

bnhcrc.com.au



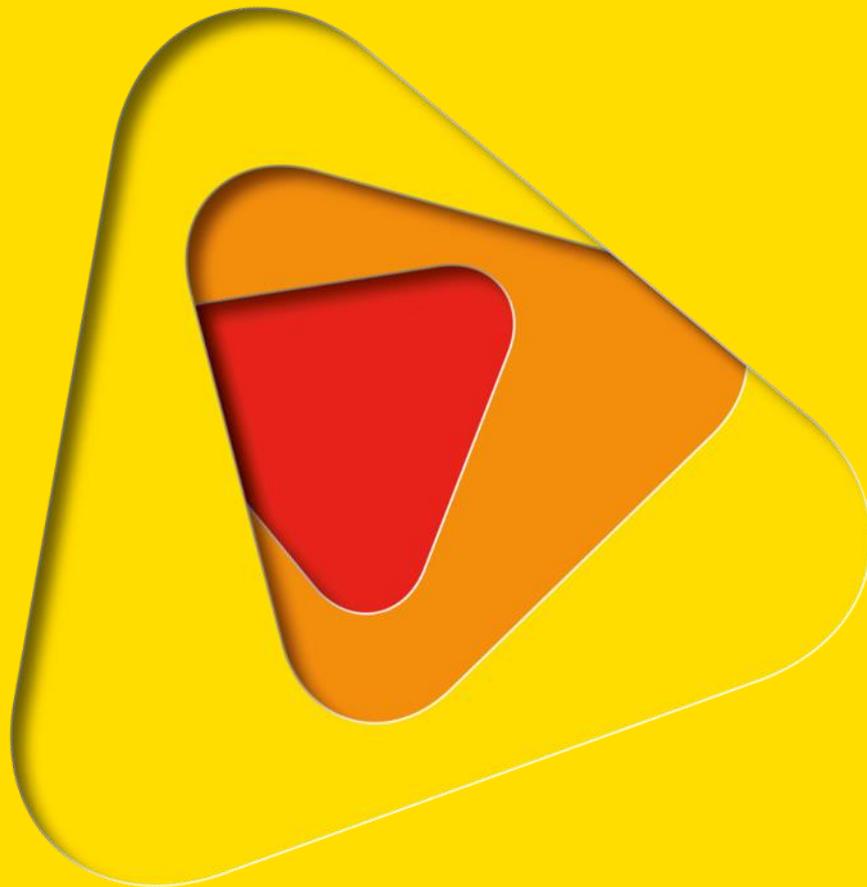
bushfire&natural
HAZARDSCRC

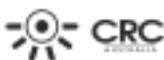
BUILDING RESILIENT REMOTE COMMUNITIES IN NORTHERN AUSTRALIA

Prof Jeremy Russell-Smith

Charles Darwin University
Bushfire and Natural Hazards CRC

Annual Report 2014





© Bushfire and Natural Hazards CRC, 2015

No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form without the prior written permission from the copyright owner, except under the conditions permitted under the Australian Copyright Act 1968 and subsequent amendments.

Disclaimer:

The Bushfire and Natural Hazards CRC advises that the information contained in this publication comprises general statements based on scientific research. The reader is advised and needs to be aware that such information may be incomplete or unable to be used in any specific situation. No reliance or actions must therefore be made on that information without seeking prior expert professional, scientific and technical advice. To the extent permitted by law, the Bushfire and Natural Hazards CRC (including its employees and consultants) excludes all liability to any person for any consequences, including but not limited to all losses, damages, costs, expenses and any other compensation, arising directly or indirectly from using this publication (in part or in whole) and any information or material contained in it.

Publisher:

Bushfire and Natural Hazards CRC

January 2015

Annual Report

Development challenges and opportunities for building resilient remote communities in northern Australia and neighbouring countries

January – June 2014

The problem: Critical issues underpinning the resilience (or lack thereof) of Indigenous and local communities in savanna landscapes across northern Australia and in adjacent countries (eastern Indonesia, Timor Leste, PNG), concern requirements for developing (1) culturally appropriate, environmentally sustainable economic opportunities, and (2) supportive governance and policy frameworks. Although this region is culturally diverse, local communities in these regions face many development issues in common (e.g. endemic poverty and/or disadvantage, limited employment opportunities inadequate provision of services, poor governance etc) which impact directly on the resilience of local communities to BNH risks. The lack of wealth generation at the local level impedes community ability to develop infrastructure, build human capital through training and experience of the workplace. As a consequence most policy initiatives seek to address 'subsistence' level issues, failing to prioritise preparation for BNH events. The ability of these communities to respond in a coordinated way at an appropriate scale is largely non-existent.

Why it is important: This situation is of critical importance to north Australia and policy development for north Australian BNH. While the domestic population is relatively small, the region is home to several million people who form a potential pool of BNH disaster victims to be serviced by centres such as Darwin. The recent development of institutions to project disaster response ability into the region and forward positioning of strategic assets is in part a recognition of this regional pressure on domestic BNH response capacity. But it is necessarily attending to the issue of response to events, rather than the building of resilience to address BNH at a local level.

While not underplaying the significance of these challenges, growing north Australian and international experience points also to substantial opportunities for helping to build community resilience through development of novel climate mitigation and related ecosystem / environmental services economies. Pertinent examples include the recent and ongoing development of savanna burning abatement and sequestration offset opportunities in fire-prone northern Australia, and emerging REDD+ (Reduced Emissions from Deforestation and Degradation, plus social, biodiversity and environmental co-benefits) offsets and related opportunities available to our regional neighbours. Additionally, it is well recognised that sustainable development in such settings is reliant on implementing effective culturally appropriate governance models, supported by responsive, well-informed policy settings.

Addressing the problem: This project focuses on north Australia, but also include our near neighbours in an effort to build regional resilience. As part of the broader 'Northern Hub' suite of projects broadly addressing *Building community resilience in northern Australia*, this project contributes to:

- articulating key contemporary terrestrial land use management, institutional, and policy challenges facing Indigenous people and local communities in north Australian savanna regions
- exploring opportunities afforded through emerging economies related to climate change mitigation, carbon trading, and ecosystem services to help address identified challenges
- undertaking rigorous valuation of Ecosystem Services (ES) to be derived from savanna landscapes of northern Australia, and associated scenario modelling of Payment for Environmental Service (PES) benefits which can be derived from emerging land-use options

(e.g. savanna burning, carbon sequestration, diversified / mixed pastoral management activities, environmental stewardship arrangements)

- identifying beneficial culturally appropriate institutional / governance arrangements which can effectively support community development and resilience aspirations providing authoritative analysis of above findings to help inform Indigenous community policy development and community resilience outcomes in northern Australia

Introduction

A first distinguishing, if often overlooked, demographic feature of the northern savannas is that, outside of the cities and towns, most northern savanna residents are Indigenous and, although ‘land rich’, are impoverished—and these trends are projected to exacerbate over coming decades. While it’s apparent that some Indigenous savanna residents, especially those with educational and training qualifications, may take up mainstream employment opportunities (e.g. in mining, tourism, service, defence, and pastoral sectors), many others exercise other priorities including, in remote communities especially, cultural responsibilities to country. The reality is that for many Indigenous savanna residents the Gap will remain. Indigenous land owners are massive and ongoing investors of in-kind services to land and socio-cultural management. Building on this and substantial investment in more formalized Indigenous land and sea management programs (e.g. Working on Country’s ranger program, Indigenous Protected Areas, the ILC’s pastoral employment programs), an evident challenge for building resilience in regional and remote Indigenous communities is to support ongoing development of Indigenous environmental services enterprises.

Currently, however, there is a major mis-match between these development requirements for building sustainable communities and associated enterprises and contemporary political aspirations for the region. Thus, at the last federal election, both the Coalition and Labor parties made policy pledges to ‘develop the north’, and specifically to develop ‘the northern food bowl’. Following their election victory, the Coalition have begun to implement that pledge through the establishment of a joint parliamentary enquiry into northern Australia and the possible establishment of a Cooperative Research Centre (CRC) focusing specifically on developing northern agriculture or, perhaps more broadly, northern development.

While recognising that development of northern Australia does indeed face many challenges (see below), the myth of the northern food bowl and associated agricultural development was first comprehensively addressed, and dismissed, in the 1960s by BR Davidson in his critical analysis of *The Northern Myth*, and again as recently as 2009 in the final report of the Northern Land and Water Taskforce (NLWT), *Sustainable development of northern Australia*. These and other recent authoritative studies consistently demonstrate that economically and ecologically sustainable opportunities for agricultural development in the north are very limited—rather than a prospective ‘food bowl’, potentially the most viable agricultural crops concern the restricted growing of sugarcane and cotton. Even on the oft-touted Ord scheme in the East Kimberley, the major growth crop is sandalwood.

The reality of the north is vastly different from the myth. The NLWT suggests that as much as 90% of the northern savannas are used ostensibly for (beef cattle) pastoralism—very substantially under extensive (as opposed to intensive, irrigated or grain fed) production systems. Industry reports show that, given low fertility soils, seasonal access issues, distant and volatile markets, most northern pastoral enterprises are either economically marginal or unsustainable if confined to pastoral production alone.

Conversely, those very same marginal lands are recognised internationally for their biodiversity (although increasingly stressed), carbon storage, and ecosystem services values—in turn, affording innovative diversified natural resource management enterprise opportunities in regions, or on parts of properties, with limited / no pastoral production potential. Recent discussions with key agricultural sector pastoral industry players indicate a growing recognition that diversified non-pastoral land management opportunities must be considered as part of the marketing and enterprise mix.

Project Outline

This project aims to critically examine, communicate, and advocate for the contribution that ‘new economy’ opportunities and associated institutional and policy settings can make towards enhancing community resilience especially in relatively intact north Australian landscapes. The project builds on substantial regional work and international networks established over many years through initiatives funded and/or implemented by a large number of organisations.

The project will (1) build on substantial available research and findings, including outputs generated by other ‘Northern Hub’ sub-projects (particularly B1.1-3, B1.2.1-2, B1.3.3) undertaken as part of the broader project, *Building resilience in north Australian communities*, and (2) initiate ecological economics assessments exploring the potential contributions of new economic opportunities (e.g. carbon and biodiversity options) in helping to diversify ‘traditional’ economically marginal regional land use options (e.g. pastoralism, agriculture in northern Australia).

The project will be conducted over 7 years, in two parts. Phase 1 will be undertaken over the first four years—a key output will be the production of a book synthesising above research undertakings, with a particular focus on informing and contributing to north Australian Indigenous economic development and resilience policies. Phase 2 will continue with prioritised research issues identified through the formal Phase 2 review process—with an anticipated key output being the production of a second book focusing more broadly on community resilience issues in the broader north Australian-eastern Indonesian-Timor Leste-PNG region.

Building on substantial engagement with regional stakeholders in recent years, a strong record of foundational studies, and development of key research partnerships with leading international ES and PES modellers, the project aims to maintain and foster shared understanding of ecologic, economic, governance and policy challenges and opportunities principally through:

- implementing an inaugural workshop in Yr 1 focusing especially on northern Australia, bringing together key project partners and researchers, to (1) develop an agreed framework, timeframes, and governance for the project, and (2) an agreed chapter framework, potential authors, and associated research required towards the production of a synthesis book at end of Phase 1 of the project (in Yr 4)
- appointment of a dedicated ecological economics modeller to work with respective regional partners (including local communities), to explore and assess different ES and PES options through rigorous and transparent scenario modelling processes
- holding of progress review workshops in Yrs 2-3
- holding of major review workshop in Yr 4, involving project researchers and key stakeholder invitees, to (1) review progress, (2) present book chapter outlines, (3) set direction for Phase 2 of project over Yrs 5-7
- implementing ongoing research on community resilience issues in Yrs 5-7, most likely focusing more broadly on northern Australia-eastern Indonesia-Timor Leste-PNG savanna region

- supporting allied post-graduate research opportunities, including documentation and analysis of critical site- or regional-specific local governance, and over-arching policy settings
- undertaking effective communication and policy advocacy of project findings to local, regional and international audiences through BNHCRC, partner and stakeholder communications processes
- contributing scientific publications to international standard, including publication of at least two substantial book syntheses in Yrs4/5, and Yr7

Key Activities for the Period Jan-Jun 2014

Over the past 6 months, the major focus of the project has been on:

- Establishing the project advisory team membership (refer box above)
- Holding of the initial project workshop (see below)
- Appointment of the project post-doc (see below)
- Building connections with other linked projects in the Northern Hub of the CRC
- Establishing connections with key 'Northern Hub' stakeholders, including key end users (e.g. Steve Rothwell, PFES NT)
- Establishing initial connections with pertinent BNH CRC cluster lead end users (Naomi Stephens, Suellen Flint), clusters (e.g. Prescribed burning and Catchment Management), and projects (e.g. Phil Morley's Australian Disaster Resilience Index)

Inaugural PES project workshop (10-12 June, Litchfield National Park, NT)

The workshop was attended by 18 participants, with the great majority having direct involvement with the current (PES) or other projects associated with the Northern Hub of the BNHCRC (see table below). The workshop was held to set the direction for the PES project, especially activities which would contribute to the development of a book which is listed as a major output of the project in Yr4. It had been anticipated and hoped that the project post-doc would have been appointed prior to the workshop—but unfortunately this proved administratively impossible.

As well as endorsing proposed project objectives and activities, a major outcome of the workshop was to instigate a comprehensive scenario modelling process to address and to inform current 'northern development' agendas. As detailed at the workshop, substantial additional funding will be required to undertake the stated tasks (including the holding of regional workshops, economic modelling, public opinion testing) and a pathway was established to seek such funding from identified philanthropic sources. The status of this initiative and related funding will be reported on in ensuing reports.

Workshop background (from workshop preparatory materials)

Building on a number of regional workshops held over the last two years, at the commencement of 2013 the new Bushfire and Natural Hazards Cooperative Research Centre (BNH CRC) approved the undertaking of a long-term project (Building community resilience in northern Australia) with the objectives of:

- articulating key contemporary terrestrial land use management, institutional, and policy challenges facing Indigenous people and local communities in north Australian and adjacent savanna regions
- exploring opportunities afforded through emerging economies related to climate change mitigation, carbon trading, and ecosystem services to help address identified challenges
- undertaking rigorous valuation of Ecosystem Services (ES) to be derived from savanna landscapes of northern Australia and adjoining regions, and associated scenario modelling of Payment for Environmental Service (PES) benefits which can be derived from emerging land-

use options (e.g. savanna burning, carbon sequestration, diversified / mixed pastoral management activities, environmental stewardship arrangements)

- identifying beneficial culturally appropriate institutional / governance arrangements which can effectively support community development and resilience aspirations
- providing authoritative analysis of above findings to help inform Indigenous community policy development and community resilience outcomes in north Australian and adjacent regions

The present workshop serves as the inaugural get-together of core project researchers and invited participants, to set the direction for the project over the next four years. Given that a key output of the project concerns the last dot-point above, a particular focus of the workshop is to develop a conceptual outline and work plan towards the production of a major policy initiative—at the present time conceived as a book.

Participant	Organisation	BNH CRC
Ricky Archer	Northern Gulf NRM	
Prof Andrew Campbell	CDU / RIEL	PES project team
Otto Campion	Ramingining, NT	Resilience project researcher
Prof Bob Costanza	ANU	PES project team
Dr Andrew Edwards	CDU / DCBR	Fire project researcher
Dr Jackie Gould	TNI / DCBR	Resilience project researcher
Glenn James	NAILSMA	Project researcher
Sam Johnston	UNU	PES project team
Dr Ida Kubiszewski	ANU	PES project team
Paul Lane	Lingiari Foundation	
Howard Pedersen	Yawuru Association	
Dr Natalie Rossiter-Rachor	CDU / RIEL	Flammable weeds project researcher
Prof Jeremy Russell-Smith	CDU / DCBR	PES project team
Assoc Prof Samantha Setterfield	CDU / RIEL	Flammable weeds project researcher
Steve Sutton	CDU / DCBR	Training project researcher
Peter Whitehead	NAILSMA / DCBR	
Dean Yibarbuk	Warddeken Land Management	Resilience project researcher
Peter Yu	NAILSMA	PES project team

Appointment of the PES project post-doc

As noted above, at the time of writing this process is well in-train, with interviews for two eminently suitable candidates due to be held on the 24th July. Finding a suitable candidate has been a long process, effectively commencing in August 2013 with early notice of the position being posted on pertinent international websites. That this task has proven somewhat difficult may be gauged by the requirements of the position as set out below.

Key Selection Competencies

1. Relevant qualifications and demonstrated extensive experience in scientific research into valuing ecosystem services (ES), and payments for environmental services (PES) opportunities.
2. Demonstrated extensive experience working effectively and respectfully with Indigenous people, communities and institutions, especially with the undertaking of research addressing sustainable development issues.
3. Demonstrated extensive experience with modeling tools and approaches amenable for exploring ecological and economic implications of different land (or sea) -use options and scenarios—particularly in the context of

informing and engaging with non-specialist community stakeholders.

4. Demonstrated understanding of contemporary policy issues affecting Indigenous land ownership, land use and development issues in northern Australia.
5. Demonstrated understanding of the importance of traditional / customary community governance systems, especially in the context of supporting culturally appropriate sustainable development.
6. Demonstrated high end ability to generate and deliver effective presentations and papers to research colleagues, government policy makers, Indigenous people and the wider community.
7. NT Drivers Licence (or ready ability to get such) and experience in the safe operation of vehicles and field teams in remote landscapes.
8. A PhD in a discipline relevant to Competencies 1-5 above.

Project Team:

Project Leader: Prof Jeremy Russell-Smith (CDU)

Cluster Lead End User: Ms Suellen Flint and Jennifer Pidgeon (a/g)

Core research team

Prof Bob Costanza (ANU)

Mr Joe Morrison (NLC)

Mr Peter Yu (NAILSMA)

Mr Sam Johnston (UNU)

Dr Ida Kubizewski (ANU)

Dr Bronwyn Myers (CDU)

Prof Andrew Campbell (CDU)

Post-doc TBA