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22 August 2024

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Submission on the draft NSW Disaster Adaptation Plan Guidelines

The Sydney Environment Institute is a world-leading multidisciplinary environmental research institute at the University of Sydney which brings together experts in climate disaster and adaptation research from a range of disciplines. We are pleased to provide this feedback on the draft NSW Disaster Adaptation Plan (DAP) Guidelines.

A step in the right direction

The proposed DAP Guidelines explicitly embrace a 'place- and community-centred approach' to disaster adaptation and risk reduction planning. It is further described as a 'co-designed' approach that is 'locally shaped' and 'regionally driven'. This is a promising and much needed turn following the repeated experiences of catastrophic disaster events across New South Wales over recent years, especially the 2019-20 bushfire crisis and the 2022 Northern Rivers floods.

The desire for place-based and locally informed approaches is overwhelmingly shared by disaster-affected communities in New South Wales. This is confirmed through the findings of two research projects led by the Sydney Environment Institute (SEI) investigating community self-organising before, during and after disasters in the [Shoalhaven, Blue Mountains, Hawkesbury and Northern Rivers](#) as well as [a study of community risk](#) based on the input of emergency management agencies funded with Natural Hazards Research Australia (NHRA).

The incorporation of long term and differentiated adaptation pathways are important steps in this direction. Disaster-affected communities identified that preparation, resilience and adaptation building has received insufficient emphasis compared to reactive modes of disaster response. They also noted that 'one size fits all' approaches are not adequate for addressing the diverse needs of communities. The adaptation pathways incorporated into the DAP Guidelines allow for measures to be tailored to localised conditions, histories and dynamics. This will be crucial for communities who understand the difference between current preparation and long-term needs for transformative changes.

The shift to regional implementation is another encouraging step in alleviating concerns over centralised structures and decision-making which are consistently argued to be inefficient and ineffective in addressing localised conditions and needs. However, there remains a risk that regional scales may still elide localised dimensions to disaster events. To mitigate this concern, and to ensure the declared 'place-based' and community 'co-designed' principles

are properly adhered to, *further clarification is required on the processes of recognising and integrating local knowledges, understandings, and responses to disasters and risk*. This co-designed approach should be engaged with involvement of both communities and agencies to ensure connection of central considerations and resources with local needs.

In addition, SEI suggests further development of the concept of social infrastructure, more examples of nature-based solutions, greater emphasis and clarification on extreme heat hazards and more attention to the realities of differential vulnerability. We comment on each of these and offer specific recommendations below.

Local knowledge

Local knowledge means different things to different people. SEI suggests the following definition: *'the knowledges that come from close familiarity with place and community, including lived and historic disaster experiences, as well as the skills, training, networks and access to resources that exists within communities.'*¹ This definition mitigates the risk of excluding grassroots groups and community members who do not occupy formal roles. Several research participants in our work across NSW reported not being invited to post-disaster debriefing despite their significant contributions to the community-led response and recovery. This effort requires active resourcing for engagement to include voices not otherwise heard at the community level.

Recommendations:

1. **'Local knowledge' should be concretely defined in the main text and glossary using the above definition as a basis.**
 - a. The dot points under 'embrace local knowledge' (p.19) should be expanded to illustrate the value and diversity of knowledge of place and responses to disasters.
2. **'Local knowledge holders' should be directly emphasised as including grassroots resilience groups, and others who act informally, alongside those who occupy formal roles with place-based community organisations.**
 - a. The inclusion of representatives from local resilience groups and informal actors in the Community Leaders Forum (p.17) should be encouraged to reflect the point made above. The need to create leaders and/or give voice to community members who may be less likely to be heard should also be emphasised.

¹ For more:

Webster, S., Pittaway, E., Gillies-Palmer, Z., Schlosberg, D., Matous, P., Longman, J., Howard, A., Bailie, J., Viney, G., Verlie, B., Celermajer, D., Naderpajouh, N., Rawsthorne, M., Joseph, P., Iveson, K. and Troy, J. (2024) [*Empowering Communities, Harnessing Local Knowledges: Self-Organising Systems for Disaster Risk Reduction \(April 2024\)*](#). Sydney Environment Institute

Hadlos, A., Opdyke, A., & Hadigheh, S. A. (2022). [*Where does local and indigenous knowledge in disaster risk reduction go from here? A systematic literature review*](#). *International Journal of Disaster Risk Reduction*, 79, 103160.

3. How local knowledges will be incorporated into disaster adaptation planning should be clearly outlined.

- a. The dot points (p.18) should be amended to include incorporating local knowledges. Moreover, the dot points under ‘two-way communications’ (p.19) need to demonstrate how community knowledge and voice is being incorporated. It remains currently focused on accessible language which is not what two-way communication means (i.e., collaborative, bilateral, mutually beneficial).

4. How Indigenous knowledges will be incorporated into disaster adaptation planning should be clearly outlined.

- a. The importance and value of Aboriginal and Torres Strait Islander people is acknowledged (p.14). However, there is no clear indication as to how diverse knowledges can be leveraged to enrich the state’s existing adaptation actions and strategies. An addition of clear steps on how to collect and integrate Indigenous knowledges is needed.

5. The ways community ‘co-design’ will factor into the governance and decision-making of finalised DAPs should be clarified.

- a. The principles outlined in ‘Table 1 - Principles for Community Engagement’ are important but seem passive. If participation is understood through a scale (from passive/tokenistic participation on the lower end and transformative/meaningful on the higher end), more is needed to explain how power and decision-making will be shared with the affected communities especially marginalised and vulnerable groups.

Social infrastructure

The inclusion of ‘social infrastructure’ as an explicitly stated risk reduction option is most welcome. However, the brief examples provided risk being misleading as to the scope and function of both. The example cited for social infrastructure – libraries providing refuge from heat – does not adequately capture the importance of this infrastructure in building social cohesion and local knowledge-sharing networks, which are both necessary for social preparedness and response to disasters. [Infrastructure Australia](#) suggests *social infrastructure takes the form of facilities, spaces, services and networks that support communities*. They are what bring people together and builds connections, beyond just physical buildings, and have been crucially leveraged by disaster-affected communities across New South Wales. Importantly, understanding place means understanding social cohesion and social infrastructure *in place* as a significant measure of local capacities.

Recommendations:

- 1. A core focus on preservation and enhancement of social functioning of communities and environments as disaster adaptation planning should be encouraged.**

2. **‘Social infrastructure’ should be consistently defined in the text body, glossary using the above definition as a basis, and illustrated with more varied examples.**
 - a. Figure 3 should be amended to convey that ‘understanding place’ means understanding social cohesion and social infrastructure in place.
3. **Investment in local resilience organisations and processes which enhance social cohesion and local knowledges simultaneously with preparedness should be recommended as a risk reduction option.**
 - a. For example, community fetes aligned with evacuation drills.
4. **The need for gathering and managing data on the state and mobilisation of social infrastructure locally should be emphasised to create an evidence base for its role in social disaster preparedness and inform investment priorities.**
 - a. This should form a significant component of the ‘understanding place’ data collection and report (p.26-27). This should be seen as investigating both local vulnerabilities and capacities.

Nature-based solutions

Similarly, ‘nature-based measures’ as a form of risk reduction could use further elaboration as they have a wide variety of uses beyond simply reducing vulnerability. For example, forests, grasslands, and wetlands are critical ecosystems that sequester and store large amounts of carbon while holding water which can reduce the severity of rapid flooding events, therefore providing both mitigation and adaptation benefits. ‘Hybrid solutions’ or ecological engineering approaches can also be mentioned as possibly suitable avenues for different communities in disaster adaptation planning.

Recommendations:

1. **A fuller range of examples for nature-based measures as options should be elaborated, while emphasising ‘co-benefits’ in their explanation.**
 - a. For example, nature-based solutions projects can also be used to preserve or recreate habitat and biodiversity.
2. **Investment in nature-based solutions should prioritise multi-stakeholder partnerships to ensure their sustainability and effectiveness.**
 - a. On page 11, the reference to ‘investment in nature-based measures’ could be strengthened by highlighting the crucial role of partnerships between civil society and the public sector. Such collaborations are essential for empowering communities and enabling them to take a leading role in the stewardship of these projects.

Differential vulnerability

Adaptation must be about reducing current and future vulnerabilities. The term ‘vulnerable’ or ‘vulnerability’ appears in the document 24 times, but only once with an actual link to issues of socio-economic differences and the people/communities who are already made vulnerable/at risk. It simply is not possible to address risk and vulnerability reduction in

adaptation planning without a discussion of how that vulnerability, and its inequity, has been constructed, how it shapes disasters and impacts, and how it can be addressed.

Recommendations:

1. **How vulnerability will be addressed should be incorporated more explicitly in the design of adaptation planning and pathways.**
2. **Those communities made most vulnerable to climate change impacts should be consistently prioritised.**
3. **Move the language of the guidelines from discussions of generalised climate risks and homogenous vulnerability towards locally specific and differential vulnerability.**
4. **New and exacerbated vulnerabilities that can and will arise from inaction should be recognised and addressed.**
 - a. This should be an explicit part of the ‘understanding place’ data collection and report alongside outlining how risk will be reduced over time as different options/pathways are implemented (p.26-27).
5. **The need for adaptation planning to address the creation of vulnerability via other policy areas and the need to coordinate across such areas (e.g. housing, energy) should be noted.**
6. **As vulnerability changes over time given risks, capacity, and policy, periodic reviews of vulnerability should be done outside of the five-year review period recommended for DAPs.**
7. **Develop or apply principles for ‘just adaptation’ and environmental justice informed by the best practice guidelines developed by [Future Earth Australia](#) and the Sydney Environment Institute (available soon).**

Heat adaptation

The emphasis on extreme heat as a hazard throughout the Guidelines is inconsistent compared to bushfires and floods. The word ‘heat’ is mentioned only 4 times, and in the context of ‘heatwaves’, despite being more lethal than any other disaster. It is important to emphasise extreme heat risk and adaptation as it is a ‘silent killer’ that is not as visible as other disaster events. Moreover, the language around extreme heat must also be adjusted to include ‘extreme hot weather’ alongside ‘heatwaves’ to accommodate short- and long-term periods of hot weather not necessarily captured in the Bureau of Meteorology (BoM) standard definition yet still have detrimental impacts on heat-vulnerable people.

Recommendations:

1. **Extreme heat should be consistently emphasised throughout the full document.**
 - a. A reference to extreme heat alongside floods and bushfires on page 3. Likewise, the ‘statewide policies’ section (p.8) should mention heat alongside flood, fire and coastal hazards.

- b. Solutions to reduce the risk and negative impact of extreme heat should be mentioned (p.11).
 - c. The imagery used mainly features water as a hazard (e.g. beaches, rivers, coastal towns etc.) which should be revised to reflect other hazards.
- 2. Heat hazards should be defined in the text body and glossary to clearly incorporate both ‘heatwaves’ and ‘extreme hot weather’.**
- 3. Health impacts should be consistently noted alongside loss of life, economic and environmental impacts.**
- a. The word ‘health’ should be added to: ‘Natural events can become hazards when there is a potential negative impact, such as loss of life or economic or environmental damage.’ (p.12)

We trust that our submission and recommendations assist the NSW Reconstruction Authority and we remain available for further consultation where required.

Yours sincerely,



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