

The Nature-led community resilience toolkit: Including people and nature in emergency management

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Societies internationally are recognising the urgent need for radical transformation in our relationships with nature. Our natural world is changing rapidly and increasing severity and frequency of disasters are affecting communities around the globe. Evidence and insights from Australia and around the world highlight the critical role of nature in supporting spiritual, emotional, physical and psychosocial recovery after disasters.

The Australian-first Nature-led Community Resilience Toolkit, draws on the reciprocal connecting and healing of people and nature in recovering from disasters, incorporating nature-based initiatives into disaster resilience. It reinforces community values and leadership capabilities, fostering community participation through volunteering and enhancing local understanding of disaster risks and resilience-building measures for nature. It supports communities to identify, understand and take meaningful, informed and collaborative action in realising their responsibility as custodians of local natural environments.

A nature and community-led approach to disaster resilience

Activities that enable more effective and sustainable disaster recovery for humans and nature are increasingly being sought by disaster managers, environmental organisations, and community groups. Nature-led community resilience (NLCR) has an important role to play to support disaster recovery and resilience activities, by helping people and nature recover together and build resilience in disasters. This is because disasters can impact people in many and varied ways: physically, financially, and psychosocially (e.g., fear, loss, change)¹.

The impact of disasters on nature can also cause trauma to people through a sense of loss of their familiar natural environment and surroundings, and agency and control in how they connect with it. Changes in nature not only affect the local community but is far more wide-reaching, because it can affect people from far away, even people who have never been to the impacted area. This means that nature recovery can have wide-reaching benefits².

Disasters can have devastating impacts on nature, impacting biodiversity, threatened species, ecosystems and critical habitats³. Healthy environments and ecosystems are essential to supporting human health and wellbeing⁴. Supporting and prioritising nature in disasters is therefore critical to supporting community recovery.

What is nature-led community resilience?

NLCR recognises the symbiotic and reciprocal relationship between people and nature. When people connect with and support nature's recovery, they are supported in their own recovery and hope for the future. NLCR involves people healing nature and nature healing people.

During and after disasters, NLCR assists communities recover and importantly supports the recovery of the natural environment⁵. It promotes community connection and harnesses strong community reaction, local insight and expertise. NLCR also galvanises efforts to support nature, and longer-term shifts supporting actions caring for nature within and outside a disaster context. This matters because communities with connection, direction and purpose recover more readily than others⁶.

The role of nature in healing is increasingly backed up by evidence and practice⁵. As more and more people in Australia are impacted directly or indirectly by the escalating disaster landscape, we look for new ways to cope with climate change and its impact on people and our environment.



The idea of NLCR is not new. For millennia, First Nations Peoples have embodied a way of being that encompasses Caring for Country, Healing Country and Walking Together. Integral to the idea of Caring for Country is that nature needs people, and people need nature, and that people have a responsibility to manage Country⁷.

Many Indigenous and other cultures conceptualise humans and nature as forming a single balanced and symbiotic relationship. They view humans and nature as connected, not separate entities⁸; many people see their wellbeing and identities deriving from their relationships with both people and nature⁹. These ideas of reciprocity and symbiosis form the basis of a NLCR approach; we still have much to learn and advocate for NLCR based on Indigenous and local leadership and Knowledges.



Barred Galaxias parade at Playspace opening, Marysville

The community saw hope and strength in supporting nature's recovery from the bushfires.

“The fish are back and so are we!”

In 2009, when environmental teams visited wildfire-affected areas around Marysville to assess impacts to habitat and wildlife, and monitor regeneration, it sparked community interest. The community were offered the opportunity to learn about the impacted species, participate in recovery efforts, and connect with one another. Some people chose to help plant trees to support habitat recovery, and some joined in setting and checking fish larval drift nets to help identify critical spawning sites. Some of these events closely involved local Aboriginal Traditional Owners. They delivered presentations and talked with people about responsibilities for 'Country', and the concept that we look after Country, and Country looks after us.

The beginnings of NLCR as featured in the NLCR Story Library¹⁰.

NLCR approach benefits people and nature

NLCR aims to genuinely and meaningfully engage local communities in nature connection and support human recovery. It is informed by, and enables, the basic elements of psychosocial support in disasters¹¹. These are: generating a sense of physical safety, promoting calm; enabling connection with others and the environment; supporting agency through self and collective efficacy; and instilling hope.

NLCR supports the recovery and resilience of both human communities and natural ecosystems, drawing on globally recognised disaster recovery and resilience principles and trauma-informed practices, alongside local biodiversity recovery needs (see toolkit for more details). NLCR activities focus on decision-making, community engagement, resourcing, working on ground, and strategic learning. NLCR actions should be readily included in disaster-end environmental recovery and resilience programs to support impacted communities through connection to, and care for, regenerating nature.

Incorporating NLCR during the different phases of disasters

Although it has its roots in recovery, NLCR can be considered in all phases of disasters. The following roadmap sets out the general stages of action to incorporate NLCR before, during, and after disasters.

Before



During



After



Key activities to undertake across the phases of disasters.

Good disaster recovery and stronger resilience are directly influenced by the investment in planning and preparedness¹². Before disasters, NLCR activities support communities to build strong social capital and connections with each other and nature. This supports communities in connecting and knowing how to care for their local environments, and in understanding the mitigation, adaptation, preparedness and recovery plans in their area.

NLCR response and relief efforts, during and immediately after disasters, primarily focus on community engagement about what work is being done to support nature in the response phase. Communications should be considered and regular, sharing impacts and consequences and reassurance (where appropriate).

There are many NLCR opportunities in early-, medium- and long-term recovery. Most immediately, it is important to communicate with communities to alleviate the feeling of nature as a threat. This needs to happen before finding a way to bring communities back to nature through including NLCR in recovery planning and recovery groups, engaging with communities, offering grant opportunities for NLCR activities, or implementing NLCR activities with local communities.

Knowing when to initiate NLCR activities should be guided by the local context and knowledge of the community and their recovery journeys; it will not be the same for everyone. For some, this can be quite early in the recovery process, for others, it may not be for years.

<i>BEFORE: NLCR Preparedness Actions</i>
<p>Identify opportunities for NLCR:</p> <ul style="list-style-type: none"> • Include explicit community/nature connection and biodiversity needs in emergency management plans and arrangements: regional, municipal, state. (e.g. recovery chapters in Regional Emergency Management Plans and Municipal Emergency Management Plans). • Be prepared: Create a NLCR roadmap for personalised actions across the phases. <p>Engage communities to bring them along:</p> <ul style="list-style-type: none"> • Inform the community about climate change, disasters, mitigation/adaptation, and NLCR activities. <p>Advocate for support and funding:</p> <ul style="list-style-type: none"> • Identify, prepare and advocate for NLCR funding opportunities, including preparedness, mitigation, and connection. <p>Implement NLCR activities and learning:</p> <ul style="list-style-type: none"> • Ongoing promotion, support, and evaluation for NLCR activities, including preparing for disaster/climate change impacts on NLCR activities and organisations. Use metrics and stories to support future funding and advocacy.
<i>RESPONSE: NLCR Response Actions</i>
<p>Communicate:</p> <ul style="list-style-type: none"> • Ensure ongoing community engagement about disaster response and nature impact through environment and emergency agencies. It is important to engage communities to bring them along as well. • Provide strong messaging about the risks e.g. to stay away from the firegrounds and out of floodwaters. <p>Implement NLCR activities:</p> <ul style="list-style-type: none"> • Some select volunteer opportunities to support nature if appropriate.
<i>AFTER: NLCR Recovery Actions</i>
<p>Assess the impacts and build co- awareness of community and environment:</p> <ul style="list-style-type: none"> • State and local government assessments of community and environmental impacts, risks and recovery needs. • Active co-awareness of other assessments taking place. • NLCR awareness in assessment processes through toolkit, ideas and assessors. • Early communications to alleviate the feeling of nature as a threat.

Connect within recovery pillars:

- Committees and meetings to review assessments and identify needs.
- Identify opportunities for (re)connecting community and environment needs and priorities; bring communities back to nature.
- Continue communications to alleviate the feeling of nature as a threat, considering ways to bring communities back to nature.

Plan for community and biodiversity recovery:

- NLCR included in recovery planning for community and biodiversity: local, regional, state.
- Identify opportunities to implement nature recovery projects that involve local communities.
- Government/agencies seek funding for projects.

Partner with communities:

- Inform, identify, and prioritise NLCR activities that meet needs.
- Ongoing community engagement about what's being done and how to get involved; can work through social media.
- Support groups to plan and deliver NLCR
- Grant applications for NLCR activities, connecting with NLCR grant sources, writers and advocates.

Implement to deliver on NLCR projects:

- NLCR project plans delivered in the short, medium and long term.
- Recovery of existing NLCR activities and new targeted NLCR.
- Recovery of conservation group operations so they are available to continue to support NLCR projects.

Evaluate and learn for continuous improvement, and share stories:

- Draw on existing evaluation tools.
- Monitor and evaluate nature/community connection activities and funding.
- Identify and share lessons.
- Storytelling and sharing.

NEW BEFORE: Continuing Community Development Actions**Embedding:**

- NLCR to be included and recognised in all relevant emergency management and recovery plans as business as usual.
- Established groups expand to include new stakeholders.
- Build broader awareness and participation.

Eventually, NLCR extends beyond recovery and becomes the 'new before', building resilience, expanding and delivering sought-after nature-community connection activities, volunteering opportunities, continued monitoring, evaluation, and publishing learnings in different formats to help others learn from this experience.

The NLCR Toolkit and Story Library

The NLCR Toolkit and Story Library has been a journey decades in the making. The idea of NLCR was more formally developed and piloted by the Victorian Government following the 2009 Black Saturday bushfires¹³¹⁴. The momentum for NLCR, and associated learnings, continued to build, including recovery actions following the 2019–20 bushfires, where it was also incorporated into grant

programs, and then again as part of the Victorian Government's Flood Recovery Program. Consequently, it has yielded insights from different types of disasters and geographic contexts.

The NLCR Toolkit provides a framework for identifying opportunities to incorporate NLCR projects in disaster preparedness, recovery and resilience, and provides illustrative examples for building human-nature connection across the disaster phases, to support human and nature resilience. It has been developed to support any person, group or organisation that is seeking to meaningfully support disaster impacted communities and recovery for people and nature. This may include community and environment/conservation groups, local, state and national governments, non-governmental organisations (NGOs) and not-for-profit organisations (NFPs), Traditional Owner groups, schools, research organisations and funders.

A range of tools have been developed to support the development, design and implementation of NLCR activities including:

- Templates to support planning and implementing NLCR activities
- Practical examples showing groups undertaking NLCR actions in the different phases of disasters
- NLCR research and evaluation overview
- NLCR and emergency management principles
- Mapping NLCR to existing frameworks.
- NLCR resource hub

The toolkit is accompanied by the Story Library that shares brief stories of NLCR initiatives across different contexts, communities, activities, and outcomes. These stories were developed in collaboration with the stakeholders involved in developing the toolkit. They provide inspiration and examples when advocating for funding and planning for NLCR projects.

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Further information about NLCR

Please go to the NLCR page on the ARI website, the current home of nature-led community resilience in Victoria: <https://www.ari.vic.gov.au/research/people-and-nature/nature-led-community-recovery>.

To find out about getting involved or starting a NLCR project in your community, contact your local government authority or local environment group.

Acknowledgment

The NLCR toolkit is the result of a collaborative approach with the support of people, organisations and networks including conservation and environmental groups, local governments, state

government departments, not-for-profits, First Nations groups, funding organisations, universities and research groups. You can find details of the organisations that were involved in the toolkit.

Endnotes

¹ Quinn P, Gibbs L, Blake D, Campbell E, Johnston D, & Ireton G. (2021). *Guide to Post-Disaster Recovery Capitals (ReCap)*. Melbourne, Australia: Bushfire and Natural Hazards Cooperative Research Centre. Retrieved from: recoverycapitals.org.au

² Block K, Molyneaux R, Gibbs L, Alkemade N, Baker E, MacDougall C, Ireton G, Forbes D. (2019). The role of the natural environment in disaster recovery: "We live here because we love the bush". *Health Place*, 57, 61-69. doi: 10.1016/j.healthplace.2019.03.007. Epub 2019 Apr 11. PMID: 30981069.

³ IPCC (2022) *Climate change 2022: Impacts, adaptation and vulnerability. Contribution of working group ii to the sixth assessment report of the intergovernmental panel on climate change*. (eds H.-O. Pörtner, D. C. Roberts, M. Tignor, E. S. Poloczanska, K. Mintenbeck, A...B. Rama). Cambridge, UK, and New York, USA.

⁴ Martin, L., White, M. P., Hunt, A., Richardson, M., Pahl, S. & Burt, J. (2020) Nature contact, nature connectedness and associations with health, wellbeing and pro-environmental behaviours. *Journal of Environmental Psychology*, 68101389. <https://doi.org/10.1016/j.jenvp.2020.101389>

⁵ Porter, J. E., Dabkowski, E., Ghasemirdekani, M., Barbagallo, M. S., James, M. H., Prokopiv, V. & Wright, W. (2022) The impact of nature-led recovery initiatives for individual and community health post disaster: A systematic literature review. *Reviews on Environmental Health*. <https://doi.org/10.1515/reveh-2022-0061>

⁶ For example, see: Aldrich, Daniel. (2012). *Building Resilience: Social Capital in Post-Disaster Recovery*. The University of Chicago Press: Chicago, IL and London. 10.7208/chicago/9780226012896.001.0001.

⁷ Weir, J. K., Stacey, C. & Youngetob, K. (2011). *The benefits associated with caring for country*. Caring for Our Country, pp. 21. Canberra.

⁸ West, S., Haider, L. J., Stålhammar, S. & Woroniecki, S. (2020). A relational turn for sustainability science? Relational thinking, leverage points and transformations. *Ecosystems and People*, 16(1), 304-325. <https://doi.org/10.1080/26395916.2020.1814417>

⁹ Chan, K. M. A., Balvanera, P., Benessaiah, K., Chapman, M., Díaz, S...Turner, N. (2016) Why protect nature? Rethinking values and the environment. *Proceedings of the National Academy of Sciences*, 113(6), 1462-1465. <https://doi.org/10.1073/pnas.1525002113>

¹⁰ Stories compiled by Lee, K., Lamont, A., Whiteford, C., van Eeden, L., & Hames, F. (2024). *The Nature and community-led approach to disaster resilience: Story Library*. Published Report. Department of Energy, Environment and Climate Action, Heidelberg, Victoria.

¹¹ Hobfoll, S. E., Watson, P., Bell, C. C., Bryant, R. A., Brymer, M. J... Ursano, R. J. (2007) Five essential elements of immediate and mid-term mass trauma intervention: Empirical evidence. *Psychiatry: Interpersonal and Biological Processes*, 70(4), 283-315. <https://doi.org/10.1521/psyc.2007.70.4.283>

¹² Australian Government Department of Home Affairs. (2018). *National disaster risk reduction framework*. <https://www.homeaffairs.gov.au/emergency/files/national-disaster-risk-reduction-framework.pdf>

¹³ Reeves, J., Hames, F. & Graymore, M. (2019). *Watery Places: Stories of Environmental and Community Renewal*. In: Eds Campbell, Duffy, Edmondson: Located Research: Regional places, transitions and challenges.

¹⁴ Hames, F. (2012). *Engaging the community in native fish recovery following bushfire: Black Saturday Victoria 2009 – Natural values fire recovery program*. Department of Sustainability and Environment, Heidelberg, Victoria.