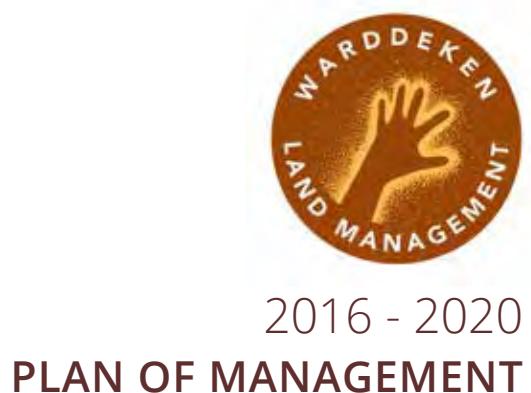
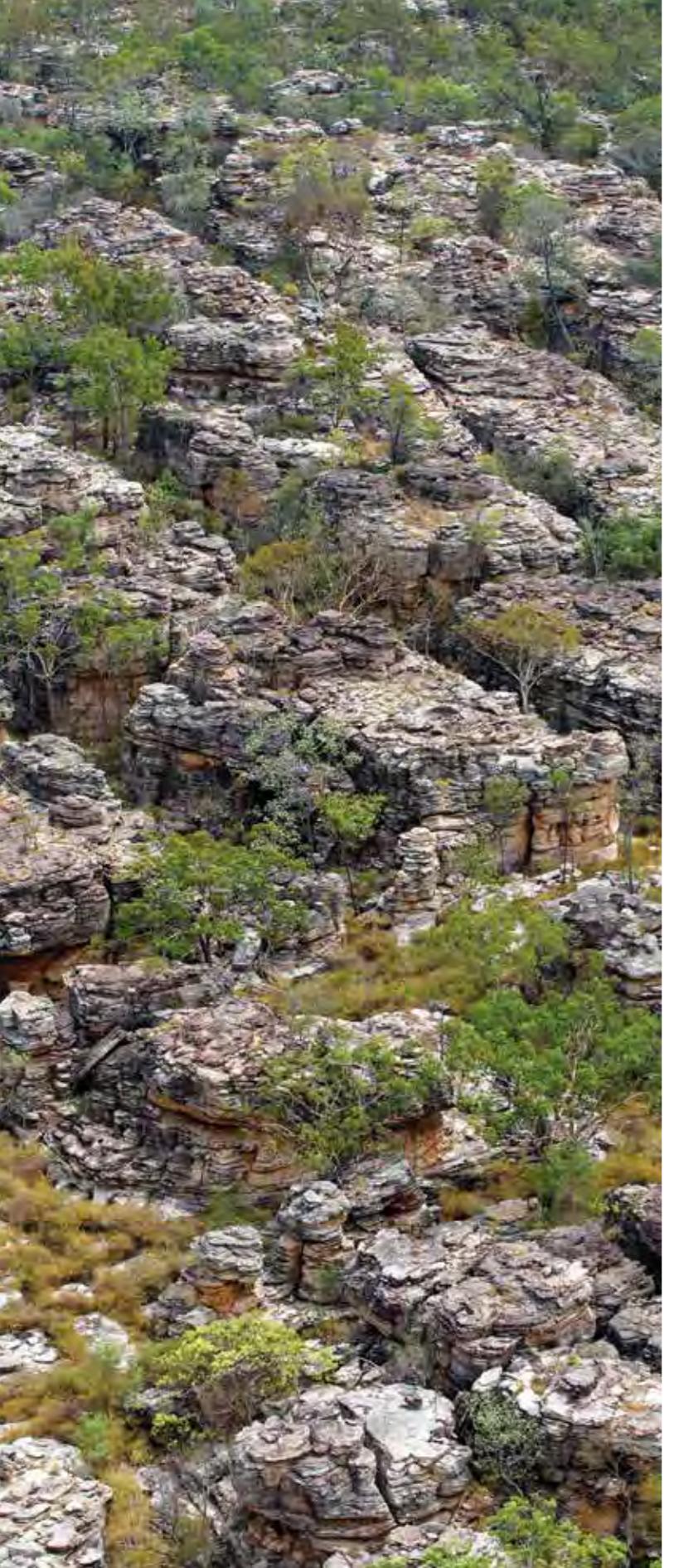




WARDDEKEN INDIGENOUS PROTECTED AREA





'When our way of thinking, our ideas and practices go into the plan of management, then that is enlightening for us because this is what our old people, our ancestors have left for us. We will understand how to look after this country.'

We don't want to only follow new ways that are foreign to us, no. We want to do what our old people have done before us because this is their legacy to us. Together with non-Aboriginal culture, the two ways can go into the plan of management. That way, there will be understanding.'

Rodney Naborlhborth

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Warning: This plan contains images, names and references to deceased Indigenous Australians.

Heather Moorcroft and Georgia Vallance have prepared this Warddeken Plan of Management, based on consultations with Nawarddeken people and Warddeken Land Management Limited members.

All Indigenous knowledge in this plan remains the intellectual property of the Nawarddeken people.

This plan includes photography by David Hancock at SkyScans, Jake Weigl, Georgia Vallance, Rowand Taylor, Peter Cooke, Graeme Gillespie and Dan McLaren and may not be used without consent.

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Warddeken Indigenous Protected Area

Plan of Management 2016 - 2020

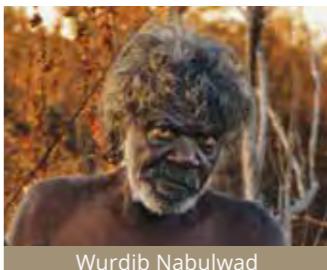
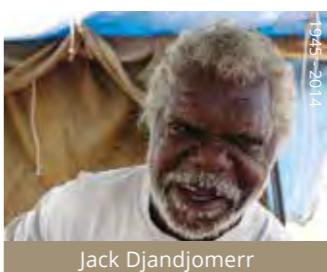
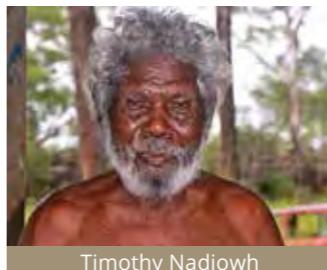
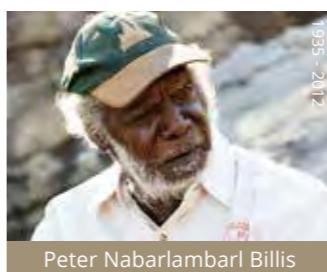
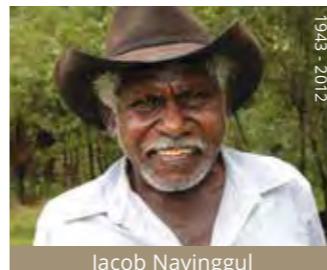
Dedication to our professors

The most senior and knowledgeable Nawarddeken hold unequalled knowledge about our home, the Kuwarddewardde. Their depth of knowledge and willingness to share and teach has led us to acknowledge them as our professors.

This plan is dedicated to our professors, those we still have with us and those whose spirits have returned home to the stone country. It was their passion that led to the establishment of our company Warddeken

Land Management Limited. They wanted to make sure Nawarddeken would continue to look after the Kuwarddewardde for generations to come.

The wisdom and foresight of our professors set us on the path we follow today as we continue to look after the Kuwarddewardde, the country they loved so much. We carry them in our hearts and it is their vision guiding us into the future.



Our logo



Our logo was created in 2007 when Warddeken Land Management Limited was incorporated as a not-for-profit company. The kabidbimyo (hand stencil) at the centre of the logo is the hand of the company's founder and patron, Bardayal Lofty Nadjamerrek AO (Wamud Namok 1926–2009). It reminds us that it was his guiding hand that led the land management movement in the stone country and we wear it with pride.

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Our vision

Our vision is to have healthy people living and working on our healthy country in the Kuwarddewardde.

We want the management of our country to be in our hands now and into the future.



*'This is my country.
This is where I recognise myself.
I have a responsibility to manage
it now and into the future.'*

Andrew Maralngurra



We like what's happening with Warddeken and the direction it's taking. Warddeken has made things change. There's been real action. It allows people to interact with cultural activities like hunting and provides opportunities for older people to be respected as teachers'.

Leanne Guymala & Lewis Naborlhborlh

Warddeken Land Management story

The stone country of the Kuwarddewardde (Arnhem Land Plateau) is the home of the Nawarddeken, our people. The Warddeken Land Management story is about Nawarddeken returning to country to care for their clan estates using customary and contemporary management practices.

For thousands of generations Nawarddeken clan groups lived on their customary estates in the stone country. They were part of a living landscape, integral to the health of the Kuwarddewardde. Nawarddeken walked and camped throughout the Kuwarddewardde, each dry season undertaking landscape scale traditional burning. Djungkay (ceremonial managers) carried out and managed ceremonies in accordance with the responsibilities passed on to them by matrilineal descent. Djang (sacred sites) and other cultural sites were visited regularly.

With the arrival of Baland (white people), Nawarddeken began to leave the Kuwarddewardde, attracted by Christian missions and government trading posts, opportunities to work in the mining and buffalo industries, and the appeal of larger settlements. Some also served with the armed forces in WWII. A Nawarddeken diaspora resulted and, by the late 1960s, the Kuwarddewardde was largely depopulated. Nawarddeken elders considered the country orphaned.

During this time, our professors saw and felt the devastation of large wildfires and an increasing number of feral animals impacting on biodiversity

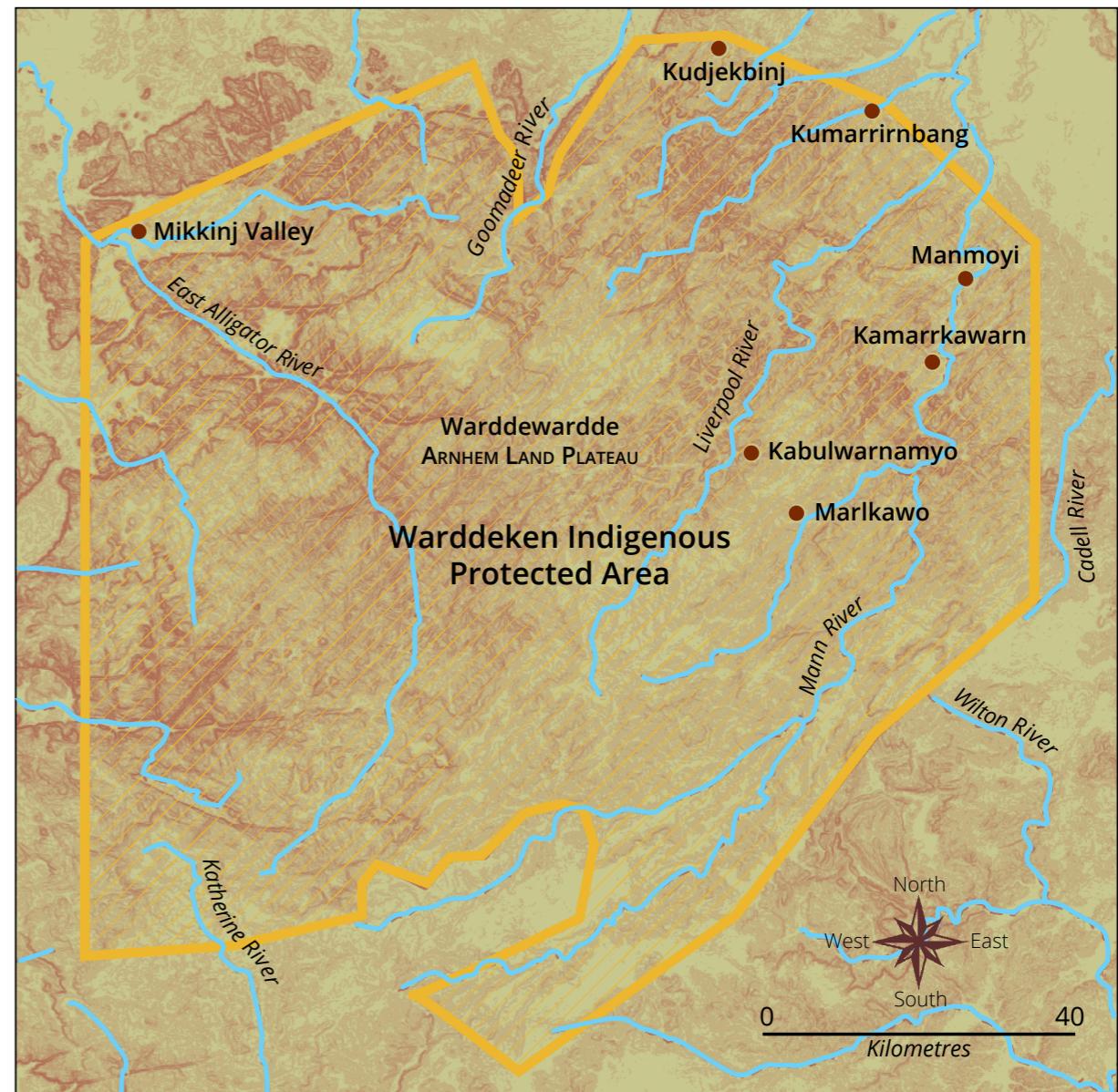
and cultural sites. Their concern was matched only by their desire and motivation to return to country, to once again look after the Kuwarddewardde, and maintain and pass on their knowledge to future generations.

In the 1970s a return to country movement began in Australia, which resulted in Nawarddeken moving back to outstation communities in the Kuwarddewardde. In 2002 after decades spent bringing other Nawarddeken back to country the venerable Bardayal Lofty Nadjamerrek returned to his childhood home at Kabulwarnamyo to establish the first of three Warddeken ranger bases, providing employment in the region and allowing landowners to make a living on country. Although the diaspora still exists, our professors' vision of all Nawarddeken clan groups once again looking after country is more than a possibility.



Warddeken Indigenous Protected Area

The work of our professors, particularly the late Bardayal Lofty Nadjamerrek, led to the dedication of the Warddeken Indigenous Protected Area (IPA) on 24 September 2009.



Covering 1,394,951 hectares, the Warddeken IPA is dominated by large expanses of rugged stone country in Australia's Northern Territory. It encompasses the upper reaches of the Liverpool, Mann, East Alligator, Katherine and Goomadeer rivers, and includes part of the South Alligator River catchment.

Managing the Warddeken IPA

The Warddeken IPA is managed by its Nawarddeken landowners with the support of Warddeken Land Management Limited (Warddeken), a not-for-profit company limited by guarantee.

The company's Board of Directors is made up of representatives from the different areas, or wards, of the IPA, including Walem Ward (southern clans), Kakbi Ward (northern clans), Karrikad Ward (western clans) and Koyek Ward (eastern clans).

Whilst more than 300 Nawarddeken are registered members of Warddeken, the company does not speak for them or make decisions about country. This is the responsibility of landowners (people with

customary connection to the land), individually and as clan groups.

The objectives of the company are outlined in its constitution and primarily relate to assisting landowners to:

- Conserve Indigenous knowledge
- Protect the environmental values of the land
- Manage the IPA as part of the Australian National Reserves System in accordance with the Union for the Conservation of Nature (IUCN) Protected Area Category VI
- Increase capacity in land management through education



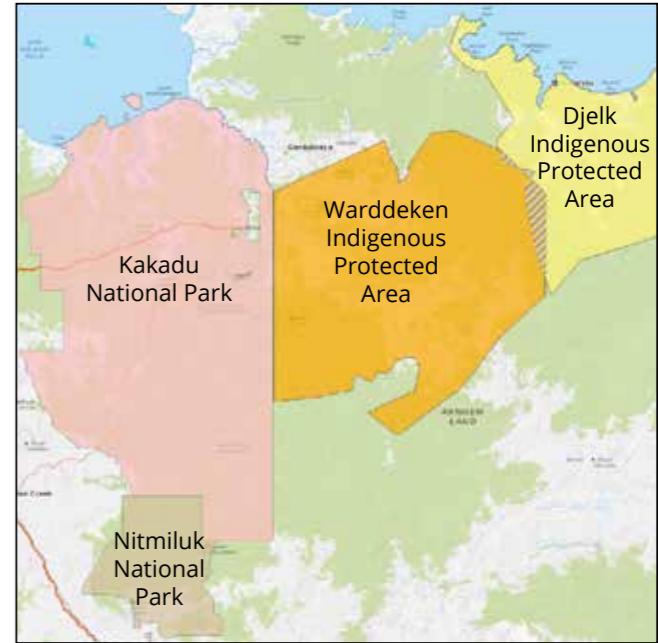
- Participate in natural and cultural resource management projects
- Participate in fire, weed, feral animal and threatened species management

Our company employs many Bininj (Aboriginal people) as well as a number of Balandja to carry out its responsibilities. Reflecting the customary responsibilities of caring for country, Nawarddeken are also involved in the management of the adjacent Kakadu National Park and Djelk IPA, and nearby Nitmiluk National Park. Where possible, Warddeken IPA work programs are carried out cooperatively with these conservation areas.

Since 2009, the Warddeken IPA has been managed in accordance with the first Warddeken Plan of Management (2009-2013) resulting in many achievements, including:

- Ranger stations were established at Manmoyi, Kabulwarnamyo and Kamarrkawarn, allowing many Nawarddeken to live and work on country
- Good fire management resulting in fewer large intense late season wildfires in the stone country
- Removal of feral animals, particularly buffalo and pigs, was begun with signs of recovery evident for some wetlands and anbinik forests
- Cultural sites once again cared for and customary knowledge programs initiated to ensure intergenerational knowledge transfer
- National and international recognition for our work in looking after country, culture and community

We need to continue the good work that was done under the first plan and pursue new opportunities, technologies and ideas that may help, particularly in relation to our two-toolbox approach combining Indigenous knowledge and Western science. Our 2016-2020 Plan of Management will be important



for steering our work at this critical time. It will ready us for a sustainable future.

The 2016-2020 Plan of Management has been developed in consultation with hundreds of Nawarddeken using the Healthy Country Planning process under the guidance of the company's Board of Directors. Taking into account the achievements and lessons of the last five years, the 2016-2020 Plan of Management will be used to develop rangers' work plans and programs across the IPA, as well as some more detailed sub-plans. Progress against the plan will be regularly checked, monitored and evaluated.

'We have two IPAs (Djelk and Warddeken) and we need to do this application of Bininj knowledge across the region, to the east and with Parks in Kakadu too. The direction is positive, there's lots of things happening - training, collaboration and expansion.'

Dean Yibarbuk

Introducing our assets

Developed with input from more than 200 Warddeken members, who were consulted over a two-year period, our assets represent what is most important to us as Nawarddeken caring for our country. It is clear to us that both Nawarddeken and the Kuwarddewardde are healthiest when our country is populated and managed by Nawarddeken. As a result our chosen assets are holistic and represent not only the physical and ecological elements of the Kuwarddewardde but also the cultural, social and economic values that support Nawarddeken to live on our country.

To ensure we represent the interests of our landowners and make the best use of resources, our assets incorporate our Bininj knowledge and cultural practices, which are integral to the Kuwarddewardde and essential to good management of the IPA.

The Kuwarddewardde is not only home to Nawarddeken but encompasses a large number of djang and other cultural sites, rock art complexes and a rich diversity of plants and animals. A number of these plant and animal species and their associated ecologies have been afforded conservation significance by Western science, including endemic and threatened species.

In this section we describe each asset, outline our goals for maintaining or improving the health of assets, and strategies for achieving these goals.

Our assets are:

1. **KUNMAYALI DJA KUNWOK**
(Bininj knowledge and languages)
2. **DJANG**
(Sacred sites)
3. **KUNWARDDEBIM**
(Rock art)
4. **MANWURRK**
(Fire)
5. **MAYH**
(Animals)
6. **MANME DJA MANRAKEL**
(Food and medicine plants)
7. **KUKKU**
(Freshwater places)
8. **ANBINIK**
(*Allosyncarpia* forests)
9. **KUNDULK ANDJUHDJUMBUNG KUKORLH**
(Arnhem sandstone shrublands)
10. **GOVERNANCE**
11. **COMMUNITIES AND LIVELIHOODS**



Asset health

Working with senior Bininj staff, landowners and expert partners, we developed key attributes and indicators of health for each asset to help us prioritise and monitor our work over the life of the plan. Planning is focused on maintaining or improving asset health, and removing or reducing threats.

With the exception of assets rated Very Good, our aim is to improve the health of all assets by the



completion of this plan. For example, assets with Poor health in 2016 will be in Fair or Good health by 2020. We have a suite of key attributes and indicators that will be checked against health assets annually, triennially or at the end of the planning period (as appropriate) to measure improvement and inform preparation of our next management plan.

The table opposite details the current health of our assets as determined through this planning process:

ASSETS	To be determined	POOR	FAIR	GOOD	VERY GOOD
1. KUNMAYALI DJA KUNWOK (Bininj knowledge and languages)					
2. DJANG (Sacred sites)					
3. KUNWARDDEBIM (Rock art)					
4. MANWURRK (Fire)					
5. MAYH (Animals)					
6. MANME DJA MANRAKEL (Food and medicine plants)					
7. KUKKU (Freshwater places)					
8. ANBINIK (<i>Allosyncarpia</i> forests)					
9. KUNDULK ANDJUHDJUMBUNG KUKORLH (Arnhem sandstone shrublands)					
10. GOVERNANCE					
11. COMMUNITIES AND LIVELIHOODS					

VERY GOOD The asset is very healthy. Current work associated with the asset should be maintained.

GOOD The asset health is within an acceptable range. Minor changes to current work associated with the asset are required to maintain or improve health.

FAIR The health of the asset is not acceptable. Significant aspects of the asset are unhealthy and current work associated with the asset is not addressing the issues. Failing to act will result in further deterioration. A modest increase or change to current work is required.

POOR The asset is threatened with local extinction. Current work associated with the asset is not addressing the issues. Restoring the health of the asset is increasingly difficult and will require significant changes to current works, which is expensive and resource intensive.

To be determined Insufficient knowledge is available to determine asset health. Research is required to gain an understanding of the asset's key attributes and indicators of health.



Asset 1: KUNMAYALI DJA KUNWOK

Bininj knowledge and languages

Kunmayali dja kunwok (Bininj knowledge and languages) are integral to the best practice management of the Warddeken IPA, and will help preserve the unique natural and cultural heritage of the Kuwarddewardde for future generations.

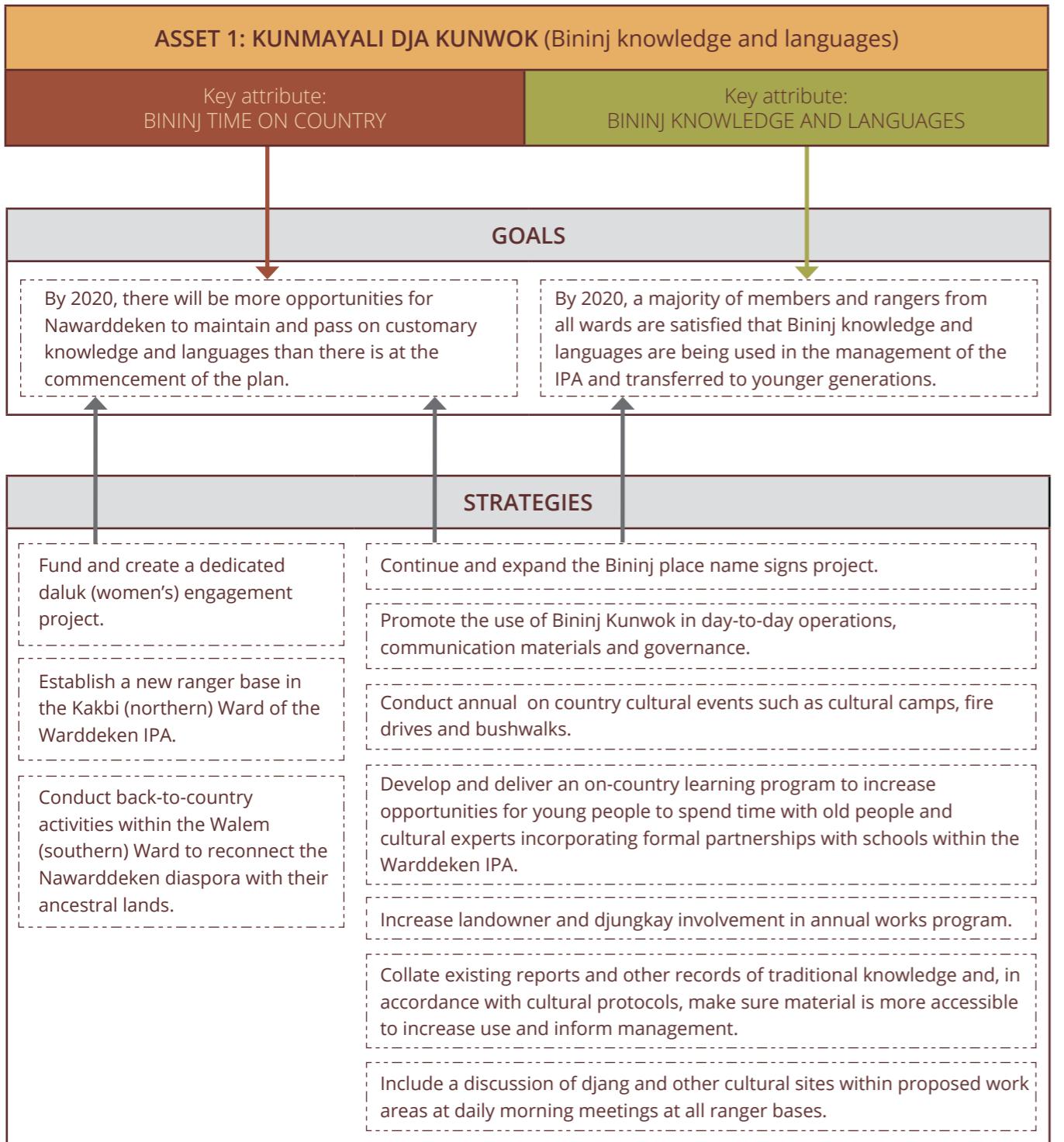
Our unique knowledge system and languages define us as Nawarddeken, the people of the Kuwarddewardde. They define our relationships to each other and to country. Bininj knowledge is customary knowledge that sets out the laws for these relationships and how we are to respect, care for and be part of the Kuwarddewardde. Bininj Kunwok is how we refer to our languages, Kunwinjku, Kune and Kundendjeihmi and their associated dialects, they are part of our knowledge. Speaking our languages is a way we express our knowledge which is an integral part of our culture.

We believe that we are part of the Kuwarddewardde and the Kuwarddewardde is part of us. Being on the Kuwarddewardde, using our knowledge and speaking our languages about particular places, plants and animals, the behaviour of animals and the seasons, keeps our culture strong. Carrying out cultural responsibilities and practices, such as visiting djang, burning according to tradition and law, collecting bush foods and having djungkay performing their cultural obligations to country, ensures that our culture stays strong and that the Kuwarddewardde is healthy. We are also healthier and happier when we do these things.

Our professors strongly believed that kunmayali dja kunwok must continue, stressing the need for it to be passed on to future generations. We use kunmayali dja kunwok as part of our everyday lives, as well as in our work. Each clan or family has certain cultural responsibilities and practices that, in accordance

with our law, only they can carry out. We pass on this to younger Bininj during special activities such as cultural camps, fire drives and bushwalks along Bininj manbolh (traditional walking routes). We have also recorded a lot of kunmayali dja kunwok, which can only be accessed and used according to cultural protocols.







'We will use our knowledge because we need to practice the fragile cultural practices that are about to disappear. Sometimes we are not fully knowledgeable about some of these things. Our language is important in land management. Children can lose and forget about complex things such as kunderbuy (triangular kinship system), kunbalak (avoidance register language) and other things the old people did. We can teach our children these things as part of this work.'

Elizabeth Nabarlambal



Asset 2: DJANG Sacred sites



Djang (sacred sites) are important cultural sites that have spiritual or religious significance and are a sentient part of the Kuwarddwardde. Djang and other important cultural sites are found throughout the Kuwarddewardde and need to be managed according to our Nawarddeken law.

Djang and important cultural sites include places that are used for ceremonies and places where Nayuhungki (Creation Beings) are resting or have a particular association. Other djang and cultural sites include burial sites and increase sites, where rituals are performed to ensure the ongoing existence of plant and animal species, particularly those used by Bininj as food. Some sites can only be visited by certain people and require custodians to perform unique cultural protocols to communicate with the spirits or Nayuhungki. Other sites can be visited by lots of Bininj as well as Baland. It is important that the customary knowledge of these places is passed on to younger generations.

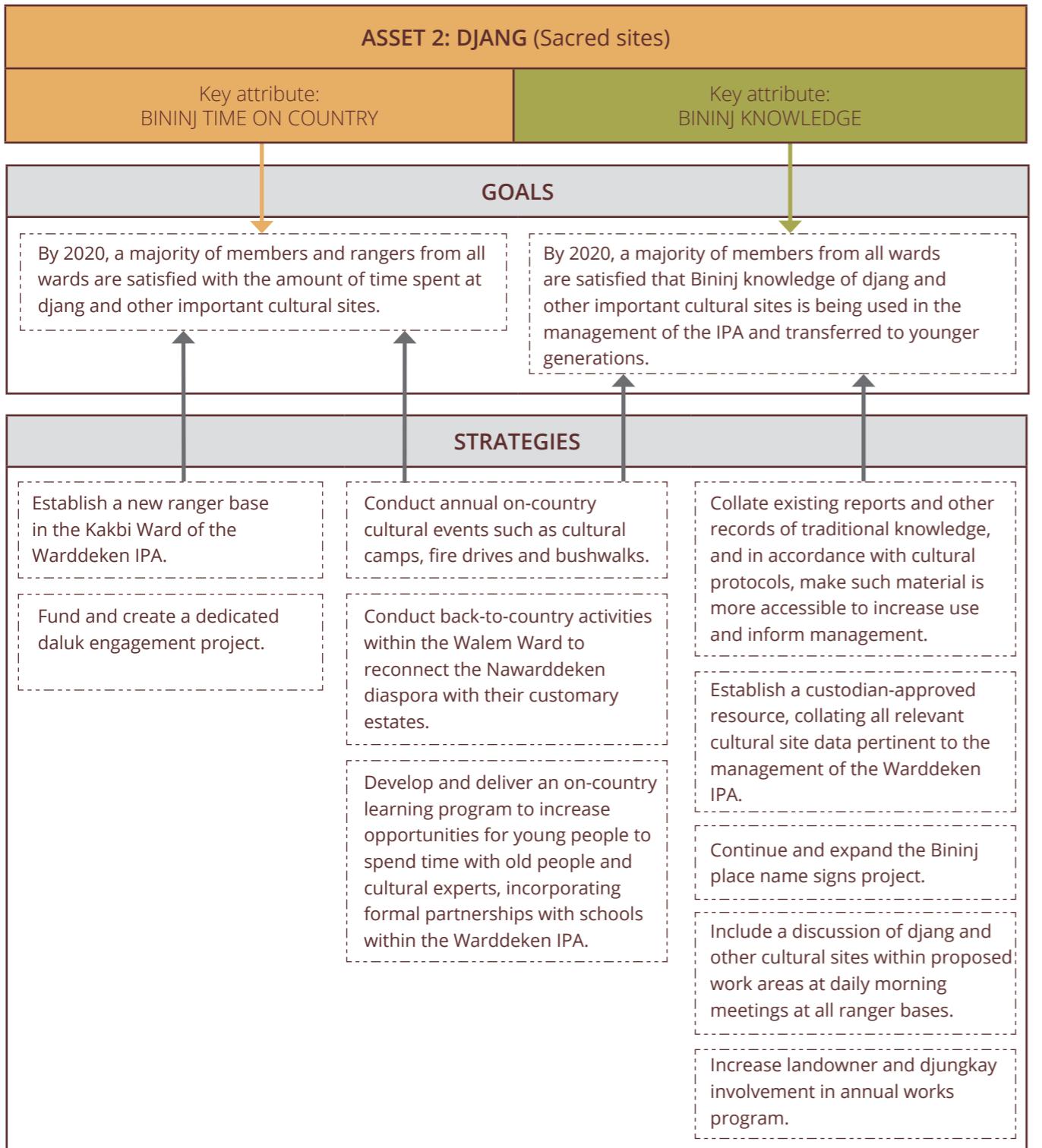
We have recorded and mapped the location and details of many djang and other important cultural sites. These records and maps inform the development of our work programs. We have also installed place name signs at some of the more public sites, and some sites require the installation of signs and barriers advising of access protocols.

The location and details of numerous important cultural sites have been mapped and recorded by Baland, and this information is held by individuals or government agencies. To ensure that our cultural sites are managed according to Bininj law and cultural protocols, it is essential that the owners and managers of these sites retain control of this information.

Landowners from across the IPA stress the importance of maintaining knowledge of djang and associated customary protocols, and wish to see Warddeken

assist in the maintenance of this knowledge. We will build on our already successful program of cultural activities such as camps and bushwalks, and work closely with schools within the Warddeken IPA to develop a cultural curriculum that incorporates knowledge of djang.

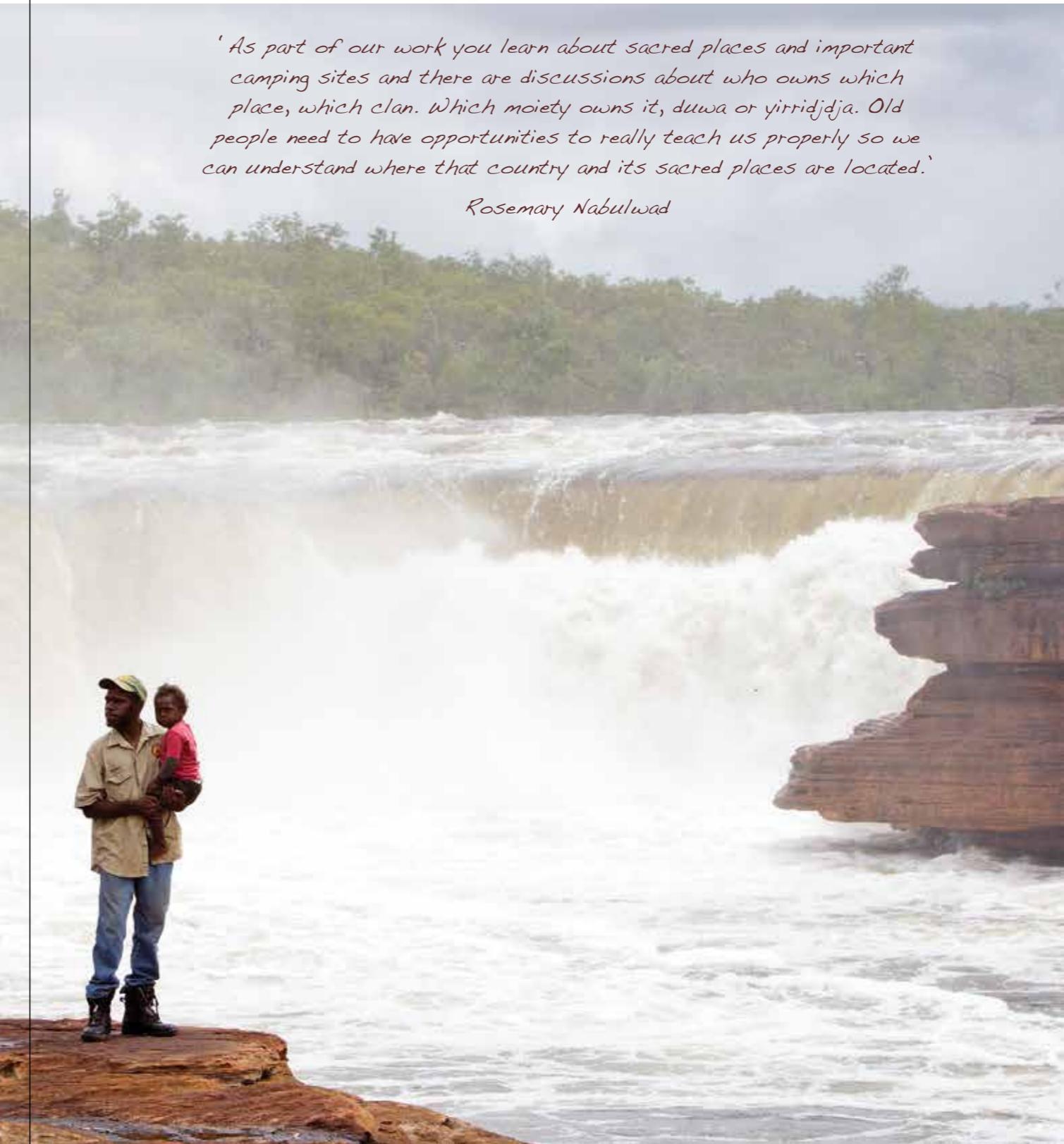
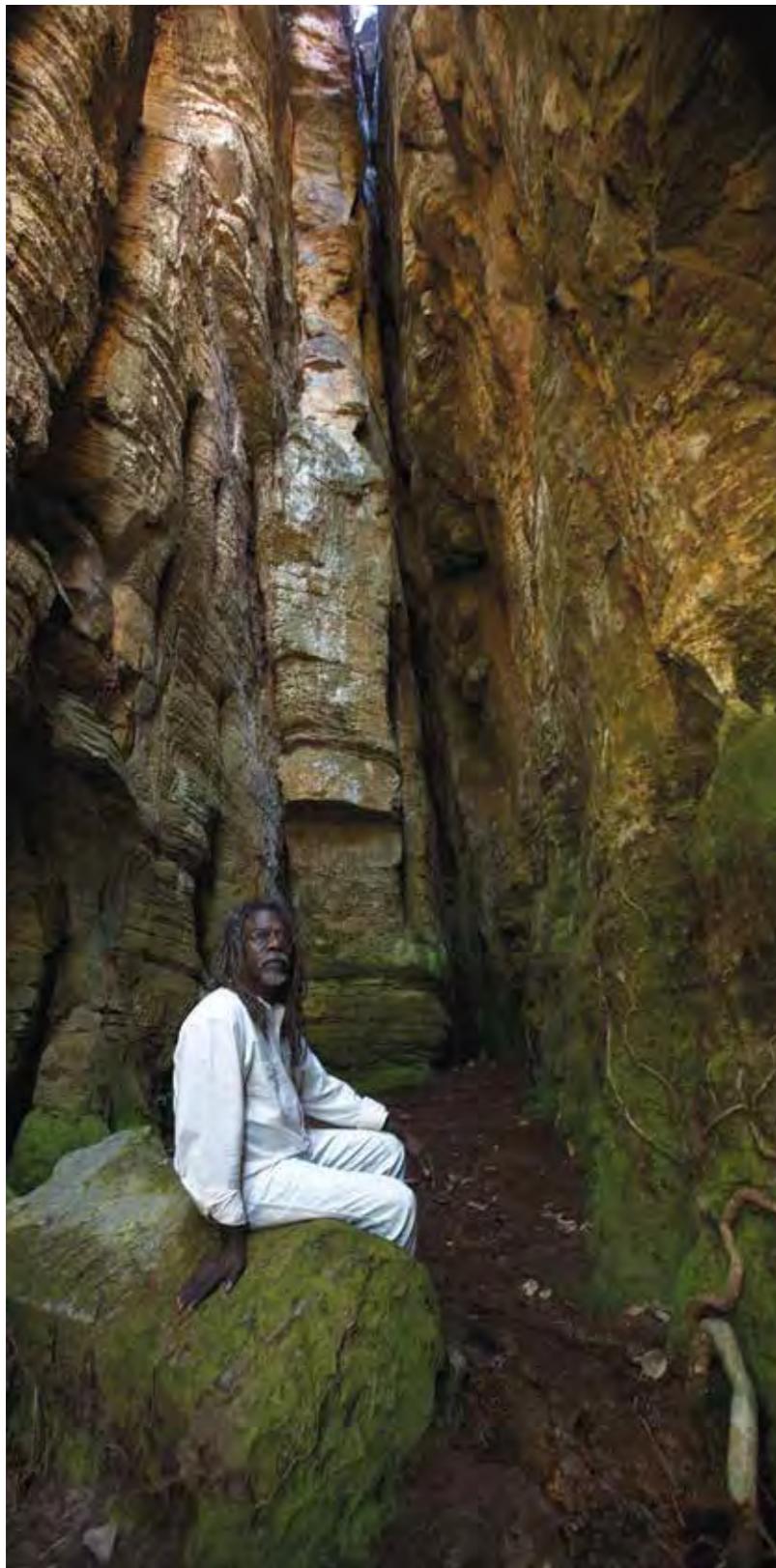




'When we know or learn the name of that country, we understand what it means and why it is important - it gives us important knowledge; the name gives a place meaning.'

Jamie Nabarlambarl Billis





'As part of our work you learn about sacred places and important camping sites and there are discussions about who owns which place, which clan. Which moiety owns it, duwa or yirridjja. Old people need to have opportunities to really teach us properly so we can understand where that country and its sacred places are located.'

Rosemary Nabulwad



Asset 3: KUNWARDDEBIM Rock art

We have many culturally important places, including thousands of kunwarddebim (rock art complexes). Our kunwarddebim is internationally significant and documents untold generations of life in the Kuwarddewardde. This record is at risk as many important sites are being threatened by wildfires and disturbance caused by feral animals, such as buffalo rubbing on the paintings.

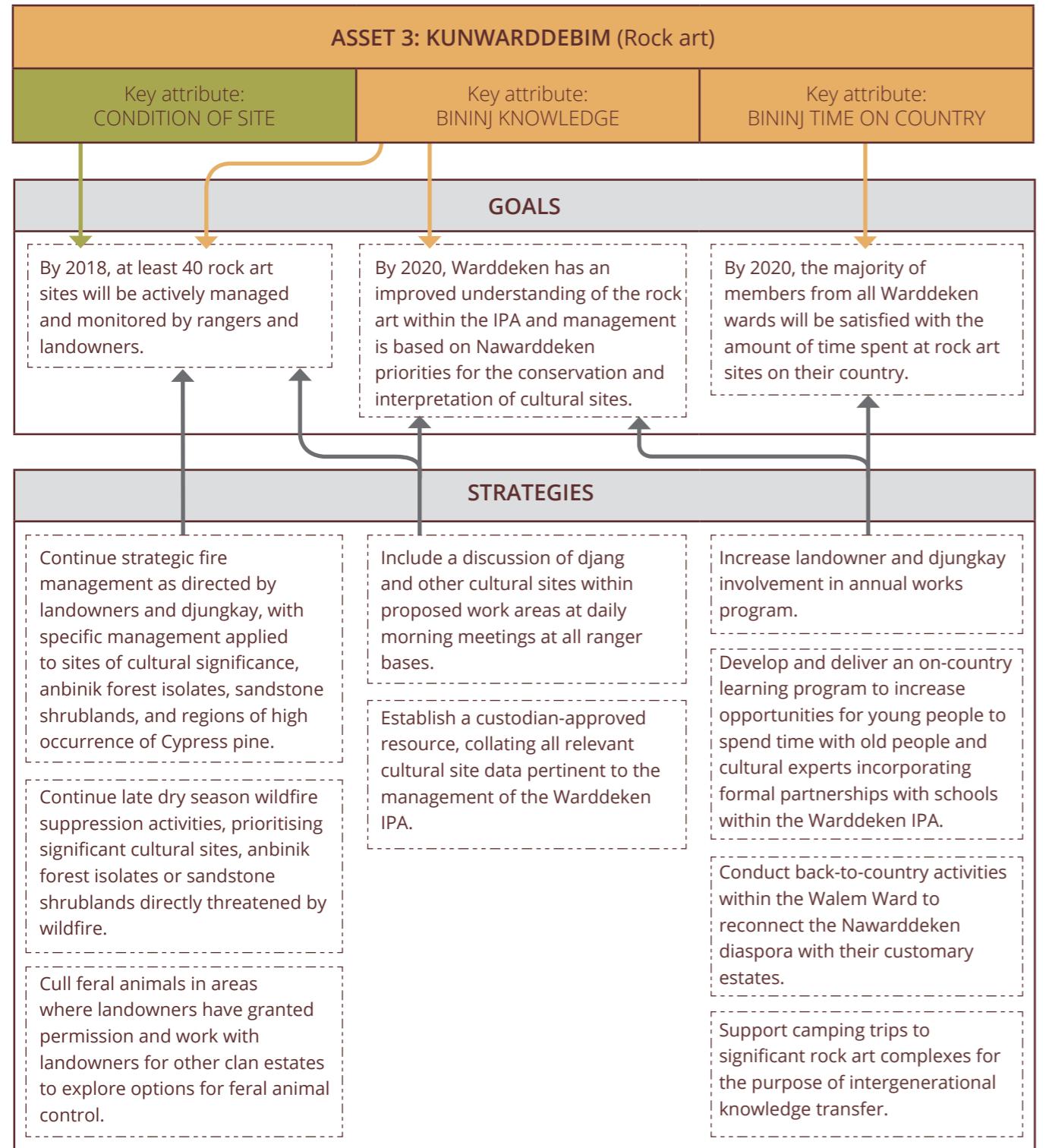
Paintings are usually located on the walls and ceilings of rock shelters. Spear tips, stone axes, grinding hollows, clap sticks and other archaeological artefacts can also be found in these rock shelters. These were the occupation sites of our ancestors, particularly in the wet season. They were their homes. As well as occupation sites, other archaeological sites such as stone arrangements are found across the Kuwarddewardde.

The importance of cultural places is not limited to the art or artefacts found there. Generations of Bininj used these places over thousands of years, as evidenced by the many layers of art that some complexes contain. They embody a rich library of information, Bininj knowledge, plants and animals, seasons and the arrival of Baland. They contain stories that need to be told in Bininj Kunwok to the younger generations. Some kunwarddebim are very old and some are recent, including those by our professor, Bardayal Lofty Nadjamerrek. They are our physical and intellectual property. Visiting these places keeps them healthy.

We acknowledge that kunwarddebim is also considered special by Baland, who have recorded and studied many sites in our region. It is important that Baland respect our right, as custodians with customary responsibility for the Kuwarddewardde, to determine the priorities for research and management of our cultural places.

Landowners have indicated they would like more opportunities to reconnect with their estates. Warddeken will assist in facilitating back to country trips to involve landowners in the documentation and conservation of kunwarddebim within their clan estates. We will work towards developing a method of surveying and documenting the extensive kunwarddebim within the IPA, to inform and enhance existing conservation activities.





'These paintings are the stories of Nawarddeken told over thousands of years. Some were painted by people like us and others were placed there by spirits. Rock art is our cultural heritage and we are the ones with a responsibility to care for these places.'

Donna Nadjamerrek







Asset 4: MANWURRK Fire

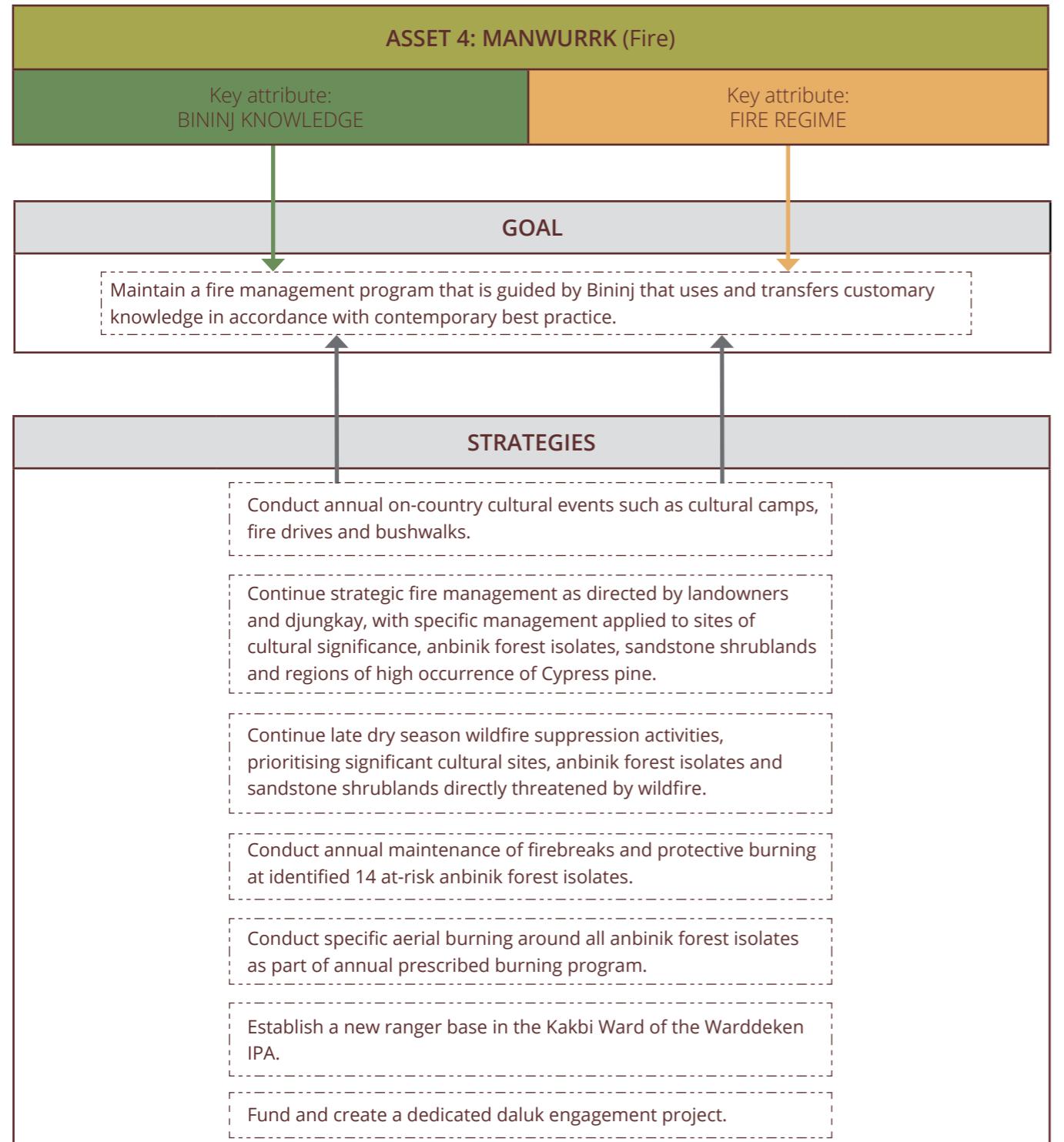
Manwurrk (fire) is one of the main tools we use to look after the Kuwarddewardde. Many endemic plants, animals and ecosystems of the Kuwarddewardde rely on burning regimes that have evolved over a long period of time. Manwurrk is used for hunting, ceremonies, protecting important cultural sites and to clear camping and living areas. According to Nawarddeken tradition and law, burning is based on a regime of small cool early season burns. Burning this way helps reduce the threat of large, unplanned wildfires late in the dry season.

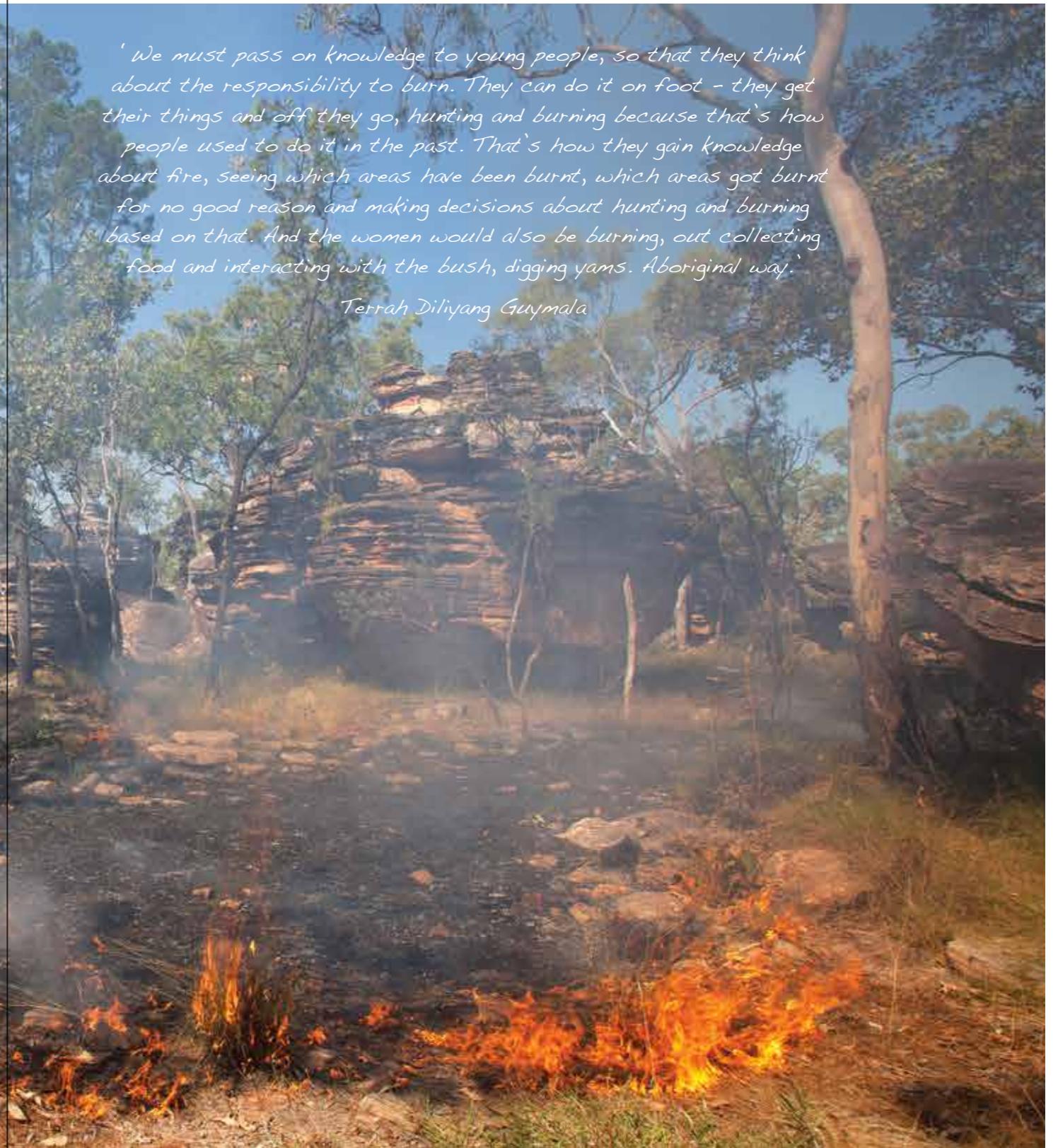
Our professors stressed that burning must be carried out according to customary responsibilities and traditional knowledge. Burning is carried out using our two-toolbox approach, for example burning while walking through and visiting country using

traditional walking routes is combined with the use of modern tools to guide and record the activity. Similarly, djungkay and landowners use their cultural knowledge of country and fire behaviour to guide the delivery of incendiaries by helicopter. Later, these works are reviewed in GIS and the fire scars mapped by satellite.

The West Arnhem Land Fire Abatement (WALFA) project was one way the Nawarddeken diaspora were able to gain support to return to country. Under WALFA, Warddeken receives financial support for our burning program by reducing the carbon emissions caused by late season wildfires. This money contributes significantly to the company's budget. Our reputation amongst business, conservation and Indigenous organisations rests to a large degree on the success of our company under WALFA.

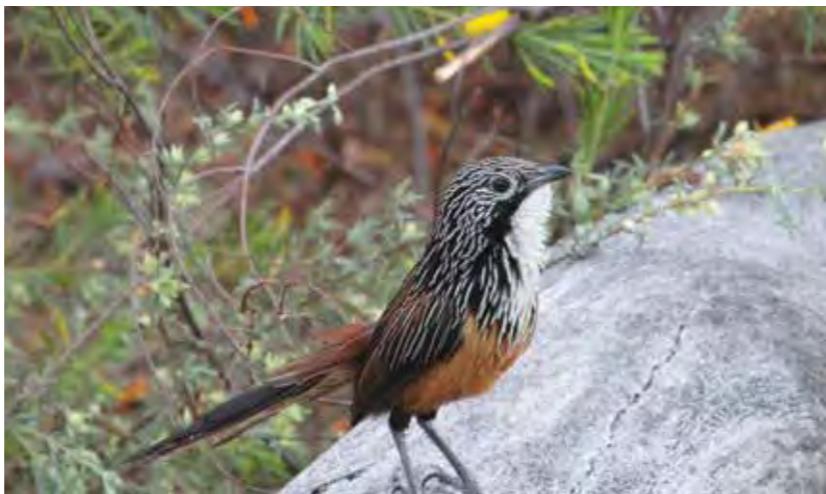






'We must pass on knowledge to young people, so that they think about the responsibility to burn. They can do it on foot - they get their things and off they go, hunting and burning because that's how people used to do it in the past. That's how they gain knowledge about fire, seeing which areas have been burnt, which areas got burnt for no good reason and making decisions about hunting and burning based on that. And the women would also be burning, out collecting food and interacting with the bush, digging yams. Aboriginal way.'

Terrah Diliyang Guymala



Asset 5: MAYH Animals

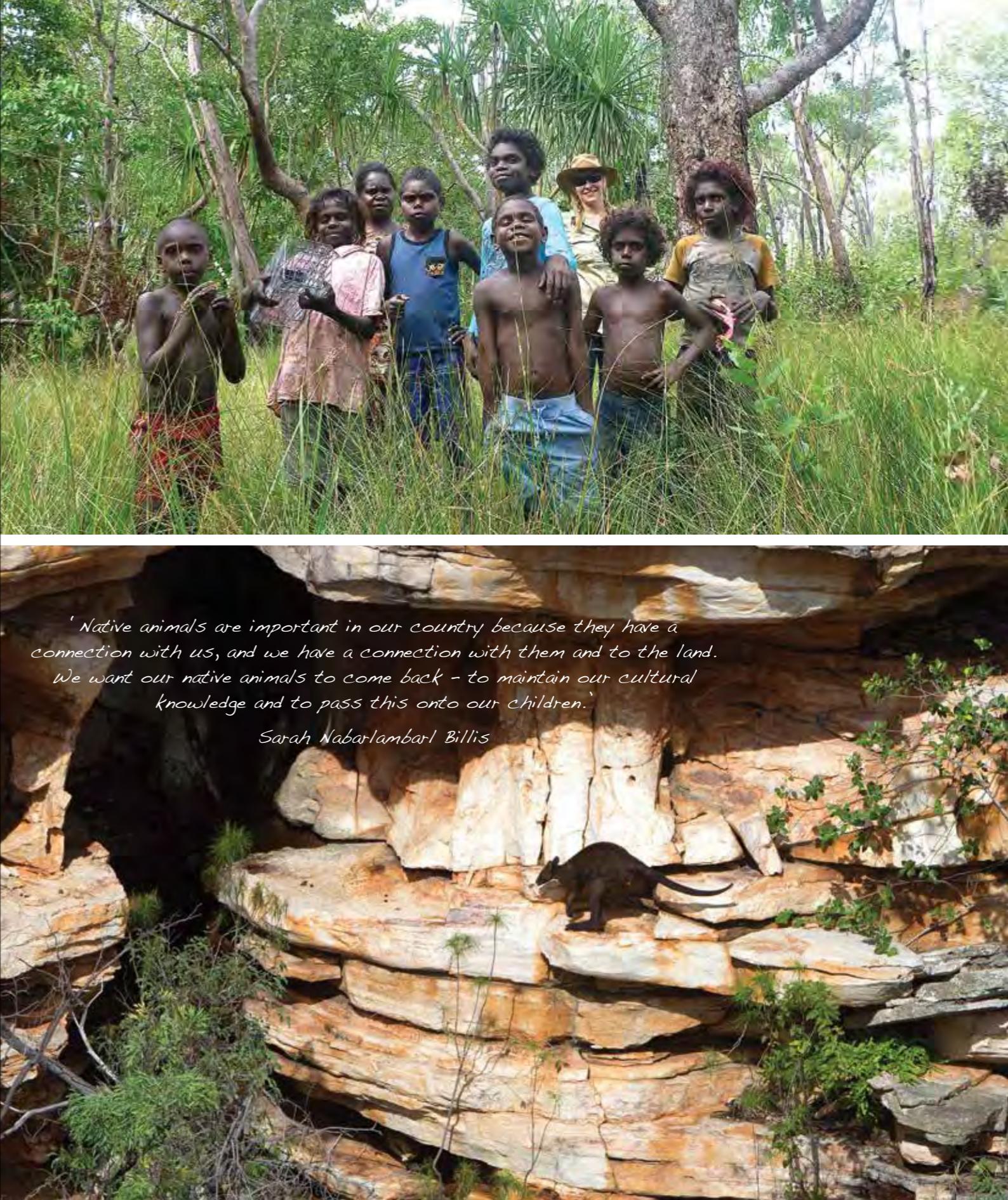
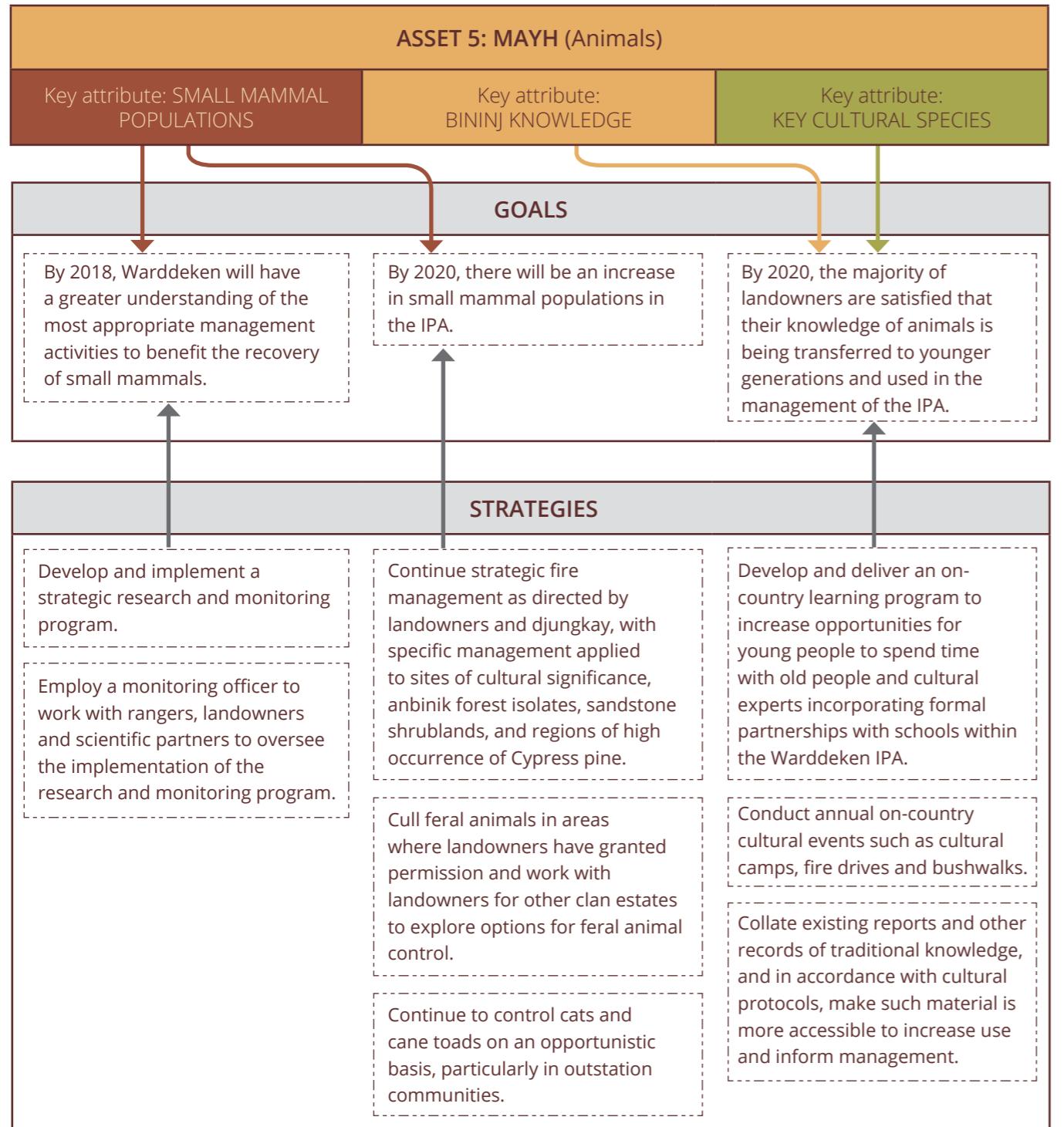
Many mayh (animals) of the Kuwarddewardde have special cultural significance to us. They are associated with sacred sites or ceremonial practices. They may be totems or our favourite bush food.

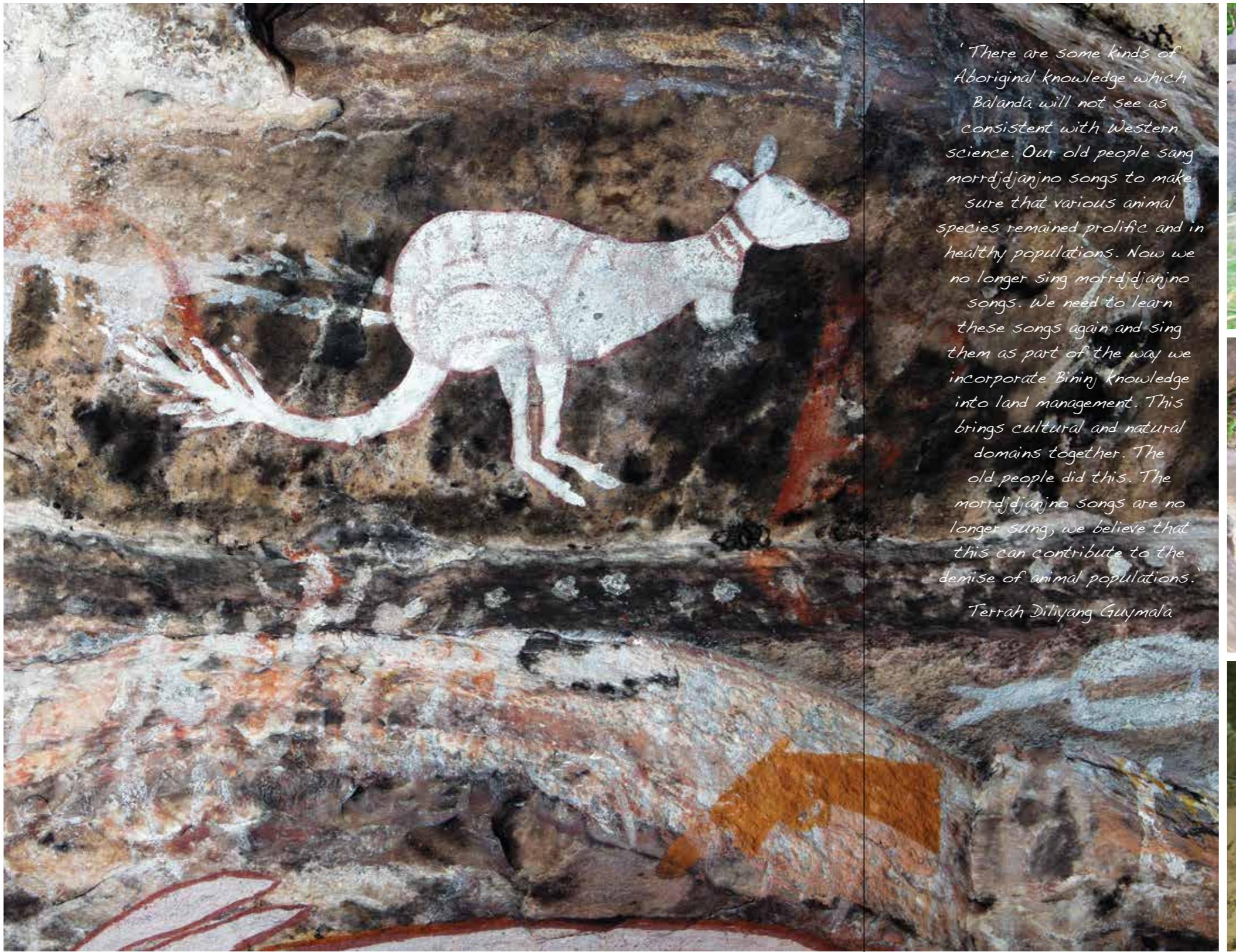
Our mayh have also been afforded conservation significance by Western science due to their status as rare, threatened or endemic. Some of these are Leichhardt's grasshopper, Oenpelli python, water monitors, white-throated grasswren, northern quoll, golden bandicoot, golden-backed tree-rat and narbalek (pygmy rock-wallaby).

With our scientific partners, we have been surveying specific animals for a number of years. This work, and the work of our neighbours in Kakadu, has shown that the number and diversity of small mammals and large reptile species have declined across the Kuwarddewardde. This mirrors similar declines across much of northern Australia and represents a significant national and international conservation challenge. The loss of mayh is not only a loss to biodiversity, it also represents a loss of Bininj knowledge as we can no longer perform and pass on our customary obligations related to these species.

Current research suggests that the decline of the mayh populations in the Kuwarddewardde is the result of the frequency and intensity of wildfires, the impact of cane toads and cats, and disturbance by buffalo and pigs in the upper reaches of catchments, critically important refuge areas. More research is required. With better understanding of this issue, we will be able to figure out the best way to help these populations recover.







'There are some kinds of Aboriginal knowledge which Balanda will not see as consistent with western science. Our old people sang morrdidjanjno songs to make sure that various animal species remained prolific and in healthy populations. Now we no longer sing morrdidjanjno songs. We need to learn these songs again and sing them as part of the way we incorporate Bininj knowledge into land management. This brings cultural and natural domains together. The old people did this. The morrdidjanjno songs are no longer sung; we believe that this can contribute to the demise of animal populations.'

Terrah Diliyang Guymala



Asset 6: MANME DJA MANRAKEL

Food and medicine plants



Manme dja manrakel (food and medicine plants) of the Kuwarddewardde have special cultural significance for Nawarddeken. Many plant species also have conservation significance because they are rare, threatened or endemic.

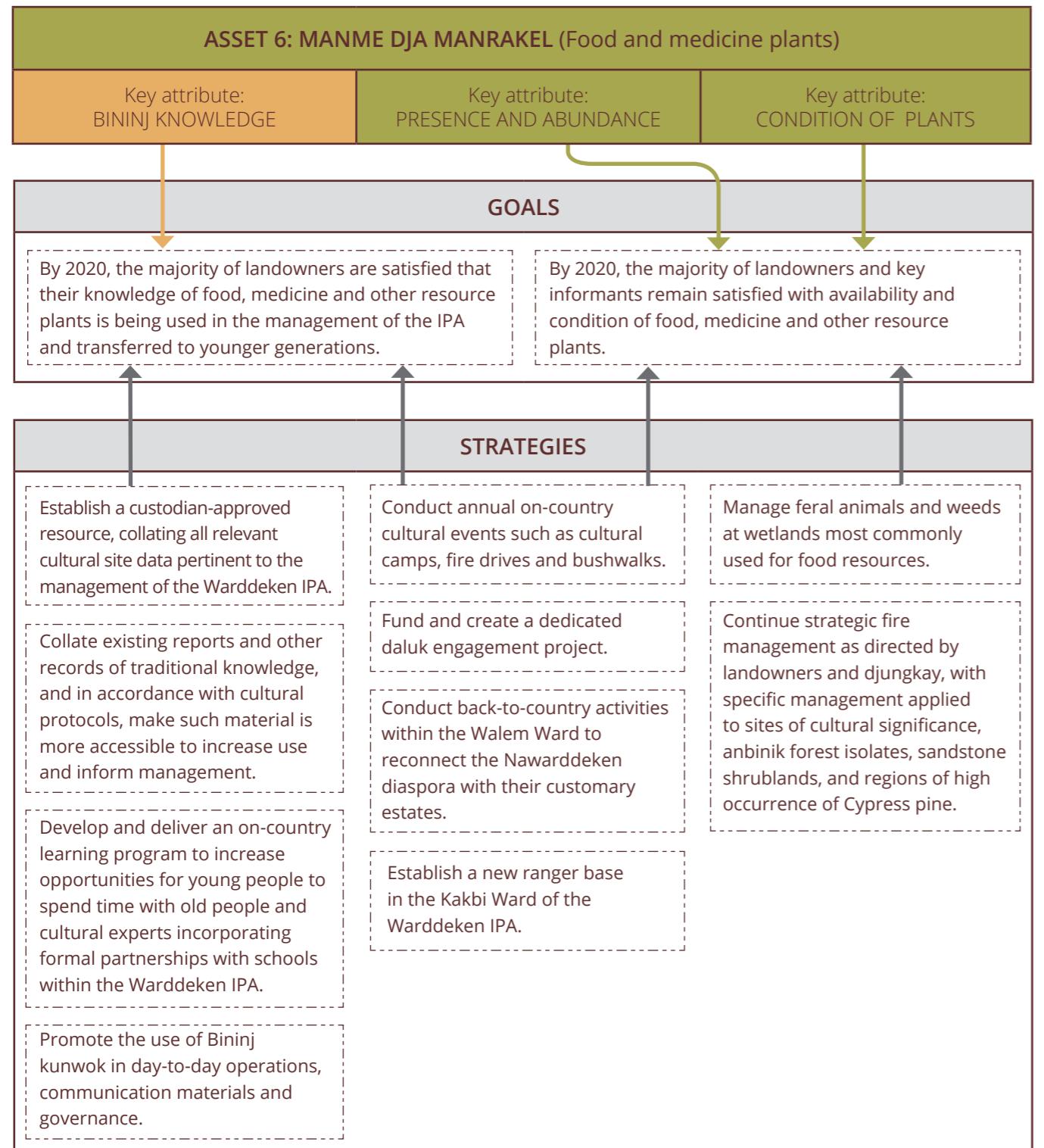
Our professors have extensive knowledge of plants. They knew where to find certain species based on their knowledge of country, seasons and biological indicators. They knew which plants were edible and which required special preparation to make them palatable or remove toxins. They used plants to cure sickness and make tools such as spears, baskets and other utensils.

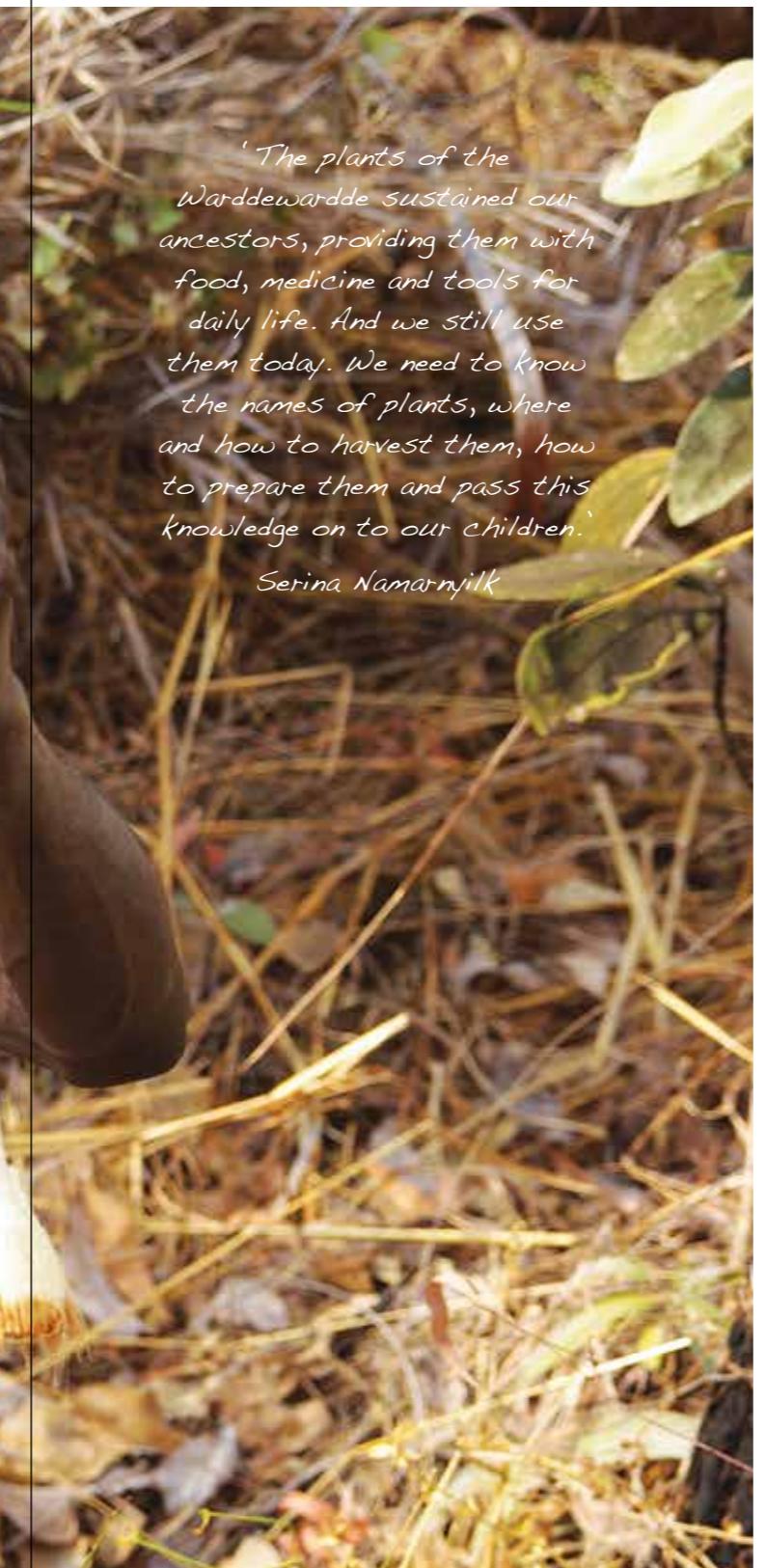
Our Bininj knowledge and languages associated with manme dja manrakel must be passed on to the younger generations. Our children love spending time on-country collecting fruit, digging up yams, harvesting waterlilies and learning to make stone country tools. They learn these cultural practices in their everyday lives, as well as during special cultural activities like cultural camps.

Some populations of culturally important plant species are being damaged by late dry season wildfire and feral animals, particularly buffalo and pigs. Weeds also compete with manme dja manrakel and some prickly weed species, such as hytpis and sida, make it difficult and unpleasant for Bininj to collect.

In addition to the disturbance and damage caused by these threats, we are concerned about unseasonal weather and changes to cultural seasonal indicators, which impacts on the availability of certain plant species. This may be related to climate change. Warddeken will assist in the protection of significant manme dja manrakel sites through active management of feral animals and weeds.







'The plants of the Warddewardde sustained our ancestors, providing them with food, medicine and tools for daily life. And we still use them today. We need to know the names of plants, where and how to harvest them, how to prepare them and pass this knowledge on to our children.'

Serina Namarnyilk





Asset 7: KUKKU Freshwater places

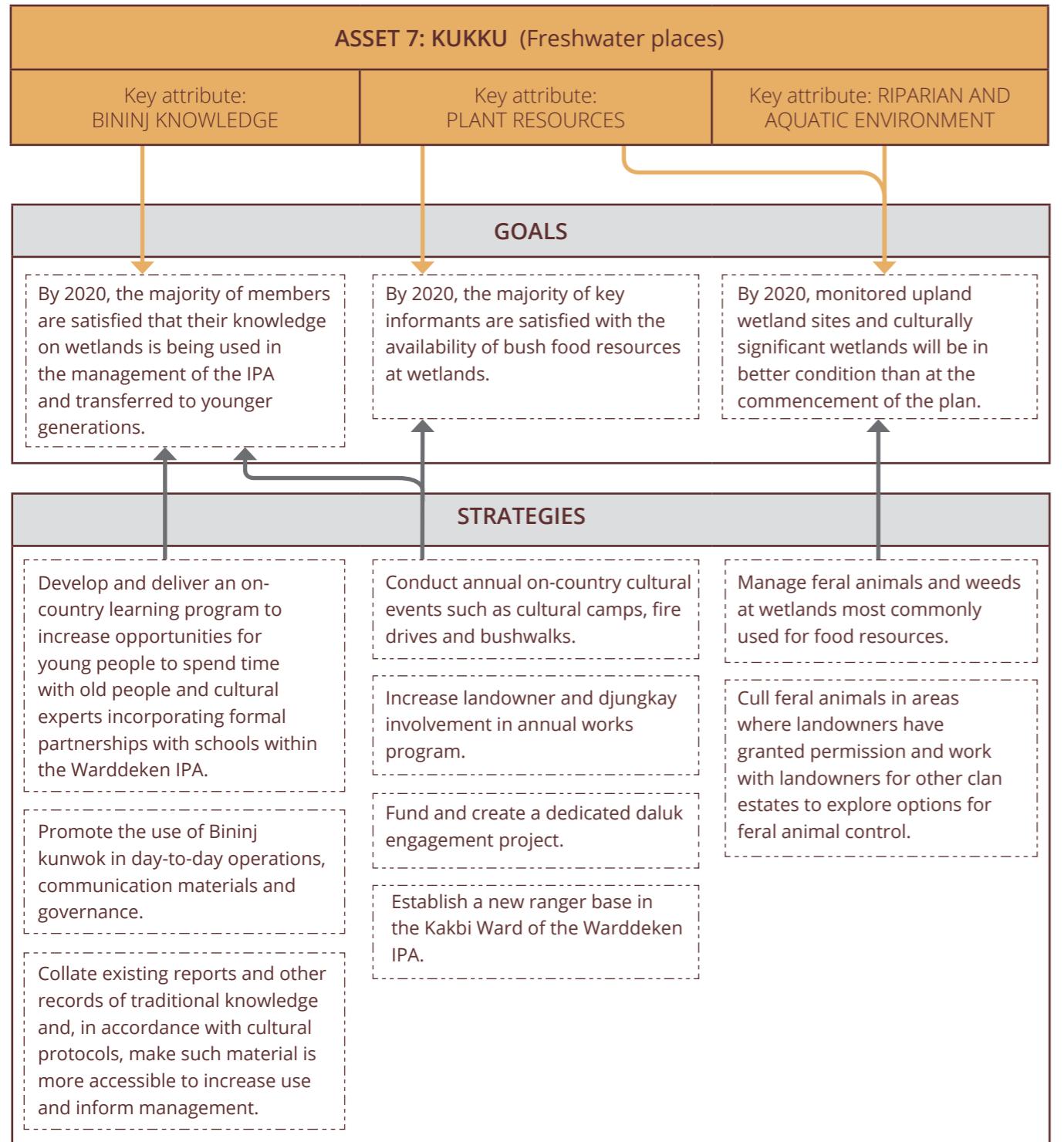
Nawarddeken are freshwater people. The Warddeken IPA encompasses the upper reaches of the East Alligator, Mann, Liverpool, Katherine and Goomadeer rivers, as well as part of the South Alligator River catchment. Associated with these catchments and headwaters are springs, swamps, billabongs and marshlands, sometimes referred to as upland wetlands or perched wetlands.

Many kukku (freshwater places) of the Kuwarddewardde are sacred sites, where Nayuhungki are at rest having travelled through the landscape creating parts of country. Such places can only be accessed and used according to cultural protocols. Other kukku are where our ancestors camped and where Bininj continue to camp today, collecting many different bush foods, such as fish, turtles, water chestnuts and waterlilies. A number

of kukku are important sources of drinking water for our ranger stations. It is important that these places are visited in order to facilitate the intergenerational transfer of Bininj knowledge and languages to younger generations.

With our scientific partners, we have been researching some of our kukku. Based on this research we believe that, like the ones in adjacent Kakadu National Park, some may have conservation significance. The majority of our kukku are in fair condition, however their health is threatened by disturbances caused by feral animals such as buffalo and pigs. Scientists think that some kukku, particularly those in the upland wetlands, may also be important refuges for animals, including threatened species. Specific management actions are required to reduce these threats and protect these places.







'This is where we live. We can look after our land around us, fish, water courses, wetlands and the wildlife they sustain. We don't want buffalo and pigs and weeds to ruin these places, or cane toads which affect fish and other animals. We need to leave something for our children and grandchildren.'

Elizabeth Bangarr





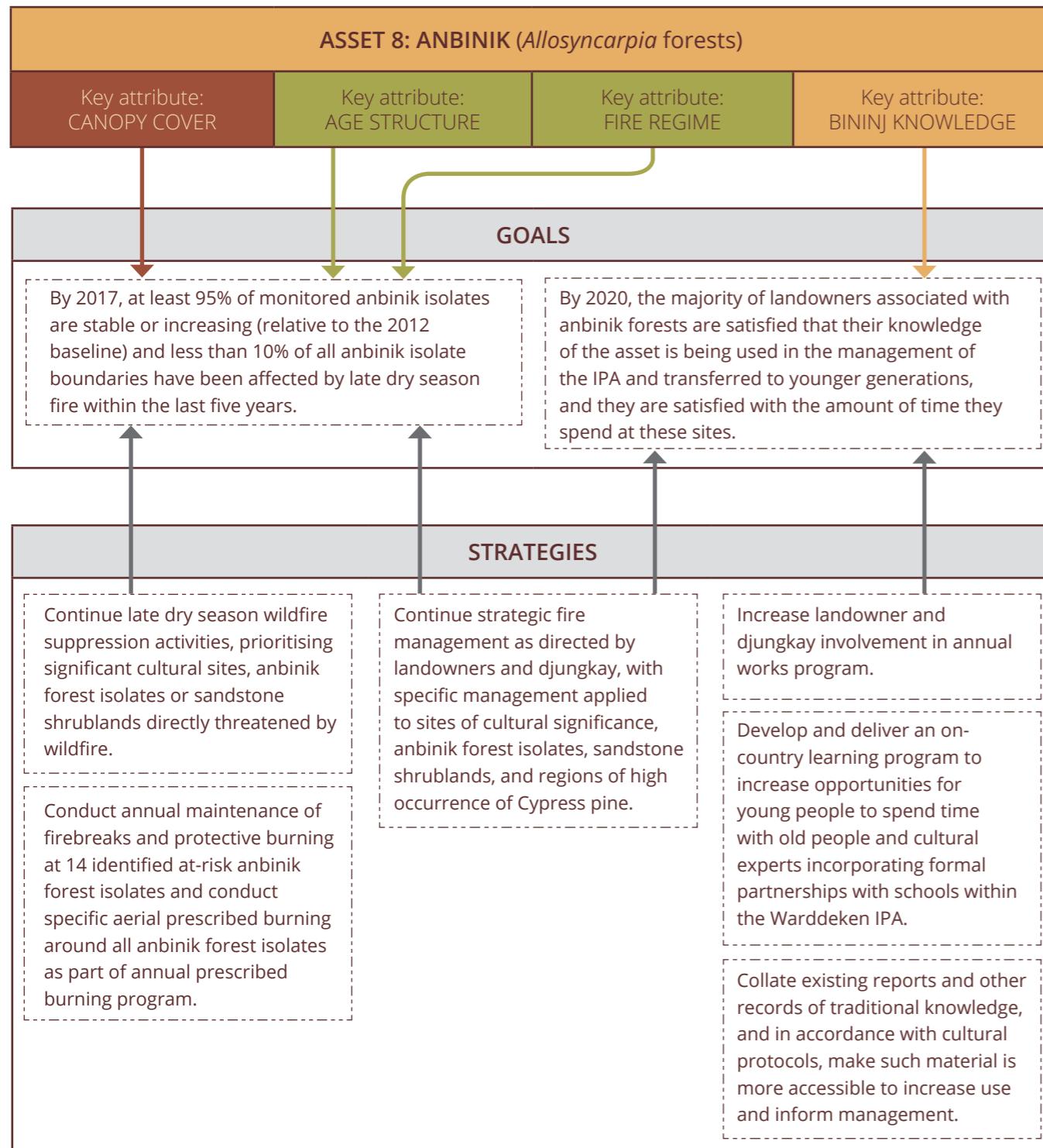
Asset 8: ANBINIK *Allosyncarpia* forests

Anbinik (*Allosyncarpia ternata*) is a large evergreen tree endemic to the Kuwarddewardde where it dominates the fragmented monsoon rainforests and supports a specific range of plant and animal species. Nawarddeken valued anbinik forests for their shelter and amenity with many being significant occupation sites. These forests were protected by Nawarddeken with the deliberate use of fire in the early dry season, where cool burning served to remove fuel and prevent wildfires.

Of 74,000 hectares of anbinik forest on the plateau, two thirds of it occurs within the Warddeken IPA. It is found in the moist gullies and gorges of the plateau, as well as on the slopes and elevated flat terrain. On flat terrain, the occurrence and size of anbinik forest patches has been severely impacted by wildfires. Despite being relatively fire tolerant, intense and frequent wildfires kill individual plants resulting in the opening up of forest patches to weeds and feral animals. Recovery of these forest patches is slow and takes decades. Forest patches in the gullies and gorges are in better condition as they are more protected from such threats.

To help manage anbinik forests and recover isolated patches, we have reintroduced traditional burning regimes. We have also identified 14 anbinik isolates for more intensive management with on-ground firebreaks. Together with our scientific partners, we are measuring the success of this work. The results of this research will inform the management and long-term survival of this species in the Warddeken IPA and neighbouring protected areas. By doing this work, we hope that anbinik forest patches will be good shady places to visit and spend time for generations to come.







'We are using modern technologies to replicate the customary practices of our ancestors. Old people protected anbinik using fire and now we are doing the same.'

Dean Yibarbuk



Asset 9: KUNDULK ANDJUHDJUMBUNG KUKORLH Arnhem sandstone shrublands

Bininj kunwok does not have a discrete specific word for what scientists refer to as the Arnhem Plateau Sandstone Shrublands Complex. The closest we have is kundulk andjuhdjumbung kukorlh, which is Bininj kunwok for the trees and short shrubs associated with bedrock or rocky open zones.

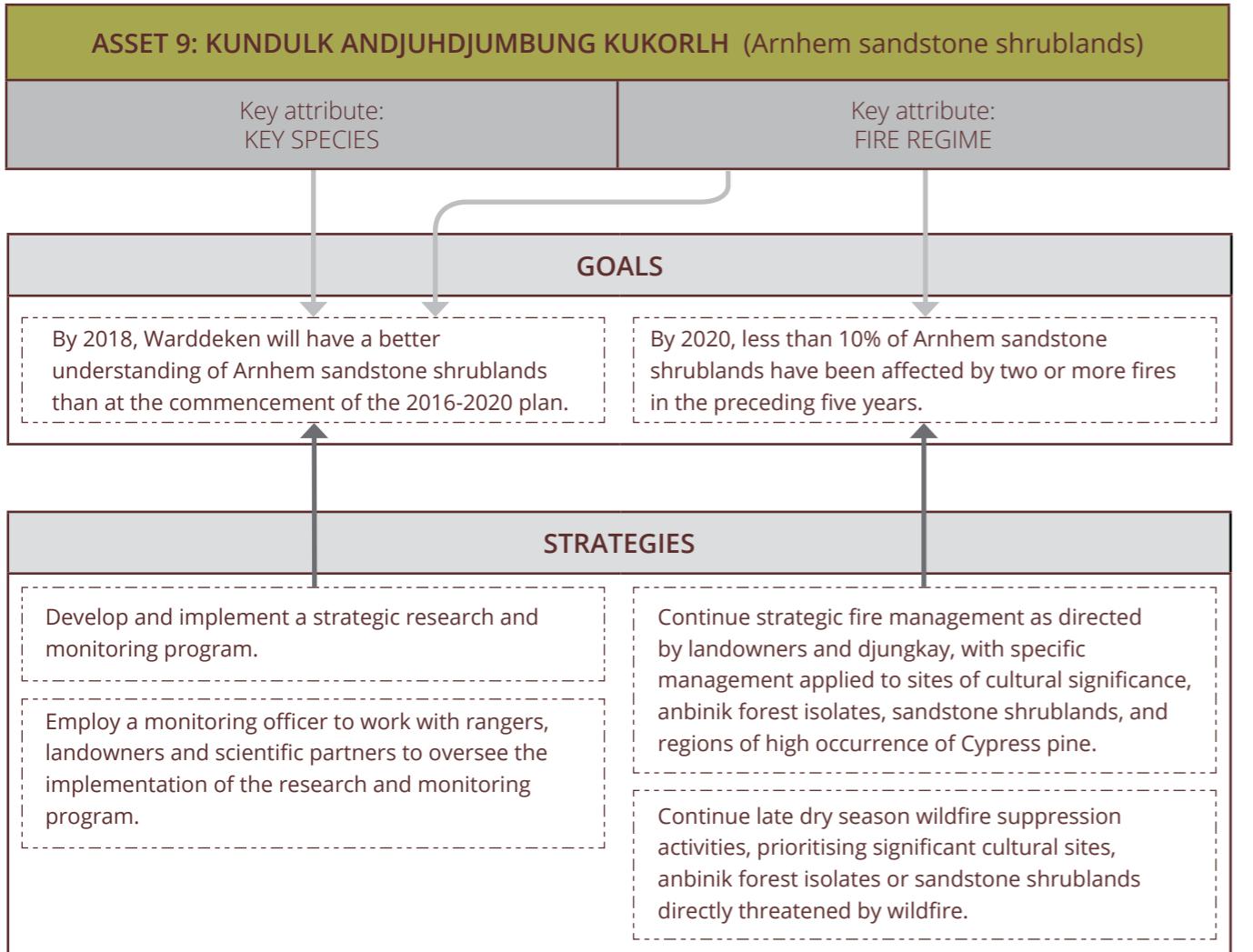
The Arnhem sandstone shrublands are threatened by wildfires and disturbance caused by feral animals, and listed as an Endangered Ecological Community under national environmental legislation. They are the habitat for numerous rare, endangered and endemic plants and animals, found in the crevices, rock pavements and sand sheets of the Kuwarddewardde, as well as the mudstone of the Marawal Plateau in Nitmiluk National Park.

Nawarddeken acknowledge the importance of shrublands as significant conservation areas, as well as being the location of many stone arrangements constructed by our ancestors. Many of these arrangements are still visible across the Kuwarddewardde and are visited by Bininj today. Additionally, some of the animals supported by the shrublands, such as the Oenpelli python, have cultural significance to us.

Arnhem sandstone shrublands are made up of particular species of shrubs and grasses - many of which are sensitive to frequent and intense wildfires. They are dominated by resprouter shrubs, such as turkey bush (*Calytrix exstipulata*), and obligate seeder shrubs such as rock myrtle (*Petraeomyrtus punicea*). In the dry season, hummock grasses, such as *Triodia microstachya*, and mat-forming grasses, including *Micraira* species, are common. Flowering herbs and other annuals are common in the wet season. Animals of the Arnhem sandstone shrublands include Leichhardt's grasshopper, white-throated grasswren, black wallaroo, northern quoll and Oenpelli python.

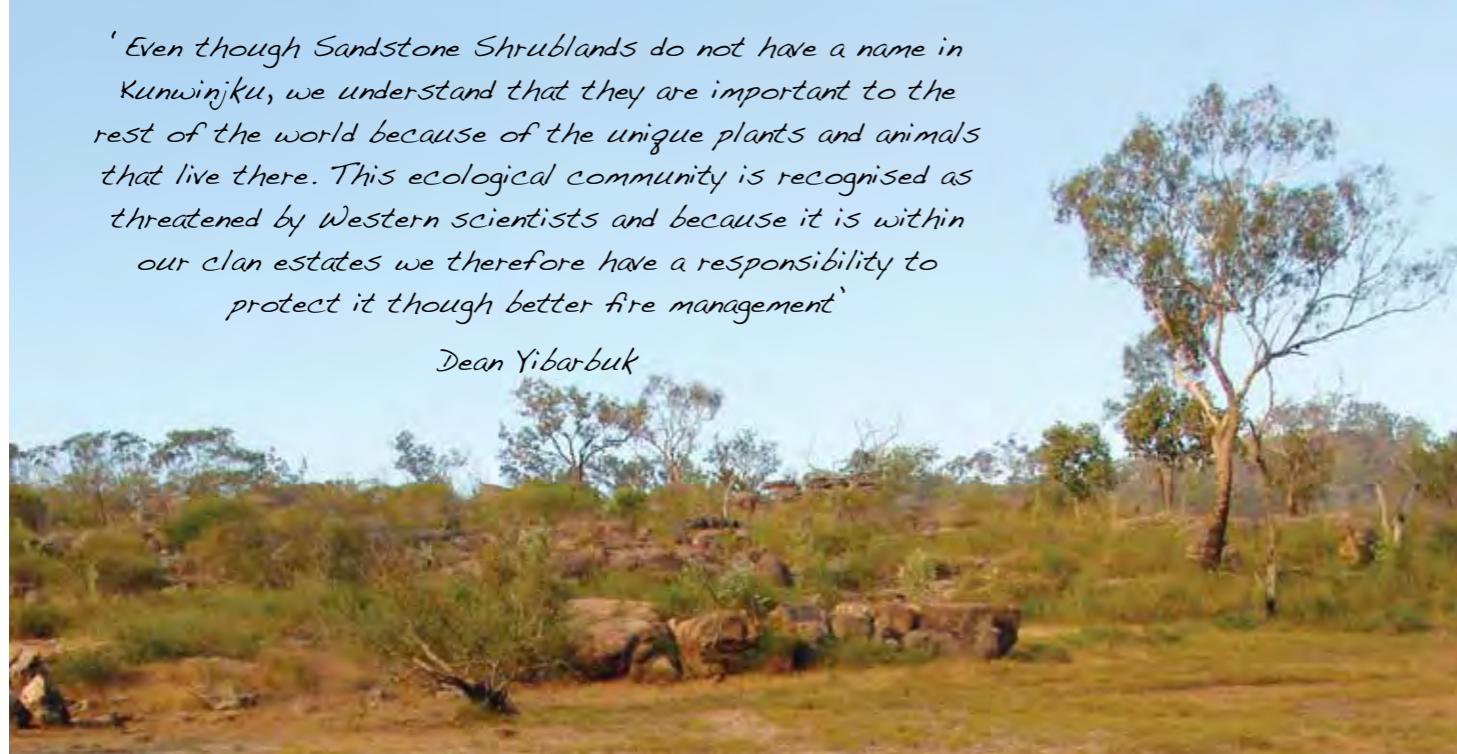
While we know lot of about some of the plants and animals of this Endangered Ecological Community, further research is required to find out how all the components of the shrublands work together. With increased understanding, we will be able to develop a best practice management plan to ensure its protection and long-term survival.





'Even though Sandstone Shrublands do not have a name in Kunwinjku, we understand that they are important to the rest of the world because of the unique plants and animals that live there. This ecological community is recognised as threatened by Western scientists and because it is within our clan estates we therefore have a responsibility to protect it through better fire management'

Dean Yibarbuk





Asset 10: GOVERNANCE

Our company, Warddeken, is guided by our professors' vision of healthy people living and working on healthy country. Our good reputation and success can be attributed to strong governance and planning in line with the company's constitution, combined with our two-toolbox approach. We value both Bininj knowledge and Western science and combine these two approaches in our management programs.

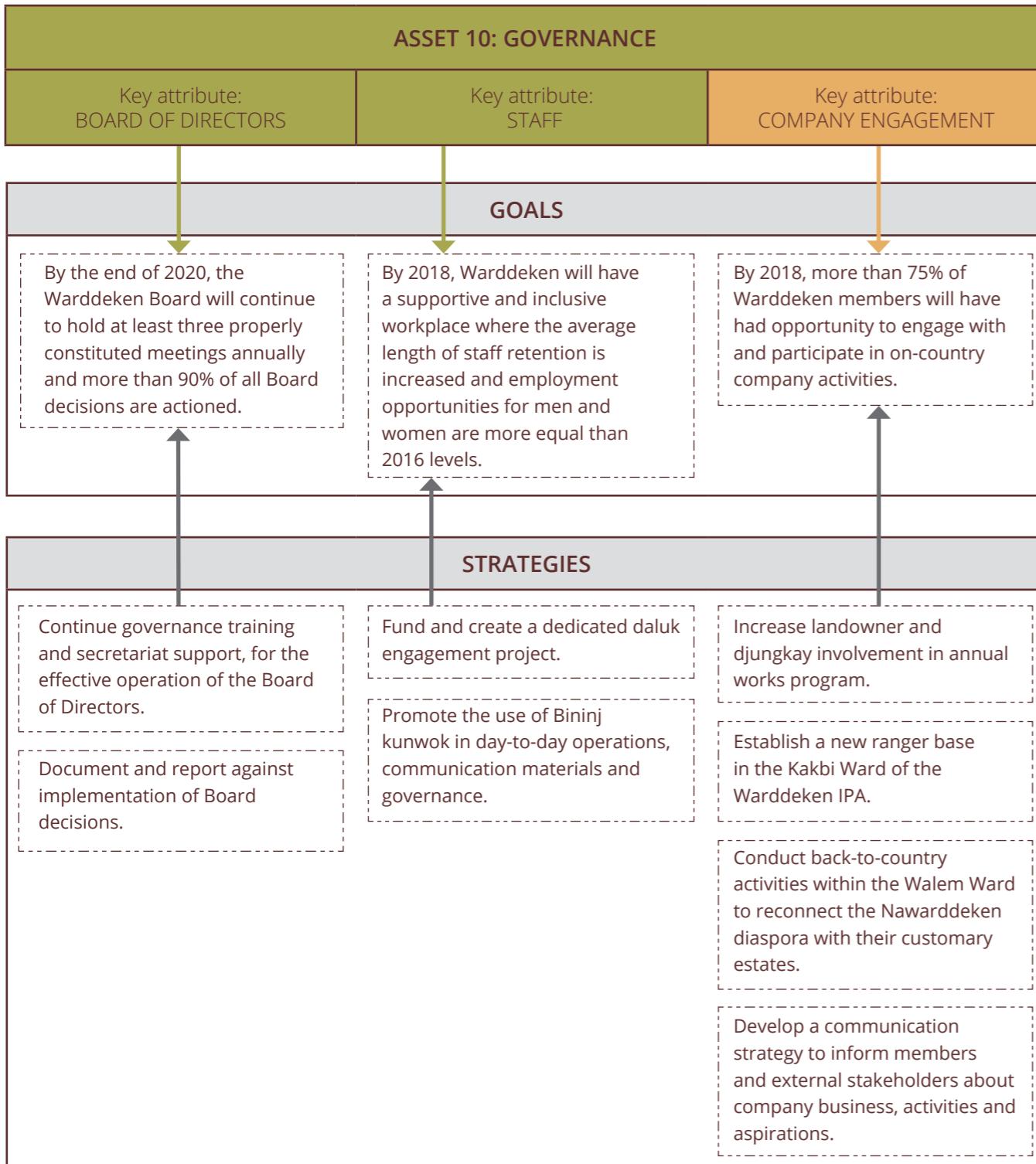
We have an active Board of Directors and approximately 300 members drawn from all areas of the IPA. We employ many Nawarddeken and other Bininj, as well as a few Baland, to carry out the day-to-day operations of our company. We make a concerted effort to ensure we have the right people in the right jobs, and that our staff and directors have the appropriate training to carry out their responsibilities.

Warddeken has been financially secure since the company was established in 2009, meeting our financial and accounting reporting requirements, including grant acquittals, reports to business partners and annual company audits. Our works programs are based on an annual operations plan, developed to achieve the objectives of the five-year Warddeken Plan of Management. This is our second plan of management, which will build on the good reputation and governance systems established since our incorporation.

During the life of this plan, we will make a bigger effort to keep members and all Nawarddeken more engaged with the management of the IPA. We need to improve our communication with members who are not actively employed or engaged in company business or do not live on country, particularly Bininj representing the Walem Ward.

Another way we want to improve our governance is to have more daluk employed by the company in a range of positions. Improving our communication with members and employing more daluk will make the company more inclusive and increase our capacity.







'You can see the results of Bininj applying their knowledge to land management already. Where I live at Kabulwarnamyo, the place has developed. It has become a big centre with work available for people and its influence is spreading out all over the plateau. Now the younger people are living and working there. We are teaching younger people about the country, the walking routes, the place names, experiences with the country and then they in turn follow this way. This is not a new thing. It's just what our old people before us taught us.'

Mary Kolkwarra Nadjamerrek



Asset 11: COMMUNITIES AND LIVELIHOODS

To meet the vision of our professors, it is important that Nawarddeken are able to live on country. For this to happen, we need to be able to make a living in the Kuwarddewardde. As well as being the most significant employer in the IPA the work of the company fulfills an important role in conserving a globally significant part of Australia's natural and cultural heritage.

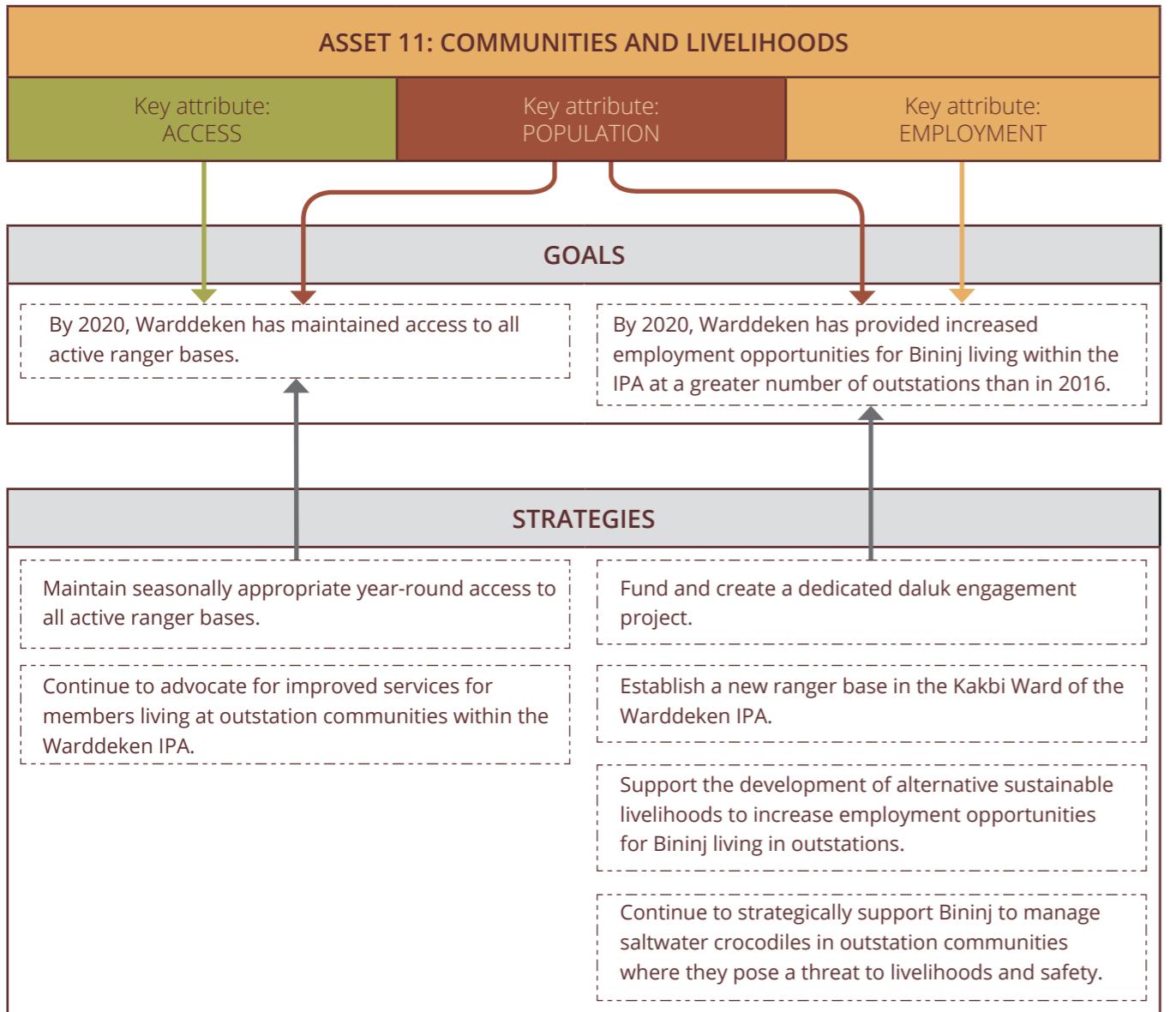
Within the IPA we have eight outstation communities, with permanent ranger bases at Kabulwarnamyo and Manmoyi and a seasonal base at Kamarrkawarn. Kabulwarnamyo is also our headquarters. There are other communities within the IPA that are seasonally occupied, including Marlkawo and Kumarrirrbang. Many of the people living in these communities work for the company as rangers, cultural advisors or office staff.

Living on our customary estates not only improves our health, wellbeing and livelihood opportunities, it also represents an efficient way of conserving a unique part of the nation's natural and cultural heritage. Our work enables us to maintain connections to our estates, utilise our cultural skills and practices and maintain our traditional knowledge. With our connections, skills and knowledge we are in the best position to provide this valuable work in a cost effective way.

To continue this important work, considerable resources are required. Like other Australians, we rely on services such as communications, education, healthcare, postal services and banking. We also need logistical support in accessing consumer goods and other essential materials. In recent years, with changes in government policy, some services are at risk, which threatens our ability to live on country. It is critical that these services continue.

We are looking at ways of improving supply of some of these services so that more people, particularly families with children, can spend more time on the Kuwarddewardde. We are also looking at increasing the opportunities for our members who do not have a community established on their estates, particularly in the Walem Ward, to be able to spend more time on the Kuwarddewardde and be involved with the company.





'We have a good feeling living out bush. It's good for our wellbeing, our psychological health. When we put our children out here and they all grow up here, it's a good feeling. It's here they learn about Aboriginal knowledge, about who we are.'

Ross Guymala





Introducing the main threats

There are a number of threats to the health of the Kuwarddewardde, including loss of biodiversity and cultural places, which impacts on our ability to live and work on country, and ensure that future generations are able to do the same. Some threats are recognised by Western science as very significant and there are national threat abatement programs and plans to address these.

The main threats that will be addressed in this plan were chosen based on consultations with our members and rangers, who see firsthand the impacts of these threatening processes on country. They include a number of threats faced by other protected areas, including our neighbours.

Threats can be a problem for one or more assets. By taking a strategic approach to mitigating the impact of threats on our country and culture, we will make all our assets healthier.

In this section we describe each threat and outline our goals and strategies to reduce their impact on asset health.

The main threats are:

1. EMPTY COUNTRY
2. BININJ KNOWLEDGE AND LANGUAGES
3. SUPPORT FOR OUTSTATIONS
4. FERAL ANIMALS – cats and cane toads
5. FERAL ANIMALS – buffalo and pigs
6. WILDFIRES
7. CAPACITY OF WARDDEKEN
8. SALTWATER CROCODILES
9. WEEDS



Threat ranking

To prioritise threats to the IPA, landowners and senior Bininj staff were consulted about their main concerns for the health of the Kuwarddewardde. We also spoke with Balanda scientists because many threats are new to our country and culture, and we want to work alongside experts to help us best manage these introduced problems.



We established our threat ranking according to the scope, severity and irreversibility of the impact of the threat. Ranking the main threats helps us prioritise our work over the life of this plan, including maintaining or improving asset health, as well as reducing or removing threats. By the completion of the plan, we want all threats to be ranked lower. For example, threats that were ranked Very High in 2016 will be ranked High or Medium by 2020.



VERY HIGH The threat has potential or is likely to destroy or remove part or all of a asset if the current situation or rate of damage continues. If this happens, it may be impossible to improve the health of the asset.

HIGH The threat is likely to cause serious damage to part or all of a asset if the current situation or rate of damage continues. If this happens, it would be very expensive and difficult to improve the health of the asset.

MEDIUM The threat is likely to cause serious damage to part or all of a asset if the current situation or rate of damage continues. If this happens, it would be very expensive and difficult to improve the health of the asset.

LOW The threat is likely to cause a limited amount of damage to part or all of a asset if the current situation or rate of damage continues. If this happens, it would require minimal effort and resources to improve the health of the asset.

Threat 1: EMPTY COUNTRY

The most significant threat to the Kuwarddewardde is empty country. Before our professors returned to the Kuwarddewardde, it was considered orphaned, empty of its' people.

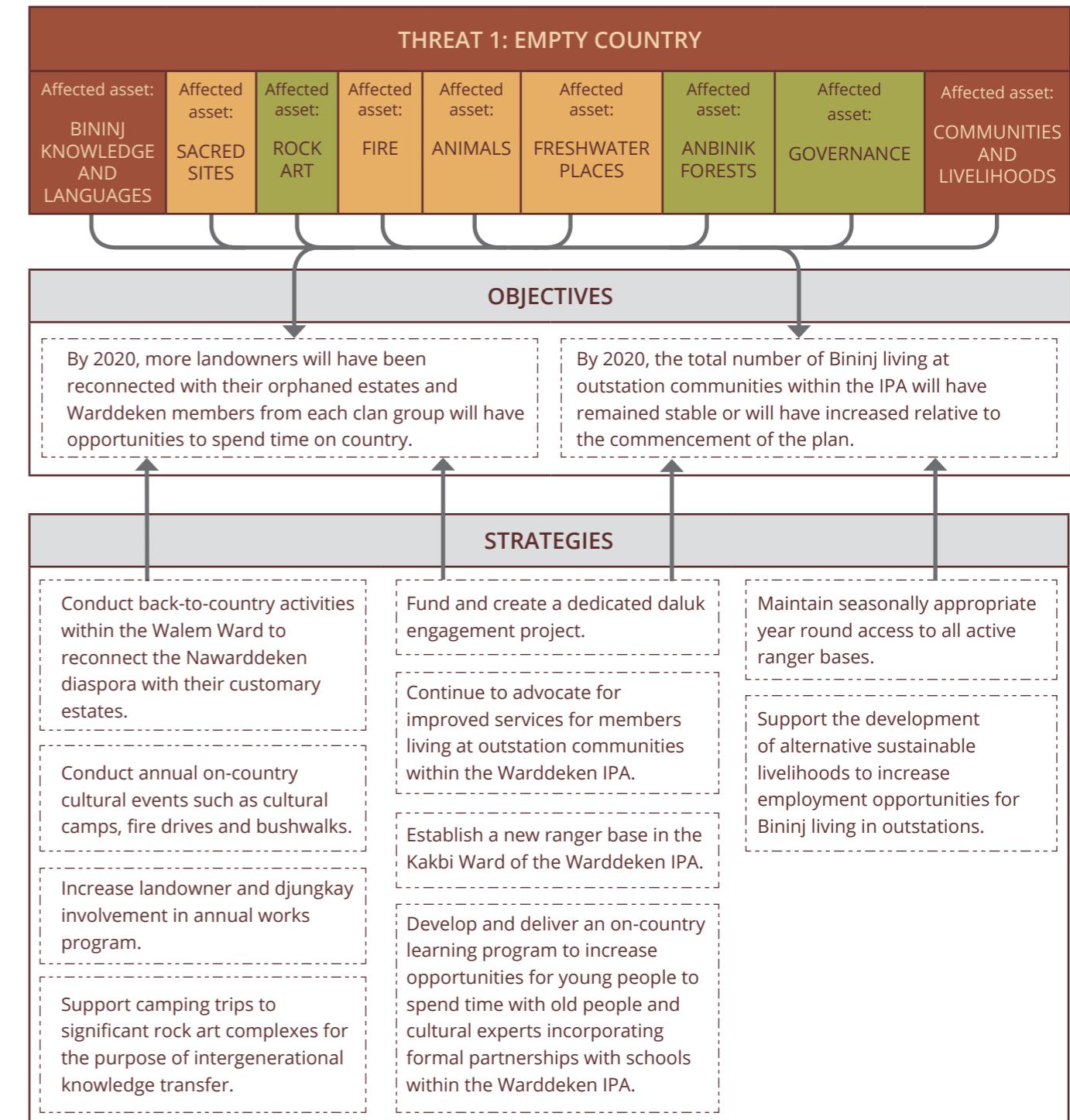
For a number of years not many Nawarddeken lived on or spent time on country. Because of this, customary responsibilities associated with sacred sites, ceremonies, rock art and other cultural places were not carried out, causing serious concern. Frequent and intense wildfires burned uncontrolled over large areas. Feral animals were left unchecked, resulting in damage to our cultural places, anbinik forests and wetlands. Scientists attribute the significant decline in small mammal populations largely to the combination of these uncontrolled wildfires and the increasing damage caused by feral animals.

Returning to country has resulted in better management for both culture and conservation.



There are fewer wildfires. Thousands of feral animals are now removed every year. Cultural places are managed and djang are visited. Research also shows that we Nawarddeken are healthier when we are spending time on the Kuwarddewardde.

The work of our company has ensured that some Nawarddeken families can be on our estates, either camping seasonally or permanently living. However, the Kuwarddewardde is a large area and despite our efforts, many parts of it remain empty. Some areas are very remote and do not have access or appropriate infrastructure to support Bininj visiting or living there. Making sure the Kuwarddewardde is not empty is expensive, however we will continue to create more opportunities for Bininj to live and work on country.



Threat 2: BININJ KNOWLEDGE AND LANGUAGES

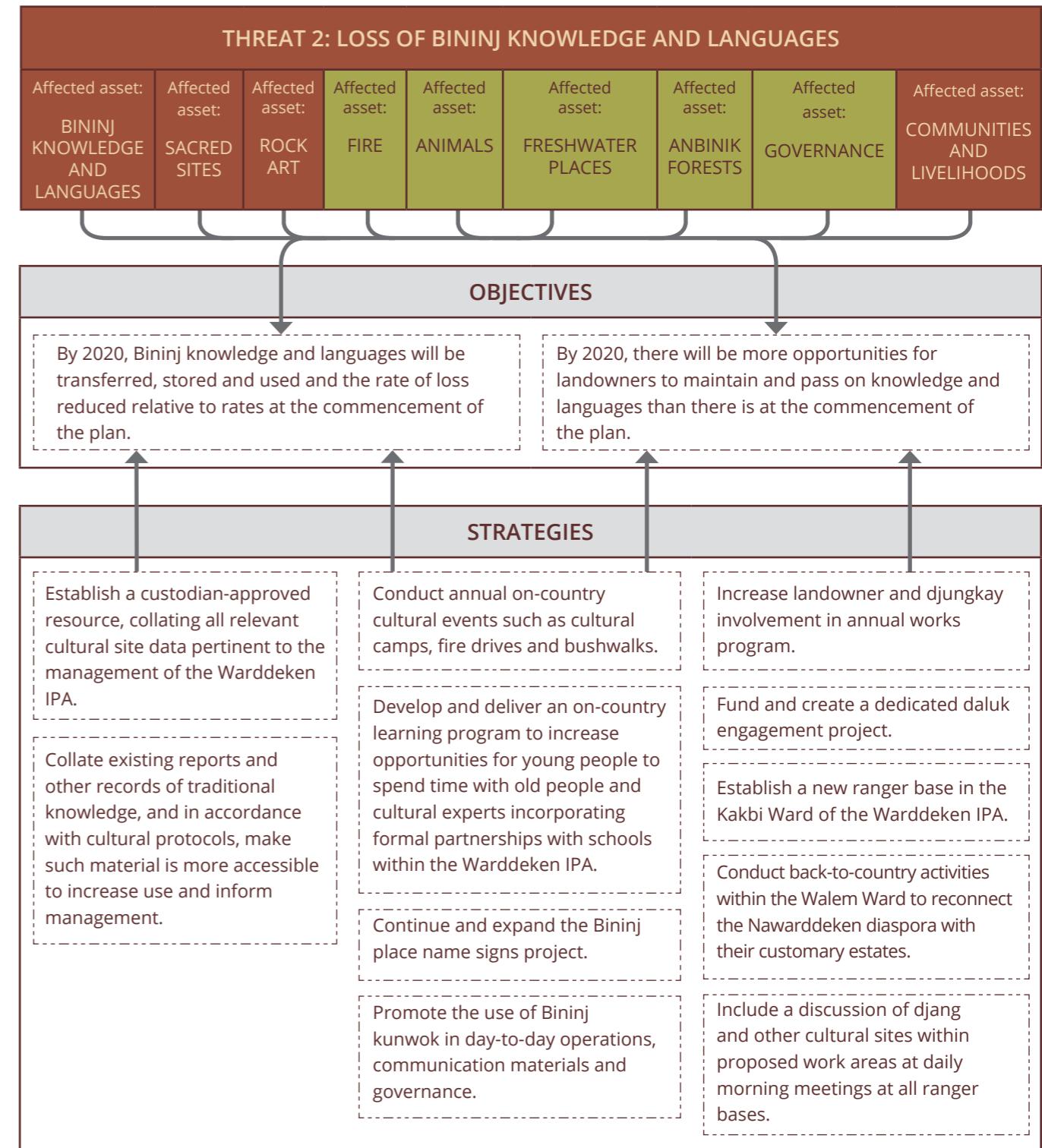
The loss of Bininj knowledge and languages is a major threat to the health of the Kuwarddewardde. Our knowledge and languages are not found anywhere else, they help define us as Nawarddeken and have been passed from generation to generation for thousands of years. They are essential to our health and wellbeing.

If Bininj knowledge and languages are lost then ceremonies will not be carried out, we will not know the stories, songs and places of the Kuwarddewardde and younger generations will not know how to manage their estates according to customary responsibilities. Young Bininj will also not know how to make cultural items, such as spears, how to carry out cultural practices, such as painting, or where and how to collect and prepare bush foods. Important cultural sites will not be looked after properly. All these things impact on the health of Nawarddeken and the Kuwarddewardde.

We acknowledge that some Bininj knowledge and languages has been lost. The old people worry that younger generations are not learning and practicing enough Bininj knowledge and languages. Parents themselves admit to not supporting their children enough in learning and practicing more Bininj knowledge and languages. Living in a modern world, it is easy to be distracted by other things.

Many Bininj choose to live in towns for employment and access to better facilities and infrastructure. However some Bininj knowledge and languages can only happen on the Kuwarddewardde, and not all

Bininj have this opportunity. Knowledge that can only be passed on to certain people has an even higher risk of being lost. We feel strongly that more needs to be done to reduce the loss of customary knowledge and languages, and to find a balance between Bininj culture and living in the modern world.



Threat 3: SUPPORT FOR OUTSTATIONS

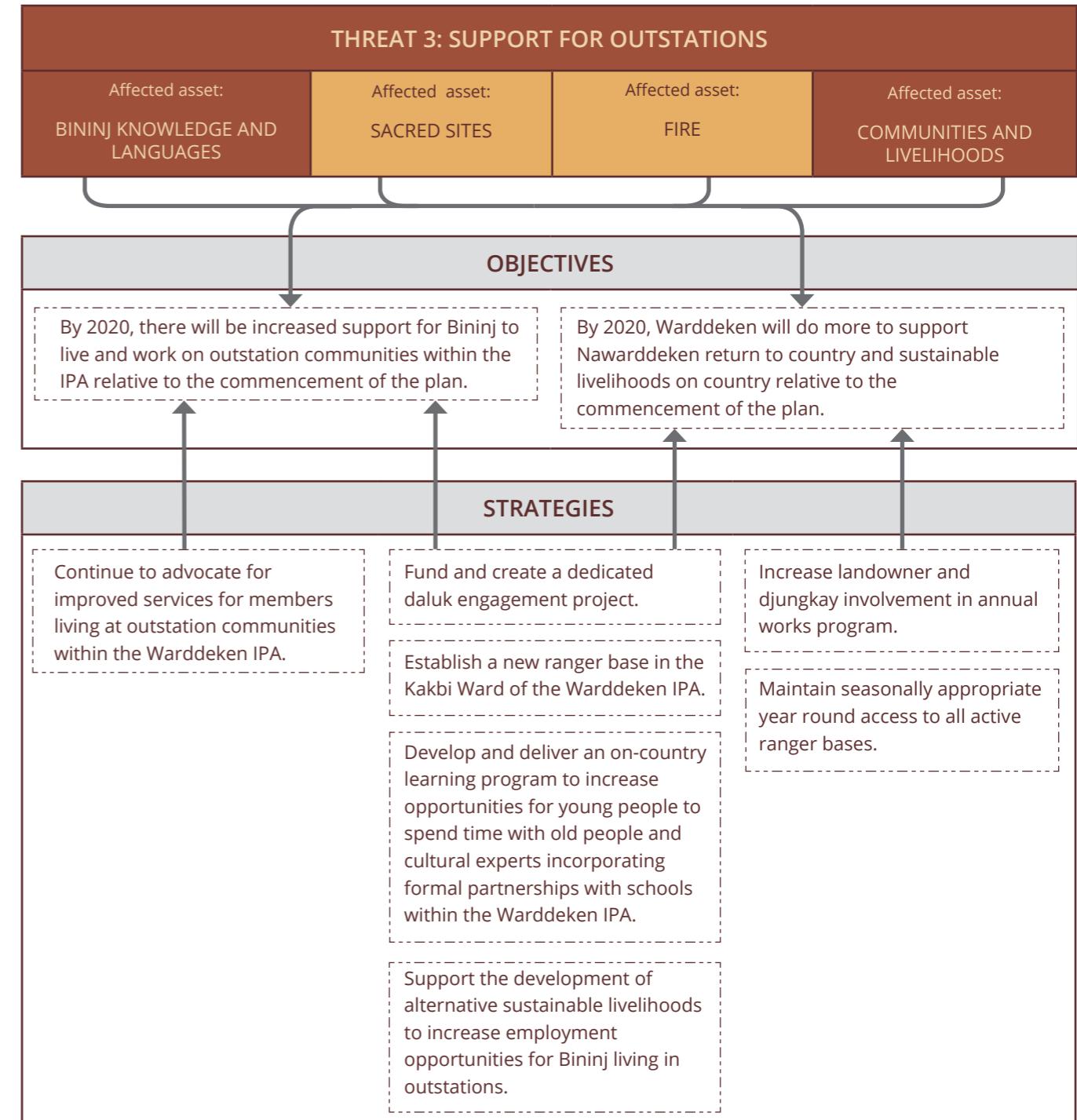
The level of support for outstations is strongly linked to the threat of empty country and loss of Bininj knowledge and languages. If there is little support for outstations, then fewer Bininj are able to return, live or spend time on the Kuwarddewardde, impacting on the overall health of people and place.

Since our professors returned to the Kuwarddewardde, many Bininj have been able to spend more time on and looking after their estates. There are now ranger bases and outstations at Kabulwarnamyo, Manmoyi and Kamarrkawarn, where Bininj, rangers and their families live. It is important for Bininj working for the company to have their families with them.

During the life of this plan we will establish a ranger station at Kudjekbinj. Each ranger base is remote

and requires specific access, infrastructure and facilities to enable the rangers to continue their work of managing the IPA and looking after the Kuwarddewardde. However, Warddeken cannot be responsible for providing all the support for outstations. The company provides support that is directly related to managing the IPA.

Other services such as health services and affordable groceries are needed in our everyday lives. These services are often difficult to secure and over the years there have been times when they have ceased altogether. This lack of support for outstations and the associated expense, threatens the ability of Bininj to live and work on the Kuwarddewardde, ultimately threatening the health of Nawarddeken and the Kuwarddewardde.



Threat 4: FERAL ANIMALS

Cats and cane toads

There are a number of different types of feral animals that are threatening the health of our assets and the health of the Kuwarddewardde. The most serious of these are feral cats (*Felis catus*) and cane toads (*Rhinella marina*).

Cats and cane toads occur in many parts of Australia and are listed as Key Threatening Processes under national environmental legislation. Both cats and cane toads have a significant impact on a number of animal populations. Together with other threats such as wildfire, they are thought to be responsible for the decline in small mammals across northern Australia, including in the Kuwarddewardde. Cats and cane toads are also known to spread diseases to native animals.

Cats are extremely efficient hunters and prey on many different types of animals, particularly small mammals, birds and reptiles. They can grow to over 10 kilograms, much larger than a domestic cat, increasing the variety of animals which they can prey upon. With the help of our scientific partners, we have been surveying, trapping and opportunistically culling cats for a number of years. However cats are solitary, have a large home range and predominantly hunt at night. These factors make feral cats difficult to find and catch.

Cane toads, including their eggs and tadpoles, have toxic defences that kill the animals that prey on them. Carnivorous animals such as the northern quoll, goannas and snakes are particularly at risk. Cane toads eat other frog species, fish and other small animals. They impact on our livelihoods by

reducing the availability of bush foods, and infest waterways making the water unsuitable for drinking.

Scientists have been studying how to control cats and cane toads for many years, however more research is required. It is unlikely that cats or cane toads can be eradicated or even controlled, and therefore our work is focused on reducing their impact. Community awareness of the threats these feral animals pose is important, as is keeping up to date with current research and contributing where possible.



THREAT 4: FERAL ANIMALS – CATS AND CANE TOADS

Affected asset: ANIMALS	Affected asset: FRESHWATER PLACES	Affected asset: ARNHEM SANDSTONE SHRUBLANDS
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OBJECTIVE

By 2020, there will be an increase in the level of awareness and understanding of the threats and control of cats, cane toads and disease spread by feral animals relative to the commencement of the plan.

STRATEGIES

Develop and implement a strategic research and monitoring program.

Employ a monitoring officer to work with rangers, landowners and scientific partners to oversee the implementation of the research and monitoring program.

Manage feral animals and weeds at wetlands most commonly used for food resources.

Cull feral animals in areas where landowners have granted permission and work with landowners for other clan estates to explore options for feral animal control.

Continue to control cats and cane toads on an opportunistic basis, particularly in outstation communities.

Threat 5: FERAL ANIMALS

Buffalo and pigs

As well as cats and cane toads, the other feral animals threatening the health of our assets in the Kuwarddewardde are buffalo (*Bubalis bubalis*) and pigs (*Sus scrofa*). Buffalo and pigs arrived in Australia with early settlers as domestic livestock. Like cats and cane toads, they are not just a problem within the Warddeken IPA.

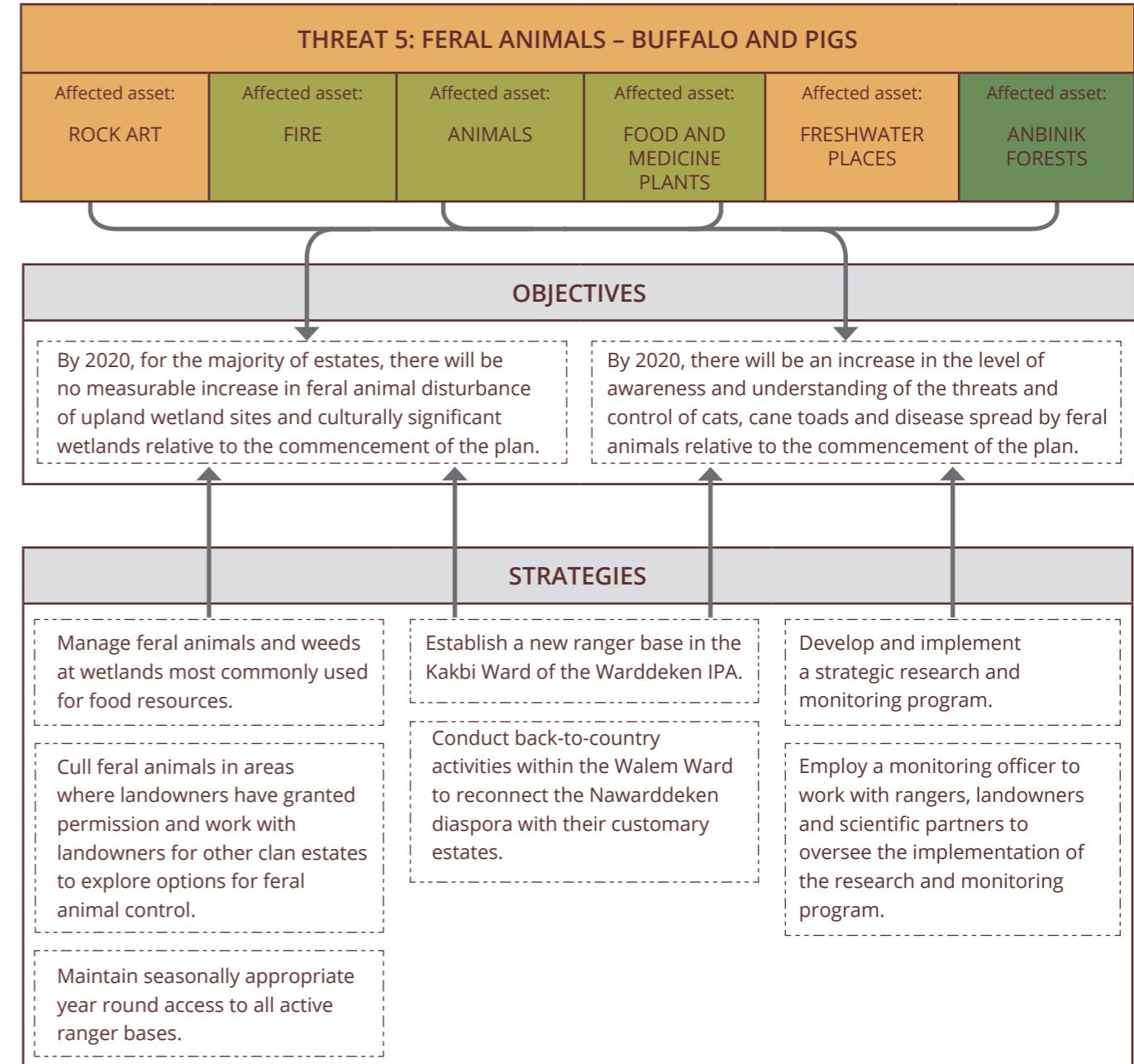
Buffalo occur in many parts of northern Australia and pigs are found across most of the continent. Pigs are a recognised National Threatening Process under environmental legislation. Both buffalo and pigs pollute and erode culturally significant wetlands. Their wallowing disturbs wetlands, causing erosion, decreasing water quality and destroying bush food crops. They trample and dig up forest seedlings and spread weeds across vegetation communities, impacting on the habitat of native animals.

As well as the damage caused to the Kuwarddewardde, these feral animals impact on Nawarddeken customary practices and safety. Buffalo and pigs pose a physical threat, spoil our drinking water, and carry and spread diseases. Buffalo, in particular, cause damage to rock art by rubbing against the paintings.

Rangers and landowners have been undertaking programs for the control of buffalo and pigs for a number of years. As part of a strategic regional program, aerial culling of buffalo is carried out each year. This is combined with opportunistic culling by rangers. Our monitoring shows that the damage by buffalo has decreased in some areas where control

programs are active. However, pigs are more difficult to control and a variety of methods may be required to reduce their numbers and minimise their impact.

Although buffalo are a threat to the health of our assets and to the Kuwarddewardde, they are also a ready supply of fresh meat and important to food security in the IPA. One of our challenges is to reduce the threat of buffalo whilst maintaining it as a food source.



Threat 6: WILDFIRES

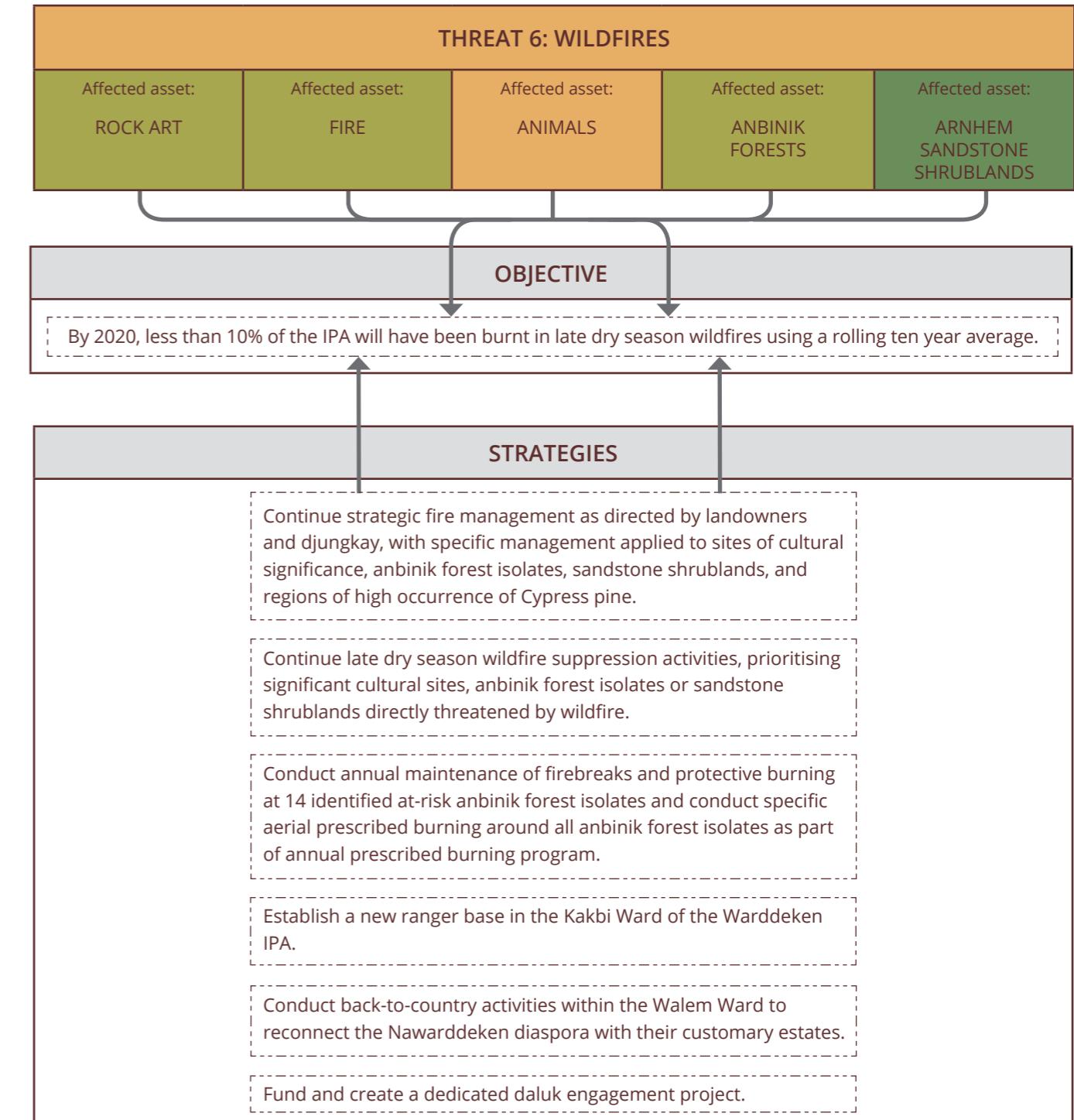
Wildfires are one of the key threatening processes of the Kuwarddewardde. They impact on the Kuwarddewardde and the health of our assets in many ways.

When Nawarddeken moved away from the Kuwarddewardde in search of employment and other opportunities, large frequent and intense wildfires, usually the result of late season lightning strikes, replaced their careful and deliberate use of fire. Our professors and Western scientists were worried about the serious damage wildfires were doing to the Kuwarddewardde's natural and cultural heritage. Working together through the WALFA project, they reintroduced traditional fire regimes, which lead to the establishment of our first ranger group and the return of Nawarddeken to country.

The impact of wildfires on the biodiversity of the stone country includes a reduction in the size and composition of anbinik forest patches, loss of plant species and habitat, refuges and food sources for native animals, including species of conservation

significance. Wildfires are closely linked by severity and scope to other threats such as weeds and feral animals. The combined impact of these threats is thought to be a major factor in the decline of small mammal populations. Wildfires also damage rock art and other important cultural sites, including djang, and reduce the amount and diversity of bush foods available for Bininj. More directly they threaten lives, homes and other assets.

Like weed and feral animal control, reducing the threat of wildfires is complicated and expensive. We work strategically with our scientific partners and neighbours to suppress wildfires and reduce their occurrence. We carry out early season burning using our two-toolbox approach combining Bininj knowledge together with GIS and GPS capabilities, aerial and on-ground techniques. While our focus is on reducing the threat of late season wildfires, we remain vigilant throughout the year, detecting and suppressing wildfires where possible and safe.



Threat 7: CAPACITY OF WARDDEKEN

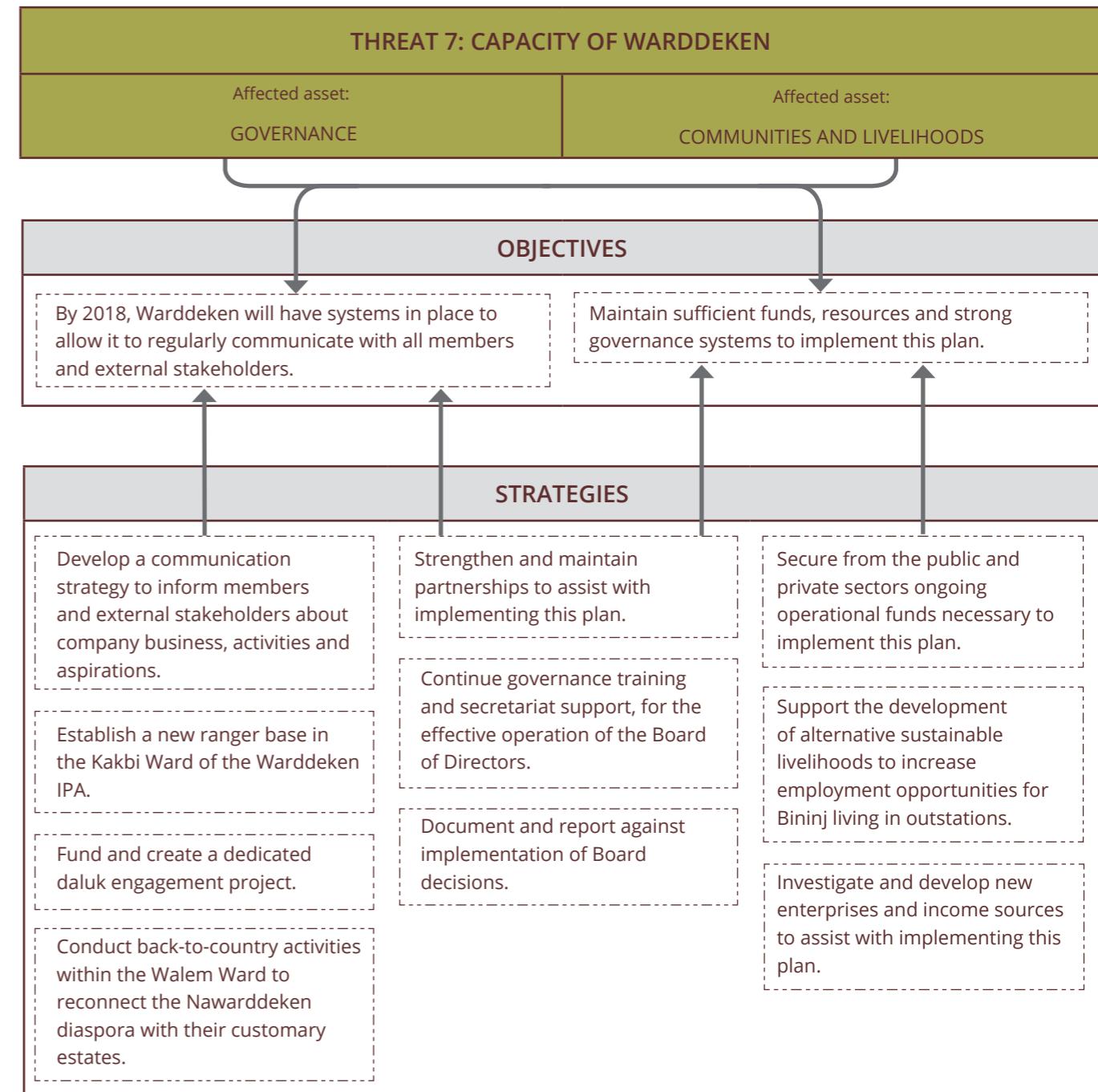
To meet the vision of our professors, Warddeken must have the capacity to meet the demands of this plan and beyond. Since establishing Warddeken we have successfully secured extensive resources, funding and well-trained staff, however there is still much work to be done.

The health of the Kuwarddewardde faces many challenges; challenges that our ancestors faced generations ago, as well as new challenges that have come about with the arrival of Balanda in our region. Any reduction in resources would have a direct impact on our capacity to meet these challenges and achieve our goals. Loss of capacity is a major threat.

Having dedicated the Warddeken IPA, we have a responsibility to manage the Kuwarddewardde, including many threatened endemic plant and animal species, and ecological communities, in accordance with international standards of the IUCN Protected Area Category VI. To a great extent our success rests on our capacity to fulfil our wildfire abatement work under the WALFA project. We are also responsible for the Kuwarddewardde as part Australia's rich cultural heritage, including Bininj knowledge and languages, extensive rock art complexes and cultural sites.

We need the funds to access the IPA and carry out our works programs, including the purchase, repair and maintenance of machinery and equipment. Our staff need accredited training and support to gain certificates and degrees in conservation and land management. Under our two-toolbox

approach staff also require training and personal development in Bininj knowledge and languages, to be able to continue to carry out their customary obligations and responsibilities. This is how we look after the Kuwarddewardde and ensure our children and grandchildren will be healthy people living and working on their healthy country.



Threat 8: SALTWATER CROCODILES

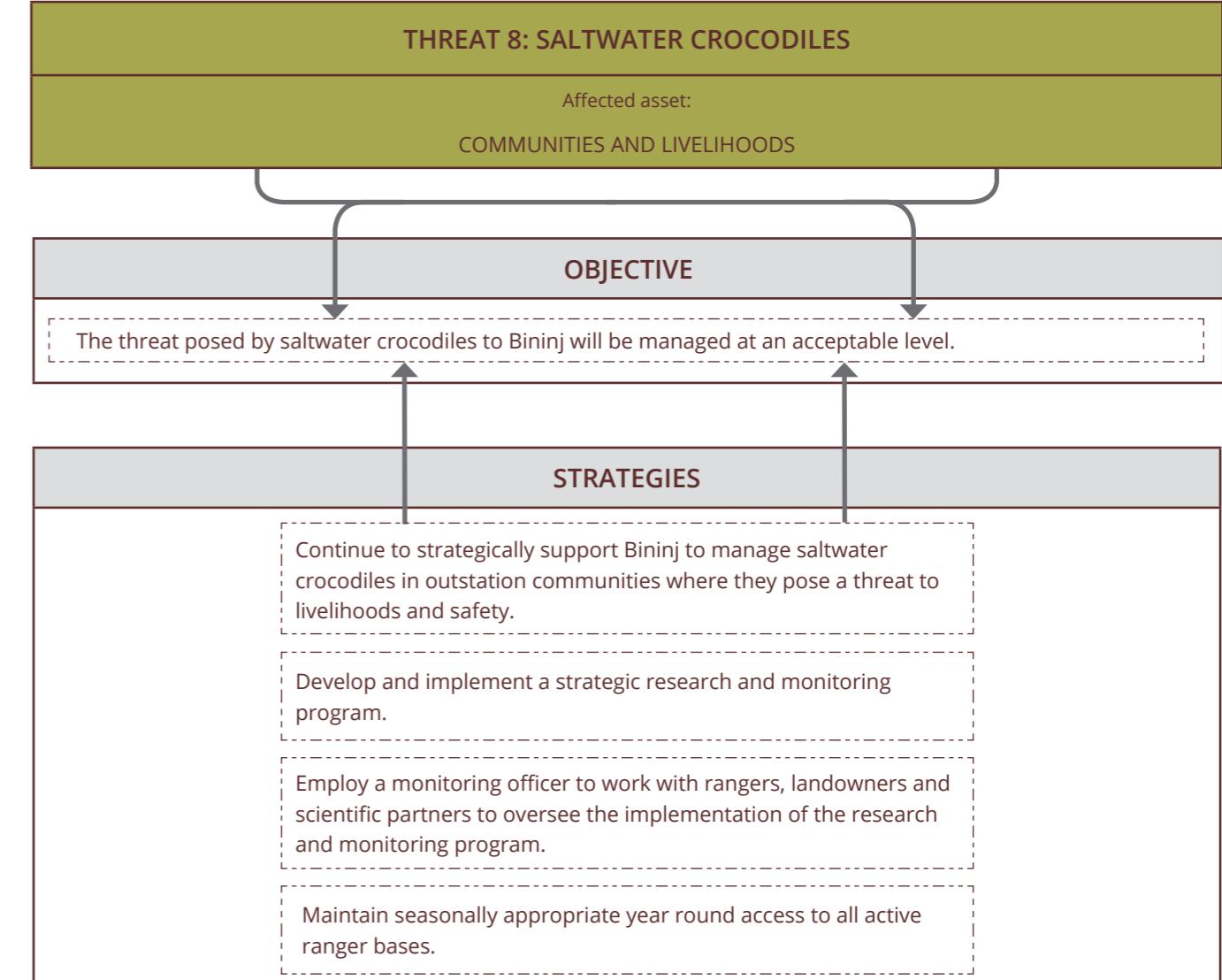
Although the name suggests otherwise, saltwater crocodiles (*Crocodylus porosus*) are also found in the freshwater reaches of river systems. The increasing number of these predators is becoming problematic for Bininj living on the Kuwarddewardde. Landowners in affected areas are concerned about safety and wish to see this threat addressed.

Saltwater crocodiles occur in wetlands across much of northern Australia. In 1971, the species was afforded protection in the Northern Territory as their numbers had declined significantly after decades of harvesting. Since then, crocodile numbers have increased considerably. Even though landowners support the continued protection of this species, they have become a threat to livelihoods and communities.



Our communities are located near permanent water bodies and we use them for a number of practical and cultural reasons. Each year landowners have noticed an increasing presence of large saltwater crocodiles in our rivers, suggesting that the population is expanding its range.

We are worried that someone will be killed by a saltwater crocodile, as has happened elsewhere in recent years, and also about the impact of saltwater crocodiles on populations of culturally significant modjarrkki (freshwater crocodile). At the time of writing, the community of Manmoyi on the Mann River is the most affected by the threat of saltwater crocodiles.



Threat 9: WEEDS

Weeds are a threat to the Kuwarddewardde as they compete with native plants, make it difficult for animals to move through country and reduce the habitat available to native animals. Weeds also make it difficult for Bininj to collect bush foods and restrict access to hunting and fishing areas.

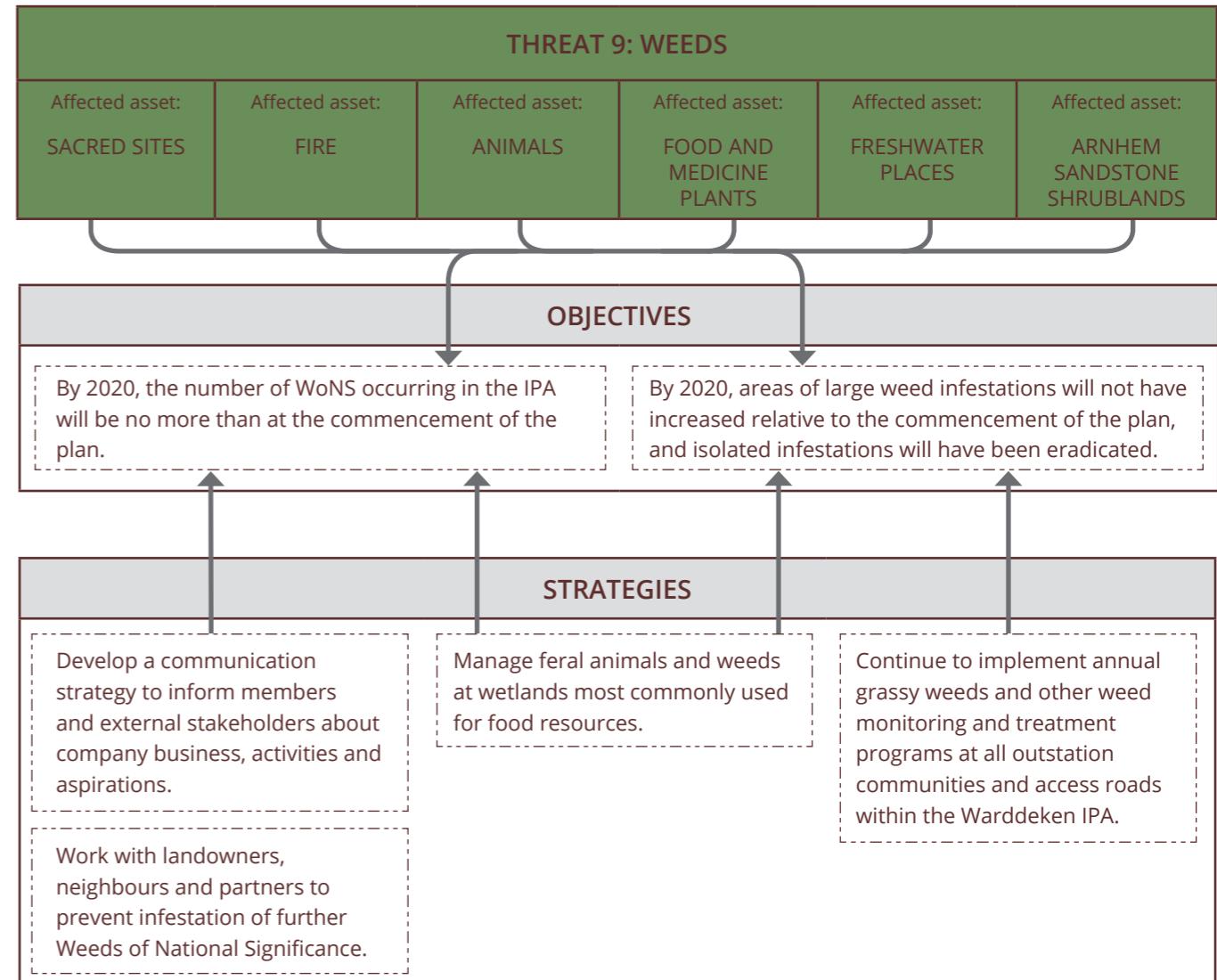
Although relatively weed free, gamba grass and mission grass are the main weeds of concern for the Kuwarddewadde. On the western edge of the IPA, in the Mikkinj Valley, there is a considerable infestation of *Mimosa pigra*, which is a Weed of National Significance. There is potential for other WoNS, such as *Salvinia molesta*, to infest the IPA. Weeds such as hyptis, sida and rattle pod also occur along roadsides and around communities.

Taking advantage of the disturbances caused by wildfires, buffalo and pigs, weeds invade ecological communities such as wetlands, anbinik forest patches and shrublands. The grassy weeds have the greatest impact on the health of the Kuwarddewardde as they alter fire regimes by

increasing fuel loads, resulting in very hot, large fires that emit significant amounts of greenhouse gases.

Despite the Kuwarddewardde having fewer weeds than many parts of northern Australia, weed control in the IPA is resource intensive and very expensive. As with other main threats, working strategically with our neighbours is the most effective way to prevent new infestations. Early detection, eradication of any new outbreaks, vigilance and regular post-treatment follow up are important components of our approach.

An example of this work is in Mikkinj Valley, where we work with our neighbouring landowners in Kakadu and government authorities to control mimosa. This operation requires the use of helicopters, airboats and other machinery. We use mobile spray units and hand spraying to combat smaller infestations around communities and outstations, and have almost entirely eradicated grassy weeds within IPA communities. With our GIS capabilities we also survey and map known weed infestations.



Our strategies

1. Conduct annual on-country cultural events such as cultural camps, fire drives and bushwalks.
2. Increase landowner and djungkay involvement in annual works program.
3. Develop and deliver an on-country learning program to increase opportunities for young people to spend time with old people and cultural experts incorporating formal partnerships with schools within the Warddeken IPA.
4. Conduct back-to-country activities within the Walem Ward to reconnect the Nawarddeken diaspora with their customary estates.
5. Fund and create a dedicated daluk engagement project.
6. Establish a new ranger base in the Kakbi Ward of the Warddeken IPA.
7. Establish a custodian-approved resource, collating all relevant cultural site data pertinent to the management of the Warddeken IPA.
8. Collate existing reports and other records of traditional knowledge, and in accordance with cultural protocols, make such material more accessible to increase use and inform management.
9. Continue and expand the Bininj place name signs project.
10. Promote the use of Bininj kunwok in day-to-day operations, communication materials and governance.
11. Include a discussion of djang and other cultural sites within proposed work areas at daily morning meetings at all ranger bases.
12. Support camping trips to significant rock art complexes for the purpose of intergenerational knowledge transfer.
13. Continue strategic fire management as directed by landowners and djungkay, with specific management applied to sites of cultural significance, anbinik forest isolates, sandstone shrublands, and regions of high occurrence of Cypress pine.
14. Continue late dry season wildfire suppression activities, prioritising significant cultural sites, anbinik forest isolates or sandstone shrublands directly threatened by wildfire.
15. Conduct annual maintenance of firebreaks and protective burning at 14 identified at-risk anbinik forest isolates and conduct specific aerial prescribed burning around all anbinik forest isolates as part of annual prescribed burning program.
16. Manage feral animals and weeds at wetlands most commonly used for food resources.
17. Cull feral animals in areas where landowners have granted permission and work with landowners for other clan estates to explore options for feral animal control.
18. Continue to control cats and cane toads on an opportunistic basis, particularly in outstation communities.
19. Work with landowners, neighbours and partners to prevent infestation of further Weeds of National Significance.
20. Continue to implement annual grassy weeds and other weed monitoring and treatment programs at all outstation communities and access roads within the Warddeken IPA.
21. Continue to strategically support Bininj to manage saltwater crocodiles in outstation communities where they pose a threat to livelihoods and safety.

Implementing the plan

22. Develop and implement a strategic research and monitoring program.
23. Employ a monitoring officer to work with rangers, landowners and scientific partners to oversee the implementation of the research and monitoring program.
24. Continue to advocate for improved services for members living at outstation communities within the Warddeken IPA.
25. Support the development of alternative sustainable livelihoods to increase employment opportunities for Bininj living in outstations.
26. Maintain seasonally appropriate year round access to all active ranger bases.
27. Develop a communication strategy to inform members and external stakeholders about company business, activities and aspirations.
28. Continue governance training and secretariat support, for the effective operation of the Board of Directors.
29. Document and report against implementation of Board decisions.
30. Strengthen and maintain partnerships to assist with implementing this plan.
31. Secure from the public and private sectors ongoing operational funds necessary to implement this plan.
32. Investigate and develop new enterprises and income sources to assist with implementing this plan.

The Warddeken Plan of Management 2016-2020 is the overarching planning document guiding the management of our IPA for the next five years.

This plan will be implemented by our dedicated and passionate team of rangers who will work alongside elders, landowners, djungkay and with our neighbours to conserve the culture and environment of the stone country.

Each strategy in this management plan involves a series of steps, or actions, which collectively make up the Warddeken IPA Action Plan 2016-2020. The action plan identifies the timing, method, responsibility and estimated cost of each action over the five-year period. It is used to develop the company's annual operational plans, and weekly or monthly works programs for the rangers.



Monitoring, evaluating and adapting the plan

Implementation of the Warddeken Plan of Management is only one step in the adaptive management process that we are using in our company.

We will monitor and evaluate the progress, and amend the plan to ensure that it is on track towards achieving our vision. An adaptive process allows management to take account of changing circumstances, new technologies and new information or knowledge.



The key parts of our monitoring and evaluation program will keep track of:

1. Implementation of the plan

At least twice each year we will monitor actions being carried out and highlight any issues. Monitoring will be undertaken by rangers, and other relevant staff.



2. Effectiveness of the strategies

We will annually measure specific indicators for each objective and goal, and then compare these measurements against baseline data. Results from this monitoring will be used to evaluate the effectiveness of the strategies outlined in the plan. If strategies are found to be ineffective, they will be adapted accordingly.



3. Health status of the assets

The indicators identified in this plan will be used to measure the health of the assets and evaluate whether they have improved. We have a suite of key attributes and indicators that will be checked against health assets annually, triennially or at the end of the planning period (as appropriate) to measure improvement and inform preparation of our next management plan. Specific monitoring and evaluation activities are included in the Action Plan.

Parts 2 and 3 above will require assistance from our scientific partners as well as considerable resources. A monitoring plan will be developed that details indicators, methods, timing, location, responsibilities, costs, baseline data and asset health status. It may also highlight information or research needs such as collection of baseline data for some assets.



Monitoring and evaluation reports will be presented to the Chief Executive Officer and Board of Directors, and a summary will be included in the company's annual report. Reports will also be made in accordance with funding obligations. The Warddeken Monitoring and Evaluation Committee will also help guide the monitoring and evaluation program.

Our indicators

1. Landowner, ranger and key informant satisfaction with their Bininj knowledge being used in the management of the IPA and transferred to the next generations.
2. Landowner satisfaction with their language being transferred to the next generation.
3. Landowner, ranger and key informant satisfaction with the amount of time they spend on country and at specific assets.
4. Landowner, ranger and key informant satisfaction with the status of key attributes of assets.
5. Rock art survey toolkit (TBA).
6. Savanna landscape unburnt for >3 years and >10 years.
7. Percentage of IPA burnt by late dry season wildfires based on rolling 10 year average.
8. Woodland habitat occupied by Cypress pine affected by two or more severe fires over a five-year period.
9. Sandstone shrubland patches and woodland affected by two or more large (>100km²) recurring fires over a five-year period.
10. Small mammal populations.
11. Availability and condition of food and medicine plants.
12. Freshwater places showing signs of disturbance by feral animals.
13. Anbinik forest patches decreasing.
14. Anbinik forest patches with no scrub encroachment.

Acknowledgements

15. Anbinik forest patch boundaries affected by one or more late dry season fires over a five-year period.
16. Anbinik forest patches affected by two or more recurring fires over a five-year period.
17. Retention of staff.
18. Employment hours worked by daluk.
19. Employment positions held by daluk.
20. Board of Directors meetings with quorum.
21. Board of Directors decisions actioned.
22. Implementation of management plan.
23. Company audit requirements.
24. Members engaged with company.
25. Outstations inhabited with stable population.
26. Outstations with functional airstrips.
27. Outstations with passable road access.
28. Outstations with employment opportunities for working age residents.

Warddeken gratefully acknowledges the funding from Bush Heritage Australia and the Australian Government for the development of the Warddeken Plan of Management 2016-2020.



Australian Government

Warddeken also acknowledges the generous support of other partner organisations and looks forward to continuing to work closely with them throughout the life of this plan.



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'All these techniques of how to live in this country have been left for us to use. We can put our elders' knowledge into our plan of management whether it be things such as fire, knowledge of places and cultural data, animals that live in certain places, sacred sites.

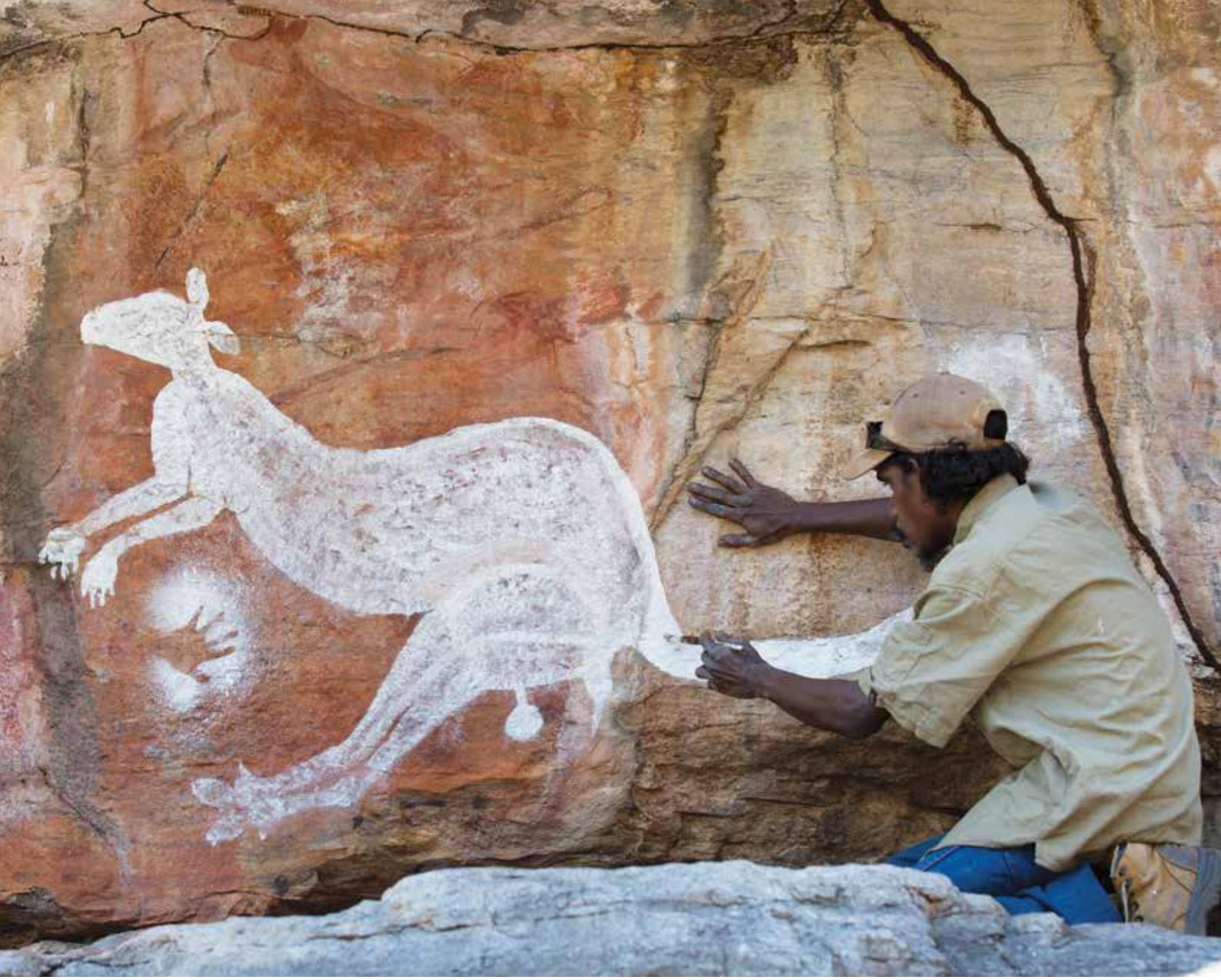
When we use our own cultural practices and our own knowledge about living in the bush, it gives us strength. When we use our own Aboriginal knowledge and put it into a plan of management in our IPA, it gives us confidence and strength and we can understand how to work in our own Aboriginal domain – Bininj way.'

Terrah Diliyang Guymala

Warddeken Land Management Limited wishes to acknowledge and sincerely thank all the landowners and staff who contributed their time, suggestions and knowledge during the development of this plan. The planning process was carried out over 18 months and involved consulting with the majority of landowners.

Special thanks to Mary Kolkwarra Nadjamerrek, Serina Namarnyilk, Sarah Nabarlambal Billis, Sylvia Ragurrk, Dean Yibarbuk, Shaun Ansell, Jake Weigl, Terrah Diliyang Guymala, Stuart Guymala, Nigel Gellar, Graeme Gillespie and Jeremy Freeman for their additional participation in the planning process.





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