



NATURAL HAZARDS
RESEARCH FORUM

STREAM 1 WORKSHOP 4

Integrated solutions for bushfire-adaptive homes

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slido
SCAN TO PARTICIPATE
CODE: **NHRF23**

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[#NHRF23](https://twitter.com/NHRF23)





Integrated solutions for bushfire-adapted homes

Empowering residents in their journey towards bushfire adaptation

Workshop NHRA forum 3/05



ice Agency





I would like to begin by acknowledging the Traditional Owners of the land, sea and waters, of the area that we're meeting on today, and pay my respect to their Elders past and present





Agenda

- Team introduction
- Objectives, research aims and methods (Raphi)
- Community engagement (Peter)
- CFA's Stakeholder Expectations (Mark, Chloe, and John)

- Slido questions (all)
- Open discussion (all)

- Next steps



Team

- **Raphael** **Blanchi** **CSIRO**
- **Laura** **Kostanski** **CSIRO**
- Justin Leonard CSIRO
- Garth Warren CSIRO
- Alessio Arena CSIRO
- Brian Cook UniMelb
- **Peter** **Kamstra** **UniMelb**
- **Mittul** **Vahanvati** **RMIT**
- Dulani Halvitigala RMIT
- Melissa O'Hallaran NSW RFS
- **Mark** **Holland** **CFA**
- **Chloe** **Begg** **CFA**
- **John** **Gilbert** **CFA**
- Ken Strahan Strahan Research





Project objectives and scope

What ?

- Empower resident to develop more adaptive homes
- Engage with resident and relevant stakeholder
- Explore type of behaviour and motivations
- Identify options available to incentivise changes

Why?

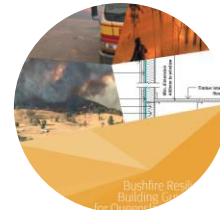
- Building renovating and maintaining a house is a complex socio technical problem
- Lot of information there - informative misinformative



**Policy
Regulatory
framework**



**Community
Education**

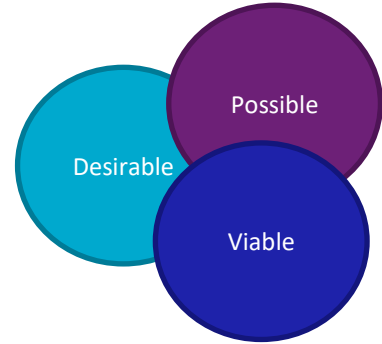


**Guidelines
Best
practices**

What the project will do

Mix methods, co-design approach that will bring together residents and practitioners in the development of new processes for sharing information about home-adaptation options

3 phases:



What does the current system look like?

Focus: Current context and baseline for residents and selected stakeholders

What is possible in this complex system?

Focus: Explore what is possible to change in the current system

What change is viable to achieve in this system?

Focus: What has influence knowledge and behaviour change

What does the current system look like?



Desirable

Activities & Outputs:

- **Desktop study and literature review** –to explore and understand the current context for achieving bushfire adapted house outcomes. Review exiting knowledge (published and grey literature)
 - outlines the learnings,
 - insights (of current blockers, opportunities, experiences),
 - principles (values, what is needed, roles and responsibilities)
 - roadmap towards implementing change (including a framework of what options exist, details of stakeholder typologies, and recommendations for interventions in existing processes).
- **Journey mapping** – Resident’s journey within the current context and limitations.
- **Choice case studies** – Two case studies will be used to explore communities with different socio-economic status
- **Survey resident** – residents’ perceptions, intentions, and behaviour, profile residents by considering their level of knowledge and their attitudes towards local risks, technical factors, procedures, the social causes of house failure, and solutions for bushfire-adapted homes, including co-benefits.
- **Survey stakeholders** – Interview relevant stakeholders and practitioners (e.g. builders, architects, fire agencies).

Outcomes:

Documented risk reduction opportunities, solutions, and incentives to inform resident decision-making via an overview of the required solutions, incentives, and approaches.

What is possible in this complex system



Activities & Outputs:

- **Co-production workshop** – We will explore integrated solutions using co-production workshops which will involve the profiled residents and a selection of experts, fire agency representatives, and other stakeholders to explore the strengths, gaps and opportunities that are emerging in the community's awareness of (and preferences for) the technical, social, and procedural aspects of bushfire risk reduction, and their willingness to use co-benefit solutions (drawing on outputs from previous steps).
- **Follow up survey with residents** – how we measure the changes in behaviour

Outcomes:

Co-designed recommendations to identify how and where to most effectively ameliorate limitations in existing legislation and in other adaptive measures

What change is viable to achieve in this system?



Viable

Activities & Outputs:

- **Insights and learning** from literature reviews, journey mapping, residents' surveys, and the co-production workshop will inform the creation of integrated socio-economic and technical systems (SETS)-**based solution pathways** that are targeted towards residents, fire agencies and other stakeholders. These SETs will be presented as sets of visually designed, accessible, and searchable information.
- The collected information will be used to provide recommendations for future research, and for the tailored development of the next generation of house-loss models.

Outcomes:

Integrated solutions - The result of this research will provide practitioners with the necessary approaches to work more effectively with key stakeholders and to support residents' decision-making and actions to develop and maintain their property effectively

Information on the next generation of house model



THE UNIVERSITY OF

MELBOURNE

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School of Geography, Earth and Atmospheric Science
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PREVAILING APPROACHES



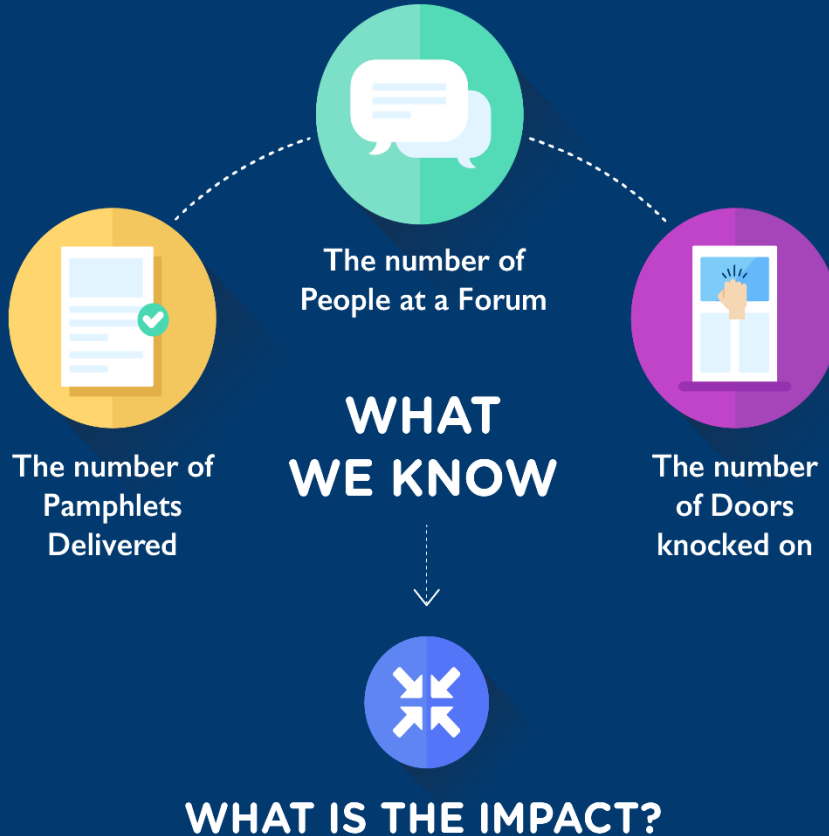
Raising Awareness



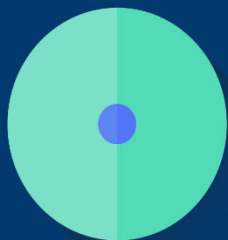
Education

INEFFECTIVE
at prompting
behaviour change

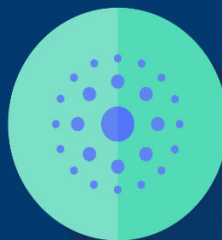
THE EMERGENCY MANAGEMENT



WHAT WE NEED ?



I Degree



Ripples

Prompt behaviour
change throughout
a community



Partnership



To measure and
track the impacts



Public leads
risk reduction

HOW PEOPLE CHANGE THEIR BEHAVIOUR



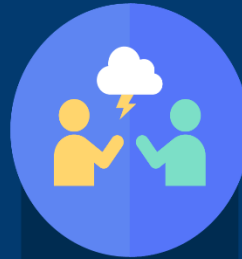
People
change their
behaviour
when they
want to.



They need to
value and
have
personal
investment.



People need
to have
power over
the process.



Mistakes,
conflicts,
and discord.



Contributing
to something
'Bigger'.

HOW TO ACCOMPLISH THIS?



Reconceptualise

'Engagement' as part of long-term partnerships

Ask For The Public's Help



Power-Sharing

Allow communities to help direct emergency services



be 'Action-Focused'



Emergency services

Must be ready to respond when publics want to change



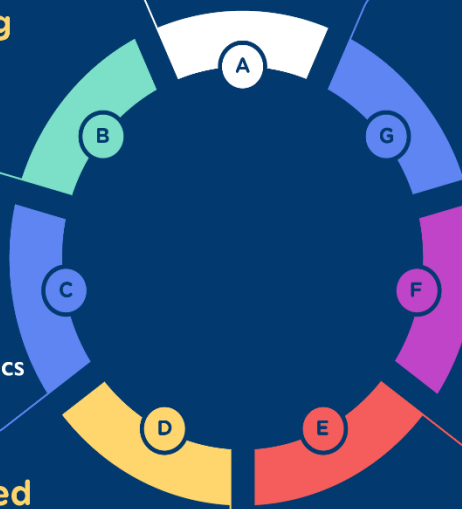
Work With Publics

and demonstrate that their views have direct impact on what's done



We Need

to measure 'Thought' and 'Intent' to take preparatory actions



THE COMMUNITY ENGAGEMENT FOR DISASTER RISK REDUCTION (CEDRR)

CEDRR

altering engagement for community-led
resilience



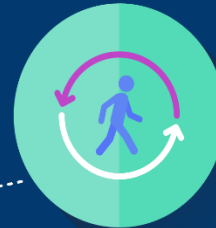
Measure



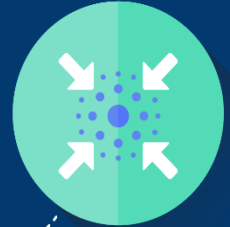
Raise
Awareness



Can Elicit
Commitment To
Take Preparatory
Actions At The
Household Scale



Prompts
People To
Take Actions



Prompt
publics to
prompt others
to take action



Growing community resilience to current and future risk through research and conversations.

Welcome to the CEDRR website. Here you will find information about our research project at the University of Melbourne.

Get involved

Help build community resilience and support the research.

[I want to get involved](#)

Have a question? [Contact the team](#)

CFA's Stakeholder Expectations

Our impact

Read about [our method](#) here.



300+

Conversations had with participants



8

Community groups involved



\$10000+

Donations to community groups



Slido questions

How do you define a 'bushfire-adapted home'?

(Free text response)

What is *the* critical aspect that can help *residents* to create a bushfire-adapted home?

(Choose one of the following)

- Planning and building regulations
- Knowledge and education on the risks and hazards of bushfire
- Knowledge of building methods and preparedness practices
- Insurance incentives
- Community incentives
- Encouragement or pressure from friends, family, or neighbours
- Other [open comments]

What are the critical factors that prevent residents from achieving a bushfire-adapted home?

(Choose all that apply)

- Financial costs
- Adds too much time to a build or retrofit
- Lack of knowledge about best practices
- Residents underestimate bushfire risks
- Other [open comments]



Slido questions

- Do you have any comments on who we should engage for our case studies (e.g., in terms of locations, demographics, type of resident)?
- Do you want to be involved in the project?
(Choose one of the following)
 - No
 - Yes [please enter your email address]
- What is your preferred way to stay informed about the project?
(Choose one of the following)
 - Email updates
 - Newsletter
 - Attending presentations
 - Other [open comments]
- What are the main changes or outcomes you would like to see from this project?
- What are you most interested in learning from this project?

Thank you

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<https://www.csiro.au/en/research/natural-disasters/bushfires>
<https://research.csiro.au/bushfire/>

