

# Making messages effective for all: South East Queensland flood warnings and alerts

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## Abstract

All people need to understand warnings and alerts in an emergency. People from culturally and linguistically diverse communities are more acutely at risk in emergencies and disaster events. They often rely on unofficial community translators or other people within their community or families to relay important information. Community translators sometimes do not find the original message easy to translate nor interpret into their own languages. Also, first-language English speakers may find some emergency messaging unclear. This paper reports on a project undertaken as part of the Queensland Office of Inspector-General of Emergency Management review of the February to March 2022 South East Queensland rainfall and flooding event. Seven text message warnings that were sent during the event were analysed using a linguistic technique, Clear Explicit Translatable Language. Four methods were used to make wordings easier to interpret and translate, simpler, clearer and updated. The result is a practical output and an accessible Aide-Mémoire for Practitioners.

## Introduction

Communicating during emergencies requires messages that are simple, clear and easy to interpret and translate into other languages. Messages that are easily comprehensible have greater effect. An Aide-Mémoire for Practitioners gives guidance on strengthening phrasing using

25 cases of wordings taken from 7 text message warnings and alerts sent during February and March 2022 during severe rainfall and flooding in South East Queensland. Figure 1 shows an example of the phrasing change from 'evacuate if required' to the simpler and clearer 'leave if it is not safe to stay'.



Figure 1: Original phrasing (orange) altered to simpler and clearer phrasing (blue).

## The context

Warnings and alerts during an emergency need to be understood by as many people as possible. Although they are one part of the information ecosystem, text message warnings and alerts are very important. They should be succinct, trustworthy, carry authority and, according to Schuster *et al.* 2022, most people can receive one. In Australia, text messages are sent to language situations where not everyone speaks English. To illustrate, approximately 23% of people in Australia speak a language other than English at home and over 300 languages are spoken in the country (ABS 2022). Additionally, not all the population has a high reading level. As noted by the Australian Government (n.d), 44% of people have a low reading level and many, even those with a high reading level, do not understand emergency operational language.

People in culturally and linguistically diverse communities are particularly at risk in emergencies and often rely on unofficial community translators and interpreters during these events (Chandonnet

2021, Shepherd & van Vuuren 2014). Community leaders may distribute information through messages in their own languages, either through text or voice, using messaging apps such as WhatsApp. They may also make phone calls to community members to keep them abreast of the situation. Moreover, they may adapt messages to make them applicable and relevant to their communities.

Community translators and interpreters do not always find the original message easy to translate nor interpret into their own languages (Ogie & Perez 2020). Messages designed with translation and interpretation in mind can make the role of interpreters easier at a very stressful time. It cannot be assumed that speakers of languages other than English necessarily have access to a community leader or consider themselves part of a particular community (Grey & Severin 2022). The English text message may be one of a few information sources, so governments have a responsibility for accessibility for the original warnings and alerts.

## Method

A sample of 7 text messages that were sent during the 2022 flooding event was analysed using a Clear Explicit Translatable Language (Goddard 2021). This was a project for the Queensland Office of the Inspector-General of Emergency Management to review the event. Clear Explicit Translatable Language allows people to express important thoughts and messages not in 'full English' but in a simplified version of English that is easy to translate or interpret into other languages. The technique has been used in areas such as health, education and international development. Efforts have been underway to use the technique in emergency and disaster messaging, as seen in a proof-of-concept that principally alters preparedness messages (Bromhead 2021). To demonstrate, the preparedness message 'make a plan' can be made easier to interpret and translate if changed to 'think about what you will do, write it down'.

In the project, suggestions were made for altering wordings in the warnings and alerts while keeping the original sense of the message. At all points, character counts were borne in mind, so the messages stayed sharp and within the bounds of an SMS. The warnings and alerts were divided into sentences, and if deemed necessary, adjusted to make them simpler, clearer and easier to interpret and translate into other languages. In addition, the sentences adjusted were assigned with ratings of (1) clear, (2) could be made clearer and (3) unclear. See Appendix 1 for a summary.

The intention of the analysis was to build on existing strengths in messaging and add insights brought by linguistics. The relevant Queensland Emergency Alert Manual (QFES 2021) and Australian Institute for Disaster Resilience guideline (AIDR 2021) were referenced during the research process.

## Practical output

The project generated a practical output, an Aide-Mémoire for Practitioners, that could be used by message creators in a fast-paced, evolving environment. The aide-mémoire contains brief general guidance before specific suggestions for adjusting

wording that is divided into 25 lettered points. These are separated depending on the reason for the suggested change:

- i. Making words easier to translate
- ii. Making words simpler
- iii. Unpacking ideas that may not be clear
- iv. Updating old-fashioned words.

Each section is separated into the type of words, using accessible labels with technical grammar terms in brackets, for example, doing words (verbs); people, places, things (nouns); explaining words (adjectives and adverbials). A balance has been struck between making the wording accessible and keeping within character restrictions.

## Aide-Mémoire for Practitioners

### General

The current practice of using the 3 warning advice levels (advice, watch and act, emergency) and adding the name of the issuing authority makes warnings and alerts consistent and recognisable and is meant to add to the message credibility.

### Specific

#### i. Making words easier to translate

##### Doing words (Verbs)

	Use	Avoid
<b>A</b>	happening now	occurring
<b>B</b>	have to	need
<b>C</b>	think carefully about	consider
<b>D</b>	do the things you have to do	take the necessary steps
<b>E</b>	stay where you are	shelter in place
<b>F</b>	know	plan

##### People, places, things (Nouns)

	Use	Avoid
<b>G</b>	places	areas
<b>H</b>	people	residents

##### Explaining words (Adjectives and Adverbials)

	Use	Avoid
<b>I</b>	if you can	if possible
<b>J</b>	more	further
<b>K</b>	other	additional

## ii. Making words simpler

### Doing words (Verbs)

	Use	Avoid
<b>L</b>	begin	commence
<b>M</b>	go to	attend, visit, refer to
<b>N</b>	go and stay	evacuate to
<b>O</b>	make sure your pets are safe	provide shelter for your pets
<b>P</b>	lock	secure
<b>Q</b>	leave	evacuate

### People, places, things (Nouns)

	Use	Avoid
<b>R</b>	house or home	property
<b>S</b>	the way you will go	journey

### Explaining words (Adjectives and Adverbials)

	Use	Avoid
<b>T</b>	very dangerous flash flooding	life-threatening flash flooding

## iii. Unpacking ideas that may not be clear

### Doing words (Verbs)

	Use	Avoid
<b>U</b>	expand 'check roads' to 'check where roads are closed'	'check roads' alone
<b>V</b>	drive, walk or ride	enter

### People, places, things (Nouns)

	Use	Avoid
<b>W</b>	explain 'evacuation centres', for example, 'safe places, evacuation centres'	'evacuation centres' alone

### Explaining words (Adjectives and Adverbials)

	Use	Avoid
<b>X</b>	<ul style="list-style-type: none"> <li>use 'if it is not safe' and 'if you have nowhere else to go'</li> <li>unpack 'if required' and 'if necessary'</li> </ul>	N/A

## iv. Updating old-fashioned words

### Doing word (Verb)

	Use	Avoid
<b>Y</b>	call	dial

## Sample result

Figure 2 shows an example of an adjusted message.



Figure 2: Warning message adjusted using Clear, Explicit, Translatable Language.

## Conclusion

Warnings and alerts provided during heavy rainfall, flooding and other hazards have many strengths. Building on these foundations, small alterations to messaging can make them simpler, clearer and easier to interpret and translate. For warnings and alerts to be effective, they need to be understandable by most, or ideally all, people in the community. Adjustments to messages do not necessarily result in longer phrasing. It is possible to remain within desired character counts. A Clear, Explicit Translatable Language approach could give interpreters and translators from culturally and linguistically diverse communities greater accessible information to distribute, either in text or voice, in a way that best resonates with their communities. Improvements in accessibility may benefit others outside culturally and linguistically diverse communities. The Clear, Explicit, Translatable Language approach given in the practical output, the Aide-Mémoire for Practitioners, may also contribute to warnings about other emergencies and contribute to information given to people to help them prepare for and recover from disasters.

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### About the author

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## Appendix 1: Original wordings assessed for accessibility with suggested rewording

### Key:

**c:** character numbers

**italics:** indicates where suggested rephrasing is different from the original

**level 1:** clear

**level 2:** could be made clearer

**level 3:** unclear

No.	Original	Level	Suggested
1	Evacuate now (12 c.)	1	<i>Leave now</i> (9 c.)
2	Evacuate if required (20 c.)	2	<i>Leave if it is not safe to stay</i> (31 c.)
3(i)	Major flooding is occurring in xxx and may impact your property. (64 c.)	2	Major flooding is <i>happening now</i> in xxx and may impact your <i>home</i> . (64 c.)
3(ii)	You may need to consider leaving your property. (47 c.)	2	You may <i>have to think carefully about leaving your home</i> . (56 c.)
4(i)	You should take the necessary steps to provide shelter for your pets. (69 c.)	2	You should <i>do the things you have to do to make sure your pets will be safe</i> . (76 c.)
4(ii)	If you need to leave then please take essential medication, secure your property and go and stay with family or friends on higher ground. (137 c.)	2	If you <i>have to</i> leave then please take essential medication, <i>lock your house</i> and go and stay with family or friends on higher ground. (132 c.)
4(iii)	If necessary, you can attend council run evacuation centres at the xxxx centre, or the xxx showgrounds. (103 c.)	2	<i>If you have nowhere else to go, you can go to safe places</i> , council run evacuation centres at the xxxx centre, or the xxx showgrounds. (133 c.)

No.	Original	Level	Suggested
4(iv)	In a life-threatening emergency dial 000. For further information please visit: <a href="https://disaster.XXXX.qld.gov.au">https://disaster.XXXX.qld.gov.au</a> (112 c.)	1	In a life-threatening emergency <i>call</i> 000. For <i>more</i> information go to <a href="https://disaster.XXXX.qld.gov.au">https://disaster.XXXX.qld.gov.au</a> (101 c.)
5(i)	Major Flooding likely on the Brisbane River. (44 c.)	1	
5(ii)	Stay out of flood water. (24 c.)	1	
5(iii)	Check roads and plan you journey if evacuating. (47 c.)	2	Check <i>where roads are closed</i> and <i>know the way you will go</i> . (56 c.)
5(iv)	Refer to link below for Councils evacuation centre information. Visit <a href="http://www.XXXX.qld.gov.au">www.XXXX.qld.gov.au</a> (89 c.)	2	For Councils evacuation centres information about <i>go to</i> <a href="http://www.XXXX.qld.gov.au">www.XXXX.qld.gov.au</a> (75 c.)
6(i)	EMERGENCY WARNING. From XXX. (28 c.)	1	
6(ii)	Life-threatening flash flooding is occurring. (45 c.)	2	<i>Very dangerous</i> flash flooding is <i>happening now</i> . (47 c.)
6(iii)	Shelter in place unless it is unsafe to do so. (46 c.)	2	<i>Stay where you are unless it is not safe</i> . (41 c.)
6(iv)	Access to area is cut and inaccessible in multiple places. (58 c.)	3	<i>Many roads are closed (and cars cannot leave or come into the area)</i> . <sup>1</sup> (66 c.)
6(v)	Do not enter flood waters. (26 c.)	2	<i>Do not drive, walk or ride into</i> flood waters. (45 c.)
7(i)	EMERGENCY EMERGENCY EMERGENCY WARNING FLOOD. (44 c.)	1	
7(ii)	Wivenhoe dam releases will be commencing from 4am Sunday 27 February. (69 c.)	2	Wivenhoe dam releases will be <i>beginning</i> from 4am Sunday 27 February. (68 c.)
7(iii)	Additional areas are expected to be impacted by life-threatening flooding occurring across the XXXX Council area. (113 c.)	2	<i>Other places</i> are expected to be impacted by <i>very dangerous</i> flooding happening in the XXXX Council area. (103 c.)
7(iv)	Residents in low lying areas should prepare to leave and warn others. (69 c.)	2	<i>People</i> in low lying areas should prepare to leave and warn others. (66 c.)
7(v)	Evacuate to friends and family if possible. (43 c.)	2	<i>Go and stay with</i> friends or family <i>if you can</i> . (46 c.)
7(vi)	An evacuation centre is open at the xxxx Showgrounds. (53 c.)	2	<i>If you have nowhere else to go, go to</i> an evacuation centre at the xxxx Showgrounds. (83 c.)
7(vii)	For more information visit <a href="https://disaster.xxxx">https://disaster.xxxx</a> (48 c.)	2	For more information <i>go to</i> <a href="https://disaster.xxxx">https://disaster.xxxx</a> (48 c.)

1. The meaning of this sentence was not clear to the analyst. The suggestion is approximate.