



Natural  
**Hazards  
Research**  
Australia

# Call for Expressions of Interest

T7-A1: Multi-hazard public information  
and warning platforms for the future

Expressions of Interest due **5pm AEDT 11 December 2024**  
to [research@naturalhazards.com.au](mailto:research@naturalhazards.com.au)



Australian Government

[naturalhazards.com.au](http://naturalhazards.com.au)

Australia's leading research centre for natural  
hazard resilience and disaster risk reduction

# Overview

Natural Hazards Research Australia (hereafter the Centre) is seeking expressions of interest from project teams for the following project:

## T7-A1 Multi-hazard public information and warning platforms for the future

<b>Project description</b>	<p>This research project will explore current and changing perceptions and usage of multi-hazard public information and warning platforms amongst Australian communities. The research will focus on usability, comprehension and accessibility for all communities – including all generations, people with culturally and linguistically diverse backgrounds, people with disabilities and those from Aboriginal and Torres Strait Islander communities.</p> <p>The findings of this study will support the strategic direction of developing a national, all-hazard emergency warning app, as recommended by the Royal Commission into National Natural Disaster Arrangements in 2020.</p> <p>More widely, it will build a deeper understanding of community expectations and multi-hazard communication and warning needs, helping to frame future communication of hazard risks and warning information and the future use and development of multi-hazard public information and warning platforms.</p>
<b>Estimated duration</b>	2.5 years (two years research project delivery, six months research translation)
<b>Budget</b>	<p>The budget envelope for this project is \$400,000 to \$600,000 (ex GST)</p> <p>The research team should note that this is a competitive process, and assessment of Expression of Interest Submissions will include a value for money component, see Evaluation Criteria.</p>
<b>Related national research priorities<sup>1</sup></b>	<ul style="list-style-type: none"> <li>→ Communities and workforces of the future</li> <li>→ Evidence-informed policy, strategy and foresight</li> <li>→ Resilient communities</li> </ul>
<b>Related Centre research priorities for 2024–26<sup>2</sup></b>	<ul style="list-style-type: none"> <li>→ Next generation capability</li> <li>→ Social equity</li> </ul>
<b>Supporting organisations</b>	AFAC National Public Information and Warnings Group
<b>Centre contact</b>	For any questions regarding this Call for EOIs, please email <a href="mailto:research@naturalhazards.com.au">research@naturalhazards.com.au</a> .
<b>Online project briefing</b>	For more information or questions, an online project briefing webinar will be held at <b>12:00pm AEDT on 19 November 2024</b>
<b>Submission of EOI</b>	EOIs must be prepared using the Centre's <a href="#">EOI submission form</a> and <a href="#">Budget Template</a> . EOIs are to be submitted to <a href="mailto:research@naturalhazards.com.au">research@naturalhazards.com.au</a> by <b>5:00 pm AEDT on 11 December 2024</b>

1 Natural Hazards Research Australia (2022) National research priorities for disaster risk reduction and community resilience to the impacts of natural hazards, accessible at [www.naturalhazards.com.au/sites/default/files/2022-05/NatHazResAus\\_ResearchPriorities\\_FA02.pdf](http://www.naturalhazards.com.au/sites/default/files/2022-05/NatHazResAus_ResearchPriorities_FA02.pdf)

2 Natural Hazards Research Australia (2024) *Biennial Research Plan 2024–26*, accessible at <https://www.naturalhazards.com.au/sites/default/files/2024-07/NHRA%20ResearchPlan24%E2%80%9326%2004.pdf>

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# Statement of requirements

## Background and context

This project is based on a concept developed by the AFAC National Public Information and Warnings Group.<sup>3</sup> This Group is the custodian of national public information and warnings doctrine<sup>4</sup>, including the Australian Warning System<sup>5</sup> and provides leadership, strategic direction and governance for continuous improvement in public information and warning systems.

The Australian Warning System (AWS) is a new national approach to information and calls to action for hazards like bushfires, floods, storms, cyclones, extreme heat and severe weather. The AWS operates as part of a larger risk communication system that also includes: the Australian Fire Danger Rating System (AFDRS)<sup>6</sup>, Bureau of Meteorology (BoM) weather warnings<sup>7</sup>, Emergency Alert<sup>8</sup>, traditional broadcast media (e.g. ABC and community radio), social media, formal and informal networks, on-ground community liaison and physical signage. A new National Messaging System is also being developed by the National Emergency Management Agency (NEMA) and the Department of Infrastructure, Transport, Regional Development, Communications and the Arts (DITRDCA) to align with the AWS. It will allow emergency services to send targeted warning messages to compatible mobile phones and other devices in near real time.<sup>9</sup>

Australian government emergency management and weather agencies share a common challenge of distributing public information and warnings effectively in line with technology advancements and communities' changing communication expectations and needs. To do this, they increasingly use multi-hazard public information and warning platforms ('platforms'). These are user-centred digital tools and services that make spatially displayed emergency and warning information available to the public online for a range of hazards including bushfires, floods, tsunamis, cyclones, storms and heatwaves, amongst others. These platforms may also share preparedness and recovery information. They serve as central hubs for public communication by emergency management and weather agencies. Examples include state and territory government emergency warning websites (e.g. <https://www.emergency.wa.gov.au/>), the Bureau of Meteorology website (<http://www.bom.gov.au/australia/index.shtml>), local government disaster dashboards in Queensland (e.g. <https://www.qld.gov.au/community/disasters-emergencies/disasters/resources-translations/local-government-disaster-dashboards>) and emergency warning apps (e.g. the Hazards Near Me app in NSW, <https://www.nsw.gov.au/emergency/hazards-near-me-app>). These websites and apps are also supported by associated social media (e.g. <https://www.facebook.com/tasalert/>). The AFAC Public Information and Warnings Group is seeking to understand how these platforms are supporting public safety as part of the wider risk communication system in order to explore future communication innovations and capabilities.

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3 AFAC is the National Council for Fire and Emergency Services, see <https://www.afac.com.au/>

4 <https://knowledge.aidr.org.au/resources/handbook-public-information-and-warnings/>

5 <https://www.australianwarningsystem.com.au/>

6 <https://afdrs.com.au/>

7 <http://www.bom.gov.au/australia/warnings/>

8 <https://www.emergencyalert.gov.au/home>

9 <https://www.nema.gov.au/our-work/key-programs/national-messaging-system>

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The United Nations' *Early Warnings for All* initiative aims to ensure everyone across the globe is protected by multi-hazard early warning systems by 2027<sup>10</sup>. In line with this goal, emergency management and weather agencies across the country have increased investment in multi-hazard public information and warning platforms. This development has occurred alongside a significant public policy direction across emergency services towards an 'all hazards' approach. In practice, these platforms are used as a single source of truth often extending beyond the initial hazard to associated community information such as road closures, evacuation routes, power outages etc. This one-stop approach has the potential to overwhelm the community with information overload causing navigation challenges, inconsistency and confusion reducing public trust. Because of this, these platforms need to be carefully designed and developed with a strong understanding of diverse user experiences and needs.

Jurisdictions are currently at different stages of implementing these platforms. Whilst there is significant collaboration and informal learning networks in place across the jurisdictions, the projects are commonly viewed through an Information Communication and Technology (ICT) project lens, with only limited user experience information having yet been gathered.

For emergency management and weather agencies across Australia, there is a critical need to evaluate and understand what effective coordination of information looks like at a community level. This understanding will support agencies to adapt current platforms to improve user experience, community outcomes and inform the development of national standards and future public information and warnings platforms and capabilities.

This research will support the strategic direction of developing a national, all-hazard emergency warning app, as recommended by the Royal Commission into National Natural Disaster Arrangements in 2020 (Recommendation 13.6).<sup>11</sup> It will also build a deeper understanding of community expectations and multi-hazard communication and warning needs, helping to frame future communication of hazard risks and warning information and the future use and development of multi-hazard public information and warning platforms.

## Project description

This research project will explore current and changing perceptions and usage of multi-hazard public information and warning platforms amongst Australian communities. The research will focus on usability, comprehension and accessibility for all communities – including all generations, people with culturally and linguistically diverse backgrounds, people with disabilities and those from Aboriginal and Torres Strait Islander communities.

The AFAC National Public Information and Warnings Group will play an important advisory role throughout the project.

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<sup>10</sup> <https://wmo.int/site/wmo-and-early-warnings-all-initiative>

<sup>11</sup> <https://www.royalcommission.gov.au/natural-disasters/report>

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Key knowledge gaps that this project should address:

1. Whether, and under what conditions, these platforms empower people to act through knowledge or overwhelm users with too much information, including both text-based and visual/map-based information.
2. How AWS calls to action are received and understood by platform users, including when calls to action for multiple hazards are communicated on these platforms concurrently for the same geographic area.
3. How AWS warnings, BoM weather warnings and AFDRS information are received, understood and used by communities in interaction with each other.
4. The extent of the community reach of warnings issued through these platforms during minor (e.g. tree over road) and major (flooding, bushfire) events.
5. How platforms fit into and interact with pre-existing informal warnings sharing tools (e.g. phone trees, social media).
6. How warnings can effectively be displayed in third-party platforms that communities already use as part of advanced multi-channel communication approaches (i.e. explore the intersection with 'big tech' platforms (e.g. Google Crisis Alerts, <https://crisisresponse.google/forecasting-and-alerts/>).
7. How community engagement and community education before hazard events occur can support community comprehension of hazard risk and warning information shared via these platforms.
8. Investigation into projected future community communication preferences and how they might be implemented into these platforms (e.g. AI technology).

This project will include:

1. Systematic analysis of the current state of multi-hazard public information and warning platforms knowledge and practice, including;
  - a. existing standards and principles in Australia and internationally
  - b. current platforms in use nationally (web-based and app-based), including how they are implemented in each jurisdiction
  - c. review of recent policy and practice changes including the introduction, development and review of the AFDRS (i.e. first season review) and the AWS (i.e. three year post-implementation review)
  - d. review of existing international and Australian research into the design and use of multi-hazard public information and warnings platforms and how these platforms are received by Australia communities. This review will be supported by a knowledge sharing forum co-hosted with the Centre and AFAC, and will include other Centre-funded research such as:
    - i. [Predictions in public: understanding the design, communication and dissemination of predictive maps to the public](#)
    - ii. [Awareness, education and communication for compound natural hazards](#)
    - iii. [Community experiences of the 2022 Australian floods](#)
2. Empirical research to examine the usability, comprehension and accessibility of these platforms for all communities that address the knowledge gap areas listed above. This research should include the application of social research methods, behavioural insights approaches and scenario-based and user testing with a diverse range of cohorts, such as:
  - a. different generations, people with culturally and linguistically diverse backgrounds, people with disabilities and those from Aboriginal and Torres Strait Islander communities, cohorts with particular communication needs (e.g. non-English speaking, deaf or hard of hearing, visually impaired, low-literacy, people who use Easy Read or assistive technology)
3. Publication and translation of research findings leading to their implementation, including collaboration with the AFAC Public Information and Warnings Group to develop a research utilisation plan and product that might include the development of a collaborative framework, standards, design principles or user doctrine.

## Expected outputs

### Core outputs

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- Co-developed research plan
- A national knowledge sharing forum, co-developed with the AFAC Public Information and Warnings Group and the Centre to inform the systematic analysis
- Systematic analysis report/s
- Final report that provides evidence and principles to inform the next generation of platforms, including mobile applications and the identification of future research opportunities and capability needs
- A research utilisation plan
- A research utilisation product, which may include the development of a collaborative framework, standards, design principles, guidelines or user doctrine in consultation with the AFAC Public Information and Warnings Group.
- Stakeholder presentation/s
- Academic publications in high-ranking international journals

### Additional outputs

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- Project plan and plain language statement
- Quarterly progress reports
- Project evaluation report
- Relevant communications outputs including but not limited to a public webinar and a Hazard Note

## Collaborative approach

Researchers are expected to undertake the research using a collaborative approach to assist in the translation and transfer of knowledge to end-users and to ensure the project meets their needs. Researchers are encouraged to outline their approach to ensuring effective collaboration which could include embedding researchers within end-user organisations for a period to time.

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## Anticipated outcomes

This research project will improve national capability for public information and warnings in a range of ways. It will:

- Enhance emergency management and weather agency understanding of their communities' hazard and emergency communication needs, preferences and capabilities
- Improve and increase the reach of public information and warnings for all Australians and those visiting Australia so they can make timely and appropriate decisions to mitigate the impacts of hazards
- Inform the design and utilisation of multi-hazard public information and warnings platforms through the development of principles, guidelines, standards or frameworks that can be integrated into or complement AIDR's Public Information and Warnings Handbook (AIDR 2021).<sup>12</sup>
- Strengthen public trust in emergency management and weather agencies and their authority to issue public information and warnings
- Inform the next generation of multi-hazard public information and warnings platforms, including mobile applications.

Outputs from this research will be used to inform future developments or enhancements to multi-hazard public information and warning platforms as recommended by the Royal Commission into National Natural Disaster Arrangements.

It will assist in gaining a deeper understanding of community expectations, helping to frame future communication of hazard risks and warning information. The findings will be implemented by core funding into public information and existing/future grant opportunities.

Partners in this project will be responsible for implementing research findings and outputs in their organisation and jurisdiction.

## Quality control and reporting

The project will be overseen and supported by a Project Management Committee (PMC) comprising the Principal Researcher, a Centre representative, and at least one stakeholder representative. Composition of the PMC will be determined in consultation with the Principal Researcher.

### Reports

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The Centre expects that the outputs delivered by this project will meet the highest scientific standards and will be suitable for publication on the Centre website and in industry newsletters, as well as in high-quality scientific journals.

The successful research organisation/s must co-develop with end-users a project plan and project summary using the Centre's templates. The project summary should explain in plain language what the project is about, what questions it intends to answer and describe the expected practical outputs that will make use of the research findings. The project plan must be approved by the PMC and will become an attachment to the contract.

Reports (and any supporting material) must be submitted to the PMC's satisfaction and will be subject to review by PMC members. The project team will be required to ensure an internal peer review process is undertaken prior to the final report being submitted.

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<sup>12</sup> <https://knowledge.aidr.org.au/resources/handbook-public-information-and-warnings/>



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### **Milestone reporting**

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The project team must report all milestone deliverables and engagement activities into the Centre's Project Management System. This will include sufficient justification for the completion of milestones to the satisfaction of the PMC and the Centre.

### **Communication**

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

- regular PMC meetings will be held
- the project team will use a consultative approach, documented in quarterly reports
- the Principal Researcher will give periodic presentations to key stakeholder groups to gain critical feedback on project milestones.

Additional quality control processes may be agreed as part of the project planning process.

## Contractual arrangements

A copy of the Research Services Agreement, the proposed form of contract for the purposes of this project, can be found [here](#).

The Centre reserves its rights to make amendments to the form of contract.

**This agreement should be reviewed by applicants as part of the EOI submission.**

If you would like to request amendments to any of the terms and conditions set out in the proposed form of contract, details of the proposed changes and the reason the changes are requested must be included in the EOI submission form. Requests for any changes will be at the sole discretion of the Centre.

Selection as a shortlisted or preferred provider does not give rise to a contract (express or implied) between the shortlisted or preferred provider and the Centre for the supply of goods or services. No legal relationship will exist between the Centre and the shortlisted or preferred provider until such time as a binding contract in writing is executed by both parties.

In the case of consortiums, the Centre requests that one consortium member be nominated as Lead Research Provider and take responsibility for subcontracting other parties.

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# Submitting an Expression of Interest

## Application and review process

Project selection and approval will be a two-stage process. The first stage is evaluation of the EOIs that are received. The second stage is development of a project proposal, where a preferred provider will be selected and offered an opportunity to co-develop a detailed project proposal with input from key stakeholders.

### Key dates

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<b>7 November 2024</b>	Call for EOIs opens
<b>19 November 2024</b>	Online project briefing
<b>11 December 2024</b>	Due date for EOIs
<b>Late January 2025</b>	Anticipated date to notify applicants of EOI outcome
<b>Late February 2025</b>	Final due date for submitting co-developed project proposal

## Submission requirements for this EOI

Project teams responding to this EOI are required to submit their response using the Centre's [EOI submission form](#) and [Budget Template](#). Submissions must include:

- a statement of capability (max 600 words), including the proposed contributions of each research team member to the project
- a statement (max 400 words) about the diversity of the project team
- a statement (max 400 words) about the project's inclusion and respect of First Nations peoples, philosophies, cultures, rights and/or knowledges
- an outline (max 1000 words) describing how the project team intends to approach the project, strategies for effective collaboration and an indicative methodology
- an indicative schedule of work and interim milestones/project outputs as described in this document
- a proposed project budget in line with the budget envelope provided, including details of any in kind contribution from research organisation/s – a detailed budget to be provided using the downloadable [Budget Template](#) provided on the Centre's website
- a clear statement (max 400 words) describing the outcomes that will be delivered for this project and how they will be used by stakeholders
- a clear statement (max 400 words) describing the outputs that the proposed approach to this project will deliver and how the findings could translate into practice
- a statement (max 500 words) demonstrating the project team's relevant industry and stakeholder engagement
- a risk management statement (max 500 words)
- any requested changes to the Centre's proposed form of contract
- up to two-page CVs for each proposed project team member.

## Additional information

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

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## Frequently asked questions

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Additional information provided to individual respondents will also be published on the Centre's 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

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An online webinar scheduled for **12:00pm AEDT, 19 November 2024** 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 project page on 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

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After the closing date, the Centre will review submitted EOIs against the evaluation criteria below. The evaluation criteria provide an indication of those matters that should be included in the EOI and supporting material – details are provided in the table below.

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 Centre's needs. The Centre reserves the right to invite any other specific researchers as it sees fit to submit proposals before or after the closing date.

Evaluation criteria	% weighting
<b>Research capability:</b> the capacity and capability to deliver an excellent research project in an Australian environment	25
<b>Project approach:</b> a demonstrated understanding of the project requirements and a proposed project approach and methodology that is appropriate, feasible and robust Relevant outline of a collaborative approach to assist in the translation and transfer of knowledge to end-users and to ensure the project meets their needs.	20
<b>Project outcomes and outputs:</b> demonstrate a high-level understanding of the intentions of the project and how outputs/outcomes translate to practice	20
<b>Industry engagement:</b> strong track record of industry engagement with the ability to support and influence Australian disaster management at a national or state/territory level through interaction with key stakeholders	15
<b>Value for money:</b> delivery of required outcome within available budget along with the ability to leverage the funds provided with in-kind contributions or supplementary opportunities	20

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