CALL FOR EXPRESSION OF INTEREST

PROJECT CFA02 – EFFECTIVENESS OF BUSHFIRE RISK REDUCTION

EXPRESSIONS OF INTEREST DUE 10 OCTOBER 2022 TO **research@naturalhazards.com.au**

OVERVIEW

Natural Hazards Research Australia (hereafter the Centre), in conjunction with our client, the Country Fire Authority (CFA), is seeking expressions of interest from project teams for the following project:

Effectiveness of bushfire risk reduction

Project aims and objectives	This project builds on existing research conducted on community values (i.e., social, economic, and environmental values) and indicators of the effectiveness of bushfire risk management in reducing risk to these values. It aims to ensure that appropriate indicators of bushfire risk reduction are identified and prioritised for application or, where necessary, developed to a suitable form for application on a joint agency basis. The project will aim to: • develop a definitive set of valued attributes that can be used for improving the holistic nature of the way Victorian fire agencies consider risk and measure the effectiveness of risk reduction. • undertake a review of current practice within Victorian fire agencies, describing which and how valued attributes are currently being considered in terms of fire risk reduction. • produce a report on the current state of knowledge and practice related to community values and the effectiveness of agency activities in reducing bushfire risk to them, as well as gap analysis and documentation identifying key pathways for improving the way risk and risk mitigation, is assessed in Victoria
Estimated duration	24 months
Maximum available budget	$273,000 (ex GST)
Centre contact	For any questions regarding this Call for EOIs, please email research@naturalhazards.com.au.

Submission of EOI	EOIs must be prepared using the Centre EOI submission form. EOIs are to be submitted to research@naturalhazards.com.au by **11:59pm 10 October 2022.**

STATEMENT OF REQUIREMENTS

BACKGROUND AND CONTEXT

The Victorian government has accepted the concept of 'living with bushfire', whereby it is recognised that fire is part of natural landscape processes and that some level of uncontrolled fire is always likely to impact the community. The core intent of the Safer Together program is to ensure that the fires that occur, and the measures taken in preparation and response, have minimal impact on community values (i.e., social, economic, and environmental values). To do this is an exceptionally challenging task, as:

- there is a vast range of valued attributes that could be impacted (both positively and negatively),
- there is a wide range of actions both the government and community can take,
- there is a great deal of complexity and uncertainty relating to the future regarding, changes to fires, biodiversity, land use, community demographics, and what community members care about, and
- there are complex interactions between activities and different values, and any strategy will likely need to balance trade-offs.

To balance trade-offs of the things the community values objectively, we need approaches to identify and measure the state of different valued attributes and how they may change when exposed to bushfires or management interventions.

The first recommendation of the VAGO audit was that Victorian fire agencies develop, implement and report on a holistic suite of metrics relating to its bushfire risk mitigation programs. Potential house loss has long been used as a measure of potential fire risk in Victoria, and there has been recent work by the Risk 2.0 program, and the Office of Bushfire Risk Management (OBRM) extends this to a small suite of additional metrics.

However, it is unclear whether these metrics could be considered 'holistic' representations of what the community values, given the complex interactions of fire in Victorian communities. There have recently been a number of projects looking to identify, quantify and evaluate trade-offs in relation to fire and community values. These include the following:

- Melbourne University integrated Forests Ecosystem Research (iFER) and Strategic Bushfire Risk Assessment & Strategy Selection (SBRASS) projects
- University of Western Australia's studies into intangible social values in fire management
- University of Adelaide's work into Improved decision support for natural hazard risk reduction.

Much of the past work has been limited to case studies; consequently, these approaches may not be appropriate or capture all necessary considerations when applied on a statewide cross-tenure joint agency basis.

Links to fire agency policy and practice:

Risk 2.0 (DELWP). The recently finalised Risk 2.0 defined a number of metrics for use in Victoria's risk modelling. An independent panel of experts reviewed these, and a number of recommendations were made. The proposed project encompasses these recommendations and will extend beyond simulation modelling indicators.

Strategic Bushfire Risk Assessment projects (Regional teams, DELWP). There have been a series of projects developed by regional teams in DELWP – particularly in the South West – where there have been innovations in methods for estimating fire risk to a range of values.

The Office of Bushfire Risk Management (OBRM, DELWP). The OBRM is responsible for improving processes for describing risk in Victoria. This proposed project will increase the evidence base that OBRM can use for decision making, particularly concerning implementing the Victorian Bushfire Management Strategy.

Existing academic research:

Integrated Forest Ecosystem Research (iFER) Program (University of Melbourne). This program has quantified the interactions between fire and a limited set of values in case-study areas. The proposed project will extend this work and increase the consideration of assets and values away from forested areas.

Strategic Bushfire Risk Assessment & Strategy Selection (SBRASS) Project (University of Melbourne). The SBRASS project was focused on the Otways; this proposed project will ensure any relevant findings can benefit the entire state.

Improved decision support for natural hazard risk reduction (University of Adelaide). This was done as part of BNHCRC research; this proposed project will ensure its findings are applied to Victoria.

Social values in fire management (University of Western Australia). This was done as part of BNHCRC research; this proposed project will ensure its findings are applied to Victoria

PROJECT DESCRIPTION

This project builds on existing research conducted on community values (i.e., social, economic, and environmental values) and indicators of the effectiveness of bushfire risk management in reducing risk to these values. It aims to ensure that appropriate indicators of bushfire risk reduction are identified and prioritised for application or, where necessary, developed to a suitable form for application on a joint agency basis.

EXPECTED OUTPUTS

This project will be completed in three phases of work. The first two can be run in parallel and will be used to inform the third. This project is expected to be completed by engaging an experienced third party, most likely a University team that has experience in measuring values and is familiar with current agency practice (including simulator-based indicators). These stages are:

- **Undertake a systematic review of bushfire impacts, mitigation costs, mitigation effectiveness, and the interactions between them**. This will include an academic literature review, a grey literature review and a description of practices of peer agencies interstate or internationally. The review will consist of a synopsis summarising best practice valued attributes, including describing metrics or indicators of change. This will also identify critical valued attributes that should be prioritised for consideration. This will include identifying interactions and relationships between the fires, activities, and various valued attributes.
- **Undertake an analysis of fire agencies' data systems and practices to document these practices and data sources and describe what information is routinely collected on fire and mitigation activity costs, benefits, and impacts.** This will be achieved by having a dedicated person employed to work within agencies to review documentation and engage with staff. This phase will aim to determine current approaches to:
    - indicating risk to valued attributes
    - the information available on bushfire impacts,
    - the various costs of mitigation activities (which may or may not be used to evaluate risk) will include consulting agency staff to identify gaps or values that need further attention.
- **Produce a report that presents values currently or could be used by agencies and lists current and potential metrics used to measure the effectiveness of bushfire mitigation activities.** A report will be produced describing key gaps in current systems and providing a pathway for improving practices. This will include specific detail on indicators, including whether existing work can be adapted for use, how they should be used and what further development or research is needed. The academic / peer agency review will include a recommended development pathway with informed prioritisation.

Additional outputs include:

- Improve the holistic nature of the way Victorian fire agencies consider risk and measure the effectiveness of risk reduction.
- To undertake a review of current practice within Victorian fire agencies, describing which and how valued attributes are currently being considered in terms of fire risk reduction
- Produce a report on the current state of knowledge and practice related to community values and the effectiveness of agency activities in reducing bushfire risk to them, as well as a gap analysis and any documentation identifying key pathways for improving the way risk and risk mitigation is assessed in Victoria

ANTICIPATED OUTCOMES

Improved indicators will have tangible benefits by supporting the following processes:

1. The use of indicators to evaluate the effectiveness of a range of mitigation activities, including vegetation management, land use planning, building regulations, and community engagement.
2. The integration of ecological, social, and economic values into vegetation management plans.
3. Improvement of the indicators used to model the impacts of bushfire on social, economic and ecological values.
4. Identification of the actions that individuals, as well as communities, can take to reduce their risk.
5. Improvement in processes for collecting data on costs, impacts and activities.
6. Development of feedback processes to inform community engagement activities.
7. Workforce planning.

TIMELINES AND MILESTONES

Key Steps for research provider	Lead	Due Date
1. Scoping workshop with Agency stakeholders	NHRA/Research Organisation	November 2022
2. Project Plan defining project approach and communications plan	Research Organisation	November 2022
3. Systematic literature review of bushfire impacts, mitigation costs, mitigation effectiveness, and the interactions between them (academic and grey literature).	Research Organisation	February 2023
4. Undertake an analysis of the data systems and practices within fire agencies to document these practices, data sources and describe what information is routinely being collected on fire and mitigation activity costs, benefits, and impacts.	Research Organisation	July 2023
5. Project report indicating progress to date and preliminary findings	Research Organisation	September 2023
6. Presentation of preliminary findings at AFAC conference	Research Organisation	November 2023
7. Workshop with Agency end-users on indicators, gaps and potential paths forward	Research Organisation	November 2023
8. Presentation of key findings, including recommendations for further work	Research Organisation	August 2024

9. Draft report	Research Organisation	September 2024
10. Final report	Research Organisation	November 2024

QUALITY CONTROL AND REPORTING

Final report and other project outputs

It is the expectation of the Centre and our client CFA that the materials delivered as part of this project will meet the highest standards and will be suitable for internal and external distribution.

It is a requirement that all reports (and any supporting material) be submitted to the Project Control Board's satisfaction (see under Project Governance). To ensure the final report meets this expectation, it will be subject to up to two rounds of review (with a minimum of two weeks for each review) by CFA. Project teams are required to ensure an internal peer review process is undertaken before the draft final report is submitted for CFA consideration.

Before the final report is submitted to the Project Control Board for approval, it must also have been professionally proofread and copy-edited.

These steps must be arranged by the project team and be costed as part of the project budget and completed within the project timeframe. **Reports that have not been professionally proofread and copy-edited will not be considered final**.

Project teams should ensure that sufficient time is included in the proposed project timeline for review of the draft final report by CFA, revision, and completion of the final report. This may take up to two months.

Communication

To further assist with the quality assurance, it is expected that:

- The project team will utilise a consultative approach and demonstrate this by documenting engagement activities within the relevant reports.
- The project team will work collaboratively with CFA and the Centre in developing any public communications about the project.
- The project team leader will give periodic presentations (e.g., annually) to key stakeholder groups to gain critical feedback on project milestones.

Any further quality control processes that are required for this piece of work, as well as key success measures, will be agreed upon with the CFA Research Lead as part of the planning process.

PROJECT MANAGEMENT AND PROCESSES

Contractual arrangements

This project is being delivered under an Agreement in place between Natural Hazards and Disaster Resilience Research Centre Ltd, t/as Natural Hazards Research Australia (the Centre), and the Country Fire Authority (CFA). The contract put in place between the Centre and the Lead Provider Organisation selected to undertake this work will reflect the terms of the Agreement between CFA and the Centre.

A draft copy of the contract between the Centre and the successful Lead Provider Organisation is available by request at any time during the EOI process by emailing research@naturalhazards.com.au. This contract should be reviewed as part of the EOI process. This is a standard agreement, and any changes will be at the sole discretion of the Centre. If you would like to request amendments to any of the terms and conditions set out in the proposed contract, details of the proposed changes and the reason the changes are requested must be included with the submitted response. In considering this contract and proposing changes, please note the Centre has been advised by CFA that (i) changes to provisions relating to the ownership of Intellectual Property will only be varied to take account of substantial in-kind contribution from the successful Provider Organisation/s, and (ii) no changes can be made to the publications approvals processes.

In the case of consortiums, the Centre requires one consortium member be nominated as Lead Provider Organisation for contractual arrangements.

Project governance

A monthly meeting between the research team and the project team will be held to discuss the project's progress and ensure that the project team can provide input to ensure the project remains on track for producing practical outcomes for agency use.

Each project is carried out under the supervision of a Project Control Board (PCB) and in accordance with the governance arrangements agreed between the Centre and CFA.

While the contractual relationship for the delivery of this project will be between the Lead Provider Organisation and the Centre, there will also be a strong relationship between the project team and CFA staff. Communication is an important element of the success of this project and providers will be required to maintain strong links with the CFA Research Lead, the Project Reference Group, and the Centre Project Manager throughout the project.

A governance plan has been prepared which shows the roles and responsibilities of each of the participants: CFA, Natural Hazards Research Australia, and the Provider Organisation/s. The successful research team will be required to comply with the processes and expectations as set out in that document.

Project Planning

The project overview included in this document describes the way the CFA subject matter experts believe the project can most successfully be undertaken. Alternative approaches can be

considered. Any alternative approaches must ensure the delivery of the required outputs, including any intermediate outputs identified in this document.

Following acceptance of a project proposal, the successful research organisation must prepare a detailed project plan and risk treatment plan using the CFA template. This plan must be approved by the CFA Research Lead and will become an attachment to the contract

Reporting

The successful project team will be required to make at least one presentation (and possibly two) annually to the Project Control Board or other nominated CFA group during the life of the project.

In addition to the Expected Outputs listed above, the project team will also be required to:

- provide a fact sheet within three months of signing the contract between the research organisation and the Centre (CFA template)
- provide detailed Quarterly Progress Reports
- contribute to a Project Evaluation Report.

Dates for submitting Quarterly Progress Reports:

Period covered	Report required
1 July to 30 September	October
1 October to 31 December	January following calendar year
1 January to 31 March	April
1 April to 30 June	July

SUBMITTING AN EXPRESSION OF INTEREST

SUBMISSION REQUIREMENTS FOR THIS EOI

Project teams responding to this Call for Expressions of Interest are required to submit their response, including:

- A project proposal of up to eight pages, clearly addressing the requirements of the specifications set out in this document. The proposal should include an introduction, a project plan for delivery, a detailed project budget and a summary of staff and skills. Proposals must include achievable timelines, which will be used to monitor progress.
- Project budget, including details of any in-kind contribution from the research organisation. A statement of acceptance of the terms and conditions of the proposed contractual arrangements. If such arrangements are not acceptable, details of any changes must be included with the submitted response.

ADDITIONAL INFORMATION

In responding to this Call for Expressions of Interest, advice should be provided on any known or anticipated impacts of COVID-19 pandemic restrictions or human resource risks on the timely delivery of the project. Where appropriate, risk management for the impacts of COVID-19 pandemic restrictions should be incorporated into the EOI.

Any proposal, once submitted, will be treated as commercial in confidence.

Applications must be submitted to: research@naturalhazards.com.au by **11:59 pm 10 October.**

Frequently asked questions

Additional information provided to individual respondents will also be published on the Centre website to ensure access to all interested parties. Respondents are encouraged to check the website for any additional information via these published FAQs, prior to the closing date.

Online project briefing

An online webinar scheduled for 9.30am (AEDT) Thursday 29 September 2022 will provide a more detailed briefing of the project and the opportunity for interested parties to pose specific questions.

Registrations for this webinar can be made via the Centre's website. Once completed, a recording of this webinar will be posted to the website to ensure all interested respondents have access to this information.

Evaluation criteria

After the closing date, Natural Hazards Research Australia and the CFA Research Lead will review proposals against the evaluation criteria below and recommend the State's Representative to the most appropriate organisation/s to undertake this work. The evaluation criteria indicate those matters that should be included in the project proposal and associated documentation – details are provided in the table below.

You will be advised by **Monday 7 November 2022** if your application has been accepted and it is expected work on the project will commence upon signing of the contract.

The decision of the Centre and our client CFA will be final. The Centre reserves the right not to offer the work or only allocate a proportion of the available funding if a proposal does not meet the client's needs. The Project Control Board reserves the right to invite any other specific providers as it sees fit to submit proposals before or after the closing date.

Evaluation criterion	% weighting
Research capability and capacity: The research provider must demonstrate they have the capacity and capability to deliver an excellent applied research project in a Victorian environment and deliver the required outputs within timelines. If the project requires a specialist development activity (e.g. electronics, instrumentation, non-production software), the provider has the appropriate skills to provide this.	25
Project proposal: A clear demonstration that the project team understands the project scope via the development of a feasible approach that meets defined objectives. The proposal must include an indicative timetable of work and interim milestones/project outputs as described in this document.	35
Industry engagement: Track record of industry engagement with evidence of providing findings and outputs that have been utilised by government agencies.	15
Value for money: Likelihood of delivery of required outcome within available budget along with the ability to leverage the funds provided with in-kind contributions or supplementary opportunities, including demonstrated ability to leverage co-funding and partners for technology development, use and evaluation. The evaluation team will consider the membership of the project team and the proposed roles and time commitment. A plan for the production of academic research publications will be considered as additional value.	20
Social and environmental values: Evidence that the research provider promotes and prioritises socially and environmentally responsible approaches within their organisation.	5