

ARID LANDS REGIONAL ACTION PLAN



Thorny Devil, Parks Australia



Central Australian tip, Shenagh Gamble



Landcare Day Alice Springs, Tanya Howard



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Arid Lands Regional Action Plan

This document describes the Arid Lands NRM region and the nine management actions that make up the Arid Lands RAP. Background information is based on information drawn from publications, databases and expert opinion. The management actions are based on consultation with the Arid Lands NRM community. They stand alongside 39 Territory-wide management actions.

Region Profile

The Arid Lands region covers 49% of the land area of the Northern Territory (658,000 sq km). It includes all of the MacDonnell Ranges and Burt Plain bioregions, the Territory sections of the Great Sandy Desert, Simpson Strzelecki Dunefields, Finke, Central Ranges, Channel Country and Stony Plains bioregions, most of the Territory section of the Tanami bioregion and parts of Sturt Plateau, Mitchell Grass Downs and Davenport Murchison Ranges bioregions.

The region is home to 19% of the Territory's population. It covers the entire area of the MacDonnell Shire, most of the Central Desert Shire and part of the Barkly Shire. Its largest town is Alice Springs. The Australian Government has prioritized Yuendumu and Hermannsburg for Regional Service Delivery.* These communities, along with Papunya and Ali Curung have been designated Territory Growth Towns.** Numerous organisations are involved in natural resource management in the region.

The Arid Lands region has eight catchments that drain internally towards Lake Eyre. There are various arrangements and agreements over Lake Eyre catchments. The vegetation is mostly spinifex grassland (69%), with smaller areas of open shrubland (18%), and open woodland (12%).

The Arid Lands region has 24 Sites of Conservation Significance. Except for South-west Tanami Desert, around half of these are ranges and the remainder wetlands. Eight are of international significance and the remainder of national significance. There are four High Conservation Value Aquatic Ecosystems (HCVAEs) in the Arid Lands region. Riparian vegetation in the Arid Lands is recognised as sensitive and in need of protection by the Northern Territory Government.

Low fire frequencies occur through most of the region, but are higher on the southern part of the Sturt Plateau, which extends into the Arid Lands region. The Arid Lands region has 43 nationally listed threatened species and 72 species listed as threatened in the Territory. Bednall's Land Snail, listed as Critically Endangered in the Territory, is the most severely threatened species that is still thought to occur in the region.

Region Profile cont...

The region has four Weeds of National Significance (WoNS) and 31 Territory declared weeds. Buffel Grass, introduced for pastoral production, is having a major impact on biodiversity, but is not declared on any weed list. One exotic ant, two exotic birds and 12 exotics mammals have established feral populations in the region.

About 55% of the Arid Lands region is Aboriginal freehold, 36% pastoral leases, on which cattle are grazed. Though accounting for a small total area, horticulture is an important land use in the Arid Lands region. Current and proposed protected areas make up 36% of the region; the vast majority of this is as proposed Indigenous Protected Areas.



Red Centre rain, Hannah Seward

*Remote Service Delivery communities include those 15 Territory communities as defined under the terms of the COAG Remote Service Delivery National Partnership Agreement.

**Territory Growth Towns are 20 remote communities identified under the NTG's Growing the Territory Initiative

Organisations involved in NRM and other stakeholders in this region in 2010 cont...

Australian Government

Department of Agriculture, Fisheries & Forestry
 Department of Climate Change & Energy Efficiency
 Department of Defence
 Department of Sustainability, Environment, Water, Population & Communities

Conservation NGOs

Arid Lands Environment Centre
 Australian Plants Society - Alice Springs
 Australian Wildlife Conservancy
 Conservation Volunteers
 Greening Australia
 Land for Wildlife
 Olive Pink Botanic Gardens

Corporations

Power and Water Corporation

Indigenous organisations

CentreFarm
 Indigenous Land Corporation
 Ingkerreke Outstation Resource Centre
 Iteyepinye Aboriginal Corporation
 Laramba Community
 Lhere Artepe Aboriginal Corporation
 Tangentyere Council
 Tjuwanpa Outstation Resource Centre

Indigenous ranger groups

Anmatyerr Rangers
 Kaltakatjarra Rangers
 Tjuwanpa Rangers
 Warlpiri Rangers

Individuals and companies

Fishers
 Horticulturalists
 Hunters
 Mining companies
 Pastoral land managers
 Tour operators
 Tourists
 Traditional owners

Industry representative bodies

Minerals Council of Australia
 Northern Territory Cattleman's Association
 Northern Territory Horticultural Association
 Tourism Central Australia

Land Councils

Central Land Council

Landcare and Friends-of groups

Alice Springs Landcare Inc
 Friends of the Desert Park
 Tangentyere Council Landcare and Environmental Health Unit

Local Government & supporting organisations

Alice Town Council
 Barkly Shire
 Central Desert Shire
 Local Government Association of the Northern Territory
 MacDonnell Shire

Non-statutory advisory bodies

Alice Springs Pastoral Industry Advisory Committee
 Alice Springs Regional Weed Reference Group
 Alice Springs Water Advisory Committee
 Northern Territory Weed Advisory Committee

Northern Territory Government

Department of Business and Employment
 Department of Education and Training
 Department of Housing, Local Government and Regional Services
 Department of Infrastructure and Construction
 Department of Lands and Planning
 Department of Natural Resources, Environment, the Arts & Sport
 Department of Resources
 Department of the Chief Minister
 Environmental Protection Authority

Pastoral Landcare groups & Best Practice groups

Centralian Land Management Association

Regional Bodies

Territory Natural Resource Management

Special interest groups

Rural Residents Association

Universities & other training, research & development organisations

Batchelor Institute of Indigenous Tertiary Education
 Bushfires Cooperative Research Centre
 Centre for Appropriate Technology
 Charles Darwin University
 Cooperative Research Centre for Remote Economic Participation
 CSIRO
 Desert Knowledge Australia
 Institute for Aboriginal Development
 Invasive Animals Cooperative Research Centre
 Meat and Livestock Australia
 Rural Industries Research and Development Corporation

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Sites of Conservation Significance

Site	Significance	World Heritage Area	Ramsar	HCVAE	Protected
Andado and Snake Creek lakes	International	-	-	-	1%
Anmatyerr North	National	-	-	-	-
Beddome Range and Wilyunpa Tablelands	National	-	-	-	-
Cleland Hills and surrounds	National	-	-	-	-
Davenport and Murchinson Ranges (part)	National	-	-	-	11.2%
Dulcie Range and surrounds	National	-	-	Dulcie Ranges Springs	6%
Elkedra River floodout swamps	National	-	-	-	-
George Gill Range and surrounds	International	-	-	-	36%
Greater MacDonnell Ranges	International	-	-	Western Finke River Catchment pools	11%
				Glen Helen Mound Spring	
Karinga Creek paleodrainage system	International	-	-	-	-
Lake Amadeus and Lake Neale	National	-	-	-	-
Lake Lewis and surrounds	National	-	-	-	*
Lake MacKay	International	-	-	Lake Mackay	*
Lake Surprise and the Lander River floodout swamps	National	-	-	-	20.3%*
Mount Conner and surrounds	National	-	-	-	-
Mount Liebig and surrounds	National	-	-	-	-
Mud Hut Swamp	National	-	-	-	-
Newhaven Lakes	National	-	-	-	67%
Petermann Ranges and surrounds	National	-	-	-	*
Rodinga Range and adjacent ranges	National	-	-	-	-
South-west Tanami Desert	International	-	-	-	*
Uluru and surrounds	International	Uluru-Kata Tjuta National Park	-	-	50% *
Waterhouse Range	International	-	-	-	90%
Wood Duck Swamp	National	-	-	-	-

* indicates that the extent protected will increase with the declaration of proposed Indigenous Protected Areas



Termite mounds, Tanami Desert, Steve Wingrave

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Threatened Species

Species	Nat/NT Status	Species	Nat/NT Status
Snails			
Bednall's Land Snail	EN/CR	Land Snail (<i>Semotrachia euzyga</i>)	EN/EN
Ellery Gorge Land Snail	-/VU	Land Snail (<i>Semotrachia filixiana</i>)	-/VU
Emile's Land Snail	-/VU	Land Snail (<i>Semotrachia huckittana</i>)	-/VU
Gillen Creek Land Snail	-/VU	Land Snail (<i>Semotrachia illarana</i>)	-/VU
Land Snail (<i>Basedowena squamulosa</i>)	-/VU	Land Snail (<i>Semotrachia jessieana</i>)	-/VU
Land Snail (<i>Dirutrachia sublevata</i>)	-/VU	Land Snail (<i>Semotrachia jinkana</i>)	-/VU
Land Snail (<i>Divellomelon hillieri</i>)	-/VU	Land Snail (<i>Semotrachia rossana</i>)	-/VU
Land Snail (<i>Granulomelon grandituberculatum</i>)	-/VU	Runutjirbana Land Snail	-/VU
Land Snail (<i>Pillomena aemula</i>)	-/VU	Spencer's Land Snail	-/VU
Land Snail (<i>Semotrachia caupona</i>)	-/VU	Watt's Land Snail	-/VU
Land Snail (<i>Semotrachia esau</i>)	-/VU	Western MacDonnell's Land Snail	-/VU
Bednall's Land Snail	EN/CR		
Insects			
Desert Sand Skipper	EN/EN		
Fish			
Finke Goby	-/VU		
Reptiles			
Bronzeback Snake-Lizard	VU/-	Slater's Egernia	EN/EN
Great Desert Skink	VU/VU	Yellow-spotted Monitor	-/VU
Mertens' Water Monitor	-/VU		
Birds			
Australian Bustard	-/VU	Night Parrot	EN/CR
Australian Painted Snipe	VU/VU	Plains-wanderer	VU/-
Emu	-/VU	Princess Parrot	VU/VU
Grey Currawong	-/CR	Purple-crowned Fairy-wren (western)	VU/VU
Malleefowl	VU/CR	Red Goshawk	VU/VU
Masked Owl (northern mainland)	VU/VU	Thick-billed Grasswren	VU/EN
Mammals			
Black-footed Rock-wallaby	VU/-	Golden Bandicoot	VU/EN
Brush-tailed Mulgara	VU/VU	Greater Bilby	VU/VU
Carpentarian Antechinus	VU/EN	Kowari	VU/-
Central Rock-rat	EN/EN	Long-tailed Dunnart	-/VU
Common Brushtail Possum (southern)	-/EN	Northern Quoll	EN/CR
Crest-tailed Mulgara	EN/VU	Plains Mouse	VU/EN
Dusky Hopping-mouse	VU/EN	Sandhill Dunnart	EN/-
Fawn Hopping-mouse	VU/EN	Southern Marsupial Mole	EN/VU
Ferns			
<i>Adiantum capillus-veneris</i>	-/VU		
Cycads			
<i>Macrozamia macdonnellii</i>	VU/-		

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threatened species cont...

Flowering plants			
Acacia latzii	VU/VU	Eremophila prostrata	VU/VU
Acacia peuce	VU/EN	Ipomoea polpha subsp. latzii	VU/VU
Acacia pickardii	VU/VU	Livistona mariae	VU/VU
Acacia undoolyana	VU/VU	Minuria tridens	VU/VU
Actinotus schwarzii	VU/VU	Olearia macdonnellensis	VU/VU
Austrobryonia argillicola	-/VU	Ricinocarpos gloria-medii	VU/VU
Baumea arthropphylla	-/EN	Santalum acuminatum	-/VU
Bolboschoenus caldwellii	-/EN	Thryptomene hexandra	-/VU
Eleocharis papillosa	VU/VU	Wrixonia schultzii	VU/VU

VU: Vulnerable; EN: Endangered; CR: Critically Endangered

Sensitive vegetation communities

Community
Old-Growth Forest
Riparian Vegetation

Feral animals

Group	Species
Insect	Big-headed Ant
Bird	Barbary Dove
Bird	Spotted Turtle Dove
Mammal	Black Rat
Mammal	Brown Rat
Mammal	Camel
Mammal	Cat
Mammal	Cattle
Mammal	Donkey
Mammal	Fox
Mammal	Horse
Mammal	House Mouse
Mammal	Pig
ammal	Rabbit
Mammal	Wild Dog



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Significant Listed Weeds

Species	Common name	National Status	Northern Territory Status
<i>Acanthospermum hispidum</i>	Starburr	-	B, C
<i>Alternanthera pungens</i>	Khaki Weed	-	B, C
<i>Argemone ochroleuca</i>	Mexican Poppy	-	B, C
<i>Asphodelus fistulosus</i>	Onionweed	-	A, C
<i>Carthamus lanatus</i>	Saffron Thistle	-	B, C
<i>Calotropis procera</i>	Rubber Bush	-	B (south of 16 o30' S latitude), C
<i>Cenchrus echinatus</i>	Mossman River Grass	-	B, C
<i>Dalbergia sissoo</i>	Himalayan Raintree	-	A, C
<i>Datura ferox</i>	Long-spine Thornapple	-	A, C
<i>Datura innoxia</i>	Downy Thornapple		B, C
<i>Datura wrightii</i>	Hairy Thornapple		B, C
<i>Emex australis</i>	Spiny Emex	-	B, C
<i>Hyptis suaveolens</i>	Hyptis	-	B, C
<i>Jatropha gossypifolia</i>	Bellyache Bush	-	A, B, C
<i>Lantana camara</i>	Lantana	WoNS	B, C
<i>Lycium ferocissimum</i>	African Boxthorn	-	A, C
<i>Opuntia imbricata</i>	Devil's Rope Cactus	-	B (south of 18° S latitude), C
<i>Opuntia stricta</i>	Common Prickly Pear	-	B (south of 18° S latitude), C
<i>Parkinsonia aculeata</i>	Parkinsonia	WoNS	B, C
<i>Prosopis spp.</i>	Mesquite	WoNS	A, C
<i>Ricinus communis</i>	Castor Oil Plant	-	B, C
<i>Senna obtusifolia</i>	Sicklepod	-	B, C
<i>Senna occidentalis</i>	Coffee Senna	-	B, C
<i>Sida acuta</i>	Spinyhead Sida	-	B, C
<i>Sida cordifolia</i>	Flannel Weed	-	B, C
<i>Sida rhombifolia</i>	Paddy's Lucerne	-	B, C
<i>Tamarix aphylla</i>	Athel Pine	WoNS	B, C
<i>Tribulus cistoides</i>	Caltrop	-	B, C
<i>Tribulus terrestris</i>	Caltrop	-	B, C
<i>Xanthium occidentale</i>	Noogoora Burr	-	B, C
<i>Xanthium spinosum</i>	Bathurst Burr	-	B, C

WoNS: Weed of National Significance; KTP: Key Threatening Process
A: Eradicate; B: Control growth and spread; C: Do not introduce to the Northern Territory

What we plan to do

This RAP includes actions identified by the community as necessary to address significant NRM issues in the Arid Lands region.

Forming a vibrant NRM community, Arid Lands natural resource managers see the importance of collaborative work, whether this is across tenure or across borders.

Of most immediate concern is the impact of recent wet conditions on plant growth that has produced phenomenal fuel loads. **MA-04** will help the management of this fire hazard by providing a regional fire management coordinator, and supporting culturally-based fire planning and on-country visits for burning. It will also bring together fire management expertise from across central Australia, facilitating cross-border collaboration between organisations tackling fire management in the Northern Territory, Western Australia, South Australia and Queensland. The fire, vegetation and cultural mapping needed to underpin fire management are provided through Territory-wide actions.

The run of wet years has also promoted the growth and spread of weeds, notably Mexican Poppy. **MA-15** will identify options for controlling this weed. Considerable effort has already been invested in the control of Athel Pine along Arid Lands watercourses, where it replaces native trees, and causes erosion and surface salinisation. **MA-15** will support and expand this important work in order to recover riparian condition. Strategic control of other weeds at the catchment scale and preventing new weeds from becoming established are aims of Territory-wide action.

Considerable effort is also being invested in reducing the impact of camels on desert ecosystems and communities. **MA-21** will ensure that this work continues when current funding arrangements cease. While the problem with camels is that there are too many, the problem with rabbits is that there are too few. The effectiveness of Rabbit Calicivirus Disease (RCD) in reducing rabbit numbers has led to complacency, and a new generation of Territory land managers may hardly remember a time when rabbits were a significant pest. However, resistance to RCD is building in New South Wales, so **MA-20** will re-instil rabbit control measures as part of land management practices to help prevent another population explosion.

Most, if not all, permanent wetlands in the Arid Lands are heavily impacted by feral grazing animals. These feral animals are likely to be degrading the values that have led to the designation of such wetlands as Sites of Conservation Significance. **MA-68** will therefore assess and address feral animal impacts on these wetlands.

what we plan to do cont...

While there was concern about the impact of Buffel Grass on natural and cultural values through much of the Arid Lands, there was recognition that control was only likely to be feasible around key biodiversity assets. Along with Couch Grass, Buffel Grass severely impacts the values of many Arid Land Sites of Conservation Significance and threatened species populations. **MA-69** will therefore identify where Buffel and Couch Grass threats to biodiversity can be prevented or managed, and trial some control measures.

An even greater threat to Arid Land biodiversity has been predation by cats and foxes, which has contributed to the extinction or decline of many small mammals and reptiles. **MA-77** will support a trial of proven fox control methods around threatened species populations, and draw on recent developments to identify and test effective cat control methods.

Several threatened species in the MacDonnell Ranges occur at altitudes that provide a milder microclimate than the surrounding deserts. **MA-26** will examine whether these microclimates will persist under expected climate change conditions, or whether special measures may be required to ensure the persistence of these species.

This RAP will be supported by Territory-wide actions to maintain and build knowledge and capacity and provide resources and training for natural resource management. It will be reviewed at regular intervals throughout the five-year life of the INRM plan.



CLC Intergenerational Transfer of IEK Program, Partame people of Finke River

Arid Lands Management Actions

Program	Management Actions		Priority	Community Rating
Harnessing fire	MA-04	Support fire management in central Australia	VH	VH
Controlling weeds at the catchment scale	MA-15	Continue to manage Athel Pine along priority watercourses	H	VH
	MA-17	Identify and implement management options for Mexican Poppy	M	M
Reducing feral animal impacts	MA-20	Reinvigorate rabbit control by Arid Lands land managers	VH	VH
	MA-21	Maintain advances made by the Camel Action Plan	VH	VH
Understanding climate change	MA-26	Investigate the implications of climate change on hilltop species in the MacDonnell Ranges	M	M
Protecting significant sites	MA-68	Identify and address significant feral herbivore impacts on wetland values in Arid Land Sites of Conservation Significance and other wetlands	H	VH
	MA-69	Minimise Buffel and Couch Grass impact at Sites of Conservation Significance and on threatened species populations	M	VH
Recovering species through adaptive management	MA-77	Reduce fox and cat predation of significant populations of Arid Land threatened species	VH	VH



Spinifex Hopping-mouse, Michael Barritt