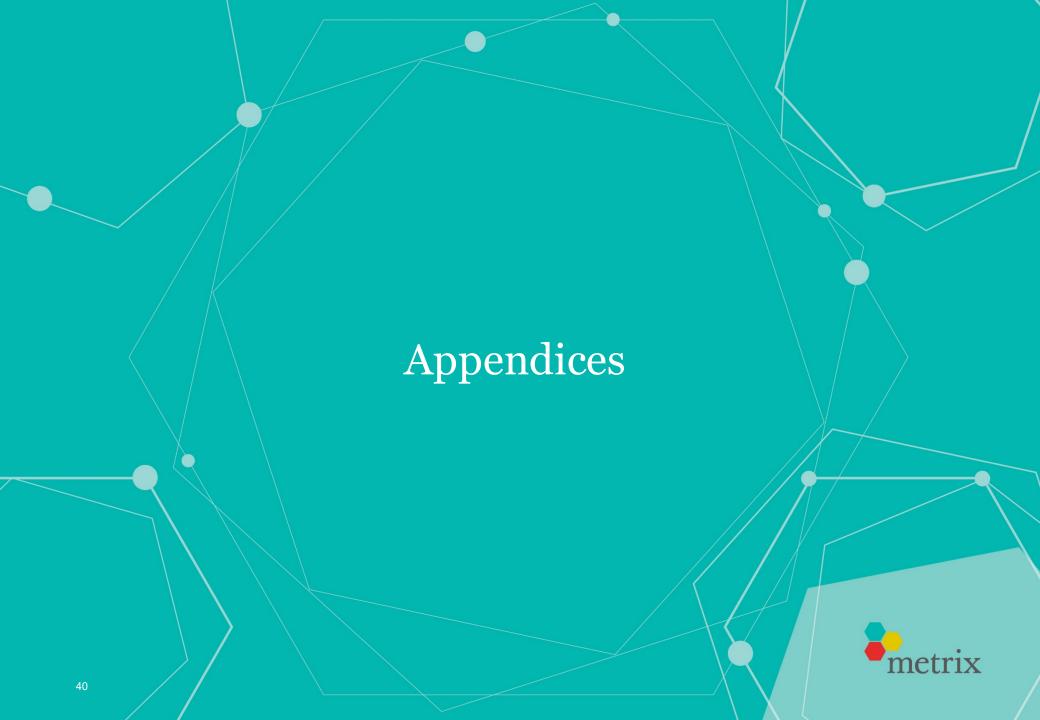


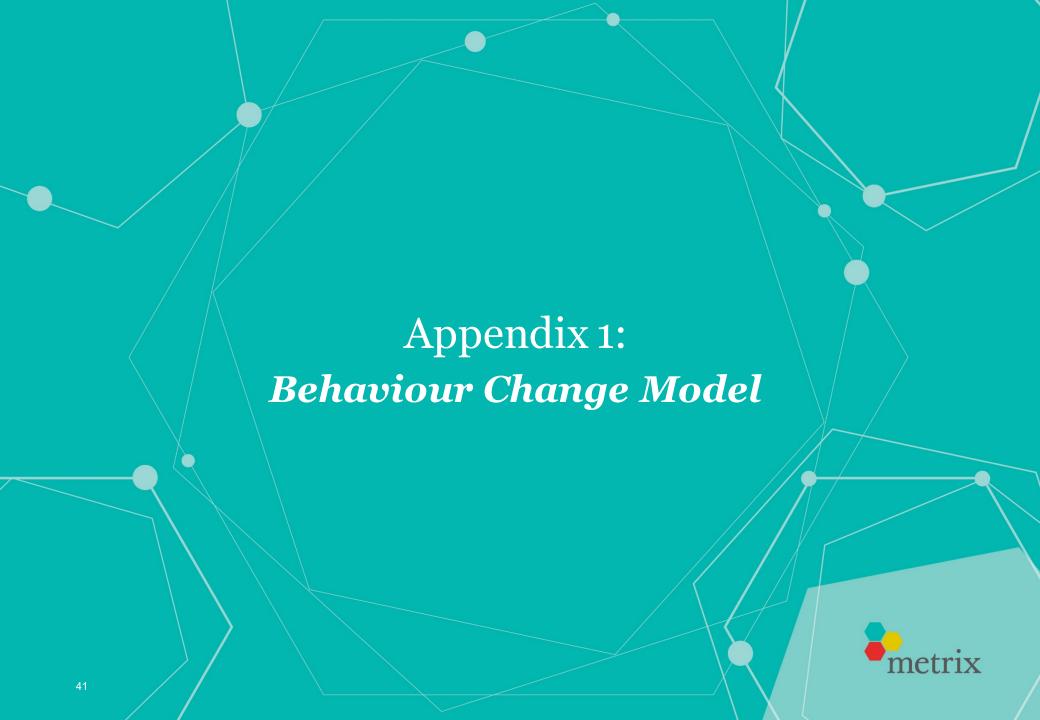


Supporting messages for Emergency Warning situations are focused on taking <u>immediate</u> action









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.
- 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.



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.



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 natural hazards is limited, with less than half intending to prepare so they can respond to warnings quickly

Tasmanian Behaviour Change Model

	Bushfire		Cyclone		Flood		Severe Storms		Extreme Heat	
	Metro	Regional	Metro	Regional	Metro	Regional	Metro	Regional	Metro	Regional
Risk Recognition	95	91	3	4	72	86	66	81	19	17
Personal Risk Recognition	55	42	7	2	22	32	53	66	18	17
Knowledge on how to respond to warnings	54	42	6	2	20	30	50	64	16	16
Decision to prepare	46	37	5	1	15	25	42	48	13	14
Future intention to prepare	28	20	3	0	9	13	23	34	7	7

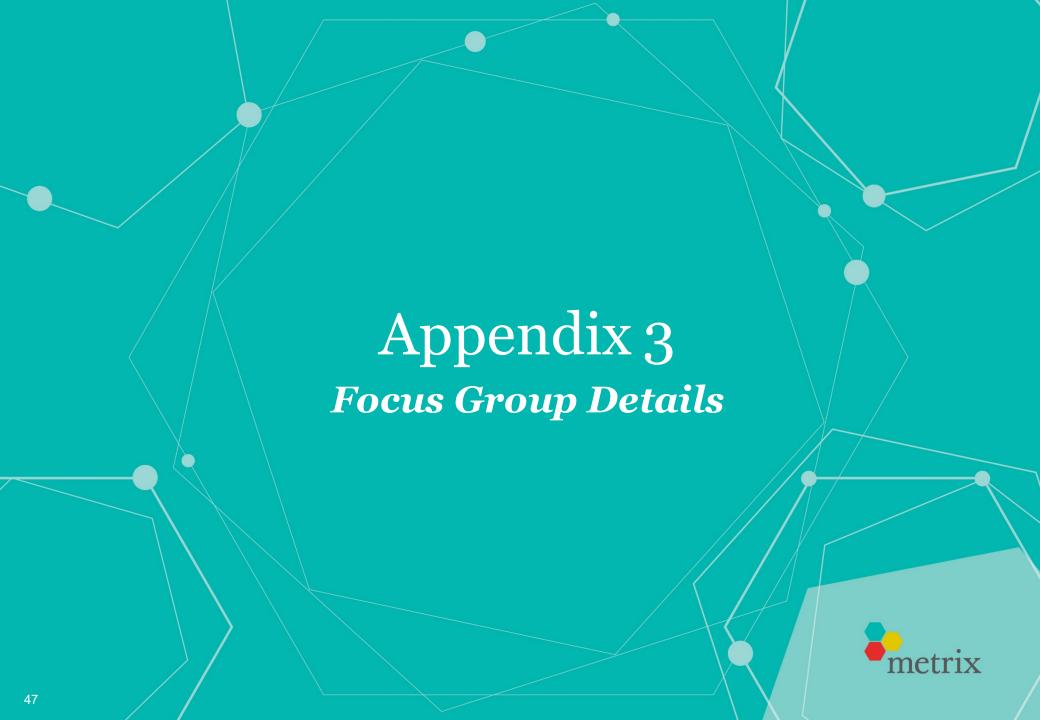
Low ratings for cyclones and extreme heat would likely be a result of the low incidence of the hazard in Tasmania.





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 Parners 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			
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	ВОМ	Project Manager, National Flood Warning Infrastructure Working Group			
Sascha Rundle	National	ABC	Acting Manager, EmergencyBroadcasting & Community Development			
Leighton Morvell	National	EMA	Director Capability and International			
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 CommunitySafety & 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		



Focus group attendance summary | 340 participants

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



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.

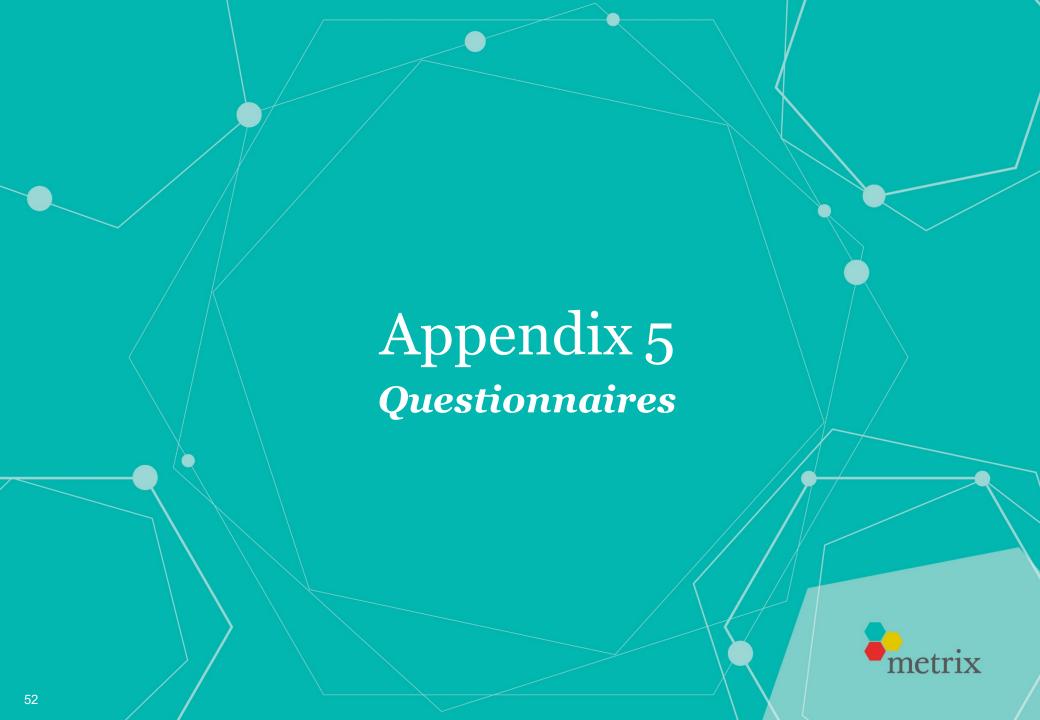
INTRODUCTION 2

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.



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

	Quotas					
STATE	METRO	REGIONAL				
QLD	400	600				
NSW	500	500				
VIC	600	400				
SA	800	200				
WA	500	500				
TAS	20	00				
ACT	10	00				
NT	100					
TOTAL PER VERSION	5400					

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

PROGRAMMER INSTRUCTIONS

0	Denotes single response question
	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.

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SECTION 1 – SCREENING

S1	Do you, a relative or a close friend work or have recently worked:	In market research	Terminate	□ 01
	work of flave recently worked.	In advertising or media	Terminate	□ 02
	RANDOMISE	In emergency services (e.g. police,	ce)	
			Terminate	□ 03
		As a volunteer in emergency service	ces (e.g. firefighter)	
			Terminate	□ 04
		For an insurance company		□ 05
		For a telecommunications provider		□ 06
		None of the above		0 07
S2	How old are you?	Under 18	Terminate	0 01
		18-24		O 02
		25-29		O 03
		30-34		0 04
		35-39		O 05
		40-44		0 06
		45-49		0 07
		50-54		0 08
		55-59		0 09
		60-64		O 10
		65+		0 11
S3	Are you	Male		O 01
		Female		O 02
		Other		O 03
S4	What is your postcode?			
	PROGRAMMER – RESTRICT TO			
	NUMERIC, 4 DIGITS			
	TERMINATE IF DO NOT FALL			
	INTO AU POSTCODE RANGE			

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SECTION 2 - Recognition of Risk

Q1 Which of the following natural Bushfire □ 01 hazards do you believe are a risk in Cyclone □ 02 [insert jurisdiction]? Flood □ 03 Severe Weather - Severe Storms □ 04 **RANDOMISE, LOCK CODE 98 AT BOTTOM** Severe Weather - Extreme Heat □ 05 Other (please specify) □ 06 None of the above O 98

SECTION 3 – Recognition of Personal Risk

Q2 What level of **personal risk** do you associate with each of the following natural hazards?

	a. Bushfire	b. Cyclone	c. Flood	d. Severe Storms	e. Extreme Heat
No risk to me I feel that it is not a risk to me at all	0 1	0 1	0 1	0 1	0 1
Low risk to me I feel very little personal risk (e.g. Don't live, work or travel in an at-risk area, I am well prepared, hazards are infrequent, etc.)	0 2	O 2	O 2	O 2	O 2
Moderate risk to me I feel some risk (e.g. Hazards are unpredictable, I may be prepared, I live, work or travel in an area of some risk, etc.)	0 3	0 3	0 3	O 3	0 3
High risk to me I feel I am at risk (e.g. Live, work or travel in a high-risk area, hazards occur frequently, I am not prepared, etc.)	0 4	0 4	0 4	0 4	0 4

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

Q3 Why do you feel you are not at <u>personal risk</u> 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 [INSERT JURISDICTION] where I live, work or travel	□ 1	□ 1	□ 1	□ 1	□ 1
My type of property isn't at risk of this hazard	□ 2	□ 2	□ 2	□ 2	□ 2
This hazard has never occurred where I live	□ 3	□ 3	□ 3	□ 3	□ 3
Other (specify)	□ 4	□ 4	□ 4	□ 4	□ 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)

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 no knowledge	0 1	0 1	0 1	0 1	0 1
I have a little knowledge	0 2	0 2	0 2	0 2	0 2
I have moderate knowledge	0 3	0 3	0 3	0 3	0 3
I have a high level of knowledge	0 4	0 4	0 4	0 4	0 4

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

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SECTION 5 – Decision to Act

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

Q7 Have you taken, or are you planning to take, any action to prepare yourself to **respond** to an alert and/or warning for the following hazards?

	a. Bushfire	b. Cyclone	c. Flood	d. Severe Storms	e. Extreme Heat
Yes, I have prepared myself	0 1	0 1	0 1	0 1	0 1
I have not prepared before, but am planning to	O 2	O 2	0 2	O 2	O 2
No, I have no intention to prepare myself	0 3	0 3	0 3	0 3	O 3

Ask if NOT made decision to act - Code 3 @ Q7

Q8 Why do you feel you do not need to prepare yourself to respond to an alert and/or warning for the following hazards?

RANDOMISE, LOCK CODE 97 AT BOTTOM.

14 11 20 11 10 21 10 11 10 11									
	a. Bushfire	b. Cyclone	c. Flood	d. Severe Storms	e. Extreme Heat				
This hazard doesn't occur in the part of [INSERT JURISDICTION] where I live	□ 1	□ 1	□ 1	□ 1	□ 1				
I am capable of dealing with all the disruptions this hazard might cause	□ 2	□ 2	□ 2	□ 2	□ 2				
This hazard has never occurred where I live	□ 3	□ 3	□ 3	□ 3	□ 3				
It is too difficult to prepare	□ 4	□ 4	□ 4	□ 4	□ 4				
I have other priorities	□ 5	□ 5	□ 5	□ 5	□ 5				
It's too expensive to prepare	□ 6	□ 6	□ 6	□ 6	□ 6				
It isn't my responsibility to prepare	□ 7	□ 7	□ 7	□ 7	□ 7				
I feel I need more information on how to prepare	□ 8	□ 8	□ 8	□ 8	□ 8				
Other (specify)	□ 97	□ 97	□ 97	□ 97	□ 97				
OKID TO OFOTION O ALEDTO AND WADD	UNIOO IE AI		- 07 (NO		TO AOT\				

SKIP TO SECTION 8 – ALERTS AND WARNINGS IF ALL CODE 3 @ Q7 (NO DECISION TO ACT)

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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	0 1	0 1	0 1	0 1	0 1
Every 2 years	0 2	O 2	0 2	0 2	0 2
Every 3 years	0 3	0 3	0 3	0 3	0 3
Every four years	0 4	0 4	0 4	0 4	0 4
Every 5 years or less frequently	0 5	O 5	0 5	0 5	O 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

Q13a	Thinking about bushfires, do you recall any messaging from [jurisdiction] about days of increased	Yes, seen <i>and</i> heard Yes, heard only	O 01 O 02
	bushfire risk?	Yes, seen only	0 03
		No, I have not seen or heard of this	0 04

Q13b Which of the following statem best describes what the Fire	Predicts now likely a life is to occur	O 01
Rating is?	Predicts how dangerous a fire could be if it did occur	0 02
	Don't know	O 99

Fire Danger Rating



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

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Q13c	A fire danger rating system is used to advise the community of the level	Yes, seen <i>and</i> heard	0 01
	of bushfire danger on a particular	Yes, heard only	0 02
	day, based on the forecast weather	Yes, seen only	O 03
	conditions.	No, I have not seen or heard of this	O 04
	The rating levels are: Low-moderate, High, Very High, Severe, Extreme, [Catastrophic / Code Red – Victoria only].		
	Have you seen or heard of these fire danger ratings before today?		

KEEP IMAGE OF FDRS ON SCREEN

Q13d Thinking about the **Fire Danger Rating System** (FDRS) 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 FDRS is confusing	0 1	0 2	0 3	0 4	0 5
2 The FDRS is relevant to me	0 1	0 2	0 3	0 4	0 5
3 I use the FDRS to plan my days in summer	0 1	O 2	O 3	0 4	0 5
4 The FDRS encourages me to take action	0 1	O 2	0 3	0 4	0 5
5 The FDRS has too many levels	0 1	O 2	0 3	0 4	0 5
6 I see FDRS displayed in my local community	0 1	O 2	0 3	O 4	O 5

Q14	Have you taken any action in the past after seeing or hearing the Fire	Yes	O 01
	Danger Rating level?	No	O 02

KEEP IMAGE OF FDRS ON SCREEN ASK IF CODE 1 @ Q14

Q15	Thinking about the <u>last</u> time you took action, at what Fire Danger	RATING LEVEL	•	ACTION TAKEN
	Rating level did you take action;	Low-Moderate	0 1	OPEN
	what actions did you take and why?	High	0 2	
		Very High	0 3	
		Severe	0 4	

Please provide as much detail as possible	Extreme	O 5	
including what the event/incident was, what you felt the warning was telling the	Catastrophic	06	
community, and what actions you took.	Don't know	O 99	
PROGRAMMING NOTE – code 6 read 'Code Red' for Victoria			

KEEP IMAGE OF FDRS ON SCREEN

Q16 Thinking about the fire danger rating system (FDRS) shown, at what level of the FDRS would you...?

RANDOMISE

		Low moderate	High	Very High	Severe	Extreme	Catastrop hic	Never
1	1 Become concerned about the safety of my property	0 1	O 2	O 3	O 4	O 5	0 6	O 98
2	2 Become concerned about the safety of myself and family	0 1	O 2	O 3	O 4	O 5	O 6	O 98
3	3 Check for information about fires in my area	O 1	O 2	0 3	O 4	O 5	0 6	O 98
4	4 Leave the area	0 1	O 2	O 3	O 4	O 5	0 6	O 98
5	Reconsider travel through a bushland or forested area	O 1	O 2	0 3	O 4	0 5	O 6	O 98
6	6 Cancel my plans	0 1	O 2	O 3	O 4	O 5	0 6	O 98
7	7 Ensure my property is well prepared for fire	O 1	O 2	0 3	O 4	O 5	O 6	O 98

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Fire Danger Ratings



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

RAND	OMISE ORDER	YOU NEED TO ACT NOW					
Q17a	Which of these actions do you believe is required when the fire	Put your survival first and leave bushfire risk areas O 1 YOU NEED TO GET READY TO ACT					
	danger rating is Low moderate to Very High ?	Only stay if you are prepared to the highest level. You must be prepared to actively defend your home if a fire starts.	0 2				
Q17b	Which of these actions do you believe is required when the fire	CHECK YOUR PLAN NOW					
	danger rating is Severe?	Check your bushfire survival plan. If you are not prepared, leavir bushfire prone areas early in the day is your safest option.	<u>03</u>				
Q17c	Which of these actions do you believe is required when the fire	YOU NEED TO BE AWARE					
	danger rating is Extreme?	Monitor conditions and be aware action may be needed.	0 4				
		Something else (specify)	0 5				
Q17d	Which of these actions do you believe is required when the fire danger rating is Catastrophic?	I don't know	O 99				
	gg						
Q18a	Have you seen or heard messaging related to a total fire ban ?	Yes, seen <i>and</i> heard	0 01				
	related to a total life ball:	Yes, heard only	O 02				
		Yes, seen only	O 03				
		No, I have not seen or heard of this	0 04				
0.101		I					
Q18b	What should an individual do (or not do) if a total fire ban was in place?	OPEN ENDED					
includi telling	e provide as much detail as possible ing what you feel this warning is the community, and what actions to be avoided or taken.						

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Bushfire Emergency Warning
Bushfire Watch and Act
Bushfire Advice/Other Fires

Prescribed Burn / Bushfire All Clear

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

INSERT ALERT LEVEL IMAGE FROM SEPARATE FILE

Q19	During a bushfire, community alerts and/or warnings are issued for bushfires 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 and heard Yes, heard only Yes, seen only No, I have not seen or heard of this	O 01 O 02 O 03 O 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 confusing	0 1	0 2	0 3	0 4	0 5
2 The alert/warning levels are relevant to me	0 1	O 2	0 3	0 4	0 5
4 The alert/warning levels encourage -me to take action	0 1	O 2	0 3	0 4	O 5
5 The alert/warning levels have too many levels	0 1	O 2	0 3	0 4	O 5
6 The alert/warning levels are closely linked to the Fire Danger Rating System	0 1	O 2	O 3	0 4	O 5

Q21 Have you taken any action in the past after seeing, hearing or	<u>Yes</u> 0 01
receiving a bushfire alert and/or warning?	<u>No</u> <u>O 02</u>

ASK IF CODE 1 @ Q21

Q22	How did you receive this alert and/or warning?	Landline telephone warning	<u> </u>
		SMS message	□ 2

RANDOMISE, LOCK CODE 97 AT BOTTOM	Radio new alert TV news alert	□ 3 □ 4
BOTTOW	Contact from friend, family or neighbour	<u> </u>
	Direct contact (door knock) from emergency services	□ 6
	Internet/online (Please specify)	<u> </u>
	Social media (Please specify)	□ 8
	Other (specify)	□ 97

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

	ing about the <u>last</u> time you action, at what bushfire	ALERT LEVEL	•	ACTION TAKEN
alert/w	warning level did you take	Advice	0 1	<u>OPEN</u>
action and w	n; what actions did you take hv?	Watch and Act	O 2	
	,	Emergency Warning	O 3	
Please provid	de as much detail as possible	Evacuation (FOR VIC (-	
including wha	at the event/incident was, what varning was telling the and what actions you took.	Don't know	O 4 O 99	
, , , , , , , , , , , , , , , , , , , ,	,			

DISPLAY IMAGE OF ALERTS ON SCREEN

Q24 Thinking about the alert/warning system shown, at what alert level would you...?

RANDOMISE

	Advice	Watch and Act	Emergency Warning	Never
Become concerned about the safety of my property	0 1	O 2	0 3	O 98
2 Become concerned about the safety of myself and family	0 1	O 2	0 3	O 98
3 Check for information about fires in my area	0 1	0 2	0 3	O 98
4 Leave the area	0 1	0 2	0 3	O 98
5 Reconsider travel through a bushland or forested area	0 1	O 2	0 3	O 98
6 Cancel my plans	0 1	0 2	0 3	O 98
7 Ensure my property is well prepared for fire	0 1	0 2	0 3	O 98

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[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

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

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CYCLONE



Cyclone Red Alert



Cyclone Yellow Alert



Cyclone Blue Alert



Potential Cyclone / Cyclone All Clear

[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.

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.

SHOW FOR WA ONLY

The four alert/warning stages are blue, yellow, red and all clear.

SHOW FOR VIC ONLY

The four alert/warning levels are advice, warning, emergency warning and evacuation.

SHOW FOR ALL OTHER JURISDICTION

The five alert/warning levels are category 1-5 cyclones.

Have you seen or heard of these alerts/warnings before today?

Yes, seen <i>and</i> heard	0	01
Yes, heard only	0	02
Yes, seen only	0	03
No, I have not seen or heard of this	0	04

Page 14 of 22 © 2017 Metrix Consulting Pty Ltd Have you taken any action in the past after seeing or hearing the cyclone alert and/or warning level?

Yes

No

0 01

No

0 02

KEEP IMAGE OF ALERTS ON SCREEN ASK IF CODE 1 @ Q27

Q28 Thinking about the <u>last</u> time you took action, at what **cyclone** alert and/or warning level did you take action; what actions did you take and why?

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.

WA ALERT LEV	<u>EL</u>	ACTION TAKEN
Blue Alert	0 1	OPEN
Yellow Alert	0 2	
Red Alert	0 3	
Don't know	O 99	
FOR VIC ONLY		
Advice	0 4	
Warning	0 5	
Emergency Warning	0 6	
Evacuation	0 7	
Don't know	O 99	
FOR ALL OTHER		
JURISIDICATION		
Category 1	0 8	
Category 2	0 9	
Category 3	0 10	
Category 4	0 11	
Category 5	0 12	
Don't know	0 99	

Cyclone Yellow 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

RAND	OMISE ORDER	Get ready for a cyclone	
Q29a	Which of these actions do you believe is required when the alert/warning level is (For WA: All	You need to start preparing for cyclonic weather Take action and get ready to shelter	0 1
Clear/For VIC: Advice/For All	You need to prepare for the arrival of the cyclone Take shelter from the cyclone	O 2	
Q29b	Which of these actions do you believe is required when the	You need to go to shelter immediately The danger has perced	O 3
	alert/warning level is (For WA: Blue Alert/For VIC: Warning/For all other jurisdictions Category 2)?	The danger has passed Wind and storm surge dangers have passed but you need to take to avoid the dangers caused by damage	care O 4
0200	Which of these actions do you	Something else (specify)	O 5
Q230	believe is required when the alert/warning level is (For WA: Yellow Alert /For VIC: Emergency Warning /For all other jurisdictions Category 3?	I don't know	<u>O 99</u>
Q29d	Which of these actions do you believe is required when the alert/warning level is (For WA: Red Alert/For all other jurisdictions Category 4)?		
_	Which of these actions do you believe is required when the alert/warning level is (For VIC: Evacuation/For all other jurisdictions: Category 5)?		

FLOOD



[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.

	issued to the community.	Yes, heard only	0 02
	Have you seen or heard of this	Yes, seen only	0 03
	warning before today?	No, I have not seen or heard of this	0 04
	o .		
RAND	OMISE ORDER	Low-lying areas next to water courses are inundated. Minor	<u>r</u>
Q31a	Which of these definitions do you	roads may be closed. Backyards and buildings below floor	level
40.00	believe reflects an alert for minor	may be affected.	0 1
	flooding (For SA: Flood Advice/For VIC: Advice/For TAS:	Main traffic routes may be affected. Some buildings may be	<u>e</u>
		affected above floor level. Evacuation of flood affected area	as .
	Advice)?	may be required.	0 2
Q31b	Which of these definitions do you	Extensive rural and/or urban areas are inundated. Many	
	believe reflects an alert for	buildings may be affected above floor level. Major rail and t	raffic
	moderate flooding (For SA: Flood Watch and Act/ For Vic:	routes may be closed. Evacuation of flood affected areas m	nay
	Warning/For TAS: Act Now)?	be required.	0 3
		Early advice of a developing situation that may lead to floor	ding
Q31c	Which of these definitions do you		0 4
	believe reflects an alert for major flooding (For SA: Flood	Advice that flooding is occurring or expected to occur in a	
	Emergency Warning/For VIC:	geographical area	0 5

Something else (specify)

I don't know

Yes, seen and heard

O 01

0 6

0 7

0 01

0 02

	believe reflects when a flood warning is issued?	
Q32	Have you taken any action in the	Voc

Yes

No

ASK IF CODE 1 @ Q32

Q30

When there is danger of flooding, a

flood alert and/or warning may be

Emergency Warning/For TAS:

believe reflects a flood watch (For SA: Flood Advice - Reduce Threat/For VIC: Evacuation)?

Emergency Warning)?

Q31d Which of these definitions do you

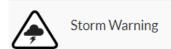
Q31e Which of these definitions do you

past after seeing or hearing the flood alert and/or warning?

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Q33	When and what actions did you take and why?	OPEN ENDED
includi you fe	e provide as much detail as possible ing what the event/incident was, what It the warning was telling the unity, and what actions you took.	

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

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	Yes, seen <i>and</i> heard Yes, heard only Yes, seen only No, I have not seen or heard of this	O 01 O 02 O 03 O 04
	and/or warning before today?		

Q35	Which of the following severe weather alerts and/or warnings have	Severe thunderstorms	<u> </u>
	you seen or heard of before today?	Large hail	□ 2
		Sustained winds of gale force (63 km/h) or more	□ 3
	RANDOMISE, LOCK CODE 99 AT	Wind gusts of 90 km/h or more	<u> </u>
	BOTTOM	Very heavy rain that may lead to flash flooding	□ <u>5</u>
		Abnormally high tides (or storm tides) expected to exceed	
		highest astronomical tide	<u>□ 6</u>
		Unusually large surf waves expected to cause dangerous	
		conditions on the coast	<u> </u>
		Widespread blizzards in Alpine areas	□ 8
		None of the above	O 99
		FOR VIC	

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	Advice	<u> </u>	
		Warning	□ 10
		Emergency Warning	<u> </u>
		Evacuation	□ 12
		None of the above	0 99
Q36	Have you taken any action in the past after seeing or hearing the	Yes	<u> </u>
	severe weather alert and/or warning?	No	<u>O 02</u>

ASK IF CODE 1 @ Q36

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

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

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

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Q39	Have you taken any action in the past after seeing or hearing a	Yes	0 01
	heatwave alert and/or warning?	<u>No</u>	0 02
ASK IF	F CODE 1 @ Q39		
Q40	What actions did you take and why?	OPEN ENDED	
Pleas	se provide as much detail as possible		
including what the event/incident was, what			
	elt the warning was telling the nunity, and what actions you took.		
	,		
	SECTION	9 – FINAL PROFILING	
And ius	st a few final questions about yourself.		
	Which of these best describes your	Young person living at home with parents	0 01
	household?	Young single/couple – no children at home	0 02
		Single/couple with youngest child under the age of 6 yrs	0 03
		Single/couple with youngest child between 6 and 12 yrs	0 04
		Single/couple with youngest child 13 yrs+	0 05
		Older single with no children at home	O 06
		Older couple with no children at home	O 07
		Other	0 08
		Prefer not to answer	O 99
D1b	following groups?	Person living with a disability	□ 01
		Primary carer for someone with a disability	□ 02
		None of the above	O 98
D1c	Do you identify as?	I	
510	Do you identify as:	Aboriginal	□ 01
		Torres Strait Islander	□ 02
		Aboriginal and Torres Strait Islander	□ 02
		None of the above	0 98

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	140 C C C C C C C C C C C C C C C C C C C		
D2	Which of the following best applies to you?	Own my home (no mortgage)	0 01
	to you.	Paying off my home (have a mortgage)	0 02
		Renting	O 03
		Other (e.g. live with parents/ boarding)	0 04
		Prefer not to answer	O 99
D3	Which of these best describes your	Working full time	O 01
	current employment situation?	Working part-time/casual	0 02
		Unemployed	0 03
		Student	0 04
		Retired	0 05
		Home duties	0 06
		Prefer not to answer	O 99
		- Total Hot to diletter	
D 4	D # 1	1	
D4	Do you currently have home, contents or business insurance?	Contents insurance	□ 01
		Home insurance	□ 02
		Business insurance	□ 03
		I have no insurance	0 04
D5	What is the size of your property?	Small - Less than ¼ acre (less than 1,100m2)	0 01
		Medium - Between 1/4 and 1 acre (1,010m2-4,040m2)	O 02
		Large - Between 1 and 10 acres (4,040m2-40,400m2)	O 03
		Regional – Larger than 10 acres	0 04
D6	Which of the following property type	Standalone house	0 01
	is your home?	Duplex/townhouse	O 02
		Unit/apartment	0 03
		Transportable house	0 04
D7a	How far is your home from the	Less than 100 metres	O 01
	nearest bushland or grassland area (an area of forest, trees, bush or	Between 100 and 500 metres	0 02
	(4.1. 4.104 01.101001, 11000, 110011 01	Between 500 metres and 1 km	0 03

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	grasslands)?	Further than 1km	0 04
D7b	How far is your home from the nearest river or coast	Less than 100 metres	0 01
	nearest fiver or coast	Between 100 and 500 metres	0 02
		Between 500 metres and 1 km	0 03
		Further than 1km	0 04
D8	Were you born or did you spend your childhood years living in	Yes, I was born in Australia	0 01
	Australia?	I was not born in Australia but spent my childhood	
		years living here	0 02
		No, I did not move to Australia until I was an adult	0 03
		Other (specify)	0 04
DO	What paragral avpariance have your	and with the following hazarda?	

RANDOMISE LOCK CODE 6 AT THE BOTTOM					
	a. Bushfire	b. Cyclone	c. Flood	d. Severe Storms	e. Extreme Heat
I was injured due to this hazard	□ 1	□ 1	□ 1	□ 1	□ 1
I have had property damage from this hazard	□ 2	□ 2	□ 2	□ 2	□ 2
I have had to evacuate due to this hazard	□ 3	□ 3	□ 3	□ 3	□ 3
I have experienced this close to my home but did not have to evacuate	□ 4	□ 4	□ 4	□ 4	□ 4
I have ongoing trauma or stress due to this hazard	□ 5	□ 5	□ 5	□ 5	□ 5
I have no personal experience with this hazard	O6	O 6	O 6	0 6	O 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	54	.00	

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

0	Denotes single response question
	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

S1	Do you or anyone you know well work or have	In market research	Terminate	□ 01
	recently worked:	In advertising or media	Terminate	□ 02
	RANDOMISE	In emergency services (e.g. police,	firefighter, ambuland	ce)
	KANDOMISE		Terminate	□ 03
		As a volunteer in emergency service		
		l 	Terminate	<u> </u>
		For an insurance company		□ 05
		For a telecommunications provider		□ 06 □ 00
		None of the above		<u> </u>
S2	How old are you?	Under 18	Terminate	0 01
		18-24		0 02
		25-29		0 03
		30-34		0 04
		35-39		0 05
		40-44		0 06
		45-49		0 07
		50-54		0 08
		55-59		0 09
		60-64		O 10
		65+		0 11
S3	Are you	Male		0 01
		Female		O 02
		Other		0 03
S3	What is your postcode?			
	PROGRAMMER –			
	RESTRICT TO NUMERIC,			
	4 DIGITS			
	TERMINATE IF DO NOT			
	FALL INTO SPECIFIC			
	POSTCODE RANGE			

CREATE HIDDEN VARIABLE BASED ON LOCATION TO MATCH GEOGRAPHICAL SEGMENT

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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.

Q1a	Based on this description, have you heard of the Fire	Yes	0 1
	Danger Rating System	No	0 2
	before today?	Don't Know	O 99

PROGRAMMING NOTE:

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

Q1b	How many Fire Danger Rating levels are there in		[] le	<u>vels</u>
	the existing system?	Don't Know	0	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

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- 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

	INAMED OF THE STATE OF THE	AI EO ONOVIN	
Q2	Firstly, we'd like you to think about the following	4 stage semi-circle	0 1
	variations of shape when	4 stage rectangle	0 2
	presenting Fire Danger Ratings as a sign or picture	4 stage triangle	0 3
	(e.g. online or roadside signage).		
	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.		
	Which shape would be most effective to communicate the Fire Danger Ratings?		
	Click <u>here</u> to view further information on the purpose of this system.		

EXAMPLE IMAGES (see separate document for high resolution versions)

Semi-circle Rectangle Triangle

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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

Q3	Now, which of these colour sets best communicates increasing	Show if code 1 @ Q2	
	fire risk and would encourage	Semi-circle green, yellow, orange, red O	01
	you to take action and stay safe at each Fire Danger Rating?	Semi-circle green, orange, red, black O	02
	at cach inc banger framing:	Semi-circle yellow, orange, red, black O	03
	Click here to view further		
	information on the purpose of this system.	Show if code 2 @ Q2	
		Rectangle green, yellow, orange, red O	04
	RANDOMISE	Rectangle green, orange, red, black O	05
		Rectangle yellow, orange, red, black O	06
		Show if code 3 @ Q2	
		Triangle green, yellow, orange, red O	07
		Triangle green, orange, red, black O	08
		Triangle yellow, orange, red, black O	09

Green, Orange, Red, Black
Green, Yellow, Orange, Red
Green, Yellow, Orange, Red, Black

Yellow, Orange, Red, Black

(Show if code 1 @ Q2)

Green, Orange, Red, Black

Green, Orange, Red, Black

Green, Yellow, Orange, Red

Green, Yellow, Orange, Red, Black

Yellow, Orange, Red, Black

Yellow, Orange, Red, Black

(Show if code 1 @ Q2)

(Show if code 2 @ Q2)

(Show if code 3 @ Q2)

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PROGRAMMING NOTES:

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

Q4a Thinking about the purpose of Low, moderate, high O 01 this system (i.e. to effectively prompt individuals to take Low, high, very high O 02 action), which of the following word-sets best communicates bushfire risk from least to most danger for the first 3 levels? Click here to view further information on the purpose of this system. **ROTATE**

Q4b	Now please rank the following options from most to least	Extreme	0 01
		Severe	O 02
highest level of bushfire danger.	Catastrophic	O 03	
	RANKED PREFERENCE -	Code Red	0 04
	LIMIT TO 3	<u>Major</u>	O 05
	RANDOMISE	Maximum	O 06
	TOTAL	Disastrous	<u>0 07</u>
		Red Flag	0 08
		Code Black	O 09

Q5a An additional instruction will accompany each Fire Danger Rating. Which of the following would be most effective to encourage you to take action and stay safe at each Fire Danger Rating?						
Insert level 1	Insert level 2	Insert level 3	Insert #1 response			
response from Q4a	response from Q4a	response from Q4a	from Q4b			
 Know what to do Be aware that fires can start Prepare so you are ready if a fire starts 	 Be ready to act Stay informed Know what you will do Stay alert Monitor conditions Be prepared 	 Take action Be ready to leave Conditions can change quickly If a fire starts, take action right away Know where you will 	 Leave high risk areas Protect your life Take action now Know how to stay safe Leave the night before or early on the day Conditions will change 			
		<u>Protect your life and property</u>	quickly			

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

Please rank your top three preferences.

RANKED PREFERENCE – LIMIT TO 3

RANDOMISE

Fire Danger Forecast	0 1
Your Fire Risk	0 2
Fire Risk Level	0 3
Fire Danger Rating	0 4
Fire Danger Level	0 5
Area Fire Risk	0 6
Fire Risk Forecast	0 7

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?

Single rating for the day (highest rating)O 01Variable ratings throughout the dayO 02No preferenceO 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:
 - o 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.

Q6a	Based on this description, have you heard of these	Yes	0 1
	Bushfire Warnings in the	No	0 2
	past?	Don't Know	O 99

PROGRAMMING NOTE:

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

Q6b	Q6b Have you ever received on of these warnings before today?	Yes [] number received	0 1
		No	0 2
		Don't Know	O 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.

Q6a	Based on this description, have you heard of these	Yes	0 1
	[Cyclone/Flood/Extreme Heat/Severe Storm]	No Don't Know	O 2 O 99
	Warnings in the past?		

PROGRAMMING NOTE:

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

Q6b	Have you ever received one of these warnings before	Yes	0 1
	today?	No	0 2
		Don't Know	O 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.

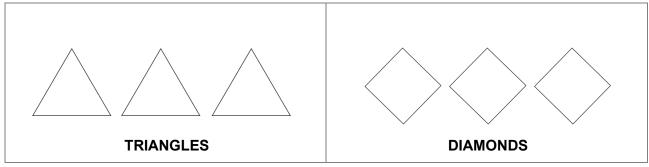
Focus group research has been conducted nationally to develop a set of potential options for the new warning system. In the following questions we'd like you to select from these options to design the most effective warning system to promote action.

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

Q7	A core of three levels will be used for the warning system.	3 stage triangle 3 stage diamond	O 1 O 2
	Which of the following variations of shape would be most effective when showing a [bushfire, cyclone, flood, extreme heat, severe storm] warning? Click here to view further information on the purpose of this system.		



EXAMPLE IMAGES (see separate document for high resolution versions)

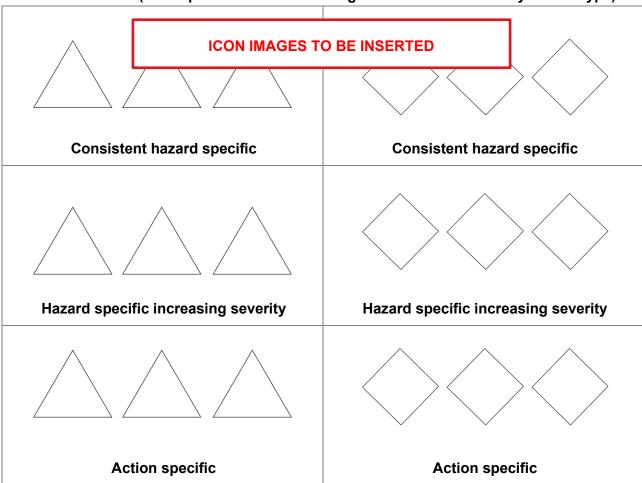
PROGRAMMING NOTE:

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

Q8 The warning system will use icons inside each	Consistent hazard specific icon	0 1
shape when warnings are	Hazard specific icons with increasing severity	0 2
issued through visual channels (e.g. TV, social media, online interactive maps).	Action specific icon	O 3
Which of the following options would be most effective when showing a [bushfire, cyclone, flood, extreme heat, severe storm] warning?		

Click <u>here</u> to view further information on the purpose of this system.

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



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

Q9	Now, which of these three colour sets best communicates increasing [bushfire, cyclone, flood, extreme heat, severe storm] risk and would encourage you to take action when a warning is issued?	Yellow, orange, red Blue, yellow, red Yellow, red, black	O 01 O 02 O 03
	Click <u>here</u> to view further information on the purpose of this system. RANDOMISE		

ICON IMAGES TO BE INSERTED

YELLOW, ORANGE, RED

BLUE, YELLOW, RED

YELLOW, RED, BLACK

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	
1 Warning	0 1	0 2	
2 Advice	0 1	0 2	
3 Monitor	0 1	0 2	
4 Alert	0 1	0 2	
5 Act	0 1	0 2	Emergency Warning
6 Prepare	0 1	0 2	
7 Act Now	0 1	0 2	
8 Watch and Act	0 1	0 2	
9 Take Action	0 1	0 2	
10 Take Action Now	0 1	0 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.

		Level 2	
1 Warning		0 2	
2 Take Action Now		0 2	
3 Take Action	Advice	0 2	Emergency
4 Act	Advice	0 2	Warning
5 Prepare		0 2	
6 Act Now		0 2	
7 Watch and Act		0 2	

Q11	In some situations an additional message will be	All clear	0 1
	issued once the danger of	Reduced threat	0 2
	[a bushfire/a cyclone/ a	Reduced risk	0 3
	flood/extreme heat/a severe storm] has		
	lessened.		
Which	n of the following options best		
	describes the final message to indicate that the danger		
	has lessened?		
	RANDOMISE		

Q12 For the next question you will be sown 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	Scenario 2	Scenario 3	Scenario 4
(LOW LEVEL)	(MIDDLE LEVEL)	EMERGENCY WARNING	EMERGENCY WARNING
WARNING	WARNING		

Stay informed	0 01	Get ready now	0 01	Leave now	0 01	Seek shelter now	0 01
Stay alert	0 02	Prepare for cyclo	<u>ne</u>	Prepare to leave	0 02	Go to a safe place	e now
Be aware	0 03	impact	0 02	Leave immediatel	yO 03		O 02
A fire has started	0 04	Conditions are ch	anging	Take action now	0 04	It is too late to lea	ve O
Take care in the area O			O 03	Get ready now	O 05	<u>03</u>	
<u>05</u>		Make your cyclone		Prepare for flood impact		Immediate danger O 04	
Keep up to date	0 06	preparations now	0 04		0 06	Seek shelter	
Conditions may ch	nange	Get ready to leav	e O 05	Increasing flood ri	sk O	immediately	O 05
O 07		Prepare your hon	ne O	07		Move indoors now	0 06
		<u>06</u>		Make your flood		Take cover	0 07
		Prepare to leave	0 07	preparations now	O 08		
		Prepare for a Cat	egory				
		2 cyclone in your	area O				
		08					

SECTION 4 - MAP APPLICATION

PROGRAMMING NOTE:

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

Q13	Each state and territory has an interactive map where the community can view current warnings and incidents.	The existing design is optimised An alternative approach would be needed	O 1 O 2
	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?		

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

Q14	Why is an alternate approach required?					
OPEN	OPEN ENDED					

DISPLAY WARNINGS SYSTEM IMAGES IN COLOUR SELECTED AT Q9

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

Q15	Which of the following options would be most	Triangle Consistent hazard specific icon	0 1
	effective when showing	Triangle Hazard specific icons with increasing severity	0 2
	warnings on an interactive online map?	Triangle Action specific icon	0 3
	orillite map:	Diamond Consistent hazard specific icon	0 4
	Click here to view further	Diamond Hazard specific icons with increasing severity	O 5
	information on the purpose of this system.	Diamond Action specific icon	0 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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