People Led Prevention delivered by Landcare NSW

Landcare as an Enabler of Behaviour Change in Disaster Resilience- an evidence informed approach

April 2024

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Part 1 – Background

Introduction

The Project

Landcare NSW have been funded through the NSW Reconstruction Authority Disaster Risk Reduction (DRR) Fund to deliver the People led Prevention project. In line with the DRR Fund objectives, the People Led Prevention Project aims to:

- Empower individuals and communities to understand their natural hazard risks and encourage proactive disaster planning and preparedness.
- Create more connected communities with specific support and natural hazard information offered to newcomers.
- Identify key barriers to adopting disaster resilience behaviours in the community.

This Paper

This paper has been prepared as part of Landcare NSW's broader practise and behaviour change learning for the Landcare community. We have utilised a convergent evidence approach utilising information from literature, key themes from interviews and previous work undertaken for Landcare NSW.

Interviewee list:

- **Dr Aditi Mankad**, Senior Research Scientist, Theme Leader Interdisciplinary Decision Making, CSIRO
- **Elly Bird**, Executive Director, Resilient Lismore
- **Heidi Chappelow,** Project Manager, Hunter Local Land Services
- **Jamie Walker Senior Project Officer,** Northern Region Aboriginal Affairs, Premier's Department
- **Jessica Leck**, Consultant (former local Landcare Leader)
- **Jodie Graham** Mid Murray Operational Officer, Rural Fire Service
- **Lisa Walker**, Cultural Insights Lead, Orange Compass
- **Nina O'Brien,** Disaster Resilience and Recovery Lead, Foundation for Rural and Regional Renewal
- **Rob Henderson**, Emergency Management Team Leader, Hunter Local Land Services

This paper builds upon Landcare's previous experience, wisdom, and knowledge to provide deeper insights into how to influence behaviour change, and Landacre's role in this. The purpose of this paper is to clearly identify, understand and leverage the barriers and enablers of behaviour change in order to provide insights to inform Landcare's future work. It identifies general barriers and enablers and examines how they impact on behaviour change to help to guide Landcare's ways of working. Information regarding

Barriers and Enablers of specific intervention may be found in Landcare's People Led Prevention project resources funded by the Reconstruction Authority in 2022[1].

This paper is intended for use by Landcare NSW and Local Landcare Networks to support behaviour change.

Disaster Resilience and Risk Reduction

What is Disaster Risk Reduction and Resilience?

Disaster risk reduction is intended to reduce and prevent disaster risks and manage the residual risk. It is one aspect of strengthening disaster resilience (DFAT, 2023). The internationally recognised United Nations Sendai Framework for Disaster Risk Reduction (UN, 2015) targets reduction in mortality, economic loss, number of people affected and damage to critical infrastructure and services. It aims to increase the number of countries with local and national Disaster Risk Reduction strategies, international cooperation to developing countries and access and availability of warning systems.

Disaster Resilience is broader than disaster Risk Reduction Community Resilience. It includes the geographical and sociological capacity of a community to withstand and mobilise effectively in response to a crisis, and to heal and recover over time. Building community resilience involves connecting, mobilising, and attending to community resources and strengths. This supports the whole community to contribute to community wellbeing and creation of a robust and engaged community that can function in times of crisis and uncertainty (Howard et al., 2022).

Disaster Resilience and risk reduction is an emerging field. In 2024, the NSW Reconstruction Authority released the first State Disaster Mitigation Plan (NSW Reconstruction Authority, 2024). This followed on from the Second National Action Plan for Disaster Risk Recovery released in 2023 (NEMA, 2023). Following these two key pieces of policy, local Disaster Adaptation Plans, based in Local Government Areas will also be developed in 2024. As these are developed, it is of particular importance that Landcare works effectively to support disaster Resilience planning in Landcare communities.

Part 2 –Supporting Behaviour Change

Behaviour Change Models and Disaster Resilience

There are many behaviour change models. We deliberately do not go into depth on reviewing them all here. Instead, after review, we have chosen to focus on two models:

The first is the EAST model (Service, O. et al, 2015), which is currently utilised by Landcare to inform interventions. EAST refers to Easy, Applicable, Social and Timely and is a useful guide when developing programs and interventions. The intent of this model is not to provide a comprehensive representation of what influences behaviour, but a simple, easy

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[1] Landcare's People Led Prevention Evaluation Report (Mudford et al 2023a) and Landcare Behaviour Change (Mudford et al. 2023b).

to remember evidence-based approach to behaviour change (Service et al., 2015). The EAST model does not however consider the underpinnings of behaviour change, such as attitudes or beliefs.

The second model we have utilised is the COM-B framework (The Decision Lab, 2024 Social Change, UK, N.D.). This was developed by behaviour change experts to consider behaviours and how to influence behaviours. COM-B stands for: Capability, Opportunity, Motivation-Behaviour. This model helps to identify and understand what needs to be targeted for a behaviour change intervention to be effective.

Building upon Landcare's current approach, this paper proposes to combine the EAST and COM-B frameworks. We recommend the use of the COM-B framework initially to provide deeper insights into the enablers of change and help support understanding of what underpins the behaviour. The EAST framework can then be used to consider the practicalities of what will make the behaviours readily implementable and how to intervene (see Figure 1 below).
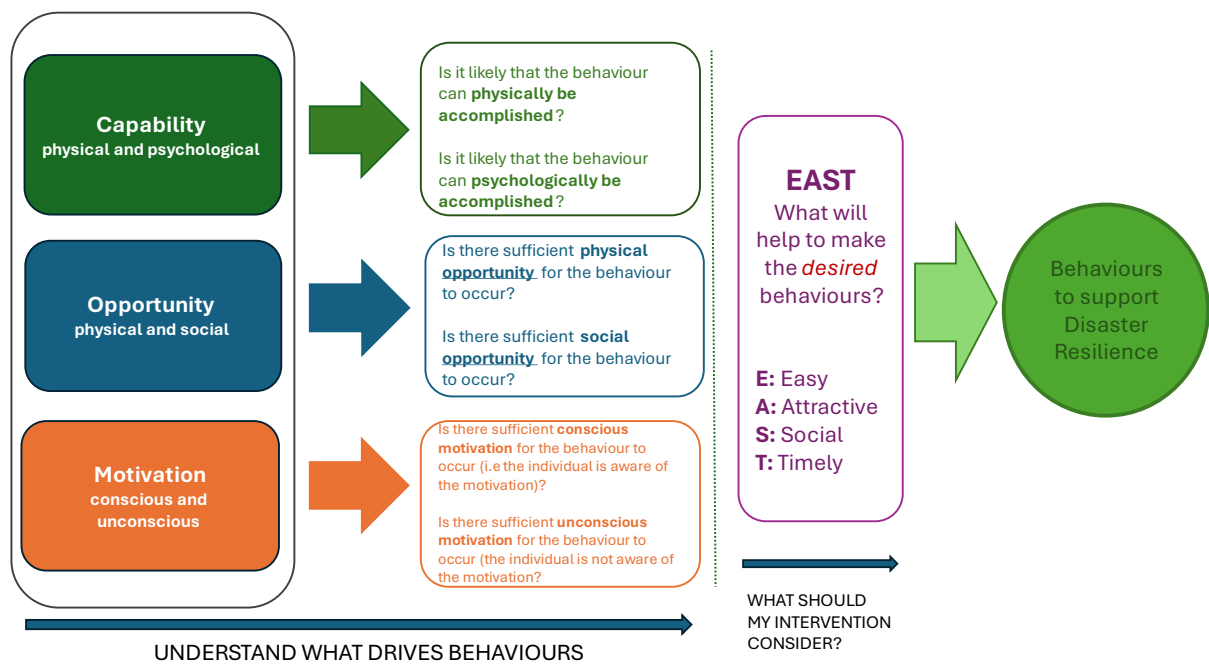
Figure 1: Combining the COM-B and EAST frameworks for behaviour change

Key Ways of Working To Support Behaviour Change

In the following section, we have identified key themes to consider in behaviour change and identified Barriers and Enablers for each. These themes include:

- Always start with community
- Community to community is best
- Networks of networks can be leveraged

- Focus on the long term

The COM-B model has then been used to frame how Landcare can understand the drivers behind behaviours to better support change; if capability, opportunity and motivation are considered, it becomes easier to understand where intervention is required to support change. Landcarers can use this model to understand how to target and exactly where to focus their interventions. The intention is that Landcarers will continue to use the EAST framework, as they are doing already, to develop locally tailored interventions.

An example of the model in action

Activity: Landcare to engage children to plant trees on school grounds and the children are not engaged.

Capability: The children have had a session on how to plant trees and have been shown how to do it.

Opportunity: They have had the opportunity to practice with a Landcarer and know the correct procedure. All of the equipment and seedlings have been laid out for them and the tree planting area marked.

Motivation:

Conscious motivation: The children have not yet learnt about the importance of tree planting and its environmental benefits.

Unconscious motivation: The children can see many other engaging activities occurring in the playground. One child has been told by his parents never to get his clothes dirty at school and another does not like the feel of dirt. This may influence their desire to participate and how appealing the activity is to them in this moment.

Behaviour:

In this instance, capability and opportunity are present and motivation needs to be targeted in order to influence behaviour.

Consider how this then intersects with the EAST model, regarding where to intervene.

The behaviour is presumably **easy,** as they have the skills, support and resources to complete the behaviour. It is not currently applicable nor social and the request is not timely. How can we influence these factors to increase motivation? There is no 'right answer' and the solution may be approached from many different angles.

Motivation may increase if **applicability** increases. For example, if the children understand the 'why'.

Motivation may increase if **sociability** increases. For example, if they are paired.

Motivation may increase if the activity becomes more **timely**. For example, if there are fewer distractions.

1. Always start with community

'Based in, run by, delivered by community'

What does this refer to?

All programs and interventions must start with the community and be codesigned with community (Bath, 2022; Keating et. al., 2022 NSW Reconstruction Authority, 2023).

Our interviewees repeatedly emphasised that communities are best positioned to identify what they would like to focus on and explore and starting with community is the most effective way to encourage behaviour change. The following outlines the key barriers and enablers to working with community to build trust and empower them to identifying priorities.

Barriers and Enablers for working effectively with communities

Enablers

Start at the start: Communities do not want to be 'done to' and are often the best judges of what they need. Prior to developing programs, the groundwork must be laid. Where possible, do not go in with a preconceived idea of what you would like to implement.

Take time to understand and build trust: Listening before talking was identified as one of the primary enablers of community engagement and is essential for effective codesign. Understanding the community's needs and perspective prior to developing and implementing an initiative is vital.

Lean into the tricky conversations: Having an honest discussion helps to build trust. Many communities have been through difficult experiences and may have had negative experiences with service providers in the past. In order to truly understand community needs; it is important to acknowledge what has gone before and work together on how to move forward.

'In the disaster preparedness world if you don't have trust, you can't have the relationship' If you don't have a relationship, you've got no motivation to change behaviour'

Work flexibly to provide what is useful at the time: Supporting what the community needs at the time is an effective means of proving usefulness and building trust. If they need written resources as they are too busy to chat, provide written resources. If the community has just been through a major event, they may not want information, but a place to relax and gather.

The belief that 'outsiders may not understand': There is often the perception that outsiders do not understand local community needs. Hard work is required both to build trust and understanding, and to provide empathy, connection and genuine relationships.

Communities may have had negative experiences: In some communities, they have had many different organisations and individuals come into the communities and run programs that have then ended. Over time, trust has been eroded and it is important to consider what the value add or point of difference may be in the current program.

True codesign takes time that is not always available: Projects may have limited timelines and the codesign process, in particular the ability to build trust and engagements and get buy in may be compromised. This means that co-design needs to well-planned and resourced when designing programs.

Resourcing: Preparedness and resilience activities also take time and resourcing that is not always available. Some preparedness activities may have significant complexity and require practice and upskilling. This can be expensive and labour intensive.

A First Nations Perspective:

This theme of 'always start with community' is particularly important from a First Nations perspective. With a fraught history of colonisation and many service providers adopting a 'done to' rather than 'work with' approach, co-design and an approach ensuring cultural knowledge is respected is absolutely vital.

An important component of this is, where possible, employing an Aboriginal workforce to support this process. First Nations communities are often more comfortable with and more likely to engage with and authentically co-design with a locally appropriate and trusted Aboriginal workforce.

Many First Nations cultures are 'relationships first,' so the time to 'yarn', get to know one another and build trust is an essential component. At times, this seem at odds with urgent timeframes and funding and program requirements. However, it will set the critical foundations for success.

What does this mean for Landcare?

Considered in the context of the COM-B model:

Capability

Go slow to go fast: In the initial stages, it is vital to slow down and build the relationship. Though Landcarers may be funded for a specific purpose or to convey specific knowledge, early in the project, consider instead how you can build relationships, trust and a two-way knowledge exchange to build a shared understanding. Spend time understanding the community and how you can best support capability building and behaviour change.

Opportunity

Create space to understand what community needs: Give community members the opportunity to genuinely share their needs and allow yourself the time and space to genuinely understand what the community needs. This means thinking about how you come into the community. It may not be coming in initially as an 'expert' or project worker with information to share, but instead meeting people, getting to know them, and gaining an understanding of their perspective. In information sessions, it involves letting people share what they need to, even if it is a difficult topic or differs from what you have anticipated.

Inclusion is also a vital component: Consider how you can access, include, and invite in those that may not historically and traditionally be involved in programs and services (Howard et. al,2022).

This may mean mapping your stakeholders and actors, thinking about 'who isn't in the room' when gathering, and who else in your community could benefit from this work. In order to access diverse groups, this may entail different modes of communication and engagement that further support inclusion. It may also involve going to different settings to meet those who do not generally attend, such as the local playground or shopping centre, disability groups or events and locations that you may not have previously considered.

Motivation

Approach with a seed, not a tree: Motivation to change behaviour is increased if the community and individuals have strong ownership of the idea. Ensure your approach empowers and builds on strengths, rather than highlighting failure. Be clear and honest from the outset about what is in your remit including the funding and duration of project.

Sometimes you need to go off script: Another vital component of this is understanding context. A community who has just been through a significant event, may not have the capacity to take on large amounts of new information or a new program, but may respond well to an alternative way to get together and provide information. Examples from interviewees included offering 'Pizza and Ping Pong' with brochures and information available if desired.

'The conversations people want to have last month is a different conversation that they want to have next month, and there's a lot of trauma sitting in community and fatigue and engagement fatigue.'

(Interviewee, March 2024)

2. Community to community is best

'People learn best by leaning over the fence. And see what the neighbours are doing'

(Interviewee March 2024)

What does this refer to?

One of the primary themes that emerged in interviews, and is well supported by literature, is the importance of direct and local messaging that travels from one community member to another (Aldrich, 2012; Villar, 2021). This applies with regard to both formal communications such as information sessions and demonstrations and informal communications, such as neighbours talking to one another.

In order to enable and support this approach, rather than the traditional model of 'experts' coming in and providing a session, supporting community members and building the capability to share information within the community is essential. Utilising local community to promote important messages through audio visual and online mediums is vital.

Barriers and Enablers

Enablers

Social capital of community members: Community members have a level of social capital that helps to support behaviour change. Those from outside the community may have to work harder to build that capital. If community members speak to one another about behaviour change initiatives, this helps to promote and encourage new behaviours.

A unique understanding of context**:** Community members also have a unique understanding of the local context and ways of working within the community. The social, economic, and environmental context is nuanced and understanding of place is important in disaster resilience work.

The ability to learn from one another: Community members seeing others do, then having the opportunity to practice in a safe environment where they feel comfortable to make mistakes and ask questions, is a strength of Landcare and its community. In the disaster resilience space this allows information to be tightly tailored to local context and needs.

Barriers

With leadership and authority comes complexity: When community members are placed into positions of authority, it comes with an additional level of complexity, as their

workplace is also their home. This requires added care and consideration to ensure no harm is done, such as if programs are discontinued or the content is controversial.

Community members may also be asked to step into roles where they don't have the skills and expertise: There is also the opportunity to provide capability building, tools and hands on support to enhance capacity and capability in areas such as leadership, project management, communications and managing difficult conversations.

Competing demands and a lack of time: Community members may also have many competing demands lack the time and resourcing to focus on behaviour change initiatives.

Insurance: A number of our interviewees highlighted insurance challenges around volunteers and demonstration of nature-based strategies, particularly those that carry significant risk, such as fire.

A First Nations Perspective:

As previously mentioned, where possible employing Aboriginal team members is an important component of community-to-community engagement. Relationships are key. In an environment where under resourcing and competing demands remain a challenge, reach outs from other organisations to support initiatives place pressure on an already stressed workforce.

In many settings, particularly Discrete Indigenous Communities, which may be remote, the challenges of finding staff members who are part of the community means being flexible with job share arrangements and timing of projects.

NSW is in the process of establishing Aboriginal Community Resilience Networks that work from within the community, for community which may further support community to community work around disaster resilience.

It is also important where possible to use trusted, well-established platforms for community-to-community engagement. For example, during the Lismore floods, the Koori Mail played a key role in provision of information and distribution of resources and trusted social media sites were relied upon heavily.

What does this mean for Landcare?

> ***'Community based Landcare can mean a small core group of people are carrying the load, but in the disaster resilience space we need to adopt a more distributed leadership model.'***
>
> *(Interviewee, March 2024)*

Capability

Distributed leadership: Landcare has an essential role in supporting a distributed leadership model, where leadership takes place within and among the community.

Identifying and supporting community members to step into leadership positions is a role Landcare can play. This includes community members who may not be identified as leaders, but potentially have the characteristics skillset or expertise to develop leadership capabilities. It may also involve people who, though not in leadership positions, play pivotal roles in the community where they will have networks and connections that help drive greater peer to peer learning across a wider cohort of participants.

Community members are more likely to experience burnout and overwhelm if leadership and responsibility sits with too few individuals. This must be considered both in terms of paid Landcare roles and volunteer positions.

Diverse leadership - both technical leadership and relational leadership It is important to remember these is more than one type of leader, and one type of leadership. Community members bring different strengths and cannot be expected to fulfil all roles. There may be leaders who are able to lead from a technical perspective (E.g. project managers, technical experts) and others who can lead from relational or social perspective (E.g. natural networkers, social organisers).

Succession Planning: Focus on growing young community members, older members who may not previously have taken up roles of authority, or members with diverse skills to take up roles within the Landcare group. More experienced members may be able to mentor and support emerging leaders.

Considering what type of support is required is essential: Before supporting, identify exactly what is required and tailor your support accordingly. Try to remove any barriers to engagement and participation.

For example, if technical knowledge is required, training and information provision or calling on an expert to support may be effective. If there is a lack of on the ground resourcing, providing practical support such as emailing, sourcing spaces, invitations, flyers, venues or catering may be helpful.

Consider if these is support you can provide to encourage inclusion. This may include transport or specific audio visual or human resources.

Opportunity

Varied methods of communications: There are many ways in which community members can hear from one another. They require varying degrees of labour and time. Consider this when you are developing content, whether it is literature or social media. You can utilise case studies and short videos of people and stories to whom your target audience can relate. Once again, consider the accessibility of your messaging and ensure it is accessible.

Trial by error: Hearing information is not as effective as the opportunity to try out a solution. Provide opportunities to try. There are many opportunities for collaboration where Landcare can support the opportunity for community to learn from one another. Examples of this are activities such as ecoburns with the local RFS captain involved. Create opportunities in collaboration with locals to practice and refine behaviours. This supports behaviour change and their transition into everyday practice.

'They wanna actually know what it's like to be in a practice burn, to understand, to see how the fire is gonna move on the land. They don't want the first time they have to do something big and scary like that to be by themselves on a property.'

Collaboration: There may also be further opportunities to collaborate with local 'resilience organisations' such as Resilience Lismore that are run by local people doing community to community work. Forming a collaborative relationship may help to leverage existing resources and relationships to extend this work and prevent over-burdening and duplication for community.

Motivation

Play to community member's strengths and offer opportunities to succeed and grow: Supporting community members to develop their strength, interests and skills will provide increased motivation for participation.

Consider renumeration: Given demands placed on volunteers and volunteer fatigue, renumeration for time should be considered where desired and feasible.

Partnerships Partnering with other well regarded organisations such as RFS may also increase community engagement in programs and activities.

Engaging different cohorts: Consider targeted efforts to engage specific cohorts who are not traditional Landcarers E.g. people of non-English speaking backgrounds, disabilities, youth.

3. Networks of networks can be leveraged

'Landcare NSW provides access to networks of people and land managers, which can be activated, to become involved in disaster preparedness.'

### What does this refer to?

Networks can be considered at multiple levels and theories on network structure abound (Gamper, 2022). One way to consider networks is at micro, meso and macro levels. In this theory, micro refers to the individual level, macro the institutional level, and meso is the link in between (Gamper, 2022).

The layering of Landcare's role at the member, group and network level means Landcare's relationships and networks may be utilised at all levels to support and influence behaviour change. In communities, there are connections at all levels and a range of networks, that are often intertwined and overlapping. It is the interconnection between these networks, or 'networks of networks' that a number of our interviewees identified as a powerful enabler for disaster resilience behaviour change.

Utilising the footprints of Landcare's members, groups, and networks, together with existing community networks means the social and environmental outcomes for disaster resilience work is a natural fit for broader reach.
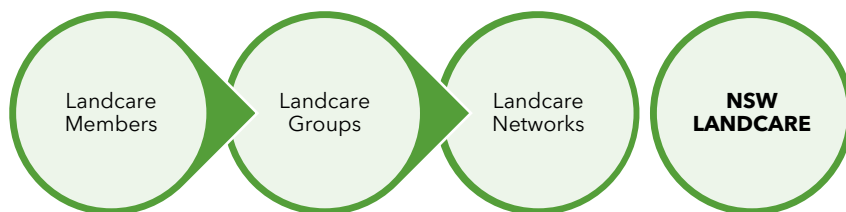
'Communities that don't have sticky networks aren't strong '

(Interviewee March 2024)

Barriers and Enablers

Enablers

Common Language*: Disaster mitigation and adaptation are relatively new concepts. Previously, communities have largely focused on response and recovery. In the first instance a shift in language and framing is required from recovery and response to mitigation and adaptation.

Building a shared understanding of the importance of this across networks is essential as a shared common language acts as a lever to enable behaviour change. Interviewees identified building a common language and shared local understanding to support information exchange as pivotal when building programs.

Open membership: Many groups and networks have formal and informal networks, which means that communication is still distributed to all landholders beyond those who are paid group members resulting in a wide distribution of materials.

Funding: Community initiatives are often held together by volunteers and run with limited, short-term funding. Landcare's network model often strengthens group-based responses to projects by providing organisational scaffolding and administration support to the membership.

Barriers

Diversity and Readiness: No two Landcare networks are same. The strength of each network is in its diversity. They are complex networks with various reasons for being, focus and capacity. This means that some Landcare groups have a strong appetite for disaster resilience related works whilst others will require additional input over time to develop an interest.

Closed mindset: This can present in some communities, who maintain a traditional often conservative approach to land management practices and not as open to new ideas. In some communities, some networks may consist wholly of members with this mindset and it can be challenging to encourage new concepts for knowledge transfer and behaviour change. This is where the concept of using 'networks of networks' is vital.

Declining populations in some communities: Very small and isolated communities have limited people to take up roles This creates increased pressure on a limited number of people and their networks can become quite small.

FIFO workers and absentee landowners: Challenges have also arisen from the rise in FIFO workers in some regions and absentee landowners in others. In areas such as the Southern Highlands, up to 25% of land owners are absentee owners, who are not engaged as part of the community. This makes it more difficult for them to be incorporated into the network.

First Nations Perspective

There is a wonderful weaving of traditional owner networks such as Discrete Indigenous Communities, Aboriginal Culturally Controlled Organisations, or Local Aboriginal Land Councils that exist in regional areas with strong connection to country and increasing involvement in disaster preparedness and recovery. It is important to ensure Aboriginal community voice is always incorporated into Disaster resilience work.

The establishment of Aboriginal Community resilience Networks is also in process in NSW. There is a unique opportunity to work with and include these networks in Landcare's work. This in turn would result in a stronger 'networks of networks'. Strengthening the reach and increase of knowledge and wisdom of the local area would therefore influence disaster resilience work more holistically from a western and indigenous perspective.

What does this mean for Landcare?

Capability

When considering capability building within community and developing robust systems and services, it is important to recognise that there is a complex ecosystem of organisations that have a role in disaster response and resilience.

It is also important to consider that Landcare is not part of the Local Emergency Management Committees (LEMC) so checking in and ensuring alignment of activities is Vital.

In designing projects, it is vital to consider where technical capability may sit within a network. Consulting and partnering with organisations and individuals that hold specific expertise is essential. Organisations that have not historically partnered with Landcare for example emergency services organisations, all bring capability that Landcare does not otherwise have. First Nations organisations offer expertise in traditional land management practice i.e. cultural burning and a range of local subject matter experts (fire ecologists, flood plain specialists, agronomists) or the Local Emergency Management Officer (LEMO) based in local council are also useful resources.

Social expertise or capability such as understanding how best to engage with and activate networks and individuals will likely sit locally and it is important to consider where this expertise sits.

In advocating for funding, resources and program design NSW Landcare can be utilised by local groups and their networks (i.e. using networks of networks) to connect to the state and national platforms and leverage support.

Opportunity

When planning disaster resilience activities, Landcare needs to think about not only their network of members and groups but also the greater networks that exist in their

community, as many community members wear many 'hats' in different circles. This will give many more people the opportunity to be part of and exposed to Landcare offerings and events.

Not all of these networks are formal or local networks but still provide great opportunities for learning, connection, collaboration and planning. Examples from interviewees include informal 'interest' networks of horse owners scattered throughout the state and beyond.

Advocating and promoting the 'Landcare network' in the disaster resilience space with its reach and access to land managers, in a rural and urban context is a unique opportunity as the Landcare NSW Pilot reaches completion. Land managers are interested in both the community disaster preparedness planning and implementing nature-based solutions, to ultimately become safer and better informed.

Motivation

Tapping into existing networks that are known and trusted in communities may increase willingness to engage in Disaster Resilience behaviours. Groups and members that have an open mindset to trial and test ways of doing things, a willingness to become involved and to include others are an important resource.   Using the 'networks of networks' principle, starting with one group will likely lead to broader dissemination of behaviour change.

4. Focus on the long term

Overwhelmingly the data and interviewees indicate investing in capacity and leadership for disaster resilience at the local level is a key ingredient to success. This means investing in people, and in networks of practise to achieve long term, sustainable behaviour change and an ability to shift and adapt over time.

Implementing behaviour change does not always translate neatly to existing funding cycles and projects are often discontinued before they have the opportunity to be embedded or demonstrate outcomes.

Previous Landcare projects have intentionally tried to build a legacy such as tools and resources and advocate for ongoing funding and resourcing in order to offset this issue (Mudford et. al., 2023b). It is also important to understand what works and doesn't work. Data gathering, documentation and continuous improvement is therefore essential to support long term initiatives and funding.

According to the SDMP (NSW Reconstruction Authority, 2024) a primary challenge is that many past pilot projects and one-off grants have not translated into models that can be adapted locally and replicated at scale.

Enablers

The following are enablers to support long term solutions:

Place-based responses: Tailored, place-based responses are needed due to the localised nature of disaster profile and the social and environmental interventions needed. Networks of dispersed and shared leadership also help build skills and knowledge locally across and within groups.

Resourcing, capacity and capability building initiatives to support data collection: In many projects the focus is on establishment and implementation and data collection is forgotten. Resourcing and capability building is required to support systems and processes so data gathering, evaluation and improvement is thought of and integrated in any project design, not as an afterthought.

Long term funding commitments: Longer term funding provides certainty in terms of budgeting, embedding and employment. It also supports data gathering and the building of an evidence base around what works.

Barriers

The following barriers have been identified in the sustainability of longer term programs and in the maintenance of programs and initiatives to support behaviour change beyond the life of the program:

Capacity of organisations: Disaster resilience work is often perceived as an add on and not core business. There are often more immediate pressing concerns that need addressing.

The challenges of scaling pilots: The short term nature of funding and logistics of starting something new means that given the lead time to set up new initiatives, they are only established for a short time, and therefore unable to gain robust data to prove effectiveness and gain additional funding to scale pilots.

Embedding learnings and knowledge as disaster resilience evolves: Disaster resilience is rapidly evolving. It is proving challenging for organisations especially not for profits to keep up with policy, practise, and funding in this space.

Staff turnover: Staff turnover is a large barrier as organisations grapple with short term funds for contracts, having limited local knowledge and expertise to access for hire, and limited resourcing for contracting in additional skillsets.

What does this mean for Landcare?

Capability

Community capability building must be the starting point of any Landcare based initiative. This means that the community can retain skills beyond the life of the project.

Opportunity

Landcare is a trusted and local brand that has been in existence for over thirty years in the community; it is here for the long game. Project design and planning is key to disaster resilience projects that Landcare deliver and if projects are funded then consideration of legacy or what will happen once the project is complete.

Its recommended that Landcare consider implementing some the elements that worked well in the People Led Prevention project (Mudford et. al., 2023b):

- Documented systems and processes i.e. co-design, local relationships
- A network of Disaster Resilience Facilitators
- Online and hard copy tools and guides
- Checklist for planning DR activities

Landcare could also consider having a central point for knowledge sharing so that there is a repository, and that people can access this information and share questions and project outcomes.

At a state level, Landcare NSW also has the opportunity to elevate the profile of their pilot projects to advocate for longer term funding and scaling of the initiatives.

Motivation

At a local community level, short term funding poses significant challenges in terms of both building community trust and sustaining long term change, it is recommended that mechanisms for sustained funding are looked at.

There is currently a strong focus at a state and federal level on disaster Resilience. Landcare NSW is in a strong position, given the success of pilot projects to advocate for funding for longer term programs and solutions.

Landcare's Role as an Enabler

Successful disaster resilience requires both bottom-up, community-led planning and engagement with top-down resourcing, including finance, infrastructure, and policy settings (Gallo and Aldrich, 2024). Landcare's role at a local, regional and state level positions the organisation well to be effective in this space. Considering figure 2 (below) Landcare's role spans all of the domains of community awareness and preparedness in disaster resilience.

Figure 2: Measures to Support Community Awareness and Preparedness (State Disaster Mitigation Plan, 2024 pp. 114)

Landcare's role is as an enabler, building capability, supporting, and empowering community organisations and other services working in this space to educate, demonstrate, collaborate, and connect for effective behaviour change around Disaster Resilience.

Landcare at a local community level

At local, regional, and state levels many organisations play a clearly designated role in the preparation response and recovery from disaster events E.g. RFS, SES. Other organisations step in to fill gaps, which can be both a strength and a challenge with regard to organisation, coordination and duplication.

As Landcare sits outside the Emergency Services network, it is important that their role in this space is clearly defined and creates no additional confusion or complexity. This also creates a unique opportunity for Landcare to work flexibly to provide support, coordination, resources, and capability building in collaboration with the local community and emergency services, particularly in the preparedness space.

Sitting outside the Emergency Management system also means not having to be the expert but supporting communities to convene and discuss DR is important and valued by individuals and groups. This allows Landcarers to better understand the existing landscape and consider how they can best support to build disaster resilience. This information can then be communicated at a state level. The opportunity to complete projects such as People Led Prevention (Mudford et. al., 2023b) and gather strong evaluation data supports Landcare in this role.

Landcare also has the opportunity to be the enabler to bring people and organisations together and decrease confusion of roles, accountability and authority in the community. Interviewees referred to siloed delivery of activities and repetition with organisations inadvertently working at cross purposes E.g. two events on the same night in a small town. Through this project, it was identified that Landcare can play an active role in

regional NSW communicating and connecting people in their network to multiple agencies and DR projects.

Landcare NSW role at a state level

Whilst Landcare operates locally, Landcare NSW also operates at a state level and is in a unique position to aggregate and elevate information to state government to inform policy and funding.

Landcare's role and structure also enables Landcare's ability to support demonstrations of new and innovative solutions. Landcare also demonstrates a commitment to data gathering, using methods such as significant change stories, case studies and numerical data and evaluation, which puts them in a strong advocacy position, both with regard to advocating with government but also advocating with community.

NSW Landcare's position in the system and ability to mobilise at a state, regional and local level allowed them to trial and test an approach to activate the Landcare network in disaster risk reduction. This state-wide approach aimed to test Landcare's role in the disaster space and develop a regional approach to engage the network in disaster preparedness. A Steering Committee was established to ensure collaboration and coordination at the state level which included representatives from:

- Landcare NSW
- State Emergency Service NSW
- Rural Fire Service NSW
- NEMA
- NSW Reconstruction Authority

Regionally, Landcare groups and network connected with local members of the abovementioned organisations and incorporated other local stakeholders.

Conclusion

As NSW faces more frequent, concentrated, and intensifying extreme weather events, it has never been more urgent to strengthen the disaster resilience of Australian communities. Landcare brings together practical natural solutions to mitigate and prepare for disasters and does this through a social, economic, and environmental lens. In a place-based context, with complex technical content and multiple actors dealing with disaster resilience, sustained behaviour change is complex to navigate well.

Incorporating an analysis of literature, local case studies and the learnings from the People Led Prevention project, this paper utilises established Behaviour change models, the COM-B and EAST model to provide Landcare with an evidence informed, practical approach to support its role in behaviour change.

We heard from interviews loud and clear: community-led approaches must be the way forward, and that community to community works best. This does not mean community

being left on its own: the expertise, support and resources of governments, emergency responders and service providers are critical in disaster preparedness.

This work found that there are key elements that Landcare can adopt when planning and implementing Disaster resilience activities:

- ***Always start with the community first***
- ***Community to community is best***
- ***Networks of networks can be leverage***
- ***Focus on the long term***

First Nations involvement and perspective is critical across all of the key elements and is a cross-cutting principle of this work. This must be considered and resourced in the planning, co-design, and implementation of projects. In First Nations communities it is imperative that this work be First Nations led, guided by First Nations culture and principles, and involve first nations employees where possible. Resourcing to allow the time, human resourcing and capability required in order for this to occur is essential.

In a complex environment with chronic underinvestment, short-term timeframes for planning and infrastructure that undermines resilience capacities in communities, Landcare is a clear enabler and has the potential to greatly expand this role in the disaster resilience space. Landcare continues to make gains in community led behaviour change to support resilience action on the ground. Their ability to adapt their role and programs based on place and community creates a powerful lever in this space.

Building of knowledge, skills and lived experience in Landcare groups, facilitators, communities and networks, together with their place based approach provides a unique opportunity for Landcare to strengthen and leverage their role in behaviour change around disaster resilience and the community, regional and state level.

Using the COM-B model to clearly identify Capability, Opportunity and Motivation for behaviour change, then the EAST model to develop Easy, Applicable, Social and Timely interventions provides a framework and supports Landcare to understand how best to target behaviour change. This will further strengthen Landcare's offering moving forward in the important work of strengthening disaster resilience.

References and Further Reading

Aldrich DP. (2012) *Building resilience: Social capital in post-disaster recovery.* Chicago: University of Chicago Press

Bath, J., & Wakerman, J. (2015). 'Impact of community participation in primary health care: What is the evidence?' *Australian Journal of Primary Health*, *21*(1), https//doi.org/10.1071/PY12164

Department of Foreign Affairs and Trade (DFAT) (2023) ' Disaster Resilience and Disaster Risk Reduction' *https://www.dfat.gov.au/development/topics/development-issues/building-resilience/drr/disaster-risk-reduction-and resilience#:~:text=Disaster%20risk%20reduction%20(DRR)%20is,of%20risk%2Dinformed%20sustainable%20development*.

Gallo, Ava & Aldrich, Daniel. (2024). 'Think Globally, Act Locally? Evaluating Boston Climate Projects' *Community Engagement. Human Ecology.* 1-12. . https://doi.org 10.1007/s10745-023-00473-2.

Gamper, M. (2022) ' Social Network Theories: An Overview'. In: Klärner, A., Gamper, M., Keim-Klärner, S., Moor, I., von der Lippe, H., Vonneilich, N. (eds) Social Networks and Health Inequalities. Springer, Cham. https://doi.org/10.1007/978-3-030-97722-1_3

Holling, C.S. (1973) 'Resilience and Stability of Ecological Systems' *Annual Review of Ecology, Evolution and Systematics* Vol. 4:1-23 https://doi.org/10.1146/annurev.es.04.110173.000245

Howard, A., Rawsthorne, M. and Joseph, P. (2022) 'Critical Dimensions in Community Disaster Resilience' [Fact Sheet], *University of Sydney for the Foundation for Rural & Regional Renewal* https://frrr.org.au/wp-content/uploads/FRRR_Critical-dimensions-for-community-led-resilience-building.pdf.

Keating, A., Paschen, J-A., Brown, L., Werbeloff, L., Pearce, T., Fawcett, K., Walden, I., Jones, K. Williamson, B., Archer, F., Spencer, C. and Rogers, B.C. (2022) 'Transformative actions for community-led disaster resilience' Fire to Flourish, Melbourne, Australia

Michaelsen MM, Esch T. (2023) 'Understanding health behavior change by motivation and reward mechanisms: a review of the literature'. *Front Behavioural Neuroscience.* Jun 19;17:1151918. doi: 10.3389/fnbeh.2023.1151918. PMID: 37405131; PMCID: PMC10317209.

Susan Michie, Maartje M van Stralen & Robert West (2011) 'The behaviour change wheel: A new method for characterising and designing behaviour change interventions' *Implementation Science* volume 6, Article number: 42

Minderoo Foundation, (2022) 'Resilient Communities Framework Version 1.0 June 2022'

Mudford, A, McKenzie, F, Millar,E (2023a) 'Landcare NSW Behavioural Change Campaign' (Internal Document)

Mudford A, Millar, E, (2023b) 'People Led Prevention delivered by Landcare NSW Pilot Project Report & Recommendations' (Internal Document)

National Emergency Management Agency (2023) 'Second National Action Plan for Disaster Risk Reduction' NSW State Government

NSW Reconstruction Authority (2024) 'State Disaster Mitigation Plan' NSW State Government

Perrings, C., (1998). Resilience in the dynamics of economy-environment systems. *Environmental and Resource Economics*, *11*, pp.503-520.

Pimm, S.L., (1984) The complexity and stability of ecosystems. *Nature*, *307*(5949), pp.321-326.

Service, O., Hallsworth, M.,Halpern, D., Algate,F., Gallagher,R., Nguyen, S., Ruda,S., Sanders,M. (2015) 'EAST-Four simple Ways to Apply Behavioural Insights', UK Cabinet Office https://www.bi.team/wp-content/uploads/2015/07/BIT-Publication-EAST_FA_WEB.pdf

Social Change UK. (n.d.). 'A guide on the COM-B Model of Behaviour. https://social-change.co.uk/files/02.09.19_COM-B_and_changing_behaviour_.pdf

The Decision Lab (2024) 'The COM-B model for behaviour change.' https://thedecisionlab.com/reference-guide/organizational-behavior/the-com-b-model-for-behavior-change

United Nations (2015) 'Sendai Framework for Disaster Risk Reduction 2015-2030' https://www.preventionweb.net/files/43291_sendaiframeworkfordrren.pdf

Villar, M.E. Johnson, P. (2021)'Tailoring Content for Authenticity and Adoption: Community-Based Participatory Research and the Co-creation of Story-Based Health Communication for Underserved Communities' *Frontiers in Communication*, April 2021 DOI10.3389/fcomm.2021.663389

West, R., & Michie, S. (2020). 'A brief introduction to the COM-B Model of behaviour and the PRIME Theory of motivation'. https://www.qeios.com/read/WW04E6.2