

# CLCAC Indigenous Fire and Weed Management Project



Gangalidda Garawa Rangers (Burketown)

Waanyi Garawa Rangers (NT)

Bidunggu Rangers (Gregory)

# PROJECT OVERVIEW

- Large-scale fire and weed management across 64,000 square km:
  - Implementing early season fire regimes planned in consultation with Traditional Owners, undertaken by CLCAC rangers, NT rangers and pastoralists/ land managers with assistance/ support from stakeholders
  - Undertaking strategic weed control (using chemicals and fire) for WoNS along the NT border and other key areas identified by Biosecurity Qld
- Training and capacity/ knowledge building within the lower Gulf for pastoralists, landholders and rangers to undertake best practice fire and weed management
- Effective fire and weed management will protect and enhance biodiversity (native flora and fauna) across the landscapes of the lower Gulf
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# PROJECT STAKEHOLDERS

- Traditional Owners
- Pastoralists
- CLCAC
- NLC
- QLD and NT fire services
- QLD National Parks
- Southern Gulf Catchments NRM Group
- Burke Shire Council
- Biosecurity Queensland
- NT Weeds





# Demonstrating outcomes

## ON GROUND WORKS:

Early season burning →

Weed control

Plus Biodiversity  
Monitoring (flora  
and fauna)

## MONITORING WORK:

Pre/post fire plots & Visual burn  
assessment (veg surveys) +  
comprehensive NAFI analysis

Weed density measurements &  
mapping, total weed kill counts,  
photo points

### **WHY MONITOR??**

What is measured is understood;  
If you don't measure results you can't prove success from failure;  
If you can demonstrate outcomes you can win public support. And ever more  
importantly...

*To provide a demonstrated return on investment!!*



	On-ground activities	Monitoring
<p><b>Early season burning</b></p> 	<ul style="list-style-type: none"> <li>• Cool, mosaic, patchy burns are lit across the landscape</li> <li>• Burns are planned every year in consultation &amp; with consent of TOs at community meetings</li> <li>• Burns are implemented in line with the Gulf Savannah Fire Management Guidelines (GSFMG)</li> <li>• Occurring in the early dry season (burning finishes by end of June)</li> </ul>	<p>Pre/post fire plots</p> <ul style="list-style-type: none"> <li>• Veg plots done just before a burn to record native veg cover, weeds, structure</li> <li>• Same plots done again one year later to assess change</li> </ul> <p>Visual burn assessment</p> <ul style="list-style-type: none"> <li>• Done just after a burn to assess patchiness % (making sure burn is in line with recommendations in the GSFMG) and general assessment of landscape condition</li> <li>• Using NAFI data and mapping to show early season burns vs. late season</li> </ul>
<p><b>Weed management</b></p> 	<ul style="list-style-type: none"> <li>• Late season prescribed burns to manage rubber vine</li> <li>• Chemical application for control of rubber vine, prickly acacia and parkinsonia</li> </ul>	<p>WoNS monitoring</p> <ul style="list-style-type: none"> <li>• Density estimates yearly to measure decrease over time</li> <li>• Individual plant counts if possible to record total number of weeds killed</li> <li>• Comparison Mapping (pre-treatment vs. end of project) to show reduction in strategic outlier rubber vine communities near the NT border</li> </ul>

\*Monitoring also includes best practice data collection and management during on-ground activities.



Measurable objectives	How to be assessed	How to be reported (in fire report)
Early-season, prescribed mosaic burning demonstrated.	Using fire scar remote sensing data (NAFI), estimate burnt and unburnt country. Provide overall percentage of fire occurring in early-dry season vs. late-dry season.  Note that early burns may not be visible on NAFI it may be necessary to combine remote sensing with points collected on GPS.	<b>Achieved:</b> Remote sensing shows a series of progressive burns through the early-dry season.  <b>Partially Achieved:</b> One to two burns achieved in early-dry, still a few burns in late dry.  <b>Not Achieved:</b> No burning has occurred in the early-dry OR too much burning has occurred in the late-dry.
Proactive planned burning has prevented impact by subsequent wildfire to natural/ cultural resources or infrastructure.	Using fire scar remote sensing data, estimate area of planned burns against wildfire on an annual basis.	<b>Achieved:</b> Annual area planned burnt prevents impact by wildfire.  <b>Not Achieved:</b> Wildfire has had significant impact.
Create a fine-scaled patchy burn in Spinifex communities.	Visual estimation of percentage of vegetation burnt— using NAFI data overlaid with QLD Herbarium Broad Veg Groups, and the project area map, gain a burn % estimate for each Regional Ecosystem across the project area landscapes.	<b>(Example outcomes)</b>  <b>Achieved:</b> 25–75 % of Spinifex hummocks remain unburnt within the burn area. (Total % based on Gulf Fire Management Guidelines for that veg type)  <b>Not Achieved:</b> More than 75 % or less than 25 % of Spinifex hummocks remain unburnt within the burn area. (Patchiness does not correlate to % in Guidelines for that veg type.)
Recruitment of obligate seeders (e.g. <i>Jacksonia</i> spp., <i>Acacia</i> spp.) promoted over the burn area. Also focus on bush tucker and culturally significant species.	During vegetation surveys (biodiversity monitoring component) assess if seedlings of fire-killed shrubs can be seen in the ground layer. Within unburnt areas of the burn footprint more mature shrubs remain—visually assess from one or more vantage points or from the air.	<b>Achieved:</b> Fire-killed shrubs are present at various heights/stages of maturity across the burn area.  <b>Not Achieved:</b> Fire killed shrubs are all of a single age/height across the burn area.

## Measurable Key Objectives:

- Early-season mosaic burns
- Prevent uncontrolled wildfire
- Creating a fine-scaled patchy burn in Spinifex communities
- Recruitment of obligate seeders; focus on bush tucker and culturally significant species.



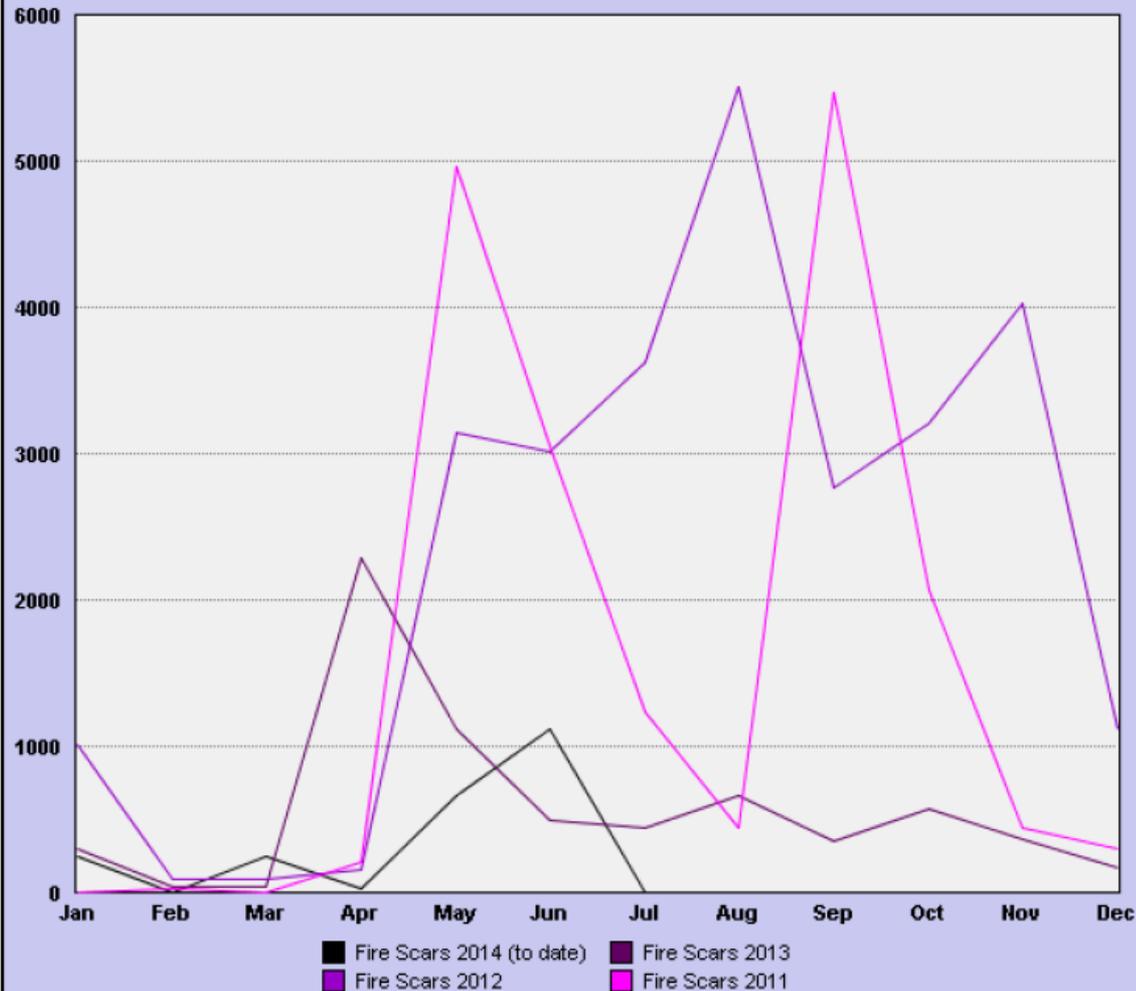
# Improved fire and weed management = improved biodiversity outcomes

- Biodiversity monitoring involves both flora and fauna surveys
- Veg plots & transects, 10 consecutive trapping nights (elliott traps, funnel traps, pitfall, harp traps), nightly spotlighting, active day searches and all opportunistic sightings recorded.
- Is undertaken in an area that falls within the projects' broad veg group as classified by the Federal Gov't, is culturally appropriate and has significant biodiversity values including fire-sensitive indicator species, and culturally significant species.



### Fire scar areas by year

in sq km for each month



### Percentage of Project Area burned over last 4 years:

- 2011- 25.9% (18,187 sq Km)
- 2012- 39.4% (27,740 sq Km)
- 2013- 9.7% (6,812 sq km)
- 2014 (to date) – 3.3% (2,302 sq km)

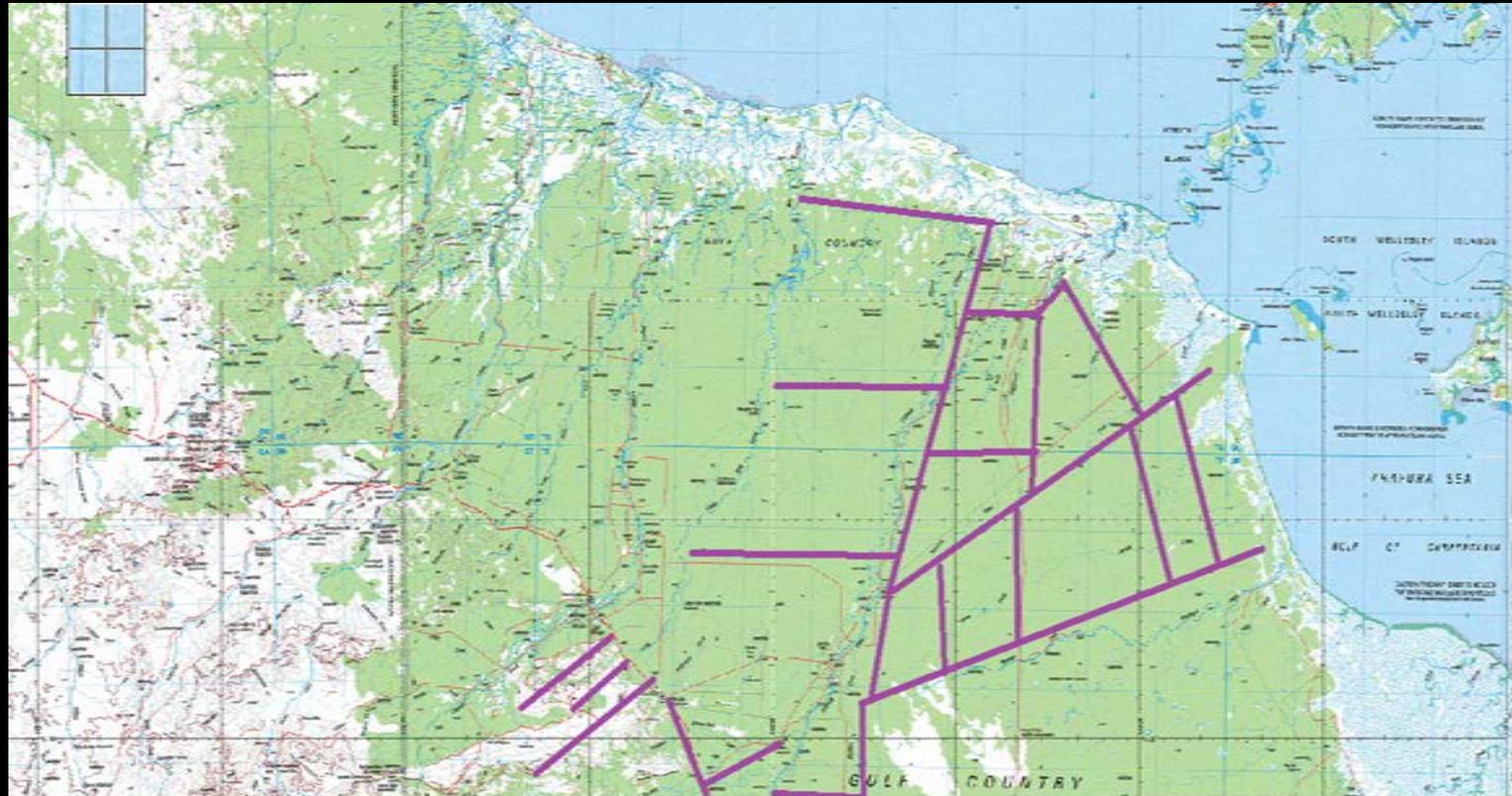




# Fire management Work Group



# Fire Planning for aerial burning program 2014



# Biodiversity Studies Fauna



# Biodiversity Vegetation Monitoring



# Hellsgate Fire Workshop



# Fire Training



# Fire Plots



# Aerial Prescribed Burning



# NAFI SCARS 2014

