# IMPACT OF 2010-2011 FLOODS ON AFFECTED COMMUNITIES RESIDENTIAL

# A REPORT FOR VICTORIAN FLOODS REVIEW

3 August 2011

# Strahan Research Pty Ltd

Level 13, 10-16 Queen St Melbourne Vic 3000 Tel (03) 9604 9199 Fax (03) 9604 9191

www.strahan-research.com

# **CONTENTS**

Background	Page
Project Objectives	
• •	
Methodology	
Questionnaires	
Management of Data Collection	
Reporting of Findings	
Section I: Household Survey Data	7
Emergency Risk Ratings before 2010-2011 Floods	8
Received Early Warning of Flooding	11
Source of Warning Information Received	12
Time between Warning and Flooding	
Actions after Warning Received	
Influence on Response to Floods	
Emergency Plan before Floods	
Emergency Plan Content	
What Prompted Having Emergency Plan	
Home Emergency Kit What Prompted Getting Emergency Kit	
Why Don't Have Emergency Kit	
Impact of Floods vs Expectations	
Scale of Direct Impact of Flood Waters: General	
Scale of Direct Impact of Flood Waters: Detail	28
Effects of Impact of Flood	
Continue Experiencing Impacts from FloodsImpacts Continuing to Experience	
Effects of Impact of Flood on Local Community	
Need to Take Actions to Lessen Impact	
Actions Taken to Lessen Impact	
Other Actions Taken to Lessen Impact	
Items Saved from Flooding	
Evacuated Home as Result of Floods	
When Evacuated Why Evacuated	
Where Went after Evacuated	
Why Didn't Evacuate	45
Received DHS Grants as Result of Floods	46
Which Grants Received	
Grant Money Sufficient	
·	
Indirect Impacts of Floods How Long without Power	
Impact of Loss of Power	
How Long without Water Supply	54
Experienced Medical Difficulties during Flood	
Able to Access Medical Facilities of Treatment	
Sources of Information on Flood Threat prior to Floods	
Other Sources of Information prior to Floods	59

Emergency Alert through Telephone  Number of Telephone Messages Received	61
About Telephone Messages	
Satisfaction with First Emergency Alert Message	
Timing of Emergency Alert Messages	
Being Woken-up by Emergency Alert Messages Understood Emergency Alert Message	
Reacted to Emergency Alert Message Immediately	
Opinion on Emergency Alert Message Sent during the Night	
Helpfulness of Information Sources during FloodsHelpfulness of Websites as Information Sources during Floods	
Use of Social Media to Communicate or Access Information	
Use of Mobile Phone or iPad for Information on Email or Websites	75
Need for Emergency Flood Information in Languages Other than English	76
Contacted Someone for Emergency Assistance	
Whom Contacted for Emergency Assistance	
Main Reasons for Seeking Emergency Assistance	
Attended SES Community Meeting about Floods	81
Went through Floodwaters	
Reasons for Going through Floodwaters	83
What Have Learned from Being Involved in Flood	84
Want More Information about Floods	86
Positive Impact of Floods	87
Section II: Metro B – Qualitative Discussion	88
Perceived Risk	89
Warning	
Actions	
Emergency Plan and Kit	
Direct Impact of Flood	
Actions	90
Evacuation	
Receipt of GrantsIndirect Impacts of Flood	
Sources of Information	
Emergency Alert	
Helpfulness of Information Sources	
Use of Social Media and Technology	
Information in Languages Other Than English	
Emergency Assistance and SES Meeting	91
Went through Floodwaters	91
Learning	
Demand for Information	
Positive Impacts	
Section III: Demographics of Sample	
Section IV: Questionnaire	95

#### BACKGROUND

As part of the Review of the 2010-11 Flood Warning and Response, communities affected are being consulted for their views, experiences and thoughts on the management of floods in Victoria

Part of this consultation includes this survey of households located in areas affected by the floods.

#### PROJECT OBJECTIVES

The objective of this research is to elicit the actual experience of households of the flood events and to understand their attitudes, values and expectations of emergency management information, processes and response services related to the floods.

Specifically the research will address:

- Risk perception of floods and bushfire including plans and risk management
- Early warning in advance of the flood
- Emergency alert warning messages
- Official information sources and their usefulness
- Direct and indirect flood impacts including on farming activities
- Householder experiences, decisions and actions
- Householder contact with emergency service organisations
- Access to emergency grants
- Personal reflections
- Demographics including age, gender, disability and geographic location

#### **METHODOLOGY**

A random telephone survey of 1197 households in targeted areas impacted by floods within Victoria was conducted in July 2011.

This sample allows the Victorian Floods Review to be 95% confident that household sample results are within 3.6% of aggregate population values.

#### QUESTIONNAIRES

The Principal Researcher of the Office of Emergency Services who is assisting the Review developed a draft household questionnaire. It was further refined in consultation with Strahan Research. The average duration of the household questionnaire was 19 minutes.

#### SAMPLING

#### Country

Locality

Strahan Research drew a quota sample of 687 households based on relative population within the following towns and villages in rural areas of Victoria. These are referred to in this report as *Country*.

Local Government Area Catchment Management Authority

Allansford	WARRNAMBOOL	GLENELG HOPKINS
Beulah	YARRIAMBIACK	MALLEE
Boort	LODDON	NORTH CENTRAL
Bright	ALPINE	NORTH EAST
Buxton	MURRINDINDI	GOULBURN BROKEN
Chiltern	INDIGO	NORTH EAST
Cressy	COLAC OTWAY	CORANGAMITE
Culgoa	BULOKE	MALLEE
Darraweit Guim	MACEDON RANGES	PORT PHILLIP AND WESTERNPORT
Delatite	MANSFIELD	GOULBURN BROKEN
Ellerslie	MOYNE	GLENELG HOPKINS
Harrow	WEST WIMMERA	GLENELG HOPKINS
Hexham	MOYNE	GLENELG HOPKINS
Kialla West/Kialla Lakes	GREATER SHEPPARTON	GOULBURN BROKEN
Marysville	MURRINDINDI	GOULBURN BROKEN
Miners Rest	BALLARAT	GLENELG HOPKINS
Mitiamo	LODDON	NORTH CENTRAL
Mologa	LODDON	NORTH CENTRAL
Mount Rowan	BALLARAT	GLENELG HOPKINS
Murchison	GREATER SHEPPARTON	GOULBURN BROKEN
Nullawil	BULOKE	MALLEE
Panmure	MOYNE	GLENELG HOPKINS
Prairie	LODDON	NORTH CENTRAL
Pyramid Hill	LODDON	NORTH CENTRAL
Rheola	LODDON	NORTH CENTRAL
Robinvale	SWAN HILL	MALLEE
Rupanyup	YARRIAMBIACK	WIMMERA
Shelford	GOLDEN PLAINS	CORANGAMITE
Torrumbarry	CAMPASPE	NORTH CENTRAL
Walwa	TOWONG	NORTH EAST
Warracknabeal	YARRIAMBIACK	WIMMERA
Wickliffe	ARARAT	GLENELG HOPKINS
Woorndoo	MOYNE	GLENELG HOPKINS
Yea	MURRINDINDI	GOULBURN BROKEN

### Metro A

A further 397 households were quota sampled within the Cardinia Shire as part of the Port Phillip and Westernport Catchment Management Authority including the following localities:

- Bayles
- Bunyip
- Cardinia
- Cora Lynn

- Dalmore
- Garfield
- lona
- Koo Wee Rup
- Nar Nar Goon
- Nar Nar Goon North
- Pakenham
- Pakenham South
- Vervale

A quota of 40% was applied to Pakenham and Pakenham South. Within the remaining 60%, the other areas were quota sampled based on their relative population.

These are referred to in this report as Metro A.

#### Metro B

A sample of 112 households within urban areas that experienced flooding was also undertaken within Springvale (Melway 80 C8), Keysborough (Melway 89 K7) and Tarneit (Melway 202 K3)

It was necessary in these areas to draw sample on a street-by-street basis.

These are referred to in this report as Metro B.

#### MANAGEMENT OF DATA COLLECTION

Our surveying of households involved:

- one interview per household was obtained;
- sample households were telephoned up to three times in order to make contact to complete an interview;
- only individuals within the sample were interviewed;
- interviewers highly experienced in dealing sensitively with respondents following emergency events were used

#### REPORTING OF FINDINGS

The data tables that follow report on all areas surveyed – Country, Metro A and Metro B. However because of the small number of cases in Metro B the discussion of findings in the first section of this report focuses on Country and Metro A.

A qualitative discussion of findings in Metro B is separate and follows in Section III.

**SECTION I: HOUSEHOLD SURVEY DATA** 

# **EMERGENCY RISK RATING BEFORE 2010-2011 FLOODS**

Respondents were asked:

Prior to the September 2010 and February 2011 floods in Victoria and the summer bushfire season, how would you have rated the risk that a flood, bushfire or storm would severely impact on your...

			Countr n=687					/letro / n=398					/letro E n=112				ı	Total n=1197	7	
Emergency Risk Rating before 2010-2011 Floods	No Risk	Low Risk	Some Risk	High Risk	N/A*	No Risk	Low Risk	Some Risk	High Risk	N/A*	No Risk	Low Risk	Some Risk	High Risk	N/A*	No Risk	Low Risk	Some Risk	High Risk	N/A*
							F	L	0		0	D	S							
Household residence	34.1	39.6	16.3	10.0	2.6	21.2	45.9	20.7	12.2	0.0	42.0	42.9	11.6	3.6	0.0	30.6	42.0	17.3	10.1	1.5
Farm building	30.2	41.9	15.8	12.1	68.7	29.0	30.5	22.1	18.3	52.4						34.0	38.0	16.1	11.9	56.9
Livestock	24.1	41.2	16.5	18.2	75.3	26.1	31.9	21.0	21.0	54.6						24.9	37.4	18.3	19.4	61.4
Personal and family safety	33.1	43.2	15.5	8.2	6.3	25.6	44.9	19.1	10.4	0.0	47.7	39.3	9.3	3.7	0.0	30.3	43.8	16.8	9.1	3.6
						В	U	S	ŀ	ı	F	ı	R	Е						
Household residence	19.3	35.1	22.3	23.2	3.5	21.8	43.5	24.4	10.4	0.0	49.1	38.4	8.0	4.5	0.0	23.0	38.2	21.6	17.1	2.0
Farm building	12.2	28.8	26.1	32.9	67.7	21.3	37.8	21.3	19.7	49.1						24.0	33.0	20.5	22.5	55.2
Livestock	10.4	25.3	24.2	40.1	73.5	17.6	32.8	28.6	21.0	49.6						13.3	28.2	25.9	32.6	58.7
Personal and family safety	17.3	35.9	25.4	21.4	7.6	20.5	41.6	26.4	11.5	0.0	51.4	35.8	8.3	4.6	0.0	18.5	38.0	25.7	17.7	4.3
							S	;	Т	0	R	ı	Л							
Household residence	7.0	36.5	41.8	14.8	3.8	7.5	32.4	46.1	14.0	1.5	24.3	34.2	35.1	6.3	0.0	8.8	34.9	42.6	13.7	2.7
Farm building	6.6	35.4	42.0	16.0	69.1	6.7	32.5	46.7	14.2	63.9						12.5	34.4	40.8	12.3	61.0
Livestock	12.0	38.0	33.7	16.3	75.8	6.2	32.7	47.8	13.3	65.4						9.7	35.8	39.4	15.1	65.3
Personal and family safety	10.0	43.0	35.0	11.9	7.3	8.6	37.6	43.5	10.2	1.5	30.8	34.6	31.8	2.8	0.0	9.5	41.0	38.2	11.3	4.7

<sup>\*</sup>The four levels of risk add-up to 100%, with the exclusion of the 'N/A' - not applicable cases - which have been separated for greater clarity of data.

#### Risk of Flood

Over one quarter (27.4%) of respondents rated the level of risk of a flood severely impacting on their residence (prior to the 2010/11 Victorian floods) as high or some risk. More Metro A respondents (32.9%) than country respondents (26.3%) rated the flooding risk as high or some risk

Well over a quarter of respondents (28.0%) with farm buildings rated the risk of severe impact on those buildings as high or some risk. More Metro A respondents (40.4%) than country respondents (27.9%) rated the flooding risk to their farm building as high or some risk.

Well over one third of respondents (37.7%) with livestock rated the risk of severe impact on their livestock as high or some risk. More Metro A respondents (42.0%) than country respondents (34.7%) rated the flooding risk to their livestock as high or some risk.

Over a quarter of respondents (25.9%) rated the risk of severe impact on their personal and family safety as high or some risk. More Metro A respondents (29.5%) than country respondents (23.7%) rated the flooding risk to their personal and family safety as high or some risk.

#### Risk of Bushfire

Almost four in ten (38.7%) respondents rated the level of risk of a bushfire severely impacting on their residence (prior to the bushfire season) as high or some risk. More country respondents (45.5%) than Metro A respondents (26.3%) rated the bushfire risk as high or some risk

Well over four in ten respondents (43.0%) with farm buildings rated the risk of severe impact by bushfire on those buildings as high or some risk. More country respondents (59.0%) than Metro A respondents (41.0%) rated the bushfire risk to their farm building as high or some risk.

Almost six in ten respondents (58.5%) with livestock rated the risk of severe impact on their livestock as high or some risk. More country respondents (64.3%) than Metro A respondents (49.6%) rated the bushfire risk to their livestock as high or some risk.

Over a quarter of respondents (25.9%) rated the risk of severe impact on their personal and family safety as high or some risk. More Metro A respondents (29.5%) than country respondents (23.7%) rated the flooding risk to their personal and family safety as high or some risk.

#### **Demographic Analysis**

Respondents aged 35 to 54 years more than other age groups rated the risk of flood to their farm buildings (36.2%) or their livestock (44.8%) or their personal and family safety (29.5%) prior to the floods as high or some risk.

#### Risk of Storm

Well over one half (56.3%) respondents rated the level of risk of a storm severely impacting on their residence as high or some risk.

Over one half of respondents (53.1%) with farm buildings rated the risk of severe impact by storm on those buildings as high or some risk.

Over one half of respondents (54.5%) with livestock rated the risk of severe impact of a storm on their livestock as high or some risk. More Metro A respondents (61.1%) than country respondents (50.0%) rated the storm risk to their livestock as high or some risk.

Almost one half of respondents (49.5%) rated the risk of severe impact on their personal and family safety from a storm as high or some risk. More Metro A respondents (53.7%) than country respondents (46.9%) rated the storm risk to their personal and family safety as high or some risk.

# RECEIVED EARLY WARNING OF FLOODING

Respondents were asked:

During the floods in September and February, were you provided with an early warning of potential flooding in your area?

Received Early Warning of Flooding	Country n=687	Metro A n=398	Metro B n=112	Total n=1197
Yes	48.0	31.8	8.9	39.0
No	48.5	66.4	85.7	57.9
Don't know	3.5	1.8	5.4	3.1

Almost four in ten (39%) of all respondents had received an early warning of the potential of flooding in their area.

In country areas almost one half (48%) of respondents had received an early warning while in Metro A just over three in ten (31.8%) had received a warning and in Metro B less than one in ten (8.9%) had received such a warning.

# SOURCE OF WARNING INFORMATION RECEIVED

Respondents who had received an early warning of potential flooding were asked in an open-ended question:

Who issued you with this warning information?

Source of Warning Information Received	Country %	Metro A %	Metro B %	Total %
Radio	26.1	10.5	28.6	22.2
SES	13.5	13.2	7.1	13.4
Emergency Alert	10.0	38.2	7.1	17.3
Local Council	9.8	0.0	0.0	7.1
TV	9.8	13.8	7.1	10.8
CFA	7.7	3.9	0.0	6.4
Internet	4.4	2.6	7.1	3.9
Friends/neighbours/family	4.4	3.9	14.3	4.6
Word of mouth	3.5	0.0	0.0	2.5
Public meeting	2.6	0.0	0.0	1.7
Police	1.9	7.2	7.1	3.4
CMA/Water authority	1.6	0.7	0.0	1.4
Newspaper	1.6	0.0	14.3	1.5
Other	1.8	2.0	0.0	1.9
Don't know	0.0	3.9	7.1	2.0

<sup>\*</sup>Multiple responses

The four main sources of early warning about potential flooding cited in almost two thirds of responses are:

- Radio including ABC local radio (22.2%)
- Emergency Alert (17.3%)
- SES (13.4%)
- Television (10.8%)

In country areas more respondents cite radio as an important source (26.1%) while the Emergency Alert is cited more in Metro A (38.2%).

#### TIME BETWEEN WARNING AND FLOODING

Respondents who had received an early warning of potential flooding were asked:

How much time did you have after receiving the warning before the flood arrived?

Hours before Flood Waters Arrived	Country n=194	Metro A n=90	Metro B n=10	Total n=289
1-5 hours	9.8	54.4	16.7	24.2
6-12 hours	20.6	23.3	21.5	
13-24 hours	31.4	18.9	16.7	27.0
24-48 hours	20.1	3.3	16.7	15.2
>48 hours	18.0	0.0	16.7	12.1

<sup>\*</sup>Some respondents who received an early warning of potential flooding did not subsequently experience flooding and are therefore excluded from these data.

Almost one quarter of these respondents (24.2%) said that the flood arrived within 1 to 5 hours after receiving the warning.

A further one in five (21.5%) had the flood arrive 6 to 12 hours after receiving a warning.

Over one half of respondents had in excess of 12 hours warning of potential flooding with a quarter (27.0%) having between 13 and 24 hours, 15.2% having 24to 48 hours and almost one in eight (12.1%) having more than 48 hours warning.

Respondents in Metro A reported a much shorter time between receiving a warning and the floods arriving than those in country Victoria. Over three quarters (77.7%) of those in Metro A had 12 hours or less warning while almost seven in ten (69.5%) of country respondents had more than 13 hours warning.

### **ACTIONS AFTER WARNING RECEIVED**

Respondents who had received an early warning of potential flooding were asked in an open-ended question:

What did you do immediately after you received the warning?

Actions After Warning Received	Country %	Metro A %	Metro B %	Total %
Nothing/no action	25.3	16.6	45.5	23.4
Prepared for flood/lift/food	13.2	12.3	9.1	12.8
Sandbagged/built levee/trench	9.6	0.6	0.0	6.8
Monitored/got information	8.8	6.1	9.1	8.1
Helped others/prepared town	7.2	1.2	0.0	5.4
Looked at river/water rise/drains	5.9	6.1	9.1	6.1
Moved livestock	5.9	6.7	0.0	6.1
Got ready to leave	4.7	13.5	0.0	7.0
Left/evacuated	3.4	25.2	0.0	9.5
Spoke/helped friend/neighbour/family	3.4	5.5	9.1	4.1
Went to community meeting	2.6	0.0	0.0	1.6
Assessed situation/made stay or go decision	2.3	2.5	0.0	2.3
Moved/lifted equipment	1.8	0.6	0.0	1.4
Got anxious/stressed/panicked	1.6	0.6	0.0	1.3
Other	4.4	2.5	18.2	4.0

<sup>\*</sup>Multiple responses

Almost one quarter of respondents who had received a warning (23.4%) did not take any immediate action following receipt of the warning of potential flooding.

One in eight respondents (12.8%) said that they immediately started to prepare for the flood including by lifting furniture and valuables and organising food and water.

Almost one in ten (9.5%) immediately evacuated or left their residence.

Respondents in country areas (25.3%) more than those in Metro A (16.6%) took no immediate action. On the other hand over one quarter (25.2%) of those in Metro who had received a warning said that they left their property or evacuated while only 3.4% of country respondents took this course of action. These differential immediate responses may be due to the amount of time that country and Metro A respondent s perceived that they had to react to potential flooding.

This issue of time also appears to be reflected in other actions taken more in the country than in Metro A. For example country respondents more than those in Metro A sandbagged their properties [9.6% and 0.6% respectively] and helped others and prepared their towns for the floods [7.2% and 1.2%].

# **Demographic Analysis**

Respondents aged 55 years and over (28.6%) more than the others did nothing after receiving the warning.

Respondents aged 35 to 54 years (16.2%) more than other age groups prepared for the flood after receiving the warning.

# **INFLUENCE ON RESPONSE TO FLOODS**

Respondents were asked:

To what extent did the following influence your response to these floods?

			intry 687				ro A 398				ro B 112			To n=1		
Influence on Response to Floods	No Influence	Small Influence	Some Influence	Large Influence	No Influence	Small Influence	Some Influence	Large Influence	No Influence	Small Influence	Some Influence	Large Influence	No Influence	Small Influence	Some Influence	Large Influence
Queensland flood information and images from the media	41.1	17.1	24.6	17.2	40.3	12.9	24.6	22.3	25.7	22.0	28.4	23.9	39.4	16.1	25.0	19.5
Local knowledge about previous floods in your area	24.9	14.4	28.7	32.0	41.5	15.4	20.0	23.0	61.8	15.5	10.9	11.8	33.8	14.8	24.2	27.2
Recent weather patterns	28.2	17.4	33.3	21.2	36.1	19.9	24.0	19.9	55.5	13.6	24.5	6.4	33.3	17.9	29.4	19.4
Floodsafe community information	62.1	14.1	15.7	8.2	78.5	10.0	9.0	2.6	82.6	3.7	13.8	0.0	69.4	11.8	13.3	5.6
Safety information from Council	65.7	14.0	13.8	6.5	85.6	7.4	5.1	1.8	86.1	4.6	8.3	0.9	74.2	11.0	10.5	4.4

The three main factors that influenced respondents' response to the floods are:

- Local knowledge about previous floods in their area (51.2% large or some influence)
- Recent weather patterns (48.8%)
- Queensland flood information and media images (44.5%)

Less than one in five respondents cited Floodsafe community information (18.9%) and safety information from their local Council (14.9%) as having some or a large influence.

Country respondents (60.7%) more than those from Metro A (43.0%) cited local knowledge of previous local floods as having some or a large influence.

Similarly, country respondents (54.5%) more than those from Metro A (43.9%) cited recent weather patterns as having some or a large influence.

Country residents were more greatly influenced than those from Metro A by Floodsafe information (23.9% and 11.6% respectively and by Council information (20.3% and 6.9%).

#### **Demographic Analysis**

Respondents aged 35 to 54 years (54.4%) more than other age groups say that recent weather patterns had some or a large influence on their response to the floods.

# **EMERGENCY PLAN BEFORE FLOODS**

Respondents were asked:

Prior to the floods, did you have a flood or bushfire emergency plan for your home or farm?

Had Emergency Plan before Floods	Country n=687	Metro A n=398	Metro B n=112	Total n=1197
Yes	48.2	36.2	7.2	40.4
No	51.2	63.8	88.3	58.9
Don't know	0.6	0.0	4.5	0.8

Over four in ten respondents (40.4%) had a flood or bushfire emergency plan prior to the floods.

Country respondents (48.2%) more than respondents from Metro A (36.2%) said that they had an emergency plan prior to the floods.

#### **Demographic Analysis**

Respondents aged 18 to 34 years (69.3%) more than other age groups did not have an emergency plan prior to the floods.

# **IMPORTANCE OF EMERGENCY PLAN CONTENT**

Respondents who had an emergency plan prior to the floods were asked:

How important is it to have the following in your plan?

		Со	untry	(n=3	30)			Ме	tro A	(n=1	43)			IV	letro	B (n=	8)		Total (n=481)							
Importance of Emergency Plan Content	Not Important at All	Slightly Important	Important	Very Important	Don't know	N/A*	Not Important at All	Slightly Important	Important	Very Important	Don't know	N/A*	Not Important at All	Slightly Important	Important	Very Important	Don't know	*W/A	Not Important at All	Slightly Important	Important	Very Important	Don't know	N/A*		
Seasonal clean-ups around your property	1.2	2.1	13.0	83.4	0.3	0.1	3.5	2.8	19.7	73.9	0.0	0.3	12.5	0.0	25.0	62.5	0.0	0.0	2.1	2.3	15.2	80.2	0.2	0.2		
Decision to either leave your house or stay during the emergency	1.8	3.4	15.9	77.1	1.8	0.1	2.1	2.8	21.0	73.4	0.7	0.0	0.0	12.5	37.5	50.0	0.0	0.0	1.9	3.3	17.7	75.6	1.5	0.1		
When, where and how to move household furniture and valuables	23.2	26.8	23.5	25.0	1.5	0.6	24.1	28.4	22.0	24.8	0.7	0.3	25.0	12.5	50.0	12.5	0.0	0.0	23.5	27.0	23.5	24.7	1.3	0.4		
Decisions to buy equipment to respond to an emergency	14.8	27.2	25.6	30.2	2.3	3.5	23.7	19.1	29.8	27.5	0.0	3.0	42.9	0.0	28.6	14.3	14.3	0.9	17.8	24.4	26.9	29.1	1.8	3.1		
Discussing the emergency plan with your family	3.7	2.1	21.5	71.5	1.2	0.6	2.9	0.0	23.9	72.5	0.7	0.8	0.0	0.0	62.5	37.5	0.0	0.0	3.4	1.5	22.9	71.2	1.1	0.6		
Identifying sources of information about the emergency	1.5	4.5	35.8	56.4	1.8	0.3	2.1	1.4	37.3	59.2	0.0	0.3	12.5	0.0	37.5	50.0	0.0	0.0	1.9	3.5	36.3	57.1	1.3	0.3		
Considering fire and flood risks when making property and household renovations and changes	12.3	21.8	25.8	38.0	2.1	0.7	14.9	18.7	33.6	32.1	0.7	2.3	12.5	0.0	50.0	37.5	0.0	0.0	13.0	20.5	28.4	36.3	1.7	1.2		
Insurance review for your household	12.3	6.1	28.2	51.1	2.3	3.2	6.1	6.1	37.4	48.9	1.5	2.8	12.5	0.0	50.0	37.5	0.0	0.0	10.5	6.0	31.3	50.2	2.0	2.8		
Insurance review for your farm	16.9	4.0	21.8	54.0	3.2	29.3	11.3	8.1	35.5	40.3	4.8	20.1							15.1	5.4	26.3	49.5	3.8	23.5		
When and how to move animals and livestock	10.3	2.6	15.5	68.1	3.4	31.0	3.1	3.1	27.7	63.1	3.1	19.3							7.7	2.8	19.9	66.3	3.3	24.2		
When, where and how to move equipment	12.0	12.8	21.1	47.4	6.8	28.4	14.7	19.1	32.4	30.9	2.9	18.5							12.9	14.9	24.9	41.8	5.5	22.5		
Identifying higher ground for livestock	12.0	3.7	20.4	61.1	2.8	31.6	7.9	4.8	31.7	52.4	3.2	19.3							10.5	4.1	24.6	57.9	2.9	24.6		

<sup>\*</sup>The four levels of importance and 'Don't know" add-up to 100%, with the exclusion of the 'N/A' - not applicable cases - which have been separated for greater clarity of data.

www.strahan-research.com

Four factors were identified by over nine in ten respondents as being important to have in their emergency plan:

- Seasonal clean ups around their property (95.4%)
- Discussing the emergency plan with their family (94.1%)
- Identifying sources of information about the emergency (93.4%)
- Decision to either leave their house of stay during the emergency (93.3%)

More than eight in ten respondents (81.5%) with an emergency plan say that it is important to have an insurance review in it.

More than eight in ten respondents with an emergency plan who have animals or livestock say that it is important for it to establish when and how to move them (86.2%) and to identify higher ground for them (82.5%).

# WHAT PROMPTED HAVING EMERGENCY PLAN

Respondents who had an emergency plan prior to the floods were asked in an openended question:

What prompted you to have an emergency plan?

What Prompted Having Emergency Plan	Country %	Metro A %	Metro B %	Total %
Experience/knowledge of emergencies	33.8	35.7	37.5	34.3
Live in risk area/know are at risk	16.3	21.0	0.0	17.5
To be prepared	9.1	1.3	25.0	7.0
Long experience in the bush	7.8	5.7	0.0	7.0
Promotion of planning by ES/media	7.5	8.3	12.5	7.8
Member of ES	6.6	7.6	12.5	7.0
Common sense	5.3	5.7	12.5	5.5
For own and family's safety	5.0	8.9	0.0	6.1
From fire plan	3.6	0.6	0.0	2.7
Weather patterns/climate change	1.4	1.3	0.0	1.3
Other	3.3	3.8	0.0	3.4
Don't know	0.3	0.0	0.0	0.2

<sup>\*</sup>Multiple responses

The two factors that prompted then to have an emergency plan that was identified by a majority of respondents with a plan are:

- Experience with or knowledge of prior emergencies such as earlier floods or major bushfires (34.3%)
- Recognition that they live in a high-risk area (17.5%)

Metro A respondents (21.0%) more than country respondents (16.3%) said that their emergency plan was prompted by recognition that they lived in a high–risk area.

# **HOME EMERGENCY KIT**

Respondents were asked:

Do you have a home emergency kit that contains things like a battery powered radio, torch, first aid kit mobile phone and food?

Have Home Emergency Kit	Country n=687	Metro A n=398	Metro B n=112	Total n=1197
Yes	46.4	42.1	30.9	43.6
No	53.3	57.6	69.1	56.2
Don't know	0.3	0.3	0.0	0.3

Over four in ten respondents (43.6%) say they have an emergency kit.

#### **Demographic Analysis**

Respondents aged 18 to 34 years (69.3%) more than other age groups do not have an emergency kit.

# WHAT PROMPTED GETTING EMERGENCY KIT

Respondents who had an emergency kit were asked:

What has prompted you to get an emergency kit?

What Prompted Getting Emergency Kit	Country n=319	Metro A n=166	Metro B n=34	Total n=518
Saw them at a Bunnings retail store	0.6	0.0	17.6	1.5
Saw them in an ABC retail store	0.0	0.6	0.0	0.2
Saw them at another retail store	0.6	0.6	0.0	0.6
Heard about emergency kits on the radio	2.8	1.2	0.0	2.1
Saw an ad for emergency kits on the TV	2.8	1.2	0.0	2.1
Family or friends suggested to get an emergency kit	3.8	10.3	29.4	7.5
From participating in SES, local council or CFA community education activities	23.2	10.3	0.0	17.8
Other	66.1	75.8	52.9	68.1

Over one in six respondents (17.8%) were prompted to get an emergency kit through their involvement in community education activities and a further 7.5% had taken up family and friends suggestions.

Country respondents (23.2%) more than those from Metro A (10.3%) were prompted to get an emergency kit as a result of educational activities.

Almost seven in ten respondents had been prompted by other factors.

What Else Prompted Getting Emergency Kit	Country %	Metro A %	Metro B %	Total %
Previous emergencies	31.0	28.0	21.1	29.5
Always had one	18.1	19.2	15.8	18.4
To be prepared	12.4	12.0	21.1	12.7
Common sense	11.0	7.2	0.0	9.1
Long time in the country/self sufficient	10.5	4.8	0.0	7.9
Know there is threat	5.7	7.2	0.0	5.9
For personal and family safety	3.8	6.4	10.5	5.1
Work in OHS/safety/training	2.4	10.4	26.3	6.5
Weather patterns	0.5	0.0	0.0	0.3
Other	4.8	4.8	5.3	4.5

<sup>\*</sup>Multiple responses

The three main other factors that had prompted respondents to get an emergency kit are:

- Experience or knowledge of previous emergencies (29.5%)
- Always having one in the past (18.4%)
- Wanting to be prepared for an emergency (12.7%)

# **Demographic Analysis**

Respondents aged 35 to 54 years (35.0%) more than other age groups say that they were prompted to get an emergency kit because of knowledge or experience of previous emergencies.

# WHY DON'T HAVE EMERGENCY KIT

Respondents who did not have an emergency kit were asked:

Why don't you have an emergency kit?

Why Don't Have Emergency Kit	Country %	Metro A %	Metro B %	Total %
Low risk/no threat	28.8	33.9	41.7	32.2
Have elements/not as a kit	18.9	14.6	10.7	16.4
Don't see the need	15.7	15.9	21.4	16.5
Never thought about it	9.6	11.2	3.6	9.4
Can't be bothered/not a priority	5.6	8.2	8.3	6.8
Disorganised	5.1	0.4	0.0	2.9
Intend to get one	4.0	4.3	3.6	3.8
Have first aid kit	2.1	0.0	0.0	1.2
Will leave if emergency	1.6	5.2	2.4	2.9
Can't afford it	0.0	0.0	4.8	0.6
Other	6.1	2.1	1.2	4.2
Don't know	2.4	4.3	2.4	3.0

<sup>\*</sup>Multiple responses

Almost one half of respondents (48.7%) who do not have an emergency kit say this is because they:

- Believe that they are at low or no risk of an emergency (32.2%)
- Don't see the need for one (16.4%)

A further 16.4% say they have the elements of a kit but not in one place or in kit form.

Only 3.8% or these respondents say they intend to get one.

# **IMPACT OF FLOODS VS EXPECTATIONS**

Respondents were asked:

Based on the warnings and information that you had, did the floods have a greater or lesser direct impact on you than you expected or was the impact as you expected?

Impact of Floods Vs Expectations	Country n=687	Metro A n=398	Metro B n=112	Total n=1197
Greater impact than expected	38.7	43.9	11.8	37.9
As expected	38.5	36.0	40.0	37.8
Lesser impact than expected	20.1	19.3	33.6	21.1
Don't know	2.6	0.8	14.5	3.1

Almost four in ten (37.9%) respondents said that the floods had a greater direct impact on them than they had expected based on warnings and information.

A similar proportion (37.8%) said that the impact was as they expected and just over one in five (21.1%) said the impact was less than expected.

#### **Demographic Analysis**

Respondents aged 35 to 54 years (42.6%) more than other age groups say that the impact of the floods was greater than expected.

Respondents aged 18 to 34 years (43.8%) more than other age groups say that the impact of the floods was as they expected.

# SCALE OF DIRECT IMPACT OF FLOOD WATERS: GENERAL

Respondents were asked:

How large a direct impact did the flood waters have on you and your home?

Scale of Direct Impact of Flood Waters	Country n=687	Metro A n=398	Metro B n=112	Total n=1197
Large	12.4	9.4	2.7	10.4
Medium	12.9	14.8	2.7	12.6
Small	18.9	27.7	16.4	21.6
No direct impact	55.8	48.1	78.2	55.4

Almost one quarter (23.0%) of respondents said that the flood waters had a large (10.4%) or medium (12.6%) direct impact on them and their home.

Just over one fifth (21.6%) said flood waters had a small direct impact on them and their home.

A majority of respondents (55.4%) said flood waters had no direct impact on them.

#### **Demographic Analysis**

Respondents aged 35 to 54 years more than other age groups say that the impact of the floods were large (14.1%) or medium (15.0%).

Respondents aged 18 to 34 years (31.4%) more than other age groups say that the impact of the floods was small.

# SCALE OF DIRECT IMPACT OF FLOOD WATERS: DETAIL

Respondents who had said that the flood waters had medium or large direct impact on them or their home were asked:

How large a direct impact did the flood waters have on?

			Countr n=687	-				/letro n=398	-				/letro l n=112				ı	Total n=1197	7	
Scale of Direct Impact of Flood Waters	No Impact at All	Small Impact	Medium Impact	Large Impact	N/A*	No Impact at All	Small Impact	Medium Impact	Large Impact	N/A*	No Impact at All	Small Impact	Medium Impact	Large Impact	N/A*	No Impact at All	Small Impact	Medium Impact	Large Impact	N/A*
House	39.9	19.7	20.8	19.7	0.0	53.1	11.5	18.8	16.7	0.0	50.0	33.3	16.7	0.0	0.0	44.7	17.1	20.0	18.2	0.0
Other buildings	40.9	15.2	17.7	26.2	1.3	43.3	13.3	23.3	20.0	1.5	50.0	16.7	0.0	33.3	0.0	41.9	14.6	19.2	24.2	1.3
Gardens or yards	22.4	10.0	24.7	42.9	0.1	15.6	13.5	20.8	50.0	0.0	33.3	16.7	16.7	33.3	0.0	20.2	11.4	23.2	45.2	0.1
Carpets and floor coverings	72.3	8.1	4.6	15.0	0.0	76.8	3.2	4.2	15.8	0.0	66.7	16.7	0.0	16.7	0.0	73.7	6.6	4.4	15.3	0.0
Furniture and home contents	76.2	8.1	7.0	8.7	0.0	80.2	5.2	7.3	7.3	0.0	83.3	16.7	0.0	0.0	0.0	77.7	7.3	6.9	8.0	0.0
Family memorabilia	85.0	6.4	1.7	6.9	0.0	88.5	6.3	1.0	4.2	0.0	83.3	16.7	0.0	0.0	0.0	86.2	6.5	1.5	5.8	0.0
Family pets	82.1	8.0	5.6	4.3	1.6	80.6	10.8	4.3	4.3	0.8	83.3	16.7	0.0	0.0	0.0	81.6	9.2	5.0	4.2	1.2
Car or other vehicles	75.3	8.2	7.6	8.8	0.3	77.9	6.3	8.4	7.4	0.0	80.0	20.0	0.0	0.0	0.9	76.3	7.8	7.8	8.1	0.3
Emotional and physical wellbeing of family members	20.3	14.5	23.3	41.9	0.0	29.2	17.7	19.8	33.3	0.0	33.3	33.3	16.7	16.7	0.0	23.7	16.1	21.9	38.3	0.0
Surrounding neighbourhood	8.7	7.0	21.5	62.8	0.0	10.4	8.3	19.8	61.5	0.0	40.0	20.0	20.0	20.0	0.0	9.9	7.7	20.9	61.5	0.0
Farm buildings and equipment	35.5	14.0	21.5	29.0	11.5	43.1	13.8	19.0	24.1	9.5						38.4	13.9	20.5	27.2	9.8
Farm animals and livestock	32.9	13.2	21.1	32.9	13.8	46.3	20.4	13.0	20.4	10.5						38.5	16.2	17.7	27.7	11.4

<sup>\*</sup>The four levels of impact add-up to 100%, with the exclusion of the 'N/A' - not applicable cases - which have been separated for greater clarity of data.

Over eight in ten (82.4%) of respondents who said floodwaters had a large or medium impact on them felt that they had a large (61.5%) or medium (20.9%) impact on their surrounding neighbourhood.

Almost seven in ten (68.4%) of these respondents said that the floodwaters had a large (45.2%) or medium (23.2%) impact on their garden or yard.

Over six in ten (60.2%) said floodwaters had a large (38.3%) or medium (21.9%) impact on the emotional and physical wellbeing of their family members. Country respondents (65.2%) more than Metro A respondents (53.1%) said that the floodwaters had a large or medium impact on their family members.

Approximately four in ten of these respondents said that floodwaters had a large or medium impact on their house (38.2%) and other buildings (43.4%) on their property.

In excess of four in ten respondents who had farm buildings and livestock said that floodwaters had a large or medium impact on their farm buildings and equipment (47.7%) and farm animals and livestock (45.4%). Country respondents more than Metro A respondents said that the floodwaters had a large or medium impact on farm buildings and equipment (50.5% and 33.espectively) and on farm animals and livestock (54% and 33.4%).

# **EFFECTS OF IMPACT OF FLOOD**

Respondents who had said that the flood waters had medium or large direct impact on them or their home were asked in an open-ended question:

What effects did the impact of the flood have on you, your family or your farm?

Effects of Impact of Flood	Country %	Metro A %	Metro B %	Total %
Stress/anxiety/depression	18.5	14.9	33.3	17.6
Damage to house/property/contents/car	11.8	20.3	50.0	15.0
Isolation/marooned/stuck	9.9	10.1	0.0	9.9
Loss of crop/pasture/feed	8.9	14.2	0.0	10.5
Loss of income/financial impact	8.3	6.1	0.0	7.5
Physical demands of clean-up	6.4	2.0	0.0	4.9
Animal loss/stress/sickness	6.4	5.4	0.0	6.0
Inconvenience/small impact	5.4	5.4	0.0	5.4
Evacuated/forced from home	4.5	4.1	0.0	4.3
Loss/damage to fences	4.2	4.1	0.0	4.1
Family split-up	2.9	2.7	0.0	2.8
Helped community	2.9	0.0	0.0	1.9
Loss/damage of machinery	2.2	2.7	0.0	2.4
Worry about family/friends/neighbours	1.3	1.4	16.7	1.5
Unable to go to work	1.3	0.7	0.0	1.1
Loss of utilities/power	1.3	0.0	0.0	0.6
Other	3.8	6.1	0.0	4.5

<sup>\*</sup>Multiple responses

The four main impacts of the flood, identified by more than one half of respondents who experienced a large or medium impact of floodwaters, are:

- Stress, anxiety and depression resulting from the floods (17.6%)
- Damage to their home, contents and other property including vehicles (15.0%)
- Loss of crops, feed and pasture (10.5%%)
- Physical isolation caused by the floodwaters (9.9%)

Metro A respondents (20.3%) more than country respondents (11.8%) said that the floodwaters had a large or medium impact by damaging their home, contents and property.

# **CONTINUE EXPERIENCING IMPACTS FROM FLOODS**

Respondents who had said that the floodwaters had medium or large direct impact on them or their home were asked:

Are you still experiencing any impacts from the floods on your home or farm?

Continue Experiencing Impacts from Floods	Country n=205	Metro A n=96	Metro B n=6	Total n=307
Yes	42.0	45.8	33.3	43.0
No	57.6	52.1	50.0	55.7
Don't know	0.5	2.1	16.7	1.3

More than four in ten (43.0%) of these respondents said that they were experiencing ongoing direct impacts of the floodwaters.

### IMPACTS CONTINUING TO EXPERIENCE

Respondents who were still experiencing impacts from the floods were asked in an openended question:

What are the impacts that you are continuing to experience?

Impacts Continuing to Experience	Country %	Metro A %	Metro B %	Total %
House damaged/subsided/mould	18.2	11.1	50.0	16.4
Paddocks/soil eroded/not growing	14.6	13.9	25.0	14.6
Insurance not paid/repair costs	13.9	5.6	0.0	10.8
Fencing not fixed	11.7	1.4	0.0	8.0
Water still/under water/water-logged	10.2	33.3	0.0	17.8
Cleaning-up/debris	7.3	4.2	25.0	6.6
Infrastructure/bridges/roads damaged	5.1	2.8	0.0	4.2
Buildings/machinery damaged	4.4	9.7	0.0	6.1
Weeds and pests	3.6	1.4	0.0	2.8
Mice plague	2.9	0.0	0.0	1.9
Unable to work/farm	2.9	5.6	0.0	3.8
Stress/depression/uncertainty/insecurity	1.5	5.6	0.0	2.8
Animals sick	1.5	1.4	0.0	1.4
Other	2.2	4.2	0.0	2.8

<sup>\*</sup>Multiple responses

Over six in ten respondents who were experiencing on going direct impacts of the floodwater cited four major impacts:

- Water logged gardens, yards and pasture and in some cases land still underwater (17.8%)
- Damage to houses and buildings including subsidence and mould (16.4%)
- Soil erosion and other damage to land and paddocks (14.6%)
- Difficulties getting insurance payouts and dealing with repair costs (10.8%)

Metro A respondents (33.3%) more than country respondents (10.2%) cited waterlogged land as an ongoing impact of the floodwaters.

Country respondents more than those from Metro A cited damage to their home (18.2% and 11.1% respectively) and difficulties with insurance payments (13.9% and 5.6%) as ongoing impacts.

# EFFECTS OF IMPACT OF FLOOD ON LOCAL COMMUNITY

Respondents were asked in an open-ended question:

What effects did the impact of the flood have on your local town or community?

Effects of Impact of Flood on Local Community	Country %	Metro A %	Metro B	Total %
Damage to houses/property	16.1	20.3	10.2	17.2
Community spirit/help each other	13.6	4.7	3.1	9.6
Town saved/minimal damage	10.7	5.7	36.2	10.6
Reduced business/tourism/economic loss	10.4	9.9	2.4	9.7
Damage to farms/community/crops/animals	8.0	7.5	0.0	7.3
Road flooded	7.9	18.9	21.3	13.0
Isolated/cut off	5.4	9.6	0.0	6.6
Damage to roads/bridges	4.9	5.9	3.9	5.2
Stress/stretched to the limit	4.7	1.8	2.4	3.4
Levee to protect town	3.8	0.3	0.0	2.2
Damage to public buildings/infrastructure	2.5	2.1	3.9	2.4
Evacuation necessary	1.7	3.2	0.0	2.1
Loss of livelihood/no work	1.5	0.0	0.8	0.9
Loss of power/telephone	0.9	0.3	0.8	0.7
Increased awareness of flood risk	0.8	0.3	0.0	0.6
Disputes between people or with Council	0.6	0.0	0.0	0.3
Loss of homes/contents/possessions	0.3	2.3	1.6	1.1
Other	5.5	5.6	4.7	5.4
Don't know	0.9	1.7	8.7	1.7

<sup>\*</sup>Multiple responses

The four main **negative** impacts of the flood on the local community that are cited in almost one half of responses (47.2%) are:

- Damage to houses and property (17.2%)
- Flooding of roads (13.0%)
- Reduced business activity, tourism and economic loss (9.7%)
- Damage to farms, crops, pastures and livestock (7.3%)

Over one in five responses (20.2%) cited two important **positive** impacts of the floods on the community:

- The township was saved from the floods or there was minimal flooding experienced (10.6%)
- Strong community spirit was created with people helping each other and working together (9.6%)

Responses from Metro A respondents (18.9%) more than country respondents (7.9%) cited road flooding as a community impact.

Responses of country respondents (13.6%) more than Metro A respondents (4.7%) cited the creation of a strong community spirit as a community impact.

#### **Demographic Analysis**

Respondents aged 18 to 34 years (18.5%) more than other age groups say that the community has been effected by roads being flooded.

# **NEED TO TAKE ACTIONS TO LESSEN IMPACT**

Respondents were asked:

Once you became aware of potential flooding did you need to take actions to lessen the flood's impact on your home and property or did you need to take very limited or no action?

Need to Take Actions to Lessen Impact	Country n=687	Metro A n=398	Metro B n=112	Total n=1197
Needed to take actions to lessen impact	22.8	16.1	9.8	19.4
Needed to take very limited or no action	77.2	83.9	90.2	80.6

Almost one in five respondents (19.4%) said that they needed to take actions to lessen the flood's impact on their home and property.

#### **Demographic Analysis**

Respondents aged 35 to 54 years (26.2%) more than other age groups say that the their needed to take actions to lessen the impact of the flood.

# **ACTIONS TAKEN TO LESSEN IMPACT**

Respondents who needed to take actions to lessen the flood's impact on their home and property were asked:

Which of the following actions did you take to lessen the impact of the flood?

Actions Taken to Lessen Impact	Country (n=156)				Metro A (n=63)				Metro B (n=11)				Total (n=230)			
	Yes	ON N	Don't know	*W/N	Yes	No	Don't know	*W/N	Yes	No	Don't know	* N/A	Yes	No	Don't know	*W/A
Told neighbour	69.3	30.7	0.0	0.4	62.9	35.5	1.6	0.5	72.7	27.3	0.0	0.0	67.7	31.8	0.4	0.4
Sandbagged property	51.3	48.7	0.0	0.0	21.0	79.0	0.0	0.5	54.5	45.5	0.0	0.0	43.2	56.8	0.0	0.2
Moved or lifted furniture	51.3	48.7	0.0	0.0	54.0	46.0	0.0	0.3	72.7	27.3	0.0	0.0	53.1	46.9	0.0	0.1
Secured items that could float	53.9	46.1	0.0	0.0	50.0	48.3	1.7	0.8	63.6	36.4	0.0	0.0	53.3	46.2	0.4	0.3
Turned off utilities such as power or gas	36.7	62.7	0.7	0.3	39.7	58.7	1.6	0.3	72.7	27.3	0.0	0.0	39.3	59.8	0.9	0.3
Moved car	50.3	49.7	0.0	0.1	57.4	42.6	0.0	0.5	54.5	27.3	18.2	0.0	52.4	46.7	0.9	0.3
Moved animals (pets and/or livestock)	62.2	37.8	0.0	1.7	52.6	47.4	0.0	1.8	66.7	33.3	0.0	1.8	59.8	40.2	0.0	1.8
Telephoned SES	24.8	73.9	1.3	0.0	23.4	75.0	1.6	0.0	54.5	45.5	0.0	0.0	25.9	72.8	1.3	0.0
Listened to the radio	77.0	23.0	0.0	0.1	84.4	15.6	0.0	0.0	72.7	27.3	0.0	0.0	78.9	21.1	0.0	0.1
Other important actions	56.6	41.2	2.2	0.3	66.7	31.6	1.8	0.8	18.2	54.5	27.3	0.0	57.4	39.2	3.4	0.4

<sup>\*&#</sup>x27;Yes', 'No' and 'Don't know' add-up to 100%, with the exclusion of the 'N/A' – not applicable cases – which have been separated for greater clarity of data.

The five actions taken by a majority of respondents who needed to take actions to lessen the impact of the flood are:

- Listened to the radio (78.9%)
- Told a neighbour (67.7%)
- Moved animals- mainly livestock but pets in some cases (59.8%)
- Secured items that could float (53.3%)
- Moved or lifted furniture (53.1%)

Over four in ten respondents (43.2%) who needed to take action sandbagged their property.

County respondents more than Metro A respondents moved animals (62.2% and 52.6% respectively) and sandbagged their properties (51.3% and 21.0%).

#### OTHER ACTIONS TAKEN TO LESSEN IMPACT

Other Actions Taken to Lessen Impact	Country %	Metro A %	Metro B %	Total %
Built levee/channel	17.2	19.6	33.3	18.4
Pumped water	14.1	26.1	33.3	18.4
Got information on water levels	13.1	8.7	0.0	11.6
Helped others/neighbours	10.1	0.0	0.0	6.1
Evacuated/moved to safe place	10.1	0.0	33.3	7.5
Contacted ES/Council	8.1	2.2	0.0	6.1
Moved machinery/equipment	6.1	4.3	0.0	5.4
Discussed with family/friends	5.1	6.5	0.0	5.4
Stocked-up on food/water	2.0	0.0	0.0	1.4
Organised medications	1.0	2.2	0.0	1.4
Checked media	0.0	10.9	0.0	3.4
Other	13.1	19.6	0.0	15.0

<sup>\*</sup>Multiple responses

The main "other" actions that were taken by 57% of respondents who need to take action are:

- Build a levee, channel or trench to protect their property (18.4%)
- Pump water from around their property (18.4%)
- Get information about water levels in rivers, creeks and drains (11.6%)
- Evacuate or move to a safe place (7.5%)
- Contact the emergency services (other than SES) (6.1%)
- Help neighbours and other people in thew community (6.1%)

Country respondents more than Metro A respondents said that they:

- Got information on water levels (13.1% and 8.1% respectively)
- Helped others (10.1% and 0.0%)
- Evacuated (10.1% and 0.0%)

Metro A respondents (26.1%) more than country respondents (14.1%) pumped water from around their property.

### ITEMS SAVED FROM FLOODING

Respondents who needed to take actions to lessen the flood's impact on their home and property were asked:

Which of the following were you able to save from the flooding as a direct result of any actions that you took?

	(	Country	(n=156	5)	Metro A (n=63)			Metro B (n=11)				Total (n=230)				
Items Saved from Flooding	Yes	ON	Don't know	* <b>V/</b> V	Yes	S S	Don't know	**	Yes	S S	Don't know	**	Yes	ON	Don't know	N/A*
Furniture	82.6	17.4	0.0	5.8	81.8	18.2	0.0	5.0	45.5	27.3	27.3	0.0	79.9	18.3	1.8	5.0
Carpets	63.6	36.4	0.0	6.0	64.3	35.7	0.0	5.3	30.0	50.0	20.0	0.9	61.6	37.1	1.3	5.3
Car	84.3	15.7	0.0	4.8	89.1	10.9	0.0	4.5	54.5	9.1	36.4	0.0	83.7	14.0	2.3	4.3
Kitchen goods	78.3	21.7	0.0	6.1	77.5	22.5	0.0	6.0	36.4	36.4	27.3	0.0	75.2	22.9	1.9	5.5
Electrical goods	72.6	27.4	0.0	6.1	81.0	19.0	0.0	5.5	27.3	54.5	18.2	0.0	71.7	27.0	1.3	5.3
Outside furniture	72.2	27.8	0.0	4.5	73.8	26.2	0.0	5.3	27.3	54.5	18.2	0.0	69.6	29.2	1.2	4.3
Pets	77.2	21.8	1.0	6.8	91.9	8.1	0.0	6.3	75.0	12.5	12.5	2.7	80.8	17.8	1.4	6.3
Farm equipment	67.6	31.1	1.4	10.8	76.7	20.0	3.3	8.5					70.2	27.9	1.9	9.0
Livestock	69.1	30.9	0.0	11.8	89.7	10.3	0.0	8.8					75.3	24.7	0.0	9.7

<sup>\*&#</sup>x27;Yes', 'No' and 'Don't know' add-up to 100%, with the exclusion of the 'N/A' - not applicable cases - which have been separated for greater clarity of data.

Actions taken by respondents, in over three quarters of cases saved their:

- Car (83.7%)
- Pets (80.8%)
- Furniture (79.9%)
- Livestock (75.3%)
- Kitchen goods (75.2%)

Carpets were saved by the lowest proportion of respondents (61.6%).

Metro A respondents more than country respondents, through their actions, saved pets (91.9% and 77.2% respectively) and livestock (89.7% and 69.1%). These differences are likely to be due to the relatively smaller and more limited activities of rural properties in Metro A.

### **EVACUATED HOME AS RESULT OF FLOODS**

Respondents who needed to take actions to lessen the flood's impact on their home and property were asked:

Did you evacuate your home as a result of the floods?

Evacuated Home as Result of Floods	Country n=176	Metro A n=63	Metro B n=11	Total n=230
Yes	22.7	25.4	9.1	22.8
No	77.3	74.6	90.9	77.2
Don't know	0.0	0.0	0.0	0.0

Over one in five respondents (22.8%) who had taken actions to lessen the impact of the floods evacuated their home as a result of the floods.

### WHEN EVACUATED

Respondents who had evacuated their home as a result of the floods were asked:

When did you evacuate?

When Evacuated	Country n=40	Metro A n=17	Metro B n=1	Total n=58
As soon as I received the first warning	32.5	41.2	100.0	36.2
When I realised flooding was going to affect my property	45.0	29.4	0.0	39.7
After the flood hit my property	17.5	23.5	0.0	19.0
Shortly after my house began to flood	2.5	5.9	0.0	3.4
A few hours or days after my house became flooded	2.5	0.0	0.0	1.7

Almost four in ten respondents (39.7%) who had evacuated did so when they realized that the flooding would affect their property.

Over one third (36.2%) evacuated as soon as they received the first warning.

Almost one in five respondents (19.0%) did not evacuate until the flood hit their property.

Country respondents (45.0%) more than Metro A respondents evacuated as soon as they realized flooding would affect their property.

Metro A respondents (31.2%) more than country respondents (32.5%) evacuated as soon as they got the first warning.

### WHY EVACUATED

Respondents who had evacuated their home as a result of the floods were asked:

Why did you evacuate?

Why Evacuated	Country n=40	Metro A n=17	Metro B n=1	Total n=58
Concerned about the safety of my family	55.0	52.9	100.0	55.2
Concerned about my possessions and important documents	2.5	0.0	0.0	1.7
Was advised to by the emergency services	30.0	35.3	0.0	31.0
Other reason	12.5	11.8	0.0	12.1

A majority of respondents (55.2%) who evacuated did so because they were concerned about the safety of their family.

Almost one third (31.0%) evacuated because they were advised to by the emergency services.

#### WHERE WENT AFTER EVACUATED

Respondents who had evacuated their home as a result of the floods were asked:

Where did you go after you evacuated?

Where Went after Evacuated	Country n=40	Metro A n=17	Metro B n=1	Total n=58
Evacuation or relief centre in your area	17.9	5.9	0.0	14.0
Friends or family in a safe area	51.3	70.6	100.0	57.9
Hotel/motel	0.0	0.0	0.0	0.0
Local village/township	25.6	11.8	0.0	21.1
Melbourne or large town	0.0	5.9	0.0	1.8
Other place	5.1	5.9	0.0	5.3

Almost six in ten (57.9%) evacuees went to stay with friends or family in a safe location.

Over one in five (21.1%) evacuated to their local township or village.

Almost one in seven (14.0%) went to an evacuation or relief centre in their local area.

Country respondents more than Metro A respondents evacuated to their local township (25.6% and 11.8% respectively) or to the local evacuation centre (17.9% and 5.9%).

Metro A respondents (70.6%) more than country respondents (51.3%) evacuated to friends or family in a safe area.

### WHY DIDN'T EVACUATE

Respondents who took action to lessen the impact of the flood but did not evacuate their home as a result of the floods were asked:

What was the main reason you did not evacuate your property?

Why Didn't Evacuate	Country n=135	Metro A n=47	Metro B n=9	Total n=191
There was no threat to the safety of me or my family	40.0	42.6	77.8	42.4
My property wasn't threatened	39.3	19.1	0.0	32.5
I wasn't aware that I could evacuate	0.7	0.0	0.0	0.5
I wasn't told to evacuate	3.0	10.6	11.1	5.2
I was protected by actions/levee	3.0	0.0	0.0	2.1
It was dangerous to leave/cut off	2.2	19.1	0.0	6.8
I stayed to protect property	5.2	4.3	11.1	4.7
I stayed to look after animals	1.5	0.0	0.0	1.0
Other reason	5.2	4.3	0.0	4.7

The two main reasons why three quarters of respondents did not evacuate are because:

- There was threat to them or the safety of their family (42.4%)
- Their property wasn't threatened (32.5%)

Country respondents (39.3%) more than Metro respondents (19.1%) didn't evacuate because they felt that their property wasn't threatened.

Metro A respondents more than country respondents did not evacuate because it was dangerous to leave (19.1% and 2,2% respectively) and because they weren't told to evacuate (10.6% and 3%).

# **RECEIVED DHS GRANTS AS RESULT OF FLOODS**

Respondents who had found it necessary to take action to lessen the impact of the flood were asked:

Have you received any Department of Human Services grants as a result of the September or January floods? These include grants for emergency, temporary living expenses, re-establishment and damage to house and contents.

Received DHS Grants as Result of Floods	Country n=176	Metro A n=64	Metro B n=11	Total n=230
Yes	33.0	29.7	0.0	30.7
No	65.9	70.3	100.0	68.5
Don't know	1.1	0.0	0.0	0.8

Just over three in ten (30.7%) of these respondents received a Department of Human Services grant as a result of the floods.

### WHICH GRANTS RECEIVED

Respondents who had received grants were asked:

Which types of grants did you receive?

Which Grants Received	Country n=58	Metro A n=19	Metro B n=0	Total n=77
Emergency Grant	75.9	73.7		75.3
Temporary living expenses grant	22.4	15.8		20.8
Re-establishment grant	22.4	0.0		16.9
Damage to house and contents gift	15.5	21.1		16.9

Over three quarters of respondents who received grants (75.3%) received Emergency grants.

Over one in five of respondents (20.8%) receiving grants got a Temporary Living Expenses grant.

Over one in seven respondents (16.9% each) received a Re-establishment grant or a Damage to House and Contents gift.

Country respondents more than Metro A respondents received a Temporary Living Expenses grant (22.4% and 15.8% respectively) and a Re-establishment grant (22.4% and 0% respectively).

Metro A respondents (21.1%) more than country respondents (15.5%) received a Damage to House and Contents gift.

### **GRANT MONEY SUFFICIENT**

Respondents who had received grants were asked:

Was the money sufficient for your immediate needs?

Grant Money Sufficient	Country n=58	Metro A n=19	Metro B n=0	Total n=77
Yes	82.8	68.4		79.2
No	17.2	26.3		19.5
Don't know	0.0	5.3		1.3

Almost eight in ten respondents (79.2%) felt that the grant money they received was sufficient for their immediate needs.

Country respondents (82.8%) more than Metro A respondents (68.4%) felt that grant monies were sufficient to meet their immediate needs.

### **HOW GRANTS HELPED**

Respondents who had received grants were asked in an open-ended question:

How did these funds help?

How Grants Helped	Country %	Metro A %	Metro B N/A	Total %
Buy food/groceries/restock fridge	31.9	28.6		30.6
Pay bills/every day expenses	15.3	10.7		14.3
Cover job/income loss/keep going	12.5	0.0		9.2
Repair/buy machinery	12.5	14.3		13.3
Repair buildings/fences	8.3	10.7		9.2
Buy clothes	5.6	10.7		7.1
Replace livestock/feed	4.2	3.6		4.1
General assistance	2.8	3.6		3.1
Buy big items	0.0	7.1		2.0
Other	6.9	10.7		7.1

<sup>\*</sup>Multiple responses

Over three in ten respondents (30.6%) who had received grants said that the funds helped to buy food and groceries they had lost as a result of the floods and due to the loss of power.

Just over one in seven respondents (14.3%) said the grants helped to pay the bills and meet their everyday expenses.

Over one in eight (13.3%) said that the grants helped toward the cost of repairing or buying new machinery.

Almost one in ten respondents said the grants helped to cover loss of income(9.2%) and contributed to the cost of repairing buildings or fences (9.2%)

Country respondents (12.5%) more than Metro A respondents ().0%) said that grants helped to cover loss of income and keep them going.

# **INDIRECT IMPACTS OF FLOOD**

Respondents were asked:

During the flood were you affected by any of the following?

		Country n=687		Metro A n=398			Metro B n=112			Total n=1197		
What Affected by During Flood	Yes	ON.	Don't know	Yes	ON.	Don't know	Yes	N	Don't know	Yes	No	Don't know
Loss of power	23.0	74.3	2.6	19.7	75.4	4.9	18.3	79.8	1.8	21.5	75.2	3.3
Loss of water supply	8.2	90.5	1.3	3.6	93.3	3.1	0.9	96.3	2.8	6.0	91.9	2.0
Gas supply disruption	1.8	96.8	1.5	1.5	94.1	4.3	0.9	96.3	2.8	1.6	95.9	2.5
Telephone service disruption	21.3	77.5	1.2	12.8	82.8	4.4	5.5	89.9	4.6	17.0	80.4	2.5
Lack of access to fresh food	13.9	85.6	0.4	8.0	90.7	1.3	0.9	97.2	1.8	10.8	88.4	0.9
Isolation due to road closures	40.8	58.7	0.4	57.0	41.0	2.1	11.1	86.1	2.8	43.4	55.4	1.2
Lack of access to work	18.2	78.7	3.1	20.8	76.3	2.8	7.4	88.9	3.7	18.1	78.8	3.1
Lack of access to school	8.1	87.5	4.4	11.0	84.0	5.0	3.7	90.7	5.6	8.7	86.6	4.7

Over four in ten respondents (43.4%) were isolated by road closures.

Over one fifth (21.5%) experienced loss of power and over one sixth (17.0%) had telephone service disruptions.

Over one in six (18.1%) could not get to work.

Country respondents (21.3%) more than Metro A respondents (12.8%) experienced telephone service disruptions as a result of the floods.

Metro A respondents (57.0%) more than country respondents (40.8%) experienced isolation due to road closures.

### **HOW LONG WITHOUT POWER**

Respondents who had experienced loss of power were asked:

How long were you without power?

How Long Without Power	Country n=144	Metro A n=71	Metro B n=20	Total n=231
1-3 hours	31.3	39.4	50.0	35.1
4-8 hours	15.3	18.3	31.3	17.3
9-12 hours	8.3	8.5	12.5	8.7
13-24 hours	5.6	22.5	0.0	10.4
25-48 hours	18.8	11.3	0.0	15.2
49-72 hours	10.4	0.0	6.3	6.9
>72 hours	10.4	0.0	0.0	6.5

Over one third of respondents (35.1%) who experienced loss of power, were without power for up to 3 hours.

A further one quarter (26.0%) were without power for between 4 and 12 hours.

One in ten (10.4%) were without power for up to 24 hours and a further 15.2% had no power for up to 48 hours.

Over one in eight (13.4%) were without power for more than 48 hours.

Country respondents were without power for longer periods than Metro A respondents. Over one fifth (20.8%) of country respondents were without power for more than 48 hours whereas no Metro A respondent lost power for more than 48 hours.

### **IMPACT OF LOSS OF POWER**

Respondents who had experienced loss of power were asked in an open-ended question:

What was the impact of not having power on you and your family?

Impact of Loss of Power	Country %	Metro A %	Metro B %	Total %
No impact/short time	34.7	30.7	46.7	33.8
Loss of food/fridge, freezer	17.0	6.8	6.7	13.3
No lights	5.1	17.0	13.3	9.4
Inconvenience/disruption	5.7	6.8	6.7	6.1
Need to use generator	8.5	1.1	0.0	5.8
No cooking	5.1	8.0	0.0	5.8
No TV/radio	6.3	0.0	20.0	5.0
No telephone/mobile battery flat	5.7	3.4	6.7	5.0
Loss of pumped water	2.3	8.0	0.0	4.0
No hot water/heating	2.8	5.7	0.0	3.6
Forced to leave	0.0	6.8	0.0	2.2
No air-conditioning	1.7	1.1	0.0	1.4
Other	3.4	4.5	0.0	3.6
Don't know	1.7	0.0	0.0	1.1

<sup>\*</sup>Multiple responses

The main impact of a loss of power identified by more than one in eight (13.3%) respondents who lost power is loss of frozen and refrigerated food.

Almost one in ten respondents (9.4%) said that the loss of lighting was an important impact.

In excess of one in twenty respondent who lost power said that the impact was:

- Inconvenience (6.1%)
- Need to use a generator (5.8%)
- Prevented cooking meals (5.8%)

One third of respondents who lost power said that it had very little or no impact on them.

Country respondents more than Metro A respondents said that impacts of loss of power were:

- Loss of refrigerated and frozen food (17.0% and 6.8% respectively)
- Need to use a generator (8.5% and 1.1%)

Metro A respondents (17.0%) more than country respondents (5.1%) said that loss of lighting was an impact.

### HOW LONG WITHOUT WATER SUPPLY

Respondents who had experienced loss of water supply were asked:

How long were you without water?

How Long Without Water	Country n=51	Metro A n=14	Metro B n=1	Total n=65
1-3 hours	25.5	21.4	100.0	24.6
4-8 hours	21.6	0.0		16.9
9-12 hours	13.7	7.1		12.3
13-24 hours	9.8	35.7		15.4
25-48 hours	17.6	35.7		21.5
49-72 hours	9.8	0.0		7.7
>72 hours	2.0	0.0		1.5

Of those respondents who experienced a loss of water almost one quarter (24.6%) were without it for 3 hours or less.

Almost three in ten (29.2%) were without water for 4 to 12 hours and a further 15.4% were without water for 13 to 24 hours.

Just over one fifth (21.5%) lacked water for 24 to 48 hours almost one in ten (9.2%) were without water for in excess of 48 hours.

Country respondents more than Metro A respondents were without water for 4 to 8 hours (21.6% and 0.0% respectively), 9 to 12 hours (13.7% and 7.1%) and 49 to 72 hours (9.8% and 0.0%).

Metro A respondents more than country respondents were without water for 13 to 24 hours (35.7% and 9.8% respectively) and 25 to 48 hours (35.7% and 17.6%).

### **EXPERIENCED MEDICAL DIFFICULTIES DURING FLOOD**

Respondents were asked:

During the floods did you or any of your household experience medical difficulties that required a doctor, hospital, ambulance or access to specific medication or treatment?

Experienced Medical Difficulties During Flood	Country n=687	Metro A n=398	Metro B n=112	Total n=1197
Yes	6.3	2.3	0.9	4.5
No	93.2	97.7	97.2	95.1
Don't know	0.4	0.0	1.8	0.4

Fewer than one in twenty (4.5%) respondents experienced medical difficulties that required a doctor, hospital, ambulance or access to medication or treatment.

# ABLE TO ACCESS MEDIACL FACILITIES OR TREATMENT

Respondents who had experienced medical difficulties during the flood were asked:

Were you able to access the medical facilities or treatment that was needed?

Able to Access Medical Facilities or Treatment	Country n=44	Metro A n=9	Metro B n=1	Total n=54
Yes	52.3	55.6	100.0	53.7
No	45.5	33.3	0.0	42.6
Don't know	2.3	11.1	0.0	3.7

Just over one half (53.7%) of those who required specific medical attention were able to get it.

### SOURCES OF INFORMATION ON FLOOD THREAT PRIOR TO FLOODS

Respondents were asked:

Prior to the floods had you received information about the potential for flooding in your area and what to do in case of a flood from the following sources?

		Country n=687			Metro A n=398			Metro B n=112			Total n=1197	
Sources of Information Prior to Floods	Yes	ON N	Don't know	Yes	N N	Don't know	Yes	No	Don't know	Yes	N <sub>O</sub>	Don't know
SES	25.4	71.8	2.8	11.0	86.2	2.8	2.8	94.5	2.8	18.6	78.6	2.8
Emergency services - CFA, Police	22.1	75.1	2.8	9.0	89.0	2.0	0.9	96.3	2.8	15.8	81.7	2.5
Local Council	21.9	76.3	1.8	5.6	92.1	2.3	3.7	92.7	3.7	14.8	83.1	2.1
Catchment Management Authority	7.4	90.4	2.2	1.5	97.4	1.0	0.9	96.3	2.8	4.8	93.3	1.9
Insurer	1.3	97.8	0.9	1.8	96.4	1.8	2.8	94.5	2.8	1.6	97.0	1.4
Water companies	2.6	96.2	1.2	1.3	97.2	1.5	0.9	96.3	2.8	2.0	96.5	1.4
DSE	4.4	93.5	2.1	0.8	97.9	1.3	0.9	97.2	1.9	2.9	95.3	1.8
Other	18.6	78.6	2.8	14.7	83.4	1.9	2.7	94.6	2.7	15.9	81.6	2.5

The three main information sources on the potential for flooding prior to the floods are:

- SES (18.6%)
- Emergency services including CFA (15.8%)
- Local Council (14.8%)

Country respondents more than Metro A respondents identified all three sources:

- SES (25.4% and 11.0% respectively)
- Emergency services including CFA (22.1% and 9.0%)
- Local Council (21.9% and 5.6%)

### OTHER SOURCES OF INFORMATION PRIOR TO FLOODS

Other Sources of Information Prior to Floods	Country %	Metro A %	Metro B	Total %
Radio	40.3	28.4	40.0	36.8
τν	36.1	46.3	60.0	39.5
Family/friends/neighbours/word of mouth	6.8	14.9	0.0	8.5
Media	5.2	0.0	0.0	3.9
Internet/websites	4.2	6.0	0.0	4.7
Newspaper	2.6	3.0	0.0	2.7
Public meeting	1.6	0.0	0.0	1.2
Other	3.1	1.5	0.0	2.7

<sup>\*</sup>Multiple responses

Well over one in seven respondents (15.9%) identified other sources of information prior to the floods.

The two dominant other sources of information on the flood threat prior to the floods are television (39.5%) and radio (36.8%)

Country respondents (40.3%) more than Metro A respondents (28.4%) cited radio as a source while Metro A respondents (46.3%) more than country respondents (36.1%) cited TV.

# **EMERGENCY ALERT THROUGH TELEPHONE**

Respondents were asked:

Did you receive any emergency warning or advice messages through your landline or mobile telephone from the emergency services during any of the floods?

Emergency Alert through Telephone	Country n=687	Metro A n=398	Metro B n=112	Total n=1197
Yes	22.5	24.3	7.3	21.7
No	74.2	74.2	88.1	75.4
Don't know	3.4	1.5	4.6	2.9

Over one in five respondents (21.7%) said that they received an emergency warning or advice message on landline or telephone from the emergency services.

### NUMBER OF TELEPHONE MESSAGES RECEIVED

Respondents who had received emergency alerts through telephone were asked:

Approximately how many messages did you receive?

Number of Telephone Messages Received	Country Metro A n=153 n=95		Metro B n=8	Total n=256
One	31.4	28.4	50.0	30.9
Two	36.6	31.6	25.0	34.4
Three	14.4	24.2	0.0	17.6
Four	8.5	9.5	0.0	8.6
Five	2.0	2.1	0.0	2.0
Six	2.6	1.1	0.0	2.0
Seven	0.0	0.0	0.0	0.0
Eight	0.7	0.0	0.0	0.4
Nine	0.7	0.0	0.0	0.0
Ten	0.7	0.0	0.0	0.4
More than ten	2.6	1.1	0.0	0.8
Don't know	2.6	2.1	25.0	3.1

Almost two thirds of respondents (65.3%) received one (30.9%) or two (34.4%) messages.

Over one in six (17.6%) received three messages and 8.6% received four messages.

Metro A respondents (24.2%) more than country respondents (14.4%) received three messages.

### **ABOUT TELEPHONE MESSAGES**

Respondents who had received emergency alerts through telephone were asked:

Can you tell me about the messages?

	Country n=153		Metro A n=95			Metro B n=8			Total N=256			
About Telephone Messages	Yes	ON N	Don't know	Yes	No	Don't know	Yes	N N	Don't know	Yes	ON N	Don't know
Do you recall the content of the messages?	69.3	26.1	4.6	75.8	17.9	6.3	75.0	12.5	12.5	71.9	22.7	5.5
Do you recall how you responded immediately after you received the messages?	81.0	15.7	3.3	90.4	8.5	1.1	87.5	0.0	12.5	84.7	12.5	2.7
Did receiving the messages assist you in implementing your emergency plan?	49.3	45.3	5.3	64.5	33.3	2.2	12.5	75.0	12.5	53.8	41.8	4.4

More than eight in ten respondents (84.7%) who received a warning message remembers how they responded immediately after receiving it More than seven in ten respondents (71.9%) remember the content of the message.

Just over one half (53.8%) felt that the message assisted them in implementing their emergency plan.

Metro A respondents (64.5%) more than country respondents (49.3%) felt that the message helped in implementing their emergency plan.

# SATISFACTION WITH FIRST EMERGENCY ALERT MESSAGE

Respondents who had received emergency alerts through telephone were asked:

How satisfied were you with the information and timing of the first warning message?

Satisfaction with First Alert Message	Country n=153	Metro A n=95	Metro B n=8	Total n=256
Very dissatisfied	5.9	8.3	25.0	7.4
Dissatisfied	10.5	10.4	0.0	10.2
Satisfied	56.6	58.3	25.0	56.3
Very satisfied	22.4	21.9	37.5	22.7
Don't know	4.6	1.0	12.5	3.5

Almost eight in ten respondents (79.0%) who received an Emergency Alert message were satisfied (56.3%) or very satisfied (22.7%) with its information and timing.

One in six were dissatisfied (10.2%) or very dissatisfied (7.4%).

### **TIMING OF EMERGENCY ALERT MESSAGES**

Respondents who had received emergency alerts through telephone were asked:

Did you receive any of the messages late at night or early in the morning?

Timing of Emergency Alert Messages	Country n=153	Metro A n=95	Metro B n=8	Total n=256
Yes	45.1	37.5	12.5	41.2
No	42.5	58.3	50.0	48.6
Don't know	12.4	4.2	37.5	10.1

Over four in ten respondents (41.2%) received the Emergency Alert message late at night or early in the morning.

### BEING WOKEN-UP BY EMERGENCY ALERT MESSAGES

Respondents who had received emergency alert messages late at night or early in the morning were asked:

When you received an emergency alert message late at night or early in the morning, did it wake you up from your sleep?

Being Woken-up by Emergency Alert Messages	Country n=69	Metro A n=36	Metro B n=1	Total n=106
Yes	58.0	16.7	0.0	43.4
No	42.0	77.8	100.0	54.7
Don't know	0.0	5.6	0.0	1.9

Of those who received the warning late at night or early in the morning, just over four in ten respondents (43.4%) were woken by it.

Country respondents (58.0%) more than Metro A respondents (16.7%) were woken by the message.

# **UNDERSTOOD EMERGENCY ALERT MESSAGE**

Respondents who had received emergency alert messages late at night or early in the morning and were woken up by it were asked:

Did you understand the message and who was sending it?

Understood Emergency Alert Message	Country n=40	Metro A n=6	Metro B n=0	Total n=46
Yes	90.0	83.3		89.1
No	7.5	16.7		8.7
Don't know	2.5	0.0		2.2

Almost nine in ten respondents (89.1%) who were woken by the Emergency Alert message understood it and who was sending it.

# REACTED TO EMERGENCY ALERT MESSAGE IMMEDIATELY

Respondents who had received emergency alert messages late at night or early in the morning and were woken up by it were asked:

Did you react to the message immediately - not wait until the morning?

Reacted to Emergency Alert Message Immediately	Country n=40	Metro A n=6	Metro B n=0	Total n=46
Yes	90.0	50.0		84.8
No	10.0	50.0		15.2
Don't know	0.0	0.0		0.0

Over eight in ten respondents (84.8%) who were woken by the message reacted to it immediately rather than waiting till the morning.

# OPINION ON EMERGENCY ALERT MESSAGE SENT DURING THE NIGHT

Respondents who had received emergency alert messages late at night or early in the morning and were woken up by it were asked:

Did you consider that this warning message sent to you during the night as?

Opinion on Emergency Alert Message Sent During the Night	Country n=40	Metro A n=6	Metro B n=0	Total n=46
Important to send at that time	80.0	33.3		73.9
An intrusion but acceptable	17.5	66.7		23.9
An unnecessary intrusion that could have waited	2.5	0.0		2.2

Almost three quarters of respondents (73.9%) who were woken by the Emergency Alert message considered that it was important to send it at the time.

A further 23.9% felt that it was an intrusion but acceptable.

### **HELPFULNESS OF INFORMATION SOURCES DURING FLOODS**

Respondents were asked:

During any of the floods how helpful were the following information sources that you may have used?

	Country (n=687)					Metro A (n=398)						Metro	=112)		Total (n=1197)					
Helpfulness of Information Sources During Floods	Not helpful at all	Slightly helpful	Helpful	Very helpful	Did not use*	Not helpful at all	Slightly helpful	Helpful	Very helpful	Did not use*	Not helpful at all	Slightly helpful	Helpful	Very helpful	Did not use*	Not helpful at all	Slightly helpful	Helpful	Very helpful	Did not use*
Victorian telephone Flood Information Line	24.3	24.3	40.5	10.8	93.7	28.6	0.0	47.6	23.8	92.2	0.0	0.0	100	0.0	95.5	25.4	15.3	44.1	15.3	93.5
SES telephone Request Line	20.8	4.2	41.7	33.3	92.0	62.5	0.0	20.8	16.7	90.5	0.0	0.0	0.0	0.0	100	34.7	2.8	34.7	27.8	92.1
Power company emergency telephone information lines	25.7	22.9	37.1	14.3	93.9	55.6	33.3	11.1	0.0	95.0	100	0.0	0.0	0.0	96.4	33.3	24.4	31.1	11.1	94.6
Websites on the internet	6.7	10.0	46.9	36.4	64.0	8.5	14.1	57.7	19.7	61.9	0.0	11.8	58.8	29.4	81.3	7.0	11.6	51.3	30.2	65.0
ABC local radio	5.9	10.1	46.1	37.9	42.1	7.9	10.6	50.3	31.1	60.2	5.0	5.0	35.0	55.0	78.6	6.4	10.0	46.9	36.7	51.5
Community radio station	8.0	12.3	48.6	31.2	77.7	10.0	15.0	55.0	20.0	87.5	0.0	16.7	16.7	66.7	86.6	7.9	13.2	47.9	31.1	81.9
Commercial radio station	14.7	16.2	46.3	22.8	78.2	15.8	25.0	43.4	15.8	78.7	10.5	10.5	47.4	31.6	79.5	14.7	18.6	45.5	21.2	78.5
Television	18.1	27.3	42.3	12.3	33.8	24.9	27.3	38.8	9.0	35.3	10.9	20.3	46.9	21.9	40.2	19.7	26.7	41.5	12.0	34.9
Newspapers	30.2	22.5	35.9	11.5	59.7	33.7	24.5	39.8	2.0	72.7	12.5	12.5	62.5	12.5	68.8	29.6	22.2	39.0	9.2	64.9
Neighbours	7.8	18.1	47.9	26.2	39.0	3.8	19.8	47.2	29.2	43.9	0.0	29.4	35.3	35.3	81.3	6.3	19.0	47.3	27.4	44.6
Family	6.9	20.5	47.1	25.4	50.4	3.1	22.5	44.0	30.4	49.6	0.0	33.3	40.7	25.9	73.2	5.3	21.9	45.7	27.1	52.3
Local police, CFA or SES	7.0	15.3	44.9	32.9	54.1	5.2	13.0	42.9	39.0	75.4	0.0	0.0	0.0	0.0	100	6.6	14.8	44.4	34.1	65.0

<sup>\*</sup>The four levels of helpfulness add-up to 100%, with the exclusion of the 'Did not use' cases – which have been separated for greater clarity of data.

The main sources of information that respondents tended to use during the floods were:

- Television (63.2%)
- Neighbours (53.3%)
- ABC local radio (46.7%)
- Family (45.9%)
- Websites on the Internet (33.2%)
- Newspapers (32.7%)
- Local emergency services, local police, CFA or SES (31.6%)

Over eight in ten respondents who used them said that two sources were helpful or very helpful:

- ABC local radio (83.6%)
- Websites on the Internet (81.5%)

Over seven in ten respondents who used them said that three sources were helpful or very helpful:

- Local emergency services (78.5%)
- Neighbours (74.7%)
- Family (72.8%)

# **HELPFULNESS OF WEBSITES AS INFORMATION SOURCES DURING FLOODS**

Respondents who had used websites were asked:

How helpful were the following websites?

		Cou n=2	ntry 239			Met n=	ro A 142			Met	_		Total n=398				
Helpfulness of Websites as Information Sources During Floods	Not helpful at all	Slightly helpful	Helpful	Very helpful	Not helpful at all	Slightly helpful	Helpful	Very helpful	Not helpful at all	Slightly helpful	Helpful	Very helpful	Not helpful at all	Slightly helpful	Helpful	Very helpful	
Bureau of Meteorology	2.3	7.5	44.8	45.4	5.1	9.2	56.1	29.6	0.0	14.3	21.4	64.3	3.1	8.4	47.6	40.9	
VICSES	13.6	6.8	42.4	37.3	2.9	20.0	54.3	22.9	0.0	0.0	100	0.0	9.5	11.6	47.4	31.6	
CFA	5.0	12.5	60.0	22.5	4.5	9.1	68.2	18.2	0.0	0.0	100	0.0	4.8	11.1	63.5	20.6	
Local Council	18.9	5.4	56.8	18.9	14.3	28.6	57.1	0.0	0.0	0.0	0.0	0.0	18.2	9.1	56.8	15.9	
Catchment Management Authority	15.8	5.3	63.2	15.8	50.0	25.0	0.0	25.0	0.0	0.0	0.0	0.0	21.7	8.7	52.2	17.4	
Vic Roads	10.0	11.0	35.0	44.0	10.0	20.0	37.5	32.5	0.0	0.0	100	0.0	9.8	13.3	37.1	39.9	
Power Company	50.0	0.0	50.0	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	50.0	0.0	33.3	16.7	
Department of Human Services	25.0	0.0	0.0	75.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	20.0	0.0	20.0	60.0	
Department of Primary Industry	25.0	0.0	25.0	50.0	0.0	0.0	100	0.0	0.0	0.0	0.0	0.0	16.7	0.0	50.0	33.3	
Department of Sustainability and Environment	7.7	7.7	46.2	38.5	0.0	16.7	83.3	0.0	0.0	0.0	0.0	0.0	5.3	10.5	57.9	26.3	
Other websites	5.6	11.1	52.8	30.6	00	34.6	23.1	42.3	0.0	0.0	75.0	25.0	3.0	19.7	42.4	34.8	

Of those 33.2% of respondents who used websites as a source of information during the floods, the following websites were most used:

- Bureau of Meteorology (69.9%)
- Vic Roads (58.9%)
- Other websites (56.5%)
- VICSES (54.9%)
- CFA (52.0%)
- Local Council (50.7%)

Of those websites that we used, respondents saw the following as helpful or very helpful:

- Bureau of Meteorology (88.5%)
- CFA (83.5%)
- VICSES (79.0%)
- Other websites (77.2%)
- Vic Roads (77.0%)
- Local Council (72.7%)

# USE OF SOCIAL MEDIA TO COMMUNICATE OR ACCESS INFORMATION

Respondents were asked:

Leading up to, during and after the floods, did you use any social media such as Facebook or Twitter to communicate or access information?

Used Social Media to Communicate or Access Information	Country n=687	Metro A n=398	Metro B n=112	Total n=1197
Yes	12.6	18.5	11.0	14.4
No	87.4	81.3	86.2	85.2
Don't know	0.0	0.3	2.8	0.3

One in seven respondents (14.4%) say that they used social media to communicate or access information leading up to, during and after the floods.

Metro A respondents (18.5%) more than country respondents (12.6%) used social media.

## **Demographic Analysis**

Respondents aged 18 to 34 years (31.1%) more than other age groups say that they used social media, leading up to, during and after the floods to communicate or access information.

Respondents aged 55 years and over (95.6%) more than others say they did not use social media for communicating and information during the floods.

# HOW OFTEN USED SOCIAL MEDIA IN RELATION TO FLOODS

Respondents who had used social media to communicate or access information relating to floods asked:

How often did you use social media to communicate or access information relating to floods?

How Often Used Social Media in Relation to Floods	Country n=84	Metro A n=72	Metro B n=12	Total n=168
Once	1.2	4.2	16.7	3.6
A Couple of times	27.4	25.0	50.0	28.0
Regularly	50.0	44.4	25.0	45.8
All the time	21.4	26.4	8.3	22.6

Of those who used social media, over two thirds (68.4%) used it regularly (45.8%) or all the time (22.6%).

Over one quarter (28.0%) used it a couple of times.

# USE OF MOBILE PHONE OR IPAD FOR INFORMATION ON EMAIL OR WEBSITES

Respondents were asked:

Leading up to, during and after the floods, did you use your mobile telephone or iPad to access information on email or websites?

Used Mobile Phone or iPad for Information on Email or Websites	Country n=687	Metro A n=398	Metro B n=112	Total n=1197
Yes	8.8	16.7	9.2	11.5
No	90.8	82.8	89.0	87.9
Don't know	0.4	0.5	1.8	0.6

Over one in ten respondents (11.5%) used their mobile telephone or iPad to access information on email or websites leading up to, during or after the floods.

## **Demographic Analysis**

Respondents aged 18 to 34 years (42.3%) more than other age groups say that they used their mobile telephone or iPad, leading up to, during and after the floods to access information on email or websites.

Respondents aged 55 years and over (95.2%) more than others say they did not use their mobile telephone or iPad, leading up to, during and after the floods to access information on email or websites.

# NEED FOR EMERGENCY FLOOD INFORMATION IN LANGUAGE OTHER THAN ENGLISH

Respondents were asked:

Did you need to have any of the emergency information about floods, available to you in a language other than English?

Need for Emergency Flood Information in Language Other than English	Country n=687	Metro A n=398	Metro B n=112	Total n=1197
Yes	1.8	3.4	12.8	3.3
No	97.9	96.6	87.2	96.5
Don't know	0.3	0.0	0.0	0.2

One in thirty respondents (3.3%) need emergency information available in a language other than English.

# CONTACTED SOMEONE FOR EMERGENCY ASSISTANCE

Respondents were asked:

Leading up to and during the floods, did you contact anyone for emergency assistance?

Contacted Someone for Emergency Assistance	Country n=687	Metro A n=398	Metro B n=112	Total n=1197
Yes	8.4	4.9	0.0	6.4
No	91.5	94.6	100.0	93.3
Don't know	0.1	0.5	0.0	0.3

Over one in sixteen respondents (6.4%) contacted someone for emergency assistance leading up to or during the floods.

# WHOM CONTACTED FOR EMERGENCY ASSISTANCE

Respondents who had contacted someone for emergency assistance were asked:

Did you contact any of the following for emergency assistance?

		Country n=57	•		Metro A n=20			Metro B n=0			Total n=79	
Who Contacted for Emergency Assistance	Yes	ON	Don't know	Yes	ON	Don't know	Yes	O Z	Don't know	Yes	ON	Don't know
Police	16.9	83.1	0.0	30.0	70.0	0.0				20.3	79.7	0.0
CFA	22.4	77.6	0.0	10.0	90.0	0.0				19.2	80.8	0.0
SES	59.3	40.7	0.0	70.0	30.0	0.0				62.0	38.0	0.0
Local Council	27.6	72.4	0.0	25.0	75.0	0.0				26.9	73.1	0.0
Water company	3.4	96.6	0.0	10.0	90.0	0.0				5.1	94.9	0.0
Insurer	10.2	89.8	0.0	15.0	85.0	0.0				11.4	88.6	0.0
Department of Human Services	11.9	88.1	0.0	5.0	95.0	0.0				10.1	89.9	0.0
Power company	0.0	100.0	0.0	15.0	85.0	0.0				3.8	96.2	0.0
Water catchment authority	0.0	100.0	0.0	5.0	95.0	0.0				1.3	98.7	0.0
Family	45.8	54.2	0.0	40.0	55.0	5.0				44.3	54.4	1.3
Friends	52.5	47.5	0.0	35.0	60.0	5.0				48.1	50.6	1.3
Neighbours	55.2	44.8	0.0	45.0	55.0	0.0				52.6	47.4	0.0

Over six in ten respondents (62.0%) who had sought emergency assistance contacted the SES.

Respondents also contacted neighbours (52.6%), friends (48.1%) and family (44.3%).

Other organizations contacted included:

- Local Council (26.9%)
- Police (20.9%)
- CFA (19.2%)

Metro A respondents (70.0%) more than country respondents (59.3%) contacted the SES.

Country respondents more than Metro A respondents contacted friends (52.5% and 35.0% respectively) and neighbours (55.2% and 45.0%).

# MAIN REASONS FOR SEEKING EMERGENCY ASSISTANCE

Respondents who had sought emergency assistance were asked:

What were your main reasons for seeking emergency assistance?

Main Reasons for Seeking Emergency Assistance	Country %	Metro A %	Metro B N/A	Total %
Flooding in building	22.8	30.0		25.0
Flooding outside property	31.6	60.0		39.5
Aware of flood warning and concerned about property/building	35.1	55.0		40.8
Concerns about electrical safety	8.8	25.0		13.2
Assistance in sandbagging	33.3	20.0		30.3
Assistance in lifting household contents	3.5	15.0		6.6
Insurance company advised me to call SES	0.0	0.0		0.0
Local Council advised me to call SES	3.5	15.0		6.6
Needed road closure information	24.6	30.0		26.3
Needed information on which areas were flooding	38.6	40.0		39.5

<sup>\*</sup>Multiple responses

Approximately four in ten respondents who sought emergency assistance did so because they:

- Were aware of the flood warning and we concerned about their property (40.8%)
- Were experiencing flooding outside their property (39.5%)
- Needed information on which areas were flooding (39.5%)

More than three in ten (30.3%) sought emergency assistance with sandbagging.

# ATTENDED SES COMMUNITY MEETING ABOUT FLOODS

Respondents were asked:

Did you attend an SES community meeting about any of the floods?

Attended SES Community Meeting about Floods	Country n=687	Metro A n=398	Metro B n=112	Total n=1197
Yes	22.9	2.8	0.9	14.2
No	76.7	96.4	99.1	85.3
Don't know	0.4	0.8	0.0	0.5

Almost one in seven respondents (14.2%) attended an SES community meeting about the floods.

Country respondents (22.9%) more than Metro A respondents (2.8%) attended an SES community meeting.

# **WENT THROUGH FLOODWATERS**

Respondents were asked:

Did you walk, drive or ride through floodwaters?

Walked, Drove or Rode through Floodwaters	Country n=687	Metro A n=398	Metro B n=112	Total n=1197
Yes	49.4	61.0	26.6	51.1
No	50.3	38.7	72.5	48.5
Don't know	0.3	0.3	0.9	0.3

More than one half of respondents (51.1%) walked, drove or rode through floodwaters.

Metro A respondents (61.0%) more than country respondents (49.4%) went through floodwaters.

## **Demographic Analysis**

Respondents aged 18 to 34 years (62.0%) and 35 to 54 years (61.1%) more than those 55 years and over walked, drove or rode through floodwaters.

## REASONS FOR GOING THROUGH FLOODWATERS

Respondents who had walked, driven or ridden through floodwaters were asked in an open-ended question:

Why did you walk, drive or ride through floodwaters?

Reasons for Walking, Driving or Riding through Floodwaters	Country %	Metro A %	Metro B %	Total %
For food/supplies/go to town	18.2	14.9	9.7	16.5
To go to/return from work	18.2	13.0	22.6	16.4
To work on farm/move livestock	10.7	6.5	0.0	8.6
To act to protect home/get sandbags	7.5	1.9	0.0	5.0
To help people/friends/family	7.2	11.5	3.2	8.7
To get home/ok before left	7.0	13.0	29.0	10.4
To evacuate	5.6	11.1	0.0	7.5
To get info on flood/monitor water level	5.4	6.9	9.7	6.2
No option/surrounded by water	4.3	3.8	3.2	4.1
To take kids to/from school	2.9	3.1	9.7	3.3
To go to a meeting	2.4	0.0	0.0	1.4
Social/recreational activity/visit friends	1.9	9.2	9.7	5.1
Other	8.6	5.3	3.2	7.1

<sup>\*</sup>Multiple responses

Over six in ten respondents (60.6%) who walked, drove or rode through floodwaters said that they did so to:

- Get food or supplies (16.5%)
- Go to and/or return from work (16.4%)
- Return home after being away (10.4%)
- Assist people including the community, friends and family (8.7%)
- Work on the farm/rural property including moving livestock (8.6%)

Country respondents (18.2%) more than Metro A (13.0%) respondents went through floodwater to go to and or return from work.

Metro A respondents (13.0%) more than country respondents (7.0%) went through floodwater to get home.

## **Demographic Analysis**

Respondents aged 35 to 54 years (21.6%) more than other age groups say that they went through floodwaters to go to and/or return from work.

Respondents aged 55 years and over (20.1%) more than others say they went through floodwaters to get food or supplies.

# WHAT HAVE LEARNED FROM BEING INVOLVED IN FLOOD

Respondents were asked in an open-ended question:

What do you feel you may have learned from being involved in this flood?

What Have Learned from Being Involved in Flood	Country %	Metro A %	Metro B %	Total %
Know there is flood risk	17.2	15.3	20.2	16.8
Need to be prepared/plan/emergency kit	12.6	14.1	10.9	13.0
Learnt nothing new	10.6	10.6	15.5	11.1
Need to be alert/monitor conditions	9.5	12.6	6.2	10.2
Value of community cooperation	7.8	1.8	1.6	5.3
ES/Council ineffective	5.4	3.3	0.8	4.2
Know what to do if there is a flood	4.9	8.1	8.5	6.3
Infrastructure needs improvement to prevent floods	3.8	5.3	2.3	4.2
Our house is safe/high enough	3.4	3.9	1.6	3.4
Speed at which water can rise	3.0	6.7	2.3	4.1
Don't drive through water	2.8	4.5	1.6	3.2
Floods have major impact/damage/stress	2.4	2.4	5.4	2.7
Insurance needs to cover floods	2.3	1.8	0.0	2.0
Listen to local knowledge	1.9	1.0	0.8	1.5
Need better early warning system	1.5	0.8	1.6	1.3
Personal safety is the most important	0.5	1.4	0.8	0.8
Know our plans work/can cope	0.3	0.0	0.0	0.2
Other	5.4	5.9	2.3	5.3
Don't know	4.6	0.4	17.8	4.4

<sup>\*</sup>Multiple responses

The three main learnings that four in ten respondents (40.0%) cite are that they now know that:

- The area in which they live is at risk of flooding(16.8%)
- Need to be prepared for flooding emergencies (13.0%)
- During flood emergencies they need to be alert and to monitor the situation (10.2%)

More than one in ten respondents (11.1%) said that they did not learn anything new from being involved in the flood.

# **Demographic Analysis**

Respondents aged 18 to 34 years more than other groups said that they had learned that there is a flood risk in their area (21.1%) and they need to be prepared for an emergency (18.9%).

# WANT MORE INFORMATION ABOUT FLOODS

Respondents were asked:

Do you want more information about floods and what you can do if your property floods?

Want More Information about Floods	Country n=687	Metro A n=398	Metro B n=112	Total n=1197
Yes	12.1	24.3	34.9	18.3
No	86.4	74.7	64.2	80.4
Don't know	1.5	1.0	0.9	1.3

Over eight in ten respondents (80.4%) do not want more information about floods.

# **Demographic Analysis**

Respondents aged 18 to 34 years (24.3%) more than other age groups say that they want more information about floods and what you can do if your property floods.

# **POSITIVE IMPACTS OF FLOODS**

Respondents were asked in an open-ended question:

Are there any positive impacts of the floods for you, your household, farm or community?

Positive Impacts of Floods	Country %	Metro A %	Metro B %	Total %
Bring community closer together	32.7	19.6	8.8	26.2
Nothing positive	31.8	47.1	55.9	38.9
Break drought/ water supply/ dams/ gardens	8.0	2.6	2.9	5.8
Awareness of flood threat	6.6	9.8	6.9	7.7
More growth/wildlife/regenerate/replenish	4.9	0.0	0.0	2.9
Fix/work on infrastructure	3.4	5.3	2.9	4.0
Prepared for floods in the future	3.2	5.7	4.9	4.2
Know home is safe	1.9	1.9	0.0	1.8
Aware need correct insurance	0.7	0.5	0.0	0.5
Create work/business	0.3	0.5	0.0	0.3
Other	2.6	5.0	3.9	3.6
Don't know	4.0	1.9	13.7	4.1

<sup>\*</sup>Multiple responses

Over one quarter of responses (26.2%) cite the floods as having a positive impact by bringing the local community together.

One in thirteen (7.7%) responses cite awareness of the flood threat as a positive impact of the floods.

Almost four in ten respondents (38.9%) see no positive impacts of the floods.

Country respondents (32.7% more than Metro A respondents (19.6%) saw the positive aspect as bringing the community closer together.

Metro A respondents (47.1%) more than country respondents (31.8%) saw nothing positive coming out of the floods.

**SECTION III: METRO B – QUALITATIVE DISCUSSION** 

#### Perceived Risk

There is a low risk perception of flooding and bushfire within Metro B.

One in eight respondents believed prior to the floods that there was a risk of bushfire (8% some risk and 4.5% high risk) while over one in seven (15.2%) thought there was a risk of flood (11.6% and 3.6%).

Many more (41.4%) believed there was a risk of storm (35.1% and 6.3%).

## Warning

Fewer than one in ten respondents (8.9%) say they received an early warning of potential flooding and this was mainly through radio, newspapers and friends, family and neighbours.

The length of time reported by respondents, between warning and the flood event ranges uniformly from 1 to 5 hours to 24 to 48 hours and more than 48 hours.

#### Actions

Respondents mainly did not respond to the warning (45.5%), spoke to friends and neighbours about it, monitored information and checked the river or drains (9.1% each)

A majority of respondents (52.9%) were influenced in their response by Queensland flood information and images. Recent weather patterns were also influential for almost one third of respondents (30.9%).

## **Emergency Plan and Kit**

Few respondents (7.2%) had an emergency plan and those who did believe that it is important that it include discussions about the plan with family, identifying information sources. seasonal clean ups and the decision to stay or go.

They were prompted to have an emergency plan by experience or knowledge of previous emergencies and the intention of being prepared.

Three in ten respondents (30.9%) have an emergency kit. Three in ten (29.4%) were prompted to get one by family and friends and 17.66 saw them at Bunnings. A considerable number say their work in the area safety prompted them to have a kit.

Those who do not have a kit largely believe they are not at risk (41.7%) or don't see the need (21.4%).

#### **Direct Impact of Flood**

Four in ten respondents (40%) said that the impact of the floods were as they expected and a further one third (33.6%) felt it was less than they expected. Just over one in ten (11.6%) felt the impact of the floods was greater than they expected.

Over three quarters of respondents (78.2%) said that there was no direct impact of the floods and only 5.4% experienced a large or medium direct impact. The direct impact was primarily on buildings, gardens and the surrounding neighbourhood.

Those who experience a large or medium impact said that floods damaged property caused stress and worry about others who were affected.

One third (6 respondents) of these continued to experience impacts of the flood including property damage, damage to gardens and clean up efforts.

Respondents saw the main impacts on their local community as the flooding of roads and damage to house and property.

#### Actions

Fewer than one in ten respondents (9.8%) needed to take action to lessen the flood's impact. These actions were primarily to speak to neighbours, listen to the radio, move or lift furniture, turn off utilities and move pets. Other actions taken were to dig channels or trenches, pump water and evacuate.

Respondents' actions mainly saved pets, vehicles and furniture.

#### **Evacuation**

One respondent who needed to take actions evacuated her home. This occurred as soon as the warning of potential flooding was received because she was concerned about the safety of her family. They evacuated to friends or family in a safe area.

Those who did not evacuate primarily felt that there was no threat to them or their family

### **Receipt of Grants**

No respondents received DHS grants as a result of the floods.

### **Indirect Impacts of Flood**

Respondents lost power (18.3%) and telephone services (5.5%), they were isolated due to road closures (11.1%) and could not go to work (7.4%).

One half of respondents (50%) who lost power were without it for 1 to 3 hours, 31.3% for 4 to 8 hours and 12.5% for 9 to 12 hours.. Consequently almost one half (46.7%) said the loss of power had no impact. the main impacts were loss of TV and radio (20%) and lighting (13.3%).

Only one respondents lost water supply for between 1 and 3 hours.

One respondent experienced medical difficulties and they were able to be appropriately dealt with.

## **Sources of Information**

Prior to the floods overwhelmingly respondents had not received information on the potential for flooding in their area. Four respondents had received information from the local Council, three from the SES and three from insurers.

#### **Emergency Alert**

Eight respondents say they received an Emergency Alert message during the floods. Four received a single message, two received two messages and two did not know how many they received.

Most recalled the content of the message (6 respondents) and how they responded to it (7). However only one respondent said that it assist in implementing their plan.

Five respondents were satisfied or very satisfied with the information and timing of the message, two were very dissatisfied and one was unsure.

One respondent received a message late at night or early in the morning but was not woken by it.

## **Helpfulness of Information Sources**

Respondents mainly use the following sources of information during the floods:

- Television (59.8%)
- Newspapers (31.2%)
- Family (26.8%) and neighbours (18.7%)
- ABC local radio (21.4%)
- Commercial radio (20.5%)
- Websites on the Internet (18.7%)

These sources were seen as helpful or very helpful as follows:

- ABC local radio (90%)
- Websites on the Internet (88.2%)
- Commercial radio (79%)
- Newspapers (75%)
- Television (68%)
- Family (66.6%) and neighbours (70%)

Of the twenty-one respondents who used websites for information fourteen used the Bureau of Meteorology site, three used VicRoads and one each used SES and CFA websites. Thr remainder used other sites.

Twelve said the BoM site was helpful (3) or very helpful (9) and all the other sites were seen as helpful.

### **Use of Social Media and Technology**

Just over one in ten respondents (11%) used social media to communicate and access information leading up to, during and after the floods. Of the twelve respondents who used it 6 used it a couple of times and 4 used it regularly or all the time.

Ten respondents used their mobile telephone or iPad to access information on email or websites.

#### Information in Languages Other than English

One in eight respondents (12.8%) said that they need to have emergency information available to them in a language other than English.

### **Emergency Assistance and SES Meeting**

No respondent contacted anyone for emergency assistance.

One participant attended an SES community meeting about the floods.

## Went through Floodwaters

Over one quarter of respondents (26.6%) walked, drove or rode through floodwaters.

They did this mainly because they needed to get home (29.0%) and to go to and/or return from work (22.6%).

## Learning

Respondents (20.2%) said that as a result of the floods they now knew that the area in which they live is flood prone. They had learnt that they needed to be prepared for a flood emergency (10.9%), what to do if there was a flood (8.5%) and to be alert and monitor conditions (6.2%)

Over one in seven (15.5%) felt they had learnt nothing new from the flood events and 17.8% did not know what they had learnt.

## **Demand for Information**

Over one third of respondents (34.9%) want more information about floods and what they can do if their property floods.

## **Positive Impacts**

Almost seven in ten respondents (69.6%) said that there were no positive impacts (55.9%) or did not know of any positives (13.7%).

Positive impacts identified are that the floods bought the community together (8.8%), it created a greater awareness of the flood threat (6.9%) and prepared them for future floods (4.9%).

**SECTION IV: DEMOGRAPHICS OF SAMPLE** 

		% Respondents		
	Country n=687	Metro A n=398	Metro B n=112	Total n=1197
Household Situation				
Couple with one or more children or dependents	30.3	35.5	35.5	32.5
Couple without children or dependents	42.6	33.9	28.2	38.4
Single person with children or dependents	3.7	5.4	5.5	4.4
Single person without children or dependents	16.9	12.6	21.8	15.9
Group of adults living together	6.3	12.6	9.1	8.7
Other	0.1	0.0	0.0	0.1
Type of Property				
Type of Property  House in residential area	64.0	F0 0	00.4	64.2
	61.9	58.8	99.1	64.3
Hobby farm or small acreage	18.5	23.4	0.9	18.5
Farm	19.4	17.6	0.0	17.0
Other	0.1	0.3	0.0	0.2
Main Language Spoken at Home				
English	99.1	97.2	75.2	96.3
Other	0.9	2.8	24.8	3.7
Geographic area				
Gender				
Male	46.3	37.2	36.6	42.4
Female	53.7	62.8	63.4	57.6
Age of Respondent				
18-24	1.8	4.1	3.6	2.7
25-34	6.1	12.2	13.6	8.9
35-44	16.0	16.8	19.1	16.5
45-54	20.4	20.2	20.9	20.3
55-64	24.2	19.9	20.9	22.4
65-74	21.1	17.9	16.4	19.6
75 and over	10.4	8.9	5.5	9.5
Ref/Not Applicable	0.1	0.0	0.0	0.1
A way of Powtrace				
Age of Partner	0.0	0.5	0.0	0.4
18-24	0.3	0.5	0.9	0.4
25-34	5.4	9.5	10.0	7.2
35-44	15.0	16.5	17.3	15.7
45-54	16.6	17.0	12.7	16.4
55-64	17.8	15.7	12.7	16.6
65-74	14.5	11.8	10.9	13.3
75 and over	6.4	6.2	2.7	6.0
Ref/Not Applicable	24.0	22.9	32.7	24.4
Disability				
Yes	16.9	17.3	15.7	16.9
				83.1
No	83.1	82.7	84.3	03.1

**SECTION V: SURVEY** 

0. 0			
S. Hello I am [NAME OF Victorian Floods Review		ing from Strahan Resea Comrie.	rch on behalf of the
September 2010 and Fe affected you and your h manages and responds	ebruary 2011. It wants ousehold. The informate to flood emergencies ning you say will be co	response to and impact to understand more about ation will be used to impact. We are conducting an onfidential. We'd like you	out how the floods rove how Victoria interview that will take
	ould you have rated the	2011 floods in Victoria a he risk that a flood, bush	
Household residence Farm building Livestock Personal and family safety	Flood O No risk O Low risk O Some risk O High risk O NA	Bushfire  No risk  Low risk  Some risk  High risk  NA	Storm  No risk  Low risk  Some risk  High risk  NA
<ul><li>2. During the floods in S potential flooding in you</li><li>Yes</li><li>No</li><li>Dont Know</li></ul>	-	ary, were you provided w	rith an early warning of
2a. Who issued you with	this warning informa	tion?	-
2b. How much time did y Hours before flood w 2c. What did you do imm	aters arrived	ng the warning before the seived the warning?	e flood arrived?
			_

3. To what extent did the following influence your r	esponse to these floods? Influence
Queensland flood information and images from the media Your local knowledge about previous floods in your area Recent weather patterns Floodsafe community information Safety information from Council	<ul> <li>No influence</li> <li>Small influence</li> <li>Some influence</li> <li>Large influence</li> </ul>
<ul> <li>4. Prior to the floods, did you have a flood or bush</li> <li>Yes</li> <li>No</li> <li>Don't Know</li> </ul>	fire emergency plan for your home or farm?
5. How important is it to have the following in your	plan?
Seasonal clean-ups around your property	O Not important at all
Decision to either leave your house or stay	<ul><li>Slightly important</li></ul>
during the emergency	O Important
When, where and how to move household	O Very important
furniture and valuables	O Don't Know
Decisions to buy equipment to respond to	O NA
an emergency	
Discussing the emergency plan with your family	
Identifying sources of information about the	
emergency	
Considering fire and flood risks when	
making property and household renovations and changes	
Insurance review for your household	
Insurance review for your farm	
When and how to move animals and	
livestock	
When, where and how to move equipment	
Identifying higher ground for livestock	
6. What prompted you to have an emergency plan Prompted you	? 

<ul> <li>7. Do you have a home emergency kit that contain torch, first aid kit mobile phone and food?</li> <li>Yes</li> <li>No</li> <li>Don't Know</li> </ul>	s things like a battery powered radio,
<ul> <li>7a. What has prompted you to get an emergency keep.</li> <li>Saw them at a Bunnings retail store.</li> <li>Saw them in an ABC retail store.</li> <li>Saw them at another retail store.</li> <li>Heard about emergency kits on the radio.</li> <li>Saw an ad for emergency kits on the TV.</li> <li>Family or friends suggested to get an emerge.</li> <li>From participating in SES, local council or Co.</li> <li>Other</li> </ul>	ency kit
7b. Why dont you have an emergency kit? Why not	
<ul> <li>8. Based on the warnings and information that you lesser direct impact on you than you expected or vo.</li> <li>Greater impact than expected</li> <li>As expected</li> <li>Lesser impact than expected</li> <li>Dont Know</li> </ul>	
<ul> <li>8a. How large a direct impact did the flood waters direct impact:</li> <li>Large</li> <li>Medium</li> <li>Small</li> <li>No direct impact</li> </ul>	have on you and your home. Was the
9. How large a direct impact did the flood waters he House Other buildings Gardens or yards Carpets and floor coverings Furniture and home contents	ave on Impact O No impact at all O Small impact O Medium impact O Large impact O NA

Family memorabilia Family pets Car or other vehicles Emotional and physical wellbeing of family members Surrounding poighbourhood	ily
Surrounding neighbourhood Farm buildings and equipment	
Farm animals and livestock	
10. What effects did the impact of the floo	od have on you, your family or your farm?
<ul> <li>11. Are you still experiencing any impacts</li> <li>Yes</li> <li>No</li> <li>Dont Know</li> </ul>	from the floods on your home or farm?
11a. What are the impacts that you are co	ontinuing to experience?
·	od have on your local town or community?
	•
13a. Which of the following actions did yo Actions taken Told neighbour Sandbagged property	u take to lessen the impact of the flood?  O Yes O No
Moved or lifted furniture Secured items that could float Turned off utilities such as power or gas Moved car	O Dont Know O NA

100

Moved animals (pets and/or livestock) Telephoned SES Listened to the radio Other important actions	
13b. What other action did you take? Other action	
14. Which of the following were you able to save fr actions that you took? Items saved	om the flooding as a direct result of any
Furniture	O Yes
Carpets	O No
Car	O Dont Know
Kitchen goods	O NA
Electrical goods	
Outside furniture	
Pets	
Farm equipment	
Livestock	
<ul><li>15. Did you evacuate your home as a result of the</li><li>Yes</li><li>No</li><li>Dont Know</li></ul>	floods?
<ul> <li>15a. When did you evacuate?</li> <li>As soon as I received the first warning</li> <li>When I realised flooding was going to affect</li> <li>After the flood hit my property</li> <li>Shortly after my house began to flood</li> <li>A few hours or days after my house became</li> </ul>	
<ul> <li>15b. Why did you evacuate?</li> <li>Concerned about the safety of my family</li> <li>Concerned about my possessions and impo</li> <li>Was advised to by the emergency services</li> <li>Other reason (specify)</li> </ul>	
15c. Where did you go after you evacuated?  O Evacuation or relief centre in your area	

<ul> <li>Friends or family in a safe area</li> <li>Hotel/motel</li> <li>Local village/township</li> <li>Melbourne or large town</li> <li>Other (specify)</li> </ul>	
<ul> <li>16. What was the main reason you did not</li> <li>There was no threat to the safety of one</li> <li>My property wasn't threatened</li> <li>I wasn't aware that I could evacuate</li> <li>I wasn't told to evacuate</li> <li>Other reason (specify)</li> </ul>	me or my family
<ul> <li>17. Have you received any Department of Heavy September or January floods? These inclues expenses, re-establishment and damage to Yes</li> <li>No</li> <li>Dont Know</li> </ul>	de grants for emergency, temporary living
17a. Which types of grants did you receive' ☐ Emergency Grant ☐ Temporary living expenses grant ☐ Re-establishment grant ☐ Damage to house and contents gift	? [MULTIPLE possible]
<ul><li>17b. Was the money sufficient for your imm</li><li>Yes</li><li>No</li><li>Dont Know</li></ul>	nediate needs?
17c. How did these funds help?	
18. During the flood were you affected by a Loss of power Loss of water supply Gas supply disruption Telephone service disruption Lack of access to fresh food	ony of the following  O Yes  O No O Dont Know

Isolation due to road closures
Lack of access to work
Lack of access to school

S. IF YES TO LOSS OF POWER IN Q18 ASK:

18a. You said that you experienced a loss of power. How long were you without power?

Hours without power \_\_\_\_\_\_

18b. What was the impact of not having power on you and your family?

S. IF YES TO LOSS OF WATER IN Q18 ASK:

18c. You said that you lost water supply. How long were you without water? Hours without water \_\_\_\_\_

- 19. During the floods did you or any of your household experience medical difficulties that required a doctor, hospital, ambulance or access to specific medication or treatment?
  - O Yes
  - ON C
  - Dont Know

19a. Were you able to access the medical facilities or treatment that was needed?

- Yes
- O No
- Dont Know
- 20. Prior to the floods had you received information about the potential for flooding in your area and what to do in case of a flood from the following sources?

SES O Yes
Emergency services - CFA. Police O No

Emergency services - CFA, Police O No Local council O Dont Know

**Catchment Management Authority** 

Insurer

Water companies

**DSE** 

Other

S. IF YES TO OTHER IN Q20 ASK:

20a. From what other sources had you received information from?

Other sources	
<ul> <li>21. Did you receive any emergency warning or mobile telephone from the emergency services</li> <li>Yes</li> <li>No</li> <li>Dont Know</li> </ul>	<b>U U U</b>
<ul> <li>21a. Approximately how many messages did you</li> <li>One</li> <li>Two</li> <li>Three</li> <li>Four</li> <li>Five</li> <li>Six</li> <li>Seven</li> <li>Eight</li> <li>Nine</li> <li>Ten</li> <li>More than ten (specify)</li> <li>Dont Know</li> </ul>	
21b. Can you tell me about the messages Do you recall the content of the messages? Do you recall how you responded immediately after you received the messages? Did receiving the messages assist you in implementing your emergency plan?	<ul><li>Yes</li><li>No</li><li>Dont Know</li></ul>
<ul> <li>21c. How satisfied were you with the information</li> <li>Very dissatisfied</li> <li>Dissatisfied</li> <li>Satisfied</li> <li>Very satisfied</li> <li>Dont Know</li> </ul>	n and timing of the first warning message?
<ul><li>21d. Did you receive any of the messages late a</li><li>Yes</li><li>No</li></ul>	at night or early in the morning?

103

O Dont Know	
<ul> <li>21e. When you received an emergency alert mes did it wake you up from your sleep?</li> <li>Yes</li> <li>No</li> <li>Dont Know</li> </ul>	ssage late at night or early in the morning,
21f. Did you Understand the message and who was sending it? React to the message immediately - not wait until the morning?	<ul><li>Yes</li><li>No</li><li>Dont Know</li></ul>
<ul> <li>21g. Did you consider that this warning message</li> <li>Important to send at that time</li> <li>An intrusion but acceptable</li> <li>An unnecessary intrusion that could have</li> </ul>	
22. During any of the floods how helpful were the have used?	e following information sources that you may
Victorian telephone Flood Information Line SES telephone Request Line Power company emergency telephone information lines Websites on the internet ABC local radio Community radio station Commercial radio station Television Newspapers Neighbours Family Local police, CFA or SES	Helpfulness
S. IF USED WEBSITES IN Q22 ASK: 22a. How helpful were the following websites?	
Bureau of Meteorology	Helpfulness  O Did not use

**Bureau of Meteorology** 

105

VICSES CFA Local Council Catchment Management Authority Vic Roads Power Company Department of Human Services Department of Primary Industry Department of Sustainability and Environment Other websites	<ul> <li>Not helpful at all</li> <li>Slightly</li> <li>Helpful</li> <li>Very helpful</li> </ul>
<ul> <li>23. Leading up to, during and after the floods, did</li> <li>Facebook or Twitter to communicate or access in</li> <li>Yes</li> <li>No</li> <li>Dont Know</li> </ul>	
<ul> <li>23a. How often did you use social media to comm floods?</li> <li>Once</li> <li>A couple of times</li> <li>Regularly</li> <li>All the time</li> </ul>	unicate or access information relating to
<ul> <li>24. Leading up to, during and after the floods, did access information on email or websites?</li> <li>Yes</li> <li>No</li> <li>Dont Know</li> </ul>	you use your mobile telephone or iPad to
<ul><li>25. Did you need to have any of the emergency in language other than English?</li><li>Yes</li><li>No</li><li>Dont Know</li></ul>	nformation about floods, available to you in a
<ul><li>26. Leading up to and during the floods, did you c</li><li>Yes</li><li>No</li></ul>	ontact any one for emergency assistance?

# O Dont Know

26a. Did you contact any of the following for eme	<del>-</del>
Police	Contacted  O Yes
CFA	O No
SES	O Dont Know
Local Council	3 Bonk Know
Water company	
Insurer	
Department of Human Services	
Power company	
Water Catchment authority	
Family	
Friends	
Neighbours	
<ul> <li>What were your main reasons for seeking e</li> <li>MULTIPLE RESPONSE]</li> <li>Flooding in building</li> <li>Flooding outside property</li> <li>Aware of flood warning and concerned abore</li> </ul>	
<ul> <li>Concerns about electrical safety</li> <li>Assistance in sandbagging</li> </ul>	
<ul><li>Assistance in lifting household contents</li><li>Insurance company advised me to call SE</li></ul>	C C
□ local council advised me to call SES	.5
□ Needed road closure information	
□ Needed information on which areas were	flooding
	•
27. Did you attend an SES community meeting a	about any of the floods?
O Yes	
<ul><li>No</li><li>Dont Know</li></ul>	
O DOIR KIIOW	
oo Did walle duise an nide themself fire it is to	O
28. Did you walk, drive or ride through floodwate	15?
<ul><li>Yes</li><li>No</li></ul>	
O Dont Know	

106

28a. Why did you walk, drive or ride thro	ough floodwaters?
29. What do you feel you may have lear	rned from being involved in this flood?
30. Do you want more information abou O Yes O No O Dont Know	t floods and what you can do if your property floods?
31. Are there any positive impacts of the	e floods for you, your household, farm or community?
S. And now for the last few questions	
<ul> <li>33. Which of the following best described</li> <li>Couple with one or more children</li> <li>Couple without children or dependent</li> <li>Single person with children or dependent</li> <li>Single person without children or</li> <li>Group of adults living together</li> <li>Other</li> </ul>	or dependents dents pendents dependents
34. Which of the following age groups d Household members You Your partner	Age O 18 to 24 O 25 to 34 O 35 to 44 O 45 to 54 O 55 to 64 O 65 -74 O 75 and over O Not applicable

<ul> <li>35. What type of property do you live on?</li> <li>House in residential area</li> <li>Hobby farm or small acreage</li> <li>Farm</li> <li>Other (specify)</li></ul>
<ul><li>36. What is the main language that you speak at home?</li><li>English</li><li>Another language. What language</li></ul>
<ul><li>37. Do you or any member of your household have a disability?</li><li>Yes</li><li>No</li></ul>
38. What is the postcode of the area that you live in?  Postcode
39. Sometimes our interviews are checked to make sure we have done them correctly. Could I have your first name only please?  Name
40. RECORD GENDER  O Male O Female
S. That is the end of the interview. Thank you for your time. Just to remind you that I am [NAME OF INTERVIEWER] from Strahan Research and if you have any questions, concerns or feedback please contact our office on 03 9604 9199. [If respondent would like more information on emergency issues refer to the VFR website www.floodsreview.vic.gov.au]
41. RECORD TELEPHONE NUMBER Telephone
42. RECORD NAME OF INTERVIEWER Interviewer