

# Review of the Effectiveness of Disaster Management Arrangements Arising from Tropical Cyclone Debbie

REPORT - Quantitative Research with Community Members

The Office of The Inspector-General Emergency Management

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# Contact

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# Introduction

## Background

In April 2017, The Office of the Inspector-General Emergency Management was tasked by Police, Fire and Emergency Services Minister Mark Ryan to undertake a review into the effectiveness of Queensland's disaster management system in the wake of Tropical Cyclone Debbie.

To help inform the review, MCR was commissioned by The Office of the Inspector-General Emergency Management to gather feedback from community members via a telephone survey. The regions of focus for the survey were areas within the Mackay, Whitsundays, Rockhampton and the Logan/Scenic Rim/Gold Coast regions that were most heavily impacted by Tropical Cyclone Debbie and the associated weather events.

## Objectives

The objectives of the research were as follows:

- To assess community engagement and awareness levels in regards to Disaster Management Arrangements generally
- To investigate the community's confidence in terms of understanding risks and being prepared for events in the future
- To understand the impacts experienced by community members in association with Tropical Cyclone Debbie and the weather and flooding associated with this event (the event)
- To measure use of and perceived effectiveness of information and warnings methods used in the lead-up to and during the event (including text messaging)
- To understand the use of services and assistance during and after the event and determine gaps where services or assistance was needed but not available
- To measure satisfaction with the amount of information provided about when services would be restored or clean-ups completed
- To measure satisfaction with the speed with which services were restored or clean-ups completed
- To understand people's perceptions of whether they were prepared for and able to cope with a range of impacts after the event
- To collect community member suggestions for improving the preparations and response of emergency services, the local council, community groups or citizens themselves.

This report details the findings to the survey conducted in May 2017.



# Summary

## Survey background

In April 2017, The Office of the Inspector-General Emergency Management was tasked by Police, Fire and Emergency Services Minister Mark Ryan to undertake a review into the effectiveness of Queensland's disaster management system in the wake of Tropical Cyclone Debbie.

MCR was commissioned by The Office of the Inspector-General Emergency Management to gather feedback from community members to help inform the review. A telephone survey of 1,200 residents was undertaken between 18 May 2017 and 29 May 2017.

Residents from four regions were surveyed:

1. Mackay – direct cyclone impact (n=282)
2. Whitsundays – direct cyclone impact (n=306)
3. Rockhampton – slow on-set flooding impact (n=307)
4. Logan/Scenic Rim/Gold Coast – rapid on-set weather conditions after the cyclone's coastal crossing (n=305).

Respondents to the survey resided within selected areas of each region (i.e. those areas most heavily impacted). Areas were selected based on advice from The Office of the Inspector-General Emergency Management.

## Community engagement

### Knowledge of Disaster Management Arrangements

The proportion of respondents rating their knowledge of Disaster Management Arrangements as either *good* or *extensive* is highest in the Whitsundays region (73%), followed by Rockhampton (68%) and Mackay (65%). Logan/Scenic Rim/Gold Coast respondents are least likely to consider their knowledge to be *good* or *extensive* (42%).

### Disaster management – perceived responsibilities

In each region the local council is the entity most likely to be nominated as being responsible for disaster management (especially in Mackay 70%, Whitsundays 70% and Rockhampton 69%, but also in Logan/Scenic Rim/Gold Coast 50%). The State Emergency Service (SES) is the next most frequently mentioned organisation (25%-28%), followed by State Government (4%-17%). Compared with other regions, those living in the Logan/Scenic Rim/Gold Coast region are the most likely to mention the State Government as responsible for disaster management (17%).

Awareness of the Local Disaster Management Group (LDMG) is more widespread in Rockhampton (66%), Whitsundays (61%) and Mackay (60%) compared with Logan/Scenic Rim/Gold Coast (22%).

Reported attendance in the last 12 months at community events, public meetings or presentations about Disaster Management Arrangements ranges from 2% to 7% (Rockhampton 7%, Mackay 5%, Whitsundays 4%, Logan/Scenic Rim/Gold Coast 2%).

### **Confidence – understanding risks and preparing for future events**

The majority of residents surveyed say they are confident in their understanding of disaster risks to themselves and their property (Whitsundays 96%, Mackay 92%, Rockhampton 91%, Logan/Scenic Rim/Gold Coast 87%).

Similar levels of confidence are expressed in relation to being prepared for and knowing how to respond to events in the future (Whitsundays 99%, Mackay 94%, Rockhampton 92%, Logan/Scenic Rim/Gold Coast 87%).

### **Impact of Tropical Cyclone Debbie and associated weather and flooding**

As expected, the impacts of the event reported by respondents vary by region as detailed below.

#### Mackay

In Mackay, power and telecommunications outages (78%, 64% respectively), school closures (43%), isolation (36%) or loss of income (36%) are the most commonly reported impacts.

27% report other (non-home) property damage, 21% of respondents report home damage and 8% advise that property was destroyed.

One in ten (11%) respondents say they had to evacuate their home in response to Tropical Cyclone Debbie.

#### Whitsundays

Impacts are widely reported by Whitsundays respondents. Almost all experienced power or telecommunications outages (98%, 85% respectively). After that, damage to the home (75%), limited food, water or fuel supplies (66%), other (non-home) property damage (62%) or isolation (58%) are common impacts being reported.

7% of Whitsundays respondents say they had to evacuate their home.

#### Rockhampton

Isolation (28%) and power outages (25%) are the most commonly reported impacts according to survey respondents in Rockhampton, followed by telecommunications outages (20%), loss of income (16%) or home damage (15%).

7% of respondents report evacuating their home in Rockhampton.

#### Logan/Scenic Rim/Gold Coast

Isolation (54%), school closures (48%), power outages (37%) or telecommunications outages (33%) are the most commonly reported impacts personally experienced by respondents in the Logan/Scenic Rim/Gold Coast survey area.

3% of Logan/Scenic Rim/Gold Coast respondents say they had to evacuate their home in response to the weather event.

### **Evacuation location**

In all regions, respondents who evacuated their home during the event most commonly evacuated to a family, friend or neighbour's house.

Among survey respondents, reported use of an *official* evacuation facility is noted in Mackay (2%) and Whitsundays (4%) regions.

People most commonly say they selected their evacuation location due to the perceived comfort, safety and proximity of the option.

### Information sources used in the lead-up to and during the event

The adjacent chart displays the proportion of respondents in each region using various sources of information prompted in the survey.

The Bureau of Meteorology (BOM) website is the information source most widely relied upon in the areas directly impacted by Tropical Cyclone Debbie (Mackay 76%, Whitsundays 76%)

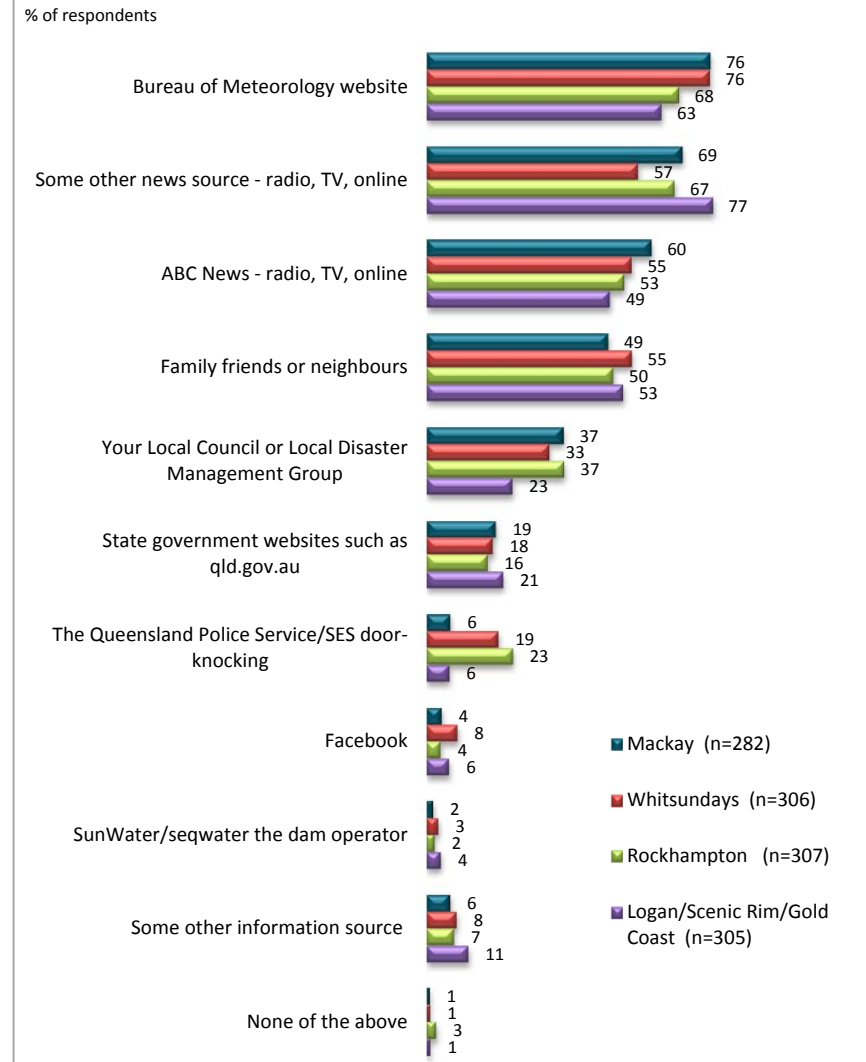
In Rockhampton (slow-on set flooding event), respondents are equally like to say they relied on the BOM website (68%) or radio/TV/online news sources (other than the ABC).

Respondents who experienced rapid-onset weather conditions in the Logan/Scenic Rim/Gold Coast region are most likely to report using a news source (other than the ABC) (77%), followed by the BOM website (63%).

Being door-knocked is most commonly mentioned by Rockhampton (23%) or Whitsundays (19%) residents as a source of information.

Generally speaking, those aged under 55 years of age are more likely than their older counterparts to have used mobile, online or social media channels.

**Q9a. In the lead-up to or during {EVENT} which, if any, of the following sources of information did you use?**



### Perceived effectiveness of methods of receiving warnings

The table below details respondents' ratings of effectiveness for each warning method tested.

In the rapid on-set event area of Logan/Scenic Rim/Gold Coast a text message to mobile is rated as the most effective method of receiving warnings. While this method is also considered effective by a majority of residents in other areas, radio broadcasts are just as (if not more) likely to be rated as effective.

In all regions, phone calls to landlines from authorities receive the lowest effectiveness ratings.

Method	Mackay	Whit-sundays	Rock-hampton	Logan/Scenic Rim/Gold Coast
	<i>% rating method of receiving warning as effective</i>			
Text message to mobile from authorities	77	76	79	83
Radio broadcasts	90	76	77	69
Television broadcasts	77	57	81	79
Phone call to mobile from authorities	71	66	74	74
Being door-knocked by police or SES	74	64	73	72
The websites of relevant authorities	66	66	69	63
Social media such as Facebook or Twitter	67	65	64	64
Phone call to landline from authorities	51	44	59	47

Across all regions, perceived effectiveness of warnings methods varies by age; generally speaking younger residents (under 55 years, particularly under 45 years) are most likely to rate mobile and social media channels as effective. Perceived effectiveness of online and social media methods declines sharply among those aged 65 years or older, especially those in this age group who live in the regions outside the South East corner.

### Text message warnings

At least one in two residents in the survey area of each region can recall receiving official warnings via text message in the lead-up to or during the event (Mackay 63%, Rockhampton 57%, Whitsundays 51%, Logan/Scenic Rim/Gold Coast 48%).

The local council is the most commonly nominated source of text message warnings (especially in Mackay 56%, Whitsundays 53% and Rockhampton 46%, compared to Logan/Scenic Rim/Gold Coast 24%). Many respondents however (31%-46%) cannot recall who the text messages came from.

Text message recipients generally rate the messages they received as easy to understand (see table below). Reasons for rating messages as hard to understand most commonly relate to not understanding the terminology or language used (e.g. zones) or the information provided not being localised/area-specific enough.

Compared with other regions, respondents in the fast on-set event region (Logan/Scenic Rim/Gold Coast) are *least* likely to say text messages arrived on time.

	Mackay	Whit-sundays	Rock-hampton	Logan/Scenic Rim/Gold Coast
	<i>% agreeing</i>			
Text message was easy to understand	87	95	97	95
Text message arrived at the right time	76	85	84	65
Text message was relevant	48	51	48	44
Took action after receiving text message	40	41	40	35

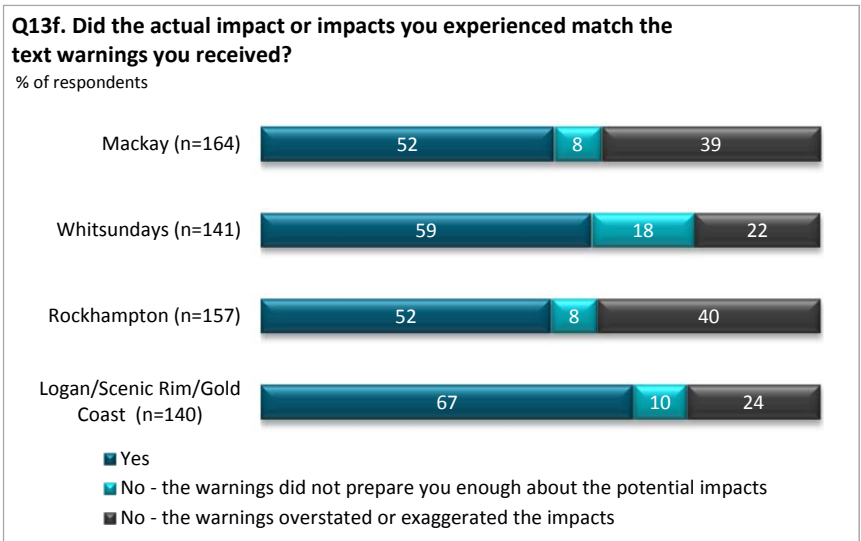
### Actual impacts compared to text message warning

Perceptions about whether the text message warnings matched the impacts experienced are found to vary by region.

Respondents in the Logan/Scenic Rim/Gold Coast area (67%) are most likely to say text warnings matched their actual experience.

In Mackay (39%) and Rockhampton (40%) regions, four in ten say the warnings overstated or exaggerated the impacts.

A perception that the warnings did not prepare them enough for the potential impacts is strongest among Whitsundays residents (18%).



### Suggested improvements to emergency warnings from any source

Respondents are most likely to suggest the following to improve emergency warnings (from any source):

- More warnings (via text message, TV or radio)
- More detailed/clearer information provided in warnings
- Earlier warnings to allow more time to prepare
- More localised or area-specific warnings
- More accurate reports and information (media reporting or event predictions).

The above themes are evident in all regions but are most strongly expressed by Whitsundays or Logan/Scenic Rim/Gold Coast based respondents.

### Services and assistance

#### Services received

Respondents living in Whitsundays (93%) or Mackay (57%) are more likely to report receiving assistance in relation to Tropical Cyclone Debbie and or the associated weather events than those residing in the Rockhampton (27%) or Logan/Scenic Rim/Gold Coast (20%) areas.

In the Whitsundays 81% of respondents say they received financial assistance, 50% had clean-up assistance and 17% took advantage of food and water supply assistance.

37% of Mackay respondents were provided financial assistance and 29% say they received clean-up assistance.

Financial assistance (11% Rockhampton, 6% Logan/Scenic Rim/Gold Coast) or clean-up assistance (13% Rockhampton, 7% Logan/Scenic Rim/Gold Coast) are the most commonly mentioned types of assistance received in other regions.

### Services required but not received

21% of Whitsundays respondents say there were services that they required in the aftermath of the event but did not receive; most commonly clean-up assistance (8%) or assistance from SES for property damage (5%). Compared with the Whitsundays region, fewer residents in Mackay (13%), Rockhampton (12%) or the Logan/Scenic Rim/Gold Coast (12%) regions feel they required services that were not delivered to them.

### **Information about and timeliness of restoration of services**

#### Provision of information about restoration of services

Respondents in the Logan/Scenic Rim/Gold Coast, Whitsundays or Mackay regions are least likely to agree they were provided enough information about when services would be restored or the clean-up completed (agreement levels below 50% for most issues measured, versus agreement levels close to or above 60% in Rockhampton). Across most regions, lowest agreement that they were provided enough information is found for advice about when the phone or internet services would be restored.

#### Speed of service restoration

Generally speaking, most respondents are satisfied with the speed with which services were restored (typically above 70% for most measures). Areas where respondents are least satisfied were in regards to the speed with which phone or internet services were restored or (in Rockhampton) the speed with which evacuees could return to their home.

### **Overall preparedness and ability to cope**

Most respondents say they were prepared for and able to cope with the impacts of the recent weather event (see table below).

Respondents are less likely to agree they were prepared for being out of their homes in the Whitsundays (66%) or Logan/Scenic Rim/Gold Coast (52%) regions.

	Mackay	Whit-sundays	Rock-hampton	Logan/Scenic Rim/Gold Coast
<i>Base is those who classed themselves as applicable to each event</i>	<i>% prepared for and able to cope...</i>			
Without power	88	91	83	86
Without water	82	74	92	79
Without phone or internet	78	83	83	73
With road access being restricted	89	91	94	88
With being out of their home	92	66	97	52
With the impacts of the event generally	95	87	98	92

### **Overall suggestions for improving preparations or response during disasters**

When asked for their suggestions to improve the preparations or response of emergency services, the local council, community groups or citizens themselves, the following themes most commonly emerged:

- More council, utility and telecommunications service updates on when restoration would be complete
- More information and education about how to prepare and where to evacuate to
- More assistance from SES/emergency services for a longer period of time
- More assistance/better response from council
- Improve speed of restoration/repair of infrastructure.





# Method

<b>Method</b>	Computer assisted telephone interviewing (CATI) was used to survey respondents. This is where a trained interviewer reads the pre-programmed questions from a computer screen and enters responses into the computer as they are given by the respondent.
<b>Target audience</b>	People living in the specified geographic areas during Tropical Cyclone Debbie or the flooding or weather associated with Tropical Cyclone Debbie.
<b>Sample size</b>	1200 interviews were conducted across four regions in the proportions detailed below.
<b>Geographic universe</b>	<p>Four regions were included in the survey</p> <ol style="list-style-type: none"> <li>1. Mackay – direct cyclone impact (n=282)</li> <li>2. Whitsundays – direct cyclone impact (n=306)</li> <li>3. Logan/Scenic Rim/Gold Coast – rapid on-set weather conditions after the cyclone’s coastal crossing (n=305)</li> <li>4. Rockhampton – slow on-set flooding (n=307).</li> </ol> <p>Respondents to the survey resided within selected areas of each region (i.e. those streets most heavily impacted). Areas were selected based on advice from The Office of the Inspector-General Emergency Management (IGEM).</p>
<b>Questionnaire</b>	In consultation with IGEM, MCR designed the questionnaire, see Appendix A.
<b>Sample composition</b>	A complete sample composition is included at Appendix B.
<b>Weighting and significance testing</b>	Post enumeration, the data for each region were weighted to represent the age and gender profile of the postcodes sampled in that region. Data analysis was conducted by MCR using the data analysis package Q-Software. On columns with at least n=30 respondents, significance testing (using z-test, Bessel’s correction on and false discovery rate off) was applied at the 95% confidence level.
<b>Fieldwork partner</b>	MCR’s fieldwork partner Q&A Market Research conducted the fieldwork. Q&A Market Research has ISO 20252 quality accreditation.
<b>Fieldwork dates</b>	Fieldwork was conducted between the 18 <sup>th</sup> and 29 <sup>th</sup> May 2017. A fieldwork statistics report is included at Appendix C.



MCR is a member of AMSRO and abides by the AMSRS Code of Professional Behaviour. The Code of Professional Behaviour can be downloaded at [www.amsrs.com.au](http://www.amsrs.com.au). Under the Code of Professional Behaviour – information about Client’s businesses, their commissioned market research data and findings remain confidential to the clients unless both clients and researchers agree the details of any publications.

MCR has ISO 20252 quality assurance accreditation.

**Disclaimer**

As is our normal practice, we emphasise that any market size estimates in this report can be influenced by a number of unforeseen events or by management decisions. Therefore no warranty can be given that the information included will be predictive of a desired outcome.



# Findings – Mackay

## 1.0 Community Engagement

### 1.1 Knowledge of Disaster Management Arrangement

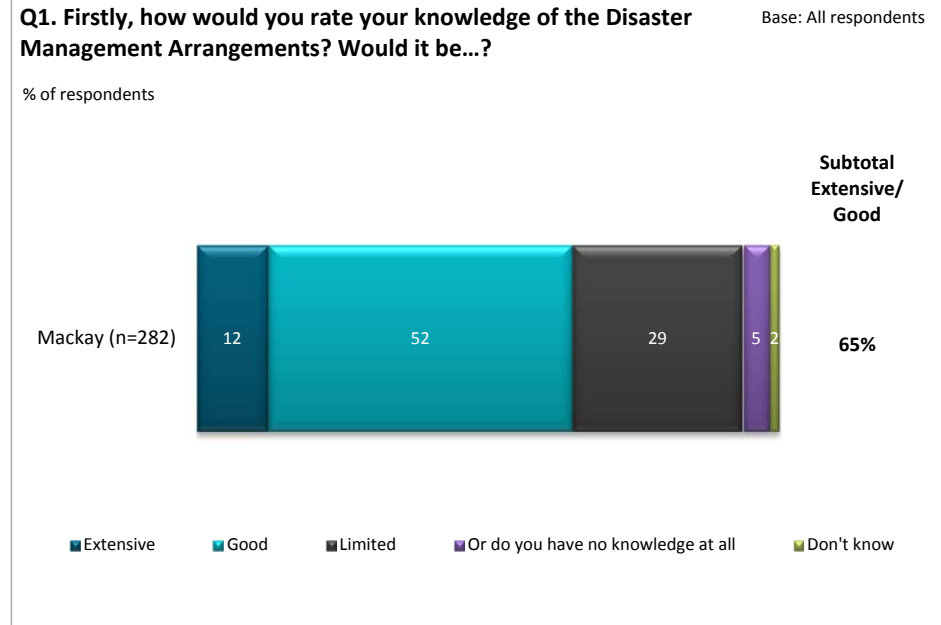
Q1. Firstly, how would you rate your knowledge of the Disaster Management Arrangements? Would it be...?

Most (65%) Mackay respondents rate their knowledge of the Disaster Management Arrangements as extensive (12%) or good (52%). Three in ten (29%) rate their knowledge as limited while 5% admit they have no knowledge at all.

#### Sub-group differences

Older residents (45+ years) (17%) are more likely than younger residents (under 45 years) (5%) to consider their knowledge to be extensive.

As would be expected, those aware of the Local Disaster Management Group (LDMG) (72%) are more likely than those unaware (54%) to estimate their knowledge as either good or extensive.



Q1. Firstly, how would you rate your knowledge of the Disaster Management Arrangements? Would it be...?

Base: All respondents	Total n=282	Gender		Age		LDMG Awareness	
		Male n=117	Female n=165	Under 45 n=65	45 and over n=217	Yes n=161	No n=121
Extensive	12%	9%	16%	5% ↓	17% ↑	15%	9%
Good	52%	50%	55%	57%	49%	57%	45%
<b>SUBTOTAL extensive/good</b>	<b>65%</b>	<b>58%</b>	<b>71%</b>	<b>62%</b>	<b>66%</b>	<b>72% ↑</b>	<b>54% ↓</b>
Limited	29%	35%	23%	30%	28%	25%	35%
Or do you have no knowledge at all	5%	5%	5%	5%	5%	2% ↓	9% ↑
<b>SUBTOTAL limited/none</b>	<b>34%</b>	<b>39%</b>	<b>28%</b>	<b>35%</b>	<b>33%</b>	<b>27% ↓</b>	<b>45% ↑</b>
Don't know	2%	2%	1%	3%	1%	2%	2%

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

## 1.2 Disaster management responsibility

Q2. Who do you believe is responsible for Disaster Management generally in your area?

The local council is the organisation that Mackay respondents are most likely to consider generally responsible for disaster management in their area (70%). After council, the State Emergency Service (SES) (28%) is mentioned, followed by individual residents such as family, friends or neighbours (12%).

### Sub-group differences

People with no prior disaster event experience (18%) are more likely than those with some experience (6%) to report not knowing who is responsible for disaster management in their area.

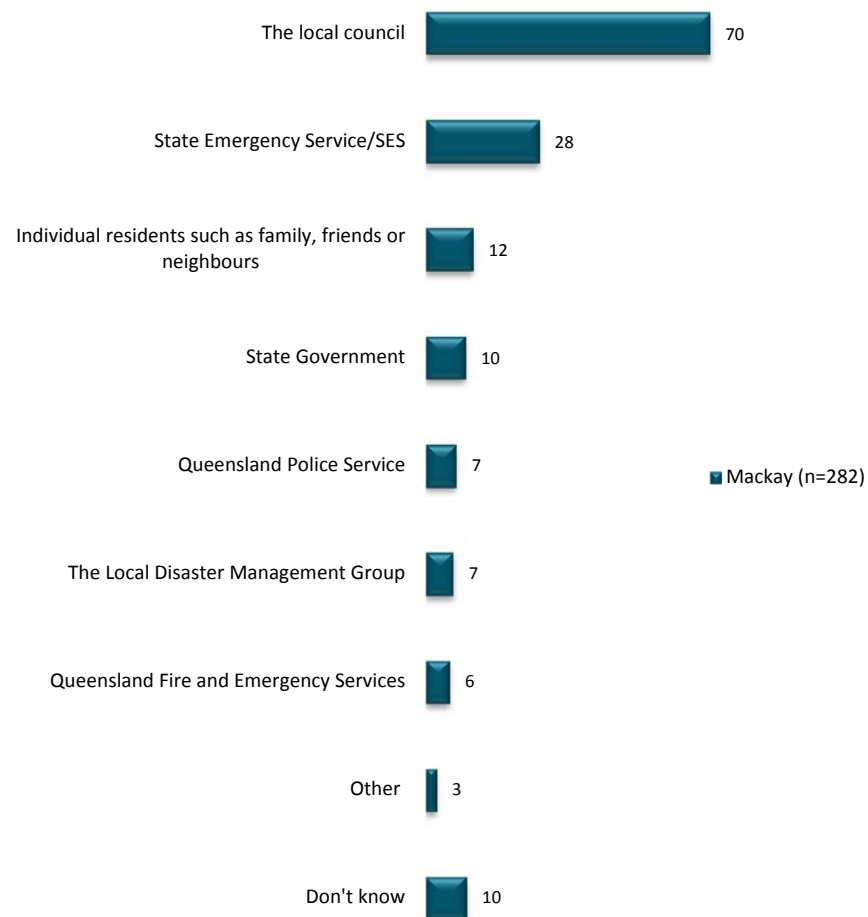
Those who have been through another disaster in the past (13%) are more likely than those who have not (3%) to say the State Government bear responsibility for disaster management.

Males (16%) are more likely than females (3%) to believe the State Government to be responsible for disaster management in their area, while those aged 45 years or older (11%) are more likely than those aged under 45 years (3%) to nominate the Queensland Police Service.

### Q2. Who do you believe is responsible for disaster management generally in your area?

% of respondents

Base: All respondents





Q2. Who do you believe is responsible for disaster management generally in your area?

Base: All respondents	Gender		Age		Prior Disaster Experience		
	Total n=282	Male n=117	Female n=165	Under 45 n=65	45 and over n=217	Yes n=183	No n=99
The local council	70%	67%	72%	74%	66%	69%	71%
State Emergency Service/SES	28%	23%	33%	26%	29%	28%	28%
Individual residents such as family, friends or neighbours	12%	14%	9%	13%	11%	15%	6%
State Government	10%	16% ↑	3% ↓	11%	9%	13% ↑	3% ↓
Queensland Police Service	7%	7%	8%	3% ↓	11% ↑	6%	11%
The Local Disaster Management Group	7%	10%	4%	7%	6%	7%	6%
Queensland Fire and Emergency Services	6%	4%	8%	7%	5%	7%	4%
Other	3%	1%	5%	2%	3%	3%	1%
Don't know	10%	10%	10%	9%	11%	6% ↓	18% ↑

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

### 1.3 Awareness of Local Disaster Management Group

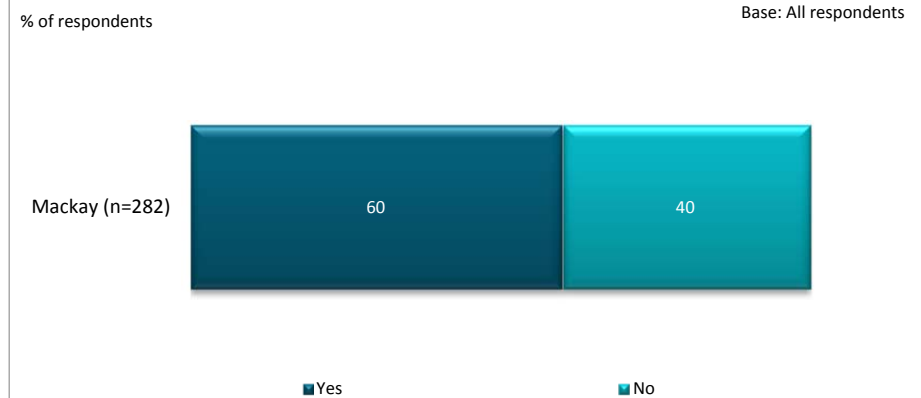
Q3. Before today had you heard of the Local Disaster Management Group? It may also be known as the Local Emergency Management Group?

Six in ten (60%) residents in the Mackay survey area say they were aware of the Local Disaster Management Group (LDMG) prior to the survey.

#### Sub-group differences

Awareness of the LDMG is highest among those who have been through a disaster in the past (70%).

**Q3. Before today had you heard of the Local Disaster Management Group? It may also be known as the Local Emergency Management Group.**



Q3. Before today had you heard of the Local Disaster Management Group? It may also be known as the Local Emergency Management Group?

Base: All respondents	Total n=282	Gender		Age		Prior Disaster Experience	
		Male n=117	Female n=165	Under 45 n=65	45 and over n=217	Yes n=183	No n=99
Yes	60%	63%	57%	65%	57%	70% ↑	41% ↓
No	40%	37%	43%	35%	43%	30% ↓	59% ↑

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

^Caution: Small cell size

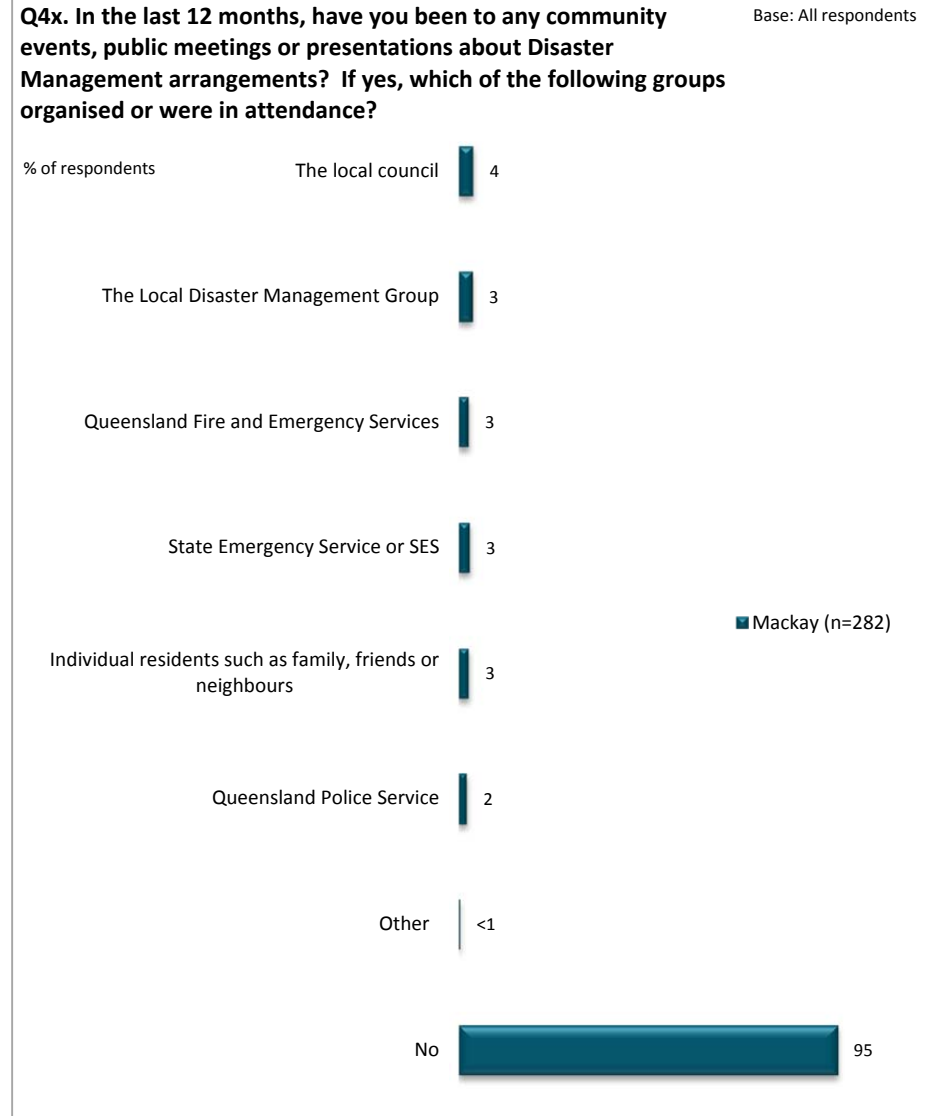
## 1.4 Disaster Management Arrangements - event attendance

*Q4x. In the last 12 months, have you been to any community events, public meetings or presentations about Disaster Management Arrangements? If yes, which of the following groups organised or were in attendance?*

95% of Mackay respondents say they have not attended any community events or meetings in relation to Disaster Management Arrangements in the past 12 months, while 5% report that they have. The local council, LDMG, QFES, SES and QPS are all reported to have held public events about disaster management in the past year.

### *Sub-group differences*

Those aged 45 years or older (8%) are more likely than those aged under 45 years (1%) to have attended an event.



Q4x. In the last 12 months, have you been to any community events, public meetings or presentations about Disaster Management arrangements? If yes, which of the following groups organised or were in attendance?

Base: All respondents	Gender		Age		You had to evacuate from your home		
	Total n=282	Male n=117	Female n=165	Under 45 n=65	45 and over n=217	Yes n=35	No n=247
SUBTOTAL Yes	5%	7%	4%	1% ↓	8% ↑	15%	4%
The local council	4%	6%	1%		6% ↑	9%	3%
The Local Disaster Management Group	3%	6%	1%		6% ↑	14%	2%
Queensland Fire and Emergency Services	3%	5%	*		4%	11%	1%
State Emergency Service or SES	3%	5%	1%		5%	9%	2%
Individual residents such as family, friends or neighbours	3%	3%	2%		4% ↑	11%	2%
Queensland Police Service	2%	4%			4%	9%	1%
Other	*		1%	1%			1%
SUBTOTAL No	95%	93%	96%	99% ↑	92% ↓	85%	96%

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

\*Indicates less than 1% of respondents.

## 2.0 Confidence – understanding risks and preparations for future events

### 2.1 Understanding of risk to self and property

Q5. How confident are you about your understanding of the risk to you and your property?  
Are you...

92% of Mackay respondents say they are confident in understanding the risk to themselves and their property (45% *very* confident, 47% *quite* confident).

#### Sub-group differences

Results are consistent across sub-groups.

Q5. How confident are you about your understanding of the risk to you and your property? Are you...



Q5. How confident are you about your understanding of the risk to you and your property? Are you...

Base: All respondents	Gender		Age		You had to evacuate from your home		
	Total n=282	Male n=117	Female n=165	Under 45 n=65	45 and over n=217	Yes n=35	No n=247
Very confident	45%	46%	43%	51%	40%	27%	47%
Quite confident	47%	47%	48%	39%	53%	60%	46%
<b>SUBTOTAL Confident</b>	<b>92%</b>	<b>93%</b>	<b>91%</b>	<b>90%</b>	<b>94%</b>	<b>87%</b>	<b>93%</b>
Not very confident	6%	6%	7%	9%	4%	11%	6%
Not at all confident	1%		1%	1%	*		1%
<b>SUBTOTAL Not Confident</b>	<b>7%</b>	<b>6%</b>	<b>8%</b>	<b>10%</b>	<b>5%</b>	<b>11%</b>	<b>7%</b>
Don't know	1%	1%	1%		2% ↑	2%	1%

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

\*Indicates less than 1% of respondents.

## 2.2 Confidence in being prepared for future events

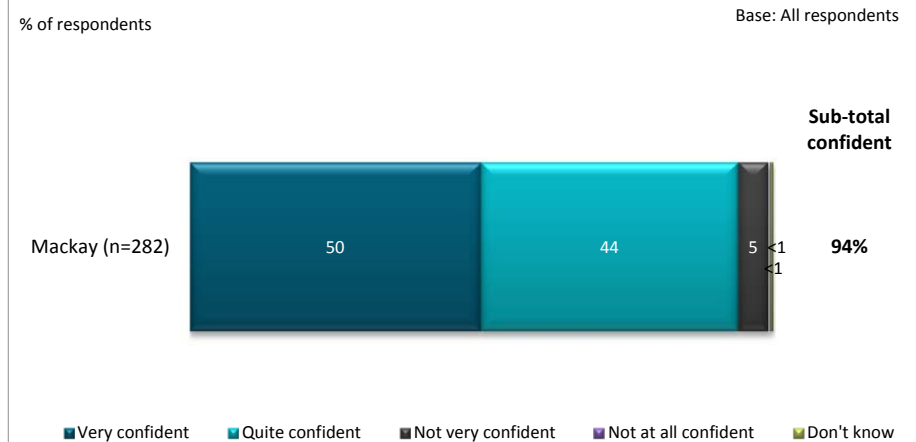
Q6. How confident are you in regards to being prepared for and knowing how to respond to events in the future? Are you...

The vast majority of Mackay residents surveyed (94%) report confidence in being prepared for and knowing how to respond to events in the future (50% very confident, 44% quite confident).

### Sub-group differences

Those aged under 45 years (60%) or those who lost income due to the event (64%) are more likely than average (50%) to be very confident in regards to events in the future.

Q6. How confident are you in regards to being prepared for and knowing how to respond to events in the future? Are you...





Q6. How confident are you in regards to being prepared for and knowing how to respond to events in the future? Are you...

Base: All respondents	Gender			Age		Key Impacts												
	Total n=282	Male n=117	Female n=165	Under 45 n=65	45 and over n=217	Power outage n=225	Telco outage n=181	Isolated or cut off from town, work or moving in and out of your home n=107	Schools or day-care centres were closed n=98	Limited food, water or fuel supplies n=85	Loss of income n=79	Other property was damaged n=76	Emotional impact n=71	Home was damaged n=67	Had to evacuate from your home n=35	Other property was destroyed or lost n=26^	Physical injury n=4^	Home was destroyed n=1^
Very confident	50%	51%	49%	60% ↑	43% ↓	53%	50%	46%	45%	53%	64% ↑	53%	40%	56%	50%	43%		
Quite confident	44%	45%	44%	32% ↓	53% ↑	43%	45%	47%	45%	37%	32% ↓	44%	51%	41%	40%	43%	77%	100%
SUBTOTAL Confident	94%	96%	92%	92%	96%	96%	95%	93%	90%	89%	96%	97%	91%	97%	90%	86%	77%	100%
Not very confident	5%	3%	7%	8%	3%	3%	4%	6%	9% ↑	11%	4%	3%	8%	3%	10%	14%	23%	
Not at all confident	*	*			*	*	*											
SUBTOTAL Not Confident	5%	4%	7%	8%	4%	4%	5%	6%	9%	11%	4%	3%	8%	3%	10%	14%	23%	
Don't know	*	*	*		1%	*	*	1%	1%		1%		1%					

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

\*Indicates less than 1% of respondents.

^Caution: Small cell size

### 3.0 Impact of Event

#### 3.1 Impacts experienced

Q7. Thinking specifically now about {EVENT}, which if any, of the following impacts did you personally experience?

Power and telecommunications outages (78%, 64% respectively) are the most commonly reported impacts of the event according to survey respondents in Mackay. Other impacts commonly mentioned are school closures (43%), loss of income (36%) or isolation (36%).

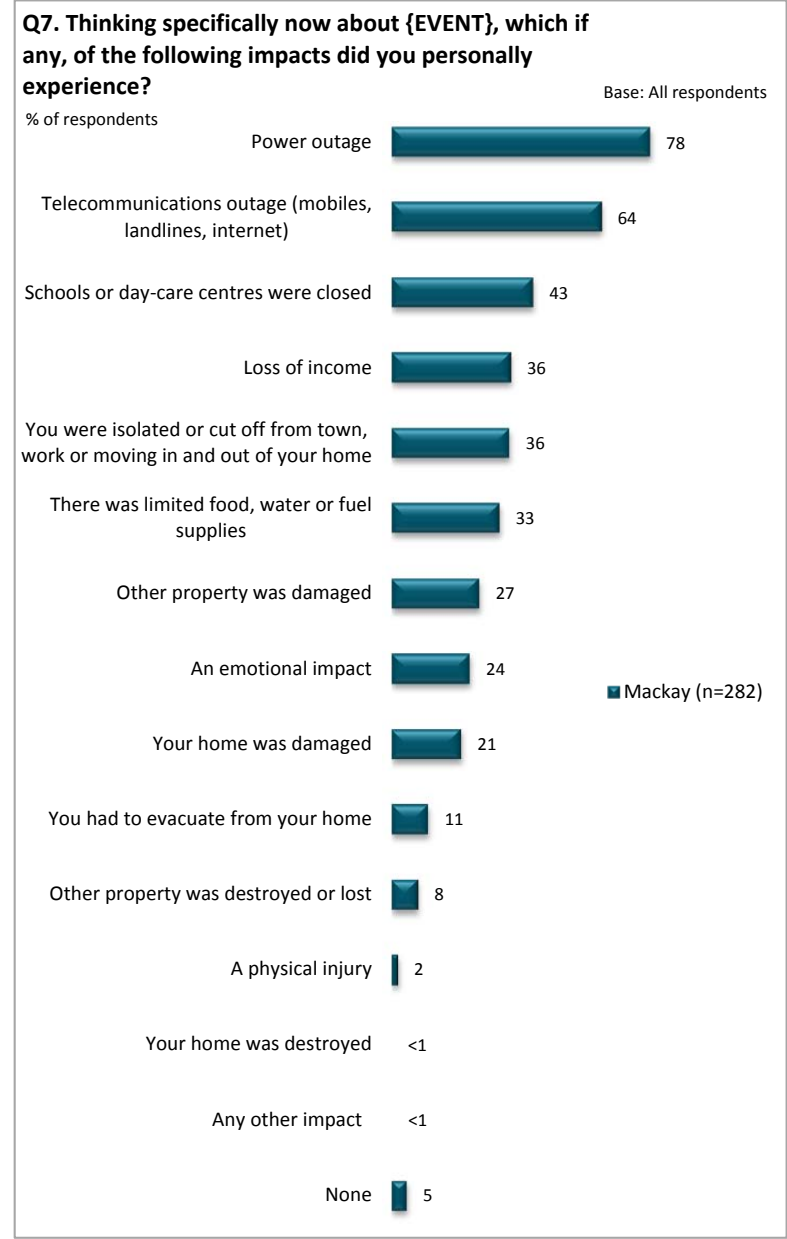
21% of respondents report home damage, 27% report other property damage and 8% say other property was destroyed.

One in ten (11%) survey respondents say they had to evacuate their home in response to Tropical Cyclone Debbie.

##### Sub-group differences

Females are more likely than males to report impacts such as school closures (53% female, 33% male) or home damage (29% female, 13% male).

Those aged over 45 years (7%) are more likely than the younger cohort (1%) to report no impacts.



Q7. Thinking specifically now about {EVENT}, which if any, of the following impacts did you personally experience?

Base: All respondents	Gender		Age		
	Total n=282	Male n=117	Female n=165	Under 45 n=65	45 and over n=217
Power outage	78%	79%	78%	73%	82%
Telecommunications outage (mobiles, landlines, internet)	64%	59%	68%	64%	63%
Schools or day-care centres were closed	43%	33% ↓	53% ↑	56% ↑	34% ↓
Loss of income	36%	39%	33%	47% ↑	29% ↓
You were isolated or cut off from town, work or moving in and out of your home	36%	32%	40%	35%	36%
There was limited food, water or fuel supplies	33%	28%	38%	33%	33%
Other property was damaged	27%	23%	31%	24%	29%
An emotional impact	24%	18%	30%	23%	25%
Your home was damaged	21%	13% ↓	29% ↑	21%	21%
You had to evacuate from your home	11%	9%	14%	11%	11%
Other property was destroyed or lost	8%	6%	11%	6%	9%
A physical injury	2%	3%	1%	1%	3%
Any other impact	*		*		*
Your home was destroyed	*		*		*
None	5%	5%	4%	1% ↓	7% ↑

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

\*Indicates less than 1% of respondents.

### 3.2 Location used during evacuation

Q8. Where did you evacuate to?

Q8a. Why did you decide to evacuate to {insert location from Q8}?

Of Mackay residents who evacuated their home, most used an unofficial evacuation facility (51% went to a family member’s home, 39% to a friend’s home and 4% to a neighbour’s house). 2% of survey respondents report using an official evacuation facility during Tropical Cyclone Debbie.

Evacuation options are most commonly chosen on the basis of being perceived to be the safest (60%), most comfortable (19%) or closest (17%) option. 17% say they chose their evacuation point after being told to go there.

#### Q8. Where did you evacuate to?

Base: respondents who evacuated home

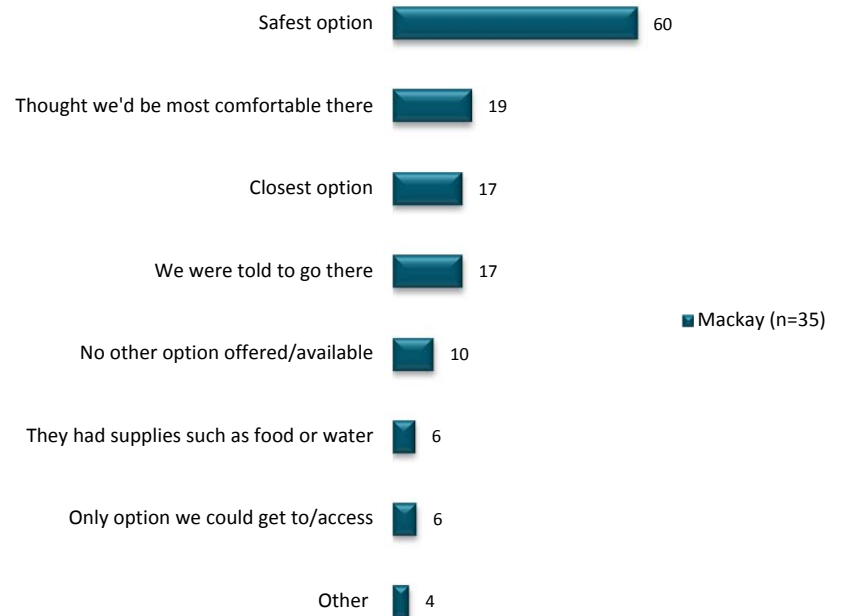
% of respondents



#### Q8a. Why did you decide to evacuate to...?

Base: respondents who evacuated home

% of respondents



## 4.0 Information & Warnings

### 4.1 Sources of information used prior to/during event

*Q9a. In the lead-up to or during {EVENT} which, if any, of the following sources of information did you use?*

Mackay residents report relying on a range of information sources in the lead-up to or during Tropical Cyclone Debbie, the most widely used being the Bureau of Meteorology (BOM) website (76%), a news source other than the ABC (69%) or ABC News services (60%).

One in two (49%) report sourcing information via family, friends or neighbours, while 37% say they did so via the LDMG.

#### *Sub-group differences*

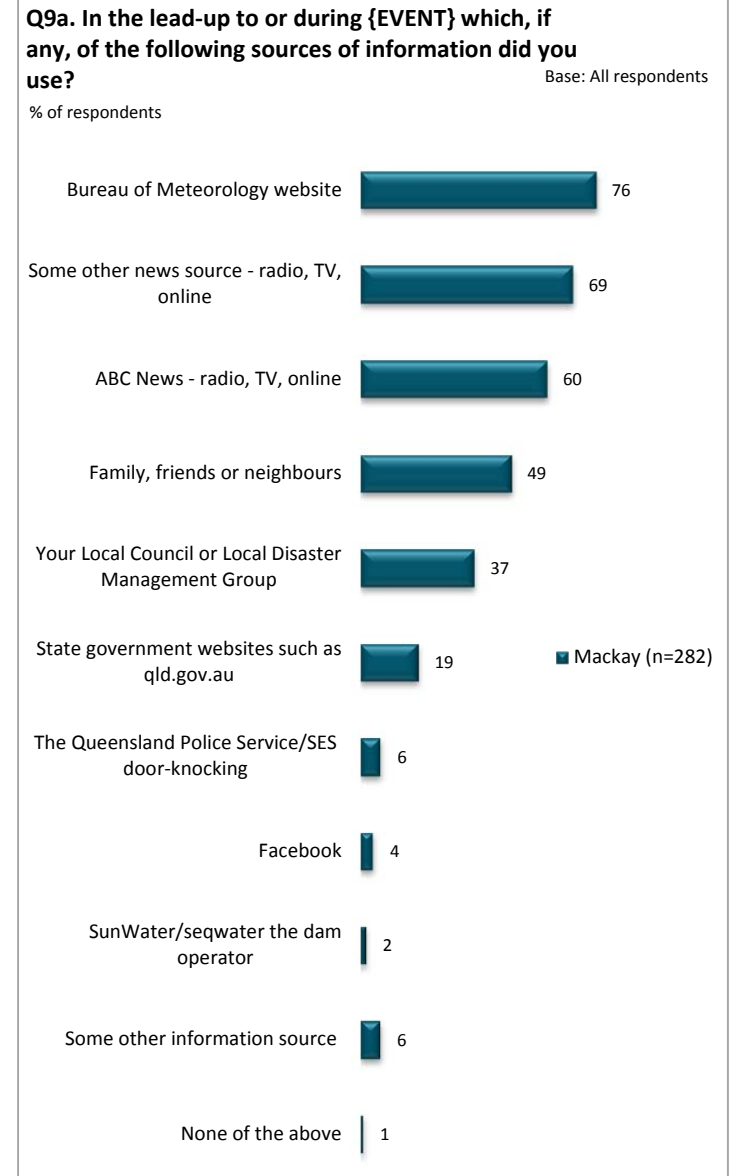
Those who had to evacuate their homes due to the event (72%) were more likely than non-evacuees (46%) to have relied on family, friends or neighbours for their information.

Nine in ten (94%) respondents aged under 45 years relied on the BOM website for information, compared to six in ten (64%) of those aged 45 years or older doing so.

Younger respondents are more likely to have sourced information from news sources other than the ABC (82%) than they are to have sourced their information from the ABC (63%). Those aged 45 years or older are equally likely to have used either ABC (59%) or other (59%) news sources.

Females (57%) or those who evacuated their home (72%) are more likely than average (49%) to have received information from family, friends or neighbours.

Females (10%) or those aged 45 years or older (9%) are more likely than average (6%) to have sourced information from the Queensland Police Service or through being door-knocked by the SES.



Q9a. In the lead-up to or during {EVENT} which, if any, of the following sources of information did you use?

Base: All respondents	Gender		Age		You had to evacuate from your home		Key Impacts		LDMG Awareness		
	Total n=282	Male n=117	Female n=165	Under 45 n=65	45 and over n=217	Yes n=35	No n=247	Any impact n=266	No impact n=16^	Yes n=161	No n=121
Bureau of Meteorology website	76%	80%	72%	94% ↑	64% ↓	76%	76%	77%	69%	81% ↑	69% ↓
Some other news source - radio, TV, online	69%	73%	64%	82% ↑	59% ↓	74%	68%	69%	57%	71%	66%
ABC News - radio, TV, online	60%	64%	56%	63%	59%	64%	60%	61%	57%	59%	62%
Family, friends or neighbours	49%	41% ↓	57% ↑	49%	48%	72% ↑	46% ↓	51%	13%	43% ↓	58% ↑
Your Local Council or Local Disaster Management Group	37%	33%	40%	38%	36%	41%	36%	36%	53%	40%	32%
State government websites such as qld.gov.au	19%	17%	20%	24%	15%	16%	19%	19%	15%	18%	19%
The Queensland Police Service or the SES door-knocking or coming to your house to give you information or a warning	6%	3% ↓	10% ↑	3% ↓	9% ↑	11%	6%	7%		7%	6%
Facebook	4%	5%	4%	7%	2%		5% ↑	4%	14%	4%	4%
SunWater/seqwater the dam operator	2%		4% ↑	2%	1%		2% ↑	2%	5%	1%	3%
Some other information source	6%	5%	8%	7%	6%	12%	6%	6%	5%	7%	5%
None of the above	1%	1%	*		1% ↑		1% ↑	1%	5%	1%	1%

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

\*Indicates less than 1% of respondents.

## 4.2 Main source of information used prior to/during event

Q9b. And which of those did you MAINLY use?

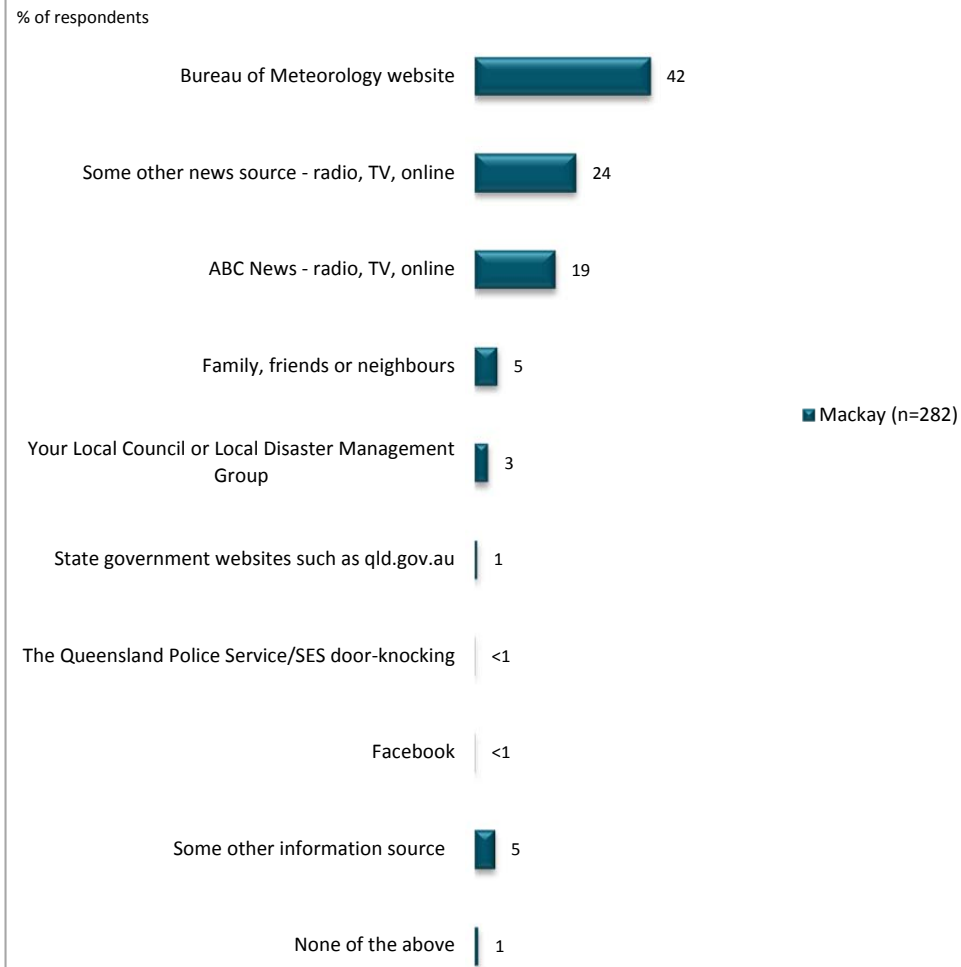
When asked to report the *main* source of information used during Tropical Cyclone Debbie, Mackay respondents are most likely to have used the BOM website (42%), followed by a news source other than the ABC (24%), then ABC News (19%).

### Sub-group differences

Those aged under 45 years (32%) are more likely than average (24%) to have relied on a news source other than the ABC, while those aged 55 years or older (37%) are more likely than average to have used ABC news services (19%).

### Q9b. And which of those did you MAINLY use?

Base: All respondents



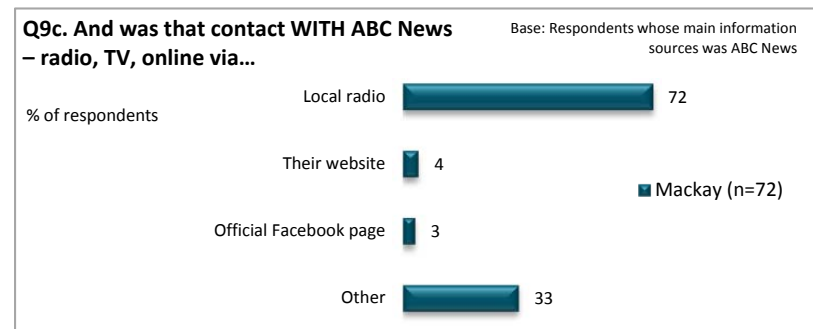
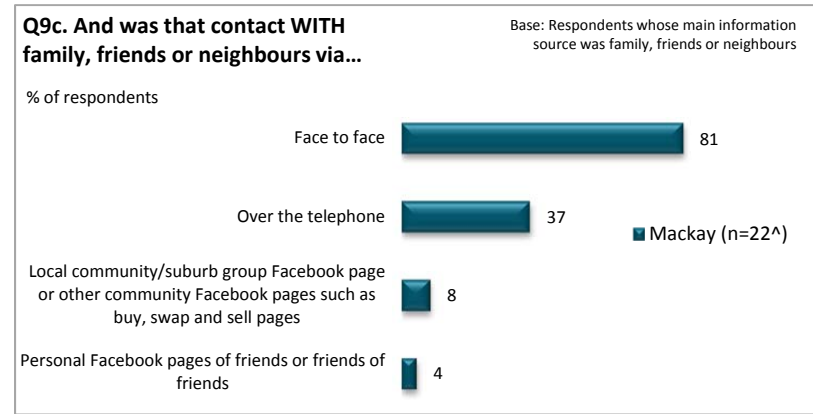
### 4.3 Type of contact with main source of information

Q9c. And was that contact WITH...

Mackay respondents who had contact with family, friends or neighbours are most likely to say their contact was face-to-face (81%) or over the telephone (37%).

Contact with the local council was most commonly via a text message (57%) or the official council Facebook page (29%).

Local radio was the most common way of receiving ABC News (72%).





## 4.4 Effectiveness of warning methods

Q10. Please rate the effectiveness of each of the following methods of receiving warnings during times of disaster. The first method is a, the next method is a...

Radio (90%), television (77%), text message (77%) or being door-knocked (74%) are considered the most effective methods of receiving warnings during times of disaster according to Mackay residents.

A phone call to a landline from authorities (51%) is rated as the *least* effective method. The perceived effectiveness of all options tested is detailed in the adjacent chart.

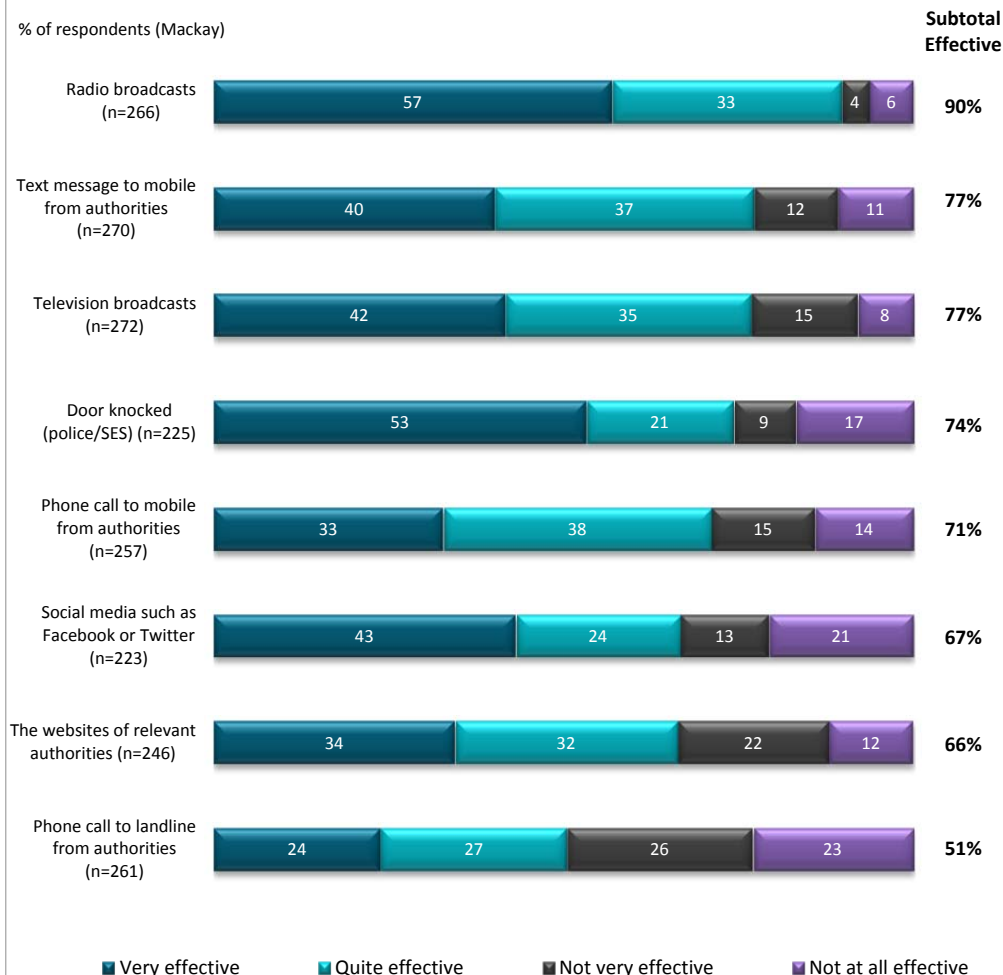
### Sub-group differences

Those aged 45 years or younger are more likely than average to rate a range of warning methods as effective, especially radio broadcasts (97%) or social media (85%). Females (77%) are more receptive than males (57%) to social media.

A sharp decline in acceptance of online, mobile or social media sources is noted among those aged 60 years or older.

**Q10. Please rate the effectiveness of each of the following methods of receiving warnings during times of disaster. The first method is a, the next method is a...**

Base: All respondents excluding those who answered don't know



Q10. Please rate the effectiveness of each of the following methods of receiving warnings during times of disaster. The first method is a, the next method is a...

Base: All respondents, excluding those who answered don't know	Gender			Age											
	Total	Male	Female	Under 45	45 and over	18 to 24 years	25 to 29 years	30 to 34 years	35 to 39 years	40 to 44 years	45 to 49 years	50 to 54 years	55 to 59 years	60 to 64 years	65 years or over
<i>% of respondents rating method very/quite effective</i>															
Radio broadcasts (n=266)	90%	90%	90%	97% ↑	84% ↓	100%	100%	89%	100%	100%	85%	86%	92%	83%	76% ↓
Text message to mobile from authorities (n=270)	77%	73%	81%	82%	74%	100%	100%	61%	84%	85%	87%	86%	78%	57% ↓	57% ↓
Television broadcasts (n=272)	77%	79%	75%	83%	72%	79%	88%	92%	68%	84%	76%	56% ↓	80%	58% ↓	80%
Being door knocked or getting a visit to your house by police or SES (n=225)	74%	70%	79%	71%	77%	62%	88%	65%	50%	80%	84%	72%	85%	74%	71%
Phone call to mobile from authorities (n=257)	71%	69%	74%	77%	67%	100%	100%	61%	81%	74%	73%	79%	78%	57%	52% ↓
Social media such as Facebook or Twitter (n=223)	67%	57% ↓	77% ↑	85% ↑	51% ↓	70%	100%	81%	100%	84%	57%	62%	56%	57%	23% ↓
The websites of relevant authorities (n=246)	66%	65%	68%	73%	61%	91%	73%	67%	84%	66%	72%	65%	66%	52%	45% ↓
Phone call to landline from authorities (n=261)	51%	49%	52%	46%	54%	48%	87%	17%	61%	51%	55%	54%	67%	40%	55%

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

## 4.5 Text message warnings

### 4.5.1 Receipt of official warnings via text message

Q11. In the lead-up to or during {EVENT}, did you receive any official WARNINGS via TEXT MESSAGE?

Q12. Who did you receive a text message from?

Six in ten (63%) Mackay residents in the survey area report receiving a warning via text message in the lead-up to or during Tropical Cyclone Debbie.

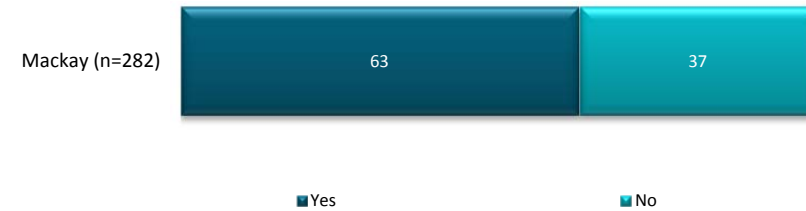
Of those who received a text message, the local council is most commonly stated as the source (56%). One in three (36%) cannot recall who the text came from.

#### Sub-group differences

Receipt of a warning via text message is most prevalent among those aged under 45 years (70%). The age group *least* likely to recall receiving a text message warning is the 65 years or older age group (33%).

Q11. In the lead-up to or during {EVENT}, did you receive any official WARNINGS via TEXT MESSAGE? Base: All respondents

% of respondents



Q12. Who did you receive a text message from? Base: Those who received a text message

% of respondents



Q11. In the lead-up to or during {EVENT}, did you receive any official WARNINGS via TEXT MESSAGE?

Base: All respondents	Gender			Age											
	Total n=282	Male n=117	Female n=165	Under 45 n=65	45 and over n=217	18 to 24 years n=7^	25 to 29 years n=6^	30 to 34 years n=16^	35 to 39 years n=8^	40 to 44 years n=28^	45 to 49 years n=29^	50 to 54 years n=36	55 to 59 years n=36	60 to 64 years n=39	65 years or over n=77
Yes	63%	63%	63%	70%	57%	70%	88%	86%	52%	62%	63%	66%	78% ↑	59%	33% ↓
No	37%	37%	37%	30%	43%	30%	12%	14%	48%	38%	37%	34%	22% ↓	41%	67% ↑

Q12. Who did you receive a text message from?

Base: Those who received a text message	Gender			Age											
	Total n=164	Male n=65	Female n=99	Under 45 n=45	45 and over n=119	18 to 24 years n=5^	25 to 29 years n=5^	30 to 34 years n=14^	35 to 39 years n=5^	40 to 44 years n=16^	45 to 49 years n=18^	50 to 54 years n=24^	55 to 59 years n=28^	60 to 64 years n=23^	65 years or over n=26^
The Local Council	56%	52%	60%	53%	58%	57%	43%	47%	43%	66%	62%	34%	61%	65%	66%
Local Disaster Management Group	6%	5%	6%	5%	6%			11%		5%	4%	17%	7%		3%
School	1%		1%		1%						4%				
Dam operator - seqwater or SunWater	1%	1%	1%		1%							4%	4%		
Other	4%	2%	5%	2%	5%			5%			4%	9%		13%	3%
Not sure	36%	40%	31%	40%	32%	43%	57%	37%	57%	30%	35%	37%	29%	22%	34%

^ Caution: small cell size.

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

## 4.5.2 Ease of understanding text message warnings

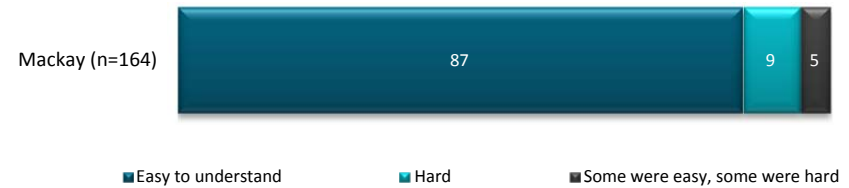
Q13a. Thinking about {any of} the text message warnings you received would you say they were generally....

Nine in ten (87%) recipients of a text message in Mackay report that the text message warnings received were easy to understand. 9% say they were hard to understand, while 5% report some being easy, and others being hard to understand.

Q13a. Thinking about {any of} the text message warnings you received would you say they were generally....

Base: Those who received a text message

% of respondents



Q13a. Thinking about {any of} the text message warnings you received would you say they were generally....

Base: Those who received a text message	Source of text message						
	Total n=164	The Local Council n=94	Local Disaster Management Group n=10 <sup>^</sup>	Dam operator - seqwater or SunWater n=2 <sup>^</sup>	School n=1 <sup>^</sup>	Other n=8 <sup>^</sup>	Not sure n=53
Easy to understand	87%	91%	80%	100%	100%	89%	80%
Hard	9%	6%	13%			11%	13%
Some were easy, some were hard	5%	3%	7%				7%

<sup>^</sup> Caution: small cell size.

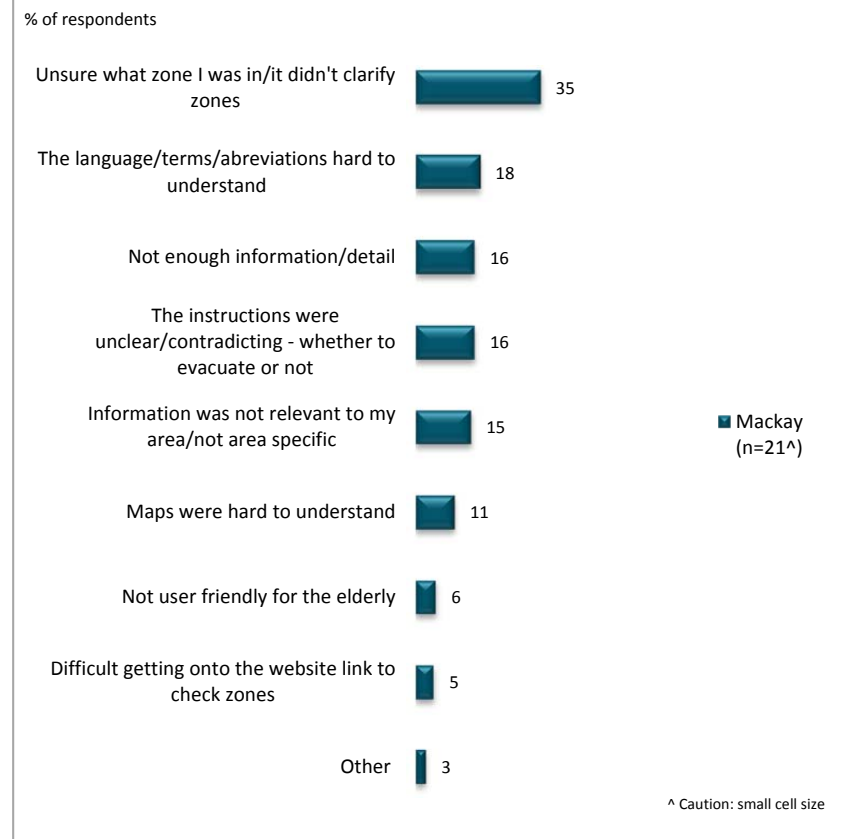
### 4.5.3 Why were text message warnings hard to understand?

Q13aa. Why were the text message warnings you received hard to understand?

The main difficulty Mackay text recipients say they had in understanding their text messages was in relation to the reference to zones; 35% say they didn't understand what zone they were in or near to be able to assess their risk. 18% say they had difficulty understanding the language or abbreviations, while 16% feel that not enough detailed information had been provided. Other reasons are provided in the adjacent chart.

#### Q13aa. Why were the text message warnings you received hard to understand?

Base: Those who received a text message they thought was hard to understand



#### 4.5.4 Timing of text messages

Q13b. Did text messages generally arrive...

Most (76%) text message recipients say the messages arrived at the right time, 14% feel the messages arrived too late, while the balance (9%) report some arrived on time while others arrived too late.

Q13b. Did text messages generally arrive...

Base: Those who received a text message

% of respondents



Q13b. Did text messages generally arrive...

Base: Those who received a text message	Source of text message						
	Total n=164	The Local Council n=94	Local Disaster Management Group n=10 <sup>^</sup>	Dam operator - seqwater or SunWater n=2 <sup>^</sup>	School n=1 <sup>^</sup>	Other n=8 <sup>^</sup>	Not sure n=53
At the right time, or	76%	80%	56%	100%	100%	79%	74%
Too late	14%	12%	7%			21%	18%
Some arrived at the right time, some too late	9%	7%	37%				9%

<sup>^</sup> Caution: small cell size.

#### 4.5.5 Relevance of text message

Q13c. Were they...

Of Mackay residents who received a text message, one in two (48%) report the text message as relevant to themselves and their property, 31% feel the messages were irrelevant, while 21% say that some messages were relevant and some were not.

#### Q13c. Were they...

Base: Those who received a text message

% of respondents



Q13c. Were they....

Base: Those who received a text message	Source of text message						
	Total n=164	The Local Council n=94	Local Disaster Management Group n=10 <sup>^</sup>	Dam operator - seqwater or SunWater n=2 <sup>^</sup>	School n=1 <sup>^</sup>	Other n=8 <sup>^</sup>	Not sure n=53
Relevant to you and your property	48%	51%	37%	47%		90%	42%
Not relevant	31%	28%	26%	53%		10%	37%
Some were, some weren't	21%	20%	37%		100%		21%

<sup>^</sup> Caution: small cell size.



#### 4.5.6 Action taken after receiving text message

Q13d. Did you take any action after receiving any of the text messages?  
 Q13e. What action did you take?

Four in ten (40%) Mackay text message recipients took action after receiving a text message.

Of those who took action, the most common response reported was preparing their property (45%). Other common responses were to evacuate their home (19%), move property out of harm's way (15%), stay at home or off the roads (13%) or watch and listen for warnings more carefully (10%).

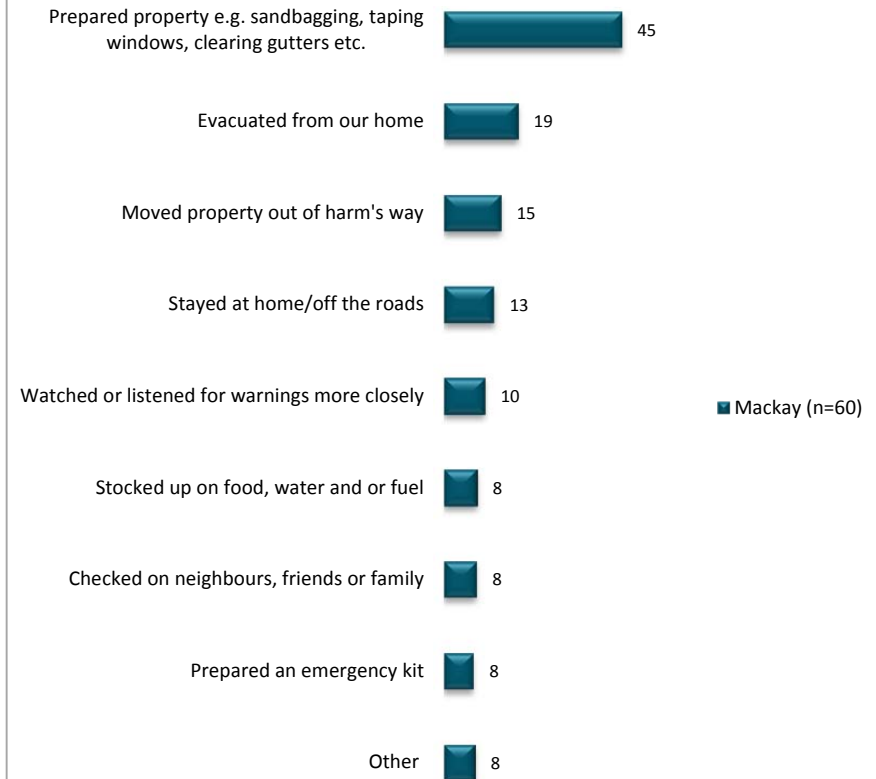
#### Q13d. Did you take any action after receiving any of the text messages? Base: Those who received a text message

% of respondents



#### Q13e. What action did you take? Base: Those who took action

% of respondents



#### 4.5.7 Impact experienced matching text message warnings

Q13f. Did the actual impact or impacts you experienced match the text warnings you received?

52% of Mackay text message recipients feel that the actual impacts they experienced matched the text message warning(s) received. 39% feel the warnings overstated or exaggerated the impacts while 8% feel that text message warnings did not prepare them *enough* for the potential impacts of the event.

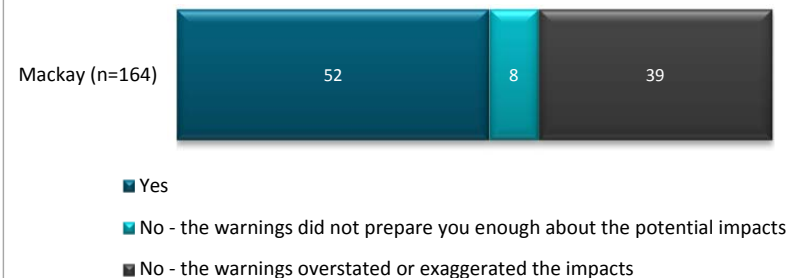
##### Sub-group differences

Those who were isolated from town, work or their home (14%) are more likely than average (8%) to say that the text message(s) did *not* adequately prepare them for the potential impacts of the event.

**Q13f. Did the actual impact or impacts you experienced match the text warnings you received?**

Base: Those who received a text message

% of respondents



Q13f. Did the actual impact or impacts you experienced match the text warnings you received?

Base: Those who received a text message	Source of text message						
	Total n=164	The Local Council n=94	Local Disaster Management Group n=10 <sup>^</sup>	Dam operator - seqwater or SunWater n=2 <sup>^</sup>	School n=1 <sup>^</sup>	Other n=8 <sup>^</sup>	Not sure n=53
Yes	52%	53%	55%	100%		50%	52%
No - the warnings did not prepare you enough about the potential impacts	8%	6%	13%			10%	11%
No - the warnings overstated or exaggerated the impacts	39%	41%	32%		100%	41%	37%
<b>SUBTOTAL No</b>	<b>48%</b>	<b>47%</b>	<b>45%</b>		<b>100%</b>	<b>50%</b>	<b>48%</b>

<sup>^</sup> Caution: small cell size.

## 4.6 Suggested improvements for warnings

Q14. Thinking about emergency warnings generally, from any source or organisation, how could they be improved? How else?

Among Mackay residents, suggestions for improving emergency warnings, from any source or organisation, most commonly relate to providing more detailed and or clear information (e.g. for evacuation plans, evacuation shelters or road closures) (9%).

Communications systems that can withstand power disruptions (4%), localised and area specific information (4%), more warnings generally (4%) or more accurate reporting and predictions (4%) are also suggested. The top 11 suggestions for improvement are presented in the adjacent chart, with the balance of suggestions detailed in the table on the following page.

One in two respondents are unable to make any suggestions for improving emergency warnings (22% saying they are satisfied with the current warnings and 31% not having any suggestions to make).

### Sub-group differences

Specific suggestions made by evacuees, (which were not mentioned by non-evacuees) were as follows:

- more accurate reports and information (4%)
- more regular updates/real time information (4%)
- improve telecommunications and infrastructure to reduce effects of an event (3%)
- have warning sirens/drive around with a speaker/siren on radio or TV (3%)
- more assistance/better response from SES, emergency services (1%).

**Q14. Thinking about emergency warnings generally, from any source or organisation, how could they be improved?** Base: All respondents

### TOP 11 Responses

% of respondents



NFI = no further information

Q14. Thinking about emergency warnings generally, from any source or organisation, how could they be improved? How else?

Base: All respondents	Gender			Age		You had to evacuate from your home	
	Total n=282	Male n=117	Female n=165	Under 45 n=65	45 and over n=217	Yes n=35	No n=247
Satisfied with current services/no improvements needed	22%	25%	19%	18%	25%	10% ↓	23% ↑
Provide more detailed and clear information (e.g. evacuation plans, shelters, road closures etc.)	9%	11%	8%	13%	7%	14%	9%
Better communication methods when power is down	4%	3%	5%	1% ↓	6% ↑	13%	3%
More localised/relevant/area-specific warnings/information	4%	1% ↓	7% ↑	5%	3%	2%	4%
More alerts/warnings through TV and radio	4%	3%	4%	6%	3%	12%	3%
More alerts/warnings through SMS	4%	* ↓	8% ↑	4%	4%	2%	4%
More accurate reports and information (media reporting or event predictions)	4%	5%	2%	6%	2%		4% ↑
More/better warnings NFI	4%	5%	2%	5%	2%	9%	3%
Earlier alerts/more time for people to prepare	4%	1% ↓	6% ↑	6%	1%	10%	3%
More regular updates/real time information	3%	5%	1%	6%	1%		4% ↑
Improve telecommunications and infrastructure to reduce effects of an event	3%	4%	2%	3%	3%		3% ↑
More door knocking	3%	3%	2%	4%	2%	6%	2%
Have warning sirens/drive around with a speaker/siren on radio or TV	2%	1%	4%	2%	2%		3% ↑
Do not over exaggerate (can cause fear) (media, predictions, text messages)	2%	3%	1%	3%	1%		2%
Information coming from local sources/council using local knowledge	2%	*	3%	1%	2%	5%	1%
More contact face to face	2%	2%	1%	1%	2%	13%	
Improve telecommunications and power restoration	1%	2%	*	3%	1%		2%
Specific alerts and assistance to the elderly (more personal, less SMS/social media)	1%	1%	1%		2%	2%	1%
More extensive (blanket) coverage with warnings (any method) so everyone is warned	1%	*	1%		2%	2%	1%
Ensure alerts have reached everyone	1%	*	1%		1%		1%
More assistance/better response from SES, emergency services	1%		2% ↑		1% ↑		1% ↑
Let everyone know the power restoration schedule	1%	1%			1%		1%
More assistance for tourists/people new in the area	1%	*	1%		1%		1%
More alerts/warnings through social media	1%		1%		1%		1%
More letter drops/public notices	*		1%		1%		1%
Better communication with the public/locals	*		1%		1%		*
More direct phone calls	*		1%		1%		*
Better information from BOM (how to interpret, tracking of cyclone, up-to-date)	*		*		*		*
Other	1%	*	1%		2%	2%	1%
Don't know/nothing/was not affected	31%	31%	31%	31%	31%	20%	32%

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

\*Indicates less than 1% of respondents.

## 5.0 Services & Response

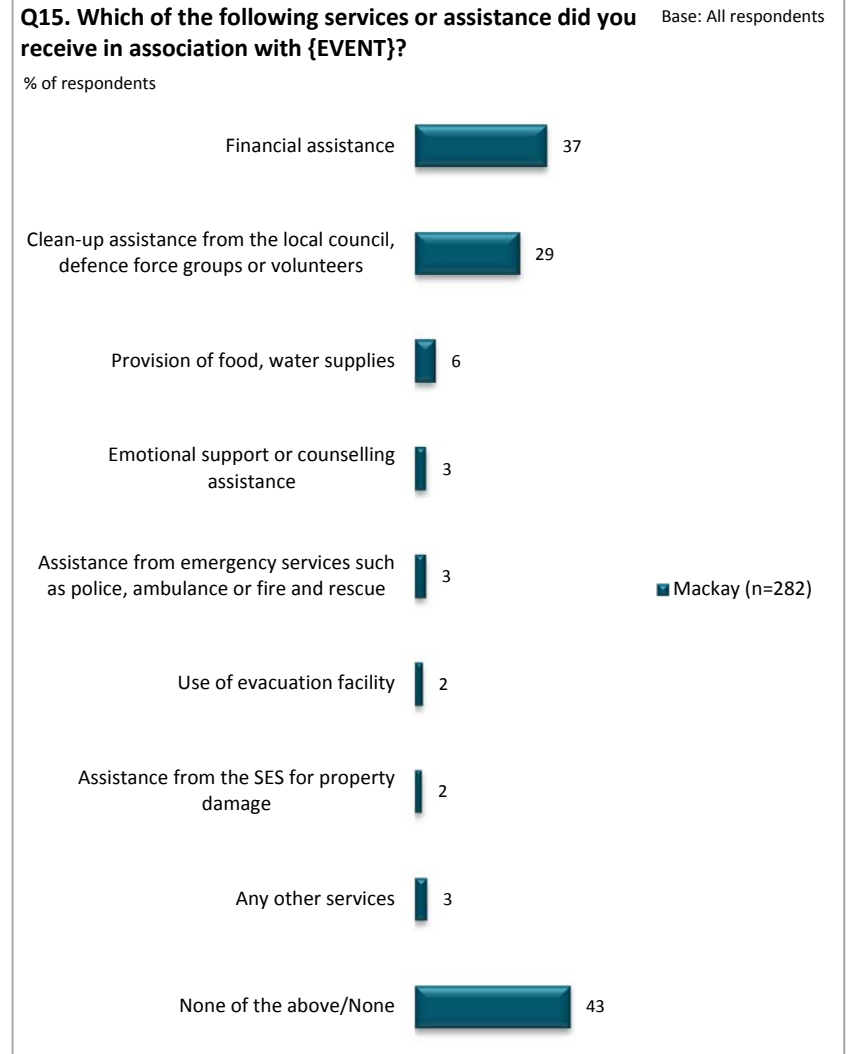
### 5.1 Services or assistance received

Q15. Which of the following services or assistance did you receive in association with {EVENT}?

37% of Mackay residents report receiving financial assistance in association with Tropical Cyclone Debbie, while 29% received clean-up assistance from the local council, defence force groups or volunteers. These were the two most widespread types of assistance reported. The adjacent chart provides results for a range of other services or forms of assistance measured.

#### Sub-group differences

Females (45%) are more likely than average (37%) to report receiving financial assistance.



Q15. Which of the following services or assistance did you receive in association with {EVENT}?

	Gender		Age		Key Impacts													
	Total n=282	Male n=117	Female n=165	Under 45 n=65	45 and over n=217	Power outage n=225	Telco outage n=181	Isolated or cut off from town, work or moving in and out of your home n=107	Schools or day- care centres were closed n=98	Limited food, water or fuel supplies n=85	Loss of income n=79	Other property was damaged n=76	Emotional impact n=71	Home was damaged n=67	Had to evacuate from your home n=35	Other property was destroyed or lost n=26^	Physical injury n=4^	Home was destroyed n=1^
Base: All respondents																		
Financial assistance	37%	28% ↓	45% ↑	42%	33%	43% ↑	47% ↑	58% ↑	51% ↑	51% ↑	43%	53% ↑	59% ↑	65% ↑	56% ↑	61%	88%	
Clean-up assistance from the local council, defence force groups or volunteers	29%	31%	27%	26%	31%	30%	30%	24%	32%	26%	33%	47% ↑	40%	46% ↑	50% ↑	20%	88%	100%
Provision of food, water supplies	6%	7%	4%	6%	6%	7% ↑	5%	7%	8%	4%	9%	10%	9%	15% ↑	18%	11%	65%	
Emotional support or counselling assistance	3%	2%	4%	1%	5%	4% ↑	3%	2%	5%	5%	5%	6%	3%	8%	11%	3%	53%	
Assistance from emergency services such as police, ambulance or fire and rescue	3%	5%	1%		5% ↑	4%	3%	2%	5%	4%	4%	5%	5%	7%	11%	18%	53%	
Use of evacuation facility	2%	2%	2%	1%	3%	3%	2%	3%	4%	3%	4%	8%	3%	10%	19% ↑	14%	53%	
Assistance from the SES for property damage	2%	1%	3%	2%	2%	2%	2%	3%	2%	3%		2%	2%	4%	4%	14%		
Any other services	3%	3%	4%	2%	4%	4%	5% ↑	6%	5%	8%	8%	4%	9%	2%		3%		100%
None of the above/None	43%	46%	40%	43%	43%	38% ↓	34% ↓	25% ↓	30% ↓	32% ↓	39%	26% ↓	15% ↓	17% ↓	21% ↓	21%		

^ Caution: small cell size.

↑ ↓ indicates a significant difference to the average at at least the 95% confidence level.

## 5.2 Service/assistance needed by not received

Q16. Were there any services or assistance that you did need but did not receive?

When asked if there were any services or assistance they needed during the event, but did not receive, the majority of Mackay respondents (87%) feel that there were none.

3% of respondents report needing but not receiving assistance from the SES for property damage, 2% say they would have liked clean-up assistance from the local council, defence force groups or volunteers, while 2% report needing but not receiving financial assistance.

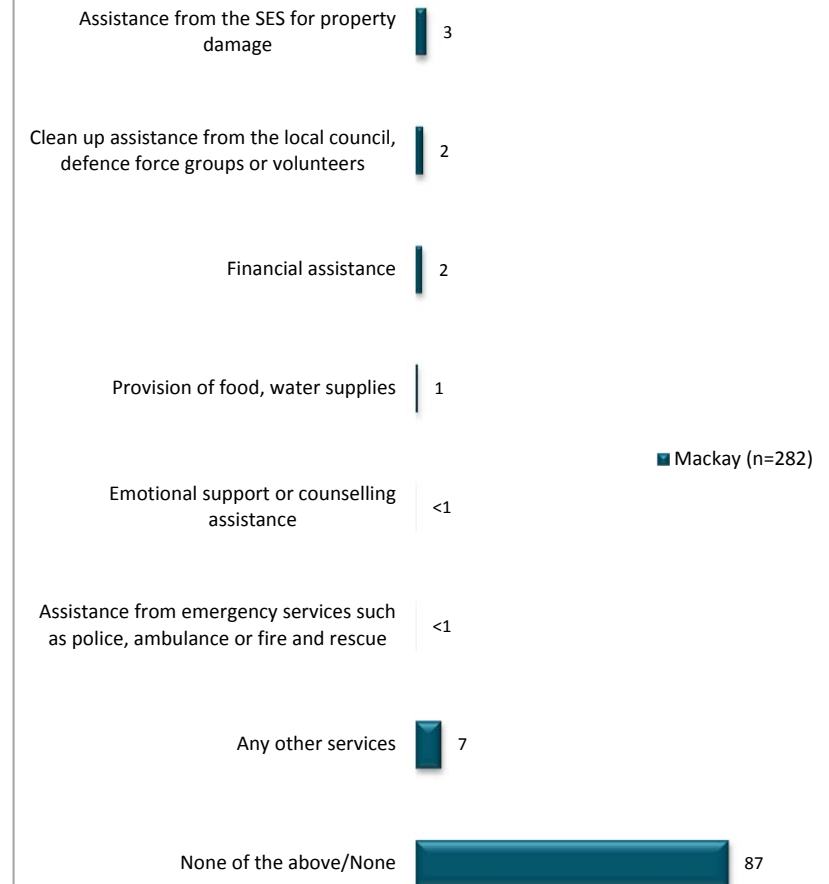
### Sub-group differences

Those who experienced a power outage (4%), telecommunications outage (5%) or those who were isolated (7%) are more likely than average (3%) to say they needed assistance from the SES for property damage that was not provided.

### Q16. Were there any services or assistance that you did need but did not receive? (UNPROMPTED)

Base: All respondents

% of respondents



Q16. Were there any services or assistance that you did need but did not receive?

Base: All respondents	Gender			Age		Key Impacts												
	Total n=282	Male n=117	Female n=165	Under 45 n=65	45 and over n=217	Power outage n=225	Telco outage n=181	Isolated or cut off from town, work or moving in and out of your home n=107	Schools or day-care centres were closed n=98	Limited food, water or fuel supplies n=85	Loss of income n=79	Other property was damaged n=76	Emotional impact n=71	Home was damaged n=67	Had to evacuate from your home n=35	Other property was destroyed or lost n=26^	Physical injury n=4^	Home was destroyed n=1^
Assistance from the SES for property damage	3%	1%	5%	2%	4%	4% ↑	5% ↑	7% ↑	5%	3%	6%	6%	7%	8%	2%	11%	12%	
Clean-up assistance from the local council, defence force groups or volunteers	2%	1%	4%	1%	3%	2%	2%	5% ↑	3%	4%	2%	4%	5%	7%	4%	14%	12%	
Financial assistance	2%	1%	3%	3%	1%	3% ↑	3%	2%	3%	4%	4%	1%	1%	4%	4%	3%		
Provision of food, water supplies	1%	*	1%	1%	*	1%	1%	1%		1%	1%		1%	2%				
Emotional support or counselling assistance	*	*			*	*	*	1%					1%					
Assistance from emergency services such as police, ambulance or fire and rescue	*		*		*	*	*	1%	*			1%	1%	1%				
Any other services	7%	11% ↑	3% ↓	6%	8%	7%	7%	5%	5%	5%	5%	3%	12%	8%		3%		100%
None of the above/None	87%	86%	88%	89%	86%	86%	85%	84%	86%	86%	85%	88%	78%	77%	92%	80%	88%	

^ Caution: small cell size.

\*Indicates less than 1% of respondents.

↑↓ indicates a significant difference to the average at at least the 95% confidence level.



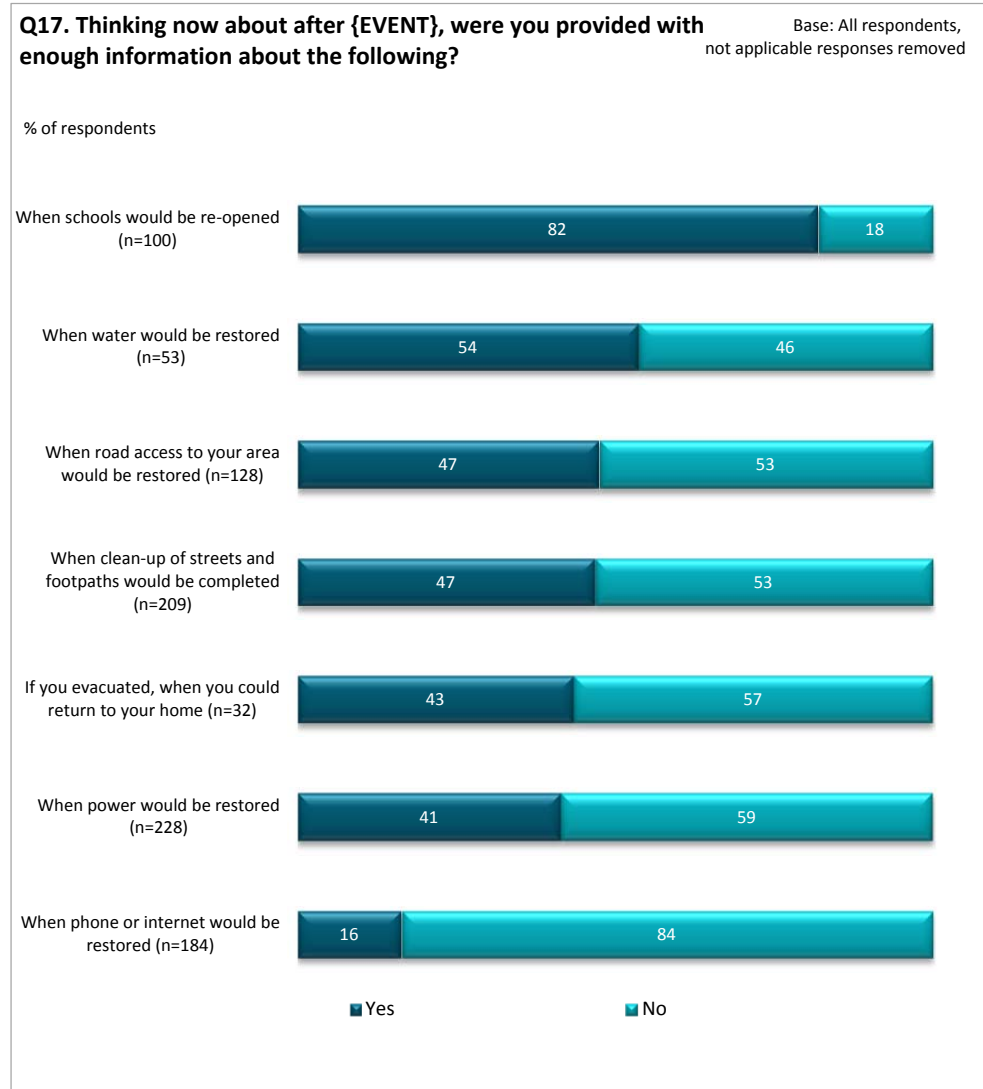
### 5.3 Information provided after event

*Q17. Thinking now about after {EVENT}, were you provided with enough information about the following? If you were not affected by the issue you can say not applicable.*

The majority of Mackay respondents (82%) say they were provided with enough information about when schools would be re-opened. 54% feel they were well informed about when water would be restored. For all other essential communication less than one half of respondents say they were provided with enough information. Respondents are least likely to agree that they were informed well enough about when phone or internet services would be restored.

#### *Sub-group differences*

Differences by age and gender are highlighted in the following table.



Q17. Thinking now about after {EVENT}, were you provided with enough information about the following? If you were not affected by the issue you can say not applicable.

Base: All respondents, not applicable responses removed	Total	Gender		Age	
		Male	Female	Under 45	45 and over
<i>% of respondents saying yes</i>					
When schools would be re-opened (n=100)	82%	88%	76%	74% ↓	91% ↑
When water would be restored (n=53)	54%	58%	50%	55%	51%
When road access to your area would be restored (n=128)	47%	60% ↑	35% ↓	48%	47%
When clean-up of streets and footpaths would be completed (n=209)	47%	50%	43%	49%	45%
If you evacuated, when you could return to your home (n=32)	43%	38%	47%	36%	48%
When power would be restored (n=228)	41%	42%	41%	55% ↑	33% ↓
When phone or internet would be restored (n=184)	16%	15%	18%	21%	13%

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

## 5.4 Satisfaction with speed after event

Q18. After the event, were you satisfied or dissatisfied with the speed with which...

The majority of residents living in the Mackay survey area report satisfaction with the speed with which services were restored:

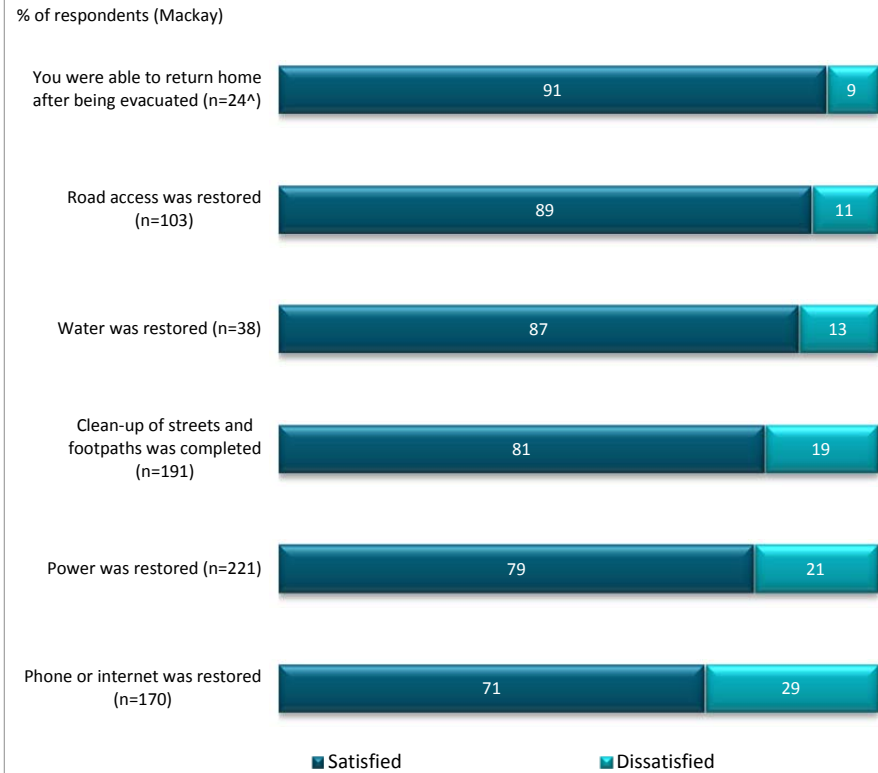
- Returning to home after evacuating (91% satisfied)
- Road access (89%)
- Water (87%)
- Clean-up of streets (81%)
- Power (79%)
- Phone or internet (71%).

### Sub-group differences

Males (90%) are more likely than females (73%) to report being satisfied with the speed with which street clean-ups were completed.

### Q18. After the event, were you satisfied or dissatisfied with the speed with which...

Base: All respondents, not applicable responses removed



<sup>^</sup> Caution: small cell size.

Q18. After the event, were you satisfied or dissatisfied with the speed with which...

Base: All respondents, not applicable responses removed	Total	Gender		Age	
		Male	Female	Under 45	45 and over
<i>% of respondents satisfied</i>					
Power was restored (n=221)	79%	74%	85%	83%	77%
Water was restored (n=38)	87%	88%	86%	91%	77%
Phone or internet was restored (n=170)	71%	76%	67%	78%	66%
Road access was restored (n=103)	89%	89%	89%	86%	91%
Clean-up of streets and footpaths was completed (n=191)	81%	90% ↑	73% ↓	85%	78%
You were able to return home after being evacuated (n=24 <sup>^</sup> )	91%	93%	90%	84%	96%

<sup>^</sup> Caution: small cell size.

↑ ↓ indicates a significant difference to the average at at least the 95% confidence level.

## 5.5 Overall preparedness and ability to cope

Q19. Overall would you say you were prepared for and able to cope...

The majority of surveyed residents in Mackay say they felt they were prepared for and able to cope with:

- the impacts generally of Tropical Cyclone Debbie (95%)
- being out of their home (92%)
- restricted road access (89%)
- the loss of power (88%)
- the loss of water (82%)
- the loss of phone or internet (78%).

### Sub-group differences

Results by age and gender are highlighted in the following table.

### Q19. Overall would you say you were prepared for and able to cope...

Base: All respondents,  
not applicable responses removed

% of respondents



Q19. Overall would you say you were prepared for and able to cope...

Base: All respondents, not applicable responses removed	Total	Gender		Age	
		Male	Female	Under 45	45 and over
<i>% of respondents saying yes</i>					
Without power (n=223)	88%	90%	85%	90%	86%
Without water (n=45)	82%	85%	79%	85%	75%
Without phone or internet (n=171)	78%	82%	75%	81%	76%
With road access being restricted (n=106)	89%	91%	87%	90%	88%
With being out of your home (n=26 <sup>^</sup> )	92%	87%	96%	100%	87%
With the impacts of the event (n=277)	95%	94%	97%	95%	95%

<sup>^</sup> Caution: small cell size.

## 6.0 Overall Suggestions for Improvement

### 6.1 Suggested improvements for the preparation and response of services

Q20. And apart from the comments you made earlier about emergency warnings, how could the preparations or response of emergency services, the local council, community groups or citizens themselves have been improved? What could have been done differently to have helped you or others at any stage of the event? What else?

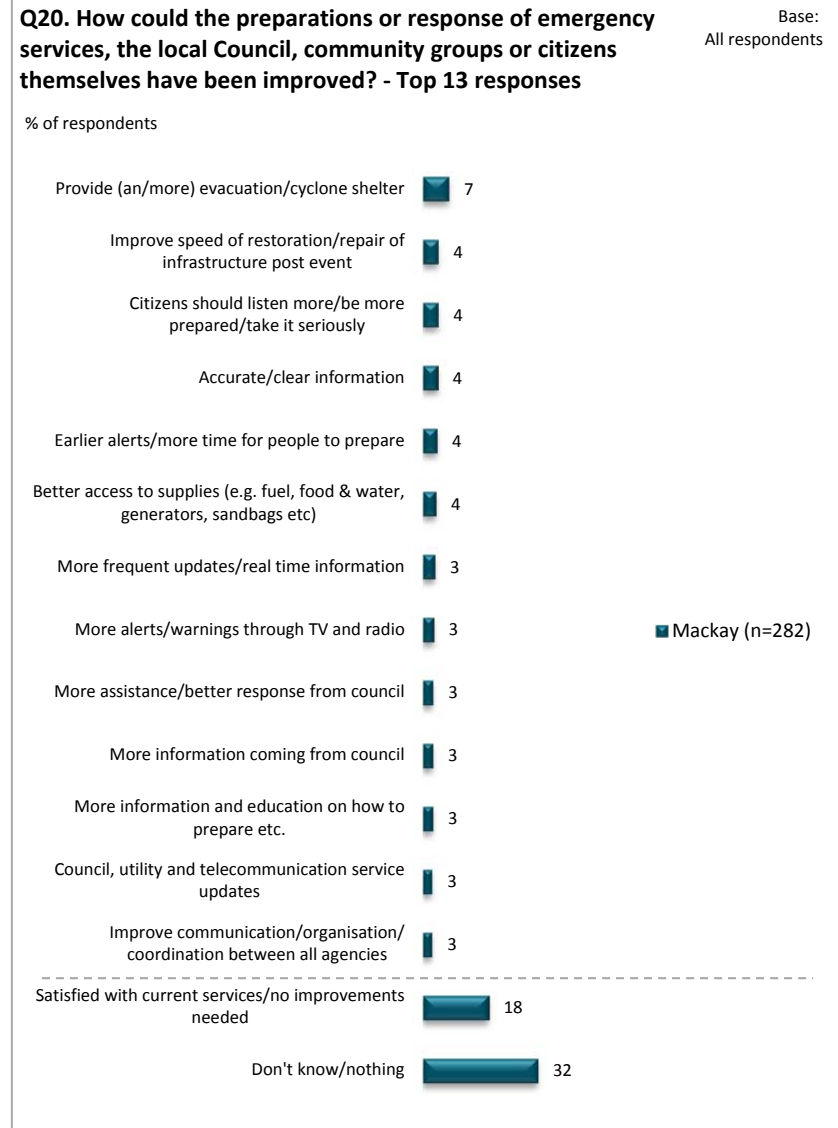
Mackay respondents were asked for their suggested improvements to the preparations and response of emergency services, the local council, community groups or citizens themselves. The most common themes arising in response to this are as follows:

- Provide more evacuation or cyclone shelters (7%)
- Improve speed of restoration or repair of infrastructure post event (e.g. telecommunications, utilities, roads) (4%)
- Citizens should listen more/be more prepared/take it more seriously (4%)
- Provide accurate/clear information (4%)
- Provide earlier alerts/more time for people to prepare (4%)
- Provide better access to supplies (e.g. fuel, food, water, generators, sandbags) (4%).

The top 13 reasons are displayed in the adjacent chart while remaining suggestions are included in the table overleaf.

#### Sub-group differences

Females are more likely than males to request more accurate/clear information (7% female, 2% male), more assistance/better response from council (6% female, <1% male) or more alerts/warnings through social media/SMS (4% female, no responses from males).



Q20. And apart from the comments you made earlier about emergency warnings, how could the preparations or response of emergency services, the local council, community groups or citizens themselves have been improved? What could have been done differently to have helped you or others at any stage of the event? What else?

Base: All respondents	Gender			Age		You had to evacuate from your home	
	Total n=282	Male n=117	Female n=165	Under 45 n=65	45 and over n=217	Yes n=35	No n=247
Satisfied with current services/no improvements needed	18%	21%	15%	15%	21%	18%	18%
Provide (an/more) evacuation/cyclone shelter	7%	5%	10%	9%	6%	14%	6%
Improve speed of restoration/repair of infrastructure post event (e.g. telecommunications, utilities, roads etc.)	4%	2%	6%	5%	4%	8%	4%
Citizens should listen more/be more prepared/take it seriously	4%	2%	7%	6%	3%	2%	5%
Accurate/clear information	4%	2% ↓	7% ↑	4%	4%	6%	4%
Earlier alerts/more time for people to prepare	4%	2%	6%	4%	4%	13%	3%
Better access to supplies (e.g. fuel, food & water, generators, sandbags etc.)	4%	2%	5%	5%	2%	8%	3%
More frequent updates/real time information	3%	2%	5%	4%	3%		4% ↑
More alerts/warnings through TV and radio	3%	2%	4%	4%	2%	4%	3%
More assistance/better response from council	3%	* ↓	6% ↑	3%	3%	4%	3%
More information coming from council	3%	2%	3%	5%	2%		3% ↑
More information and education on how to prepare, where and how to evacuate, make people aware of dangers	3%	3%	2%	3%	3%	2%	3%
Council, utility and telecommunication service updates (e.g. power outages, clean-up, road and bridge openings/closures etc)	3%	1%	4%	1%	4%	6%	2%
Improve communication/organisation/coordination between all agencies	3%	3%	2%	4%	2%	6%	2%
Ensure alerts have reached everyone	2%	3%	1%	3%	2%		2%
More alerts/warnings through social media/SMS	2%		4% ↑	2%	2%		2% ↑
Other mentions of better communication	2%	2%	2%	4%	1%		2%
Citizens should not carry out dangerous behaviours (driving through waters, jet skiing, looting)	1%	2%	*	3%	*		1%
Improve infrastructure to reduce effects of an event (e.g. levy, dam, strengthened utilities etc)	1%	2%	*		2% ↑		1% ↑
Better communication when power is down	1%	1%	1%	1%	1%		1%
More door knocking	1%	1%	1%	1%	1%		1%
Citizens should help each other (support each other, know and check on neighbours)	1%	*	2%	1%	1%	4%	1%
More localised/relevant/area-specific warnings/information/road closure information	1%	*	1%	1%	*		1%
More assistance for tourists/people new in the area/the elderly	1%	*	1%		1%		1%
Have warning sirens/drive around with a speaker/siren on radio or TV	*	1%			1%		1%
More face to face contact	*	1%			1%		1%
More alerts/warnings on rising flood levels	*	*	*		1%		1%
Improve disaster financial relief (more people to be eligible, easier to apply for, faster process)	*		1%		1%		*
More help for longer to be provided by SES, emergency services/better presence	*		1%		1%		*
Do not over exaggerate (can cause fear) (media, text messages)	*	*			*		*
Other	2%	3%	2%	4%	1%	2%	2%
Don't know/nothing	32%	38%	26%	31%	33%	24%	33%

\*Indicates less than 1% of respondents.

↑ ↓ indicates a significant difference to the average at at least the 95% confidence level.



## 7.0 Telecommunications

### 7.1 Telephony and internet

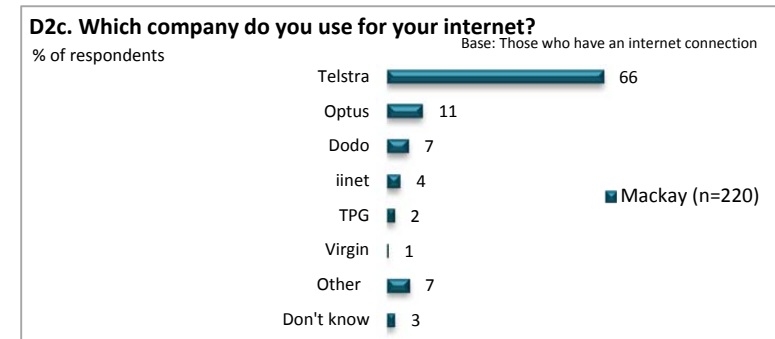
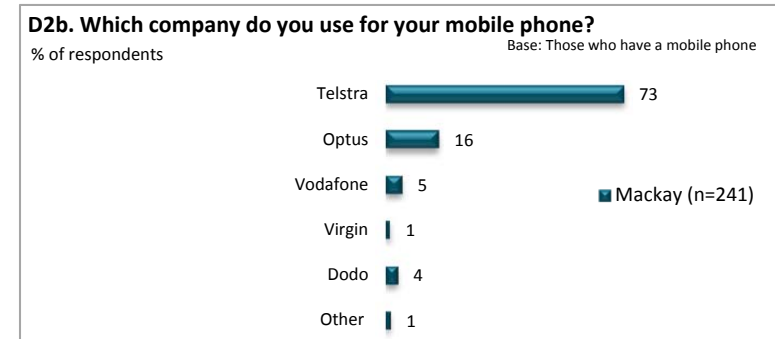
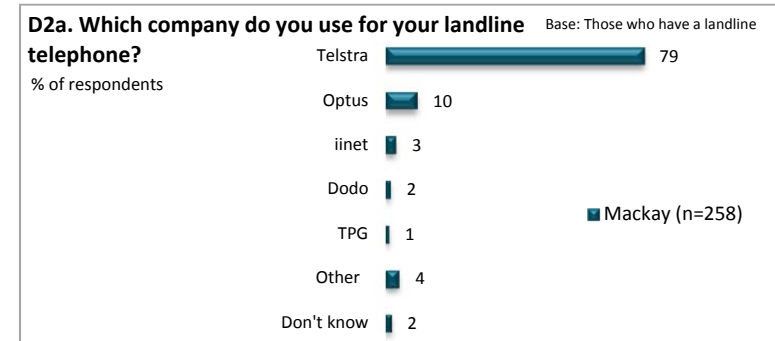
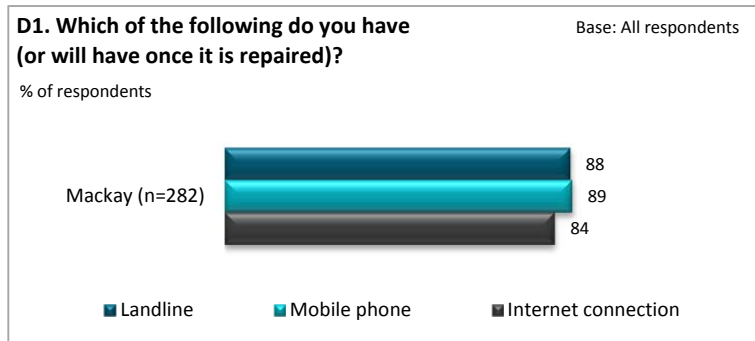
D1. Which of the following do you have (or will have once it is repaired)?  
 D2abc. Which company do you use for your landline/mobile/internet?

The majority of residents living in the Mackay survey area reported ownership of a mobile phone (89%), landline (88%) or internet connection (84%).

Telstra is reportedly the most common landline provider (79%), mobile phone provider (73%) and internet provider (66%).

#### Sub-group differences

Internet connections are more common among those aged under 45 years (90%) than over 45 years (80%) although a drop off in connection rates is most noticeable for residents aged 65 years or older (48%).



D1. Which of the following do you have (or will have once it is repaired)?

Base: All respondents	Gender			Age											
	Total n=282	Male n=117	Female n=165	Under 45 n=65	45 and over n=217	18 to 24 years n=7^	25 to 29 years n=6^	30 to 34 years n=16^	35 to 39 years n=8^	40 to 44 years n=28^	45 to 49 years n=29^	50 to 54 years n=36	55 to 59 years n=36	60 to 64 years n=39	65 years or over n=77
Landline	88	86	90	83	92	70	88	74	84	91	86	86	94	95	100 ↑
Mobile phone	89	86	91	90	87	79	100	90	77	97	100	86	97 ↑	84	69 ↓
Internet connection	84	82	86	90 ↑	80 ↓	79	100	90	77	97	98	86	89	81	48 ↓

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

^Caution: Small cell size

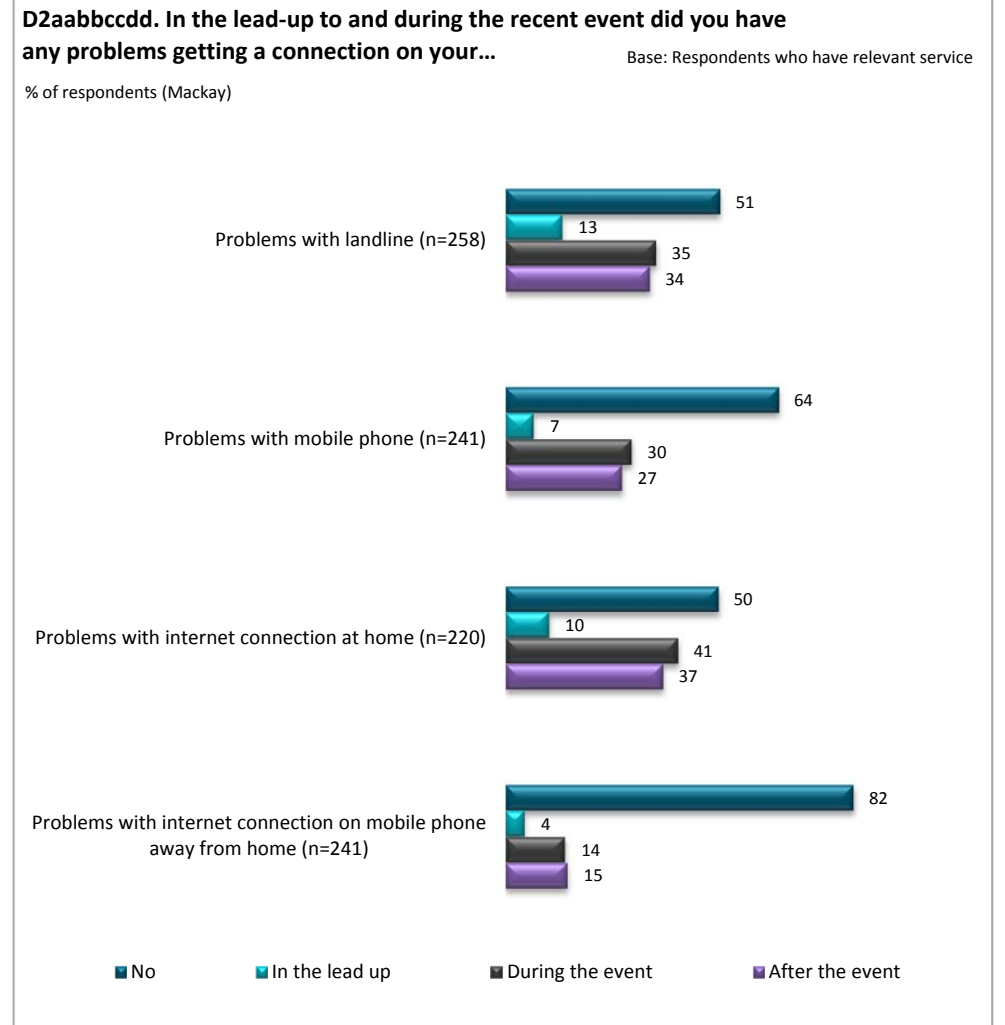
## 7.2 Problems with connections

*D2aabbccdd. In the lead-up to and during the recent event did you have any problems getting a connection on your...*

In Mackay in the lead-up to, during or after Tropical Cyclone Debbie:

- 50% of home internet users report they had a connection problem on their home internet
- 49% of landline holders report they had problems connecting to this service
- 36% of mobile phone users report experience of mobile phone connection problems
- 18% of mobile internet users report they had problems with mobile internet access when away from home.

Problems were most common during or after the event.



D2aa. In the lead-up to and during the recent event did you have any problems getting a connection on your landline telephone...

Base: All respondents who have a landline	Landline provider							
	Total n=258	Telstra n=213	Optus n=20 <sup>^</sup>	TPG n=3 <sup>^</sup>	iinet n=4 <sup>^</sup>	Dodo n=4 <sup>^</sup>	Other n=11 <sup>^</sup>	Don't know n=3 <sup>^</sup>
NO	51%	48%	74%	100%	62%	33%	36%	15%
SUB-TOTAL Yes	49%	52%	26%		38%	67%	64%	85%
In the lead up	13%	14%	13%			67%		
During the event	35%	38%	18%		38%	33%	53%	
After the event	34%	35%	18%		38%	33%	35%	85%

D2bb. In the lead-up to and during the recent event did you have any problems getting a connection on your mobile phone...

Base: All respondents who have a mobile phone	Mobile phone provider						
	Total n=241	Telstra n=183	Optus n=36	Virgin n=3 <sup>^</sup>	Vodafone n=8 <sup>^</sup>	Dodo n=5 <sup>^</sup>	Other n=6 <sup>^</sup>
NO	64%	61%	63%	60%	90%	100%	84%
SUB-TOTAL Yes	36%	39%	37%	40%	10%		16%
In the lead up	7%	7%	5%	40%			
During the event	30%	32%	30%	40%	10%		16%
After the event	27%	30%	30%	40%			16%

<sup>^</sup>Caution: Small cell size

D2cc. In the lead-up to and during the recent event did you have any problems getting an internet connection at home on a PC, laptop, tablet or mobile phone ...

Base: All respondents who have internet	Internet provider								
	Total n=220	Telstra n=154	Optus n=22 <sup>^</sup>	TPG n=4 <sup>^</sup>	iinet n=6 <sup>^</sup>	Virgin n=1 <sup>^</sup>	Dodo n=11 <sup>^</sup>	Other n=17 <sup>^</sup>	Don't know n=5 <sup>^</sup>
NO	50%	48%	69%	35%	50%		57%	53%	19%
SUB-TOTAL Yes	50%	52%	31%	65%	50%	100%	43%	47%	81%
In the lead up	10%	10%	5%			100%	16%	19%	10%
During the event	41%	45%	26%	65%	50%	100%	4%	27%	81%
After the event	37%	39%	26%	11%	50%	100%	27%	27%	81%

D2dd. In the lead-up to and during the recent flood event did you have any problems getting an internet connection on your mobile phone when away from home...

Base: All respondents who have a mobile phone	Internet provider								
	Total n=241	Telstra n=150	Optus n=22 <sup>^</sup>	TPG n=4 <sup>^</sup>	iinet n=6 <sup>^</sup>	Virgin n=1 <sup>^</sup>	Dodo n=11 <sup>^</sup>	Other n=16 <sup>^</sup>	Don't know n=5 <sup>^</sup>
NO	82%	80%	83%	88%	100%		65%	96%	90%
SUB-TOTAL Yes	18%	20%	17%	12%		100%	35%	4%	10%
In the lead up	4%	4%		12%		100%	16%		10%
During the event	14%	16%	12%	12%		100%	19%	4%	10%
After the event	15%	19% ↑	10%	12%		100%	8%	4%	10%

<sup>^</sup>Caution: Small cell size

↑↓ indicates a significant difference to the average at at least the 95% confidence level.



# Findings – Whitsundays

## 1.0 Community Engagement

### 1.1 Knowledge of Disaster Management Arrangement

Q1. Firstly, how would you rate your knowledge of the Disaster Management Arrangements? Would it be...?

Most (73%) Whitsundays respondents rate their knowledge of the Disaster Management Arrangements as extensive (16%) or good (57%). 20% rate their knowledge as limited while 5% say they have no knowledge at all.

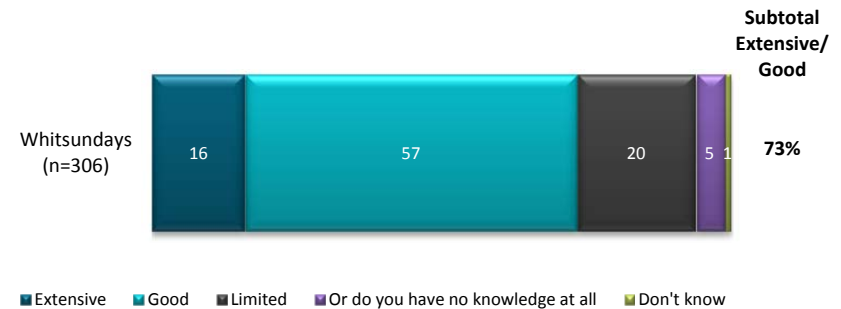
#### Sub-group differences

As would be expected, those aware of the Local Disaster Management Group (LDMG) (80%) are more likely than those unaware (64%) to estimate their knowledge as either good or extensive.

Those who have not had any previous disaster experience (32%) are more likely than those who have (16%) to say they have only limited knowledge of arrangements.

Q1. Firstly, how would you rate your knowledge of the Disaster Management Arrangements? Would it be...? Base: All respondents

% of respondents





Q1. Firstly, how would you rate your knowledge of the Disaster Management Arrangements? Would it be...?

Base: All respondents	Gender		Age		LDMG Awareness		
	Total n=306	Male n=127	Female n=179	Under 45 n=69	45 and over n=237	Yes n=185	No n=121
Extensive	16%	14%	19%	14%	18%	19%	12%
Good	57%	57%	58%	56%	58%	61%	52%
<b>SUBTOTAL extensive/good</b>	<b>73%</b>	<b>71%</b>	<b>77%</b>	<b>70%</b>	<b>76%</b>	<b>80% ↑</b>	<b>64% ↓</b>
Limited	20%	25%	16%	24%	18%	15% ↓	28% ↑
Or do you have no knowledge at all	5%	3%	7%	6%	5%	3%	8%
<b>SUBTOTAL limited/none</b>	<b>25%</b>	<b>28%</b>	<b>23%</b>	<b>30%</b>	<b>22%</b>	<b>18% ↓</b>	<b>36% ↑</b>
Don't know	1%	2%	*		2%	2%	

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

\*Indicates less than 1% of respondents.

## 1.2 Disaster management responsibility

Q2. Who do you believe is responsible for Disaster Management generally in your area?

The local council is the organisation that Whitsundays respondents are most likely to consider generally responsible for disaster management in their area (70%). After council, the State Emergency Service (SES) (25%) is mentioned, followed by individual residents such as family, friends or neighbours (12%).

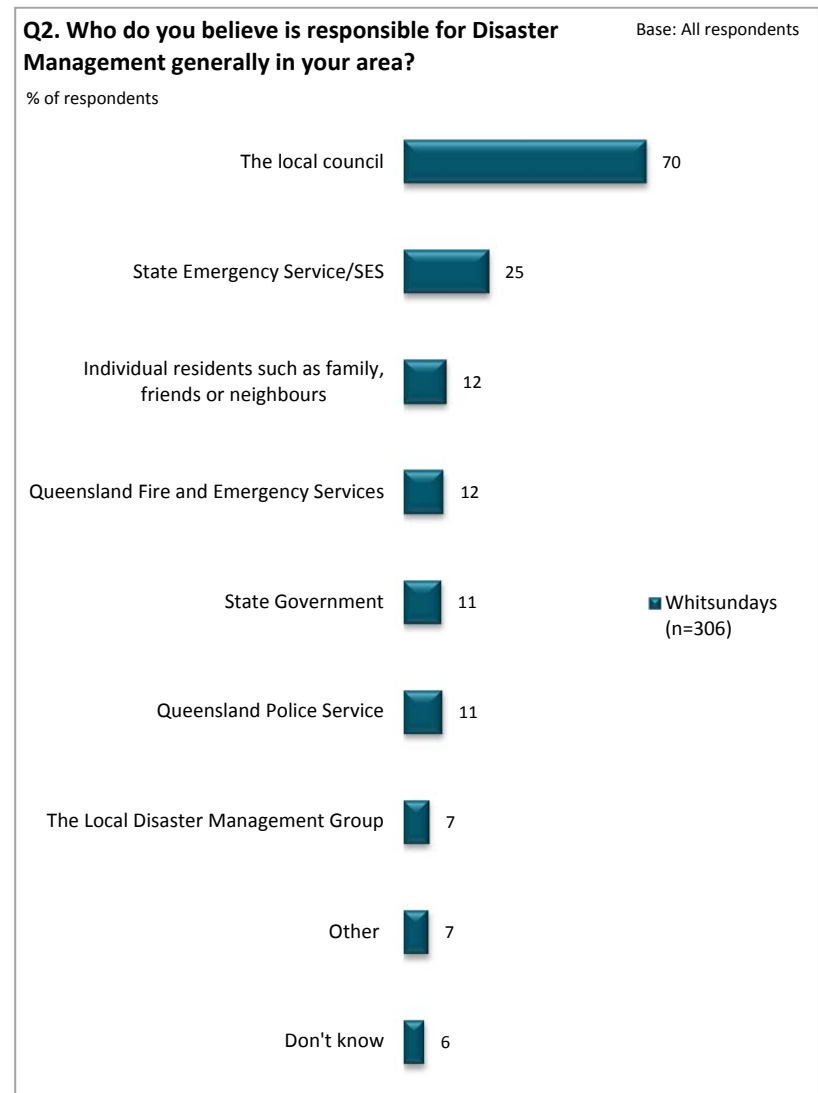
### Sub-group differences

Those aware of the LDMG (75%) are more likely than those who are not (61%) to nominate the local council as being responsible for disaster management.

Respondents with previous disaster event experience (13%) are more likely than those with no experience (6%) to consider the State Government to be responsible.

Males (16%) are more likely than females (7%) to believe that the Queensland Fire and Emergency Services (QFES) are responsible.

Those aged 45 years and over (33%) are more likely than those aged under 45 years (13%) to nominate the SES as being responsible.



Q2. Who do you believe is responsible for disaster management generally in your area?

Base: All respondents	Gender		Age		Prior Disaster Experience		
	Total n=306	Male n=127	Female n=179	Under 45 n=69	45 and over n=237	Yes n=229	No n=77
The local council	70%	70%	69%	71%	69%	68%	74%
State Emergency Service/SES	25%	26%	23%	13% ↓	33% ↑	26%	19%
Individual residents such as family, friends or neighbours	12%	15%	10%	11%	13%	15% ↑	6% ↓
Queensland Fire and Emergency Services	12%	16% ↑	7% ↓	8%	14%	12%	12%
State Government	11%	11%	11%	13%	10%	13% ↑	5% ↓
Queensland Police Service	11%	15%	7%	7%	14%	13%	6%
The Local Disaster Management Group	7%	7%	7%	6%	8%	8%	6%
Other	7%	7%	7%	8%	7%	8%	4%
Don't know	6%	4%	8%	6%	6%	5%	8%

↑ ↓ indicates a significant difference to the average at at least the 95% confidence level.

### 1.3 Awareness of Local Disaster Management Group

*Q3. Before today had you heard of the Local Disaster Management Group? It may also be known as the Local Emergency Management Group?*

Six in ten (61%) residents in the Whitsundays survey area say they were aware of the Local Disaster Management Group (LDMG) prior to the survey.

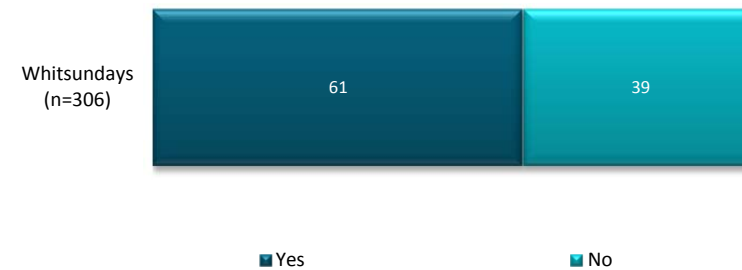
#### *Sub-group differences*

Respondents aged 65 years or over (47%) are less likely than average (61%) to have awareness of the LDMG.

**Q3. Before today had you heard of the Local Disaster Management Group? It may also be known as the Local Emergency Management Group.**

Base: All respondents

% of respondents



Q3. Before today had you heard of the Local Disaster Management Group? It may also be known as the Local Emergency Management Group?

Base: All respondents	Gender		Age		Prior Disaster Experience		
	Total n=306	Male n=127	Female n=179	Under 45 n=69	45 and over n=237	Yes n=229	No n=77
Yes	61%	55%	67%	59%	62%	63%	55%
No	39%	45%	33%	41%	38%	37%	45%

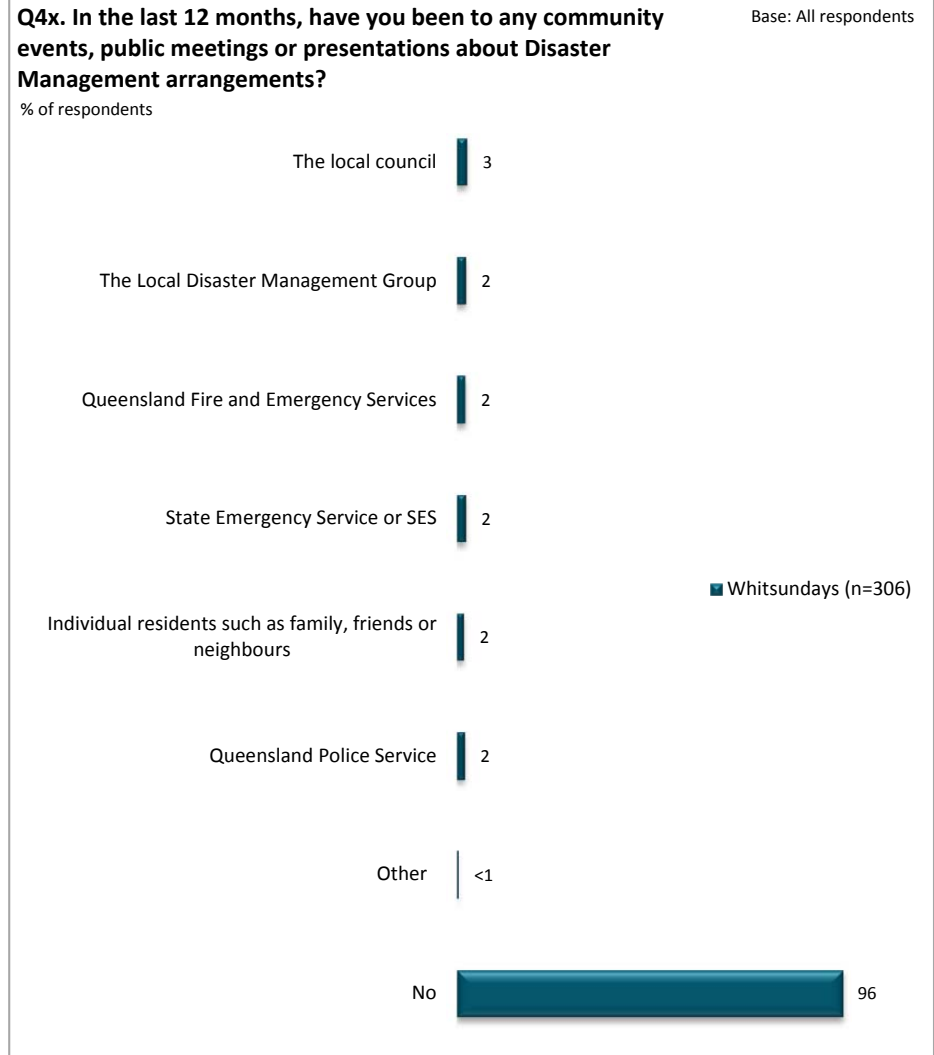
## 1.4 Disaster Management Arrangements - event attendance

*Q4x. In the last 12 months, have you been to any community events, public meetings or presentations about Disaster Management Arrangements? If yes, which of the following groups organised or were in attendance?*

96% of Whitsundays respondents in the survey area say they have not attended any community events or meetings in relation to Disaster Management Arrangements in the past 12 months, while 4% report that they have. The local council, LDMG, QFES, SES and QPS are all reported to have held public events about disaster management in the past year.

### *Sub-group differences*

Those aware of the LDMG (6%) are more likely than average (4%) to have attended an event in the previous 12 months.



Q4x. In the last 12 months, have you been to any community events, public meetings or presentations about Disaster Management arrangements? If yes, which of the following groups organised or were in attendance?

Base: All respondents	Gender		Age		LDMG Awareness		You had to evacuate from your home		
	Total n=306	Male n=127	Female n=179	Under 45 n=69	45 and over n=237	Yes n=185	No n=121	Yes n=25^	No n=281
SUBTOTAL Yes	4%	2%	6%	3%	4%	6% ↑	* ↓	9%	3%
The local council	3%	2%	3%	3%	2%	4% ↑		5%	2%
The Local Disaster Management Group	2%	2%	3%	2%	2%	4% ↑		5%	2%
Queensland Police Service	2%	2%	2%	2%	2%	3% ↑		7%	2%
Queensland Fire and Emergency Services	2%	2%	3%	3%	1%	4% ↑		5%	2%
State Emergency Service or SES	2%	2%	2%	2%	2%	4% ↑		9%	2%
Individual residents such as family, friends or neighbours	2%	2%	2%	2%	2%	3%		7%	1%
Other	*		1%		1%	*	*		*
SUBTOTAL No	96%	98%	94%	97%	96%	94% ↓	100% ↑	91%	97%

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

\*Indicates less than 1% of respondents.

^Caution: Small cell size

## 2.0 Confidence - understanding risks and preparations for future events

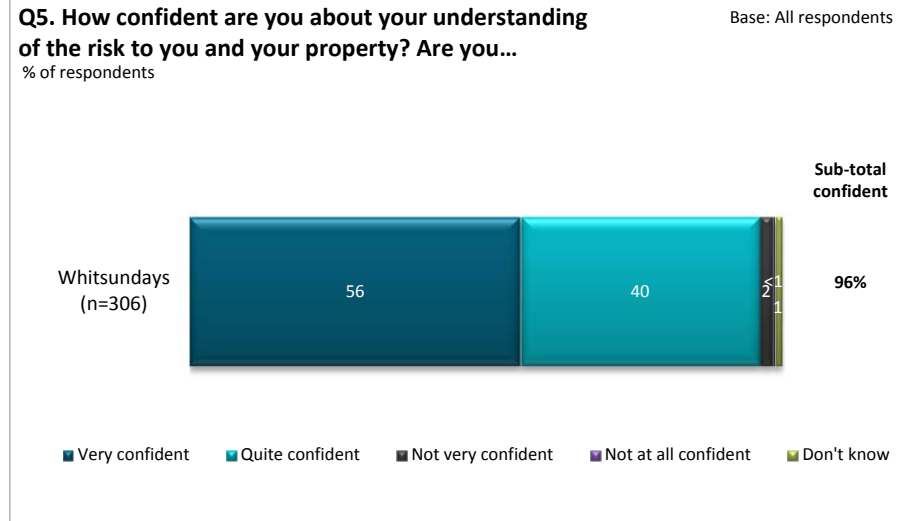
### 2.1 Understanding of risk to self and property

Q5. How confident are you about your understanding of the risk to you and your property?  
Are you...

96% of Whitsundays respondents in the survey area say they are confident in understanding the risk to themselves and their property (56% very confident, 40% quite confident).

#### Sub-group differences

Results are consistent across sub-groups.





Q5. How confident are you about your understanding of the risk to you and your property? Are you...

Base: All respondents	Gender		Age		You had to evacuate from your home		
	Total n=306	Male n=127	Female n=179	Under 45 n=69	45 and over n=237	Yes n=25^	No n=281
Very confident	56%	53%	59%	58%	55%	42%	57%
Quite confident	40%	44%	37%	39%	41%	54%	39%
<b>SUBTOTAL Confident</b>	<b>96%</b>	<b>97%</b>	<b>96%</b>	<b>97%</b>	<b>96%</b>	<b>97%</b>	<b>96%</b>
Not very confident	2%	1%	4%	1%	3%		2%
Not at all confident	*	1%			*		*
<b>SUBTOTAL Not Confident</b>	<b>2%</b>	<b>1%</b>	<b>4%</b>	<b>1% ↓</b>	<b>3%</b>		<b>3%</b>
Don't know	1%	2%	1%	2%	1%	3%	1%

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

\*Indicates less than 1% of respondents.

^Caution: Small cell size

## 2.2 Confidence in being prepared for future events

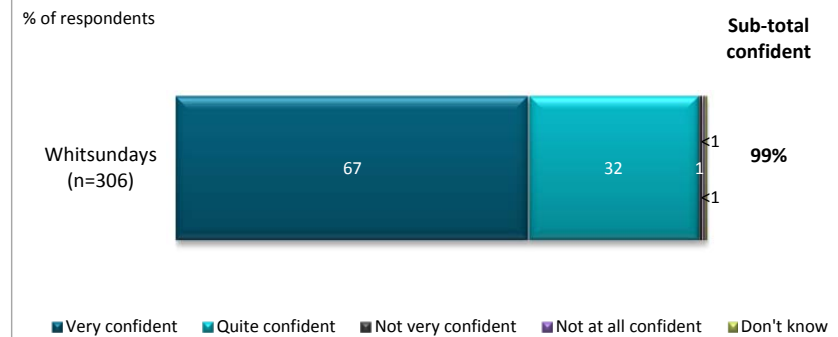
Q6. How confident are you in regards to being prepared for and knowing how to respond to events in the future? Are you...

Almost all Whitsundays residents surveyed (99%) report confidence in being prepared for and knowing how to respond to events in the future (67% very confident, 32% quite confident).

### Sub-group differences

Respondents who experienced a telecommunications outage as a result of Tropical Cyclone Debbie (98%) or those who have prior disaster experience (98%) are less likely than average (99%) to say they are confident in being prepared for future events.

**Q6. How confident are you in regards to being prepared for and knowing how to respond to events in the future? Are you...** Base: All respondents



Q6. How confident are you in regards to being prepared for and knowing how to respond to events in the future? Are you...

Base: All respondents	Gender			Age		Key Impacts												
	Total n=306	Male n=127	Female n=179	Under 45 n=69	45 and over n=237	Power outage n=300	Telco outage n=255	Home was damaged n=225	Limited food, water or fuel supplies n=198	Other property was damaged n=186	Isolated or cut off from town, work or moving in and out of your home n=168	Emotional impact n=157	Loss of income n=137	Schools or day-care centres were closed n=110	Other property was destroyed or lost n=59	Had to evacuate from your home n=25^	Physical injury n=11^	Home was destroyed n=7^
Very confident	67%	68%	66%	70%	64%	66%	65%	65%	66%	64%	66%	60% ↓	72%	67%	73%	71%	64%	29%
Quite confident	32%	31%	33%	29%	34%	32%	33%	34%	33%	35%	32%	38%	26%	32%	22%	27%	36%	35%
<b>SUBTOTAL Confident</b>	<b>99%</b>	<b>99%</b>	<b>98%</b>	<b>99%</b>	<b>99%</b>	<b>99%</b>	<b>98% ↓</b>	<b>99%</b>	<b>99%</b>	<b>98%</b>	<b>98%</b>	<b>98%</b>	<b>99%</b>	<b>99%</b>	<b>96%</b>	<b>98%</b>	<b>100%</b>	<b>64%</b>
Not very confident	1%	*	1%		1%	1%	1%	1%	*	*	*	1%	1%	1%	1%	2%		14%
Not at all confident	*		1%	1%		*	1%		1%	1%	1%	1%			2%			22%
<b>SUBTOTAL Not Confident</b>	<b>1%</b>	<b>*</b>	<b>2%</b>	<b>1%</b>	<b>1%</b>	<b>1%</b>	<b>1%</b>	<b>1%</b>	<b>1%</b>	<b>1%</b>	<b>1%</b>	<b>2%</b>	<b>1%</b>	<b>1%</b>	<b>3%</b>	<b>2%</b>		<b>36%</b>
Don't know	*	1%			*	*	*	*		*	*				1%			

↑ ↓ indicates a significant difference to the average at at least the 95% confidence level.

\*Indicates less than 1% of respondents.

^Caution: Small cell size

## 3.0 Impact of Event

### 3.1 Impacts experienced

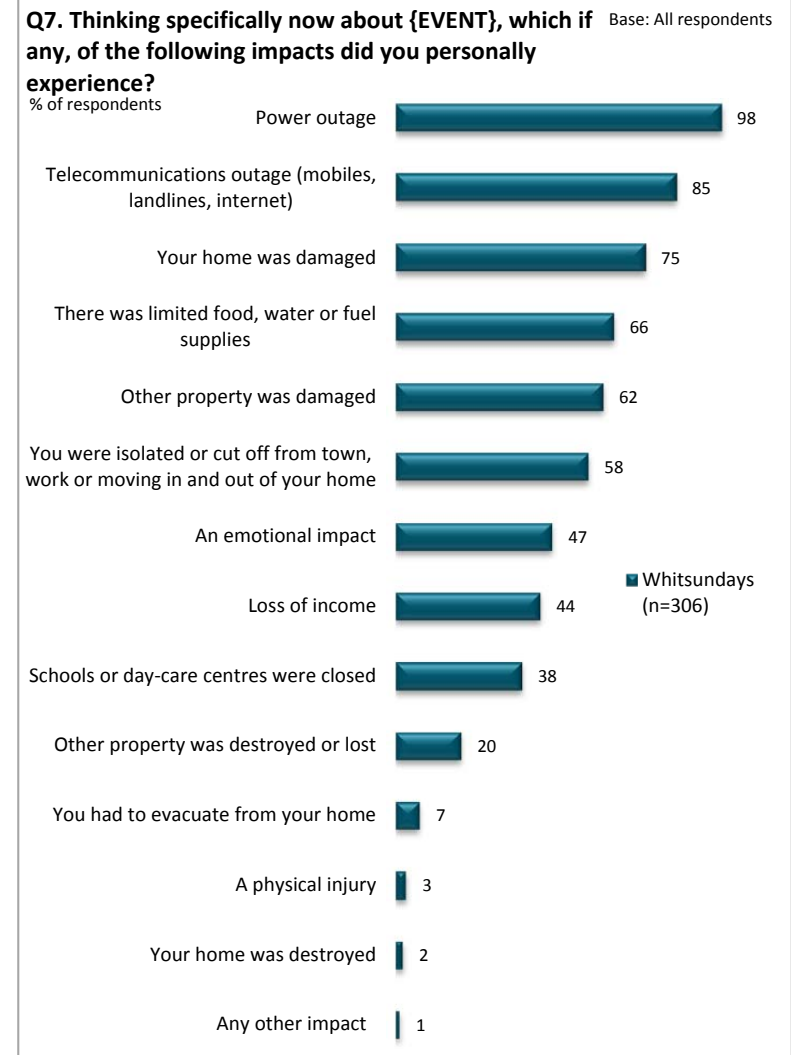
Q7. Thinking specifically now about {EVENT}, which if any, of the following impacts did you personally experience?

Power and telecommunications outages (98%, 85% respectively) are the most commonly reported impacts of the event according to survey respondents in the Whitsundays. Other impacts commonly mentioned are damage to the home (75%), limited food, water or fuel supplies (66%), other (non-home) property damage (62%) or isolation (58%).

7% of Whitsundays survey respondents say they had to evacuate their home in response to Tropical Cyclone Debbie.

#### Sub-group differences

Females are more generally more likely than males to report personally experiencing an impact of Tropical Cyclone Debbie.



Q7. Thinking specifically now about {EVENT}, which if any, of the following impacts did you personally experience?

Base: All respondents	Gender		Age		
	Total n=306	Male n=127	Female n=179	Under 45 n=69	45 and over n=237
Power outage	98%	97%	99%	98%	98%
Telecommunications outage (mobiles, landlines, internet)	85%	85%	84%	89%	82%
Your home was damaged	75%	74%	76%	78%	73%
There was limited food, water or fuel supplies	66%	56% ↓	76% ↑	69%	63%
Other property was damaged	62%	59%	66%	64%	61%
You were isolated or cut off from town, work or moving in and out of your home	58%	54%	62%	65%	53%
An emotional impact	47%	37% ↓	58% ↑	43%	50%
Loss of income	44%	35% ↓	53% ↑	46%	42%
Schools or day-care centres were closed	38%	30% ↓	47% ↑	49% ↑	30% ↓
Other property was destroyed or lost	20%	16%	24%	21%	19%
You had to evacuate from your home	7%	6%	8%	7%	7%
A physical injury	3%	3%	3%	3%	3%
Your home was destroyed	2%	1%	4%	3%	1%
Any other impact	1%	2%	1%	2%	1%

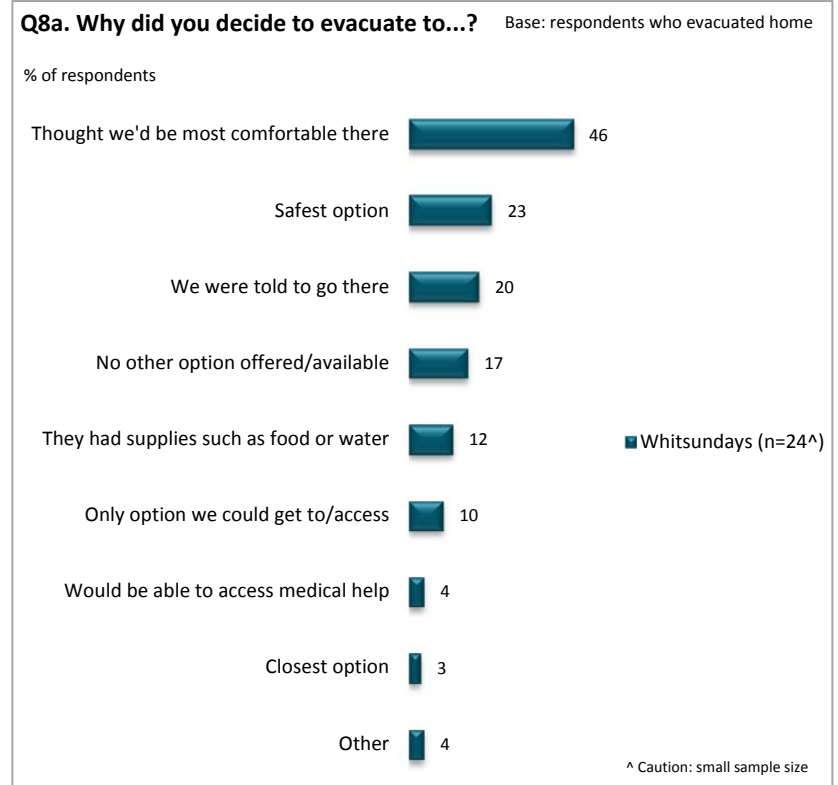
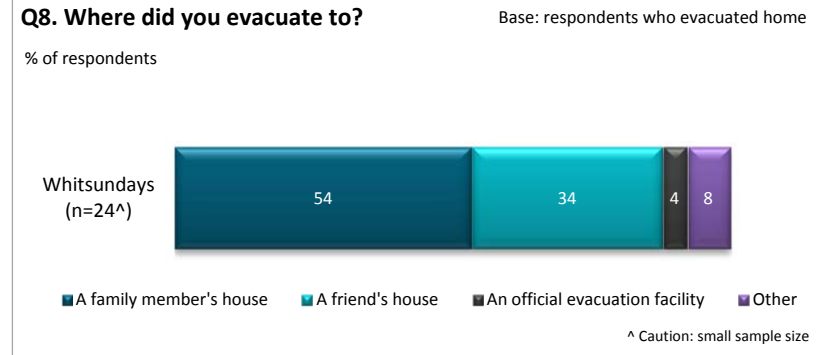
↑↓ indicates a significant difference to the average at at least the 95% confidence level.

### 3.2 Location used during evacuation

Q8. Where did you evacuate to?  
 Q8a. Why did you decide to evacuate to {insert location from Q8}?

Of Whitsundays residents who evacuated their home, most used an unofficial evacuation facility (54% went to a family member’s home, 34% to a friend’s home and 8% elsewhere). 4% of survey respondents report using an official evacuation facility during Tropical Cyclone Debbie.

Evacuation options are most commonly chosen on the basis of being perceived to be the most comfortable (46%), safest (23%) or there was no other option (17%). 20% say they chose their evacuation point after being told to go there.



## 4.0 Information & Warnings

### 4.1 Sources of information used prior to/during event

Q9a. In the lead-up to or during {EVENT} which, if any, of the following sources of information did you use?

Whitsundays residents report relying on a range of information sources in the lead-up to or during Tropical Cyclone Debbie, the most widely used being the Bureau of Meteorology (BOM) website (76%), a news source other than the ABC (57%), ABC News services (55%) or family, friends or neighbours (55%).

One third (33%) report sourcing information via the LDMG or the local council.

#### Sub-group differences

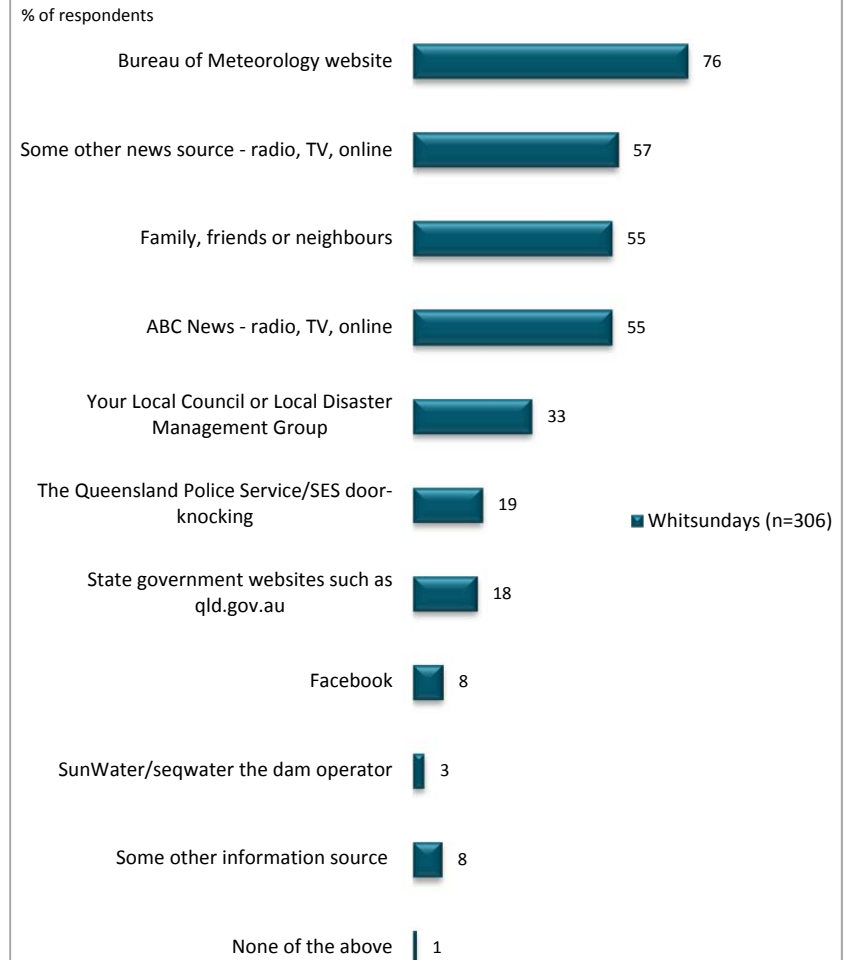
Respondents aged under 45 years are more likely than the older cohort to rely on the BOM website (84% <45, 71% 45+) or family, friends or neighbours (72%, 44%) for information.

Females (45%) are more likely than males (22%) to have used their local council or LDMG for information.

Those aware of the LDMG (82%) are more likely than those who are not aware of the group (67%) to have used the BOM website for information.

Q9a. In the lead-up to or during {EVENT} which, if any, of the following sources of information did you use?

Base: All respondents



Q9a. In the lead-up to or during {EVENT} which, if any, of the following sources of information did you use?

Base: All respondents	Total n=306	Gender		Age		LDMG Awareness		You had to evacuate from your home	
		Male n=127	Female n=179	Under 45 n=69	45 and over n=237	Yes n=185	No n=121	Yes n=25 <sup>^</sup>	No n=281
Bureau of Meteorology website	76%	74%	78%	84% ↑	71% ↓	82% ↑	67% ↓	73%	76%
Some other news source - radio, TV, online	57%	51%	63%	58%	56%	53%	63%	45%	58%
Family, friends or neighbours	55%	50%	61%	72% ↑	44% ↓	57%	52%	72%	54%
ABC News - radio, TV, online	55%	59%	51%	48%	60%	57%	52%	66%	54%
Your Local Council or Local Disaster Management Group	33%	22% ↓	45% ↑	38%	30%	35%	30%	60%	31%
The Queensland Police Service or the SES door-knocking or coming to your house to give you information or a warning	19%	15% ↓	25% ↑	16%	22%	21%	17%	42%	18%
State government websites such as qld.gov.au	18%	13%	23%	20%	17%	17%	19%	21%	18%
Facebook	8%	6%	11%	13%	5%	11%	5%	41%	6%
SunWater/seqwater the dam operator	3%	2%	4%	4%	2%	4%	2%	12%	3%
Some other information source	8%	7%	10%	11%	6%	9%	7%	14%	8%
None of the above	1%	1%	1%		2%	*	2%		1%

<sup>^</sup> Caution: small cell size.

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

\*Indicates less than 1% of respondents.



## 4.2 Main source of information used prior to/during event

Q9b. And which of those did you MAINLY use?

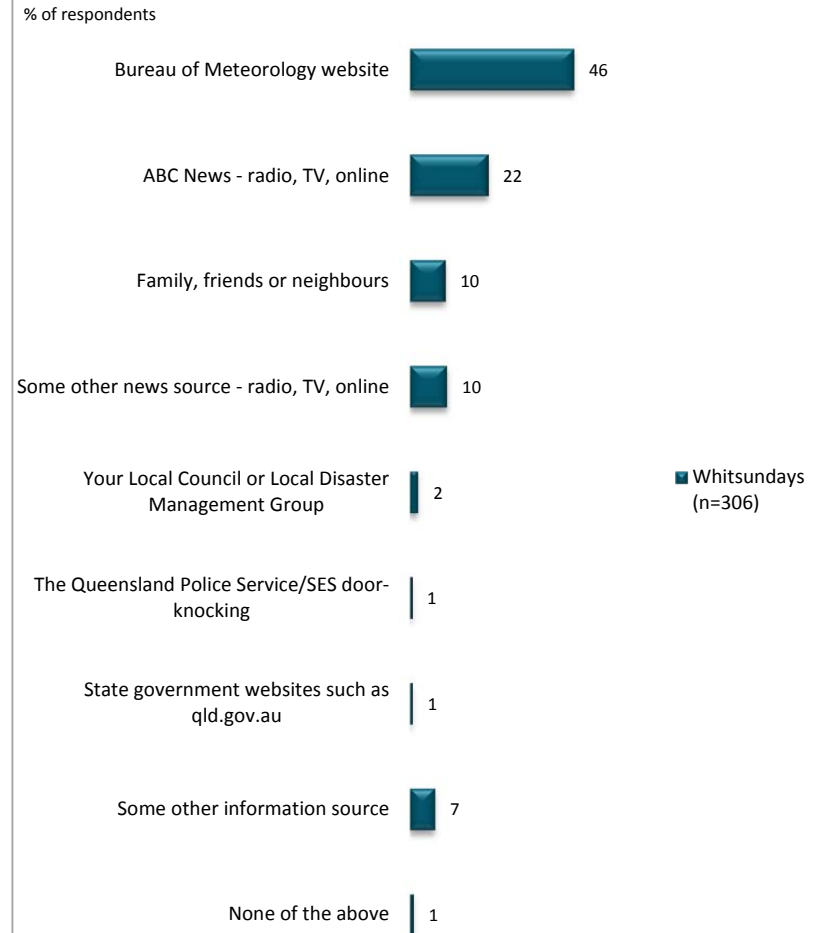
When asked to report the *main* source of information used during Tropical Cyclone Debbie, Whitsundays respondents are most likely to have used the BOM website (46%), followed by ABC news (22%), then family, friends or neighbours (10%) equal with a news source other than the ABC (10%).

### Sub-group differences

Respondents aged 45 years or older (29%) are more likely than younger residents (12%) to have used ABC news services as their main source of information.

### Q9b. And which of those did you MAINLY use?

Base: All respondents



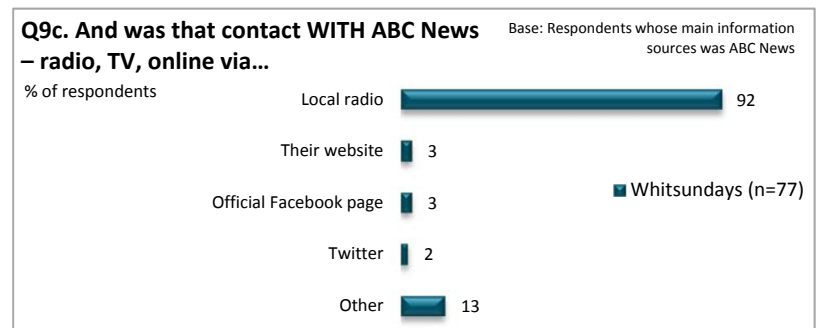
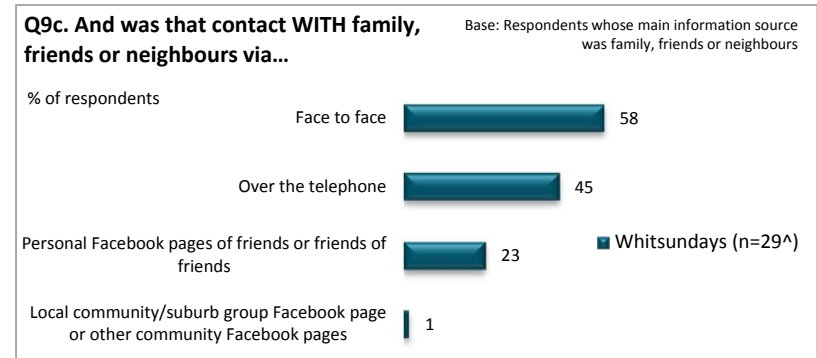
### 4.3 Type of contact with main source of information

Q9c. And was that contact WITH...

Whitsundays respondents who had contact with family, friends or neighbours are most likely to say their contact was face-to-face (58%), over the telephone (45%) or via Facebook (23%).

Contact with the local council or LDMG was most commonly via a text message (57%), followed by their website (43%) or the official council Facebook page (37%).

Local radio was by far the most common way of receiving ABC News (92%).



<sup>^</sup>Caution: Small cell size

## 4.4 Effectiveness of warning methods

Q10. Please rate the effectiveness of each of the following methods of receiving warnings during times of disaster. The first method is a, the next method is a...

According to Whitsundays residents, radio (76%) or text messages (76%) are most likely to be rated as effective methods of receiving warnings during times of disaster. After these methods, websites of relevant authorities (66%), a phone call to mobile from authorities (66%) or social media such as Facebook or Twitter (65%) are mentioned.

A phone call to a landline from authorities (44%) is rated as the least effective method. The perceived effectiveness of all options tested is detailed in the adjacent chart.

### Sub-group differences

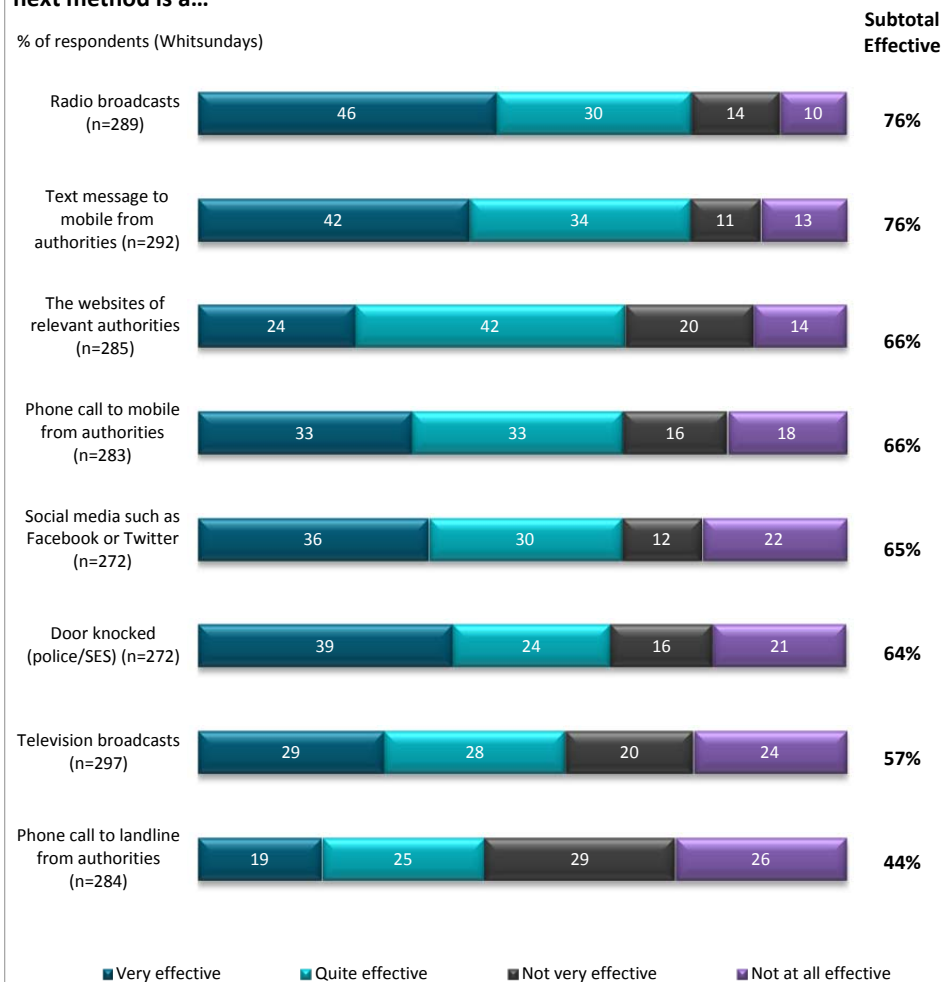
Those aged 65 years or older (63%) are more likely than average (44%) to rate a phone call from authorities to a landline as effective. They are the age group least likely to rate a text message to mobile as effective (60%, average 76%).

Those aged 45 years or younger are more likely than average to rate a range of warning methods as effective, especially social media (86%, 65% average) or the websites of authorities (75%, 66% average).

Females (73%) are more likely than males (58%) to consider social media to be effective for warnings.

Generally speaking, a sharp decline in acceptance of online, mobile or social media sources is noted among Whitsundays respondents aged 60 years or older.

Q10. Please rate the effectiveness of each of the following methods of receiving warnings during times of disaster. The first method is a, the next method is a... Base: All respondents excluding those who answered don't know



Q10. Please rate the effectiveness of each of the following methods of receiving warnings during times of disaster. The first method is a, the next method is a...

Base: All respondents, excluding those who answered don't know	Gender			Age											
	Total	Male	Female	Under 45	45 and over	18 to 24 years	25 to 29 years	30 to 34 years	35 to 39 years	40 to 44 years	45 to 49 years	50 to 54 years	55 to 59 years	60 to 64 years	65 years or over
<i>% of respondents rating method very/quite effective</i>															
Radio broadcasts (n=221)	76%	78%	74%	70%	80%	100%	56%	64%	80%	62%	86%	77%	64%	81%	85%
Text message to mobile from authorities (n=216)	76%	74%	79%	82%	71%	100%	85%	94%	85%	69%	77%	82%	72%	68%	60% ↓
Television broadcasts (n=172)	57%	55%	59%	55%	58%	100%	44%	74%	33%	48%	54%	69%	43%	55%	64%
Being door knocked or getting a visit to your house by police or SES (n=178)	64%	59%	69%	58%	68%	100%	73%	48%	55%	48%	71%	58%	72%	61%	73%
Phone call to mobile from authorities (n=187)	66%	66%	65%	65%	66%	89%	59%	53%	57%	69%	65%	67%	74%	65%	65%
Social media such as Facebook or Twitter (n=161)	65%	58% ↓	73% ↑	86% ↑	50% ↓	89%	85%	90%	77%	88%	61%	77%	49%	30% ↓	29% ↓
The websites of relevant authorities (n=180)	66%	62%	70%	75% ↑	59% ↓	100%	85%	64%	75%	72%	67%	76%	50%	55%	45% ↓
Phone call to landline from authorities (n=136)	44%	41%	48%	42%	46%	68%	44%	24%	43%	43%	29%	47%	38%	49%	63% ↑

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

## 4.5 Text message warnings

### 4.5.1 Receipt of official warnings via text message

Q11. In the lead-up to or during {EVENT}, did you receive any official WARNINGS via TEXT MESSAGE?

Q12. Who did you receive a text message from?

One in two (51%) Whitsundays residents in the survey area report receiving a warning via text message in the lead-up to or during Tropical Cyclone Debbie.

Of those who received a text message, the local council is most commonly stated as the source (53%), followed by the LDMG (13%). Three in ten (31%) cannot recall who the text came from.

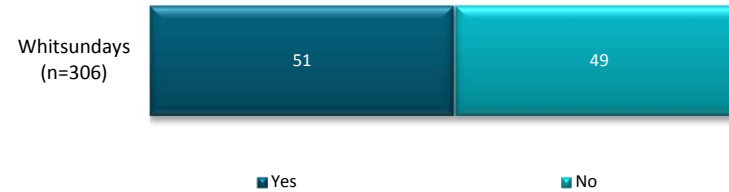
#### Sub-group differences

Receipt of a warning via text message is most prevalent among those aged under 45 years (70%) (particularly those aged under 35 years - up to 89%). The age group *least* likely to recall receiving a text message warning is the 65 years or older age group (21%).

#### Q11. Warning messages by Location

Base: All respondents

% of respondents



#### Q12. Who did you receive a text message from?

Base: Those who received a text message

% of respondents



Q11. In the lead-up to or during {EVENT}, did you receive any official WARNINGS via TEXT MESSAGE?

Base: All respondents	Gender			Age											
	Total n=306	Male n=127	Female n=179	Under 45 n=69	45 and over n=237	18 to 24 years n=7^	25 to 29 years n=6^	30 to 34 years n=12^	35 to 39 years n=18^	40 to 44 years n=26^	45 to 49 years n=25^	50 to 54 years n=59	55 to 59 years n=40	60 to 64 years n=50	65 years or over n=63
Yes	51%	51%	51%	70% ↑	38% ↓	89%	85%	84%	61%	60%	38%	59%	50%	33% ↓	21% ↓
No	49%	49%	49%	30% ↓	62% ↑	11%	15%	16%	39%	40%	62%	41%	50%	67% ↑	79% ↑

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

Q12. Who did you receive a text message from?

Base: Those who received a text message	Gender			Age											
	Total n=141	Male n=57	Female n=84	Under 45 n=47	45 and over n=94	18 to 24 years n=6^	25 to 29 years n=5^	30 to 34 years n=10^	35 to 39 years n=11^	40 to 44 years n=15^	45 to 49 years n=10^	50 to 54 years n=34	55 to 59 years n=20^	60 to 64 years n=16^	65 years or over n=14^
The Local Council	53%	54%	52%	42% ↓	67% ↑	33%	52%	38%	42%	47%	76%	44%	65%	95%	70%
Local Disaster Management Group	13%	8%	18%	20% ↑	3% ↓	12%		19%	30%	24%		6%	6%	5%	
Dam operator - seqwater or SunWater	*		1%		1%							2%			
Other	7%	6%	8%	6%	8%		17%	12%		5%		13%	10%	8%	7%
Not sure	31%	33%	29%	36%	24%	55%	48%	31%	28%	33%	24%	39%	19%	5%	23%

^ Caution: small cell size.

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

\*Indicates less than 1% of respondents.

## 4.5.2 Ease of understanding text message warnings

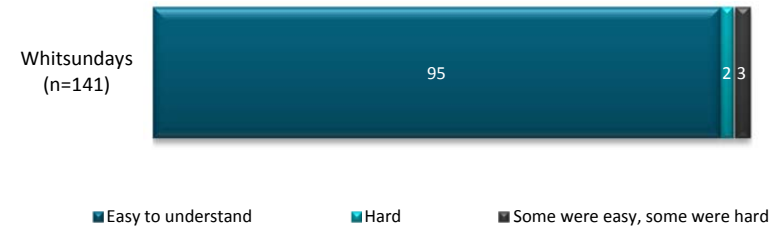
Q13a. Thinking about {any of} the text message warnings you received would you say they were generally....

95% of recipients of a text message in the Whitsundays report that the text message warnings received were easy to understand. 2% say they were hard to understand, while 3% report some being easy and others being hard to understand.

### Q13a. Understandable by Location

Base: Those who received a text message

% of respondents



Q13a. Thinking about {any of} the text message warnings you received would you say they were generally....

Base: Those who received a text message	Source of text message					
	Total n=141	The Local Council n=80	Local Disaster Management Group n=15 <sup>^</sup>	Dam operator - seqwater or SunWater n=1 <sup>^</sup>	Other n=12 <sup>^</sup>	Not sure n=40
Easy to understand	95%	94%	100%	100%	100%	95%
Hard	2%	2%				3%
Some were easy, some were hard	3%	4%				2%

<sup>^</sup> Caution: small cell size.

### 4.5.3 Why were text message warnings hard to understand?

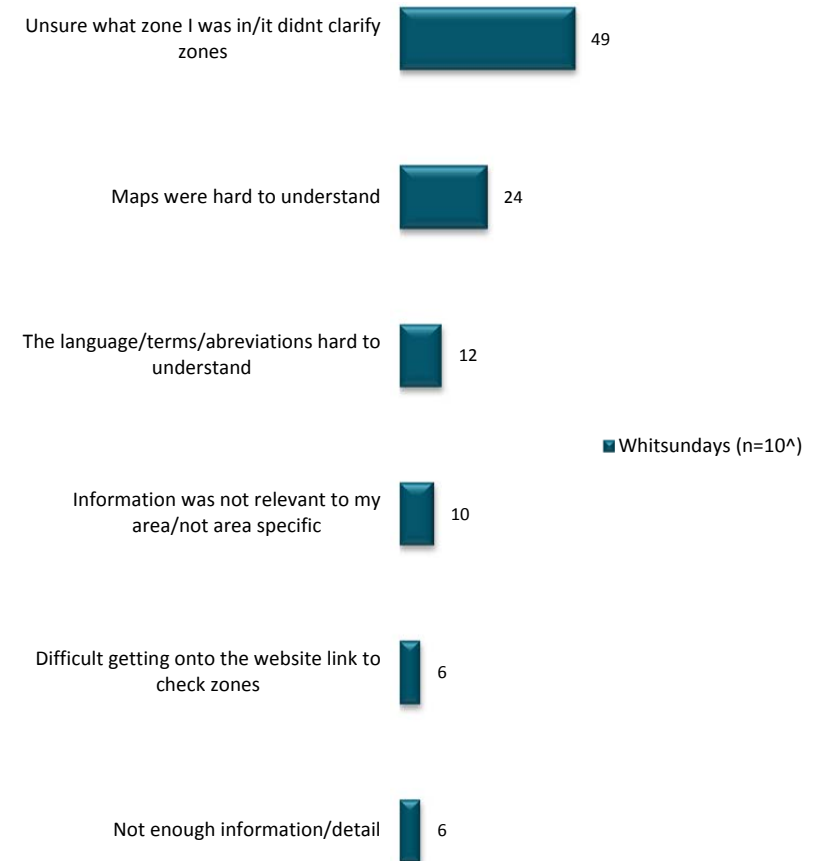
Q13aa. Why were the text message warnings you received hard to understand?

The main difficulty Whitsundays text recipients had in understanding their text messages was in relation to the reference to zones; 49% say they didn't understand what zone they were in or near to be able to assess their risk. 24% feel the maps were difficult to understand while 12% say they had difficulty understanding the language or abbreviations used.

#### Q13aa. Why were the text message warnings you received hard to understand?

% of respondents

Base: Those who received a text message they thought was hard to understand



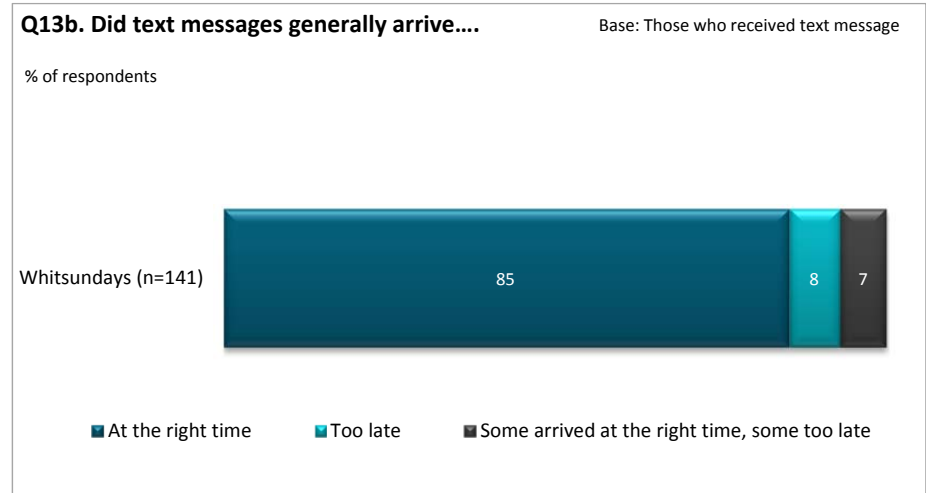
^Caution: Small cell size



#### 4.5.4 Timing of text messages

Q13b. Did text messages generally arrive...

Most (85%) text message recipients say the messages arrived at the right time, 8% feel the messages arrived too late, while the balance (7%) report some arriving on time while others arrived too late.



Q13b. Did text messages generally arrive...

Base: Those who received text message	Total n=141	Source of text message				
		The Local Council n=80	Local Disaster Management Group n=15 <sup>^</sup>	Dam operator - seqwater or SunWater n=1 <sup>^</sup>	Other n=12 <sup>^</sup>	Not sure n=40
At the right time, or	85%	91%	59%	100%	89%	81%
Too late	8%	4%	20%		7%	9%
Some arrived at the right time, some too late	7%	5%	21%		4%	10%

<sup>^</sup> Caution: small cell size.

#### 4.5.5 Relevance of text message

Q13c. Were they...

Of Whitsundays residents who received a text message, one in two (51%) report the text message as relevant to themselves and their property, 28% feel the messages were irrelevant, while 21% report that some messages were relevant and some were not.



Q13c. Were they....

Base: Those who received text message	Source of text message					
	Total n=141	The Local Council n=80	Local Disaster Management Group n=15 <sup>^</sup>	Dam operator - seqwater or SunWater n=1 <sup>^</sup>	Other n=12 <sup>^</sup>	Not sure n=40
Relevant to you and your property	51%	51%	58%	100%	89%	41%
Not relevant	28%	33%	9%			30%
Some were, some weren't	21%	16%	33%		11%	29%

<sup>^</sup> Caution: small cell size.

## 4.5.6 Action taken after receiving text message

Q13d. Did you take any action after receiving any of the text messages?

Q13e. What action did you take?

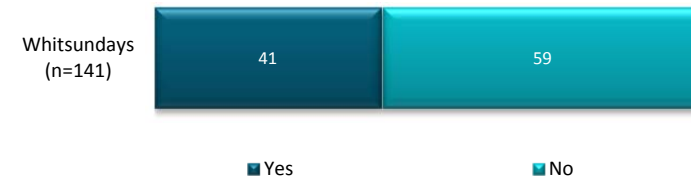
Four in ten (41%) Whitsundays text message recipients took action after receiving a text message.

Of those who took action, the most common response reported was preparing their property (50%). Other common responses were to stock up on food, water and or fuel (27%) or watch and listen for warnings more carefully (23%). 14% of text message recipients say they evacuated their home.

### Q13d. Did you take any action after receiving any of the text messages?

Base: Those who received text message

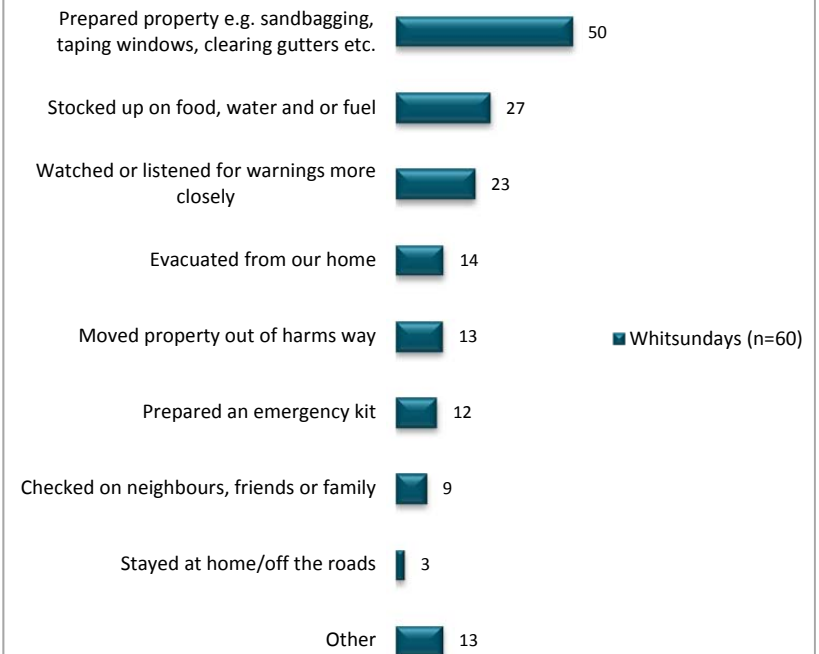
% of respondents



### Q13e. What action did you take?

Base: Those who took action

% of respondents



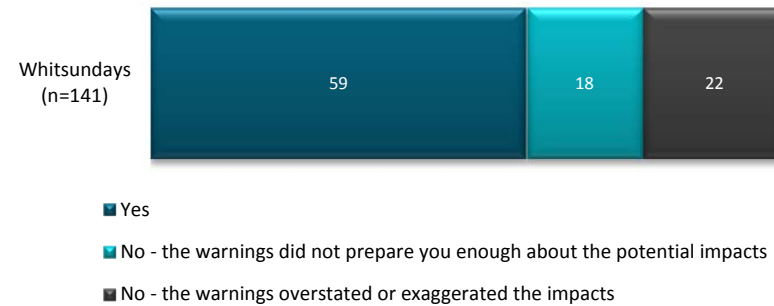
#### 4.5.7 Impact experienced matching text message warnings

Q13f. Did the actual impact or impacts you experienced match the text warnings you received?

59% of Whitsundays text message recipients feel that the actual impacts they experienced matched the text message warning(s) received. 22% feel the warnings overstated or exaggerated the impacts, while 18% feel the text message warnings did not prepare them *enough*.

**Q13f. Did the actual impact or impacts you experienced match the text warnings you received?**  
% of respondents

Base: Those who received a text message



Q13f. Did the actual impact or impacts you experienced match the text warnings you received?

Base: Those who received a text message	Source of text message					
	Total n=141	The Local Council n=80	Local Disaster Management Group n=15 <sup>^</sup>	Dam operator - seqwater or SunWater n=1 <sup>^</sup>	Other n=12 <sup>^</sup>	Not sure n=40
Yes	59%	55%	45%	100%	86%	63%
No - the warnings did not prepare you enough about the potential impacts	18%	18%	28%			23%
No - the warnings overstated or exaggerated the impacts	22%	27%	27%		14%	14%
<b>SUBTOTAL No</b>	<b>41%</b>	<b>45%</b>	<b>55%</b>		<b>14%</b>	<b>37%</b>

<sup>^</sup> Caution: small cell size.

## 4.6 Suggested improvements for warnings

Q14. Thinking about emergency warnings generally, from any source or organisation, how could they be improved? How else?

Among Whitsundays residents, suggestions for improving emergency warnings, from any source or organisation, most commonly relate to providing more detailed and or clear information (e.g. for evacuation plans, evacuation shelters or road closures) (13%) or more alerts or warnings via SMS (11%) or through television or radio channels (7%).

The top 11 suggestions for improvement are presented in the adjacent chart, with the balance of suggestions detailed in the table on the following page.

One in two respondents are unable to make any suggestions for improving emergency warnings (25% saying they are satisfied with the current warnings and 24% not having any suggestions to make).

### Sub-group differences

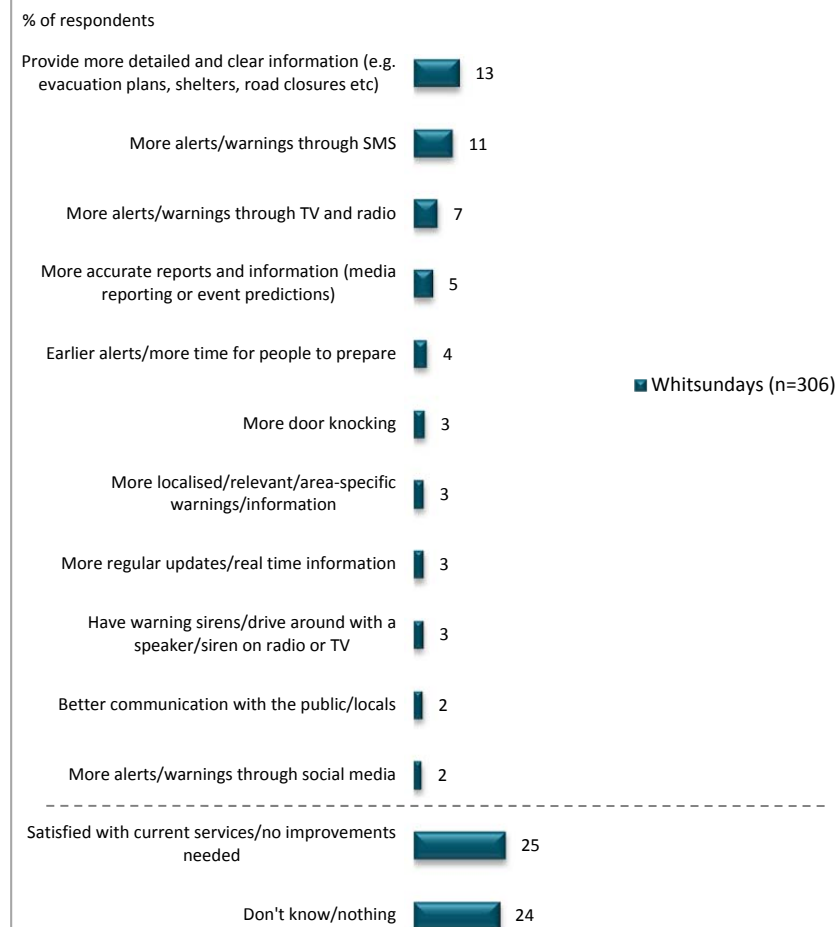
Those aged 65 years or older (16%) are more likely than average (7%) to call for more alerts or warnings through television or radio.

Those who experienced emotional impacts (17%) or whose home was damaged (14%) are more likely than average (11%) to call for more warnings via SMS.

Those who have lived in the area for less than ten years (24%) are more likely than average (13%) to suggest more detailed and clear information (e.g. evacuation plans, shelters, road closures etc.) as an improvement.

### Q14. Thinking about emergency warnings generally, from any source or organisation, how could they be improved? TOP 11 Responses

Base: All respondents



Q14. Thinking about emergency warnings generally, from any source or organisation, how could they be improved? How else?

Base: All respondents	Total n=306	Gender		Age		You had to evacuate from your home	
		Male n=127	Female n=179	Under 45 n=69	45 and over n=237	Yes n=25^	No n=281
Satisfied with current services/no improvements needed	25%	27%	24%	27%	24%	22%	26%
Provide more detailed and clear information (e.g. evacuation plans, shelters, road closures etc)	13%	13%	13%	14%	12%	7%	13%
More alerts/warnings through SMS	11%	10%	12%	16%	7%	12%	11%
More alerts/warnings through TV and radio	7%	8%	6%	4%	8%	5%	7%
More accurate reports and information (media reporting or event predictions)	5%	7%	4%	2% ↓	8% ↑		6%
Earlier alerts/more time for people to prepare	4%	2%	5%	4%	3%		4%
More door knocking	3%	1% ↓	6% ↑	3%	3%		3%
More localised/relevant/area-specific warnings/information	3%	3%	3%	4%	2%		3%
More regular updates/real time information	3%	1%	5%	2%	3%	5%	3%
Have warning sirens/drive around with a speaker/siren on radio or TV	3%	2%	4%		5% ↑	7%	2%
Better communication with the public/locals	2%	3%	2%	4%	1%	12%	2%
More alerts/warnings through social media	2%	3%	2%	1%	3%	3%	2%
More extensive (blanket) coverage with warnings (any method) so everyone is warned	2%	3%	1%	3%	1%		2%
Specific alerts and assistance to the elderly (more personal, less SMS/social media)	2%	1%	3%	3%	1%		2%
More/better warnings NFI	2%	2%	2%		3%		2%
Better information from BOM (how to interpret, tracking of cyclone, up-to-date)	2%	1%	2%	1%	2%		2%
More assistance for tourists/people new in the area	1%	*	3%	1%	2%		2%
Better communication methods when power is down	1%	1%	2%	1%	1%	2%	1%
Improve telecommunications and infrastructure to reduce effects of an event	1%	*	2%		2% ↑		1%
Information coming from local sources/council using local knowledge	1%	*	2%	1%	1%		1%
Do not over exaggerate (can cause fear) (media, predictions, text messages)	1%	2%	*	2%	*	12%	*
More assistance/better response from SES, emergency services	1%		2%	1%	1%		1%
More contact face to face	1%	*	1%	1%	*		1%
Ensure alerts have reached everyone	1%	*	1%		1%	2%	*
Let everyone know the power restoration schedule	*		1%	1%		6%	
Improve telecommunications and power restoration	*		1%	1%			*
More direct phone calls	*		1%		1%		*
More letter drops/public notices	*		*		*		*
Other	1%	1%	1%		2% ↑		1%
Don't know/nothing/was not affected	24%	28%	19%	25%	23%	13%	25%

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

\*Indicates less than 1% of respondents

^Caution: Small cell size

## 5.0 Services & Response

### 5.1 Services or assistance received

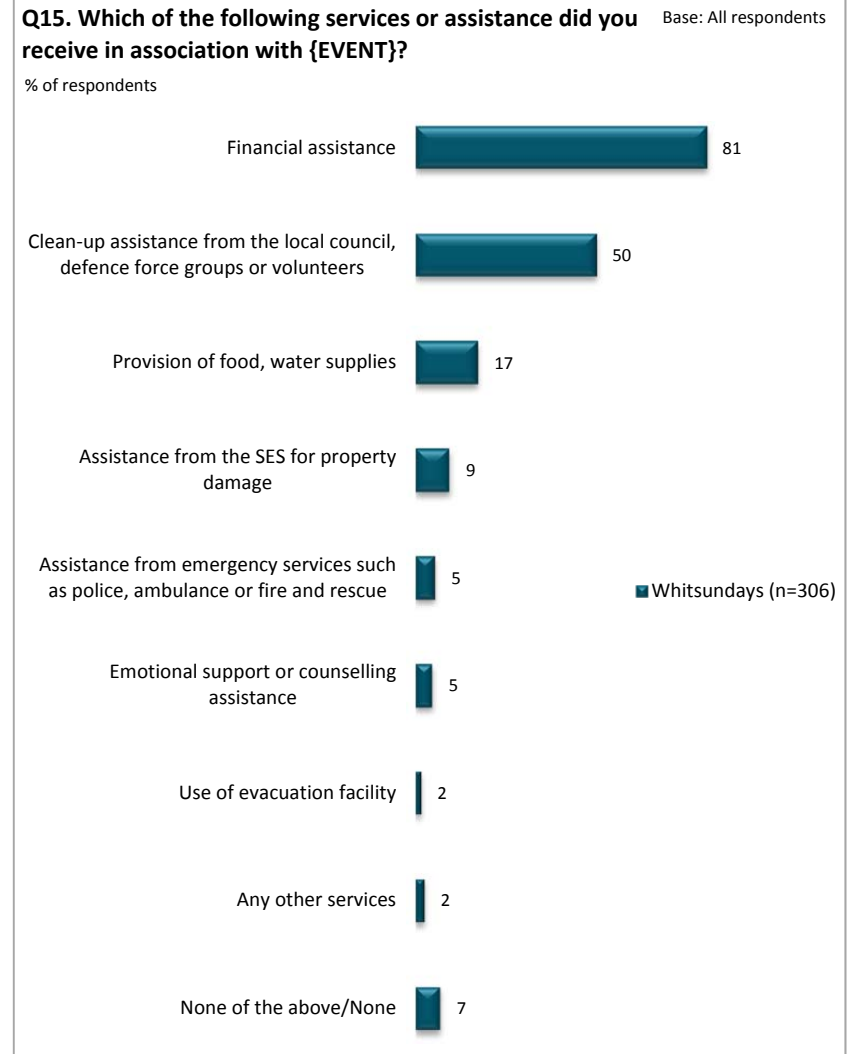
Q15. Which of the following services or assistance did you receive in association with {EVENT}?

81% of Whitsundays residents report receiving financial assistance in association with Tropical Cyclone Debbie, while 50% received clean-up assistance from the local council, defence force groups or volunteers. These are the two most widespread types of assistance reported. The adjacent chart provides results for a range of other services or forms of assistance measured.

#### Sub-group differences

Females are generally more likely than males to report receiving assistance.

Respondents whose home was damaged (87%), who were emotionally impacted (88%) or who lost income (89%) are more likely than average (81%) to report receiving financial assistance.



Q15. Which of the following services or assistance did you receive in association with {EVENT}?

Base: All respondents	Gender			Age		Key Impacts												
	Total n=306	Male n=127	Female n=179	Under 45 n=69	45 and over n=237	Power outage n=300	Telco outage n=255	Home was damaged n=225	Limited food, water or fuel supplies n=198	Other property was damaged n=186	Isolated or cut off from town, work or moving in and out of your home n=168	Emotional impact n=157	Loss of income n=137	Schools or day- care centres were closed n=110	Other property was destroyed or lost n=59	Had to evacuate from your home n=25^	Physical injury n=11^	Home was destroyed n=7^
Financial assistance	81%	75% ↓	87% ↑	79%	82%	82%	81%	87% ↑	82%	84%	84%	88% ↑	89% ↑	82%	87%	94%	91%	87%
Clean-up assistance from the local council, defence force groups or volunteers	50%	51%	49%	51%	50%	50%	49%	49%	46%	53%	46%	46%	48%	49%	55%	58%	64%	58%
Provision of food, water supplies	17%	16%	19%	20%	15%	17%	19%	20%	14%	18%	18%	21%	18%	15%	19%	31%	47%	7%
Assistance from the SES for property damage	9%	8%	11%	9%	10%	10%	10%	11%	12%	11%	11%	11%	8%	7%	15%	5%		
Assistance from emergency services such as police, ambulance or fire and rescue	5%	3% ↓	8% ↑	6%	5%	5%	6%	7% ↑	5%	5%	6%	4%	5%	5%	6%	10%		
Emotional support or counselling assistance	5%	2%	7%	7%	3%	5%	4%	6%	5%	7% ↑	3%	7%	5%	9% ↑	10%	8%	20%	7%
Use of evacuation facility	2%		3% ↑	1%	2%	2%	2%	2% ↑	1%	2%	1%	1%	1%	2%		5%	5%	
Any other services	2%	2%	3%	2%	3%	2%	2%	3%	2%	3%	4% ↑	2%	3%	3%	3%			
None of the above/None	7%	8%	6%	4%	9%	7%	7%	5%	7%	5%	5%	3% ↓	4%	5%	1% ↓	6%	9%	13%

^ Caution: small cell size.

↑↓ indicates a significant difference to the average at at least the 95% confidence level.



## 5.2 Service/assistance needed by not received

Q16. Were there any services or assistance that you did need but did not receive?

When asked if there were any services or assistance they needed during the event, but did not receive, the majority of Whitsundays respondents (79%) feel that there were none.

8% of respondents report needing but not receiving clean-up assistance from the local council, defence force groups or volunteers, 5% say they would have liked assistance from the SES for property damage, while 3% report needing but not receiving the provision of food or water supplies.

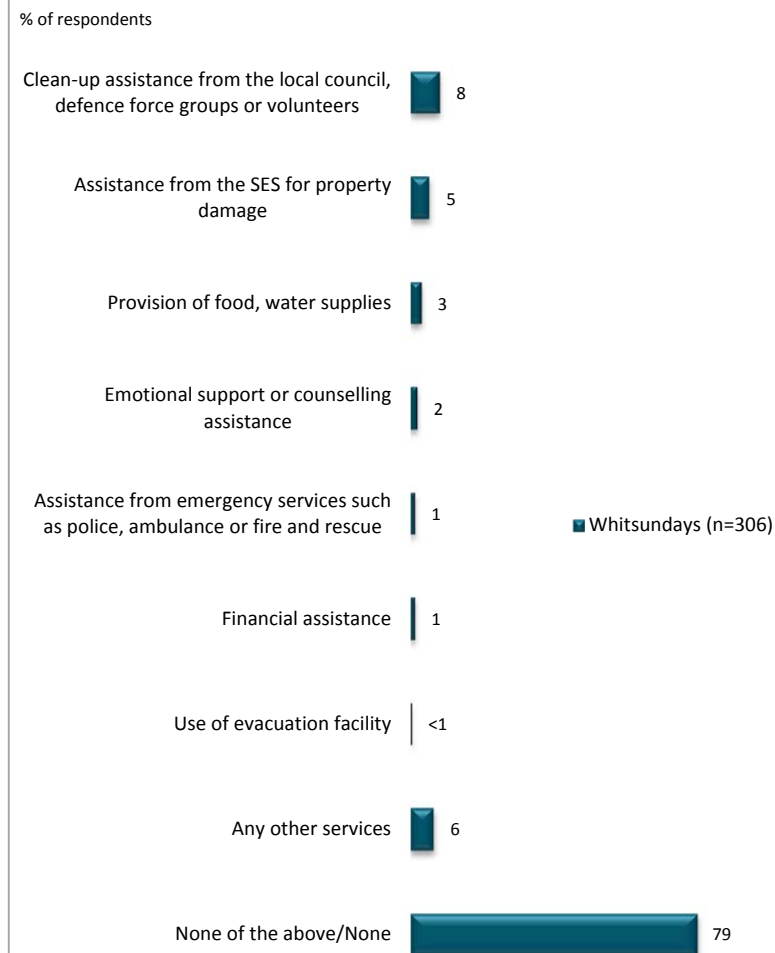
### Sub-group differences

Females are generally more likely than males to report that they needed some form of assistance that they did not receive.

Respondents who lost income (15%) or were isolated from home or work (13%) are more likely than average (8%) to say they needed clean-up assistance but it wasn't provided. Those who were isolated (8%) are more likely than average (5%) to say they needed assistance from the SES for property damage that was not provided.

### Q16. Were there any services or assistance that you did need but did not receive? (UNPROMPTED)

Base: All respondents



Q16. Were there any services or assistance that you did need but did not receive?

Base: All respondents	Gender			Age		Key Impacts												
	Total n=306	Male n=127	Female n=179	Under 45 n=69	45 and over n=237	Power outage n=300	Telco outage n=255	Home was damaged n=225	Limited food, water or fuel supplies n=198	Other property was damaged n=186	Isolated or cut off from town, work or moving in and out of your home n=168	Emotional impact n=157	Loss of income n=137	Schools or day- care centres were closed n=110	Other property was destroyed or lost n=59	Had to evacuate from your home n=25^	Physical injury n=11^	Home was destroyed n=7^
Clean-up assistance from the local council, defence force groups or volunteers	8%	7%	10%	11%	6%	8%	8%	9%	10%	7%	13% ↑	12%	15% ↑	12%	9%	15%	15%	
Assistance from the SES for property damage	5%	6%	5%	5%	5%	5%	6%	6%	5%	7%	8% ↑	7%	7%	6%	10%	5%	20%	
Provision of food, water supplies	3%	2%	4%	5%	1%	3%	4% ↑	4%	5% ↑	3%	4%	6% ↑	5%	7% ↑	5%	12%		
Emotional support or counselling assistance	2%		4% ↑	2%	2%	2%	2% ↑	2%	2%	2%	2%	3%	2%	*	6%	2%		22%
Assistance from emergency services such as police, ambulance or fire and rescue	1%	2%	1%		2%	1%	1%	1%	2%	2%	2%	2%	2%	1%	1%	2%	5%	
Financial assistance	1%		3%	1%	1%	1%	1%		2%	1%	2%	2%	2%	2%				
Use of evacuation facility	*		1%		1%	*	*		1%		1%	*	*	1%	1%			
Any other services	6%	4%	9%	4%	8%	7%	7%	7%	9% ↑	8%	9% ↑	11% ↑	11% ↑	5%	16% ↑	4%	17%	14%
None of the above/None	79%	85% ↑	73% ↓	79%	79%	79%	77% ↓	79%	74% ↓	77%	71% ↓	67% ↓	67% ↓	75%	65% ↓	77%	63%	64%

^ Caution: small cell size.

\*Indicates less than 1% of respondents.

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

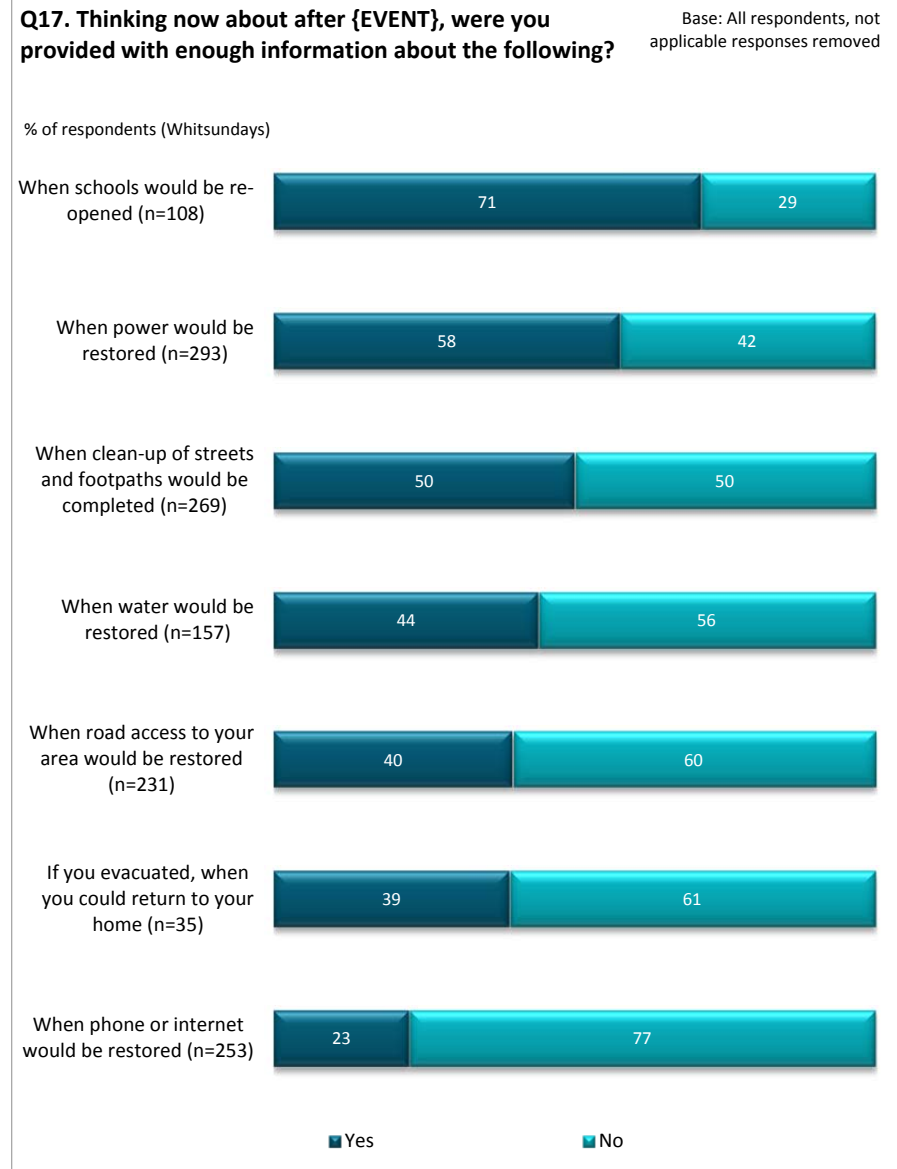
### 5.3 Information provided after event

Q17. Thinking now about after {EVENT}, were you provided with enough information about the following? If you were not affected by the issue you can say not applicable.

The majority of Whitsundays respondents (71%) say they were provided with enough information about when schools would be re-opened. 58% feel they were well informed about when power would be restored. 50% say they were provided enough information about when the clean-up of streets and footpaths would be completed. For all other essential communication less than one half of respondents say they were provided with enough information. Respondents are least likely to agree that they were informed well enough about when phone or internet services would be restored (23%).

#### Sub-group differences

Males (50%) are *less* likely than average (58%) to agree they were provided with enough information about when power would be restored.



Q17. Thinking now about after {EVENT}, were you provided with enough information about the following? If you were not affected by the issue you can say not applicable.

Base: All respondents, not applicable responses removed	Total	Gender		Age	
		Male	Female	Under 45	45 and over
<i>% of respondents saying yes</i>					
When schools would be re-opened (n=108)	71%	60%	81%	74%	66%
When clean-up of streets and footpaths would be completed (n=269)	50%	51%	49%	49%	51%
When power would be restored (n=293)	58%	50% ↓	65% ↑	65%	52%
When road access to your area would be restored (n=231)	40%	37%	42%	38%	41%
When water would be restored (n=157)	44%	35%	53%	48%	41%
When phone or internet would be restored (n=253)	23%	23%	22%	23%	22%
If you evacuated, when you could return to your home (n=35)	39%	7%	53%	47%	29%

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

## 5.4 Satisfaction with speed after event

Q18. After the event, were you satisfied or dissatisfied with the speed with which...

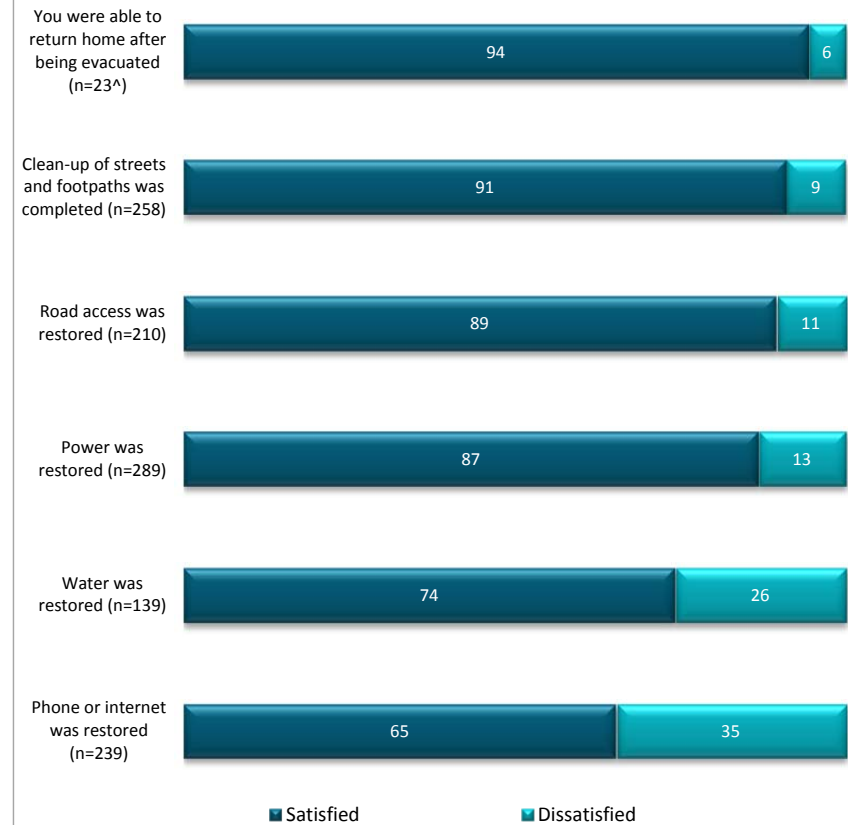
The majority of residents living in the Whitsundays survey area report satisfaction with the speed with which services were restored:

- Returning to home after evacuating (94% satisfied)
- Clean-up of streets (91%)
- Road access (87%)
- Power (87%)
- Water (74%)
- Phone or internet (65%).

### Q18. After the event, were you satisfied or dissatisfied with the speed with which...

Base: All respondents, not applicable responses removed

% of respondents (Whitsundays)



Q18. After the event, were you satisfied or dissatisfied with the speed with which...

Base: All respondents, not applicable responses removed	Total	Gender		Age	
		Male	Female	Under 45	45 and over
<i>% of respondents satisfied</i>					
Power was restored (n=289)	87%	88%	85%	86%	87%
Water was restored (n=139)	74%	73%	75%	69%	79%
Phone or internet was restored (n=239)	65%	72% ↑	58% ↓	69%	63%
Road access was restored (n=210)	89%	89%	89%	89%	90%
Clean-up of streets and footpaths was completed (n=258)	91%	91%	91%	91%	91%
You were able to return home after being evacuated (n=23^)	94%	100%	92%	100%	88%

<sup>^</sup> Caution: small cell size.

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

## 5.5 Overall preparedness and ability to cope

Q19. Overall would you say you were prepared for and able to cope...

The majority of surveyed residents in the Whitsundays say they felt they were prepared for and able to cope with:

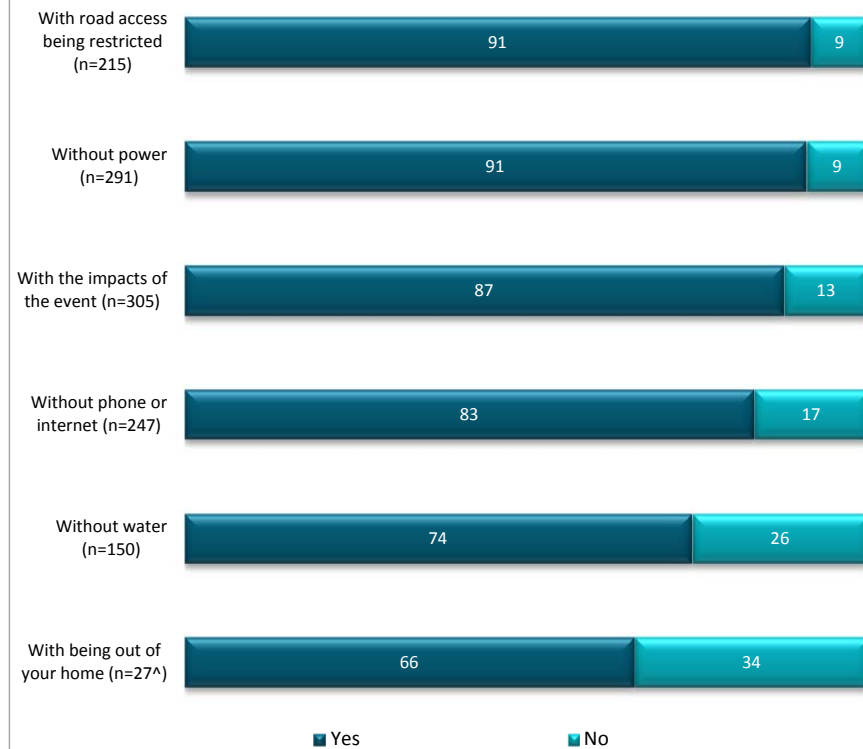
- restricted road access (91%)
- the loss of power (91%)
- the impacts generally of Tropical Cyclone Debbie (87%)
- the loss of phone or internet (83%)
- the loss of water (74%)
- being out of their home (66%).

### Sub-group differences

Generally speaking, those aged 45 years or older are more likely to feel they were prepared for and able to cope with the impacts of Tropical Cyclone Debbie.

**Q19. Overall would you say you were prepared for and able to cope...** Base: All respondents, not applicable responses removed

% of respondents (Whitsundays)



Q19. Overall would you say you were prepared for and able to cope...

Base: All respondents, not applicable responses removed	Gender			Age	
	Total	Male	Female	Under 45	45 and over
<i>% of respondents saying yes</i>					
Without power (n=291)	91%	93%	89%	86%	94%
Without water (n=150)	74%	80%	68%	64%	82%
Without phone or internet (n=247)	83%	92% ↑	75% ↓	82%	84%
With road access being restricted (n=215)	91%	93%	90%	90%	93%
With being out of your home (n=27^)	66%	72%	62%	56%	75%
With the impacts of the event (n=305)	87%	90%	85%	86%	89%

<sup>^</sup> Caution: small cell size.

↑↓ indicates a significant difference to the average at at least the 95% confidence level.



## 6.0 Overall Suggestions for Improvement

### 6.1 Suggested improvements for the preparation and response of services

*Q20. And apart from the comments you made earlier about emergency warnings, how could the preparations or response of emergency services, the local council, community groups or citizens themselves have been improved? What could have been done differently to have helped you or others at any stage of the event? What else?*

Whitsundays respondents were asked for their suggested improvements to the preparations and response of emergency services, the local council, community groups or citizens themselves. The most common themes arising in response to this are as follows:

- More help (from SES, emergency services) being available for a longer period of time (7%)
- More information and education on how to prepare, where and how to evacuate (6%)
- Improving communication/organisation/coordination between all agencies (5%)
- Providing more assistance for tourists/people new to the area/the elderly (5%)
- Provide better access to supplies (e.g. fuel, food, water, generators, sandbags) (5%).

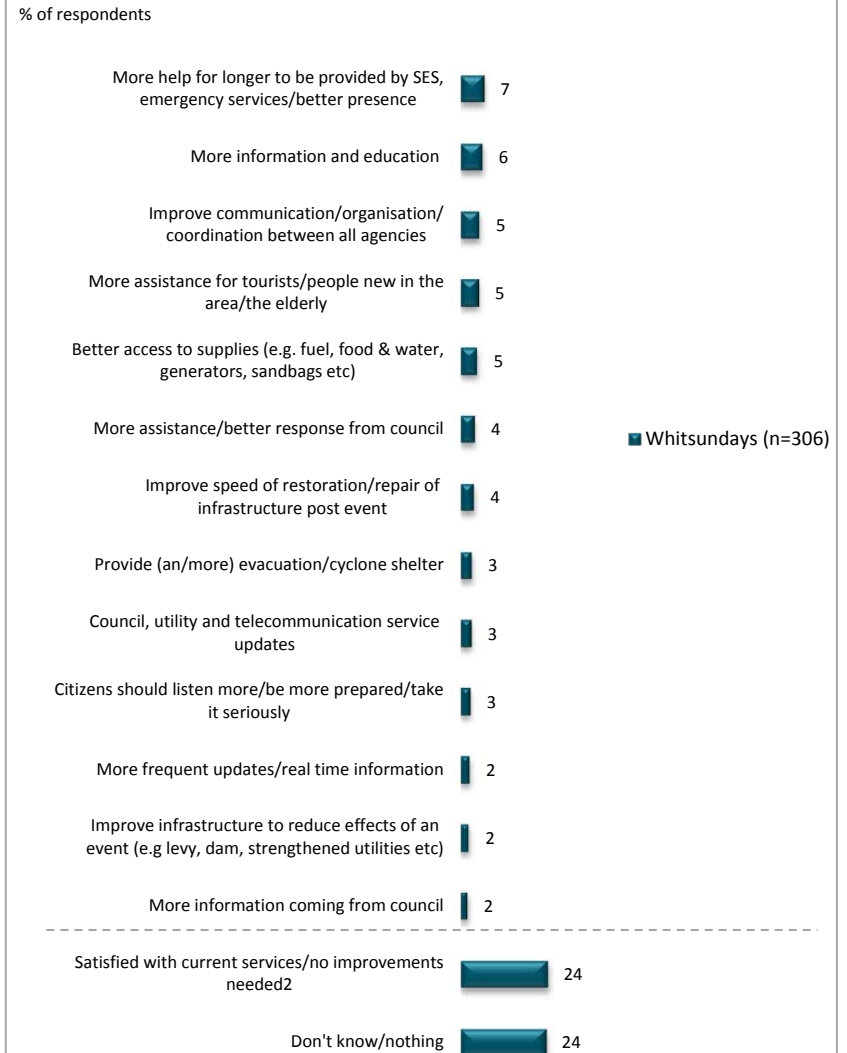
The top 13 responses are displayed in the adjacent chart while remaining suggestions are included in the table overleaf.

#### Sub-group differences

Females are more likely than males to request providing an evacuation shelter (5% females, 1% males) or providing more frequent updates/real time information (5% females, <1% males).

#### Q20. How could the preparations or response of emergency services, the local Council, community groups or citizens themselves have been improved? – Top 13 responses

Base: All respondents



Q20. And apart from the comments you made earlier about emergency warnings, how could the preparations or response of emergency services, the local council, community groups or citizens themselves have been improved? What could have been done differently to have helped you or others at any stage of the event? What else?

Base: All respondents	Total n=306	Gender		Age		You had to evacuate from your home	
		Male n=127	Female n=179	Under 45 n=69	45 and over n=237	Yes n=25^	No n=281
Satisfied with current services/no improvements needed	24%	29%	19%	23%	25%	29%	24%
More help for longer to be provided by SES, emergency services/better presence	7%	7%	6%	3%	9%		7%
More information and education on how to prepare, where and how to evacuate, make people aware of dangers	6%	7%	5%	7%	5%	6%	6%
Improve communication/organisation/coordination between all agencies	5%	7%	3%	5%	5%		6%
More assistance for tourists/people new in the area/the elderly	5%	3%	7%	7%	3%	14%	4%
Better access to supplies (e.g. fuel, food & water, generators, sandbags etc)	5%	4%	6%	9%	2%		5%
More assistance/better response from council	4%	5%	3%	2%	5%		4%
Improve speed of restoration/repair of infrastructure post event (e.g. telecommunications, utilities, roads etc)	4%	4%	3%	5%	3%	2%	4%
Provide (an/more) evacuation/cyclone shelter	3%	1% ↓	5% ↑	3%	3%	6%	3%
Council, utility and telecommunication service updates (e.g. power outages, clean-up, road and bridge openings/closures etc)	3%	1%	5%	2%	3%		3%
Citizens should listen more/be more prepared/take it seriously	3%	3%	3%	2%	3%		3%
More frequent updates/real time information	2%	* ↓	5% ↑	3%	2%		3%
Improve infrastructure to reduce effects of an event (e.g. levy, dam, strengthened utilities etc)	2%	2%	3%	1%	3%	8%	2%
More information coming from council	2%	1%	2%	2%	2%		2%
More alerts/warnings through TV and radio	2%	2%	2%	1%	2%		2%
Earlier alerts/more time for people to prepare	2%	*	3%	1%	2%		2%
Accurate/clear information	2%	*	3%	2%	1%	2%	1%
Better communication when power is down	1%	1%	2%	1%	1%	2%	1%
Have warning sirens/drive around with a speaker/siren on radio or TV	1%	1%	2%	2%	*	4%	1%
More alerts/warnings through social media/SMS	1%	*	2%	2%	*		1%
More/better warnings NFI	1%		2%	2%	*		1%
Improve insurance services	1%		2%	2%	*	2%	1%
More localised/relevant/area-specific warnings/information/road closure information	1%	1%	2%		2%		1%
Improve disaster financial relief (more people to be eligible, easier to apply for, faster process)	1%	*	2%	1%	1%		1%
More door knocking	1%	1%	1%		1%	5%	*
More face to face contact	1%	1%	*		1%		1%

\*Indicates less than 1% of respondents.

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

^Caution: Small cell size

Q20. And apart from the comments you made earlier about emergency warnings, how could the preparations or response of emergency services, the local council, community groups or citizens themselves have been improved? What could have been done differently to have helped you or others at any stage of the event? What else? (Cont'd)

Base: All respondents	Gender			Age		You had to evacuate from your home	
	Total n=306	Male n=127	Female n=179	Under 45 n=69	45 and over n=237	Yes n=25^	No n=281
Citizens should help each other (support each other, know and check on neighbours)	*	*	*		1%		*
Other mentions of better communication	*		1%		1%		*
Do not over exaggerate (can cause fear) (media, text messages)	*		*		*		*
More letter drops/public notices	*		*		*	2%	
Citizens should not carry out dangerous behaviours (driving through waters, jet skiing, looting)	*		*		*		*
Other	1%	2%	1%	2%	1%		1%
Don't know/nothing	24%	25%	22%	22%	25%	29%	23%

\*Indicates less than 1% of respondents.

^Caution: Small cell size

## 7.0 Telecommunications

### 7.1 Telephony and internet

D1. Which of the following do you have (or will have once it is repaired)?

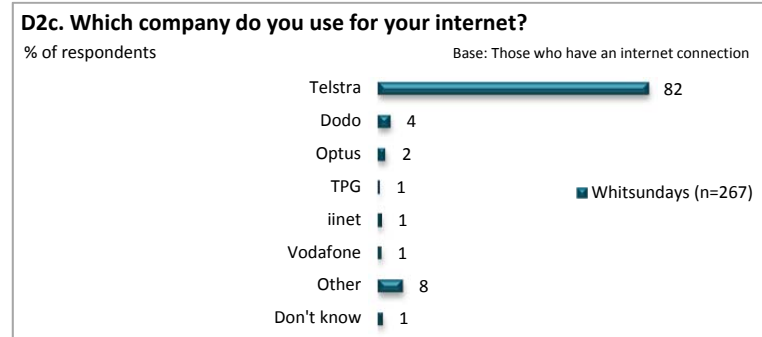
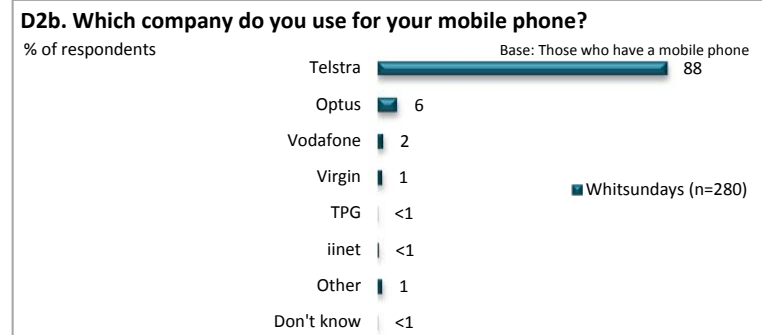
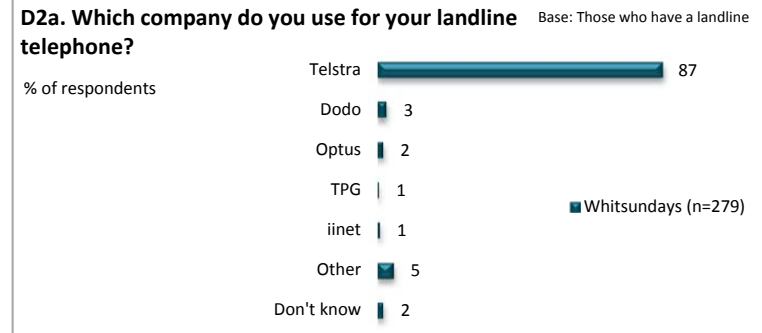
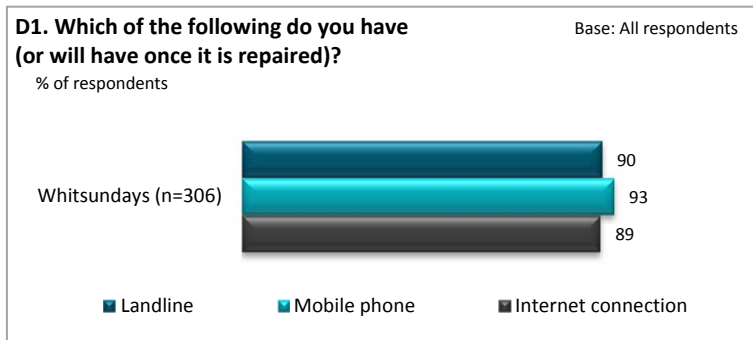
D2abc. Which company do you use for your landline/mobile/internet?

The majority of residents living in the Whitsundays survey area reported ownership of a mobile phone (93%), landline (90%) or internet connection (89%).

Telstra is reportedly the most common landline provider (87%), mobile phone provider (88%) and internet provider (82%).

#### Sub-group differences

Internet connections are more common among those aged under 45 years (97%) than over 45 years (84%), a drop off in connection rates is most noticeable for residents aged 65 years or older (68%).



D1. Which of the following do you have (or will have once it is repaired)?

Base: All respondents	Gender			Age											
	Total n=306	Male n=127	Female n=179	Under 45 n=69	45 and over n=237	18 to 24 years n=7^	25 to 29 years n=6^	30 to 34 years n=12^	35 to 39 years n=18^	40 to 44 years n=26^	45 to 49 years n=25^	50 to 54 years n=59	55 to 59 years n=40	60 to 64 years n=50	65 years or over n=63
Landline	90	87	93	87	92	70	71	69	95	100	92	89	92	88	95
Mobile phone	93	91	95	98 ↑	90 ↓	100	85	100	95	100	95	96	98 ↑	84	80 ↓
Internet connection	89	86	93	97 ↑	84 ↓	100	85	100	92	100	95	87	88	89	68 ↓

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

^Caution: Small cell size

## 7.2 Problems with connections

*D2aabbccdd. In the lead-up to and during the recent event did you have any problems getting a connection on your...*

In the Whitsundays in the lead-up to, during or after Tropical Cyclone Debbie:

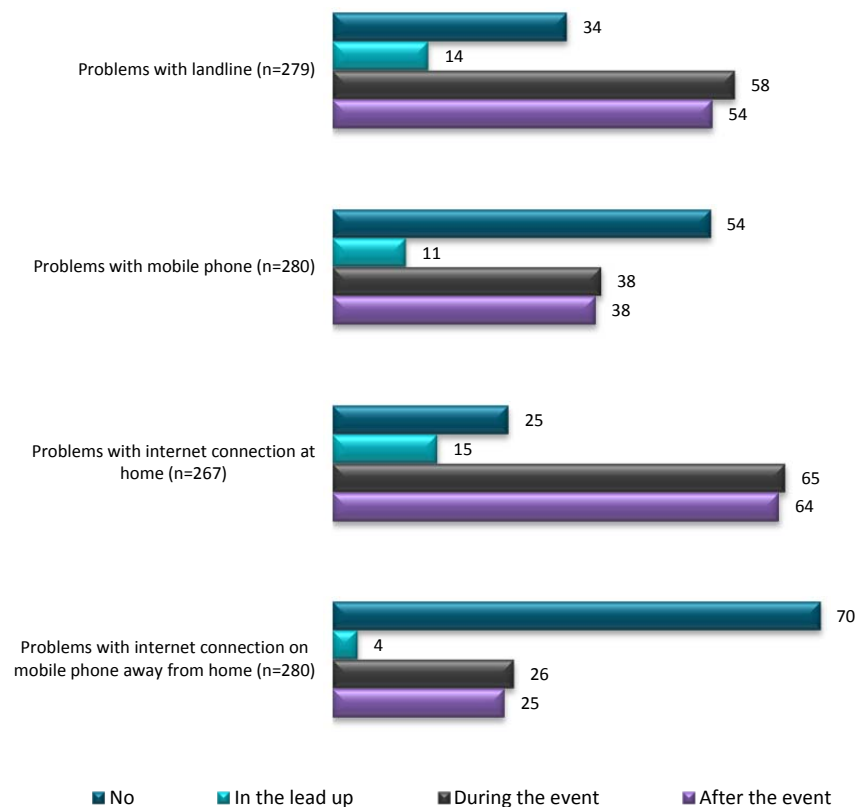
- 75% of home internet users report having a connection problem on their home internet
- 66% of landline holders report they had problems connecting to this service
- 46% of mobile phone users report experience of mobile phone connection problems
- 30% of mobile internet users report they had problems with mobile internet access when away from home.

Problems were most common during or after the event.

**D2aabbccdd. In the lead-up to and during the recent event did you have any problems getting a connection on your...**

Base: Respondents who have relevant service

% of respondents (Whitsundays)



D2aa. In the lead-up to and during the recent event did you have any problems getting a connection on your landline telephone...

Base: Respondents who have a landline	Landline provider							
	Total n=279	Telstra n=241	Optus n=6 <sup>^</sup>	Dodo n=6 <sup>^</sup>	iinet n=4 <sup>^</sup>	TPG n=3 <sup>^</sup>	Other n=15 <sup>^</sup>	Don't know n=4 <sup>^</sup>
NO	34%	32%	14%	42%	100%	28%	58%	39%
SUB-TOTAL Yes	66%	68%	86%	58%		72%	42%	61%
In the lead up	14%	15% ↑	28%				3%	
During the event	58%	60%	69%	26%		72%	39%	61%
After the event	54%	56%	71%	58%		28%	42%	47%

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

<sup>^</sup>Caution: Small cell size

D2bb. In the lead-up to and during the recent event did you have any problems getting a connection on your mobile phone...

Base: Respondents who have a mobile phone	Mobile phone provider							
	Total n=280	Telstra n=243	Optus n=18 <sup>^</sup>	Vodafone n=5 <sup>^</sup>	Virgin n=4 <sup>^</sup>	iinet n=2 <sup>^</sup>	TPG n=1 <sup>^</sup>	Other n=6 <sup>^</sup>
NO	54%	59% ↑	15%	15%		100%		21%
SUB-TOTAL Yes	46%	41% ↓	85%	85%	100%		100%	79%
In the lead up	11%	9%	24%	28%	11%			
During the event	38%	34% ↓	77%	85%	100%			61%
After the event	38%	32% ↓	78%	85%	100%		100%	79%

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

<sup>^</sup>Caution: Small cell size

D2cc. In the lead-up to and during the recent event did you have any problems getting an internet connection at home on a PC, laptop, tablet or mobile phone ...

Base: Respondents who have an internet connection	Internet provider								
	Total n=267	Telstra n=216	Dodo n=9 <sup>^</sup>	Optus n=7 <sup>^</sup>	iinet n=5 <sup>^</sup>	TPG n=3 <sup>^</sup>	Vodafone n=2 <sup>^</sup>	Other n=22 <sup>^</sup>	Don't know n=3 <sup>^</sup>
NO	25%	25%	18%	23%	75%	28%	50%	21%	
SUB-TOTAL Yes	75%	75%	82%	77%	25%	72%	50%	79%	100%
In the lead up	15%	15%		34%				23%	
During the event	65%	67%	25%	55%	25%	72%	50%	66%	69%
After the event	64%	63%	82%	77%		72%	50%	68%	100%

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

<sup>^</sup>Caution: Small cell size

D2dd. In the lead-up to and during the recent flood event did you have any problems getting an internet connection on your mobile phone when away from home...

Base: Respondents who have a mobile phone	Internet provider								
	Total n=280	Telstra n=212	Dodo n=9 <sup>^</sup>	Optus n=6 <sup>^</sup>	iinet n=4 <sup>^</sup>	TPG n=3 <sup>^</sup>	Vodafone n=2 <sup>^</sup>	Other n=20 <sup>^</sup>	Don't know n=3 <sup>^</sup>
NO	70%	70%	86%	59%	71%	28%	50%	70%	31%
SUB-TOTAL Yes	30%	30%	14%	41%	29%	72%	50%	30%	69%
In the lead up	4%	4% ↑							
During the event	26%	26%	14%	41%	29%		50%	24%	69%
After the event	25%	24%	14%	41%		72%	50%	30%	69%

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

<sup>^</sup>Caution: Small cell size



# Findings – Rockhampton

## 1.0 Community Engagement

### 1.1 Knowledge of Disaster Management Arrangement

Q1. Firstly, how would you rate your knowledge of the Disaster Management Arrangements? Would it be...?

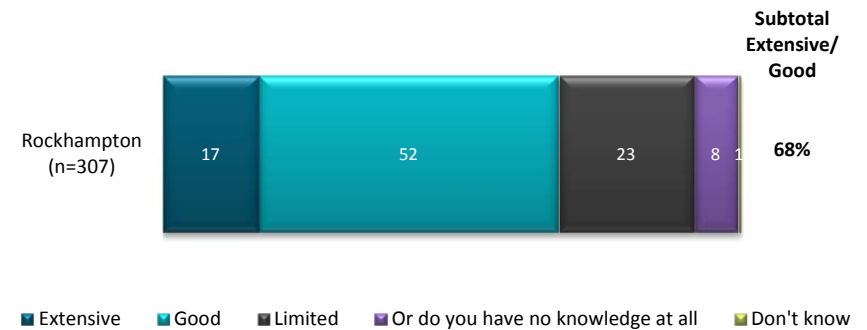
Seven in ten (68%) Rockhampton respondents rate their knowledge of the Disaster Management Arrangements as extensive (17%) or good (52%). Two in ten (23%) rate their knowledge as limited while 8% consider they have no knowledge at all.

#### *Sub-group differences*

Those aged 65 years or older (78%) or those aware of the Local Disaster Management Group (LDMG) (77%) are more likely than average (68%) to consider their knowledge to be extensive or good.

Those who have lived in the area for less than 10 years (42%) are more likely than average (31%) to say they have limited or no knowledge of Disaster Management Arrangements.

Q1. Firstly, how would you rate your knowledge of the Disaster Management Arrangements? Would it be...? Base: All respondents  
% of respondents



Q1. Firstly, how would you rate your knowledge of the Disaster Management Arrangements? Would it be...?

Base: All respondents	Total n=307	Gender		Age		LDMG Awareness	
		Male n=112	Female n=195	Under 45 n=73	45 and over n=234	Yes n=209	No n=98
Extensive	17%	17%	16%	18%	16%	22% ↑	7% ↓
Good	52%	45%	58%	44%	57%	55%	45%
SUBTOTAL extensive/good	68%	62%	74%	62%	73%	77% ↑	52% ↓
Limited	23%	28%	19%	26%	22%	18% ↓	33% ↑
Or do you have no knowledge at all	8%	9%	6%	11%	5%	5%	13%
SUBTOTAL limited/none	31%	38% ↑	24% ↓	37%	27%	23% ↓	46% ↑
Don't know	1%		1%	1%	*		2%

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

\*Indicates less than 1% of respondents.

## 1.2 Disaster management responsibility

Q2. Who do you believe is responsible for Disaster Management generally in your area?

The local council is the organisation that Rockhampton respondents are most likely to consider generally responsible for disaster management in their area (69%). After council, the State Emergency Service (SES) (25%) is mentioned, followed by Queensland Police Service (QPS) (13%).

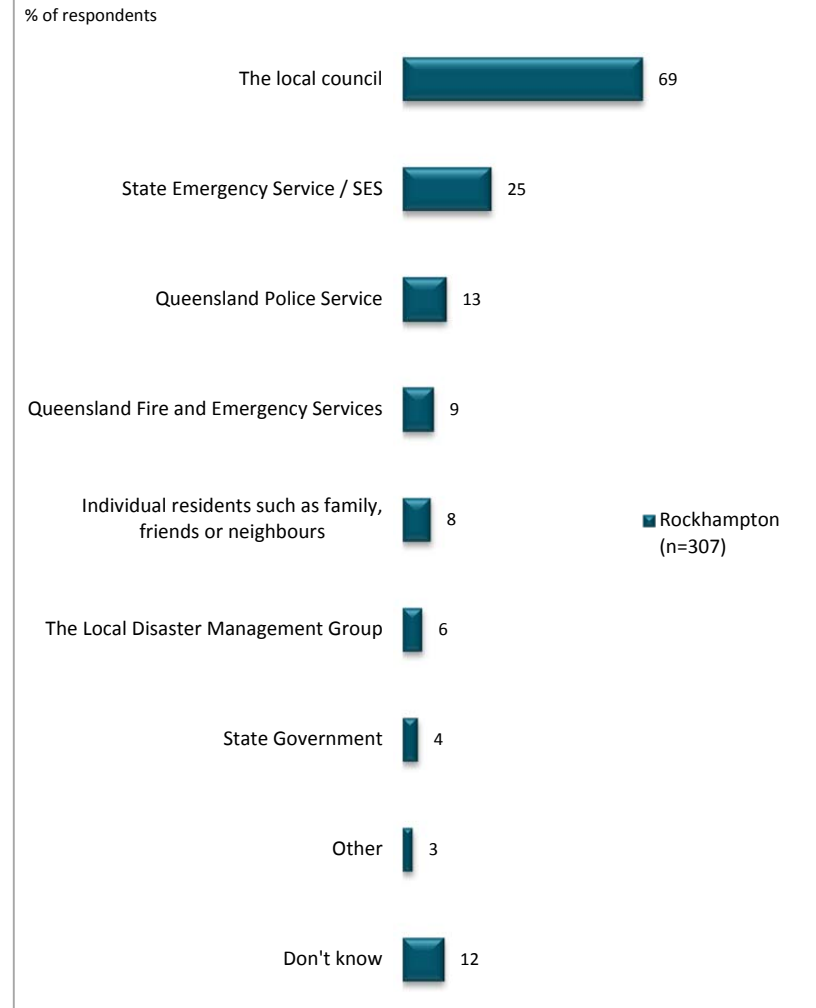
### Sub-group differences

People with no prior disaster event experience (36%) are more likely than those with some experience (7%) to report not knowing who is responsible for disaster management in their area.

Those who have been through another disaster in the past (73%) are more likely than those who have not (47%) to say the local council is responsible for disaster management.

Females (9%) are more likely than average (6%) to nominate the LDMG as being responsible for disaster management in their area.

Q2. Who do you believe is responsible for Disaster Management generally in your area? Base: All respondents



Q2. Who do you believe is responsible for disaster management generally in your area?

Base: All respondents	Gender		Age		Prior Disaster Experience		
	Total n=307	Male n=112	Female n=195	Under 45 n=73	45 and over n=234	Yes n=251	No n=56
The local council	69%	67%	71%	74%	66%	73% ↑	47% ↓
State Emergency Service / SES	25%	26%	25%	22%	27%	27%	18%
Queensland Police Service	13%	10%	15%	9%	15%	13%	10%
Queensland Fire and Emergency Services	9%	8%	10%	9%	9%	9%	9%
Individual residents such as family, friends or neighbours	8%	8%	8%	8%	8%	8%	8%
The Local Disaster Management Group	6%	2% ↓	9% ↑	8%	4%	6%	4%
State Government	4%	3%	6%	5%	4%	5%	2%
Other	3%	2%	4%	4%	2%	4% ↑	
Don't know	12%	14%	10%	16%	9%	7% ↓	36% ↑

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

### 1.3 Awareness of Local Disaster Management Group

Q3. Before today had you heard of the Local Disaster Management Group? It may also be known as the Local Emergency Management Group?

Six in ten (66%) residents in the Rockhampton survey area say they were aware of the Local Disaster Management Group (LDMG) prior to the survey.

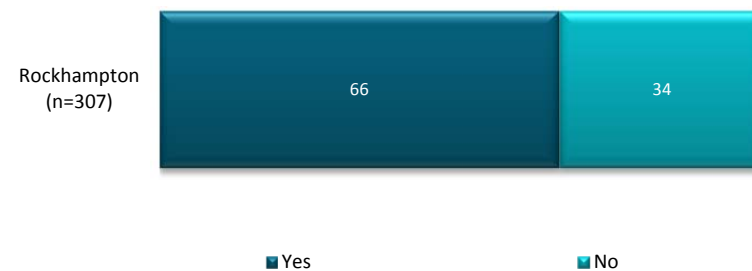
#### Sub-group differences

Females (75%) are more likely than males (57%) to report awareness of the LDMG.

Q3. Before today had you heard of the Local Disaster Management Group? It may also be known as the Local Emergency Management Group.

Base: All respondents

% of respondents



Q3. Before today had you heard of the Local Disaster Management Group? It may also be known as the Local Emergency Management Group?

Base: All respondents	Gender		Age		Prior Disaster Experience		
	Total n=307	Male n=112	Female n=195	Under 45 n=73	45 and over n=234	Yes n=251	No n=56
Yes	66%	57% ↓	75% ↑	64%	67%	67%	61%
No	34%	43% ↑	25% ↓	36%	33%	33%	39%

<sup>^</sup>Caution: Small cell size

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

## 1.4 Disaster Management Arrangements - event attendance

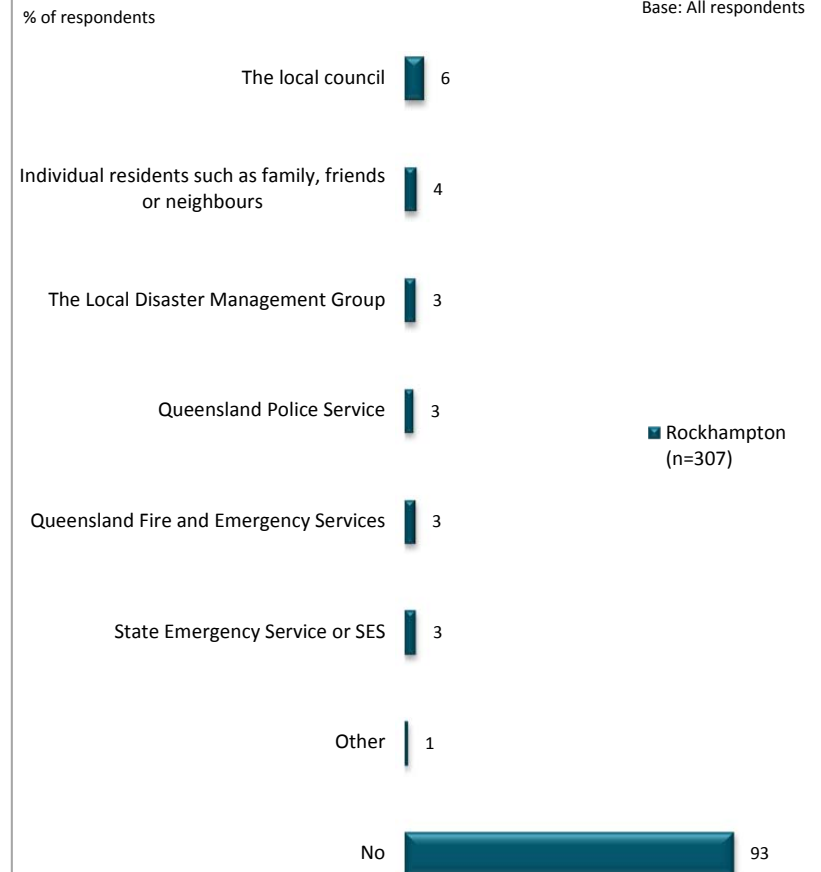
*Q4x. In the last 12 months, have you been to any community events, public meetings or presentations about Disaster Management Arrangements? If yes, which of the following groups organised or were in attendance?*

93% of Rockhampton respondents in the survey area say they have not attended any community events or meetings in relation to Disaster Management Arrangements in the past 12 months, while 7% report that they have. The local council, LDMG, QPS, QFES and SES are all reported to have held public events about disaster management in the past year.

### *Sub-group differences*

Those aware of the LDMG (9%) are more likely than those not aware of the LDMG (1%) to have attended an event in the previous 12 months (in particular, those hosted by the local council 8%).

**Q4x. In the last 12 months, have you been to any community events, public meetings or presentations about Disaster Management arrangements? If yes, which of the following groups organised or were in attendance?**





Q4x. In the last 12 months, have you been to any community events, public meetings or presentations about Disaster Management arrangements? If yes, which of the following groups organised or were in attendance?

Base: All respondents	Gender			Age		LDMG Awareness		You had to evacuate from your home	
	Total n=307	Male n=112	Female n=195	Under 45 n=73	45 and over n=234	Yes n=209	No n=98	Yes n=21^	No n=286
SUBTOTAL Yes	7%	5%	8%	8%	6%	9% ↑	1% ↓		7%
The local council	6%	5%	6%	7%	5%	8% ↑			6%
Individual residents such as family, friends or neighbours	4%	4%	3%	5%	3%	5% ↑			4%
The Local Disaster Management Group	3%	3%	3%	4%	3%	5% ↑			4%
Queensland Police Service	3%	3%	2%	3%	3%	4% ↑			3%
Queensland Fire and Emergency Services	3%	3%	3%	3%	3%	5% ↑			3%
State Emergency Service or SES	3%	3%	3%	4%	3%	5% ↑			4%
Other	1%		2%	1%	1%	1%	1%		1%
SUBTOTAL No	93%	95%	92%	92%	94%	91% ↓	99% ↑	100%	93%

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

## 2.0 Confidence – understanding risks and preparations for future events

### 2.1 Understanding of risk to self and property

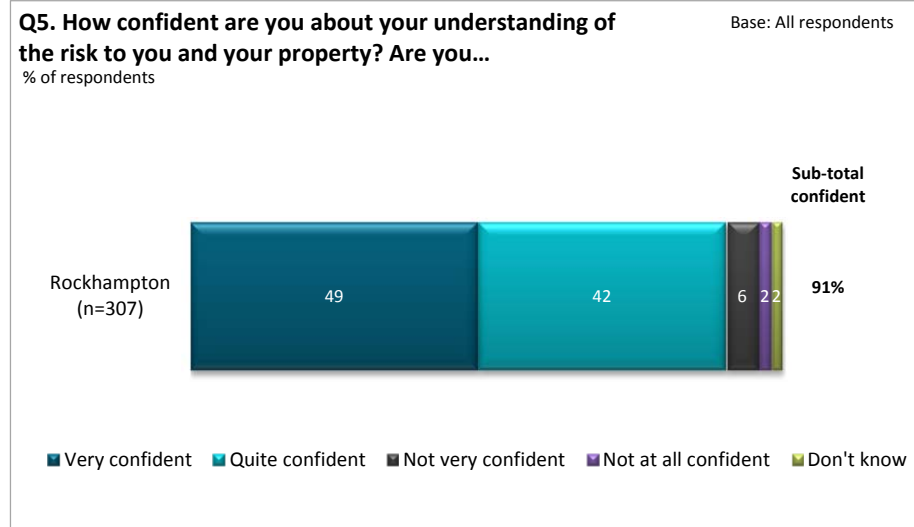
Q5. How confident are you about your understanding of the risk to you and your property?  
Are you...

91% of Rockhampton respondents in the survey area say they are confident in understanding the risk to themselves and their property (49% *very* confident, 42% *quite* confident).

#### *Sub-group differences*

Respondents aged 45 years or older (95%, particularly 65+ years 99%) are more likely than respondents aged under 45 years (83%) to be confident in their understanding of the risks they face.

Respondents aware of the LDMG are more likely (55%) than those who are not (36%) to be *very* confident they understand the risks to them and their property.



Q5. How confident are you about your understanding of the risk to you and your property? Are you...

Base: All respondents	Gender			Age		Key Impacts											LDMG Awareness		
	Total n=307	Male n=112	Female n=195	Under 45 n=73	45 and over n=234	Isolated or cut off from town, work or moving in and out of your home n=81	Power outage n=71	Telco outage n=54	Emotional impact n=47	Other property was damaged n=43	Loss of income n=42	Home was damaged n=38	Schools or day- care centres were closed n=31	Limited food, water or fuel supplies n=26^	Had to evacuate from your home n=21^	Other property was destroyed or lost n=12^	Physical injury n=3^	Yes n=209	No n=98
Very confident	49%	47%	50%	39% ↓	54% ↑	44%	34% ↓	35% ↓	59%	54%	61%	42%	50%	50%	42%	52%	59%	55% ↑	36% ↓
Quite confident	42%	42%	42%	44%	41%	44%	52%	49%	36%	42%	37%	44%	43%	42%	36%	48%	41%	38%	50%
<b>SUBTOTAL Confident</b>	<b>91%</b>	<b>89%</b>	<b>92%</b>	<b>83% ↓</b>	<b>95% ↑</b>	<b>88%</b>	<b>86%</b>	<b>84%</b>	<b>95%</b>	<b>96%</b>	<b>98% ↑</b>	<b>86%</b>	<b>93%</b>	<b>92%</b>	<b>79%</b>	<b>100%</b>	<b>100%</b>	<b>93%</b>	<b>86%</b>
Not very confident	6%	5%	6%	10%	3%	11%	9%	11%	3%	4%	2%	9%	7%	8%	18%			4%	8%
Not at all confident	2%	3%	1%	5%	*	1%	1%	4%	1%						3%			1%	4%
<b>SUBTOTAL Not Confident</b>	<b>8%</b>	<b>8%</b>	<b>7%</b>	<b>15% ↑</b>	<b>3% ↓</b>	<b>12%</b>	<b>10%</b>	<b>15%</b>	<b>5%</b>	<b>4%</b>	<b>2% ↓</b>	<b>9%</b>	<b>7%</b>	<b>8%</b>	<b>21%</b>			<b>5%</b>	<b>12%</b>
Don't know	2%	3%	1%	2%	2%		4%	1%				5%						2%	2%

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

\*Indicates less than 1% of respondents.

^Caution: Small cell size

## 2.2 Confidence in being prepared for future events

Q6. How confident are you in regards to being prepared for and knowing how to respond to events in the future? Are you...

The vast majority of Rockhampton residents surveyed (92%) report confidence in being prepared for and knowing how to respond to events in the future (53% *very* confident, 39% *quite* confident).

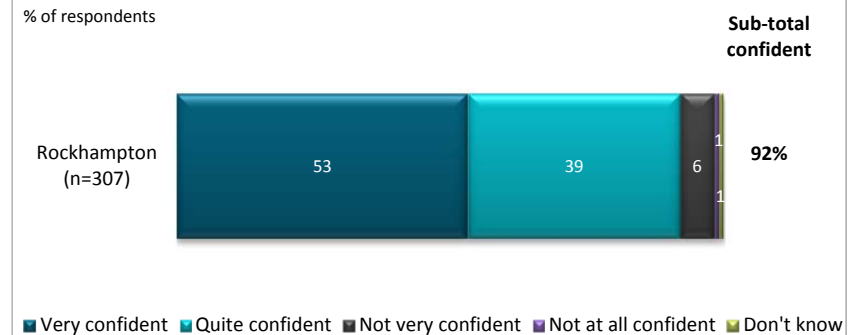
### Sub-group differences

Respondents aged 45 years or older (97%) are more likely than younger residents (under 45 years) (85%) to be confident in regards to events in the future.

Respondents aware of the LDMG (59%) or those who have experienced other disasters (58%) are more likely than average (53%) to be *very* confident in regards to events in the future.

Q6. How confident are you in regards to being prepared for and knowing how to respond to events in the future? Are you...

Base: All respondents



Q6. How confident are you in regards to being prepared for and knowing how to respond to events in the future? Are you...

Base: All respondents	Total n=307	Gender		Age		Key Impacts		Prior Disaster Experience		LDMG Awareness	
		Male n=112	Female n=195	Under 45 n=73	45 and over n=234	Any impact n=188	No impact n=119	Yes n=251	No n=56	Yes n=209	No n=98
Very confident	53%	50%	56%	50%	55%	52%	55%	58% ↑	31% ↓	59% ↑	42% ↓
Quite confident	39%	39%	39%	35%	41%	38%	40%	36%	51%	38%	41%
<b>SUBTOTAL Confident</b>	<b>92%</b>	<b>89%</b>	<b>95%</b>	<b>85% ↓</b>	<b>97% ↑</b>	<b>90%</b>	<b>95%</b>	<b>94%</b>	<b>82%</b>	<b>97% ↑</b>	<b>83% ↓</b>
Not very confident	6%	9%	4%	12% ↑	3% ↓	8%	4%	4%	15%	3% ↓	12% ↑
Not at all confident	1%	2%		2%		1%		1%			2%
<b>SUBTOTAL Not Confident</b>	<b>7%</b>	<b>10%</b>	<b>4%</b>	<b>14% ↑</b>	<b>3% ↓</b>	<b>9%</b>	<b>4%</b>	<b>5%</b>	<b>15%</b>	<b>3% ↓</b>	<b>15% ↑</b>
Don't know	1%	*	1%	1%	1%	1%	1%	*	2%		2%

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

\*Indicates less than 1% of respondents.

## 3.0 Impact of Event

### 3.1 Impacts experienced

Q7. Thinking specifically now about {EVENT}, which if any, of the following impacts did you personally experience?

Isolation (28%) and power outages (25%) are the most commonly reported impacts of the event according to survey respondents in Rockhampton. Other impacts commonly mentioned are telecommunications outages (20%), loss of income (16%) or home damage (15%).

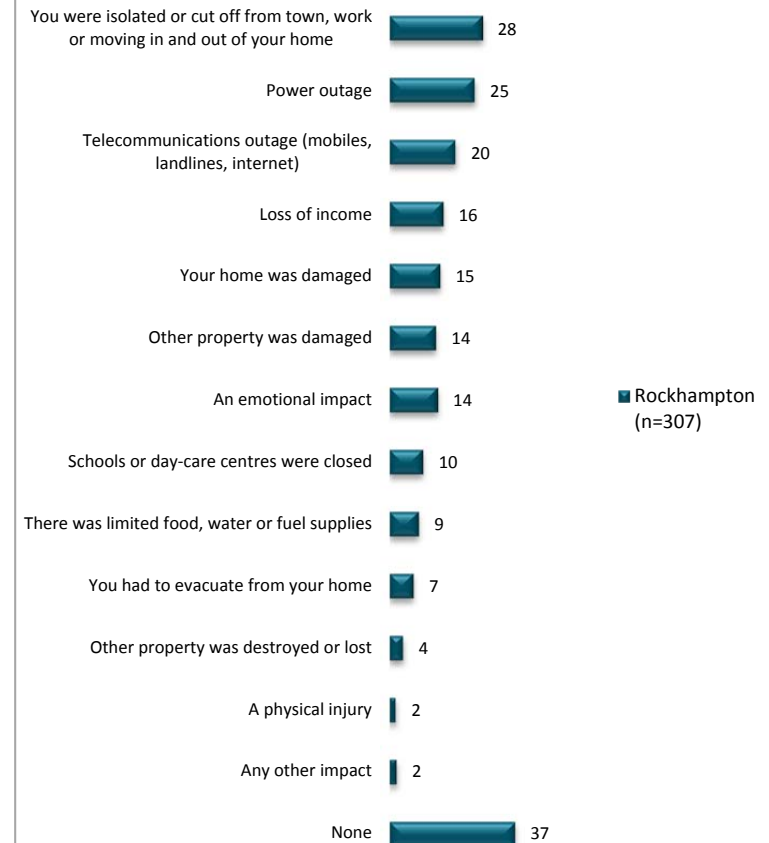
7% of Rockhampton survey respondents say they had to evacuate their home in response to Tropical Cyclone Debbie.

#### Sub-group differences

Respondents aged 45 years or over (17%) are more likely than those aged 45 years or younger (8%) to report they had other (non-home) property damage.

#### Q7. Thinking specifically now about {EVENT}, which if any, of the following impacts did you personally experience? Base: All respondents

% of respondents



Q7. Thinking specifically now about {EVENT}, which if any, of the following impacts did you personally experience?

Base: All respondents	Gender		Age		
	Total n=307	Male n=112	Female n=195	Under 45 n=73	45 and over n=234
You were isolated or cut off from town, work or moving in and out of your home	28%	31%	24%	29%	27%
Power outage	25%	31% ↑	19% ↓	23%	27%
Telecommunications outage (mobiles, landlines, internet)	20%	21%	18%	21%	19%
Loss of income	16%	19%	13%	13%	18%
Your home was damaged	15%	18%	12%	16%	14%
An emotional impact	14%	12%	16%	13%	15%
Other property was damaged	14%	14%	14%	8% ↓	17% ↑
Schools or day-care centres were closed	10%	8%	12%	9%	10%
There was limited food, water or fuel supplies	9%	10%	7%	7%	10%
You had to evacuate from your home	7%	7%	7%	9%	6%
Other property was destroyed or lost	4%	3%	5%	3%	5%
A physical injury	2%	4%		2%	2%
Any other impact	2%	3%	1%		3%
None	37%	35%	39%	41%	35%

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

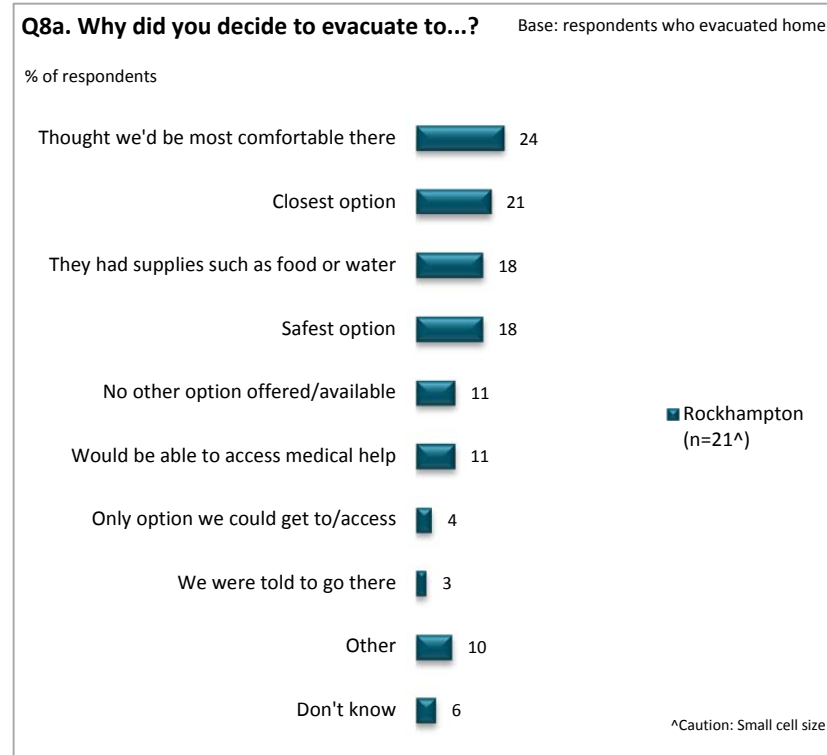
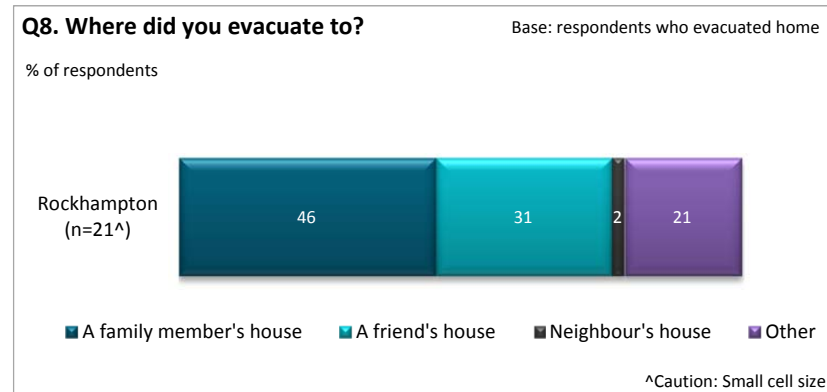
### 3.2 Location used during evacuation

Q8. Where did you evacuate to?

Q8a. Why did you decide to evacuate to {insert location from Q8}?

Of Rockhampton residents who evacuated their home, most used an unofficial evacuation facility (46% went to a family member’s home, 31% to a friend’s home and 2% to a neighbour’s house). None of the survey respondents report using an official evacuation facility during the weather and flooding associated with Tropical Cyclone Debbie.

Evacuation options are most commonly chosen on the basis of being perceived to be the most comfortable (24%), closest (21%), to have available supplies such as food or water (18%) or are considered to be the safest (18%) option.





## 4.0 Information & Warnings

### 4.1 Sources of information used prior to/during event

Q9a. In the lead-up to or during {EVENT} which, if any, of the following sources of information did you use?

Rockhampton residents report relying on a range of information sources in the lead-up to or during the weather and flooding associated with Tropical Cyclone Debbie, the most widely used being the Bureau of Meteorology (BOM) website (68%), a news source other than the ABC (67%) or ABC News services (53%).

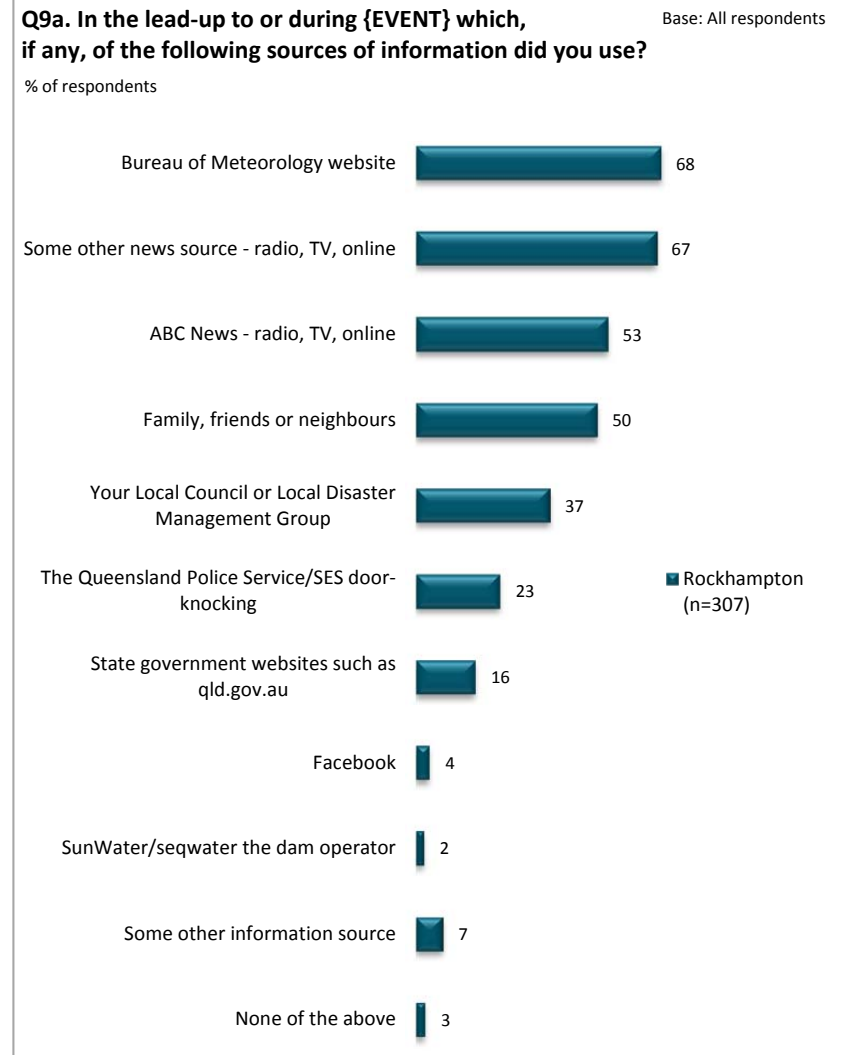
One in two (50%) reports sourcing information from family, friends or neighbours, while 37% say they did so via the LDMG.

#### Sub-group differences

79% of respondents aged under 45 years say they relied on the BOM website for information, compared to 61% of those aged 45 years.

Older respondents (61%) are more likely than younger respondents (40%) to have relied on ABC news sources.

Females (46%) are more likely than males (28%) to have sourced information from the LDMG.



Q9a. In the lead-up to or during {EVENT} which, if any, of the following sources of information did you use?

Base: All respondents	Total n=307	Gender		Age		Key Impacts		Prior Disaster Experience		LDMG Awareness	
		Male n=112	Female n=195	Under 45 n=73	45 and over n=234	Any impact n=188	No impact n=119	Yes n=251	No n=56	Yes n=209	No n=98
Bureau of Meteorology website	68%	71%	65%	79% ↑	61% ↓	69%	67%	72% ↑	47% ↓	69%	65%
Some other news source - radio, TV, online	67%	60% ↓	73% ↑	65%	68%	67%	66%	67%	63%	70%	60%
ABC News - radio, TV, online	53%	55%	51%	40% ↓	61% ↑	52%	55%	53%	54%	58%	44%
Family, friends or neighbours	50%	52%	48%	57%	46%	55%	42%	50%	50%	50%	50%
Your Local Council or Local Disaster Management Group	37%	28% ↓	46% ↑	44%	33%	41%	30%	38%	31	44% ↑	23% ↓
The Queensland Police Service or the SES door-knocking or coming to your house to give you information or a warning	23%	26%	21%	27%	21%	30% ↑	12% ↓	27% ↑	6% ↓	28% ↑	15% ↓
State government websites such as qld.gov.au	16%	11% ↓	22% ↑	24% ↑	12% ↓	19%	12%	18%	11%	21% ↑	9% ↓
Facebook	4%	1% ↓	6% ↑	4%	4%	4%	4%	5% ↑		5%	2%
SunWater/seqwater the dam operator	2%	4%	1%	3%	2%	4%		1%	6%	3%	
Some other information source	7%	7%	8%	6%	8%	7%	8%	8%	4%	9%	5%
None of the above	3%	4%	2%	4%	2%	2%	4%	2%	5%	2%	4%

↑ ↓ indicates a significant difference to the average at at least the 95% confidence level.

## 4.2 Main source of information used prior to/during event

Q9b. And which of those did you MAINLY use?

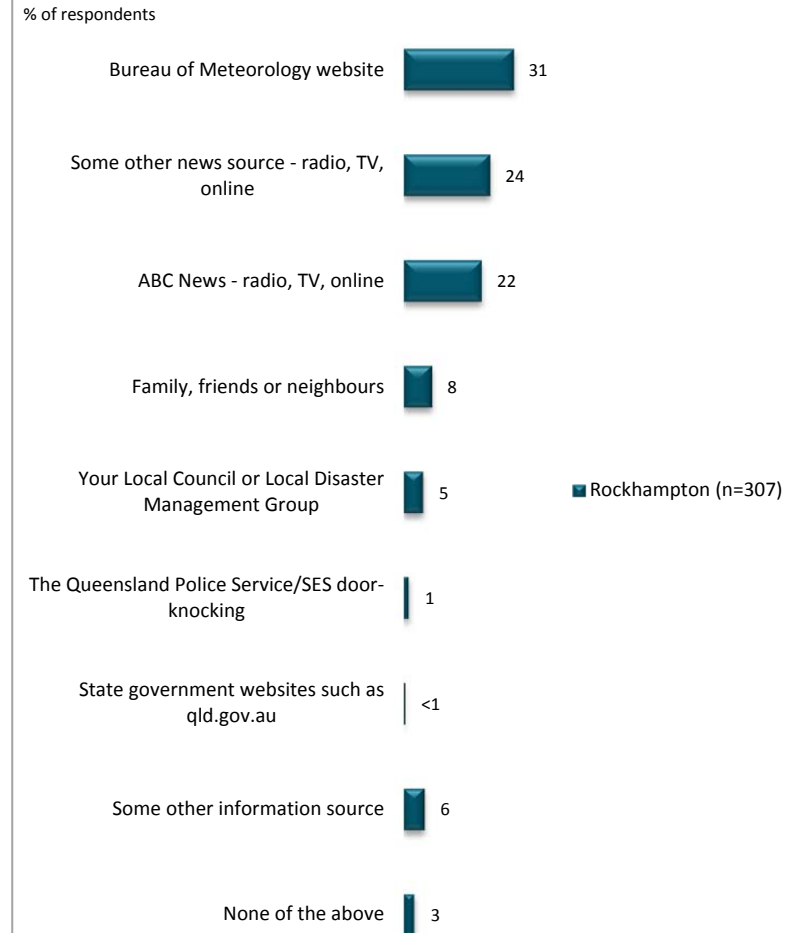
When asked to report the *main* source of information used during Tropical Cyclone Debbie, respondents from the Rockhampton survey area are most likely to have used the BOM website (31%), followed by a news source other than the ABC (24%), then ABC News (22%).

### Sub-group differences

Those aged under 45 years are most likely to have relied on the BOM website for information (41%), while those aged 45 years or older most commonly used ABC news sources (31%).

Q9b. And which of those did you MAINLY use?

Base: All respondents



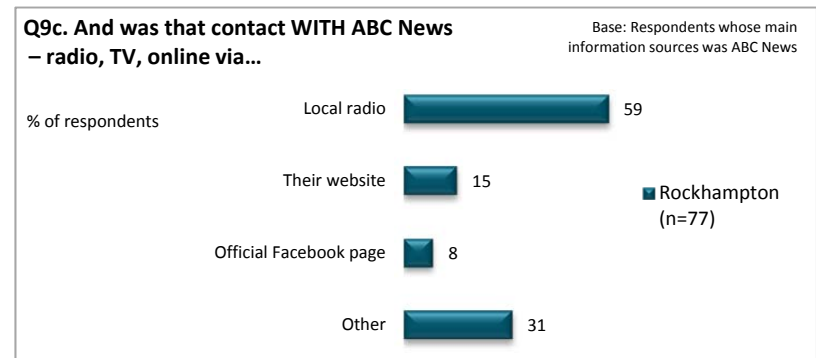
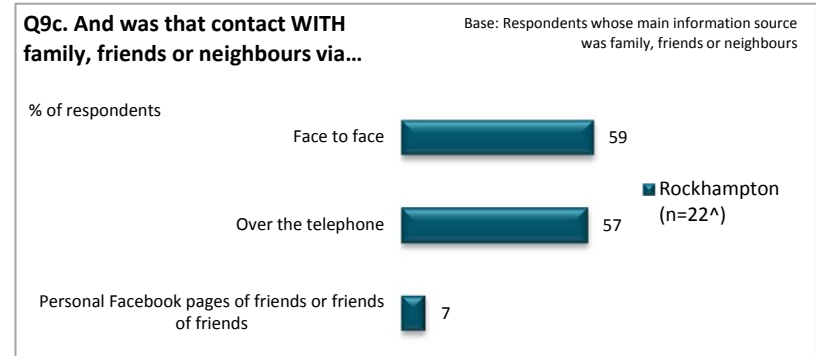
### 4.3 Type of contact with main source of information

Q9c. And was that contact WITH...

Rockhampton respondents who had contact with family, friends or neighbours are most likely to say their contact was face-to-face (59%) or over the telephone (57%).

Contact with the local council was most commonly via the official council Facebook page (56%) or their website (34%).

Local radio was the most common way of receiving ABC News (59%).



^Caution: Small cell size

## 4.4 Effectiveness of warning methods

Q10. Please rate the effectiveness of each of the following methods of receiving warnings during times of disaster. The first method is a, the next method is a...

Television (81%), text message (79%) or radio (77%) are considered the most effective methods of receiving warnings during times of disaster according to Rockhampton residents.

A phone call to a landline from authorities (59%) is rated as the least effective method. The perceived effectiveness of all options tested is detailed in the adjacent chart.

### Sub-group differences

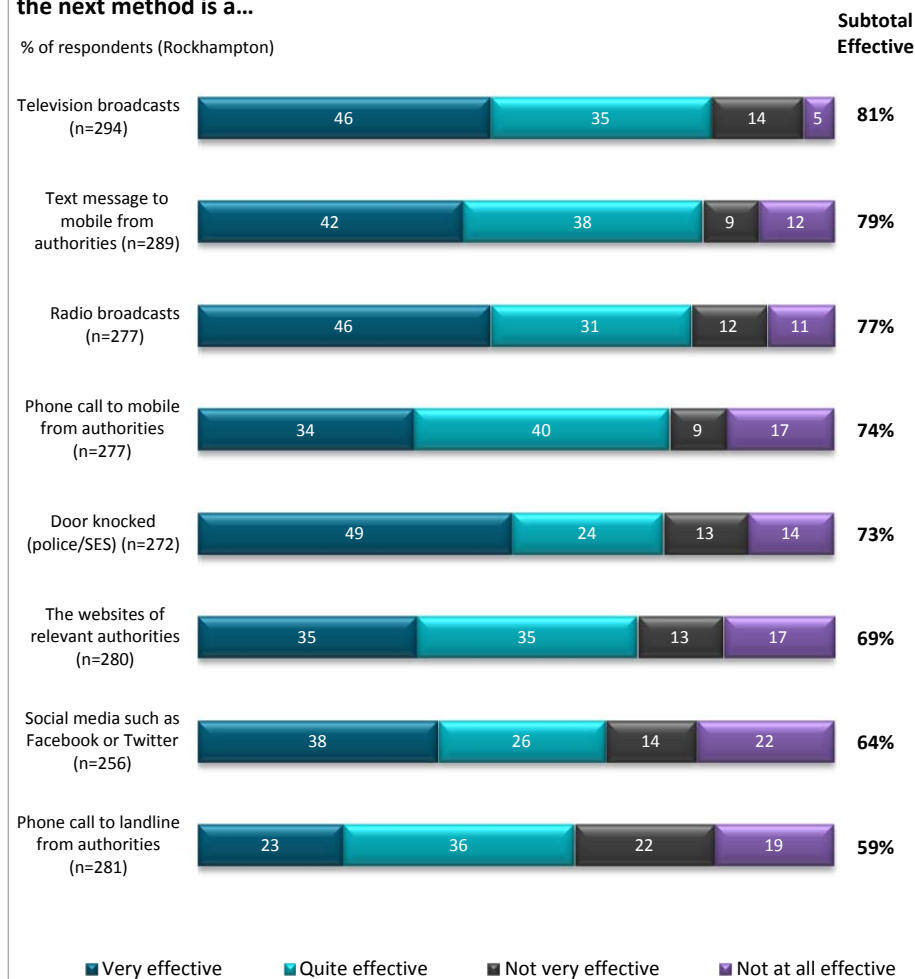
Respondents aged 45 years or younger are more likely than average to rate the website of relevant authorities (78%, 69% average) or social media (87%, 64% average) as effective.

A sharp decline in acceptance of online, mobile or social media sources is noted among those aged 60 years or older.

**Q10. Please rate the effectiveness of each of the following methods of receiving warnings during times of disaster. The first method is a, the next method is a...**

Base: All respondents excluding those who answered don't know

% of respondents (Rockhampton)



Q10. Please rate the effectiveness of each of the following methods of receiving warnings during times of disaster. The first method is a, the next method is a...

Base: All respondents, excluding those who answered don't know	Gender			Age											
	Total	Male	Female	Under 45	45 and over	18 to 24 years	25 to 29 years	30 to 34 years	35 to 39 years	40 to 44 years	45 to 49 years	50 to 54 years	55 to 59 years	60 to 64 years	65 years or over
<i>% of respondents rating method very/quite effective</i>															
Television broadcasts (n=294)	81%	76%	86%	80%	81%	91%	100%	86%	73%	76%	74%	94% ↑	72%	72%	92% ↑
Text message to mobile from authorities (n=289)	79%	75%	84%	83%	77%	78%	100%	72%	89%	85%	81%	93% ↑	74%	78%	66% ↓
Radio broadcasts (n=277)	77%	78%	77%	72%	81%	81%	100%	71%	68%	68%	84%	81%	79%	69%	84%
Phone call to mobile from authorities (n=277)	74%	74%	74%	79%	71%	89%	33%	76%	87%	83%	74%	89% ↑	62%	74%	63% ↓
Being door knocked or getting a visit to your house by police or SES (n=272)	73%	67% ↓	80% ↑	71%	75%	55%	100%	76%	74%	65%	74%	67%	78%	78%	75%
The websites of relevant authorities (n=280)	69%	66%	73%	78% ↑	63% ↓	82%	100%	86%	77%	70%	66%	76%	72%	50% ↓	56% ↓
Social media such as Facebook or Twitter (n=256)	64%	54% ↓	74% ↑	87% ↑	48% ↓	100%	100%	86%	80%	88%	55%	68%	47%	40% ↓	33% ↓
Phone call to landline from authorities (n=281)	59%	52% ↓	66% ↑	50%	65%	89%	17%	52%	39%	52%	59%	64%	62%	60%	76% ↑

↑ ↓ indicates a significant difference to the average at at least the 95% confidence level.

## 4.5 Text message warnings

### 4.5.1 Receipt of official warnings via text message

Q11. In the lead-up to or during {EVENT}, did you receive any official WARNINGS via TEXT MESSAGE?

Q12. Who did you receive a text message from?

Six in ten (57%) Rockhampton residents in the survey area report receiving a warning via text message in the lead-up to or during weather and flooding associated with Tropical Cyclone Debbie.

Of those who received a text message, the local council is most commonly stated as the source (46%). One in three (36%) cannot recall who the text came from.

#### Sub-group differences

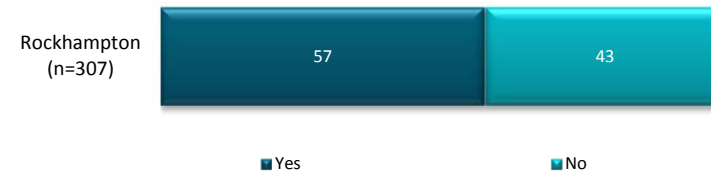
Receipt of a warning via text message is more prevalent among those aged under 45 years (71%) compared to those aged over 45 years (49%). The age group *least* likely to recall receiving a text message warning is the 65 years or older age group (21%).

Those who have been affected by other disasters in the past (62%) are more likely than those who haven't (34%) to report receiving a warning via text message.

#### Q11. Warning messages by Location

Base: All respondents

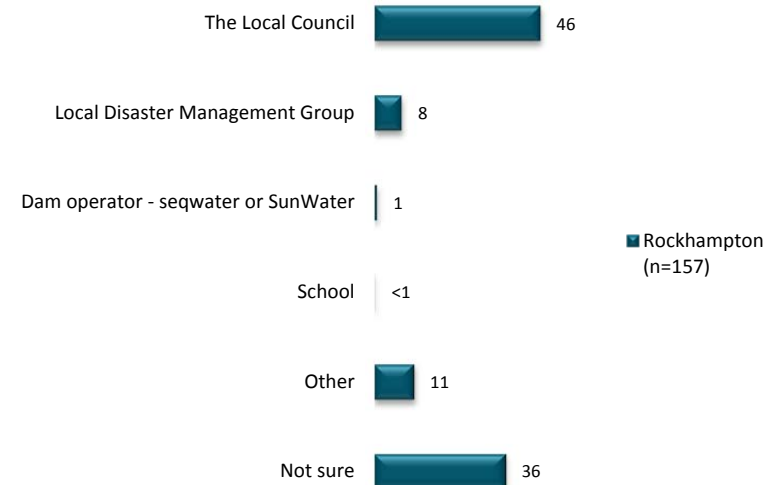
% of respondents



#### Q12. Who did you receive a text message from?

Base: Those who received a text message

% of respondents



Q11. In the lead-up to or during {EVENT}, did you receive any official WARNINGS via TEXT MESSAGE?

Base: All respondents	Gender			Age												Prior Disaster Experience	
	Total n=307	Male n=112	Female n=195	Under 45 n=73	45 and over n=234	18 to 24 years n=7^	25 to 29 years n=4^	30 to 34 years n=15^	35 to 39 years n=19^	40 to 44 years n=28^	45 to 49 years n=37	50 to 54 years n=35	55 to 59 years n=42	60 to 64 years n=39	65 years or over n=81	Yes n=251	No n=56
Yes	57%	56%	59%	71% ↑	49% ↓	46%	83%	52%	92%	71%	72% ↑	64%	54%	43%	21% ↓	62% ↑	34% ↓
No	43%	44%	41%	29% ↓	51% ↑	54%	17%	48%	8%	29%	28% ↓	36%	46%	57%	79% ↑	38% ↓	66% ↑

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

Q12. Who did you receive a text message from?

Base: Those who received a text message	Gender			Age												
	Total n=157	Male n=53	Female n=104	Under 45 n=52	45 and over n=105	18 to 24 years n=4^	25 to 29 years n=3^	30 to 34 years n=8^	35 to 39 years n=17^	40 to 44 years n=20^	45 to 49 years n=27^	50 to 54 years n=23^	55 to 59 years n=22^	60 to 64 years n=16^	65 years or over n=17^	
The Local Council	46%	41%	50%	44%	47%	80%	21%	45%	38%	48%	43%	67%	33%	52%	52%	
Local Disaster Management Group	8%	1% ↓	14% ↑	9%	7%				13%	12%	9%	3%	7%	4%	6%	
Dam operator - seqwater or SunWater	1%	1%	1%		2%							3%		9%		
School	*		1%		1%							3%				
Other	11%	16%	6%	9%	13%	20%		9%		16%	23%	10%	10%			
Not sure	36%	42%	31%	38%	35%		79%	46%	49%	24%	29%	30%	50%	35%	42%	

^ Caution: small cell size.

\*Indicates less than 1% of respondents.

↑↓ indicates a significant difference to the average at at least the 95% confidence level.



## 4.5.2 Ease of understanding text message warnings

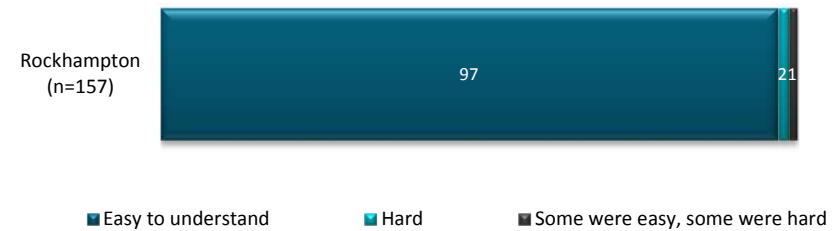
Q13a. Thinking about {any of} the text message warnings you received would you say they were generally....

97% of recipients of a text message in Rockhampton report that the text message warnings received were easy to understand. 2% say they were hard to understand, while 5% report some being easy and others being hard to understand.

### Q13a. Understandable by Location

Base: Those who received a text message

% of respondents



Q13a. Thinking about {any of} the text message warnings you received would you say they were generally....

Base: Those who received a text message	Source of text message						
	Total n=157	The Local Council n=76	Local Disaster Management Group n=13 <sup>^</sup>	Dam operator - seqwater or SunWater n=2 <sup>^</sup>	School n=1 <sup>^</sup>	Other n=13 <sup>^</sup>	Not sure n=57
Easy to understand	97%	97%	100%	100%	100%	100%	95%
Hard	2%	3%					1%
Some were easy, some were hard	1%						4%

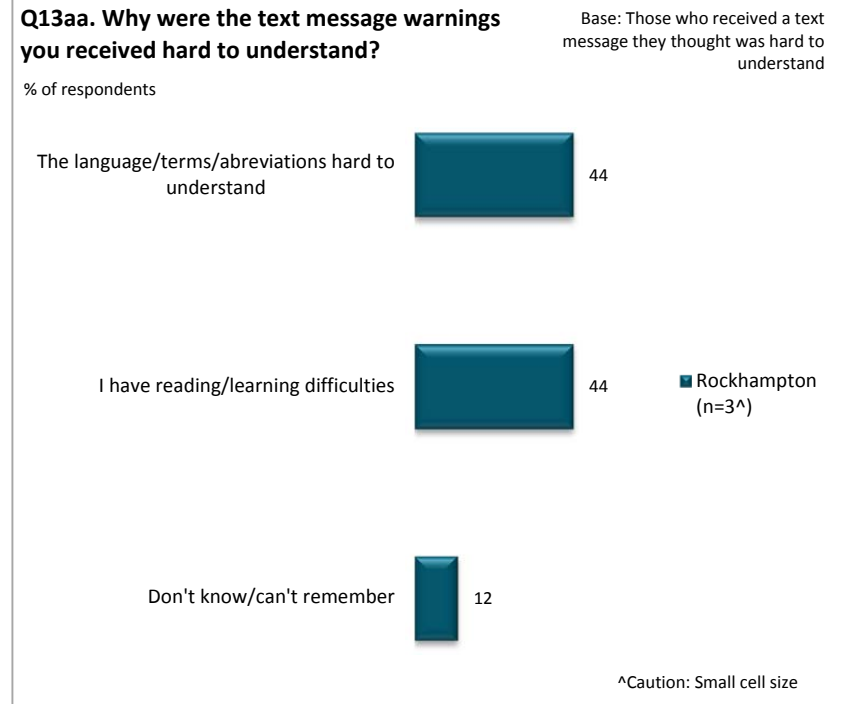
<sup>^</sup> Caution: small cell size.

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

### 4.5.3 Why were text message warnings hard to understand?

Q13aa. Why were the text message warnings you received hard to understand?

The main difficulty Rockhampton text recipients say they had in understanding their text messages was in relation to the language or abbreviations used (44%, or two respondents). Two respondents report they have reading/learning difficulties.



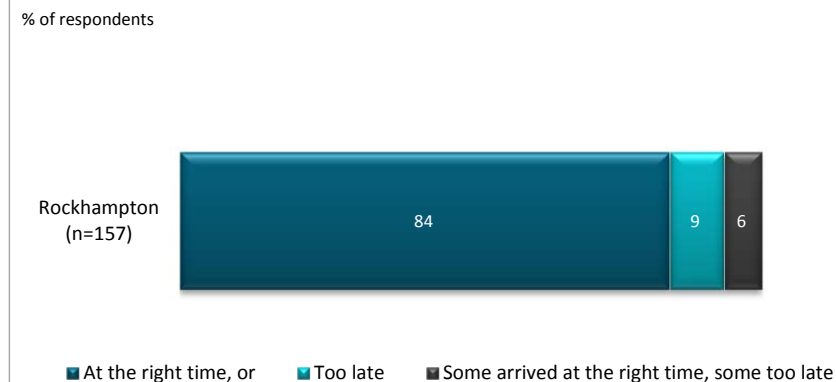
#### 4.5.4 Timing of text messages

Q13b. Did text messages generally arrive...

Most (84%) text message recipients say the messages arrived at the right time, 9% feel the messages arrived too late, while the balance (6%) report some arriving on time while others arrived too late.

Q13b. Did text messages generally arrive....

Base: Those who received text message



Q13b. Did text messages generally arrive...

Base: Those who received text message	Source of text message						
	Total n=157	The Local Council n=76	Local Disaster Management Group n=13 <sup>^</sup>	Dam operator - seqwater or SunWater n=2 <sup>^</sup>	School n=1 <sup>^</sup>	Other n=13 <sup>^</sup>	Not sure n=57
At the right time, or	84%	86%	73%	33%		88%	86%
Too late	9%	6%	18%	67%	100%	12%	9%
Some arrived at the right time, some too late	6%	8%	9%				6%

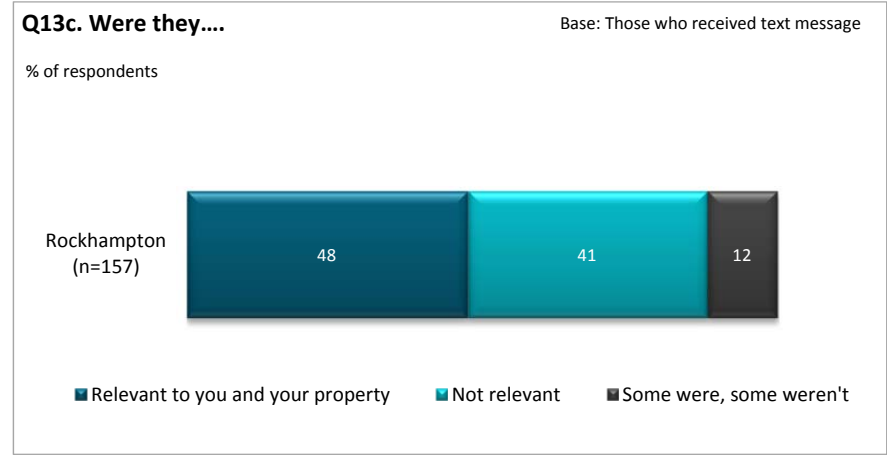
<sup>^</sup> Caution: small cell size.

↑ ↓ indicates a significant difference to the average at at least the 95% confidence level.

#### 4.5.5 Relevance of text message

Q13c. Were they...

Of Rockhampton residents who received a text message, one in two (48%) reported the text message was relevant to themselves and their property, 41% feel the messages were irrelevant, while 12% report that some messages were relevant and some were not.



Q13c. Were they....

Base: Those who received text message	Source of text message						
	Total n=157	The Local Council n=76	Local Disaster Management Group n=13 <sup>^</sup>	Dam operator - seqwater or SunWater n=2 <sup>^</sup>	School n=1 <sup>^</sup>	Other n=13 <sup>^</sup>	Not sure n=57
Relevant to you and your property	48%	44%	43%	67%		63%	50%
Not relevant	41%	43%	30%			18%	45%
Some were, some weren't	12%	13%	27%	33%	100%	18%	5%

<sup>^</sup> Caution: small cell size.

#### 4.5.6 Action taken after receiving text message

Q13d. Did you take any action after receiving any of the text messages?  
 Q13e. What action did you take?

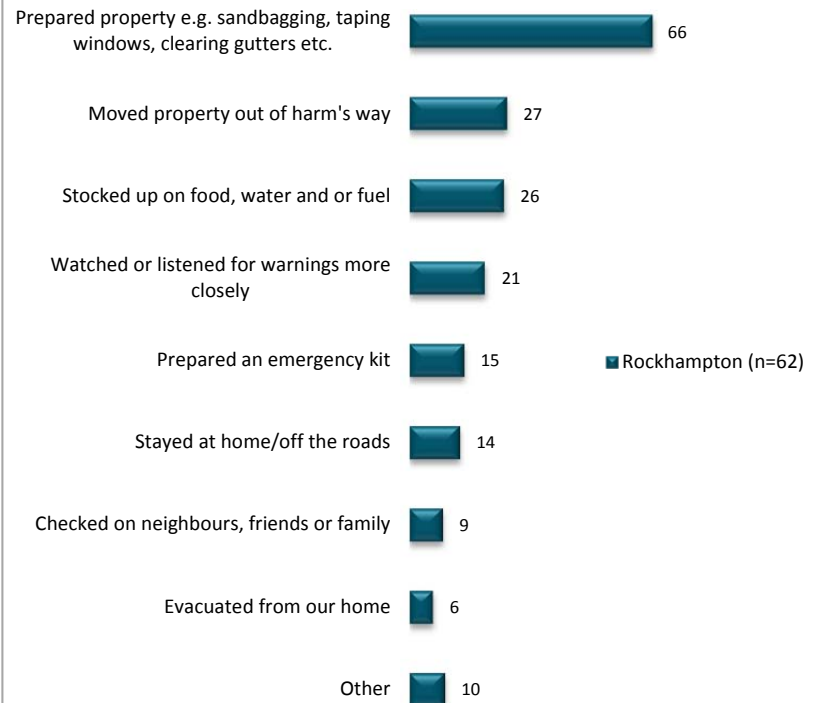
Four in ten (40%) Rockhampton text message recipients took action after receiving a text message.

Of those who took action, the most common response reported was preparing their property (66%). Other common responses were to move property out of harm's way (27%), stock up on food, water and/or fuel (26%) or watch and listen for warnings more carefully (21%). 6% of text message recipients say they evacuated their home.

**Q13d. Did you take any action after receiving any of the text messages?** Base: Those who received text message  
 % of respondents



**Q13e. What action did you take?** Base: Those who took action  
 % of respondents



#### 4.5.7 Impact experienced matching text message warnings

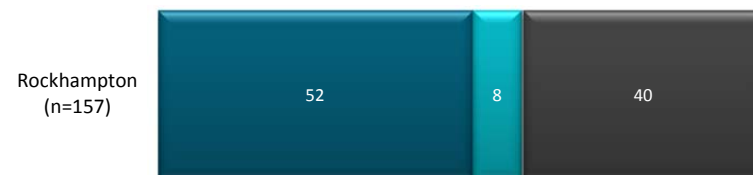
Q13f. Did the actual impact or impacts you experienced match the text warnings you received?

52% of Rockhampton text message recipients feel that the actual impacts they experienced matched the text message warning(s) received. Four in ten (40%) feel the warnings overstated or exaggerated the impacts, while 8% feel the text message warnings did not prepare them *enough*.

**Q13f. Did the actual impact or impacts you experienced match the text warnings you received?**

% of respondents

Base: Those who received a text message



- Yes
- No - the warnings did not prepare you enough about the potential impacts
- No - the warnings overstated or exaggerated the impacts

Q13f. Did the actual impact or impacts you experienced match the text warnings you received?

Base: Those who received a text message	Source of text message						
	Total n=157	The Local Council n=76	Local Disaster Management Group n=13 <sup>^</sup>	Dam operator - seqwater or SunWater n=2 <sup>^</sup>	School n=1 <sup>^</sup>	Other n=13 <sup>^</sup>	Not sure n=57
Yes	52%	51%	62%	33%		61%	50%
No - the warnings did not prepare you enough about the potential impacts	8%	11%	9%	67%		12%	2% ↓
No - the warnings overstated or exaggerated the impacts	40%	38%	29%		100%	27%	48%
<b>SUBTOTAL No</b>	<b>48%</b>	<b>49%</b>	<b>38%</b>	<b>67%</b>	<b>100%</b>	<b>39%</b>	<b>50%</b>

<sup>^</sup> Caution: small cell size.

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

## 4.6 Suggested improvements for warnings

Q14. Thinking about emergency warnings generally, from any source or organisation, how could they be improved? How else?

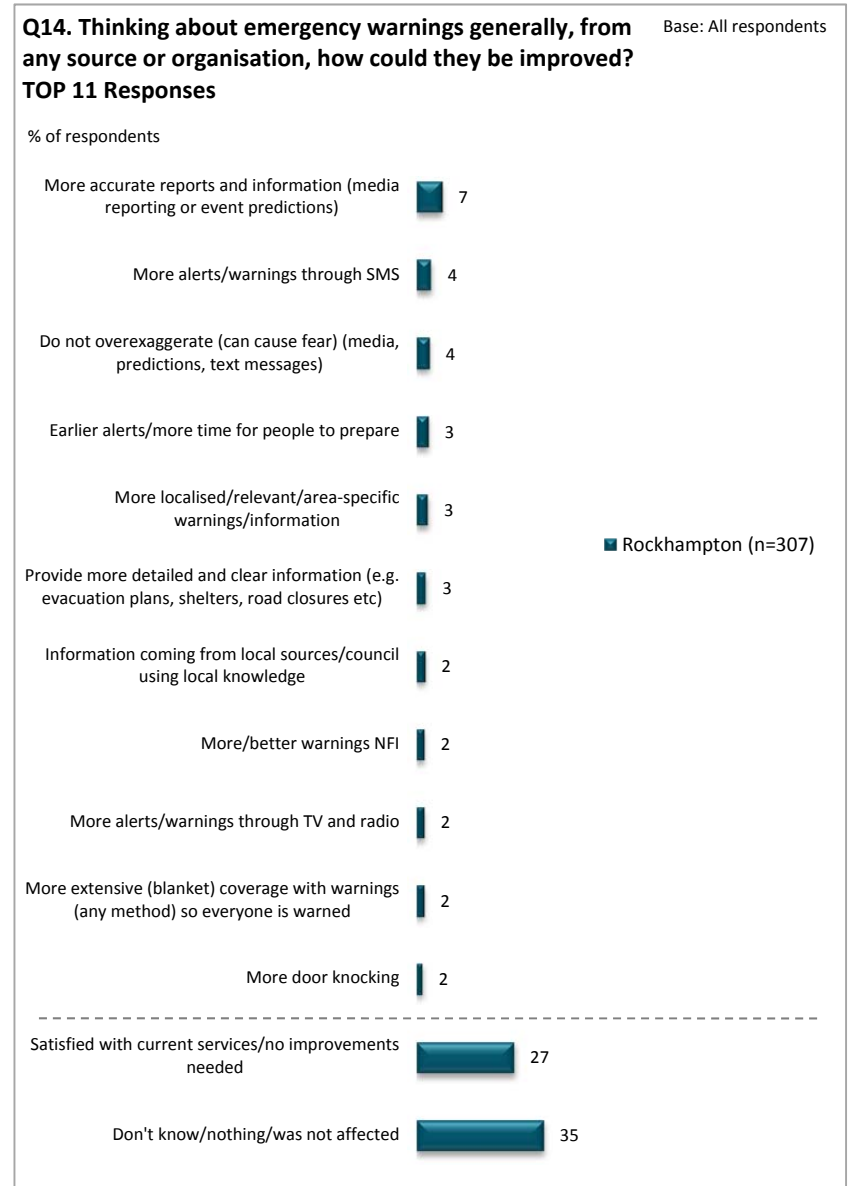
Among Rockhampton residents, suggestions for improving emergency warnings, from any source or organisation, most commonly relate to providing more accurate reports and information (media reporting or event predictions, 7%). Providing more alerts/warnings through SMS (4%) and not over exaggerating the impacts (4%) are also suggested. The top 11 suggestions for improvement are presented in the adjacent chart, with the balance of suggestions detailed in the table on the following page.

Six in ten respondents are unable to make any suggestions for improving emergency warnings (27% saying they are satisfied with the current warnings and 35% not having any suggestions to make).

### Sub-group differences

Females are more likely than males to suggest more alerts/warnings via SMS (7% females, 2% males) or earlier alerts (5% female, 1% male).

Other sub-group differences are highlighted in the following table.



Q14. Thinking about emergency warnings generally, from any source or organisation, how could they be improved? How else?

Base: All respondents	Gender		Age		You had to evacuate from your home		
	Total n=307	Male n=112	Female n=195	Under 45 n=73	45 and over n=234	Yes n=21^	No n=286
Satisfied with current services/no improvements needed	27%	27%	28%	30%	25%	26%	27%
More accurate reports and information (media reporting or event predictions)	7%	9%	5%	5%	8%	21%	6%
More alerts/warnings through SMS	4%	2% ↓	7% ↑	4%	4%	6%	4%
Do not over exaggerate (can cause fear) (media, predictions, text messages)	4%	4%	3%	1% ↓	5% ↑		4%
Earlier alerts/more time for people to prepare	3%	1% ↓	5% ↑	3%	3%	3%	3%
More localised/relevant/area-specific warnings/information	3%	3%	3%	2%	4%	2%	3%
Provide more detailed and clear information (e.g. evacuation plans, shelters, road closures etc)	3%	2%	3%	4%	2%		3%
Information coming from local sources/council using local knowledge	2%	4%	1%		4% ↑	4%	2%
More/better warnings NFI	2%	4%	1%	3%	2%		2%
More alerts/warnings through TV and radio	2%	2%	2%	2%	2%	6%	2%
More extensive (blanket) coverage with warnings (any method) so everyone is warned	2%	3%	2%	4%	1%	6%	2%
More door knocking	2%	1%	2%	2%	1%		2%
Specific alerts and assistance to the elderly (more personal, less SMS/social media)	2%	3%	1%	2%	1%	11%	1%
Better information from BOM (how to interpret, tracking of cyclone, up-to-date)	1%	2%	*		2%		1%
More assistance/better response from SES, emergency services	1%	2%	1%	1%	1%		1%
More regular updates/real time information	1%	1%	1%		2% ↑		1%
Have warning sirens/drive around with a speaker/siren on radio or TV	1%	2%			1%		1%
More direct phone calls	1%	*	1%	1%	1%		1%
Ensure alerts have reached everyone	1%	2%		2%			1%
Better communication methods when power is down	1%		2%	1%	1%		1%
Improve telecommunications and infrastructure to reduce effects of an event	*		1%		1%		*
More alerts/warnings through social media	*		1%	1%			*
More letter drops/public notices	*		1%	1%			*
Other	4%	4%	3%	3%	4%	13%	3%
Don't know/nothing/was not affected	35%	35%	36%	34%	36%	22%	36%

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

\*Indicates less than 1% of respondents.

^Caution: Small cell size



## 5.0 Services & Response

### 5.1 Services or assistance received

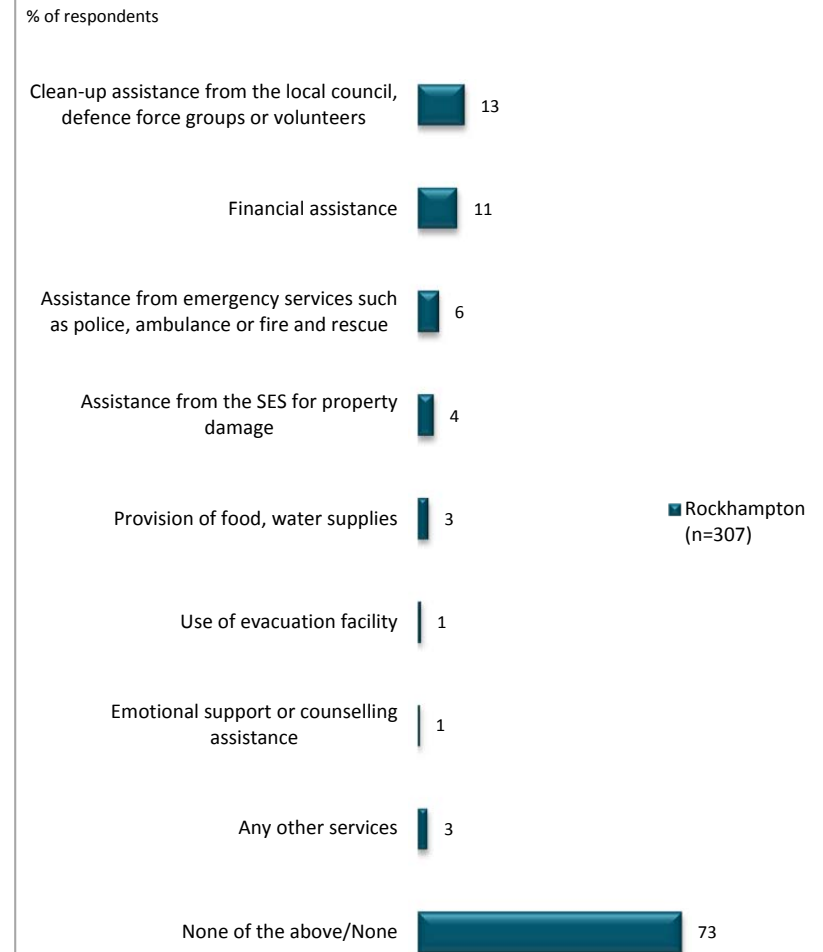
Q15. Which of the following services or assistance did you receive in association with {EVENT}?

13% of Rockhampton residents report receiving clean-up assistance from the local council, defence force groups or volunteers after the weather and flooding associated with Tropical Cyclone Debbie. 11% received financial assistance. These are the two most widespread types of assistance reported. The adjacent chart provides results for a range of other services or forms of assistance measured.

#### Sub-group differences

As expected, those who reported a personal impact from the event are generally more likely to have received a variety of assistance types.

Q15. Which of the following services or assistance did you receive in association with {EVENT}? Base: All respondents



Q15. Which of the following services or assistance did you receive in association with {EVENT}?

Base: All respondents	Gender			Age		Key Impacts													
	Total n=307	Male n=112	Female n=195	Under 45 n=73	45 and over n=234	Isolated or cut off from town, work or moving in and out of your home n=81	Telco outage n=54	Power outage n=71	An emotio nal impact n=47	Other property was damaged n=43	Loss of income n=42	Your home was damaged n=38	Schools or day- care centres were closed n=31	Limited food, water or fuel n=26^	You had to evacuate from your home n=21^	Other property was destroyed or lost n=12^	A physical injury n=3^	Any other impact n=5^	None n=119
Clean-up assistance from the local council, defence force groups or volunteers	13%	16%	10%	14%	12%	25% ↑	24%	25% ↑	30% ↑	39% ↑	29% ↑	30% ↑	33% ↑	32%	30%	66%		10%	7% ↓
Financial assistance	11%	11%	11%	15%	9%	29% ↑	25% ↑	23% ↑	24%	31% ↑	33% ↑	43% ↑	15%	31%	39%	30%	17%		
Assistance from emergency services such as police, ambulance or fire and rescue	6%	6%	6%	6%	6%	16% ↑	14%	11%	16%	24% ↑	11%	17%	13%	20%	24%	39%		37%	2%
Assistance from the SES for property damage	4%	5%	4%	3%	5%	12% ↑	14%	12% ↑	18% ↑	23% ↑	15%	19% ↑	19%	26%	12%	59%			
Provision of food, water supplies	3%	3%	3%	3%	3%	5%	11% ↑	7%	10%	16% ↑	9%	15% ↑	10%	22%		10%			
Use of evacuation facility	1%	2%	*	2%	* ↓	3%	4%	3%	5%	6%	5%	5%	8%	9%					*
Emotional support or counselling assistance	1%	1%	1%		1%	1%	1%	1%	1%		1%	2%		2%	4%				
Any other services	3%	3%	3%	4%	2%	6%		1%	1%	1%	2%	1%			3%	5%			3%
None of the above/None	73%	72%	75%	74%	73%	47% ↓	57% ↓	58% ↓	48% ↓	37% ↓	56% ↓	34% ↓	67%	50%	29%	16%	83%	53%	88% ↑

^ Caution: small cell size.

\*Indicates less than 1% of respondents.

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

## 5.2 Service/assistance needed by not received

Q16. Were there any services or assistance that you did need but did not receive?

When asked if there were any services or assistance they needed during the event, but did not receive, the majority of Rockhampton respondents (88%) feel that there were none.

4% of respondents report needing but not receiving financial assistance, while 3% say they would have liked clean-up assistance from the local council, defence force groups or volunteers.

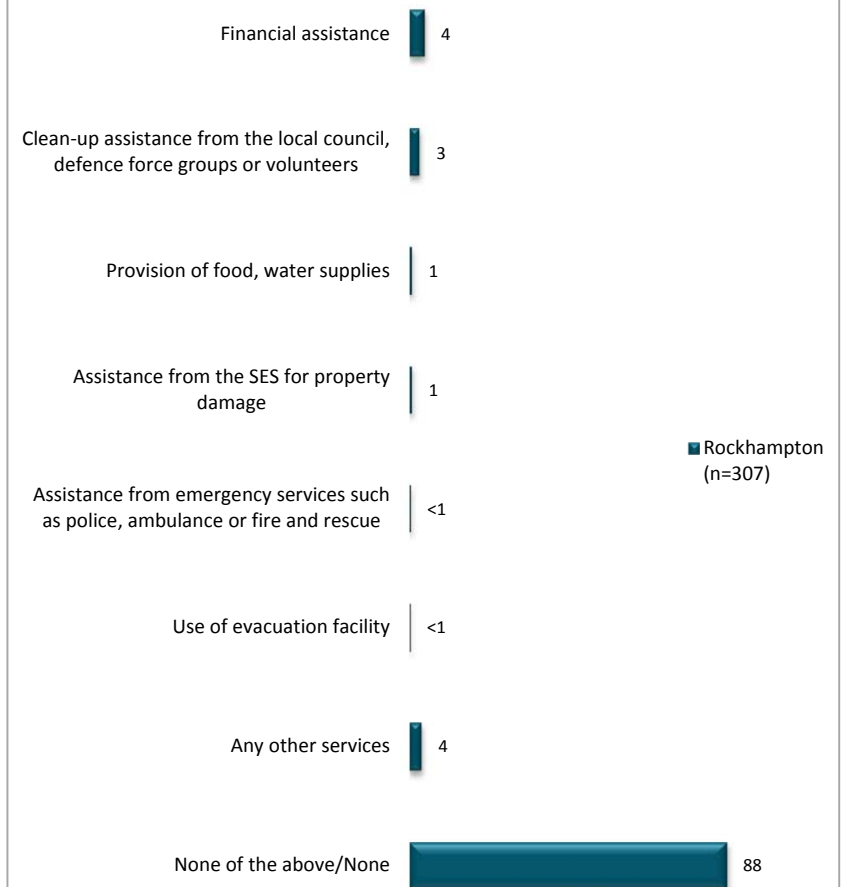
### Sub-group differences

Those who experienced a loss of income (19%) are more likely than average (4%) to say that they needed financial assistance that was not provided.

### Q16. Were there any services or assistance that you did need but did not receive? (UNPROMPTED)

Base: All respondents

% of respondents



Q16. Were there any services or assistance that you did need but did not receive?

	Gender		Age		Key Impacts														
	Total n=307	Male n=112	Female n=195	Under 45 n=73	45 and over n=234	Isolated or cut off from town, work or moving in and out of your home n=81	Telco outage n=54	Power outage n=71	An emotional impact n=47	Other property was damaged n=43	Loss of income n=42	Your home was damaged n=38	Schools or day- care centres were closed n=31	Limited food, water or fuel n=26^	You had to evacuate from your home n=21^	Other property was destroyed or lost n=12^	A physical injury n=3^	Any other impact n=5^	None n=119
Financial assistance	4%	6%	3%	2%	6%	2%	6%	11%	8%	10%	19% ↑	8%	3%	11%					
Clean-up assistance from the local council, defence force groups or volunteers	3%	4%	2%	4%	2%	9%	2%	3%	4%	9%	2%	12%	4%	6%	23%		17%		
Provision of food, water supplies	1%	2%		2%			4%	3%						9%					
Assistance from the SES for property damage	1%	2%		2%		3%	4%	3%	5%	6%		5%			11%				
Assistance from emergency services such as police, ambulance or fire and rescue	*		1%	1%		1%													
Use of evacuation facility	*	1%			1%				2%	2%									
Any other services	4%	4%	3%	3%	4%	6%	3%	4%	10%	7%	8%	4%		5%	12%	14%			2%
None of the above/None	88%	85%	92%	88%	88%	79% ↓	85%	80% ↓	73% ↓	68% ↓	71% ↓	71% ↓	93%	78%	54%	86%	83%	100%	98% ↑

^ Caution: small cell size.

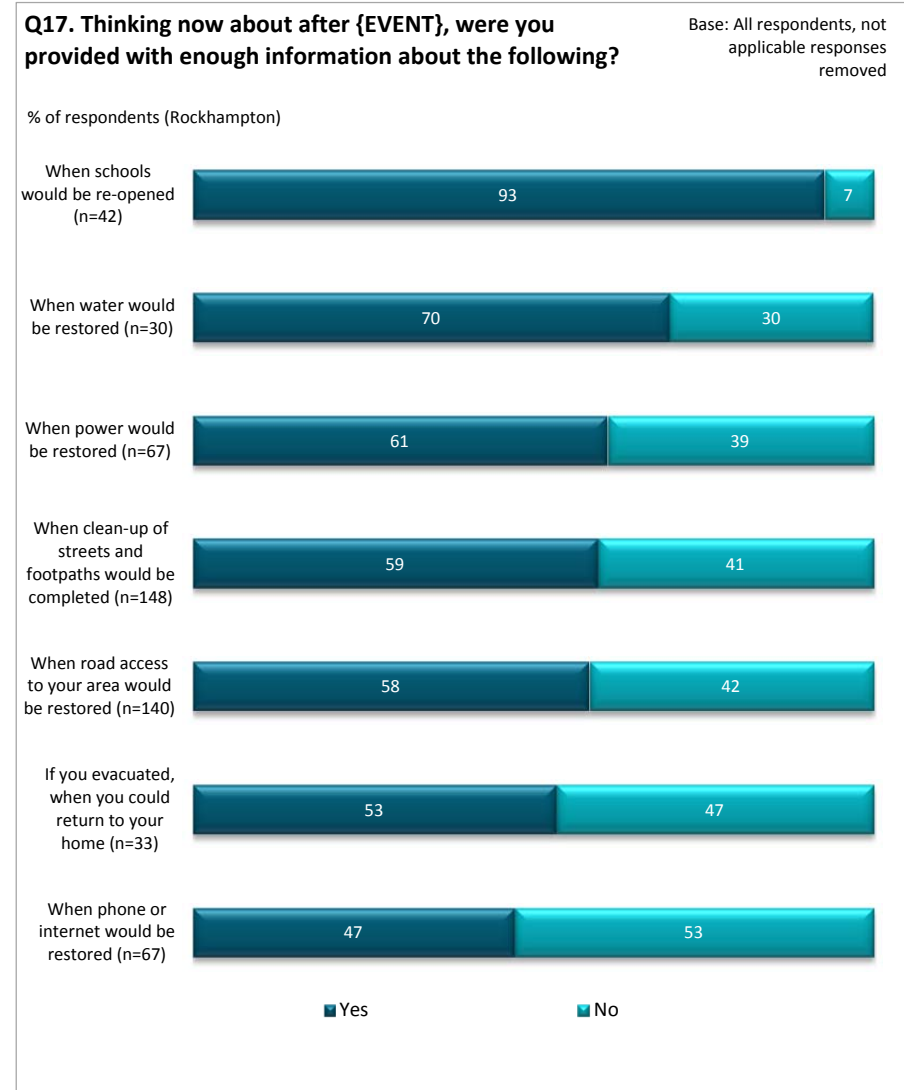
\*Indicates less than 1% of respondents.

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

### 5.3 Information provided after event

Q17. Thinking now about after {EVENT}, were you provided with enough information about the following? If you were not affected by the issue you can say not applicable.

The majority of Rockhampton respondents (93%) say they were provided with enough information about when schools would be re-opened. 70% feel they were well informed about when water would be restored, while 61% feel they were informed about when power would be restored. Respondents are least likely to agree they were informed well enough about when phone or internet services would be restored (47%).



Q17. Thinking now about after {EVENT}, were you provided with enough information about the following? If you were not affected by the issue you can say not applicable.

Base: All respondents, not applicable responses removed	Gender			Age	
	Total	Male	Female	Under 45	45 and over
<i>% of respondents saying yes</i>					
When schools would be re-opened (n=42)	93%	96%	89%	96%	89%
When water would be restored (n=30)	70%	72%	67%	71%	69%
When power would be restored (n=67)	61%	60%	62%	75%	54%
When clean-up of streets and footpaths would be completed (n=148)	59%	59%	60%	55%	62%
When road access to your area would be restored (n=140)	58%	60%	56%	62%	56%
If you evacuated, when you could return to your home (n=33)	53%	63%	45%	71%	36%
When phone or internet would be restored (n=67)	47%	49%	45%	59%	40%

## 5.4 Satisfaction with speed after event

Q18. After the event, were you satisfied or dissatisfied with the speed with which...

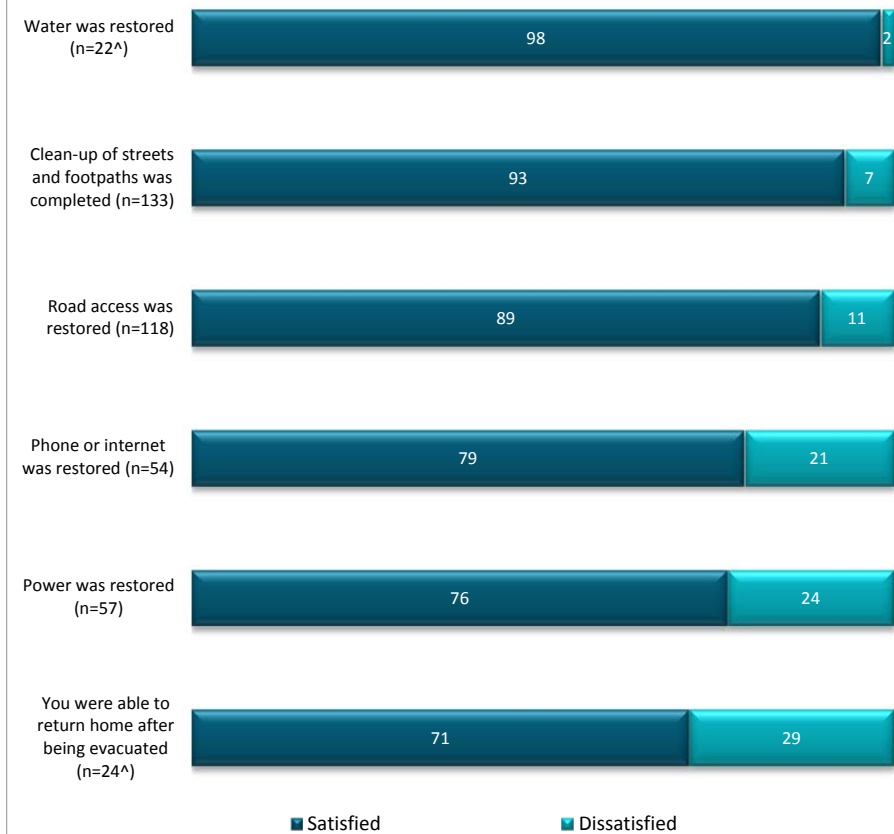
The majority of residents living in the Rockhampton survey area report satisfaction with the speed with which services were restored:

- Water (98% satisfied)
- Clean-up of streets (93%)
- Road access (89%)
- Phone or internet (79%)
- Power (76%)
- Returning to home after evacuating (71%).

### Q18. After the event, were you satisfied or dissatisfied with the speed with which...

Base: All respondents, not applicable responses removed

% of respondents (Rockhampton)



^Caution: Small cell size

Q18. After the event, were you satisfied or dissatisfied with the speed with which...

Base: All respondents, not applicable responses removed	Gender		Age		
	Total	Male	Female	Under 45	45 and over
<i>% of respondents satisfied</i>					
Power was restored (n=57)	76%	80%	71%	90%	68%
Water was restored (n=22 <sup>^</sup> )	98%	100%	94%	100%	94%
Phone or internet was restored (n=54)	79%	85%	70%	81%	77%
Road access was restored (n=118)	89%	92%	87%	91%	88%
Clean-up of streets and footpaths was completed (n=133)	93%	90%	96%	88%	96%
You were able to return home after being evacuated (n=24 <sup>^</sup> )	71%	63%	81%	62%	83%

<sup>^</sup> Caution: small cell size.



## 5.5 Overall preparedness and ability to cope

Q19. Overall would you say you were prepared for and able to cope...

The majority of surveyed residents in Rockhampton say they felt they were prepared for and able to cope with:

- the impacts generally of the weather and flooding resulting from Tropical Cyclone Debbie (98%)
- being out of their home (97%)
- restricted road access (94%)
- the loss of water (92%)
- the loss of phone or internet (83%)
- the loss of power (83%).

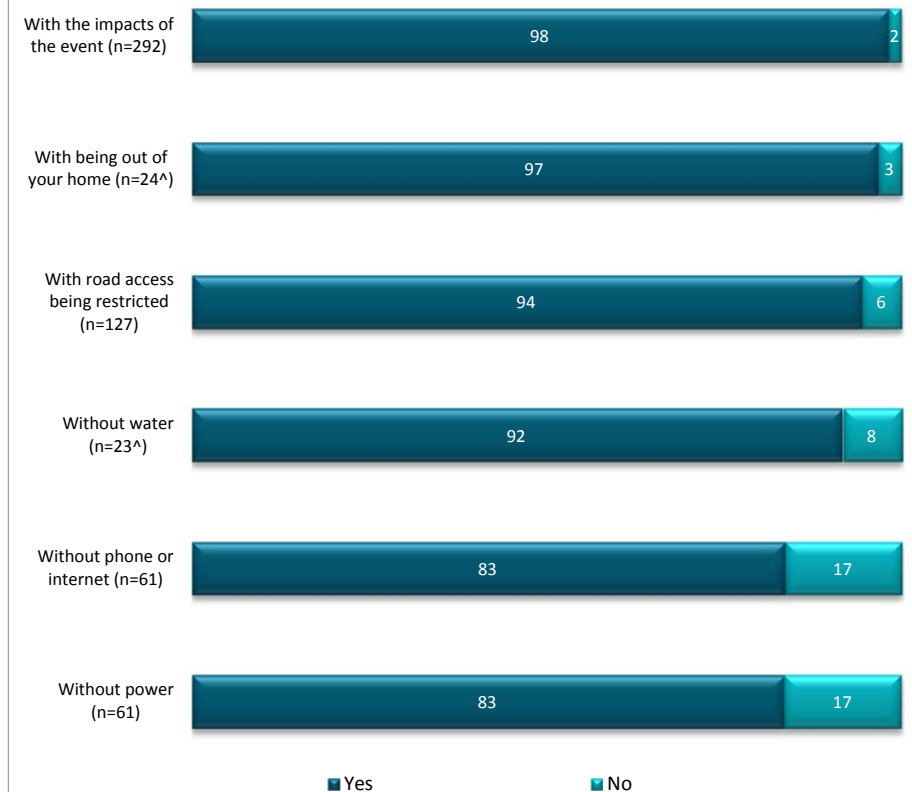
### Sub-group differences

Results by age and gender are highlighted in the following table.

### Q19. Overall would you say you were prepared for and able to cope...

Base: All respondents, not applicable responses removed

% of respondents (Rockhampton)



^Caution: Small cell size

Q19. Overall would you say you were prepared for and able to cope...

Base: All respondents, not applicable responses removed	Gender		Age		
	Total	Male	Female	Under 45	45 and over
<i>% of respondents saying yes</i>					
Without power (n=61)	83%	92%	71%	83%	83%
Without water (n=23 <sup>^</sup> )	92%	100%	76%	93%	90%
Without phone or internet (n=61)	83%	85%	82%	80%	86%
With road access being restricted (n=127)	94%	97%	91%	98%	92%
With being out of your home (n=24 <sup>^</sup> )	97%	100%	92%	100%	92%
With the impacts of the event (n=292)	98%	99%	98%	99%	98%

<sup>^</sup> Caution: small cell size.

## 6.0 Overall Suggestions for Improvement

### 6.1 Suggested improvements for the preparation and response of services

*Q20. And apart from the comments you made earlier about emergency warnings, how could the preparations or response of emergency services, the local council, community groups or citizens themselves have been improved? What could have been done differently to have helped you or others at any stage of the event? What else?*

Rockhampton respondents were asked for their suggested improvements to the preparations and response of emergency services, the local council, community groups or citizens themselves. The most common themes arising in response to this are as follows:

- Provide more accurate/clearer information (4%)
- Do not over exaggerate the impacts (3%)
- Improve infrastructure to reduce effects of event (3%)
- Provide more assistance/better response from council (3%)
- Improve council, utility and telecommunication service updates (3%).

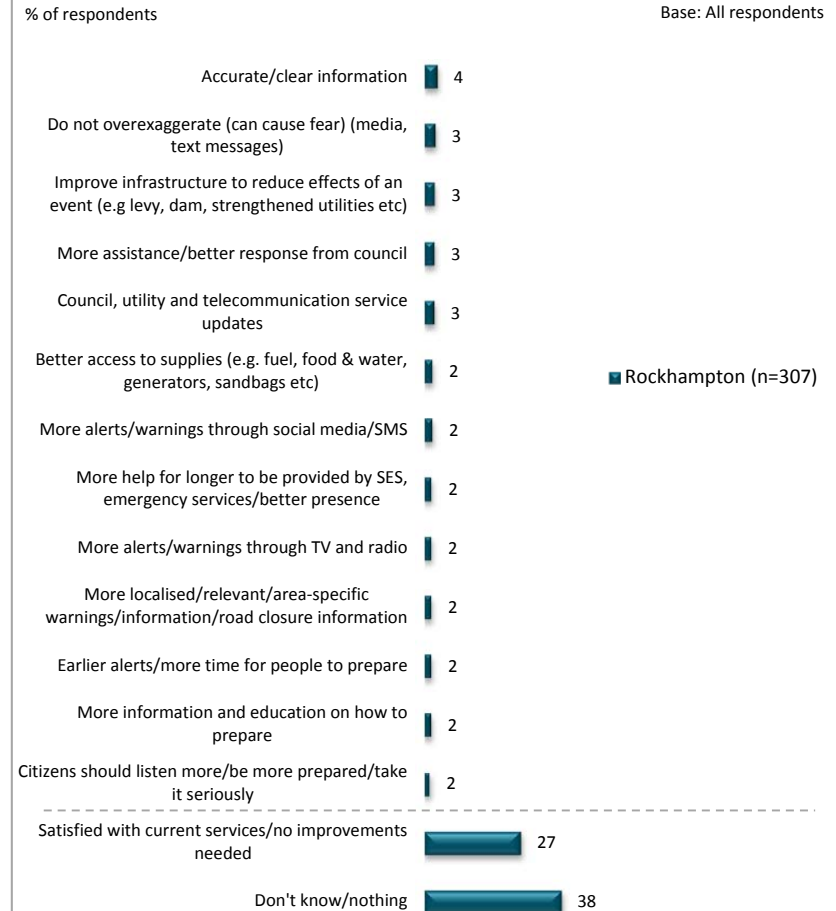
The top 13 reasons are displayed in the adjacent chart while remaining suggestions are included in the table overleaf.

#### *Sub-group differences*

Those who experienced personal impacts from the event are generally more likely to make a range of suggestions.

Results by gender, age and key impacts are presented in the following tables.

#### Q20. How could the preparations or response of emergency services, the local Council, community groups or citizens themselves have been improved? – Top 13 responses



Q20. And apart from the comments you made earlier about emergency warnings, how could the preparations or response of emergency services, the local council, community groups or citizens themselves have been improved? What could have been done differently to have helped you or others at any stage of the event? What else?

Base: All respondents	Gender			Age		Key Impacts														
	Total n=307	Male n=112	Female n=195	Under 45 n=73	45 and over n=234	Isolated or cut off from town, work or moving in and out of your home n=81	Telco outage n=54	Power outage n=71	An emotional impact n=47	Other property was damaged n=43	Loss of income n=42	Your home was damaged n=38	Schools or day-care centres were closed n=31	Limited food, water or fuel n=26^	You had to evacuate from your home n=21^	Other property was destroyed or lost n=12^	A physical injury n=3^	Any other impact n=5^	None n=119	
Satisfied with current services/no improvements needed	27%	22%	31%	21% ↓	30%	23%	16% ↓	17% ↓	20%	27%	23%	24%	28%	5%	9%	19%	41%	18%	26%	
Accurate/clear information	4%	5%	2%	4%	3%	8%	11%	7%	16%	8%	7% ↑	13%		5%	24%	4%			3%	
Do not over exaggerate (can cause fear) (media, text messages)	3%	5%	1%	3%	3%	3%	1%	4%	3%	6%	7% ↑	5%		6%	4				3%	
Improve infrastructure to reduce effects of an event (e.g. levy, dam, strengthened utilities etc)	3%	4%	2%	4% ↑	2%	4%	1%	1%	2%	2%	4%	2%	2%	3%					4%	
More assistance/better response from council	3%	3%	2%	3%	3%	5%	4%	3%	2%	5%	5% ↑	4%	5%	6%	10%		17%		2%	
Council, utility and telecommunication service updates (e.g. power outages, clean-up, road and bridge openings/closures etc)	3%	3%	3%	3%	3%	4%	2%	2%	4%		3%		2%	4%	7%	12%			4%	
Better access to supplies (e.g. fuel, food & water, generators, sandbags etc)	2%	4%	1%	5% ↑	1%	1%	5%	7%		2%			2%	20%					1%	
More alerts/warnings through social media/SMS	2%	2%	2%	2%	2%	1%			5%	2%	2%	3%	4%						3%	
More help for longer to be provided by SES, emergency services/better presence	2%	2%	2%	2%	2%	5%	6%	5%	6%	8%	7% ↑	9%	8%	9%	2%	10%			1%	
More alerts/warnings through TV and radio	2%	3%	2%		3% ↑	5%		2%	4%	1%	2%		2%	2%					37%	1%
More localised/relevant/area-specific warnings/information/road closure information	2%	2%	2%	3% ↑	1%	1%	2%	1%	6%	3%			4%			10%			2%	
Earlier alerts/more time for people to prepare	2%		4% ↑	4% ↑	1%		3%	3%	3%					2%						1%
More information and education on how to prepare, where and how to evacuate, make people aware of dangers	2%	4% ↑			3% ↑							2%	3%	4%						3%
Citizens should listen more/be more prepared/take it seriously	2%	1%	2%	1%	2%	1%	2%	1%												2%
Improve speed of restoration/repair of infrastructure post event (e.g. telecommunications, utilities, roads etc)	1%	*	2%	1%	2%	4%	2%	1%		4%			4%	5%						
More information coming from council	1%	2%	1%	1%	1%	3%	6%													
Improve communication/organisation/coordination between all agencies	1%	1%	1%	1%	1%	2%	2%	1%	3%		2%			2%	7%	12%				1%

\*Indicates less than 1% of respondents.

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

^Caution: Small cell size

Q20. And apart from the comments you made earlier about emergency warnings, how could the preparations or response of emergency services, the local council, community groups or citizens themselves have been improved? What could have been done differently to have helped you or others at any stage of the event? What else?

Base: All respondents	Gender			Age		Key Impacts													
	Total n=307	Male n=112	Female n=195	Under 45 n=73	45 and over n=234	Isolated or cut off from town, work or moving in and out of your home n=81	Telco outage n=54	Power outage n=71	An emotional impact n=47	Other property was damaged n=43	Loss of income n=42	Your home was damaged n=38	Schools or day-care centres were closed n=31	Limited food, water or fuel n=26^	You had to evacuate from your home n=21^	Other property was destroyed or lost n=12^	A physical injury n=3^	Any other impact n=5^	None n=119
More door knocking	1%	1%	1%	1%	1%	1%	4%	2%	6%	1%		1%	3%	2%					1%
More assistance for tourists/people new in the area/the elderly	1%	1%	2%	1%	1%	1%	4%	2%	5%	5%	2%	3%				10%			
More/better warnings NFI	1%		2%	2%	*	1%					1%	3%	8%						
Provide (an/more) evacuation/cyclone shelter	1%	2%	*	2%	*				1%	1%	1%						41%		
Citizens should help each other (support each other, know and check on neighbours)	1%		2%	1%	1%														2%
Better communication when power is down	1%	2%		2%		3%									11%				
Other mentions of better communication	1%	2%			1%	3%	4%	3%	5%	6%	5%	5%	8%	9%		19%			
More alerts/warnings on rising flood levels	1%	1%	*		1%	1%			2%	2%	1%								1%
More frequent updates/real time information	1%		1%		1%	1%	2%		3%		2%	3%							1%
More warning signs on roads	1%		1%	1%	*	2%		2%							6%				
More letter drops/public notices	*		1%	1%		1%	2%		3%	3%	2%	3%		5%		10%			
Citizens should not carry out dangerous behaviours (driving through waters, jet skiing, looting)	*		1%	1%		1%		2%		3%		3%			6%	10%			
Ensure alerts have reached everyone	*	1%			1%	1%	2%	1%											
Improve disaster financial relief (more people to be eligible, easier to apply for, faster process)	*		*		*														1%
More direct phone calls	*		*		*	1%		1%	1%					2%					
Other	2%	1%	2%	1%	2%	1%	3%	1%	4%	2%	1%		2%					8%	2%
Don't know/nothing	38%	40%	36%	37%	38%	27% ↓	32%	41%	15% ↓	24% ↓	34%	34%	22% ↓	22%	25%	11%		37%	46%

\*Indicates less than 1% of respondents.

↑ ↓ indicates a significant difference to the average at at least the 95% confidence level.

^Caution: Small cell size

## 7.0 Telecommunications

### 7.1 Telephony and internet

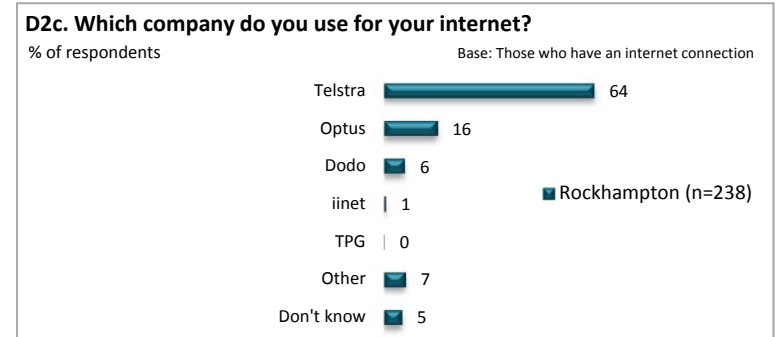
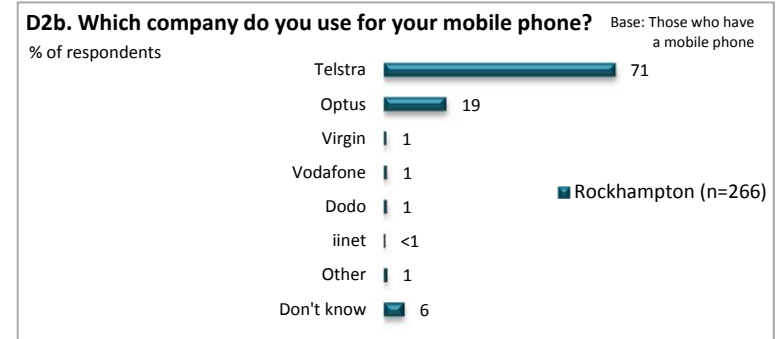
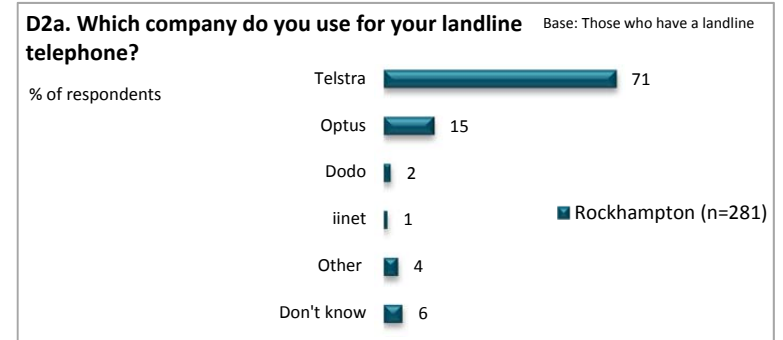
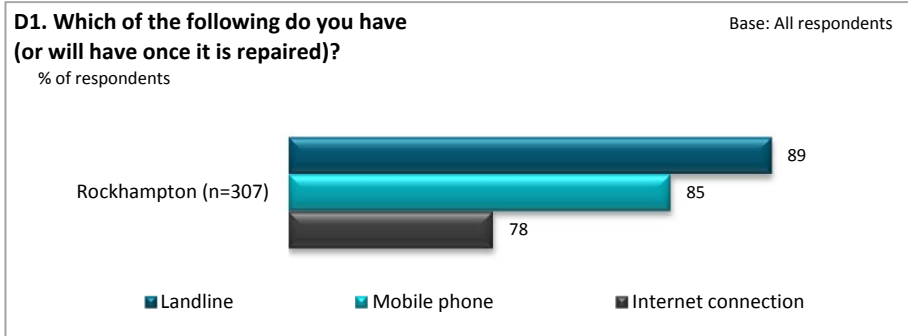
D1. Which of the following do you have (or will have once it is repaired)?  
 D2abc. Which company do you use for your landline/mobile/internet?

The majority of residents living in the Rockhampton survey area reported ownership of a landline (89%), mobile phone (85%) or internet connection (78%).

Telstra is reportedly the most common landline provider (71%), mobile phone provider (71%) and internet provider (64%).

#### Sub-group differences

Landlines are most prevalent among respondents aged 65 years or older (99%), however this age group are less likely than average to have an internet connection (63%, 78% average).



D1. Which of the following do you have (or will have once it is repaired)?

Base: All respondents	Gender			Age											
	Total n=307	Male n=112	Female n=195	Under 45 n=73	45 and over n=234	18 to 24 years n=7^	25 to 29 years n=4^	30 to 34 years n=15^	35 to 39 years n=19^	40 to 44 years n=28^	45 to 49 years n=37	50 to 54 years n=35	55 to 59 years n=42	60 to 64 years n=39	65 years or over n=81
Landline	89%	84%	93%	84%	92%	81%	100%	62%	96%	86%	90%	72%	91%	98% ↑	99% ↑
Mobile phone	85%	80% ↓	90% ↑	85%	85%	64%	67%	95%	69%	100%	82%	94%	95% ↑	89%	77%
Internet connection	78%	76%	80%	84%	74%	81%	67%	85%	69%	97%	76%	79%	89% ↑	75%	63% ↓

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

^Caution: Small cell size

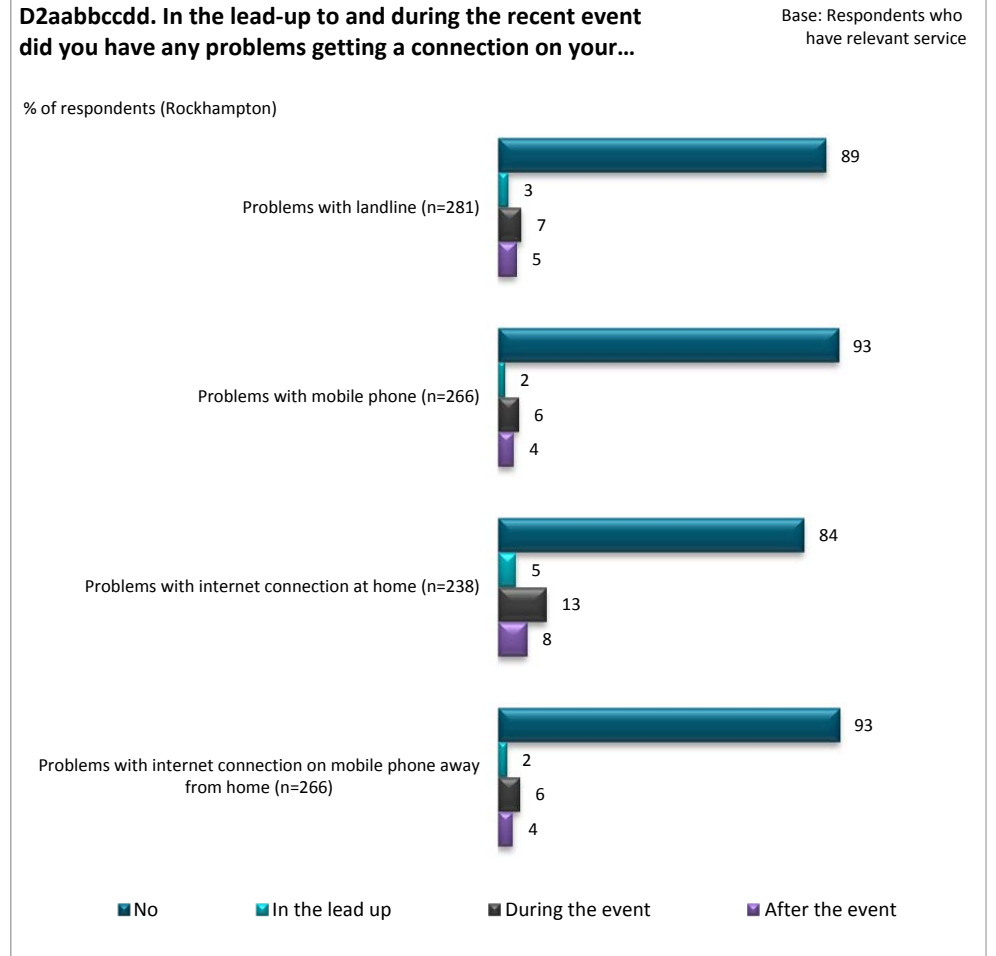
## 7.2 Problems with connections

*D2aabbccdd. In the lead-up to and during the recent event did you have any problems getting a connection on your...*

In Rockhampton in the lead-up to, during or after the weather and flooding associated with Tropical Cyclone Debbie:

- 16% of home internet users report having a connection problem on their home internet
- 11% of landline holders report they had problems connecting to this service
- 7% of mobile phone users report experience of mobile phone connection problems
- 7% of mobile internet users report they had problems with mobile internet access when away from home.

Problems were most common during or after the event.





D2aa. In the lead-up to and during the recent event did you have any problems getting a connection on your landline telephone...

Base: All respondents who have a landline	Landline provider						
	Total n=281	Telstra n=205	Optus n=38	Dodo n=6^	iinet n=3^	Other n=14^	Don't know n=15^
NO	89%	90%	90%	100%	85%	69%	95%
SUB-TOTAL Yes	11%	10%	10%		15%	31%	5%
In the lead up	3%	3%	6%			4%	
During the event	7%	6%	4%		15%	31%	5%
After the event	5%	5%	6%		15%	6%	5%

^Caution: Small cell size

D2bb. In the lead-up to and during the recent event did you have any problems getting a connection on your mobile phone...

Base: All respondents who have a mobile phone	Mobile phone provider								
	Total n=266	Telstra n=194	Optus n=44	Vodafone n=4^	Virgin n=3^	Dodo n=3^	iinet n=2^	Other n=4^	Don't know n=12^
NO	93%	93%	91%	81%	100%	100%	100%	100%	95%
SUB-TOTAL Yes	7%	7%	9%	19%					5%
In the lead up	2%	2%	4%						
During the event	6%	6%	7%	19%					5%
After the event	4%	3%	9%	19%					5%

^Caution: Small cell size

D2cc. In the lead-up to and during the recent event did you have any problems getting an internet connection at home on a PC, laptop, tablet or mobile phone ...

Base: All respondents who have internet	Internet provider							
	Total n=238	Telstra n=157	Optus n=37	Dodo n=12 <sup>^</sup>	iinet n=3 <sup>^</sup>	TPG n=1 <sup>^</sup>	Other n=17 <sup>^</sup>	Don't know n=11 <sup>^</sup>
NO	84%	83%	84%	85%	67%	100%	74%	94%
SUB-TOTAL Yes	16%	17%	16%	15%	33%		26%	6%
In the lead up	5%	6%	2%				8%	
During the event	13%	13%	13%	15%	33%		20%	6%
After the event	8%	8%	11%		33%		14%	6%

<sup>^</sup>Caution: Small cell size

D2dd. In the lead-up to and during the recent flood event did you have any problems getting an internet connection on your mobile phone when away from home...

Base: All respondents who have a mobile phone	Internet provider							
	Total n=266	Telstra n=154	Optus n=33	Dodo n=11 <sup>^</sup>	iinet n=3 <sup>^</sup>	TPG n=1 <sup>^</sup>	Other n=17 <sup>^</sup>	Don't know n=10 <sup>^</sup>
NO	93%	95%	89%	82%	100%	100%	92%	94%
SUB-TOTAL Yes	7%	5%	11%	18%			8%	6%
In the lead up	2%	2%	3%				8%	
During the event	6%	5%	5%	18%			8%	6%
After the event	4%	3%	11%					6%

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

<sup>^</sup>Caution: Small cell size

# Findings – Logan/Scenic Rim/Gold Coast

## 1.0 Community Engagement

### 1.1 Knowledge of Disaster Management Arrangement

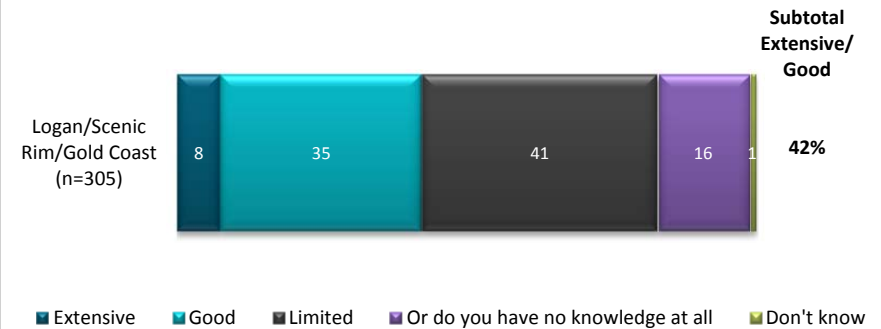
Q1. Firstly, how would you rate your knowledge of the Disaster Management Arrangements? Would it be...?

Four in ten (42%) Logan/Scenic Rim/Gold Coast respondents rate their knowledge of the Disaster Management Arrangements as extensive (8%) or good (35%). A similar proportion (41%) rates their knowledge as limited while 16% say they have no knowledge at all.

#### Sub-group differences

As might be expected, those aware of the Local Disaster Management Group (LDMG) (69%) are more likely than average (42%) to estimate their knowledge as either good or extensive.

Q1. Firstly, how would you rate your knowledge of the Disaster Management Arrangements? Would it be...? Base: All respondents  
% of respondents



Q1. Firstly, how would you rate your knowledge of the Disaster Management Arrangements? Would it be...?

Base: All respondents	Total n=305	Gender		Age		LDMG Awareness	
		Male n=113	Female n=192	Under 45 n=71	45 and over n=234	Yes n=81	No n=224
Extensive	8%	6%	9%	6%	9%	21% ↑	4% ↓
Good	35%	37%	33%	31%	37%	48% ↑	31% ↓
SUBTOTAL extensive/good	42%	43%	42%	37%	46%	69% ↑	35% ↓
Limited	41%	38%	43%	49%	35%	27% ↓	45% ↑
Or do you have no knowledge at all	16%	18%	13%	14%	17%	4% ↓	19% ↑
SUBTOTAL limited/none	57%	56%	57%	63%	52%	31% ↓	64% ↑
Don't know	1%	1%	1%		2% ↑		1% ↑

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

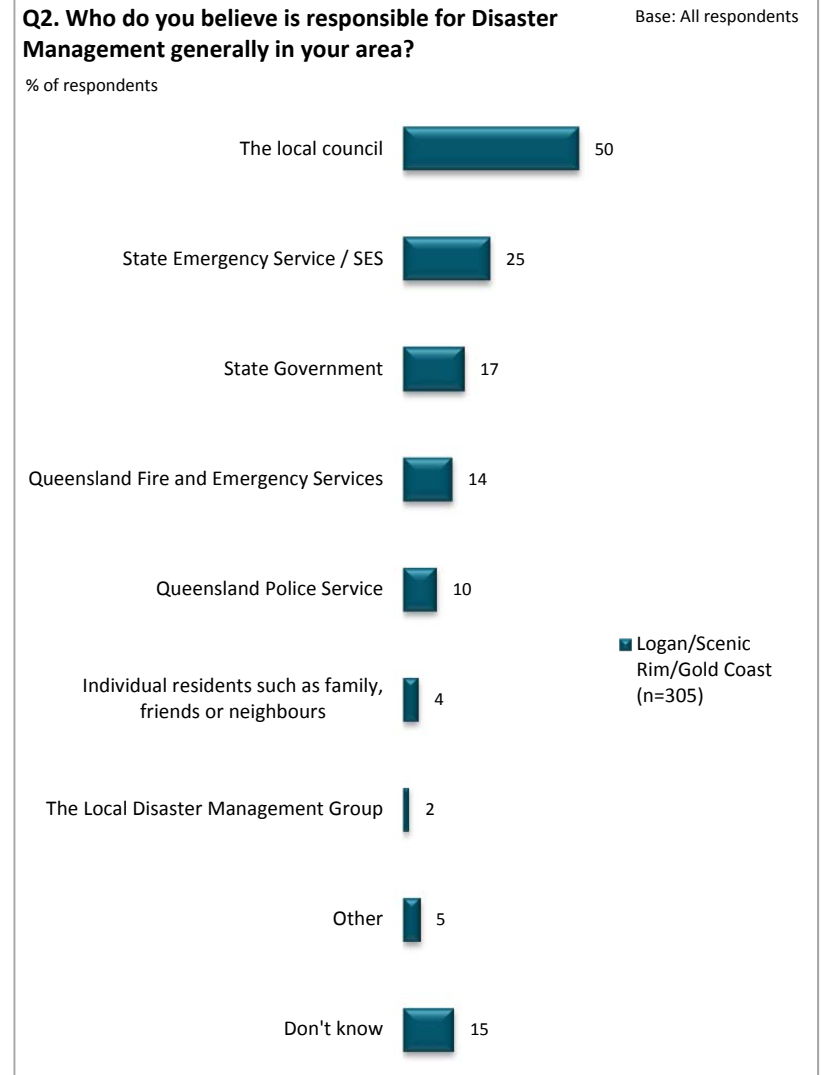
## 1.2 Disaster management responsibility

Q2. Who do you believe is responsible for Disaster Management generally in your area?

The local council is the organisation that respondents are most likely to consider generally responsible for disaster management in their area (50%). After council, the State Emergency Service (SES) (25%) is mentioned, followed by the State Government (17%).

### Sub-group differences

Those aware of the Local Disaster Management Group (LDMG) (65%) are more likely than those unaware (46%) to nominate the council as having responsibility for disaster management.



Q2. Who do you believe is responsible for disaster management generally in your area?

Base: All respondents	Total n=305	Gender		Age		LDMG Awareness		Prior Disaster Experience	
		Male n=113	Female n=192	Under 45 n=71	45 and over n=234	Yes n=81	No n=224	Yes n=113	No n=192
The local council	50%	47%	53%	55%	48%	65% ↑	46% ↓	49%	51%
State Emergency Service / SES	25%	31%	19%	25%	25%	26%	25%	25%	25%
State Government	17%	24% ↑	12% ↓	14%	20%	9% ↓	20% ↑	12%	21%
Queensland Fire and Emergency Services	14%	12%	16%	17%	12%	19%	13%	10%	16%
Queensland Police Service	10%	8%	11%	10%	10%	15%	8%	9%	10%
Individual residents such as family, friends or neighbours	4%	2% ↓	7% ↑	4%	4%	6%	4%	7%	3%
The Local Disaster Management Group	2%	1%	2%	1%	2%	3%	1%	3%	1%
Other	5%	8%	2%	5%	5%	3%	6%	4%	5%
Don't know	15%	10%	19%	16%	14%	7%	17%	17%	13%

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

### 1.3 Awareness of Local Disaster Management Group

Q3. Before today had you heard of the Local Disaster Management Group? It may also be known as the Local Emergency Management Group?

One in five (22%) residents in the Logan/Scenic Rim/Gold Coast survey area says they were aware of the Local Disaster Management Group (LDMG) prior to the survey.

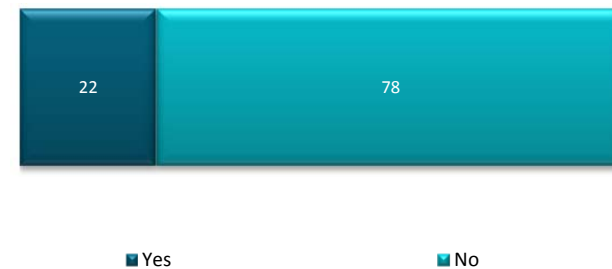
#### Sub-group differences

Awareness of the LDMG is higher among those aged 45 years and over (27%) than with those aged under 45 years (15%)

Q3. Before today had you heard of the Local Disaster Management Group? It may also be known as the Local Emergency Management Group.

Base: All respondents

% of respondents





Q3. Before today had you heard of the Local Disaster Management Group? It may also be known as the Local Emergency Management Group?

Base: All respondents	Total n=305	Gender		Age		Prior Disaster Experience	
		Male n=113	Female n=192	Under 45 n=71	45 and over n=234	Yes n=113	No n=192
Yes	22%	17%	27%	15% ↓	27% ↑	29%	19%
No	78%	83%	73%	85% ↑	73% ↓	71%	81%

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

## 1.4 Disaster Management Arrangements - event attendance

*Q4x. In the last 12 months, have you been to any community events, public meetings or presentations about Disaster Management Arrangements? If yes, which of the following groups organised or were in attendance?*

98% of Logan/Scenic Rim/Gold Coast respondents say they have not attended any community events or meetings in relation to Disaster Management Arrangements in the past 12 months, while 2% report that they have. The local council, SES, LDMG, QPS and QFES are all reported to have held public events about disaster management in the past year.

### *Sub-group differences*

Those aware of LDMG (8%) are more likely than those not aware (no response mentioned) to have attended an event in the previous 12 months.

**Q4x. In the last 12 months, have you been to any community events, public meetings or presentations about Disaster Management arrangements? If yes, which of the following groups organised or were in attendance?**

Base: All respondents



Q4x. In the last 12 months, have you been to any community events, public meetings or presentations about Disaster Management arrangements? If yes, which of the following groups organised or were in attendance?

Base: All respondents	Gender		Age		LDMG Awareness		You had to evacuate from your home		
	Total n=305	Male n=113	Female n=192	Under 45 n=71	45 and over n=234	Yes n=81	No n=224	Yes n=8^	No n=297
SUBTOTAL Yes	2%	2%	2%	1%	2%	8%			2%
The local council	1%		2%	1%	1%	4%			1%
The Local Disaster Management Group	*		1%	1%		2%			*
Queensland Police Service	*		1%	1%		2%			*
Queensland Fire and Emergency Services	*		1%	1%		2%			*
State Emergency Service or SES	1%	2%	1%	1%	2%	6%			1%
Individual residents such as family, friends or neighbours	*		1%	1%		2%			*
Other	1%		2%	1%	1%	4%			1%
SUBTOTAL No	98%	98%	98%	99%	98%	92%	100%	100%	98%

\*Indicates less than 1% of respondents.

## 2.0 Confidence – understanding risks and preparations for future events

### 2.1 Understanding of risk to self and property

Q5. How confident are you about your understanding of the risk to you and your property?  
Are you...

87% of Logan/Scenic Rim/Gold Coast respondents say they are confident in understanding the risk to themselves and their property (42% *very* confident, 45% *quite* confident).

#### Sub-group differences

Sub-groups more likely than average (12%) to say they are *not* confident in their understanding of the risk to them and their property are:

- females (16%, males 6%)
- those aged under 45 years (19%, >45 years 7%)
- those not aware of the LDMG (13%, aware 5%)
- those who felt emotionally impacted by the event (27%)
- those who had property damage (not home) (28%).



Q5. How confident are you about your understanding of the risk to you and your property? Are you...

Base: All respondents	Gender		Age		LDMG Awareness		
	Total n=305	Male n=113	Female n=192	Under 45 n=71	45 and over n=234	Yes n=81	No n=224
Very confident	42%	54% ↑	31% ↓	32% ↓	49% ↑	51%	40%
Quite confident	45%	38% ↓	52% ↑	49%	42%	44%	45%
<b>SUBTOTAL Confident</b>	<b>87%</b>	<b>92%</b>	<b>83%</b>	<b>81%</b>	<b>91%</b>	<b>95% ↑</b>	<b>85% ↓</b>
Not very confident	8%	4% ↓	12% ↑	14% ↑	5% ↓	5%	10%
Not at all confident	3%	2%	4%	4%	2%		4% ↑
<b>SUBTOTAL Not Confident</b>	<b>12%</b>	<b>6% ↓</b>	<b>16% ↑</b>	<b>19% ↑</b>	<b>7% ↓</b>	<b>5% ↓</b>	<b>13% ↑</b>
Don't know	1%	2%	*		2%		2%

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

\*Indicates less than 1% of respondents.

## 2.2 Confidence in being prepared for future events

Q6. How confident are you in regards to being prepared for and knowing how to respond to events in the future? Are you...

Nine in ten Logan/Scenic Rim/Gold Coast residents surveyed (87%) report confidence in being prepared for and knowing how to respond to events in the future (38% very confident, 49% quite confident).

### Sub-group differences

Males (92%) are more likely than average (87%) to express confidence in this regard.



Q6. How confident are you in regards to being prepared for and knowing how to respond to events in the future? Are you...

Base: All respondents	Gender		Age		LDMG Awareness		Prior Disaster Experience		Key Impacts		
	Total n=305	Male n=113	Female n=192	Under 45 n=71	45 and over n=234	Yes n=81	No n=224	Yes n=113	No n=192	Any impact n=247	No impact n=58
Very confident	38%	51% ↑	26% ↓	31%	43%	45%	36%	40%	37%	36%	48%
Quite confident	49%	41% ↓	57% ↑	51%	48%	46%	50%	51%	49%	51%	41%
<b>SUBTOTAL Confident</b>	<b>87%</b>	<b>92% ↑</b>	<b>83% ↓</b>	<b>82%</b>	<b>91%</b>	<b>91%</b>	<b>86%</b>	<b>91%</b>	<b>85%</b>	<b>87%</b>	<b>89%</b>
Not very confident	10%	6%	14%	14%	7%	9%	10%	9%	11%	11%	8%
Not at all confident	2%	1%	3%	3%	2%		3% ↑	* ↓	3% ↑	2%	2%
<b>SUBTOTAL Not Confident</b>	<b>12%</b>	<b>7% ↓</b>	<b>17% ↑</b>	<b>18%</b>	<b>9%</b>	<b>9%</b>	<b>13%</b>	<b>9%</b>	<b>14%</b>	<b>13%</b>	<b>10%</b>
Don't know	*	*			*		*		*		1%

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

\*Indicates less than 1% of respondents.

### 3.0 Impact of Event

#### 3.1 Impacts experienced

Q7. Thinking specifically now about {EVENT}, which if any, of the following impacts did you personally experience?

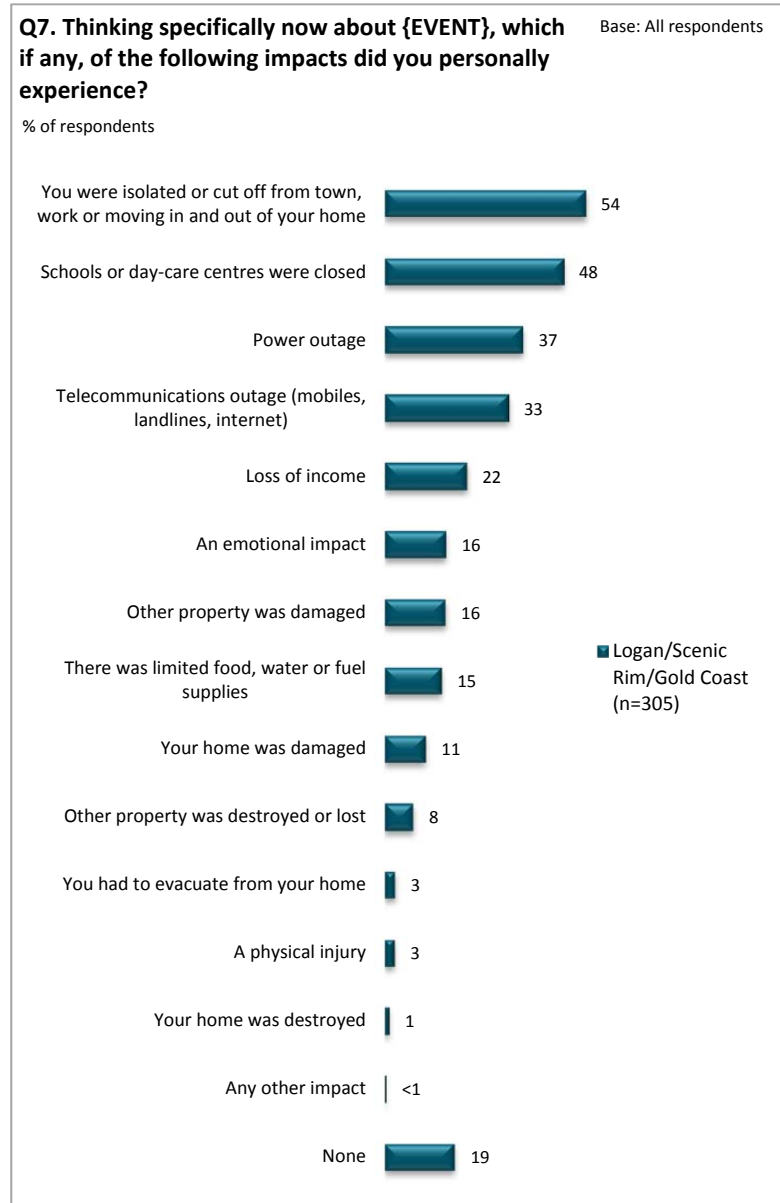
Being isolated from town, work or moving in and out of their home (54%), school closures (48%), power outages (37%) or telecommunications outages (33%) are the most commonly reported impacts of the event personally experienced by respondents in the Logan/Scenic Rim/Gold Coast area.

Other impacts commonly mentioned are loss of income (22%), emotional impact (16%) or property (non-home) damage (16%). The adjacent chart lists results for all potential impacts measured.

3% of survey respondents say they had to evacuate their home in response to the weather event associated with Tropical Cyclone Debbie.

##### Sub-group differences

Females (22%) are more likely than males (11%) to report an emotional impact.





Q7. Thinking specifically now about {EVENT}, which if any, of the following impacts did you personally experience?

Base: All respondents	Total n=305	Gender		Age	
		Male n=113	Female n=192	Under 45 n=71	45 and over n=234
You were isolated or cut off from town, work or moving in and out of your home	54%	54%	55%	55%	54%
Schools or day-care centres were closed	48%	43%	53%	54%	44%
Power outage	37%	33%	42%	37%	38%
Telecommunications outage (mobiles, landlines, internet)	33%	28%	38%	34%	32%
Loss of income	22%	21%	23%	25%	20%
An emotional impact	16%	11% ↓	22% ↑	13%	19%
Other property was damaged	16%	13%	19%	20%	14%
There was limited food, water or fuel supplies	15%	17%	14%	14%	16%
Your home was damaged	11%	11%	11%	15%	9%
Other property was destroyed or lost	8%	4%	11%	9%	7%
You had to evacuate from your home	3%	2%	4%	5%	2%
A physical injury	3%	4%	1%	3%	2%
Your home was destroyed	1%		2%	2%	1%
Any other impact	*		1%		1%
None	19%	24%	14%	17%	20%

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

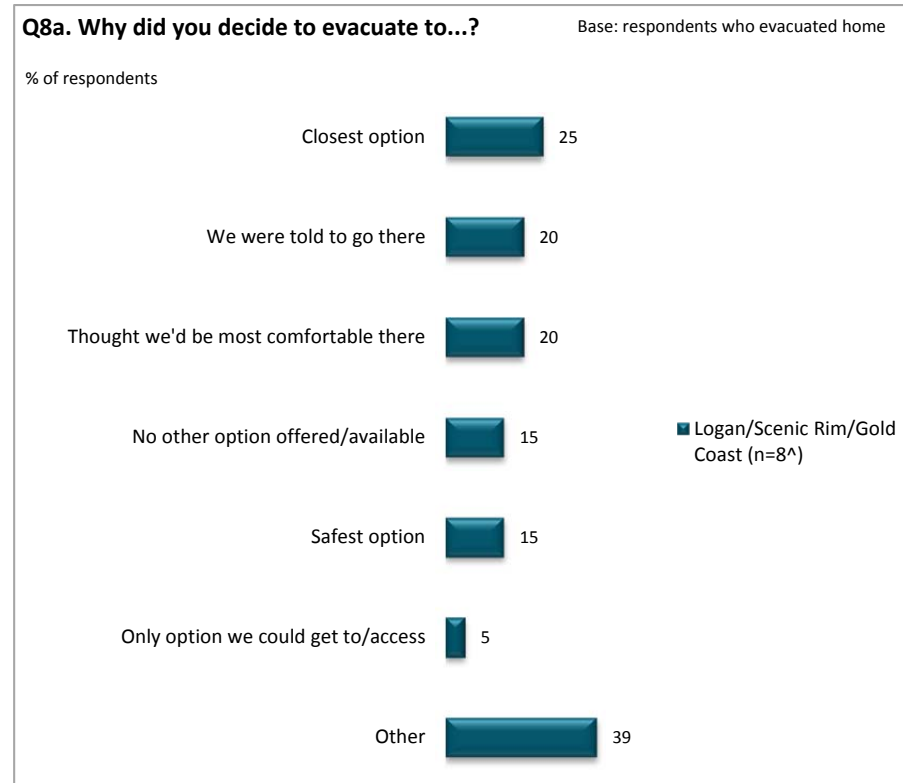
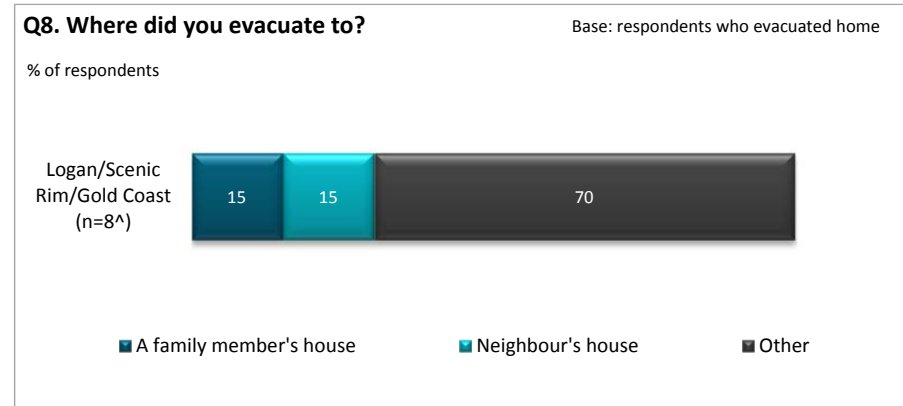
\*Indicates less than 1% of respondents.

### 3.2 Location used during evacuation

Q8. Where did you evacuate to?  
 Q8a. Why did you decide to evacuate to {insert location from Q8}?

Of Logan/Scenic Rim/Gold Coast residents who evacuated their home (n=8), all used an unofficial evacuation facility such as a family member’s home, a neighbour’s home or their workplace.

Evacuation options are most commonly chosen on the basis of being perceived to be the closest option (25%), the most comfortable (20%) or because they were told to go there (20%).



## 4.0 Information & Warnings

### 4.1 Sources of information used prior to/during event

*Q9a. In the lead-up to or during {EVENT} which, if any, of the following sources of information did you use?*

Logan/Scenic Rim/Gold Coast residents report relying on a range of information sources in the lead-up to or during Tropical Cyclone Debbie, the most widely used being a news source other than the ABC (77%), the Bureau of Meteorology (BOM) website (63%), family, friends or neighbours (53%) or ABC News services (49%).

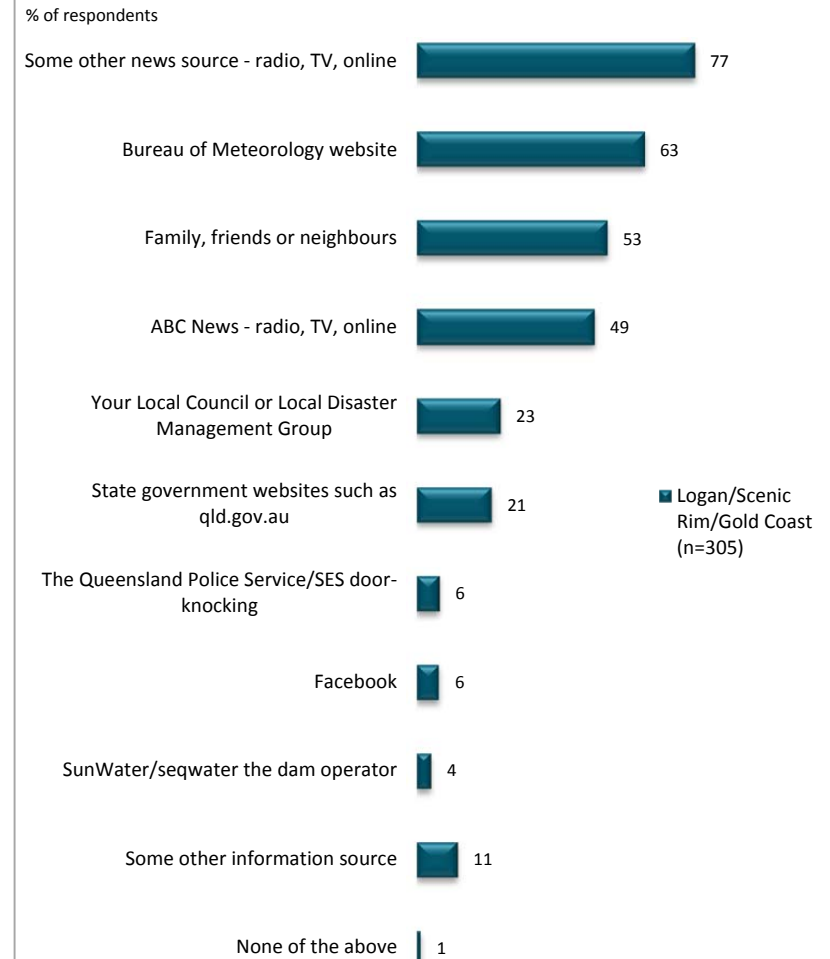
#### *Sub-group differences*

Usage is significantly lower than average among those aged 65+ years for the following sources:

- BOM (48%, 63% average)
- Family, friends or neighbours (32%, 53% average)
- State Government websites (9%, 21% average).

**Q9a. In the lead-up to or during {EVENT} which, if any, of the following sources of information did you use?**

Base: All respondents



Q9a. In the lead-up to or during {EVENT} which, if any, of the following sources of information did you use?

Base: All respondents	Gender		Age		Key Impacts		Prior Disaster Experience		LDMG Awareness		
	Total n=305	Male n=113	Female n=192	Under 45 n=71	45 and over n=234	Any impact n=247	No impact n=58	Yes n=113	No n=192	Yes n=81	No n=224
Some other news source - radio, TV, online	77%	78%	76%	83%	73%	79%	70%	75%	78%	71%	79%
Bureau of Meteorology website	63%	63%	64%	69%	59%	67% ↑	46% ↓	74% ↑	57% ↓	66%	62%
Family, friends or neighbours	53%	49%	57%	59%	49%	55%	44%	59%	49%	47%	54%
ABC News - radio, TV, online	49%	51%	47%	45%	52%	52%	39%	45%	52%	44%	51%
Your Local Council or Local Disaster Management Group	23%	22%	24%	24%	22%	27% ↑	8% ↓	31%	19%	32%	21%
State government websites such as qld.gov.au	21%	19%	22%	24%	18%	20%	23%	22%	20%	24%	20%
The Queensland Police Service or the SES door-knocking or coming to your house to give you information or a warning	6%	7%	6%	8%	5%	7%	2%	6%	6%	2% ↓	8% ↑
Facebook	6%	4%	8%	7%	6%	5%	10%	5%	7%	2% ↓	7% ↑
SunWater/seqwater the dam operator	4%	4%	4%	3%	4%	5% ↑		3%	4%	5%	4%
Some other information source	11%	8%	15%	17%	8%	13%	6%	14%	10%	18%	9%
None of the above	1%		2%	2%	*	1%		2%	*	2%	1%

^ Caution: small cell size.

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

\*Indicates less than 1% of respondents

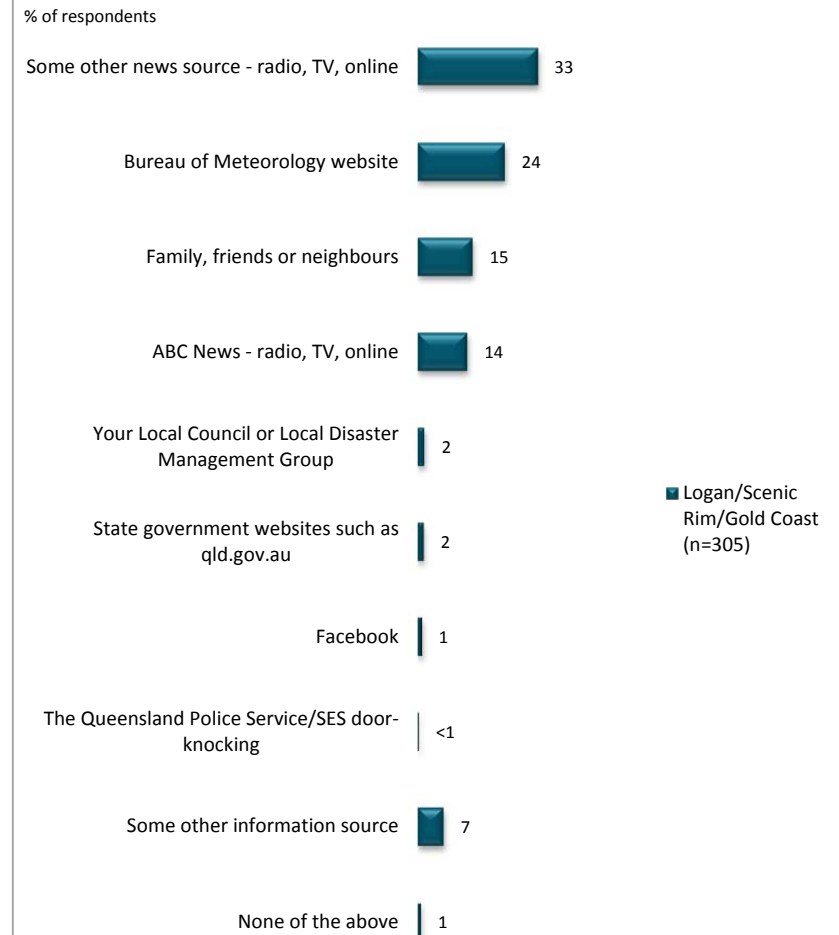
## 4.2 Main source of information used prior to/during event

Q9b. And which of those did you MAINLY use?

When asked to report the *main* source of information used during the weather event associated with Tropical Cyclone Debbie, Logan/Scenic Rim/Gold Coast respondents are most likely to have used a news source other than the ABC (33%), followed by the BOM website (24%), then family, friends or neighbours (15%).

Q9b. And which of those did you MAINLY use?

Base: All respondents



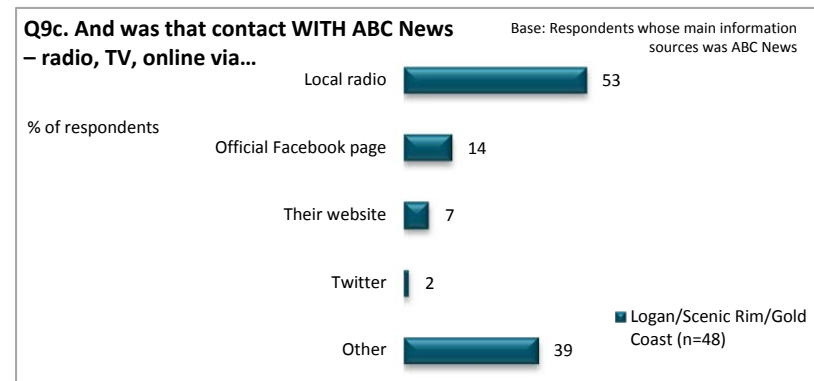
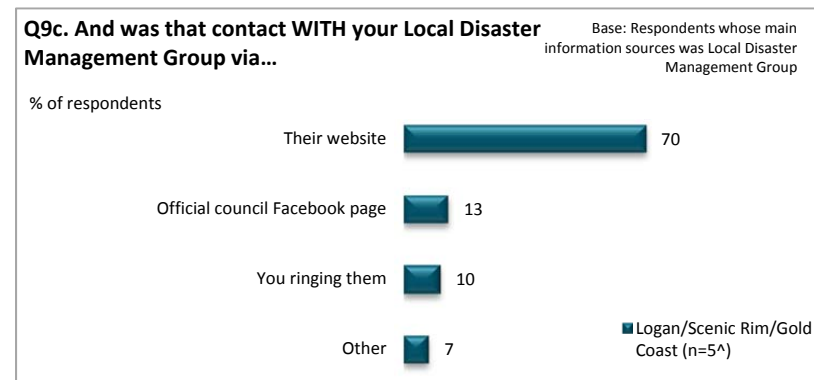
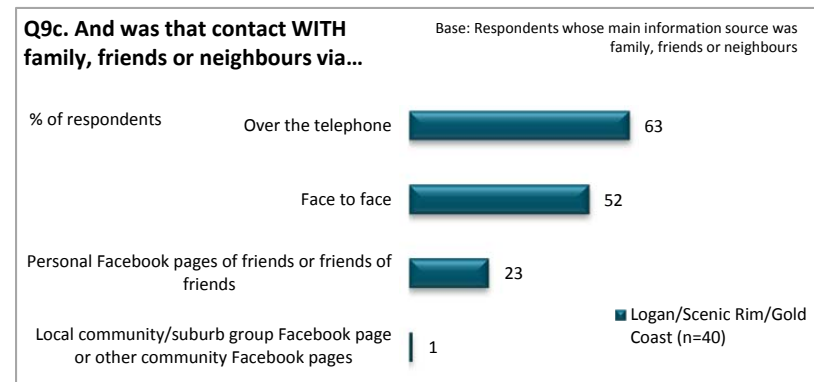
### 4.3 Type of contact with main source of information

Q9c. And was that contact WITH...

Logan/Scenic Rim/Gold Coast respondents who had contact with family, friends or neighbours are most likely to say their contact was over the telephone (63%) or face-to-face (52%).

Contact with the local council was most commonly via their website (70%).

Local radio was the most common way of receiving ABC News (53%), followed by their official Facebook page (14%).



## 4.4 Effectiveness of warning methods

Q10. Please rate the effectiveness of each of the following methods of receiving warnings during times of disaster. The first method is a, the next method is a...

Warning methods rated as most effective by those in the Logan/Scenic Rim/Gold Coast survey area are text message to mobile (83%), television broadcasts (79%), phone call to mobile from authorities (74%) or being door-knocked (72%).

A phone call to a landline from authorities (47%) is rated as the least effective method. The perceived effectiveness of all options tested is detailed in the adjacent chart.

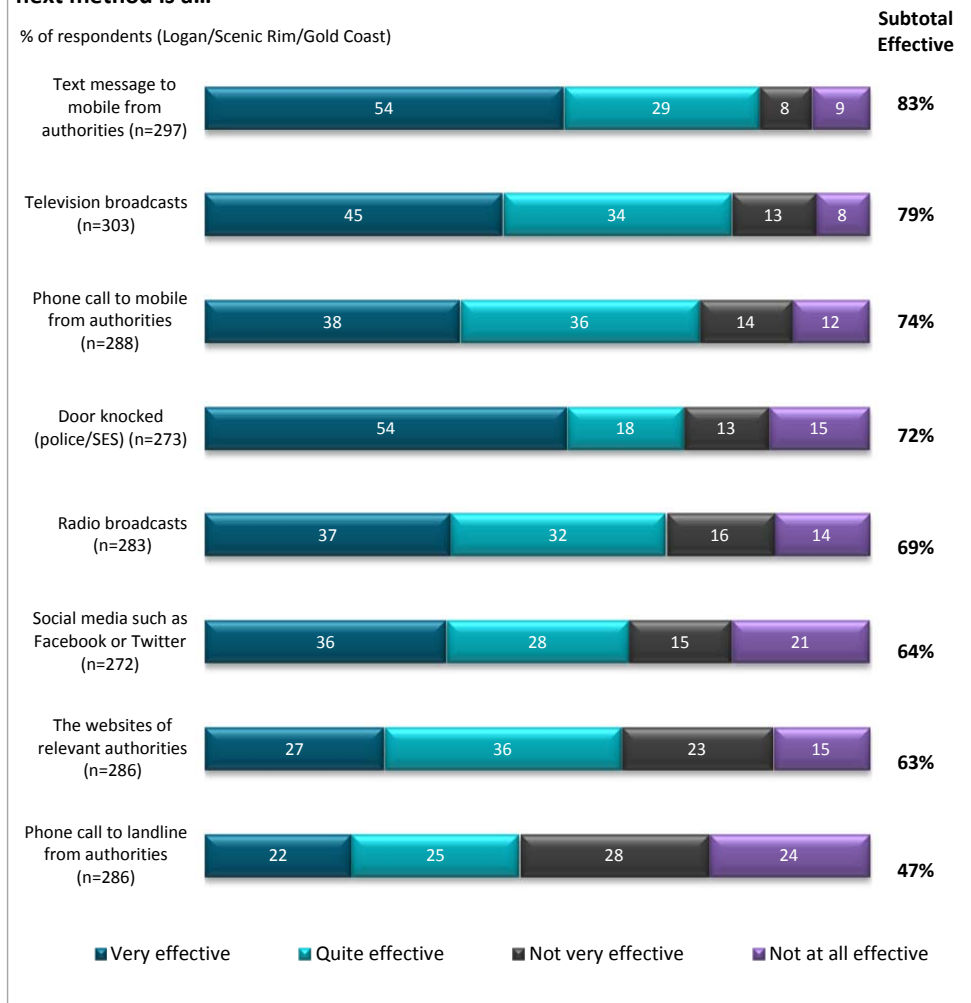
### Sub-group differences

Those aged 45 years or younger are more likely than average to rate a range of warning methods as effective, especially text messages (92%), phone call to mobile (83%) and social media (77%).

While those aged 65 years or older in the Logan/Scenic Rim/Gold Coast survey area are still less likely than their younger counterparts to rate text, online or social media channels as effective, they are generally more open to these methods compared with those 65 years or older living in other regions surveyed.

Q10. Please rate the effectiveness of each of the following methods of receiving warnings during times of disaster. The first method is a, the next method is a...

Base: All respondents excluding those who answered don't know



Q10. Please rate the effectiveness of each of the following methods of receiving warnings during times of disaster. The first method is a, the next method is a...

Base: All respondents, excluding those who answered don't know	Gender			Age											
	Total	Male	Female	Under 45	45 and over	18 to 24 years	25 to 29 years	30 to 34 years	35 to 39 years	40 to 44 years	45 to 49 years	50 to 54 years	55 to 59 years	60 to 64 years	65 years or over
<i>% of respondents rating method very/quite effective</i>															
Radio broadcasts (n=283)	69%	74%	65%	70%	69%	86%	74%	32%	68%	69%	60%	83% ↑	77%	69%	69%
Text message to mobile from authorities (n=297)	83%	86%	81%	92% ↑	77% ↓	86%	100%	100%	93%	90%	81%	80%	78%	78%	71% ↓
Television broadcasts (n=303)	79%	80%	78%	82%	77%	100%	75%	86%	93%	74%	63% ↓	95% ↑	80%	78%	85%
Being door knocked or getting a visit to your house by police or SES (n=273)	72%	71%	73%	66%	76%	34%	49%	86%	84%	77%	81%	81%	83%	62%	72%
Phone call to mobile from authorities (n=288)	74%	78%	71%	83% ↑	69% ↓	79%	94%	69%	93%	78%	63%	78%	58% ↓	73%	72%
Social media such as Facebook or Twitter (n=272)	64%	63%	64%	77% ↑	54% ↓	86%	85%	86%	69%	71%	73%	51%	39% ↓	47% ↓	37% ↓
The websites of relevant authorities (n=286)	63%	66%	60%	71%	57%	93%	61%	72%	66%	68%	63%	58%	52%	56%	51%
Phone call to landline from authorities (n=286)	47%	46%	49%	52%	45%	72%	30%	72%	42%	52%	41%	30% ↓	41%	52%	56%

^ Caution: small cell size.

↑↓ indicates a significant difference to the average at at least the 95% confidence level.



## 4.5 Text message warnings

### 4.5.1 Receipt of official warnings via text message

Q11. In the lead-up to or during {EVENT}, did you receive any official WARNINGS via TEXT MESSAGE?

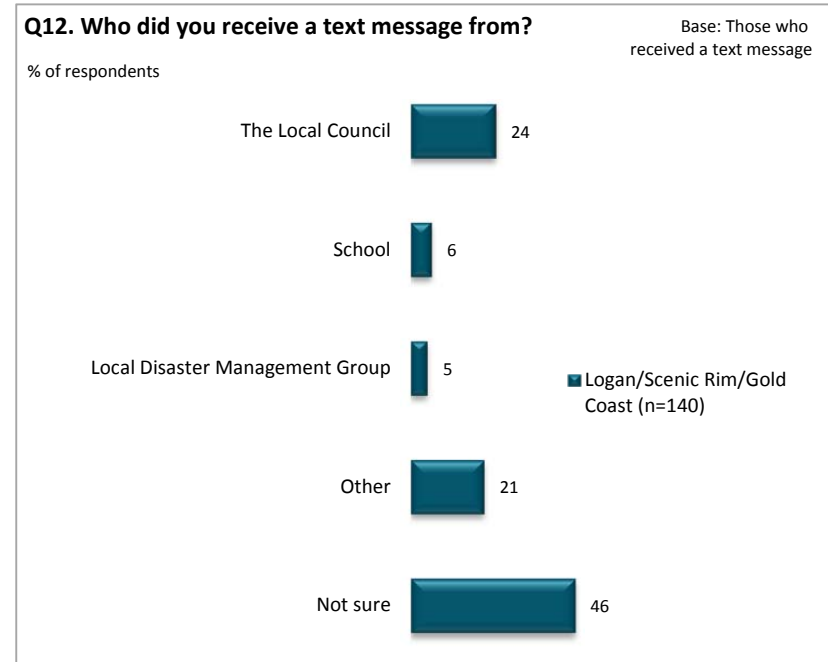
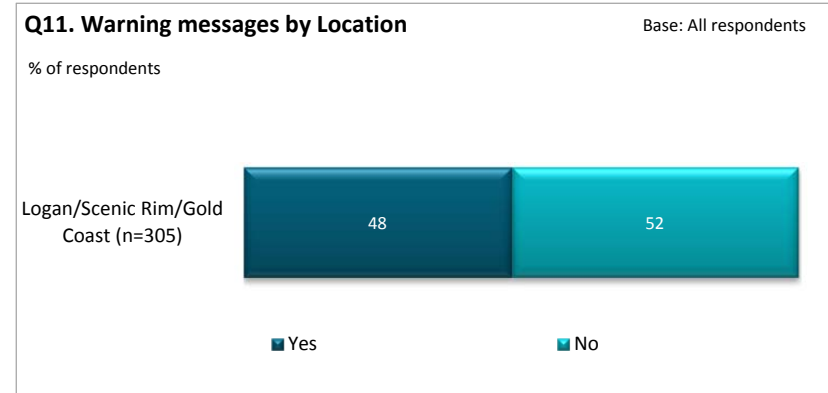
Q12. Who did you receive a text message from?

One in two (48%) residents in the Logan/Scenic Rim/Gold Coast survey area reports receiving a warning via text message in the lead-up to or during Tropical Cyclone Debbie.

Of those who received a text message, the local council is most commonly stated as the source (24%). One in two (46%) cannot recall who the text came from.

#### Sub-group differences

The age group *least* likely to recall receiving a text message warning is the 65 years or older age group (34%, 48% average).



Q11. In the lead-up to or during {EVENT}, did you receive any official WARNINGS via TEXT MESSAGE?

Base: All respondents	Gender			Age											
	Total n=305	Male n=113	Female n=192	Under 45 n=71	45 and over n=234	18 to 24 years n=12 <sup>^</sup>	25 to 29 years n=11 <sup>^</sup>	30 to 34 years n=6 <sup>^</sup>	35 to 39 years n=11 <sup>^</sup>	40 to 44 years n=31	45 to 49 years n=33	50 to 54 years n=49	55 to 59 years n=42	60 to 64 years n=51	65 years or over n=59
Yes	48%	48%	49%	57%	43%	34%	58%	69%	70%	59%	46%	49%	44%	43%	34% ↓
No	52%	52%	51%	43%	57%	66%	42%	31%	30%	41%	54%	51%	56%	57%	66% ↑

Q12. Who did you receive a text message from?

Base: Those who received a text message	Gender			Age											
	Total n=140	Male n=52	Female n=88	Under 45 n=41	45 and over n=99	18 to 24 years n=5 <sup>^</sup>	25 to 29 years n=5 <sup>^</sup>	30 to 34 years n=5 <sup>^</sup>	35 to 39 years n=7 <sup>^</sup>	40 to 44 years n=19 <sup>^</sup>	45 to 49 years n=15 <sup>^</sup>	50 to 54 years n=23 <sup>^</sup>	55 to 59 years n=19 <sup>^</sup>	60 to 64 years n=22 <sup>^</sup>	65 years or over n=20 <sup>^</sup>
The Local Council	24%	36% ↑	12% ↓	18%	29%		45%		24%	13%	44%	24%	14%	26%	15%
School	6%	2% ↓	10% ↑	9%	3%	20%			21%	8%		5%	9%	6%	
Local Disaster Management Group	5%	5%	4%	8%	2%				11%	14%		5%			5%
Other	21%	19%	23%	20%	22%	20%		20%	45%	18%	23%	31%	14%	30%	10%
Not sure	46%	38%	54%	47%	46%	60%	55%	80%	11%	48%	32%	36%	67%	41%	70%

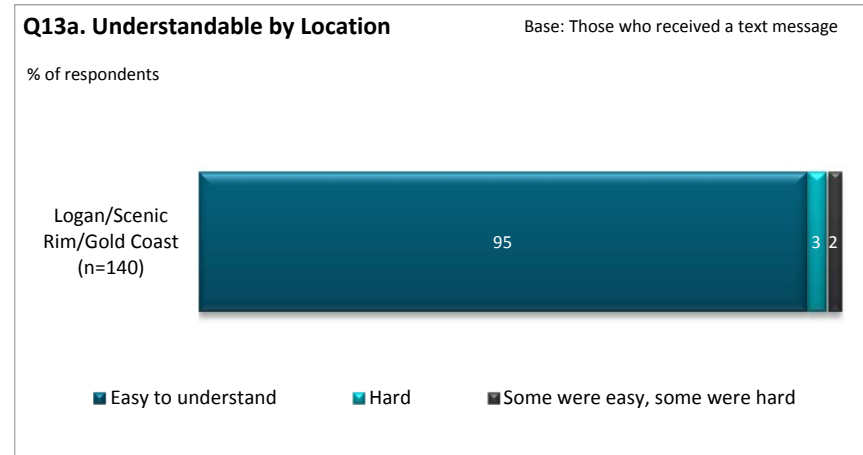
<sup>^</sup> Caution: small cell size.

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

## 4.5.2 Ease of understanding text message warnings

Q13a. Thinking about {any of} the text message warnings you received would you say they were generally....

95% of text message recipients in Logan/Scenic Rim/Gold Coast report that the text message warnings received were easy to understand. 3% consider they were hard to understand, while 2% report some being easy, and others being hard to understand.



Q13a. Thinking about {any of} the text message warnings you received would you say they were generally....

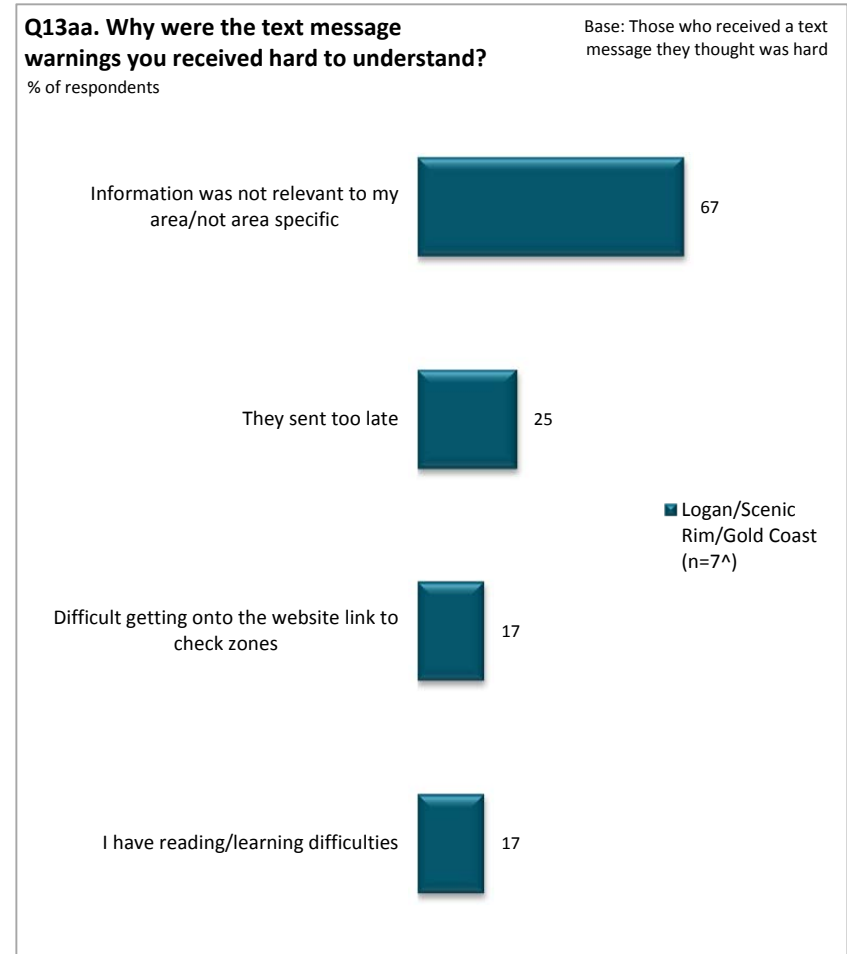
Base: Those who received a text message	Source of text message					
	Total n=140	The Local Council n=28 <sup>^</sup>	School n=9 <sup>^</sup>	Local Disaster Management Group n=5 <sup>^</sup>	Other n=31	Not sure n=70
Easy to understand	95%	95%	100%	100%	92%	95%
Hard	3%	2%			4%	4%
Some were easy, some were hard	2%	4%			4%	1%

<sup>^</sup> Caution: small cell size.

### 4.5.3 Why were text message warnings hard to understand?

Q13aa. Why were the text message warnings you received hard to understand?

Of the seven Logan/Scenic Rim/Gold Coast text message recipients who say their text messages were hard to understand, five say the messages were not relevant to their area, two say the messages were sent too late, one respondent says they had difficulty accessing the website to check the zones, while one has personal reading difficulties.



#### 4.5.4 Timing of text messages

Q13b. Did text messages generally arrive...

Two thirds (65%) of text message recipients say the messages arrived at the right time, 21% feel the messages arrived too late, while the balance (15%) report some arrived on time while others arrived too late.



Q13b. Did text messages generally arrive...

Base: Those who received text message	Source of text message					
	Total n=140	The Local Council n=28 <sup>^</sup>	School n=9 <sup>^</sup>	Local Disaster Management Group n=5 <sup>^</sup>	Other n=31	Not sure n=70
At the right time, or	65%	54%	42%	91%	79%	63%
Too late	21%	30%	35%	9%	8% <sup>↓</sup>	21%
Some arrived at the right time, some too late	15%	15%	22%		14%	17%

<sup>^</sup> Caution: small cell size.

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

#### 4.5.5 Relevance of text message

Q13c. Were they...

Of Logan/Scenic Rim/Gold Coast residents who received a text message, 44% report the text message as relevant to themselves and their property, 38% feel the messages were irrelevant, while 18% report that some messages were relevant and some were not.



Q13c. Were they....

Base: Those who received text message	Source of text message					
	Total n=140	The Local Council n=28 <sup>^</sup>	School n=9 <sup>^</sup>	Local Disaster Management Group n=5 <sup>^</sup>	Other n=31	Not sure n=70
Relevant to you and your property	44%	39%	35%	61%	51%	44%
Not relevant	38%	52%	65%	20%	38%	29%
Some were, some weren't	18%	8%		19%	11%	27% <sup>↑</sup>

<sup>^</sup> Caution: small cell size.

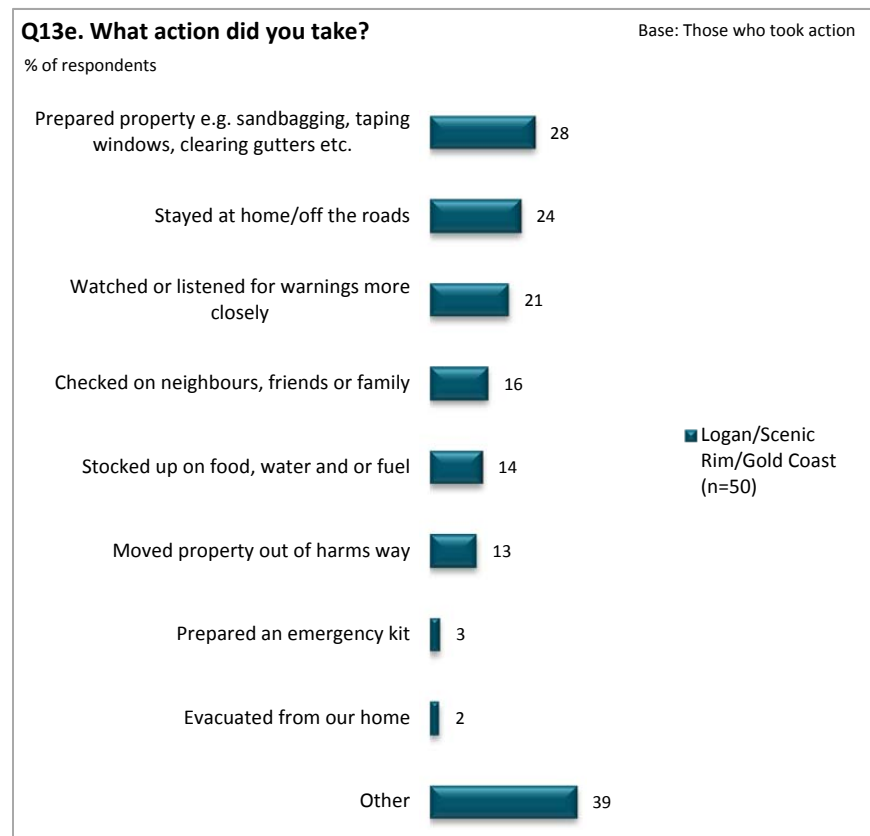
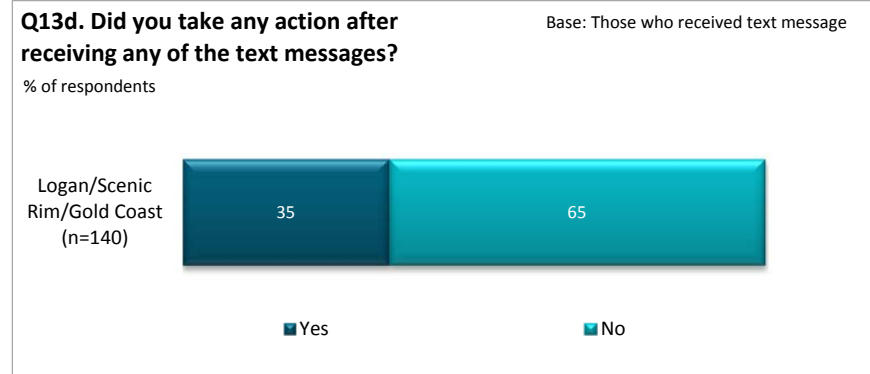
<sup>↑↓</sup> indicates a significant difference to the average at at least the 95% confidence level.

#### 4.5.6 Action taken after receiving text message

Q13d. Did you take any action after receiving any of the text messages?  
 Q13e. What action did you take?

35% of Logan/Scenic Rim/Gold Coast text message recipients took action after receiving a text message.

Of those who took action, the most common response reported was preparing their property (28%). Other common responses were to stay at home or off the roads (24%) or watch and listen for warnings more carefully (21%).



#### 4.5.7 Impact experienced matching text message warnings

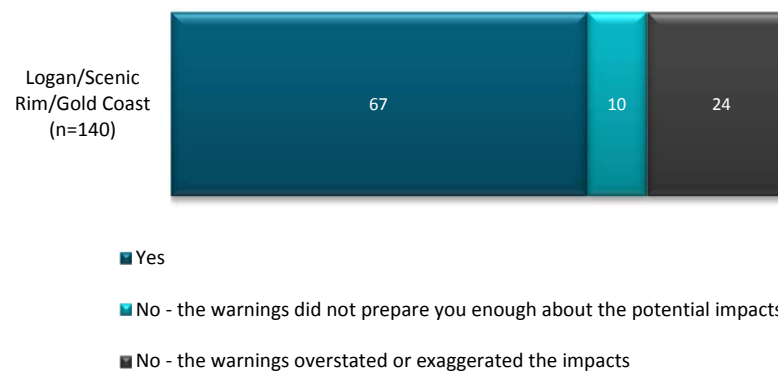
Q13f. Did the actual impact or impacts you experienced match the text warnings you received?

67% of Logan/Scenic Rim/Gold Coast text message recipients feel that the actual impacts they experienced matched the text message warning(s) received. 24% feel the warnings overstated or exaggerated the impacts, while 10% feel the text message warnings did not prepare them *enough* for the potential impacts of the event.

Q13f. Did the actual impact or impacts you experienced match the text warnings you received?

Base: Those who received a text message

% of respondents



Q13f. Did the actual impact or impacts you experienced match the text warnings you received?

Base: Those who received a text message	Source of text message					
	Total n=140	The Local Council n=28 <sup>^</sup>	School n=9 <sup>^</sup>	Local Disaster Management Group n=5 <sup>^</sup>	Other n=31	Not sure n=70
Yes	67%	64%	58%	91%	81%	60%
No - the warnings did not prepare you enough about the potential impacts	10%	14%	42%		4%	7%
No - the warnings overstated or exaggerated the impacts	24%	22%		9%	15%	33% ↑
<b>SUBTOTAL No</b>	<b>33%</b>	<b>36%</b>	<b>42%</b>	<b>9%</b>	<b>19%</b>	<b>40%</b>

<sup>^</sup> Caution: small cell size.

↑↓ indicates a significant difference to the average at at least the 95% confidence level.



## 4.6 Suggested improvements for warnings

Q14. Thinking about emergency warnings generally, from any source or organisation, how could they be improved? How else?

Among Logan/Scenic Rim/Gold Coast residents, suggestions for improving emergency warnings, from any source or organisation, most commonly relate to providing more alerts via SMS (13%), providing earlier alerts (10%), more alerts via TV or radio (8%) or more localised/area specific warnings/information (8%).

The top 11 suggestions for improvement are presented in the adjacent chart, with the balance of suggestions detailed in the table on the following page.

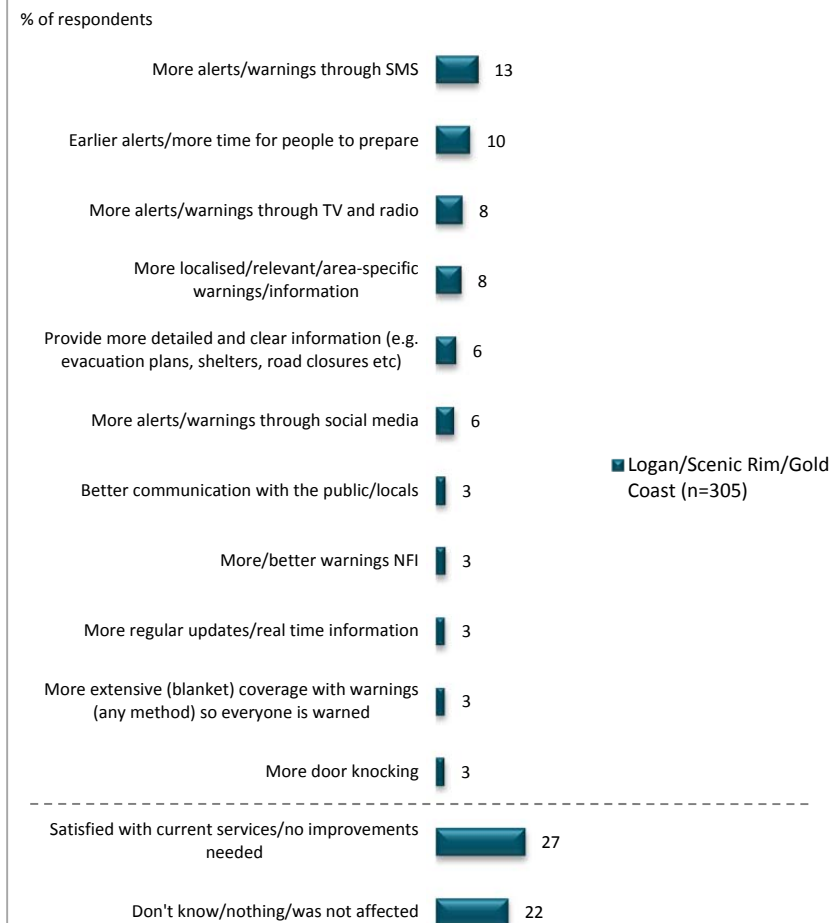
One in two respondents are unable to make any suggestions for improving emergency warnings (27% saying they are satisfied with the current warnings and 22% not having any suggestions to make).

### Sub-group differences

Differences by age and gender are detailed in the following table.

### Q14. Thinking about emergency warnings generally, from any source or organisation, how could they be improved? TOP 11 Responses

Base: All respondents



Q14. Thinking about emergency warnings generally, from any source or organisation, how could they be improved? How else?

Base: All respondents	Total n=305	Gender		Age	
		Male n=113	Female n=192	Under 45 n=71	45 and over n=234
Satisfied with current services/no improvements needed	27%	28%	26%	24%	29%
More alerts/warnings through SMS	13%	14%	11%	17%	10%
Earlier alerts/more time for people to prepare	10%	8%	13%	19% ↑	5% ↓
More alerts/warnings through TV and radio	8%	11%	6%	3% ↓	11% ↑
More localised/relevant/area-specific warnings/information	8%	4% ↓	11% ↑	6%	8%
Provide more detailed and clear information (e.g. evacuation plans, shelters, road closures etc.)	6%	5%	7%	9%	4%
More alerts/warnings through social media	6%	10% ↑	2% ↓	8%	4%
Better communication with the public/locals	3%	5%	1%	1%	4%
More/better warnings NFI	3%	4%	2%		5% ↑
More regular updates/real time information	3%	1% ↓	5% ↑	4%	2%
More extensive (blanket) coverage with warnings (any method) so everyone is warned	3%	4%	1%	3%	2%
More door knocking	3%	2%	3%	2%	3%
More accurate reports and information (media reporting or event predictions)	1%	1%	2%	1%	1%
More assistance/better response from SES, emergency services	1%	1%	1%		2% ↑
Information coming from local sources/council using local knowledge	1%	1%	1%	1%	1%
Better information from BOM (how to interpret, tracking of cyclone, up-to-date)	1%	2%			2%
Do not over exaggerate (can cause fear) (media, predictions, text messages)	1%		2%	2%	
Better communication methods when power is down	1%		1%	1%	*
Have warning sirens/drive around with a speaker/siren on radio or TV	1%	*	1%	1%	*
Ensure alerts have reached everyone	*	1%			1%
More direct phone calls	*	1%			1%
Specific alerts and assistance to the elderly (more personal, less SMS/social media)	*		1%		1%
Let everyone know the power restoration schedule	*		1%		1%
More assistance for tourists/people new in the area	*		*		*
Don't know/nothing/was not affected	22%	20%	24%	15% ↓	26% ↑
Other	5%	6%	4%	7%	3%

↑ ↓ indicates a significant difference to the average at at least the 95% confidence level.

\*Indicates less than 1% of respondents.

## 5.0 Services & Response

### 5.1 Services or assistance received

Q15. Which of the following services or assistance did you receive in association with {EVENT}?

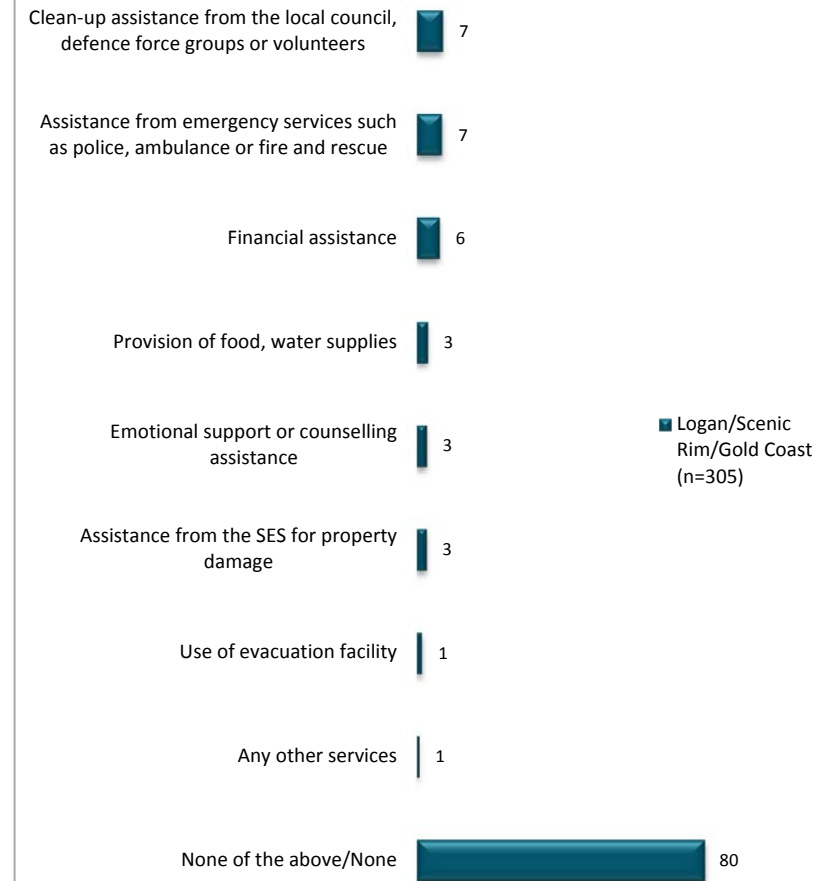
Among survey respondents in the Logan/Scenic Rim/Gold Coast survey area, clean-up assistance (7%), assistance from emergency services (7%) or financial assistance (6%) are the most widely reported assistance types received. The adjacent chart provides results for a range of other services or forms of assistance measured.

#### Sub-group differences

Females are more likely than males to have received assistance from the SES for property damage (5% female, not mentioned by males).

Q15. Which of the following services or assistance did you receive in association with {EVENT}? Base: All respondents

% of respondents



Q15. Which of the following services or assistance did you receive in association with {EVENT}?

	Gender			Age		Key Impacts													
	Total n=305	Male n=113	Female n=192	Under 45 n=71	45 and over n=234	Isolated or cut off from town, work or moving in and out of your home n=163	Schools or day- care centres were closed n=138	Power outage n=120	Telco outage n=107	Loss of income n=59	An emotional impact n=53	Other propert y was damag ed n=47	Limited food, water or fuel supplies n=37	Your home was damag ed n=29^	Other property was destroyed or lost n=24^	You had to evacuate from your home n=8^	A physical injury n=5^	Your home was destroye d n=4^	None n=58
Clean-up assistance from the local council, defence force groups or volunteers	7%	7%	7%	9%	6%	9%	10%	10%	13%	13%	29% ↑	8%	20%	26%	16%	44%	5%		2% ↓
Assistance from emergency services such as police, ambulance or fire and rescue	7%	6%	8%	3%	10%	8%	6%	10%	7%	4%	24% ↑	15%	10%	22%	22%	30%	5%		1% ↓
Financial assistance	6%	3%	9%	8%	5%	8%	8%	11%	10%	17% ↑	23% ↑	16%	14%	21%	22%	39%	5%		
Provision of food, water supplies	3%	3%	3%	3%	3%	4%	2%	6%	4%	5%	8%	1%	10%		3%				
Emotional support or counselling assistance	3%	2%	3%	5%	2%	3%	6% ↑	4%	4%	4%	10%	7%	10%	14%	5%				
Assistance from the SES for property damage	3%		5% ↑	2%	3%	1%	2%	3%	5%	1%	11% ↑	2%	3%	8%	2%	5%			32%
Use of evacuation facility	1%	*	2%	2%	1%	1%	2%	2%	2%	3%	6%	3%	4%						
Any other services	1%		1%	1%	*	1%	1%	1%	1%	2%		3%			9%				
None of the above/None	80%	83%	76%	79%	80%	75% ↓	77%	74%	73%	69%	41%	56% ↓	54% ↓	41%	46%	30%	95%	68%	98% ↑

^ Caution: small cell size.

↑ ↓ indicates a significant difference to the average at at least the 95% confidence level.

\*Indicates less than 1% of respondents.

## 5.2 Service/assistance needed by not received

Q16. Were there any services or assistance that you did need but did not receive?

When asked if there were any services or assistance they needed during the event, but did not receive, the majority of Logan/Scenic Rim/Gold Coast respondents (88%) felt that there were none.

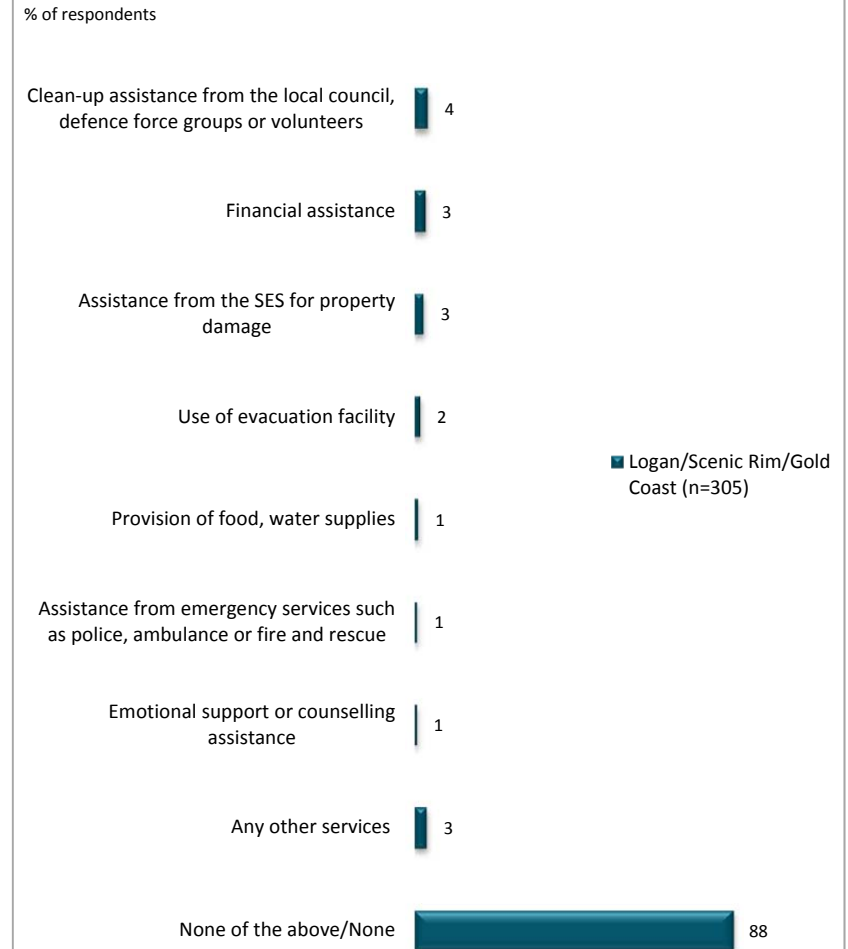
4% of respondents report needing but not receiving clean-up assistance from the local council, defence force groups or volunteers, 3% say they would have liked financial assistance, while 3% report needing but not receiving assistance from the SES for property damage.

### Sub-group differences

Females (7%), those who experienced an emotional impact (17%) or those whose non-home property was damaged (17%) are more likely than average (4%) to have needed but not received clean-up assistance.

### Q16. Were there any services or assistance that you did need but did not receive? (Unprompted)

Base: All respondents



Q16. Were there any services or assistance that you did need but did not receive?

Base: All respondents	Gender		Age		Key Impacts														
	Total n=305	Male n=113	Female n=192	Under 45 n=71	45 and over n=234	Isolated or cut off from town, work or moving in and out of your home n=163	Schools or day-care centres were closed n=138	Power outage n=120	Telco outage n=107	Loss of income n=59	An emotional impact n=53	Other property was damaged n=47	Limited food, water or fuel supplies n=37	Your home was damaged n=29^	Other property was destroyed or lost n=24^	You had to evacuate from your home n=8^	A physical injury n=5^	Your home was destroyed n=4^	None n=58
Clean-up assistance from the local council, defence force groups or volunteers	4%	1% ↓	7% ↑	3%	4%	5%	3%	5%	6%	8%	17% ↑	17% ↑	6%	10%	18%	15%	22%	34%	
Financial assistance	3%	4%	2%	1%	4%	3%	2%	4%	8%	7%	11%	5%	12%	13%	4%	5%			1%
Assistance from the SES for property damage	3%	2%	3%	2%	3%	3%	4%	3%	8% ↑	7%	14% ↑	7%	12%	16%	15%	20%	16%	34%	
Use of evacuation facility	2%	2%	1%	2%	1%	3%	3%	4%	5%	7%	9%	8%	3%	10%	14%	34%			
Provision of food, water supplies	1%		2%	1%	1%	2%	2%	2%	2%	3%	3%	1%	6%						
Assistance from emergency services such as police, ambulance or fire and rescue	1%		2%	1%	1%	1%	1%	2%	3%	2%	5%	3%	6%	4%	6%	15%	16%	34%	
Emotional support or counselling assistance	1%		1%	1%	*	1%		2%	2%	2%	3%	4%	1%	2%					
Any other services	3%	3%	4%	7%	1%	6% ↑	4%	9% ↑	10% ↑	12% ↑	3%	5%	4%	4%	15%				
None of the above/None	88%	91%	86%	86%	90%	84% ↓	86%	80% ↓	73% ↓	69% ↓	64% ↓	70% ↓	71% ↓	67%	49%	46%	78%	66%	99% ↑

^ Caution: small cell size.

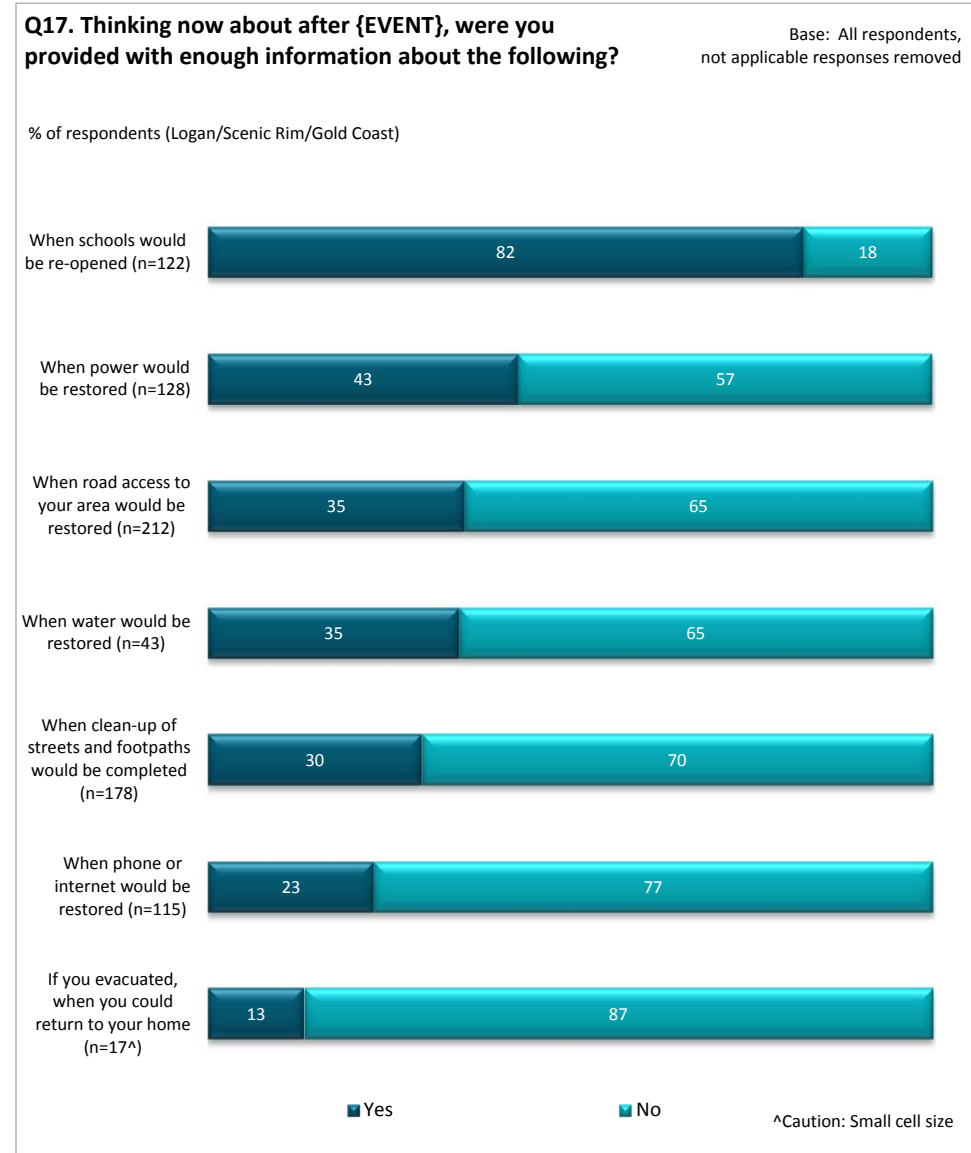
\*Indicates less than 1% of respondents.

↑ ↓ indicates a significant difference to the average at at least the 95% confidence level.

### 5.3 Information provided after event

Q17. Thinking now about after {EVENT}, were you provided with enough information about the following? If you were not affected by the issue you can say not applicable.

The majority of Logan/Scenic Rim/Gold Coast respondents (82%) say they were provided with enough information about when schools would be re-opened. For all other essential communication less than one half of respondents say they were provided with enough information. See adjacent chart for details.



Q17. Thinking now about after {EVENT}, were you provided with enough information about the following? If you were not affected by the issue you can say not applicable.

Base: All respondents, not applicable responses removed	Gender		Age		
	Total	Male	Female	Under 45	45 and over
<i>% of respondents saying yes</i>					
When schools would be re-opened (n=122)	82%	79%	84%	75%	88%
When clean-up of streets and footpaths would be completed (n=178)	30%	31%	28%	31%	28%
When power would be restored (n=128)	43%	42%	44%	44%	42%
When road access to your area would be restored (n=212)	35%	33%	38%	36%	35%
When water would be restored (n=43)	35%	16%	50%	54%	24%
When phone or internet would be restored (n=115)	23%	15%	29%	23%	23%
If you evacuated, when you could return to your home (n=17^)	13%		27%	27%	

^ Caution: small cell size.



## 5.4 Satisfaction with speed after event

Q18. After the event, were you satisfied or dissatisfied with the speed with which...

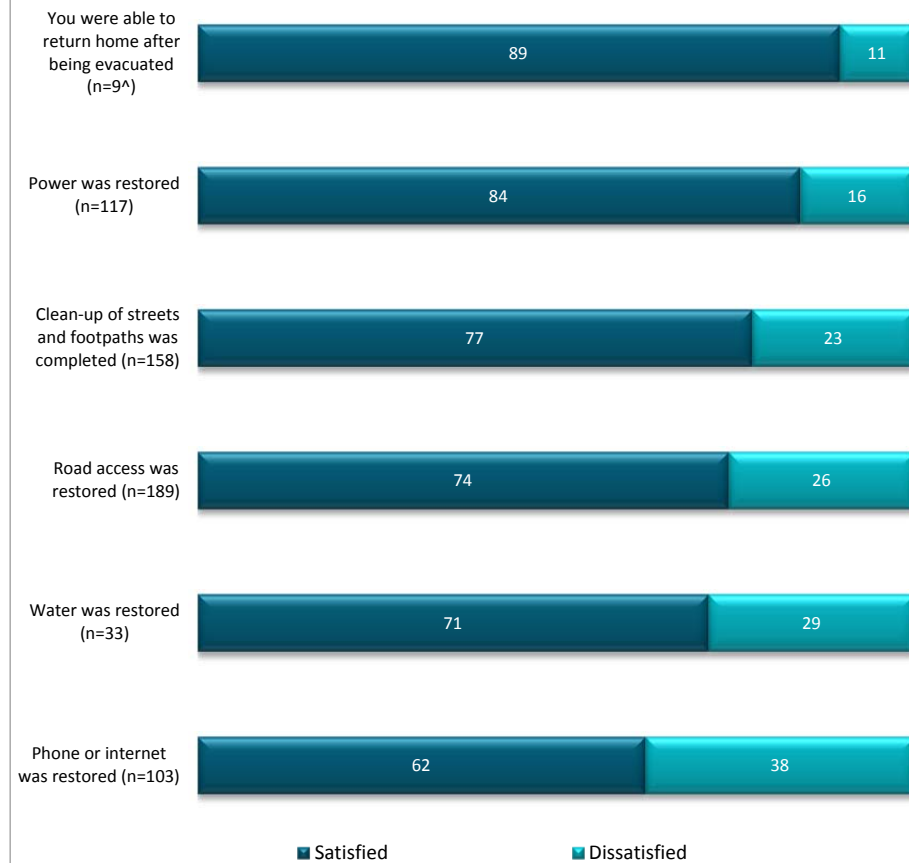
The majority of residents living in the Logan/Scenic Rim/Gold Coast survey area report satisfaction with the speed with which services were restored:

- Returning to home after evacuating (89% satisfied)
- Power (84%)
- Clean-up of streets (77%)
- Road access (74%)
- Water (71%)
- Phone or internet (62%).

Q18. After the event, were you satisfied or dissatisfied with the speed with which...

Base: All respondents, not applicable responses removed

% of respondents (Logan/Scenic Rim/Gold Coast)



<sup>^</sup>Caution: Small cell size

Q18. After the event, were you satisfied or dissatisfied with the speed with which...

Base: All respondents, not applicable responses removed	Gender		Age		
	Total	Male	Female	Under 45	45 and over
<i>% of respondents satisfied</i>					
Power was restored (n=117)	84%	81%	86%	97%	76%
Water was restored (n=33)	71%	55%	88%	85%	61%
Phone or internet was restored (n=103)	62%	66%	60%	74%	57%
Road access was restored (n=189)	74%	74%	74%	81%	69%
Clean-up of streets and footpaths was completed (n=158)	77%	76%	79%	76%	78%
You were able to return home after being evacuated (n=9^)	89%	100%	80%	87%	100%

^ Caution: small cell size.

## 5.5 Overall preparedness and ability to cope

Q19. Overall would you say you were prepared for and able to cope...

The majority of surveyed residents in the Logan/Scenic Rim/Gold Coast region say they felt they were prepared for and able to cope with:

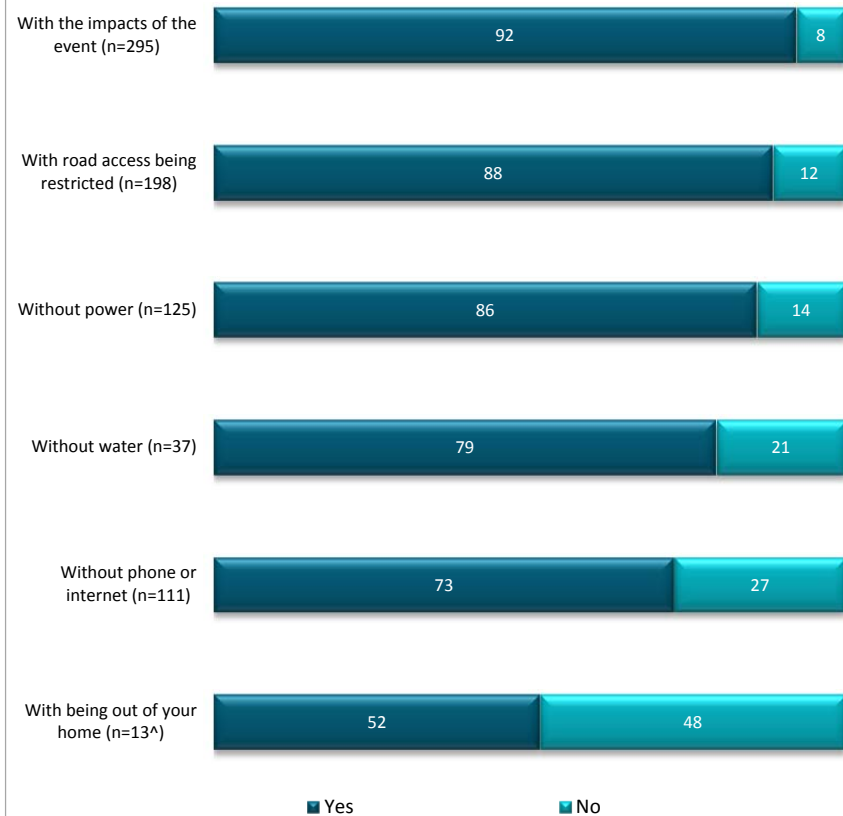
- the impacts generally of the weather event associated with Tropical Cyclone Debbie (92%)
- restricted road access (88%)
- the loss of power (86%)
- the loss of water (79%)
- the loss of phone or internet (73%).

Respondents are less likely to agree that they were prepared for and able to cope with being out of their home (52%).

### Q19. Overall would you say you were prepared for and able to cope...

Base: All respondents, not applicable responses removed

% of respondents (Logan/Scenic Rim/Gold Coast)



^Caution: Small cell size

Q19. Overall would you say you were prepared for and able to cope...

Base: All respondents, not applicable responses removed	Gender			Age	
	Total	Male	Female	Under 45	45 and over
<i>% of respondents saying yes</i>					
Without power (n=125)	86%	85%	87%	86%	86%
Without water (n=37)	79%	81%	78%	84%	77%
Without phone or internet (n=111)	73%	68%	76%	67%	75%
With road access being restricted (n=198)	88%	92%	86%	84%	91%
With being out of your home (n=13 <sup>^</sup> )	52%	33%	70%	27%	83%
With the impacts of the event (n=295)	92%	92%	92%	93%	91%

<sup>^</sup> Caution: small cell size.

## 6.0 Overall Suggestions for Improvement

### 6.1 Suggested improvements for the preparation and response of services

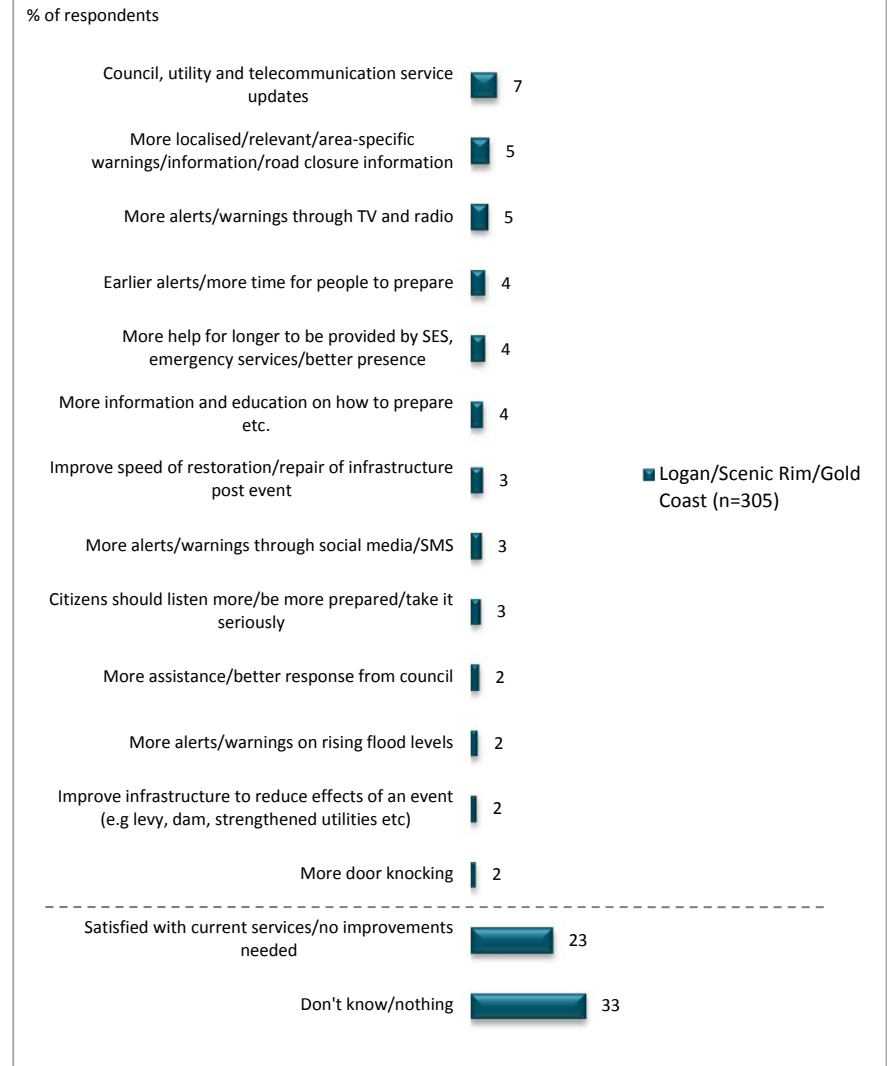
*Q20. And apart from the comments you made earlier about emergency warnings, how could the preparations or response of emergency services, the local council, community groups or citizens themselves have been improved? What could have been done differently to have helped you or others at any stage of the event? What else?*

Logan/Scenic Rim/Gold Coast respondents were asked for their suggested improvements to the preparations and response of emergency services, the local council, community groups or citizens themselves. The most common themes arising in response to this are as follows:

- Provide more council, utility and telecommunication service updates (7%)
- Provide more localised/relevant/area-specific warnings/information/road closures (5%)
- Provide more alerts/warnings via TV or radio (5%)
- Provide earlier alerts/more time for people to prepare (4%)
- SES/emergency services to provide more help for a longer time period (4%)
- More information/education on how to prepare and how to evacuate, make people aware of dangers (4%).

The top 13 reasons are displayed in the adjacent chart while remaining suggestions are included in the table overleaf.

**Q20. How could the preparations or response of emergency services, the local Council, community groups or citizens themselves have been improved? – Top 13 responses** Base: All respondents



Q20. And apart from the comments you made earlier about emergency warnings, how could the preparations or response of emergency services, the local council, community groups or citizens themselves have been improved? What could have been done differently to have helped you or others at any stage of the event? What else?

Base: All respondents	Total n=305	Gender		Age	
		Male n=113	Female n=192	Under 45 n=71	45 and over n=234
Satisfied with current services/no improvements needed	23%				
Council, utility and telecommunication service updates (e.g. power outages, clean-up, road and bridge openings/closures etc.)	7%	9%	6%	10%	6%
More localised/relevant/area-specific warnings/information/road closure information	5%	4%	7%	6%	5%
More alerts/warnings through TV and radio	5%	6%	4%	1% ↓	7% ↑
Earlier alerts/more time for people to prepare	4%	3%	5%	2%	5%
More help for longer to be provided by SES, emergency services/better presence	4%	3%	5%	7%	2%
More information and education on how to prepare, where and how to evacuate, make people aware of dangers	4%	2%	5%	5%	3%
Improve speed of restoration/repair of infrastructure post event (e.g. telecommunications, utilities, roads etc.)	3%	5%	2%	5%	3%
More alerts/warnings through social media/SMS	3%	3%	3%	5%	2%
Citizens should listen more/be more prepared/take it seriously	3%	2%	3%	5%	2%
More assistance/better response from council	2%	4%	1%		4% ↑
More alerts/warnings on rising flood levels	2%	1%	3%	2%	2%
Improve infrastructure to reduce effects of an event (e.g. levy, dam, strengthened utilities etc.)	2%	2%	1%	1%	2%
More door knocking	2%	1%	2%	2%	1%
More frequent updates/real time information	2%	1%	2%	1%	2%
More/better warnings NFI	1%		3%	2%	1%
More warning signs on roads	1%		2% ↑	1%	1%
More letter drops/public notices	1%	2%			2%
Accurate/clear information	1%	1%	1%		2% ↑
Improve disaster financial relief (more people to be eligible, easier to apply for, faster process)	1%		2%	1%	1%
Citizens should not carry out dangerous behaviours (driving through waters, jet skiing, looting)	1%		2%	1%	1%
More information coming from council	1%	*	1%		1%
Provide (an/more) evacuation/cyclone shelter	*		1%	1%	
Better communication when power is down	*		1%		1%
More face to face contact	*		1%	1%	
More assistance for tourists/people new in the area/the elderly	*		1%		*
Improve communication/organisation/coordination between all agencies	*		*		*
Have warning sirens/drive around with a speaker/siren on radio or TV	*	*			*
Ensure alerts have reached everyone	*	*			*
Other mentions of better communication	*	*			*
Citizens should help each other (support each other, know and check on neighbours)	*	*			*
Do not over exaggerate (can cause fear) (media, text messages)	*		*		*
Better access to supplies (e.g. fuel, food & water, generators, sandbags etc)	*		*		*
Other	1%	1%	2%	1%	2%
Don't know/nothing	33%	35%	31%	27%	36%

\*Indicates less than 1% of respondents.

↑ ↓ indicates a significant difference to the average at at least the 95% confidence level.

## 7.0 Telecommunications

### 7.1 Telephony and internet

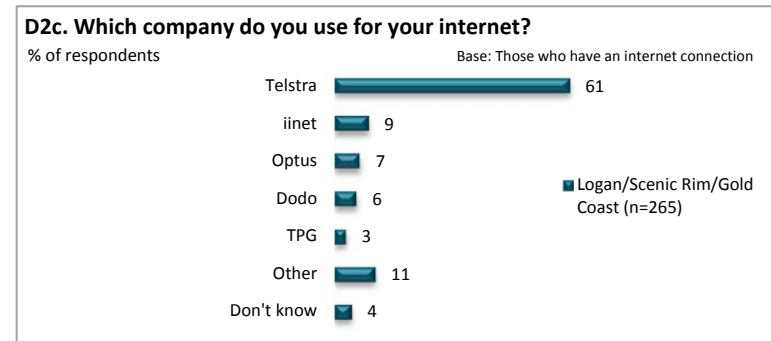
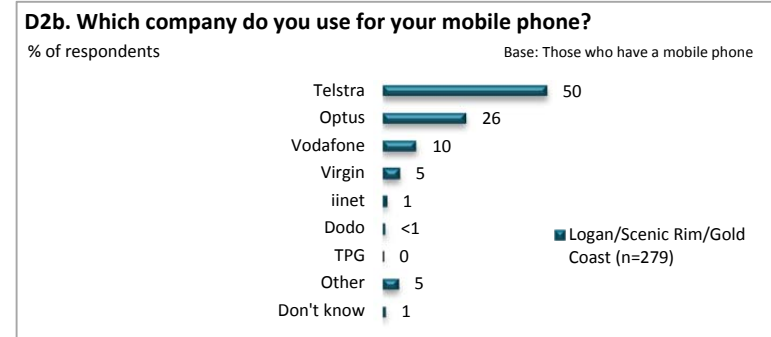
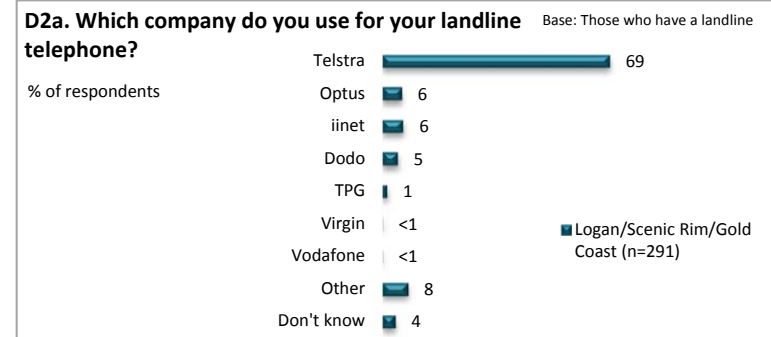
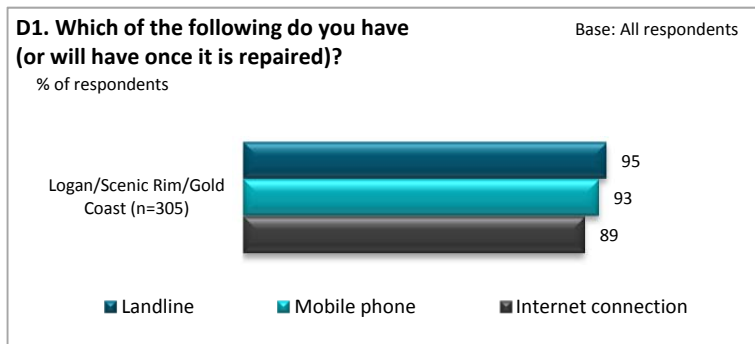
D1. Which of the following do you have (or will have once it is repaired)?  
 D2abc. Which company do you use for your landline/mobile/internet?

The majority of residents living in the Logan/Scenic Rim/Gold Coast survey area reported ownership of a landline (95%), mobile phone (93%) or internet connection (89%).

Telstra is reportedly the most common landline provider (69%), mobile phone provider (50%) and internet provider (61%).

#### Sub-group differences

Males are more likely than females to report having an internet connection (93% male, 85% female) or mobile phone (96% male, 90% female). A drop off in internet connection rates is most noticeable for residents aged 65 years or older (77%), although this decrease is not as marked as in other regions.



D1. Which of the following do you have (or will have once it is repaired)?

Base: All respondents	Gender			Age											
	Total n=305	Male n=113	Female n=192	Under 45 n=71	45 and over n=234	18 to 24 years n=12^	25 to 29 years n=11^	30 to 34 years n=6^	35 to 39 years n=11^	40 to 44 years n=31	45 to 49 years n=33	50 to 54 years n=49	55 to 59 years n=42	60 to 64 years n=51	65 years or over n=59
Landline	95%	96%	94%	95%	95%	93%	100%	72%	93%	98%	89%	92%	98%	98%	100% ↑
Mobile phone	93%	96%	90%	96%	91%	93%	100%	100%	93%	95%	89%	92%	94%	93%	88%
Internet connection	89%	93%	85%	93%	86%	93%	87%	100%	93%	95%	89%	92%	92%	85%	77% ↓

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

^Caution: Small cell size



## 7.2 Problems with connections

*D2aabbccdd. In the lead-up to and during the recent event did you have any problems getting a connection on your...*

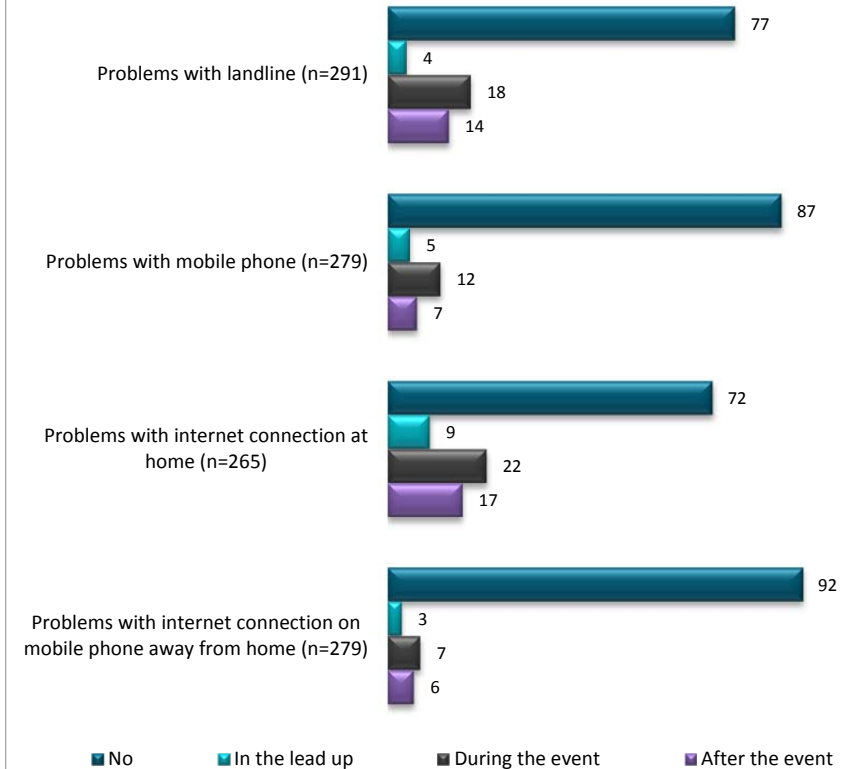
In Logan/Scenic Rim/Gold Coast in the lead-up to, during or after Tropical Cyclone Debbie:

- 28% of home internet users report having a connection problem on their home internet
- 23% of landline holders report they had problems connecting to this service
- 13% of mobile phone users report experience of mobile phone connection problems
- 8% of mobile internet users report they had problems with mobile internet access when away from home.

### D2aabbccdd. In the lead-up to and during the recent event did you have any problems getting a connection on your...

Base: Respondents who have relevant service

% of respondents (Logan/Scenic Rim/Gold Coast)



D2aa. In the lead-up to and during the recent event did you have any problems getting a connection on your landline telephone...

Base: All respondents who have a landline	Landline provider									
	Total n=291	Telstra n=217	Optus n=16 <sup>^</sup>	iinet n=14 <sup>^</sup>	Dodo n=11 <sup>^</sup>	TPG n=3 <sup>^</sup>	Virgin n=1 <sup>^</sup>	Vodafone n=1 <sup>^</sup>	Other n=20 <sup>^</sup>	Don't know n=8 <sup>^</sup>
NO	77%	72% ↓	95%	91%	94%	100%	100%	100%	74%	89%
SUB-TOTAL Yes	23%	28% ↑	5%	9%	6%				26%	11%
In the lead up	4%	5%								11%
During the event	18%	22%	5%	9%	6%				22%	11%
After the event	14%	17% ↑		9%	6%				7%	11%

D2bb. In the lead-up to and during the recent event did you have any problems getting a connection on your mobile phone...

Base: All respondents who have a mobile phone	Mobile phone provider									
	Total n=279	Telstra n=140	Optus n=66	Vodafone n=29 <sup>^</sup>	Virgin n=15 <sup>^</sup>	Dodo n=4 <sup>^</sup>	iinet n=3 <sup>^</sup>	TPG n=2 <sup>^</sup>	Other n=16 <sup>^</sup>	Don't know n=4 <sup>^</sup>
NO	87%	84%	89%	96%	100%	100%	100%	100%	77%	100%
SUB-TOTAL Yes	13%	16%	11%	4%					23%	
In the lead up	5%	9% ↑	1%						3%	
During the event	12%	15%	10%	4%					23%	
After the event	7%	9%	4%						18%	

↑ ↓ indicates a significant difference to the average at at least the 95% confidence level.

<sup>^</sup>Caution: Small cell size

D2cc. In the lead-up to and during the recent event did you have any problems getting an internet connection at home on a PC, laptop, tablet or mobile phone ...

Base: All respondents who have internet	Internet provider							
	Total n=265	Telstra n=169	iinet n=20 <sup>^</sup>	Optus n=16 <sup>^</sup>	Dodo n=13 <sup>^</sup>	TPG n=6 <sup>^</sup>	Other n=29 <sup>^</sup>	Don't know n=12 <sup>^</sup>
NO	72%	71%	79%	77%	73%	85%	65%	65%
SUB-TOTAL Yes	28%	29%	21%	23%	27%	15%	35%	35%
In the lead up	9%	10%	18%	2%	8%		4%	18%
During the event	22%	25%	9%	20%	13%	8%	22%	35%
After the event	17%	18%	9%	10%	22%	8%	16%	24%

D2dd. In the lead-up to and during the recent flood event did you have any problems getting an internet connection on your mobile phone when away from home...

Base: All respondents who have a mobile phone	Internet provider							
	Total n=279	Telstra n=168	iinet n=19 <sup>^</sup>	Optus n=16 <sup>^</sup>	Dodo n=12 <sup>^</sup>	TPG n=5 <sup>^</sup>	Other n=29 <sup>^</sup>	Don't know n=12 <sup>^</sup>
NO	92%	89%	98%	89%	100%	100%	94%	94%
SUB-TOTAL Yes	8%	11%	2%	11%			6%	6%
In the lead up	3%	5%					5%	
During the event	7%	10%	2%	11%			6%	6%
After the event	6%	8%	2%	7%			5%	6%

↑↓ indicates a significant difference to the average at at least the 95% confidence level.

<sup>^</sup>Caution: Small cell size



# Appendices

## Appendix A – Questionnaire

### INTRODUCTION / SCREENERS

Good morning/afternoon/evening. This is <name> calling from Q&A Market Research on behalf of the Office of the Inspector-General Emergency Management. In light of Tropical Cyclone Debbie The Office of the Inspector-General is surveying local residents to gather community feedback in relation to disaster management arrangements in your area. The survey will take approximately 15 minutes and your answers will remain anonymous. Would you be able to help us out?

*If no, ask:* Would there be another adult in your household who would be interested in providing feedback?

*If agreed to interview:*

Thank-you. Throughout the interview I'll be following a standard questionnaire to keep the interview as brief as possible and ensure that questions are consistent from interview to interview. Because I'm following the questionnaire, it may sometimes seem like I'm being too formal or mechanical. Please be assured your opinions are very important to us and I want to be sure I record them accurately.

Firstly, I need to ask a few demographic type questions to ensure we're talking with a good cross section of the community.

#### PROGRAMMING NOTE - EVENT

Whitsunday and Mackay region will be read {Tropical Cyclone Debbie}

Rockhampton and SEQ will be read {the weather and flooding associated with Tropical Cyclone Debbie}

#### **Ask all**

AA Just confirming, do you live in or very close to {*computer insert locality*}?

1. To be confirmed – codeframe here will be determined by sample

BB And were you in the area or at home during {EVENT}?

1. Yes
2. No TERMINATE

CC Record gender

1. Male
2. Female

DD And are you aged 18 years or older?

1. Yes
2. No TERMINATE

EE What is your postcode?

Direct numeric entry: \_\_\_\_\_

**READ OUT:**

This survey is about disaster management arrangements. Disaster management arrangements refer to the arrangements for preventing or reducing the impact of, preparing for, responding to and recovering from a disaster.

The first section of this survey asks about your general experience with disaster management arrangements in your area. Later in the survey there will be questions specifically about the recent event of {EVENT}.

**COMMUNITY ENGAGEMENT**

**Ask all**

Q1 Firstly, how would you rate your knowledge of the Disaster Management Arrangements? Would it be...? (READ OUT) (SR)

1. Extensive
2. Good
3. Limited
4. Or do you have no knowledge at all
5. Don't know (do not read out)

**Ask all**

Q2 Who do you believe is responsible for Disaster Management generally in your area? (UNPROMPTED) (MR)

1. The local council
2. The Local Disaster Management Group
3. Queensland Police Service
4. Queensland Fire and Emergency Services
5. State Emergency Service / SES
6. Individual residents such as family, friends or neighbours
7. Other (please specify) \_\_\_\_\_
8. Don't know

**Ask all**

Q3 Before today had you heard of the Local Disaster Management Group? It may also be known as the Local Emergency Management Group?

1. Yes
2. No

**Ask all**

Q4x In the last 12 months, have you been to any community events, public meetings or presentations about Disaster Management arrangements? *If yes, which of the following groups organised or were in attendance?* READ OUT MR

1. NO
- YES:
2. The local council
  3. The Local Disaster Management Group
  4. Queensland Police Service
  5. Queensland Fire and Emergency Services
  6. State Emergency Service or SES
  7. Individual residents such as family, friends or neighbours
  8. Other (please specify) \_\_\_\_\_

## UNDERSTANDING OF RISKS

**Ask all**

Q5 How confident are you about your understanding of the risk to you and your property? Are you...  
READ OUT SR

1. Very confident
2. Quite confident
3. Not very confident
4. Not at all confident
5. Don't know (do not read out)

**Ask all**

Q6 How confident are you in regards to being prepared for and knowing how to respond to events in the future? Are you... READ OUT SR

1. Very confident
2. Quite confident
3. Not very confident
4. Not at all confident
5. Don't know (do not read out)



## IMPACT OF EVENT

### Ask all

Q7 Thinking specifically now about {EVENT}, which if any, of the following impacts did you personally experience? READ OUT MR

1. A physical injury
2. An emotional impact
3. Your home was damaged
4. Your home was destroyed
5. You had to evacuate from your home
6. Other property was damaged
7. Other property was destroyed or lost
8. Telecommunications outage (mobiles, landlines, internet)
9. Power outage
10. Loss of income
11. You were isolated or cut off from town, work or moving in and out of your home
12. There was limited food, water or fuel supplies
13. Schools or day-care centres were closed
14. Any other impact (specify) \_\_\_\_\_
15. NONE

### Ask those who evacuated home (code 5 at Q7)

Q8 Where did you evacuate to? (READ OUT IF NECESSARY, SR)

1. An official evacuation facility
2. A family member's house
3. A friend's house
4. Neighbour's house
5. Other (please specify \_\_\_\_\_)

### Ask those who evacuated home (code 5 at Q7)

Q8a Why did you decide to evacuate to {insert location from Q8}? UNPROMPTED MR

1. No other option offered/available
2. Only option we could get to/access
3. Closest option
4. We were told to go there
5. Thought we'd be most comfortable there
6. Safest option
7. They had supplies such as food or water
8. Would be able to access medical help
9. Other (please specify \_\_\_\_\_)
10. Don't know

## INFORMATION & WARNINGS

### ASK ALL

Q9a In the lead-up to or during {EVENT} which, if any, of the following sources of information did you use?  
READ OUT MR

Q9b And which of those did you MAINLY use? ONLY READ OUT AS NECESSARY SR  
PROGRAMMING NOTE: ONLY SHOW THOSE MENTIONED AT Q9A

- a) Family friends or neighbours
- b) Your Local Council or Local Disaster Management Group
- c) {SunWater *outside SEQ region/ seqwater all other regions*} the dam operator
- d) ABC News – radio, TV, online
- e) Some other news source – radio, TV, online
- f) The Queensland Police Service or the SES door-knocking or coming to your house to give you information or a warning
- g) State government websites such as qld.gov.au
- h) Bureau of Meteorology website
- i) Some other information source (specify \_\_\_\_\_)
- j) NONE OF THE ABOVE

### For the source the respondent MAINLY used IF IT WAS EITHER CODE A/B/C/D at Q9b

Q9c And was that contact WITH {MAINLY USED SOURCE AT Q9b} via READ OUT MR  
{Interviewer to read out relevant codeframe below} ...

Codeframe for code (a) Family friends or neighbours

- 1. Face to face
- 2. Over the telephone
- 3. Personal Facebook pages of friends or friends of friends
- 4. Local community/suburb group Facebook page or other community Facebook pages such as buy, swap and sell pages
- 5. Twitter

Codeframe for code (b) Your Local Council/Local Disaster Management Group

- 1. You ringing them
- 2. Them ringing you
- 3. A text message from them
- 4. Official council Facebook page
- 5. Twitter
- 6. Their website
- 7. Other

Codeframe for code (c) {SunWater *outside SEQ region/ seqwater all other regions*} the dam operator

1. You ringing them
2. Them ringing you
3. A text message from them
4. Official SunWater Facebook page
5. Twitter
6. Their website
7. Other

Codeframe for code (d) ABC News

1. Local radio
2. Their website
3. Official Facebook page
4. Twitter
5. Other

**Ask all**

Q10 Please rate the effectiveness of each of the following methods of receiving warnings during times of disaster. The first method is a, the next method is a ...

ROTATE

- a) Phone call to landline from authorities
- b) Phone call to mobile from authorities
- c) Text message to mobile from authorities
- d) The websites of relevant authorities
- e) Television broadcasts
- f) Radio broadcasts
- g) Social media such as Facebook or Twitter
- h) Being door knocked or getting a visit to your house by police or SES

Would you rate this as ... READ OUT

1. Very effective
2. Quite effective
3. Not very effective
4. Not at all effective
5. Don't know (do not read out)

## TEXT MESSAGE WARNINGS

### Ask all

Q11 In the lead-up to or during {EVENT}, did you receive any official WARNINGS via TEXT MESSAGE?

1. Yes
2. No

### Ask those who did receive text message code 1 at Q11

Q12 Who did you receive a text message from? UNPROMPTED MR

1. Local Disaster Management Group
2. The Local Council
3. Dam operator – seqwater or SunWater
4. School
5. Other (please specify \_\_\_\_\_)
6. Not sure

Q13a Thinking about {any of} the text message warnings you received would you say they were generally....  
READ OUT SR

1. Easy to understand, or
2. Hard (Why hard to understand \_\_\_\_\_)
3. Some were easy, some were hard

Q13b Did text messages generally arrive.... READ OUT SR

1. At the right time, or
2. Too late
3. Some arrived at the right time, some too late

Q13c Were they.... READ OUT SR?

1. Relevant to you and your property
2. Not relevant
3. Some were, some weren't

Q13d Did you take any action after receiving any of the text messages?

1. Yes
2. No

**If yes, code 1 at Q13d**

Q13e What action did you take? UNPROMPTED MR

1. Watched or listened for warnings more closely
2. Stocked up on food, water and or fuel
3. Prepared an emergency kit
4. Checked on neighbours, friends or family
5. Prepared property y sandbagging, taping windows, clearing gutters, removing tree branches, checking insurance or other activities
6. Moved property out of harm's way
7. Stayed at home/off the roads
8. Evacuated from our home
9. Other (please specify \_\_\_\_\_)

**Ask those who did receive text message code 1 at Q11**

Q13f Did the actual impact or impacts you experienced match the text warnings you received?

1. Yes
2. No – the warnings did not prepare you enough about the potential impacts
3. No – the warnings overstated or exaggerated the impacts

**Ask all**

Q14 Thinking about emergency warnings generally, from any source or organisation, how could they be improved? How else? UNPROMPTED MR

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## SERVICES AND RESPONSE

### Ask all

Q15 Which of the following services or assistance did you receive in association with {EVENT}? READ OUT MR

### Ask all

Q16 Were there any services or assistance that you did need but did not receive? UNPROMPTED MR

1. Use of evacuation facility
2. Provision of food, water supplies
3. Assistance from emergency services such as police, ambulance or fire and rescue
4. Assistance from the SES for property damage
5. Clean-up assistance from the local council, defence force groups or volunteers
6. Financial assistance
7. Emotional support or counselling assistance
8. Any other services (please specify \_\_\_\_\_)
9. None of the above/NONE (DO NOT READ OUT)

### Ask all

Q17 Thinking now about after {EVENT}, were you provided with enough information about the following?  
If you were not affected by the issue you can say not applicable.

- a) When power would be restored
  - b) When water would be restored
  - c) When schools would be re-opened
  - d) When phone or internet would be restored
  - e) When road access to your area would be restored
  - f) When clean-up of streets and footpaths would be completed
  - g) If you evacuated, when you could return to your home
- 
1. Yes
  2. No
  3. Not applicable

*If a code is not applicable at Q17 exclude from Q18 and Q19 codeframe  
Also note code frame responses differences between Q17-18-19*

**Ask all**

Q18 After the event, were you satisfied or dissatisfied with the speed with which... READ OUT

- a) Power was restored
- b) Water was restored
- c) Phone or internet was restored
- d) Road access was restored
- e) Clean-up of streets and footpaths was completed
- f) You were able to return home after being evacuated

- 1. Satisfied
- 2. Dissatisfied
- 3. Not applicable

**Ask all**

Q19 Overall would you say you were prepared for and able to cope... READ OUT?

- a) Without power
- b) Without water
- c) Without phone or internet
- d) With road access being restricted
- e) With being out of your home
- f) With the impacts of the event

- 1. Yes
- 2. No
- 3. Not applicable

**OVERALL SUGGESTIONS FOR IMPROVEMENT**

**Ask all**

Q20 And apart from the comments you made earlier about emergency warnings, how could the preparations or response of emergency services, the local council, community groups or citizens themselves have been improved? What could have been done differently to have helped you or others at any stage of the event? What else? UNPROMPTED MR

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## DEMOGRAPHICS

### Ask all

D1 Which of the following do you have (or will have once it is repaired)?

1. Landline
2. Mobile phone
3. Internet connection

### Ask those who have relevant service

D2a Which company do you use for your landline telephone?

D2b Which company do you use for your mobile phone?

D2c Which company do you use for your internet?

*If use more than one, ask for main brand*

1. Telstra
2. Optus
3. TPG
4. iinet
5. Virgin
6. Vodafone
7. Dodo
8. Other (specify)
9. Don't know

D2aa In the lead-up to and during the recent event did you have any problems getting a connection on your landline telephone... READ OUT

D2bb In the lead-up to and during the recent event did you have any problems getting a connection on your mobile phone... READ OUT

*Interviewer note – problems are regarding connection issues not flat batteries or lost phones*

D2bcc In the lead-up to and during the recent event did you have any problems getting an internet connection at home on a PC, laptop, tablet or mobile phone ... READ OUT

D2bdd In the lead-up to and during the recent flood event did you have any problems getting an internet connection on your mobile phone when away from home... READ OUT

1. NO
2. Yes, Was that... *specify MR*
  - a. In the lead-up to the event
  - b. During the event
  - c. After the event



**Ask all**

D3 To which of the following age categories do you belong? Are you under or over 40 years of age?  
READ OUT SR

1. 18 to 24 years
2. 25 to 29 years
3. 30 to 34 years
4. 35 to 39 years

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5. 40 to 44 years
6. 45 to 49 years
7. 50 to 54 years
8. 55 to 59 years
9. 60 to 64 years
10. 65 years or over

D3a Which of the following categories, best describes your household type? READ OUT SR

1. Lone person household
2. Couple with no children
3. Single or couple with dependent children (mostly aged under 13 years)
4. Single or couple with dependent children (mostly aged over 13 years)
5. Single or couple with adult children (aged over 18 years)
6. Couple whose children have left the family home
7. Group household (non related individuals)
8. Other/specify \_\_\_\_\_

D4 Do you have any people aged 75 years or older living in your household?

1. Yes
2. No

D5 How long have you lived in the area?

Direct numeric entry \_\_\_\_\_(years) \_\_\_\_\_ (months)

D6 Which of the following describes your work status? READ OUT SR

1. You work full time
2. You work part time
3. You do home duties
4. You are a student
5. You are currently in between jobs (Unemployed)
6. You are on a pension/benefit
7. Other /specify

D9 Apart from the recent event, have you ever been impact by another disaster?

1. NO
2. Yes,  
*if yes ask: What type of disaster have you been impacted by before? MR*
3. Storm damage
4. Flood
5. Cyclone
6. Earthquake
7. Fire
8. Drought
9. Health epidemic
10. Failure of essential services such as water or power
11. Other (specify \_\_\_\_\_)

Thank you for your time today.

Some people may find the topic of this research distressing. If you do feel upset or distressed in any way, you may like to contact Lifeline on: 13 11 14.

**Privacy statement**

The information you have provided today will be used only by the Office of the Inspector-General Emergency Management for research purposes. Your answers will be combined with those of other participants to provide feedback to the Office on the needs and views of the community. Your name and responses to this survey will always remain anonymous.

## Appendix B – Sample composition

<b>MACKAY RESPONDENTS</b>	n=282	% = 100
<b>GENDER</b>		
Male	117	41%
Female	165	59%
<b>AGE</b>		
18 to 24 years	7	2%
25 to 29 years	6	2%
30 to 34 years	16	6%
35 to 39 years	8	3%
40 to 44 years	28	10%
45 to 49 years	29	10%
50 to 54 years	36	13%
55 to 59 years	36	13%
60 to 64 years	39	14%
65 years or over	77	27%
<b>HOUSEHOLD</b>		
Lone person household	40	14%
Couple with no children	51	18%
Single or couple with dependent children (mostly aged under 13 years)	51	18%
Single or couple with dependent children (mostly aged over 13 years)	28	10%
Single or couple with adult children (aged over 18 years)	36	13%
Couple whose children have left the family home	63	22%
Group household (non related individuals)	9	3%
Other/specify	4	1%
<b>PEOPLE AGED 75 YEARS OR OLDER LIVING IN HOUSEHOLD</b>		
Yes	55	20%
No	227	80%
<b>YEARS LIVED IN AREA</b>		
Less than 10	68	24%
10 to less than 10	86	30%
20 to less than 15	51	18%
30 to less than 20	24	9%
40 to less than 25	23	8%
50+	30	11%
<b>WORK STATUS</b>		
You work full time	100	35%
You work part time	49	17%
You do home duties	20	7%
You are a student	4	1%
You are currently in between jobs (Unemployed)	14	5%
You are on a pension/benefit	76	27%
Self-Funded Retiree	17	6%
Other /specify	2	1%
<b>PRIOR DISASTER EXPERIENCE</b>		
No	99	35%
Storm damage	21	7%
Flood	88	31%
Cyclone	137	49%
Earthquake	7	2%
Fire	3	1%
Drought	5	2%
Failure of essential services such as water or power	9	3%
Other /specify	1	*

\* indicates less than 1%

<b>WHITSUNDAYS RESPONDENTS</b>	<b>n=</b>	<b>% = 100</b>
<b>GENDER</b>		
Male	127	42
Female	179	58
<b>AGE</b>		
18 to 24 years	7	2
25 to 29 years	6	2
30 to 34 years	12	4
35 to 39 years	18	6
40 to 44 years	26	8
45 to 49 years	25	8
50 to 54 years	59	19
55 to 59 years	40	13
60 to 64 years	50	16
65 years or over	63	21
<b>HOUSEHOLD</b>		
Lone person household	49	16
Couple with no children	58	19
Single or couple with dependent children (mostly aged under 13 years)	46	15
Single or couple with dependent children (mostly aged over 13 years)	37	12
Single or couple with adult children (aged over 18 years)	33	11
Couple whose children have left the family home	73	24
Group household (non related individuals)	8	3
Other/specify	2	1
<b>PEOPLE AGED 75 YEARS OR OLDER LIVING IN HOUSEHOLD</b>		
Yes	40	13
No	266	87
<b>YEARS LIVED IN AREA</b>		
Less than 10	59	19
10 to less than 10	69	23
20 to less than 15	67	22
30 to less than 20	39	13
40 to less than 25	23	8
50+	49	16
<b>WORK STATUS</b>		
You work full time	138	45
You work part time	58	19
You do home duties	10	3
You are a student	4	1
You are currently in between jobs (Unemployed)	9	3
You are on a pension/benefit	63	21
Self-Funded Retiree	23	8
Other /specify	1	*
<b>PRIOR DISASTER EXPERIENCE</b>		
No	77	25
Storm damage	48	16
Flood	58	19
Cyclone	219	72
Earthquake	14	5
Fire	4	1
Drought	5	2
Failure of essential services such as water or power	7	2
Other /specify	2	1

<b>ROCKHAMPTON RESPONDENTS</b>	n=307	% = 100
<b>GENDER</b>		
Male	112	36%
Female	195	64%
<b>AGE</b>		
18 to 24 years	7	2%
25 to 29 years	4	1%
30 to 34 years	15	5%
35 to 39 years	19	6%
40 to 44 years	28	9%
45 to 49 years	37	12%
50 to 54 years	35	11%
55 to 59 years	42	14%
60 to 64 years	39	13%
65 years or over	81	26%
<b>HOUSEHOLD</b>		
Lone person household	66	21%
Couple with no children	48	16%
Single or couple with dependent children (mostly aged under 13 years)	37	12%
Single or couple with dependent children (mostly aged over 13 years)	34	11%
Single or couple with adult children (aged over 18 years)	50	16%
Couple whose children have left the family home	54	18%
Group household (non related individuals)	12	4%
Other/specify	6	2%
<b>PEOPLE AGED 75 YEARS OR OLDER LIVING IN HOUSEHOLD</b>		
Yes	58	19%
No	249	81%
<b>YEARS LIVED IN AREA</b>		
Less than 10	83	27%
10 to less than 10	80	26%
20 to less than 15	51	17%
30 to less than 20	30	10%
40 to less than 25	34	11%
50+	29	9%
<b>WORK STATUS</b>		
You work full time	107	35%
You work part time	54	18%
You do home duties	20	7%
You are a student	5	2%
You are currently in between jobs (Unemployed)	19	6%
You are on a pension/benefit	85	28%
Self-Funded Retiree	14	5%
Other /specify	3	1%
<b>PRIOR DISASTER EXPERIENCE</b>		
No	56	18%
Storm damage	52	17%
Flood	119	39%
Cyclone	217	71%
Earthquake	1	*
Fire	3	1%
Drought	8	3%
Failure of essential services such as water or power	14	5%

\*Indicates less than 1% of respondents

<b>LOGAN/SCENIC RIM/GOLD COAST RESPONDENTS</b>	n=305	% = 100
<b>GENDER</b>		
Male	113	37%
Female	192	63%
<b>AGE</b>		
18 to 24 years	12	4%
25 to 29 years	11	4%
30 to 34 years	6	2%
35 to 39 years	11	4%
40 to 44 years	31	10%
45 to 49 years	33	11%
50 to 54 years	49	16%
55 to 59 years	42	14%
60 to 64 years	51	17%
65 years or over	59	19%
<b>HOUSEHOLD</b>		
Lone person household	32	10%
Couple with no children	43	14%
Single or couple with dependent children (mostly aged under 13 years)	48	16%
Single or couple with dependent children (mostly aged over 13 years)	39	13%
Single or couple with adult children (aged over 18 years)	64	21%
Couple whose children have left the family home	53	17%
Group household (non related individuals)	19	6%
Other/specify	7	2%
<b>PEOPLE AGED 75 YEARS OR OLDER LIVING IN HOUSEHOLD</b>		
Yes	47	15%
No	258	85%
<b>YEARS LIVED IN AREA</b>		
Less than 10	81	27%
10 to less than 10	87	29%
20 to less than 15	77	25%
30 to less than 20	43	14%
40 to less than 25	11	4%
50+	6	2%
<b>WORK STATUS</b>		
You work full time	112	37%
You work part time	55	18%
You do home duties	21	7%
You are a student	12	4%
You are currently in between jobs (Unemployed)	10	3%
You are on a pension/benefit	64	21%
Self-Funded Retiree	29	10%
Other /specify	2	1%
<b>PRIOR DISASTER EXPERIENCE</b>		
No	192	63%
Storm damage	27	9%
Flood	82	27%
Cyclone	24	8%
Earthquake	2	1%
Fire	6	2%
Drought	1	*
Failure of essential services such as water or power	6	2%
Other /specify	1	*

## Appendix C – Fieldwork statistics

Region	Mackay	Whitsundays	Rockhampton	Logan/Scenic Rim/Gold Coast
<b>Final sample size</b>	n=282	n=306	n=307	n=305
<b>Response Rate</b>	51%	47%	43%	32%
<b>In Field</b>	18/05/17			
<b>Out of Field</b>	29/05/17			

## Appendix D – ‘Other’ responses

### MACKAY

Q2. Who do you believe is responsible for Disaster Management generally in your area?	Number of responses
Federal Government	2
Electricity people	1
Insurance companies	1
BoM	1
Radio stations	1
Queensland Health	1
Ergon Energy	1

Q4x. In the last 12 months, have you been to any community events, public meetings or presentations about Disaster Management arrangements? If yes, which of the following groups organised or were in attendance?	Number of responses
NIL	1

Q7. Thinking specifically now about {EVENT}, which if any, of the following impacts did you personally experience?	Number of responses
Cancelled airflight	1

Q8. Where did you evacuate to?	Number of responses
My other property	1
Eton suburb	1

Q8a. Why did you decide to evacuate to {insert location from Q8}?	Number of responses
Mother in law was by herself so went to be with her	1

Q9a. In the lead-up to or during {EVENT} which, if any, of the following sources of information did you use?	Number of responses
Higgins Storm Chasing website	3
Social media (other)	3
Mackay and district weather updates	2
Texted us	1
Queensland website (NFI)	1
Local group L&K weather	1
RACQ App	1
I was the group leader and I work for the SES	1
Third party weather sites	1
Weatherzone app	1
Text information	1

Q12. Who did you receive a text message from?	Number of responses
State Government	2
Insurance company	2
From my work (QLD Health)	1
Optus	1
Brisbane weather bureau	1

Q13a. Thinking about {any of} the text message warnings you received would you say they were generally....	Number of responses
The messages were over exaggerated. Would cause more harm than good	1

Q14. Thinking about emergency warnings generally, from any source or organisation, how could they be improved? How else?	Number of responses
Don't have television media coverage of the disaster/not trustworthy	1
Local council had a phone number (1300 etc.) to contact for clarification if needed but number did not answer	1
People take it too casually. It takes a while for messages to get through like if it's flooded forget it, and especially for people who have never experienced this and just don't know what can happen. Make more serious messages	1

Q15. Which of the following services or assistance did you receive in association with {EVENT}?	Number of responses
Council had a clean-up. We didn't need anything picked up. Not much damage to our property	1
Family and neighbours	1
Insured through RACQ	1
Red Cross set up hubs	1
Education Queensland	1
Ergon Energy to restore power	1
Emergency telecommunications assistance	1
Got sandbag	1
Guided through floodwaters by SES crews	1

NFI = No further information



<b>Q16. Were there any services or assistance that you did need but did not receive?</b>	<b>Number of responses</b>
Needed power back on	1
Needed radio signal (lost during cycle)	1
Probably need to check people's stories out. Stop people claiming what they should not be claiming money from disaster relief (not insurance). Stricter guidelines for handing out money	1
Home assistance for the broken fence	1
Respondent is diabetic and with power outage no communication with outside world. Insulin deteriorates after 24 hours in heat conditions (usually kept in fridge below certain temperature)	1
Internet was down for a while. Needed internet services	1
Power out for a week caused me anxiety/stress 'out of my mind' as I need special diet and couldn't cook	1
Just wanted the insurance claim	1
Ergon Energy and Telstra	1
Would have liked to help in the clean-up, had heavy equipment to help (tractors)	1
The loss of income, financial assistance	1
More assistance regarding the recovery of power. We had to get a power generator and stay with in-laws who had power	1
Applied for an emergency assistance for natural disaster. I did not receive	1
Did not receive any information while the cyclone was passing/wasn't updated	1
Power restoration. In other words Ergon haven't carried out any preventative maintenance for their electricity lines etc.	1
Mobile phone service	1
Would have liked some contact after the event. I called the council afterwards and had a long chat about communications. Council said lines were down. I think they should come onto the streets and contact manually with a loud hailer or door knock people to see if they were all right. People were disappointed no-one came to see if they were OK. No one called after to see what the result was	1

<b>Q20. And apart from the comments you made earlier about emergency warnings, how could the preparations or response of emergency services, the local council, community groups or citizens themselves have been improved? What could have been done differently to have helped you or others at any stage of the event? What else?</b>	<b>Number of responses</b>
They should look at flood mapping in Mackay as well as storm surge warnings	1
They could have a better phone line service for the council and other relevant bodies	1
The council should be responsible, not the police commissioner and the premier who are operating externally	1
Dump should have been for free so residents can clean up yard before cyclone crossed	1
Maybe more 000 operators as some people couldn't reach 000	1

<b>D3a. Which of the following categories, best describes your household type?</b>	<b>Number of responses</b>
Couple with children under and over 13	1
Living with two brothers	1
Living with brother and godson	1
Single and caring for your parents over 70	1

<b>D6. Which of the following describes your work status?</b>	<b>Number of responses</b>
Refused	1
Retired	1

<b>D9. Apart from the recent event, have you ever been impact by another disaster?</b>	<b>Number of responses</b>
Mini-tornado	1

## 'Other' responses WHITSUNDAYS

Q2. Who do you believe is responsible for Disaster Management generally in your area?	Number of responses
Federal Government	7
National Government	2
Army, transport and main roads departments	1
Premier	1
Outside help should be brought in	1
The Australian Army	1
Lions Club	1
Disaster coordinator	1

Q4x. In the last 12 months, have you been to any community events, public meetings or presentations about Disaster Management arrangements? If yes, which of the following groups organised or were in attendance?	Number of responses
Queensland Health/workplace	1
Private organisations/not-for-profits	1
Business owners/banks/insurance representatives	1

Q7. Thinking specifically now about {EVENT}, which if any, of the following impacts did you personally experience?	Number of responses
The government recovery team took over our (community building) for about a month	1
Wasn't able to get children's medication	1

Q8. Where did you evacuate to?	Number of responses
Hotel/motel	2
Church	1

Q8a. Why did you decide to evacuate to {insert location from Q8}?	Number of responses
Our daughter needed the shelter	1
I'm in management for the SES	1

Q9a. In the lead-up to or during {EVENT} which, if any, of the following sources of information did you use?	Number of responses
Social media (other)	7
Cyclone chasers/trackers/stormchasers	3
American Navy website (good tracking cyclones)	2
Other weather websites such as WillyWeather and weather zone	1
Work/QLD health	1
Elders Weather website	1
Other tracking sites	1
Local community	1
SES	1
Local newspaper	1
Interstate family communication	1
State Government representatives (Psychologist)	1
People from outside the town through calls telling us what was going on/they were watching it on the news	1
Austar weather channel	1
I get information through disaster management group	1
Husband is a national park ranger	1
Global weather system site (Navy)	1
Disaster information package in the mail	1

Q12. Who did you receive a text message from?	Number of responses
SES	5
Bureau of Meteorology	2
Insurance company	1
Not sure where it came from. It was a general community broadcasts. I think it may be have been the Whitsundays Disaster Committee.	1
Insurance company	1
Commonwealth Bank	1
Telstra/Ergon Energy	1
The police	1

Q14. Thinking about emergency warnings generally, from any source or organisation, how could they be improved? How else?	Number of responses
They should tell people to get out in a higher than usual tide	1
More people should tune into warnings to protect themselves	1
Stop getting rid of the public telephones so that people may use them	1
I think they should ban all commercial TV stations from being on air. I'm sick of them coming here and telling everyone how it is. They should be arrested for obstructing police efforts	1
Treat people as being intelligent and not treat us like idiots. Some people were forced to evacuate who have lived in houses longer than I have been alive or forced to evacuate when there was no danger	1

<b>Q15. Which of the following services or assistance did you receive in association with {EVENT}?</b>	<b>Number of responses</b>
Neighbours helped a lot	1
My employer's employee assistance program	1
Red Cross handed out Woolworths vouchers	1
Had a friend drive to another town for fuel	1
Local neighbourhood centre	1
Salvation Army 2 cards of \$100 each	1
Centrelink payment	1
Supplier of sand bags from the SES	1
Insurance company was quite good	1

<b>Q16. Were there any services or assistance that you did need but did not receive?</b>	<b>Number of responses</b>
More generators available	1
We needed people to come and check, no one came after the Cyclone	1
Needed SES to come, big branch hanging, dangerous near house	1
More financial assistance. \$150 dollars didn't help enough	1
Needed help with a tarp over my shed but did not get help with it	1
Asked for volunteer help, was told it would happen but it never did	1
Landline services. I called Telstra to get it reconnected and it took over a month	1
Assistance package from Centrelink was declined because our house wasn't damaged enough to qualify apparently. People were calling straight away and were getting funding within a couple of days but we had to wait a month. They gave it to some people and not others and I don't think that was right/so financial assistance from Centrelink would have been good	1
Electricity and landline connection	1
Insurance claim on damage	1
Loss of income claim on our business	1
Medical	1
Receive 1-2 payments for compensation	1
Access to power and water	1
Refund of cost of fuel for generator essential for life support machine for a person with a disability. \$50 per day to run. Only on a pension therefore very limited income/still trying to recover financially	1
Needed cleaning assistance for the yard. Tree too big for old lady to carry. Asked for assistance and did not receive any	1
Storm however this is to be expected	1
Insurance company to be more active immediately afterwards. My home is still damaged and my place of employment is damaged	1
More financial assistance because I couldn't work for a couple of weeks. Everyone has a mortgage and because you're in the disaster zone postcode, it would have been nice for the government to pause mortgage repayments during that time because it was out of our control. They can give refugees money so give it to us, your average, normal Australian worker	1
No generators and Queensland Government need to invest in putting those in place	1
Still don't have landline or internet/provider is Telstra	1

<b>Q20. And apart from the comments you made earlier about emergency warnings, how could the preparations or response of emergency services, the local council, community groups or citizens themselves have been improved? What could have been done differently to have helped you or others at any stage of the event? What else?</b>	<b>Number of responses</b>
There were a lot of different bodies involved and it would be good to have a central hub managing everything and dispensing information	1
Maybe they should have evacuated Collinsville as well	1

<b>D3a. Which of the following categories, best describes your household type?</b>	<b>Number of responses</b>
Mother, daughter and daughter's son	1
Family home. Adult siblings with partner and child	1

<b>D6. Which of the following describes your work status?</b>	<b>Number of responses</b>
Sick leave due to injury in cyclone	1

<b>D9. Apart from the recent event, have you ever been impact by another disaster?</b>	<b>Number of responses</b>
Dust storms	1

## 'Other' responses ROCKHAMPTON

Q2. Who do you believe is responsible for Disaster Management generally in your area?	Number of responses
Federal Government	5
Weather Bureau	2
Department of Main Roads	2
Ergon Energy	1
BOM website	1

Q4x. In the last 12 months, have you been to any community events, public meetings or presentations about Disaster Management arrangements? If yes, which of the following groups organised or were in attendance?	Number of responses
Ergon Energy	1
Local rate payers meeting held every three months	1
Workplace trainer in support work/care provider area	1
Queensland Coast Guard	1

Q7. Thinking specifically now about {EVENT}, which if any, of the following impacts did you personally experience?	Number of responses
Got an illness from the weather	1
Had to provide extra assistance to family members due to them being involved in emergency services	1
Sewage problems in the street. Flowing down the gutter	1

Q8. Where did you evacuate to?	Number of responses
Motel	2
Hotel	1
A motor-inn because it was close to work	1

Q8a. Why did you decide to evacuate to {insert location from Q8}?	Number of responses
Live on outskirts of town. Needed to be near work and facilities so it was the best option	1
Took our own mobile home with us	1

Q9a. In the lead-up to or during {EVENT} which, if any, of the following sources of information did you use?	Number of responses
Weatherzone online	3
Internet	2
SMS/text messaging	2
Insurance company	2
Checked the river himself	1
Fitzroy River water people	1
Visual proof	1
Through work	1
Weather zone forecasting was better than BOM	1
The power company knocked on the door	1
ACCC weather sites	1
Workplace	1
Higgins disaster update on Facebook	1
Rural fire service member/ got texted from his head officer	1
Morning Bulletin Website	1
River height gauge was best warning	1
Friends on properties on the river who knew exactly what the river was doing	1
Looked on some website/not sure which one	1

Q12. Who did you receive a text message from?	Number of responses
Insurance company sent updates and warnings	4
SES	2
The (my) bank	1
Real estate agency	1
Commonwealth Bank Insurance Company	1
Work as rural fire fighter. Head office sent text	1
My workplace	1
SES or police and also weather alerts	1
Main roads	1

<b>Q14. Thinking about emergency warnings generally, from any source or organisation, how could they be improved? How else?</b>	<b>Number of responses</b>
Listen to the public and respond. Ask for insights from the public about current damages and incorporate that into the warnings	1
Each disaster is different. Last time we had to evacuate. Cyclone Debra was less water on property. Did not evacuate. Stay calm - do not panic, deal with the situation as it arrives	1
One received from each authority contacted	1
I think people just have to be aware/read papers listen to news and their neighbours	1
More the flooding in Rockhampton that needs to be improved not the warnings	1
Emergency services could stop treating everyone like children and that we know nothing. Emergency services and council should stop thinking lowly of the community. Give the community more credit	1
The council should be a lot quicker and swifter in their work. They need more funding	1
When the river levels rose higher than expected/nobody could gage that	1
Prevention is the best thing and build a levy. It would be cheaper than cleaning up after every cyclone/flood.	1
Spend the money in Rockhampton that they make from mining	1
Should have one online reliable source	1
Better surveillance of the areas/flood gauges installed	

<b>Q15. Which of the following services or assistance did you receive in association with {EVENT}?</b>	<b>Number of responses</b>
Bush fire brigade helped clean-up	1
Gardener cleaned up broken limbs from trees as part of the general service (paid) after the event	1
A community group visited and had a chat and said they would come back	1
Assistance from neighbours cleaning up	1
Family and friends	1
SES warning	1
Council provided sandbags	1
Council put sacks in our drains to stop sewage	1
Fitzroy River Water provided me advice and called out to the area	1

<b>Q16. Were there any services or assistance that you did need but did not receive?</b>	<b>Number of responses</b>
Sandbags	2
Guidance on where to put animals	1
Getting onto Centrelink help would have been appreciated. If Ergon Energy had left the power on I would have been OK. Some notice that they were going to cut the power would have helped deal with fridges	1
A \$180 grant we applied for and did not receive	1
Financial assistance from the Government as we did lose income	1
Would like to have people come and check out property	1
Would have liked emergency ice supply to keep things cold	1
Real time information and warning of natural disasters approaching	1
Council assistance to fix my riverbank but they won't do anything. They want you to do it yourself. Some financial assistance would also be helpful	1

<b>Q20. And apart from the comments you made earlier about emergency warnings, how could the preparations or response of emergency services, the local council, community groups or citizens themselves have been improved? What could have been done differently to have helped you or others at any stage of the event? What else?</b>	<b>Number of responses</b>
Make sure a place needs to be evacuated before someone starts telling people to evacuate. The logistics of evacuating a large facility are enormous	1
Stop sensationalising it. Flood level meters need to work	1
Maybe they could make the media stay out it as they made it hard for a lot of businesses that weren't impacted and therefore suffered because of it	1
Only concern and help is for the people below flood levels who bought cheap houses and people above flood levels don't get treated as well	1
Tightening of the time frames for road closures	1
More negotiation for business owners in relation to road closure	1

<b>D3a. Which of the following categories, best describes your household type?</b>	<b>Number of responses</b>
Refused	1
Couple and grandfather	1
Couple with dependent children and respondent's mother	1
Live with my mum as her carer	1
Husband, wife, adult son, grandchild	1
Couple looking after elderly parent	1

<b>D6. Which of the following describes your work status?</b>	<b>Number of responses</b>
Refused	2
Currently on Work Cover	1

## 'Other' responses LOGAN/SCENIC RIM/GOLD COAST

Q2. Who do you believe is responsible for Disaster Management generally in your area?	Number of responses
Federal Government	4
Energex	2
Media/Local Media	2
National Resources Department	1
Developers may be part of it	1
God	1
Civil Defence	1
Main Road	1
Weather Bureau	1

Q4x. In the last 12 months, have you been to any community events, public meetings or presentations about Disaster Management arrangements? If yes, which of the following groups organised or were in attendance?	Number of responses
Workplace meeting	1
Queensland Rural Fire	1
QAS	1
Lifeline	1

Q7. Thinking specifically now about {EVENT}, which if any, of the following impacts did you personally experience?	Number of responses
Too many sightseers in the streets during and for a few days after	1
Traffic was worse	1

Q8. Where did you evacuate to?	Number of responses
We went to our other property	1
Had a big property and had a big barn that we evacuated too	1
Family member's house (next door)	1
Work	1

Q8a. Why did you decide to evacuate to {insert location from Q8)?	Number of responses
Water was already flooding our house so we decided ourselves to evacuate	1
The rain was heavy and we got scared	1

Q9a. In the lead-up to or during {EVENT} which, if any, of the following sources of information did you use?	Number of responses
Social media (other)	5
Mobile phone texts/text messages	4
Higgins Storm Chasing	3
Energex	2
Text messages from someone I can't remember	1
Mobile	1
Phone alerts were coming through to us	1
Emergency phone service to our home number	1
Googled local road closures	1
My manager called me and told me not to try to get to work	1
Road traffic authority	1
Internet	1
Channel 9 and website Facebook	1
Weather app	1
Logan city website	1
Willy weather	1
Text message	1
Android app called Weatherzone	1
Logan weather radar/Logan flood watch	1
Queensland alert	1

Q12. Who did you receive a text message from?	Number of responses
Government/State Government/Queensland Government	16
SES	3
Education Queensland	3
Police/Queensland Police	2
BOM website	1
Could have been the SES	1
Emergency alert	1
Emergency service	1
NSW SES	1
REMSERV	1
Storm warning alert system subscribed for	1

<b>Q14. Thinking about emergency warnings generally, from any source or organisation, how could they be improved? How else?</b>	<b>Number of responses</b>
Make sure that when they send it, it really is serious	1
It's up to people to prepare for this stuff. Should be able to self-manage what you need on your property	1
Maybe a zeppelin in the air	1
Listening to the scientists of the meteorology websites and funding them better. State and Federal Government listen to them	1
Single source such as ABC is excellent so keep telling people this is the one source of information. One clear single source of info that people know and use	1
Local council should be more prepared and organised to deal with the situations	1
If anything make sure people stay out of flood water and give bigger fines for people who don't listen to the warnings for wasting emergency services' time	1
Having an emergency access point in the local area but on high ground	1
I am new to Australia. All the data should be available to emergency staff, contact details, number of people in household. Because if the area is flooded and you are helping the families, you will be able to keep track of the people you are helping and how many people may need rescuing	1
You can't prepare for Mother Nature. Can't blame anybody, just happens. Common sense is important	1
More sandbags provided	1

<b>Q15. Which of the following services or assistance did you receive in association with {EVENT}?</b>	<b>Number of responses</b>
Clean-up pickup	1
Energex putting power back on	1

<b>Q16. Were there any services or assistance that you did need but did not receive?</b>	<b>Number of responses</b>
No one knew who to phone in non-life threatening situations. [I] was on an island and cut off and no one knew how to help	1
Assistance from a telecom company to fix the lines	1
Compensation for loss of food	1
Could have received more financial assistance	1
Information about power outage situations	1
Lack of communication and earlier notification of flooding	1
We rang the SES because we couldn't find our mum and they got a helicopter. They could have had a bit more communicative with us during that time. She slept overnight in the car	1
We survived only because I happened to have shopped recently. If it had been otherwise while we were cut off for five days we would have needed food assistance	1
Would have been good to have assistance with fallen trees/semirural/lot of trees/lots of trips to the tip with furniture and trees. Still cleaning it up. Doing it all on our own	1

<b>Q20. And apart from the comments you made earlier about emergency warnings, how could the preparations or response of emergency services, the local council, community groups or citizens themselves have been improved? What could have been done differently to have helped you or others at any stage of the event? What else?</b>	<b>Number of responses</b>
We have a footpath that leads to the street behind us. They have posts blocking the path but if they were removed a lot of cars could have had access and people could better get in and out	1
Continuing with meetings of disaster groups to keep everything up to date is a god idea. Keep reviewing it so they cover every eventually and improve services. And improve on their findings each time there is an event such as Debbie	1
More information would be nice	1
Would like basic goods prices monitored. Local servo put up bread up to three times the price	1
A fridge magnet for emergency contact numbers in case you lose power and internet	1

<b>D3a. Which of the following categories, best describes your household type?</b>	<b>Number of responses</b>
No comment	1
Intergenerational family, multiple homes on one property	1
Single with relative	1
Not answering	1
Father with handicapped daughter	1
Three sisters living together, one disabled	1
Parents with them	1

<b>D6. Which of the following describes your work status?</b>	<b>Number of responses</b>
No comment	1
Not answering	1

<b>D9. Apart from the recent event, have you ever been impact by another disaster?</b>	<b>Number of responses</b>
Daughter died at age nine of cancer	1

## Appendix E – Sampling error chart

All sample surveys and polls, whether or not they use probability sampling, are subject to multiple sources of error which are most often not possible to quantify or estimate, including sampling error, coverage error, error associated with non-response, error associated with question wording and response options and post survey weighting and adjustments. Therefore MCR avoids the words “margin of error” as they are not able to be verified. All that can be calculated are different possible sampling errors with different probabilities of pure, unweighted, random samples with 100 response rates. These are only theoretical because no published surveys come close to this ideal. At the absolute minimum, sampling error based on various cell sizes for this survey could fall within the following ranges.

(at the 95 confidence level)

Sample size	10/90	20/80	30/70	40/60	50/50
5	±27.0	±36.0	±41.0	±44.0	±45.0
10	±19.0	±25.0	±29.0	±31.0	±32.0
15	±15.0	±21.0	±24.0	±25.0	±26.0
20	±13.0	±18.0	±20.0	±22.0	±22.0
25	±12.0	±16.0	±18.0	±19.5	±20.0
30	±11.0	±15.0	±16.7	±17.9	±18.0
35	±10.0	13.5	±15.5	±16.6	±16.9
40	±9.0	±12.6	±14.5	±15.5	±15.8
50	±8.0	±11.3	±13.0	±13.9	±14.1
60	±7.7	±10.3	±11.8	±12.6	±12.9
70	±7.2	±9.6	±11.0	±11.7	±12.0
80	±6.7	±8.9	±10.2	±11.0	±11.1
90	±6.3	±8.4	±9.7	±10.3	±10.5
100	±6.0	±8.0	±9.2	±9.8	±10.0
150	±4.8	±6.5	±7.5	±8.0	±8.2
160	±4.7	±6.3	±7.2	±7.7	±7.9
170	±4.6	±6.1	±7.0	±7.5	±7.7
200	±4.2	±5.6	±6.5	±6.9	±7.0
220	±4.0	±5.4	±6.2	±6.6	±6.7
240	±3.9	±5.2	±5.7	±6.3	±6.5
250	±3.8	±5.1	±5.8	±6.2	±6.3
260	±3.7	±5.0	±5.7	±6.1	±6.2
280	±3.6	±4.8	±5.5	±5.9	±6.0
300	±3.5	±4.6	±5.3	±5.7	±5.8
320	±3.4	±4.5	±5.1	±5.5	±5.6
340	±3.3	±4.3	±5.0	±5.3	±5.4
350	±3.2	±4.3	±4.9	±5.2	±5.3
360	±3.2	±4.2	±4.8	±5.2	±5.3
380	±3.1	±4.1	±4.7	±5.0	±5.1
400	±3.0	±4.0	±4.6	±4.9	±5.0
420	±2.9	±3.9	±4.5	±4.8	±4.9
440	±2.9	±3.8	±4.4	±4.7	±4.8
450	±2.8	±3.8	±4.3	±4.6	±4.7
460	±2.8	±3.7	±4.3	±4.6	±4.7
480	±2.7	±3.7	±4.2	±4.5	±4.6
500	±2.7	±3.6	±4.1	±4.4	±4.5
550	±2.6	±3.4	±3.9	±4.1	±4.3
600	±2.4	±3.3	±3.7	±4.0	±4.1
650	±2.4	±3.1	±3.6	±3.8	±3.9
700	±2.3	±3.0	±3.5	±3.7	±3.8
750	±2.2	±2.9	±3.3	±3.6	±3.7
800	±2.1	±2.8	±3.2	±3.5	±3.5
850	±2.1	±2.7	±3.1	±3.4	±3.4
900	±2.0	±2.4	±3.1	±3.3	±3.3
950	±1.9	±2.6	±3.0	±3.2	±3.2
1000	±1.9	±2.5	±2.9	±3.1	±3.2