

Land degradation issues and management concerns for Aboriginal communities of central Australia

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Abstract

Aboriginal land management in Central Australia is not a recent phenomenon. When we discuss these concerns today we are addressing degradation consequences relating to industrial activities such as pastoralism, mining or tourism. Over the past 22 years Aboriginal people in the Northern Territory have had to examine more closely past land use practices and indeed how they relate to problems associated with degradation given that they have regained significant tracts of land. Much of the traditional land now owned by Aboriginal people comprises former pastoral leases, and in many cases the pastoral activities have been maintained. More importantly over this period Aboriginal people have diversified into partnerships with mining and tourism, thus adding another dimension to pressures on the landscape. This new responsibility has come about through the introduction of the Aboriginal Land Rights (NT) Act (1976). This Act has taken Aboriginal people the full cycle, that is, Aboriginal people went from extensive land holders, pre-European contact, to the landless after contact and back again as a result of the establishment of the Act. The introduction of the Act, at last, gave Aboriginal people in the Northern Territory an avenue to negotiate ownership of their respective country. Aboriginal people though have constantly and strongly argued that the land has always been theirs and consequently became the victims of the legal system to justify those claims. The result of this success brought with it the need to expose intimate knowledge and disclosure of sacred wisdom. Where Aborigines could successfully win the right to lands, time, technology and economics had, in many regions of the Northern Territory, caught up with them. Indeed, Aboriginal people have never found this change repugnant nor did they mind operating on equitable terms. The land rights process was then set to test the mettle of the Federal, Territory and Local governments. The Act would also test the ability of the broader community to act in accordance with judgements that would follow, given that considerable opposition already existed stemming from what could only be termed retrospectively as traditional enemies. Initial opposition came from the "... Northern Territory Legislative Assembly, the Finke River Mission, the mining companies and the pastoralists" (9). While well established bodies had infrastructure already in place to take up the issues for pursuing legalities, the Act also allowed for the implementation of such representative bodies as the Northern, Tiwi and Central Land Councils. Their central responsibilities have been to ensure the complex tasks such as representing Aboriginal traditional owners in preparing claims, negotiating with stakeholders, identifying and consulting with traditional claimants, mediating concerns pertaining to land use between Aboriginal groups, and "... administration of Aboriginal land. This includes the granting of permits for entry on to Aboriginal land" (9). Other issues that have come in to play are "... mining, sacred sites, roads, cattle, fencing, incorporation of Aboriginal groups, brands, bushfire control, soil conservation, feral animals, stock disease, distribution of royalties (9) and, for the most part, management of all lands acquired through the process of the Act. In some cases partnerships have been successfully formed with stakeholders such as the Australian National Parks and Wildlife Service, at places like Uluru where both the CLC and the Pitjantjatjara Council have majority representation on the Board of Directors.

Key Words

Indigenous, aboriginal, pastoralism, mining, degradation, tourism

Land management issues on a national scale have increasingly become a matter of concern due to the legacy inherited from earlier land use practices. Governments and their Federal, State and Territory agencies have given priority to achieving ecological sustainable development which has become vitally important to all stakeholders in recent times (20). The Central Australian case has not been given much attention due to the concept that only intensively utilised regions situated in the eastern and southern states have been considered to be commercially valuable regions on the continent. However, it is the physical characteristics that determine degradation patterns within the landscape. For example, where vegetation is lush and well watered it could be said that the soils hold together more appropriately. On the

other hand, the arid regions cannot rely on such characteristics and Latz (11) provides a typical depiction of such a land system. This is more apparent particularly when we examine Litchfield's (13) soil and sedimentary history of the MacDonnell Ranges where he has analysed and discussed several sedimentary levels of soils in this region. Given the delicate features of the arid zones in Australia, one only has to introduce any hard hoofed animals and degradation is guaranteed, such that the effects of wind and water erosion become a prominent feature in the landscape.

In Central Australia grazing is well entrenched and was seen as the most viable commercial activity. Other economic developments did not come until much later, particularly in the commercial sense. Increasingly then pastoralism, mining and tourism are the new concerns relating to land management issues in Central Australia, and this paper highlights concerns expressed by the Central Land Council (CLC), given their role in the process as managers and implementers of the Aboriginal Land Rights (NT) Act (1976). However, to do so requires observations of the earliest forms of land management practices generally. This allows a broader interpretation and dispels some misconceptions and exposes other features in the dynamics of Aboriginal land use practices. This is followed by an overview of historical developments in the pastoral industry for Central Australia. Finally, concerns expressed by the Central Land Council are discussed, providing an update of the contemporary issues at hand for Aboriginal people as stakeholders in their own right.

Pre-contact land management practices

Pre-contact land management practices by Aboriginal peoples are generally aligned to what has become popularly known as "firestick farming", a technique whereby the indigenous people of a specific region or area would manipulate the native flora by burning off to enhance its viability to attract fauna species to range on, enabling access for hunting and gathering or to promote regeneration of plant life that relied on this technique for its reproduction. Generally, land also provided a source of origins and spirituality apart from that of daily economic subsistence (20). Fire not only has a land management role in Aboriginal society, but also a spiritual function, where it is used to ward off spirits, and during ceremonial activities is a sign of completion of that event and a form of reconciliation between tribal groups.

To attribute fire entirely to land management is a misconception, one example of many misconceptions. However, "... recent ethnographic and ethnohistorical studies have considerably revised this viewpoint by pointing to a complex Aboriginal land and resource management" (14).

Lourandos (14) elaborates extensively on the misinformation relating to Aboriginal land management issues and has compiled information that reflects a fresh interpretation all based on solid ethnographical and ethnohistorical sources. Latz (11) supports Lourandos when he focuses on the diverse range of bush-tuckers manipulated by the Central Australian Aborigines and how the technology, people and landscape were in harmony with each other, and in this process how the Aborigines manipulated and assisted in landscape changes to meet their needs, employing special "...tricks of the trade..." (11). While Latz, unlike Lourandos, has had the advantage of living and working with Aboriginal people who for the most part continue to carry out certain inherited practices, he clearly recognises that the encroaching changes in Aboriginal society are predictable particularly concerning the introduction of modern foods. However, in doing so there is room left to suggest that a continuum of traditional selection remains.

The archaeological remains of Aboriginal society in the form of material culture objects shows us that change has been an ongoing process. Archaeology researchers have identified several technological changes over extended periods. While these changes through the archaeological record can give insight into societies in general, actualities of the operations of precontact events are hard to imagine. Therefore land management theories prior to contact are very general particularly when discussions on land alteration through fire stick farming are concerned.

The relationship between Aboriginal people and their landscape, as it has been realised, covers several different areas with the fire regimes mentioned above. However, the landscape is all encompassing and every part of it is relevant to Aboriginal society. For example, resource extraction for daily livelihood and spiritual activities are utilised across the board. Aboriginal people extracted vast amounts of stone from

quarries, mined ochres extensively and utilised both the flora and fauna to enhance material culture objects. Gostin (7) placed Aboriginal people and their landscape most appropriately:

"The indigenous Australians have also had a long association with technology and their understanding of the environment and natural processes has stood the test of time. Changes in world view and attitudes to the environment no doubt can and did occur, but always in the context of a hunter-gatherer lifestyle. For Aboriginal people, technology is an extension of everyday of the self. In such a society there is no redundancy, no mass production and no impersonal manufacturing" (7).

Therefore land management and the care for it ensured extended possibilities for survival. This learned aspect of Aboriginal society developed over many millennia.

Aborigines in the Sydney region in 1788 showed the first signs of disquiet within the indigenous community and Carter (3) emphasises this through an observation by William Bradley: "The Natives were well pleas'd with our people until they began clearing the ground at which they were displeas'd and wanted them to be gone ..." (3).

Furthermore in the same year on his departure, John Hunter remarks that the Sydney region was well forested and on his return in April 1790 the land had been cleared considerably and replaced by some good buildings (3). This it seems gave the colony a reason for being, and indeed set the scene for overall progress in development of the colony for some time to come. The imported attitudes to land use practices did not take into consideration that the new landscape was not the same as the one the settlers had left behind. They themselves had not experienced the full force of the continent and its many and diverse range of climatic conditions. For example, there was no knowledge of extreme droughts, rainfall fluctuations, or the high temperatures which generated fires (6). By 1840 Europeans occupied some 20% of the Australian land mass and throughout this time implemented their land management techniques wherever they settled (6). By the 1850s issues relating to land degradation became a part of the agenda in south-eastern Australia and "Robertson (1853) ... an original settler ... of Western Victoria, in a letter to Governor Latrobe, mentioned the great increase in the number of earth flows ... after 1841. ... In fact, it (the land) was being used, unwittingly, beyond its capability" (6).

Robertson's letters go on to discuss and paint a graphic picture that after only ten years of settlement land degradation signs were a common appearance, similar to that of today, "... albeit not then so severe" (6). By the 1870s both in western NSW and South Australia the landscape was showing signs of strain aided by overstocking, drought and the infestation of feral pests such as rabbits (15). Preceding this, Europeans themselves became more aware of their interaction with the landscape, and this awakening led to the establishment of national parks. No Aboriginal concerns were taken into consideration with the development of the first national park and again this was a standard set to follow for some time to come.

Pressures put on both the colonial governments and Aboriginal people to open up more lands eventually led to increased violent interactions. Aboriginal people, after being dispersed and brought under control were isolated into little pockets of land which never met their expectations as a hunter-gatherer society. Eventually after prolonged battles Aboriginal people were subjected to small plots of land, especially in the eastern regions of the continent.

If we examine the events that have occurred in the eastern side of Australia then we need ask the question "did colonial society learn from these interactions and did the experience help develop greater understanding between European and Aboriginal people?". The author of this document would argue no, for when we look at the events that proceeded nearly one hundred years later in the central region, in what was then called South Australia, the same practices and attitudes carried over. However what has now developed in more recent times in the Northern Territory of Australia is a program where Europeans have been "dragged screaming and shouting" into partnership with Aboriginal people, for all intents and purposes for the better.

The history of pastoralism in central Australia

The pastoral development in Central Australia extends back to the 1870s where it seems to have been a progression following the development that took place from the western parts of NSW across to South Australia from the 1830s up until the 1870s. The progression only took 40 years and in that short period time:

"... the land and vegetation resource was devastated over a large percentage of the area by the combination of rabbit plagues, high stock numbers, severe economic depression and prolonged drought..." (15).

Two features highlight the reasons that led to development in the central regions of Australia. Firstly, there was the ever increasing pressures to find suitable pastoral lands and, secondly, there was the need to find a route for the construction of a telegraph line from the south to the northern-most perimeter of the Australian continent. Until then, the Aboriginal people within this rather large region were basically unaffected by the European contact apart from tradeable items that had reached them from the coastal areas.

John McDouall Stuart was the first European to undertake the mission of traversing the continent from the south to the north in 1858. Indeed, he was the first white man to give the rest of colonial society a view of Aboriginal people from the arid regions of Australia (2). For most Aboriginal people on the other hand, McDouall and his expedition were the first contact they had with a white people.

Hartwig (8) explained that the pressures of pastoral development in South Australia related directly to pastoral expansion limits gained by the mid-1870s. The need to find a passage to the north and other potential pastoral lands was the major factor that led to the changes which have become a crucial part of land management practices in the centre. Rose (16), Hartwig (8) and Briscoe (2) consider the social implications associated with interactions during the earlier periods. In brief, Rose (16) analyses the change in the social and economic behaviour and focuses his attention on a cattle station, Angus Downs. Where Briscoe (2) concentrates on the broader issues relating to interactions which resulted in changes to the mode of production and how this affected Aboriginal societies throughout the Fink River Basin and the Victoria River Downs region. Hartwig (8) provides us with an analysis of the more immediate area around Alice Springs. All participants highlight crucial historical developments in the pastoral industry and are all well defined historical accounts of this process. Within these three historical accounts there are familiar overtones pointing to events and results of this interaction and, overall, how Aboriginal people were forced into change and how they coped with this.

The Central Land Council and land management issues

The Central Land Council is a statutory body set up under the Aboriginal Land Rights (NT) Act (1976) to administer a diverse range of Aboriginal affairs. More specifically it is the major organisation that peruses issues pertaining to the acquisition of land and its management. Additionally, this body has increasingly executed economic initiatives whereby the people under its jurisdiction can participate on an equitable level. Under the Act the Central Land Council administers some 371,652 square kilometres which represents 48% of their designated region, and this is held under inalienable freehold title (1). The Act also provided for the purchase of existing pastoral leases and was made possible with the advent of the Aboriginal Land Fund Commission (16).

Contemporary land use practices have been well accepted in Aboriginal society and pastoralism practices indicate that change has been accommodated with ease and that European land use practices in contemporary Aboriginal culture demonstrate an economic direction that is essential for survival as participants with equity. Previous participation excluded Aboriginal people from any opportunity to be involved at the managerial level. As employees in the pastoral industry, Aboriginal peoples participation amounted to no more than just:

" ... stock workers, labourers and domestic servants ..., and ...the level of wages, were generally inequitable" (16).

The introduction of the Aboriginal Land Rights (NT) Act 1976 gave Aboriginal people a legal mechanism in which to pursue tenure of land, a basis for setting up economic infrastructure and the ability to compete at a totally different level compared to that of the past. The Act has given Aboriginal people an additional voice to pursue political issues with representation at the Local, Territory and Federal government levels. The Central Land Council has therefore become the voice representing Aboriginal land and political issues in Central Australia. Successive claims have brought with it added responsibility, and it must be clarified that the Central Land Council has risen from being just a small regional outpost to a sophisticated bureaucracy dealing in all land management concerns extending from acquisition to control.

The bureaucracy that exists today is as complex as the issues in which they represent the Aboriginal people. A democratic structure consists of an elected Aboriginal Council, with an Executive, a Chairperson and Deputy. The Council employs a Director, an Assistant Director together with associated Regional Officers. While there are numerous responsibilities within the Land Council, it is the Mining, Land Tenure and Land Management elements of the organisation that are discussed.

As part of the statutory functions, land management is an essential part of the organisation, and the major concerns expressed by Rose (16) cover areas such as pastoralism, mining, tourism and community living areas.

Pastoralism

The legacy of the pastoral industry in the Northern Territory are the obvious signs of overstocking and mismanagement. It is clear that Aboriginal people who participate in enterprises such as pastoralism need to keep this in mind. Rose (16) has discussed the issues of concern, and highlights significant aspects of the land use practices which relate mainly to a number of Aboriginal lands under freehold and pastoral leasehold titles (16). There are two types of pastoralism practised: for example, one stems from the ability to raise sufficient financial resources; the other concerns Aboriginal attitudes towards how they want to utilise the land and overall their ability to attract economically sound projects in European terms. Aboriginal people cannot mortgage their lands to raise finance in the normal manner and when they received titles over their country, the former station is so run down that there is little infrastructure or capacity to produce. Thus, Aboriginal people are behind the eight ball from the start. This can, however, work in favour of the land in most cases, as when Aboriginal people do regain title to land, existing stock herds are low, the infrastructure is totally run down, which does not allow for former land use practices to proceed. The land can therefore regain some of its strength. Furthermore, Aboriginal people themselves, while aspiring to commercial pastoral activities, have less interest in overworking the landscape beyond its capacity, consequently existing ventures are well understocked. Rose (16) makes this very clear:

"... Aboriginal enterprises tend to have less equipment and capital than equivalent European enterprises, control over the herd is less rigid. This factor, combined with lower stocking rates, reduces the potential for widespread land degradation and leads to a situation where localised degradation around water points and nodes of activity is more common. In the context of the impact of this degradation on the rangelands in general, localised problems are highly visible and present serious erosion risks, while lower overall stocking rates reduce the likelihood of widespread pasture degradation".

The paradox is obvious: that while Aboriginal people have regained the rights to their traditional lands they generally cannot raise the capital to successfully take on European style pastoral enterprises. On the other hand, land degradation is limited. Overall, the practices that do exist for the right to control ventures remain in the hands of the Aboriginal peoples themselves. This is a positive consequence relating to land management issues. Financial capabilities to participate on the same terms as European pastoralists give Aboriginal people the scope to thoroughly pursue avenues to reassess former detrimental land use practices and take the required planning to combine the traditional needs associated with land use, and develop strategies that are going to enhance pastoralism as a viable and manageable venture.

Tourism

Central Australia is one of the major destinations for tourists both nationally and internationally, and it is estimated that by the year 2000 some 2 million people will visit the Northern Territory annually, an increase of 240% (17). This industry alone has allowed Aboriginal people for the first time to participate in the cash economy. For example, the arts and craft industry gave Aborigines a commodity that could be traded immediately for food, cash, clothing, alcohol and, more recently, motor vehicles. The exotic nature of Aboriginal culture is not only sought after in Central Australia itself but also internationally whereby tours overseas by Aboriginal groups have been very successful. Obviously international travel enabled Aboriginal people to see first hand the value of their culture and, through interactions with other indigenous groups, appreciate further dynamics associated with economic empowerment. This meant that Aboriginal people who were visitors overseas could make judgements for themselves on the value of tourism as a commodity particularly in relation to their own home lands. This realisation, however, did not come about for some time. It was not until the advent of the Land Rights (NT) Act 1976 that any sense of operating or even participating in ventures such as they observed overseas occurred.

A revision to the Act, the Aboriginal Land Rights (NT) Amendment Act 1985, set a precedent for any Aboriginal group in Australia to participate in park management and was enhanced by the introduction of the National Parks and Wildlife Conservation Amendment Act 1985 (since changed to the Australian Nature Conservation Agency) (17). These amendments set procedures in place that necessitated the leasing back of the park to the director of ANCA over a 99 year period, whereby a joint management board would involve Aboriginal people, as a majority, in the day-to-day management and conservation practices of the park (1). This landmark in legislative terms relates to the handing back of Uluru (previously Ayres Rock) and Kata Tjuta (previously Mount Olga). There are other such arrangements through the lease back agreement with the Parks and Wildlife Commission of the Northern Territory, such as the Western MacDonal Ranges, Watarrka (previously Kings Canyon). This situation though is not very satisfactory to the Central Land Council as Aboriginal people only play an advisory role in the management relationship (1, 17).

While these situations have provided Aborigines in Central Australia with a management role, their concerns go further in that most destinations on the tourist route are Aboriginal sacred sites. Strict control has been implemented at Uluru and Kata Tjuta, where access to sensitive areas has been restricted. Although the joint management situation has allowed for these considerations to take place, the concern of the Central Land Council relates mainly to the "... lack of park management resources" (17).

Tourism concerns and the impact on the environment relate to direct and indirect visitor pressures coupled with social and cultural impacts. The direct impacts relate to infrastructure required to allow for tourists to visit a range of sites. This includes the construction of roads which causes vegetation and soil disturbance where erosion problems are exacerbated, and this is enhanced by off road driving. The establishment of camping grounds with ablution blocks creates considerable damage to the local setting and encourages people to stay longer and in greater numbers. The indirect result from tourism is seen in the form of the production of material cultural objects by Aboriginal people. Artefacts are much sought after by the visitors and the income generated by this form of natural resource extraction acts as an economic supplement to local Aboriginal communities. While there are no hard data to the effects of this activity, consideration as to the future extraction of raw materials will need to be assessed and is noted as a concern to the Central Land Council. Effective tourism policies are being developed to meet the needs of the communities and to ensure best practice is achieved to sustain the environment for both the local Aboriginal people and for future tourist participation (17).

Mining

Archaeological evidence suggests that there has been a long interaction between the human population and the landscape in Central Australia. Radiocarbon dating has produced dates extending back some 20,000 years BP (Before Present) (4, 18). The manipulation of stone as a major resource is evident from large quarry sites that are visible in the landscape today. Additionally, ochre sites are extensive and extend metres underground in some cases. Thus, while mining for natural resources is not a recent event in Aboriginal society, European methods of extraction of resources puts greater demands on the landscape. Importantly, the introduction of European mining practices in Central Australia dates back to

the 1870s, which resulted from the introduction of pastoralism. Initially, small scale ventures for gold, tin, copper, silver and wolfram began, and generally these activities were unsuccessful due to the isolation and the lack of adequate transport facilities. A succession of legislation and policy since 1918 to the 1950s has involved exploration for minerals on Aboriginal lands, and this included crown lands or reserves.

Today, mining is of considerable development interest and held licences as well as exploration applications cover some 123,000 km² of Aboriginal land. There are currently 5 stable mining agreements within this area with 39 existing granted leases and another 147 under negotiation. In terms of issues pertaining to land management and the potential for land degradation, the Central Land Council acknowledges that the whole process is a major concern for Aboriginal people.

Of the 5 mining agreements in place, extraction consists of oil, gas and gold. While exploration activities are limited, both the process of extreme extraction and exploration programs have an adverse effect on the environment. The Central Land Council, while encouraging this form of economic development, is concerned with the long term effects of these practices. For example, previous experience has shown that land degradation results from early forms of exploration due to the need to access the most remote regions where heavy vehicles and drilling machinery require entry and preliminary tests are carried out. The result of such explorations can cause:

"... environmental disturbance ... and ... is greater due to the need to access drill sites with large machinery. The tracks over the grid area, and the need to manoeuvre large vehicles into the site, usually result in some disturbance to vegetation and soils" (17).

When mining does proceed, not only are there detrimental effects to the immediate area, there is also consequences for the whole environment. Because the Tanami and Granites mines have gold bearing deposits, for example, and are open cut, treatment is carried out in the immediate area. The end effect from storing waste water in tailing dams has the potential of seeping into the local water table. Rose (17) insists that tailing dams are a possible source of environmental contamination as they contain solutions which are toxic, and for which safe storage must be maintained. He also:

"... notes that all drainage systems in Central Australia are internal, draining into floodout areas in the desert and salt-lakes. Any contamination will therefore remain in the region. The leachates and erosion products from waste dumps and tailings dams should be able to be confined to restricted areas in the short term. In the long term there is the possibility that they could gradually be dispersed into the drainage system during periods of above average rainfall or flash floods" (17).

In any case contamination of the water tables would be very detrimental to the local Aboriginal communities as water is an essential resource in the arid region. Further degradation considerations are those directly associated with infrastructure development. Roads and air strips are the major factor here. While roads can give Aboriginal people access to certain areas for traditional land management practices, their continuance requires considerable attention after the life of the mine and this is the same of airstrips. Generally they are subject to rehabilitation conditions or, as in the past, left to naturally revegetate.

Mining and the associated consequences remain a major land management concern for the Central Land Council. However, mining can be seen as a positive contribution to the economy of the Aboriginal people directly involved. Both short term and long term mining projects are bound to have adverse effects on the landscape and it is essential that rehabilitation programs are followed through after the extraction process is complete (17).

Conclusion

Land degradation issues have increasingly become an international priority (5, 10). This paper reflects on those very issues by focusing on the arid regions of Central Australia where it could be argued that the fragile nature of the landscape has undergone considerable change with earlier manipulation by

Aboriginal people and recently through pastoralism, mining and tourism. The latter introductions have advanced the deteriorating state of the landscape. Therefore, with accelerated degradation rates there is a broad range of issues to consider. While there are further areas of concern, such as feral animals, this paper has discussed issues relating directly to land management issues confronting the Central Land Council where economic benefits to Aboriginal society are apparent. This is not to suggest that feral animals are not a consideration or in fact a problem or concern for the Central Land Council. On the contrary, the control of feral animals is a major priority and it seems Aboriginal people are still coming to terms on the best way to solve this problem now that they have control over their own lands.

It has not been the intention of this paper to analyse the political interaction between the Northern Territory government and the Central Land Council. However, if there are to be programs in land management which parallel one another, then compromise would be the equitable way to go.

Moreover, this paper is concerned primarily with past events that have resulted in land degradation and how legislation has empowered Aboriginal people, through the representative body such as the Central Land Council, to manage issues that can enhance traditional lifestyle as well as participate as equal players in economic ventures they choose to pursue. The three major areas of development discussed in this paper seem to relate directly to adverse effects on the landscape, and at the end of the day Aboriginal people have to come to terms with this in the future and weigh up the pros and cons of the overall benefits to the community and the landscape.

While the results of pastoralism and mining are obvious and have been carried out over a longer period than tourism for example, the former two can be analysed how not to manage Central Australia's delicate landscape. Given that Aboriginal people have only recently regained or are still in the process of achieving solid land rights, it is still too early to make any determination on the effects of commercial ventures to land degradation. There are additional pressures on Aboriginal communities due to the financial income that can be generated from this industry. Pastoralism does not appear to be making rapid progress due to the inability of Aboriginal communities to access capital. Tourism is in its infant stages and with its anticipated growth Aboriginal people will need to take stock of visitation impacts that will come with this success.

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