

Flood Risk Perceptions of Lismore Businesses

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Lismore has a long history of flooding, with the community known for its ‘flood culture’. The areas of North, South and Central Lismore were flooded on Friday the 31st of March, the worst since 1974. It was the first flood to have overtopped the Central Lismore levee, which protects the CBD comprising some 400 businesses. Built in 2005, the levee provides protection from floods to an average recurrence interval of some ten years.



Many people ignored evacuation orders and later needed help when their properties were directly threatened by floodwater. The SES has reported some 400 rescues, many of them from properties where people chose not to evacuate.

Previous Risk Frontiers research has explored evacuation rates from natural hazards, concluding that they are variable and that is very difficult to achieve complete compliance. As a result authorities need to plan for large-scale rescue operations. Flood risk perceptions and previous flood experience have likely played a part in how individuals responded to warnings, as well as the rapid rise of the Wilsons River that caught some off-guard.

Many previous studies after floods in Lismore have concluded that the community has been well prepared and adjusted to the flood hazard. Smith (1981), for example, found that previous flood experience and flood warnings had resulted in relatively low damages during the 1974 flood.

After the business district last flooded in 2001, Risk Frontiers identified that businesses had avoided major losses as a consequence of preparedness measures they had undertaken and activated once flood warnings were received. These included mitigation measures such as lifting fittings and equipment, use of mezzanine floors and implementation of Flood Action Plans (Gissing and Leigh, 2001).

Recent Research on Lismore Business Flood Risk Perceptions

Risk Frontiers undertook a telephone survey of 50 business operators in the Lismore CBD in November 2016 and February 2017 to understand the impact of the Central Lismore levee has had on risk perception and preparedness of businesses in the area.

Over 70% of businesses surveyed had operated in the Lismore CBD for more than 10 years with some 56% of respondents reporting that they had had experience with flooding. Wilson River floods recalled were those in 1954, 1974, 1984, 1987, 1989 and 2001.

Almost all respondents (95%) were aware of the Lismore CBD levee. Perceptions regarding how often they could expect to be flooded varied from *never* to *once every year*. 43% believed they would be flooded on average once every ten years and 22% once every five years. 32% over estimated the protection afforded by the levee believing they would be flooded less often than once in every ten years on average.

Some businesses acknowledged that they had been *lucky* not to have experienced flooding and acknowledged the value of SES and council efforts to educate communities:

We're massively lucky that we haven't had any big floods for so long, new business owners don't really know what to expect.

I went to an SES meeting for business owners about a year ago about floods and learnt a lot, I think it should be mandatory to go to things like that and listen to what people who have had to deal with full on floods have to say.

Some held unrealistic beliefs about the protection offered by the levee:

A flood would now have to be of biblical proportions with all the work done on the levee.

The levee protects us from floods so we haven't had to deal with any since it was built, I wouldn't expect to be flooded in the near future.

Others felt that:

The levee gives a sense of false security, people aren't really packing up any more when we get flood warnings. In the future when a big flood comes, people might lose a lot.

The majority of people (75%) believe that the levee provides more time for people to evacuate from the CBD in a flood event.

In respect of flood preparedness, the majority of respondents believed that despite the levee, it was still necessary to be prepared for floods with only 9% of respondents believing it unnecessary. However, 34% of respondents believe it is less important to be prepared now than was the case before the levee was constructed. 31% of respondents invoked global warming to mean that it was even more important to be prepared for worse floods.

80% of respondents had a Flood Action Plan. The completion of plans varied slightly with businesses that had experienced flooding 10% more likely to have developed Flood Action Plans than were businesses without prior flood experience. Of those businesses that had developed plans, many had had them in place for some time with respondents stating since

moving in and forever. Only 37% of respondents had documented their Flood Action Plan, however, meaning it would be difficult for any new employee to effectively respond to flooding.

The majority of businesses either did not have flood insurance cover (56%) or were unsure if they did (31%). Those that did not have flood insurance believed it was not available to them or that it would be too expensive.

Discussion and conclusions

The construction of the levee in 2005 has likely impacted the perception of flood risk as evidenced by the number of respondents who believed the levee provided more protection than was designed for and the number of respondents who believed it was less important to be prepared for floods than prior to the construction of the levee.

In 2002 Gissing (2003) undertook a similar study. In comparison to the 78% of businesses identified as having Flood Actions Plans today, almost all Lismore businesses in 2002 had Flood Action Plans (97%). This comparison may imply a comparable decline in flood preparedness across business operators following construction of the levee, a decline that may have been worse in the absence of flood education programs offered by the NSW SES and Lismore City Council.

There are already concerns from business owners and residents about the length of time the levee has held floodwater within the CBD area, with some suggesting that consideration must be given to raising the levee to protect against future flooding.

Over the coming weeks Risk Frontiers will visit the area and provide further briefing notes on the outcomes of research.

We wish business operators well in their recovery and acknowledge the incredible efforts of all involved especially emergency service volunteers.

References

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