Caring for country: Indigenous people managing country using fire with particular emphasis on Northern Australia

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Abstract

Australia's first people, the Aboriginal and Torres Strait Islanders or Indigenous people have been occupying Australia and managing its biota for millennia using many tools. However, no tool has been as significant in the manipulation and management of habitats as that of fire used by mobile bands of Indigenous people moving across the landscape. While fire is usually described in the 'management of country' there are also many other uses of fire that are not readily understood and discussed. These include using fire for signaling, travelling and for religious purposes such as 'smoking' a particular parcel of country after a death for cleansing purposes. In fact, as still evident in various parts of northern Australia today, the use of fire for managing traditional estates is a customary responsibility of land owners and managers, requiring ongoing collaborative planning and implementation over the seasonal, cultural cycle.

It is becoming accepted that non-Indigenous colonisation, the rapid spread of pastoralism and the concentration of people into missions, towns and settlements have disrupted the intense management of country that once existed. In recent times Indigenous people are again becoming active in the management of their ancestral estates through land rights legislation, native title negotiations, purchases and joint management. This is evident across Northern Australia where many Indigenous people have or regain access to their country.

Furthermore, Indigenous perceptions of fire and its use contrast dramatically with that of non-Indigenous people. For many Indigenous land managers and owners, this has lead to exclusions and breakdowns in communications and practical fire management at the local and regional levels.

In the past few years, there have been significant collaborations with a shared view of better managing country held by Indigenous people and other land users such as pastoralists, miners and conservationist. Across the Top End, the Bushfires Council of the Northern Territory, Northern Land Council, regional Indigenous bodies and Traditional Owner groups have been working collaboratively to develop integrated conservation and development outcomes using fire as a vehicle to build capacity at the local and regional levels. At the Northern Australia scale, the peak Indigenous bodies responsible for land management have developed the inchoate North Australian Indigenous Land and Sea Management Alliance (NAILSMA) to support Indigenous people care for their country. It has been established to support Indigenous land managers ranging from Broome in Western Australia to Cairns in Queensland.

This paper describes the rapidly developing fire management agenda on Indigenous held lands across Northern Australia and the Top End with particular emphasis on community

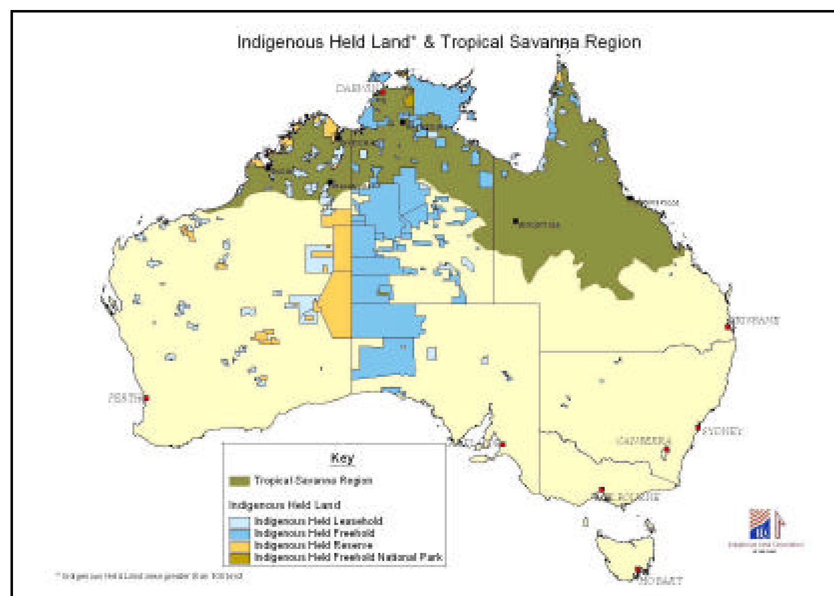
based management, collaborative partnerships and the challenges for people with poor socio-economic circumstances.

Introduction

Indigenous people across northern Australia are becoming increasingly engaged across all sectors of natural resource utilisation and management. We are active in the pastoral, mining, tourism, traditional landuse, conservation and national park management sectors. This engagement is set to increase with more land handed back or purchased by Traditional Owners.

The tropical savanna region covers one third of the Australian landmass and encompasses the most fire prone landscape across the nation with areas being burnt on an annual/biennial basis (Russell Smith et al 2003). Across this region Indigenous people are major owners, occupiers and managers of land and in many parts rely on fire as part of local and regional customary activities (economies) such as clearing of vegetation for hunting purposes. Over the last 20 years, Indigenous people have fought hard for land rights, a movement that has seen the Indigenous-owned estate expand rapidly especially in the Northern Territory (Figure 1). This estate growth has enabled in some parts, clan groups of Indigenous people to remain, return and establish outstations at key locations.

Figure 1. Indigenous owned lands and tropical savanna region



However, the role that Indigenous landscape burning has had on the biota of Australia is well argued. There are many scholars in Australia with the view that burning has no or little consequence, those that believe that Aboriginal people used fire to 'rearrange the biological furniture', while there are some that say that Indigenous people were pyromaniacs (Bowman 1998). Unfortunately the debate has had little engagement with regional Indigenous communities. It does seem however, that the populist ideology of pyromaniacs still resonates amongst many resource providers, some sectoral groups and large urban settlements, especially those residing along the east coast of the Australian continent who recently suffered from devastating bushfires.

Furthermore the opinions and knowledge that Indigenous people have of country is usually ignored or brushed off as not being legitimate in today's climate of landscape management. In fact Indigenous Knowledge (IK) across north Australia is alive and well in many parts, and there is a movement to re-instate this knowledge alongside western knowledge (science) as part of a better management regime for country that Indigenous people have gained back alongside other land users. I will highlight the importance of this knowledge system, its legitimacy in today's circumstances and the potential for better management of north Australian landscapes for biophysical, social and economic outcomes.

This paper is not written from an academic point of view, but moreso from a point of view developed through personal relationships with Traditional Owners on country, in particular throughout southeast Arnhem Land and parts of northern Australia.

Description of the region

For the sake of this paper, the region referred to is the same as that of the tropical savanna landscapes that stretch from Broome to Townsville (figure 1). The region therefore covers approximately 1.9 million square kilometres or about one-quarter of mainland Australia's land mass. It is estimated that this region has 600,000 people of which 120,000 are Indigenous people (20%).

Rainfall occurs across this region largely between October-March (wet season) delivered by the monsoon, at the range of 500-2000mm annually. North Australian rivers contribute almost 60% of the total runoff of all Australian rivers (Morton, 2003). Vegetation types are typical north Australia savanna, with *Eucalypt* dominated woodlands interspersed with grasslands and some patches of rainforests with typical nutrient poor soils. The topography is relatively flat being an ancient landscape weathered over millennia.

Generalised landuse across the region is dominated by agriculture, in the form of pastoralism for cattle and some sheep in parts of western Queensland. Indigenous people run many pastoral operations also. The second largest landuse is that used by Indigenous people for cultural/traditional usage. This encompasses mostly land claimed back, particularly in the Northern Territory under the Commonwealth's *Aboriginal Land Rights (Northern Territory) Act* 1976.

A snapshot on the past – non-Indigenous perception

Prior to European colonisation of the Australian continent, Indigenous people used and managed terrestrial and marine environments extensively for social, economic and religious uses. For more than 60,000 years the landscape and biota has been under Indigenous management. Indigenous use of fire, associated with the regular and seasonal movement of people through the landscape has been a major force in shaping and maintaining vegetation communities (Cooke, 1999). This ancient regime was seen as significant in the historical understanding of vegetation creation across the continent.

A researcher, Sylvia Hallam (2002) describes the long and on-going debate about Indigenous landscape burning as fruitless because Australia has a long prehistory, and that Australia's Indigenous people have created, conserved and exploited fine-grained habitat mosaics. This in turn increased biodiversity and resource diversity, creating inhabited landscapes with a raised carrying capacity, for themselves and [later] for European colonists.

The use of ethno-historical records is also being disputed as a reliable source of information. A very important part of the story regularly missing in early settler observations has been the reasons behind the fires observed. Who lit them, when and why is missing but sketchy at best. Some records suggest that Aborigines intentionally altered habitats to favour wildlife (Bowman 1998). However the largest gap with respect to fire and Indigenous Australians has been the inability for anthropologists to document detailed uses, knowledge and reasons for fire usage by and for Indigenous people in Australia. There are few well-kept records that, through observations, have consistent accounts of the use of fire such as that used by Western Desert Aborigines who used fire for a variety of reasons (eg. cooking, warmth, illumination, ceremony, ritualistic ordeals, felling of trees, clearing of camps, signalling, driving game, regenerating vegetation, smoking animals from burrows and asphyxiating bats in caves) (Gould, 1971).

Chris Haynes (1985) research with mostly Gunwinjku speaking people near Maningrida in Arnhem Land documents that Aborigines used low-intensity fires to create a mosaic of burnt areas throughout the dry season. Backing this up is the research undertaken by Bowman and Panton (1993*a*) that deliberate and careful ignition of fuel was undertaken in management of the cypress pine *(Callitris intratropica)* on sites without any topographic protection from fire. This is further strengthened today through a rapid decline in *Callitris intratropica* abundance, a plant that grows from seed stock not by re-sprouting, surely this is suffering at the loss of people being off their country.

The vexing debate about megafaunal extinction has also received airplay in Australia, largely driven by theorists such as Tim Flannery and to a lesser extent Peter Latz. The causes for these extinctions are really undecided due to the lack of agreement on when these animals went extinct and when humans (so-called) arrived on mainland Australia. There is also a lack of evidence to the manufacture of tools used for killing these large animals by Indigenous people (Bowman, 1998).

Some Nunggubuyu perceptions of ngura - fire

I have come to believe, as an Indigenous person that fire plays a central part of our life through ceremony, hunting, and management of animals, bush tucker management (vegetative) and also that fire can be dangerous if not respected. Indigenous people's perception of their history although orally transmitted, has been told in a way that we have always been on country and are not recent arrivals as Europeans believe. According to senior Nunggubuyu Traditional Owner, Ganbukbuk Nundhirribala "*Our use of ngura has been done long time now, since start – hunting, smoking country after a death by Jungayi (manager), clearing open plain country to hunt walburrungu (kori-bustard), wadabirr (sand-ridge goanna) and other things* (pers. com. Ganbukbuk)…*Him* [ngura is] *used in all ceremonies – Yabadurruwa, Gunabibi, Madayin, Mandiwala* [and in the past for] *yadi and jangu*" (pers. com.).

While it is not the central theme in most ceremonies, it is however part of an important story that interconnects with the management of flora and fauna. It is also responsible to note that across north Australia there are slight variations on the use of ngura by Indigenous people, and that as described in this paper, refers to Nunggubuyu people of southeast Arnhem Land only.

Ngura is introduced to young Nunggubuyu boys and girls at an early age, being described as useful, necessary and dangerous if not used properly. During young men's initiation (around puberty) it is re-introduced, but strongly as a tool for describing what is right and wrong for young men to do. Heat and smoke are the products of ngura at this stage of ceremonial life. It is then that ngura becomes a strong part of a Nunggubuyu man's life, especially in the most sacred of ceremonies as mentioned above (Gunabibi and Yabadurruwa). Young men and women use it extensively to hunt goannas and long-neck turtle on floodplain country and are shown how to do so by relevant experts.

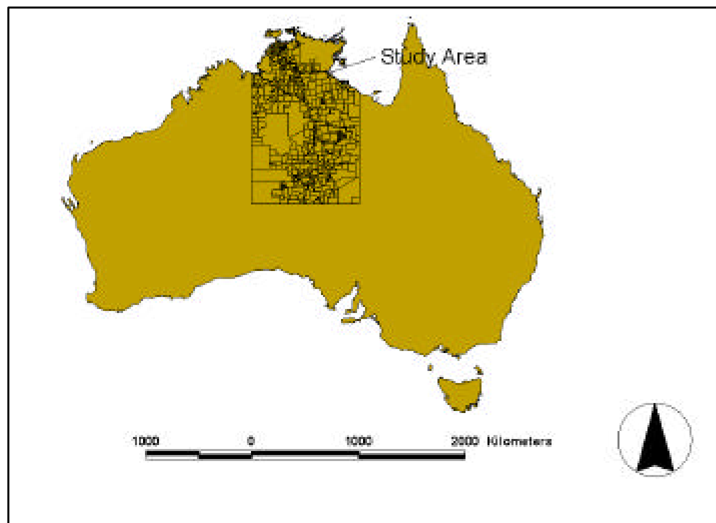
The Nunggubuyu response to enquiries about ngura is typical, in that it is not a singular topic of discussion that has its own end. More appropriately it is a tool to meet an end such as hunting. As described again by Ganbukbuk, "ngura has always been a part of hunting, gathering or cleaning up of country" (pers. com). These people, like many other north Australian Indigenous groups have a fire story about the brown falcon, or '*Karrakajn'* which is regularly observed to pick up burning embers and move it. As told by Gimul Nundhirribala "Karrakajn is always trying to light ngura, he is hungry for insects so when he sees fire, he picks it up and moves it so he can get more and more insects….like that, him number one hunter" (pers.com). There are many accounts by both black and white people of this behaviour.

Nunggubuyu use of ngura across their country (sand dunes, open woodland, hills, jungles and open floodplains) consisted of mostly small and patchy burns with occasional large 'fire drives' that were used to hunt macropods, and emus out of hilly country. This use of ngura had sound reasoning behind it and was carried out by only skilled users and hunters. A number of transcripts from Jeffrey Heath (1980) who was a linguist working with Nunggubuyu people around Numbulwar (figure 2) recorded many dreamtime, creation and general mythologies associated with people, land, law and life. One in particular refers to the origin of ngura (Text 168 Macassans, Dreamings and the origin of fire, Larangana).

It is believed by Nunggubuyu people that the origin of ngura came from a white spirit ancestor referred simplistically to in the text as 'Macassan' or those people from Macassar (Celebes). The reading of the text suggests that Macassan people have been worked into the traditions of the Nunggubuyu people. They did play a significant role in technological advancement through dugout canoes and metal axe heads. However the other side of this story is that ngura is central to the existence of Nunggubuyu people; it was brought by a spirit ancestor, which made Nunggubuyu life very different from then on. Deeper discussion on this topic reveals that the origin refers to the dreamtime, and that Macassan's were a way of articulating the whiteness of the ancestor spirit.

And now from the munanga (non-Indigenous) side, it is generally accepted that ngura plays a central role in nearly all Australian ecosystems by stimulating regeneration and determining demographic patterns of trees (Bowman, 1998). It therefore has to be understood clearly that ngura has played a huge role in Australia, whether it be by human ignition or other sources.

Figure 2. Location of Numbulwar in Australia



Present day situation

The magnitude of fire across much of northern Australia, and for reasons of this paper particularly across the Top End of the Northern Territory have become known and debated only in the past 6 years or so (Russell-Smith et al, 2001). The savanna landscape that was managed by Indigenous people for thousands of years, in most parts is now replaced by a new fire regime, particularly over the last 100-150 years of occupation by non-Indigenous peoples. There is now a movement to change this and strike a balance between old and new fire regimes along with other sectoral groups and partners.

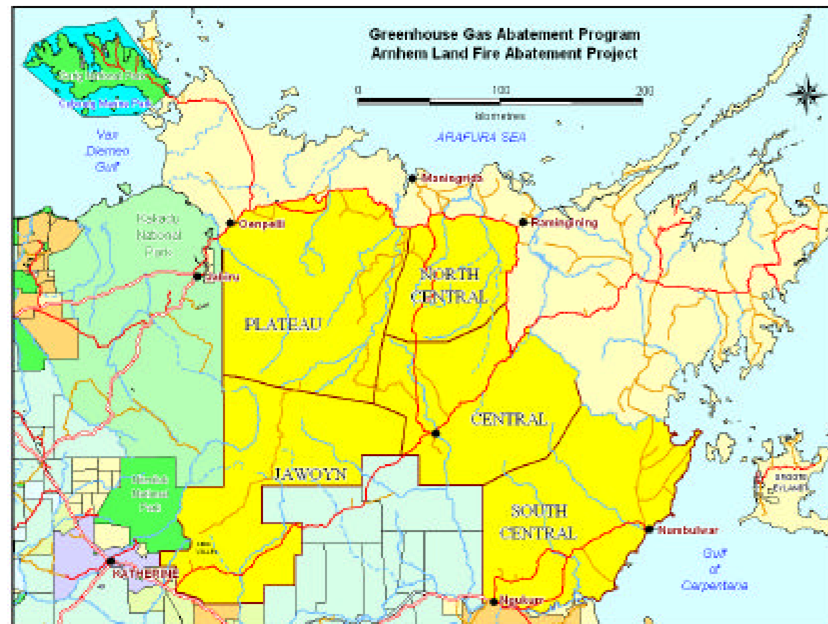
Across the Top End, fire management has fuelled many Indigenous community-based groups who actively seek to manage their country using a blend of Indigenous Knowledge and western science. These groups are known as 'Ranger' groups and range from 1-2 individuals to up to 15 where resources allow. The groups are based on the Community Development Employment Program (CDEP), a work for the dole program. At present there are approximately 30 groups situated across the Top End (Appendix 1) that work on their traditional country to manage new and emerging biophysical threats and develop economic opportunities.

In Arnhem Land, the Northern Land Council's (NLC) Caring for Country Unit, Community based ranger groups (Traditional Owners) and the Bushfires Council (BFC) have teamed up to manage fires across a 60,000km2 patch of largely unpopulated country (figure 3). The Arnhem Land Fire Abatement (ALFA) initiative has been in the making for a number of years, driven largely by the BFC and NLC aimed at reducing the amount of carbon into the atmosphere through a reduction in the amount and extent of late 'hot' fires across the region. However fire management and gas reduction is a target to locally undertake the following:

- Develop employment initiatives
- Involvement of senior custodians in advising the undertaking of the program, mentoring younger participants, and drawing on Indigenous Knowledge (IK); and
- Undertaking of a number of scientifically oriented activities (biodiversity assessments, mapping) to support the program

The project to date has not received long-term or recurrent funding, but it has led to many Traditional Owners returning to their country and engaging other active participants into the project such as researchers and community based ranger groups.

Figure 3 ALFA project area.



Fortunately enough the initiative now has the attention of the Northern Territory Government, and a private sector investor looking at providing employment and operational funds to support a reduction of wildfires through getting Traditional Owners back to their country.

Across northern Australia there are many other initiatives that operate towards a similar outcome, albeit on a smaller scale. In the Kimberley region of Western Australia, the Natural Heritage Trust (NHT) has funded a team of Indigenous people to work alongside non-Indigenous scientists and others to undertake biodiversity surveys as well as articulating how fire has been undertaken by custodians in the region. The Kimberley is significant as the custodians only left their country in the mid 1950's. In the Cape York Peninsula region, there are similar attempts to use fire management as a tool to develop regional capacity and better engage sectoral groups to work alongside each other. These projects are leading to improved collaborations and in one instance engagement with joint management of a protected area, a first for the region.

NAILSMA is beginning to play a role in the coordination of action by Indigenous groups across north Australia. Its significance will increase with the Indigenous estate to grow, NRM action and Indigenous R&D development to play a significant role in how north Australia will look into the 21st century.

In essence, fire has and always will be a vehicle for discussion, interaction and motivation for Indigenous people across north Australia. But Indigenous people do not see fire as a biophysical threat to infrastructure and life, but quiet the opposite, a necessary part of life as an Indigenous person. The country and its people need fire.

Conclusions

In summarising this paper, the available evidence and discussion while thought provoking does not as suggested through Indigenous mythology to have lead to extinctions of any flora or fauna. However, given the uncertainties from knowledge gaps, the available evidence, and also from my personal collaborations over 10 years working with Nunggubuyu people, Indigenous burning was undertaken with skill, meaning, purpose and backed up by sound Indigenous Knowledge over tens of thousands of years as articulated in ceremony and practical use of fire. There is ready evidence to suggest that those landscapes that have been depopulated with its custodians, have and continue to suffer serious biodiversity decline. This to me gives strong meaning to the words 'The land needs its people'.

The second important point to be made in this paper is that Indigenous people in Australia, in particular north Australia have got something very special, there is a body of knowledge that has been collated over thousands of years, something that will never be re-acquired or mirrored unless something drastic happens to the way resources are provided to management and R&D in the future. It is also striking that, while debates rage about Indigenous use of fire in the past and the possible changes that may have taken place, my concern is that Indigenous groups, landowners and their knowledge will be further marginalised and therefore entrenched deeper into welfare dependency. Indigenous groups across north Australia make up some of the most disadvantaged and marginalised people across the nation with few options for development of their country unless they undertake typical pastoral or tourism activities.

There needs to be a shift in the thinking about not just fire, but management of biodiversity and valuing it. Indigenous people could play a bigger part for being on country and managing it for the national good, which what many are doing, but society fails to engage in this. And as Jon Altman suggests having people on country is proving to be meeting triple bottom line public policy rhetoric that the government talks about (2003).

In finalising this paper, Indigenous land owners and managers are providing clear demonstrations across north Australia about the importance of their attachments to country. Fire management and working alongside other sectoral groups is but a small part of the jigsaw of seeking recognition that when Europeans arrived in Australia, the environment was in a balance that non-Indigenous society through initiatives such as Landcare, catchment authorities and others are attempting to repair and get back. I feel that this is fruitless unless meaningful management occurs and understanding of the implications of engaging Indigenous people across the nation are felt and understood to be of national and indeed international significance.

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APPENDIX 1