

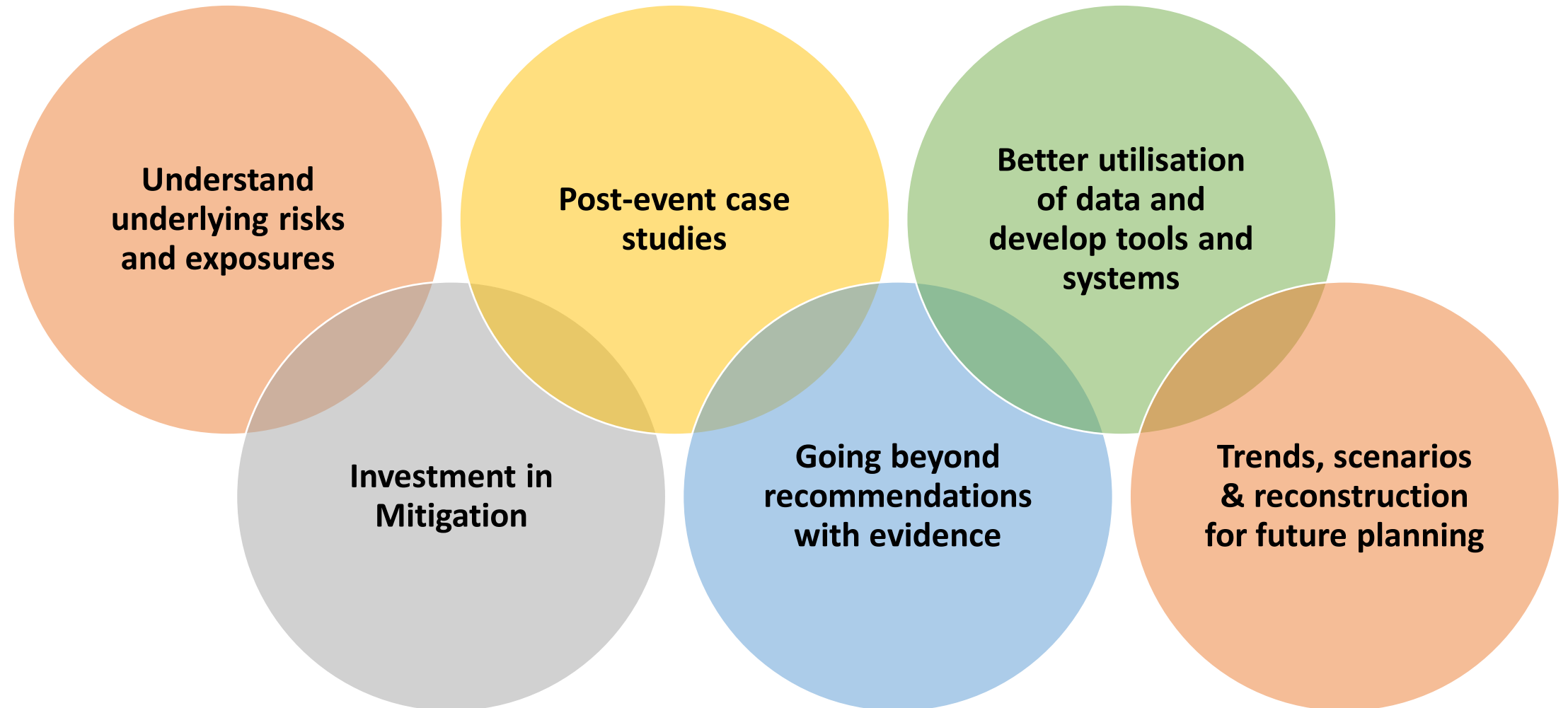
Natural Hazards Research Australia

LEARNING from DISASTERS Research Context

Desiree Beekharry

17 August 2021 | 11am AEST

Research areas



Guide to Disaster Recovery Capitals (ReCap)



Australian edition

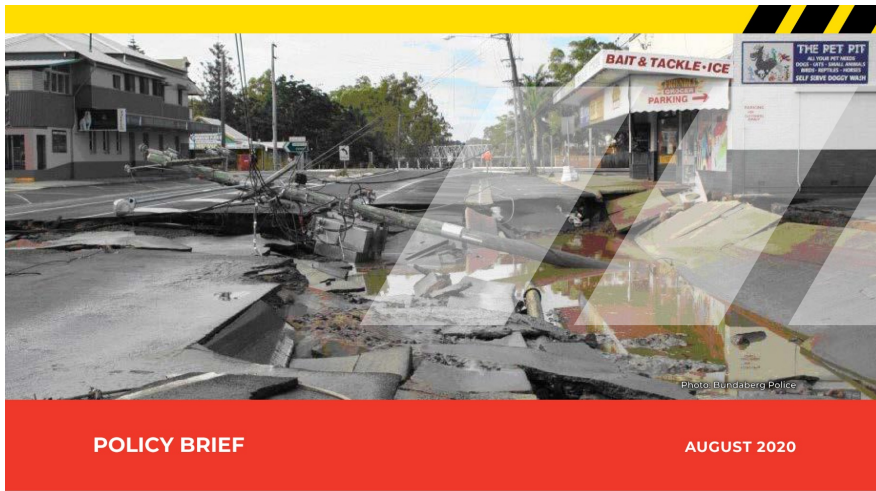


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Social | key considerations

<p>External support</p> <p>What we know</p> <p>Communities affected by disaster often receive support from other entities including technical assistance and expertise capabilities. Does the support complement existing capacity and generate other opportunities to build up? Collaborating with other entities to build capacity for reconstruction.</p> <p>Consider</p> <ul style="list-style-type: none"> • Identify and support the communities that are most likely to be able to draw on connections to government and disaster recovery and support them to add capacity for their needs. 	<p>Building human bonds</p> <p>What we know</p> <p>People often re-establish links to the social and institutional lives of their places, including reconnection with family and friends. Some people may re-establish connections in their community and elsewhere and other connections may be established through the aid of other people. Some people may not be able to re-establish connections and may experience grief and loss. Some people may experience grief and loss of connections and may experience grief and loss of connections and may experience grief and loss of connections.</p> <p>Consider</p> <ul style="list-style-type: none"> • Invested efforts to rebuild human bonds is disaster planning and recovery efforts for the people bonds that are important to different groups.
<p>Prevalence of disaster</p> <p>What we know</p> <p>Given the prevalence of social connections and disaster recovery programs that are implemented in response to disasters, it is important to identify and support the communities that are most likely to be able to draw on connections to government and disaster recovery and support them to add capacity for their needs.</p> <p>Consider</p> <ul style="list-style-type: none"> • How can social capital be built and maintained, particularly for those most at risk of isolation, in the context of disasters? 	



POLICY BRIEF

AUGUST 2020

Disasters and economic resilience: the income effects of 2013 Tropical Cyclone Oswald on small business owners

A case study of the Burnett River catchment area

Prof Mehmet Ulubasoglu
Bushfire and Natural Hazards CRC and Deakin University.



Report No. 594.2020

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POLICY BRIEF

AUGUST 2020

Disasters and economic resilience: the effects of the 2010-11 Queensland floods on individual income

A case study of the Brisbane River catchment area

Prof Mehmet Ulubasoglu
Bushfire and Natural Hazards CRC and Deakin University.



Report No. 593.2020

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BLACK SUMMER – HOW THE NSW COMMUNITY RESPONDED TO THE 2019-20 BUSHFIRE SEASON

Research for the NSW Rural Fire Service

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HAZARD NOTE

ISSUE 45 FEBRUARY 2018

TOPICS IN THIS EDITION | COMMUNICATION | COMMUNITIES | FIRE SEVERITY | WARNINGS

COMMUNITY PREPAREDNESS, WARNINGS AND RESPONSES: NSW FIRES 2017

ABOUT THIS PROJECT

This research was conducted for the New South Wales Rural Fire Service to help to understand community preparedness and responses to bushfires in NSW in 2017.

AUTHORS

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SUMMARY

In January and February 2017, New South Wales faced some of the worst bushfire conditions ever forecast for the state, including Catastrophic fire danger ratings for many communities. During this time, a number of large and damaging fires occurred.

Following this period of activity, the New South Wales Rural Fire Service (NSW RFS) commissioned the Bushfire and Natural Hazards CRC to conduct research into community preparedness and responses by affected communities.

The research involved interviews with people affected by the Currandooley, Sir Ivan and Carwoola fires, and an online survey of residents in bushfire risk areas throughout NSW.

Key findings centre around warnings, the behaviour of those under threat and public expectations of fire and emergency



▲ Above: FIREFIGHTERS AND LANDHOLDERS RESPONDING TO THE SIR IVAN FIRE. PHOTO: NICK MOIR, FAIRFAX MEDIA.

service agencies. The study found that people greatly value the Fires Near Me smartphone application and NSW RFS website for warning information, believing the information to be easy to understand, useful and sufficiently localised. However, there is a need to more clearly communicate that destructive fires occur at all fire danger conditions, not just at the Catastrophic level, as well as the limitations of directly attacking a fire front when conditions are too dangerous.

The research also confirms the tendency for people to wait and observe the fire directly before getting ready to defend themselves or confirm the need to leave, even after receiving a warning.

Based on the research, the NSW RFS has put new processes in place to better liaise with communities during major fire events, and is looking to further strengthen its approach to public information through websites, smartphone applications and face-to-face communication.

CONTEXT

This research looks at the experiences and insights of communities impacted by three bushfires in January and February 2017. It also investigates the perceptions of fire risk and experiences through an online survey, including responses to Catastrophic fire danger warnings during this period. The research builds on previous post-bushfire research undertaken since 2009 in NSW, Victoria, Tasmania, South Australia and Western Australia.

BACKGROUND

Following an intense period of hot and dry weather, NSW faced a period of significantly elevated fire danger during January and February 2017, peaking with large areas of the state's north experiencing Catastrophic fire danger in mid-February.

During this time, a number of significant bushfires occurred which impacted on communities. Fortunately, no human lives were lost during the worst of the conditions.

This research focused on three of these fires. The Currandooley fire, approximately 40km north west of Canberra, began on 17 January and ignited when a bird made contact with high voltage powerlines and landed in dry grass. The fire, which burned under Severe fire danger conditions, burned 3,378 hectares of land and destroyed a house, sheds, two vehicles, fences, pasture and an estimated 200 sheep and cattle. The Sir Ivan fire began on 11 February from lightning strikes near Leadville, approximately 250km

COSTS AND BENEFITS OF FLOOD MITIGATION IN LAUNCESTON



▲ Above: FLOODWATERS IN ROYAL PARK, LAUNCESTON, DURING THE JUNE 2016 FLOOD. PHOTO: UPSTICKSNGO_CREW CC BY 2.0.

ABOUT THIS PROJECT

This flood risk mitigation assessment for Launceston was conducted as part of the *Cost-effective mitigation strategy for flood-prone buildings* project. It was carried out in collaboration with the City of Launceston, the Launceston Flood Authority, the Tasmanian Department of Premier and Cabinet, Northern Midlands Council, Tasmania State Emergency Service and Geoscience Australia. Download the full report at www.bnhcrc.com.au/hazardnotes/40

AUTHORS

Dr Tariq Maqsood, Martin Wehner, Dr Itismita Mohanty, Neil Corby and Mark Edwards, Geoscience Australia.

SUMMARY

With Launceston experiencing severe flooding in June 2016, this project reviewed the costs and benefits of mitigation work (upgraded levees) which began in 2010. Flood mitigation is an expensive exercise, and this research highlights the benefits through avoided impacts of the flood levee mitigation program, against the cost of construction.

Findings show that the upgrading of the levee system, completed in 2014, resulted in avoiding losses of about \$216 million (had the pre-existing levees failed), which is approximately four times the total investment in the new levee system. This investment in building the

new levee system was found to be a sound economic decision based on the estimated costs at the time of decision making, alongside improved estimates of benefits from this study. The actual benefits of these mitigation works to the community extend beyond the direct benefits as assessed in this project, to the intangible and indirect benefits that have not been included.

It was found that sea level rise scenarios would only have a limited impact on building losses. However, the combined impact of sea level rise and increased rainfall intensity due to climate change on the total losses may be significantly greater and could be further investigated.

CONTEXT

The nature of recent flood mitigation works and the specific nature of the June 2016 flood provide a sound opportunity to assess the cost benefits of the Launceston levee system. This assists in developing an evidence base for future investment in mitigation.

BACKGROUND

Located within the Tamar River floodplain at

the confluence of the Tamar, North Esk and South Esk Rivers in Tasmania, Launceston is a flood-prone city. There have been 35 significant floods, with the 1929 flood considered the worst. In the 1960s, a ten kilometre flood levee system was constructed to mitigate the risk. The levee system was upgraded from 2010 to 2014, expanding to 12 kilometres of earth levee, 700 metres of concrete levee and 16 floodgates. Following significant flooding in June 2016, this

project conducted a cost benefit analysis of this new levee system.

BUSHFIRE AND NATURAL HAZARDS CRC RESEARCH

This study assessed many factors related to the flood risk in Launceston:

- What was the avoided damage costs as a result of the 2010 to 2014 levee upgrade?