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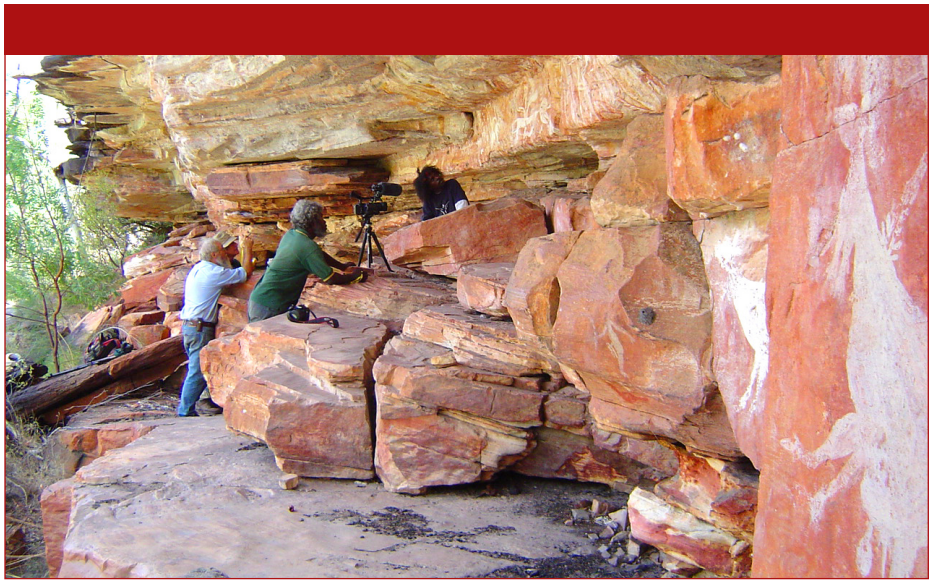

People On Country

Warddeken Land Management Limited

Traditional Owners and Area of Operation

A number of clans of the Bininj Kunwok language group are the traditional owners of the west Arnhem plateau. Bininj ownership of their land is recognized under the *Aboriginal Land Rights (Northern Territory) Act 1976*. Warddeken Land Management was established in August 2007 and operates from the Kabulwarnamyo outstation community, re-established in 2002. It represents over 10 years work by the traditional owners of the west Arnhem plateau in formalizing their cultural and natural resource management activities and re-connecting people with country.

The Bininj Kunwok clans that are part of Warddeken Land Management are Mok, Mirarr Gundjeihmi, Warrdjak/Worgorl, Danek, Ngalngbali (Succession to Nguluminji), Warrdjak, Yurlhmanji, Maddalk, Bolmo, Badmardi, Wurnkomku, Barradi, Madjawarr, Marrirn, Wurrik, Mayirrkulidj, Durlmangkarr, Rol, Djordi/Djorrolom, Murruba, Buluwunwun, Bulumo, Karnbirr, Berderd/Mimbalawuy, Wurrbarn, Warridjnu, Bularldja, and Lambirra.

Warddeken Land Management operates across the remote and rugged western Arnhem Plateau. Most of the terrain is dominated by the heavily dissected sandstone, and access is mainly by foot or by helicopter. In the dry season a few rough tracks are accessible by 4WD, connecting up the handful of outstations that have been established since the mid-1980s. There are four other communities on the Plateau, three of which are permanently occupied and one which is currently unoccupied for cultural reasons. They are Malkowo, Manmoyih, Kamarrkawan and Kumarrirnbang.

Warddeken Land Management's area of operation is approximately 12,400 sq km of sandstone country immediately east of Kakadu National Park.

People on Country

People On Country: Healthy Landscapes and Indigenous Economic Futures

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Landscape Description

The Arnhem Land Plateau is recognised under the NT Parks and Conservation Masterplan as an international site of biodiversity significance and one of the highest priorities for conservation across the Northern Territory. The plateau is the home of 166 species of plants that occur nowhere else in world along with 20 species of vertebrate. (NRETA 2005: 118). The plateau is highly significant for numerous nationally and Territory-listed threatened species. It is also of great cultural significance locally and globally with experts stating that the extraordinarily rich and diverse body of rock art across the plateau is of World Heritage standard.

A Warddeken female ranger photographs rock art on a site damaged by feral buffalo trampling.

The Arnhem Land plateau covers the entire Arnhem Land Plateau Bioregion. The plateau covers some 32,000 sq km of country and is the home of an extraordinary high diversity of animal and plant communities and includes many relictual (an animal or plant known to have existed in the same form in previous geological ages) and endemic species of flora and fauna.

The dominant ecological community of the plateau is the Arnhem Land sandstone heath. This community is a complex of closely interdigitated (interlocked like the fingers of folded hands), intergrading plant formations including Eucalyptus, Corymbia or Callitris dominated forests, woodlands, open woodlands, shrublands and hummock grasslands united by the presence of a well developed scleroplyllous shrub component (IPA Tech Report). The relatively small areas of Myrtaceae (A*llosyncarpia ternata*) forest surviving in the upper basin are also highly valued by landowners for their association with ancestors.

The prevailing fire regime is leading to broad-scale loss of obligate seeders (woody plants which cannot re-sprout from their trunks and are dependent on seed for regeneration), which provide much of the ecological fabric of this ecosystem. To maintain the extent, diversity and intactness of this ecosystem, traditional owners have been active in reducing the frequency of extensive hot late season fires. The reoccupation of the Arnhem Land Plateau and the West Arnhem Fire Abatement Program, discussed below, is assisting with this major task.

Monsoonal rainforests throughout the basin are highly valued for yams and other food plants. However, the prevailing fire regime is also degrading and diminishing these rainforests, particularly those dominated by Myrtaceae. The monsoonal rainforest appears to be in retreat over a large portion of its range. It is not only late

hot season fires that are degrading this ecosystem but also feral animals, particularly pigs, and weeds (IPA Tech Report).

Feral buffalo (*Bubalus bubalis*) also have a negative impact on the plateau. Buffalo are held in ambivalent regard by landowners. They are valued highly for subsistence hunting and also for the potential commercial value they hold. At the same time landowners recognise the negative impact that buffalo have on wetlands, springs and water quality. The National Brucellosis and Tuberculosis Eradication Campaign (BTEC) in the 1970s significantly reduced buffalo numbers in the low-lands of coastal west Arnhem Land. However, mustering was impossible and shootout difficult on the Plateau. Furthermore, migrating buffalo from the Gulin Gulin herd, near Bulam, (which was determined to be disease-free and not subject to destocking, and is now estimated to number 30,000 animals) have been identified as a major threat to biodiversity of the plateau.

Cane toads or 'rubbish frogs' entered the bioregion in the 2001 Wet season from the east. Their presence and impact on native fauna causes great distress to traditional owners. There have been regular sightings of dead freshwater crocodiles which may be attributable to crocodiles eating cane toads (NLC 2004). Feral cats are also found on the plateau escarpment their population and impact on native species is not known. European bees have been in the Plateau east of the Gumardir River since the early 1990s their impact on the culturally important and highly valued sugar bag native bees (*Trigona* and *Austroplebeia sp*) is also unknown.

Threatened species on the Plateau include: Bustard (*Ardeotis australis*), Emu (*Dromaius novaehollandiae*), Northern Quoll (*Dasyurus hallucatus*), Nabarlek (*Petrogale concinna*), Black Wallaroo (*Macropus bernardus*), Arnhem Land Rock-rat (*Zyzomys maini*), Arnhem Leafnosed-bat (*Hipposideros inornata*), Freshwater Sawfish (*Pristis microdon*), and Nawaran or the Oenpelli python (*Morelia oenpelliensis*).

Severe gully erosion caused by feral buffalo.

Land Management History

Up until World War II the plateau was only occupied by Bininj. It was utilised for its animal and plant life, and regular fire management took place. A slow drift away from the plateau began in the 1940s and by the mid-1960s the majority of the plateau peoples had moved to places like Gunbalanya, Pine Creek, Barunga (then Bamyili) and Wugular (then Beswick). A lack of fire management saw a rise in the number

of intense late-season wildfires, which by the 1980s were threatening the plateau's entire ecosystem (NLC 2006).

The reconnection with country began through the leadership of senior traditional owners and an unusual cross-cultural partnership with Peter Cooke. In the late 1990s, with Cooke's guidance, a series of innovative land management planning meetings and back to country trips were convened. Here, traditional owners from the north, south, east and west of the plateau got together at Kamalhkamalhdjang in Karnbirr country to talk about caring for the Arnhem Land Plateau. Much of the discussion focussed on the inaccessible nature of the plateau and of people no longer living on country and what problems this was causing to country and culture. At these early meetings discussions focussed on the damage to country and biodiversity from wildfires and feral animals and the loss of Indigenous knowledge about country and law.

During the Dry seasons of 1996 and 1997 large, very late, hot fires ravaged much of central Arnhem Land. In areas where there had been many late season hot fires traditional owners noticed that there was less biodiversity from when country was occupied and managed by traditional owners. The loss of variety of plant species was also impacting on important bush food. During these early meetings people were talking about how the emus have no fat on them, they said this was because they did not have enough food.

Not only was the plateau being damaged by wildfires but also buffaloes and pigs. These feral animals were damaging many important places. People were talking about how billabongs, many of them sacred sites, had been destroyed by these animals. In some areas around the billabongs people reported that the margins of the wetlands had been trampled so the land resembled a cratered-concrete surface. Any turtles hibernating in the mud would have been trampled to death or eaten by pigs. Many of the trees around the billabongs had also been knocked over by buffaloes.

The first task that traditional owners worked on was helping people get back to country. In addition to moving back to country many visits or back to country camps, were organised to fit in with school holidays so that parents could take their children and grandchildren to learn about country and how to look after it.

Currently, Warddeken Land Management has approximately 12 rangers (with numbers fluctuating depending on the season and amount of work) working in its program. A number of senior traditional owners are also play a pivotal role in guiding an providing cultural advice to the land management program.

Land Management Activity

>> Fire - West Arnhem Fire Abatement Project

The West Arnhem Fire Management Project (WALFA) is a partnership between Aboriginal Traditional Owners and Indigenous representative organisations, Darwin Liquefied Natural Gas (DLNG), and the Northern Territory Government. The partnership was formed to implement strategic fire management across 28,000 sq km of Western Arnhem Land for the purposes of offsetting some of the greenhouse gas emissions from the Liquefied Natural Gas plant at Wickham Point in Darwin Harbour. The project aims to reduce greenhouse gas emissions from this area by adopting effective fire management practices in what has been mostly unoccupied and unmanaged land. While the primary aim of the partnership for the non-indigenous partners is to offset greenhouse gas emissions, the primary aim of traditional owners has been to use the project to reconnect with country and undertake cultural and natural resource management in this region of unique biodiversity.

To achieve the greenhouse gas offsets traditional owners' land management organisations (Warddeken, Jawoyn, Djelk, Adjumarllarl and Mimal Rangers) working closely with non-Indigenous partners, such as Bushfires NT, Tropical Savannas CRC implement strategic fire management from early in the dry season to reduce the size and extent of unmanaged wildfires and measure the greenhouse gas offsets.

This project does not generate income from carbon trading; it is a fee for service arrangement in which traditional owners are paid for fire management to produce greenhouse gas offsets. However, the process and accounting practices used to abate greenhouse emissions in this project will qualify for carbon trading when it comes on stream.

Regular early dry season burn-offs now occur and traditional owners have achieved the emission abatement targets set for 2005 2006 and 2006 2007. The WALFA Agreement created a long-term fee-for-service funding stream which enabled the employment of rangers in full-time positions. A core group of these rangers are now qualified to deliver aerial controlled burning (ACB) from helicopters and fixed-wing aircraft. The WALFA Project received the 'Innovative Solutions to Climate Change' Award at the 2007 Australian Museum Eureka Prizes. It is important to note that the Community Development and Employment Program (CDEP) was instrumental in assisting this project get off the ground.

The WALFA project was a critical 'two-way' (valuing Indigenous ecological knowledge and science equally) research and management partnership as it led the way in demonstrating the potential alliances between private enterprise government, Indigenous and non-Indigenous scientists and land managers. It was also important in establishing a pilot model that clearly demonstrates the importance of people on country for fire management across the tropical savannas of Northern Australia.

Cultural and Ecological Research

Warddeken has been a leader in cultural and ecological research. Senior traditional owners were visionary in adopting a 'two-way' approach to cultural and natural resource management. Such an approach underpins the WALFA project. Warddeken along with traditional owners have been active in a number of research projects that have supported land management and the return of people to country. These projects include:

>> The Gumardir Survey Camp Project

The Gumardir Survey Camp Project established the high value of collaborations between traditional owners and western ecologists and land managers. The project, undertaken in 2001, surveyed 16 sites in the Gumardir River catchment of the plateau. Western ecological data from this catchment is scarce. As well as gathering new ecological data the project was important in recognizing the value of Indigenous ecological knowledge and nurturing further collaborations between indigenous and non-indigenous specialists.

The project gathered significant new data about:

- the flora and fauna of the catchment and its distribution;
- the threats posed by feral buffalo to sensitive plateau sites and the urgent need for a management strategy;
- the threats posed by uncontrolled wildfire to sensitive and valuable species; and
- the need for vigilant weed surveillance.

Language of Land Management

The language of land management has been a little understood and poorly funded component of cultural and natural resource management in Northern Australia. While significant funds are available for threatened fauna and flora it has been a major challenge for traditional owners to secure funding to keep their unique, highly important and threatened languages and ecological components active.

The maintenance of Aboriginal languages is essential for cultural and natural resource management. Each language is deeply rooted in and shaped by the country in which it developed. The maintenance of language is closely related to the maintenance of country as knowledge and experience of country, seasons, species, sites of cultural significance and place names are maintained within a particular language. A person's responsibility and affinity with their country is governed by their language group. Aboriginal people often have close affiliations with a number of languages, though the language most central to identity is that spoken by their father. Hence the country belonging to this language is also of importance to that person; they have responsibility to care for and sustainably manage that country and its associated sites, ceremonies or dreamings and resources (NLC 2004).

In western natural resource management language is not given consideration as a fundamental component of land and sea management and funding to maintain the dozens and dozens of unique Aboriginal languages and associated ecological roles across Northern Australia is scarce.

Warddeken Land Management have been one of the leading land and sea management groups in the Top End of the Northern Territory in working on maintaining language as an essential component of long-term management of country.

For example, in 2005 16 Aboriginal adults participated in workshop conducted in Bininj Kunwok, the language most familiar to the participants, with the linguist Dr Murray Garde. In addition to Dr Garde were filmmakers, ecologists, and land managers.

The workshop was building on the work begun in 2000 by Bardayal Nadjamerrek, the senior traditional owner leading the land management work on the plateau, other indigenous experts and Dr Garde who have compiled a lists of some 300 Kundedjnjenhmi terms that relate to descriptions of country generally, and to classification of flora and fauna, geomorphologic and hydrological features, weather and climate.

Kundedjnjenhmi is the Bininj Kunwok dialect of clans from the high plateau country of Western Arnhem Land. Kundedjnjenhmi speaking clans traditionally occupied an area of about 7000 sq km of the plateaus 30,000 sq km. The purpose of the workshop in 2005 was to continue to identify and document Kundedjnjenhmi terminology for landscape types, plant habitats, weather, drainage systems, geomorphology and people/land interactions. Participants selected digital photographs collected from the plateau over a five year period to illustrate terms for various landscape/weather types. These photographs form the basis of a data-base for the Bidwern project discussed below.

>> The Bidwern Project

Bidwern is a word used in West Arnhem Land languages and means 'many fingers', but is generally used to refer to new technologies and devices. The Bidwern Project aims to develop a sustainable methodology for the collection, archiving and retrieval of the multidisciplinary, multiformat digital information that is being produced by the collaborative research effort on the plateau. The project will be of great benefit in the future assisting young Aboriginal landowners from this country in using the vast body of knowledge recorded by their ancestors.

>> The Ankung Kunred (Sugar Bag Country) Project

The native stingless bee are an important species for Aboriginal people in Northern Australia. Despite being incredibly small the bees hold a significant place in the religious and ceremonial life of Aboriginal people. The bees, referred to as sugar bag produce highly valued and extremely tasty honey and wax. The honey is used as food and the wax and is an important resource in art and craft activities. There is a growing market for this unique honey in Australia and overseas and Warddeken Land Management have been undertaking research in this area as another way of providing a cash income source and enterprise for people on country.

To date artificial hive boxes have been constructed by community members and rangers and successful experiments have been undertaken in the transfer of wild-nests to the hives for ongoing management and harvest.

The Warddeken rangers have been leading the way in enterprise development based on sugar bag. They host visits from many other Aboriginal land and sea management groups who are keen to learn from their enterprises and experience. Such collaborations between Aboriginal land and sea management groups have been essential as a cost effective way of transferring knowledge and skills between Aboriginal groups in a culturally appropriate manner on country.

>> Rock Art and Archaeological Management

As well as being a rich area of biodiversity the country managed by Warddeken Land Management is also heritage significant for its rock art and archaeological sites. There are hundreds of these sites scattered across the country and they tell of the people who occupied the country, the presence of extinct animals, changes in species, hunting practices, developments in styles of rock art and the arrival of Europeans, their animals and technologies in the area.

Warddeken Land Management is active in mapping these sites and ensuring that land management activities are undertaken to protect the sites. Art and archaeological sites are subject to damage from a number of natural causes. Water running over paintings and seeping through rock in the Wet season is a major cause of damage, as is vegetation which grows up and covers the paintings moving in the wind the branches slowly rub the paintings off the rock. There is a need for drip lines to protect the art work from water, and for the removal of termite and wasp nests as well as vegetation.

>> Back to Country Trips

Bushwalks are another highly successful and important component of land management in the plateau. The highly developed and intricate body of Indigenous ecological knowledge that senior traditional owners from this area have accumulated comes from their travels by foot across their country. Regular movement across the country visiting sites of cultural significance, visiting family, hunting and gathering and burning country underpin this knowledge. This movement across country was one of the primary vehicles for the transmission of local ecological knowledge across generations. The depopulation of the plateau in the 1960s threatened to sever this transfer of knowledge for all time.

Recognising that time and the passing of senior traditional owners would mean that this body of detailed knowledge would be lost Warddeken Land Management have been highly active in facilitating back to country trips.

Over the last five years many walks—up to 120 km in length—have been undertaken. Many young people undertake the walk with senior traditional owners who are no longer mobile visiting them by helicopter to talk to them about the country, what they have seen, and discussing the seasonal and habitat-specific approaches to traditional fire management. Many of the young people are now involved in putting this knowledge into practice through the WALFA project. These trips allowed the

mapping of customary place names, clan estates and sites of cultural and religious significance. This enables landowners and managers to talk, plan and act effectively in managing the plateau. It enables Indigenous ecological knowledge to continue playing a primary role in the management of country.

It has been difficult for traditional owners to access funding for activities such as bushwalks. To ensure Indigenous ecological knowledge was not lost Warddeken Land Management was able to secure funding from an overseas philanthropic organization, the Christensen Fund, to ensure this knowledge was not lost and would remain available in managing some of Australia's most important regions of biodiversity.

Governance

Meeting at Kabulwarnamyo and following subsequent consultations, traditional owners discussed which governance structure would be best suited to deliver environmental services and create jobs for people on country. The decision was to establish a company - Warddeken Land Management Company Limited. Its key roles are:

- Assisting land owners with the management of land, natural and cultural resources;
- Protecting cultural sites and information and developing programs to strengthen and transmit culture;
- Employment and training of rangers and land and cultural resource managers;
- Assisting land owners to return to their country;
- Attracting funds for management programs and livelihood;
- Establishing a trust to receive and manage donations for management work;
- Brokering partnerships with scientists and organisations to develop management based on 'two-way' knowledge systems;
- Brokering partnerships to deliver funding, resource management training skills development and volunteer programs;
- Assisting landowners to develop economic development activities that support them being on their country;
- Representing and advocating for Aboriginal people to improve services, infrastructure and quality of life; and
- Ensuring that the access permit system managed by the Northern Land Council is working properly for their country.

Importantly Warddeken Land Management Limited will be run by land owners from the proposed IPA lands, but it is not a traditional owner group that represents and makes decisions for country. That right remains with land owning groups under the *Aboriginal Land Rights (Northern Territory) Act 1976*. It is also not an outstation resource centre organisation like the neighbouring Demed Association and the Bawinanga Aboriginal Corporation. It is uniquely established to be the primary

support organisation for cultural and natural resource management within the proposed IPA.

Warddeken aim to establish a financial management system so that funds can be quarantined to pay for land management within the IPA. It will work with landowners to plan land management projects, budgets and assist in undertaking the work. Warddeken will not spend funds on vehicles or houses or other items for private use but will only undertake land management work for the benefit of all landowners on the plateau.

Proposed Warddeken Indigenous Protected Area

Warddeken Land Management is working to declare their land as an Indigenous Protected Area (IPA). A significant amount of community consultation, research and biodiversity survey work has gone into the development of a draft plan which is expected to be supported by the Australian Government Department of the Environment Water Heritage and the Arts (DEWHA) and the NT Government Department of Natural Resources Environment and the Arts (NRETA), due to the valuable cultural and natural resources of the area. The IPA management plan will set a framework for the management of the area over the next decade. The important and unique strength of an IPA is that it allows the Australian government to add biologically important areas of land to the national reserve system and providing some funding for their on going management. For Aboriginal people it means that, unlike joint-management arrangements for national parks, they remain the primary managers of their country. Aboriginal people are able to develop their own partnerships and determine their own outcomes.

The development of the Indigenous Protected Area Action Plan was supported by Bush Heritage Australia. BHA continues to provide support for Warddeken Land Management Ltd to work towards achieving their goal of establishing the IPA. Part of this partnership involves looking into ways of encouraging and securing philanthropic support for Warddeken conservation-related activities.

Warddeken Resources

- Warddeken - A joint statement prepared by Bardayal Nadjamerrek, Mary Kolkiwarra, Lois Nadjamerrek and Peter Biliss in Dedjnjengh and English. (176K PDF document)
- The Warddeken Indigenous Protected Area—proposal by Peter Cooke. (40K PDF document)

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