

SHELTERING DURING FLOODS

Experiences of residents and businesses in the Northern Rivers region

Matalena Tofa^{1,2,3}, Katharine Haynes ^{1,2,3}, Andrew Gissing^{1,3,}, Lucinda Coates^{1,3,}, Kevin Roche¹

¹Risk Frontiers

²Department of Geography and Planning, Macquarie University

³Bushfire and Natural Hazards CRC



Photo: NSW SES on BNHCRC (2017): https://www.bnhcrc.com.au/news/2017/lismore-floods-did-you-stay-or-did-you-go









Background

Three example situations

Why do people shelter?

Challenges and scenarios faced

Moving forward



325mm of rain in Lismore in 18 hours



300 rescues in the first 36 hours



Over 17,000 properties affected



Power cuts to at least 10,000 homes



Photo: NSW Government, Department of Primary Industries (Water) http://www.water.nsw.gov.au/water-licensing/about-licences/which-act-applies-/act_north

Purpose

- To explore people's experiences of sheltering during the flood
- To explore reasons why people shelter during floods

Methods

- 83 interviews with residents and business owners
- Survey:
 - Online, phone, in-person
 - 330 responses; 80% residents,
 20% businesses



Photos: ABC News (2 April 2017): http://www.abc.net.au/news/2017-04-01/gallery-debbie-devastation-flooding-continues-nsw-qld/8406830

[He] felt sick, and started to vomit and thought he was having a panic attack... this was the Thursday night... he was at the top of our stairs inside and had a heart attack, and his children tried to revive him... When [he] had obviously died, the kids had rung the ambulance and everyone else and they couldn't get here.... And so it was the following morning before they could even get anyone in here to take the children out, and of course [he] was still here then until after lunch on that Saturday... So you have a story to tell, lady. You do.

Resident, South Murwillumbah, Female

Business owner in South Murwillumbah

Prepared as always

Planned to shelter

Actively responded to the flood

Elderly female resident in North Lismore

Mobility, health issues

Always sheltered

Cared for by community

Newer resident in Lismore

Evacuated once before

Sheltered alone

Sheltering is stressful, but evacuation isn't easy either

Business owner in South Murwillumbah

Prepared as always

Planned to shelter

Actively responded to the flood ...I just say, 'stop work guys, we're in flood mode.' Minimal impact, it's all about,' and getting it up high, we have a loft upstairs. We were pretty much there all night until round about 11 o'clock the following day when the current had stopped flowing and you could walk out, and it was probably about waist deep.

...when it's just still stagnant water, we can get around and maybe move a couple of things up a big higher, make sure something is not going to break off the wall and that. That's our reason to be here, that and also just a little bit of security too.

Bushfire and Natural Hazards CRC 2017 bnhcrc.com.au

Elderly female resident in North Lismore

Mobility, health issues

> Always sheltered

Cared for by community

So I prefer to be self-sufficient and stay put. I'm large and I'm awkward at my age. I would prefer to stay put and my son's larger and more awkward and that's another reason we prefer to stay put. We know that [this house has] been built for floods.

From my point of view, people were extraordinarily kind and I had very little to worry about as everybody else did it for me. I'm very grateful. That's our story of the flood.

Bushfire and natural hazards crc 2017 bnhcrc.com.au

Newer resident in Lismore

Evacuated once before

Sheltered alone

Sheltering is stressful, but evacuation isn't easy either ...it was **prolonged terror**. You know like my body was terrified for 12 hours... Now I know why people used to pray to gods.

It's a big thing to evacuate. It's a big thing to leave your house and you can't - you know you've got the shirt on your back and you can't get back, you can't deal with things as they happen. It's not a small thing, and I don't think anyone appreciates you know, oh what - like you can hear on the news that the attitude is well why don't they just evacuate, that's dumb... I feel like I'm more in control in my home. I don't actually believe that I'll die if I can't access the shops for a few days... Or if I don't have power. I'm pretty sure the human race has survived that for much longer than a few days.

® Bushfire and natural hazards CRC 2017 bnhcrc.com.au

...we've been here for so long, we've seen so many floods, I suppose. We never ever got out.

It just didn't cross my mind that I would leave. I don't know. I feel really safe in this house. This house has been here since 1890. It's been through a lot of floods...

Culture of sheltering

- It's safe
- Community
- Expected it to be less severe

My home, My livelihood

- Protecting or don't want to leave home, pets
- Protecting livelihoods

Actively responding

- Lifting and saving belongings
- Clean-up

Evacuation issues

- Warning too late
- Difficult or stressful

There's not much difference between your livelihood and your life, you know. It's a fine line.

I think it's our home and it's all we've got, so we're going to protect it.

Culture of sheltering

- It's safe
- Community
- Expected it to be less severe

My home, My livelihood

- Protecting or don't want to leave home, pets
- Protecting livelihoods

Actively responding

- Lifting and saving belongings
- Clean-up

Evacuation issues

- Warning too late
- Difficult or stressful

The big thing is the clean-up. If you're not there, you can't get - and the longer leave it, the harder it is to clean.

Every flood that's come through, regardless small or large, we always bed ourselves down here for this very purpose. If there's something does happen, well, we're here to deal with it... no, definitely wouldn't consider not being here in a flood, no.

Culture of sheltering

- It's safe
- Community
- Expected it to be less severe

My home, My livelihood

- Protecting or don't want to leave home, pets
- Protecting livelihoods

Actively responding

- Lifting and saving belongings
- Clean-up

Evacuation issues

- Warning too late
- Difficult or stressful

By the time SES told us to evacuate we couldn't get out of our property because roads were under at our place.

I didn't know because I woke up in it.

Culture of sheltering

- It's safe
- Community
- Expected it to be less severe

My home, My livelihood

- Protecting or don't want to leave home, pets
- Protecting livelihoods

Actively responding

- Lifting and saving belongings
- Clean-up

Evacuation issues

- Warning too late
- Difficult or stressful

Going higher

I got a call through to the police. I wanted them to know I was going to go into the roof, I wanted them to know I was there.... I was worried that I would go into the roof and nobody would know I was there.

Isolation

We knew we were on our own. We basically felt like we were cut off from the world, because we had to wait for that water to go down. Then we didn't know what we were facing when we went out there.

The water

... I can still feel that absolute terror of listening to the river. That noise, that was unbelievable. It's lodged somewhere deep in my soul, that noise.

Looking after others

My autistic son broke his arm on day 2 of the flood and we were flooded for 3 more days with him unable to get medical attention. We were stuck.

Before this event:

- 57% said they usually sheltered
- 27% hadn't experienced a flood before
- <5% said they usually evacuate to a shelter or to friends/family</p>

During this event:

- 80% sheltered for some of the flood; most of these stayed with their home or business for the duration
- 17% evacuated before or as flooding started

Next time:

- 75% of those who sheltered this time said they would shelter again
- 80% of those who evacuated this time said they would evacuate again

© BUSHFIRE AND NATURAL HAZARDS CRC 2017

bnhcrc.com.au

What are people looking for?

Use of local knowledge and expertise

Warnings for 'catastrophic' floods

Warnings that are timely, and not 'panicky'

Tailored information and advice



How can emergency services and councils play a part?

Engage productively and practically with those who usually shelter

Information, advice, and warnings

Evacuation concerns e.g. pets

Support preparedness

bnhcrc.com.au

CONTACT DETAILS

Dr. Matalena Tofa and Dr. Katharine Haynes

Department of Geography & Planning, Macquarie University

Bushfire & Natural Hazards CRC

E: matalena.tofa@mq.edu.au

E: <u>haynes.katharine@gmail.com</u>

For more information and case studies, go to: www.bnhcrc.com.au or www.riskfrontiers.com.au