

Central Ranges 1 (CR1 – Mann-Musgrave Block subregion)

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Information from Western Australia and the Northern Territory has been listed separately in this synopsis as a result of different vegetation mapping protocols that have been used in the two jurisdictions and the associated difficulties in combining that information.

Subregional description and biodiversity values

Description and area

Western Australia:

High proportion of Proterozoic ranges including both volcanic and quartzites and derived soil plains, interspersed with red Quaternary sandplains with some permian exposure. Described as the 'Giles Botanical District', the sandplains support low open woodlands of either Desert Oak or Mulga over *Triodia basedowii* hummock grasslands. Low open woodlands of Ironwood (*Acacia estrophiolata*) and Corkwoods (*Hakea* spp.) over tussock and hummock grasses often fringe ranges. The ranges support mixed wattle scrub or *Callitris glaucophylla* woodlands over hummock and tussock grasslands. The climate is Arid, with a mean rainfall of 200mm comprising summer and winter rain.

Northern Territory:

The Mann-Musgrave Block subregion lies in the south west corner of the Northern Territory. The Mann and Musgrave Ranges occur just south of the border in South Australia. Elevation in the subregion is generally above 500m, ranging up to 1000m along the South Australian border. The area lies over the Musgrave Block and small areas of the Amadeus Basin. Soils in the subregion are mainly shallow sands and massive earths. The climate is arid with annual rainfall below 300mm. Vegetation is hummock grassland (*Triodia* spp.) and sparse Acacia shrubland. Minor drainage occurs around the Petermann Ranges, including Docker and Hull Rivers.

Dominant land use

Western Australia:

Dominant landuses include Aboriginal Reserve (94.33% of subregion area), Grazing – Freehold (0.03%), Grazing – Leasehold (1.36%), Unallocated Crown Land and Crown Reserves (4.28%).

Northern Territory:

No information supplied.

Continental stress class

The Continental Stress Class for both the West Australian and Northern Territory components of CR1 is 6.

Known special values in relation to landscape, ecosystem, species and genetic values

Western Australia:

Rock Pools of the Walter James Range:

Two permanent freshwater pools with each being approximately 9m wide and 4m deep. The area is a permanent breeding site for the frog *Cyclorana maini* and a permanent source of water for birds. Provides a good example of the few permanent rock pools in the Central Ranges Bioregion. The social and cultural values of the pools are significant. They form part of a song line which extends from Broome through to Kings Canyon, NT to Pukura WA. The upper pool is used for drinking while the lower one is also used for swimming by local communities (WA014).

Rare and Priority Flora:

Includes: *Acacia auricoma*, *A. calcicola*, *Calotis latiuscula*, *Comesperma viscidulum*, *Dicrastylis gilesii*, *Eucalyptus sparsa*, *Fuirena nudiflora*, *Grevillea* sp. Rawlinson Range, *Isotropis winneckeii*, *Menkea lutea*, *Neurachne lanigera*, *Prostanthera centralis* and *Schoenus centralis*.

Rare and Specially Protected Fauna:

Includes birds such as Peregrine Falcon (*Falco peregrinus*), Grey Falcon (*Falco hypoleucos*), Major Mitchell's Cockatoo (*Cacatua leadbeateri*), Princess Parrot (*Polytelis alexandrae*), Scarlet-chested Parrot (*Neophema splendida*), Slender-billed Thornbill (*Acanthiza iredalei iredalei*), Malleefowl (*Leipoa ocellata*), and Night Parrot (*Pezoporus occidentalis*). Mammals include Bilby (*Macrotis lagotis*), Southern Marsupial Mole (*Notoryctes typhlops*), Mulgara (*Dasyercus cristicauda*), and Black-footed Rock Wallaby (*Petrogale lateralis* (the Townsend Ridges population of this species has a unique chromosome number)). Reptiles include Great Desert Skink (*Egernia kintorei*) and Woma (*Aspidites ramsayi*).

Ecosystems That Have More Than 80% of Their Total Extent Confined CR1:

Beard Veg Assoc	Description	% Extent
92	Hummock grasslands, sparse tree steppe; bloodwood over hard spinifex <i>Triodia basedowii</i>	81.8
233	Shrublands; <i>Acacia bivenosa</i>	83.8
234	Shrublands; <i>Acacia ?cyperophylla</i> scrub	100.0

Refugia:

- There are no identified true known refugia in CR1, however the Rock Pools of the Walter James Range and Lake Christopher have the potential to provide such refuge during periods of drought, or as breeding locations during seasonal rainfalls.
- Some river and creek systems and gorges may also provide temporary refugia, but may be only seasonal.

High Species and Ecosystem Diversity:

The subregion is rich and diverse in both its flora and fauna however most species are wide ranging and usually occur in at least one, and often several, adjoining subregions.

Northern Territory:

No information supplied.

Existing subregional or bioregional plans and/or systematic reviews of biodiversity and threats

Western Australia:

The CR1 subregion is covered by a CALM Regional Management Plan, that provides an overview of the region's biota, addresses land and wildlife conservation issues, but was written to cover a third of WA and therefore was generalised in its attention to detail. Issues in relation to joint management of IPAs (Indigenous Protected Areas) are flagged in this document, but not addressed in detail. The reviews and strategies therein (for reserve system development or management of weeds, fire, feral animals, mining, ecosystem rehabilitation & disease quarantine) do not address the specific needs of subregions, or even bioregions, individually (Department of Conservation and Land Management 1994b).

Northern Territory:

No planning process in place.

Wetlands

Wetlands of National significance (DIWA listings)

Western Australia:

Name and Code	Description ¹	Condition ²	Trend ³	Reliability ⁴	Threatening Processes ⁵
Rock Pools of the Walter James Range WA 014	B17	iii	iii-iv	iii	v (feral animals attracted to water source), x (changed hydrology due to grazing pressure around rockholes and 'upstream' by feral animals), vi (exotic weeds introduced by animals accessing water), xi (pollution by faeces and dead animals in waterholes)

¹Appendix B, key d; ²Appendix C, rank 2; ³Appendix C, rank 3; ⁴Appendix C, rank 1; ⁵Appendix B, key e

Northern Territory:

Name and Code	Description ¹	Condition ²	Trend ³	Reliability ⁴	Threatening Processes ⁵
Lake Amadeus	Not stated	iii	vi	Not stated	v (camels)

¹Appendix B, key d; ²Appendix C, rank 2; ³Appendix C, rank 3; ⁴Appendix C, rank 1; ⁵Appendix B, key e

Wetlands of subregional significance (in addition to the DIWA listed wetlands)

Western Australia:

Name and Code	Location	Description ¹	Special Values ²	Condition ³	Trend ⁴	Reliability ⁵	Threatening Processes ⁶
Lake Christopher	127.32 E, 24.45 S	B6	i, iii, cultural values	iv	iv	ii	vii (altered fire regimes in fringing flora), v (feral animal grazing pressure including camels, goats, rabbits)
Rawlinson Range Springs (Yirrirra)	127.54 E, 24.49 S	B17	i, iii, cultural values	iv	iv	ii	v (feral animals attracted to water source), x (changed hydrology due to grazing pressure around springs and 'upstream' by feral animals), vi (exotic weeds introduced by animals accessing water), xi (pollution by faeces and eutrophication of dead animals).
Rebecca and Giles Creek systems	128.40-55 E, 24.47-25.10 S	B2	i, iii, cultural values	iv	iv	ii-iii	v (feral animals attracted to water source), x (changed hydrology due to grazing pressure around springs and 'upstream' by feral animals), vi (exotic weeds introduced by animals accessing water), vii (altered fire regimes around fringing vegetation), xi (pollution by faeces and eutrophication of dead animals)

¹Appendix B, key d; ²Appendix B, key c; ³Appendix C, rank 2; ⁴Appendix C, rank 3; ⁵Appendix C, rank 1; ⁶Appendix B, key e

Northern Territory:

Name and Code	Location	Description ¹	Special Values ²	Condition ³	Trend ⁴	Reliability ⁵	Threatening Processes ⁶
Armstrong Creek	Not stated	B2	Not stated	iii	vi	Not stated	Not stated
Britten Jones Creek	Not stated	B2	ii	iii	vi	Not stated	xii
Hull River	Not stated	B2	Not stated	iii	vi	Not stated	Not stated

¹Appendix B, key d; ²Appendix B, key c; ³Appendix C, rank 2; ⁴Appendix C, rank 3; ⁵Appendix C, rank 1; ⁶Appendix B, key e

Riparian zone vegetation

Western Australia:

Name	Condition ¹	Trend ²	Reliability ³	Threatening Processes ⁴
Ephemeral creek lines	iii - iv	iv	i - ii	vi (grazing pressure from camels, goats and rabbits), vii, v (camels, goats, rabbits cats and foxes)

¹Appendix C, rank 2; ²Appendix C, rank 3; ³Appendix C, rank 1; ⁴Appendix B, key e

Northern Territory:

Name	Condition ¹	Trend ²	Reliability ³	Threatening Processes ⁴
Ephemeral creek lines	iii	iii	Unknown	vii, vi, v

¹Appendix C, rank 2; ²Appendix C, rank 3; ³Appendix C, rank 1; ⁴Appendix B, key e

Ecosystems at risk

Threatened ecological communities (TECs)

Western Australia:

There are no Threatened Ecological Communities (TECs) in CR1.

Northern Territory:

No information supplied.

Other ecosystems at risk

Western Australia:

No ecosystems at risk have been identified in CR1, although, in general, altered fire regimes and the potential for intense wildfires pose the greatest risk to ecosystems of this region. Introduced grazers and predators pose the next greatest risk to flora and fauna. Introduction of weeds along roadsides and water courses also threaten pristine ecosystems of the region.

Northern Territory:

No information supplied.

Species at risk

Fauna

Western Australia:

Species	WA Status	Condition ¹	Trend ²	Reliability ³	Threatening Processes ⁴
SCHEDULE 1; RARE/LIKELY TO BECOME EXTINCT, DIV 1 (MAMMALS)					
<i>Macrotis lagotis</i>	V	Unknown	vi	ii	v (foxes, cats)
<i>Notoryctes typhlops</i>	E	Unknown	vi	i-ii	v (foxes, cats)
<i>Dasyercus cristicauda</i>	V	Unknown	vi	ii	v (foxes, cats)
<i>Petrogale lateralis</i> MacDonnell Ranges race	V	Unknown	vi	iii	v (foxes and dingoes), ii
SCHEDULE 1; RARE/LIKELY TO BECOME EXTINCT, DIV 2 (BIRDS)					
<i>Polytelis alexandrae</i>	V	Unknown	vi		vii
<i>Acanthiza iredalei</i> <i>iredalei</i>		Unknown	vi	ii	vii
<i>Leipoa ocellata</i>	V	Unknown	vi	ii	v (foxes, cats), vii
<i>Pezoporus occidentalis</i>	CR	Unknown	vi	ii	v (foxes, cats), vii
SCHEDULE 1; RARE/LIKELY TO BECOME EXTINCT, DIV 3 (REPTILES)					
<i>Egernia kintorei</i>	V	Unknown	vi	iii	v (foxes, cats), vii
Schedule 4; Other specially protected fauna. Division 2 (Birds)					
<i>Falco peregrinus</i>	SP	Unknown	vi	ii	ii
<i>Cacatua leadbeateri</i>	SP	Unknown	vi	ii	ii, vij
OTHER SPECIES AT RISK WITHIN THE SUBREGION					
<i>Falco hypoleucos</i>	P4	Unknown	vi	ii	ii
<i>Neophema splendida</i>	P4	Unknown	vi	ii	ii
<i>Aspidites ramsayi</i>	P1	Unknown	vi	ii	v (foxes, cats), vii

¹Appendix C, rank 2; ²Appendix C, rank 3; ³Appendix C, rank 1; ⁴Appendix B, key e

Northern Territory:

Species	Status	Condition ¹	Trend ²	Reliability ³	Threatening Processes ⁴
<i>Trichosurus vulpecula</i>	E	ii	ii	vi	vii (habitat change through increased incidence of hot extensive fires), vi (change through broad-scale weed invasion), iv (camels, donkeys, cattle), v (foxes, cats).

¹Appendix C, rank 2; ²Appendix C, rank 3; ³Appendix C, rank 1; ⁴Appendix B, key e

Declared rare and priority flora

Western Australia:

Species Name	Status	Condition ¹	Trend ²	Reliability ³	Threatening Processes ⁴
PRIORITY 1					
<i>Dicrasyllis gilesii</i>	1	Unknown	vi	ii	vii
<i>Fuirena nudiflora</i>	1	Unknown	vi	ii	vii
<i>Grevillea</i> sp. Rawlinson Range		Unknown	vi	ii	vii
<i>Isotropis winneckeii</i>	1	Unknown	vi	ii	vii
<i>Menkea lutea</i>	1	Unknown	vi	ii	iv, vii
<i>Neurachne lanigera</i>	1	Unknown	vi	ii	vii
<i>Prostanthera centralis</i>	1	Unknown	vi	ii	iv, vii
<i>Schoenus centralis</i>	1	Unknown	vi	ii	vii
PRIORITY 2					
<i>Comesperma viscidulum</i>	2	Unknown	vi	ii	iv, vii

¹Appendix C, rank 2; ²Appendix C, rank 3; ³Appendix C, rank 1; ⁴Appendix B, key e

Northern Territory:

No information supplied.

Analysis of appropriate management scenarios

Reservation priorities of ecosystems

Western Australia:

Beard Veg Assoc	Ecosystem Description	IUCN I-IV	Non-IUCN Reserve	CALM Purchased Lease	Priority
96	Hummock grasslands, shrub steppe; acacia species (+grevillea) over <i>Triodia basedowii</i> often between sandridges				H
125	Bare areas; salt lakes				H
676	Succulent steppe; samphire				H
134	Mosaic: Hummock grasslands, open low tree steppe; desert bloodwood and feathertop spinifex (on) sandhills/Hummock grasslands, shrub steppe; mixed shrubs over spinifex between sandhills				H
95	Hummock grasslands, shrub steppe; acacia & grevillea over <i>Triodia basedowii</i>				H
18	Low woodland; mulga (<i>Acacia aneura</i>)				H
45	Shrublands; mallee scrub (Great Victoria Desert)				H
39	Shrublands; mulga scrub				H
2175	Grass savannah on clay plains (Tanami)				H
19	Low woodland; mulga between sandridges				H
252	Hummock grasslands, shrub steppe; mulga and mallee over soft spinifex				H
219	Hummock grasslands, grass steppe; soft & hard spinifex & <i>T. basedowii</i>				H

Beard Veg Assoc	Ecosystem Description	IUCN I-IV	Non-IUCN Reserve	CALM Purchased Lease	Priority
136	Hummock grasslands, shrub steppe; mixed shrubs over spinifex between sandhills				H
230	Mosaic: Medium sparse woodland; desert oak between sand dunes/Hummock grasslands, grass steppe; hard spinifex <i>Triodia basedowii</i>				H
92	Hummock grasslands, sparse tree steppe; bloodwood over hard spinifex <i>Triodia basedowii</i>				H
233	Shrublands; <i>Acacia bivenosa</i>				H
234	Shrublands; <i>Acacia ?cyperophylla</i> scrub				H

Northern Territory:

Veg Number	Ecosystem Description	IUCN I-IV	Non-IUCN Reserve	CALM Purchased Lease	Priority
65	<i>A. aneura</i> (Mulga) tall open-shrubland with <i>Eragrostis eriopoda</i> (Woollybutt) open-grassland understorey.	0	0	0	
73	<i>A. tetragonophylla</i> (Dead Finish), <i>A. kempeana</i> (Witchetty Bush) sparse-shrubland with herb/grassland understorey.	0	0	0	
78	<i>Triodia spicata</i> (Spike Flowered Spinifex) hummock grassland with <i>Grevillea wickhamii</i> (Holly Grevillea), <i>Acacia</i> sparse-shrubland overstorey.	0	0	0	
79	<i>Plectrachne melvillei</i> (Spinifex) hummock grassland with <i>A. aneura</i> (Mulga), <i>A. kempeana</i> (Witchetty Bush) tall open-shrubland overstorey.	0	0	0	
82	<i>Triodia basedowii</i> hummock grassland with <i>A. aneura</i> (Mulga) tall sparse-shrubland overstorey between dunes.	0	0	0	
84	<i>Triodia basedowii</i> (Hard Spinifex) hummock grassland with <i>E. gamophylla</i> (Blue Mallee) tall sparse-shrubland overstorey.	0	0	0	
86	<i>Triodia pungens</i> (Soft Spinifex) or <i>Triodia basedowii</i> (Hard Spinifex) hummock grassland with <i>Acacia</i> tall sparse-shrubland overstorey between dunes	0	0	0	
90	<i>Triodia irritans</i> (Porcupine Grass) open-hummock grassland.	0	0	0	
92	<i>Triodia clelandii</i> (Weeping Spinifex) hummock grassland with mixed species low open-woodland overstorey.	0	0	0	
93	<i>Triodia basedowii</i> (Hard Spinifex) hummock grassland with <i>Allocasuarina decaisneana</i> (Desert Oak) open-woodland overstorey between dunes.	0	0	0	
94	<i>Triodia basedowii</i> (Hard Spinifex) hummock grassland with <i>Allocasuarina decaisneana</i> (Desert Oak) low open-woodland or <i>Acacia</i> tall sparse-shrubland overstorey.	0	0	0	

Subregional constraints in order of priority (see Appendix B, key g)

Western Australia:

Competing Landuses: This subregion is almost entirely Aboriginal Reserve with no IUCN conservation reserve. Any establishment of conservation reserve will require negotiation with traditional owners. Other competing land uses are not currently a major issue although there are some significant prospective mineral deposits within the Central Ranges with associated Mining company interests that will need to be addressed in the near future. The region has numerous cultural sites, many of extreme importance, consultation with traditional owners in relation to land management in this region is paramount. Joint management strategies for lands (as outlined in the CALM Regional Management Plan) address issues in relation to cultural protection and/or development.

Other: There is considerable difficulty in identifying biodiversity values as there has been little work done in the area and most data is of a resolution that is too course.

Northern Territory:

No information supplied.

Bioregional and subregional priority for reserve consolidation

Western Australia:

CR1 is reservation Class 1 (see Appendix D, and Appendix C, rank 4). There are no reserves within the subregion at all, indicating a highly inadequate representation in terms of CAR criteria at not only the subregional level but also at the bioregional level.

Northern Territory:

There are no reserves in CR1.

Reserve management standard

Western Australia:

In CR1, no feral predator programs are in place other than for the protection of the Townsend Ridges Rock Wallaby population. Wildfire management facilities are limited by resources. Mining activities (exploration) are supervised, but feral herbivore grazing activities still pose a conservation risk in some areas. Reserve management standard is not applicable as there are no reserves, however the management rank for all tenures across the bioregion is (ii) (see Appendix C, rank 5). This indicates that biodiversity values and management issues are poorly identified and resource degradation is occurring (due to the lack of feral predator control), though the situation is retrievable.

There are no reserves in CR1.

Northern Territory:

Off reserve conservation

Priority species or groups and existing recovery plans

Western Australia:

Species	Specific Recovery Plan	General Recovery Plan
<i>Falco peregrinus</i>	No	Action Plan for Australian Birds
<i>Falco hypoleucos</i>	No	Action Plan for Australian Birds
<i>Cacatua leadbeateri</i>	No	Action Plan for Australian Birds
<i>Polytelis alexandrae</i>	No	Action Plan for Australian Birds
<i>Neophema splendida</i>	No	Action Plan for Australian Birds
<i>Acanthiza iredalei iredalei</i>	No	Action Plan for Australian Birds
<i>Leipoa ocellata</i>	Yes - Malleefowl Preservation Society have current Action Plan and ongoing research	Action Plan for Australian Birds
<i>Pezoporus occidentalis</i>	Yes - IRP	Action Plan for Australian Birds
<i>Macrotis lagotis</i>	Yes - National Threatened Species Recovery team	Action Plan for Australian Marsupials and Monotremes
<i>Notoryctes typhlops</i>	No	Action Plan for Australian Marsupials and Monotremes
<i>Dasymercus cristicauda</i>	Yes - National Threatened Species Recovery team	Action Plan for Australian Marsupials and Monotremes
<i>Petrogale lateralis</i>	No	Action Plan for Australian Marsupials and Monotremes
<i>Egernia kintorei</i>	Yes - National Threatened Species Recovery team	Action Plan for Australian Reptiles
<i>Aspidites ramsayi</i>	No	Action Plan for Australian Reptiles

Northern Territory:

No information supplied.

Appropriate species recovery actions

Western Australia:

Species	Recovery Actions ¹	Recovery Descriptions
<i>Falco peregrinus</i>	i, ii, iii, vii, ix	Habitat retention through reserves or on other State lands or on private lands. Feral animal control to restore habitat and CWR native fauna. Fire management.
<i>Falco hypoleucos</i>	i, ii, iii, vii, ix	Habitat retention through reserves or on other State lands or on private lands. Feral animal control to restore habitat and CWR native fauna. Fire management.
<i>Cacatua leadbeateri</i>	i, ii, iii, ix	Habitat retention through reserves or on other State lands or on private lands. Fire management.
<i>Polytelis alexandrae</i>	i, ii, iii, ix	Habitat retention through reserves or on other State lands or on private lands. Fire management.

Species	Recovery Actions ¹	Recovery Descriptions
<i>Neophema splendida</i>	i, ii, iii, ix	Habitat retention through reserves or on other State lands or on private lands. Fire management.
<i>Acanthiza iredalei iredalei</i>	i, ii, iii, ix	Habitat retention through reserves or on other State lands or on private lands. Fire management.
<i>Leipoa ocellata</i>	i, ii, iii, vii, ix	Habitat retention through reserves or on other State lands or on private lands. Feral predator control. Fire management.
<i>Pezoporus occidentalis</i>	i, ii, iii, vii, ix	Habitat retention through reserves or on other State lands or on private lands. Feral predator control. Fire management.
<i>Macrotis lagotis</i>	i, ii, iii, vii, x, ix	Habitat retention through reserves or on other State lands or on private lands. Feral predator control. Translocation from secure populations. Fire management.
<i>Notoryctes typhlops</i>	i, ii, iii, vii, ix	Habitat retention through reserves or on other State lands or on private lands. Feral predator control. Fire management.
<i>Dasyercus cristicauda</i>	i, ii, iii, vii, ix	Habitat retention through reserves or on other State lands or on private lands. Feral predator control. Fire management.
<i>Petrogale lateralis</i>	i, ii, iii, vii, x, ix	Habitat retention through reserves or on other State lands or on private lands. Feral predator control. Translocation from secure populations. Fire management.
<i>Egernia kintorei</i>	i, ii, iii, vii, ix	Habitat retention through reserves or on other State lands or on private lands. Feral predator control. Fire management.
<i>Aspidites ramsayi</i>	i, ii, iii, vii, ix	Habitat retention through reserves or on other State lands or on private lands, Feral predator control. Fire management.

¹Appendix B, key h.

Northern Territory:

Species	Recovery Actions ¹	Recovery Descriptions
<i>Trichosurus vulpecula</i>	v, vii, ix	Fencing is possibly useful in some areas to exclude stock, in order to protect habitat. Feral animal control include control of foxes, cats, camels and donkeys. Fire management including reduction in incidence of extensive hot fires.

¹Appendix B, key h.

Ecosystems

Western Australia:

There are no ecosystems at risk listed for CR1.

Northern Territory:

No information supplied.

The subregional priority for off park conservation is (ii) (see Appendix C, rank 6), indicating that significant off park effort is needed, resource constraints, and limited community capacity exist.

Northern Territory:

No information supplied.

Conservation actions as an integral part of NRM

Existing NRM actions

Western Australia:

Industry Codes of Practice

Northern Territory:

Threat Abatement Planning: Some regional fire management, monitoring and control through regional offices of Bushfires Council.

Existing ecosystem recovery plans

Western Australia:

There are no ecosystems at risk listed for CR1.

Northern Territory:

No information supplied.

Appropriate recovery actions

Western Australia:

There are no ecosystems at risk listed for CR1.

Northern Territory:

No information supplied.

Subregion priority for off reserve conservation

Western Australia:

Feasible opportunities for NRM

Western Australia:

Threat Abatement Planning as Part of NRM: e.g. Vegetation and threatened species management plans, pest management, and fire management plans.

Capacity Building Required with Community, Landholders, Industry and Institutions: Particularly developing relationships with Aboriginal communities.

Northern Territory:

Capacity Building Required with Community, Landholders, Industry and Institutions: There is a need to expand resources to, and capability of, Aboriginal landowners for conservation management.

Threat Abatement Planning: There is scope for greater capacity for broad-scale management of fire, ferals, and weeds.

Impediments or constraints to opportunities

Western Australia:

Developing association with Aboriginal communities is essential. Conservation Through Reserves could be limited through mining leases and tenements, although this is not currently a major factor. There is a need to increase awareness of conservation values through education of various industry (mining) and the public in general. Limited financial resources are also a major constraint.

Northern Territory:

No information supplied.

Subregions where specific NRM actions are a priority to pursue

The NRM priority for CR1 (ii) (see Appendix C, rank 7), indicating that there are significant constraints to implement NRM, primarily due to the subregions

Source

References cited

No.	Author	Date	Title	Publication Details	Pub. Type
231	Department of Conservation and Land Management	(1994b).	Goldfields Region Management Plan 1994-2004. Management Plan No. 27.	Department of Conservation and Land Management.	R
181	Cogger, H., Cameron, E., Sadler, R. and Egger, P.	(1993).	The Action Plan for Australian Reptiles.	Australian Nature Conservation Agency, Canberra.	R
298	Garnett, S.T. and Crowley, G.M.	(2000).	The Action Plan for Australian Birds.	Environment Australia, Canberra.	R
483	Maxwell, S., Burbidge, A.A. and Morris, K. (eds).	(1996).	The 1996 Action Plan for Australian Marsupials and Monotremes. Wildlife Australia Endangered Species Program Project Number 50.	Environment Australia, Canberra.	R
484	McAlpin, S.	(2001).	A Recovery Plan for the Great Desert Skink (<i>Ergernia kintorei</i>) 2001-2011.	Arid lands Environment Centre.	R
090	Benshemesh, J.	(2000).	National Recovery Plan for Malleefowl.	Department of Environment and Heritage, South Australia.	R
778	Blyth, J.	(1996).	Night parrot (<i>Pezoporus occidentalis</i>) Interim Recovery Plan for Western Australia 1996 to 1998 (IRP No 4)	Department of Conservation and Land Management, Perth.	O
717	Bellchambers, K. and Johnson, K.A.	(1991).	The Recovery Plan for the Greater Bilby <i>Macrotis lagotis</i>	Endangered Species Programme and the Conservation Commission	R

isolation and resource requirements to implement NRM in both Western Australia and the Northern Territory.

Data gaps

Gaps in data needed for the identification of biodiversity values and management responses

Western Australia:

Vegetation and Regional Ecosystem Mapping: There has been no systematic regional survey on flora or fauna.

Systematic Fauna Survey: Fauna survey data is confined to vertebrates and is sparse, and mostly site specific.

Floristic Data: There are few data on habitat requirements of virtually all invertebrate species, most ephemeral plants, persisting CWR mammals, and uncommon vertebrate and plant species.

Ecological and Life History Data: No quantitative data present on the affect of exotic predators/herbivores, weed invasion, fire, mineral extraction or other threatening processes.

Other Priority Data Gaps:

- Ethnoecological research in relation to flora and fauna is of a high priority for future work.

Northern Territory:

Other Priority Data Gaps:

- Monitoring to assess trends and responses to landscape-wide disturbance

Ecological and Life History Data

Systematic Fauna Survey: Survey information required.

Vegetation and Regional Ecosystem Mapping: Survey information required.

				of the Northern Territory, Alice Springs	
546	Pearson, D.J.	(1992).	Past and present distribution and abundance of the Black-Footed Rock Wallaby in the Warburton region of Western Australia.	Wildlife Research 19: 605-622.	J

R = Report; J = Journal article; O = Other.

Other relevant publications

See reference numbers 053, 061, 075, 081, 086, 104, 105, 115, 116, 119, 131, 268, 321, 420, 486, 497, 517,

545, 548, 607, 627, 628, 638, 685 and 686 in Appendix A.