SCOPING REMOTE NORTH AUSTRALIAN COMMUNITY RESILIENCE AND DEVELOPING GOVERNANCE MODELS THROUGH ACTION RESEARCH

Annual report 2016-2017

Jeremy Russell-Smith
Darwin Centre for Bushfire Research, Charles Darwin University

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ABSTRACT

The '*scoping remote northern Australia resilience*' project is part of a larger suite of Bushfire and Natural Hazards CRC projects being undertaken through Charles Darwin University in collaboration with the North Australian Land & Sea Management Alliance (NAILSMA) and the Aboriginal Research Practitioners Network (ARPNet—a collective of Indigenous community researchers). Two main sub-projects under scoping resilience are: Payments for Ecosystem Services and Asset Assessment, and Governance Models for Indigenous communities. Collectively, these projects aim to promote enhanced understanding of the special circumstances concerning resilience issues in remote locations, and to identify culturally appropriate governance arrangements and enterprise opportunities that contribute to community resilience.

We collectively report the progress of our project work conducted during the financial year, 2016-2017, as below:
1. Research analyses, activities and assessments undertaken to assess the value of ecosystem services in northern Australia
2. Research and planning activities undertaken for developing the Governance models for Indigenous communities

1. Payment for Ecosystem Services:
i. A detailed ecological-economic assessment conducted for the >600 mm rainfall region in North Australia
ii. Current land uses and related Ecosystem Services (ES) identified, assessed and mapped for the selected region
iii. ES from an Indigenous estate identified, assessment and evaluated
iv. An ES valuation framework developed
v. Initial consultations for the next phase - Scenario Planning started

2. Governance models (iii. to v. 2016/17)
i. Desktop Asset Mapping report and Literature Review – considering published and externally available views on what constitutes assets (e.g. built, social and cultural capital) and the scoping of Indigenous perceptions of resilience.
ii. Background research by Aboriginal community researchers (ARPNet) on scope and interpretation of 'hazards' and resilience in remote Aboriginal community life – case studies at Gunbalunya and Ngukurr (NT)
iii. Research on resilience issues in the remote Island community of Galiwin'ku (NT) post 2014 cyclones Nathan and Lam, undertaken by Yolngu (local Aboriginal) researchers (Yalu – Galiwin'ku based Yolngu research organisation)
iv. Review, follow-up and extension of Galiwin'ku research - addressing governance issues
v. Next steps – scaling up; Galiwin'ku, neighbouring communities, other States; a framework approach to building better relationships around governance and service delivery.

END USER STATEMENT

Suellen Flint, Department of Fire and Emergency Services, WA.

The 'scoping remote northern Australia resilience' project involved three complementary sub project that collectively aim to promote and enhanced understanding of resilience issues in remote Indigenous communities and identify culturally appropriate governance and economic opportunities that lead to enhanced community development and resilience.

The last year of the project has demonstrated an increased understanding in recognising the complexity of Indigenous resilience. The ARPNet project whose fundamental approach is that when dealing with complex social and environmental challenges, the key lies in engaging with people in an empowering framework.

The increased collaboration with participants from Queensland, Northern Territory and Westerns Australia is demonstrating the commitment to having a strategic approach and conversation to build on the lessons learnt from these projects to improve resilience across the northern Australia.

INTRODUCTION

North Australia represents a vast natural landscape affording low agricultural/pastoral production potential but unique cultural values for the local Indigenous population and conservation values for the wider Australian public (Northern Land and Water Task Force 2009, Crowley 2015a,b). Outside of the cities and towns, the majority of northern savanna residents are Indigenous who have native title and freehold rights to land —'land rich'— but are recognised as being economically and socially disadvantaged (Fig. 1) (Steering Committee for the Review of Government Service Provision 2015, 2016).
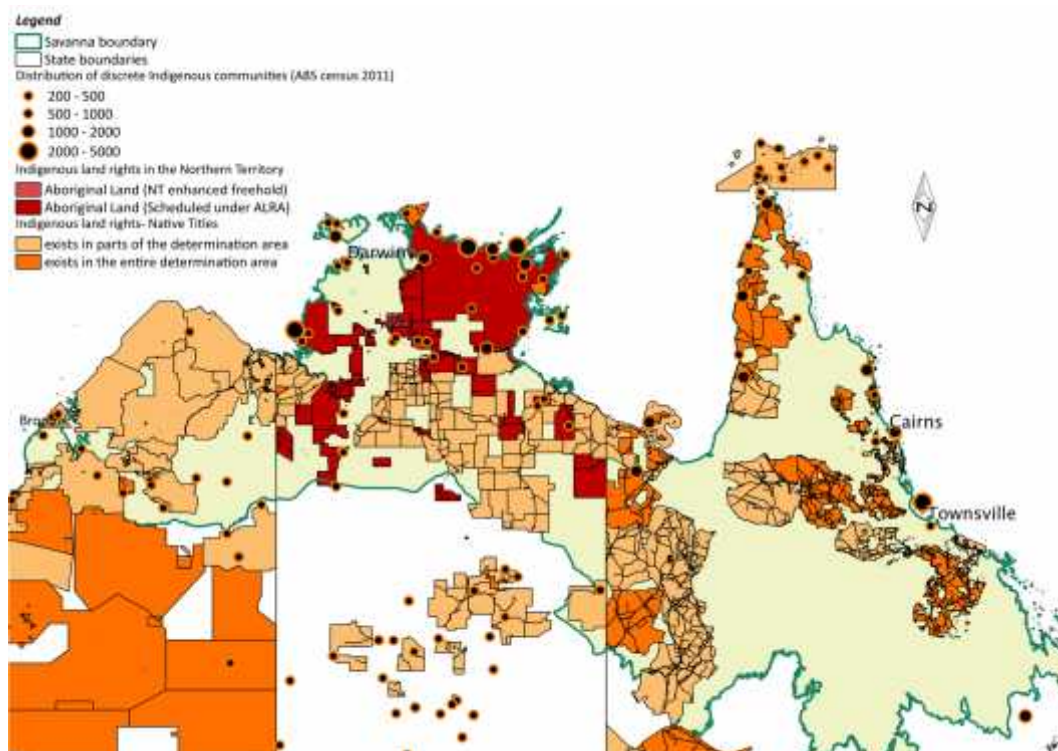
Fig. 1: An outline of North Australia showing distribution of Indigenous discrete communities and their land rights.

Northern Australia is susceptible to major cyclones, floods and bushfires (Fig. 2a and b). Despite the evident risks of natural hazards, Indigenous people in remote locations are ill-served by existing emergency services. While these remote communities have significant Indigenous and local knowledge allowing them to understand and interact with their traditional estates, a lack of work opportunities, poor health, under-investment in infrastructure, restricted communication services, and flawed governance models heightens vulnerability to regional natural hazards. Current government and other service delivery modes require transformations to support the empowerment and resilience of local people through recognition and respect for local protocols and building capabilities and meeting people's needs, to more effectively manage natural and other identified hazards, to deliver better services, and to support and create long-term sustainable economies in the region.
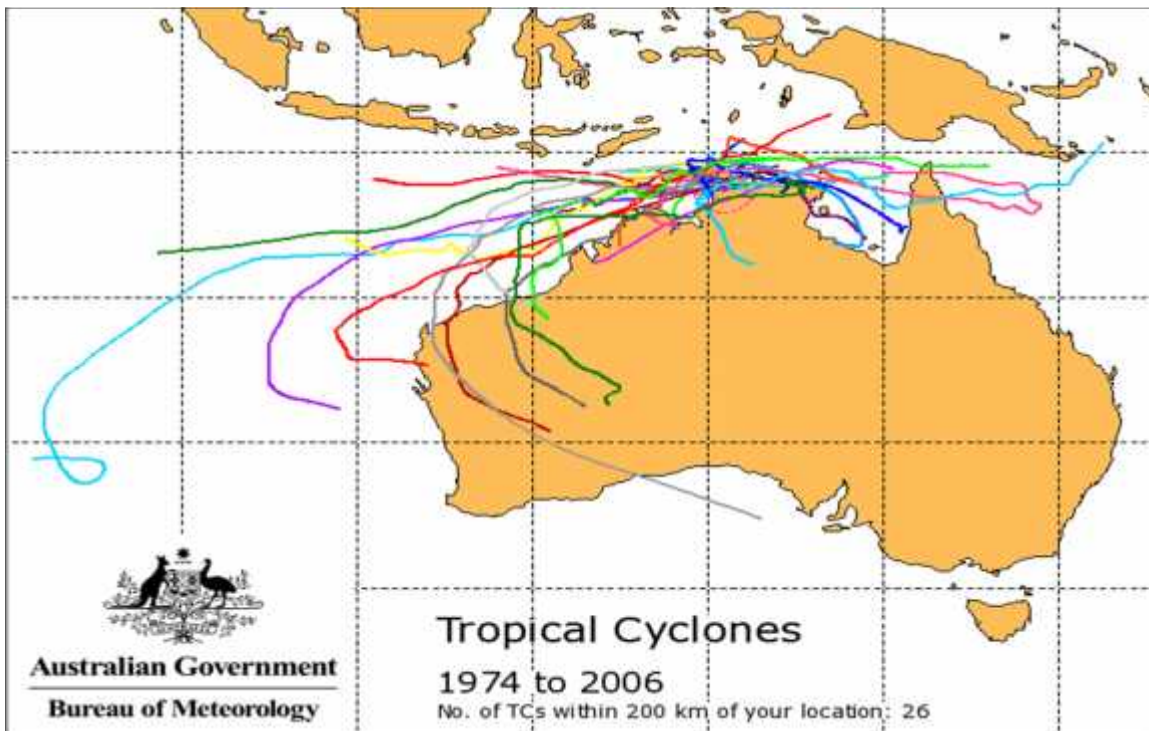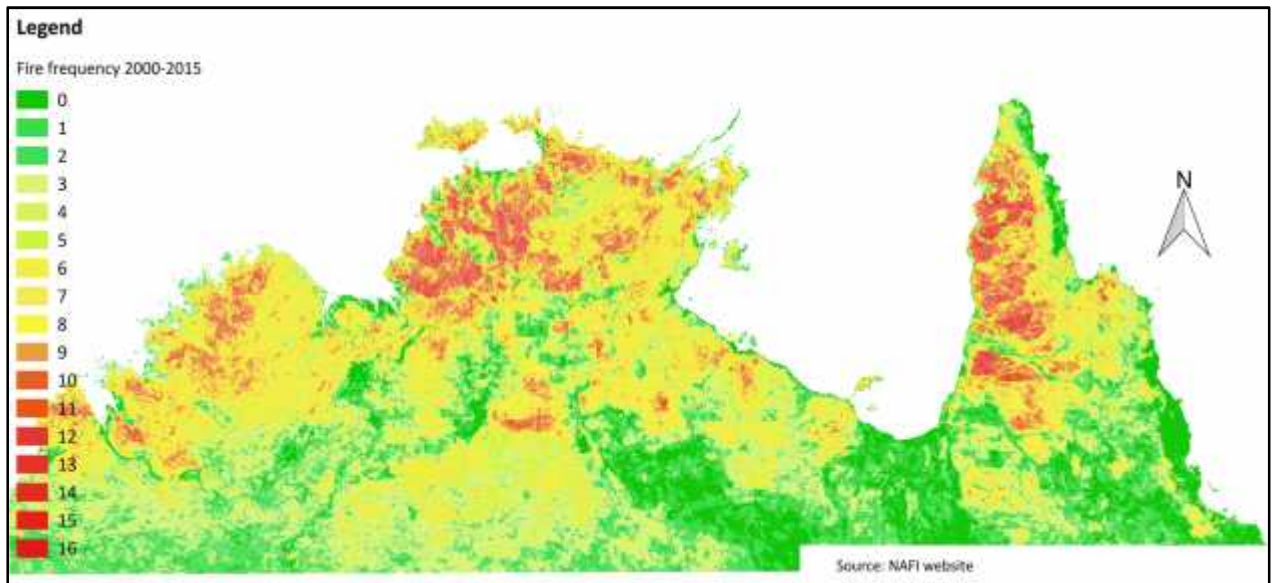
Fig. 2: A brief description of northern Australia showing

a. Fire frequency from 2000-2015 (note – more than 50% of the region experiences bushfires every second year).

b. Cyclone tracks from 1974-2006, with 26 cyclones over 32 years (Source: Bureau of Meteorology)

Natural hazards, although posing unavoidable threats to people living in remote locations, also offer opportunities to establish innovative economies for reducing the risk of natural hazards and managing the landscape. For example managing fire on *country* reduces greenhouse gas (GHG) emissions and improves ecosystem

processes and services, while enabling people to build and utilize their capabilities, thus enhancing resilience (Fig. 3).

Improved fire management on country

↓

Reduced GHG emissions and
Reduced risk of future severe fire events

↓

Economic opportunities through C and
ecosystem services-based economies

↓

Improved land functions and processes, and
ecosystem services (incl. natural & cultural assets)

↓

Building/utilizing people's capabilities (e.g.
Tradtional knowledge of fire management)

↓

Improved livelihoods and well-being of
people (e.g. good health, social networks)

↓

Community Resilience

Fig. 3. Fire management and community resilience.

Resilience of Indigenous communities (particularly, in remote areas) is complex and challenging for both local Indigenous leaders and external agencies. Whilst some of the conceptual goals may be the same (e.g. stronger more independent communities), how such goals manifest, the components of these and the pathways to achieve them may differ dramatically. An appreciation of the complex nature of Aboriginal circumstances, worldviews, lifespace and history is crucial for the Scoping Resilience project and is effectively outlined by James et al. (2017), who describe what constitutes community resilience and what models are relevant for effective relationship building around governance at a local scale. This discussion is an outcome from the Galiwin'ku study project and is the subject of the second component of scoping resilience research conducted by NAILSMA, ARPNet and Yalu.

For the first part of the project—the PES component— we extend the proposed framework (Fig. 3) to explore the potential of monetary payments for managing *country* to continue the flow of its ecosystem services (ES). During 2016-17, PES research explored the potential of ES, mainly focused on C (Carbon) economies in the north, and evaluated the monetary value of ES from an Indigenous estate and developed an Indigenous-specific ES framework.

The second part—the Governance component—addresses how community resilience can be enhanced, and what are the key socio-economic and cultural factors in determining Indigenous communities resilience.

BACKGROUND

An integrated view of the northern landscape, natural hazards, Indigenous communities issues related to resilience, and potential opportunities are described in an earlier annual report prepared for the BNHCRC (Russell-Smith 2015).

The current report provides a brief outline of PES and Governance research undertaken during 2016-17. The PES component includes ES concept, assessment and valuation, and the broad scale assessment of ES opportunity across the north. The Governance component includes analyses of community-based governance structures and models that can be applied in northern Australia.

PES COMPONENT:

ECOSYSTEM SERVICES (ES): CONCEPT, ASSESSMENT AND VALUATION OF ES FROM AN INDIGENOUS ESTATE

ES are defined as the benefits or services people derive from ecosystems (Millennium Assessment (MA) 2003, 2005). In ecological terms, ES represent the ecological characteristics, functions, or processes that directly or indirectly contribute to human well-being. The MA (2003) categorizes ES into four main classes:

a. *Provisioning services*: services that offer "provisioning" benefits to people such as bush tucker and bush medicine.

b. *Regulating services*: services that regulate different aspects of the integrated system, such as flood control, storm protection, water regulation, water purification, air quality maintenance, pollination, pest control, and climate control. These services are generally not marketed but have clear value to society.

c. *Cultural services*: services that offer cultural, religious, identity, sense of place, or other "cultural" benefits. For example, customary lands provide sites for Indigenous people to perform ceremonies and transmit that knowledge to future generations.

d. *Supporting services*: services that maintain basic ecosystem processes and functions such as soil formation, primary productivity, and provisioning of habitat. These services affect human well-being *indirectly* by maintaining processes necessary for provisioning, regulating, and cultural services.

We applied the MA approach, with explicit inclusion of well-being constituents, to evaluate ES from an Indigenous estate in the NT, Fish River Station (Fig. 4), recently published in the core ES journal, *Ecosystem Services* (Sangha et al. 2017).
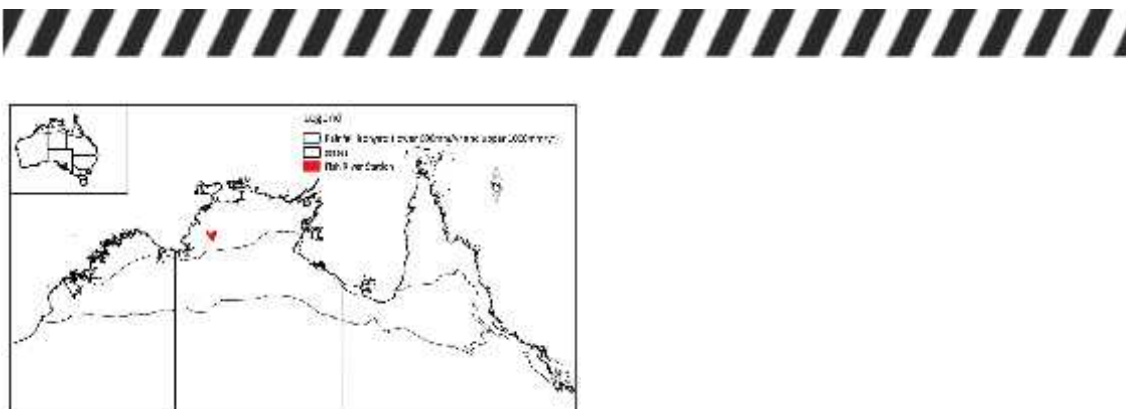
Fig. 4. Location of Fish River Station in relation to rainfall isohyets in northern Australia.

An important part of this study was to assess the monetary benefits of ES towards people's well-being (Table 1), and the costs of managing the flow of these services (Table 2).

Table 1. Total value of non-marketable and marketable ES of Fish River Station, applying different valuation methods (Sangha et al. 2017).

Ecosystems-based values	Area (ha)	Unit value (USD ha^{-1} y^{-1})	Total Value (USD y^{-1})
4.1.1. Non-marketable ES:			
ia. Applying BVT using global-median values of each ecosystem from TEEB database (de Groot et al. 2012)			
Woodlands	175,600	1,571	275,867,600
Grasslands	1,260	2,785	3,509,100
Inland wetlands/riparian areas	290	17,068	4,949,720
Tropical Rainforests	700	2,431	1,701,700
Disturbed/clear land	150	0	0
Total value			**$286,028,120**
ib. Applying BVT using regional-relevant values from the Australian studies from TEEB database (de Groot et al. 2012)			
Woodlands	175,600	469	82,356,400
Grasslands	1,260	233	293,580
Inland wetlands/riparian areas	290	1088	315,520
Tropical rainforests	700	2177	1,523,900
Disturbed/clear land	150	0	0
Total value			**$84,489,400**
Property 'country' - scale values			
ii. Applying tradeoff of Indigenous welfare expenditure to assess the socio-cultural values of Indigenous estate: 50% tradeoff of Government expenditure for provision of cultural and social ES from FRS that can save expenditure on welfare services (safe and supportive environment, economic participation, healthy lives and early childhood development) for 80 people who regularly visit FRS Travel expenses for 80 people to visit FRS Saved costs of welfare payments for employing five rangers **Total wellbeing benefits from country**			$1,355,608 $40,000 $292,500 **1,688,108**
4.1.2. Marketable ES: **C credits (mitigation and sequestration)**			**437,383**

Table 2. Minimum costs required for maintaining ES flows from Fish River Station (Sangha et al. 2017).

Minimum costs applying	Total Value (USD y⁻¹)
i. Tradeoff of: On-ground fire, weed and pest management, repairs and maintenance costs, and salaries of workers	751,000
Ongoing annual infrastructure development costs (e.g. new roads, fences, sheds, etc.)	25,000
Cost of visits for cultural knowledge training camps to maintain cultural values	8,000
ii. Annualised land price	119,000
iii. Foregone benefits from beef enterprise	104,921
Total	**1,007,921**

ASSESSMENT OF ES OPPORTUNITIES ACROSS NORTHERN AUSTRALIA

Another major component of PES research conducted as part of the project was an ecological-economic analysis of >600mm rainfall region in northern Australia (Fig 5; Russell-Smith et al. 2017).

A detailed assessment of the economic situation of a typical regional beef cattle producing enterprise was conducted by integrating available published data on a range of ecological and financial attributes (pasture production and capability, financial returns, land degradation, GHG emissions, etc.) mostly from ABARES farm survey data (http://www.agriculture.gov.au/abares/surveys) and various regional sources.

Pasture production, a main ES from the northern landscape, was assessed in terms of pasture capability (Fig. 5a), long-term financial returns (Fig. 5b) from a typical pastoral enterprise, and for its economic viability in the future. These analyses reveal low/very low financial returns from an average median cattle property in terms of annual Earnings Before Interest and Tax (EBIT), and support earlier findings from pastoral industry northern beef situational analysis reports.

Our assessment, and those of other regional reports (McLean et al. 2013; Bray et al 2015; Crowley 2015b), point to the need for exploring other PES opportunities (e.g. carbon farming, biodiversity credits, and fire/natural hazard management) to minimize the risks and enhance community resilience both for the Indigenous and non-Indigenous people by developing diversified complementary economies.
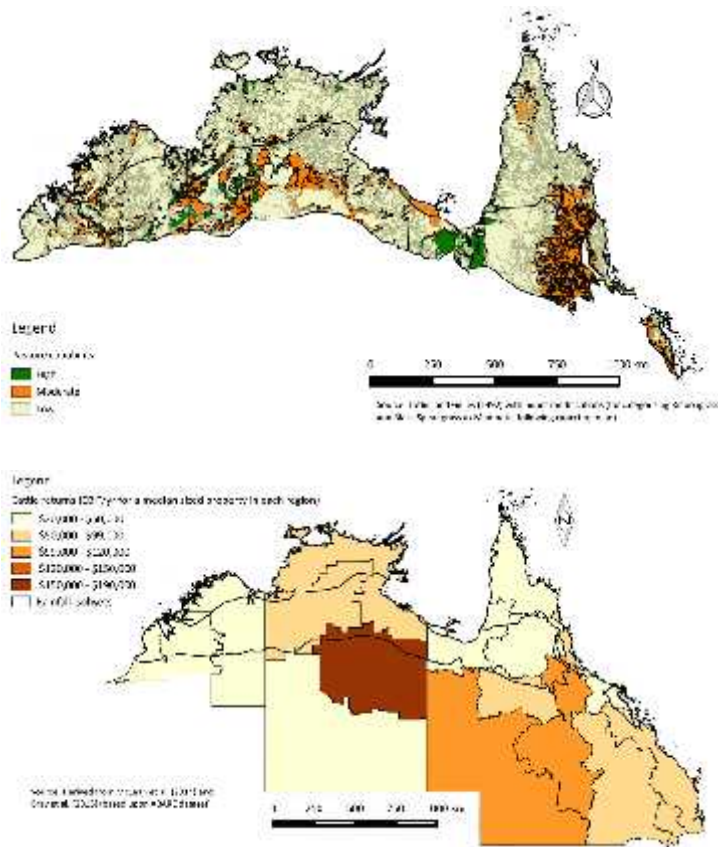
Fig. 5. Pasture assessment as a major ES from the northern landscape (Source Russell-Smith et al. 2017):

    a.   Pasture capability (above)

    b.   Annual long-term (2001-2012) economic returns from a typical, median-sized pastoral business in the north—Earnings Before Interest and Tax (EBIT)/yr (below).

Our preliminary assessment of high-value conservation estate suggests that there is significant potential for ~AUD 20-30 M carbon economy for abating GHGs (a conservative estimate), and an additional potential opportunity of ten times that amount with the associated development of sequestration methodologies (Russell-Smith et al. 2017). Managing the northern landscape through developing complementary economies, such as through fire management on country, can significantly reduce the risk of natural hazards across northern Australia.

This initial scoping assessment suggests a huge potential for PES economies in the north that will benefit the Australia Government for saving the costs of land management, including pests and weeds, and reducing the welfare and natural hazard related costs, while contributing to enhance the resilience of Indigenous and non-Indigenous people, as well as of northern landscape.

GOVERNANCE COMPONENT:

Indigenous culture and society is central to the future development of northern Australia. Although the physical assets are easily recognised – land and sea, pristine environments, biodiversity, minerals, fishing resources, places for tourism etc. – the social and cultural assets of the people who belong there and who are defined by their land and sea *country* are not so easily recognised. The many layers

of paternal governance and agency superimposed over Indigenous customary estate-based social organisation have eroded local authority and control over recent generations.

> "Every government agency or contractor that comes here to Galiwin'ku brings their own authority with them. We don't know what they're all doing or why they're here. We've lost control of what's happening in our community" (Elaine Lawurrpa, 2016).

Despite this, persistent expressions of resilience abound, often obscured from and unrecognised in 'top-down' service delivery and higher order policy settings, for example in northern development, mainstream education and health. They appear in the matrix of connections to kin and *country*; in assertions of rights and identity through heritage, law and language; in sophisticated knowledge systems informing land and sea management; in attempts to reclaim leadership in over-governed communities; and in fundamental local synergy with the dynamism of nature and its cycles.

This community resilience work shows that these unique local qualities, expressed widely by Indigenous people, are core ingredients for personal and community resilience, assets to effective and innovative cross-cultural relationships (whether in personal settings or in development), and abundant across the North. With sharper conceptual tools to recognise some of these key strengths more effective relationships can be built to deliver valued outcomes where mutual interests overlap. There are many diverse examples that illustrate how better governance relationships can be built and should look. Stronger resilience at community level underpins and is bolstered by improved governance relationships at the interface of Indigenous and broader society.

Remote Indigenous towns, settlements or communities are relatively recent constructs, demographically comprised of minority traditional land owner groups amongst numbers of others, attracted or forced off their homelands elsewhere in the region – whether by missions, government rations or buffalo camps and tobacco (Lawurrpa, 2016). The same kind of ancestral stories and manifestations animate townscapes as they do wider *country*, creating extraordinary social adaptations and vulnerable behavioural protocols. These communities come under various types of governing legislation (e.g., Aboriginal Land Rights (1976) Act, Local Government Acts, Aboriginal Associations Act). Their councils and shires are generally poor with no or limited rate base, providing sub-standard services; a plethora of government, NGO and other agencies fill gaps and undertake works in collectively uncoordinated and ad hoc manner, bringing their own authority and mandated agendas. Each service provider, funder and representative organisation adds a layer of governance with all the requisite committees, KPIs and reporting requirements to the already complex inter-cultural environment.

Over-governance is an issue both for Indigenous people whose homes these places have been now for many generations, and for agencies wanting to deliver services more effectively and build resilience and capability. Recognising this complexity is the first step to recognising Indigenous resilience beneath it. The tendency of

government and local organisations to only engage the visible and often superficial community structures rather than 'real' underlying community governance arrangements, inevitably invests resources and time in processes and structures likely to fail, erode local authority structures, and exacerbate conflict and apparent dysfunction: with the community characteristically being 'blamed' for the failure (Lawurrpa, 2016). This reflects the predominant policy perspective that resilience results from what is done to or for people. This fails to accommodate the fact that, when dealing with complex social and environmental challenges, the key lies in engaging with people in an empowering framework.

For this framework to be developed and enacted appropriately, it is essential to understand that it is a two-way process; it reflects the co-creation of solutions and their sustainable implementation through the interaction between empowered communities (and their members) and empowering settings (provided by broader societal agencies). Empowerment is essential to creating trust (NAILSMA 2012). The former, the factors that underpin empowered communities, is a function of the social, cultural, spiritual and environmental capital of Indigenous peoples. This must be accommodated in planning and intervention, and to do so it is essential to adopt a bottom-up approach that can accommodate local diversity (e.g., regarding needs, goals and socio-cultural characteristics etc.). In this context, the propensity for attributing failure to local communities is thus more accurately understood as a function of mainstream societal agencies failing to understand the empowerment concept or choosing to focus on only one aspect thereof. An example of the benefits of an empowerment-based approach is evident in the work of the Aboriginal Research Practitioners Network (ARPNet) and Yalu (supported by NAILSMA).

The success of the ARPNet in navigating and respecting complex community life in their research contracts is no surprise. Working in the local languages enables all the nuances of meaning (mentioned above) to be captured, immediately valuing local authority, identity, relationship to the underlying customary landscape and local history. Such active demonstrations of trust, not always recognised by outside partners, provide local community-led relationship initiatives based on and able to build on inherent resilience features - such as the capacity to adapt cultural learning to new education spaces and technological capacities.

Capturing difference and continuity in building resilience

These lessons can be transposed to the regional level. Consider the potential for regional scale emergency management approaches based on the framework, process and trajectory of the Yolngu driven Burrmalala cyclone project at Galiwin'ku. The initial post-cyclone community resilience project was small scale and appeared narrow in focus, but community leaders rapidly saw the value of their own research in helping them to address the legacy of compounded disempowerment and cultural erosion. The emerging proposition to (re)create a community interface run by Yolngu leadership to manage government and other agency engagement with their community is a challenging one and one that not only expresses but seeks to enhance the qualities that make Yolngu who they are and who they want to be in their future town setting.

This story resonates with complementary research by ARPNet at Gunbalunya and Ngukurr and by Girringun in North Queensland. With respect to natural disaster management and community resilience for example, there are many communities across the north that already do or would get value from locally driven research into disaster resilience and resilience more generally, as with Galiwin'ku. There is a significant opportunity for EM and other agencies to learn from the process and outcomes and adopt regional or even transregional approaches to engagement and relationship building with Indigenous communities. The benefits sought are more efficient cost effective service delivery, improved local resilience and capability to prepare, respond and rebuild. The first step may be knowing how to recognise and relate to both obvious and obscured resilience qualities.

"Resilient communities can adapt, change, and learn from problems or challenges. For example, resilience may be actively manifest by community members or leaders influencing and/or preparing for economic, social and environmental changes"[i]. They do so by being able to mobilize and apply their social, cultural, spiritual and environmental values and local authorities, to the resolution or accommodation of the social and environmental challenges they have encountered. That is, the notion of resilience has purchase because strength and adaptability persistent in Aboriginal cultures, continues to drive the struggle for recognition and prosperity, despite the erosive impact of recent history – consistently pointing to the need for reciprocity in relationship building and practice.

The nuanced local research at Galiwn'ku has by its nature been a patient process. The next steps for Yolngu there are not going to be easy though a basic framework and strategy for taking them has emerged – focus back on local relationships around traditional land ownership within the contemporary community and its hinterland setting; begin/continue healing processes from generations of social capital erosion; consider how key Yolngu values can be captured in a set of principles and protocols for non-Yolngu agency engagement with the community; create a space and process ('interface') for agencies and Yolngu leadership to develop direct relationships for service provision etc; invite a key agency to discuss and interrogate this relationship building structure (e.g. EM agencies). This is a simplified version of what is suggested at this stage, which is likely to develop and change over time. A final plan for implementing improved engagement protocols and resilience building was not able to be delivered under phase one.

The intent for phase two of the BNHCRC is to run similar Yolngu research processes in neighbouring communities, again recognizing familial networks across the customary landscape, to provide confidence to Gaiwin'ku and neighbouring Yolngu and the ability to easily share experience of research values and resilience building processes that emerge from them. A sub-regional conversation like this will help prove up the strategic approach to similar action research and relationship building based on improved resilience to be undertaken in North Queensland and Western Australia. Each community is unique in history, language, tradition, resource access, remoteness, State influence, demography etc. This poses issues for scaling up service delivery for bureaucracies. However, this BNHCRC and other research reminds us of common features – both imposed (e.g. over-governance, limited support to engage in meaningful economic development, legal and customary rights to land) and organic (e.g. local/regional kin structures, nuanced and shared local knowledge, extant decision making

processes/structures) that indicate where common strengths, vulnerabilities and resilience/governance issues can begin to be addressed. The prospects for developing an improved approach to practical relationship building around service provision and outcomes of mutual value is significant, based on facilitating Aboriginal stewardship of the practical processes and empowering them (e.g. through work, experience, training) along the way.

Phase two funding already secured through the CRC will seed this next effort – starting with modest developments with Galiwin''ku Yolngu. Further financial support is being sought through NEMP and other sources / partners.

KEY ACTIVITIES DURING 2016-17

1. BOOK – PES AND COMMUNITY RESILIENCE

Three workshops were organised in June 2016, February and May 2017 in preparation for organising a major project output, a book summarizing themes explored by the project and tentatively entitled, *2Way Country—transition to a resilient North Australia land sector economy*. The earlier two workshops focused on formulating the chapters, and the latter to finalize the book, which has now been submitted to an Indigenous publisher, Magabala Press, based in Broome. This book, due for publication in late 2017, aims to inform supportive public policy development for remote North Australian communities.

The book comprises a Preface and eight chapters as follows:

Preface *(Note: still to complete once editing and publication process finalized)*

This book provides a synthesis of a suite of research projects addressing the broad theme, *Building community resilience in northern Australia*, focused especially on remote, predominantly Indigenous (Aboriginal) communities. This research was contracted by the Bushfire and Natural Hazards Cooperative Research Centre (BNHCRC) in late 2013, and undertaken under the auspices of the BNHCRC's 'northern hub' administered through Charles Darwin University in partnership with the North Australian Indigenous Land & Sea Management Alliance Ltd (NAILSMA).

While the book incorporates findings from component sub-projects that address a range of related topics (community resilience and governance, economic opportunities especially through payments for environmental services, appropriate bushfire and natural hazards training, savanna fire management, management of high biomass flammable grassy weeds), for reporting and wider readership purposes we have intentionally placed these matters in a broader cultural, historical, environmental, economic, development and governance context. At an early project workshop we asked colleagues what issues they considered necessary to illuminate the broad project theme, and how—this book is the result.

Chapter 1. Preamble

The North Australian Indigenous Land and Sea Management Alliance (NAILSMA) is a not-for- profit company that advances the sustainable use and management of northern Australian lands and waters based on Indigenous cultural, social and economic imperatives. NAILSMA has been operating since 2001, representing Traditional Owners and Native Title Holders, throughout the North. The authors of this chapter are and have been either the Chair or CEO of NAILSMA since its inception. We share a collective Indigenous view that Northern Australia development should be based on a decolonized land tenure system with an associated economic use that is both compatible and inclusive of Indigenous rights, knowledge and practices.

Chapter 2: Change and continuity: the North Australia cultural landscape

As a framework for chapters which follow, here we set out a contemporary vision for a sustainable north Australian society and economy that builds on recognition of key landscape characteristics and drivers, tens of thousands of years of Indigenous occupation and cultural development, and contemporary patterns of settlement and landuse. Today, we recognise that there are two co-existent cultural traditions which, from time to time and place to place, may intersect constructively to provide mutual benefit. We focus first on giving voice to ongoing connections to, and the fundamental importance of, maintaining law, culture and country, and the aspirations of Indigenous people across the North. We then consider the processes which have fashioned the northern landscape as we know it today, including the prehistorical record spanning at least 50,000 years of continuous occupation. Finally, to set our scene, we undertake a brief description of key environmental, demographic and tenure features of the North Australia region as addressed in this book.

Chapter 3: Northern Australian History — Dispossession, Colonisation and the Assertion of Indigenous Rights

The chapter overviews the colonial history of northern Australia from the 1860s to the present as a backdrop in support of the book's central theme; an

alternative and realistic argument for inclusive and sustainable development for northern Australia. The book contends that recognising and embracing Indigenous people's rights and their cultural and social capital is fundamental to transforming the North's economy and society. For this to occur the North's colonial character – land title regime, Indigenous political and economic marginalisation, and resource wealth extraction – must be overhauled. The chapter explains broadly how the North's colonial structures of the nineteenth century have become embedded in an ongoing settler colonial relationship that the North has with the Australian nation. The critical elements of the North's structural colonialism have remained intact and reinforced by modernisation theory and the workings of Australia's federal system of government despite court judgements which recognise Indigenous rights in Australian law.

Chapter 4: Economic development across the North: historical and current context of possible alternatives

Australia's recurring bouts of enthusiasm for northern development shift focus across an array of potential riches, but one feature is unchanging. Goals are set, pathways chosen and rewards distributed by and mostly for people from outside the region.

Strong external roles are arguably inescapable given a small, sparsely-distributed northern population and weak infrastructure. But outcomes from this sort of approach to development have been just as predictably adverse for local people over a large part of the Australian continent. While extracting the north's resources makes variable but considerable contributions to the nation's economic performance, resident populations struggle to access benefits. Dominant industry sectors source much of their labour, materials and services from outside the region so that, rather than opportunity, locals are more likely to feel damaging social and environmental impacts.

Outside a few larger urban enclaves, north Australia's resident, especially remote, Indigenous populations remain socio-economically disadvantaged, notwithstanding their (comparatively recent) recovery of lands and coastal and inland waters, and non-exclusive native title interests in much of the vast pastoral estate. Some lands severely damaged by mining, ill-managed grazing, failed agriculture or forestry ventures, invasive animals and plants, and wildfire, require major investments in repair: investments that local people lack the financial resources to make themselves.

The "new" whitepaper offers few ideas and fewer commitments to support local people: whether to find better ways of accessing benefits arising directly from orthodox development or to identify and pursue entirely new approaches. Failure to innovate in socio-economic development is compounded by the retreats to the past: in dismissal of contemporary environment and heritage protection as red tape. Hostility to sound environmental measures appears particular short-sighted given the potential for incomes from ecological services to foster labour and capital retention in the north. The contradictions inherent in coupling a rose-tinted view of the great scale and quality of development opportunities to a determination to put aside the environmental and social obligations of governments and developers does not appear to have occurred to the White Paper's architects.

In the northern perspective (local interest) vacuum left by government, it may be necessary for landowners and industry to work together to restore balance and, above all, identify and secure approaches to economic development that more effectively advance the well-being of the north's people. The chapters to come outline some of the ways this might be done.

Chapter 5: Towards a sustainable diversified land sector economy for North Australia

This chapter explores sustainable, economically viable opportunities for land sector development across North Australia. Currently, the cattle industry is the dominant land use sector, nominally operating over as much as 90% of the region. For context we first describe the concept of ecosystem services, and how services derived from healthy and functioning ecosystems contribute to human society and well-being. A recent national study shows that ecological services will continue to deteriorate unless significant land use changes are adopted.

The second part of the chapter assesses the economic viability and environmental sustainability of the North Australian pastoral industry based on analysis of extensive available long-term data sources. As industry reports have also concluded, we find that the great majority of pastoral enterprises in our focal region are economically unviable. Additionally, we show that the industry has very significant environmental impacts which currently are not accounted for in economic sustainability assessments. Despite these general findings, it is important to note that some pastoral enterprises are both well managed and profitable—demonstrating that such standards are attainable.

However, given the general condition of the North Australia pastoral sector, the third part of the chapter examines opportunities for transitioning to a diversified land sector economy. We show that, far from being a endowed with features that particularly favour pastoral use, North Australian landscapes are most notable for very significant cultural, biodiversity conservation, and global carbon stock values. The rapid expansion of carbon market activities across the North, especially through reducing greenhouse gas emissions from savanna fires by strategic prescribed burning (based on widespread Indigenous practice), but also through a number of pastoral sector applications, points to the potential both for ongoing expansion of carbon projects and the ecosystem services sector generally. A key challenge for sustainable land sector development in North Australia is to diversify land sector opportunities including, where appropriate, carbon, biodiversity conservation, and culture and nature-based tourism markets.

Chapter 6: Resilient communities and reliable prosperity

Indigenous culture and society is central to the future development of North Australia. Although the physical assets are easily recognised – land and sea, pristine environments, biodiversity, minerals, fishing resources, places for tourism etc. – the social and cultural assets of the people who belong there and who are defined by their land and sea are not so easily recognised. The many layers of paternal governance and agency superimposed over Indigenous customary estate-based social organisation have eroded local authority and control over recent generations. Despite this, persistent expressions of resilience abound, often obscured from and unrecognised in 'top-down' service delivery and higher order policy settings, for example in northern development, education and health. They appear in the matrix of connections to kin and *country*; in assertions of rights and identity through heritage, law and language; in sophisticated knowledge systems informing land and sea management; in attempts to reclaim leadership in over-governed communities; and in the fundamental local synergy with the dynamism of nature and its cycles.

This chapter seeks to show that these unique local qualities, expressed widely by Indigenous people, are core ingredients for personal and community resilience, assets to effective and innovative cross-cultural relationships (whether in personal settings or in development), and abundant across the North. With sharper conceptual tools to recognise some of these key strengths more effective relationships can be built to deliver valued outcomes where mutual interests overlap. Diverse examples are used to illustrate this, all of which are expressions of better governance relationships (or how they ought to be), stronger resilience, and indicative of a better understanding of reliable prosperity in the interface between Indigenous and broader society.

Chapter 7: Like a rusty nail, you can never hold us blackfellas down; cultural resilience in the southwest Gulf of Carpentaria

Even though their *Countries* were violently invaded by settler colonisers in the 1870s, the Indigenous peoples of the southwest Gulf of Carpentaria region maintained their social capital—their Laws, cultures, knowledge, ceremonies and songs—to survive as distinct groups. Then when legal opportunities became available they regained ownership of some of their ancestral lands and then, over a period of 40 years, they slowly rebuilt their natural capital; their lands, waters and other natural resources. Using both their natural and social capital they have developed innovative community-based cultural and natural resource management initiatives to provide social, economic and environmental benefits to themselves and to the wider Australian community.

Chapter 8: Governing Northern Australian landscape for a better future
Building on the historical and contemporary understandings of North Australia outlined in previous chapters, this chapter explores the major systemic governance challenges facing North Australian communities and landscapes. It then teases out key decision-making initiatives that could be applied to weave a

more inclusive and sustainable set of outcomes through the focused reconciliation of three well understood political tensions that operate at landscape-scale across the North (i.e. economic development, biodiversity conservation and the protection and promotion of Indigenous rights and interests in country). Key priorities for systemic governance reform are considered, starting from the grass roots strengthening of Indigenous-led and local governance systems, through to genuine bipartisan and cross-jurisdictional cooperation on policy and investment priorities.

2. OUTCOMES

1. ES methodological issues explained from northern Australian context:
    Sangha, KK, Russell-Smith, J, Morrison, SC, Costanza, R, Edwards, A (2017) Challenges for valuing ecosystem services from an Indigenous estate in northern Australia. *Ecosystem Services* **25**, 167-178.
2. An Indigenous ES framework developed:
    Sangha, KK, Russell-Smith, J (2017) Towards an Indigenous well-being framework: An Australian example. *Conservation and Society, accepted.*
3. Developed a preliminary model on linking fire, ES and economic perspectives from northern Australia, using Similie--requiring further work.
4. Presented a paper at the International Society of Ecological Economics conference, 27-29 June, 2016, held in Washington DC, US
5. Presented information to local organisations such as Northern Land Council and NT Cattlemen's Association, as well as various meetings with regional and local government departments and organisations.
6. Held an ES workshop—Ecosystems and Indigenous and Local peoples wellbeing, on the 27th of March, 2017 during the OCEANIA ES forum in Brisbane, Qld.
7. Presented a paper on Value of ES from an Indigenous estate, 28th of May, 2017 at the OCEANIA ES forum in Brisbane, Qld.
8. Presented PES research at a special forum for the Developing Northern Australia conference, 19-20 June, 2017, Cairns, Qld.
9. Presented PES research at the Northern Australia Fire Managers Forum, 20-21 June, 2017, held in Kununurra, WA.
10. Presented research at RAF and AFAC 2016.
11. Visited the NT gulf communities to discuss carbon/PES opportunities.
12. Presentation to IGEM at AFAC side session, Brisbane, September 1 or 2 (IGEM).
13. NEMP committee meeting Perth, October 27-28, 2017.
14. Presentation BNHCRC RA Forum April 5-6, 2017.

3. FUTURE RESEARCH

The PES research will continue to address enhancing resilience of remote communities in northern Australia, in active participation with the potential stakeholders including relevant government agencies, local communities, and Non-Government Organisations, across the three northern jurisdictions. The project will support enhanced regional planning by developing appropriate tools (e.g. mapping and information resources), as a means for assisting with Emergency Management risk mitigation. Particularly, the PES component will evolve into the new Scenario Planning research project where we'll directly engage with all the possible stakeholders at selected case study sites to explore the feasible future opportunities. This future research will assist in recognizing and building capabilities of Indigenous communities to partner with EM agencies, and to develop and promote culturally appropriate sustainable economies in the region.

The Community Governance research will expand in the neigbouring community of Ramingining, similarly stuck by cyclones Nathan and Lam as Galiwin'ku. Some pre-planning has been done with ARPNet. Given local interest expressed, it is hoped this will deliver direct benefit to Ramingining Yolngu, complement the Galiwin'ku work, and potentially inspire discussion and action around resilience building in and around Ramingining. It is hoped that this complementary action research will assist Yolngu in the region to support each other to drive better relationship building and governance amongst them, government agencies and other service providers. This will help refine and validate the framework approach that communities and agencies can use to improve service, governance and well-being outcomes.

Overall, it is intended that the Scenario Planning Project work will be coordinated where possible to develop improved community resilience modelling. This will be useful for Indigenous communities participating in the projects and for non-Indigenous end users in validating engagement and relationship governance models.

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