bushfire&natural HAZARDSCRC

INDIGENOUS FIRE AND LAND MANAGEMENT – IMPACT AND SUSTAINABILITY

The development of a Future Research Strategy around opportunities and challenges for sustainable partnerships in emergency management

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NAILSMA
NORTH AUSTRALIAN INDIGENOUS LAND AND SEA MANAGEMENT ALLIANCE

ARP Net
Aboriginal Research Practitioners' Network

Djabugay Native Title
Aboriginal Corporation

Dalkarra Djirrikay Authority Galiwin'ku

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Cover: Final project workshop, Kuranda. Qld. Hosted by Djabugay. 10 May 2021. L-R Back: Brad Grogan, Vince Harrigan, Glenn James, James Bayung, Barry Hunter Jnr, Jimmy Richards, Otto Campion, Ted Gondarra, Jimmy Morrison, Barry Hunter Snr, Michael Wassing, Lawrence Laing, Tony Hazell. L-R Front: Russell Hobbler, Ezekiel Deshong, Gavin Donohue, Leslie Geia, Radayne Tanna, Dameon Hunter. Not pictured (on Zoom): Marrandoo Yanner, Lee Valance, Andrew Kenyon.

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ARC	Australian Red Cross
ARG	Agency Reference Group
ARPNet	Aboriginal Research Practitioners Network
BFNT	Bushfires Northern Territory
CDU	Charles Darwin University
DFES	Department of Fire and Emergency Services (Western Australia)
EM	Emergency management
EMA	Emergency Management Agency/Agencies
FPIC	Free, Prior and Informed Consent
ILM	Indigenous Land Manager/management
Qld	Queensland
QFES	Queensland Department of Fire and Emergency Services
M&E	Monitoring and Evaluation
NAILSMA	North Australian Indigenous Land and Sea Management Alliance Ltd
NQld	North Queensland
NT	Northern Territory
NTES	Northern Territory Emergency Services
PAR	Participatory Action Research
PFES	Police, Fire and Emergency Services (Northern Territory)
WA	Western Australia

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ACKNOWLEDGEMENTS

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EXECUTIVE SUMMARY

CONTEXT

Significant work has been done over the life of the Bushfire and Natural Hazards Cooperative Research Centre (CRC) around the issues, opportunities and challenges facing remote Indigenous communities in the face of natural hazards. In the north of Australia, the predominant natural threats are cyclones, wildfire and flood, though the level of threat and impact of any of these differs considerably from region to region. There are other hazards that deeply concern remote community leaders, again, not equally across regions: heat stress and exposure, natural water resource salination and pollution, food security, toxicity and asthma issues from crude community waste burning, infrastructure issues (including road access); and related challenges; local capability to act, governance, resilience, inclusion etc.

The emergency management sector research has focused on technologies, capability, recruitment, and other aspects of EM agency preparation, response and recovery. This project responds to an identified gap in addressing the overall environment of Emergency management in remote areas. . . working together!

It is broadly recognised within Indigenous communities that EM is carried out FOR them, not WITH them. (See detailed discussion of this in the Arnhem Land context in Maypalama et. al.: 2016 and Sithole et. al.: 2021). This has generated increased interest, not only in the future engagement of communities in EM, but in the roles, if any, of EM and other agencies in the resilience of communities who, given structural and resource limitations in EM, are keen (and encouraged) to increase 'self-reliance' and take on more responsibilities in this space.

There is now a growing conversation nationally around government agencies and Indigenous communities collaborating more effectively. Much of this conversation has been around the perceived positive impact of traditional knowledge (particularly use of fire) on landscape health, and vulnerability to wildfire, how this may be integrated into rural fire service practice and what the real impact of this might be.

Indigenous leaders and rangers have consistently said and shown that use of fire is not separate from other (holistic) elements of caring for traditional country and that the social and cultural dimensions to land and fire management need to be acknowledged and respected to deliver the desired benefits to country and people (Sithole et. al. 2021: Maypalama et.al. 2019: James et. al. 2019: Burgess et. al. 2009). There are many aspects to this conversation and many perceived potential benefits of working together. They underpin this project's focus on partnerships to be able to explore this work together. Thus, the research brief is to:

- develop a future research strategy
- develop a strategic partnership framework
- explore research priorities.

METHOD

This research was conducted as a series of community-based discussions and workshops in the Northern Territory and north Queensland[1]. NAILSMA provided resources, logistics, backgrounding and other support to local Indigenous researchers and facilitators who ran the meetings on country. This was a Participatory Action Research (PAR) method, consistent with preceding research on community resilience and partnerships by ARPNet and NAILSMA under the Bushfire and Natural Hazards CRC project *Developing effective partnerships in remote north Australian communities: Indigenous research and leadership in Ramingining and Galiwin'ku*[2]. Inherent in this approach are direct benefits to Indigenous researchers and their communities from the process and from longer term outcomes influenced by their research and advocacy with EM agency leaders[3].

 Where possible, meeting notes from the NT and Qld discussions were drafted and circulated to respondents and all invitees to the final combined workshop. This was to share what had already been discussed and to help provide focus.

An Agency Reference Group (ARG) (made up predominantly of representatives from QFES, NTES and DFES, but including CDU, Red Cross, NAILSMA and BFNT people) was invited to review and respond to early workshop outcomes, and attend the final workshop. This step was to inform the ARG and Indigenous community invitees to the final workshop with a general view of both Indigenous and agency perspectives on EM priorities and partnership prospects. They were able to kick-off their face-to-face discussions with a degree of prior understanding and focus.

This final, combined workshop was hosted by Djabugay people on their land, facilitated by Barry Hunter, a Djabugay leader and consultant and supported by NAILSMA.

FINDINGS

To inform a Future Research Strategy the research team has organised ideas from the workshop and broader project into:

- Gaps – unmet issues, knowledge and challenges with business-as-usual

- Research Priorities – investigation, understanding and pathways for action.

- Partnerships – substance, development, focus and monitoring.

The work found that gaps are evident within communities, within EM agencies and between them. Summary of the findings includes:

- General lack of basic engagement by agencies – for example, not knowing who to talk to and how to start doing things differently.

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[1] Regrettably it was beyond the resource and time scope of this project to include Western Australia in the on-ground process. DFES were however, able to connect with the final workshop in Kuranda and the end, and Lee Valance's input much appreciated.

[2] See report. Sithole et. al: 2021. In Press

[3] Ibid. pp22-29.

- Limitations of local capability – governance, dedicated equipment and infrastructure, knowledge of EM systems and agency operations, restrictive laws etc.

- Very little knowledge of social capital and other assets available in communities – local knowledge, equipment skills, communications, cross-cultural training, new generation recruitment, networks of obligation and care, nuanced knowledge of country and its seasons, use of fire.

- Naivety from agencies about Indigenous culture and knowledge systems.

- Lack of understanding about the costs and benefits of adopting new support and partnership models, tailored to regionally unique needs.

- Lack of understanding of the impact across government agencies, particularly the lack of coordination of their functions, engagement and policy settings – often even within agencies.

- Lack of clarity about resilience building at community level.

- Poor recognition or knowledge of the impacts of climate change on different areas, and in relation to future planning

- How land tenure effects Indigenous fire and land management activities

- Performance criteria and stewardship of agency/community collaborations (cultural and EMA criteria) are undeveloped.

Research Priorities mirror the above gaps and challenges, leading to achieving practical steps in long-term relationship pathways:

- Detailed modelling of different approaches to sustainable involvement of Indigenous leaders and land management groups in EM partnership roles

- Cost benefit analysis of the different partner models to inform policy, operational change and short- and long-term Government EM budget planning.

- Reviewing laws and regulations to align with agreed partner roles, responsibilities and performance – e.g., State fire bans, fire lighting fines.

- Understanding the parameters of formal roles and responsibilities, decision making capabilities, cultural prohibitions/sensitivities, access rights etc. on different land tenure types (e.g., Aboriginal Freehold, Native Title, National Parks, Pastoral leases, town areas)

- Developing communication and EM management tools for local communities, including tools for Indigenous partners to guide agency partners in cross-cultural modus-operandi.

- Developing the 'two toolbox'[4] approach to maximise the effectiveness of working together, including monitoring criteria.

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[4] A phrase coined by Otto Campion referring generally to the strategic integration of knowledge and technologies from Indigenous and 'western' sources to achieve mutually desirable goals.

- Investigate opportunities and challenges of State and Territory EM agencies collaborating with each other to support the partnership approach with Indigenous communities across the north.

- Streamline engagement and partnership approaches for agencies in relation to common features across communities and identify approaches to accommodate unique circumstances.

Integrating Indigenous fire and land management knowledge with EM operations and systems is not about taking the knowledge, it's about building respectful and trusting relationships with Indigenous people to deliver more effective EM together.

UTILISATION

This research method (Participatory Action Research) assumes that the Indigenous researchers and their communities are a focal end-user. Participating EM agencies are another key end-user, not only by benefiting from the research in the long run but through face-to-face interactions with community researchers through which opportunities and challenges in developing direct relationships with participating communities can be discussed and solutions progressed firsthand.

In this sense the research is being used as it develops, to benefit communities, relationship building and short-term achievable change. It is also aimed at the national agenda for partnerships with Indigenous land managers, seeking to inform the new Natural Hazards Research Australia[5] about future research priorities and to encourage more discussion, more experience sharing and broader engagement of Indigenous leaders and influential EM agency staff in collaborative workshops hosted by Communities in different jurisdictions *on country*. This latter aim reflects the success of this project's collaborations and use of this model as an ongoing forum to benefit the sector. See for example the Aims and Expectations of the final project workshop below.

 The summary of next steps:

1. Relevant EM agencies and community leaders to start or continue working on their relationship and achievable change now.

2. This report, supported by participating agencies, is presented to the new Natural Hazards Research Australia as a foundation to attract a future fully funded program of collaborative PAR with community researchers and of partnered EM activity.

3. For the next and future collaborative workshops to be planned and funding secured so they may become annual, focused, Indigenous led pillars of EM sector partnerships.

4. Conversations continue at 3 levels: community level, transregional and across the multi-agency national conversation. This should include Qld, NT and WA EM agencies connecting more effectively with each other

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[5] This is a research Centre that is planned to replace the Bushfires and Natural Hazards CRC.

and supporting each other to progress partnership building at North Australia scale.

5. Indigenous communities and land management groups, their representative organisations and supporters take whatever steps they are able to, to build resilience and capability in EM.

Ramingining workshop. April 26-27. R-L: Rose Wurrgu Wurrgu, Susan Duwalatji, Rita Dhurrkay, Christine Brown, Maisie Cameron, Jimmy Djamarnbar, Judy Garnindja, Richard Bundalil (standing at back), Graham James, Glenn James, Otto Campion, James Bayung, David Keighran, Jimmy Morrison.

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END-USER PROJECT IMPACT STATEMENT

The workshop was certainly an experience to me and was good to be able to meet with others to see and hear how they have progressed and gained confidence in managing fire, emergency and rescue on their country.

Jimmy Morrison

Thanks for the opportunity of the day. It has already started some state and regional links to further support…Thanks to you, Barry and everyone for their continued openness in sharing their thinking, challenges and opportunities with the group. I personally found the day extremely valuable. QFES is continuing to build its bushfire capabilities and will be seeking employment opportunities specific for x7 Indigenous Bushfire Safety Officers to assist with our partnering and support. I have committed to further training of staff / volunteers this year using the existing JigaJa model in Burketown, and QFES will explore alternate service delivery models at State and Regional level for improved engagement and provision of disaster management services with and by first nations people. We look forward to continuing to support and assist in the NAILSMA works and other national, state, regional and local opportunities for knowledge sharing and engagement.

Mike Wassing, *Deputy Commissioner, Queensland Fire and Emergency Services, QLD*

The Djabugay Aboriginal Corporations were pleased to host the workshop and engage in discussions that will lead to better engagement between Indigenous land and sea rangers and emergency services in respective states and territories, particularly discussing possible research outcomes that may lead to a broader approach towards fire management and the involvement of rangers in indigenous lead research.

Djabugay Aboriginal Corporation

This series of workshops have been instrumental in bringing together communities, not for profit organisations and government departments to discuss better coordination and collaboration for disaster management across the whole of the tropical north of Australia. This is going to make a difference - and if it wasn't for these workshops these discussions would not have happened. Thank you.

Andrew Kenyon, *Northern Territory Director, Australian Red Cross, NT*

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INTRODUCTION

Discussions about emergency management in their communities have been held by Indigenous leaders in the NT Top End and North Queensland, in part responding to a previous CRC project and making the most of the current CRC opportunity. Indigenous representatives, QFES, NTES and DFES agency representatives, Red Cross, NAILSMA and CDU held a workshop in Darwin, November 2020. This current round of discussion and workshops seeks to continue this cross-border collaboration and focus on some practical issues that will provide pathways for more effective partnerships between Indigenous groups and EM agencies going forward.

The report is broken into Knowledge Gaps, Research Priorities and Strategic Partnerships Framework. Together they form an overarching Future Research Strategy. This Strategy is informed by this project's activities: the Combined Workshop in Kuranda, regional workshops and other discussions held in the NT and Nth Qld, and by longer experience gleaned by other groups.

Table 1. Deliverables as questions

Bushfire and Natural Hazards CRC Project Outcomes	Adapted into questions to guide discussion
Explore key issues and knowledge gaps to develop a Future Research Strategy	Why are we talking about partnerships in EM and How should partners work together?
Future research priorities assessment	What are the research priorities?
Develop a strategic partnership framework	Who can and should be involved in partnership research opportunities and challenges and how should the partnership work?

The themes of particular interest to the CRC were an important focus (particularly fire management), though free flowing discussions were also encouraged to allow participants to raise and uncover nuanced ideas in this cross-cultural exchange - Note, for example that topics were not limited to Indigenous fire management. Sessions were held on country, welcomed by the relevant Traditional Owners, and facilitated by local Indigenous project leaders.

BACKGROUND

In July 2020, the Australian Government announced that funding would be available to the Bushfire and Natural Hazards CRC to undertake research with direct links to the bushfires which occurred in the 2019-2020 Black Summer. The Government and CRC are particularly interested in these three outcomes:

1. to explore key issues and knowledge/capability gaps to develop a Future Research Strategy

2. to develop a Strategic Partnership Framework

3. to undertake a future Research Priorities Assessment

The national conversation around future and strategic emergency management has a growing focus on potential partnerships with Indigenous land managers. Themes on Indigenous land management obvious to fire and emergency service agencies (amongst others) are traditional knowledge systems and in particular nuanced knowledge of and application of fire in managing landscapes. This project sought to provide a forum for Indigenous people to explore, appropriately articulate and present these and other aspects of their knowledge, capability and aspiration to an audience increasingly eager to engage with them for common benefit, but typically uncertain about how to engage on this; what the challenges are and how to meet them; what the potential costs and benefits are; and what the broader aspirations of Indigenous communities are in this space.

The disastrous fires in the SE and elsewhere, combined with a highly significant resurgence of Indigenous knowledge and practice in using fire to look after country, have fuelled this interest in exploring ways in which Indigenous land and fire managers and EM agencies might collaboratively raise sector capability and reduce the risk and impact of wildfires. There are many questions about how and on what basis collaborations might be built, as well as fundamental questions about how we view fire in the landscape and our relationship with it. This project scoped and recommended key areas of research to inform and drive better models for collaboration in EM in the future.

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RESEARCH APPROACH

NAILSMA, ARPNet and Yalu[6] used Participatory Action Research approaches for Arnhem Land based projects immediately preceding this one. They are documented in the Final Report for the *Developing effective EM partnerships in Remote north Australian communities: Indigenous research and leadership in Ramingining and Galiwin'ku.* (Sithole et al: In press). This follow-on research has been consistent in its approach.

Indigenous researchers from the relevant communities were contracted to organise and run background discussions, regional workshops and the final combined workshop. NAILSMA provided financial, logistical, information and collegiate support. The work was hosted in local communities and discussion facilitated by Indigenous researchers. Discussion and workshop agendas were developed to provide background and guidance to the formal project deliverables but were open to local adaptation to encourage and capture local priorities and interests as well.

Workshop session, Djabugay office, facilitated by Barry Hunter. Kuranda May 10th, 2021. (Photo: Glenn James)

Free, prior and informed participation is a mainstay of this approach and delivers a high degree of ownership, inclusion and confidence in participation. Feedback is also of high importance in this approach: feedback of notes from meetings to the participants; feedback from participants about the draft reportage going into the next meetings; feedback on final report by participants to ensure transparency and accuracy of messaging and to allow edits, comments and further input before final submission of the report.

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[6] Yalu Marnggithinyaraw Indigenous Corporation is an Indigenous owned and operated community research and development organisation, based in Galiwin'ku, Northern Territory. NAILSMA and Yalu collaborated on an earlier participatory action research project on Community resilience post cyclones Lam and Nathan in 2015 (Maypalama et al 2016).

A further FPIC[7] step employed in this approach was to circulate outcomes of previous meetings to the Agency Reference Group (ARG) prior to the final 'round table' discussions they were to have with Indigenous participants and to encourage ARG member response to those outcomes. All participants would be reasonably informed prior to the workshop. Community and EM agency representatives could in this way start the workshop with some background understanding of each other's perspectives and be able to focus on key topics.[8]

A manifest benefit of this approach was the universal interest in holding more of these combined workshops, on country and hosted by other groups across the North - an invitation by Marrandoo Yanner to host the next one at Burketown on his country in the Gulf of Queensland, was met with enthusiasm from Indigenous and non-Indigenous participants alike. Indigenous participants as a group had a strong sense of ownership of this conversation and of 'grasping the nettle' to set the tone for the next steps in relationship building with EM agencies.

Workshop Image. Kuranda. May 10th, 2021. L-R: Tony Hazell, Dion Creek, Radayne Tanna, Jimmy Richards, Mike Wassing. (Photo: Glenn James)

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[7] FPIC (Free Prior and Informed Consent) is a protocol highlighted by the United Nations Office of the High Commissioner for Human Rights (OHCHR) to bolster the United Nations Declaration on the Rights of Indigenous People (UNDRIP), acknowledging that the Declaration by itself is not enough to protect Indigenous rights to land etc, in the face of development. FPIC is not a new idea, nor necessarily sufficient, but is accepted as an important international standard and so carries weight as (at least) the foundation for better engagement with Indigenous people everywhere where their rights, interests and aspirations are potentially impacted by developers, governments, service providers or others.
[8] Though generally successful, this was an imperfect strategy –meeting documentation, distribution of notes and response timing for example, were not always achievable or achievable for all participants. . . some participants had no email address and or were not reliably contactable.

RESEARCH STRATEGY AND KNOWLEDGE GAPS

RESEARCH STRATEGY

The purpose of this research strategy is to guide a co-designed research program in the cross-cultural environment amongst EM agencies and Indigenous researchers, fire and land managers. It combines a core concern to increase capability and effective management through partnerships with Indigenous fire and land managers and reduce the risk of wildfires, with the broader considerations and knowledge gaps raised by Indigenous participants and workshopped throughout this project.

Some broad objectives are posed below, reflecting the core concerns above. Raw information on Knowledge Gaps generated through the project are grouped with one or other of this Objectives, providing some basic organisation of ideas. The raw information on research priorities is also grouped under these objectives. These groupings are not definitive but start to paint a picture of the various blocks of future research suggested in the many discussions that occurred through this project.

OBJECTIVES

Improved health, safety and prosperity of communities.	Indigenous people engaged in meaningful, sustainable and equitable emergency management	Effective partnerships between emergency management agencies and Indigenous groups	Cooperation of Indigenous and non-Indigenous knowledge systems

As indicated in the over-all Research Strategy structure, a Partnership Framework is a part of what's needed to achieve these kinds of goals over the long term. It will be an important part of the partner engagement process to understand what's required and decide and plan for what Partnerships should aim to achieve (both in research and action contexts), and what is beyond their scope. This research confirms that it is a much bigger network of change and improvement needed than what can be achieved through the lens of EM, but that EMA partnerships with Indigenous communities cannot be completely separated from the matrix of other relationships and scenarios that Indigenous communities live with. The Partnership Framework offers a structure reflecting these broad objectives, that is built on the Knowledge Gaps, Research Priorities and ideas around how to work together that came from this project.

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Discussions leading to the final combined workshop for this project (in Kuranda) suggested a range of aims and expectations for action from that workshop. They show how important the social inputs and outcomes are to this work, the long-term commitment expressed by participants (a strong characteristic of PAR) and a strong message about and background confidence in community capability and willingness to work together with EMAs.

Aims:

There were several aims for the workshop, formal and informal:
- Hold a workshop facilitated, run and managed by Indigenous leaders for each other.
- The formally contracted aim to explore the building blocks for future development of research and EM partnerships between Indigenous groups and Emergency Management Agencies in remote communities of the North (See excerpt from NAILSMA contract below) and to provide substantial Indigenous views for reporting back to the Bushfire and Natural Hazards CRC.
- To continue the conversation amongst Indigenous leaders and EM agency representatives, face to face, in a relaxed environment to directly focus on issues, opportunities and experiences to progress mutual understanding and better ways of working together.
- For countrymen from the NT and NQld. to get together, share experiences, discuss priorities around EM and consider a strategic position on EM challenges and opportunities.
- To discuss and present local Indigenous views on the social, cultural and economic context of fire management in EM and its implications for partnerships with EM agencies and industry researchers.

Expectations:

- That Natural Hazards Research Australia will respond well to the reports from this project an invite Indigenous leaders and researchers to partner with them to explore the priorities, develop the partnership strategies and put the outcomes to practice.
- That the relationship between Indigenous leaders and influential EM agency people will develop through good faith, informed and focused discussions and fora, and that this will help deliver positive change with or without action from the new Centre.
- That countrymen getting together and their persistence in communicating their interests will lead to more opportunity.

EXCERPT FROM OPPORTUNITIES AND CHALLENGES FOR FUTURE PARTNERSHIPS BETWEEN INDIGENOUS COMMUNITIES AND EMERGENCY MANAGEMENT AGENCIES – UNPUBLISHED NOTES ON COMBINED WORKSHOP. KURANDA, QLD. MAY 10

Kuranda Workshop May 10. 2021. Otto Campion (ARPNet) Presenting. (Photo: Glenn James)

KNOWLEDGE GAPS

Table 2. Knowledge gaps, grouped under Objectives, List and Description

Community health, safety and prosperity	Sustainable EM Roles	Effective partnerships	Cooperation between knowledge systems
Understanding community leaders not just as stakeholders but as land owners, Native title holders, cultural custodians	Budget review to pay for engagement etc.	Review EM guidelines for communities to ensure flexibility	Help EMA understand and support local cultural belief as resilience building
A model that incorporates working with homelands	Build Regional network of Ind researchers	Show what communities have to offer EM – capabilities, assets.	Recognise and address literacy issues in EM communication

Help each other to grow – understanding and sharing experience with others	Understanding local capability, assets	Ownership and equity in partnerships	Recognition of IK, local knowledge and cultural assets is very low
Education and training	Bring research together each year	M&E for Indigenous engagement in EM and partnerships – co-developed framework	Understanding the system
Climate change impacts on community safety and well-being			Engaging youth and dealing with issue of them being cut off Centrelink when they engage
Climate change impacts on land management enterprise			Understanding climate change impacts in and between local areas

Knowledge gaps - list	Description
Limited understanding by or support from EMA for embracing local cultural belief systems as an important aspect of resilience building	People are concerned that their cultural beliefs are not recognised and respected. This is a key to resilience building and for other aspects of EM. Resolving this will be an ongoing process and must start with trust.
EM guidelines for communities are complex and inflexible	EM guidelines don't always fit the circumstances of Indigenous community life or how local people do things. Cultural protocols for example will affect the way people act towards each other and local knowledge and skill influences how and what things might be done in emergency circumstances. EM guidelines should be reviewed to attune with local circumstances
Show what communities have to offer EM – capabilities, assets.	EM agencies overall have little knowledge of what different Indigenous communities have to offer EM. Building better relationships with local leaders is a good way to understand this better. Many local communities are also in a position to be pro-active and show EM agencies what they have and are capable of.
Budget review to pay for engagement etc.	Community engagement is critical to nurturing productive ongoing relationships and should be seen as a part of all future budgets. Government review of EM and other relevant budgets should accommodate ongoing engagement as determined by community and agency partners.
English literacy is a significant issue in this context of EM communications.	Given mainstream EM operations are English language based, any and all people with English literacy issues (e.g. those for whom English may be a second or third language) require other modes of effective communication, whether in their own language or provided by people better able to communicate with them. This important function should be formally recognised and imbedded as a key component of joint planning.
Recognition of IK, local knowledge and cultural assets is very low	Indigenous Knowledge has integrity and meaning as a system. This is not usually recognised. Rather, it is assumed by outsiders that small parts of IK can be plucked out and used elsewhere (e.g. like fire technologies) but doing this excludes the living culture that gives it meaning and effectiveness and potentially harms the cultural integrity, identity and livelihood value the owner/practitioners of that knowledge have. IK systems and the rights and benefits that relate to them are systems evolved in place and need to be understood better, respected and worked with. Fee For Service is a good model to help this.
Understanding the importance of ownership and equity in partnerships	Ownership and control of local EM activities (whether about resilience building or response etc.) are important for local empowerment and ability to act on local best practice

Understanding community leaders not just as stakeholders but as land owners, Native title holders, cultural custodians and local residents.	Indigenous community groups comprise TOs, kin and others. They are not mere stakeholders with limited interests but multi-generational landowners. It is critical that they are treated as core players in EM.
What a Regional network of Indigenous researchers might look and function like and how it may be created.	Research in and around Indigenous communities is increasingly done by Indigenous researchers themselves (or in partnership). There is a call to strengthen the benefits of this by networking research groups within and beyond their regions to compare and strengthen research, up-skill, promote Indigenous research capacity and better represent trans-jurisdictional issues and solutions.
Understanding local circumstance, capability and assets	There are several ways to develop better understanding about local and regional capability: Skills audits, practical training exercises, better connectivity with local leaders (rangers et al), tendering for contractors etc. These and other means of knowing what skills etc. are available in remote areas are important for improved engagement of countrymen in EM.
Understanding local culture and protocols	Indigenous communities have strong cultural values with rules and protocols that guide their actions, relationships and behaviour, including access to land, care for ceremonial and other sites, kinship roles and responsibilities, and local authority structures. Local leaders seek to help EM agencies understand more of this where relevant to EM and partnership work. These systems are the backbone of local resilience and capability. It is important to respect local culture and protocols to be able work effectively as partners.
EM models that effectively incorporate working with homelands	Homelands are often seen as problem areas for administration, support, policy, EM response and the like. However, they tend to be hubs of land management and knowledge practice, places with clear authority structures and highly desirable for cultural, physical and spiritual well-being. EM modelling and planning needs to relate to homelands (outstations).
Help each other to grow – understanding and sharing experience with others	Experience sharing, joint training etc. with neighbouring and distant community groups, through good quality partnerships, through formal and informal networks and workshops are means to ongoing growth and improvement in resilience, capability, confidence and EM services.
Education and training that provides the best foundation for successful outcomes.	Greater involvement in EM at community level opens job options and brings the need and opportunity for improved education. Education requirements for different level engagement in EM should be explored, communicated, and planned for over time.
Effort is required to help remote residents better understand the EM system	The national, State and regional EM systems/structures need to be better communicated and understood at local level.
Understanding the value in bringing research together each year	Natural Hazards Research Australia must ensure that research (partnered or otherwise) is brought together each year. The CRC held annual conferences and Indigenous researchers / practitioners would like to maximise the benefits of their research by hosting annual workshops and conferences on (their) country. This will strengthen research relationships and outcomes, enable best practice comparisons and 'scaling up' and provide continuity.
Engaging youth and dealing with issue like being cut off from Centrelink when they engage	It's critical to 'grow-up' the next generations of land managers (including for the EM space). With very limited employment capacity, rangers and other groups employ younger ones to work and learn with them. Sadly, part time, casual, seasonal and one-off opportunities for youth often come at the price of being cut off Centrelink. This may leave them and their families worse off creating a disincentive for them to engage. Intergenerational transfer is critical.
M&E is an important mechanism for Indigenous engagement in EM and	Mechanisms for checking that partnerships are delivering on expectations and ways of assessing and realigning them are crucial to potential partnerships. M&E will become part of the partner framework but needs careful exploration to meet social, cultural, resilience, economic and EM expectations.

partnerships – co-developed framework.	
Climate Change impacts are critical considerations	Climate Change is having a significant impact on many aspects of Indigenous community life: on safety; on 'savanna burning' carbon farming operations; on access to country and on traditional food and other resource reliability. Current and future impacts are not well documented in local knowledge systems and not clearly understood in the context of EM in local areas.

RESEARCH PRIORITIES

Table 3. Research priorities, grouped under Objectives, List and Descriptions

Community health, safety and prosperity	Sustainable EM roles	Effective partnerships	Cooperation between knowledge systems
Communication systems and infrastructure	Fee For Service opportunities must be explored and communicated	IP considerations (integrity)	Do Aboriginal Land owner/residents have formal responsibilities in EM?
Yolngu leadership model for EM response – clear actions, no confusion	Cost Benefit analysis – understanding the pros and cons of proposed change	Understanding resilience in different locations, tenure types, historical settings etc.	Integrating cultural and local knowledge in resilience building, preparation, response and building back better
Climate change impacts on community safety in different places.	Compare EM service delivery models	Communication in practice – language, context and meaning	Co-research into climate change impacts, including long term monitoring
	Climate Change impacts on current and future land management enterprise	Developing approaches to account for commonalities & differences between communities / groups	Indigenous knowledge & Intellectual Property

Research Priorities - list	Description
Communication systems and infrastructure	Dependence on vulnerable communications infrastructure (e.g. mobile phones, transport access) leaves many places without reliable connection to family, information or support. Homelands are particularly vulnerable. Action research into reliable, perhaps hybrid model for remote circumstances is important.
Communication in practice – language, context and meaning.	Spoken and written communications need to acknowledge natural and regional language differences, and levels of English literacy. Plain English should be used and local interpreters used on advice from local leaders. Concepts drawn from non-Indigenous circumstances and the context in which they are communicated need careful consideration to be locally meaningful. Development of communication tools for communicating various concepts roles and processes is important for effective local action and EMA relationship with local communities.
Local leadership model for EM response – clear actions, no confusion	Research by local Indigenous people is needed into complementary models for communication and response in the community to avoid confusion and improve effectiveness. Local Rapid Assessment tools and guidelines for early warnings and appropriate local communications networks (family, clan, outstation, elderly, absent etc.). are examples.
Indigenous knowledge & Intellectual Property	• Sourcing - Allocate sufficient time and resources to find relevant information. • Access - Secure formal permission to incorporate & use Traditional knowledge & IP. • Integrity - Respect intellectual property rights and the integrity of Indigenous Knowledge as a critical foundation of partnership building and collaborations generally
Fee For Service opportunities	Fee For Service opportunities will be important in many (under-resourced) places to cement Indigenous engagement in effect EM because sustainability

	of involvement is not possible without jobs, and a level of independence from and equity with partners.
Do Aboriginal Land owner/residents have formal responsibilities in EM?	Legislation and rules around landowner/occupier responsibility in EM are not well understood
Commonalities & differences between locations	As discussed in Sithole et. al. (2021) there are important commonalities amongst Indigenous communities that can be used to advantage in planning partnerships at scale. There are also important differences that must be considered in order to build the most appropriate and effect on-ground partnership structure and function.
Cost Benefit analysis	It is important for Indigenous leaders and Government agency decision makers alike to understand the costs and benefits of various level and forms of engagement, in the first instance to break the ice on the issue of affordability of changing the 'normal' way of doing EM in remote communities
Comparisons between EM service delivery models in different locations.	EM service delivery differs across jurisdictions and in different countries. Australia is in a good place to create best practice models, largely because of the proactive approach and accumulated skills of Indigenous people in this sector.
Review zoning for EM controllers and priority areas	Part of the review of service delivery models should include maximising the benefits in this new partnership focused EM environment by, for example, relocating management and other resources to areas of best use.
Integrating cultural and local knowledge in resilience building, preparation, response and building back better	Local and cultural knowledge can be hugely beneficial to EM goals and operations. Exploring how this works with mainstream EM operations in each community will be important to local livelihoods, cultural integrity, local resilience and self-reliance as well as to effective preparation, response and 'building back better'.
Understanding resilience in different locations, tenure types, historical settings etc.	Community resilience is about local circumstances, equally as it is about services, infrastructure etc. provided from outside. Exploring the local characteristics and processes influential on this is important to support and help build resilience.
Climate Change impacts	Research on climate change impacts from 'western' local and traditional knowledge perspective (e.g., impact on seasonal indicators) is important for local resilience, land management planning and operations and social capital input into EM partnerships. Co-research in this field should be ongoing.

Ramingining workshop. April 26-27. 2021. L-R.: Otto Campion (ARPNet facilitator), Graham James, Richard Bundalil, Jimmy Morrison, David Keighran, Rita Dhurrkay, Danny Burton (back), Maisie Cameron (middle), Susan Duwalatji (back), Christine Brown.
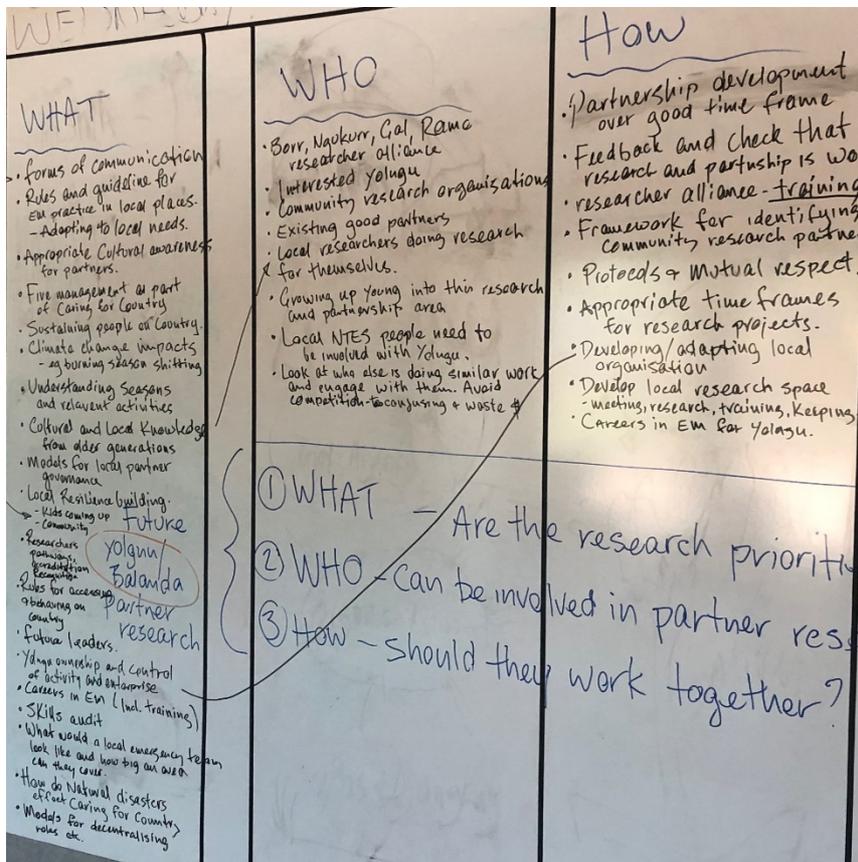
Workshop whiteboard notes. Ramingining April 2021.

STRATEGIC PARTNERSHIPS FRAMEWORK

Table 4. Strategic partnership needs, List and Description

| Strategic Partnership Needs	Comment
M&E for partnership performance and adaptation	M&E will be crucial to assess whether partnerships and their components are working and as a means to diagnose issues, account for anticipated changes and to adapt the partnership and or activities/processes to match or solve change.
Better community engagement.	The first questions from most EM agency people are "How do we start . . . to engage better? . . . Who do we talk to?" Indigenous leaders at this workshop and through other initiatives are showing the way to kick off conversations about what better engagement means to them. There are many dimensions to this. (See discussion by Christie: 2010).
Collaborative research agreement.	For the rights and interests of each of the partners to be protected it will be important to discuss and agree on a collaborative research and IP agreement. At this stage it is unclear who might be involved in partnered research so some general terms and conditions should be developed so they might apply to all prospective partners as those partner opportunities arise. There are precedents for this in Indigenous collaborations with Universities etc.
Review of legislation to ensure a formal role for locals.	Indigenous leaders want inclusion in the management of lands and EM. This involves policy making, legislation, planning and implementation. There ought to be a formally recognised role for TOs, Native Title Holders, Ranger groups or others with responsibility and capability.
Specific consideration of rules made for urban areas that can adversely affect remote residents and land managers.	People living in remote areas are often affected by rules, legislation, policy decisions etc. that are made to apply to the majority of the population - urban and rural populations for the most part. Fire bans, monolingual school curricula, Centrelink and job seeker rules are amongst many that affect remote residents and potentially impact on engagement in EM.
Specific consideration of how to marry EM rules with cultural protocols.	There is a call to integrate EM protocols and standards with local cultural protocols to reflect local circumstances and strengthen EM response
2 way learning skills	There has been a strong push for 2-way learning (the 2-tool box model), using the best of local knowledge and skill, and western style technologies and skill. This has worked very well with Savanna Burning projects across north Australia for instance.
Build Capacity and EM leaders will have to use the best trained available	As shown by the Burketown rangers, building good skills and capacity locally can lead EM and other agencies to be drawn to employ Indigenous services. Indeed, ignoring the best prepared group for the job may lead to ethical and possibly legal ramifications.
Other agencies in community (health, ed., etc.) need to engage with the conversation	Many agencies are present in community life. Recent research confirms anecdotal evidence that they often work in isolation from each other with their own agenda and processes. For EM partnerships to work effectively, these other agencies must be brought into the conversation, not to control it but to participate with Indigenous leaders in it.
Integrated planning	Planning around EM needs to integrate the various and multiple knowledges, interests, responsibilities and capacities that exist at community, regional, State and National levels, including across-cultures and across programs. For example, Incorporating EM within the 'Healthy Country' Planning process or with Savanna Burning carbon project planning help with continuity and clarity of roles etc. within EM.
Best practice EM should be shared with and used to support other places	Best practice examples should be communicated to others and lesson learned taken to assist other EM partnership places. It may be useful to consider (co-)investing extra resources into one or more partnership

	development case study sites to explore and create the best practice examples deliberately. There is interest from NGOs like Red Cross in such co-investment.
Review EMA rules, regulations, zoning etc.	Rules, regulations, structures etc. in EMAs should be review by the partnership to adapt where possible to reflect Indigenous needs, advantage and aspirations in EM and strengthen the effectiveness of the Indigenous action research side of the partnerships.
Broaden future participation around the table	Significant work has been done now in this space and several forums held to discuss and connect various players. The environment is right to expand the conversation to other communities and relevant government agencies to address some of the steps mooted in these notes.
Continue dialogue at 3 levels	This conversation needs to continue at the community level with local leadership, residents, and agencies working with them there; at the cross regional level amongst community groups sharing experiences and planning, and EM agencies across from various jurisdictions; and at the national level to influence policy and encourage change by grass roots example.
Appropriate engagement & involvement of local agencies with Indigenous leadership	• Working with local agencies to support and Indigenous leader initiative in EM and other service delivery. • Ensuring that agency engagement support the leadership governance structures. I many places this is about breaking with the old paternalism and creating a new model for empowering next generations of TOs and other community residents to work with and refine. This will not work effectively with just one agency.
Inter-agency cooperation and co-ordination	States and Territories seem to have been working alone on what are now critically national EM agendas. Senior players in Qld, the NT and WA need to work together to share their experiences in this engagement space, help each other do better by raising the bar and collectively influencing the national conversation and policy environment.
Proper training and career pathways	Countrymen are interested in training, real jobs and fulfilling career paths in EM. A lot of the roles and responsibilities align well with local aspirations to care for country (with fire and with careful attention) to care for their kin, to create employment opportunities, bring youngsters into the industry and into leadership, to improve community resilience and to prosper. Training and career pathways are keenly sought. The ranger movement is an example of how this might occur; EM can present other opportunities to build on this.
Sustainability of Indigenous involvement in research and active EM partnerships	A good mix of salaried, contracted, volunteer and other forms of participation in the various roles and opportunities identified by the partners should be considered. Each of these forms needs investigation at concept and in the local context.
Local participation in EM – formal arrangements	It will be critical to plan for the various roles and levels of participation that community members or groups may have in EM. The formal arrangements, like; contracts, direct employment, volunteering; and other conditions such as identifying the right people for the job, succession and growth planning should be workshopped by the partnership.
Creating opportunities for youth to engage	There are very few jobs in communities that encourage or create pathways for youth to engage . . . and there are significant challenges to them doing so consistently. The next generation's engagement in EM (and other) livelihoods needs to be mapped out and put in practice from the beginning. They are the future of EM aspirations in a world of dramatically changing and uncertain climate impacts.
Where possible, local groups may have to find local	Community people express a willingness to 'chuck-in' to attract the desired services to their community. This can take many forms and is often

resources to initiate projects or services that will attract other investors, like EMAs.	very difficult for the poorly resourced to achieve but people acknowledge the need to contribute what they can to get governments and others to provide personnel, training, money, infrastructure or other resources needed to get a better job done. E.g. CLCAC providing office space and the Shire providing accommodation to attract QFES to rezone and relocate their controller from Mt Isa to Burketown (Pers Comm. Yanner, Kuranda workshop: 2021)
EM Plans:	• Making EM Plans accessible to the (Indigenous) community - currently held In the police station and are complex, English only documents[9] • Incorporating new ideas into EM plans such as: acquiring mobile infrastructure for quick deployment to outstations to accommodate mass evacuations from large communities during pandemics or other natural disasters; Developing quick response teams to be mobilised locally and in other locations during disasters.
Determine partnership priorities and identify skills and knowledge needed	This project has identified priority areas for action in resilience building as well as in conventional preparation, response and reconstruction. There are a range of skills and initiatives, many that exist in the community, for which human and other resources are required. The partnerships need to work through what these tasks are, their priorities and resources involved. Accessing and building the local skills, knowledge and assets will be important for partners.
Securing resources	All parties to the partnership will need to work to secure resources needed to service their agreed action research foci.

Kuranda Workshop. May 10, 2021. Ted Gondarra presenting (back left). Barry Hunter Facilitating. (Photo: Glenn James)

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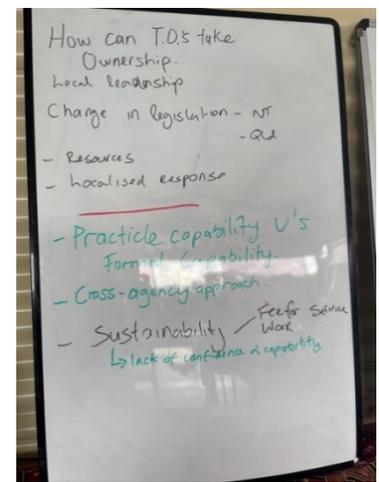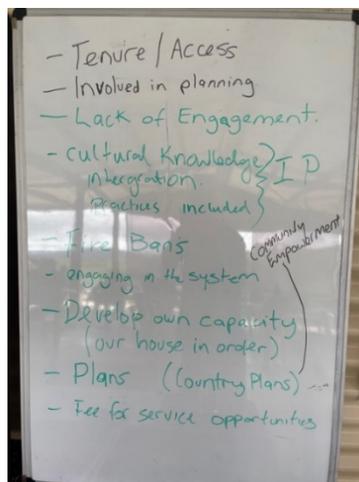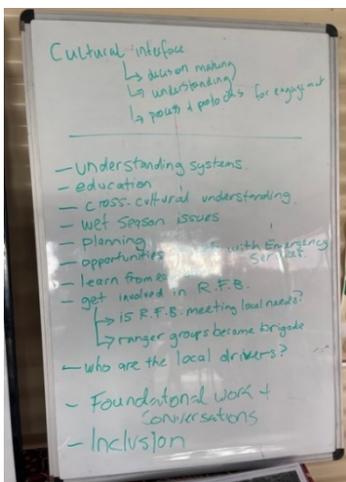
[9] See referenced example, Local Counter Disaster and Recovery Plan - Ngukurr

STRATEGIC PARTNERSHIP FRAMEWORK SCHEMATIC

The Partnership Framework that evolved from this PAR project follows from the Knowledge Gaps and Research Priorities. Its place in the overall Research Strategy can be represented in simplified terms, as in this diagram:

Strategic Partnerships Framework

The following framework is informed by and incorporates the ideas from this project, particularly from the workshops. Not all the gaps, priorities and relationship characteristics from the workshops (expressed in the tables above) are captured below – There are many of them and the process of refining them further is for future EM partners to explore and agree on.

Building partnerships

Engagement

The very first steps are often the hardest to do. Who do we talk to? and How do we make the initial approach? might sound like simple questions to answer but this and previous research by Indigenous researchers (Maypalama et. al. 2016: Sithole et. al 2021) confirms that attempts by government agencies and others to connect with Indigenous leaders in communities are often poorly planned and incoherent to locals[10]. Attempts by Indigenous proponents to connect with governments are correspondingly often unheard and or framed in a (non-bureaucratic) language that's misunderstood. [This is not always the case and there are some good examples of engagement at this level (e.g. the work Aboriginal Land Councils do, the structure and functions of the Indigenous Water Policy Group, the long engagement processes in the development of the Indigenous Carbon Farming sector)].

This project has been run and attended by Indigenous people putting themselves forward to be contacted and providing forums through which that can easily be done. It starts, as ARPNet researchers describe (ARPNet. 2017), with recognition and respect.

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[10] See also discussion by Michael Christie (2010) in 'A box of veggies'.

Engagement of community leadership / rangers et. al. with the rest of their community is equally important. In most cases the Indigenous proponents of a proposed EM partnership will not be the whole community – they will be a smaller group who will have to represent and be mandated by the community to act on their behalf. This 'other half of the engagement coin' also takes time and resource to achieve. The Traditional owners or cultural custodians (usually a minority in any community) are the key authority group to recognise. They will provide the authority (or otherwise) for initiatives to progress.

Protocols

- Use agreed modes of effective communication, including translators where needed and ensure regular feedback to all parties.

- Respect Free, Prior and Informed Consent / Decision-making principles.

- Cross-cultural orientation is an important commitment to understanding and respect in many communities. EM agency staff and associated researchers may be directed and should participate in this.

- Understanding how the community is made up and working through local leadership is important for recognising and respecting local authority, decision-making pathways and protocols.

- Provide practical support for meetings and associated activities. Make a plan to support local capacity building. This may include paid liaison work, meeting supplies and transport, recognition that important people attending meetings often have to take time off work and should not be out of pocket to do so.

- Work together in appropriate timeframes – respecting the time it takes for local leaders and researchers to work within their community protocols and sensitivities.

- Give priority to finding, using and growing local capability, including support for local and Indigenous knowledge enhancement and transmission[11].

- Negotiate research Collaboration agreements.

Skills and Training identification

Indigenous communities and clusters of communities in regions have long histories of practical training, from 'mission times' through the CDEP and now Ranger periods. Conventional skills are broad ranging, often including building and construction, road maintenance, mining, market gardening, education and health, Arts and clothing, administration and others. Skills and knowledge in cultural and social affairs are renowned but usually untapped for their nuanced qualities in non-Indigenous dominated sectors like EM. The combination of knowledge systems, or use of 'two toolboxes' has, in some areas like, (bi-cultural)

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[11] On country learning opportunities are a good way to provide support for both Indigenous and 'western' style learning and knowledge transmission. See Fogarty and Schwab 2012.

education, community health, environmental management and Norforce[12], for example, been synergistic and proved highly effective. This is also true with community based Indigenous researchers, like those at Yalu, ARPNet and others supported by the Northern Institute at Charles Darwin University. Their work is carried out in local language, they follow local social and cultural protocols, are sensitive to local circumstances and of course hold highly detailed and nuanced local knowledge (Sithole et. al..2021. PP22-28).

Assessment of relevant knowledge and skills should be made by local researchers and Partners in ways appropriate to both knowledge systems, to help with partnership planning, maximise access and create a baseline for long term training strategy.

Action research and action

Be clear about partner roles and responsibilities as agreed and set out in a collaboration agreement. The partners will need to be alert to duplication amongst them and with other research – an all to common and frustrating phenomenon. Ownership and equity are important qualities to create and maintain but challenging where one partner may have deep pockets and the other working on a shoe string.

On-ground research will expose common features and unique qualities of different communities and homelands[13] that will be important to the design of specific tasks and for scaling up the benefits of research and praxis.

Research teams should aim for best practice models of collaboration incorporating Indigenous and non-Indigenous criteria for measuring success and agreed partnership review periods for adjusting or adapting the model and partner performance.

Research partnerships with community researchers will incorporate PAR where possible as local researchers, responsive to views, rights and interests of their communities will need to maintain their mandate to do the work and to deliver practical benefit along the way. Being 'the object of research' is generally an unacceptable research model today.

Key research priorities such as bushfire mitigation, are usually meaningful only in the broader social and knowledge contexts. For example, fire management in this case makes sense in the positive context of 'cultural fire' and livelihood opportunities, and not so much in the negative context of fighting a foe. Clearly both activities are needed but the way they work together will be about what other values are achievable in the goal to reduce fire risk.

In this sense, there is a lot of research and practical work to be done to build local resilience, pass on knowledge, create and improve sustainable livelihood opportunities etc., much of which must be considered in those periods when there are no impending hazards. Building capability, resilience and sustainable livelihoods are valuable examples of where voluntary EM participation has considerable limitations, even in partner supported scenarios. This also suggests

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[12] Norforce is the Northern Territory version of non-regularly army in the North. Equivalents exist in Queensland and Western Australia.
[13] See 'Brief discussion about uniqueness and continuity', Sithole et. al. (2021) P20.

a role to play for EM research and practitioner partners in investigating and supporting models that help sustain Indigenous engagement in EM research and practice.

Feedback and reporting to all parties, but perhaps particularly to the core 'end-users', community people, is key (but sadly often lacking) in research and practice. This is a function of the partnership to ensure or gauge community and stakeholder support. Modes of communication should be appropriate to the audience, accessible, engaging, regular and properly delivered.

Support

As mentioned above, Indigenous researchers working in their communities seek a mandate to do their work by the community at large – perhaps through leadership groups like the DDA (Maypalama et. al.: 2016). Research by Yalu and NAILSMA in Galiwin'ku sought consent from a local ethics committee set up in the community to ensure any research done there and expected outcomes were acceptable to Traditional Owners and clan leaders. Ongoing support for the research work was secured by regular feedback and consistent engagement with the community. This was also the protocol followed by ARPNet in its research on EM partnerships in Ramingining, and an important approach for any Indigenous researchers mooted by participants in this project.

A strong theme in this project was that of networking of Indigenous researchers across regional and State/Territory jurisdictions and supporting capability building in an expanding, mutually supportive network.

Groups with EM roles and responsibilities (e.g. Police, red cross, shires and health clinics) within regions and across the north should be aware and cooperative with the proposed partnership approach. The DDA, ARPNet and others have emphasised through their work how lack of continuity amongst various EM players (within communities and between States) so easily creates immediate barriers to their initiatives. This is not easily achieved but must be considered in the communication and broader partnership model, requiring good governance relationships amongst the partners and other parties.

Resources will need to be secured over the 'build' intermediate and long term. Long term support for projects with potentially multiple related initiatives is typically co-funded. A finance model should be developed as part of the research and as the partners begin to look more holistically at hazard reduction in earnest. This should include Federal, State/Territory, local, NGO, perhaps local FFS and other financial support.

Check

Review

Indigenous measures are increasingly sought to guide practice in such fields as health and well-being (Kingsley et. al. 2013), and environmental management (Austin et al. 2017: Robinson et al. 2018, p24). Similarly, partnered research and practice in EM should seek capture local Indigenous and mainstream measures of success.

How the partners work with and relate to each other over time will be important to keep track of, particularly as each party operates within their own dynamic institutional, professional and social circumstances.

The value and direction of research impact and outputs must also be reviewed from time to time, cognizant of local, regional and national use value.

Adaptability

Indigenous participants in this project are hoping and expecting partnerships for research and action in the EM space to be ongoing, certainly not one-off or time bound to the whims of government policy and commitment. In this context, respondents have expressed the need for adaptability in research relationships, in responding to shifting priorities and ultimately in emergency management activities. Government, senior staff, policy setting and funding changes are arguably as hazardous to community resilience and well-being as natural hazards.[14] Long term agreements, good monitoring and evaluation and adaptability are considered important to mitigate these risks to partnership quality and outcomes.

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[14] It was concluded by respondents in an ARPNet research project (circa 2015), looking at assets and vulnerabilities in hazard management in the Ngukurr community, that governments posed a greater hazard to local security and well-being than cyclones, floods or similar.

SUMMARY OF FUTURE RESEARCH STRATEGY

This Future Research Strategy is informed by the various discussions and workshops that Indigenous researchers have put together over the course of this CRC project. Previous work on community resilience, EM partnerships, governance and cultural dimensions to engagement in EM has also been drawn upon[15]. There is too much detail in all this to include it all and discussions revealed much more that could not be explored in such a limited project. The Framework represents key features and ideas emphasised in various discussions but is not exhaustive.

The broad objectives of this framework begin to group otherwise long lists of Gaps, Priorities and Partnership considerations. This basic organisation of information leads us to be able to frame the future research strategy in broad, indicative terms without assuming we have all the elements pegged.

- We have explored knowledge gaps.

- We have considered research priorities for PAR partnerships that mirror identified gaps.

- We have compiled and begun organising views, concerns, requirements, challenges etc. that confront our collective interest in forming effective partnerships to do the research, and through the same (PAR) means to effect real benefit on the people and environment they work in.

- The sum of these parts, explored in more detail throughout the report, is the Future Research Strategy.

What do we need to know?	Who should be involved in the research partnership?	How will the partnership and research work?

What we have sought to achieved is a pathway for engagement between Emergency Management Agency leaders (and their research organisations) and Indigenous community leaders. The steps are informed by Indigenous led PAR and the process represents a better way of doing things, from the perspective of the many who participated in this project.

This Future Research Strategy can be taken up by the new Natural Hazards Research Australia and used to engage with prospective Indigenous research partners to consider and plan future partnerships with confidence in the content and steps of the process.

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[15] In particular the work by NAILSMA and ARPNet in post cyclone Galiwin'ku and Ramingining (in Sithole et. al. 2021 and Maypalama et. al. 2016) and background work by NAILSMA and Indigenous consultants in Borroloola and Cape York. It has also drawn on the Scenario Planning project by colleagues at the Darwin Centre for Bushfire Management, collaborative work in the 2019 publication on Sustainable Land Sector Development . . . and other CRC sponsored projects.
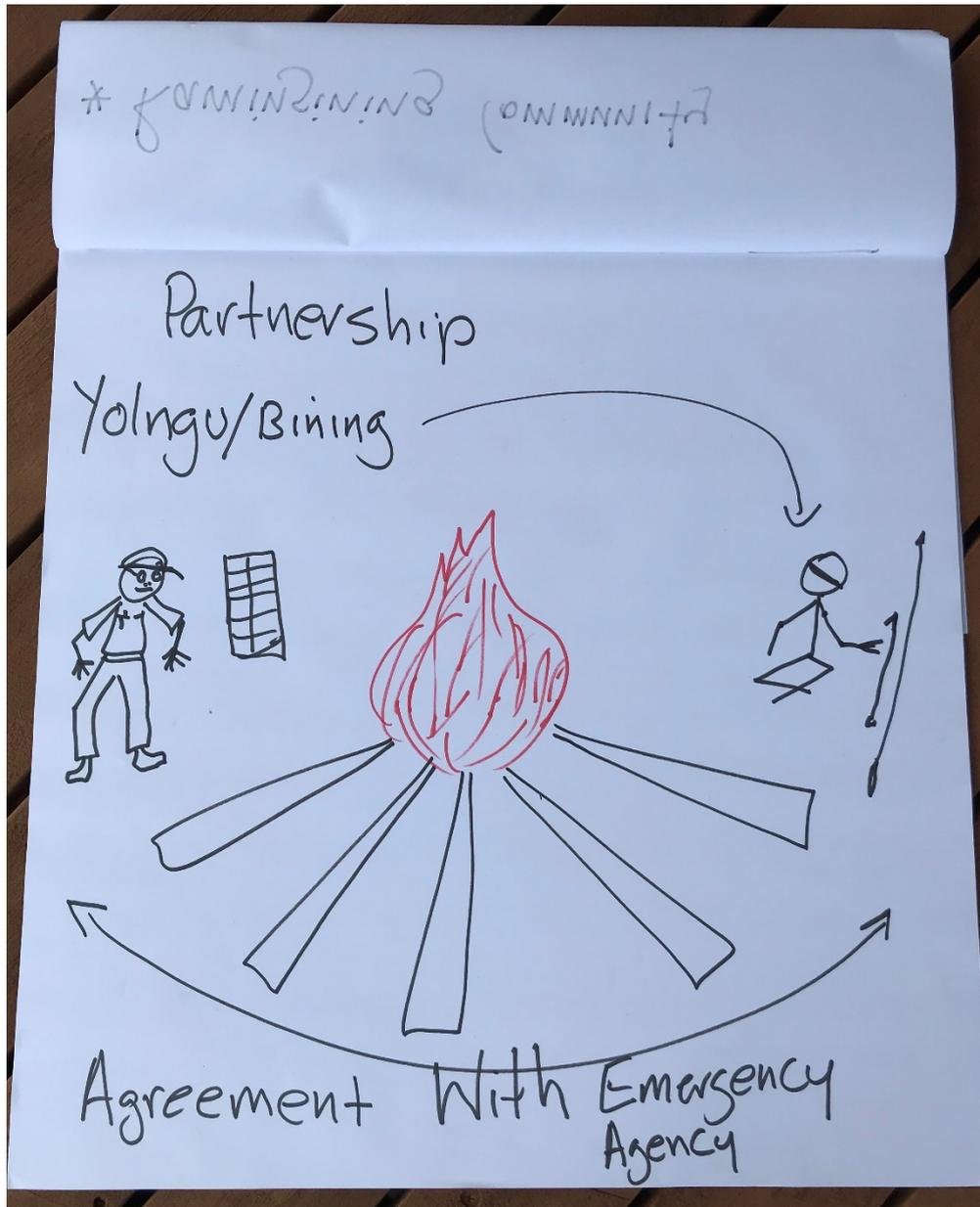
Illustration by Otto Campion depicting the metaphorical and practical significance of fire, as the hearth and the subject of partnership making. Ramingining April 2021.

UTILISATION AND IMPACT

SUMMARY

This project follows previous community based and associated research through the northern hub of the Bushfire and Natural Hazards CRC. Publications from this previous work are already in the public realm, but the utilisation value of this project has been to build on those outcomes in the continued inclusion of Indigenous community groups in this important EM conversation. Face-to-face involvement in these discussions is by far a more effective and engaging mode of communication for Indigenous community people than written documents. This is a fundamental tenet of the PAR approach, the impacts of which should be fully acknowledged.

Not only has this project contributed to the continuity of this EM conversation within participating communities but importantly, has continued the conversation across the north. . . though limited by time and resource. This level of inclusiveness and continuity in relationship building is also critical to the success of the project writ large, and not achievable through publications alone.

Project use and impact are also manifest in the paid work it enabled for Indigenous researchers, facilitators and host organisations. Again, the PAR approach tends to focus on such direct benefit as the work progresses. For the Indigenous researchers, this project provided more experience for them as practitioners, good for personal skill and well-being and good for building network of Indigenous researchers across jurisdictions.

Consistent inclusion in EM related conversations and planning expand local knowledge and networks around EM and increased appreciation of opportunities and challenges for involvement in EM at community level.

Relationship building with EMA leaders is central to this project and an improved future of EM. This is also best achieved by face-to-face engagement.

Reporting outputs from this project will, it is hoped, directly influence Natural Hazards Research Australia to work with the Indigenous people in the North and the ideas they have generated for improved collaboration and reduced risk.

PARTICIPATORY ACTION RESEARCH

Output description

Participatory Action Research approach, with cumulating social and intellectual capital outcomes from previous related work into EM partnerships.

Extent of use

Benefits from this PAR project are already evident in the improved awareness of local themes, opportunities and challenges for community groups in EM collaboration. As summarised above, relationship building with EMA and networking across northern regions are core benefits steadily accruing with the further application of this PAR approach. Developing local stories and moving

from the provincial to the regional and national are incremental but important characteristics of the project. Without this scaling-up, service provider attention and resources to change the way EM is done will not be possible.

Utilisation potential

This project has built on previous work and is seen as part of a cumulative process. When connected to other important initiatives in this EM research and practice space (e.g. future research, policy and resource development, technology advance, climate change impact mitigation) the utilisation potential is highly significant. The potential value of this work amongst players at the local level should not either be under-estimated. As expressed in the project workshop in Kuranda (by EM and Indigenous leaders participating), it is expected that EMA and community initiatives will come out of the hands-on experience of this project – bolstering a new program of Indigenous community liaison positions within QFES and supporting 'the next' workshop (on invitation from Marrandoo Yanner) in Burketown, are two examples.

Utilisation and impact evidence

Utilisation and impact evidence are currently known only to the organisers and participants and take the form of; improved knowledge and awareness, direct employment of Indigenous researchers and facilitators, stated intent to continue and expand this engagement amongst EMAs and Indigenous groups.

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CONCLUSION

Growing interest in Indigenous technologies around fire and land management are to be lauded. There are challenges in understanding how to use the benefits of Indigenous knowledge or fire without somehow taking the 'Indigenous' out of the practice. Eurocentric Australia has long feared fire in the landscape and emergency management leaders and firefighters have, through that lens, responded in that social knowledge context.

Indigenous fire management practice has never been based on fear, and never aimed solely at fire itself. Fire is embedded in lore and culture, has many functions and characteristics; in ceremony, within marriage and relationship building, for hunting, and more. It cannot be separated from the world view that gives it meaning and place in family, in culture, in caring for country.

Being able to look after country and fire has contemporary life challenges, like access to cultural estates under the control of others (e.g. pastoralists, national parks) to practice good care, resources available to get people out and support them to care for their country, reclaiming ancestral and local knowledge, learning new skills and knowledge and passing all this to younger ones, because 'land management is forever![16] So, an off the cuff focus on fire management knowledge and skills leaves much of what is important in the cultural context, behind.

This broader context of Indigenous involvement in EM must be approached up front. It is from here that ILMs can more meaningfully relate to fire management because considerations of livelihood opportunities, training, customary protocols, young leadership and other values in looking after country are sensible in this context. Indigenous people can contribute their knowledge and experience to a partnership environment built on trust and good process.

Background understanding and good engagement, following local protocols and being open to opportunities are ideas laid out in more detail above. As EM and potential partnerships are a long-term concern, they raise the challenge of sustainability. As described, sustainability is closely married to ownership, control and livelihood interests. As in economic development more broadly (NAIEF. 2013), livelihoods in the EM space (as well as being about safety and well-being) are about addressing the erosion of local authority, disempowerment, unemployment and relative poverty, but livelihoods are also about prosperity (James et. al. 2019), self-reliance, local ingenuity, pride and other resilience building qualities.

Hence, strengthening ownership and control can help community leaders address issues of disempowerment and the many aspects of resilience building. Indigenous land and sea managers and cultural leaders have led with their feet to begin to address well-being issues in a myriad of ways. A prominent and extraordinarily successful precedent for land management-based fire hazard reduction is the development of savanna burning based carbon farming (Russell-Smith et. al. 2019). The success of savanna burning, celebrated by its direct beneficiaries in what is now an ILM sector, has been made possible through the

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[16] A phrase attributable to the Manwurrk Rangers on the West Arnhem Plateau, celebrating their sustainable return and commitment to looking after their country.

creation of socially responsible locally owned Indigenous businesses.[17] The willingness and capacity of Indigenous people to do business on country was strongly expressed by the North Australian Indigenous Economic Forum (NAIEF. 20)

There is no single pathway to ensuring that ownership is the foundation of livelihood and resilience building, but it is a longstanding concern for Indigenous leaders that generations of disempowerment and erosion of cultural authority be addressed under their direction not by 'outside' design.

NAILSMA developed a Business on Country (BoC) Strategy and Framework to offer guidance for governments, funders, potential partners and Indigenous groups alike about the building blocks and processes for doing business with countrymen. This Strategy is concerned with the wider field of Indigenous involvement in land sector development but is applicable to the EM space when considering engagement, community structures for development, social license to operate, resilience and FFS aspects of EM partnerships (NAILSMA. November 2020).

This project began with a focus on Indigenous fire and land management. Participants made the most of opportunities to address knowledge gaps, to consider what could be explored in partnerships how that could develop. Through an Indigenous lens, partnerships will need to meet broader expectations, framing a Future Research Strategy around resilience in biophysical, social and cultural, economic and technical dimensions.

NEXT STEPS

The summary of next steps:

1. At the local level, relevant EM agencies and community leaders to start or progress work on their relationships and achievable change now.

2. This report, distributed to and supported by participating agencies, is submitted to the Bushfire and Natural Hazards CRC/Natural Hazards Research Australia and followed up by NAILSMA and others, promoting this work as a foundation for a future fully funded program of collaborative PAR with community researchers and associated practical outcomes in communities.

3. For the next and future collaborative workshops to be planned and funding secured so they may become annual, focused, Indigenous led pillars of EM sector partnership.

4. Conversations continue at 3 levels: community level, transregional and across the multi-agency national conversation. This should include Qld, NT and WA EM agencies connecting more effectively with each other

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[17] It's worth noting where the West Arnhem Land Fire Abatement project has progressed to since 2009, particularly following incorporation as a business. On a modest but sufficient commercial income from Savanna Burning Carbon Credits the Indigenous business, Warddeken Land Management Ltd., can claim to have eradicated wild-fire on the West Arnhem Plateau (28,000km^2 of predominantly savanna woodland with very limited road access), (Pers Comm. S. Ansell 2019).

and supporting each other to progress partnership building at North Australia scale.

5. Engage with existing collaborators and potential funders to provide financial support to continue the momentum of Indigenous and EM engagement and networking.

6. The Bushfire and Natural Hazards CRC/Natural Hazards Research Australia, with this project's research leaders, connects this research with other CRC funded research carried out in parallel through the Firesticks, UNSW partnership and considers a forum for Indigenous voice I the broader national conversation (north, south, east and west) about partnership building.

The above are all opportunities to capitalise on and expand the benefits from this project.

PUBLICATIONS LIST

This project has been a short term, focused exploration of Indigenous views on future partnerships with researchers in the broader emergency management sector. It has not sought to generate publications within its limited time and resource scope, other than this final report.

James. G, Burton. D, Campion. O, Morrison. J, Hunter. B, Gondarra. T and Bayung. J. *Indigenous Fire and Land Management – Impact and sustainability:*

The development of a Future Research Strategy around opportunities and challenges for sustainable partnerships in Emergency Management. Bushfire and Natural Hazards CRC. 2021. (DRAFT)

PUBLICATIONS LIST

TEAM MEMBERS

The research team was invited by NAILSMA, based on previous work the CRC sponsored in this area. The five Indigenous researchers (Otto, Jimmy, Barry, Ted and James) are based in their own communities in the Northern Territory and Queensland and the others (Glenn and Danny) are based in Darwin. All are experienced working in cross-cultural settings and with the themes raised through this project on emergency management, Indigenous well-being and livelihoods and working together.

RESEARCH TEAM

Otto Campion	Aboriginal Research Practitioner Network – Ramingining. NT
Jimmy Morrison	Borroloola, NT
Barry Hunter	Kuranda, Qld.
Ted Gondarra	Dalkarra and Djirrikay Authority (DDA). Galiwin'ku, NT.
Glenn James	NAILSMA. Darwin, NT.
Danny Burton	NAILSMA Ltd. Darwin, NT.
James Bayung	Dalkarra and Djirrikay Authority (DDA). Galiwin'ku, NT.

END-USERS

There were no formal end-users identified for this short project. There are however, obvious end-users amongst the participating groups and agencies, and by association:

End-user organisation	End-user representative	Extent of engagement (Describe type of engagement)
QFES	Michael Wassing	Senior representative at direct discussion with Indigenous leaders in project.
BFNT	Ken Baulch	End-user for preceding project and key interest group representative in the NT
Andrew Kenyon	Australian Red Cross	Long term engagement in local and national EM space and project participant
ARPNet	Otto Campion	Community-based Indigenous research organisation with livelihood and well-being interests in the project
NAILSMA Ltd	Ricky Archer	Indigenous organisation and potential partner with Natural Hazards Research Australia
Indigenous communities	Indigenous project participants	Key respondents and group most directly affected by project outcomes and EM changes.

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