

MIMAL INDIGENOUS PROTECTED AREA

A proposal for a new Northern Territory IPA

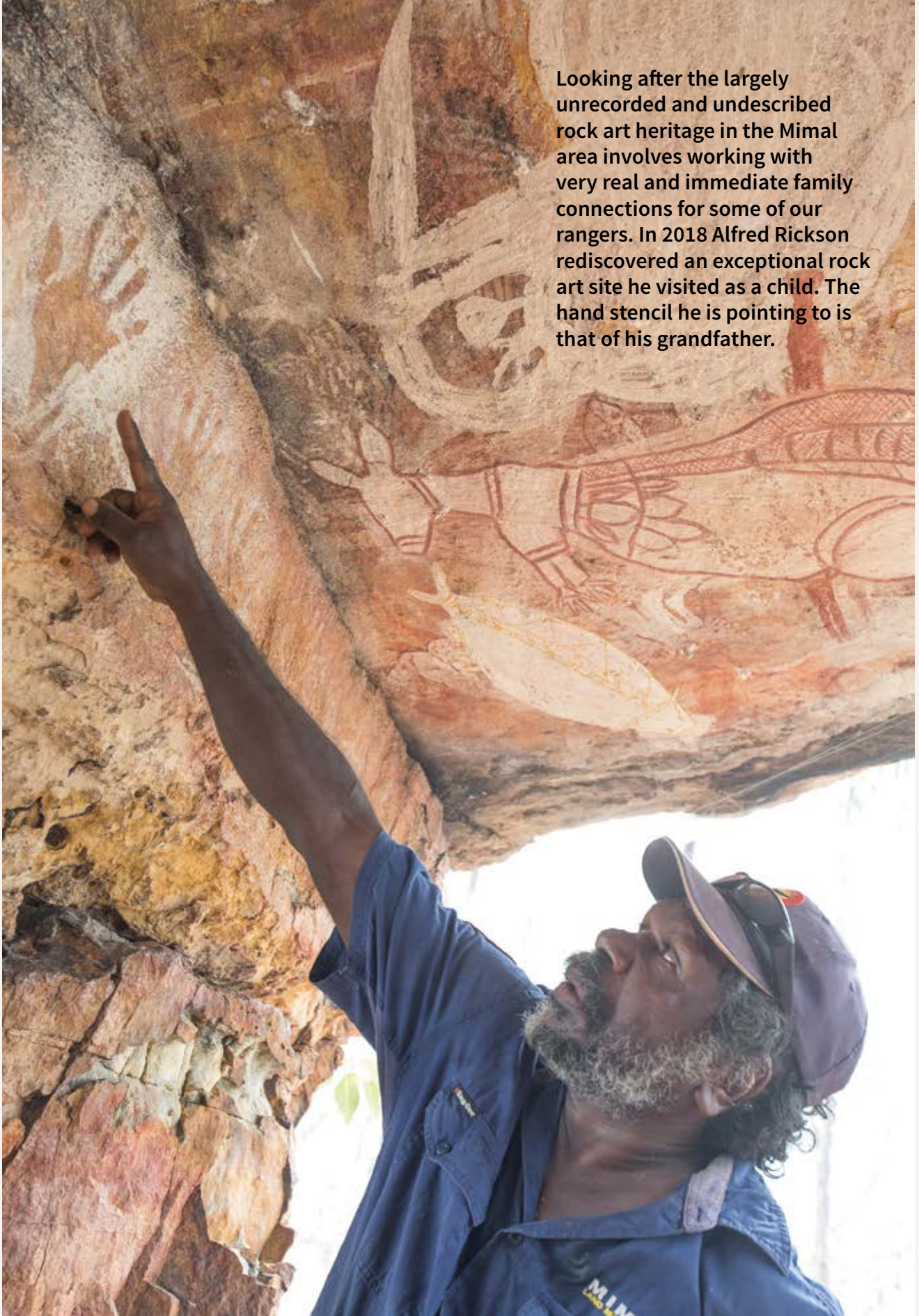


MIMAL  **LAND MANAGEMENT**

This document outlines an Indigenous community initiative to establish an IPA in central Arnhem Land. It is designed to accompany the Mimal Land Management Aboriginal Corporation Healthy Country Plan.

Prepared by Tamarind Planning for Mimal Land Management Aboriginal Corporation.

Looking after the largely unrecorded and undescribed rock art heritage in the Mimal area involves working with very real and immediate family connections for some of our rangers. In 2018 Alfred Rickson rediscovered an exceptional rock art site he visited as a child. The hand stencil he is pointing to is that of his grandfather.



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MIMAL INDIGENOUS PROTECTED AREA

This document showcases an initiative by Mimal Land Management Aboriginal Corporation (MLMAC) to establish a new Indigenous Protected Area (IPA) in south central Arnhem Land in the Northern Territory. It complements the Mimal Land Management Healthy Country Plan and presents additional information relevant to the establishment of an IPA and accession to the National Reserve System. In detailing the exceptional natural and cultural values of this area a clear case is made for Government support for the development and operation of the proposed **Mimal Indigenous Protected Area**.

SUMMARY

Mimal Land Management area is located in Arnhem Land, approximately 250 kilometres east of Katherine in the Northern Territory. Covering almost 20,000 square kilometres, this huge region is the geographic centre of Arnhem Land. It includes the headwaters of the rivers flowing into the Gulf of Carpentaria including the Rose, Phelp, Wilton and Mainoru and the north flowing rivers, Mann, Blyth and Goyder, along with the headwaters of the Arafura Swamp catchment. The region is home to the Dalabon, Rembarrnga and Mayili people and the main communities and homelands include Bulman, Weemol and Bawurrbarnda (Emu Springs).

The proposed Mimal IPA will cover a total area of 1.83 million hectares. Of this, 124,000 hectares overlaps with existing IPAs including Warrdeken, Djelk and South East Arnhem Land IPAs.

In the proposed Mimal IPA four animal species are listed as threatened under the national Environment Protection and Biodiversity Conservation Act and five species are listed as threatened under the Territory Parks and Wildlife Conservation Act, including the Northern Quoll which is listed as critically endangered in the NT. Other animals predicted to occur in the IPA include two species listed nationally as critically endangered, three species listed as endangered and 12 species as vulnerable.

The entire Mimal Land Management area shares an unbroken history of Aboriginal ownership and management. Traditional connections to country remain largely intact and many landowners either reside on or spend long periods at outstations. The entire area is mantled with places of significance to our people, including rock art sites, dreaming lines and sacred places linked to our spiritual ancestors. Customary land management is augmented by the activities of the Mimal Rangers.

The proposed Mimal IPA, with its important biodiversity and cultural assets, would not only add significantly to the national conservation portfolio but, in conjunction with neighbouring IPAs and wildlife sanctuaries would substantially increase the reservation of the Central Arnhem bioregion.

MIMAL

The **Mimal Healthy Country Plan 2017–2027** captures the vision of the Dalabon, Rembarrnga and Mayili people of the region. It identifies important assets and goals, threats, projects and monitoring. Following is a summary of goals, assets, threats and management strategies.

HEALTHY COUNTRY AND HEALTHY PEOPLE GOALS

- Deliver good management as a result of strong leadership, good governance and increased engagement and support from landowners.
- Ensure our people can spend more time on country and in outstations, connecting with families and engaging in cultural activities including ceremony, language, dance and song, and in two-way learning.
- Improve fire management by training Rangers and undertake ongoing monitoring of ecological health.
- Protect sacred places by improving access, increasing time on country, and control of illegal entries.
- On freshwater country (Djula and Wah) reduce the impact of feral animals and weeds through herd management and weed control thereby improving habitat for native species and providing better and safer access to country and clean water resources.

- On the woodlands and forests (Berrhno and Mininyburr) ensure ongoing good fire management and reduce the impact of feral animals and weeds through herd management and weed control in the region.
- On the grassy plains (Ruwurrno and Rorrobo), manage cattle and buffalo, reduce the impact of pigs, cats and weeds and implement good fire management to support healthy populations of native animals.
- In the rock country (Badno and Ngalwad) improve access to to document and conserve rock art, control weeds, and ensure appropriate fire management for fire sensitive plant communities.

Mimal people see the development of an IPA as means of achieving these goals.





THE PROPOSED MIMAL INDIGENOUS PROTECTED AREA

AREA LOCATION

The Mimal IPA centres on a huge area of country in south central Arnhem Land, approximately 250 kilometres east of Katherine in the Northern Territory. The region is home to the Dalabon, Rembarrnga and Mayili people and is broadly classified in indigenous landscape terminology as grassy plains (Ruwurno and Rorrobo), woodland and forest (Berrhno and Mininyburr), rock country (Badno and Ngalwad) and freshwater country (Djula and Wah). The proposed IPA covers 18,300 square kilometres.

Of this, 1,240 square kilometres is overlapping with existing IPAs including Warddeken IPA in the north-west, Djelk IPA to the north, and South East Arnhem Land IPA to the south-east. The boundary with the Arafura Swamp Rangers Aboriginal Corporation is in the north-east, while the Australian Wildlife Conservancy's Wongalara Sanctuary adjoins the southern boundary of the proposed Mimal IPA.

Once dedicated, the Mimal IPA would encompass 18,300 square kilometres of the Arnhem Land Aboriginal Land Trust, an area held as Inalienable Freehold under the provisions of the Commonwealth *Aboriginal Land Rights (Northern Territory) Act (ALRA) 1976*.

A central point for the Mimal IPA is found approximately at Latitude: 13°30'44.05"S, Longitude: 134°32'3.49"E.

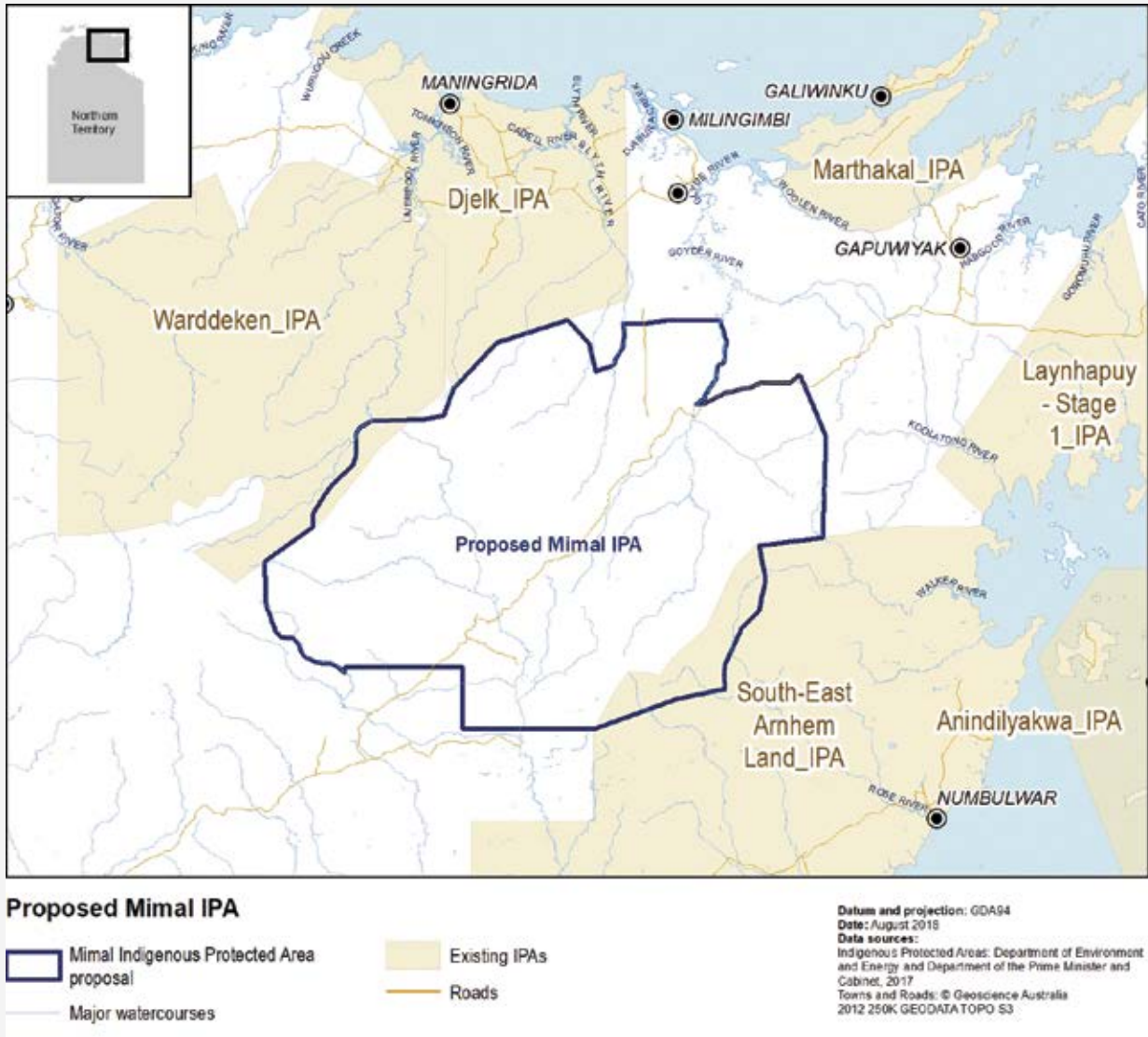


Figure 1: Draft boundary for the Mimal Indigenous Protected Area



IPA DEDICATION

The Mimal IPA will be dedicated as a Category V Protected Area, consistent with the International Union of the Conservation of Nature (IUCN) definition of a “*landscape or seascape where the interaction of people and nature over time has produced a distinct character with significant ecological, biological, cultural and scenic value; and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values*”.

ADDITIONAL STEPS TO IPA DEDICATION

Mimal’s IPA framework is close to complete with an effective ranger program, established plant and infrastructure, landowner-representative governance and a Healthy Country Plan. The final steps toward dedication of the Mimal IPA include refinement of the boundary alignment, statutory landowner consultations and negotiation of Shared Management Area agreements with neighboring IPAs.



INTERACTION WITH EXISTING IPA

Preliminary planning for Mimal IPA has resulted in considerable overlap (c.7%) with adjacent IPA (3 existing, 1 proposed). This is largely due to traditional patterns of land ownership where an individual's responsibilities extend across areas, sites and the songlines linking them. This model is poorly interpreted by linear Western boundaries. In collaboration with their neighbours, MLMAC intended to facilitate broad landowner consultations and negotiate clearer alignment of existing protected area boundaries with established cultural

precincts. It is envisaged this will reduce the extent of overlaps, and limit shared management to areas where it is either culturally prescribed or operationally useful.

Above: Mimal have regularly hosted Arnhem Land Fire Abatement group meetings. These annual gatherings are an important venue for sharing ideas and making collaborative strategies to improve fire and conservation management throughout the Arnhem region. Bawurrbarnda, 2016.

MANAGEMENT FRAMEWORK

MIMAL LAND MANAGEMENT ABORIGINAL CORPORATION

Mimal Land Management Aboriginal Corporation is an independent not-for-profit Aboriginal owned and operated Organisation focused on bringing benefits to country and culture for Dalabon, Rembarrnga and Mayili landowners and people of south central Arnhem Land in the Northern Territory. In May 2015, Mimal Land Management was incorporated under the *Corporations (Aboriginal and Torres Strait Islander) Act 2006*. It is governed by a board of nine foundation directors, with three from each of the three groupings of clans (eastern, central and western). It is recognised as a charity by the Australian Charities and Not-for-profit Commission and has public benevolent institution status.

MIMAL RANGERS

The Mimal Rangers formed 20 years ago as a local community initiative to assist Aboriginal landowners in south-central Arnhem Land with conservation and land management. The group received early support from the Natural Heritage Trust and became foundation partners in the West Arnhem Land Fire Abatement Program (WALFA), now Arnhem Land Fire Abatement NT (ALFA NT). With the introduction of Working on Country in 2007, the Mimal Rangers were hosted by the Northern Land Council. On 25 October 2017 landowners celebrated full management independence under MLMAC. There are currently 8 full time equivalent (FTE) Mimal ranger positions. Seasonal casual employment associated with fire management increases this to up to 12 FTE positions. Employment through the ranger program provides important income in remote areas which helps grow the local economy. Importantly, it provides jobs that recognise and respect our knowledge.



PARTNERS

The Mimal Land Management Aboriginal Corporation has effective and on-going partnerships with the following agencies and organisations.

- Arafura Swamp Rangers Aboriginal Corporation
- Arnhem Land Fire Abatement Northern Territory
- Australian Government Department of Agriculture and Water Resources
- Australian Government Department of Prime Minister and Cabinet
- Australian Wildlife Conservancy—Wongalara
- Bawinanga Aboriginal Corporation
- Bushfires NT, NT Department of Environment and Natural Resources
- Bush Heritage Australia
- Darwin Centre for Bushfires Research, Charles Darwin University
- Djelk Rangers (Djelk IPA)
- Warddeken Land Management (Warddeken IPA)
- Yugul Mangi and Numbulwar Numburindi Rangers (South East Arnhem Land IPA)
- Roper Gulf Regional Council
- Flora and Fauna Division, NT Department of Environment and Natural Resources
- Gulin Gulin Buffalo Company
- Jawoyn Association
- Landcare Australia (*helped fund Gamba video*)
- North Australian Indigenous Land & Sea Management Alliance
- Northern Land Council
- Territory Natural Resource Management Warddeken Land Management
- Weed Management Branch, NT Department of Environment and Natural Resources
- Flinders University College of Arts and Sciences
- Aboriginal Governance and Management Program

CONSERVATION VALUES OF THE PROPOSED MIMAL IPA

KEY ECOLOGICAL FEATURES

The proposed Mimal IPA includes the headwaters of rivers flowing into the Gulf of Carpentaria including the Rose, Phelp, Wilton, Mainoru and Roper, as well north-flowing rivers, the Mann, Blyth and Goyder, all part of the Arafura Swamp catchment. The woodlands and forests of the Arnhem plateau are a stronghold for Emus, listed as Near Threatened in the NT. Patches of rugged sandstone heath and extensive Cypress Pine (*Callitris intratropica*) forests are responding to improved fire management by the Mimal Rangers. Further south of the Arnhem plateau the country opens to more grassy systems, where the Australian Bustard, an important traditional food resource, can be found in increasingly large numbers due to improved fire management.

The Dook Creek Formation stretches from the Mainoru River, northeast to Goyder River. This limestone aquifer supports a belt of hundreds of sinkholes, some of which have evolved into vast lakes like Korrbulyu and Barnkul or into the numerous circular wetlands like Bokanaritj. The outflows at places such as Djaddikku, Bamdibu, Weemol and Bawurrbarnda, support dense jungles and supply the Wilton, Mainoru, Guyuyu and Goyder rivers with strong flows throughout the dry season. These culturally important

water places are also habitat for the threatened Mertens' Water Monitor. Located in the dryer south are woodlands, lancewood forests and spinifex. Rivers originating in these parts, such as the Phelp are dry channels for most of the year but support important off-channel billabongs such as Bayamirri. Along with rock holes and soaks, these billabongs provide water to seed-eating birds, such as the Gouldian Finch and Partridge Pigeon which are listed, respectively, as endangered and vulnerable under the national *Environment Protection and Biodiversity Conservation Act*.

Parsons Range, along the eastern boundary of the proposed Mimal IPA, is part of a broad continuous biogeographic corridor. To the north this sandstone formation was once part of a land bridge joining mainland Australia to New Guinea. This feature links Arnhem Land to sandstone environments of the Gulf of Carpentaria and supports a varied array of wildlife including arid-land elements such as the Spectacled Hare-wallaby (*Lagorchestes conspicillatus*), Papuan elements such as the Six-toothed Rainbow Skink (*Carlia sexdentata*) and Arnhem Land sandstone endemic species such as the Oenpelli Python (*Simalia oenpelliensis*).

Waterways arising in the uplands of Mimal IPA are integral to the health of the nationally significant Arafura Swamp. A complex of perennial springs along the margins of the Arnhem plateau drives the major rivers and tributaries flowing into these wetlands. As sister IPA proposals, Mimal and Arafura Swamp not only share close cultural

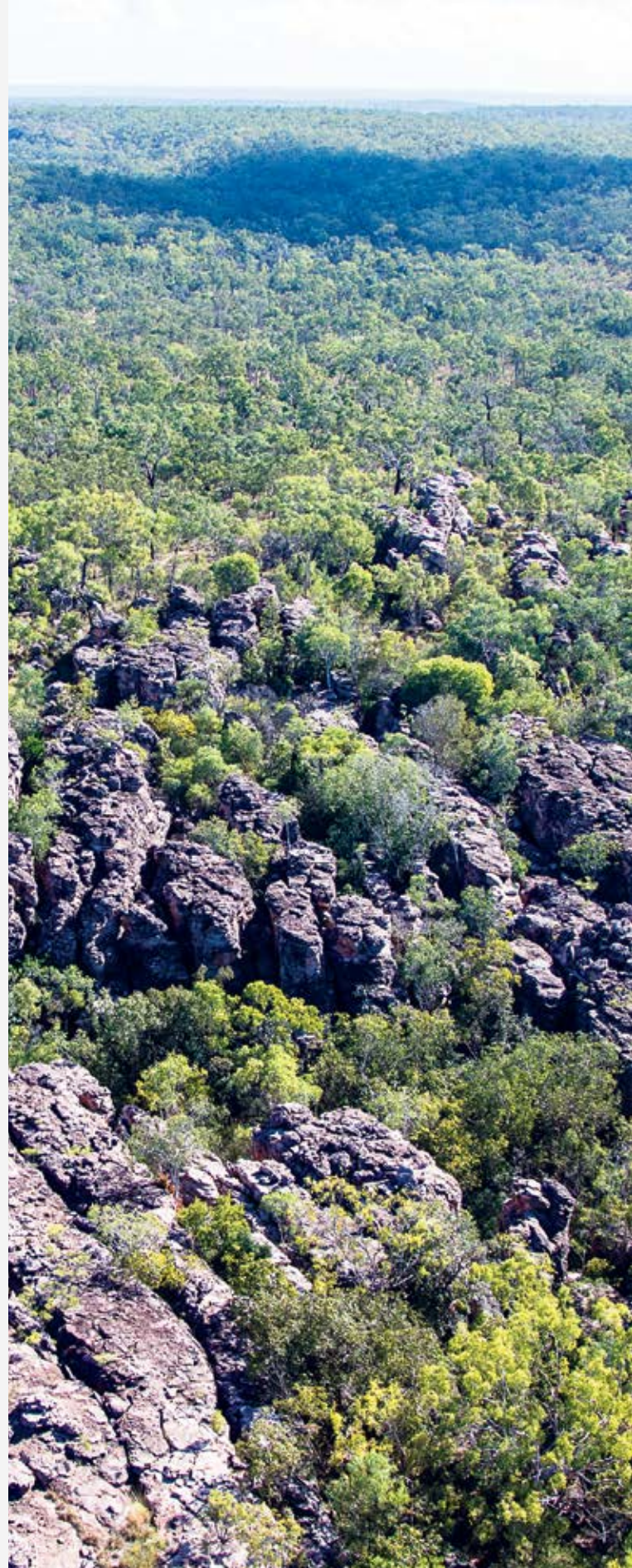
affinities, their landscape management is also interdependent. Effective wildfire, weed and feral animal control in the upper catchment are crucial to the function of downstream ecosystems.

THREATENED SPECIES

Nine threatened species have been recorded from the proposed Mimal IPA while at least a further 17 species are considered likely to occur in the IPA based on their known range and habitat preferences. Of the eight threatened vertebrate species recorded, the Gouldian Finch is listed as Endangered under the national *Environment Protection and Biodiversity Conservation Act* and the Northern Quoll is listed as Critically Endangered under the *Territory Parks and Wildlife Conservation Act* and as endangered nationally.

Twenty-six species listed as Marine or Migratory under the *Environment Protection and Biodiversity Conservation Act 2007* are predicted to occur in the proposed Mimal IPA

Right: Sandstone Rock Country is an important feature of Mimal IPA. Though it is likely to host many to sandstone-endemic plants and animals found in Warrdeken IPA and Kakadu National Park, almost no inventory work has been done here.



HEALTHY COUNTRY FROM HEALTHY BURNING

In Arnhem Land customary burning focused on strategic, small scale and low intensity fires early in the dry season. This fire regime effectively controlled late dry season wildfires, which are ecologically damaging and emit excessive amounts of greenhouse gases. When clan groups were drawn off country in the 20th century, early dry season burning declined and the impact became clear; with little or no burning in the early dry season the frequency of huge and intense fires in the late dry season increased. In some areas these fires were recurring annually.

In response, five Ranger groups—Mimal, Manwurrk (Warddeken), Adjumarlarl, Djelk, and Jawoyn—worked together to reinstate customary early dry season burning. In 2006, the groups successfully secured an emissions offset agreement with Conoco Phillips and the West Arnhem Land Fire Abatement (WALFA) project was formed, providing the resources to manage more than 28,000 square kilometres of country. In 2013, WALFA became Arnhem Land Fire Abatement (ALFA) (NT).

Mimal Rangers look after just over half of the ALFA (NT) project area, including fire-prone country exposed to dry south-easterly winds covering the project area's entire south-east flank. The success of ALFA (NT) depends on strategic fire management by Mimal, without our efforts the region is potentially exposed to huge late dry season wildfires. From 1995–2007, an average of 58 per cent of the entire Mimal region was burnt annually,

49 per cent of which was in the late dry season. From 2008–2016, an annual average of 43 per cent was burnt, of which only 15 per cent was late dry season wildfire. This is a remarkable achievement, far surpassing the fire management goals of nearby Kakadu and Nitmiluk National Parks.

Annual fire mapping indicates that of all the ranger groups, Mimal has achieved the greatest reversal of catastrophic fire with significant positive outcomes for the environment. Our fire management program protects fire-vulnerable savanna species such as Cypress Pine (*Callitris intratropica*), small mammals with restricted home ranges, and other fauna such as Emus who require a diversity of food and habitat resources. Burning by Mimal Rangers has also hugely reduced greenhouse gas emissions from pre-2006 levels.



Above: A combination of early dry-season prescribed burning and effective late dry-season suppression has been the secret to Mimal's success in reducing the extent of fire in their landscape. (Photo by Jonas Klein)

THREATS

FERAL ANIMALS

Water buffalo, wild cattle, pigs, horses, donkeys, cats and cane toads are all present in the proposed Mimal IPA. In freshwater areas (Djula and Wah), the worst impacts are from buffalo and pigs. Their wallowing and rooting around destroys vegetation, accelerates erosion, and affects the water quality of creeks, billabongs and springs. Grassy springs are transformed into continually expanding bare earth gullies. Buffalo and pigs also make people feel unsafe on country, preventing them from accessing water and harvesting traditional food resources such as fish, lilies, mussels and turtles. Cane toads are also widespread in freshwater areas and, as elsewhere in northern Australia, have heavily impacted the native wildlife.

Away from the freshwater country overgrazing by buffalo, cattle, horses and donkeys causes a loss of native vegetation and promotes erosion. Feral cats pose a significant threat, particularly to small mammals and reptiles in the plains country (Ruwurrno and Rorrobo), and rock country (Badno and Ngalwad).

WEEDS

Grader grass (*Themeda quadrivalvis*), a Weed of National Significance, is established in the proposed IPA and covers large areas along rivers and plains where it has replaced native vegetation forming a monoculture. Mission grass (*Cenchrus polystachios*), which

replaces native vegetation and remains green until the late dry season, is also established. Gamba grass is a significant potential threat to the proposed IPA. Like Mission grass it out-competes native grasses and increases fuel loads, resulting in more intense fires and the loss of fire-sensitive understory species, the death of mature trees and general loss of biodiversity. By altering fire regimes invasive grasses have the potential to disrupt lucrative and environmentally important savanna carbon projects. Mimal Rangers have to-date managed to keep their area free of Gamba grass by early detection and eradication of infestations on more than four occasions. Prickly Acacia (*Acacia nilotica*) occurs along water courses in this area where it out-competes native plants.

White teak (*Gmelina arborea*) is regarded as an environmental weed in the Northern Territory and has spread from original plantings as an ornamental and shade tree around Bulman and Weemol while Chinese Apple (*Ziziphus mauritiana*), is another invasive tree that has been cultivated in the township of Bulman and now IPA poses a threat to the broader area.

Freshwater country is also potentially threatened by Water Hyacinth (*Eichhornia crassipes*) and Cabomba (*Cabomba caroliniana*). These fast-growing Weeds of Significance form dense populations quickly, destroying native plants and animals, reducing water quality and restricting flow. Though yet to be found in the area they are of major concern given the threat they pose to the downstream wetlands of the Arafura Swamp wetlands.

UNCONTROLLED FIRE

For many decades, before the advent of the large landscape indigenous fire management projects from 2006, uncontrolled high intensity fires swept across vast tracts of country late in the dry season causing severe and cumulative ecological damage and emitting excessive amounts of greenhouse gases. Loss of cover led to accelerated erosion and advantaged feral predators like cats who preferentially hunt in burnt areas. The proliferation of grassy weeds, such as grader grass, has contributed to more frequent and intense fires, but the threat of Gamba grass invasion and its effect on fire regimes remains the most severe threat to biodiversity.

ILLEGAL ACCESS

The proposed Mimal IPA is located on a huge area of country in south-central Arnhem Land in the Northern Territory. Arnhem Land is Aboriginal freehold land and access is restricted by a legal permit system under Northern Territory Legislation. Enforcement of this system has been weak and is mostly disregarded by tourists and other people seeking access. Also, it is currently it is very difficult for police to prosecute people who are illegally on country. Trespass takes many forms and includes fishing, pig shooting, illegal safari hunting, collecting native animals for the illegal wildlife trade, tourists straying off the Central Arnhem Road—the main thoroughfare between Katherine and Nhulunbuy—and contractors and other workers travelling throughout the region. Traditional Owners are very concerned about

trespassing on their homelands; they fear for the sanctity of their sacred sites, worry about the safety of their families and are generally upset by the lack respect for their privacy. Mimal Rangers manage the weeds, wildfire and rubbish associated with unwanted visitors, yet are currently powerless to enforce the permit provisions of the *NT Land Rights Act*. In 2018 MLMAC has been working closely with an NT Government review of ranger powers to improve their capacity to control illegal access.

LOSS OF CULTURE

People are losing connections to culture because ceremonies are not taking place as frequently as in the past. The body of traditional lore and customs that has structured Rembarrnga, Dalabon and Mayili communities for millennia, need ongoing support to prevent the erosion of culture. Senior Traditional Owners are responsible for guiding and governing their communities, particularly young people, but a range of challenges make this difficult. Two-way education is not available, while a loss of respect and lack of jobs leads to boredom and potential drug taking, gambling and family violence. Barriers to spending time with families on country, such as the closure of outstations and lack of transport, add to the problems. Keeping country healthy relies on people, their connections and cultural responsibilities to the land. Loss of culture weakens these connections and obligations, leaving ancestral country unused and uncared for. *'Empty Country'* is seen as

a major threat by Traditional Owners as it embodies an environment devoid of spiritual and physical wellbeing.

GOVERNANCE FAILURE

Although the Mimal Rangers have been operating successfully for more than 16 years, the Mimal Land Management Aboriginal Corporation was only established in 2015. Strong foundations have been put in place to help MLMAC achieve its goals, but resilience and ongoing success depends on good governance. Failure of corporations can be the result of a range of factors including a lack of policy implementation, poor processes, and a lack of communication and engagement with the landowners and communities the corporations are representing. MLMAC has placed a strong emphasis on governance, training and ongoing monitoring. It has built corporate strength through successful long-term partnerships and is continually exploring new funding and development opportunities with government, non-government organisations and industry.



Above right: Mid reaches of the Wilton River near Bigedi. Better fire management is helping combat erosion and deposition into river systems, and in turn improving the health of aquatic ecosystems.

Below right: Shallow circular billabongs known as labbalno in Rembarnga are a distinctive feature of limestone areas within the proposed IPA.



LAND MANAGEMENT



CURRENT ACTIVITIES

The effectiveness of weed, fire and feral animal management in the Mimal Management Area is not only critically important for local biodiversity outcomes, it also impacts on neighbouring key conservation areas including the Warddeken IPA, the Djelk IPA, South East Arnhem IPA, the Arafura Swamp and the Australian Wildlife Conservancy's Wongalara Sanctuary. Mimal Rangers undertake a practical mix of land management activities including:

Fire management: the proposed IPA area is part of the ALFA NT carbon abatement

area and Mimal Rangers, in partnership with neighboring ranger groups, work with landowners to strategically plan annual early dry season burning. Incendiaries are delivered from helicopters and thousands of kilometres covered by vehicles to conduct prescribed burning. Mimal Rangers have demonstrated the necessary experience and skills to control destructive late dry season wildfires, some of which are lit by travellers on the Central Arnhem Highway and others from lightning.

Feral animal control: Though recent government-assisted culling has greatly reduced Buffalo numbers in the north of the

Mimal area, feral pest control remains a high priority, particularly at key sites. An integrated plan for buffalo and pig control is currently being developed to ensure a multi-faceted, long-term approach.

Weed management: to date focused on established weeds such as Grader grass, Mission grass, Prickly Acacia, Chinee apple and Gmelina trees, as well as preventing the establishment of Gamba grass in the region. An integrated weed management plan is currently being developed.

Cultural mapping and management of special places: ongoing recording and registration of sacred areas in consultation with Traditional Owners and the Aboriginal Areas Protection Authority. Women rangers are involved in the recording of site locations and stories associated with women's ceremony. In 2018 MLMAC began a partnership with Flinders University for collaborative recording of rock art sites and development of appropriate conservation activities. In the 2018–19 year MLMAC is working with software developers to design and populate a locally-managed Cultural Heritage Management System.

Community engagement: conduct cultural camps with schools annually on an ongoing basis.

Biosecurity: MLMAC holds a current contract with the Department of Agriculture and Water Resources to undertake biosecurity work including animal health and invasive pest monitoring.

Visitor management: includes ongoing monitoring of tourists straying off the Central

Arnhem Road; people working in the Mimal region, such as teachers, shooting without permission or illegal safari hunters camping and shooting without permission. In 2018 the MLMAC board approved draft protocols for visitors, to be circulated out of community offices in Bulman and Weemol.

General operations: includes a range of activities such as on-going management planning with traditional land owners and the wider community, road and track clearing, patrols for unwanted visitors, visiting and supporting remote homelands and working with scientists on a variety of projects.



FUTURE STRATEGIES

The Mimal Healthy Country Plan prioritises our community's aspirations for improved land and cultural heritage management. It shows what is important to us, sets a pathway for the development of our ranger program and a charter their future work. Our Healthy Country strategies include:

Building Mimal capacity

Build a strong, confident and informed board to ensure good governance, and provide training and career development for rangers. Develop a comprehensive monitoring and evaluation plan and actively seek strategic partnerships and alliances.

Strong Culture

Reverse the loss of respect and knowledge through increased opportunities for people to spend time on country and live at outstations, and support community engagement in cultural activities and programs. Increase engagement with school students through cultural activities and events, and teaching two-way knowledge.

Healthy country burning

Maintain and build on our highly successful fire management program to continue to reduce greenhouse gas emissions, protect biodiversity and provide jobs for rangers. Strengthen Mimal participation in ALFA (NT).

Changing herd management

Reduce the damaging impact of buffalo, horses, donkeys and cattle on Djula and

Wah (wetland habitats) through changed herd management without job losses or reduced income for landowners.

Pigs, other pests and diseases

Reduce feral pig and cat populations by mapping pig damage, providing training in control techniques and implementing the most up-to-date control methods. Train rangers in the detection and control of pest ants.

Weed control

Manage established weeds and ensure the region remains free of Gamba grass through community awareness, ranger training, early detection and eradication.

Visitor management

Train rangers and equip them with effective powers of enforcement over illegal entry onto country, strengthen relationships with the police and Northern Land Council to increase landowner control, and, in collaboration with other groups, develop a ranger base and visitor centre to engage more positively with tourists.

Healthy waters

Undertake feral animal exclusion around high value *Djula* and *Wah* (freshwater) places and develop ranger monitoring capacity and ability to detect water weeds. Engage landowners in water health issues and activities, and apply a two-toolbox approach to inform management planning.

STATEMENT OF SIGNIFICANCE



NATIONAL RESERVE SYSTEM CRITERIA

The Mimal IPA aligns with many aspects of the Scientific Framework underpinning the National Reserve System (NRS). Specifically, it addresses the following Scientific Priorities for Biodiversity Conservation:

Bioregions and subregions where there is very little legal protection for plants and animals native to that area and where they are under a real threat.

The Central Arnhem bioregion occurs on remote Aboriginal freehold land which is subject to very low levels of environmental law enforcement due to a) an absence of agency intervention on Aboriginal land, and b) Traditional Aboriginal Owners having no legal powers of enforcement. Unauthorised hunting, fishing, trespass and wildlife poaching are increasing issues across the region. In particular Mimal IPA serves to counter the otherwise unattended threat of gamba grass invasion of northern Australia's subtropical savannas.

Native habitats under-protected within the existing National Reserve System.

Mimal IPA will provide new or vastly increased protection of 43 Major Vegetation groups (NVIS) and 41 Vegetation Sub-groups at a bioregional level.

Rare or threatened species and habitats.

Four nationally threatened vertebrates are recorded from the IPA. These are the Gouldian Finch (EN), Northern Quoll (CR), Partridge Pigeon (VU), and Leichhardt's Sawfish (VU). 5 additional vertebrate species are listed as

Threatened under the Territory Parks and Wildlife Conservation Act. The Department of Environment and Energy predict a further 16 species listed as threatened under the EPBC Act occur within the IPA.

Mimal IPA is also likely to protect disjunct occurrences of one Listed Threatened Ecological Community the Arnhem Plateau Sandstone Shrubland Complex Endangered Community which is predicted to occur within its boundary. This community nominally hosts 4 plants species listed nationally as vulnerable.

Places that offer refuge, centres of native species richness, or areas of national importance such as wetlands.

Mimal IPA plays a critical role in protecting and maintaining the health of the waterways feeding the Arafura Swamp, a unique wetland of international significance. The upper reaches of Arafura Swamp catchment fall within Mimal IPA. Arafura swamp is a listed as a Nationally Important Wetland and nominated as a High Conservation Value Aquatic Ecosystem under the RAMSAR Convention. It is also recognised internationally as a Key Biodiversity Area, and in this context is described as a site “contributing significantly to the global persistence of biodiversity” (BirdLife International 2018).

Special species, groups or circumstances—for example, very special habitat requirements, species with an exceptionally large range, migratory species, species vulnerable to climate change or other threatening process.

A combination of continuing customary land management, exemplary contemporary fire management, and a lack of western land uses at a landscape scale predispose Central Arnhem Land as a potentially significant biome for the conservation of small to medium-sized mammals; a faunal group that has drastically declined across northern Australia over the past 20 years.





SUPPORTING INFORMATION

APPENDIX 1. THREATENED WILDLIFE OF THE MIMAL IPA

Conservation Codes

CR—Critically Endangered

EN—Endangered

VU—Vulnerable

NT—Near Threatened

Common Name	Scientific Name	NT Status	National Status	NT Endemic
Black-footed Tree-rat	<i>Mesembriomys gouldii</i>	VU		
Emu	<i>Dromaius novaehollandiae</i>	NT		
Gouldian Finch	<i>Erythrura gouldiae</i>	VU	EN	
Mertens' Water Monitor	<i>Varanus mertensi</i>	VU		
Northern Leaf-nosed bat	<i>Hipposideros stenotis</i>	VU		
Northern Quoll	<i>Dasyurus hallucatus</i>	CR	EN	
Oenpelli Python	<i>Simalia oenpelliensis</i>	VU		1
Partridge Pigeon (eastern)	<i>Geophaps smithii smithii</i>	VU	VU	
Leichhardt's Sawfish	<i>Pristis pristis</i>	VU	VU	

Table 1: Threatened Species and significant species recorded from the proposed Mimal IPA.

Common Name	Scientific Name	National Status (EPBC Act)
White-throated Grasswren	<i>Amytornis woodwardi</i>	VU
Curlew Sandpiper	<i>Calidris ferruginea</i>	CR
Red Goshawk	<i>Erythrotriorchis radiatus</i>	VU
Northern Shrike-tit	<i>Falcunculus frontatus whitei</i>	VU
Far Eastern Curlew	<i>Numenius madagascariensis</i>	CR
Australian Painted Snipe	<i>Rostratula australis</i>	EN
Masked Owl (northern)	<i>Tyto novaehollandiae kimberli</i>	VU
Fawn Antechinus	<i>Antechinus bellus</i>	VU
Brush-tailed Rabbit-rat	<i>Conilurus penicillatus</i>	VU
Ghost Bat	<i>Macroderma gigas</i>	VU
Northern Hopping-mouse	<i>Notomys aquilo</i>	VU
Nabarlek (Top End)	<i>Petrogale concinna canescens</i>	EN
Northern Brush-tailed Phascogale	<i>Phascogale pirata</i>	VU
Bare-rumped Sheath-tailed Bat	<i>Hipposideros stenotis</i>	VU
Australian Painted Snipe	<i>Saccolaimus saccolaimus nudicluniatus</i>	VU
Water Mouse	<i>Xeromys myoides</i>	VU
Gulf Snapping Turtle	<i>Eseya lavarackorum</i>	EN

Table 2: Additional nationally listed Threatened Species predicted to occur within the proposed Mimal IPA.

Common Name	Scientific Name	National Status	Marine Listed Species	Migratory Wetlands Species	Migratory Terrestrial Species	Migratory Marine Species
Oriental Reed-Warbler	<i>Acrocephalus orientalis</i>		1	1		
Common Sandpiper	<i>Actitis hypoleucos</i>		1	1		
Magpie Goose	<i>Anseranas semipalmata</i>		1			
Fork-tailed Swift	<i>Apus pacificus</i>		1			1
Great Egret	<i>Ardea alba</i>		1			
Cattle Egret	<i>Ardea ibis</i>		1			
Sharp-tailed Sandpiper	<i>Calidris acuminata</i>		1	1		
Curlew Sandpiper	<i>Calidris ferruginea</i>	CR	1	1		
Pectoral Sandpiper	<i>Calidris melanotos</i>		1	1		
Oriental Plover	<i>Charadrius veredus</i>		1			
Black-eared Cuckoo	<i>Chrysococcyx osculans</i>		1			
Oriental Cuckoo	<i>Cuculus saturatus</i>		1	1	1	
Oriental Pratincol	<i>Cuculus saturatus</i>		1	1		
White-bellied Sea-Eagle	<i>Haliaeetus leucogaster</i>		1			
Red-rumped Swallow	<i>Hirundo daurica</i>		1		1	
Barn Swallow	<i>Hirundo rustica</i>		1		1	
Rainbow Bee-eater	<i>Merops ornatus</i>		1			
Grey Wagtail	<i>Motacilla cinerea</i>		1		1	
Yellow Wagtail	<i>Motacilla flava</i>		1	1		
Far Eastern Curlew	<i>Numenius madagascariensis</i>	CR	1			
Osprey	<i>Pandion haliaetus</i>		1	1		
Rufous Fantail	<i>Rhipidura rufifrons</i>		1		1	
Painted Snipe	<i>Rostratula benghalensis (sensu lato)</i>	EN	1			
Freshwater Crocodile	<i>Crocodylus johnstoni</i>		1			
Estuarine Crocodile	<i>Crocodylus porosus</i>		1			1
Leichhardt's Sawfish	<i>Pristis pristis</i>	VU				1

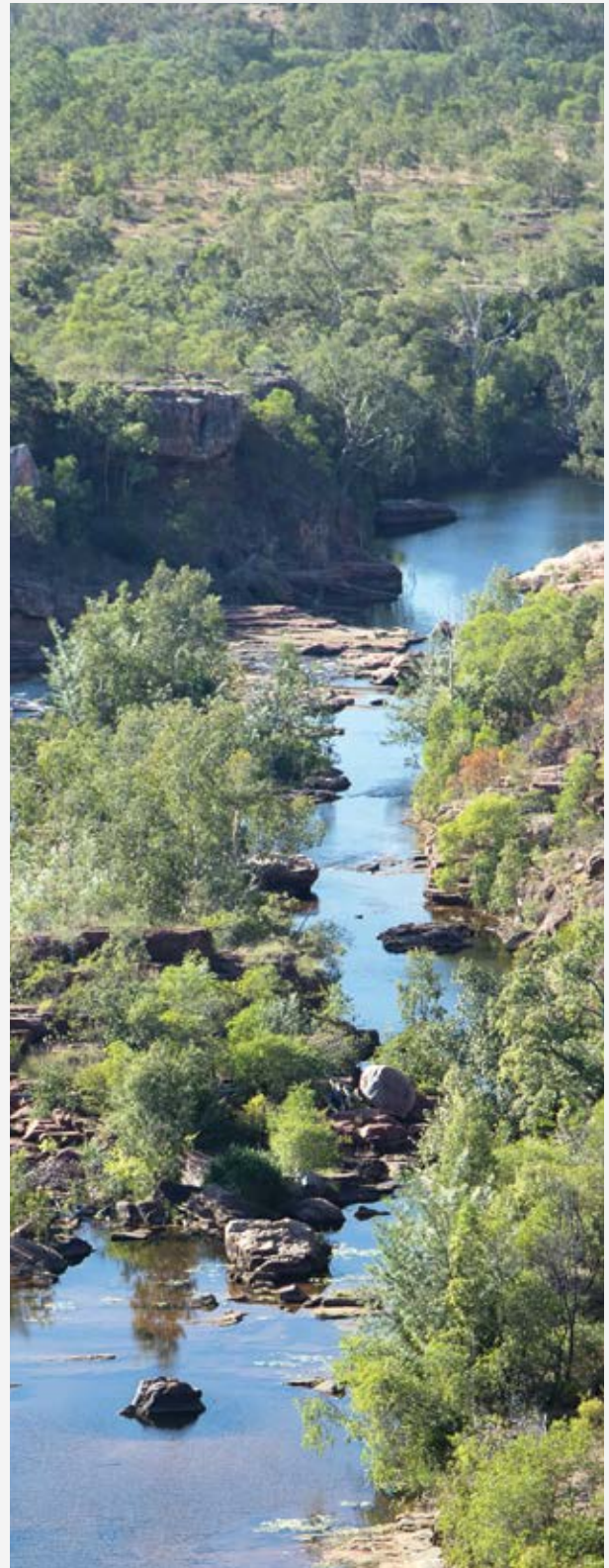
Table 3: Species listed as Marine or Migratory under the EPBC Act 2007 predicted to occur in the proposed Mimal IPA.

Threatened plants

One threatened plant is recorded from the Mimal area, Armstrong's Cycad *Cycas armstrongii*, listed as Vulnerable at an NT level. It is also a species endemic to the NT.

Listed Threatened Ecological Communities

The Arnhem Plateau Sandstone Shrubland Complex Endangered Community is predicted to occur within the Mimal IPA. Though not specifically recorded from the IPA this community is known to host 4 plants listed nationally as **Vulnerable** (EPBC Act 2007), as well as one further species listed as **Vulnerable** and 25 listed as **Near Threatened** at an NT level (TPWCA 2012).



APPENDIX 2. BIOREGIONAL RESERVATION

The Mimal IPA will substantially contribute to building the National Reserve System to better by increasing protection across three bioregions and four biological subregions. Most notably this includes:

- Increasing protection of the Central Arnhem bioregion by more than 45%
- Improving protection of the Wilton subregion by nearly 50%
- Almost doubling the protection within the Parson subregion, up from 24% to 45%

Bioregion/Subregion	Existing Reservation	Additional Reservation—Mimal IPA	Remaining Unreserved
Arnhem Plateau	60.2%	4.0%	35.8%
Mainoru	60.2%	4.0%	35.8%
Central Arnhem	30.7%	45.6%	23.7%
Parson	24.4%	20.8%	54.8%
Wilton	31.4%	48.2%	20.4%
Gulf Fall and Uplands	23.8%	0.8%	75.4%
McArthur	23.8%	0.8%	75.4%

Table 4. Increase in reservation of IBRA bioregions/subregions offered by the Mimal IPA.



Vegetation Protection

At a bioregional level Mimal IPA will increase protection across 43 Major Vegetation groups (NVIS). This includes new¹ protection for:

- Significantly increased protected (greater the 50% by area increase) for 3 poorly reserved Major Vegetation groups in the Central Arnhem bioregion

At a bioregional level Mimal IPA will increase protection across 41 Vegetation sub-groups, including new protection for:

- Vastly increased (greater than 50% by area increase) in protection for 7 Vegetation subgroups in the Central Arnhem bioregion.
- Increased protection (greater the 10% increase by area) for 10 Vegetation subgroups in the Central Arnhem bioregion

Mimal IPA will increase the representation for 50 Major Vegetation groups (NVIS) at the level of IBRA7 subregions. This includes new protection for:

- Vastly increased protection (increase 50% or greater) for 6 Major Vegetation groups.
- Significantly increased protection (above 30%) for 5 Major Vegetation groups currently unprotected or with less than 10% reserved.

Mimal IPA will increase the representation for 66 Vegetation Subgroups across four IBRA7 subregions. Increased new protection includes:

- Vastly increased protection (increase 50% or greater) for 7 Vegetation Subgroups all currently poorly (less than 10% reserved) or unreserved.

¹'New protection' is additional to the existing protection afforded by IPAs overlapping the Mimal area.



Bioregion	Major Veg Group	Total area (h)	No protection (h)	Mimal IPA new protection (h)	Mimal IPA new protection	Other ² IPAs
Central Arnhem	Acacia Forests and Woodlands	5,645	26	660	12%	43%
Central Arnhem	Eucalypt Low Open Forests	54,387	27,797	14,029	26%	20%
Central Arnhem	Eucalypt Open Forests	1,163,510	332,378	391,367	34%	37%
Central Arnhem	Eucalypt Open Woodlands	59,074	3,566	46,326	78%	11%
Central Arnhem	Eucalypt Woodlands	1,535,574	231,180	732,925	48%	35%
Central Arnhem	Melaleuca Forests and Woodlands	115,159	27,537	66,126	57%	18%
Central Arnhem	Other Open Woodlands	7,335	141	7,104	97%	0%
Central Arnhem	Rainforests and Vine Thickets	4,533	2,089	436	10%	44%
Central Arnhem	Tropical Eucalypt Woodlands/ Grasslands	503,956	74,700	319,806	63%	11%
Central Arnhem	Unclassified Forest	3,373	1,834	338	10%	33%

Table 5: Major (>10% reservation) protection of Major Vegetation groups at the Bioregion level afforded by Mimal IPA.

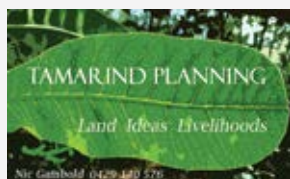
² None of these NVIS Vegetation Groups are protected in reserves other than IPA, i.e. they occur in no National Parks or Conservation Reserves.

Bioregion	Vegetation Sub-group	Total area (h)	No protection (h)	Mimal new protection	Mimal new protection	Other IPAs
Central Arnhem	Cleared, non-native vegetation, buildings	2,807	809	1,265	45%	26%
Central Arnhem	Dry rainforest or vine thickets	4,533	2,089	436	10%	44%
Central Arnhem	Eucalyptus low open woodlands with hummock grass	3,953	128	949	24%	72%
Central Arnhem	Eucalyptus low open woodlands with tussock grass	1,141		982	86%	8%
Central Arnhem	Eucalyptus open forests with a grassy understorey	1,217,897	360,175	405,395	33%	36%
Central Arnhem	Eucalyptus open woodlands with a grassy understorey	53,979	3,438	44,395	82%	6%
Central Arnhem	Eucalyptus woodlands with a hummock grass understorey	172,896	7,532	17,349	10%	79%
Central Arnhem	Eucalyptus woodlands with a tussock grass understorey	1,362,677	223,648	715,576	53%	29%
Central Arnhem	Melaleuca open forests and woodlands	115,159	27,537	66,126	57%	18%
Central Arnhem	Melaleuca open woodlands	7,335	141	7,104	97%	0%
Central Arnhem	Other Acacia forests and woodlands	5,645	26	660	12%	43%
Central Arnhem	Tropical Eucalyptus open forests and woodlands with tall annual grassy understorey	503,956	74,700	319,806	63%	11%
Central Arnhem	Unclassified native vegetation	2,815	1,577	306	11%	30%

Table 6: Major protection (> 10% reservation) of Vegetation Subgroups at the Bioregion level afforded by Mimal IPA.

REFERENCES

The Mimal Land Management Aboriginal Corporation Healthy Country Plan 2017–2027.
Data Sets: (Accessed 24/04/2018) Northern Territory Flora and Fauna Atlas; Interim Biogeographic Regionalisation for Australia (IBRA), Version 7 (Regions), Australian Government Dept. of the Environment and Energy; National Vegetation Information System (NVIS), Australian Government Dept. of the Environment and Energy.



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