More than 90% of people who drive through floodwater experience no adverse consequences

Flood Risk Communication

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This project focused on gaining a better understanding of people's behaviour in and around floodwater. Specifically, the two behaviours associated with the greatest number of fatalities in Australia; driving into floodwater and recreating in floodwater. Findings from this research are being used to identify and quantify challenges for flood risk communication and develop guidelines for those communicating with the public.

Introduction

Flooding is a significant cause of death, accounting for the second highest number of fatalities due to natural hazards in Australia after heatwaves. Our research investigating vehicle-related flood fatalities in Australia found that at least 96 people died in incidents between 2001 and 2017, with older males (aged 50–59 and 70–79) being the highest-risk group.

This 3-year research project comprised several studies. These included investigation of factors associated with driving into floodwater with the general public and State Emergency Services (SES), interviews to understand how experts and lay public differ in their conceptualisation of flood and flood risk, consolidation and exploration of vehicle-related flood fatality data, and evaluation of public flood risk communication and the public's recall of flood campaigns and messages. In addition, experimental research has been undertaken to develop and validate a tool to assess expertise in the risk assessment of floodwater.

Stakeholder summaries of these studies are available in a series of Research into Practice Briefs.

Methods

This poster presents keys findings from just one research study - an online public survey of driving and recreating in floodwater. Data were collected from a proportionally representative sample of the adult Australian population, balanced by state and gender.

The survey investigated experiences of driving into, and entering, floodwater. This included collecting details of a specific recent incident of driving into floodwater. The survey also investigated recall of flood risk campaigns and messaging.

Results

A total of 2184 people were surveyed. Some key findings are listed below.
- 26% of respondents had entered floodwater on land
- 19% had engaged in activities in flooded rivers
- 55% had driven (or been driven) through floodwater in the last 5 years
- 40% reported they could recall an official flood campaign
- 6.4% could recall the core 'if it's flooded, forget it' message.

Of those who drove through floodwater:
- 61% drove through water estimated to be 15-45cm deep
- 91% drove through with no adverse consequences
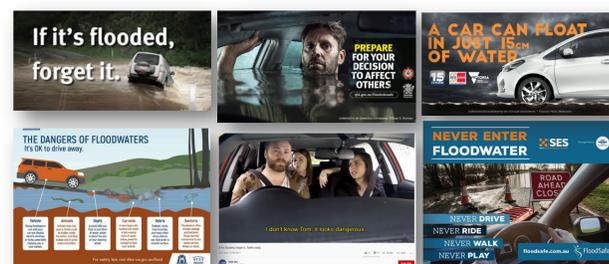- 0.7% needed rescuing by emergency services

Discussion

Our study findings have many implications for flood risk communication. The fact that more than half the public drive through floodwater and 90% incur no adverse consequences means that flood communication asserting risks and danger will not align with lived experience and is likely to be rejected.

Recall of flood risk messaging is generally poor, although better in some states where both the risks can be greater (due to remoteness and lack of alternative routes) and campaigns have been strongly promoted in recent times.
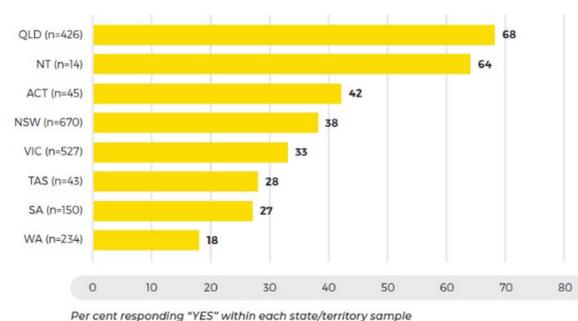
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Outputs from this project are available at
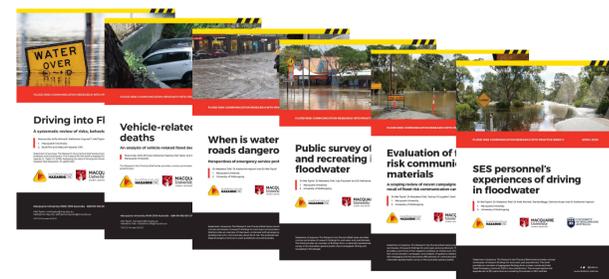https://www.bnhcrc.com.au/research/floodrisk communication

Examples of public flood campaigns aimed at preventing people driving into floodwater

- 40% reported they could recall an official campaign aimed at preventing people driving or playing in floodwater.
- 6.4% recalled the message 'if it's flooded forget it'

State	Per cent responding "YES"
QLD (n=426)	68
NT (n=14)	64
ACT (n=45)	42
NSW (n=670)	38
VIC (n=527)	33
TAS (n=43)	28
SA (n=150)	27
WA (n=234)	18

Per cent responding "YES" within each state/territory sample

Public recall of flood campaigns: national survey (n=2109)

Research into Practice Briefs – generated from research activities