Natural Hazards Research Australia

# Biennial Research Plan 2025–27

Natural Hazards Research Australia

Australian Government

Natural Hazards Research Australia's staff work from Burramattagal, Dharawal, Dharug, Dja Dja Wurrung, Gadigal, Turrbal/Yuggera, Wadawurrung, Wangal and Wurundjeri Countries. We thank and acknowledge the Traditional Custodians of these lands and all the lands where we work, live and walk and pay our respects to Elders past, present and emerging. We recognise that these lands and waters have always been places of teaching, research and learning and that sovereignty has not been ceded. We are committed to strengthening reconciliation and building resilience through respectful and empowering relationships with First Nations communities, peoples and partners.



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To contact Natural Hazards Research Australia, email office@naturalhazards.com.au.

# Executive Summary

Natural Hazards Research Australia (the Centre) is progressing its mission to work with our partners and the community on research that is useful, actionable and used to support better decision-making to save lives and protect communities. The Centre's investments span funded research through to knowledge sharing and capability development in the research ecosystem, from end-users to researchers.

The mission is enacted through Centre's philosophy of an end-user driven approach to strategy and its implementation, which is unique, agile and powerful in addressing critical and emergent issues in disaster risk reduction. The Centre works alongside end-users to identify, scope and procure research to address a range of research opportunities, from applied frontline problems through to blue sky thinking and thought leadership. This spans sudden-onset hazards including bushfire, flood, cyclone, heatwave, storm, inundation and erosion caused by sea level rise, earthquake, tsunami and landslide.

## The Centre's research strategy

Achievements over the first four years of the Centre's activities are documented in detail across five progress reports. These achievements are in direct response to the Centre's Biennial Research Plans (2022-24, 2023-25 and 2024-26), addressing the Centre's Strategic Plan 2021-2031 and the corresponding 10-Year Research Strategy 2022.

Centre achievement highlights to date, through the previous research plans, include:

- establishment of an extensive end-user driven research portfolio (92 projects, 32 Participants, 57 research providers), spanning all states and territories and the full spectrum of natural hazards.
- delivery of responsive post disaster research, supporting the timely collection and analysis of data during and immediately following an event.
- delivery of a substantial workforce capability development portfolio, supporting 72 doctoral students through scholarships, an associate program, work placements (internships) and fellowships.
- delivery of First Nations knowledges research and researcher career development pathways.
- growth in brand and participant base including investment in natural hazards research.

The Centre's research is achieving significant utilisation, including through the:

- Australian Disaster Resilience Index which provides critical insights into communities' resilience to the effects of natural hazards, with more than 55,000 registered users.
- national rollout of the SES Fit for Task Program is improving the health, wellbeing and safety of SES members, based on a decade of Centre funded research.
- ABC Emergency Community Service Announcements messaging for floods and storms improving public awareness and preparedness throughout Australia.
- Australian Institute for Disaster Resilience Handbook Series is informing emergency management doctrine, with 7,800 downloads of documents including Centre funded research in 2023-2024.

This Biennial Research Plan 2025–27 (the Plan) provides the next two-Year outlook for the Centre's research activities. It frames the Centre's investments into its research portfolio of projects and capability development and provides a prospectus of possible questions for end-users to consider. It includes milestones relating to the Centre's commitments under the Commonwealth Agreement (Attachment 1).

The Plan has been prepared within the context of a range of policy questions under discussion at various levels of government and industry, spanning mitigation investment, insurance affordability and land use, national response capability, community resilience, infrastructure resilience and environmental resilience. It is also mindful of a range of drivers that are influencing measures to reduce disaster risks in Australia, spanning environmental, social and built environment changes through to capability and workforce trends and political, regulatory and economic change. These changes have significant implications for the two-year outlook:

- continued rising impacts of natural hazards and increased demands on scarce disaster management capability and resilience investments
- increased number of people living in recovery and increased demands on government funding
- increased complexity of natural hazards due to increased interconnectedness of systems.
- rising insurance unaffordability in high-risk areas
- species and habitat loss
- greater capability to manage natural hazards through technological change.

## Research priorities for 2025–27

The Centre's established core research portfolio continues to invest in new projects.

Alongside the Centre's eight research themes supporting long-term strategic planning (refer to Attachment 3), the Centre's six research key focus areas and five research key capability areas continue provide guidance to end-user-driven research concept submissions. Illustrative questions are provided for:

- Key research focus areas, comprising understanding and mitigating risk, land-use planning and urban design, resilient recovery, environmental solutions, next generation capability, and social equity.
- Key research capability areas, comprising First Nations knowledges, data management and science, future workforce, community-led, place-based resilience, and interoperability.

The Centre also has priority activities planned in relation to opportunistic and responsive activities and foresight, innovation and thought leadership.

## Maintaining a dynamic research portfolio

The Centre has already committed more than $30 million in funding to its end-user driven core research portfolio (refer to Attachment 4) and will continue to grow the portfolio through two formal end-user investment rounds each financial year. This includes a mix of short term (tactical), medium term (applied) and long term (strategic) multi-disciplinary projects.

## Research utilisation

The Centre recognises research utilisation as a key objective throughout the conduct of research. As the Centre's research portfolio continues to mature, further research translation and utilisation opportunities will emerge across its end-user driven research portfolio. To support research utilisation the Centre maintains a key focus on monitoring and evaluation.

## Responsive disaster research

The Centre's investment strategy will allow flexibility to initiate or co-invest in projects in response to specific natural hazards and or other changes that affect vulnerability, exposure or resilience to disasters caused or contributed to by natural hazards.

The Centre encourages learning between active projects and connection or building on past projects where appropriate. This includes ensuring that research data created during projects is made available in accordance with the Centre's Data Management Framework.

## Education program

The Centre has an established education and training program consisting of postgraduate student scholarships, associate students, early career researcher fellowships, work placements (internships), research networks and an annual disaster challenge. Over the forward period, the Centre will engage in implementing its new First Nations Scholarships and First Nations Fellowships.

## Research-skilled workforce

The Centre will continue to invest in workforce capabilities to aid translation of research outcomes into practice, including providing opportunities for students, researchers and end-user staff to learn and share their skills in these areas. Over the forward period, the Centre will complete the pilot phase of providing internships. Other work placement opportunities will be explored, alongside continuing to support research networks and opportunities for in-person interactions at events.

## Research-informed knowledge transfer

The Centre will, as appropriate, use the knowledge and outcomes from its research program to develop knowledge transfer opportunities including delivery of workshops and webinars based on research findings and outcomes; and support professional development of the emergency management and disaster resilience workforce. Amongst these activities the Centre will continue to run an annual Natural Hazards Research Forum, to share research findings and expand knowledge networks.

## Updating the Centre's research priorities for 2026–28

Several Centre initiatives in 2025-26 will further support planning for the next annual update of the Biennial Research Plan. This includes research underway to assess the state of natural hazards research in Australia and to evaluate the research maturity of our participants. Over the next year, the Centre will also conduct a mid-term evaluation of progress and refresh our 10-Year Research Strategy.

## Centre progress

The Centre's Strategy including its current and past Biennial Research Plans have built a solid platform for the Centre's success. Achievements over the first three years of the Centre's past and current research and other activities can be found in the Centre's progress reports. To date the Centre has:

- established an extensive end-user driven research portfolio spanning all states and territories and the full spectrum of natural hazards
- achieved research utilisation success
- delivered responsive post disaster research that is rapidly enabled
- delivered a substantial workforce capability development portfolio including scholarships, work placements (internships) and fellowships
- provided translation support for positive utilisation outcomes
- communicated key research knowledge outputs through stakeholder forums, webinars and Hazardous Publications
- invested in First Nations knowledges research and researcher career development pathways
- grown the Centre's brand and participant base including investment in natural hazards research.

# The research strategy

Natural Hazards Research Australia (the Centre) is Australia's research centre for natural hazards resilience and disaster risk reduction. The Centre works closely with the Australian Government and other participating organisations (Participants) across Australia to deliver a strategic research agenda for the nation and actively promote research utilisation.

The Centre is built on the strong foundations of its predecessors, the Bushfire CRC and the Bushfire and Natural Hazards CRC.

Core to this mission is the Centre's end-user driven approach to research strategy and implementation. The multi-disciplinary research carried out through the Centre's research program promotes individual, community and societal resilience to the impacts of natural hazards and disaster risk reduction while supporting the needs of critical stakeholders including government, emergency service agencies, industry and communities.

The Centre is both leader and a catalyst for the expansion of natural hazards research in Australia, ensuring research-informed national and regional policy, capability and improved public safety. The research program is informed by the Centre's Strategic Plan 2021-2031, the corresponding 10-Year Research Strategy 2022 and Australia's *National research priorities for disaster risk reduction and community resilience to the impacts of natural hazards* (2022; refer to References). It is also informed by ongoing engagement with Centre Participants, end-users and researchers, recent natural hazards, government policy directions and relevant inquiries and post-event reviews.

Upcoming initiatives furthering the Centre's mission includes an assessment of the state of natural hazards research in Australia and evaluation of Participant research maturity. Throughout 2025-26, the Centre will also undertake mid-term evaluation of its progress and refresh its 10-Year Research Strategy.

## Vision

That communities will be safer, more resilient and sustainable in the face of natural hazards.

## Mission

To work with partners and the community on research that is useful, actionable and supportive of better decision-making to save lives and protect communities.

# Purpose and framing of this *Biennial Research Plan*

## Biennial Research Plans are an important element of the Centre's research governance, as shown in Figure 1.

This plan provides an outline of the Centre's research activities; provides a framing for the Centre's research investments to provide for the Centre's research portfolio of projects; and describes the Centre's targeted milestones. It provides a two-Year outlook that will be reviewed in a 12-month cycle – to retain the two-Year outlook.

The annual update of the two-year outlook ensures the Centre continues to provide significant value to Participants and more broadly:

- enabling national collaborations
- increasing investment in natural hazards research
- providing evidence to inform policy and capability
- delivering a responsive end-user driven approach
- responding directly to recent disasters and emerging risks
- embedding First Nations knowledge and approaches.

The *Biennial Research Plan 2025–27* outlines the Centre's research activities and how they will deliver the outcomes outlined in the Centre's *10-Year Research Strategy 2022* and *Strategic Plan 2021–2031* (refer to References).


**Figure 1:** Centre's governance structure.

# Research themes

## The Centre's research themes provide a broad framework for its research program.

The eight themes and associated influencing factors were developed in consultation with end-users and research organisations and are described in more detail in the *10-Year Research Strategy 2022* and include:

- Communities and workforces of the future
- Sustainable, safe and healthy natural landscapes
- Resilient built environment
- Resilient communities
- Situational awareness
- Operational response and innovation
- Evidence-informed policy, strategy and foresight
- Learning from disasters.

### Research context

Australia is susceptible to a diverse range of natural hazards. The 2024-25 higher risk weather season saw damaging natural hazards around Australia including floods, severe storms, cyclones, bushfires and heatwaves. Globally, extreme natural hazards caused significant damage and loss of life, such as the Los Angeles Fires in early 2025 and the Texas flash floods in July 2025. Many communities impacted were still recovering from previous recent natural hazard events and other stressors. This occurred during record global temperatures, with 2024 the warmest year recorded globally.

The financial costs of natural hazards continue to grow, placing even greater pressure on communities' resilience and sustainability. Rising insurance prices linked to natural hazard losses are contributing to the increased cost of living across Australia and the world. Natural hazard emergencies are expected to become more frequent, complex, unpredictable and difficult to manage.

The growth sector awareness of artificial intelligence (AI) application, changing energy sources and expanding hazards-based technological innovation leads to increased interest in emerging technologies and data to solve complex problems.

The Centre continues to engage with its Participants to ensure its research program is driven by and meets the needs of government, emergency services, industry and the community to maximise relevance and value. User driven investment rounds are open to Centre Participants, or those end-users approved by the Centre's Board to submit research project ideas for funding.

### Australian Government Plans

In 2023 the National Emergency Management Agency (NEMA) released *The Second National Action Plan to Implement the National Disaster Risk Reduction Framework* (refer to References). The aim of the plan is to reduce systemic disaster risk in order to create stronger, more secure and more resilient communities before, during and after disasters. It is essential that the work of the Centre aligns with this plan and contribute to its objectives. Pleasingly mapping against each of the plan's 24 national actions demonstrates the Centre's contributions across each of the actions.

The Australian Government is undertaking a national climate change risk assessment which will inform the development of a national adaptation plan. Mandatory climate risk disclosure requirements will further increase the demand for climate risk related information including in relation to vulnerability.

The Commonwealth has recently completed the following reviews, which have the potential to influence future government plans (refer to references):

- Review of National Natural Disaster Governance Arrangements (Glasser, 2023)
- Disaster Recovery Funding Arrangements Review (NEMA, 2024)
- Independent Review of Commonwealth Disaster Funding (Colvin, 2024).

The House Standing Committee on Economics' *Inquiry into insurers' responses to 2022 major flood claims* also made recommendations relevant to disaster risk reduction.

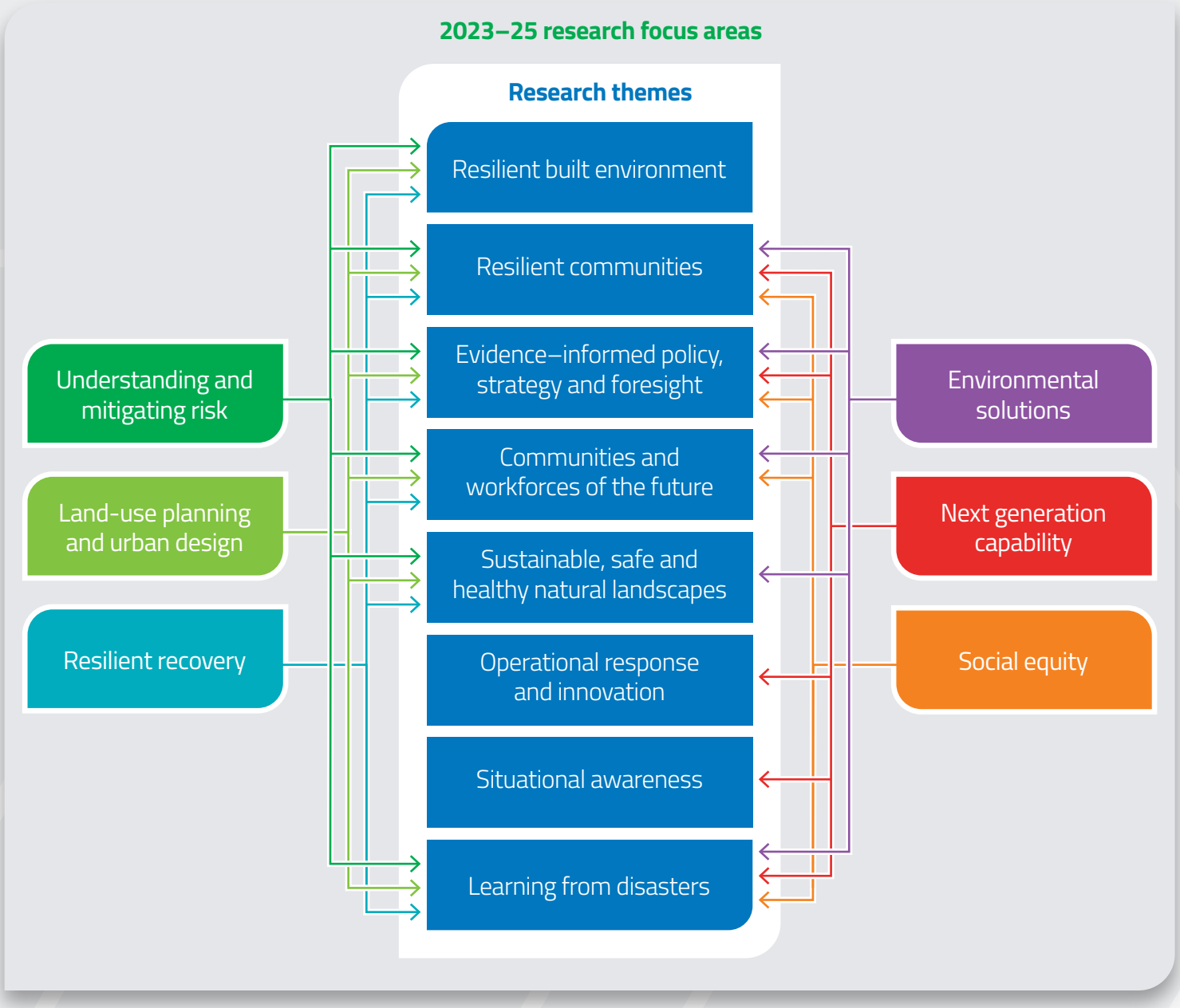


**Figure 2:** Relationship between 2025-27 research focus areas and Centre research themes

## Key policy questions under discussion

International, national and local policy continues to evolve to focus on disaster risk reduction. This includes greater investment in mitigation strategies, as evidenced by disaster mitigation funding by the Australian Government and investment in house acquisition, retrofitting and raising projects, following the 2022 eastern Australia floods.

Key policy questions currently under discussion at various levels of government and industry include:

- Mitigation investment: How much mitigation investment is required? What are the highest priority risks? Where are these mitigation priorities? What solutions are most effective? How can investment in mitigation be incentivised?
- Insurance affordability and land use: How can insurance be made more affordable? What is the most appropriate land-use planning/ urban design policy framework to accommodate natural hazard risk?
- National response capability: What is the role of the Australian Defence Force and what broader role could non-government organisations and businesses play in disaster management? Does Australia need a national disaster and recovery response force, or are there ways in which existing state and territory capability can be leveraged to enhance national response and recovery capability?
- Community resilience: How best is resilience built after a disaster? Should communities be re-built? What is the future of communities faced with increased frequency of extremes? How can First Nations communities' needs be better supported during response and recovery? How can we address social equity, considering in particular, issues in response?
- Infrastructure resilience: How can infrastructure resilience be enhanced to reduce community disruption? How can design and construction standards include resilience and future risk considerations?
- Environmental resilience: How can environmental resilience be achieved? How can First Nations people be better empowered to strengthen and protect landscapes and communities? What should a global standard for measuring nature, its condition and economic contribution be?

## Drivers influencing risk reduction measures

A range of drivers influence risk reduction measures, similar to previous Plans, spanning natural hazards and associated vulnerabilities, exposure and sector and community capability, including:

- environmental change, inclusive of:
  - changes in the future frequency and severity of natural hazards
  - biodiversity loss
- societal change, inclusive of:
  - population increases in at-risk areas
  - increases in population diversity
  - urbanisation of population
  - ageing population
  - increases in social isolation with more people living alone
  - increased use of digital devices and the internet, including the meshing of the digital and physical world
  - housing shortages placing pressure for further development
  - migration into areas where people are not aware of natural hazard risks
  - increasing rates of chronic diseases
  - decline in social cohesion
  - growing disinformation in disasters
- built environment change, inclusive of:
  - increasing complexity and interdependence of infrastructure networks and systems
  - increased use of renewable energy technologies such as lithium-ion batteries, hydrogen, electric vehicles, etc. and decentralised energy systems such as microgrids
  - ageing infrastructure impacting the reliability of services
  - growing demand for nature positive investments
  - population increases and aging building stock demanding significant maintenance and growth of supply
  - increasing use of highly flammable and combustible materials
- capability change, inclusive of:
  - technological change, including the potential of quantum computing
  - widespread adoption of artificial intelligence
  - next-generation communications (for example, 5G and satellite)
  - sensors and growth in their deployment (including satellite technologies)
  - robotics
  - augmented reality and digital twins
  - hypersonic transport
  - autonomous vehicles
  - next generation building materials
  - increasing appreciation of First Nations management practices
- workforce trends, inclusive of:
  - declining rates of formal volunteering
  - increasing workforce diversity
  - increasing flexible working
- political, regulatory and economic change, inclusive of:
  - the impact of the global economy on Australia's economic circumstances
  - geo-political stressors
  - shifting civil defence strategies
  - growing risk of cyber attacks
  - increases in Australians' wealth
  - rising insurance premiums
  - legislated Nature Repair Market
  - climate and nature disclosures

## Implications

Many possible implications of these drivers exist, with significant implications inlcuding:

- ongoing increased impacts of natural hazards and demand on scarce disaster management capability and resilience investment
- increased number of people living in recovery and demand on government funding
- increased complexity of natural hazards due to the interconnectedness of systems
- increased unaffordability of insurance in high-risk areas
- species and habitat loss
- greater capability to manage natural hazards through technology

# The Centre's research priorities for 2025–27

Based on an environmental scan of current risk, capability and policy trends (including themes from recent reviews and inquires) and feedback from Participants and other subject matter experts, the Centre proposes a series of research key focus areas and key capability areas.

The Centre encourages foresight and innovation across these areas with the view of leading research which will be useful, useable and used. The research priorities are aligned with the Centre's strategic research priorities (refer to Attachment 2), as illustrated in Figure 2.

These research focus and capability areas act as a prospectus to guide the submission of user-driven research concepts via the Centre's investment processes. The purpose of research questions listed under each focus and capability area is to provide examples to illustrate the types of research that would be considered relevant.

## Research key focus areas

### Understanding and mitigating risk

The National Disaster Risk Reduction Framework and its supporting Second National Action Plan focuses the nation's attention on building resilience by reducing risk, including through the ability to resist, accommodate, adapt to, transform and recover from the impacts of hazards. The Framework establishes a vision that all sectors of society:

- make disaster risk-informed decisions
- are accountable for reducing risks within their control
- invest in reducing disaster risk to limit the cost of disasters when they occur.

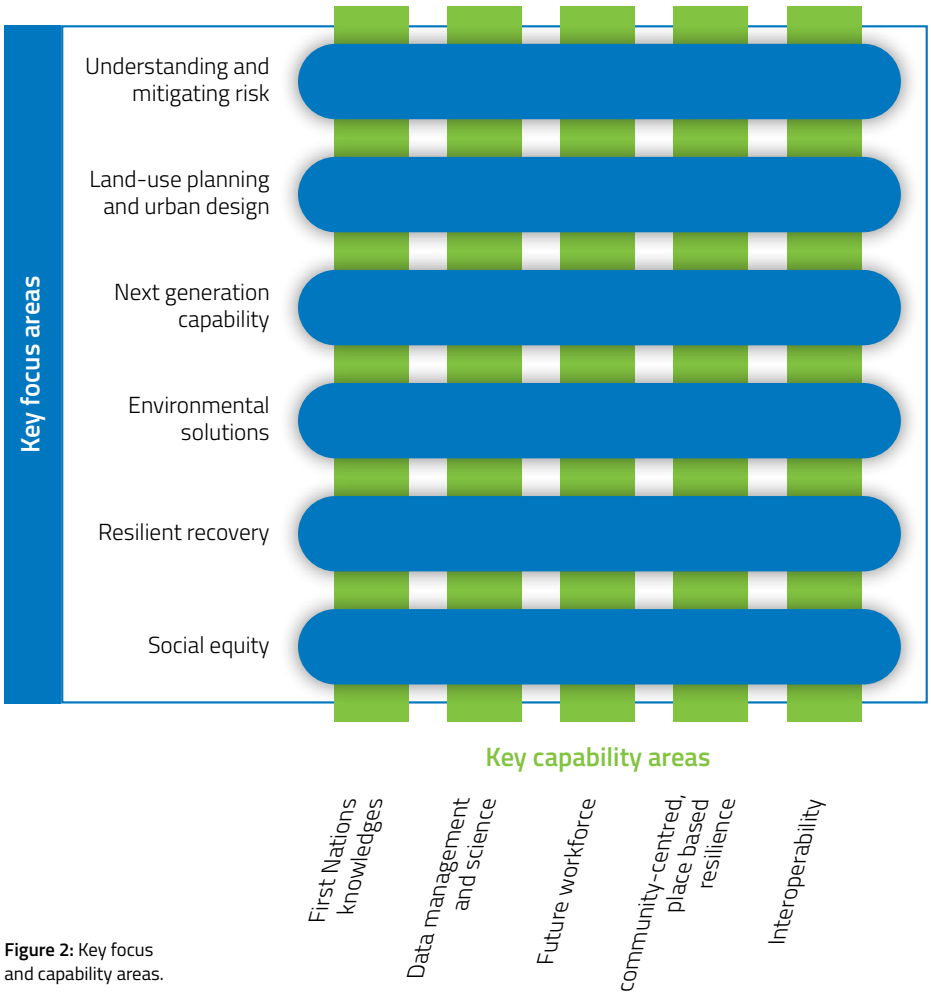


**Figure 2:** Key focus and capability areas.

The Australian Government is currently improving the understanding and management of natural hazard risk in consultation with stakeholders including Natural Hazards Research Australia. Industry and communities have called for further investments in mitigation infrastructure.

Research questions and projects that could be captured in this focus area include:

- What are the true costs of natural hazards now and in the future?
- What are the drivers and science of current and future natural hazard risk and what are the management implications?
- What are the barriers, challenges and opportunities to achieving adaptation and transformation?
- What are the highest priorities for natural hazard mitigation?
- What hazard mitigation solutions are most effective and will effectiveness change under future climate change?
- How can investment in natural hazard mitigation be encouraged?
- How can governance arrangements enable disaster risk reduction?
- How can hazard treatments be managed to minimise impact on environmental, cultural and historical assets?
- How can risk reduction address compounding events?

**Land-use planning and urban design**

Land-use planning and urban design (inclusive of building materials) are critical to the reduction of future natural hazard risk. Recent floods, cyclones and bushfires highlight opportunities to consider developments in high-risk areas. National Cabinet has tasked Planning Ministers to develop national standards for the incorporation of disaster and climate risk, as part of land-use planning and building reform processes. The Senate Select Committee on Australia's Disaster Resilience recommended a parliamentary inquiry be established into land use planning with respect to natural disaster resilience.

Industry continues to call for further government consideration of land use planning systems, assisted relocation strategies and reforms to building codes.

Research questions and projects that could be captured in this focus area include:

- How effective are existing land-use planning and urban design controls at managing current and future natural hazard risk?
- How can current and future natural hazard risk, societal changes and resilience considerations be best accommodated in land-use planning and urban design in an affordable way? (i.e. What are the land use planning and urban design controls required today for tomorrow?)
- How can risk-informed planning be encouraged and supported?
- How should essential infrastructure be managed to ensure resilience?
- How can physical risks associated with energy transition (e.g. lithium-ion batteries) and evolving urban design be managed?
- How can future building materials enhance asset resilience?

**Environmental solutions**

The Commonwealth Government's *Australia State of the Environment 2021* report highlighted the significant risks natural hazards pose to the natural environment. There is growing interest in understanding how to improve environmental resilience and the efficacy of environmental solutions to reduce natural hazard risk.

Research questions and projects that could be captured in this focus area include:

- Where are the greatest risks posed to the environment by natural hazards?
- What are the opportunities to deploy nature-based solutions?
- What is the efficacy of nature-based solutions to reduce natural hazard risk?
- How can nature-based solutions be incentivised?
- What are the environmental impacts of natural hazards and how does the environment recover?
- How are natural hazard risks altered by future environmental changes?
- How is environmental resilience supported and engendered?

**Next generation capability**

Increases in the frequency and severity of natural hazards currently and will continue to lead to increased demand on disaster management capabilities. There is a need to develop the next generation of disaster management capability that considers workforce across the prevention, preparedness, response and recovery cycle, people (including volunteers), training systems, technology, equipment, processes and ways of working to ensure Australia's disaster management capabilities are a step ahead in the coming decades.

Research questions and projects that could be captured in this focus area include:

- What are the key foundational enablers and barriers of innovation in disaster management?
- How can challenges to collective action and decision-making be addressed and the opportunities amplified across agencies and jurisdictions?
- What capacities, values and capabilities are needed for a future-facing disaster and emergency workforce (including volunteers) and how can institutions cultivate and protect them?
- What is the effectiveness and efficiency of existing capabilities and how could they be optimised?
- What are the requirements for the next generation of emergency management capability and how is this built?
- How can new technologies such as artificial intelligence, augmented reality, sensing and robotics be adopted and deployed to improve resilience?
- How can better decision making be enabled for first responders and community members?
- How will enhancements in technologies alter community attitudes, decision-making, communication and resilience? How can predictive risk simulation, decision-support and communication be enhanced?
- What is the next generation of warning systems?
- How can first-responders be more effectively protected?
- How can resilience to technological disruption be maximised?

The Centre welcomes opportunities to engage in technology demonstration research.

**Resilient recovery**

Recovery from disasters caused by natural hazards is a long-term and complex endeavour for any community. The *Sendai Framework for Disaster Risk Reduction 2015–2030* recognises opportunities to emerge stronger from natural hazards by embracing practices that build resilience and reduce natural hazard risk.

In communities experiencing compound and cascading natural hazard events, there is a sense that recovery never ends. There is a need for collaborative research into the systemic changes needed to build resilience.

Research questions and projects that could be captured in this focus area include:

- What is the effectiveness of recovery practices?
- What systemic change is needed to build resilience?
- How are communities best re-built and transformed during recovery to build resilience and reduce natural hazard risk?
- What smarter and more affordable ways exist to ensure hazard maps are up to date and available to communities, to support improved preparations and increased resilience?

**Social equity**

Natural hazard risk is underpinned by vulnerabilities including underlying social disadvantage which presents barriers for people and communities to prepare for, respond to and recover from natural hazards.

Significant knowledge gaps remain, particularly regarding the social impacts of natural hazards on people living in Australia. The *Sendai Framework for Disaster Risk Reduction 2015–2030* calls for dedicated action to address underlying risk drivers including inequality.

Research questions and projects that could be captured in this focus area include:

- Considering the term 'community resilience', what are the roles of community preparedness, social capital and social cohesion?
- What are the systemic causes of risk for vulnerable communities exposed to natural hazards in Australia?
- What are the impacts of collective trauma, focusing on lessons learned in collaboration with those with lived experience?
- What constitutes critical social infrastructure?
- How can disaster risk reduction strategies best address the needs of diverse communities? For example, First Nations, people with disability andmulticultural ) communities.
- How can social cohesion, diversity and inclusion be promoted?
- How can resilience-building initiatives address pre-existing social inequalities?
- Will technological innovation improve or reinforce social inequalities?
- How can resilience-building initiatives be made more affordable and consider social equity?

## Key capability areas

To support research key focus areas, key capability areas have been identified. Key capability areas each cut across multiple research focus areas. These include:

**First Nations knowledge**

What is the enabling environment that will better embrace First Nations knowledges to build resilience and heal and manage land and improve First Nations peoples' involvement in disaster management?

The completion of the Centre's *Reconciliation Action Plan* (RAP; refer to References) strengthened the Centre's connections and partnerships with First Nations communities and individuals across the natural hazard research sector and guides the Centre's ongoing programs, processes and research activities.

The Centre continues to strengthen partnerships with First Nations people and organisations to ensure its research program that empowers and strengthens reconciliation, with First Nations' involvement in the Centre's 10-Year research strategy review.

**Data management and science**

How can information, communications, data management practices and the application of data science, sensing and monitoring support enhanced decision making and service delivery?

There is significant emerging interest from Participants to understand emerging data and the application of AI to disaster resilience and risk reduction, including limitations and ethical, economic, operational and social considerations.

The Centre developed a *Research Data Management Framework* (refer to References) to guide the Centre's research data management, detailing best-practice data collection, identification, collation, curation, access and sector leadership.

The Centre will collaborate with others where opportunities exist to maximise value.

**Future workforce**

As the nature of natural hazards, technology and society evolves, so too must the future workforce.

Research questions and projects that could be captured in this capability area include:

- What does the nature of the workforce look like in future decades?
- What is the influence of new technologies on the future workforce?
- How can emergency services partner with other government agencies, not for profits, civil society and industry to effectively leverage emerging technologies?
- What strategies can be implemented to attract new recruits into disaster resilience and risk reduction and retain them over the long-term?
- How can volunteering be encouraged amongst diverse communities and how will volunteering differ between rural and urban areas?
- How can workforce health and safety be enhanced? How will strategies differ between volunteer and career workforces?

**Community-centred , place-based resilience**

Community-centred initiatives for adaptation, preparedness, response and recovery are critical for disaster resilience and risk reduction.

Research questions and projects that could be captured in this capability area include:

- What are community expectations of emergency management and government agencies and what do they need? How can agencies best partner with community to support effective and enduring community-centred approaches to resilience building? What capabilities do agencies need to achieve this?
- How can investment in social capital best be targeted to have meaningful impact in building more resilient communities?
- What are the most effective approaches to community engagement, including in preparing for risks they previously experienced?
- What is the best way to measure the effectiveness of community engagement and resilience programs?
- What does a decline in social cohesion and trust in government look like in a disaster management context?
- What is the state of disaster preparedness nationally?
- What are community expectations of public information and warnings?
- How can disinformation and misinformation be effectively managed?

**Interoperability**

It is critical for various components of disaster management systems to be able to work with each other, supporting improved community outcomes across disaster mitigation, preparation, response and recovery. How can the development of national systems and capabilities be best identified and supported, when and where required?

Systems and capabilities with known research needs identified as an important focus in this research plan include:

- Australian Warning System
- National Heatwave Warning Service
- Australian Tsunami Warning System
- Australian Fire Danger Ratings System
- Fire simulation/ fire prediction systems
- Aerial firefighting
- Extreme weather impact prediction
- Critical communications capabilities.

## Current and growing research portfolio

Research proposals should be mindful of potential connections with, or amplification of, the Centre's current and past research projects (refer to Attachment 3 for current project list). Further details of these projects, including project outputs are regularly updated on the Centre's website.

## Opportunistic and responsive activities

The Centre retains the ability to invest in projects that are developed:

- by research users in response to significant emerging needs
- to respond to significant disasters, or new natural hazard risks, as they occur
- to respond to strategic research gaps
- to respond to novel emerging research ideas with modest levels of seed funding to explore early-stage innovative ideas
- to promote the utilisation of the Centre's research.

These projects should align with the Centre's current research focus areas but may be funded or otherwise supported outside the published funding rounds.

## Futures Thinking, Innovation and Thought Leadership

The Centre is responsive to the needs of end-users but also has an important role in stretching thinking in areas of emerging importance, innovation and policy relevance. Centre Participants have a desire to better understand the influence of future technologies and policy trends. The Centre invests in thought leadership papers and events in partnership with Participants, industry stakeholders and researchers to drive future thinking, innovation and research.

## A dynamic research portfolio

The Centre has committed more than $30 million in funding to its end-user driven core research portfolio.

This portfolio includes short – (tactical), medium – (applied) and long-term (strategic) multi-disciplinary projects.

The Centre's research priorities for 2026–28 will be developed and incorporated into the Centre's *Biennial Research Plan 2026–28*.

This update to the research plan will be informed by the *National research priorities for disaster risk reduction and community resilience to the impacts of natural hazards* (2022), engagement with Participants, end-users and researchers, recent natural hazards and relevant inquiries and post-event reviews

The ongoing research portfolio continues to be developed and managed through strong engagement with Participants, guidance from research organisations and leadership from the Centre.

To ensure the portfolio remains relevant and invests in timely research, two formal end-user driven investment rounds take place each financial year, assessed in October and April. Each round's funding is agreed by the Centre's Board.

Specific themes may be assigned to individual investment rounds following analysis of the research portfolio. Opportunities to further the utilisation of Centre's research, including projects carried out in the Centre's previous iterations will be explored.

## New project development

The Centre's research design process aims to answer research questions posed by Participants.

User-driven investment rounds are open to Participants and end-users approved by the Centre's Board. Project ideas are evaluated using a published set of criteria and reviewed by the Research and Implementation Committee and endorsed by the Centre's Board.

Once approved, project researcher teams are onboarded and a collaborative co-design process undertaken to develop the project plan. This plan is endorsed by the governing project management committee, comprising end-users, researchers and Centre representatives.

Identified translation and implementation pathways co-developed and agreed with relevant end-users are embedded in the project plan. These pathways are regularly reviewed and updated to ensure shared understanding of desired research outcomes and project governance.

## Commissioned research

The Centre undertakes independently funded commissioned research that leverages Centre and research providers' project management capabilities. These projects align with the Centre's objectives and are fully funded by the commissioning entity.

Commissioned projects add to the Centre's available knowledge catalogue and closely link to Centre and Participant research and priorities.

During 2025–27 the Centre maintains two formal fully funded commissioned research program arrangements with:

- the Victorian Government's Department of Energy, Environment and Climate Action (DEECA)
- Victoria's Country Fire Authority (CFA)

Other commissioned work takes place on an ad-hoc basis.

## Project governance

Centre's projects are managed using a formal governance structure and associated systems. All projects have:

- an agreed and documented project plan
- identified research and end-user project leaders
- clear end-user expectations and performance measures
- a timeline that includes performance review stage gates
- a project management group
- a link with a Translation and Implementation Panel
- regular reporting obligations.

The aim of these structures ensures research is carried out collaboratively to meet the mutually desired outcomes.

# Research utilisation

## Growing research utilisation

With the ongoing maturation of the Centre's research portfolio further research translation and utilisation opportunities continue to emerge. Maximising the utilisation of research outputs within an evolving operational landscape includes:

- Prioritisation of resource allocation based on potential project impact in alignment with the Plan, value to Participants and the Centre's ability to resource. Achieving utilisation potential requires planning with and engagement from end-users.
- Fostering of utilisation activities related to the Centre's previous iterations where value to end-users and appropriate resourcing is available.

**Elements of research utilisation**

Research utilisation is complex, dynamic and non-linear, with the following process in use:

**Objectives design** – Priority knowledge users and objectives identified and defining, utilisation pathways, desired outputs and outcomes to achieve desired outcomes documented based on a clear problem statement.

**Translation, dissemination and engagement** – Timely, effective distribution of research findings and outputs through publications, conferences, workshops, annual research forum, briefing notes and other culturally appropriate means tailored to specific audiences as resources allow.

**Application –** Adaptation of research findings into practical applications, products, policies or interventions tailored to the needs of end-users. This includes prototype software tools, data sharing platforms/portals, guidelines/ practice briefs/frameworks, training and education products, strategic policy advice, networking opportunities and standard operating procedures.

**Implementation – I**mplementation activities specific to putting research findings into practice, integrating research findings into real-world systems and processes often involve adapting materials to local contexts and operating environments.

Centre research outputs feed into end-user plans for 'the next step' of implementation, which associated resourcing costs. This includes doctrine development such as legislation, policy, safety notes, standard operating procedures, planning documents and frameworks and delivering once-off, iterative or ongoing programs using the research outputs.

Drawing on the *Knowledge to Action Model*[1] and referencing the 10-Year Strategic Plan, three types of research utilisation are considered in association with funding allocation:

- **Tactical:** Supported planning (handover from researchers to end-users), end-user training to ensure necessary skills transfer (train the trainer), guidelines and doctrine development and small-scale pilot testing to refine the implementation process.
- **Applied:** Continuous improvement of research methods and process to ensure they meet end-user needs in a community-sensitive way. Utilisation may create additional research opportunities to provide further evidence to support desired outcomes.
- **Strategic:** End-user-led whole-of-system research output integration in organisations and communities.

**Monitoring and evaluation –** Assessment of impact and effectiveness of implemented research findings to ensure achievement of desired outcomes and consideration of the adoption of research findings once implementation is completed.

Monitoring and evaluation processes will be overseen by:

- Translation and Implementation Panels (subject matter professionals from participant organisations)
- Research and Implementation Committee (responsible to the Board for the oversight and review of the Centre's research activities)
- Education and Training Committee (where the research outcomes are used to develop education and training information and products).

1 The Knowledge to Action Model has an implementation cycle that elaborates on research utilisation.

**Research utilisation principles**

The following principles guide research utilisation decision making:

- **Research utilisation is a key objective** throughout the conduct of research.
- **Research utilisation is a continuum**, occurring at multiple levels (e.g. projects, programs, organisational) and involving multiple stakeholders including end-users, researchers, the Centre and others.
- **Utilisation pathways are project specific**, recognising the need for solutions that meet the needs of the end-user/s and connected community/ies.
- **Research utilisation is dynamic and can evolve**, with planning commencing at the project concept phase and continually reviewed and updated throughout the design and conduct of research collaboratively between researchers and end-users.
- **End-user driven research is key** to ensuring effective buy-in to research and its utilisation and impact amongst research beneficiaries.
- **A collective approach** is required, drawing on existing capability and capacity across end-user and researcher organisations, communities of practice and networks.
- **A pragmatic approach** is necessary, considering end-users' current and planned capability and capacity to support implementation.
- **Strong research proposals embed utilisation pathways** within research scoping and methods, based on clear research problem identification.
- **Programs of Centre research enhance utilisation outcomes,** connecting projects thematically.
- **Research utilisation outputs are best vested with end-users** to facilitate the robust and reliable hosting of knowledge, tools and applications amidst rapidly changing technology and the evolution of responsibilities across all tiers of government.

**Roles and responsibilities**

The Centre assists in building and enhancing end-users' and researchers' research utilisation capability. The research utilisation responsibilities central to this include:

- Priority to foster utilisation of research from its previous iterations where there is end-user value.
- Responsiveness to evolving research utilisation opportunities.
- Support and funding of research dissemination and engagement, application and tactical and applied implementation efforts.
- Preference of transferral of ownership and/or stewardship of research products to the end-users for implementation.
- Advocate for end-user utilisation support to fulfil the desired research outcomes, where appropriate.
- Promotion of relationships between end-users and researchers, acknowledging their importance research that is is useful, useable and used.
- Translation and Implementation Panels and Project Management Committees provide utilisation guidance advice including continuous improvement opportunities.

End-users engage in research with the Centre to address a knowledge gap and engage in the following research utilisation responsibilities:

- Lead and/or engage in research concept scoping, actively working with other end-users to find priority research topics that are nationally relevant.
- Participation in Project Management Committees to support the delivery of the scoped research.
- Active participation in Translation Implementation Panels to develop relevant research themes.
- Contribution of tactical and applied implementation resources for research outputs.
- Responsibility for funding strategic implementation of research outputs, including associated ongoing costs.

Research institutions and their researchers (research providers) engage in scoping and undertaking research with the Centre in pursuit of new knowledge and evidence that will inform actions towards safer, more resilient and sustainable communities. Central to acting in this role are the following research utilisation responsibilities:

- Work with the Centre and end-users to clearly define expectations for research outputs and utilisation up-front in project design, including implementation responsibilities and resourcing.
- Active management of research scope delivery to meet contracted expectations for outputs and outcomes.
- Documentation and communication of the research outputs in format that support end-user engagement.
- Contribution of resources to aid research implementation.

## Monitoring and evaluation of research utilisation

The Centre's monitoring and evaluation program logic, outlined in Figure 3., ensures projects have clear and measurable outcomes with formalised Participant engagement and agreed utilisation pathways.

Developed in collaboration with stakeholders and research providers, these strategies are incorporated into research projects, processes and workflows from initial concept development, Expression of Interest response and project development to project reviews.

The often extended timeframes between project start, output implementation and demonstration impact, the Centre's multi-faceted approach identifies, captures and records projects progress, as well as the direct and indirect benefits of research deliverable utilisation and other outcomes.

Monitoring and evaluation approaches:

- deploy fit-for-purpose methods and processes
- apply across the five elements of standard program logic (Figure 2 – from planning inputs to output impacts)
- continually utilise available and potential data sources
- regularly produce reports for the Centre's Board, the Commonwealth and Participants.

Reporting reflects the short – and medium – impacts of projects as well as the long-term aims underpinning the Centre's research portfolio.

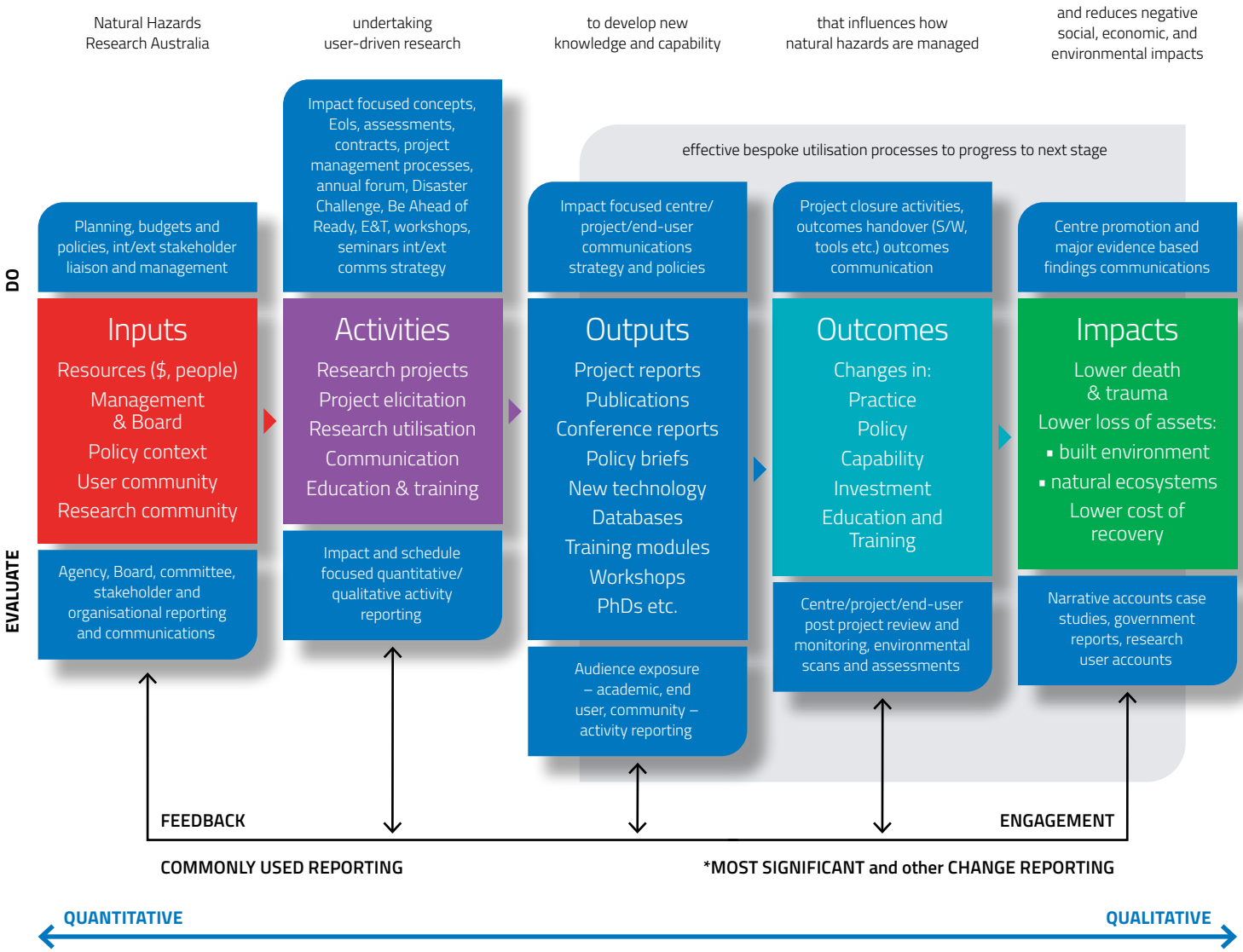


**Figure 4:** Monitoring and evaluation program logic

# Responsive disaster research

The complex nature of disasters caused by natural hazards lends itself to the use of post-disaster research to gain insights that can make a significant contribution to disaster risk reduction and strengthening of disaster resilience.

## Responsive disaster research is one of the Centre's major research programs.

The Centre's rolling investment strategy allows flexibility to initiate or co-invest in projects in response to specific natural hazards and other changes that affect vulnerability, exposure or resilience to disasters caused or contributed to by natural hazards.

Funding is available through two research programs:

- Post-Disaster Research Program available to Participants
- Quick Response Program available to researchers for the immediate collection of perishable[1] data

The Centre accepts funding applications through these programs following any significant disaster caused by a natural hazard.

The program's focus is to collect time-critical, perishable data following disasters caused by natural hazards.

### Post-Disaster Research Program

The Post-Disaster Research Program (PDRP) enables the Centre to actively engage with Participants to identify essential research needed following a disaster caused by natural hazards. This could be through projects established by the Centre or through co-investment with Participants or industry stakeholders.

The PDRP assists in the learning of important lessons from disasters by addressing significant unresolved questions, collecting information that will be used to provide insights into the event and its outcomes and to assist in disaster risk reduction or strengthening disaster resilience.

The Centre prioritises funding to projects with benefits to multiple states and territories; supports the directions outlined in this plan; identifies a clear critical research need or gap in knowledge and/or practice; and likely result in utilised outputs that enhance safety, resilience or sustainability of communities in the context of natural hazards.

### Quick Response Program

The Quick Response Program (QRP) provides funding for research data collection and can be used to directly support researchers for out-of-pocket expenses, including travel to disaster-affected areas to collect time-critical, perishable data following disasters caused by natural hazards.

The QRP assists in gaining understanding of the impacts of a disaster.

### From findings to learnings

To receive the benefits of projects supported through the PDRP and QRP, the Centre will work with the research teams and relevant end-users following project completion, to communicate and share learnings in the most appropriate ways.

### Actively engaging with other research initiatives

A number of researcher and industry-led research initiatives exist across Australia, with more likely to appear over time.

The Centre actively engages with these initiatives as they are developed and expects to continue this engagement.

In addition, several research collectives and initiatives in the university sector are undertaking research relevant to the Centre's strategic aims (e.g. the Queensland Disaster Research Alliance and the Victoria Disaster Research Alliance).

Collaboration options include:

- participation in disaster working groups
- shared workshops and events

### Open access data

The Centre requires data collected through this program be made available to the Centre and made publicly available in line with the principles outlined in the Centre's *Research Data Management Framework*, to ensure contribution to the national natural hazards data and knowledge collection.

This will contribute to building national datasets and identifying significant insights and research questions arising from major natural hazards, providing a context for the development of more extensive research proposals and influence of research priorities.

The Centre's is committed to the development of its ongoing online data catalogue to promote and support research data accessibility. This data catalogue enables line of sight to all Centre project data holdings and facilitates sound research data curation and governance practices for all Centre projects.

Where financially and strategically appropriate, the Centre supports open access publication of its outcomes.

1 Perishable data is data that must be gathered quickly after a disaster to ensure that it is not lost and that its quality and relevance is not degraded. This can include, for example, an assessment of debris in the aftermath of a storm, before clean-up has commenced, or water quality in waterways following a bushfire, flood or landslide.

# Education program

The Education program comprises the Postgraduate Research Scholarship, First Nations Scholarship, Associate Student and Early Career Researcher Development programs. This education program is governed through the Centre's Education and Training Committee.

## Postgraduate Research Scholarship program

The Postgraduate Research Scholarship program accepts applications from students enrolled in PhD and Masters by Research Degrees and opens 1 July each year. Applications are accepted until the annual scholarship fund is fully allocated. Scholarship applications must align with identified research priorities or emerging issues identified by the Centre and are assessed based on:

- alignment to the Centre's research themes
- potential for the project to contribute to the Centre's knowledge
- integration of the student into host research group's learning environment.

Opportunities are taken to align and, if appropriate, incorporate students into the Centre's core research projects.

Scholarships are funded for up to 3.5 years full-time for PhD scholarships and pro-rata for Masters by Research scholarships (part-time equivalent students are considered).

Full scholarships are funded at $34,000 per annum. Partial scholarships will be funded at $17,000 per annum.

Scholarship students are supported to participate in Centre events and relevant conferences. Students are able to:

- apply for a limited number of industry placement opportunities
- participate in other relevant Centre programs
- participate in the early career researcher development programs.

## First Nations Scholarship program

The First Nations Scholarship program provides student-focused opportunities for First Nations scholars to be supported throughout their research pathway. This could be part or all of their research journey from final year undergraduate honours, to completing doctoral studies and includes the opportunity to participate in an industry placement. The program includes financial support to facilitate enable community engagement research methods. Scholars are recruited and managed by selected partner universities.

## Associate Student program

Students conducting research relevant to the Centre and Participants not directly funded by the Centre are eligible to apply to the associate student program. This program offers students the benefit of formal affiliation with the Centre and its activities. Students can apply to the Associate Student program at any time and are able to:

- apply for funding support to attend a relevant conference and participate in events and activities run by the Centre
- participate in professional development activities offered by the Centre, including writing skills, media and public speaking training and graphic design
- apply for short-term placements in Centre partner organisations.

## Early Career Researcher Development

Completion of a PhD is only the beginning of a researcher's career. The Centre provides opportunities for affiliated early career researchers to build their international networks and actively engage in Centre research and professional development programs.

### Early Career Researcher Development and Industry Fellowships

These Fellowships recognise the value of supporting early career researchers to expand their research networks, create strong local and international collaborations and compare the opportunities and challenges for natural hazards research in different geographic, societal, cultural and climatic settings.

Fellowships are open to applications through two rounds each year with funding allocated across each round. They include:

- **Early Career Researcher Development Fellowships** – available to full-time PhD students who have successfully completed the equivalent of two years of full-time study and PhD-qualified researchers employed in research positions in research institutions or universities, for up to five years after their PhD graduation.
- **Early Career Researcher Industry Fellowships** – available to PhD-qualified researchers employed in industry (where their employer is a Centre Participant), for up to five years after their PhD graduation.
- **First Nations Fellowship** – available in 2025 for First Nations researchers.

Fellowships are available for up to $15,000.

Fellows also benefit from a range of additional opportunities including mentoring, promotion of research and connection into the Centre's Early Career Academic and Practitioner Network.

### The Disaster Challenge

The Disaster Challenge is an annual national challenge to encourage new ideas, new thinking and new research. It is open to early career researchers, postgraduate and final-Year undergraduate students in Australia.

The Disaster Challenge invites creative and innovative minds to help address wicked problems facing communities around Australia. This spans floods, bushfires, storms, cyclones, extreme heat and other natural hazards.

A wicked problem is urgent but difficult to solve because of incomplete, contradictory or changing requirements that are often difficult to recognise or evaluate.

Delivery of the Disaster Challenge will be actively supported by a national working group, engaging with research providers and end-user stakeholders.

# Research-skilled workforce

## Research translation capability

The Centre actively builds understanding and capabilities required to translate research outcomes efficiently and effectively into practice. The Centre provides opportunities for students, researchers and end-user staff to learn and share skills in this area.

Skill development and sharing is incorporated through:

- student professional development activities
- work placement programs
- the Centre's training and education program
- participation by research providers and end-users in Project Management Committees and in Translation and Implementation Panels
- participation in workshops, symposia and webinars
- opportunities to take on leadership roles in research and in research translation projects.

## Work placement program

During 2025–27, the Centre will continue to expand its internships and industry placement program for researchers and practitioners.

## Career development

The Centre nurtures researcher and end user career development to ensure research continuity as strategic component of the research program. Support for career development and succession planning is a valuable contributions to research projects.

## Research networks

To facilitate engagement with the academic community and raise Participant awareness of the latest scientific advances, the Centre continues to build research networks that align with its programs.

These networks:

- ensure Participant organisations are up to date with the current state of scientific knowledge in natural hazards
- enhance engagement and communication with academic stakeholders
- develop linkages between Participant organisations and the research community
- aid Participants' professional development.

## Conference and related travel support

Researchers are expected to actively engage with the Centre through workshops and conference presentations relevant to their projects.

Researchers engaged with Centre activities can apply for funding to support their attendance and participation in national and international conferences and workshops.

Funding is prioritised for:

- early career researchers
- researchers experiencing disadvantage
- researchers from under-represented groups.

# Research-informed knowledge transfer

## Education and training program

Through its partnerships, the Centre is committed to an education and training program that goes beyond the postgraduate training program.

The Centre will, as appropriate, use the knowledge and outcomes from its research program to develop opportunities to:

- deliver educational workshops, seminars and webinars based on research findings and outcomes
- develop professional development packages
- provide information that can be used to update and enhance vocational education training packages
- support industry-based skills and knowledge development for volunteers and employees pursuing professional development and role accreditation.

There may also be opportunities for the Centre to work with end-users and research-engaged education providers to develop customised accredited and professional development subjects and courses. This allows the strengths of the Centre's education and training participants to work with end-users to develop and deliver targeted education and training programs.

## Knowledge diffusion and transfer

Beyond education and training initiatives, the Centre's core engagement strategies will have a significant focus on end-user engagement and the translation, adoption and implementation of research outcomes into practice.

This includes:

- an annual Natural Hazards Research Forum
- research and utilisation workshops (in-person and online)
- subject matter workshops, symposia and webinars
- outreach programs making the science accessible to all Participants and the community members through research briefing notes, online resources, demonstration videos, podcasts, media engagement and other channels.

# References

This plan references several of the Centre's overarching documents, as well as publications by other entities. The current version of each Centre publication referenced can be found on the Corporate Documents page of the Centre's website: www.naturalhazards.com.au/about-us/corporate-documents. The following are links to specific publications referenced:


- Colvin, A. (2024) Independent Review of Commonwealth Disaster Funding – Final Report to the Commonwealth of Australia: Independent Review of Commonwealth Disaster Funding – Final report – Medium Res.PDF
- Commonwealth of Australia (2018) National Disaster Risk Reduction Framework: https://www.homeaffairs.gov.au/emergency/files/national-disaster-risk-reduction-framework.pdf
- Commonwealth of Australia (2021) Australia State of the Environment: https://soe.dcceew.gov.au/
- Glasser, D. (2023) Independent Review of National Natural Disaster Governance Arrangements – Final Report to the National Emergency Management Agency, Commonwealth of Australia: https://www.nema.gov.au/sites/default/files/2024-10/20240813%20-%20Glasser%20Review%20-%20Final%20Report_copy%20edit.PDF
- House Standing Committee on Economics (2023) Inquiry into Insurers' responses to 2022 major flood claims: Inquiry into insurers' responses to 2022 major floods claims – Parliament of Australia
- National Emergency Management Agency (2024) Royal Commission into National Natural Disaster Arrangements – Disaster Recovery Funding Arrangements Review: Disaster Recovery Funding Arrangements Review | NEMA
- National Emergency Management Agency (2023) The Second National Action Plan to Implement the National Disaster Risk Reduction Framework: https://www.nema.gov.au/sites/default/files/2024-08/28605%20NEMA%20Second%20Action%20Plan_V10_A_1.pdf
- Natural Hazards Research Australia (2022) *Strategic Plan 2021–2031*: www.naturalhazards.com.au/sites/default/files/2022-05/NatHazResAus%20StratPlan%20FA02.pdf
- Natural Hazards Research Australia (2022) *10-Year Research Strategy 2022*: www.naturalhazards.com.au/sites/default/files/2022-05/NatHazResAus%2010yr%20Research%20Strategy%20FA01.pdf
- Natural Hazards Research Australia (2022) *Research Data Management Framework*: www.naturalhazards.com.au/sites/default/files/2022-05/NatHazResAus%20Data%20Management%20Framework.pdf
- Natural Hazards Research Australia (2022) *National research priorities for disaster risk reduction and community resilience to the impacts of natural hazards*: www.naturalhazards.com.au/sites/default/files/2022-05/NatHazResAus%20ResearchPriorities%20FA02.pdf
- Natural Hazards Research Australia (2022) *REFLECT Reconciliation Action Plan*: www.naturalhazards.com.au/sites/default/files/2022-09/NHRA%20REFLECT%20Reconciliation%20Action%20Plan_final.pdf
- United Nations Office for Disaster Risk Reduction (2015) *Sendai Framework for Disaster Risk Reduction 2015–2030*: https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030

# Attachment 1: Milestones 2025–27

| Centre Milestone Description | | Status |
|---|---|---|
| **Centre research priorities** | | |
| 30 June 2026 | Review 10 – Year Research Plan reviewed and endorsed by Centre Board | Complete |
| 30 June 2026 | Biennial Research Plan 2026–28 drafted and endorsed by Centre Board | Complete |
| 30 June 2026 | Online data catalogue available, populated and utilised | Complete |
| **Learning and disasters** | | |
| 30 June 2026 | Outcomes, findings and insights from post-disaster research projects shared in a timely manner | Complete |
| **Engaging with other research initiatives** | | |
| 30 June 2026 | The Centre engages with relevant national and international research initiatives | Complete |
| **Research Portfolio** | | |
| 30 June 2026 | Two investment rounds completed | Complete |
| **Translation and Implementation Panels** | | |
| 30 June 2026 | Hazards Notes published to translate research findings in an accessible format | Complete |
| 30 June 2026 | Annual Natural Hazards Research Forum delivered | Complete |
| 30 June 2026 | Regular series of research translation and engagement events delivered with high participation and positive feedback | 10 events |
| **Education Program** | | |
| 30 June 2026 | Complete Postgraduate Research Scholarship round | Complete |
| 30 June 2026 | Two active First Nations Scholarships | Two active |
| **Early Career Researcher Program** | | |
| 30 June 2026 | Early Career Researcher Fellowships awarded | Two awarded |
| 30 June 2026 | Disaster Challenge Completed | Complete |
| **Research-skilled workforce** | | |
| 30 June 2026 | Internship program delivered | Five internships |
| 30 June 2026 | Complete postgraduate symposium | Complete |

# Attachment 2: Key Terms

**Natural hazards:** Natural hazards are defined as sudden-onset hazards. Highlighted by the Australian Government under the funding agreement are bushfire, flood, cyclone, heatwave, storm, inundation and erosion caused by sea level rise, earthquake, tsunami and landslide.

**Research:** A process that creates new knowledge and/or the use of existing knowledge in a new and creative way to generate new concepts, methodologies, inventions and understandings. This could include the synthesis and analysis of previous research to the extent that it is new and creative[1].

**Researcher:** Person (or persons) who conducts, or assists with the conduct of, research.[2]

**Research end-user:** An organisation external to academia that will directly use or directly benefit from the output, outcome or result of the research. Examples of research end-users include governments, businesses, non-governmental organisations and community organisations.[3]

**Research beneficiary:** An individual or community that benefits from the implementation of research by a research end-user.

**Research outputs:** Research outputs are the artifacts (things) that the research produces, which could range from being conceptual as an idea, through to being deployment ready. Research outputs could inform an end-user's first step in enacting an agenda, they could contribute to an ongoing agenda or be part of the final steps in delivering an agenda. Furthermore, the research outputs may be able to stand-alone without further time or effort or require periodic updating and/or maintenance to remain in use.

**Research utilisation:** The process of synthesising, disseminating and using research-generated knowledge to impact or change existing practice[4]. Research utilisation involves ensuring that findings are understood, accepted, adopted and applied by end-users. The Centre recognises that a range of other terms are also used in various contexts to refer to this process, including 'knowledge translation', 'research translation', 'knowledge transfer' and 'knowledge exchange'.[5]

1 Australian Research Council: Introduction (arc.gov.au)

2 The Australian Code for the Responsible Conduct of Research 2018 (NHMRC)

3 Based on: Australian Research Council: Introduction (arc.gov.au)

4 Adapted from AFAC: AFAC | Research utilisation

5 Straus SE, Tetroe J, Graham I. Defining knowledge translation. CMAJ. 2009 Aug 4;181(3-4):165-8. doi: 10.1503/cmaj.081229. Epub 2009 Jul 20. PMID: 19620273; PMCID: PMC2717660. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2717660/

Find supporting research documents and the portfolio of projects on our website
**www.naturalhazards.com.au**