Biennial Research Plan 2023–25: consultation paper

Background

Natural Hazards Research Australia (the Centre) maintains a Biennial Research Plan that guides the Centre's investment in a range of research activities. The Plan provides a two-year outlook and is reviewed on a 12-month cycle. The Plan aligns to the Centre's 10-Year Research Strategy and the Strategic Plan 2021-2031.

Annual reviews of the Plan ensure that the Centre is responding to new knowledge and utilisation needs, based on unfolding natural hazards, impacts of our changing climate and other changes that affect our risks, vulnerability or resilience to natural hazards.

The current 2022-24 Biennial Research Plan can be found here.

Biennial Research Plan Review

The Centre has commenced a review of the current Biennial Research Plan. The purpose of this paper is to seek stakeholder input into the review.

Building on the previous work to articulate research priorities for disaster risk reduction and community resilience, this review is focused on updating the Centre's research focus and key capability areas and identifying opportunities to embed research outcomes through education and training opportunities.

To inform the review, the Centre has undertaken a broad environmental scan of risk, capability and policy trends. The Centre is now seeking input from end-users and researchers.

Preliminary Focus and Key Capability Areas

Based on the initial scan, a preliminary list of research focus and key capability areas for 2023-25 has been identified.

Preliminary areas of focus for consultation include:

- **Risk mitigation** –What are the true costs of natural hazards? What are the key drivers of natural hazard risk? What are the barriers, challenges and opportunities to achieving community adaptation and transformation? What are the highest priorities for natural hazard mitigation? What natural hazard mitigation solutions are most effective? How can investment in natural hazard mitigation be encouraged? How can maladaptation be avoided?
- **Land use planning and urban design** – How do we best accommodate natural hazard risk in our land use planning/urban design policy frameworks? How can risk informed planning be encouraged and supported? How do we include resilience and future risk considerations in construction standards? How should critical infrastructure be managed to ensure resilience?
- **Resilient recovery** – How can we build in systems resilience? After a disaster how do we rebuild and transform our communities?
- **Environmental solutions** – What is the efficacy of environmental solutions to reduce natural hazard risk? Where are the greatest risks posed to the environment by natural hazards? How is environmental resilience supported and engendered?
- **Next generation capability** – What are the needs for the next generation of emergency management capability? How can better decision making be enabled for our first responders and community members? How can first-responders be more effectively protected?
- **Social equity** – How can insurance be made more affordable? How can disaster risk reduction strategies best address the needs of diverse communities? How can supply and service chains in the face of a disaster be maintained and assured?

To support these focus areas, key capability areas have been identified. Key capability areas are likely to cut across multiple focus areas. These include:

- **Indigenous knowledge** –How can Indigenous cultural knowledge be better supported and utilised to enable First Nations peoples to heal country for resilient landscapes and communities?
- **Data management and science** – How can information, communication and data management practices and the application of data science, sensing and monitoring support and enhance crisis decision making, management of critical infrastructure and community resilience and adaptability?
- **Future workforce** – How do the implications, considerations and opportunities for current and future workforces impact our ability to prepare for, respond to and recover from natural disasters?
- **Community led resilience** – How are community led initiatives for adaptation, preparedness, response and recovery best supported and engendered?
- **Interoperability** – How can we best identify and support the development of national systems and capabilities when and where required?

The intersection between the key focus and capability areas is illustrated in Figure 1, page 3.

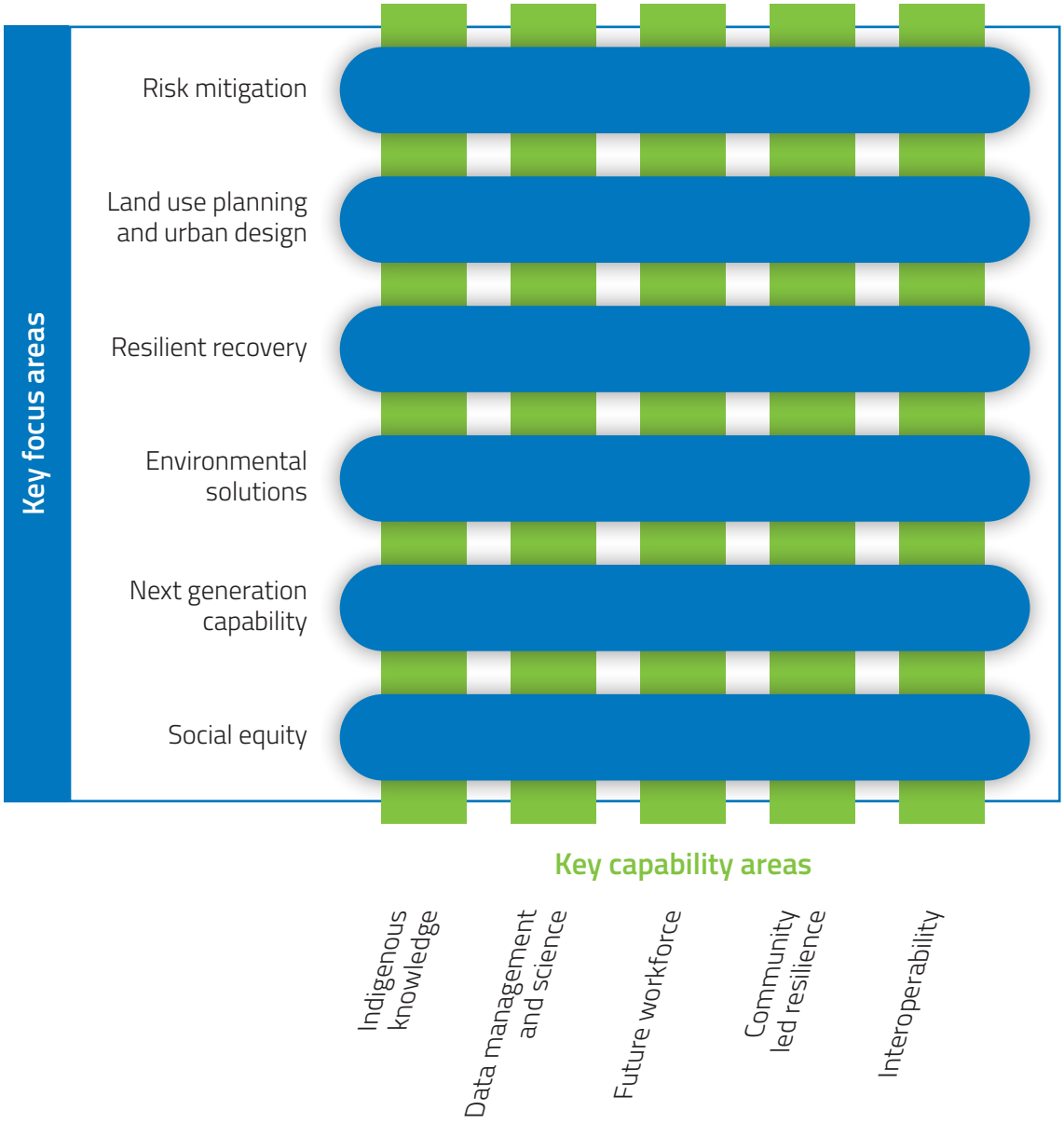

FIGURE 1 KEY FOCUS AND CAPABILITY AREAS

Discussion starter

- Are these key focus and capability areas reflective of current research needs?
- How would you prioritise these focus and capability areas in relation to your strategic, operational and policy requirements and imperatives?
- Are there any other focus and capability areas that are missing from this list?

Education and Training Program

Through its partnerships, the Centre will have many opportunities to implement research findings within education and training programs that go beyond the Centre's current postgraduate research program.

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

- deliver educational workshops and seminars
- develop training and professional development packages in partnership with our stakeholders, that can be managed and delivered within individual organisations
- provide information to providers that can be used to update and enhance vocational education training packages
- support research organisations to incorporate research findings into accredited undergraduate and graduate higher education programs, including through engagement in student-led industry projects
- 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 institutions to develop customised accredited and professional development units of study and programs. This will strengthen the Centre's ability to develop and deliver targeted education and training programs.

Discussion starter

In line with the objectives outlined above, the Centre seeks input into its education and training program through identifying:

- What are the current training and education needs of the Centre's stakeholders?
- What are the opportunities to utilise the Centre's research to update and enhance education and training programs?

Next steps

The Centre is now seeking the views of our end user and research stakeholders to inform the review of the Biennial Research Plan. We will also commence a series of workshops to encourage "stretch thinking" for bold, strategic and innovative ideas for our future research direction. The draft plan will be presented to the End User Advisory Panel in May 2023 and subject to feedback be endorsed by the Centre's Board prior to 30 June 2023.

We request your written input by 4 April 2023 via the Survey Monkey link www.surveymonkey.com/r/8L55JHB or via email to research@naturalhazards.com.au.

If you would like to have a conversation, then please contact research@naturalhazards.com.au to book a meeting.