

# Hazard Note

Topics in this edition | Communities | Warnings | Preparedness

## Learning from residents' experiences of the January–July 2022 floods in New South Wales and Queensland

### About this project

The New South Wales and Queensland portion of the *Community experiences of the 2022 Australian floods* project was conducted by Natural Hazards Research Australia in partnership with Macquarie University, the University of Southern Queensland and the Queensland University of Technology, and was supported by the NSW State Emergency Service and Queensland Fire and Emergency Services. This Hazard Note summarises select high-level results. See Further Reading for more detailed results from this project.

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### Summary

Following a series of devastating floods in NSW and Qld during January–July 2022, Natural Hazards Research Australia funded a large post-flood community research project. The purpose of this project was to hear directly and learn from the personal stories of people who were impacted or threatened by flooding, using a large-scale, mixed-method, trauma-informed study. In-depth interviews were conducted with 192 flood-impacted residents between August and October 2022 and an online survey was completed by 430 flood-impacted residents between November 2022 and February 2023.

The rich data includes details of prior flood exposure, damage/losses from the flood/s, information and warnings received, decisions and actions taken during the flood/s, details about clean-up, community and other sources of support, as well as flood-resilient adaptations made to homes before the floods and any future (planned) adaptations and actions.

The findings were published in three reports (see Further Reading):

- Final Report of all key findings, including broad themes, policy-relevant themes and content areas, and challenges areas.

- Summary Report of themes, content and challenges with policy implications.
- Technical Report of summary data.

The reports provide key insights into how people experienced these floods and the short-term recovery immediately afterwards, with pertinent relevance to policy and practice across disaster management. This evidence can be used by government departments, emergency service and management agencies and other groups to support future improvements in community safety in floods and other disasters.



**Above:** Many communities across eastern Australia, including Warwick in south-east Queensland (pictured), were inundated with flooding between January and July 2022. Photo: Queensland Fire and Emergency Services.

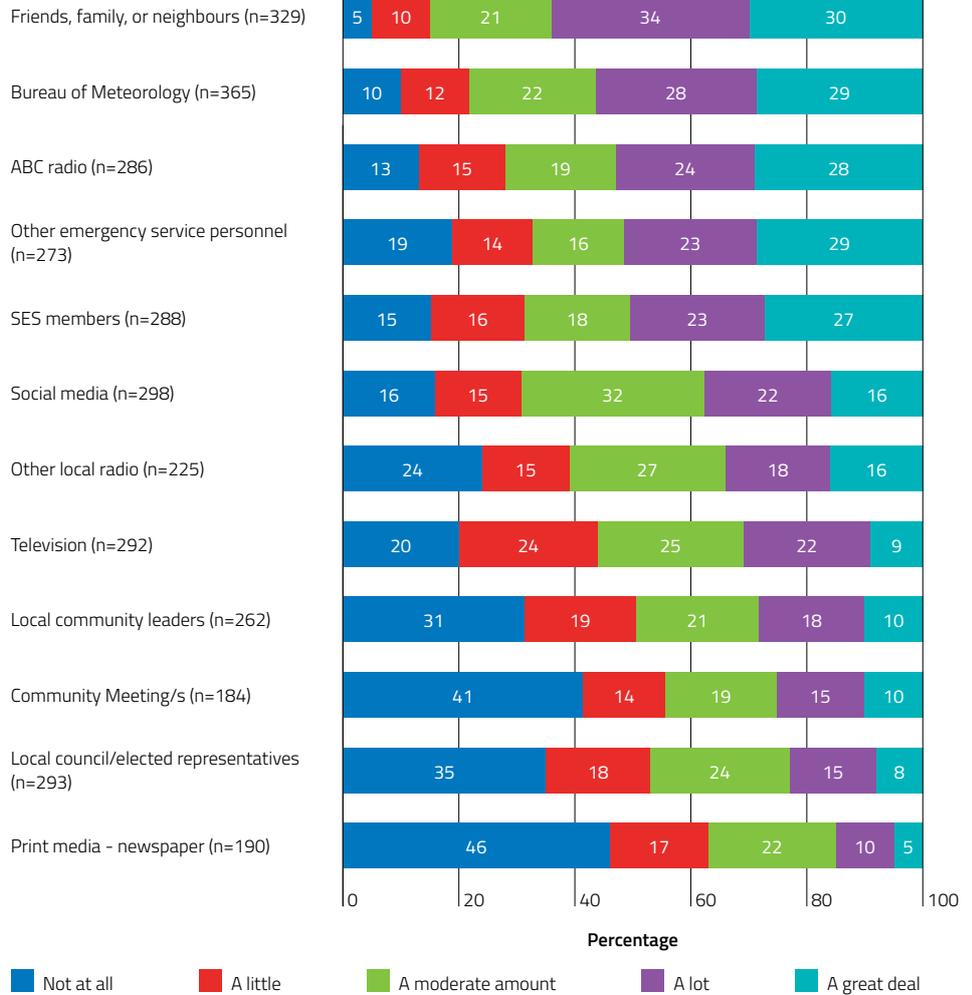
## Background

The 2022 eastern Australia floods followed two years of above-average rainfall and, nationally, the wettest month on record in November 2021, eventuating in extensive and damaging flooding that began in Qld at the end of 2021 and in NSW in February 2022. Rain and severe flooding occurred again in late March and late June 2022. The flooding affected many areas, especially Maryborough, Gympie and suburbs of Brisbane in Qld; and the Northern Rivers region, the Hunter and the Hawkesbury in NSW. Many communities were left devastated by these floods, with some areas being badly flooded multiple times in only a few months, leaving inadequate time to recover or prepare. Further damage was done to eroded riverbanks, landslips, undercut roads and other essential infrastructure.

In response, Natural Hazards Research Australia supported a large mixed-method, post-flood study of residents in Qld and NSW, focusing on those impacted by flooding between January and July 2022. The purpose of this project was to hear and learn directly from the personal stories of people who were affected by floods.

## Research methodology

The project design followed an established post-event research approach used previously by Australian researchers working in community-focused research after bushfires and floods. For this project, researchers interviewed 192 flood-impacted residents (92 Qld/100 NSW)

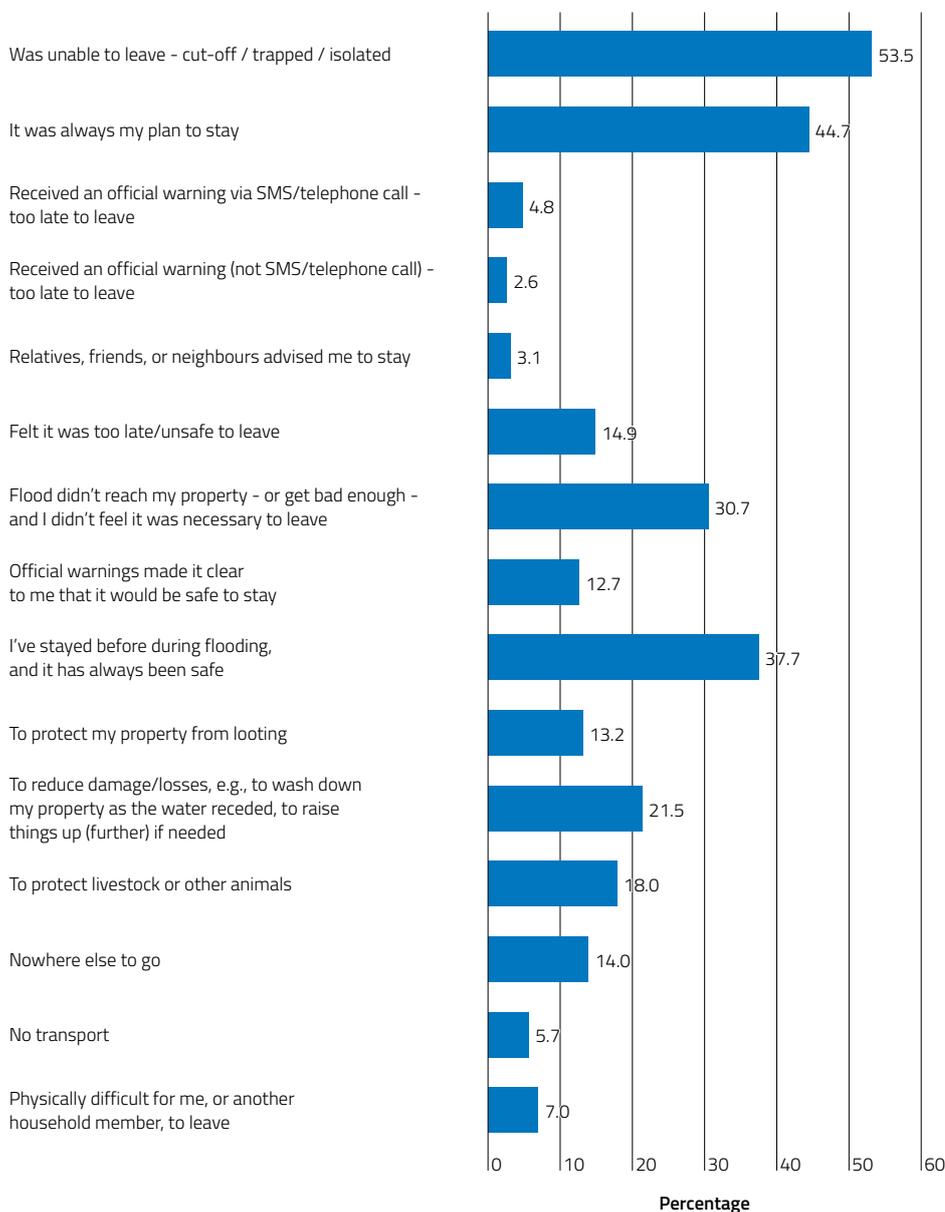


**Figure 1:** Level of trust in different sources for help in understanding the likely extent and location of flooding; n/a responses removed. Figure: Taylor et al. (2023).

## Members of the research team



**Above:** This extensive research was conducted by (L–R): A/Prof Fiona Miller, Dr Barbara Ryan, Dr Harriet Narwal, Prof Kim Johnston, A/Prof Anne Lane, A/Prof Mel Taylor, Dr Dipika Dabas, as well as A/Prof Rachel King, Harriet Townsend, Philippa Barr, Madeleine Miller and Helga Simon (not pictured).



**Figure 2:** Reasons respondents stayed during the flood; multiple responses permitted. Figure: Taylor et al. (2023).

between August and October 2022, using a participant-led, trauma-informed approach that invited residents to 'share their story'. A total of 430 residents (140 in Qld and 290 NSW) participated in an in-depth online survey between November 2022 and February 2023.

This mixed-method approach is a strength of this project. The qualitative interviews provided detail and richness about individual lived experiences, while analysis into themes allowed for commonly reported experiences to be presented and reported succinctly. The quantitative survey allowed for identification of broader data trends and for statistical analyses to uncover relationships within the data.

Researchers investigated many themes with residents, including levels of preparedness and the role of prior flooding experiences, to identify why some residents were more prepared than others, what actions they took in the lead up to and during the floods, and the challenges they faced throughout the process. Residents were also asked how they received

information and which sources they trusted. Researchers examined the types of housing impacted, their pre-flood modifications and the challenges posed in reconstruction under the threat of floods. They also assessed the residents' satisfaction with support provided by emergency services and community.

### Research findings

While the Final and Summary Reports contain more detailed outlines of key findings from this research, this Hazard Note presents only four themes that emerged from interviewing and surveying residents:

#### Social and economic risk matters

One of the clear findings was the overwhelming contribution of social and economic risks that increased the challenges for residents, with vulnerabilities evident in many forms throughout the data and themes. Specifically, older people, those living alone, those with physical limitations/mobility issues and

other disabilities encountered a range of issues – from not receiving warnings, being unable to lift possessions to protect them and encountering problems during evacuation. These results are a critical reminder to stakeholders involved in all aspects of disaster and broader social support to have plans in place that identify, engage and support community members with a range of different needs.

#### Information and warnings build trust

The role of friends, family and neighbours was highlighted in both the initial alerting of residents to flooding (10 per cent) and being their most trusted source of flood information (see Figure 1). This illustrates the importance of connectedness for early warnings and shows the need for agencies to promote the sharing of information with neighbours and checking in on others. Further analysis indicated that trust in official sources for flood information is greater when residents have more time to act before flooding and are well-prepared. These findings highlight the need for response/information agencies and local councils to continue to promote preparedness and strive to provide as much lead time for forecasting severe conditions, to assist preparations.

#### Feeling safer at home

A large proportion (61 per cent) of survey respondents did not leave their home during the floods, providing many reasons for why they stayed (see Figure 2). Some had always planned to stay, had stayed during previous floods, or had actively stayed to reduce damage and get on with the clean-up quickly, to protect animals and to protect their property from looting.

Others had more concerning reasons – they found out about flooding too late, they were unable to leave, they had nowhere to go, had no transport, or they or other household members had physical difficulties that made it hard to leave.

Despite the range of different reasons for staying, many encountered the same challenges – loss of electricity, communications, sewerage, fresh running water and an increase in anxiety about staying. Regardless of these challenges, 79 per cent of respondents who stayed felt afterwards that it was the best decision, with many feeling safer having stayed at home even while it was flooding.

#### Challenges for emergency managers

The experiences voiced by flood-impacted residents revealed four broad challenges areas for emergency managers moving forward. These are explored in more detail in the Final Report (see Further Reading):

- Loss of trust in institutions – the gradual erosion of trust that needs to be addressed across the entire emergency management system.

- Navigating the balance of control – grappling with the need to embrace self-activating communities and integrate community into all phases of disaster.
- Emotional impacts – managing the long-term psychological impacts of an increasingly complex disaster landscape.
- More than disaster – the need to see disaster support as part of a holistic person-centred approach.

## Research impact

The outcomes of this research provide vital and valuable insights into community experiences of these floods. The findings can be used to provide emergency management organisations, government departments, local councils and community with a better understanding of the complexities of community members' experiences and perspectives before, during and after severe weather.

Many participants in the study were motivated to take part because they wanted others to learn from their experiences and they wanted disaster management organisations to know about the challenges they had faced or were still facing. The de-identified data from this study form a rich resource that can be interrogated and analysed for further insights. Reports are available on the project website (see Further Reading) and those interested in further information are encouraged to contact [office@naturalhazards.com.au](mailto:office@naturalhazards.com.au).

The research team, along with Natural Hazards Research Australia, have been disseminating these findings to ensure that the lived experiences of residents are seen, heard and learned from. Activities to share the findings have so far included extensive media interviews and articles; workshops and briefings with decision-makers in emergency management and disaster resilience organisations; presentation of findings at multiple industry forums, conferences and other events; and publication of findings in key journals, industry magazines and other platforms (to come). There are more activities planned for 2023.



2022 floods research playlist

## End-user statement

### Commissioner Carlene York APM, NSW State Emergency Service

NSW SES would like to thank the members of flood-impacted communities who shared their experiences of the floods with the researchers. It is through learning from community experiences and working together that we grow our collective capability to improve community safety before and during disasters, and to recover afterwards. The important insights gained through this research project will inform future preparedness, response and recovery work undertaken by NSW SES.

### Commissioner Greg Leach, Queensland Fire and Emergency Services

This research captured community members' post-event stories, including less quantifiable aspects that can often be missed. Accurately gauging, considering and applying community experience and perspective is an important part of contemporary emergency sector agencies and the services they deliver. This research demonstrates that community members directly impacted by the 2022 rainfall and flood events have valuable insights that they are willing to share, together with an optimism that lessons learned from their tragedy can genuinely contribute to the evolution of prevention, preparedness, response, and recovery policy.

## Further reading

Taylor M, Miller F, Johnston K, Lane A, Ryan B, King R, Narwal H, Miller M, Dabas D & Simon H (2023) *Community experiences of the January–July 2022 floods in New South Wales and Queensland – Final Report*, Natural Hazards Research Australia, accessible at [www.naturalhazards.com.au/floods2022](http://www.naturalhazards.com.au/floods2022).

Natural Hazards Research Australia (2023) *Community experiences of the January–July 2022 floods in New South Wales and Queensland: Summary Report*, accessible at [www.naturalhazards.com.au/floods2022](http://www.naturalhazards.com.au/floods2022).

Taylor M, Miller F, Johnston K, Lane A, Ryan B, King R, Narwal H, Miller M, Dabas D & Simon H (2023) *Community experiences of the January–July 2022 floods in New South Wales and Queensland – Technical Report*, Natural Hazards Research Australia, available by request from [research@naturalhazards.com.au](mailto:research@naturalhazards.com.au). To ensure that the researchers are able to publish academic papers using this data, the Technical Report will not be available to the wider academic sector until May 2024.



**Natural Hazards Research Australia is the national centre for natural hazard resilience and disaster risk reduction, funded by the Australian Government and Participants.**

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