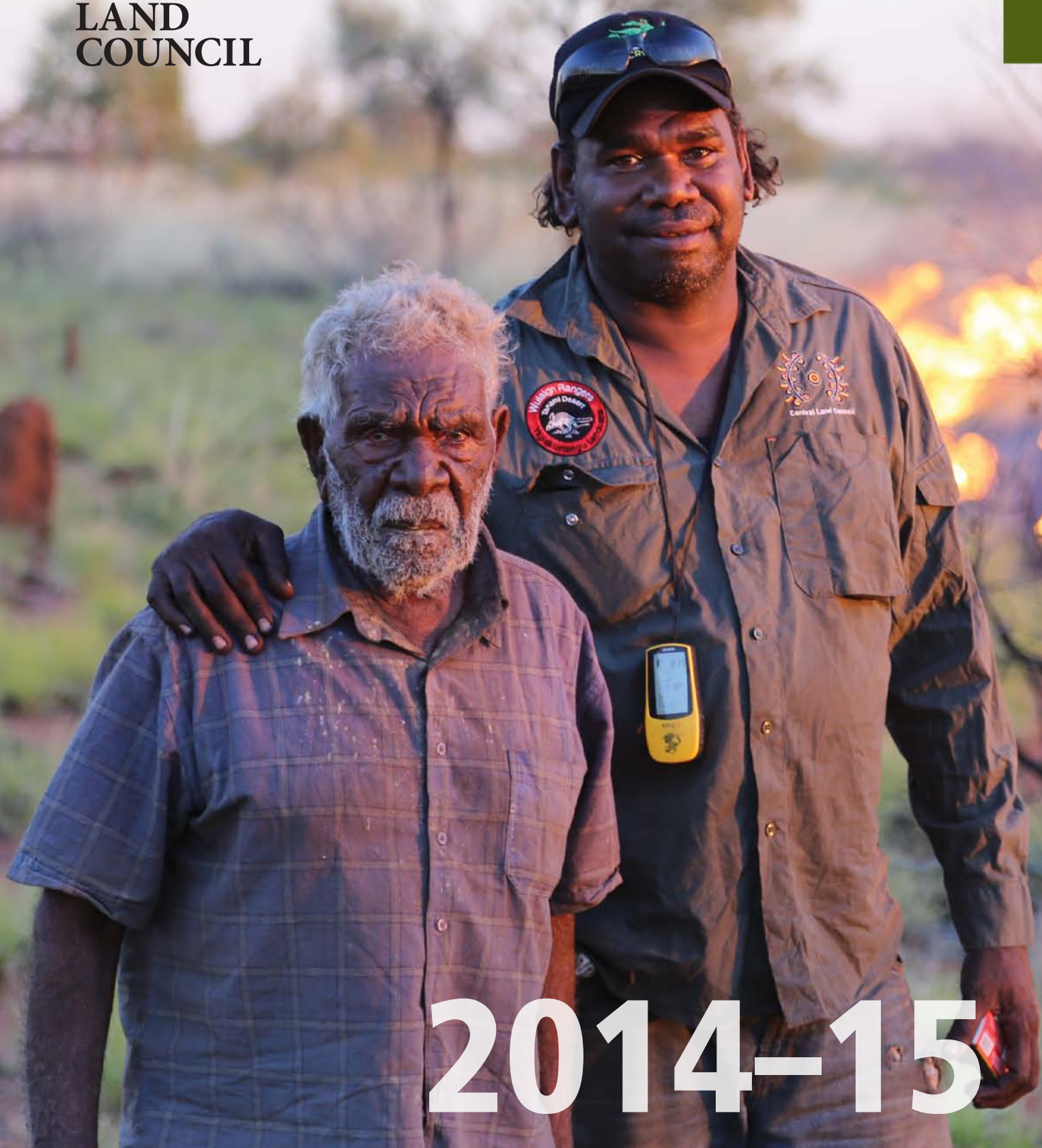


CLC RANGER PROGRAM REPORT

SUPPLEMENT TO THE CLC ANNUAL REPORT



CENTRAL
LAND
COUNCIL



2014-15



CENTRAL LAND COUNCIL

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FOREWORD



As Chair of the CLC I am very proud of the rangers and the work that they do to look after country. It is really important that there are more opportunities for our people to work on their land and look after the plants and animals for future generations.

Ranger work also gives our young people something to do. It gives them a job and training so that they learn new skills. Rangers also need to learn from the traditional owners of the land and the knowledge holders.

In 2015 a group of rangers presented to the CLC Council. The rangers gave delegates a rundown of the work that they have been doing and how much they like their job. Council delegates were very happy to hear from the rangers, and there are many delegates who want to start a ranger group in their area.

Keep up the good work.

Francis Kelly
CLC Chair



I am very pleased to present the *CLC Ranger Program Report* for the year 2014–15, which outlines the work of the CLC rangers in natural and cultural resource management. The CLC recently decided that, given the size of the ranger program and to highlight its achievements, a report that supplements the CLC's annual report was warranted.

The CLC's ranger program is a significant employer of remote Aboriginal people in the CLC region. Over the last 15 years the program has grown to consist of 11 groups employing over 100 rangers. As this is the first time the CLC has compiled a specific ranger program report, a brief history of the origins of the program and an explanation of what rangers do has been included.

I have been impressed with the work that the rangers have completed over the last 12 months in addressing land management issues. I was also impressed with the presentation that a group of rangers gave to the CLC Council and the Minister for Indigenous Affairs outlining the importance of the program.

The CLC continues to receive requests for ranger positions at a rate that currently outstrips available funding, but we are endeavouring to find ways to expand the program and to ensure existing resources are maintained beyond current funding timeframes.

David Ross
CLC Director

A SHORT HISTORY OF THE CLC RANGER PROGRAM

The ranger network in central Australia delivers huge benefits to Aboriginal landowners and to the Australian public. Through the program, Aboriginal landowners maintain and care for country while passing on knowledge and skills to young people. It offers employment and training in locations where few such opportunities exist, and through these activities it builds confidence, delivers economic benefits and provides social, environmental and cultural benefits to traditional landowners and their communities.

However, the history of the ranger network in central Australia has not been a smooth and seamless journey. As the funding priorities of successive governments have changed, the program has had to adapt and evolve, but key to its success is the resilience of traditional owners and the ongoing support of the Central Land Council (CLC). What follows is a short description of the program, from its modest beginning to the thriving network that operates throughout the CLC region today.

Over the 15 years of the ranger program the number of groups has grown to 11 providing employment opportunities to over 460 Aboriginal people in that period. Each of the groups has its own unique history; however, in the early

period there was a similar basis for group development through CLC collaboration with local organisations to provide employment and training opportunities in addressing identified cultural and natural resource issues.

Under an agreement with the Indigenous Land Corporation (ILC) the CLC facilitated planning workshops with traditional owners to identify their aspirations for land use and land management. In some instances these plans formed the basis for the creation of a ranger group. Local providers of the now defunct Community Development Employment Program (CDEP) provided the mechanism for employing rangers to work on land management projects. The CDEP, and collaborating local organisations, often Aboriginal-owned and governed, were critical in maintaining the early momentum and growth of the engagement of traditional owners in ranger work under CLC supervision.

Other ranger groups emerged from project-specific funding that addressed natural and cultural management issues in locations where there was community interest. These projects included weed and fire management, threatened species surveys, and fencing around water points to reduce the impact of feral animals. Importantly, they created the space



The early days: Muru-warinyi Ankkul Rangers standing proud next to a fence that they constructed around the Mission block in 2004.

TIMELINE

| | |
|------------------|---|
| 1999–2000 | The CLC conducts land use and land management planning workshops across a number of locations under an ILC-funded service agreement. |
| 2000 | Four rangers employed with the Wulain Outstation Resource Centre in Lajamanu under the CDEP. |
| 2001 | Weed control work at Yuendumu involves CDEP participants with support from Greening Australia and the CLC. |
| 2002 | A Warlpiri ranger group, operating through Yuendumu CDEP, emerges with an interest in participating in the management of Newhaven Reserve. |
| 2003 | Warlpiri and Lajamanu rangers undertake contract work on mines in the Tanami region. |
| 2003–04 | Natural Heritage Trust funding helps establish a ranger group in Tennant Creek. |
| 2004 | CLC establishes a Ranger Equipment ‘Library’ with an ABA grant to support emerging Indigenous land management groups. |
| 2004–05 | The Tanami Biodiversity Monitoring Project is launched, involving rangers from Lajamanu, Yuendumu and Willowra. |
| 2005 | ILC funding under the Ranger Start-Up program supports the ongoing operation of the Muru-warinyi Ankkul Rangers (Tennant Creek). |
| 2005 | A ranger group at Ntaria is established with NT Government funding as a result of the new joint management arrangements. Support is also provided by the Tjuwanpa Outstation Resource Centre. |
| 2006 | A grant to fence off springs on the Santa Teresa Aboriginal Land Trust marks the beginning of the emergence of the Santa Teresa Rangers, which initially operated out of the Ltyentye Apurte (Santa Teresa) CDEP. |
| 2006 | The Anmatyerr Cultural Water Values Project gives rise to a ranger group based at Ti Tree. |
| 2006 | The first CLC Indigenous ranger camp is held at Mangkamarnta waterhole, Phillip Creek. |

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|-------------|---|
| 2006 | The Healthy Country, Healthy People (HCHP) Schedule to the Overarching Agreement on Indigenous Affairs between the Commonwealth and NT Government’s agreed to. |
| 2007 | Aboriginals Benefit Account funding helps establish a ranger group at Kaltukatjara. |
| 2007 | Dismantling of CDEP affects several groups. |
| 2007 | Early Investment Proposals submitted under the HCHP Schedule secure development funding for Anmatyerr Rangers, the Pastoral Partnerships Project (Harts Range) and women’s land management activity in six communities. |
| 2007 | NRM capacity-building funding secured through the NT NRM Board Regional Investment Strategy provides the basis for further development of ranger initiatives at Harts Range, Santa Teresa and Tennant Creek. |
| 2008 | NT Government reforms to create shires leads to the dismantling of community government councils. |
| 2008 | Three-year HCHP funding secures co-ordination, operational and capital resources for seven CLC-hosted ranger groups. |
| 2009 | Warlu Fire Committee established, providing greater representation of Aboriginal interests in regional fire planning across the Tanami region. |
| 2011 | The Dagaragu and Papunya rangers progress from pilot phase to established group status with funding from the WoC and ILC Real Jobs programs respectively. |
| 2013 | The CLC takes on management of the Angas Downs IPA and ranger group bringing the total CLC-hosted groups to 11. |
| 2013 | Five-year funding agreement signed under the Australian Government’s Working on Country program maintains seven CLC-hosted groups up to 2018. |
| 2014 | Alice Springs ranger hub facility in Cameron Street completed and officially opened. |
| 2015 | Completion of the Ranger Program Development Strategy by independent consultants addresses future expansion and sustainability issues. |



Feral cats like this one killed by expert cat tracker Warlpiri Ranger Christine Michaels-Ellis are a threat to native animals. Photo: Desert Wildlife Services.

to explore the interest of traditional owners in developing longer-term ways of delivering land management actions and the transfer of Indigenous knowledge. Funding from programs such as the Natural Heritage Trust (NHT) allowed CDEP participants to receive training and income on top of their CDEP salary providing significant economic and social benefit for participants. During this period CLC staff were regularly pursuing funding opportunities to sustain ranger activity, particularly on occasions where groups faced gaps in funding. However, the training and employment to which the rangers were exposed during this time also gave them the capacity to engage in small contracts mainly focused around the provision of environmental services to the mining industry and NT Parks and Wildlife Commission, such as mine site rehabilitation and weed management.

From 2005 onwards the funding environment changed significantly as the Australian Government dismantled CDEP. This disrupted ranger group operations and the capacity of local organisations to support them. It also coincided with NT local government reforms that abolished existing community government councils, further diminishing local support for community-based ranger groups with considerable impacts on active projects and individual ranger motivation.

It's important to note that all groups were not impacted equally. One of the earlier long-term funding agreements successfully secured by the CLC in 2005 was with the ILC, which provided funding for three years to support the management of Warumungu lands by the Muru-warinyi Ankkul (Tennant Creek) Ranger Group. Again, the dismantling of CDEP meant that rangers could no longer be employed by local outstation resource agencies and community government councils. Existing rangers were employed by the CLC to cover this gap.

The Australian Government's Indigenous Protected Area (IPA) Program, which was established around 1995, has been critical in supporting traditional owners develop and implement land management programs across large areas of Aboriginal land. The objective of the IPA program is to improve representation of unreserved land systems occurring on Aboriginal land in the National Reserve System without changing the underlying land tenure. Since the early 2000s traditional owners and CLC explored the opportunities available under this program to support land management activity resulting in a number of declared IPAs.

The next major funding program to benefit ranger groups was the Healthy Country, Healthy People schedule. The program, scheduled between the Australian and Northern Territory governments, was a whole-of-government commitment intended to secure a consistent funding environment to support Indigenous engagement in land management. The package involved several stakeholders and supported the rollout of the Australian Government's Working on Country and ILC's Real Jobs programs with additional funding from the ABA.

By 2009 there were seven ranger groups – in Kaltukatjara, Lajamanu, Yuendumu, Ti Tree, Santa Teresa, Hermannsburg and Tennant Creek – hosted by the CLC under Working on Country and Real Jobs programs. With the promise of a secure funding arrangement for ranger group development



Muru-warinyi Ankkul Rangers spraying Parkinsonia, a declared weed.

and the continuing absence of locally based host organisations, the CLC took on responsibility for this extended network of ranger groups. CLC hosting arrangements also provided the critical link to closely align groups with the aspirations and direction of traditional owners.

The CLC continued to respond to requests from CLC delegates and traditional owners for land management support by initiating a number of pilot projects in new areas. Funding for these projects was secured under the Healthy Country, Healthy People Early Investment schedule, NHT capacity building funding and the NT Government's Ecolink initiative. By 2013 there were a total of 10 ranger groups hosted by the CLC operating across central Australia. In recognition of the benefits attributed to ranger activities, the Australian Government agreed to a five-year funding term for those groups funded under the Working on Country program, providing unprecedented funding security to 2018. The CLC's hosting of an additional group, the Angas Downs Anangu Rangers, brought the total to 11.

The ranger network now delivers substantial benefits for traditional owners and the broader public. Support from many stakeholders – the Australian and NT Governments, community-based organisations, land management groups, training providers and philanthropists – has contributed to the program's success. There is however more to be done to secure the existing ranger network and expand into new areas to provide more opportunities and spread the benefits further. This first 15 years may have been characterised by funding changes and occasional insecurity, but the continuous commitment of the CLC and landowners has been the backbone of its present success and will help the program to deliver economic, social, cultural and environmental benefits to Aboriginal people living and working on country for many years to come.

ABOUT THE CLC RANGER PROGRAM

There are 11 ranger groups hosted by the CLC, with 113 rangers in full-time, part-time or casual employment this year. The main activities of the program are:

- **Biodiversity monitoring and threatened species:** rangers conduct regular threatened species surveys, land condition surveys, water quality monitoring, and flora and fauna surveys.
- **Fire management:** rangers are involved in landscape-scale fire management for biodiversity conservation and the reduction of destructive wildfires. Rangers also undertake asset protection burns.
- **Weed management:** weeds are an ongoing issue across central Australia and rangers are closely involved in weed management.
- **Feral animal management:** camels, horses, donkeys, foxes and cats cause significant damage and rangers are involved in management of these destructive non-native species.

- **Cultural heritage management:** maintenance and protection of cultural sites and cultural knowledge transfer activities (e.g. Indigenous Ecological Knowledge).
- **Visitor management:** in areas that have high visitation the rangers work on strategies to manage the impacts of visitors and appropriate access.
- **School-based capacity building:** the rangers work with schools and youth programs to facilitate the intergenerational transfer of knowledge and provide a visible pathway of employment for students.

These points are an indication of the general focus of ranger work; however, the focus of each group varies depending on the priority land management issues for a particular area. The Ltyentye Apurte Rangers, for example, have focused on addressing soil erosion as this is an important land management issue in their area. More detail for the 2014–15 year is provided in the group profiles.



Kalukutjara Rangers at Lasseter's Grave.

THE BENEFITS OF THE PROGRAM

Evidence shows that Indigenous ranger programs result in improved health, and literacy and numeracy levels. From an environmental perspective, biodiversity outcomes include the protection of nationally threatened species and a reduction in populations of weeds and feral animals.

The CLC Ranger Program offers meaningful employment that is valued by the community and has a proven track record of success. Evidence for this is the consistent request from traditional owners to expand ranger activity into new areas and the competition for existing ranger positions. Rangers are the eyes and ears of remote Australia, providing a service with national benefits.

Being a ranger is viewed as one of the preferred employment options for Aboriginal people in remote communities. One of the primary attractions of the program is that the jobs are based on country. This provides opportunities for people to pass on knowledge and to facilitate ongoing connections to country – crucial to the maintenance of culture.

Ranger work provides an opportunity for people to engage in training and skills development that can be used in other forms of employment. Rangers also are exposed to agencies and organisations through contract work and partnerships that open up potential employment and development opportunities.

GOVERNANCE AND MANAGEMENT

The program is a separate operational unit of the CLC's Land Management Section. It is broken into two regions, north and south, each with a program coordinator. Each ranger group has an allocated ranger coordinator position. There are also support staff based in Alice Springs, including a ranger trainer, two ranger mentors and two ranger support officers. While the program is a separate operational unit a number of other land management and CLC section staff provide expertise and support.

Each ranger group has a corresponding Traditional Owner Ranger Advisory Committee (TORAC) whose role is to provide input into the development and review of work plans and priorities. The TORACs are critical in providing direction and support for the rangers and are the link between traditional



Muru-warinyi Ankkul Ranger Anthea Graham spraying weeds in the Tennant Creek area.

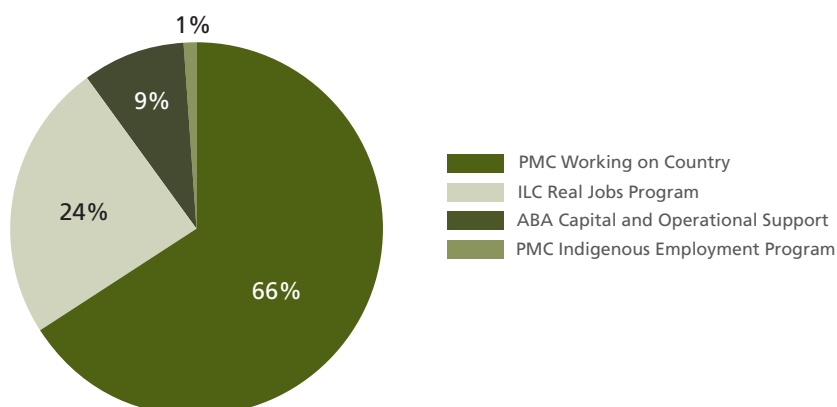
owners, the community and the rangers. IPA management committees perform the same function as a TORAC where they occur.

FUNDING

Since 2010 the program has operated under a consolidated funding model with relative security. This has enabled individual groups to develop in their ability to deliver natural and cultural resource management outcomes. Funding for salaries and the operational costs is provided under agreements with both the Australian Government through the Department of the Prime Minister and Cabinet's Working on Country program and the ILC through its Real Jobs program. The ABA also has provided significant funding for one-off operational, capital and infrastructure costs. Other funds are sourced according to demand and as opportunities arise. A small amount of revenue has been generated from contracts providing environmental services that are reinvested in the program.

At the end of 2014–15 there was some uncertainty in funding arrangements for four groups: the Ltyentye Apurte, Murnkurumurnkurru, Arltarpilta Inelye and Angas Downs Anangu Rangers. Funding arrangements for the other seven groups remain unchanged.

CLC RANGER PROGRAM FUNDING 2014–15

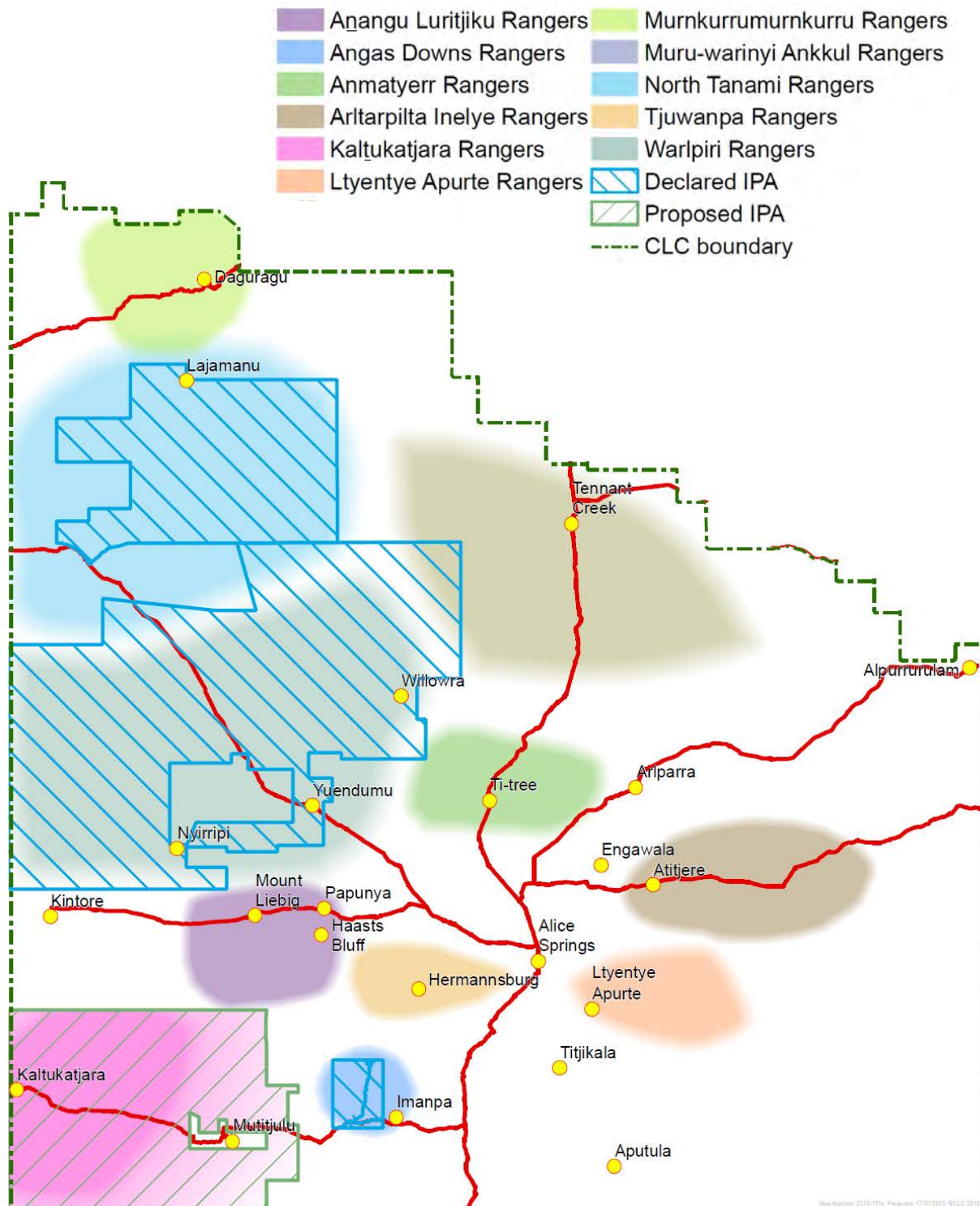


WHERE DO RANGERS WORK?

Rangers work across a huge area of land (see map below). Four of the 11 groups underpin the management of IPAs that contribute to the national reserve system, an area covering 195,237 square kilometres in total.

The map illustrates the huge work areas of each of the ranger groups. Given that there are only 113 rangers currently operating across this area they are spread very thinly and there is significant scope to increase their numbers.

RANGER GROUP WORK AREAS 2014–15





Molly Tasman with her grandson, Northern Tanami Ranger Jonathon Dixon, at Pawala.

GROUP PROFILES

NORTH TANAMI RANGERS



The North Tanami (formerly Wulaign) Rangers is one of the oldest continuous ranger groups. It was established on the basis of a land use planning process begun by the CLC in 1999 under a service agreement with the ILC. Interruption to ILC funding, in 2000, occurred at a point when this project was at an

advanced stage. But in 2001 the CLC redirected NHT funds to support six workshops with traditional owners and the completion of the *Lajamanu Strategic Land Management Plan* for an area of Aboriginal land within the Tanami bioregion.

The focus at this time was to address unemployment in the community by establishing a land management or ranger group that could address issues impacting on the cultural landscape. The type of work that was envisaged included weed and feral animal control, fire management, land degradation, mine site rehabilitation and broader

regional impacts on mineral exploration, cultural heritage preservation, threatened species protection and management of unregulated access.

At the time the Wulaign Outstation Resource Centre took a prominent role in supporting the initiatives and aspirations of traditional owners beyond the Lajamanu community. Wulaign had also begun to build a land management focus through an NHT-funded outstation environmental health project implemented with the involvement of Greening Australia and a number of mine rehabilitation contracts. With the CLC providing coordination and planning support the rangers were participants in the CDEP administered by Wulaign with the first two rangers appointed in 2001.

The early planning work also formed the basis for exploring the feasibility of establishing an IPA in the North Tanami which provided much of the development funding for the group. After an extensive planning process, traditional owners agreed to establish an IPA (declared in 2007), which is the primary operating area of the North Tanami Rangers today. The IPA management committee, made up of traditional owners,

THE TEAM



provides input into the general direction and priorities of the ranger group now securely funded under the Working on Country Program since 2009.

HIGHLIGHTS FROM 2014–15

The North Tanami Rangers worked on a number of projects around Lajamanu and the North Tanami IPA. Some of these highlights are described below.

Biodiversity monitoring and threatened species

- Conducted fauna surveys in three new areas within the North Tanami IPA. Unfortunately, the team met with little success in finding the presence of threatened species.
- Conducted pastoral land condition monitoring at two sites.
- Conducted 17 rapid fauna assessments in the Nyukulku/Mirridi area, finding significant evidence of feral cats.
- Conducted water quality monitoring at three sites.

Fire management

- Conducted 210 hectares of ground-based burning in the Nyukulku and Duck Ponds areas.
- Attended two wildfires to inhibit further spread of fires and prevent damage to infrastructure.
- Undertook a seven-day trip in the Mount Davidson region which included aerial incendiary and on-ground burning, site assessment and recording.
- Undertook a five-day trip to Emu Bore for aerial incendiary, on-ground burning and site assessments.
- Participated in the Warlu Regional Fire Committee meeting with other ranger groups and traditional owners.

Weed management

- Treated 5.5 hectares of Parkinsonia in the Northern Tanami IPA in collaboration with the Murnkurrumurnkurru Rangers. Also treated Parkinsonia and Neem along parts of the Victoria River.

Feral animal management

- Provided assistance to four horse culls undertaken by Coolibah Croc Farm, leading to the removal of approximately 200 horses.

Cultural heritage management

- Cleaned out Emu Rockhole with sludge pump and backhoe, removing large quantities of rubbish and cane toads.
- Conducted asset protection inspections at five outstations and undertook fire protection works at two of these. Seven outstations had fire protection works undertaken with backhoe and other treatments.
- Constructed exclusion fencing for two gravesite complexes.
- Erected signs at men's site near Lajamanu to manage inappropriate visitation.
- Renovated two bough shelters in ceremonial areas.

School-based capacity building

- Helped at a school camp with 13 students and 11 traditional owners to pass on traditional knowledge and demonstrate fauna surveys.

Real jobs making a real difference

The busy track from Lajamanu to Mirirrinyungu (Duck Ponds) outstation leads to several important cultural sites and hunting grounds. After several years without maintenance it was overgrown and badly eroded. North Tanami ranger Travis Alum is pleased with the work he and his colleagues have done to fix the track.

'It used to be just a bush track but now we can see to where we're going,' he said.

Members of the Warlu and Northern Tanami IPA committees decided to rehabilitate the track with funding from the IPA and the Biodiversity Fund. Col Stanton, a soil conservation consultant, gave them ideas about how best to tackle erosion. On his advice the rangers replaced windrows (the piles of soil left by graders) with 'whoa boys' – humps that let the water flow across instead of running down the road and forming gullies.

'The whoa boys will help to push the water back onto country and stop it from eating away at the road. That way we won't end up with another grand canyon,' explained Travis.

Traditional owners and rangers planned the track upgrade during a couple of site visits. The rangers then helped the road crew by flagging whoa boy points and used the water trailer to wet them after construction.

They also installed guide posts and will soon add road signs to indicate new conditions on the up-graded track.



WARLPIRI RANGERS (YUENDUMU, WILLOWRA, NYIRRIPI)



In 2000 and 2001 a weed control project that involved collaboration between the NT Weeds Branch, Greening Australia and the Yuendumu CDEP provided employment for CDEP participants to tackle Parkinsonia, rubber bush, athel pine and mesquite in and around Yuendumu. Following this, in 2002, a more formal Warlpiri Ranger group was established on a part-time basis under supervision of the CLC and in partnership with the Yuendumu CDEP. A full-time ranger co-ordinator was recruited in late 2004 with NHT funding. Opportunities became available to community members from Nyirripi, Willowra and Yuendumu to engage in land management activities which provided CDEP-based participants with additional income and on-the-job training.



In addition to the NHT funding, the ABA provided valuable funding to equip the ranger group with field and survey equipment enabling the group to undertake land management work in the region. Significant areas of early focus were the

management of Newhaven Reserve with Birds Australia and the Tanami Biodiversity Monitoring Program. An interruption to funding in 2006 and the impact of CDEP changes caused the group to falter until a series of NHT-funded projects in fire management, threatened species recovery and weed control across the southern Tanami region supported the progressive rebuilding of its capacity and profile sufficient to be incorporated into the Working on Country program in 2009.

CLC success in 2007 in applying for funding to investigate the feasibility of a Southern Tanami IPA also laid the foundations for establishing a long-term funding framework for rangers and Warlpiri traditional owners to manage the natural and cultural values of their country. After an extensive planning process the Southern Tanami IPA was declared in 2012 and a plan of management was completed. That plan forms the basis for the work of the Warlpiri Rangers today. The IPA has three management regions, each with a management committee whose role is to provide input into the work planning and prioritisation process. The Warlpiri Rangers are based and co-ordinated from Yuendumu. Rangers based at Nyirripi and Willowra are employed on a casual basis.

HIGHLIGHTS OF 2014–15

The Warlpiri Rangers' work area is the Southern Tanami IPA, which covers 101,580 square kilometres of land. Given the size of the IPA it is extremely difficult for the Warlpiri Rangers to effectively manage the whole area and therefore the annual planning and prioritisation process is critical. Some of the group's achievements are described below.

THE TEAM





Warlpiri Ranger Peter Wilson with a trapped cat near Twin Bonanza mine.



Warlpiri Ranger Peter Wilson sets a cat trap near Twin Bonanza mine.

Biodiversity monitoring and threatened species

- Undertook black-footed rock wallaby surveys at Yarripilangu with traditional owners, Australian Wildlife Conservancy and Anangu Luritjiku Rangers.
- Accompanied traditional owners to Yinapaka to carry out biodiversity monitoring and ground-based burning.
- Assisted Lowe Ecological Services with biodiversity monitoring of spoil piles at the Granites gold mine.
- Assisted Newhaven Wildlife Sanctuary with fauna tracking surveys.
- Assessed the outcome of previous management of buffel grass at Sangsters Bore and retrieved motion detection cameras from seven bilby burrows. Returned in May 2015 to carry out biodiversity monitoring using traps over three nights.

Fire management

- Participated in the Warlu Regional Fire Committee meeting with other ranger groups and traditional owners.
- Supported nine traditional owners on a country trip to Juntu, where seven sites were visited, IEK recorded, and around 100 hectares of old spinifex burned.
- Supported six traditional owners to carry out prescribed burning along the Lander River riparian corridor.
- Supported five traditional owners on a country visit to Patilirri where ground-based burning was undertaken.

Weed management

- Continued to monitor and control Parkinsonia at Jakamarra Dam and Bobs Well yards; buffel grass at Waturlpunyu, Rabbit Bore and Sangsters Bore; cactus at Yarripilangu and around the Yuendumu airstrip; rubber bush at Ngara Palya,

Waite Creek, Jurlpungu; and Mexican poppy on Mount Allen Station.

Feral animal management

- Began pegging out the proposed Lander River cattle exclusion fence. The project has been reviewed and a decision taken to re-check the project with relevant traditional owners and the regional anthropologist. The project will then be reconsidered.
- Under a contract with ABM Resources, two female rangers provided environmental services at the Twin Bonanza Mine site in collaboration with Desert Wildlife Services to control feral cats and foxes.

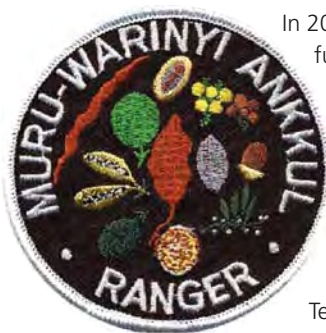
Cultural heritage management

- IEK transfer was supported on a number of country trips where fire management and other works were conducted. This was facilitated through the involvement of senior traditional owners.
- Supported 15 traditional owners on a country visit to the Chilla Well region where four significant cultural sites were visited and IEK transferred to rangers. During this trip two nights of biodiversity monitoring through trapping and daytime track plot surveys were also conducted.
- Began a project to revisit and refurbish bush graves for three family groups.

School-based capacity building

- Provided logistical support for school country visits out of three outstations involving over 100 community members, including installation of pit toilets and provision of firewood and drinking water.

MURU-WARINYI ANKKUL RANGERS (TENNANT CREEK)



In 2003 NHT land-use planning funds available to the CLC enabled consultations to occur with Warumungu traditional owners about their aspirations for the management of three culturally significant areas of Aboriginal land north of Tennant Creek: Phillip Creek Mission, Kunjarra and Jurnkurakurr.

The recommendations of that work were subsequently the basis of a successful application to NHT to build capacity to address the range of issues identified through the development of a ranger program.

A wide range of projects and related training were undertaken throughout 2004 and 2005 on these and other areas in the region by rangers initially employed through a collaboration with Julalikari Council CDEP. These included a number of small environmental service contracts for weed control around mining and heritage sites.

In 2006 a three-year grant received from the ILC and additional ABA support provided more security and funds for equipment maintaining the group through to 2008 when they transitioned to CLC employees as members of the first two ranger groups to receive Working on Country funding in the region.

HIGHLIGHTS FROM 2014–15

This ranger group is heavily involved in fire management in the Tennant Creek region and works collaboratively with other stakeholders to ensure firebreaks are installed to protect the Tennant Creek township. The group is also responsible for the management of the Kunjarra (Devils Pebbles) site just north of Tennant Creek and was recently successful in gaining the contract to manage the campground at the Karlu Karlu (Devils Marbles) Conservation Reserve. Some of the group's highlights are described below.

Biodiversity monitoring and threatened species

- Continued the Phillip Creek Mission Block survey with regular bird surveys, water quality monitoring and photo-point monitoring.
- Undertook track plot surveys at 20 sites along 80 kilometres of the Hanson River corridor to monitor bilby activity.

Fire management

- Participated in prescribed burning work resulting in an estimated 1.9 million hectares being burnt by both aerial and ground-based burning.
- Worked collaboratively with Fire and Rescue Services and Bushfires Council NT to supervise firebreak maintenance.
- Responded to two emergency response call outs to protect MRS towers and the homestead at Bluebush Station through back burning.
- Completed protection burns and slashing around Jarra Jarra outstation and three cultural sites, and a wider aerial incendiary burning project in the Jarra Jarra area.

THE TEAM





Muru-warinyi Ankkul Rangers working alongside the Parks and Wildlife Commission and the Bushfires Council NT in response to a wildfire on Murray Downs Station.

- Participated in a joint aerial incendiary burning trip to Karlantijpa North ALT/Murrarji area with traditional owners from Elliot and Kalkaringi. Twenty-two traditional owners attended this trip.
- Attended and supported traditional owners at a cross-border fire planning meeting at Fitzroy Crossing.

Cultural heritage management

- As part of a burning trip along the Yapa Track, the rangers spent five days with 26 traditional owners recording and transferring IEK and inspecting the condition of sacred sites.
- Repaired gravesites and ceremonial bough shelters at Karlinjarri.
- Installed a secure cover over Baxters Well and fenced a gravesite in the location of one of the Coniston massacre events on the Hanson River.
- Regraded and maintained 20 kilometres of boundary fence line for the Phillip Creek Mission Block (Warumungu ALT) and installed grids to inhibit cattle entry.
- Undertook management works at 10 sacred sites as part

of the Munga Munga and Milwayjarra women's storyline project. Work included protection burning, clearing access tracks and recording site information and knowledge. This part of the project culminated in overnight ceremonial dances and activities at the Kunjarra site. Rangers retraced the GPS trail for the Milwayjarra women's site, making it clear for return visits for cultural activities.

- Rangers installed three Aboriginal Land signs near Jarra Jarra at the request of a traditional owner.
- Participated in a trip to the Davenport Range National Park with traditional owners and the regional anthropologist conducting site assessments at 10 cultural sites along a proposed management track.

Visitor management

- Maintained and cleaned Kunjarra (Devils Pebbles) and began discussions with Tourism NT and the Barkly Regional Council around responsibility for ongoing maintenance with a view to rangers withdrawing from this low priority work.
- Began providing campground maintenance under a contract with NT Parks and Wildlife Commission at Karlu Karlu (Devils Marbles).

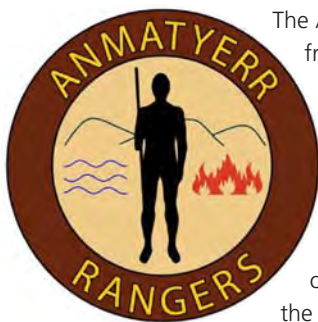
School-based capacity building

- Engaged in a workplace visit by Barkly High School students, a one-week work experience placement for two female students and a trip to Karlu Karlu (Devils Marbles) with 30 students to learn the cultural and natural significance of the site.
- Undertook a fauna survey and bush tucker mapping exercise over two days at Kunjarra with Tennant Creek Primary School children.
- Incorporated two groups of at-risk boys on a week-long country visit with Catholic Care and Barkly High School to Nguyarrmini and Pingala outstation to undertake fauna surveys.



Muru-warinyi Rangers working on the Pingala fauna survey.

ANMATYERR RANGERS (TI TREE)



The Anmatyerr Rangers emerged from involvement in a 2006 NHT-funded project coordinated by Charles Darwin University. The project's objectives were to provide recommendations on the environmental and cultural water requirements of surface-water ecosystems in the Ti Tree Water Control District

and to define the potential impacts from regional water use. The project also sought traditional owners' input into natural resource governance processes, with a focus on water planning.

This project gave rise to culturally based land management interest among young Anmatyerr men and women from across the Ti Tree and Aileron areas. This led to a number of on-ground projects, such as water monitoring work and the installation of exclusion fencing around significant water places. The Anmatyerr Community Government Council and local leaders were supportive of the development of a ranger group and provided CDEP positions to work on land management projects. In late 2007 the CDU project finished and the CLC assumed coordination responsibility for the ongoing development of the group. Funding secured through an Early Investment Proposal submitted under the HCHP Schedule was sufficient to maintain the momentum of the group through to 2009 when it was put on a permanent footing under the Working on Country Program.



Anmatyerr Rangers Dan Pepperill and Matthew Jungala working with Ti Tree community members to fix a fence line at a men's site on the Ahakeye Aboriginal Land Trust.

HIGHLIGHTS OF 2014–15

The Anmatyerr Rangers predominantly work across the Ahakeye ALT. Some of the group's highlights are described below.

Biodiversity monitoring and threatened species

- Completed a flora and fauna survey at Nolans Bore with GHD & Lowe Ecological Services for Arafura Resources Pty Ltd proposed mining area.

THE TEAM





Anmatyerr Rangers Nathaniel Dixon and Ashley Williams constructing a fence line around a sacred women's site on the Ahakeye Aboriginal Land Trust.

Weed management

- Completed weed control activities for Parkinsonia at Nturiya and Hanson River areas on the Ahakeye ALT.
- Completed weed control activities for buffel grass at the Ti Tree Ranger Office block, Arungula cultural site and Six Mile community.

Cultural heritage management

- Completed maintenance of feral animal and stock exclusion fencing at Nganju, Aninji, Arremerl and Ilkawarne.
- Completed feral animal exclusion fencing to protect critically endangered Lherepwerle lily (*Typhonium* sp.) at Lherepwerle cultural site.
- Assisted traditional owners to record sites along the Honey Ant storyline near Mulga Bore.
- Completed planning visits and site assessments for Mulga Bore and Adelaide Bore outstations and Nganju, Yanginj, Merekerlangke and Lherepwerle cultural sites.
- Completed exclusion fencing for a gravesite at Mulga Bore outstation.
- Completed fire hazard reduction for asset protection at Adelaide Bore and Mulga Bore outstations.
- Undertook three country trips to help traditional owners visit, inspect and manage sites in the Ngarnka, Jarra Jarra and Redbank areas, including the relocation of and protection burning around a 'missing' soakage.

School-based capacity building

- Developed a generic school presentation, giving a presentation at the Ti Tree school, and assisted in planning junior ranger activities at the Engawala, Stirling and Laramba schools.

Professional development and group capacity building

- Participated in a workshop facilitated by Desert Knowledge Australia on cross-cultural leadership and ranger skills, held at the Ti Tree Ranger Office with the Muru-warinyi Ankkul Rangers.



Anmatyerr Ranger Matthew Jungala marking the location of an Elliot trap used to catch small mammals in an abundance survey west of Aileron.

TJUWANPA RANGERS (HERMANNSBURG)



In 2005 the CLC conducted a pilot project to test the potential of developing a ranger group based in the Hermannsburg area. This initiative came out of the joint management arrangements of NT Parks and Reserves that enabled the initial funding to conduct this project. The view at the

time was that there were opportunities

for a ranger group based at Hermannsburg to work on the neighbouring Finke Gorge and West MacDonnell National Parks and the surrounding Aboriginal Land Trusts. This project was the catalyst for the establishment of the Tjuwanpa Rangers.

In an MOU with the CLC in these early years the rangers were CDEP employees of the Tjuwanpa Outstation Resource Centre (TORC), which provided administration and other local support for the rangers. Under the joint management arrangements the Flexible Employment Program (FEP) provided opportunities to generate additional income through short-term work on national parks. In the first half of 2005 the Tjuwanpa Rangers were involved in eight such projects including fencing, infrastructure improvements, fire management, fauna surveys and weed control. This group was also successful in obtaining a contract to install bollards at the Palm Valley campground – a key achievement in their early development. Despite their growing success and secure funding from the NT Government, the ILC and ABA for co-ordination, operational and equipment costs the initiative

stalled in October 2007 with the Federal Government's termination of the CDEP. All rangers were transitioned to the dole just a week after winning an NT Landcare Award. The Tjuwanpa Rangers were resurrected in May 2008 as CLC employees under the first of the Working on Country contracts and regained their momentum with a subsequent HCHP funding package.

HIGHLIGHTS OF 2014–15

The Tjuwanpa Rangers are based at Ntaria (Hermannsburg) and work on the surrounding Aboriginal Land Trusts. The West MacDonnell and Finke Gorge national parks are also in close proximity and the group often conducts work on these parks and provides support for joint management processes. Some of the group's highlights are described below.

Biodiversity monitoring and threatened species

- Assisted Lowe Ecological Services with four surveys around Mereenie gas field infrastructure and began negotiations to undertake contract weed management on the Santos gas field.
- Participated in a major flora and fauna survey on Tempe Downs with staff from the CLC's Land Management Section, NT Parks and Wildlife Commission and the NT Department of Land Resource Management (DLRM). Work included fish surveys, flora and fauna surveys, and helicopter-assisted black-footed rock wallaby surveys along the top of steep ridges.
- Provided support and participated in fish surveys as part of the Lake Eyre Basin Rivers Assessment with South Australian Research & Development Institute and DLRM

THE TEAM





Tjuwanpa Rangers conducted fish surveys in Owen Springs Conservation Reserve and the West MacDonnell National Park.

staff in the Owen Springs Conservation Reserve and West MacDonnell National Park.

Fire management

- Completed controlled burns and hazard reduction activities at Eight Mile and Ilpalala outstations on Ntaria ALT, and at Ormiston Gorge in the West MacDonnells National Park with NT Parks and Wildlife Commission staff.
- Conducted burning work in collaboration with the TORC women's ranger team.

Weed management

- Undertook weed survey and control work for prickly pear at Ntaria power station, Mexican poppy along the Finke River and Gilbert Creek, and athel pines at Finke River, Rodna waterhole and Utju (Areyonga) community.
- Completed weed survey and control work at Sugar Creek, Gilbert Spring, Ellery Creek, Illamurta Springs (with NT Parks and Wildlife Commission staff) and along the Owen Springs Conservation Reserve boundary fence, Walker Creek and the Palmer River on Tempe Downs. Only one athel pine and a few Parkinsonia were present, a reflection of successful control work prior to 2010.

Feral animal management

- Continued feral horse control works with traditional owners, including exclusion fencing maintenance at Wamina Gap, Korparilya and Liltjera Springs. Fencing and alternative water point establishment was carried out to exclude horses from a living area on the Uruna ALT, and Ipolera traditional owners were supported in moving and installing 150 trap yard panels to trap and sell horses from that area.

Cultural heritage management

- Completed installation of feral animal exclusion fencing at Alkarinja cultural site.
- Installed a new fence and completed maintenance activities (cleaning, removal of weeds, fire hazard reduction) at Albert Namatjira house.
- Fabricated and installed steel 'spiders' to exclude feral animals from Liltjera Spring.
- Completed maintenance and de-fouling (i.e. removal of carcasses) at Palm Paddock spring.

School-based capacity building

- Supported Ntaria School students undertaking Certificate 1 Rural Operations and Junior Ranger activities, including a joint country visit with Tjuwanpa Women's Rangers to Korparilya Spring and a school country camp at Finke Gorge National Park.

KALTUKATJARA RANGERS (DOCKER RIVER)



From as early as 1987 the CLC has supported Aboriginal people from Kaltukatjara and the Petermann ALT with land management aspirations for their country. Throughout this time traditional owners have expressed their desire to create work opportunities for young people in looking after country.

In 2003 the Kaltukatjara Reconnect Program (a program focused on developing activities for young people at risk) obtained funding for a work for the dole project to protect culturally significant waterholes in the Petermann Ranges from the impacts of camels. This work generated interest within the community and led to the CLC applying for funds from the NHT to build on that interest and capacity. Successful NHT funding allowed work to begin in 2004. Rangers conducted threatened species surveys using the knowledge of traditional owners and involved recording IEK of senior traditional owners for use in the local school. A 2006 grant from the Indigenous Heritage Program allowed work to continue on the protection of significant waterholes in the area. This project was implemented by CLC and co-ordinated on a part-time basis by an Alice Springs-based project officer. Recommendations made by an ABA-funded South-west Youth Diversionary Project conducted by CLC

in 2006 provided the impetus for further ABA investments to consolidate the group under a Shared Responsibility Agreement with Kaltukatjara Council and the CLC. This was the precursor to the group eventually transitioning to the WoC Program as CLC employees under a HCHP funding package in 2009.

HIGHLIGHTS OF 2014–15

The Kaltukatjara Rangers work across the Petermann ALT and are the workforce for implementing a number of actions arising from the IPA planning process associated with the Katiti-Petermann IPA, which is due to be declared in late 2015. Some of the group's highlights are described below.

Biodiversity monitoring and threatened species

- Undertook surveys for black-footed rock wallabies, greater desert skink and general fauna surveys. A more thorough fauna survey was conducted near the Walka rock art site.
- Used sensor cameras and CyberTracker recording to collect data for further planning of ranger activities and regularly conducted monitoring at Piyultjara, Warupunti, Tjilpuka and Urruru waterholes.
- Completed threatened species biodiversity surveys for greater desert skink and mulgara at Tjuninanta (Bloods Range) and Pitalu. Completed two surveys for black-footed rock wallaby at Tjilkamata Hill and Karu Kali.

THE TEAM





Kaltukatjara Rangers Ruby James and Mary Gibson conducting a controlled burn at Parurru.

Fire management

- Undertook extensive burning programs across the proposed Katiti-Petermann IPA area, including working with Warakurna rangers in a joint trip to the Bloods Range
- Supported traditional owner participation and presented a summary of ranger fire-work at the Waru Regional Fire Committee meeting in Mutitjulu.

Weed management

- Worked with the community to remove athel pines and white cedars to prevent their spread beyond outstations into waterways, including felling very large trees and herbicide treatment of others.
- Completed weed control activities of buffel grass at Ngakurr, Tjawata, Eagle Valley, Walu and Aputjura outstations, and at Warupanti, Ururru, Tjilpuka, Piyulatjara, Tjunti and Walka cultural sites. Completed removal of athel pine at Docker River.

Cultural heritage management

- Supported a women's cultural trip to Paruru region with 15 senior women and 10 younger women to transfer knowledge and record cultural stories, songs and dances relating to the Two Sisters Dreaming.
- Conducted country trips with 20 men to an important cultural site to pass on senior traditional owner knowledge.
- Provided logistical support and participated in a Honey Ant Storyline Project meeting and site visit.
- Checked and maintained watering point infrastructure to ensure feral camels are attracted away from cultural sites in preparation for trapping and mustering.



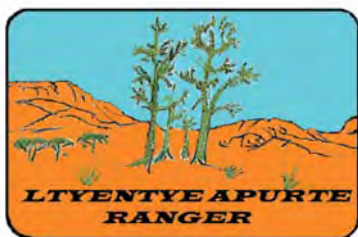
Kaltukatjara Ranger Max Brumby mixing chemicals for weed control works at Walka.

- Completed fuel reduction work through controlled burning and removal of buffel grass from around key cultural sites, outstation infrastructure, Tjunti (Lasseter's Cave) and Docker River camp grounds.

School-based capacity building

- Helped Nyangatjatjara College and students from Sydney to make *irmangka irmangka* bush medicine for community members and a local health clinic. Facilitated learning opportunities for students enrolled in Certificate I CLM through VET in Schools.

LTYENTYE APURTE RANGERS (SANTA TERESA)



Traditional owners and Ltyentye Apurte community members were concerned about the protection of significant water sites on the Santa Teresa ALT. In response, the CLC

applied for funds from the Community Water Grants program in 2006 to fence off a number of spring-fed waterholes to exclude feral animals, and regularly test water condition to monitor the change. CDEP participants employed by the Ltyentye Apurte Community Government Council worked on the project in collaboration with CLC, Greening Australia's Water for Life Program, NT Parks and Wildlife Service and Tangentyere Landcare. The success of the project generated interest in the community to continue and broaden the scope of a CDEP land management crew to manage feral animals on the land trust in 2007 with CLC support.

Further capacity-building funding secured through the NT NRM Board enabled these and other activities to continue throughout 2008 assisted by an interim project coordinator. The profile of enthusiasm and capability developed over this early period established the basis to transition to a permanent, cohesive and well resourced ranger group in 2009 supported by the ILC Real Jobs Program and other funding secured through the HCHP Schedule.

HIGHLIGHTS OF 2014–15

Under a partnership with CSIRO the Ltyentye Apurte Rangers focused on significant soil erosion issues on the Santa

Teresa ALT. The work, undertaken with CSIRO, also involved exploring the links between soil erosion and climate change, which resulted in the publication of a book for the community and others to use (see page 35). These and other work highlights are summarised below.

Erosion control

- Erosion control works with grader and bobcat included a 5 kilometre access track east of Phillipson Bore to prevent erosion, and repairs to 'whoa boys' at Judges Head and the racecourse area.
- Replaced over 5 kilometres of flood-damaged fence and repaired camel damage to a large section of Tooka Plain paddock fencing.
- Worked with CSIRO on erosion control planning and works, identifying 10 sites for treatment, and made a visit to Woodgreen Station for a demonstration by the lessee of long-term erosion control using levee banks. This approach was subsequently applied by rangers to halt sheet erosion at a trial site on the ALT.
- Identified appropriate monitoring methodology, established erosion monitoring sites at the Tooka Plain management area, and undertook related training and capacity building activities with CSIRO scientists.

Climate change

- In collaboration with CSIRO and Tangentyere developed a climate change book as a community resource to explain climate change and changing weather patterns. The book was launched by CLC Chair Francis Kelly at a community event in Ltyentye Apurte on 9 December 2014. The launch

THE TEAM



was attended by senior traditional owners, school children, media and project partner representatives.

Biodiversity monitoring and threatened species

- Continued monthly water quality monitoring, reed removal and exclusion fencing maintenance at Hayes Springs, Marion Springs, Brumby Springs, and Salt Springs.
- Completed a threatened species biodiversity survey for Slater's skink on Loves Creek Station and a bird survey at Salt Springs on the Santa Teresa ALT.

Weed management

- Completed buffel grass control and fire hazard reduction under a contract with ABM Resources NL at the Twin Bonanza mine site in the Tanami.

Feral animal management

- Assisted in facilitating a community horse meeting to seek agreement on how to dispose of trapped feral horses.
- Assisted traditional owners to trap 300 feral horses at Phillipson Bore, resulting in the sale of 84 horses to a contractor and demonstrating that regular trapping is possible if fences and yards are maintained. Checked and maintained feral animal/stock exclusion fencing in the Phillipson Bore, Case Hill and Snow Bore areas.

Cultural heritage management

- Completed an IEK country trip with Arrernte traditional owners to the north-west section of the Santa Teresa ALT.
- Participated in an IEK Arrernte language project at Ross River and Arltunga run by the Healing Centre and traditional owners to teach young people plant and animal identification using language names.
- As part of the Bush Medicine Project, completed five country visits that focused on supporting senior women to pass knowledge on to young women about collecting and making bush medicines, and mapping locations of bush medicine species.
- Provided logistical support and participated in sacred site clearance activities for approval of erosion management works.
- Completed a site visit to assess the requirements of fencing and fire hazard reduction for Mount Undoolya.

School-based capacity building

- Incorporated schools into a climate adaptation project with CSIRO and Tangentyere Council. This included support for two school country visits for students enrolled in Certificate I in CLM, including water and fauna monitoring at four cultural sites, and provided a work health and safety demonstration.
- Continued engagement with Santa Teresa School through a workplace safety awareness workshop for students in Certificate I CLM course with BIITE, a fauna survey at Marion Springs, and support for traditional owners on a day trip to Emily and Jessie Gap and Ellery Creek also as part of the Certificate 1 CLM course.
- Provided logistical support and participated in mentoring and awareness raising activities as part of a two-week annual youth camp horse trail ride with Santa Teresa community members, staff from Bush Mob and Atyenhenge Atherre Aboriginal Corporation.

Real jobs making a real difference

The Ltyentye Apurte Rangers helped develop a new resource book for communities about climate change. *What is happening with the weather in Central Australia?* is an outcome of a climate adaptation project that saw the rangers work with Tangentyere Council and CSIRO with funding from Ninti One and CSIRO.

The rangers got expert advice and training from environmental scientists and shared what they'd learned in a slideshow. Ranger Richard Furber hopes the book will help community members to better understand erosion and other ways climate change affects country.

'I didn't think about what was going on with the weather, people thought it was natural but it's something serious, not only us talking about it, other people around the world.'

Rangers assessed climate data to evaluate the potential impacts on their region. 'We looked at the data since the 1970s, which shows that there are more days over 40 degrees, as well as more storms and variability in rainfall,' said ranger co-ordinator Shannon Lander. 'It's going to affect our people and country. The work that rangers are doing is affected by climate so that makes it really important.'

One of the main problems around Santa Teresa is erosion. With climate change predicted to result in heavier rainfall, soil erosion will get worse in the future. Rangers trialled new ideas to combat sheet erosion on the Santa Teresa ALT.

Shannon wants the ranger groups to use the book to learn about climate change and plan projects that help their communities. 'We'd like to visit other ranger groups and run workshops about changing climate, and to have those groups visit us to see our erosion work.'



ANANGU LURITJIKU RANGERS (PAPUNYA)



The Anangu Luritjiku Rangers began as a three-month pilot land management project in April 2010 in response to consistent demand from senior traditional owners and CLC delegates, and in response to emerging petrol-sniffing concerns. This short-term project was funded by the NT

Government's Ecolink program, an initiative that sought to create a corridor of land running the length of the NT managed for conservation.

The aim of the pilot project was to give traditional owners an opportunity to participate in land management activities, deliver training to enhance capacity, enable traditional owners to access country, and to evaluate the viability of establishing a permanent ranger group at Papunya. The initial period was extended into 2011 enabling the group to progress from being a pilot to an established group with secure funding under the Working on Country program.

In 2012 the CLC trialled an outsourced employment model for the Anangu Luritjiku Rangers. A subcontracting agreement with Group Training NT (GTNT) provided employment and training support for the rangers; however, a review of the arrangement determined that constraints on recruiting replacement rangers made the model unworkable and in 2013 the rangers were employed directly with the CLC.

HIGHLIGHTS OF 2014–15

The Anangu Luritjiku Rangers work across the eastern half of the Haasts Bluff ALT and are based at Papunya. There are

a number of sites of biological and conservation significance where the rangers work to minimise the impacts of horses, cattle and camels and introduced plant species. Some of the group's highlights are described below.

Biodiversity monitoring and threatened species

- Collaborated with the Warlpiri Rangers on black-footed rock wallaby survey work on Newhaven Conservation Reserve (Yarapilangu), learning how to complete data sheets and undertake hillside surveys.

Fire management

- Undertook controlled burning actions, including cultural burning in the Karrinyarra Watulpunyu area in preparation and support of a Tjuupi artist country camp, part of the Honey Ant story project, and along the Patuwaritji track.

Weed management

- Continued to monitor and control weeds, including Mossman river grass at Muruntji and Town Bore, buffel grass at Ilpilli, Muruntji and several other small sites to protect trees and sacred sites, rubber bush around Walimpirri, and cactus west of Ikuntji.

Feral animal management

- The rangers have monitored and managed the impact of feral animals since 2012. This has resulted in ongoing work to develop and repair infrastructure to assist in the management of feral animals at the Papunya homelands of Ulumbarra, Aturula and Warumpi, and the maintenance of the trough and bore at Ilpilli springs on the Kintore road.
- Meetings to consult with traditional owners and community

THE TEAM





Checking monitoring cameras on Mount Liebig.

members about feral animal management resulted in the development of a feral management plan. Centred on the value of Ulumbarru Springs, the plan identified steps to reduce the number of feral horses, cattle and camels impacting on the springs.

- A commercial harvest agreement was made for the trapping and commercial removal of feral animals at homelands. Rangers co-ordinated the construction of portable yards to hold horses that the owners did not want removed whilst trapping and culling were underway. They also transported feed to trap yards, maintained the troughs and monitored animal health and welfare.
- A total of 537 feral animals (horses, cattle and camels) were removed over four months for commercial purpose with the income generated to be expended on improvement of homeland capacity to continue feral animal management activity. A further 1,709 animals, thought to be in locations that were too hard for trapping, were culled in collaboration with NT DLRM.
- Rangers worked at short notice, as funding opportunities occurred, to present and discuss culling maps with traditional owners and community members at Ikuntji, Papunya and Mount Liebig. The area culled included the western side of the Haasts Bluff Grazing Licence and land between Papunya and Ikuntji. Rangers assisted with the logistics of carting the aviation fuel and were the ground crew verifying that the culling instructions had been followed.

Cultural heritage management

- Undertook IEK country visits with traditional owners as part of the Honey Ant Storyline cultural heritage project. Visited and documented sites in the Patuwaritji region south of Ilpili, including Yintatjirri, Putati and Warulpuyu regions south west of Mount Liebig.



Ground survey work at Ilpili.

- Undertook six trips to continue weed control and fuel reduction around the Muruntji water site and vulnerable significant trees, and installed signs to manage visitor impacts on this important site.
- Coordinated the cleaning out of Warumpi rockhole and a rockhole at Tipulnga during a fire trip.
- Undertook seven management visits to the Ilpili springs area, including replacement of bore pump, fuel load reduction, spraying of buffel grass, water quality monitoring, and planning for further feral animal management and rehabilitation works.
- Constructed a memorial at Town Bore under the guidance of traditional owners to honour a past senior elder and leader, reflecting contemporary cultural engagement and expression.

School-based capacity building

- Supported a three-day country trip to Tjungkupu for 50 students and parents from Ikuntji and Watiyawanu schools, passing on cultural and ecological knowledge in collaboration with Tangentyere Council.

ANGAS DOWNS ANANGU RANGERS (ANGAS DOWNS / IMANPA)



In late 2012 the Australian Government approached the CLC to take on the temporary management of the Angas Downs IPA and the ranger group following the demise of previous hosting

arrangements. The CLC provided management support for a 12-month period while efforts were made to build the capacity of a local organisation to undertake this work.

In spite of wide-ranging negotiations there were no local organisations in a position to take over management of the IPA and the ranger group; hence, the CLC assumed long-term management of both in 2014. The Angas Downs Rangers are based at Imanpa but work across the Angas Downs IPA, which was declared in 2009 as a result of a development process independent of the CLC.

HIGHLIGHTS OF 2014–15

Transition to being managed by the CLC saw greater emphasis given to engagement of rangers from the Imanpa community. Bedding down a consistent group of rangers and securing an effective management base in Imanpa and Angas Downs continue to challenge the cohesion of this group. Nevertheless, significant outcomes were achieved through improved links to management of the IPA, a summary of which is provided below.

Biodiversity monitoring and threatened species

- Completed a survey for the threatened black-footed rock wallaby in the Kernot Range.
- Undertook several familiarisation trips to locations on the IPA to set up monitoring activities, maintain infrastructure of bores and fences, and plan future works.

Weed management

- Completed buffel grass control activities along the Punu Kura Kura access track and at Mininititja cultural site.

Feral animal management

- Assisted a contractor with the trapping and sale of feral animals from Angas Downs IPA. This work allowed rangers to learn about trapping, feeding and watering, animal welfare, loading and trucking of horses and cattle, as well as branding and castration of cattle for a future cattle enterprise. A total of 230 horses and approximately 100 cattle were removed.
- Undertook stock management (trapping) and animal husbandry tasks (castration, de-horning, ear-tagging) for Angas Downs cattle.
- Supported joint planning visits with a neighbouring pastoralist and other consultants in relation to managing feral animals and a small Angas Downs cattle herd.

Visitor management

- Completed visitor facilities maintenance and rubbish collection at Lasseter Highway rest stops and visitor facilities upgrade (installation of pit toilets) and maintenance of Wilpiya Ranger Camp.

School-based capacity building

- Supported a school visit and a country trip with Nyangatjatjara College students to the cultural site Punu Kura Kura.

Professional development and group capacity building

- A new coordinator began in September 2014.
- Pre-employment workshops and interviews led to the appointment of five permanent part-time rangers.
- Commenced ranger group re-establishment with equipment, uniforms, and community consultations for approval to operate a ranger office from the aged care building at Imanpa.
- Enabled ranger access to the new office facilities and completed the first newsletter.
- Progressed plans for reoccupying and refurbishing an operational ranger base on Angas Downs.



Angas Downs Anangu Rangers spraying buffel grass.



Rangers participating in multimedia training at the 2015 Ranger Camp held at Watarrka National Park.

MURNKURRUMURNKURRU RANGERS (DAGARAGU)



The Murnkurrumurnkurru Rangers began as a pilot project in 2010 in direct response to requests from traditional owners and CLC delegates over a long period of time. Funding for the project was secured through the NT Government's Ecolink initiative, with some extra support from the TNRM Board and the Australian Government's Local Priorities Fund.

The aim of the pilot project was to evaluate the viability of a permanent ranger group in Dagaragu and to provide opportunities for traditional owners and young people to be involved in land management. At this time the group had strong local support from the Victoria-Daly Shire Council, which provided accommodation for a project co-ordinator and other resources for the group. Strong support and collaboration was also received from NT Parks and Wildlife Commission and local schools. Funding under the Ecolink initiative was extended until more-secure funding was sourced under the ILC Real Jobs Program, at which point the group progressed from a pilot to an established group.

HIGHLIGHTS OF 2014–15

The Murnkurrumurnkurru Rangers are based in Dagaragu and work across the Dagaragu ALT and at times Judburra (Gregory) National Park. A summary of the group's highlights is provided below.

Biodiversity monitoring and threatened species

- Water quality monitoring was undertaken at six waterholes, accompanied by on-the-job training.
- Conducted pastoral land condition monitoring at 10 sites, preceded by a joint training workshop with Wulaigh Rangers.

Weed management

- Surveyed seven new weed sites, finding infestations of neem trees, Parkinsonia, rubber bush, bellyache bush and Hyptis.
- Other weed management work included neem tree and Parkinsonia removal and spraying in and around Dagaragu, Kalkaringi, and along waterways in the Land Trust area. This included the removal of several large neem trees within Kalkaringi and Dagaragu which were acting as seed sources for spread of the weed.
- Hyptis control was undertaken at Seal Yards, control of bellyache bush was undertaken at two sites, and joint weed control work was undertaken with North Tanami Rangers along the Victoria River.

Feral animal management

- Assisted with aerial feral animal cull logistics.

Cultural heritage management

- Facilitated a three-day camping trip, visiting and inspecting at least seven major significant sites with 14 traditional owners.

THE TEAM



- Undertook gravesite protection and maintenance at Number 7 Bore, Daguragu, and continued to install crosses and plaques in the Kalkaringi cemetery. Ongoing maintenance of fences and weed trimming was also completed at the cemetery and rubber bush was removed.
- Completed feral animal and stock exclusion fencing at Lily Spring and Mango Spring and undertook fence repairs around Mud Springs and Lily Spring after the wet season.

School-based capacity building

- Completed development and printing of a Gurindji bird poster in partnership with the local school and linguists. In-class sessions provided the opportunity for traditional owners to pass on their knowledge of birds in the region.



Murnkurrumurnkurru Rangers Sebastian Dodd and Harold Oliver removing neem trees in Kalkaringi.



Murnkurrumurnkurru Rangers Brodie Jimmy and Dean Farquharson installing crosses, manufactured by the rangers, at the Kalkaringi Cemetery.



Traditional owner Paddy Doolak sharing knowledge with the rangers at a massacre site, Black Fella Creek.



Murnkurrumurnkurru Rangers harvesting timber to be used to make *kawarla* (coolamons) for sale in the local art centre.

ARTTARPILTA INELYE RANGERS (ATITJERE/HARTS RANGE)



The Arltarpilta Inelye Rangers developed over a lengthy period, beginning in 2007. A limiting factor for this group has been access to land as the group is based in a region that is dominated by pastoral leasehold. Nevertheless, through persistence and support from the community and funding agencies

the group has gradually grown into a cohesive and active group. The ABA purchase of Huckitta Station in 2010 greatly enhanced the scope of viability of this group.

Early development of the group occurred with funding secured through a successful Early Investment Proposal submitted by the CLC to the Healthy Country, Healthy People Program referred to as the Pastoral Partnerships Project. The proposal aimed to develop opportunities for Indigenous communities with minimal land holdings through activity on surrounding pastoral leases with which they are affiliated. NHT funding subsequently granted by the NT NRM Board for NRM capacity building successfully enabled a pilot group at Harts Range to be established and a number of land management projects to be implemented. This involved collaboration with pastoralists and the NT Parks and Wildlife Commission to implement projects across tenures.

For a number of years the Arltarpilta Inelye Rangers operated sporadically under the guidance of Alice Springs-based land management staff until funds were secured under the ILC

Real Jobs Program. This enabled the employment of a co-ordinator and the provision of ranger salaries.

HIGHLIGHTS OF 2014–15

The Arltarpilta Inelye Rangers are based at Atitjere (Harts Range) along the Plenty Highway and regularly conduct work activities on the Aboriginal-owned Huckitta Station. Some of the group's highlights are described below.

Visitor management

- Worked with traditional owners to record key points for the installation of directional tourist signs along the access road through Huckitta Station to the Dulcie Range National Park, and developed a map with images to present to the Huckitta Station board and manager for consideration.
- Installed a visitor book at the entrance to Huckitta Station to identify and monitor tourist activity in the Dulcie Ranges National Park and Atnwerle Community Living Area.

Weed management

- Met with the Huckitta Station manager to discuss ranger projects and weed management strategies, and formulate a plan to present to the Huckitta board of directors.
- Completed weed survey and control activities for Parkinsonia in the northern section of Huckitta Station.

Cultural heritage management

- Worked on the Bush Medicine Project, supporting women traditional owners from Bonya to undertake day trips where

THE TEAM





Benji Kenny, Sebastian Webb and Anthony Petrick protecting a sacred site and spring.

they identified and recorded bush medicine plants, with rangers recording cultural information and producing a draft bush medicine photo book.

- Undertook planning for a trip with senior traditional owners in the Bonya area of Jervois Station in preparation for an on-country IEK transfer trip.
- Constructed and installed gravesite/yard infrastructure for Atitjere and Mount Eaglebeak outstation cemeteries.
- Continued ongoing maintenance and upgrading of fences and infrastructure installed to protect Amapete, Ilthe-Irperrkngawe and Ataperreperre cultural sites.
- Planned and consulted with traditional owners to develop a protection strategy for a sacred women's site on the former Atula Station where valuable rock art is threatened by feral horses and cattle. Work included supporting senior women to share stories on site with younger women.
- Undertook maintenance activities (weed control and fire hazard reduction) at Old Huckitta Homestead on Atnwerle Community Living Area.
- Completed a country visit and site assessment for reconnection of traditional owners with Amperewatterke cultural site on Ambalindum Station.
- Undertook cultural site protection planning trips with traditional owners to a number of sites and installed sensor cameras at Old Huckitta Homestead due to concerns that sacred and other heritage objects were being removed by tourists.
- Prepared an initial design and completed safety fencing at the old Whistleduck mine. Conducted assessments of requirements to protect two old mica mine sites on Mount Riddock station and the old Ranberane homestead and mine.
- Completed installation of feral animal exclusion fencing to protect Anyemperke cultural site.



Trevor Lovegrove and kids checking out old Huckitta Homestead.

School-based capacity building

- Planned junior ranger program country visits with Atitjere School.

Professional development and group capacity building

- Made internal and external improvements to the CLC regional office space to better accommodate the rangers.
- Learnt about fire management planning and notification processes for burning, and conducted fuel load reduction slashing and clean up at the Spotted Tiger campground.

RANGERS IN ACTION

FIRE MANAGEMENT

Over the last decade, fire management has grown to be a major part of the CLC Ranger Program. Through governance, planning and the introduction of technology, rangers are now culturally and professionally qualified to burn large tracts of country across the CLC region in ways that meet both cultural and conservation requirements.

The Tanami region is the most fire-prone, with its relatively high rainfall and its spinifex sandplains that regenerate and burn at three to five year intervals. It is also the largest area of contiguous Aboriginal land in the CLC region, and the least accessible. Seven ranger groups operate around its fringes, all with cultural connections to the Tanami. The formation of the Warlu (Fire) Committee in 2009 created a mechanism through which Tanami-based rangers and traditional owners could meet, discuss and plan broad-scale fire management. These actions offer access to remote country at the same time

as reducing fuel loads and risks of wildfires, and allowing Rangers access to the latest technology and training to apply fire at a landscape scale.

Indigenous Protected Areas (IPAs) have been in development in the region over the same period and the Warlu Committee now works alongside IPA management committees and Traditional Owner Ranger Advisory Committees (TORACs). Fire planning priorities are formulated at the Warlu Committee meeting every October. These are then fed in to the IPA management planning process or TORAC meetings to ensure that they are incorporated in to work plans. The priority fire actions are those where the need for fire management aligns with traditional owners' desire to visit remote country. There is support for the use of aerial incendiary technology, enabling fire management to be conducted at a scale proportionate to the landscape. Rangers also have the opportunity to be trained at the highest possible level in aircraft safety and aerial incendiary operations, and are seen as fire management leaders by traditional owners because of this.

During 2015, four landscape-scale fire management trips took place across the Tanami. These were held in response to high fuel loads and fire risk, and the desires of traditional owners to visit remote country. During these trips a number of sacred sites were revisited, the most prominent being Kurlpurlunu, a permanent waterhole and ceremony place in the sand dunes that has been sought after since the 1970s. Without access to the helicopter that was part of the fire program these site visits couldn't occur and knowledge of country would be lost.

The 2015 burning season was the most extensive for prescribed burning in the history of the program, with cool-season burns now covering much of the Tanami. These burns aim to reduce the incidence of hot spring and summer bushfires and meet the conservation needs of the region's biodiversity. Alongside this, Bushfires NT and pastoralists are involved in planning where fire management works are conducted near their boundaries.

Rangers play a central role in all of this. They learn to become familiar with technology, including the electronic and paper maps that help navigate when burning, and the use of the aerial incendiary machines. They play a central role in planning and implementing fire management, helping traditional owners interpret and mark maps, and translating for land management staff. Out bush they run the camp as well as conducting most of the burning work.

Outside the Tanami, the need for fire management work is more sporadic. Nonetheless, it still requires the same level of annual planning, and a separate Waru Committee has been established in the south-west corner of the NT to address this. As with the Tanami, rangers are involved in annual fire planning, but their work here is more ground-based, and they receive basic firefighting training wherever possible.



Aerial controlled burning in the Tanami.



North Tanami Rangers at the end of a hard day on a controlled burning trip in the Tanami.



North Tanami Ranger
Anthony Rex navigating for
aerial prescribed burning in
the Tanami.

FERAL CATS

COMPILED BY DESERT WILDLIFE SERVICES.

Cats occur in every habitat in Australia. Their ability to survive without drinking has allowed them to colonise the most remote desert regions. One of the first documented records of cats in the Australian interior was in 1897 when the explorer David Carnegie observed two Aboriginal women returning from hunting with a large black cat. Cats have continued to provide a source of meat for Aboriginal people in the western deserts since that time, gradually replacing native mammals in people's diets, as these species disappeared from the landscape.

Although cats primarily eat small lizards, rodents and birds, they are capable of killing animals up to their own body size and they are currently recognised as the most significant threat to native mammals in Australia. In central Australia cats are known predators of threatened species such as the Centralian rock rat, bilby, brush-tailed mulgara and great desert skink.

While baiting can be an effective method of reducing cat abundance in some situations, cats only take baits during periods of particularly low prey availability, and it is not possible to bait cats without affecting the dingo population. In the CLC region dingoes are significant both for their cultural value and as important predators of feral cats.

An alternative to broad-scale baiting is targeted cat control at priority threatened species sites, and this approach is being trialled by the Warlpiri Rangers, who use their specialised tracking skills and unique knowledge of cat behaviour to capture cats. Individual cats known to be preying on great desert skinks on the Australian Wildlife Conservancy's Newhaven Sanctuary are tracked on foot and despatched using traditional methods.

Cats can also be captured in rubber-jawed leghold traps, but trapping is very hit-and-miss. Expert cat hunters can greatly increase trap success rates using their interpretation of cat

movement patterns to select optimum trap placement sites. This method is currently being conducted by the Warlpiri Rangers at a remote mine-site in the Tanami Desert (to protect a population of bilbies) and on Newhaven Sanctuary.

To maintain an enduring benefit to prey populations, any cat control program needs to be regular and ongoing as cats will soon recolonise sites that have been vacated. Having a highly skilled, regional cat control team available to conduct regular, targeted cat removal is currently the most efficient method of maintaining reduced cat densities at priority sites.

Real jobs making a real difference

It's official: when it comes to taking out feral cats the tracking skills of CLC rangers win hands down over less traditional methods. Research at Newhaven Sanctuary also found that tracking beats poison bait, which can kill the main enemy of the feral cat, the dingo.

Scientists estimate that, right around the country, feral cats kill 75 million native animals every single night. That adds up to 20 billion mammals, reptiles, birds and insects every year. Ranger Christine Michaels-Ellis and scientist Rachel Paltridge described how the program used baiting, trapping and tracking to kill feral cats, the main predators of native animals.

Newhaven, a former cattle station 350 kilometres north-west of Alice Springs, has one of the largest populations of the great desert skink, which is threatened by feral cats. The skinks are nocturnal reptiles that live in burrows with their extended families.

Scientists and rangers working on Newhaven found that while dingoes occasionally eat the endangered skinks they also have a huge appetite for feral cats. So now the program makes sure the dingoes are not harmed.



Warlpiri Ranger Christine Michaels-Ellis tracking feral cats. Photo: Desert Wildlife Services.



Warlpiri Rangers Christine Michaels-Ellis and Madeline Dixon with feral cats that were tracked and then caught in traps near the Twin Bonanza mine site.



Ltyentye Apurte Rangers Charles Leichleitner, Malcom Hayes and Francis Oliver discussing soil erosion on the Santa Teresa ALT with CSIRO scientist Ashley Sparrow. Photo: Fiona Walsh, CSIRO.

SOIL EROSION MANAGEMENT AND CLIMATE CHANGE ADAPTATION: A COLLABORATION BETWEEN CSIRO AND THE CENTRAL LAND COUNCIL

COMPILED AND BASED ON A REPORT PROVIDED BY CSIRO STAFF FIONA WALSH AND ASHLEY SPARROW.

A collaboration between CSIRO and the CLC has demonstrated the environmental and human benefits that can be achieved when scientists, traditional owners and land managers work and learn together.

The objective of this project was to develop and share information about climate science and adaptive responses to climate change. This included exposing the Ltyentye Apurte Rangers to how scientists record, analyse and explain how the climate is changing and for the rangers and senior Arrernte people to share their observations of weather patterns and ecological changes. Part of the project included the rangers developing and giving presentations and workshops to members of the Ltyentye Apurte community. This helped local people better understand climate change. The intention was to empower people to determine responses to a changing climate. This work produced a book that explains climate change, Indigenous understanding of weather patterns, and adaptation methods. This hardcopy and online resource is available for the Ltyentye Apurte community, Indigenous communities and general audiences on the CLC website.

The project had a strong practical element which was a critical component to the success of the collaboration. The traditional owners and the ranger group had identified landscape erosion and its management as a practical concern. The scientists then demonstrated how processes are likely to accelerate as a result of more extreme rainfall and drying events. A review of erosion management was one adaptive response to the impacts of climate change. Together the scientists, traditional owners and rangers explored erosion processes, and the causal factors and options for erosion management methods. A site visit to Woodgreen Station demonstrated landscape-scale benefits from 40 years of best practice in erosion management and applied learning. Subsequently, in a second

stage of the project, the rangers and scientists installed erosion mitigation measures in some problem areas on the Santa Teresa ALT. They set up systems to monitor the impact of these measures and this work is ongoing. It was clear that long-term sustained effort is required to respond to problems that have accumulated over decades.

This project highlighted the importance of relationship and place-based learning approaches as opposed to classroom-based training. These contexts increase engagement and improve learning outcomes. Respecting and listening to people is the approach that the scientists took in this project and they were conscious of not dominating the process. Local knowledge was seen as the starting point to build on and then the science was introduced to complement and extend local knowledge. The project shows that local issues of concern to rangers and traditional owners do intersect with regional and national issues, and it also demonstrates that local practical actions contribute constructively to national concerns.

Multiple media were used in the project to document, report and communicate the outcomes. Many participants in this project took photos, videos and audio recordings which contributed to the reporting by rangers and CSIRO staff. The rangers presented the outcomes of the project from their perspective to other audiences and interested stakeholders, including 400 attendees of the 2015 Australian Rangelands Conference. This project was a demonstration that Aboriginal land managers and scientists can work together effectively in a respectful and ethical manner to achieve positive outcomes that have real and practical impacts in land care and cultural and natural resource management. This experience will be used as an example of how to approach and conduct co-learning and co-research in other central Australian and cross cultural contexts.

PRESENTATIONS AND AWARDS

During 2014–15, rangers participated in many presentations. These presentations are an opportunity to convey information about their work and are part of the ongoing professional development of individual rangers. Some of the presentations given by rangers are described below.

- A presentation was made at the World Parks Congress in Sydney in November 2014 by a male Anangu Luritjiku Ranger on the damage to Ilpilli, an important site for both cultural and biological reasons, from weeds and feral animals and the work that the rangers are doing to protect this site.
- In collaboration with the CSIRO the Ltyentye Apurte Ranger Group co-ordinator presented at the annual Australian Rangelands Society Conference in Alice Springs. (The project, 'Understanding climate science supports adaptation in Indigenous rangeland management', is described in detail on page 35.) In addition, a female Ltyentye Apurte Ranger presented on a local climate adaptation project undertaken with CSIRO to the Looking After Desert Country event held in parallel with the World Parks Congress in Sydney.
- In April 2015 a group of rangers from a number of the groups presented to CLC Council delegates, giving them an update on the work that rangers do and some of the issues they are faced with. The final day of the meeting also involved a presentation by the rangers to the Federal Minister for Indigenous Affairs, Senator the Hon. Nigel Scullion.
- Eight rangers and program staff attended the IUCN World Parks Congress in Sydney in November representing Warlpiri, Murnkurumurnkurru, Tjuwanpa, Anangu Luritjiku, Muru-warinyi Ankkul, Ltyentye Apurte ranger groups.



Warlpiri Ranger Christine Michaels-Ellis with her Minister's Award for Outstanding Frontline Achievement and Ranger of the Year (Barkly, Katherine and VRD Region).

- The Tjuwanpa Ranger co-ordinator was awarded the NT Ranger of the Year Award.
- The Murnkurumurnkurru Ranger Group was awarded the NT NRM Ranger Team of the Year.
- A male ranger from the Muru-warinyi Ankkul Ranger Group in Tennant Creek won the Conoco Phillips NT Young Achiever of the Year Environment Award.
- A female ranger from the Muru-warinyi Ankkul Ranger Group was nominated by BIITE for the Aboriginal and Torres Strait Islander Student of the Year for her performance in Certificate III CLM, to be presented in August 2015 at the NT Training Awards.
- A female Warlpiri Ranger won the NT Minister's Award for Outstanding Frontline Achievement and Ranger of the Year (Barkly, Katherine and VRD Region).



Rangers receiving their certificates in Conservation and Land Management from BIITE at the 2015 Ranger Camp held at Watarrka National Park.

TRAINING AND EMPLOYMENT

The CLC Ranger Program remains one of the most successful and popular models for remote Aboriginal employment and skills development, providing a highly valued employment framework in cultural and natural resource management. During 2014–15, 182 people were employed across 11 ranger groups within the program in permanent positions or short-term casual contracts underpinned by funding from the Working on Country and ILC Real Jobs (Ranger) programs for 73.4 full-time equivalent (FTE) ranger positions.

Rangers are occasionally employed casually at an entry level to build capacity and interest among young Aboriginal people in host communities with no or little previous experience. Short-term casual employment is also available to assist with larger tasks such as increased fire management, fencing projects or measures to control the impacts of feral animals. Rangers employed in these roles frequently progress to permanent positions in the program based on the experience acquired.

EMPLOYMENT OUTCOMES AND RANGER RETENTION

At the end of June 2015 the CLC employed 113 rangers on a full-time (5), part-time (83) or casual basis (25) within the 11 established ranger groups, an increase on the total number of rangers (97) employed at the close of the previous period.

Over the six-year period of consolidated funding (2010–15) a total of 464 Aboriginal people have been employed as CLC rangers either in permanent positions (part-time and full-time) or under short-term casual contracts. The current age bracket for rangers extends from 17 to 66 years, reflecting recruitment of school leavers at an entry level through to senior rangers providing leadership and cultural direction to ranger operations. Rangers in the 36–50 age bracket make up the largest proportion, at 36.9%, with 26–35 years the next most common age bracket, at 27.2%.

A comparison of ranger employment data across the six years of the program shows a 76% growth in the number of rangers employed in permanent positions, from 50 in 2010 to 88 in 2015, a 52% increase.

Over the first five years of the consolidated program the proportion of women rangers remained fairly constant, but 2014–15 saw a significant improvement – from 23.7% up to 29.2%, with 33 women employed as rangers at 30 June 2015. This improvement reflects the role-modelling being provided by a number of leading women rangers and an increased effort to attract young women. While it is still well below the 35–50% level that the program aspires to, it does give some encouragement that such figures are attainable.



CLC ranger Gibson John (right) and the CSIRO's Ashley Sparrow use a laser level to mark erosion banks.
Photo: Fiona Walsh, CSIRO.

The CLC continues to promote a career pathway available for rangers to progress to more senior positions within the program. From entry level, rangers gain experience and progress with mandatory certificates in Conservation Land Management and the opportunity to move to senior ranger roles, higher roles such as program support officer and ranger group coordinator.

Two Aboriginal co-ordinators who lead the Tjuwanpa Rangers and the Ltyentye Apurte Rangers (Santa Teresa) both progressed from support officer roles. They were joined in this period by the external appointment of an Aboriginal coordinator to the Northern Tanami Rangers and another support officer ready to fill a coordinator vacancy at Docker River.

An Aboriginal support officer to the Warlpiri Rangers was also appointed to assist their integration into management of the Southern Tanami IPA; this person progressed to a position of support officer with the CLC's Biodiversity Fund fire management program. That vacancy in turn provided the group's senior ranger with the opportunity to successfully apply for the support officer role.

An indication of the growing interest in ranger employment is the 91 applicants who were interviewed across all



Ltyentye Apurte Ranger Malcolm Hayes demonstrating the extent of soil erosion on the Santa Teresa ALT.

groups, with 42 new rangers being appointed. A delayed recruitment for the Yuendumu-based Warlpiri Rangers saw another five rangers appointed from eight applicants. Of the new rangers appointed across the program 14 were women, the Papunya and Harts Range groups appointing women for the first time.

QUALITY TARGETED TRAINING AND PROFESSIONAL DEVELOPMENT

In its sixth year with a dedicated ranger trainer, the program continued to achieve significant outcomes in building foundation competencies and career pathway progression through the provision of quality professional development and targeted training. Development of basic work-readiness skills continues to be the focus of training for newer recruits; this may include, for example, first Aid, 4WD, quad-bike operations, and workplace policies and procedures. For more established rangers with demonstrated competency in core work health and safety requirements more diverse training is provided to address skills gaps, career aspirations and specialist skills needed for safe performance of a broad range of duties such as chainsaw use, advanced welding, heavy machinery operations and aerial incendiary use.

Significant outcomes highlighting the diversification and extent of the training effort included:

- ranger participation in 75 separate training events
- delivery of 20,437 hours of training across all groups in the program in accredited units of competency from nationally recognised qualifications and 768 hours of non-accredited training

- 96% of training events were in units of competency from nationally accredited training packages
- 77 rangers enrolled in nationally accredited Conservation and Land Management (CLM) training (3 enrolments in Certificate I (3.9%), 47 in Certificate II (61%), 22 in Certificate III (28.6%), and 5 in Certificate IV (6.5%)). The 64.9% at the Certificate I and II levels is reflective of the low level of language, literacy and numeracy (LLN) capacity among rangers.
- 3,420 nominal hours of accredited training were delivered in working safely with chemicals, with a further 1,776 nominal hours dedicated to work health and safety
- 21 rangers completed Certificate II CLM and seven rangers graduated in Certificate III CLM. The Certificate III CLM qualification is required for rangers taking leadership roles in their group or seeking a support officer role. Certificate IV is essential for further progression to coordinator positions within the program or elsewhere.
- delivery of 682 hours of LLN training on-site in group or one-on-one sessions to seven groups.

RANGER WORKPLACE HEALTH AND SAFETY COMPLIANCE

Ranger awareness and compliance with workplace health and safety (WH&S) requirements continues to be prominent in ranger group and individual training plans. Significant WH&S training achievements in this period included:

- the preparation of 16 standard operating procedures to final draft stage for core ranger activities such as safe tyre changing, working in heat, job safety analysis and remote travel

- a quad-bike qualification update undertaken by 20 rangers at the CLC Ranger Camp
- delivery of two accredited training modules ('Prepare and Apply Chemicals' and 'Transport, Handle and Store Chemicals') enabling 23 rangers to obtain Chemical Use Accreditation by SMARTtrain, an occupational licence ensuring rangers can supervise others in the safe use of herbicides for weed management

- a qualification upgrade and refresher course in a new chainsaw operations unit
- delivery of two accredited training modules ('Work Safely Around Aircraft' and 'Operate Aerial Ignition Equipment in an Aircraft') to 14 senior rangers and four fire management staff to enhance aerial incendiary capacity
- delivery of 'Firefighting Level 1' to eight rangers and four fire management staff at Yulara
- accredited training to 'Operate as part of an Emergency Control Organisation (ECO)' for 16 staff across 10 ranger groups.

| Qualification / course / occupational licence | Number of rangers undertaking course 2014–15 | Number of rangers completed 2014–15 |
|---|--|-------------------------------------|
| Certificate I in Conservation and Land Management | 3 | 0 |
| Certificate II in Conservation and Land Management | 47 | 21 |
| Certificate III in Conservation and Land Management | 22 | 7 |
| Certificate IV in Conservation and Land Management | 5 | 0 |
| SMARTtrain Chemical Use Accreditation Licence | 23 | 23 |
| Firefighting I NT Accreditation | 8 | 8 |
| Quad Bike Qualification Upgrade | 20 | 20 |
| Aerial Incendiary training (2 courses) | 14 | 14 |
| New Ranger Induction | 43 | 43 |
| Operate & Maintain Chainsaws Qualification Upgrade | 7 | 7 |

LANGUAGE, LITERACY AND NUMERACY (LLN) TRAINING

Literacy and numeracy is an essential element of ranger training. It increases workplace capability and productivity and ensures that potential hazardous tasks (such as mixing herbicides) are completed safely. Rangers also gain increased confidence in learning, communicating verbally, and in writing and making presentations about their work to the wider public at conferences and workshops.

The flow-on effects beyond the workplace are considerable, with the skills acquired carried into their home life and social environment, and building self-esteem through a reduction in dependence on others for assistance in undertaking language, literacy or numeracy tasks. These foundational skills also provide many rangers with the impetus to take up further education and training opportunities.

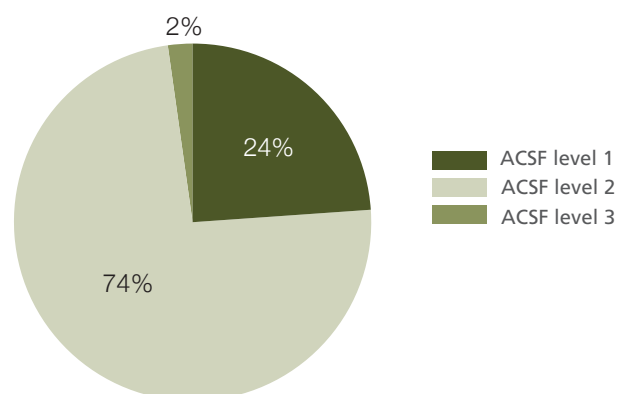
With Workplace English Language and Literacy (WELL) funding exhausted in the previous period, LLN training could not be provided continuously this year, nor did all ranger groups benefit from the training that could be delivered. Remnant ABA funds were sufficient to recontract Central Desert Training to deliver LLN training to seven groups (Yuendumu, Papunya, Tjuwanpa, Santa Teresa, Harts Range, Ti Tree, Tennant Creek). Those in more remote locations (Docker River, Lajamanu, Angas Downs and Daguragu) were left without formal LLN support.

Four Central Desert Training trainers were still able to deliver 682 hours of training on a rotational basis, well above the target direct hours of 560. Focus was given to workplace numeracy skills, working with groups and individuals on map reading, measuring distances, working with the CyberTracker and fundamental mathematical tasks. Individual rangers were also supported in their accredited training at BIITE through assistance with reading comprehension, spelling and grammar.

Over the four years of delivery the program has recorded ranger performance against the Australian Core Skill Framework (ACSF). Individual performance is predominately at ACSF Level 2 (74%), with a small group progressing to ACSF Level 3 (2%). Group data suggests that the level of ACSF performance has decreased compared to the previous funding round by 6%. This is likely due to staff turnover and catering for individuals who missed sessions. This result demonstrates that whilst some individuals have benefited greatly from the LLN support, turnover will continue to present a cohort of staff with significant LLN barriers requiring ongoing support.

With cessation of LLN funding in November 2014, applications were submitted for funding to support a multi-year LLN program to the IAS and the ABA. Both applications were unsuccessful. A revised IAS application submitted inclusive of LLN requirements was submitted in late June.

RANGER INDIVIDUAL AUSTRALIAN CORE SKILLS FRAMEWORK LEVEL



NINTH CENTRAL AUSTRALIAN INDIGENOUS COMMUNITY RANGER CAMP

The ninth annual ranger camp was held at Watarrka (Kings Canyon) National Park over a three-day period in March 2015. Over 130 Aboriginal rangers attended from the 11 CLC ranger groups, the NT Parks and Wildlife Commission and six ranger groups from the cross-border region of SA and WA. The annual camp continues to be a feature of the program, providing a platform for networking, sharing of information and relationship building between groups. Key features of the camp this year included:

- a welcome-to-country by former CLC Chair Bruce Breden and prominent Luritja women traditional owners of the park
- an address from the CLC Chair stressing the importance of ranger work in assisting traditional owners to look after traditional country
- delivery of 15 training workshops by eight providers over two days, including snake-handling, aerial incendiary, quad-bike use and multi-media
- two health-related forums, including a Quit Smoking session and presentation of 55 rangers for eye-checks (25% of whom were identified as needing glasses or other treatment)
- ranger participation in a trial Karrke Cultural Experiences tour, an emerging enterprise operated by park traditional owners from Wanmarra
- team-building activities, including an Amazing Race event and a 'healthy camp cook off'
- endorsement of a Ranger Reference Group proposal to provide ongoing ranger perspectives on program development and operational issues
- a ceremony for 16 rangers from 9 groups graduating in Certificate II or III in Conservation Land Management from BIITE.

Real jobs making a real difference

We're having a lot of fun. It's been really cool!' That's Anangu Luritjiku ranger Samara's verdict on the CLC's annual ranger camp in Watarrka National Park. 'I got to meet all the other rangers and make friends.' Samara's auntie, Loretta Morton, takes off her helmet to pose for Samara's camera.

The women are two of more than 100 Aboriginal rangers from across Central Australia and beyond who are camping together for a week of professional development and networking.

Samara's dad, senior ranger Terence Abbott, is proud of his daughter. 'She wants to work on country too, doing good stuff,' he smiles. Terence says it's good that these days a third of the CLC's rangers are women. 'We always had men's side of the story but not the women's side.'

In the 1980s the family lived at Ilpili outstation west of Papunya. The site and its spring on Terence's grandmother's country copped a hammering from feral camels. 'My turn to look after it now,' he says.

Growing up, Samara loved listening to tales of his team protecting special places. 'They work really hard,' she says. 'My dad used to come back and show me his photos of camels messing up the spring at Ilpili. He went out to muster the camels to get rid of animals that ruin the place. I thought I could help dad.'

During a guided walk through Watarrka Gorge Samara listens to the yarns of NT Parks and Wildlife Commission's ranger Mid Merry about saving tourists from themselves. 'They're crazy!' says Samara. 'But it made me think about Ilpili,' she says. 'Maybe one day we can have tourists at Ilpili.'



Murnkurumurnkurru Ranger Ursula Chubb learning how to use the Rindance machine at the ranger camp 2015.



CDU Trainer instructing Anangu Luritjiku Ranger Samarra Morris in a quad bike training exercise at the ranger camp 2015.

RANGER MENTORING SUPPORT

A significant proportion of rangers have few if any experiences of ongoing employment. Provision of mentoring support is critical to meeting workplace expectations and addressing external matters that affect ranger performance and retention. Many rangers enter the program with varying levels of experience, confidence and capability.

The high demand for ranger mentoring support across the program places considerable strain on the two ranger mentors (one male, one female) employed to support the 11 groups. Each mentor is assigned nominally to the north or south ranger sub-programs, but otherwise respond collectively to demand or gender-specific issues as appropriate across the whole region.

A total of 3,300 mentoring engagements were completed by mentors over 77 mentoring visits in this period, with an average of 7 mentor visits made per group. A number of those visits were timed to enable mentors to also assist with training delivery, ranger recruitment processes or supervision of the group in the coordinator's absence.

Highlights among the mentoring outcomes for this period are described below.

- Successful conduct of the annual CLC Ranger Induction in Alice Springs, with 41 newly recruited rangers actively participating in activities, information sessions and social interactions with other rangers.
- Active participation of all 120 rangers in training and team-building activities at the annual ranger camp at Watarrka,

including new recruits.

- Fifty-five rangers attended eye health checks and quit-smoking sessions at the ranger camp.
- Increased recruitment of women into the ranger program this period, including into two of the ranger groups (Harts Range and Papunya) for the first time.
- Thirty representations made to external agencies providing expert advice and assistance on a wide range of issues faced by rangers including health, legal, accommodation and training services.
- Participation in meetings of the emerging Centralian Mentors Network to share experiences and approaches.

Significant challenges nevertheless continue to be experienced in the provision of mentoring support. This includes:

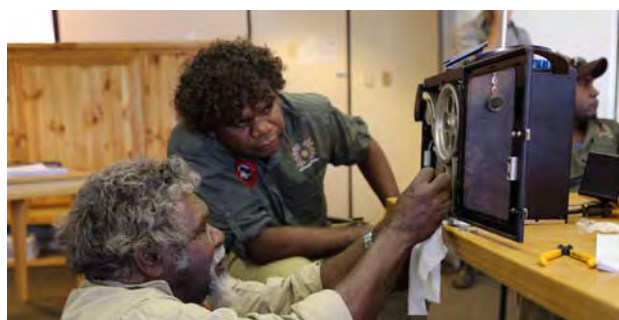
- inability to visit communities as frequently as required, due to resourcing issues
- inconsistent support from providers for provision of work readiness, recruitment and post-placement support for new rangers
- difficulties due to remoteness of ranger employees
- impact of cultural activities and other events on the mentoring and retention effort, including cultural obligations, sorry business and regional community sporting events.

FUTURE DIRECTION

Over the last 15 years the CLC Ranger Program has matured into a successful model for employment in remote Aboriginal communities and the delivery of natural and cultural resource management outcomes. Given the scale of the land management issues, the extent of land that the 11 ranger groups are responsible for, and their meagre resources, there is considerable scope to expand the Program to more effectively manage Aboriginal-owned land across the region. There is also significant demand for more ranger jobs in remote communities as one of the preferred employment options where few other opportunities exist.

In addition to expanding the scope of the existing program there is also scope to extend its reach into new areas so that the corresponding benefits can be spread further. There is consistent demand from traditional owners and CLC delegates to develop ranger groups in areas and communities where they do not currently exist – demand that continues to outstrip available funding. The CLC acknowledges that, while continued Commonwealth funding is critical to the sustainability of the program, new and innovative approaches to attract revenue from other sources is required in order to underpin growth and address the scale of land management required. This includes pursuing more fee-for-service work while balancing the interests of traditional owners and land management priorities.

In order to examine these and other strategic issues of the program's delivery, growth and resilience, the CLC engaged an independent consultant, Creating Communities Pty Ltd, to compile a Ranger Program Development Strategy. This document was completed in March 2015 and is available



Mark Butler from Western Australia and Northern Tanami Ranger Titus White learning how to use the Raindance machine at the Ranger Camp 2015.

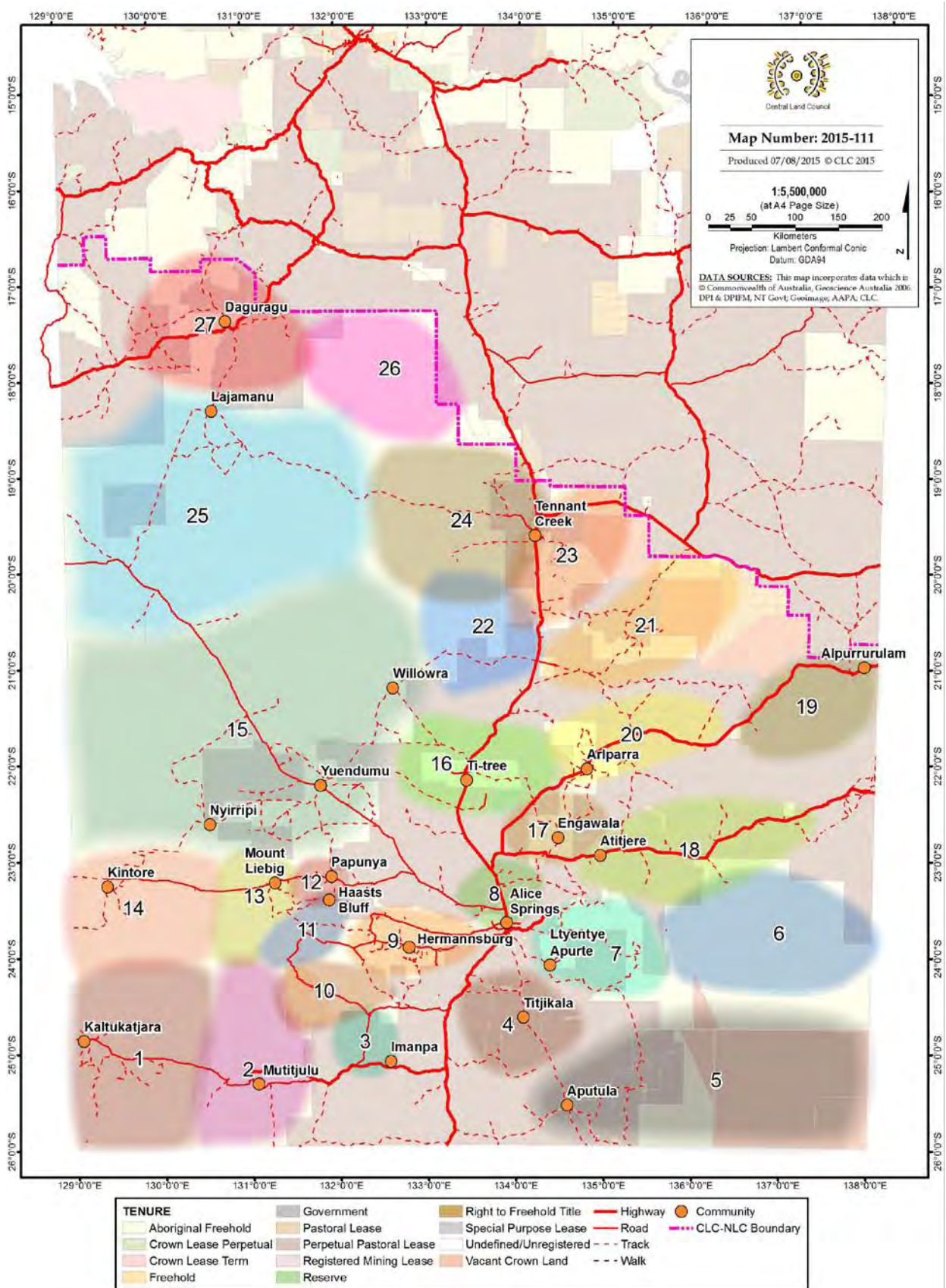
on the CLC website at www.clc.org.au. The key findings included the following significant points:

- The CLC Ranger Program was acknowledged to have developed to a point of maturity where it has a proven capacity to devise and implement a structured work program in the communities where it operates.
- The program is able to attract, retain, develop skills and deploy a stable workforce to undertake natural and cultural resource management activities, with some ranger groups now having the capability for land-based fee-for-service contracts and other enterprises.
- The CLC is currently the most appropriate organisation to manage the ranger program in central Australia and has built strong foundations and motivation for ongoing participation by Aboriginal people.



Participants and instructors involved in the Raindance (an aerial incendiary device) machine training at the ranger camp 2015.

POTENTIAL RANGER GROUP OPPORTUNITIES



- Partnerships and revenue diversification are required in order to be able to expand and sustain the program.
- Planning processes must be better integrated and linked to a robust monitoring and evaluation framework.
- Mechanisms for motivating and retaining rangers are required, including contemporary and relevant training and mentoring support.
- Communication and advocacy must be strategically managed in order to create broader understanding and support for the program.

Since completion of the strategy the CLC has taken steps to act on a number of the recommendations to date, including:

- the appointment of a ranger program development officer to plan and facilitate growth in regional participation, identify strategic partnerships and revenue diversification opportunities, develop an effective monitoring and evaluation framework, and examine future governance options
- the initiation of an internal review of the ranger training and mentoring program
- submitting an Indigenous Advancement Strategy application to implement a ranger program expansion strategy for placement of an additional 150 rangers in new community ranger groups over five years with enterprise and partnership development support (this application was unsuccessful)
- submitting an ABA application for critical infrastructure to support the expansion of the ranger program by an additional nine new groups (this application was also unsuccessful)
- supporting rangers to make their case to the Minister for Indigenous Affairs at the April 2015 CLC Council meeting to remain under the auspices of the CLC in response to

his proposed transition of ranger programs from NT Land Councils to alternative management arrangements.

The strategy listed a number of recommendations for the CLC to pursue for the expansion of the program but did not conduct an analysis as to how and where the program might expand. In order to ensure that the CLC responds in a strategic manner and new groups are given the best possible chance of success, the CLC is therefore conducting a detailed analysis of which areas and locations will have the most chance of success. The CLC is using a range of criteria under the following themes to identify the priority locations for this investment:

- **Social factors:** population demographics, strong governance structures, value-adding linkages to community schools and other social programs, such as at-risk youth.
- **Cultural and aspirational factors:** a demonstrated interest and clearly articulated aspirations.
- **Economic factors:** access to land, presence of enterprise and fee-for-service opportunities.
- **Bio-physical and bio-cultural factors:** biodiversity values and the presence of culturally significant sites.
- **Potential development partners/collaborators:** such as resource centres, local government, government and non-government interests (NT Parks and Wildlife Commission, philanthropic organisations).

This work is due to be completed by the end of 2015. However, based on an initial assessment, the map on page 43 illustrates the potential coverage that the CLC Ranger Program could have in terms of enhancing the existing ranger groups and the expansion into new areas. This map is a draft only and requires further consultation and analysis. Nevertheless, the CLC is continuing to pursue opportunities to expand the program.



Second generation ranger: Terence Abbott takes his daughter Samara Morris for a spin during the Watarrka ranger camp.

ACKNOWLEDGEMENTS

The CLC acknowledges the funders, partners and supporters of the CLC Ranger Program, including the Australian Government and the following organisations:



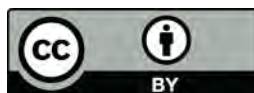
LIST OF SHORT FORMS

| | |
|-------|--|
| ABA | Aboriginals Benefit Account |
| ASCF | Australian Core Skill Program |
| ALT | Aboriginal Land Trust |
| BIITE | Batchelor Institute of Indigenous Tertiary Education |
| CDEP | Community Development Employment Program |
| CDT | Central Desert Training |
| CLC | Central Land Council |
| CLM | Conservation and Land Management |
| DLRM | Department of Land Resource Management |
| FEP | Flexible Employment Program |
| HCHP | Healthy Country Healthy People |
| IEK | Indigenous Ecological Knowledge |
| ILC | Indigenous Land Corporation |
| IPA | Indigenous Protected Area |
| LLN | Language, Literacy and Numeracy |
| NHT | Natural Heritage Trust |
| NRM | Natural Resource Management |
| TNRM | Territory Natural Resource Management |
| TORAC | Traditional Owner Ranger Advisory Committee |
| TORC | Tjuwanpa Outstation Resource Centre |
| WoC | Working on Country |

First published in 2015 by the Central Land Council
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**CENTRAL
LAND
COUNCIL**

Address

27 Stuart Highway
Alice Springs
NT 0870

Postal address

PO Box 3321
Alice Springs
NT 0871

www.clc.org.au

Phone 08 8951 6211

Email media@clc.org.au

FRONT COVER IMAGE: Traditional owner Joe Bird with grandson and Northern Tanami Ranger Jeffrey Matthews Jr on a prescribed burning trip to Papinya.

BACK COVER IMAGE: Warlpiri and Anmatyerr Rangers participating in CyberTracker training at the ranger camp 2015.

