

Walalakoo

HEALTHY COUNTRY PLAN
2017-2027



Walalakoo Healthy Country Plan 2017–2027

Warning: This plan may contain images, names and references to deceased Aboriginal people.

The Walalakoo Healthy Country Plan was prepared for Walalakoo Aboriginal Corporation by Nyikina and Mangala Traditional Owners and Frank Weisenberger Consulting.

The information in all the maps and figures herein reflects Traditional Owner views.

Design and layout: Jane Lodge

Mapping: Frank Weisenberger Consulting

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Story of the plan.....	4	Water extraction.....	34
Nyikina and Mangala Traditional Owners.....	6	Invasive animals.....	35
Using this plan.....	8	Town life / Social issues.....	36
Vision for Healthy Country.....	9	Pollution / Contamination / Tailings.....	37
Overview targets.....	10	Invasive plants.....	38
Target #1— Nyikina and Mangala lore and culture.....	11	Legacy of bad land management.....	39
Target #2— Cultural and heritage sites.....	12	Inappropriate fire regime / Wildfires.....	40
Target #3 — Freshwater places.....	14	Grazing.....	41
Target #4— Native animals.....	17	Lack of visitor management.....	42
Target #5— Bushtucker / Bush medicine plants.....	19	Over-fishing / Over-hunting & Poisoning / Baiting.....	43
Target #6— Right way fire management.....	21	Goals, strategies and actions.....	44
Target #7— Being strong on country.....	23	Goals.....	44
Health of our targets.....	24	Strategies.....	45
Threats — Overview.....	26	Monitoring and evaluation.....	48
Dams, infrastructure and water management.....	28	Governance and implementation.....	49
Climate change.....	29	References & abbreviations.....	50
Mining.....	30	Appendix 1: Glossary.....	51
Lack of knowledge transfer opportunities.....	31	Appendix 2: Nested targets.....	52
Lack of resources for Healthy Country		Threatened species.....	52
Management.....	32	Migratory species.....	53
Lack of consultation and cooperation.....	33		



Native lemongrass
© Frank Weisenberger



List of figures /List of tables

Figures

Figure 1 — Overview Nyikina Mangala Native Title Determination6

Figure 2 — Tenure Nyikina Mangala Native Title Determination.....8

Figure 3 — Elements of the Walalakoo Healthy Country Plan9

Figure 4 — Cultural and heritage sites 14

Figure 5 — Freshwater places..... 16

Figure 6 — Threatened and endemic species..... 18

Figure 7 — Vegetation types and threatened/priority ecological communities..... 20

Figure 8 — Fire frequency Late Fires 22

Figure 9 — Monitoring and evaluation 46

Tables

Table 1 — Target health overview 24

Table 2 — Threat overview 25



Mowla Bluff



Mardoowarra (Fitzroy River)



Story of the plan

Nyikina and Mangala people have, for thousands of years, been the Traditional Owners of lands stretching from the tidal waters of the King Sound along the mighty *mardoowarra* (Fitzroy River) to the reaches of the Great Sandy Desert.

In 2014 our Native Title Rights were formally recognised across 26,000 square kilometres in the Kimberley Region of Western Australia (please refer to figure 1).

Today Nyikina Mangala Rangers, alongside Traditional Owners, manage the Native Title lands for their cultural and natural values. Our ancestors passed on the obligation to look after *mardoowarra* and our country from generation to generation. To give guidance to our Rangers, Nyikina and Mangala people have developed this plan to make decisions on our country; both to look after country and to provide a strong future and livelihood for our people and communities.

Supported by The Nature Conservancy (TNC) Australia, we used the Healthy Country Planning (HCP) framework to guide us through a series of workshops. The HCP is an adaption of the *Open Standards (OS) for the Practice of Conservation*, a planning



Nyikina and Mangala Healthy Country Planning Working Group in Derby
© Frank Weisenberger



Healthy Country planning session at the Cutting
© Frank Weisenberger

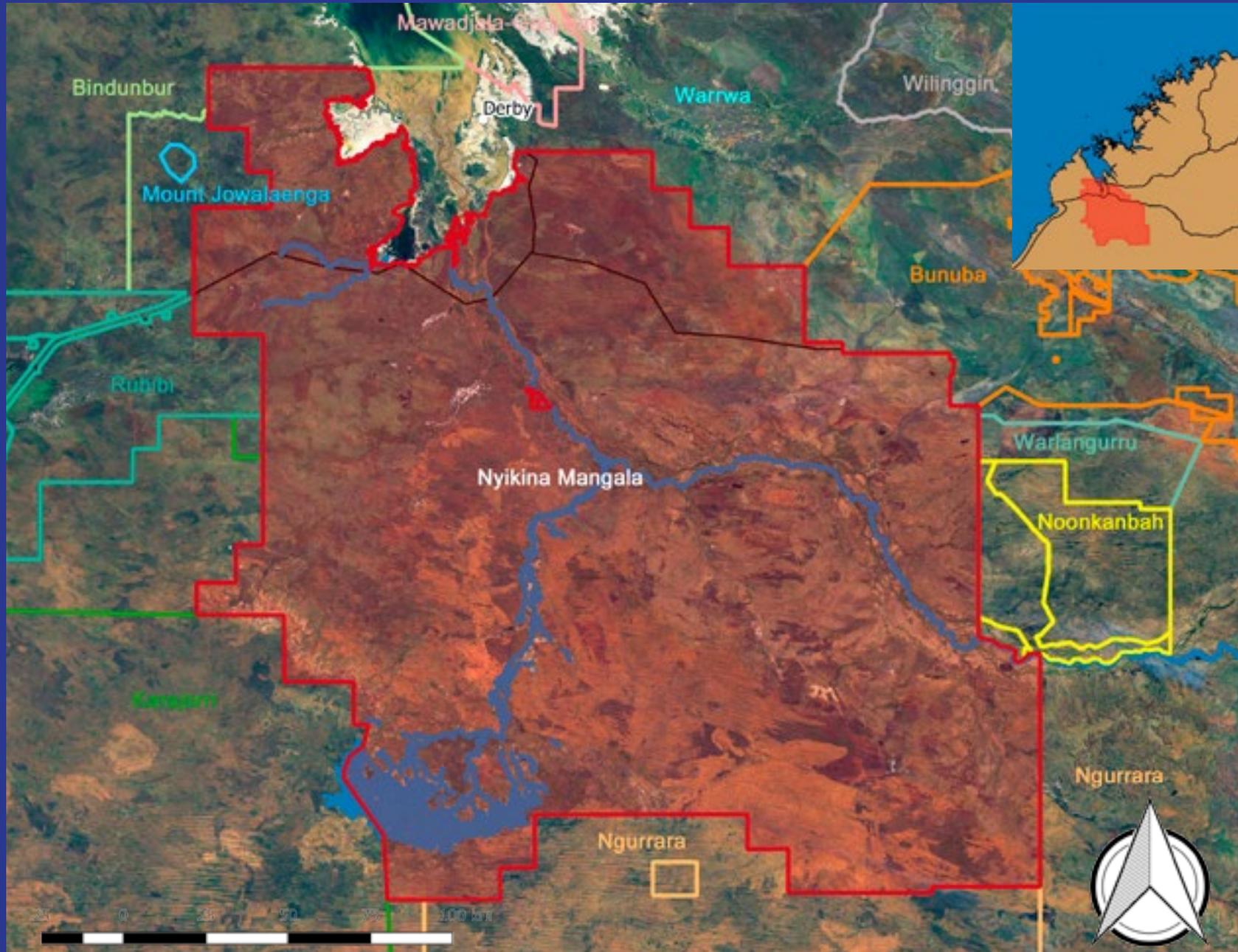


Participants at the community workshop in Derby © Frank Weisenberger

methodology that has been used across the world for conservation management by community groups and government agencies alike. By including cultural values in the planning process, the OS process has been amended to reflect our view of the world, where country and culture is closely intertwined — Healthy Country.

The Walalakoo Healthy Country Plan explains how we want to look after country. By bringing together all the knowledge from the past and joining it with the recommendations from our partners and scientists who worked on Nyikina and Mangala country, we want our traditional lands to stay healthy and our lore, culture and custom passed on to the next generation.

Figure 1: Overview Nyikina and Mangala Native Title determination



Legend	
	Walalakoo Healthy Country Project Area
	Native Title Determinations
	Native Title Applications
	Towns
	Fitzroy River
	Roads



Nyikina and Mangala Traditional Owners

Nyikina people identify themselves as *yi-mardoowarra*, meaning people who belong to the *mardoowarra* (Fitzroy River). *Mardoowarra* sustains our life and is central to our culture and customs. It's the lifeblood of Nyikina and Mangala country and was formed by *Woonyoomboo* back in the time of *bookarri-karra*, The Beginning. Our Ancestors have known how to look after country and have passed this on to the generations; we know the right names for places, and have passed *Woonyoomboo's* lore along the generations for thousands of years.

In the late 1800s when European settlers began taking over our country, Nyikina and Mangala people were driven off their country. Mangala people were forced north to Nyikina country. Mangala people grew up learning and respecting Nyikina ways and now share traditions and culture with Nyikina people.

The next fifty years were very, very hard, with plenty of station managers quick on the whip, quick to deliver hidings and quick on the trigger. Nyikina and Mangala people gradually began to work on stations. We were given basic rations and clothes in exchange for long hours of fencing, droving, shearing and breaking horses. A lot of good men and women never got paid. During this time, many Aboriginal people had accidents with horses and bullocks. We received no compensation.

In the late 1960s Nyikina and Mangala people were pushed off the stations and into the towns. Throughout the '70s they began to get organised after hearing that Northern Territory Indigenous people were setting up Land Councils. Kimberley Aboriginal people set up the Kimberley Land Council (KLC) as a political land rights organisation. This was also around the same time as the Noonkanbah dispute — it was the setting

for one of the most powerful land rights movements in Australia. Under the leadership of Malaga Nipper Tabagee, Nyikina and Mangala people fought the exploration company Amax that wanted to drill for oil on sacred sites. It wasn't just Nyikina and Mangala people fighting, people came from all over Australia to support the protest.

Nowadays many Nyikina and Mangala Traditional Owners live in communities on country again — Jarlmadangah, Pandanus Park, Looma, Jimbalakudunj, Bidan, Balginjirr and Udialla (please refer to figure 2); others live in Kimberley towns like Derby and Broome; some live in communities scattered across the Kimberley.

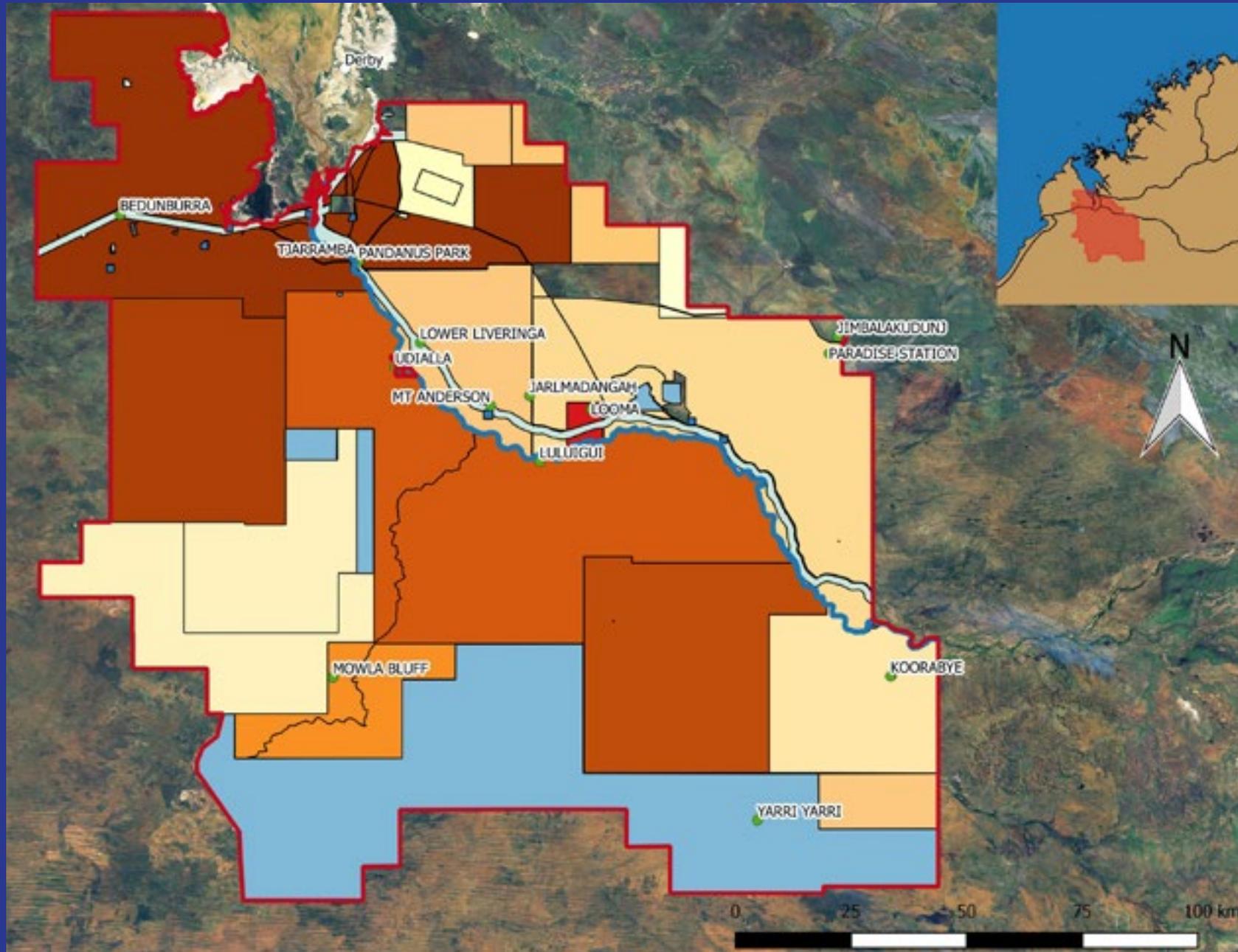
First contact isn't distant history for our people. Some of our old people remember walking out of the desert. From first contact to now—Nyikina and Mangala people have fought hard for land rights, social justice and equality. *Walalakoo* means "a lot of people" in Nyikina language. Walalakoo Aboriginal Corporation (WAC) is the representative body for Nyikina and Mangala Traditional Owners and strives to be self-sufficient, preserving culture and providing Indigenous employment opportunities to the people of the Nyikina and Mangala community.



Healthy Country Plan consultations at Pandanus Park
© Frank Weisenberger

Nyikina and Mangala Native Title
determination © KLC

Figure 2: Tenure Nyikina and Mangala Native Title determination



Legend

- Nyikina Mangala Native Title Determination
- Fitzroy River
- Nyikina Mangala Communities
- Towns

Tenure

- ALT Reserve
- Aboriginal Pastoral Lease
- Commonwealth Defence Lands
- Crown Reserve
- Vacant Crown Land
- Water Reserve

Pastoral Leases

- BLINA
- DAMPIER DOWNS
- KALYEEDA
- LIVERINGA
- MEDA
- MOWLA BLUFF
- MT ANDERSON
- MYROODAH
- NERRIMA
- YAKKA MUNGA
- YEEDA



Using this plan

The Walalakoo Healthy Country Plan will help us to achieve our vision for country, culture and our people.

The document is set out in several different parts (please refer to figure 3). These introductory chapters give an overview of our country, explain our vision for the future and describe the natural and cultural values (targets) we want to protect into the future.

The subsequent part of this plan talks about the threats that affect our country negatively, followed by objectives and strategies to enhance the health of our values and address the threats. The last chapter of the Healthy Country Plan identifies how we will implement this plan and ensure that we stay on track with monitoring and evaluation to keep this document alive.

We developed the Healthy Country Plan not only for our Rangers and Traditional Owners, but for government agencies, researchers, industry and the wider Australian community as well, for them to better understand and respect our rights and responsibilities for our country.



Wilji (Black Footed Rock Wallaby)
© WWF Australia/Nyikina Mangala Rangers

Erskine Ranges © Frank Weisenberger

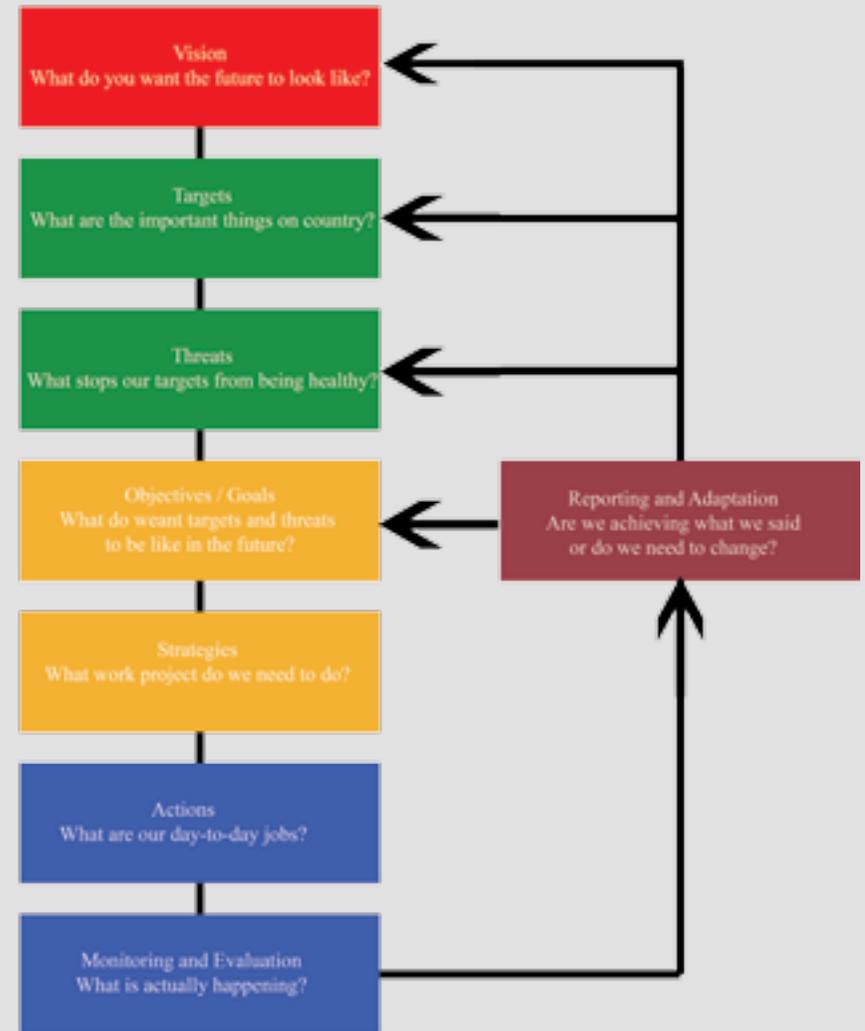


Figure 3 Elements of the Walalakoo Healthy Country Plan



Vision for Healthy Country

Nyikina and Mangala people are standing with their feet in both worlds — the traditional and the western world. With the Walalakoo Healthy Country Plan we want to bring together these two worlds and look after country in our traditional way and the western way. The vision for this plan is our shared dream for the future; how we want our country to look.



Nyikina and Mangala dancers © KRED

- Our tradition, lore, language, culture and customs are strong, protected, preserved, asserted and passed on to the next generation.
- Our decisions as Native Title Holders and First Nations People are respected and we are in control to avoid further damage to our country and culture as set out in international treaties and covenants;
- We visit country with our younger generations to pass on stories and knowledge about plants, animals and our seasons;
- Our communities are economically thriving and provide opportunities for our young people to gain skills through western scientific and cultural knowledge;
- Access to our country is controlled and visitors on our country are managed;
- *Mardoowarra* and our creeks, springs, wetlands and *kajan wila* (billabongs) are protected and we have control of our water rights;
- No plants and animals on our country are lost and its biodiversity is maintained, improved and protected.



Nyikina and Mangala dancers © KRED



Overview Targets

The HCP framework helps us to plan based on our holistic world-view. We wrote the Walalakoo Healthy Country Plan for the entire Nyikina Mangala Native Title Determination area (please refer to figures 1 & 2).

When we talk about “targets”—the most important things that we want to look after, we don’t distinguish between natural, cultural and socio-economic values. The physical values on our country are closely intertwined with our lore and culture. Culture and country are closely linked to our livelihoods — the ability of Nyikina and Mangala people to lead a healthy life on country and gain a livelihood from our Native Title lands.

In our first meeting we listed all the things that are important to us and that we want to manage on our country. We grouped those together under wider topics. For example, we combined all animals of cultural importance under the heading “Native Animals.” Some of the animals that live on our country are rare or threatened elsewhere in Australia. While we are looking after the culturally important animal species, we look after those threatened and endangered species as well. In Appendix 2 you can find a list of these “nested targets” against the wider target groups.



Wiliji (Black Footed Rock Wallaby)
© WWF Australia/Nyikina and Mangala Rangers

We consolidated the most important things Nyikina and Mangala people want to look after under the following seven topics:

- Nyikina and Mangala lore and culture
- Cultural and heritage sites
- Freshwater places
- Native animals
- Bush tucker and bush medicine plants
- Right way fire management
- Being strong on country

All these targets together represent the values we want to look after and protect on our traditional lands. The following part of the Walalakoo Healthy Country Plan includes an overview of why those targets are important to us.



Rock painting near Jarlmadangah



For
Nyikina and
Mangala people, the river and
oongookoorr are a centre of life,
following the stories of Woonyoombo
travelling the country. Freshwater places are
closely linked to many parts of our culture;
this has been passed down to our generation
from our ancestors.

We sing the country, we pass on the
stories about the country; we
keep the country alive with
these stories.

Lore, culture and our traditions are unique to Nyikina and Mangala people and central to our lives and how we look after our land and water. For us this target includes Nyikina and Mangala language, our stories about country, the traditional names for places, our customs and dances. Nyikina and Mangala's strong connection to culture and country has been acknowledged by the courts of the Western World in our Native Title Determination. This connection and knowledge is passed down from our elders to the younger generation through story and song. The young generation then carries the responsibility to pass knowledge on to future generations.

We often practice our dances and the *Warloongariy* (songline for the Fitzroy River) is important to us: it brings together elders and youth, recounting the creation of the river and the surrounding country. It is a way of keeping up the health and well-being of people, language and culture. And when we dance, we sing all night from sunset to sunrise. We use ritual and song to replenish country.

We take our elders on country to share their wealth of knowledge with the younger generation. We work actively with our partners like Yiriman to preserve and pass on knowledge; and our community schools teach young kids Nyikina and Mangala language. Teaching language is very important to ensure our culture is thriving. Many

Target #1 — Nyikina and Mangala lore and culture



Preparing for the Native Title determination © KLC

young people know some words in our language, but modern day distractions keep them from learning language fluently.

For many years Nyikina and Mangala people have participated in projects and programmes and visited country to record places, their names and stories. We want to build on these projects and bring this knowledge together in a central place, so that future generations have the correct information and can find it.

Goal: By 2017 Nyikina and Mangala lore and culture is reinvigorated and passed on to the next generation through a cultural learning program.



Dancing at Jarlmadangah
© KLC



Target #2 — Cultural and heritage sites

Nyikina and Mangala country is a cultural landscape and cultural heritage sites are the manifestations of thousands of years of occupancy by our ancestors. We group under this topic artefact sites, rock art-sites, massacre sites, burial sites, old camp and quarry sites, story places and our ceremony sites — all places that tell the story of how Nyikina and Mangala people lived on country. Rock-paintings are like a guide to us, showing us the animals our ancestors hunted and the plants they found around their camp sites. It is a cultural protocol for visitors that they are accompanied by the right Traditional Owner for a site; only the right people can tell the correct story for a place. Some of our paintings are in caves; our old people that were hunted by pastoralists and police hid in those areas from prosecution — bringing old times and the more recent history together.

It is important to us that these special places are physically managed and spiritually maintained. Traditional Owners and Nyikina Mangala Rangers need to visit sites regularly to ensure

Sometimes it is difficult to look after our sites because we are too busy with work and other kartiya responsibilities. But our lore tells us if we look after our sites, country will look after us.

sites are not damaged by wildfires, invasive plants, animals or visitors. When we visit places we need to take along our young people to reinvigorate the stories of these places and pass on the knowledge. When there are development proposals on our country we undertake site-clearances and cultural surveys to ensure important sites are not disturbed. Our lore holds us responsible to look after our sites and we can't rely on protection from *kartiya's* (European's) law. Aside from sites listed on the heritage register (refer to figure 4) there are countless more significant cultural sites spread across our traditional lands.

Goal: Priority cultural Sites on Nyikina and Mangala country are healthy and impacts from fire, weeds, ferals and visitors are minimised.

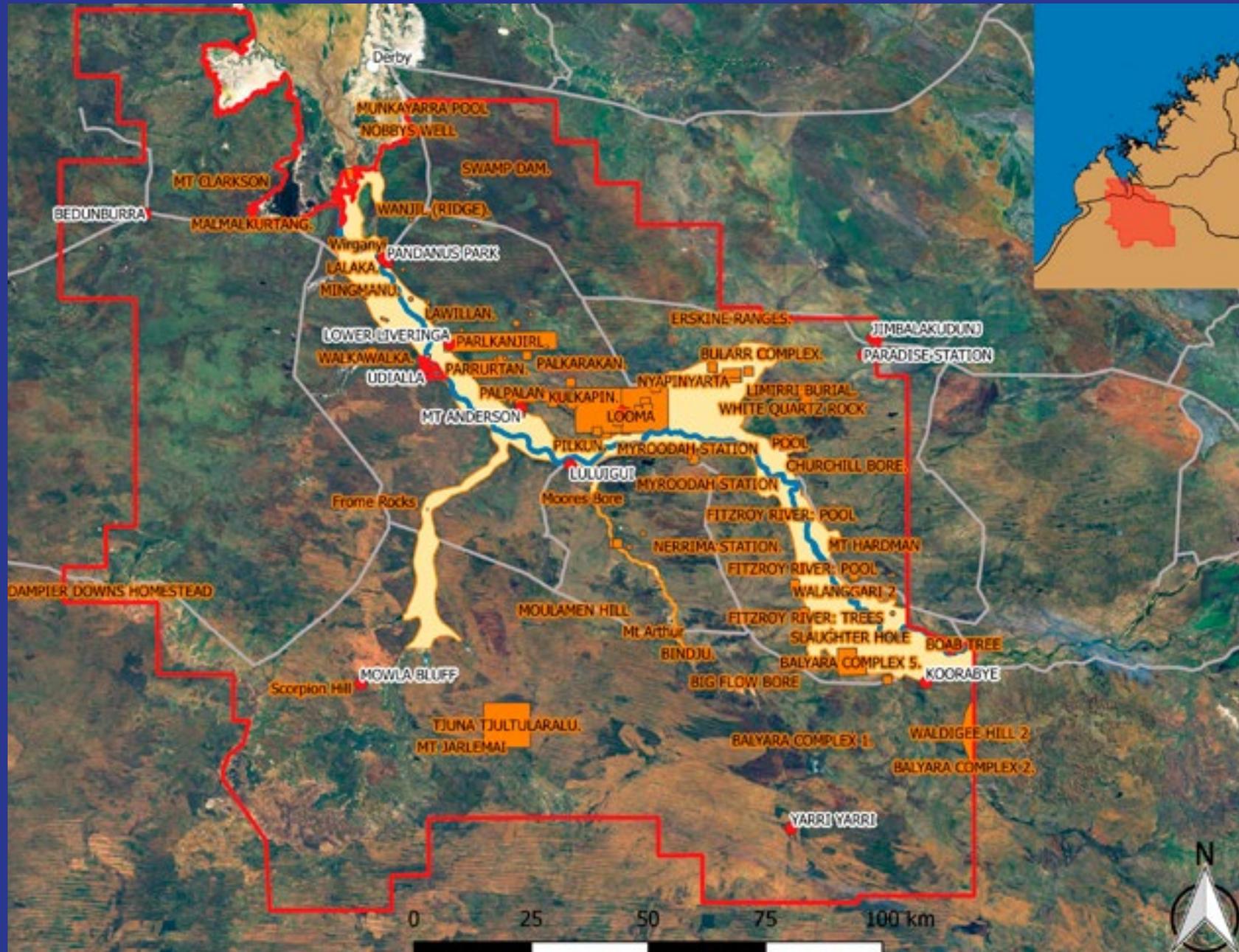
The stories of these places are important and families visit their sites on country and pass on their knowledge to the next generation.



Site management planning at Karlkabiny

Rock art at Loornboodan

Figure 4: Cultural and heritage sites



Legend

- Walalakoo Healthy Country Project Area
- DAA Heritage Sites
- National Heritage Listing West Kimberley - The Fitzroy River
- Nyinkina Mangala Communities
- Towns
- Fitzroy River
- Roads



Target #3 — Freshwater places

The *mardoowarra* (Fitzroy River) is the life-blood of Nyikina and Mangala country and was formed by *Woonyoomboo* back in the time of *bookarri-karra*, the Creation Time. The Fitzroy River is one of Australia’s largest unregulated rivers with braiding channels and wide floodplains. When we look at Freshwater, we look at it as a living water system (please refer to figure 5). Aside from the mighty Fitzroy River, its tributaries are also important. Springs in the floodplains and ranges are also significant for us. We also include *kajan wila* (billabongs) and wetlands in this target and all the plants and animals that rely on Freshwater for their lifecycle.

Mardoowarra is important for scientists because three species of the vulnerable *biyal-biyal* (Freshwater Sawfish) and *boordoo-koorr* (Northern River Shark) call it home. Our Rangers have a longstanding relationship with universities researching the sharks in our river. Dams and barrages disturb the connectivity are dangerous to fish that need to move freely. Bull sharks feed off the fish that get stuck in the pools at the bottom

of Camballin barrage. We include *biyal-biyal* and other endemic and threatened fish-species in this topic as nested targets. By making sure our rivers are healthy we look after rare and vulnerable species.

With more than 35 recorded species, our river is one of the most diverse fish habitats in Western Australia. At the right time of the year we go fishing for *walja* (Barramundi), *barooloo* (Catfish), *walngka* (Black Bream), *kakaroo* (long Mussel), *kalbarrkoo* (Freshwater Crab) and *jarramba* (Cherabin). Our Rangers look after *Koowaniya* (Freshwater Crocodile) and *linykoorra* (Saltwater Crocodile) making sure their nests are undisturbed and that they are not a threat to people fishing. Traditionally we fished with spears or nets made from rolled up grasses that we pulled through shallow water to catch fish. We used the sap of *majala* (Freshwater Mangrove) in the water to stun the fish. The bark releases a poison which sucks up oxygen in the water and the stunned fish float to the surface.

The Fitzroy River wetlands and floodplains are an important refuge for many migratory birds protected by international agreements. On their journeys they stop at LeLievre Swamp and the Camballin floodplains to rest

and feed. Surveys found more than 38,000 animals from 67 different species. This makes our wetlands a priority for conservation. For a healthy river and wetlands it is important that *waramba* (flood) comes down, washing out our river. We must monitor how much water is taken out of the ground and the river. *Kartiya* seem to think that water running into the ocean gets wasted, not understanding that it is all part of a bigger system. Over the years we have heard many proposals for dams and pipelines, but the government hasn’t yet cleaned up the mess left behind 40 years ago when the Camballin irrigation scheme failed.

Goal: By 2018 Freshwater places on Nyikina and Mangala country are culturally healthy and sustain native plants and animals

We need to educate people that there is not many of these freshwater places left. Rangers can change the way community looks after country.

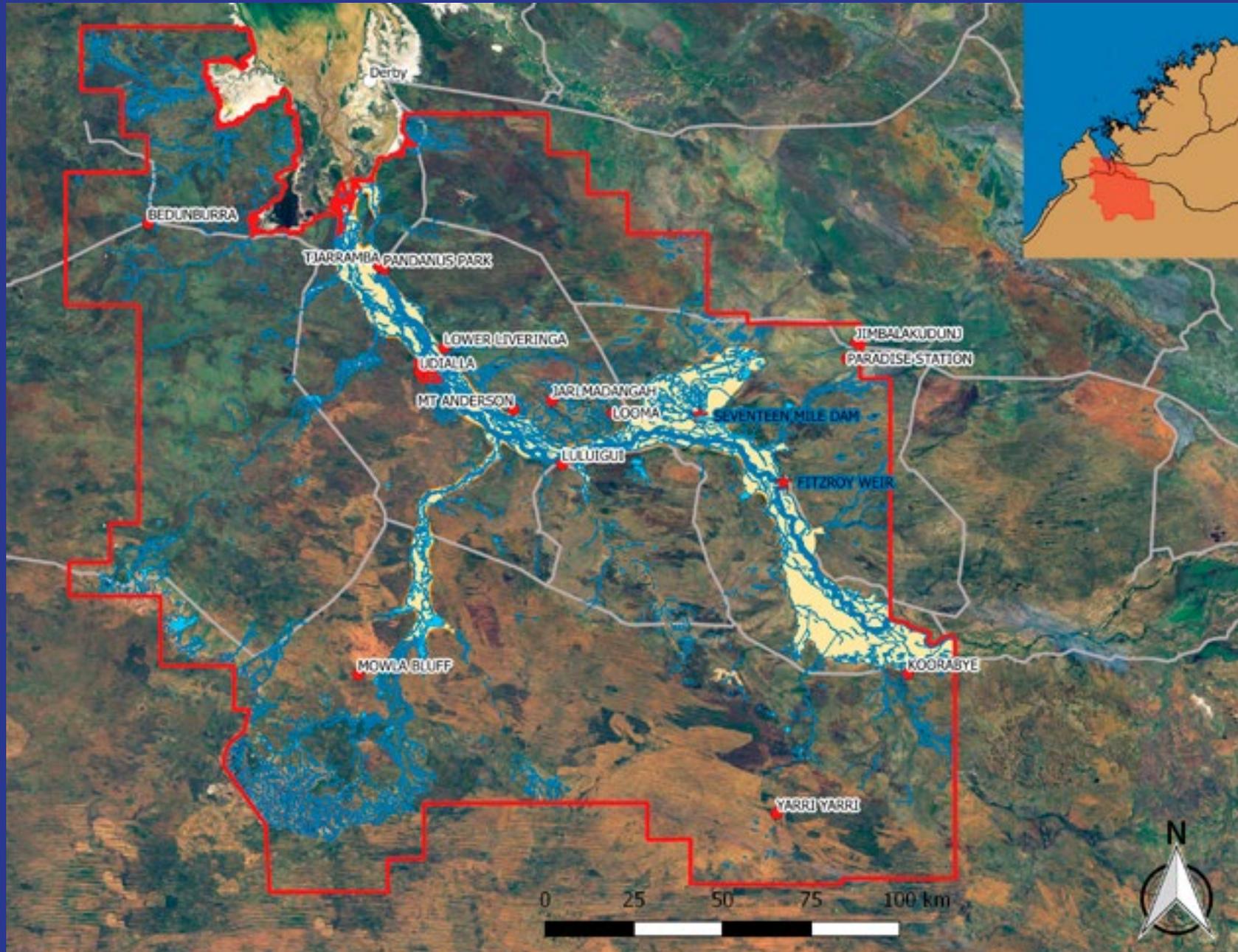
We look after the river because it's our life — we fish there, we live there.



Freshwater sawfish

© David Morgan/Murdoch University

Figure 5: Freshwater places



Legend

- Warakoo Healthy Country Project Area
- Nykina Mangala Communities
- Towns
- Water Infrastructure - Dams & Weirs
- Semi permanent water bodies
- Linear Hydrology
- Drainage Lines
- Fitzroy River
- National Heritage Listing West Kimberley - The Fitzroy River
- Roads



Target #4 — Native animals

All the animals living on Nyikina and Mangala country fall into this category: the animals with important cultural stories for us, the animals we look after for hunting and the animals important for the wider Australian public (please refer to Figure 6). The latter we included as nested targets (please refer to Appendix 2): some of those animals are endangered like the Purple Crowned Fairy Wren, which lives along the river, some are vulnerable like the Bilby and others are endemic to Nyikina and Mangala country. When we are looking after country and keeping it healthy, we maintain and improve the habitat for many animals and lessen the stresses affecting those threatened species.

Inland open plains of *moordoon* (Spinifex), grasslands and woodlands are where we hunt for *karna-nganyja* (Emu), *jamandi* (Hill Kangaroo) and *kooramarrka* (Bush Turkey); Kangaroo is not only an important food source, *barrijaniny* (River Kangaroo) is also a cultivator that digs up the ground looking for roots, stimulating the growth of native grasses. *Barniy* (Goanna), *mangka-ban* (Bilby), *kirloo* (Golden Bandicoot) and *karnajina-ngany* (Echidna) roam through our country. We see nowadays less animals on our country; climate change might be one reason, but hot late season fire which burned in the past through large tracts of our country pushed some animals out. Our Rangers are often out on country to do biodiversity surveys and keep an eye out, so that we pick up on changes early and not when it is too late and

We understand the seasons so know the right time of animals life-cycles.

We are seasonal hunters, you got to know the right time to go out for hunting.

the animal has already disappeared from Nyikina and Mangala country. Monitoring and surveys help us to prepare for the imminent arrival of the Cane Toad in our country. Animals like goanna, quoll or crocodile are poisoned by the Cane Toad's toxins. We need to watch closely how animals that are already small in number respond to this new threat.

Many of our smaller animals are affected by domestic cats which kill millions of animals each night of the year in Australia. Nyikina and Mangala Rangers have been looking after *wiliji* (Blackfooted Rock Wallaby) in the Edgar, Erskine and Grant ranges with the help from the World Wildlife Fund (WWF) Australia. *Wiliji* are nationally endangered and less than 2,500 animals are left. We use camera traps to find out about population numbers in the Kimberley and look at the scats of *wiliji* to learn about their diet. Local *wiliji* populations are relatively small and animals that are so restricted in their habitat are even more prone to wildfire and predators.

All these animals rely on rivers, creeks and billabongs for their water. That means good water management is important for us to maintain animal populations across our country.

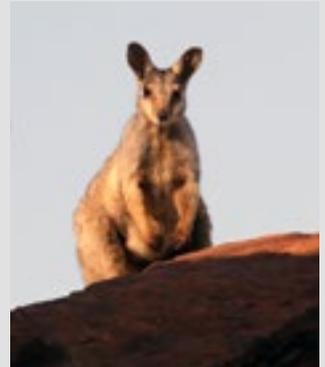
Goal: By 2016 and on-going the habitat of bush plants, native animals and threatened species is healthy and species are plentiful



Mangka-ban (Bilby)
© Damien Kelly Photography

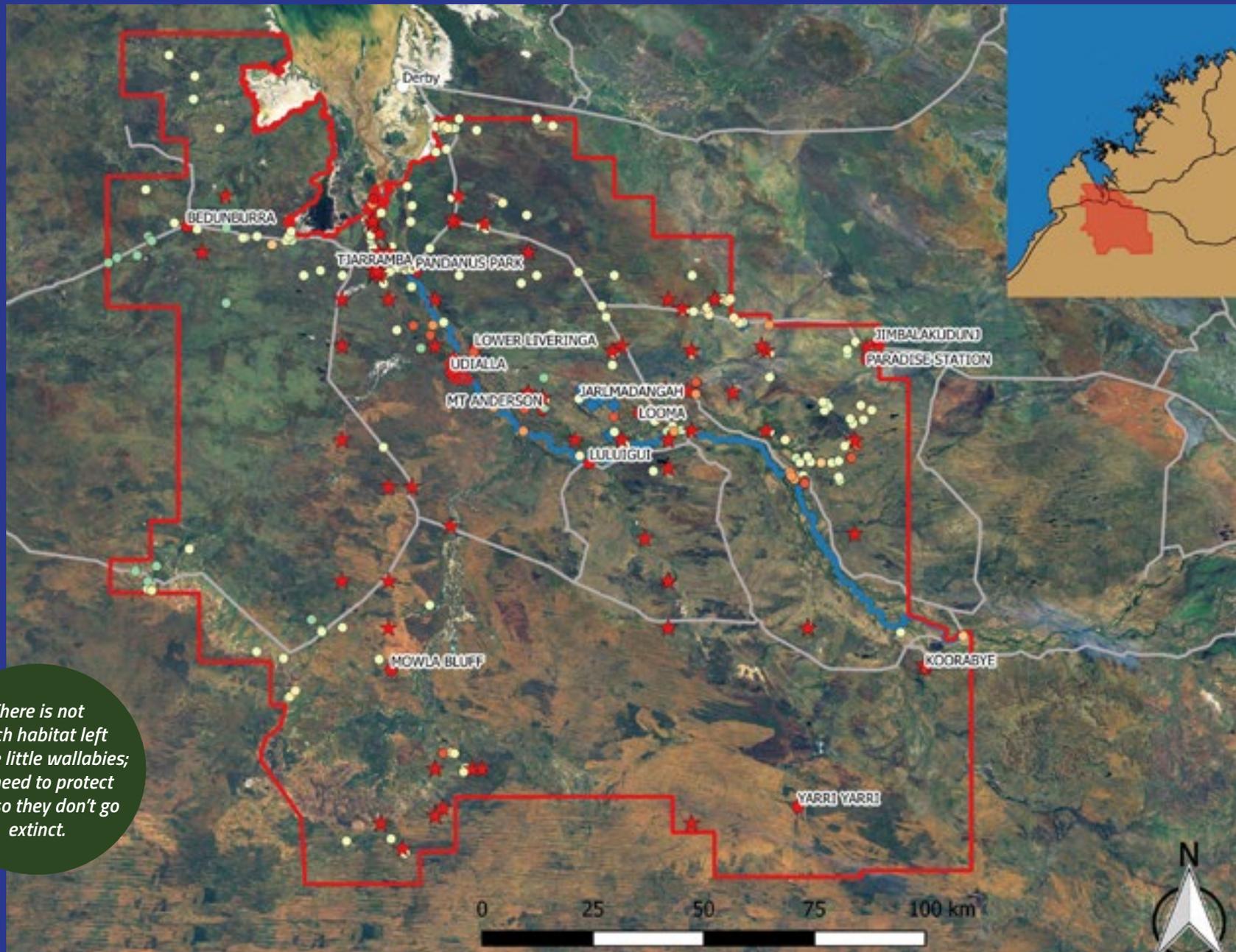


Emu at Jarlmadangah
© KLC



Wiliji (Black Footed Rock Wallaby)
© WWF Australia/Nyikina and Mangala Rangers

Figure 6: Threatened and Endemic Species



Legend

- Walalakoo Healthy Country
- Project Area
- Nykinia Mangala Communities
- Towns
- Commonwealth Listed Species (EPBC)

State Listed Species

- Conservation Priority 1
- Conservation Priority 2
- Conservation Priority 3
- Conservation Priority 4
- Endangered
- International Agreement
- Other specifically protected Fauna
- Vulnerable
- Vulnerable / International Agreement
- Black Footed Rock Wallaby
- Fitzroy River
- Roads

There is not much habitat left for the little wallabies; we need to protect that so they don't go extinct.



Target #5— Bush Tucker / Medicine Plants

This target is all about important bush tucker and bush medicine plants on our country and our traditional ecological knowledge about these plants. Some plants like the Pandanus Spiralis are nationally threatened and we include them as a nested target (please refer to Figure 7 and Appendix 2), which we aim to look after with our management strategies. With our traditional knowledge we read our country like a book. Some of our plants we use as indicators for the six seasons of our calendar. *Wila-karra* is the wet-season, when it starts to rain; it's the time *moordoon* (*Spinifex*) turns green and people use it to make *limirri* (wax) for fixing spearheads and other tools. After *koolawa*, the knock-'em-down rains, the colour of the morning sky changes; honey birds and *jiny-jiny* (Budgerigar) are nesting and the bigger birds are mating, looking for nests in tree-hollows. Going into *barrkana* (cold weather) the wattle trees begin to flower and the Seven Sisters come out more in the night skies, warning us that cold weather is on the way. From June to August during *wilbooroo* (flowering season), *warimba* (*Bauhinia*) begins to flower, indicating that crocodile eggs are ready to be collected.

Some trees have dangerous malaji and can make people very sick; some malaji are good and would give us food; Malaji can be in any tree, that's why we have to protect malaji trees. We have to look after country because country looks after us.

We have to look after our plants, that were created for us and following the knowledge that was given to us by Woonjoomboo. He named these plants and animals for us to pass the knowledge down to generation and generation to come.

is the build up to the rainy season. White gums and coolibahs, *koorr-biji* (White River Gum) and *majala* (Freshwater Mangrove) are all in flower. You can see, our country is a calendar and we have to take our children out on country to show them where plants grow and when to harvest the fruits in season.

Our ancestors used the plants growing on Nyikina and Mangala country for food, tools and weapons for hunting—Nyikina and Mangala country was their food source and the bush is like a dispensary to them. Some of our Traditional Owners are investigating bush medicine plants as commercial products to share their healing abilities with the wider community. The bark of *bilawal* (Bloodwood) can be boiled and used to relieve the symptoms of cold and flu; the bark of *birral birral* (Cockroach bush) is sometimes used for sores and ringworms. *Larrkardiy* (boab trees) are very important to us for many reasons. They are a source and indicator for water and a manifestation of the powerful forces they harbour. Boab trees provide us with twine, food, medicines and shelter.

Kartiya often don't know our plants and come through with bulldozer and destroy our bush medicine and bush tucker plants.

Goal: By 2016 and on-going the habitat of bush plants, native animals and threatened species is healthy and species are plentiful

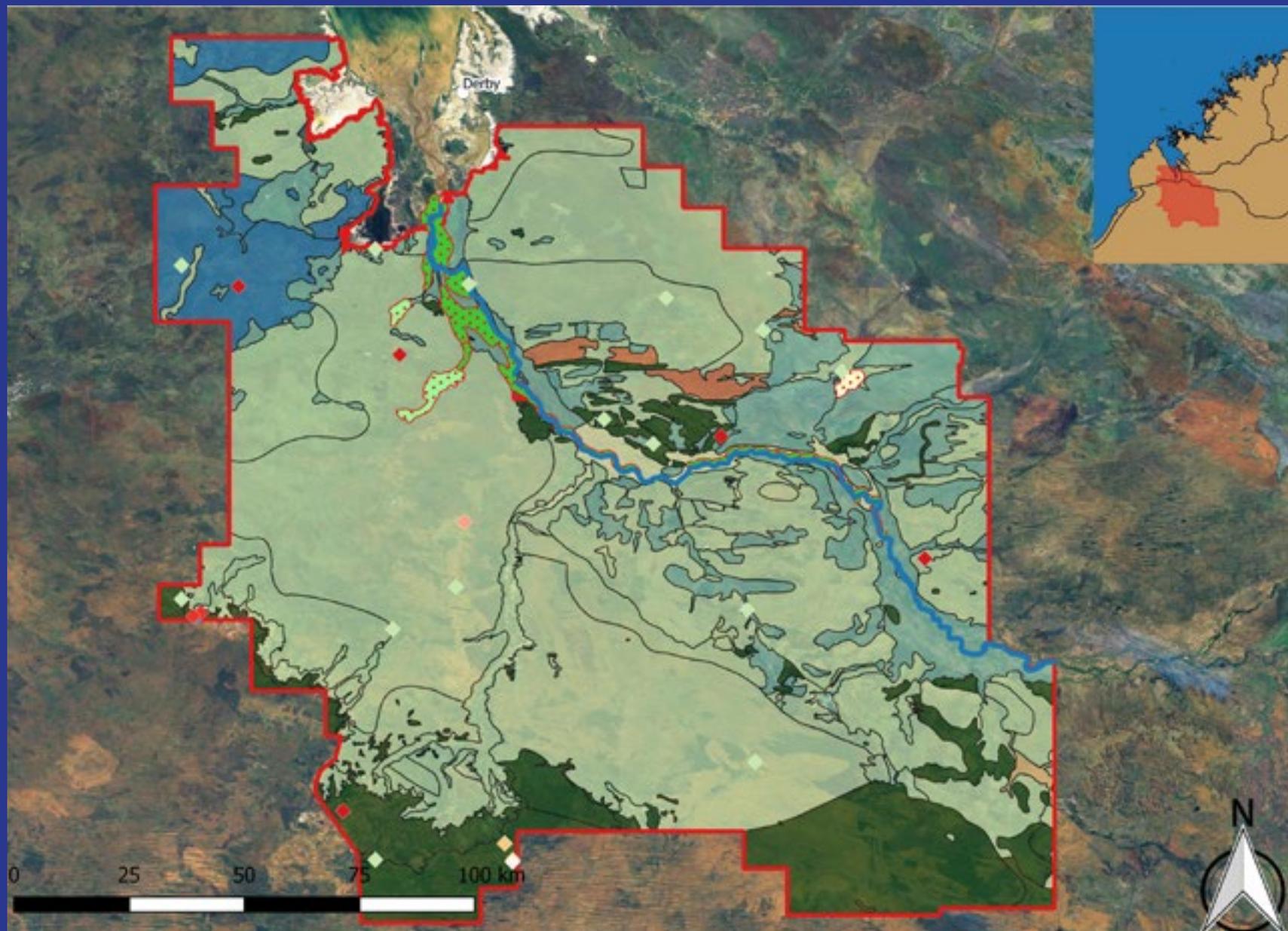


Ngamybal (Bush Orange)
© Frank Weisenberger



Bush tomato
© Frank Weisenberger

Figure 7: Vegetation types and threatened/priority ecological communities



Legend

State threatened Flora

- Priority 2
- Priority 3
- ◆ Threatened

State priority Flora

- ◆ Priority 1
- Priority 2
- Priority 3
- ◆ Threatened

○ Towns

— Fitzroy River

TEC / PEC

- ▨ Kimberley Vegetation Association 1271
- ▨ Kimberley Vegetation Association 67
- ▨ Kimberley Vegetation Association 759
- ▭ Walalakoo Healthy Country Project Area
- Nyinkina Mangala Communities

Vegetation Types

- Open hummock grassland
- Open shrubland
- Open tussock grassland
- Open woodland
- Shrubland
- Tussock grassland
- Woodland
- Roads



Target #6—Right way fire management

Fire management was one of the main tools of our ancestors to keep country, animals and plants healthy. We used branches from *koongkala* (Fire Stick Tree) to carry fire around, when our ancestors walked the country, lighting up many small fires. We call fires during *wila-kara* (wet season) and *koolawa* (beginning of winter) cool burns, because trees can germinate their seeds and grasses can get green shoots. Desert animals like *mangka-ban* (Bilby) and *karnajina-ngany* (Echidna) rely on our fire management: we try to avoid hot burns as those fires can destroy our trees and scorch the habitat for many animals. Smaller animals find it harder to escape large scale bushfires and once the fire goes through there is little hiding space for them: those animals become prey for predators like cats, who sense when fire comes through and travel from afar to hunt. Traditional fire burning declined when people were moved off country and their traditional lands were leased to pastoralists to run sheep and cattle. With the exclusion of Aboriginal people from the land, traditional burning practices were not maintained and increased fuel loads resulted in large, uncontrolled bushfires.

Right way fire management means we are trying to implement a system of early dry season cool burns across our country. With our Early Dry Season Fire Management (EDSFM) we break up country and through a patchwork of small scale fires, we stop big wildfires in the hot season. Our objectives for fire management are to reduce wildfires late in the season, increase the amount of long unburnt vegetation as a refuge for animals and minimise the impact of fires on

sensitive areas around our ranges and the riparian areas (please refer to figure 8).

We share Nyikina and Mangala country with many other stakeholders. We need to improve working together, to ensure that fire is managed carefully across the whole landscape. Our Rangers organise fire planning meetings at the beginning of each year, to meet with the Shire, the Department of Fire and Emergency Services (DFES) and pastoralists to come up with a fire management plan for our country and collaborate so everyone is working together.

In the future we want to investigate opportunities through Carbon Trading. Emissions that we save in a year from burning early, can become “carbon credits” which can be sold to big polluters who have to offset their emissions. Carbon trading allows us to generate funds to maintain our burning practice.

Goal: By 2017 Early Dry Season Fire Management implemented through the Nyikina and Mangala Rangers and partners prevents uncontrolled late dry season fire.

Rangers manage country by burning early in the season to allow new growth for native animals to feed on — makes it easier for hunting too.

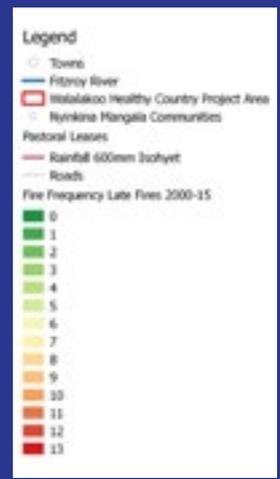
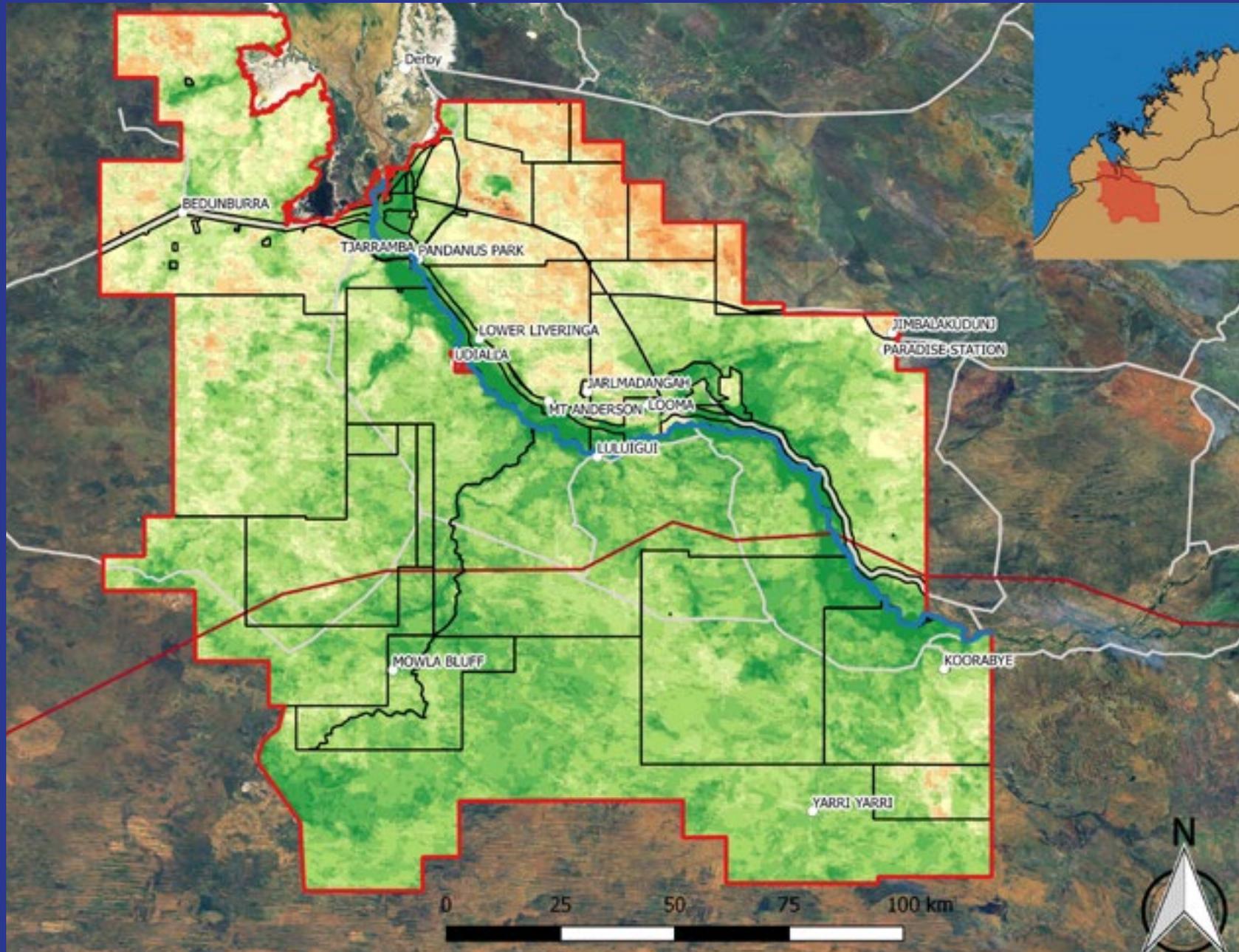


Fuel reduction burns



Cool burn on Mt Anderson Station © Frank Weisenberger

Figure 8: Fire frequency late fires





Target #7 -- *Being strong on country*

“Being Strong on Country” is a socio-economic target for us: it is as much about control and appropriate consultation as it is about resourcing, livelihoods and a healthy lifestyle on country. We are striving to create and promote livelihood opportunities for Nyikina and Mangala people on their traditional land. This can be a part of the Nyikina and Mangala Ranger Program, which provides training and employment for Nyikina and Mangala people while looking after country.

To look after such a large tract of land, our Rangers need sufficient resources and funding certainty to provide this service. We want to capitalise on business opportunities — for example in tourism and the pastoral industry. We want to give our young people the opportunity for employment and to create a workforce of skilled Nyikina and Mangala people gaining a livelihood from our land. The more Nyikina and Mangala people find work on country, the less will be the negative impact of townlife; townlife often robs Indigenous

people of their perspective and the temptations of alcohol and drugs are strong. Spending time on country working and learning about culture, Nyikina and Mangala people will spend less time in town, resulting in a stronger and healthier community.

Being strong on country means empowerment to us. It is about the recognition and assertion of our Native Title Rights and about appropriate consultation. The Australian Government recognised our rights and interests across Nyikina and Mangala country in our Native Title Determination. Indigenous Land Use agreements (ILUA’s) provide the framework for our relationship with leaseholders and the Shire. The Fitzroy River Valley has always been a focal point for development and Walalakoo Aboriginal Corporation will assert its Native Title Rights to ensure Nyikina and Mangala people are appropriately consulted on projects and development within our Native Title boundaries. Through our governance arrangements and Walalakoo’s policies, we provide

pathways for external parties to engage with us (please visit www.walalakoo.org.au).



Nyikina and Mangala Native Title determination 2014 © KLC

Goal: By 2016 onwards Nyikina and Mangala people’s aspiration for country are recognised and Traditional Owners have opportunities to gain skills and generate an income from country-based activities;

By 2018 and on-going, ten Nyikina Mangala Rangers have the resources and skills to look after Nyikina and Mangala country.



Larrkardiy (Boab) © KRED



Health of our targets

In the HCP process we look at health in different ways: In a “landscape” context — how targets are affected by processes such as fire on a regional scale; for the category “condition” we consider target health in relation to composition and structure; “size” can be seen as a measure of area or abundance and “cultural condition” considers target health in a cultural context. The health rank of each target is calculated across those categories, resulting in an overall viability rank for each target (please refer to table 1).

For example with “Freshwater Places”, we considered the connectivity of our freshwater system and the effect of erosion as “landscape” attributes; disturbance to the riparian vegetation from fire, weeds and invasive animals and the ability to catch fish in the right season are health-attributes for the category “condition”. The usage of our traditional ecological knowledge and awareness of the stories about *mardoowarra* are a “cultural health” indicator and the extent of surface water at the end of the dry season is a health-attribute for “size”.

The ratings are based on our knowledge and the expertise of scientists that we have been partnering with over the years. Some areas will require more research in the future, to answer these questions. Those gaps will steer the priorities of our research agenda and we want researchers to work together with us to fill these knowledge gaps.

The overview table helps us to prioritise our work: We need to focus our effort on targets that are in “poor” or “fair” health, as without a significant commitment we are risking to lose these values. Over time, our aim is to improve the health of our targets; we want to see that health ratings move from “poor” to “fair” to “good” and “very good”. Target-attributes that are already “good”, we want at least to maintain at this level.



Doodoodoo © Frank Weisenberger

Pelicans

Table 1 Target health overview

Conservation targets		Landscape context	Condition	Culture	Size	Viability rank
		Current rating				
1	Nyikina and Mangala lore and culture			Fair		Fair
2	Cultural and heritage sites	Good	Good	Fair	Fair	Good
3	Freshwater places	Fair	Fair	Fair	Good	Fair
4	Native animals	Fair	Fair	Good	Good	Good
5	Bush tucker medicine plants	Good	Fair	Fair	Good	Good
6	Right way fire management	Very Good	Fair	Good	Poor	Fair
7	Being strong on country			Fair		Fair
Overall health rank						Fair



Wiliji (Black footed Rock Wallaby)
© WWF Australia/ Nyikina and Mangala Rangers



Threat — Overview

A threat is a process that makes our targets or the attributes of our target unhealthy. The change in the health of our targets is a stress. When we worked through this threat assessment we are not only looking at the stresses, but at their sources. By focussing our work on affecting the sources of stresses, we become more efficient in our work. This table shows how threats on our country affect our targets. Some threats affect all our targets, while others only apply to some targets (please refer to table 2).

We ranked for each target the severity and scope of a stress, and for each stress its contribution and irreversibility to come up with the below table. The rank of each threat is then calculated across the rows, helping us to prioritise the threats on Nyikina and Mangala country. We will try and reduce the impact of threats that are ranked “high” and “medium” first of all and closely monitor so that threats ranked “low” don’t become worse over time.

The next section in the Healthy Country Plan talks about priority threats that are ranked “high” and “medium.”



Lack of connectivity © Frank Weisenberger



Rangers passing on knowledge



Grazing pressure near Lake Daley

Table 2 Threat overview

	Threats Across Targets	Nyikina and Mangala lore and culture	Cultural and heritage aites	Freshwater places	Native animals	Bush tucker/ medicine plants	Right way fire management	Being strong on country	Overall threat rank
1	Dams, infrastructure and water management			Very High	Low				High
2	Climate change (rainfall / temperature)			High	Medium	Medium	High		High
3	Mining		Medium	High	High	Medium			High
4	Lack of knowledge transfer opportunities	High	Medium	Medium	Medium	Medium	Medium	Medium	High
5	Lack of resources for Healthy Country Management	High	Medium	Medium	Medium	Medium	Medium	Low	High
6	Lack of consultation and cooperation		Medium	High			Medium	Medium	Medium
7	Water extraction		Medium	High	Medium	Medium			Medium
8	Invasive herbivores		Low	High	Medium	Low	Medium		Medium
9	Town life / Social issues	High	Medium	Medium				Low	Medium
10	Pollution / Contamination / Tailings			High	Medium	Medium			Medium
11	Invasive plants		Low	High	Low	Low	Medium		Medium
12	Legacy of bad land management			High		Low			Medium
13	Invasive carnivores				High				Medium
14	Inappropriate fire regime / wildfires		Low	Low	Medium	Medium	Medium		Medium
15	Grazing			Medium	Medium	Low	Medium		Medium
16	Lack of visitor management		Medium	Medium			Low	Medium	Medium
17	Over-hunting / Over-fishing			Medium	Medium				Medium
18	Poisoning / Baiting				Medium				Low
	Threat status for targets and project	High	Medium	Very High	High	Medium	High	Medium	High





Dams, infrastructure and water management

Nyikina and Mangala country has already seen its fair share of proposals for dams and attempts to manage the surface water: for example the barrage and some of the infrastructure and levees of the failed Camballin Irrigation Scheme are still there. They are a reminder for us of the effects of water infrastructure. In recent years the Commonwealth and State Governments identified the development of the north as an important objective of their government policy.

When considering a dam or water storage, it is important to think about all the potential impacts. In the wrong place a dam can seriously affect the connectivity of our freshwater system. Animals like *byial-byial* (Freshwater Sawfish) or *walja* (Barramundi) travel through their life-cycles from the mouth of the river to its upper reaches.

The government investigates scenarios for dams and other off-stream storage to reallocate and divert water for irrigated agriculture. To avoid the mistakes from elsewhere in Australia, we need to ensure that water-allocation is done carefully. We need to consider the site-impact on natural and cultural values, but as well keep the cumulative impact across the catchment in mind. Increased water allocations will have effects on the extent of flooding, water temperature, erosion and subsequently the sediment load the water is carrying. All this has a direct effect on the animals living in the river and bush-plants growing on the banks and on the floodplains.

Mardoowarra is our lifeline, and Nyikina and Mangala people need to ensure that any decisions about dams

and diversions are based on sound knowledge and are done in close consultation with Traditional Owners. Nyikina Mangala Rangers need to be resourced to monitor for environmental changes from the operation of dams.



The barrage—Fitzroy River
© Frank Weisenberger



Failed irrigation structures left from the 1960s © Tanya Vernes



Climate change

It is important to understand the effects of climate change, because it will impact all of us. When scientists talk about climate change they mean significant long-term changes in the average weather. For Nyikina and Mangala this means in particular changes to the rainfall and the temperature. The last few years we have seen temperature records broken over and over again and it appears that every year it gets warmer. Talking to the old people it becomes obvious that there is less rain and some of the big flooding events don't happen anymore or not often enough anymore. The exact effects of climate change for Nyikina and Mangala are hard to predict, but the most important changes will be:



Keeping track of Wiliji—checking the camera traps
© WWF Australia/Nyikina and Mangala Rangers

- an increase in the mean temperature and an increase of very hot temperatures;
- heavier rain during less days and prolonged periods of dry weather;
- more cyclones and storms resulting from higher temperatures in the seas and over land;
- change in vegetation from changing rain patterns which can result in animals moving on;

These changes will affect water availability and the quality of water. Hotter temperatures and decreased water quality will affect human health with an increased chance of water- or food borne disease. Changes in rainfall will affect many of our native plants, animals and our wetlands; at the same time these changes may increase the threat of invasive plants and animals.

There are two ways how Nyikina and Mangala people can address climate change: monitoring closely the change and looking in particular after those plants and animals that are already threatened and therefore more vulnerable to change; this process is called adaption to climate change; By reducing emissions through Early Dry Season Fire Management and other approved methodologies from the Carbon Farming Initiative (e.g. reducing methane emissions from cattle through changed herd management), Nyikina and Mangala can make its contribution to decrease green house gases; this process is called mitigation and relies on people across Australia and around the world helping together to make a change.



Magpie geese and whistling ducks at Mankajarra
© Tanya Vernes



Mining

Mining and industrial development can pose a threat to Nykina Mangala country when its done improperly. There are some sand-mines operating along the Fitzroy River and an oilfield at Ungani. Our country is rich in minerals. Over the years we have seen many mining and development proposals for Nykina and Mangala country and some of them will have huge impacts on the health of our country. Some mining activities we oppose, while others we would consider if impact and benefits are balanced carefully. In the negotiations for mining proposals we need to assert a strong position to ensure our rights and interests are included in the decision making process. Any proposal of mining should ensure that it firstly avoids impacts on our natural and cultural targets; secondly that the process is designed so that it minimises impact; and in the last instance a mining proposal should identify offsets for any residual impact. By participating in the negotiations process we need to ensure these principals are adhered in order to mitigate the threat mining can pose for our country.

For existing mines it is important that our Rangers monitor these sites carefully. Changes in country that come from the mining activity need to be addressed early: this can be for example the management of threatened species affected by the mining operation, revegetation of disturbed habitats, fire management, monitoring of water quality or invasive plant surveys.



Opening of Ungani operations © Buru Energy



Opening of Ungani operations © Buru Energy



Lack of knowledge transfer opportunities

One of the biggest threats to the health of Nyikina and Mangala lore, language and culture is the lack of opportunities to transfer cultural knowledge to the next generation. When we can affect the curriculum and what is taught, some of this learning can occur in a school environment. But it is vital that we are also on country to learn about country. We can't always sit in a class room and talk about country without seeing it. Families and young people in town are often stuck and it can become difficult to visit parts of our Native Title Determination. The young generation is growing up in two worlds, the modern western world and the traditional world. The traditional way of learning from elders on country has to compete with the modern life distractions such as television and social media.

We need to get together; get our old people together; many people passing away; we need to share and pass on our knowledge to the next generation.

To ensure cultural learning will continue, it is important that we record the knowledge of our old people in books and videos to make their wealth of knowledge available for generations to come. Nyikina and Mangala people need to own and run programs like these to ensure they address key issues in the appropriate way. We want to create more regular opportunities to visit country and spend time on cultural activities: this could be by taking young people along on Ranger trip, organise back-to-country trips for town-based families and undertake cultural camps on country to help the transmission of knowledge in the future.



Recording stories on Mardoowarra (Fitzroy River)



River stories — back to country trip



Lack of resources for Healthy Country Management

Maintaining healthy country has always required people to be present and actively manage country. With the many changes over the last hundreds of years that have happened, it is not possible for people to participate in this as they once did. Nowadays Nyikina and Mangala Rangers look after our country both ways. The traditional way, as our ancestors told us and the modern, western way. To fulfil our responsibility and look after country, Nyikina Mangala Rangers require the resources, training and funding to implement the strategies in our Healthy Country Plan. With only 6 Rangers looking after more than 26,000 square kilometers our capacity is always stretched. Nyikina and Mangala need to grow their land management capacity to increase the Ranger Group and our operations in order to mitigate the growing number of threats to healthy country. This will require Walalakoo Aboriginal Corporation to secure sufficient funding for Healthy Country Management from

a range of diverse sources like the Working-on-Country Program, strategic projects, Fee-for-Service opportunities or partnerships with agencies, landholders and philanthropic organisations. It is important for WAC to have sustainable funds because looking after country is not an obligation that will cease in the future like some government funding programs. Nyikina and Mangala people want to look after their country in perpetuity.

Indigenous Ranger Programs are an important employment opportunity for the young generation in remote communities and an important career pathway to gain meaningful employment. To secure a future for our younger generation we need to maintain and increase training opportunities, so that young Nyikina and Mangala people are skilled and ready to fulfil their cultural obligation to look after country like our ancestors did.

We need more Rangers, to look after Nyikina and Mangala country on both sides of the river.



Nyikina and Mangala Rangers helping neighbours to fight wildfires



Nyikina and Mangala Rangers and elders



Lack of consultation and cooperation

It is important that the right people speaking for this country are consulted with.

We fought for many years for our Native Title rights, and the Native Title Determination vested our interests in our Registered Native Title Body Corporate (RNTBC) Walalakoo Aboriginal Corporation (WAC). The Native Title Act identifies the processes that are in place to consult with us and it gives us negotiation powers. Yet there are still many cases where external parties make decisions on their own and not in partnership. There are cases when we find out about projects and developments happening on our country ourselves. Our Corporation has strong governance processes in place that ensure the

right people make decisions for Nyikina and Mangala country. It is vital that external parties follow our governance processes. Good consultation and cooperation means that we must be consulted with from the beginning to ensure our aspirations and values are considered and included.

Our corporation has processes in place for researchers and developers who want to come on our country. Through our corporation office in Derby (www.walalakoo.org.au) there is a physical point of contact with Nyikina and Mangala people. We welcome partnerships and collaborations and want to work closely with other stakeholders on Nyikina and Mangala country.



Signing of the Indigenous Land Use Agreement with the Shire of Derby/West Kimberley © KLC



Water extraction

Mardoowarra and its tributaries are the centre of life for Nyikina and Mangala people. The river holds important cultural stories for Indigenous people and is the critical habitat for a myriad of threatened and native animals and plants. *Mardoowarra* is mighty and in some years the river carries a lot of water. Historical data shows a high variability of rainfall in the catchment of the Fitzroy River and nowadays the impact of climate change amplifies this variability.

There are approximately 25 current ground water licences in the Fitzroy Catchment issued, extracting 2 gigalitres (GL) a year. In addition there are three surface water licences issued in the subregion with the most significant allocation of 6 GL a year at Liveringa Station for irrigated fodder crops. Due to the historical low usage, no allocation limits have been set for the catchment. But the prospect of large-scale irrigated agriculture represents a significant potential increase of consumptive water use requiring dams, diversions and off-stream storage facilities. The high variability of water in the river means, that proposals may exceed the water flow in dry years and therefore having a devastating effect on the plants and animals relying on water from *mardoowarra*.

Developers often propose that freshwater is wasted in the Fitzroy Catchment when the river pumps its water into the ocean. Those developers don't understand that the river is part of a large ecosystem in which every component has its role. Before any development proposals are discussed

...that new bridge at Snake Creek affects our river. No fish anymore

and pushed by Government agencies, the science needs to answer questions on sustainability and the cumulative impact of these proposals for the entire catchment. Traditional Owners need to play a central role in this process: not solely from a cultural perspective, but overarching due to their Native Title Rights. Nyikina and Mangala people want to ensure that any proposals for water extraction have no negative impact on culture and country and that we don't repeat the same mistakes from the Camballin Irrigation Scheme.



Water extraction for irrigated agriculture © Frank Weisenberger

Mardoowarra stopped flowing
© Frank Weisenberger



Invasive animals

In the Healthy Country Planning Process we distinguished between *Invasive herbivores* (e.g. unmanaged cattle, pigs, donkey, camel) and *Invasive carnivores* (e.g. dog, cat, fox). Both have a very different impact and require different management in our day-to-day activities. For the purpose of this publication, we have combined both threats to show the combined impact of introduced animals on Nyikina and Mangala country.



Red fox © Mike Griffiths & Phil Lewis DEC/WWF Australia

Our landscape looks very different since European settlers introduced their domestic animals into the landscape. In the early days, pastoralists ran sheep on our country, but sheep has now been replaced with cattle. Cattle and other hoofed animals have an impact on the groundcover and through grazing on the native vegetation. The highest impact occurs around freshwater places, where animals come together. When invasive herbivores congregate, they compact the soil and erode the river banks. Pastoralists and the Nyikina and Mangala Rangers can minimise their impact through good herd management and by installing artificial water points and fences near sensitive areas.

Invasive animals like dogs, cats and foxes have a serious impact on our native animals. In particular, smaller animals are hunted by those predators. Cats have a horrific impact on wildlife with every cat taking between 5 and 30 animals per night. From time to time we see cats roam our country, find their tracks and we have recorded cats on our camera traps in habitats of high conservation value. We want to work with scientists and partners to trial effective methods for the control of cats, dogs and foxes.

Another concern for our country is the imminent arrival of the cane toad. With their poisonous glands, cane toads kill animals that eat them and *barniy* (goanna), snakes, *koowaniya* (Freshwater Crocodile) and *linykoorra* (Saltwater Crocodile) may be affected. Animals that already occur in small numbers are most threatened by cane toads because their populations find it harder to cope with the impact. Our Rangers need to do more surveys to monitor our native animal species closely to ensure that no species will be lost.



Feral cat
© Phil Lewis WWF Australia



Town life / social issues

Some of our young people are growing up in communities on our country and other families live in the towns of Derby and Broome. All of them grow up in two worlds, the traditional world and the modern western world. For young people in town it is harder to connect to country because they can't just go and be on country as they please. Our traditional lore and customs often compete with the distractions and issues that young people face in town.

For the physical and spiritual well-being of our younger generation we need to work together with local and regional partners to emphasise the positive values of our Nyikina and Mangala culture and customs. To compete with the distractions of town-life we need to excite young people for our culture and country. We need to create space for them to engage with our culture through cultural camps, back-to-country trips, youth activities and offer pathways and development opportunities for the younger generation.



Out on country—Langilangi © KLC

Young fellas in town don't know much about river stories and the pastoral history; they only travel along the main highway and they don't follow the old highway we travelled in our days on camels and donkeys.



Youth dancing at the Nyikina and Mangala Native Title determination © KLC



Pollution / Contamination / Tailings

Since the release of the Northern Australia Development White Paper¹, there have been a lot of development proposals suggested for the Fitzroy Catchment. Many of these proposed developments increase the risk of pollution and contamination of our country and our rivers and creeks. Agricultural development proposals will inevitably lead to an increased use of fertilisers for fodder crops. Some of these fertilisers will wash off the land and accumulate in our rivers and billabongs. The increase in nutrients will change the water quality and affect plants and animals living in the water. By directly affecting insects and small plants, the flow-on effects from fertiliser can impact many of our flora and fauna that rely on those in their food-chain. Fertiliser, tailings and other toxins can seep into the groundwater and affect the quality of drinking water in our communities. We need to ensure that drinking water in our communities is clean and safe to drink for young and old.

Some mining proposals on our country will lead to pollution and potential contamination from tailings. Across the world the resource industry wants to use shale gas. But we can see from other parts of the country, where companies use fracking to extract the gas that the fluids pumped into the soil seriously affect the ground water. In addition, there is a risk of spills and contamination from waste water, polluted with fracking fluids, that is stored near the wells.

If it comes to any development proposals we need to ensure that they follow a stringent environmental assessment process in which we can participate as the Native Title Holders. Any agricultural or mining operation will require intensive monitoring to ensure that the negative impacts on our country are as small as possible and well managed.



Irrigated agriculture: growing fodder on Liveringa Station © Frank Weisenberger



Invasive plants

Weeds are plants that do not belong to our country and cause damage. Invasive plants can come in the form of grasses and herbs, vines, trees and shrubs and some occur in waterways. Many weeds come from overseas and have been brought to Australia by purpose (e.g. for pasture and horticulture) or by accident. Weeds cause damage by:

- altering habitats and vine-weeds by overgrowing and strangling trees and shrubs, outcompeting important native plants;
- competing or taking the place of native plants and making it harder for native animals to find food and shelter;
- increasing and changing the fuel loads of wildfires by drying out at different times of the year;
- changing the flow and health of water places;

Landholders have an obligation to manage weeds on their lands. For some of these weeds, such as “Weeds of National Significance” or “Declared plants” in Western Australia there is a legal requirement to manage these invasive plants and stop them from spreading further. Some of those dangerous infestations on Nyikina and Mangala country are Rubbervine, which is prolific along the Fitzroy River, Parkinsonia, Mesquite, Buffelgrass, Noogoorra Burr and Bellyache Bush.

Nyikina and Mangala Rangers and Traditional Owners need to keep an eye out for plants that don't belong to an area. It is easiest to eradicate weeds before they establish themselves.

Some weed infestations on Nyikina and Mangala country are large and we need to work together with partners and

other landholders to get these weeds under control before they spread any further.

One vine has hundreds of pods; one pod thousand of seeds; Rubbervine is seeding quickly and choking our trees.



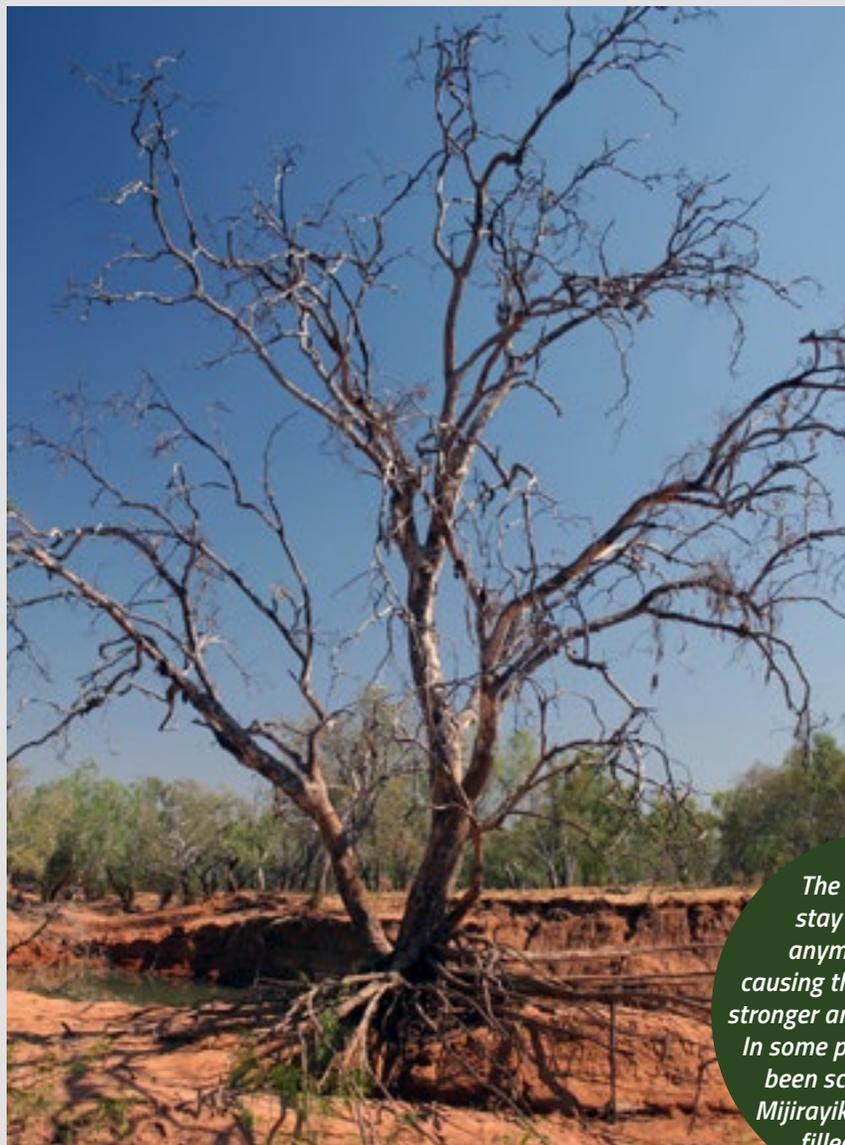
Parkinsonia © Louise Beames



Noogoorra burr © Louise Beames



Legacy of bad land management



The flood doesn't stay in its channel anymore. Erosion is causing the warramba to be stronger and more destructive. In some places the river has been scoured out like at Mijirayikan and then gets filled up with silt.

Erosion at the failed Camballin irrigation scheme © Tanya Vernes

In the late 1950's Northern Development Pty Ltd and later on the Australian Land and Cattle Company, with the help of the Department of Agriculture, were instrumental in setting up the Camballin Irrigation Scheme. At the time it was the second largest attempt to grow rice and other crops with irrigation in Australia. Despite the large investments by government to install water infrastructure, the project was troubled from the outset by disasters and was never successful. Cropping was plagued by birds, insects, weed infestations, but in particular by the inability to maintain a constant water supply from the Fitzroy River.

The big flood of 1983 brought an end to the Camballin Irrigation Scheme, but we are still affected by its consequences. Almost forty years later, deteriorating infrastructure and substantial debris from the failed Camballin project remain on-site.

Remnants of the project, including levy banks, dam walls, the barrage across the river and a variety of pump casings, culverts, roads and channels continue to exist, and no attempt has been made to rehabilitate the country. The remaining infrastructure changed the flow of the river and affects flood events. This exacerbates erosion on our country; some ravines are so deep you can park a car inside them.

Our Rangers have applied successful measures to control erosion by slowing the flow of water in the Daly Lake System on Myroodah Station. The slower the water runs, the less it erodes country and plants can regrow in areas that were barren for many years.



Erosion channels on Liveringa Station © Frank Weisenberger



Inappropriate fire regime / wildfires

Traditionally our ancestors burned country late in the wet-season and early in the dry season at a time when fires would not spread so far. With the arrival of pastoralists the fire regime in our region changed significantly. Nowadays Nyikina Mangala Rangers implement Early Dry Season Fire Management to avoid late dry season hot fires.

Late Dry Season Fires can burn sometimes for months and through large tracts of lands. As a result of hot fires, the vegetation structure changes and the landscape is dominated by annual grasses instead of perennial trees, shrubs, grasses and obligate seeders. Another threat from hot, large scale fires is their impact on the habitat of our native animals. Small animals often can't get away quickly enough from fire and get burnt. Once a fire has travelled through country there is little plant cover left for animals to hide; predators like cats benefit from hot fires and often travel large distances to hunt after a fire event. In addition, hot fires can destroy the nesting trees for birds.



Nyikina and Mangala Rangers fighting wildfires



Fighting fire with fire

Many fires come through Nyikina and Mangala country from the North. All landholders on Nyikina and Mangala country need to work together more closely so that the risk of late dry season fire is managed appropriately. The law requires that landowners ensure that fire on their land does not cross into other people's country and cause damage there.

Nyikina Mangala Rangers organise fire planning meetings every year seeking wide engagement from all stakeholders.

Nyikina Mangala Rangers are skilled and trained to provide fire management services to neighbours for fuel reduction burns or asset protection burns.



What happened is that they are overstocking the country. Where cattle goes, they make roads. When the rain comes, these roads make rivers. We need to talk to Station Managers to make sure country is looked after.

Mustering at Mount Anderson Station



Cattle © Frank Weisenberger

The pastoral industry has established itself over many decades since the arrival of European settlers. While significant work has been done over the years to improve land management practices and achieve sustainable grazing levels, there are still some areas where land management could be improved.

Pastoralists need to ensure that cattle are maintained at sustainable numbers and restricted to pastoral lands, keeping them outside sensitive areas. The riverbanks along the Fitzroy and some of our wetlands and billabongs are heavily impacted by stray cattle and trampling can lead to erosion, sedimentation and increased turbidity. Unsustainable numbers of cattle can change the ground cover and the structure of our grasslands, which amplifies the establishment of invasive plants. Removal of too much ground cover can lead to erosion and the loss of fertile soils.

Nyikina and Mangala people have been the backbone of the pastoral industry for many decades. Nowadays Walalakoo Aboriginal Corporation is part of the Kimberley Agriculture and Pastoral Company (KAPCO) to revitalise the Aboriginal pastoral industry and to create meaningful employment. Nyikina Mangala Rangers are offering fencing services to pastoralists on their land helping to restrict the movement of cattle into sensitive areas and improve herd management.



Lack of visitor management

This threat is about people accessing culturally significant sites like rock art places and freshwater places. In the old days of our ancestors Traditional Owners passing through our country sought permission to enter our lands. If visitors want to come on our country nowadays and visit culturally significant places, they need to follow certain cultural protocols. When we welcome people to our country we give visitors an introduction to country. It is important that the right information is given about our country and that the right people tell the story.

Our Rangers have already installed signage around some of our art sites and along the river. But it is important that tourists are accompanied by Traditional Owners when they go to sensitive sites. The ability to hear the stories from our elders adds value

to the experience of tourists, who normally don't interact much with local Indigenous people on their travels. Service providers and workers in our communities should undertake cultural awareness training to increase their understanding and increase cross-cultural respect.

Many people visit *mardoowarra* every year — international and interstate travellers and many people from Kimberley towns like Broome, Derby and Fitzroy Crossing. We want tourism along the Fitzroy River to be better managed to ensure that impacts from visitation such as erosion, pollution and over-utilisation of resources don't become an issue. Already based on country, Nyikina and Mangala people would like to collaborate with the local council and tourism agencies and operators to improve visitor management.



Fencing art sites at Loornboodan



Visitor management at Karlkabiny

Over-fishing / Over-hunting & Poisoning / Baiting



The threat “Over-Fishing” and “Over-Hunting” is about sustainable harvest. Our traditional ecological knowledge lets us read country like a calendar and tells us about the right season for hunting. Our Nyikina and Mangala lore tells us only to take what we need and how we share meat in our community. When patrolling along the main campsite of the river we always come across visitors who fill freezers with fish to take away and sometimes use drag nets in the river. It is important that we closely monitor how much fish is taken to avoid depletion of our fish-stocks.

Our livelihoods depend on our ability to hunt and fish and we want to explore opportunities to work closely with the Department of Fisheries and the Shire to improve recreational fishing along the Fitzroy River so that Indigenous and non-Indigenous fishing coexists harmoniously.



Biyal biyal (Freshwater Sawfish)
© David Morgan

Poisoning and baiting poses a threat to some of our carnivorous and omnivorous native animals. While poison sometimes helps to reduce the impact of feral animals, sometimes the same poison kills our native fauna when they feed on the carcass of the poisoned animal or accidentally feed on the bait. There are some new and innovative tools for feral animal management available and we want to explore opportunities with other land managers to lessen the negative impact of feral animal control on our native animals.



Grant Ranges © Frank Weisenberger



Goals, strategies and actions

Goals

At the outset of the plan we explained our Vision — how Nyikina and Mangala people want to see country in ten years time. In the preceding sections of the Healthy Country Plan we described our targets and the main threats that affect the health of our targets. To reach our vision we need to keep our targets healthy and fix the threats affecting them. Goals are those over-arching activities we undertake to achieve our vision, to look after our targets or to make a threat less harming:



Ranges near Jarlmadangah © Tanya Vernes

- By 2018 Nyikina and Mangala lore, culture and customs are reinvigorated and passed on to the next generation through a Cultural Learning Program;
- By 2017 onwards Nyikina and Mangala people's aspirations and customary obligations for country are recognised and Traditional Owners have opportunities to gain skills and generate an income from country based activities;
- By 2018 and on-going 10 Nyikina Mangala Rangers have the resources and skills to look after Nyikina and Mangala country;
- Priority cultural sites on Nyikina and Mangala country are healthy and impact from fire, weeds, feral animals and visitors is minimised;
- By 2017 Nyikina Mangala Rangers and partners implement Early Dry Season Fire Management to prevent uncontrolled late Dry Season fire;
- By 2018 Freshwater places on Nyikina and Mangala are culturally healthy and sustain native plants and animals;
- By 2016 and on-going the habitat of bush-plants, native animals and threatened species is healthy and species are plentiful;



Turtle shell

© WWF Australia/Nyikina and Mangala Rangers



Strategies

Each goal has one or more strategies associated with it. By implementing the strategies we are planning to achieve our goals.

By 2018 and on-going Nyikina and Mangala lore, culture and customs are reinvigorated and passed on to the next generation through a cultural learning program:

- Cultural Information is repatriated, collated and made accessible to foster knowledge transfer opportunities to the next generation and identify priority sites for management;
- At least one annual back-to-country trip with town based Traditional Owners is undertaken to facilitate cultural learning;
- An annual cultural walk / cultural camp together with partners is undertaken to celebrate Nyikina and Mangala culture;
- Traditional Ecological knowledge is collated in a Plants and Animals book that records language names and traditional use of flora and fauna;
- With schools and other partners develop and improve language materials for Nyikina and Mangala;

By 2017 Nyikina and Mangala people's aspiration for country are recognised and Traditional Owners have opportunities to gain skills and generate an income from country based activities:

- A communication strategy raises the profile of WAC and Nyikina Mangala Rangers with stakeholders and partners;
- By implementing the business plan, WAC facilitates economic development opportunities for Nyikina Mangala Rangers and Traditional Owners through Fee-for-Service and on-country business opportunities;
- ILUA's with pastoralists and relevant agencies ensure that WAC's aspirations for healthy country are adequately recognised in development proposals;
- Investigate opportunities for tourism business development for a better management of visitors and cultural education;



Birral Birral (Cockroach Bush)
© Frank Weisenberger



By 2018 and on-going ten Nyikina Mangala Rangers have the resources and skills to look after Nyikina and Mangala country:

- Through the implementation of WAC's business plan Nyikina Mangala Rangers are sustainably funded to look after their traditional land in accordance with the Walalakoo Healthy Country Plan;
- A communication strategy raises the profile of WAC and Nyikina Mangala Rangers with stakeholders and partners;
- Develop and implement a training plan to ensure our Rangers have the skills and capacity to look after country;
- Collaborate with service providers and community corporations to align programs with Traditional Owner aspirations and improve efficiencies for land management strategies by including community work-teams;

Priority cultural sites on Nyikina and Mangala country are healthy and impact from fire, weeds, feral animals and visitors is minimised:

- Investigate opportunities for tourism business development for a better management of visitors on Nyikina and Mangala country;
- Implement a visitor education program

through the installation of signage, distribution of posters and pamphlets in visitor centres and a cultural awareness program;

- Fence of priority cultural sites to prevent further damage from tourists and invasive animals;
- Monitor and evaluate the efficiency of land management strategies;

By 2017 Nyikina Mangala Rangers and partners implement Early Dry Season Fire Management to prevent uncontrolled late Dry Season fire:

- Nyikina Mangala Rangers facilitate fire planning and review meetings with all land-owners / stakeholders on Nyikina and Mangala country to achieve a shared vision for Fire Management;
- An EDSFM program is implemented by Nyikina Mangala Rangers and partners creating a mosaic of burned and unburned patches to reduce the impact of late Dry Season fire;
- Collaborate with community work-teams and fire agencies to protect assets and communities from damaging late dry season fire;
- Investigate the feasibility of a Low-Rainfall Savannah Burning project to intensify fire management;
- Monitor and Evaluate the efficiency of land management strategies;



Fencing at Loornboodan

By 2018 Freshwater places on Nyikina and Mangala are culturally healthy and sustain native plants and animals:

- Seek enforcement rights to patrol and monitor visitors along high-visitation sites on the Fitzroy River to ensure a sustainable fishing practice;
- Through submissions, partnerships and agreements manage the connectivity of the Fitzroy River and its cultural flow to ensure the maintenance of cultural values as listed for its National Heritage;
- Identify cattle and pig impact on the riparian vegetation and priority cultural and ecological sites;
- Through fencing, rotation management of cattle and the creation of alternative water points ease the pressure of cattle on priority ecological/cultural sites;
- Monitor and evaluate the efficiency of land management strategies;



Crocodile management



Erosion control Lake Davey



Monitoring and evaluation

Through monitoring, evaluation and review, the Walalakoo Healthy Country Plan promotes adaptive management. Now that we have collated our knowledge and aspirations in the Walalakoo HCP, Nyikina and Mangala Rangers, Walalakoo Aboriginal Corporation and Traditional Owners together with our partners will implement the Healthy Country Plan.

Monitoring and Evaluation means that we continuously check on our work, targets and threats. The fundamental question that Nyikina and Mangala are facing, is whether our strategies are working. To answer this question, we will need to periodically collect data on a number of indicators that gauge how well our strategies are keeping the critical issues in check and, in turn whether the health of our Targets is improving.

When we talk about Reporting, we are looking at reporting on three things (please refer to figure 9):

- Implementation — are we using the plan?
- Effectiveness — are the strategies working?
- Status — are our targets improving?

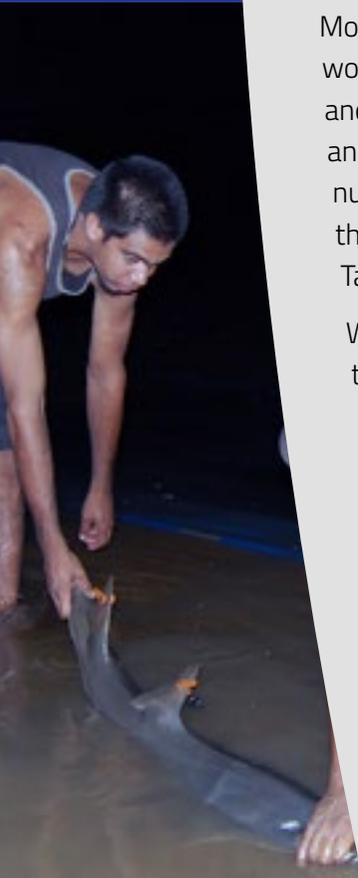
Implementation monitoring and reporting is the simplest and done most often. Implementation monitoring simply answers the question “Are we using the plan?“, and is a regular review of the actions in the work plan to see if they are being done, and check their progress. We work on this question each year when the Rangers develop their work-plan and do annual reporting on their achievements.

Effectiveness monitoring focuses on strategies and objectives, and whether we are seeing change that shows we are successful. Effectiveness monitoring builds on implementation monitoring. In addition we look at all the information we have collected from our completed work and analyse whether it is showing us that we achieved change. This is best done with the help of some of our partners; by looking at the monitoring data over time, we can evaluate if strategies are effective.

Status monitoring is undertaken on the targets and their ongoing health. This tells us if the activities and strategies are leading to improvement. Status monitoring is the most difficult of all three levels of monitoring and requires the greatest investment in time and resources, data-capture and analysis. Because natural targets often only respond to change over time, status reporting is undertaken only when the Healthy Country Plan is reviewed.



Figure 9 Monitoring and evaluation



Sawfish monitoring © David Morgan
Murdoch University



Walalakoo Aboriginal Corporation is the Registered Native Title Body Corporate representing the interest of Nyikina and Mangala Native Title holders in regards to our Native Title Determination. Our corporation is governed by a Board of Directors of twelve individuals with support from eight Cultural Advisors. The WAC members are the over-arching body that considers and decides on projects and proposals affecting our Native Title on Nyikina and Mangala country through the directors. The Board of Directors and the Cultural Advisors are appointed to provide the strategic direction for the corporation.

The day-to-day operations of the Nyikina and Mangala Rangers is overseen by a Healthy Country Advisory Committee consisting of some of our Directors and Cultural Advisors. It provides advice on Ranger activities, work planning, Ranger recruitment and supports the Nyikina Mangala Rangers as community representatives. Throughout the year at our Director Meetings, the Nyikina Mangala Rangers provide updates and feedback on their current work to the wider group.

Through our governance arrangements we ensure that projects on Nyikina and Mangala country are strategic and align with the aspirations of our corporation and the vision of the Walalakoo Healthy Country Plan. Our research policies promote collaborative research that responds to questions of the wider Australian community as much as to research priorities for our community. A network of trusted specialists and research partners will support Walalakoo Directors with the evaluation of our Healthy Country Plan and ensure that we achieve our vision through our strategies.



Crocodile management



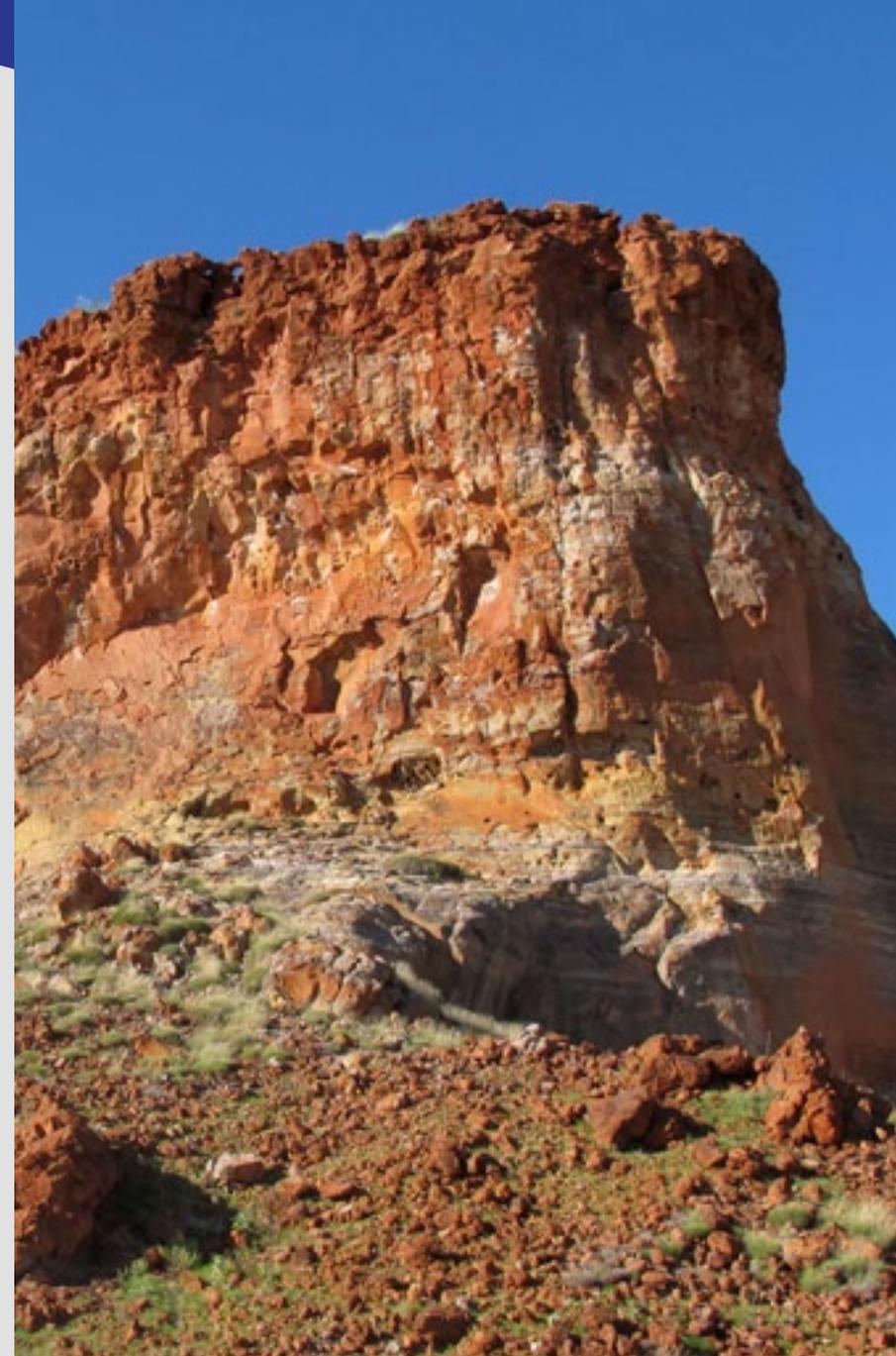
References & abbreviations

DFES	Department of Fire and Emergency Services
EDSFM	Early Dry Season Fire Management
GL	Giga litres
HCP	Healthy Country Plan
ILUA	Indigenous Land Use Agreement
KAPCO	Kimberley Aboriginal Pastoral Company
KLC	Kimberley Land Council
NHL	National Heritage Listing
OS	Open Standards
PTY	Proprietary company
RNTBC	Registered Native Title Body Corporate
TNC	The Nature Conservancy
WAC	Walalakoo Aboriginal Corporation
WWF	World Wildlife Fund

Australian Government (2015): Our North, our future:
A vision for developing Northern Australia



Freshwater crab © WWF Australia /
Nyikina Mangala Rangers



Mowla Bluff © WWF Australia/Nyikina and Mangala Rangers

Appendix 1: Glossary



banjiral	Paperbark (with grey leaves)
barniy	Goanna
barooloo	Catfish
barrjaniny	River Kangaroo / Agile Wallaby
barrkana	cold weather
bilawal	Bloodwood tree
birral birral	Cockroach bush
biyal-biyal	Freshwater Sawfish
bookarri-karra	Creation time
boordoo-koorr	Northern River Shark
jamandi	Hill Kangaroo
jarramba	Cherabin
jiny-Jiny	Budgerigar
jiirbal	Build-up of rainy season
joolooboo	Fig Tree (in river country - black fruit)
kajan-wila	Billabong
kakaroo	Long mussel
kalbarrkoo	Freshwater crab
Kardookardoo	White Gum
karnajina-ngany	Echidna
karna-nganyja	Emu
Kartiya	European
kiliwal / Kringkoo	Sap of bloodwood
kirloo	Golden Bandicoot
koolabalba	Spring time
koolowa	Knock-em down rain
koonariny	Fig tree (in river country)
koongkala	Fire Stick Tree
kooramarrka	Bush Turkey
koorr-biji	White River Gum

koowaniya	Freshwater Crocodile
kwardany	Fruit tree
lakooroo	Fig tree (in hill country)
lalin	Hot season
larrkardiy	Boab tree
libarrara	Eucalyptus
limirri	wax
linykoorra	Saltwater Crocodile
majala	Freshwater Mangrove
malaji	Spirit being
mangka-ban	Bilby
mardoowarra	Fitzroy River
mooroon	Spinifex
ngamybal	Bush orange
ngooji	Black berry (fruit tree)
nimalgkan	Small Paperbark
oongookoorr	Rainbow serpent
ranja	White berries
wakari	Pandanus
walalalakoo	A lot of people
walja	Barramundi
walngka	Black Bream
waramba	flood
warimba	Bauhinia
warloongariy	Songline for the Fitzroy River
wila-karra	Wet season
wilbooroo	Flowering season
wiliji	Black footed Rock Wallaby
yi-mardoowarra	Belonging to river country
yoodool	Paperbark (with green leave)



Edgar Ranges © WWF Australia / Nykina Mangala Rangers



Appendix 2: Nested targets

Threatened species

Healthy Country target	Listing	
Nyikina and Mangala language, lore and culture	The West Kimberley National Heritage	
Native animals	Red Goshawk (<i>Erythrotriorchis radiatus</i>) EPBC Vulnerable	Gouldian Finch (<i>Erythrura gouldiae</i>) EPBC Endangered
	Purple crowned Fairy-Wren (<i>Malurus coronatus coronatus</i>) EPBC Endangered	Night Parrot (<i>Pezoporus occidentalis</i>) EPBC Endangered
	Princess Parrot (<i>Polytelis alexandrae</i>) EPBC Vulnerable	Australian Painted Snipe (<i>Rostratula australis</i>) EPBC Endangered
	Masked Owl (<i>Tyto novaehollandiae kimberli</i>) EPBC Vulnerable	Northern Quoll (<i>Dasyurus hallucatus</i>) EPBC Endangered
	Greater Bilby (<i>Macrotis lagotis</i>) EPBC Vulnerable	Black-footed Rock Wallaby (<i>Petrogale lateralis</i> West Kimberley race) EPBC Vulnerable
	Bare rumped Sheath-tail Bat (<i>Saccolaimus saccolaimus nudicluniatus</i>) EPBC Critically Endangered	Water Mouse (<i>Xeromys myoides</i>) EPBC Vulnerable
	Letter-winged kite (<i>Elanus scriptus</i>) (WA listed - Priority 4)	Grey Falcon (<i>Falco hypoleucos</i>) (WA listed - Vulnerable)
	Peregrin Falcon (<i>Falco peregrinus</i>) (WA listed - other protection)	Eastern Curlew (<i>Scolopacidae numenius</i>) (WA listed - Vulnerable)
	Lakeland Downs Mouse (<i>Leggadina lakedownensis</i>) (WA listed - Priority 4)	Ghost bat (<i>Macroderma gigas</i>) (WA listed - Vulnerable)
	Spotted Ctenotus (<i>Ctenotus</i>) (WA listed - Priority 2)	Spectacled Hare-Wallaby (<i>Conspicillatus leichardti</i>) (WA listed - Priority 3)
Yellow lipped cave bat (<i>douglasorum</i>) (WA listed - priority 2)		
Freshwater	Northern River Shark (<i>Glyphis garricki</i>) EPBC Endangered	Dwarf Sawfish (<i>Pristis clavata</i>) EPBC Vulnerable
	Largetooth Sawfish (<i>Pristis pristis</i>) EPBC Vulnerable	Green Sawfish (<i>Pristis zijsron</i>) EPBC Vulnerable
	Prince Regent Hardyhead (<i>Craterocephalus lentiginosus</i>) (WA listed - Priority 2)	Greenway Grunter (<i>Hannia Greenwayi</i>) (WA listed - Priority 1)
Bushtucker / Bushmedicine plants	Indigofera ammobia (WA listed - Priority 3)	Keraudrenia Katatona (WA listed - Priority 3)
	Nymphoides Beaglensis (WA listed - Priority 3)	Olax spartae (WA listed - Priority 2)
	Pandanus spiralis (WA listed - Threatened)	Rhynchosia rostata (WA listed - Priority 1)



Freshwater seepage © Tanya Vernes

Migratory species listed by international agreements

Healthy Country Target	Listing	
Freshwater	Fork-tailed Swift (<i>Apus pacificus</i>)	Lesser Frigatebird (<i>Fregata ariel</i>)
	Little Tern (<i>Sterna albifrons</i>)	Saltwater Crocodile (<i>Crocodylus porosus</i>)
	Great Egret (<i>Ardea alba</i>)	Cattle Egret (<i>Ardea ibis</i>)
	Oriental Plover (<i>Charadrius veredus</i>)	Oriental Pratincole (<i>Glareola maldivarum</i>)
	Bar-tailed Godwit (<i>Limosa lapponica</i>)	Osprey (<i>Pandion haliaetus</i>)
	Common Greenshank (<i>Tringa nebularia</i>)	Maggie Goose (<i>Anseranas semipalmata</i>)
	White bellied Sea Eagle (<i>Haliaeetus leucogaster</i>)	Freshwater Crocodile (<i>Crocodylus johnstoni</i>)
	Eastern Great Egret (<i>Ardea modesta</i>) (WA listed)	Sharp-tailed Sandpiper (<i>Calidris acuminata</i>) (WA listed)
	Ruddy Turnstone (<i>Arenaria interpres</i>) (WA listed)	Red know (<i>Calidris canutus</i>) (WA listed)
	Curlew Sandpiper (<i>Calidris ferruginea</i>) (WA listed)	Red-necked Stint (<i>Calidris ruficollis</i>)
	Long-toed Stint (<i>Calidris subminuta</i>) (WA listed)	Great Sand Plover (<i>Charadrius leschenaultii</i>) (WA listed)
	Lesser Sand Plover (<i>Charadrius mongolus</i>) (WA listed)	White winged black tern (<i>Chlidonias leucopterus</i>) (WA listed)
	Little Curlew (<i>Numenius minutus</i>) (WA listed)	Whimbrel (<i>Numenius phaeopus</i>) (WA listed)
	Glossy Ibis (<i>Plegadis falcinellus</i>) (WA listed)	Pacific Golden Plover (<i>Pluvialis fulva</i>) (WA listed)
	Grey Plover (<i>Pluvialis squatarola</i>) (WA listed)	Wood Sandpiper (<i>Tringa Glaerola</i>)
	Marsh sandpiper (<i>Calidris tringa</i>) (WA listed)	Pectoral Sandpiper (<i>Calidris melanotos</i>) (WA listed)
	White-winged black tern (<i>Chlidonias leucopterus</i>) (WA listed)	Asian Dowitcher (<i>Limnodromus semipalmatus</i>) (WA listed)
Native animal	Oriental Cuckoo (<i>Cuculus optatus</i>)	Barn Swallow (<i>Hirundo rustica</i>)
	Rainbow Bee-Eater (<i>Merops ornatus</i>)	Grey Wagtail (<i>Motacilla cinerea</i>)
	Yellow Wagtail (<i>Motacilla flava</i>)	Redrumped Swallow (<i>Hirundo daurica</i>)



Linykoora (Saltwater Crocodile)

The Nature
Conservancy 
Australia



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