

FINAL PROJECT REPORT

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NORTHERN AUSTRALIAN BUSHFIRE AND NATURAL HAZARD TRAINING

Final project report

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Cover: (left) Depiction made by community participants of their community, its relationships and capabilities. (right) Footwear of a Traditional Owner. This project has sought to understand the outlook and views of community members and to ‘walk a mile in their shoes’.

WARNING: THIS DOCUMENT CONTAINS IMAGES OF, AND COMMENTARY BY, ABORIGINAL PEOPLE WHO ARE NOW DECEASED.



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We acknowledge all the Indigenous elders past and present who have supported this work. The form and purpose of the project has only been realized as a consequence of this support. With great sadness we note that some of those Elders and community members who provided us with wise counsel and enthusiasm have died during the course of the project. We remember them and their generosity and we promise to honor their voices and contributions in a dignified way.

We thank the Darwin Centre for Bushfire Research and most particularly Bev Sithole, Hmalan Hunter-Xenie and all the team at the Aboriginal Research Practitioners Network ('ARNNet') who exceeded the requirements of collaborators on the project.

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EXECUTIVE SUMMARY

This report provides an overview, including the north Australian bushfire and natural hazard ('BNH') context and the social background for the North Australian Bushfire and Natural Hazard Training project.

The project has proceeded slowly (five years) and has changed dramatically as a result of engaging in Participatory Action Research ('PAR'). This approach to researching the training needs of residents of remote north Australian communities encouraged these residents to participate in the framing of the enquiry as well as the generation of answers and training materials.

Several desktop reviews were undertaken during the project. These examined the existing BNH training offerings as well as the opportunities that existed at the time for Indigenous community members to obtain leadership training. The reviews found that where training existed it largely omitted Indigenous perspectives, particularly in terms of strategic overviews and planning. For leadership training, it was found that where remote communities were able to access training for BNH it did not focus on leadership and that which focused on leadership did not include BNH management.

In response to the views of project participants and the reviews, the project developed a set of training units that, taken together, drew together the essential elements of Indigenous and non-Indigenous BNH training in a Vocational Education and Training ('VET') style program. The program does however modify the 'standard' VET approach through the provision of flexible temporal arrangements for training and assessing. This need was identified as the project recognized the requirement to train 'on Country'¹ and to use local knowledge-holders in the preparations for and delivery of the training.

Nine formal 'engagements' were held over the life of the project, including workshops and three training pilots. In each pilot, different components of the ten training units were presented and refined. A detailed and culturally appropriate evaluation was undertaken of each pilot and the feedback was incorporated into the next 'round' of pilot training.

10 training units have been developed by the project. Some of these are entirely new while others are adaptations of existing training, albeit adapted sufficient to warrant a new unit descriptor.

The 10 units have not yet been subject to National Accreditation, but are designed to map onto the Standards for VET Accredited Courses as set out by the Australian Skills Quality Authority. Each unit has been framed in terms of 'Elements and Performance Criteria', 'Evidence Guide', 'Required Skills and Knowledge' and a 'Range Statement'.

¹ The capitalised term 'Country' is used throughout to indicate the entity which extends well beyond the English term for 'nation' or 'landscape' or 'rural'. For the Indigenous people who participated in this project 'Country' refers an entity which transcends physical, moral, spiritual and metaphysical realms and of which they are an integral part. Country is at all times the ground on which one stands but also inside a person (cf. Holmes & Janpajimpa 2013: 18). It is something one can be taken off, but can never be removed from within.



END-USER PROJECT IMPACT STATEMENT

This project identified early on that the participants in the project, the workshops and pilot training sessions, were end users. This is in addition to agency end users identified through the formal BNHCRC process.

Elders impact statement, Ramangining

Yolngu² side is here and just standing invisible, service providers they don't approach Yolngu, its been there for many years and its invisible. There is no recognition for the Yolngu voice. We are not recognized by any organization, the Mala try to take over everything. We can't get full service. We want to stand on our own and we want to work on our own. Our people are leaders themselves. Its time for us to make them understand what community means. Local people are just sitting and watching. If we get organized Balanda will listen. This is my land; this is my people and this is how we do it.

Elders impact statement, Malanganark

That's the real difference from any other project that I have seen, this one is different, we wanna start targeting each clan group, train them so they can be strong leader for own family and clan, they can make their own emergency plan for their community.

Lead end-user impact statement, Ken Baulch, Bushfires NT

For several years the project did not have a Lead End User representative. In 2019 Bushfires NT agreed to nominate Mr Kenneth Baulch for the position.

The North Australia Fire and Emergency Management Training project has been an important contributor to the development of remote community resilience to bushfires and natural hazards. By engaging directly with communities, including Traditional Owners and Custodians and their extended families, the project has driven a cross-cultural understanding of effective leadership and decision-making for responding to a natural hazard.

It has done this by explicitly valuing local, existing knowledge and capacity and then seeking to enable project participants to add to that existing scaffold new knowledge, approaches and understandings. Over a number of workshops and several years this process has documented what worked and what was appreciated by participants. The results have seen enthusiastic support for the project in the communities where the program took place.

The full benefit of the program has not yet been achieved however, as the training materials are yet to be captured in a formally accredited process. As Lead End User this final step is to be encouraged and Bushfires NT stands ready to provide advice and guidance in this area if required.

² 'Yolgnu' refers to the Indigenous peoples of north-east Arnhem Land. The term means 'person' or 'people'



INTRODUCTION

This document presents the final report of the Bushfire and Natural Hazards Cooperative Research Centre North Australian Fire and Natural Hazard Training project. As a report, it serves largely as an introduction to the materials presented in the Appendices and particularly to the training 'units' set out in Appendix 2.

The project was part of an inter-related group of action research projects based at Charles Darwin University entitled "Building Community Resilience in Northern Australia". This program included both physical and social science research into natural and cultural processes that impact upon the vulnerability and resilience of remote north Australian communities.

The key driver for the "Building Community Resilience in Northern Australia" project is the ongoing development of resilience through the life of the research project through its Participatory Action Research approach. This is an important point and one worth clarifying. The project was designed to generate some concrete outputs in the form of training materials and instructions for the delivery of those materials. But the concept also included a key requirement that the actual development of those materials through participatory interactions would also grow resilience in the doing.

To do this the project has prioritised not just the inclusion of Indigenous people in the project at a range of levels, but also to focus on the social context of the delivery of disaster management services, exploring how power imbalances constrain development of resilience and trust between agencies and communities. This has required the Bushfire and Natural Hazard Training for Northern Australia, to contextualise the materials and the process in an Indigenous world view as opposed to a non-Indigenous one.

The ongoing development of resilience through the life of the research project has been achieved through two key mechanisms. First, the inclusion of remote communities themselves in the research, so that new skills and understandings can be absorbed into the capability set of the community through the execution of research. This model has been adopted in the past by the Darwin Centre for Bushfire Research, utilizing the input of Indigenous ranger groups and providing feedback and training to reinforce the quality of data capture and to provide a legacy of understanding of modern scientific techniques that can be utilized in fire and land management. However, the Bushfire and Natural Hazard Training for Northern Australia took this further by including whole communities, not merely the rangers.

The second key mechanism for growing capacity through research is the use of Indigenous researchers, particularly ARPNet, the Aboriginal Research Practitioners Network. ARPNet comprises teams of trained researchers from communities across the north who use a specially designed set of qualitative and quantitative research methods in a contracted research service. The use of ARPNet by the BNHCRC "Building Community Resilience in Northern Australia" program, including the Training program, further enhances community resilience.

Perhaps the largest single opportunity for enhancing community resilience lies in the promotion and enhancement of existing nodes of capability and excellence. The most prominent of these for fire and emergency management



are ranger groups. These groups have grown substantially in the last decade and have built a solid base of capacity by ensuring skills, knowledge and qualifications in fields as basic as driving a car to operating GIS.

North Australian Fire and Natural Hazard Training project sought to provide a 'next-generation' training program that builds on the current assets in the north such as the ranger programs and leads to increasing levels of competence and confidence and in its turn, resilience. A crucial element of this is involvement in the preparation and delivery of training programs that are tailored to the needs of the specific targetted community. The design of materials is therefore quite different from other training available currently.



BACKGROUND

THE NATURAL HAZARD CONTEXT IN NORTHERN AUSTRALIA

The North Australian Fire and Emergency Management Training project was initiated following representations made by land, fire and emergency managers in northern Australia about the inadequacy of existing training for remote fire and emergency management. People involved in fire and land management in remote Aboriginal communities, in particular, were concerned that the existing training did not really provide satisfactory levels of skills or knowledge with which an individual or group could effectively manage bushfire and natural hazards ('BNH') at the landscape scale required in the north.

The project set out to attempt to establish new and relevant training units in fire and emergency management in Northern Australia. At the core of the concerns raised by communities lies the fact that fire and emergency management in Northern Australia is quantitatively and qualitatively different to that in the south of the continent. The geographical scale of natural disasters such as cyclones, floods and bushfires are legendary. For fire alone, an average of 430,000 km² is subject to fire annually³, much of it in severe late Dry season fires that contribute to destruction of assets, environmental degradation and the majority of the region's greenhouse gas emissions.

The enormity of the scale of these disaster events is juxtaposed with a low population and confounded by the remoteness and poverty of resident communities.

Nearly 360,000 of the people living northern Australia are in communities with varying degrees of remoteness from 'outer regional' to 'very remote'⁴. These communities are predominately inhabited by Indigenous Australians with the percentage rising in direct proportion to remoteness. Annual widespread flooding disrupts their lives and livelihoods, with many communities more than 150km from the nearest hospital becoming inaccessible by road for more than 90 days per year. Many communities are within 50km of the coast and are vulnerable to storm surge, erosion and sea level rise (18 cm in the last 20 years around Darwin). In the last decade cyclones and flooding have caused the destruction and evacuation of whole communities. This includes places like Ramingining which has not had a cyclone in living memory but had two in 2015.

While the disastrous numbers are impressive compared to southern Australia, it is perhaps the qualitative differences that underpin the need for a new suite of training materials. After all, fire is fire, flood is flood and it seems intuitive that the nature of preparation, response and recovery to each should be scalable and therefore applicable in any context. But stakeholders in communities in remote

³ This is changing thanks to landscape-scale fire management empowered by a fire-management greenhouse gas methodology. In recent years the total area burnt has reduced by 88,000km² (Fisher, 2020)

⁴ Remoteness in Australia is classified by the Australian Bureau of Statistics into 5 classes of on the basis of a measure of relative access to services: Major Cities, Inner Regional, Outer Regional, Remote and Very Remote (ABS 2016).



north Australia have made it clear that believe that their needs and their world view have not been addressed in training to date.

There are three jurisdictions in the north. Both Queensland and Western Australia are politically and demographically centred south of the Tropic of Capricorn and their agencies have developed comprehensive training capabilities that are applied uniformly across each state. Inevitably these courses primarily treat with the emergency and fire management needs of the more populated areas, and these are predominantly in sub-tropical areas. The Northern Territory agencies generally adopts/adapts materials developed in more southerly jurisdictions.

It should be said that the training that is available is essentially sound and the support of northern Australian communities by agencies has typically been generous and accommodating. But communities in the north have indicated the key qualitative differences are matters of importance to them and that addressing these issues may aid dealing with the quantitative issues raised above. In workshops and discussions, the key qualitative difference seems to devolve to acknowledgement of different world views or mind sets and the relative respect these receive from authorities.

While there is a strong narrative in southern Australia that might be characterized as 'we live in a bushfire-prone environment and we have to learn to live with it', this deterministic view is not shared in the north. Here Indigenous Australians as well as pastoral land managers and agency personnel perceive the fire regime (in particular) as something that is malleable and responsive to human agency. Fire is a tool that can (and should) be used to achieve agreed landscape and local objectives including community safety, biodiversity, aesthetic, cultural, greenhouse and amenity outcomes.

This in turn derives from a deeper Aboriginal understanding of the universe which is embedded in the Dreaming or 'the Eternal' (cf. Hume, 2004). In this world view everything in the world has morality, that is to say a 'correct and appropriate' role and behavior. All moral entities monitor each other for moral rectitude. Fire is a part of this scheme and failure to manage fire is immoral. The existence of large-scale late Dry Season ('LDS') wildfires is understood to be a clear consequence of immoral behavior. Managing fire according to Aboriginal tradition is a moral act that has beneficial spiritual as well as physical consequences.

In modern times technologies and practices to achieve this are being shared and developed informally across the north. These incorporate the best of modern scientific information and technology with ancient understandings of fire/land interactions. The West Arnhem Land Fire Abatement project ('WALFA') has been an important catalyst in this sense. A regular program of planning and seasonal debrief meetings have been the source of a program of adaptive management to which fire and land managers from across the north have been kept participants. The capabilities that are being developed in participating communities and shared with others from Broome to Cairns have contributed to community resilience in both the growth of skills and knowledge, but also in increases in wealth and workplace participation.

The workplace participation is particularly relevant insofar as the work of fire and land management for the broad range of objectives mentioned above is



fundamentally aligned with the aspirations and cultural preoccupations of many remote communities. Work is conducted on Country, with family, utilizing Traditional Knowledge and acknowledging traditional owner's rights and responsibilities. This deep cultural affinity with land management as a lifestyle and responsibility, in addition to the notion of fire as a tool to be husbanded sets up an inevitable disconnect with much existing training derived from the southern Australian paradigm.

For this reason, stakeholders in an early workshop sought to have the establishment of an overarching objective for training. The statement that training should “support north Australian needs and world view” has been adopted as an approximation of the complex of interwoven concepts discussed above. In discussions senior NT government staff indicated a different objective. This was “to save lives”. Through the course of the project we received testimony from many remote that, while no lives were lost during a series of natural hazards, people felt devalued and mistreated by the authorities that saved their lives: that they were ‘a life to be saved’ rather than a Yolgnu or Bininj person.

THE TRAINING CONTEXT

As the project started, there existed in northern Australia a training regime for BNH management, within the Vocational Education and Training (VET) system had proven highly effective in developing competencies in participants with shared cultural values.

Until recently, most training was developed and delivered within the relevant statutory authority in each Australian State or Territory. Each jurisdiction still maintains a training regime for fire and emergency management staff and volunteers. Most of the agencies have a training section that functions as a Registered Training Organisation (‘RTO’) and these ensure that all training materials and their delivery are accredited within the national Framework.

This training regime caters to the unique Australian BNH management system which relies heavily on volunteers. In each State and Territory fire and emergency organisations comprise a relatively small number of staff working with a large number of volunteers. The volunteers are organised into brigades. The brigades themselves are formally constituted bodies, usually established under a relevant statute with mandated democratic procedures. In addition to tightly controlled administrative structures, brigades also have tightly controlled operational structures. They rely on well documented doctrine and Standard Operating Procedures. These procedures usually spell out what level of training, and what specific courses are required prior to a staff member or volunteer participating in an emergency management activity. Given that many of the activities are very hazardous, this is eminently sensible.

The ‘good sense’ incorporated into this training is well recognised by remote community members. They recognise the importance of safety, and that while Traditional Knowledge is central to their practice, things have changed in the last one hundred years, including the fact that not all tracts of the landscape are under traditional management. This leads to wildfires and other natural hazards that were unknown in the pre-colonial period. While preferring to use mitigation to manage BNH, inevitably rangers and other operational groups find themselves



responding to events. In these circumstances, close attention to safety and the lessons of the nation's extensive training regime are fundamental.

Community members were at pains therefore to make it clear that they did not want the existing training to stop. In fact, they want more people trained to ensure safety. But they also expressed a view that the training was inadequate. The perceived shortcomings centred around three key areas. First the training was developed in 'the south'. This term carries a weight of meaning, much of it pejorative! Dissecting the comment in this context however it incorporates a concern that the training has been developed in the more populated non-Aboriginal communities of southern Australia. It reflects southern Australia's climate and geography and, most importantly, it incorporates a world view that portrays fire as a problem. Aboriginal people in remote north Australia do not see fire as a problem. Fire is a multidimensional phenomenon. It is a key component of their cultural practice as well as a land management tool. A 'fire regime' is something they decide, not something pre-ordained that they must respond to.

The second feature of concern in existing training for remote community members is that it does not include traditional Aboriginal knowledge and practice, except perhaps as a marginal note. While this may be understandable in the more densely populated areas of southern Australia where traditional Aboriginal land and fire management practices ceased well over 100 years ago, in northern Australia it is perceived as a glaring oversight at least, and an insult at worst.

Third and most importantly for this discussion, the training is delivered in a 'linear' manner – there is a body of information to be absorbed and this is set out in a logical format and worked through from top to bottom with assessment at the end. Presentations are generally delivered by trainers at the front of the class, talking through Powerpoint™ slides. Some practical demonstrations may be included. While this works for the majority of Australians for whom it is an understood cultural construct, it is not the favoured means of learning for remote Aboriginal communities. Tying together the previously stated concerns, the participants in this project indicate that they want an interactive learning system that reflects their cultural settings and includes their Traditional Knowledge and leaders.

These concerns were expressed about the existing BNH management training currently available through government institutions. They touch on wider issues that have been identified elsewhere regarding VET and its roll-out in remote Aboriginal communities.

VET has become the preferred system for use in Indigenous communities for many reasons (O'Callaghan, 2005). National and state government policies all target the value of Aboriginal people getting 'real jobs' and for these positions they will require 'real qualifications. Unfortunately, like other forms of education delivery in remote communities, the success of VET has been at best patchy. There are some signal successes in particular contexts; like those involving the emerging ranger and land management projects in the north. More often however, VET appears to have had limited efficacy for long term improvement in lifestyle, employment, economic and social development for Indigenous people who choose to remain on Country. The quality of delivery in the VET



sector is very inconsistent and the governing bodies have struggled to improve standards across the sector.

The nature of the VET program delivery means that this inefficiency is coupled with a steady erosion of the key Indigenous cultural constructs. These constructs are the things that connect Indigenous people to their history, religion and Country. Traditionally, these connections would be reiterated regularly and often, and learning opportunities would reinforce and build on existing knowledge. This would in turn form the foundations for pathways for future learning and 'employment'. The VET system as portrayed here sits outside this framework and consequently learning experiences will tend to be sub-optimal. There is for example a tension between the need/desire of many remote Aboriginal people to continue traditional ceremonies to progress young people through the various stages of seniority in their society (Sithole et al., 2017) and the need to complete VET course accreditation in specific timeframes. These timeframes often conflict with ceremonial obligations.

While there is a clear requirement for rigorous assessment of competency prior to individuals engaging in any dangerous activity, the timing and nature of VET accreditation has been called into question in the remote Aboriginal context. Current accreditation frameworks are quite rigid and very 'non-Indigenous'. Despite this apparent rigorousness, the accreditation and delivery processes often fall far short of the actual objective of competent confident practitioners in the BNH realm. For example, courses may be "dumbed down" in order to facilitate achievement of the qualification. This may be done with integrity such as the modified version of the TA&E for VET trainers who have a qualification as a teacher where Recognition of Prior Learning processes are applied. Often however quality is sacrificed.

While flexibility in course delivery can be useful, the VET sector is bedevilled by training providers who do not deliver good quality courses (Australian Education Union, 2016). Alternatively, training providers may focus on the imperative of filling enrolments in order to meet course delivery quotas rather than client groups undertaking training that will meet their needs. In the NT a policy of increasing VET delivery in remote communities has led to a situation where many people living in communities have qualifications provided through a range of access programs at great public expense. The authors have been shown lever-arch files by VET graduates that are filled with certificates. When further questioned about various qualifications one graduate stated that he had little memory of the course or its content. Moreover, he expressed no interest in the subject matter (a Cert IV in Aged Care) and had only attended because he was told to do so, and it involved a free trip to Darwin. This is a common scenario with many in remote communities relating similar stories and expressing similar feelings which are associated with a sense of helplessness about how to get 'education' that will support their aspirations.

Another aspect of the problem is "training fatigue". Where training is effective and skills and knowledge are developed, these competencies may remain unutilised in the communities where people live. For example, following Cyclones Lam and Nathan in 2015 members of the research partnership referred to the use of 'outside' workers who were brought into the communities at considerable expense to undertake the post-cyclone clean-up. This included tasks using a



range of qualifications which already existed within the community. People were fully trained and appropriately accredited through government funded training schemes, under-employed and keen to assist in the disaster response in their own community but were forced to watch as outsiders took control of the task. The moral of this experience for some in the community is that their qualifications are worthless. The net effect then is that VET training inadvertently contributes to a perception that education is pointless if you are Aboriginal and living in a remote community.

VET, HE and schooling in general all have struggled to make education relevant to people living in these communities. The outcomes and the modes of delivery feel alien and are in opposition to the rhythms of life in these communities. This is coupled with different patterns of engagement that work to disconnect people from the learning process. While the school may be set up in one place its students for cultural and social reasons may move around. They may be absent from the learning process for extended periods and over time these gaps make re-engagement very difficult. If the learning was embedded in the cultural rhythms of the community and if it was linked to the core concerns shared by everyone in that community then this disengagement would significantly reduce. The Wardekken Academy (Narwardekken Academy, 2016) project is an example where a local community has sought to manage this suite of problems on their own terms – with great success.

Aboriginal people are aware of these issues and refer to their traditional practice as a guide to mechanisms for improving education outcomes. In particular they rely on their land and fire management record. Traditional land management has been maintained very successfully over many generations because it is embedded in the cultural constructs of the community. Contrary to popular belief this is not because Aboriginal culture has been static but because it has flexed around changes in the landscape to ensure that the people's lives have continuity on their Country. For example archaeological research indicates that significant changes have occurred in the geography and economy of the Darwin and Adelaide River catchments in the last 1000 years (Bourke et al., 2009;) while other research in Kakadu portrays nearly 50,000 years of dynamic responses by Aboriginal people to changing environmental parameters.

This adaptive capacity remains today with Indigenous communities using the existing forums to maintain continuity while meeting the needs of the modern world. In this context the delivery of training requires a significant shift in thinking and methods. In discussions with Indigenous leaders (TOs including Djungkayi and Mingkirrinji⁵ for their Country) it was clear that they would welcome accredited Leadership training (for example) that would meet land management training priorities shared by the non-Indigenous and Indigenous BNH stakeholders but delivered through traditional learning forums including ceremony.

⁵ Djungkayi is a widely used term for a (matriarchal) hereditary manager responsible for the management of clan estates. Mingkirrinji is a term referring to the (patriarchal) hereditary owner of a clan estate in parts of western Arnhem Land (synonyms exist in most other languages). Land, fire and emergency management decisions will not be made without the due consideration of both Djungkayi and Mingkirrinji.

In the VET stream a number of organisations across northern Australia have proceeded to develop their own training projects to address these issues. These cater to the specific needs of a community. Examples include a program for learning about the management of fire in the sandstone plateau country in Kakadu National Park (KNP). This project was developed by KNP in association with Bushfires NT. Another training project has been developed by the Carpentaria Land Council to assist its ranger program achieve its goals – which include providing land management services to non-Aboriginal land holders throughout the Gulf of Carpentaria (Carpentaria Land Council, 2016).

In addition, much work has been done by institutions such as Notre Dame University (Clements, Kennedy, Marshal, & Kinnane, 2015) to develop courses that recognise and value the cultural contexts of their Indigenous students. However accreditation remains a barrier to a complete shift away from courses that are constructed using non-Indigenous centred models of delivery, and accreditation of these students continues to be controlled by organisations that have little knowledge of their context and therefore how this learning will be used. Courses continue to be constructed according to the premise "What should the student know?" rather than "How will this course facilitate lifestyles of learners?"



FIGURE 1. PARTICIPANTS IN A RAMINGINING WORKSHOP.



THE RESEARCH TEAM

The research team ebbed and flowed as the project moved from one place and topic to another and included:

Mr Stephen Sutton, Charles Darwin University

Dr Bevlyne Sithole, Charles Darwin University

Ms Hmalan Hunter-Xenie, Charles Darwin University

Mr Otto Campion Bulmaniya, ARPNet

Ms Christine Brown, ARPNet

Iolanthe Sutton, SHIM Consulting

Ms Cherry Daniels, ARPNet (Deceased)

Ms Grace Daniels, ARPNet

Mr Rohan Fisher, Charles Darwin University

Dr Andrew Edwards, Charles Darwin University

Ms Dominique Lynch, Charles Darwin University

David Campbell, Resilience Planning

Dean Yibarbuk, ARPNet

Maisie Campion, ARPNet

Charlie Brian, Buluhkaduru

Mike Redford, ARPNet

Marshall Campion, ARPNet

Russell Brian, Buluhkaduru

Hedley Brian, Buluhkaduru

Jeff Campion, ARPNet (Deceased)



RESEARCH APPROACH

APPROACH

This project developed a research approach that basically climbed Arnstein's ladder of community engagement (Arnstein 1969). Despite the best intentions of the lead researchers, the initial model of the research design in fact revolved around consultation. This situation had developed over several years prior to the inception of the project when the r

esearchers received representations from remote north Australian community members seeking a revised approach to training. For example, during a workshop in Ngukurr on the banks of the Roper River in 2015 one TO⁶ said:

“Muninga [non-Aboriginal people] are driving the car for emergency management. They are driving the car and leaving us in the dust. And we don't know where the Muninga are going. And the Muninga think that local people don't want to read or be involved in the plan. Emergency planning should be done by Yugul Mangi [ranger group at Ngukkur] and Muninga should be invited to meeting to help.”

The views expressed therein were 'understood' and the project developed along the more or less 'traditional' line of non-Indigenous institutions. That is, a series of consultations were planned to fill out 'gaps in our knowledge' within a process structured by the existing institutional arrangements. It later became clear that this approach recapitulated the epistemological problem attributed to Einstein, ie. “We cannot solve our problems with the same thinking we used when we created them.” Reference to Arnstein's ladder provided the sobering definition that 'consultation' is merely 'tokenism' and from there that it stands to reason that marked improvements in remote Aboriginal people's engagement in fire and emergency management training was not likely within such a framework.

The research model developed significantly following an agreement to work with the Aboriginal Research Practitioners Network (ARPN^{et}). This group of trained and motivated researchers had previously developed a model for social research among north Australian Aboriginal communities that included active participation in design and conduct of the research (Sithole et al, 2009). With ARPN^{et}, the project developed a program of Participatory Action Research.

Participatory Action Research (PAR) provides an essential opportunity for co-developing research and research processes *with* people rather than *for* them, or worse, *on* them (McIntyre 2007). Perhaps more importantly PAR is comfortable with questioning the nature of knowledge and the political and social ramifications of privileging some forms of knowledge over others. It is also

⁶ “TO” refers to “Traditional Owners”, a conflation of the term “traditional Aboriginal owners” as set out in the *Aboriginal Land Rights Act (Northern Territory) 1976* ('ALRA') which defines them as “a local descent group of Aboriginals who: (a) have common spiritual affiliations to a site on the land, being affiliations that place the group under a primary spiritual responsibility for that site and for the land; and (b) are entitled by Aboriginal tradition to forage as of right over that land. In the current project “TO's” are members of the Aboriginal Land Trust and therefore exercise decision-making rights conferred through the ALRA.



reassuredly accepting of lived experience as a means to legitimate forms of knowledge (Baum et al 2006). This positioning is/was entirely consistent with the initiating premises of the research; that it sought to develop training that was consistent with an Aboriginal 'world view'.

The project model was designed to be iterative. To learn and improve the products as the project progressed. This was achieved through a program of evaluation, again conducted by ARPNet. This program moved beyond the 'tick and flick' A4 form that is commonly completed at the end of a VET training session. Instead, conversations were held with participants in the various workshops and pilots and their families. Attention was paid to the degree to which participants felt 'culturally safe'; the language and settings of the events were suited to the participants.

All workshops and interactions with Traditional Owners conducted or facilitated by ARPNet practitioners and were documented using tools taken directly from or adapted from the "ARPNet Dilly Bag" (Sithole 2012). This is a suite of culturally appropriate interrogation and documentation techniques developed by and for the Aboriginal people of central and western Arnhem Land. The ARPNet Dilly Bag is a practical guide to social research using a range of visual tools which allow Indigenous people to more readily engage with the questions and issues raised in the research.

The program of research proceeded slowly, in part in recognition that the participants: a) spoke English as a third or fourth language and the English they did use is entirely vernacular. Academic English remains "foreign" to many non-Indigenous Australians and presents a barrier to communication with Indigenous Australians.

b) have varying degrees of literacy, from none to fluency. The levels of comprehension of written language vary from place to place and by generation. Many older participants read well and write in copperplate, while some young people are unable to read in their own language.

c) participants may have travelled some distance from remote communities to attend. They will share family and Dreaming and their priorities when coming together will be to exchange information with their affines. A casual approach to programming of workshops enabled people to address their primary concerns prior to engaging with the 'work'.

d) while all participants will be broadly aware of the nature of the workshop, understanding of the objectives and concepts to be discussed will be highly variable. Further to this, when dealing with colonial concepts such as 'resilience' and 'emergencies' it is likely that the participants will have a limited context and conception of the terms and how they relate to workshop. Often considerable time needs to be allocated to exploring the background, context and definitions of the concepts the researchers are seeking to understand.

The ARPNet Dilly Bag provides useful tools to accommodate all these issues and different tools were used at different times and workshops. One common thread to all the tools is that they tend to be open and transparent to all participating (but see below regarding gendered enquiry). Perhaps the most common form of documentation of discussions and workshops was the use of 'butcher's paper'.



In some circumstances this was in the form of pre-cut 'flip charts' which would be mounted against the side of a vehicle with people sitting in a semi-circle around it, participating in a 'classroom' layout. However, more commonly the paper was on a 50 or 100m roll which was laid on the ground (on a clean tarpaulin) and inscribed as the workshop proceeded.

A number of ARPNet practitioners are keen 'modellers' and actively sought to conceptualise the discussion on the butchers paper. Using the roll allowed the continuous documentation of the meeting with new sections being illustrated and modelled as the ideas and concepts were raised. The effect of this process is a 'cartoon scroll' which provides both a temporal and spatial record of the output of the workshop.

The butcher's paper scrolls are photographed and then collected. They are retained and are archived in the ARPNet facility at CDU. Figure 9 shows a section of a butcher's paper documentation.

Discussions which seek to identify relative values of different concepts use other ARPNet tools. One favoured example is the use of a collection of seeds or fruit (such as pandanus nuts) to create 'piles' representative of significance. Seeds are collected from a nearby location in the bush, with research personnel discussing the broad concept that will be discussed as the seeds are collected, together with an overview of how they will be used in the meeting. This process is organic and inevitably the conversation wanders from the personal and immediate to the abstractions to be considered in the work. On returning to the meeting participants have a clearer idea of the task to be undertaken and have developed a rapport with the researchers and each other. Typically the 'value' items will be written and drawn on pieces of cardboard, torn from boxes used to transport food and equipment and placed on the ground around the space. A discussion will be encouraged and participants will (usually) engage in detailed conversations in their first language about how many seeds should be placed on which pile and so on. This can take some time and it is common for the interrogation of the values to see seeds removed from one pile and placed on another before there is final agreement on the relative settings and people say "Ma!"⁷.

It is also not uncommon for a 'blockage' to appear in the discussion when the research seeks to identify a value or a ranking incorporating a concept not frequently discussed by the participants. In this circumstance a 'breakout' workshop may be necessary where the word on the cardboard is placed in the centre of the groups and discussed. The cardboard might then be passed around to participants and each will say something (or nothing) about what they think it means in an effort to grow comprehension and 'ownership' of the term by the community. On occasion this conversation will continue in the evening around the campfire until participants are happy that they grasp an idea in their own terms and to their satisfaction.

These interactions were further documented by note-taking and photographs.

At every engagement meeting the evaluations identified ways for the program to be improved and efforts were subsequently made to fulfil the aspirations of

⁷ Ma! Means "Yes/Good" in Bininj kunwok.



participants for the training. These efforts have resulted in greater effort being focussed on the 'how' training is delivered rather than the 'what'. That is not to say the content is not important – a lot of the materials that have been developed include new subject matter entirely derived from the north Australian remote Indigenous context. But there was increasing importance placed on the aspects of the delivery of training. These aspects included: timing, pacing, participation (clan and family, not just individuals), language, audio-visual aids and so on.

ENGAGEMENTS

Nine formal engagement programs were conducted throughout the program. These includes six workshops and three pilot training programs. The first two of these were held at CDU and were 'by invitation' (but see below). The subsequent engagements were open and inclusive involving everyone who was available and interested in a community to attend.

Charles Darwin University – Project Scoping Workshop

This workshop sought to clarify the focus of the project with input from stakeholders from all three northern jurisdictions. The workshop used innovations such as 3D spatial modelling to demonstrate possible ways to enhance engagement with communities. One key outcome of the workshop was the recommendation for an overarching mission-statement for the project: something like "Development of BNH training consistent with the north Australian 'world view'."



FIGURE 2. MEMBERS OF THE SCOPING WORKSHOP AT CDU.

Charles Darwin University Leadership Training Workshop

This workshop invited a range of senior Traditional Owners from central and west Arnhem Land to discuss the possibility of developing leadership training for

Bininj/Yolgnu that developed the parallels between the best of 'non-Indigenous' BNH leadership doctrine and practice and their own cultural practices of leadership. The response to this 'call' for workshop attendees was overwhelming. This was a subject they had never discussed with 'balanda' (non-aboriginal people). Very senior ceremony leaders inserted themselves into the program and led much of the subsequent workshop discussion.

The conclusion of the workshop was that there are many features of current BNH leadership practice which have direct analogues in Bininj/Yolgnu culture and that this ought to be recognized. It also means that young Bininj/Yolgnu have a strong foundation to build upon, there is no need for them to 'toss out' their own cultural settings in order to lead natural hazard preparation and response.

At the end of the workshop the attendees were asked, almost in passing, whether any balanda had ever spoken to them about this before. There was a loud and immediate response: **"No!" "Nothing!" "Never!"**



FIGURE 3. MEMBERS OF THE BININJ/YOLGNUM LEADERSHIP WORKSHOP AT CDU.

Blythe River Workshops 1&2

Following the success of the first two workshops, the project then received invitations to conduct workshops at various locations in Arnhem Land.

A location on the Blythe River, near the crossing of the Maningrida to Ramingining Road was chosen for workshops in 2016 and 2017. These two workshops further developed the conceptual connections regarding Bininj/Yolgnu and non-Indigenous leadership. The first workshop focused on the cultural nature of Bininj/Yolgnu structures, how the elements of the structure relate to each other and to what extent those structures resemble elements of non-Indigenous BNH leadership.

The second workshop, held on the banks of the Blythe River asked participants to think about and describe the skills and knowledge that contributed to good leadership among Bininj/Yolgnu. This required some deconstruction of traditional

ways of doing things that may not normally have been questioned by the participants.



FIGURE 4. WORKSHOP SESSION ON THE BANKS OF THE BLYTHE RIVER.

Some ‘meta-data’ was achieved in the holding of two workshops. One key element of the success of this program was the fact that the engagement was prolonged and incorporated a core group of individuals, both from the project team and from the Bininj⁸/yolgnu communities. This provided for the development of trust and the time to develop concepts. The trust was important because Bininj/yolgnu have learned to become wary of providing information to balanda researchers.

In one workshop senior TOs identified a number of individuals including some academics, who had taken their information and proceeded to make a career, or a large amount of money, or both, from that information while they received nothing, ‘not even acknowledgement’.

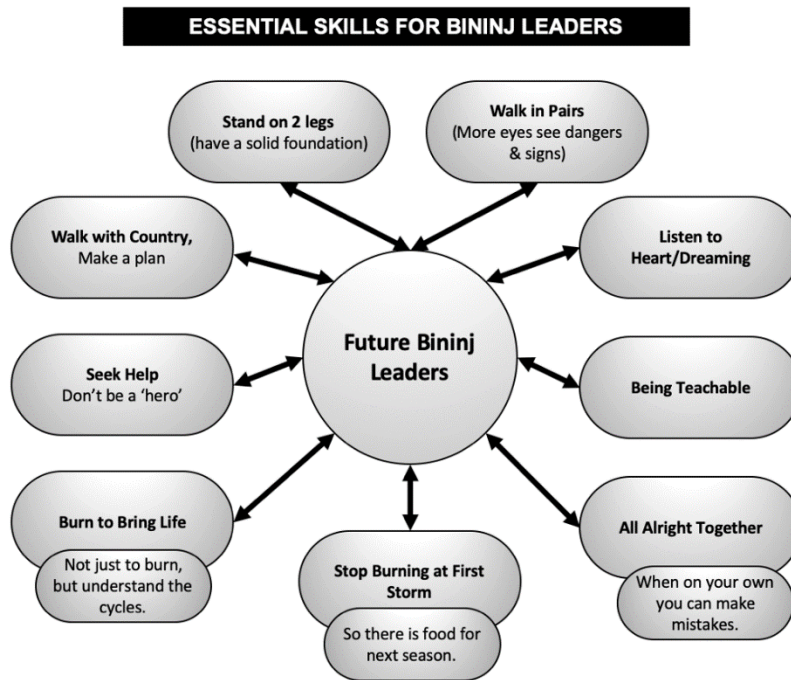


FIGURE 5. LEADERSHIP SKILLS MATRIX DEVELOPED AT THE BLYTHE RIVER WORKSHOP.

⁸ ‘Bininj’ refers to the Indigenous peoples of western Arnhem Land. The term means ‘person’ or ‘people’.



The second element of the success of the follow-up workshops was the fact that concepts were refined. It must be remembered that the research team spoke English only, while Bininj/Yolgnu participants spoke a range of languages including English but were often translating terms or concepts for the first time (see above comments about never having been asked about Bininj/Yolgnu leadership before). This meant that a range of refinements were required through the course of the project as attempts to define concepts were re-examined. The two diagrams in this section, spelling out concepts of Bininj/yolgnu leadership came about as a result of this iterative workshop process.

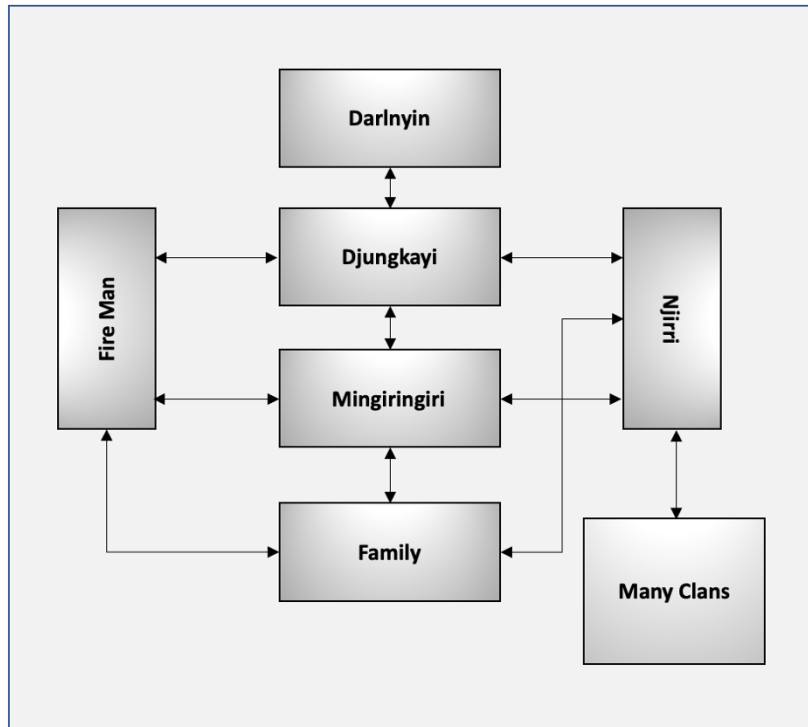


FIGURE 6. BININJ/YOLNGU LEADERSHIP AND DECISION-MAKING MATRIX (SEE SITHOLE ET AL 2019 FOR DISCUSSION).

Malyangarnak

After the workshops at Blythe River, the BNHCRC project team was invited to present a training pilot at the Malyangarnak outstate. This small community is the home-base for the Balngara Clan estate. This Rembarranga-speaking group occupies an area on the southwestern quarter of the Arafura Swamp. This vast wetland made famous by the movie “Ten Canoes”, is managed by the Guruwilling Rangers. These rangers were the core participants in the training pilot. One of the key lessons from the Malyangarnak training pilot was the value in inviting the whole clan to the training.

At Malyangarnak grandmothers and small children all sat in on most of the training delivery. In many instances older community members were able to provide important contextual input into the training. This was especially the case when discussing fire management and leadership.



FIGURE 7. MEMBERS OF THE MALYANGARNAK TRAINING PILOT.

Buluhkarduru

Following a review of the evaluation of the Malyangarnak training pilot, a second pilot was held at another outstation. This time the project was invited to Bulukahduru Outstation, about 50km south of Maningrida.



FIGURE 8. BULUKADURU TRAINING PILOT PROGRAM.

This pilot sought to adopt the lessons of the Pilot #1. Once again, the whole community was invited to attend, although this proved less successful than at Malyangarnak as the school was operating and school age community members came and went as they pleased, potentially missing lessons in the training pilot as well as at school.

The materials that were delivered were more refined and the process of integrating local senior Traditional Owners into the delivery was met with enthusiasm – although the lead-time for this was inadequate. This meant that it took some time during the actual delivery for the various ‘instructors’ to gauge

their role and contribution. The detailed evaluation of the Bulukarduru Pilot prepared as a separate exercise by ARPNet practitioners was as follows:

The model of training that has evolved out of the project is clearly distinct. It is built on strong community engagement, site specificity and respect for cultural norms and practices and is demand driven. Remote communities see value in being engaged in the training as part of a long journey of learning, living practice and more learning. It is therefore not surprising that one of the assessment questions gets an answer where the community requests more training. It is crucially important to recognise that this demand for more training is occurring in a context where Aboriginal people have become skeptical of training generally and what they perceive as unmet outcomes. This training is valued not least because there is ownership of both the process and outcome.

Ramingining

An invitation was received from the Senior Ranger of the Arafura Swamp Rangers Aboriginal Corporation to hold the third and final training pilot in Ramingining at the Ranger Station. This created some nuanced difficulties that were not experienced at the outstations. While the invitation to attend was applied to all the rangers and their families, the day to day realities of life in a town meant that the attendance was more varied. Several rangers were also required to absent themselves to attend an emergency some distance from town.

On the positive side, senior TOs who live in Ramingining to accommodate their health requirements were able to attend and gave stirring performances. This included detailed connections between non-Indigenous BNH management and Bininj/Yolngu concepts.

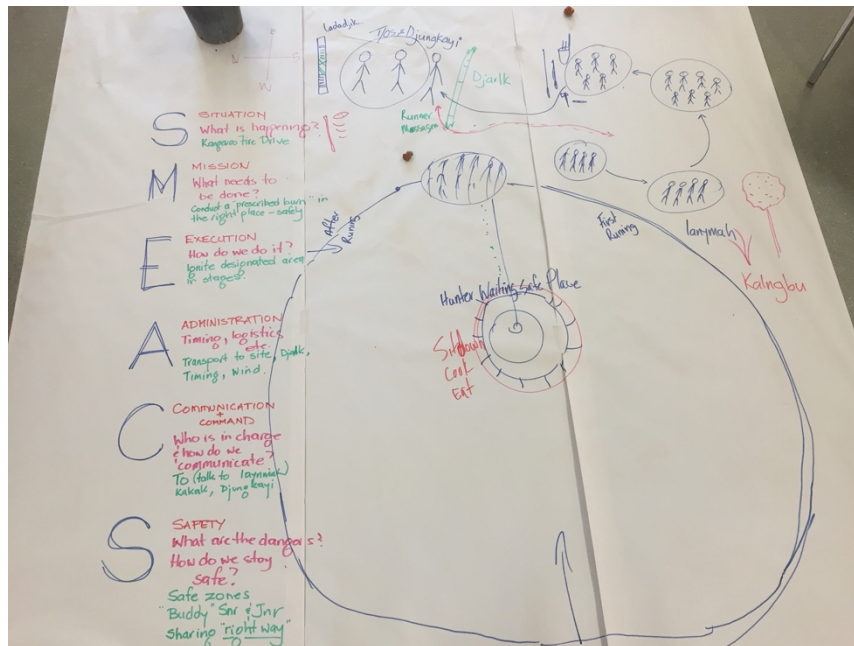


FIGURE 9. USING A LATE DRY SEASON KANGAROO FIRE DRIVE TO EXPLAIN 'SMEACS' BRIEFINGS.



REVIEWING EXISTING TRAINING AND EDUCATION

FIRE, EMERGENCY AND DISASTER MANAGEMENT TRAINING

In order to understand the requirement for additional training a review was undertaken of existing course offerings in the VET and HE streams through Charles Darwin University and its affiliated institutions. At the time of the review CDU offered courses in the VET and HE streams through several campuses, with different campuses delivering a given course in different contexts and with varying parameters. For example, the Bachelor Institute of Indigenous Tertiary Education only delivers to Indigenous students and has a framework, including allocation of resources and time for courses that varies from other campuses.

Twenty-one courses ranging from Work Safely and Assist with Prescribed Burning (VET) through to Interdisciplinary Aspects of Emergency and Disaster Management (HE) appear to offer a broad suite of education packages for aspiring fire and natural hazard managers. Together they cover all aspects of disaster and a number are delivered in courses that place fire at least in the context of ecology (in both VET and HE streams) (see Table 1). These offerings provide prospective students with high-quality training and proper qualifications that will enable graduates to access the workplace with skills and knowledge that are transportable across jurisdictions. There is no suggestion here that the offerings are in any way inadequate or in need of revision. They are what they are and provide a valuable contribution to fire, land and disaster management in northern Australia.

Qualification	Unit Description	Training Package	Location
Cert 1 CLM (AHC10110)	AHCOHS101A Work Safely (C)	AHC10	Cas (I, E, MM)
Cert 2 CLM (AHC21010)	AHCOHS201A Participate in OHS processes (C)	AHC10	Cas (I, E, MM) AS (p-time)
Cert 2 CLM (AHC21010)	PUAFIR204B Respond to wildfires	AHC10	Cas (I, MM)
Cert 3 CLM (AHC31410)	AHCOHS301A Contribute to OHS Processes	AHC10	Cas (I,M)
Cert 4 CLM (AHC31410)	AHCOHS401A Maintain OHS processes	AHC10	Cas (I, MM)
Cert 4 CLM (AHC31410)	PUAFIR303B** Suppress wildfire	AHC10	Cas (I, MM)
Cert 4 CLM (AHC31410)	PUAFIR407B Conduct prescribed burning (E)	AHC10	Cas (multimodal)
Dip CLM (AHC51110)	PUAFIR406B Develop prescribed burning plans	AHC10	Cas (MM). RPL-VEH
DEM514	Cultural, Social and Psychological Aspects of Emergency and Disaster Management	HE (Health)	Cas (I,E)
ENV507	Fire Ecology and Management	HE (Environment)	Cas (I,E)
ENV207	Fire Ecology and Management in North Australia	HE (Environment)	Cas (I,E)
DEM511	Emergency and Disaster Management in Context	HE (Health)	Cas (I,E)



DEM512	Interdisciplinary Aspects of Emergency and Disaster Management	HE (Health)	Cas (I,E)
DEM513	Leadership in Emergency and Disaster Management	HE (Health)	Cas (I,E)
DEM514	Cultural, Social and Psychological Aspects of Emergency and Disaster Management	HE (Health)	Cas (I,E)
DEM515	Reflective Case Study	HE (Health)	Cas (I,E)
DEM521	Research Project	HE (Health)	Cas (I,E)
ENV202	Introductory Remote Sensing	HE (Health)	Cas (I,E)
ENV502 (equiv unit SES201)	Remote Sensing	HE (Environment)	Cas (I,E)
HSC260 (equiv unit GPB401)	First Humanitarian Mission (Project)	HE (Environment)	Cas (I,E)
PRBM019	Strategic Governance and Management	HE (Business)	Waterfront (I)
AHC10110 Cert 1 CLM	AHCOHS101A Work Safely (core)	AHC10	Bachelor TER, BAT, CAR, DPC
AHC10110 Cert 1 CLM	AHCOHS201A Participate in OHS processes (Elective)	AHC10	Bachelor TER, BAT, CAR, DPC
Cert 2 CLM (AHC21010)	AHCOHS201A Participate in OHS processes (C)	AHC10	Bachelor TER, BAT, CAR, DPC
Cert 2 CLM (AHC21010)	AHCFIR201A Assist with prescribed burning (E)	AHC10	Bachelor TER, BAT, CAR, DPC
Cert 3 CLM (AHC31410)	AHCFIR201A Assist with prescribed burning (E)	AHC10	Bachelor TER, BAT
Cert 2 CLM (AHC21010)	PUAFIR204B Respond to wildfires (E)	AHC10	Bachelor TER, BAT, CAR, DPC
Cert 3 CLM (AHC31410)	PUAFIR204B Respond to wildfires (E)	AHC10	Bachelor TER, BAT
Cert 3 CLM (AHC31410)	AHCOHS301A Contribute to OHS Processes (C)	AHC10	Bachelor TER, BAT
Cert 4 CLM (AHC31410)	AHCOHS401A Maintain OHS processes (C)	AHC10	Bachelor TER, BAT, DPC
Cert 4 CLM (AHC31410)	PUAFIR406B Develop prescribed burning plans (E)	AHC10	Bachelor TER, BAT, DPC
Cert 4 CLM (AHC31410)	PUAFIR303B Suppress wildfire (E)	AHC10	Bachelor TER, BAT, DPC
Cert 4 CLM (AHC31410)	PUAFIR407B Conduct prescribed burning (E)	AHC10	Bachelor TER, BAT, DPC
Cert 1 CLM (AHC10110)	AHCOHS101A Work Safely (C)	AHC10	Cas (I, E, MM)
Cert 2 CLM (AHC21010)	AHCOHS201A Participate in OHS processes (C)	AHC10	Cas (I, E, MM) AS (p-time)

TABLE 1. TRAINING UNITS COVERING ASPECTS OF BNH MANAGEMENT (AT BEGINNING OF PROJECT), CDU

There remained three areas where there is a perceptible gap which was addressed by the current project. The first is that, as stated in the background, the fire management training is designed in southern Australia. It is valid in all its materials, fire is fire and everywhere spreads faster uphill, however there is no treatment of the scale of the management task in the north. Tailoring of delivery does occur and the safety lessons within the PUA and AHC courses are essential knowledge for fire managers. It is not proposed here that they be replaced, but rather that they are added to.

The second component that was essential to a comprehensive fire and disaster management training regime for the north is the incorporation of Indigenous knowledge. It is now acknowledged that Aboriginal people managed the landscape using fire at the national scale and the knowledge and practices that underpinned that remain operational to varying degrees in the north.



UNIT CODE	UNIT NAME	DESCRIPTION	UNIT DESCRIPTION	POWER POINT	ACTIVITY & ASSESSMENT & TASKS	RESOURCES+
TETBNH301	Non-Indigenous and Indigenous BNH Management Principles	Introduction to the two world views and history directly relevant to emergency management in Australia promoting awareness of personal perspective and how it relates to the broader paradigm.	*	*	*	Course Outline & Reading lists
TETBNH302	Applying Indigenous Fire Management Processes in North Australian Contexts (Local Variant)	Introduces a learning framework for the development of an applied fire management program based upon local traditional and non-Indigenous knowledge and practice, as appropriate to the local context.	*	*	*	Guide to Dashboarding
TETBNH303	Community Engagement and Cultural Protocols (Local Variant)	Introduction to established protocols used in BNH management but focussing on effective inter-cultural collaboration with Indigenous communities and organisations in rural and remote settings.	*	*	*	Film clips. & Notes
TETBNH304	Fire Management and the Law	Explores the key legislative and regulatory processes at both national and state/territory levels, governing fire management operations in non-urban locations in North Australia.	*	*	*	Reference List and comparison
TETBNH305	Digital Mapping Tools Used in BNH Management	Introduces spatial information technology used by BNH managers to collect and use environmental and other data in land and fire management activities to map, monitor, assess and report strategic BNH management planning and response operations, to maximise ecological health and crucially, minimise risk.	*	*	*	Training Manual
TETBNH306	Apply Standard Operating Procedures (SOPs)	Introduction to Standard Operating Procedures (SOP's) used in BNH with a focus on those that relate to the Top End of Australia.	*	*	*	Guide
TETBNH307	Participate in Debrief (Local Variant)	Introduction to debriefing including rationale and procedures/techniques for BNH management, particularly in the Top End of Australia.	*	*	*	Film Clips
TETBNH308	Advanced Situational Awareness and Dynamic Risk Assessment (Local Variant)	Overview of current risk assessment approaches focusing on development of Situational awareness; commonly used in the BNH/ EFM sector.	*	*	*	Guide
TETBNH309	Remote Tactical Leadership	Introduction to BNH leadership utilising relevant components of local Indigenous and government agency leadership protocols in a BNH context.	*	*	*	Field Manual



TETBNH310	Develop Operational Work Plans	Introduction to the nature of, and processes involved in, developing operational plans for BNH management.	*	*	*	
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The incorporation of Indigenous knowledge and practices, as well as sensibilities is an essential component of any management regime established in remote north Australia.

Perhaps the main difficulty of these existing courses is that they are distributed through the institution in different faculties, streams and settings. It can be speculated that an individual who completed all of the offerings would potentially be able to make a significant contribution to fire and emergency management, but this would not be as a unified qualification.

LEADERSHIP TRAINING FOR INDIGENOUS NORTH AUSTRALIANS

The project identified early on that leadership was an important matter of concern for TOs in the north. A suite of issues were raised including a shift away from respecting TOs and their knowledge, the adoption of non-Indigenous approaches in ranger programs and the lack of engagement by BNH authorities with Bininj/Yolngu leaders.

To begin to address this a review was undertaken of leadership training offerings aimed at Indigenous participants (Appendix 1). This review concluded that:

“While there has been significant progress in providing training for Indigenous people including those located in remote communities, it is clear that gaps remain. Leadership training targeting Aboriginal people does not include the imperative tactical leadership needed for emergency incident management, and training that is targeted at emergency management does not incorporate Indigenous leadership protocols. A leadership model in BNH management that encompasses Indigenous leadership would provide opportunities to establish operational protocols and procedures that benefit from the existing traditional management structures. This approach as developed would not only meet the management needs of remote communities but be of practical benefit to the management of large areas of Australia's landscape. The flow-on benefits would contribute to efforts to provide socio-economic opportunities for Indigenous communities that build enterprise, independence and long-term health particularly for those wishing to remain on Country.

To achieve this will require further shifts in thinking and practice both in training and Higher Education delivery but also in the BNH management sector. Learning the lessons from projects that have collaborated successfully to manage Country particularly in the northern savanna environments, will contribute significantly to this process. The goal is to establish a different world view, one that is built on shared ways of thinking and acting that encompasses "both ways" of achieving BNH management and leadership and that takes into account the environmental and cultural changes happening in our world currently.

One size does not fit all. One of the most important changes in training will be a shift away from centrally developed programs or "training packages" where course content, delivery modes and



assessment are created in isolation from the delivery context. A deeper, more protracted collaboration with local Indigenous communities in the preparation phase of course development will need to become the norm. Each delivery will need to be re-worked for the individual community (like we have done for the local fire training and leadership courses). This report advocates a shared responsibility between the teacher/trainer's and community with the involvement of local 'Professors' becoming a permanent fixture."

An attempt was made to address these key issues in the three iterations of training pilots conducted by the project.



DEVELOPING NORTH AUSTRALIAN BNH TRAINING

STYLE OF TRAINING UNITS

The training materials developed through the project have been arranged in the form of VET standards. While it was always considered important to develop materials that bridged VET and HE the main need identified in the 'gap analysis' was in the area of VET. The resulting 10 units have been drafted with the code TETBNH301 – 310, with 'TETBNH' shorthand for 'Top End Training for Bushfires and Natural Hazards'.

The materials as presented here are designed for delivery at the Certificate II level. This is a compromise that allows for the relatively rapid delivery of course materials at a single field school over 5 to 10 days. All the course guides and instructions allow for the scaling up or down of the units to accommodate the needs and timing of the participants. For many, the allocation of 10 straight days during the Dry season is problematic. This is the period when all on-ground activity takes place. With climate change narrowing the 'window' when traditional burning can take place for example, opportunities to run extended field schools are placed under further pressure.

These are important considerations because, as the training manual and instructors guide indicate, as far as is humanly possible these training units should be presented on Country. That is to say on the clan estates of the participants and as many components of training and assessing should be conducted in practical situations in the field.

This has a significant impact upon timing. VET courses generally allocate a certain amount of time to the delivery of a unit. Typically, this is framed within the context of 'classroom' delivery and is associated with the dominant pedagogical paradigm. Throughout this project participants had reiterated the importance of learning on Country and learning within the context of their own traditions. These traditions are more aligned with Rogoff's (2009 'Learning by Observing and Pitching In – LOPI') than from a classroom situation.

Inevitably the style of the training developed here is a blend of traditions, from the non-Indigenous pedagogy of VET and Bininj/Yolgnu knowledge systems. The effect of this is a program of training that may require additional time and consequent resources, to be allocated to any given unit.

DEVELOPMENT OF TRAINING UNITS

Through the course of the project a range of units were developed (see Table 2). Some of these are entirely new in the sense that they have arisen either from the singular perspective of the project participants or have been developed directly from knowledge accessed through the project. For example, TETBNH301 seeks to provide an overview of landscape fire in Australia from the particular world view of northern Australia and taking into account the historic and ongoing roles played by Indigenous Australians. The materials presented in this course are not new in themselves, but the perspective from which they are presented is considered novel, or at least 'emerging'.



The 10 new training units set out to provide a holistic understanding of fire and natural hazard management in northern Australia, within the wider context of the Australian and International BNH management reality. The materials for each unit are detailed in Appendix 2, but a brief summary of each is provided here:

TETBNH301 Non-Indigenous and Indigenous BNH management principles

This unit acknowledges the existence of a unique Indigenous-led BNH management regime in the north and places that system in the wider context of Australia's and the international community's approach. The aim is to provide participants an opportunity to understand their personal perspective and its context and to then build on that existing scaffold.

TETBNH302 Applying Indigenous fire management processes in North Australian contexts (local variant)

This unit identifies the local BNH management regime and explores the local traditions and culture associated with land, fire and natural hard management. The delivery should be preceded by gathering of some local information from Traditional Owners and Djungkayi and these knowledge holders should be included in course delivery. By definition, this course will vary from place to place.

TETBNH303 Community engagement and cultural protocols (local variant)

This unit seeks to connect the existing protocols for BNH management with traditional Indigenous cultural norms. It assumes that there is considerable ground for improvement of interactions between specialist BNH management agencies and traditional Indigenous communities.

TETBNH304 Fire management and the law

This unit seeks to give an overview of the nature of Australian law and its authority and then to explore the relevant and appropriate legislation that applies to the community within which the training is being delivered.

TETBNH305 Digital mapping tools used in BNH management

This unit introduces spatial information technology through a series of discussions and practical exercises using current hand-held devices and computing software. The object is to provide a base for operations, where an individual can begin to use digital mapping tools in the pursuit of the professional and day-to-day lives.

TETBNH306 Apply Standard Operating Procedures (SOPs)

This unit is a preliminary exploration of the concept of SOPs and why they exist with a step-by-step examination of SOPs applied by some local BNH organisations. Links are made to conceptual SOPs that exist within the local cultural setting.

TETBNH307 Participate in debrief (local variant)

This unit includes a session on the concept of feed back within the Australian BNH management system and why it is important. Participants are encouraged to



find culturally appropriate mechanisms to conduct debriefs in a way that generates improvements in outcomes and safety whilst avoiding inappropriate cultural interactions.

TETBNH308 Advanced situational awareness and dynamic risk assessment (local variant)

This unit provides some practical examples of dynamic risk assessment and draws out extant examples within the local context. Participants are encouraged to develop their own culturally appropriate mechanisms to assess and avoid risk in different temporal contexts.

TETBNH309 Remote tactical leadership

This unit builds bridges between the non-Indigenous and Indigenous leadership protocols and provides participants with trajectories for developing their own leadership styles within the contexts of their local communities and BNH realities.

TETBNH310 Develop operational work plans

This unit exposes the reality of conducting a program of BNH preparation and mitigation within the context of local culture, legislation and strategic planning. Participants develop tools for satisfying the (competing?) needs of funders and Traditional Owners.



UTILISATION AND IMPACT

UTILISATION – LONG TERM

This project set out to develop training materials that provided practical support and reinforcement of capabilities emerging and needed in remote Indigenous communities in northern Australia. These capabilities are needed to meet the requirements of bushfire and natural hazard management in a changing climate with new economic stressors and opportunities.

The ten units interweave a set of philosophical and practical understandings of the management of landscapes for BNH as well as the integration of Indigenous ways of being and doing with non-Indigenous approaches.

While the project set out to provide a service need for northern Australia, the delivery of this report in mid-2020, following the southern Australian bushfire crisis has highlighted a need to change the way fire (at least) is managed at a landscape level. The training units provided in Appendix 2 may assist in bringing about new understandings and capabilities in communities in fire-prone Australia generally. In particular, the way in which training was conducted – on Country, with family and at a flexible pace, is strongly recommended as a fundamental element for future training and engagement of Indigenous Australians.

Efforts are currently under way to further engage with agencies and training providers to take advantage of the work, particularly among those that are seeking to further develop their engagement with local Indigenous communities.

UTILISATION – IMMEDIATE

This project's inception incorporated the active participation of remote communities. At each step the work has been utilized by local community members to develop their capabilities in BNH management and leadership. This includes through participation in 'research' workshops as well as being both deliverers and participants in pilot training courses.

Which is all to say, the material has already been utilised in a number of locations and skills and knowledge acquired are being put to use in BNH and land management in central and western Arnhem Land.

IMPACT

That the project has already had an impact in the small remote communities in which pilot training has been delivered can be seen in evaluation reports that note local's request for more of the same. Anecdotal reports of project participants making enquiries about tertiary education opportunities in related fields have been bracketed by calls from some participants to develop effective community emergency management plans. Preparations have been made to conduct workshops to do this in one community using 3D modelling, but have been put on hold due to the COVID-19 lockdown.

There is significant potential for the project to have an ongoing impact beyond north Australia where the materials are used to generate a revised narrative of



fire and emergency management in Australia that incorporates the oldest paradigm in the world; the land management skills and knowledge of Indigenous Australians.



END-USERS

LEAD END-USERS

The project started with Ms Suellen Flint of the Western Australian Department of Fire and Emergency Services as the Lead End User. Ms Flint resigned the position of Lead End User and for several years the position was vacant until Mr Ken Baulch of Bushfires NT stepped into the role in 2019.

AGENCY END-USERS

Significant contributions were made a number of agencies responsible for BNH management in northern Australia. This included attendance at workshops and provision of feedback on reports.

- NT Fire and Rescue Service (a part of Police, Fire and Emergency Services NT).
- Bushfires NT
- Queensland Fire and Emergency Services
- Western Australian Department of Fire and Emergency Services

REMOTE COMMUNITY END-USERS

At the outset, this project adopted a Participatory Action Research agenda which researched with remote communities. These communities assumed a multi-faceted role, including that of being End Users. The following communities made a significant contribution to the project as End Users:

- Maningrida Community
- Ramingining Community
- Buluhkaduru Outstation
- Malyangarnak Outstation



PUBLICATIONS LIST

While the primary objective of the project was the development of training, it nevertheless transpired that, along the way a range of opportunities to publish the more generally useful findings occurred. The following list does not include those various reports provided as milestones to the BNHCRC.

PEER-REVIEWED JOURNAL ARTICLES

Fisher, Rohan, Scott Heckbertt, José María León Villalobos, Stephen Sutton (2019) Augmenting physical 3D models with projected information to support environmental knowledge exchange. *Applied Geography* 112.

Sithole B. Campion O. B., and Hunter-Xenie H (2018). Hazard smart remote communities in Northern Australia – community led response to disaster preparedness. *Australian Journal of Emergency Management* Volume 31 (4): 28-34

Sangha, K. K., et al. (2017). "Empowering Remote Indigenous Communities in Natural Disaster Prone Northern Australia." *International Journal of Mass Emergencies & Disasters* **35**(3):137-153

Morley, Philip, Jeremy Russell-Smith, Kamaljit K. Sangha, Stephen Sutton and Bev Sithole. (2016) "Evaluating Resilience in Two Remote Indigenous Australian Communities." *Australian Journal of Emergency Management* 31 (4):44-50.

BOOK CHAPTERS

Weir, J. K., Stephen Sutton & Gareth Catt (2020). The Theory/Practice of Disaster Justice: Learning from Indigenous Peoples' Fire Management. *Natural Hazards and Disaster Justice: Challenges for Australia and Its Neighbours*. A. Lukasiewicz and C. Baldwin. Singapore, Springer Singapore: 299-317.

Sithole B., Campbell D., Sutton S., Sutton I., with Campion O., Campion M., Brown C., Daniels G., Daniels A., Brian C, Campion J., Yibarbuk, D, Phillips E., Daniels G., Daniels D., Daniels P., Daniels K., Campion M., Hedley B., Radford M., Campion A., Campion S., Hunter -Xenie H; and Pickering S. (2019) Blackfella way, our way of managing fires and disasters bin ignored but 'im still here: Aboriginal governance structures for emergency management. In James, H. (ed) *Risk, Resilience and Reconstruction: Science and Governance for Effective Disaster Risk Reduction and Recovery in Australia, Asia and the Pacific*. Proceedings of APRU Conference. Palgrave Macmillan: Chicago.

CONFERENCE AND RESEARCH FORUM PRESENTATIONS

Conferences

Sithole B. Campion O. B., and Hunter-Xenie H (2018). Hazard smart remote communities in Northern Australia – community led response to disaster preparedness. *Research Forum at the Bushfire and Natural Hazards CRC & AFAC Conference*. Perth Australia.



Sithole, B. and ARPNet (2018). *Hazard smart remote communities – a grassroots response*. 14th APRU Multi-Hazards Conference, Canberra Australia

Stephen Sutton, Douglas Paton, Petra Buergelt, Saut Sagala (2018) "Cultures, Change and Changing Cultures for Community Resilience." *Unpacking Complexity: The Social Science of Emergencies, Disasters and Resilience Symposium*, Wellington NZ.

Sithole B., Campbell D., Sutton S*, Sutton I., with Champion O., Champion M., Brown C., Daniels G., Daniels A., Brian C, Champion J., Yibarbuk, D, Phillips E., Daniels G., Daniels D., Daniels P., Daniels K., Champion M., Hedley B., Radford M., Champion A., Champion S., Hunter -Xenie H; and Pickering S. (2017) *Blackfella way, our way of managing fires and disasters bin ignored but im still here - Indigenous governance structures for fire emergency management*. Research Forum at the Bushfire and Natural Hazards CRC & AFAC Conference. Sydney Australia.

Gould, Jackie, Bev Sithole, Andrew Campbell, Glenn James and Stephen Sutton. (2014) "Building Community Resilience to Natural Hazards in Northern Australia." in *Research Forum at the Bushfire and Natural Hazards CRC & AFAC Conference*. Wellington New Zealand.

Conference posters

Sutton Stephen, Bev Sithole, and Otto Bulmaniya Champion (2019) *To change a culture you have to understand it. Under prep to be presented at AFAC 2019*.

Sutton S. Sithole B Sutton I., Campbell D., Cameron M, Champion O., Champion M., Brian R., (2018) *Training as research and research as training in remote North Australia*. AFAC 2018.

Sithole· Bev, Hmalan Hunter-Xenie, Steve Sutton, Iolanthe Sutton and Dave Campbell with Dean Yibarbuk, Otto Champion, Charlie Brian, Mike Redford, Jeff Champion, Marshall Champion, & Hedley Brian (2017) *"Time to get the balance right with them government mob!" Building resilience in BNH management through stronger community participation*. AFAC 2017

Sithole, B., H. Hunter-Xenie, D. Yibarbuk, S. Namarnyik, K. Dirdi, O. Dann, E. Phillips, E. Narrrga, G., Yayilibibj. (2015) *Scoping remote north Australian community resilience*. AFAC 2015.



PUBLICATIONS LIST

- 1 Arnstein, S. R. (1969). A ladder of citizen participation. *Journal of the American Institute of Planners*, 35(4), 216-224.
- 2 ABS. Australian Bureau of Statistics(2016). "The Australian Statistical Geography Standard (ASGS) Remoteness Structure." Retrieved 17 September 2020, 2020, from <https://www.abs.gov.au/websitedbs/d3310114.nsf/home/remoteness+structure>.
- 3 Australian Education Union, A. (2016). Tinkering is not enough to fix VET sector. [Press release]. Retrieved from <https://www.nswtf.org.au/news/2015/08/25/tinkering-not-enough-to-fix-vet-sector.html>.
- 4 Baum, F., MacDougall, C., & Smith, D. (2006). Participatory action research. *Journal of epidemiology and community health*, 60(10), 854-857.
- 5 Bourke, P., Brockwell, S., Clarke, A., Crassweller, C., Faulkner, P., Guse, D., . . . Sim, R. (2009). Radiocarbon dates from the top end: a cultural chronology for the Northern Territory coastal plains. *Australian Aboriginal Studies*, 2009, 54+.
- 6 Carpentaria Land Council. (2016). Fire Landscape. Retrieved from <http://www.clcac.com.au/search/site/fire?f01=type%3Afire+landscape>.
- 7 Clements, J., Kennedy, G., Marshal, M., & Kinnane, S. (2015). Feasibility Study into a CNRM Qualification for Northern Australia for RDA Kimberley.
- 8 Fisher, Rohan (2020) The World's Best Fire Management System Is in Northern Australia, and It's Led by Indigenous Land Managers. *The Conversation* 10 March 2020. Retrieved from: <https://theconversation.com/the-worlds-best-fire-management-system-is-in-northern-australia-and-its-led-by-indigenous-land-managers-133071>.
- 9 Hume, L. (2004). Accessing the eternal: Dreaming "the dreaming" and ceremonial performance. *Zygon*®, 39(1), 237-258
- 10 Holmes, M. C. and W. Jampijinpa (2013). "Law for country: The structure of Warlpiri ecological knowledge and its application to natural resource management and ecosystem stewardship." *Ecology and Society* 18(3).
- 11 McIntyre, A. (2007). *Participatory action research* (Vol. 52): Sage Publications.
- 12 Narwardeken Academy. (2016). The Narwardeken Academy. Retrieved from <http://www.nawarddekenacademy.com/projects>.
- 13 O'Callaghan, K. (2005). Indigenous vocational education and training at a glance. Retrieved from Adelaide: https://www.ncver.edu.au/_data/assets/file/0012/4512/nd3102j.pdf.
- 14 Paradise, R., & Rogoff, B. (2009). Side by Side: Learning by Observing and Pitching In. *Ethos*, 37(1), 102-138.
- 15 Sithole, B., Hunter-Xenie, H., & Dunnett, D. R. (2009). Research as Opportunities for Aboriginal Engagement: A Case Study of the Aboriginal Research Practitioners' Network. *Learning Communities: International Journal of Learning in Social Contexts*, 1, 61-85.
- 16 Sithole, B. (2012). *The ARPNet Dilly Bag: a practical field guide to participatory and other research tools for use by Aboriginal Research Practitioners in Australia*. Retrieved from Darwin, Australia: https://www.outcomes.org.au/wp-content/uploads/2019/01/arpnet_dillybag_small.pdf.
- 17 Sithole, B., Hunter-Xenie, H., Yibarbuk, D., Daniels, C., Daniels, G., Champion, O., Brown, C. (2017). Living with Widdijith - Protocols for building community resilience. In D. Paton & D. Johnston (Eds.), *Disaster Resilience: An integrated approach* (2nd ed.) (pp. 268-288). Springfield Illinois: Charles C Thomas.



APPENDIX 1 – TRAINING FOR INDIGENOUS LEADERSHIP IN BUSHFIRE & NATURAL HAZARD MANAGEMENT

A review of offerings and a discussion of direction for tailored leadership training for Indigenous fire and emergency managers

INTRODUCTION

This review considers bushfire and natural hazard (BNH) leadership training in relation to remote indigenous communities in northern Australia. BNH training across Australia was, until recently, consistent and homogenous. The training is rolled out by agencies and for-profit training organisations to teach staff and volunteers how best to respond safely to the range of hazards typically encountered. Specialised training for Indigenous BNH managers has become available more recently, particularly when they are part of an existing organisation involved in land management. Across northern Australia during the last 20 years Aboriginal communities have driven the development of ranger groups. As part of the development of their capacity these groups have focused on building a range of skills including fire mitigation, fuel reduction and wildfire prevention, management and response operations related to land management.

BNH training for leadership however is less common and where it is available it inevitably relies on western systems of management and decision making, often developed within specific organisations. Absent from training in any cohesive way is training that promotes and enables use of the existing traditional management process, and the leadership systems embedded in Indigenous cultures despite the extensive long-term success of these across Australian landscapes in the past. Indigenous leaders have identified this as a significant gap in current training available to Indigenous people living on Country and working with non-Indigenous BNH organisations and other stakeholders.

A range of organisations not involved in BNH management also provide leadership training for indigenous people. But this is largely focused on the empowerment of individuals or community organisations and indigenous businesses. While this training reflects specific and generic indigenous approaches to leadership and decision-making, it is more aligned to the personal development literature than the practical and tactical leadership required to prepare for and respond to BNH.

To paraphrase the above; leadership training available to remote Aboriginal BNH managers is either of the 'personal development' sort, incorporating indigenous ways of interacting but with no tactical BNH component or, it derives from the BNH agencies and incorporates military doctrines of command and control but neglects Aboriginal leadership protocols.



INDIGENOUS LEADERSHIP IN CURRENT TRAINING

An audit of available training for leadership highlighted the paucity of this type of training (refer to Table 1: Audit of Indigenous Leadership Training below). This audit shows that while VET qualifications relevant to BNH management are available, many organisations have developed their own in-house training tailored to support the operational culture, specific needs and work priorities. This allows a range of benefits: flexibility of delivery, employment of expertise already in the organisation, facilitation of timetabling within the organisation's existing responsibilities and reduced training costs. Meeting the competing demands of external training programs such as VET while also performing normal work tasks has been a significant factor for agency management and staff in these programs. Bushfires NT management, for example, cited this as a key driver for developing their own in-house training⁹.

Significant effort has been made to understand the scope of a comprehensive land management training program with suitable training pathways to build capacity within Indigenous communities. In 2015 for example, Nulungu Research Institute¹⁰ undertook a detailed analysis of current training available in the northwest for Indigenous communities wanting to develop CNRM in the IPA in WA. This study found that there had been significant sector investment in developing course flexibility in both offerings and pathways with a focus on improving completion rates through significant and on-going support. The nature of funding timeframes was a significant issue; short term programs with limited follow up limited their success¹¹. The short term nature of funding means that long-term, sustained cultural change is difficult to achieve. As a result well-intentioned initiatives and the money spent may not achieve the innovation required.

Ranger programs¹² have achieved much in building capacity and providing work pathways for people living on Country across the Top End. However accreditation processes for HE and VET programs limit the flexibility of courses to meet the specific needs of particular communities. VET accreditation is centralised and assessment has tended to focus on specific skills demonstrated in typical industry settings. They are designed to be prescriptive and generic. This has some benefits in that it allows program developers to design a course that fulfils the requirements of accreditation established within institutions for BNH management, while also taking into account the scheduling and workforce parameters of the institution. Typically the concern for personal safety, risk assessment and management are paramount. However, the training tends to lack features that are increasingly being recognised as essential design elements for effective delivery to client groups in remote and rural Indigenous situations. This includes the contextualisation of knowledge for local conditions, and learning programs that provide adequate real-time comprehension. Alternative

⁹ Edwards, A., Baulch, K. Pers. Comm. 2015 & 2016

¹⁰ Clements, J., Kennedy, G., Marshall, M., and Kinnane, S., 2015. NLU, Cultural and Natural Resource Management: Feasibility Study Report, Univ of Notre Dame

¹¹ University of Notre Dame 2017. "Can't Be What You Can't See" The Transition of Aboriginal and Torres Strait Islander Students to Higher Education (Summary Of Findings)

¹² See for example NLC, <http://www.nlc.org.au/articles/info/ranger-programs1/>; Dept. Tourism and Culture NT <https://dttc.nt.gov.au/parks-and-wildlife-commission/park-management-strategies-consultation/joint-management>



approaches to assessment that move away from 'tick box competence' and which acknowledge differing cultural protocols are also needed. However these must not 'dumb-down' the assessment process.

Leadership as both a concept and a practice is a crucial element of any training for fire and emergency managers, but is one which is bound up in cultural protocols which are not dealt with in current BNH leadership training.

POST SECONDARY EDUCATION AND TRAINING OPTIONS

Building capacity, promoting workforce participation and increasing resilience in the Indigenous community have become key priorities for State and Territory agencies, and for communities themselves. Education and training in the tertiary sector have been identified as key mechanisms for achieving these objectives, and has in turn led to a specific focus on improving participation rates. Indigenous communities have been targeted as lucrative client groups for training and education in the last 10-15 years. Anecdotes of 'course stacking' are common; arrangements where course participants are 'press-ganged' into training which they are uninterested in and about which they understand little upon completion. These issues are of course not limited to training in Aboriginal communities¹³.

In the HE sector Indigenous access to courses has been limited by a number of factors; the individuals' ability to meet minimum qualification requirements, an unwillingness by people from Indigenous communities to leave their homes for extended periods of time and unsuitability of both delivery modes and course content. In the VET sector there are a number of recognised accreditation and delivery problems that are also at play in Indigenous/BNH training.

Both HE and the VET sector have made significant efforts to fill these gaps in education and training. In rural and remote settings across the Top End and in the remote regions in Central Australia, limited success in schooling and limited training opportunities have resulted in similarly narrow pathways into employment and enterprise 'on Country'. Should a course participant subsequently seek employment, the availability of paid positions are also limited, particularly if an individual wants to work near home.

Anecdotal evidence supports the sector statistics¹⁴¹⁵ collected for participation rates in VET. A broad range of qualifications are on the rise in Indigenous communities. While this may be linked to job pathways such as Ranger programs and Parks tourism activities there remains a significant proportion of training done that is not linked to a person's pathways or goals and contributes little to support

¹³ Munro, K. and E. Bagshaw February 7 2017. Indigenous enrolments at university increase but prestige institutions lag Sydney Morning Herald:

<http://www.smh.com.au/national/education/indigenous-enrolments-at-university-increase-but-prestige-institutions-lag-20170204-gu5jtm.html>

¹⁴ Wilks J. & Wilson, K. 2015. A profile of the Aboriginal and Torres Strait Islander higher education student population. Southern Cross University <http://www.pc.gov.au/research/ongoing/report-on-government-services/indigenous-compendium-2015/indigenous-compendium-2015-volumeb-chapter5.pdf>

¹⁵ Campbell, S. 2000. The reform agenda for vocational education and training: Implications for Indigenous Australians S. Campbell No. 202/2000 https://openresearch-repository.anu.edu.au/bitstream/1885/41530/2/2000_DP202.pdf



their ability to access paid work if only because of a lack of available positions in their community¹⁶. As stated above, when it comes to building leadership capacity the models used are western-centric, developed in southern populated contexts, and are hierarchical in nature. Training is linear rather than interactive and therefore less effective in catering to the learning styles of Indigenous people.

For Indigenous people post schooling training is viewed as providing achievable pathways, both for building capacity in their community, and increasing Indigenous HE participation. Research by O'Callaghan¹⁷ into the efficacy of VET training for Indigenous people shows they have benefited from this training in a number of ways, especially in relation to building confidence and work skills. These benefits provide a stronger foundation to make the most of opportunities that might otherwise be missed. However, their success is contingent upon a number of factors. O'Callaghan¹⁸ identifies seven key features of effective, quality training:

1. Community involvement and ownership
2. Indigenous identities, cultures, knowledge and values
3. Working in true partnership
4. Flexibility in course design, content and delivery
5. Quality staff and committed advocacy
6. Extensive student support services
7. Appropriate funding that allows for sustainability

COMMUNITY INVOLVEMENT AND OWNERSHIP

The involvement of Indigenous leaders, specifically those with responsibilities to care for the relevant Country (their 'estate') has been identified as an essential element of any activity especially those involving caring for the landscape. These people have cultural knowledge and are often proactive - willing and able to take on responsibility. Although this involvement has been a recognised feature of BNH over the last 20 years, it is the nature of this involvement that needs clarification. For example, the successful development of projects such as WALFA has relied on initiating and ongoing involvement of senior traditional owners and managers for the land. While the contribution of this type of engagement cannot be overstated, there remain gaps in that the mechanisms of leadership have not been documented in a way that can be taught elsewhere.

In conversations with Binninj (Arnhem Region), ARPNet researchers identified a number of ways involvement of elders would significantly improve training:

¹⁶ Mapping training delivery framework and pathways V3.2 provides detail

¹⁷ O'Callaghan, K. Indigenous Vocational Education and Training. At a Glance. National Centre for Vocational Education Research Ltd. PO Box 8288, Station Arcade, Adelaide, SA 5000, Australia, 2005

¹⁸ Ibid.



- drawing on experiential knowledge and best practice examples of fire management on different landscapes;
- training people in the right way to validate traditional methods;
- formalising intergenerational knowledge transfer by developing materials with elders. This also responds to elders' concerns about loss of traditional knowledge;
- recognising the 'place specificity' of this knowledge and experience.¹⁹

Bulmaniya reinforced the crucial relationship between people, environment and fire making for Indigenous involvement in BNH management:

“Most importantly, to burn Country one must know who [the elders] are and how they are connected with others and with Country. In many situations one needs to be able to sing out to Country and speak in language. Knowing who are the right people to give permission to burn Country and what Country can be burnt or not burnt are crucial points in the learning about fire.”²⁰

Any discussions with Indigenous communities highlights a number of factors crucial for success:

Training must be conducted on Country

The importance of contextualising training for Indigenous communities cannot be overstated. Leadership is interweaved into every aspect of ecological management and infuses every element of their culture. Learning about leadership must also become a coherent part of the cultural fabric of these communities. This is only possible if responsibility for training is shared with what Bulmaniya calls "professors in the communities". He says that it is vital that these people provide:

“their views on the overarching objectives of fire management or any other philosophical conceptions they may care to share as well as create a space so that they participate in the delivery of fire training.”²¹

Making the shift to an Indigenous cultural world view is crucial BUT this is locally specific and the process of contextualising must occur for each training/learning locality. To do this effectively training must be located on Country where the practical application of learning is real and every element of the learning experience contributes to building their knowledge of Country and fire management in that Country. This changes not just delivery modes but also accreditation parameters.

Pathways

Training pathways must be constructed within the community so that they reflect what is needed locally and become familiar to all within the social construct of that community. Key elements of this will be:

¹⁹ O'Callaghan, op.cit. 3

²⁰ O'Callaghan, op.cit. 4

²¹ Bulmaniya, Otto Campion, Eddie Phillips and Bevlyne Sithole 2016. Binninj Fire Knowledge: Aboriginal Fire Knowledge West Arnhem Land. A Report for the BNHCRC by the Aboriginal Research Practitioners Network. 32 pages



4.2.1 Timing and Duration

Delivery events should not compete with other important responsibilities such as ceremony. This means establishing a mode that flexes around these activities.

4.2.2 Models developed that are embedded in Indigenous community rhythms

In practice this will only be possible if Indigenous "Professors" are able to establish a fluid delivery process that occurs within the community's 'rhythms'. Therefore embedding learning into everyday life is vital so that the traditional protocols are observed and the ecological timeframes for optimal burning are achieved.

4.2.3 Use of the local Indigenous language

For Indigenous people "singing out to the Country" in local language is essential if the healthy ecological balance is to be restored. It must be remembered that the subtleties of knowledge transferral may only be possible in the traditional language. Crucially, this provides a means of maintaining the cultural constructs of the community and ensuring the sharing of power and responsibility for training and ecological health across the cultural divide.

4.2.4 Related to Indigenous community concerns

Fire and land management remain vitally important for Indigenous people. This is their home, their resource base, their Dreaming and their identity. Reinforcing their relationship with the land and their responsibility to ensure its health means there will always be managers who are deeply wedded to BNH.

INDIGENOUS IDENTITIES, CULTURES, KNOWLEDGE AND VALUES

A significant proportion of the course offerings included in the audit prioritise maintenance of Indigenous knowledges, providing insight into Indigenous cultures and identity. This can take a number of forms, falling into two broad categories; a) courses that present information of a more general pan-Aboriginal nature; b) courses focussing on specific language or cultural groups from the local region. These provide a more detailed insight into Indigenous culture and values. However neither comprehensively deal with the complexity of leadership in pre-contact cultures or indeed the diversity of existing contemporary Indigenous cultures. For many groups living on traditional lands, management of Country remains central to every aspect of their culture. Fire management is a vital part of their identity, defining livelihoods and cultural and physical well-being as well as 'cleaning up Country'.²²

The audit of courses targeting Indigenous people shows significant growth in programs about traditional knowledge. However, these focus on maintenance of cultural knowledge and establishing the value of this knowledge for Australian society. They don't cover Indigenous leadership models as a valid and for at least some situations, potentially preferable alternative to modern western leadership protocols assumed in BNH management.

²² Bulmaniya et. al., op.cit. 4



WORKING IN TRUE PARTNERSHIPS

Fire abatement research and development in northern Australia has focussed on establishing authentic partnerships as a foundation. It is well-documented that this has led to significant success to date.²³²⁴²⁵²⁶ This facilitates an on-going two-way sharing of information. It also allows for BNH agencies to benefit from the knowledge and practices used so successfully to manage Australian landscapes prior to European arrival. A number of related projects have established on-going collaborative processes to manage fire across the north, starting with WALFA and extending east into Qld and west into WA linking with local initiatives to grow a coherent tropical savanna approach.

Researchers, BNH agencies, Parks and other stakeholders have worked with Indigenous communities to build a detailed body of knowledge about the current state of ecosystems and the impact of introduced species and modern management practices on fire regimes.²⁷ As a result there has been significant evidence-based development of protocols and procedures tied to resource development for landscape management (NAFI for example). However leadership in BNH is still largely located in western agencies and methods.

Traditional leadership, whilst recognised, is seen at best as an adjunct or "courtesy" shown to Indigenous partners during BNH operational activities. This means that younger Indigenous people looking to become active and employable members of their community must look to culturally external opportunities in order to achieve their goals. Becoming a ranger is a good option but can have the effect of distancing youth from the traditional leadership models and creating a tension between their paid responsibilities and how these impact on their traditional responsibilities.

"They call themselves fire expert for fire. Old people used to go out burning. This time you got Balanda tools. Dreamtime short and tall, long time ago. That secret for man and the other one was fire stick. Other man was making fire with that fire stick. Only old people, young men and young girls not allowed. All old people used to separate. Used to walk and see burnt grass and say "they made it wrong for kangaroo and for us" they throw torch fire. So they leave that lot, they already burning, shake my head and say they make wrong fire for us but already got kangaroo. They

²³ Garnett, S. T., Sithole, B., Whitehead, P. J., Burgess, C. P., Johnston, F. H., & Lea, T. (2009). Healthy Country, Healthy People: Policy Implications of Links between Indigenous Human Health and Environmental Condition in Tropical Australia. *Australian Journal of Public Administration*, 68(1), 53-66. doi:10.1111/j.1467-8500.2008.00609.x

²⁴ Russell-Smith, J., Whitehead, P. J., & Cooke, P. (2009). Culture, ecology and economy of fire management in North Australian savannas rekindling the Wurrk tradition. Collingwood, Vic.: CSIRO Publishing.

²⁵ Silva, L. C. R., Russell-Smith, J., Yates, C. P., Edwards, A. C., Whitehead, P. J., Murphy, B. P., & Lawes, M. J. (2015). Deriving Multiple Benefits from Carbon Market-Based Savanna Fire Management: An Australian Example. *PLoS ONE*, 10(12), e0143426. doi:10.1371/journal.pone.0143426

²⁶ Whitehead, P. J., Russell-Smith, J., & Yates, C. (2014). Fire patterns in north Australian savannas: extending the reach of incentives for savanna fire emissions abatement. *The Rangeland Journal*, 36(4), 371. doi:10.1071/rj13129

²⁷ Woinarski, J., Northern Territory. Dept. of Natural Resources, E., & Arts, t. (2007). *Lost from Our Landscape: Threatened Species of the Northern Territory*: Department of Natural Resources, Environment and The Arts.



been training them kids to take all the shovel spear and teach them how to hunt for kangaroo. Good and bad that fire. Wait for Bossman [right people to burn Country] to come and burn. Kangaroo place - owner of Country - Djunkayi. To wait for answer. Do it for everybody not for one person...Now they can't ask, they burn everywhere, and don't tell the truth..."²⁸

FLEXIBILITY IN COURSE DESIGN, CONTENT AND DELIVERY

Changes to courses centre around improving flexibility. For example, a number of units in the AHC (Agriculture, Horticulture and Conservation and Land Management) Training Package have been designed to allow for flexible content and delivery and are an example of how VET units can be created that allow for a more flexible model. There has been a growing awareness amongst training providers of the need to modify training for Indigenous learners. This has led many, especially those servicing non-urban areas, to modify program design and delivery. There is recognition of the sensitivity of certain cultural information and an expectation that the provider will work with community members to ensure the course is appropriate.

ARPNet researchers highlight the complexity of actually achieving this. Sithole and Hunter-Xenie²⁹ identify 11 key ingredients for successful collaboration with Indigenous people, and Binninj specifically. These include not just a detailed knowledge of the people involved and their community but a deep and protracted relationship with the community that means that training, or any other activity, takes the form of a collaborative partnership using elements of both cultures as required to achieve mutually agreed outcomes. It is important to realise that knowledge and responsibility are vested in the whole community so this collaboration must involve all. Sithole et al refer to the "cultural condition" of individuals, highlighting the importance of each person's role in the community and the protocols, including skin and avoidance relationships which frame every aspect of community life.

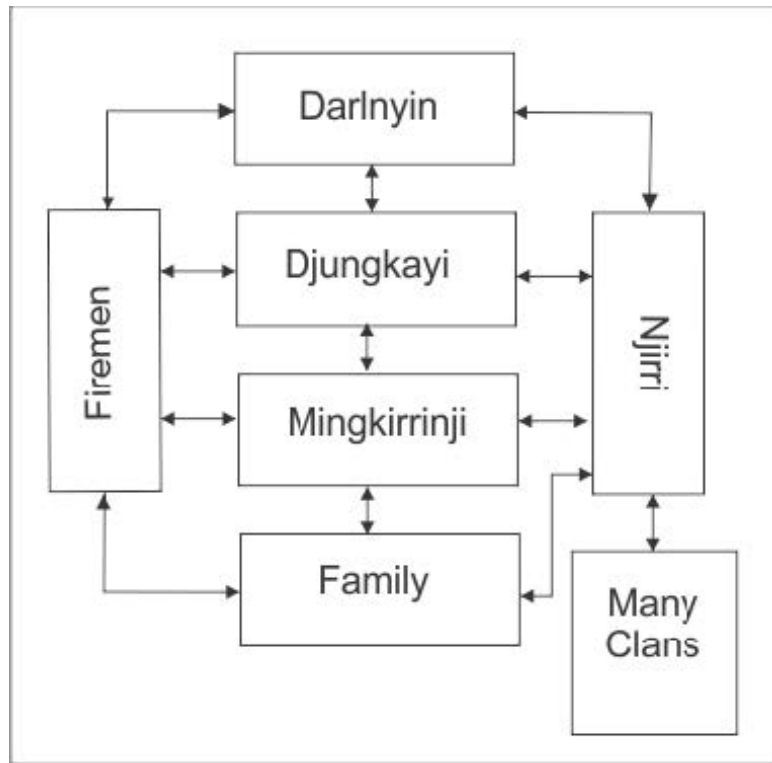
Building trust and nurturing a more meaningful relationship with the people who live in a community is of crucial importance and means that there is a need to invest significant time in the community. This means a re-think about scheduling to develop modes of preparation and delivery that not only take into account but work within, the cultural rhythms of Indigenous lifestyles. For most agencies this is a logistic 'bridge-to-far'.

²⁸ Bulmaniya op.cit. 17

²⁹ Sithole, B. and Hunter-Xenie, M. 2015, Cross Cultural Communication: Understanding The Indigenous Paradigm For Effective Communication In BNH (Film clip) Support Materials for unit TETBNH303 Community Engagement and Cultural Protocols



Box 1. A Model of Binninj Leadership



The schematic diagram is a simplified version of the leadership arrangements for making decisions about land and BNH for some Binninj communities in Arnhem Land. It is not meant to represent all Aboriginal communities, but it does show how different Binninj leadership is to 'standard' western hierarchical models. The schematic shows a complex series of interactions that individuals are required to fulfill in specific roles attending the decision-making process. The darlnyin is 'the big

boss', but must refer to the djungkayi, 'the manager', the mingkirrinji, 'owner' and the wider family intaking a decision. If the decision relates to fire then the 'fire men' – senior men with totemic affiliation and deep practical knowledge of fire are critical players. The Njirri is a process auditor and ensures that proper protocols are observed. Unlike western auditors however, the Njirri may also effect punishment for breaches of protocol.

In addition to these 'statutory' considerations, decisions need to be made that reflect the universal dichotomy of people and land into Dhuwa and Yirritja. All people and all parts of the landscape are designated Dhuwa or Yirritja and no decision is made without encompassing a balance between the two.

The model means that decisions are made which incorporate the best information and no small amount of wisdom. The observation of protocols means that when a decision is reached, it is supported and implemented, in contrast to many modern 'democratic' governance structures that ignore the social relations of leadership.

For non-Aboriginal observers these arrangements are further complicated because they are limited to specific clan estates. The djungkayi, and mingkirrinji will speak for a clearly defined area of land, but their authority will not be acknowledged beyond those bounds. On another clan estate 'leaders' become 'followers', taking a subordinate role.



This is supported by the research undertaken by Bulmaniya et.al.³⁰ Interviews held with people in a number of communities underlined the need to have local experts in the training delivery team;

“...in each community in which the training is delivered we want to include real local information of quality. Ideally this would be delivered by local subject matter experts, but rather than simply rely on these individuals to 'turn up on the day' and 'speaking off the cuff', there is clearly a need to get the quality information and incorporate it into the curriculum materials”³¹

Another factor effecting training quality is the oversimplification of course materials and assessment. Whilst tailoring delivery to the learning needs of an indigenous audience is an essential skill for educators, this can be misapplied. Training may be “dumbed down” rather than modified leading to learning outcomes that are substandard. The communities with whom this project was discussed were keen to ensure training delivery continues to support content quality. This is allied to contextualising courses. Skill development should relate directly to the duties and conditions where it is to be applied. An example of this is the use of local environmental factors when discussing the interplay of weather and BNH events. In relation to leadership courses it would discuss the nature and purpose of leadership using the local terminology, and refer to the person(s) or the kinship relationships and their responsibilities in managing operations.

QUALITY STAFF AND COMMITTED ADVOCACY

For Indigenous people the nature and definition of “quality staff” will shift significantly depending on the location, timing and specific needs of the participant group. Committed advocacy relies on individual relationships that are long-term in nature. The rate of staffing changes in western agencies and training/education providers makes both of these crucial elements difficult to achieve in a way which would support the development of the leadership training required to bring about a synergy of leadership approaches across the cultural divide.

VET is, of course, created in the dominant cultural paradigm. Its philosophy, assumptions, language and visceral imperatives are vested in a western world view. Even when it is tailored to meet Indigenous agendas as well as western agendas it continues to feel alien for many Indigenous people. It also means that it does not meld easily with traditional cultural constructs and so remains outside the cultural context of Indigenous communities.

This is particularly the case with leadership which is infused into every element of the Aboriginal culture. People may have become strong leaders as a result of their demonstrated capacity according to western notions but it remains the case that each person is born to a custodial relationship with land. This relationship can't be ‘given away’ and the responsibility continues to follow through the kinship links regardless of any one person's contribution to land

³⁰ Bulmaniya, op.cit. 6

³¹ *ibid.*



management. This is its strength, as it means that a person's life is a process of fulfilling their management responsibilities. However it also means that finding the connections to leadership models in the western paradigm is a challenge.

The complexity of kinship systems makes understanding how leadership works difficult for a non-Indigenous person (see example in Box 1). This is exacerbated by the fact that responsibility is shared across the whole community, and the fluidity of these responsibilities depending on the location of any operation makes it difficult to establish a clear, linear approach that is comfortably recognisable to non-Indigenous people, and perhaps even more so for hierarchical agencies.

One outcome of these complexities has been that the leadership courses currently available, including those tailored to indigenous people working in Indigenous organisations, seek to up-skill learners in how to understand and apply western management models. There is no doubt a great deal of value in the application of modern western leadership practices. But even when these are applied well, the culturally assigned relationships in Aboriginal society will continue to influence decision processes, although they may not be formally recognised. Further there will be (are) many occasions when these traditional settings are in opposition to those that are formally recognised. Needless to say, these tensions weaken leadership systems and may cause real problems in the wider community. In addition, it leads to agencies and outsiders making assumptions about Indigenous people that hinder effective collaborative processes especially in establishing leadership roles that work across the cultural divide.

EXTENSIVE STUDENT SUPPORT AND ADVOCACY

This would be less of a priority if training was embedded in the community where participants live and certainly where the social and cultural support mechanisms are a part of everyday life. As stated, leadership is shared and roles in any given situation are dependent on the location and nature of the operations. No one person will be leader all the time and identifying who is 'the leader' is difficult for a non-indigenous person because none of the features of leadership, the outward signs that make a leader recognisable in western culture will be present - or relevant.

Transformative approaches would facilitate this as they rely on a flat democratic information sharing process that would establish an on-going dialogue between trainer-educators who have a career in program delivery and Indigenous trainer-educators who wish to build capacity in their own communities. The context of learning is established as part of the learning process where the power balance is more equitably distributed across the teaching-learning group. The advantages of this approach are well-recognised amongst educators working with Indigenous learners in the tertiary sector, and are being increasingly used in education and training of Indigenous people:

“Transformative education holds that “learning is understood as a process of using a prior interpretation to construe a new or revised interpretation of the meaning of one’s experience in order to guide future action” (Mezirow, 1996, p. 162)... [It] places increasing emphasis on shifts taking



*place ontologically as well as epistemologically, so learners become actively engaged in new avenues for social justice (Garde-Hansen & Calvert, 2004)."*³²

APPROPRIATE FUNDING THAT ALLOWS FOR SUSTAINABILITY

Funding for BNH is currently directed towards agencies such as the statutory BNH agencies as well as National Parks and Wildlife. These generally include resourcing to undertake operations in remote regions, including relocating staff and equipment to sites at great expense. There are many reasons this model is not fully decentralised, but they pivot on a lack of trust by agencies of the ability and willingness of remote communities to maintain and sustain material to an operational standard. Re-thinking the funding model and embedding activities in communities already located on Country would allow for the money to be redirected to employment that is located in the community.

A similar case can be put for training provision. To date education and training provided by external providers has had some success but at great expense. In BNH in particular, the existing knowledge-base exists to support training in the communities that would allow for a more effective outcome with funds used providing greater sustainability not just in terms of natural ecosystems health but in supporting healthier communities that become less reliant on other services like health and social support as they build resilience.

The carbon off-set industry is a catalyst for growing enterprises that are sustainable and provide economic incentives for work that is valued by the dominant cultural paradigm and Indigenous cultures, shifting resourcing into communities.

CONCLUSIONS

While there has been significant progress in providing training for Indigenous people including those located in remote communities, it is clear that gaps remain. Leadership training targeting Aboriginal people does not include the imperative tactical leadership needed for emergency incident management, and training that is targeted at emergency management does not incorporate indigenous leadership protocols. A leadership model in BNH management that encompasses Indigenous leadership would provide opportunities to establish operational protocols and procedures that benefit from the existing traditional management structures. This approach as developed would not only meet the management needs of remote communities, but be of practical benefit to the management of large areas of Australia's landscape. The flow-on benefits would contribute to efforts to provide socio-economic opportunities for Indigenous

³² <http://www.teaching4change.edu.au/node/4>



communities that build enterprise, independence and long-term health particularly for those wishing to remain on Country.³³³⁴³⁵

To achieve this will require further shifts in thinking and practice both in training and Higher Education delivery but also in the BNH management sector. Learning the lessons from projects that have collaborated successfully to manage Country particularly in the northern savanna environments, will contribute significantly to this process. The goal is to establish a different world view, one that is built on shared ways of thinking and acting that encompasses "both ways" of achieving BNH management and leadership and that takes into account the environmental and cultural changes happening in our world currently.

One size does not fit all. One of the most important changes in training will be a shift away from centrally developed programs or "training packages" where course content, delivery modes and assessment are created in isolation from the delivery context. A deeper, more protracted collaboration with local Indigenous communities in the preparation phase of course development will need to become the norm. Each delivery will need to be re-worked for the individual community (like we have done for the local fire training and leadership courses). This report advocates a shared responsibility between the teacher/trainer's and community with the involvement of local 'Professors' becoming a permanent fixture.

REFERENCES

A Altman, J. (2012). Indigenous Futures on Country. In J. Altman & S. Kerins (Eds.), *People on Country, Vital Landscapes, Indigenous Futures* (pp. 213-231). Canberra: Federation Press.

Bulmaniya, Otto Champion, Eddie Phillips and Bevlyne Sithole 2016. *Binninj Fire Knowledge: Aboriginal Fire Knowledge West Arnhem Land. A Report for the BNHCRC by the Aboriginal Research Practitioners Network.* 32 pages

Campbell, S. 2000. The reform agenda for vocational education and training: Implications for Indigenous Australians S. Campbell No. 202/2000
https://openresearch-repository.anu.edu.au/bitstream/1885/41530/2/2000_DP202.pdf

Clements, J., Kennedy, G., Marshall, M., and Kinnane, S., 2015. *NLU, Cultural and Natural Resource Management: Feasibility Study Report*, Univ of Notre Dame

³³ Ganesharajah, C. (2009). *Indigenous Health and Wellbeing: The Importance of Country*. Retrieved from Canberra:

http://aiatsis.gov.au/sites/default/files/products/report_research_outputs/ganesharajah-2009-indigenous-health-wellbeing-importance-country.pdf

³⁴ Altman, J. (2012). *Indigenous Futures on Country*. In J. Altman & S. Kerins (Eds.), *People on Country, Vital Landscapes, Indigenous Futures* (pp. 213-231). Canberra: Federation Press.

³⁵ Weir, J. K., Stacey, C., & Youngetob, K. (2009). *The Benefits Associated with Caring for Country: Literature Review*. Canberra: Australian Government Retrieved from
<https://www.environment.gov.au/indigenous/workingoncountry/publications/pubs/benefits-cfc.pdf>.



Ganesharajah, C. (2009). Indigenous Health and Wellbeing: The Importance of Country. Retrieved from Canberra:

http://aiatsis.gov.au/sites/default/files/products/report_research_outputs/ganesharajah-2009-indigenous-health-wellbeing-importance-country.pdf

Garnett, S. T., Sithole, B., Whitehead, P. J., Burgess, C. P., Johnston, F. H., & Lea, T. (2009). Healthy Country, Healthy People: Policy Implications of Links between Indigenous Human Health and Environmental Condition in Tropical Australia. *Australian Journal of Public Administration*, 68(1), 53-66. doi:10.1111/j.1467-8500.2008.00609.x

Munro, K. and E. Bagshaw February 7 2017. *Indigenous enrolments at university increase but prestige institutions lag* Sydney Morning Herald

Russell-Smith, J., Whitehead, P. J., & Cooke, P. (2009). Culture, ecology and economy of fire management in North Australian savannas rekindling the Wurrk tradition. Collingwood, Vic.: Collingwood, Vic. : CSIRO Publishing.

Silva, L. C. R., Russell-Smith, J., Yates, C. P., Edwards, A. C., Whitehead, P. J., Murphy, B. P., & Lawes, M. J. (2015). Deriving Multiple Benefits from Carbon Market-Based Savanna Fire Management: An Australian Example. *PLoS ONE*, 10(12), e0143426. doi:10.1371/journal.pone.0143426

University of Notre Dame 2017. "Can't Be What You Can't See" The Transition of Aboriginal and Torres Strait Islander Students to Higher Education (Summary of Findings)

Weir, J. K., Stacey, C., & Youngetob, K. (2009). The Benefits Associated with Caring for Country: Literature Review. Canberra: Australian Government Retrieved from

[https://www.environment.gov.au/indigenous/workingoncountry/publications/pubs/benefits-cfc.pdf](https://www.environment.gov.au/indigenous/workingoncountry/publications/publications/pubs/benefits-cfc.pdf).

Whitehead, P. J., Russell-Smith, J., & Yates, C. (2014). Fire patterns in north Australian savannas: extending the reach of incentives for savanna fire emissions abatement. *The Rangeland Journal*, 36(4), 371. doi:10.1071/rj13129

Wilks J. & Wilson, K. 2015. A profile of the Aboriginal and Torres Strait Islander higher education student population. Southern Cross University <http://www.pc.gov.au/research/ongoing/report-on-government-services/indigenous-compendium-2015/indigenous-compendium-2015-volumeb-chapter5.pdf>

Woinarski, J., Northern Territory. Dept. of Natural Resources, E., & Arts, t. (2007). *Lost from Our Landscape: Threatened Species of the Northern Territory*: Department of Natural Resources, Environment and The Arts.



TABLE: AUDIT OF LEADERSHIP TRAINING AVAILABLE TO INDIGENOUS PEOPLE

Course Name/Provider	Description	Focus	Assumptions	Gaps
10412NAT Cert 2 in Indigenous Leadership AILC/QPS	Introduces key elements of Indigenous leadership; builds upon the capacity of emerging Indigenous Australian leaders to lead. Content includes basic knowledge, skills and behaviours to undertake Indigenous Leadership roles, identify their own strengths to plan their leadership journeys.	Build leadership capacity / empower indigenous communities. Develop 'western' leadership skills	Non-occupational Participants will be indigenous Need to build skills at interface between indigenous and wider communities	No attention to BNH
10413NAT Cert 4 in Indigenous Leadership AILC/QPS	Builds upon existing leadership skills to further develop these key skills and knowledge. It establishes pathways to further education and training, enabling students to aspire to higher levels of responsibility in chosen arenas such as senior roles in workplaces and community organisations.	Build leadership capacity / empower indigenous communities. Develop 'western' leadership skills	Non-occupational Participants will be indigenous Need to build skills at interface between indigenous and wider communities	No attention to BNH
BSB41915 Cert IV in Business (Governance) AILC/QPS	Introduces the key elements of operating in Aboriginal and Torres Strait Islander organisations and the capacity of Australian Indigenous leaders to affect governance. Boards of Aboriginal and Torres Strait Islander community-managed organisations operate in two worlds: they have cultural obligations to specific communities as well as legal and financial obligations to the wider community and funding bodies. In this special role, board members ensure that while fulfilling their duties, their contributions are individually and collectively of value to the board, organisation and community	Build leadership skills in indigenous organisations to meet accountabilities. Develop 'western' leadership skills Develop 'standard' business governance skills	Not occupation specific but focus on formal organisations Participants will be indigenous Need to build skills at interface between indigenous and wider business communities and government	No attention to BNH
In-house PD Social Leadership Australia	For Indigenous leaders and emerging leaders from all sectors to come together and learn new ways to make progress on the issues that matter most to them, to their organisations and to their communities. Customised programs with corporate bodies/govt agencies Customer Consulting, Public Promotions, Tailored Leadership, Cross-Cultural Leadership	Improving indigenous community health Empowering indigenous people in organisations Develop 'western' leadership skills	Not-occupation specific but targeting health sector Participants will be indigenous Indigenous people can fit into colonial hierarchical structure if provided the right tools Course will be tailored to organisations	No attention to BNH
NTPS In-house PD Range of training programs OCPE	Orientate indigenous people working in public sector - contextualised to person's workplace	Empowering indigenous people in public sector organisations Develop 'western' leadership skills	Non-occupation specific Participants will be indigenous people in NT public sector Course will be contextualised for individuals	No specificity around BNH
Fellowship for Indigenous Leadership	No information provided about courses	Improve health and education of Aboriginal Victorians Increase self-reliance	Participants will be recognised Indigenous leaders (from Victoria)	No specificity around BNH
Master of Indigenous Leadership & Engagement ANU	Exploring Indigenous world view, ways of leading and cultural constructs underpinning them, focussing on tensions at the cultural interface in governance and enterprise initiatives. Leadership modelled on western centric practices with awareness of how the Indigenous culture may influence communication and implementation of these approaches	Building individual capacity for indigenous leaders	Pre-requisites including completion of degree equivalent Non-occupational No specificity around BNH Indigenous 'ways' may influence communication and implementation in an essentially colonial system	No specificity around BNH



Course Name/Provider	Description			
Master of Indigenous Knowledges (Mawul Rom) (MIKMR) ACIKE CDU	For post-grad, especially Indigenous, students	Empowering individual Indigenous people Provide cultural 'third space' for developing leadership/negotiation skills	Non-occupational, but supporting mediation / negotiation in mining and NRM etc Participants likely to be Yolgnu	No specificity around BNH
AHC Training Package (Agriculture, Horticulture and Conservation and Land Management) AHC31516 Cert 3 in Indigenous land management	This qualification provides a vocational outcome required for an Indigenous land worker operating within Aboriginal Communities, following Community protocols and using a mix of traditional and contemporary land management strategies. No occupational licensing, legislative or certification requirements apply to this qualification at the time of publication. In some situations non-Aboriginal learners may not be able to access the cultural knowledge and materials required to achieve competency in this unit due to restrictions that are applied to non-Aboriginal people gaining access to cultural knowledge, material or sites.	Empowering indigenous people to be self-reliant in land management	Targeted at indigenous people but available to all Occupationally focused on NRM/ranger/land management	Generic qual that has BNH content but limited attention to leadership
PUA (Public Safety) Training Package PUA41112 Cert 4 in Public Safety (Community Safety) VET - relevant RTOs	Building leadership capacity in individuals for a range of contexts with flexibility through elective units. Fire related units focus on urban fire operations Range of relevant VET accredited courses; flexibility in elective unit selection Some RTOs select electives to tailor to BNH e.g. CDU Promotion/Practical Skills Development - focus not rural/remote locations NOTE: Could add AHC/SIT Units above to create Indigenous perspective	Predominantly focussed on urban hazard but includes specific rural BNH units Safe response to emergency incidents Controlled EM working environment	Occupation specific - BNH Participants will be part of a BNH management organisation	No attention to indigenous land management protocols No attention to indigenous leadership
Tactical & Frontline Leadership SA CFS Training VET PUA (Firefighting Management)	In-house courses - specific skill sets including incident management targeting promotion within the organisation Tailored VET training courses Cert 2 to Diploma level	Effective staff management in BNH environment	Occupation specific - BNH Participants will be part of a BNH management organisation	No attention to indigenous land management protocols No attention to indigenous leadership

ENV307? Fire Ecology and Management CDU	Fire management in northern and southern Australia differ in many ways. The study of fire ecology and management integrates the disciplines of ecology, management and policy. This unit includes a thorough coverage of fire science, ecological impacts and adaptation of plants and animals to fire, as well as fire management issues, such as different stakeholder perspectives on fire, and their different approaches to use of fire	Building practical land management skills in university undergraduates	Participants will be enrolled in undergrad degree	Limited attention to indigenous leadership protocols
Leadership and Management Carpentaria Land Council (is not an RTO)	This qualification reflects the role of individuals working as developing and emerging leaders and managers in a range of enterprise and industry contexts. As well as assuming responsibility for their own performance, individuals at this level provide leadership, guidance and support to others. They also have some responsibility for organising and monitoring the output of their team. They apply solutions to a defined range of predictable and unpredictable problems, and analyse and evaluate information from a variety of sources.	Empower indigenous people to manage business and land management enterprises	Participants will be Indigenous people, members of Carpentaria Land Council	No specific attention to BNH (but likely to be contextualised in CLC framework)
IPA Feasibility Study NDU RDA Kimberley NRI	Identifies a framework, suggested unit outlines and innovations in delivery processes including significant involvement of Indigenous leaders and contextualised learning on Country			

Providers:

ACIKE - Australian Centre for Indigenous Knowledges and Education

AILC - Aboriginal Indigenous Leadership Centre

ANU - Australian National University

CDU - Charles Darwin University

Fellowship for Indigenous Leadership OCPE - Office of Public Employment

QPS - Qld Public Service

SLA - Social Leadership Australia, Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA)

NDU - Notre Dame University

RDA - Regional Development Australia

NRI - Nulungu Research Institute



APPENDIX 2 – NORTH AUSTRALIAN TRAINING MATERIALS

Contact the Bushfire and Natural Hazards CRC at office@bnhrc.com.au to access the full suite of north Australian bushfire and natural hazard training materials referenced in this report.