

## We can prepare for extreme weather events like this – and we must

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Risk Frontiers' Andrew Gissing published this article in the Sydney Morning Herald last week focusing on the need to build flood resilience.

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Many home and business owners in NSW and southern Queensland face a difficult recovery as flooding continues. We only need to recall the empty shopfronts following the 2017 flood in Lismore, where people had struggled to buy insurance due to the high flood risk, as an example of what could happen.

The scale of these record-breaking floods is already in evidence, with the Insurance Council of Australia reporting that almost 48,220 insurance claims had been lodged by Wednesday.



Lismore streets completely flooded. Source: AAP Image/Jason O'Brien. <https://au.news.yahoo.com/>

But many people affected by these devastating floods will not be insured, or will be under-insured, through no fault of their own – and they will need support to recover. Flood insurance only became widely available in Australia after the 2011 floods. People in higher-risk areas face higher premiums.

According to the latest climate science behind this week's report from the UN Intergovernmental Panel on Climate Change, we will see worsening extreme weather events. This will only place greater pressures on insurance premiums, making insurance unaffordable for people in the highest-risk areas. This is likely to place greater need for government relief and recovery payments.

Though described as “unprecedented”, extreme weather events like this should not be unforeseen. Modern-day risk management practices allow flood managers to map and understand the risks that floods like these pose.

Mitigation investments, such as building levees, have reduced damages and undoubtedly saved lives. The relocation to high ground of Grantham in Queensland following the 2011 flood resulted in less damage when it flooded this time.

It is essential we prepare for what may previously have been considered “unprecedented”. In a warmer climate the atmosphere can hold more moisture and heavy rainfall will be more frequent, while rising sea levels will worsen coastal flooding.

Our governments spend 97 per cent of such disaster money on recovery and only 3 per cent on preparation and mitigation. This balance needs to change, and we can no longer look to the past alone to predict the future.

We know mitigation measures can reduce insurance premiums. When a levee was built in Roma in Queensland following the 2011 floods, insurance premiums dropped by about half.

More can be done. A recent study of Lismore’s flood problem suggests raising levees to double the extent of protection currently afforded to the CBD would save hundreds of millions of dollars in smaller floods. It is not feasible, however, to build levees that protect communities from the largest of floods, like this one.

Opportunities will arise to use flood-resistant building products when replacing damaged flooring and cabinetry to improve the resilience of homes and businesses. We need to build back better, and the same is true for damaged infrastructure such as roads and bridges.

Warning systems save lives and reduce damage. Risk Frontiers research shows that businesses could save up to 80 per cent of losses with early warning. Community engagement is also important to ensure people know their risks and what to do when they receive a flood warning. A single national app for emergency warnings would be a great advantage.

Eliminating flood risk is only possible by removing homes and businesses from floodplains. In the United States, large-scale schemes are routine, allowing homeowners to sell their properties to the government so the area can be returned to open floodplains. But property is generally much more expensive in Australia. The purchase of flood-prone properties in Lismore alone would likely cost more than \$1 billion.

A voluntary scheme has been running since 1984 in Sydney’s Liverpool to purchase 175 flood-prone properties. Over the past 38 years, only 70 per cent of these have been bought and returned to open floodplains. Given the great expense, voluntary purchase is typically used for only the highest-risk homes. However, as risks increase because of climate change, it may become more of a necessity.

For the risks that cannot be eliminated, our emergency services must be prepared and supported to respond with updated plans. As usual, our communities have stepped up, led by amazing community-based organisations. It’s not too late to take action. Everyone has a role to play.