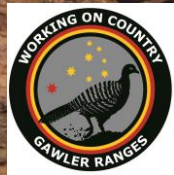


Aboriginal Engagement Cultural Reporting

Learnings from the Arid Regions

Glen Scholz DEWNR SA



Government of South Australia
Department of Water, Land and
Biodiversity Conservation



Government of South Australia
South Australian Arid Lands Natural
Resources Management Board

“Ninna Marni”

(Kurna words for “Hello, how are you?”)

*“We would like to acknowledge the Kurna people as the traditional custodians and carers of the greater Adelaide region, and that the place where we are **meeting and making decisions** today is on the traditional lands of the Kurna people. We **acknowledge, accept and respect** Kurna people’s **relationship with country** and their cultural and spiritual beliefs. We **recognise** that Kurna **heritage, knowledge and skills** are of critical importance to Australian people and the landscape today.”*



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“Under the NWI (2004) there should be Indigenous representation in water planning with incorporation of Indigenous social, spiritual and customary objectives and strategies for achieving these objectives. Governments are now in the early stages of implementing the NWI objectives and “formally recognising Aboriginal relationships with water for spiritual, cultural and economic purposes”and through policy, legislation and programs, provide Aboriginal access to water”

An even greater challenge is;

- *reconnecting Aboriginal people back to traditional lands and to provide for and support Aboriginal relationships to communities and country in ways which do not ultimately fragment them.*
- *their access to and control over it and their contribution and values about it acknowledged.*
- *How well have we done?*



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Kokotha and Barngarla Elders - Thurlga Station SA



*Kokotha Men Wilgena
Station SA*

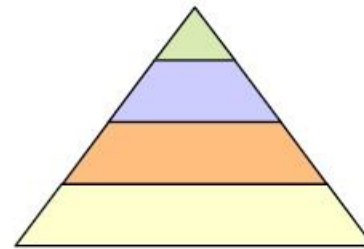
44 Wilgena, S.A. T.B.R.



*Arabana Country:
Artwork by Jody Warren*



Yolngu decision making structure



Ngapaki structures

*Leaching the poison – The importance of process and partnership
in working with Yolngu*

*Rarriwuy Marika ^a, Yalmay Yunupingu ^a, Raymattja Marika-Mununggiritj ^b, Samantha
Muller*



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Projects run exclusively by scientists

Number of
participants

Training /
Complexity

Scale
spatial/temporal

Commitment

Contributory

Collaborative

Co - Created

Projects run in partnership with Communities IBK



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Connecting to country Kokotha Elder and kids - Gawler Ranges SA







Revisiting water sites is a big part of how Arabana people stay connected to their country and important areas, enabling collection of information about each site

(Photo: M Nursey-Bray)



Tjuwanpa Rangers at Ellery Big Hole NT



Gawler Ranges Cultural and Ecological Database

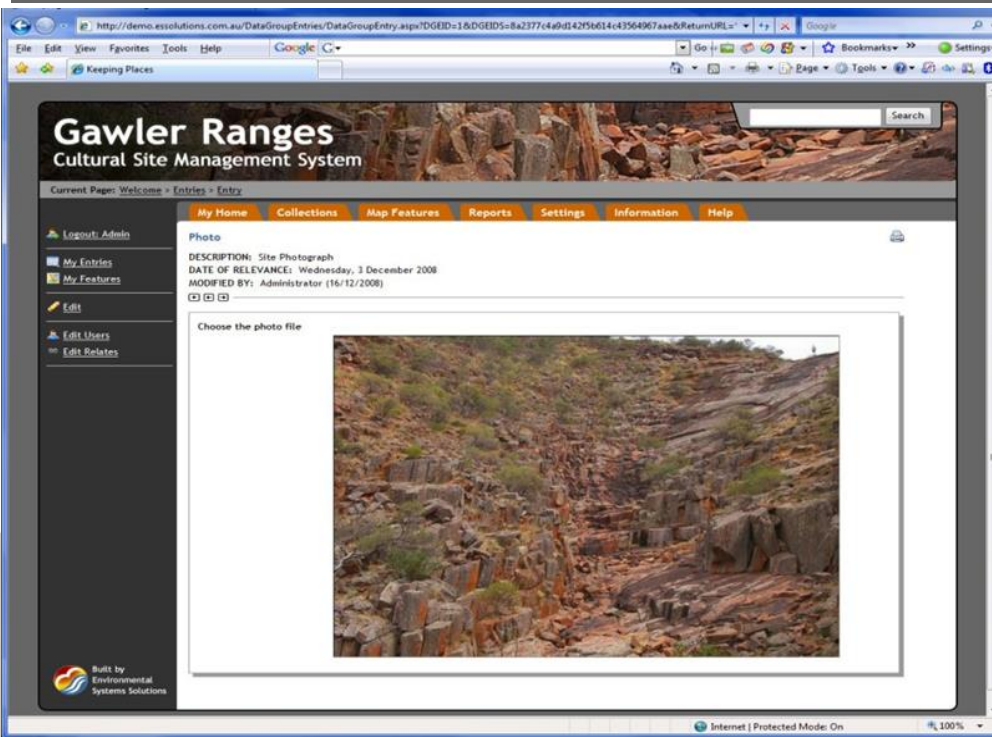
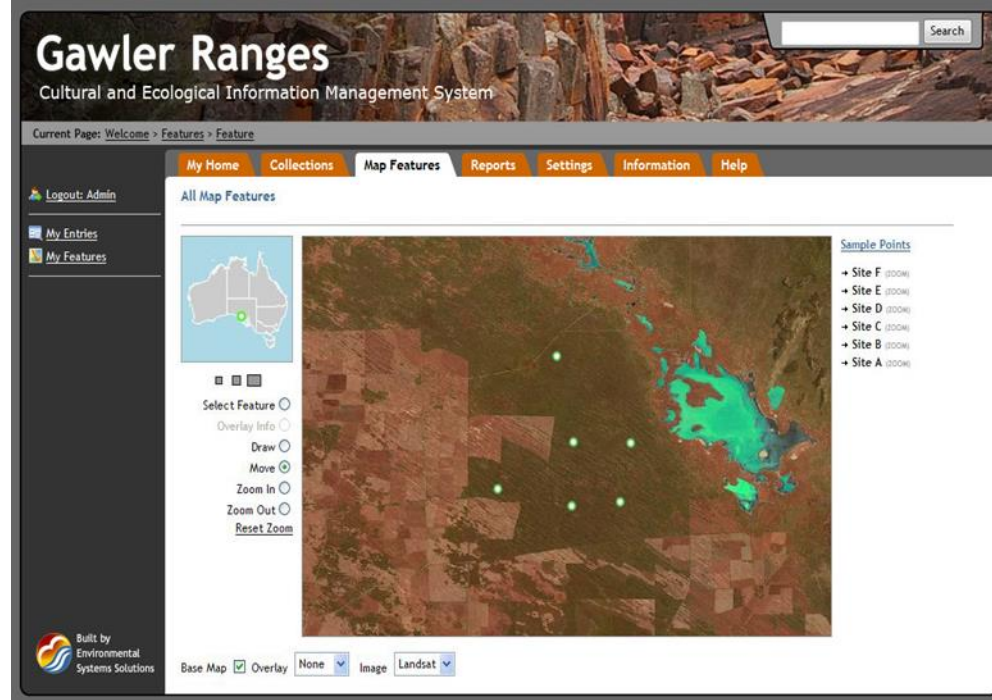
Storage for collection of Cultural and Ecological information;

- Password protected;
- Restrictions for men and women;
- Storage for inputting data but also an output for reports;
- Knowledge for future generations;
- Photos, videos and audio storage;
- Limited access by public;
- Controlled by the Gawler Ranges Group;
- GIS/GPS software for mapping

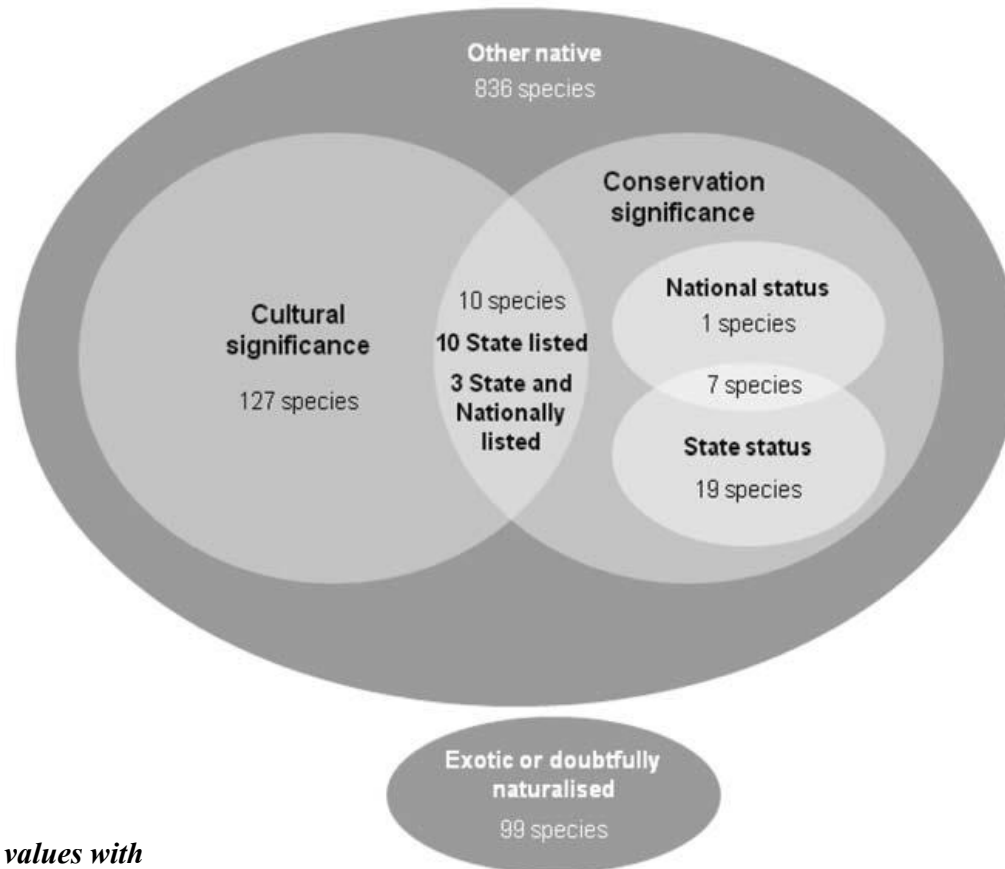


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***Proportions of the 1000 native and 99 non-native flora in the greater
Lockerbie Scrub recognised as of cultural or conservation significance***



***Incorporating Indigenous values with
'Western' conservation values in
sustainable biodiversity management***

A.J.J. Lynch, D.G. Fell and S. McIntyre-Tamwoy



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Kokotha and Barngarla Elders - Lake Everard Station SA



Section 1 – Site Overview

Cultural Assessment and Evaluation				
Mythological	Access	Gender	Significance	Status
	Closed	Male	High	Registered
Archaeological	Observations			
	Scatters	Historical		
	Camp fire	Burial Site		

Qualitative / rapid survey of perennial species (annual weed species are included)				
	Species	Common name	Aboriginal name	Aboriginal use
Aquatic	<i>Limosella granitica</i>	Granite Mudwort	-	-
	<i>Marsilea drummondii</i>	Nardoo	-	Seeds
Grasses / forbs	<i>Centipeda thespidioides</i>	Desert Sneezeweed	Kata-palkalpa (P)	Narcotic, medicine
	<i>Cheilanthes lasiophylla</i>	Woolly Cloak Fern	-	-
	<i>Ptilotus obovatus</i>	Silver Mulla Mulla	Iriya (P) (Y) Kuntulji (P) Pugar-pugarpa (P)	Grubs
	<i>Sida corrugata</i>	Corrugate Sida	-	-
Shrubs	<i>Solanum sp.</i>	-	-	-
	<i>Sporobolus actinocladius</i>	Fairy Grass	-	-
	^{1,2} <i>Acacia tarculensis</i>	Tarcoola Wattle	-	Seeds
	<i>Dodonaea lobulata</i>	Lob-leaf Hopbush	-	-
	<i>Eremophila sp.</i>	-	-	-
	<i>Enchylaena tomentosa</i>	Ruby Saltbush	Iwajiwaja (P) Malkakutjalpa (P) Wilpan-wilpanpa (P)	Fruit
	<i>Rhagodia parabolica</i>	Mealy Saltbush	-	-
	<i>Senna artemisioides</i>	Silver Cassia	Karpil-karpilpa (P) Arapita (P) Inuntji (P) (fresh growth & flowers) Pilani (P) Punti (P) Untuppu (P)	Medicine (leaves are boiled and are put into a cream for aches and pains) (K) Grubs
Trees	³ <i>Acacia aneura</i>	Mulga	Kalpilya (P)	Seeds, Artefacts, tools



Section 2 – Ecosystem Values and Threats

Table 1. Ecosystem value and threat (see Table 2 for 'value' description).

	Indicator	Value	Description	Confidence
1	Plant diversity (see species list in Section 1)	HIGH	Aquatic: 2 species Understory: 6 species Shrub: 6 species Canopy: 5 species	Qualitative Survey
2	Habitat diversity (geomorphic features)	HIGH	Shallow pool / pans: numerous pans Deep pools / pits: 2 pits Apron pool (at granite outcrops): 1 apron pool / dam	Number and size of rock-holes were not recorded
3	Hydrological value	MODERATE	Seasonal and episodic (dependent upon rainfall)	Local Knowledge
4	Salinity	FRESH	Water quality wasn't tested, but was assumed that the water was fresh from recent rainfall.	Assumption
5	Cultural site	HIGH	Significant Aboriginal site.	Local Knowledge
6	Uniqueness	MODERATE	A number of rock-holes exist on granite outcrop	Qualitative Survey
7	Key aquatic refuge	MODERATE - HIGH	<i>Limosella granitica</i> (Granite Mudwort) is listed as a vulnerable species (DEH West Region, 2007). A large shrimp-like invertebrate was observed in the apron pool / dam.	Qualitative Survey (sample not verified)
8	Weeds	ABSENT	None observed.	Qualitative Survey
9	Exotic animals	PRESENT	Evidence of significant numbers of rabbits at the site. Evidence of goats was also observed.	Qualitative Survey
10	Water abstraction	HISTORIC	Dam embankment suggests that the site may have historically been an important watering point.	Local Knowledge
11	Grazing pressure	MODERATE - HIGH	Overall there was evidence of significant grazing impact at the site. Most of the ground cover species were absent. Grazing impact was observed from sheep, rabbits and goats. From discussions with the landholder sheep tend to get trapped around this site when water is available in the pools concentrating stock around the rock-hole site. A significant number of dead sheep were observed.	Qualitative Survey
12	Dung / dead matter / algae buildup	MODERATE	Sheep dung, algae and sediment was observed in the rock-holes.	Qualitative Survey

Section 3 – Site Condition

Table 3. Vegetation condition (see Table 4 for the description of the indicators and Table 5 for the attributes used to assess vegetation condition).

Indicator	Value	Description	Confidence
Spatial Integrity	LARGELY UNMODIFIED	No evidence of large scale vegetation loss at site	Observation
Nativeness	LARGELY UNMODIFIED	No perennial weeds were recorded at the site.	Observation
Structural Integrity	SLIGHTLY MODIFIED	Grazing has impacted the sub-shrub / groundcover layer.	Observation
Age Structure	SLIGHTLY MODIFIED	The dominant shrub layer <i>Acacia tarculensis</i> (Tarcoola Wattle) showed signs of grazing with no juveniles present.	Observation
Debris	SLIGHTLY MODIFIED	Debris is reduced due to grazing and stock trampling.	Observation

Table 4: Vegetation Condition Sub-Indices Attributes (for each indicator refer to appropriate row in Table 5 for assessment criteria).

<p>Spatial Integrity: Width of riparian vegetation (as defined by inundation dependent species). Longitudinal continuity continuous cover of dominant stratum along the channel. Connectedness of the riverine vegetation to other areas of native vegetation (riparian or terrestrial).</p> <p>Nativeness: Percentage of non-native and high impact species. Abundance of non-native and high impact species in different strata. (This project will focus on perennials due to the arid system; annual cover is determined by rainfall which can coincide with site visits).</p> <p>Structural Integrity: Number of strata and/or life forms. Cover for each stratum.</p> <p>Age Structure: Cover of canopy species. Presence (or abundance) of different age stages. Presence (or abundance) of large old trees.</p> <p>Debris: Abundance of fallen logs. Presence (or abundance) of standing dead trees. Percentage cover of litter.</p>

Table 5. Key to the ecosystem 'values' listed in Table 3 above.

	Largely Unmodified	Slightly Modified	Moderately Modified	Substantially Modified	Severely Modified
Spatial Integrity	No or little evidence of broad scale loss of native vegetation	Width reduced by up to 1/3 and/or some breaks in continuity	About 50% of the native vegetation remains, either in strips or patches	Only small patches of well-separated native vegetation remains	Little or no remaining native vegetation
Nativeness (perennials)	Vegetation predominately native, few weeds and no 'high threat' species.	Exotic species present but not dominating any strata, 'high threat' species rare	One or more strata dominated by exotic species, 'high threat' species present	Most strata dominated by exotic species, 'high threat' species abundant	Few native species remaining, cover dominated by exotic species
Structural Integrity	Number of strata and cover within each strata is similar to reference	Cover within one stratum 50% lower or higher than reference	One stratum missing or extra cover within remaining stratum 50% lower or higher than reference	More than one stratum completely altered from reference (lost or <10% remaining)	Structure completely altered from reference (eg. grassland, shrubland, forest pasture)
Age Structure	Dominant strata with reference level of cover and at least three age classes present	Reduced cover (75-50%) of dominant strata, and/or only two age classes present	Reduced cover (75-50%) of dominant strata, and only one age class present	Reduced cover (<50%) of dominant strata, and only one age class present	Dominant strata mostly absent
Debris	Quantities and cover similar to reference	Some evidence of unnatural loss of debris (eg. firewood collection, trampling of leaf litter by stock)	Quantities and/or cover 50% higher or lower than reference	Very small quantities of debris present	Debris mostly absent or completely dominating the sites, with little or no living vegetation



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Table 1. Summary and comparison of investment priorities across the sites.

Lease	Site	Cultural Investment Priority	Ecological Investment Priority	Restoration Potential	Plant Diversity (# species)
Wilgena	Bulpara Hill	HIGH	HIGH	HIGH	19
Kokatha	Pilleutta	HIGH	HIGH	HIGH	26
Moonaree	Dingo Hill	HIGH	INTACT	INTACT	12
Koweridda	Koweridda OS/Yarunda	HIGH	INTACT	INTACT	14
Yardea	Kulkalla	HIGH	INTACT	INTACT	17
Thurlga	Tandaie	HIGH	MODERATE	MODERATE	9
Moonaree	Murnea	HIGH	MODERATE	MODERATE	11
North Well	Tunkillia	HIGH	LOW	MODERATE	7
Thurlga	Spring Hill	MODERATE	INTACT	INTACT	13
North Well	Arcoodaby	MODERATE	MODERATE	MODERATE	9
Wilgena	Darebin	INTACT	INTACT	INTACT	10
	Mullina	INTACT	INTACT	INTACT	16
Thurlga	Thurlga HS	INTACT	INTACT	INTACT	26
	Hudson's	INTACT	INTACT	INTACT	15
Yardea	Yardea HS	INTACT	INTACT	INTACT	24
	Artaming	INTACT	INTACT	INTACT	13
North Well	Tomato Camp	LOW	LOW	MODERATE	9
Wilgena	Moolkra Clay pan	LOW	LOW	LOW	3



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The Rock-hole story of the Gawler Ranges



The Kokatha people seen here in 1926 at Wilgena Station are the traditional owners of the Gawler Ranges, along with the Barngarla Aboriginal people

The Aboriginal people respected and cared for rock-holes as it was their main water source.

All rock-holes are associated with Wanapi Tjukurpa, Water Snake Dreaming.

Through a partnership with traditional owners, pastoralists and natural resource managers, we are creating a framework outlining protocols and methods for managing rock-hole sites that have multiple values.



The information presented here is from a collaborative project that started in 2008 and is continuing today (2011) with a long-term vision as future partners:

- South Australian Native Title Services
- South Australian Arid Lands Natural Resource Management Board, Department for Water along with three Working on Country Aboriginal Rangers employed via the Caring for our Country program through Department of Environment and Natural Resources

Occupation through time

Gawler Ranges consists of 3 National Parks and 29 Pastoral Leases.

TODAY

Indigenous Land Use Agreements on 24 properties (2008).

1700's - 1900's

European colonisation.

Aboriginal People removed from traditional country.



Today, Aboriginal people are reconnecting with their land and are revisiting and managing rock-holes on pastoral properties.

Traditional knowledge is continuing to be handed down to the next generations.

Rock-holes use through time

TODAY

The Federal Government formally recognises via the National Water Initiative (2004)

Aboriginal spiritual, cultural and economic connection to water.

To adequately understand the significance of rock-holes in the Gawler Ranges, the current and traditional land managers are working with scientists and the South Australian Arid Lands (SAAL) NRM Board to integrate management of land, water and cultural practices.

1700's - 1900's

Explorers, Afghans and Pastoralists initially used the rock-holes and outcrops as water sources.

After groundwater wells were sunk, there was no longer a dependency on the rock-holes & outcrops for stock & domestic water use.

+ 20,000 YEARS AGO

Rock holes were used as water sources but also meeting ceremonial & spiritual places.

ROCK-HOLE CREATION

Aboriginal mythology

Ancestors created the landscape and taught the people through stories and songs how to live and care for country.

Scientific Geology

The deposition of the Gawler Range Volcanic's as layered silicic was 1,592 mill. yrs ago during the Proterozoic. Rock-holes form due to weathering of water along granite fractures when the slope of the rock face is less than 20 degrees.

Landscape changes was due to both climate and Aboriginal occupation.

Landscape changes through time

Landscape changes was due to both climate and Aboriginal occupation.

Landscape change due to European occupation, with clearing and farming of land leading to a loss of native species, richness and diversity. The distribution and numbers of some native animals like kangaroos and birds changed due to more water being available across the landscape since the construction of dams and troughs.

1700's - 1900's

60% Landscape change due to European occupation and climate

TODAY

The Rangeland Ecosystem is in an altered state due to changes in surface water movement across the landscape and grazing, feral animal and weed impacts.

Aboriginal history through time

+ 20,000 YEARS AGO

Aboriginal elders teach each generation stories and songs to live and care for their country.

1700's - 1900's

The Aboriginal elders continue to teach the next generation stories and songs to live and care for their country.

TODAY

The Aboriginal elders continue to teach the next generation stories and songs to live and care for their country.

SAAL NRM Board Rock-hole project, reconnecting Aboriginal people back to traditional country, 2008 - 2011.

Pastoralists built stone walls around the edge of outcrops to catch and direct water, enhancing little water that was available. Today, these may still be used and are also a valued historic reminder of the past.





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PLAN
 SHEWING LEADING TRACKS
 FROM
PORT AUGUSTA , COWARD SPRINGS & STREAKY BAY
 TO
WILGENA
 AND
TARCOOLA

Tracks shown thus ----

TARCOOLA GOLD
 DISCOVERY

NOTE

Waters numbered 1 are leased Government works
 from which water may be obtained at usual rates.
 Those numbered 2 are on unleased lands where
 there are caretakers and water may be obtained at
 some rates.
 Waters numbered 3 are included in Pastoral Leases
 & Lessees permission to use water is necessary.
 Those numbered 4 are included in Pastoral Leases
 but arrangements have been made with Lessees for
 Public to have use of water.
 Waters numbered 5 are in Government Reserves
 or Stock Roads or Crown Lands.

CUPPERIN

