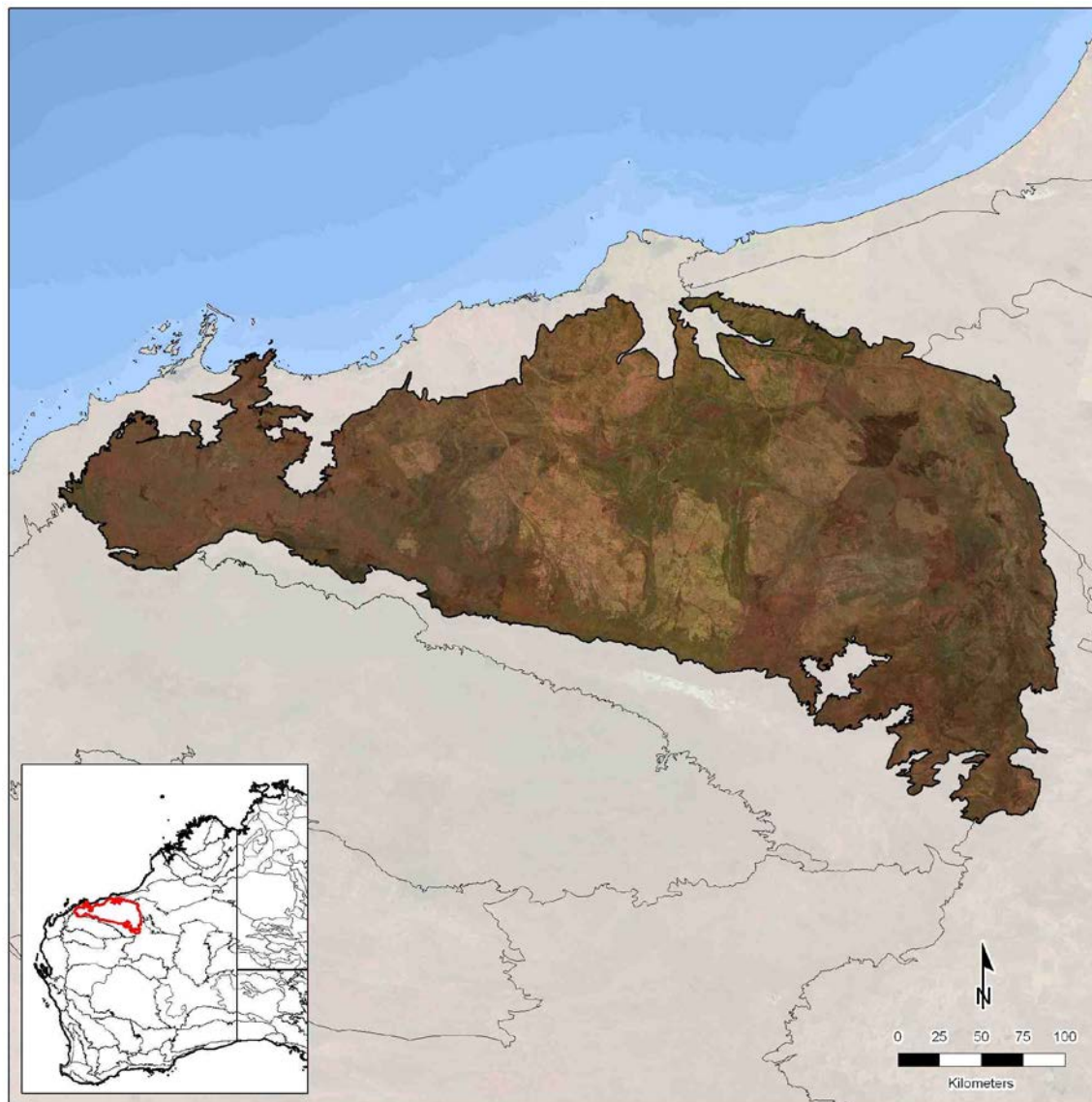


## Pilbara 1 Sub-region



*Statistics and maps produced by GIS Branch, Department of Parks and Wildlife (2014)*

Information on the methods used to generate the statistics is available [here](#).

Note: the analysis was undertaken in 2012 under the auspices of the Department of Environment and Conservation. Therefore the acronym of “DEC” is used in this document.

## PROFILE OF SUB-REGION

### Total area of sub-region (ha)

Size of sub-region in WA (ha)	Percentage of WA covered by sub-region (%)	Percentage of sub-region within WA (%)	Percentage of sub-region covered by intact habitat* (%)	Percentage of sub-region within DEC-managed conservation reserves (IUCN Ia - IV) (%)
8,374,728	3.31	100	99.84	3.95

\*Intact habitat includes remnant vegetation and additional intact habitats (wetlands) not mapped in the remnant vegetation dataset.

Please see the GIS Branch intranet site for the latest annual statistics in the following report:

- [DPaW-Managed and Other IUCN Terrestrial Lands by IBRA Sub-Regions Report](#). Statistic: Percentage of sub-region within DEC-managed conservation reserves (IUCN Ia – IV).

## Remnant vegetation

		Extent of remnant vegetation		Extent of additional intact habitats (wetlands) not mapped in the remnant vegetation dataset		Total extent	
		(ha)	(%)	(ha)	(%)	(ha)	(%)
Native vegetation on DEC-managed lands	Conservation reserves (IUCN Ia - IV)	330,866	3.95	0	0.00	330,866	3.95
	DEC-managed lands proposed for conservation	216,634	2.59	0	0.00	216,634	2.59
	Conservation reserves (IUCN V & VI)	0	0.00	0	0.00	0	0.00
	Other DEC-managed lands	0	0.00	0	0.00	0	0.00
Native vegetation on other public lands		2,362,559	28.21	12	0.00	2,362,571	28.21
Native vegetation on leasehold lands		5,439,509	64.95	20	0.00	5,439,529	64.95
Native vegetation on freehold lands		11,861	0.14	0	0.00	11,861	0.14
Native vegetation with no tenure category assigned		8	0.00	0	0.00	8	0.00
Cleared areas		-	-	-	-	13,235	0.16
Unmapped islands*		-	-	-	-	25	0.00
<b>Total</b>		<b>8,361,437</b>	<b>100</b>	<b>32</b>	<b>0</b>	<b>8,374,729</b>	<b>100</b>

NB: some rounding errors may occur.

\* DEC regions may advise if these are to be included under additional intact habitat.

Please see the GIS Branch intranet site for the latest annual statistics in the following report:

- [Statewide Vegetation Statistics \(Full report\)](#). Statistic: Extent of Remnant Vegetation including on DEC-managed lands.

## Tenure

			Extent (ha)			Extent (%)			Number of reserves		
			2002	2012	Change	2002	2012	Change	2002	2012	Change
DEC-managed lands	Conservation reserves (IUCN Ia - IV)		330,816	330,866	50	3.95	3.95	0.00	2	2	0
	DEC-managed lands proposed for conservation		292,806	216,634	-76,172	3.50	2.59	-0.91	1	1	0
	Conservation reserves (IUCN V & VI)		0	0	0	0.00	0.00	0.00	0	0	0
	State forest / timber reserves		0	0	0	0.00	0.00	0.00	0	0	0
	Other DEC-managed lands		0	0	0	0.00	0.00	0.00	0	0	0
Other lands	Unallocated crown lands		1,193,767	1,195,057	1,290	14.25	14.27	0.02	-	-	-
	Other crown reserves		1,174,399	1,163,664	-10,735	14.02	13.89	-0.13	-	-	-
		Crown reserves vested in Aboriginal Lands Trust*	-	484,228	-	-	5.78	-	-	-	-
	Pastoral leases^		5,326,008	5,397,618	71,610	63.60	64.45	0.85	-	-	-
		Pastoral leases held by Aboriginal Lands Trust*	-	86,395	-	-	1.03	-	-	-	-
	Other leasehold lands^		0	50,532	50,532	0.00	0.60	0.60	-	-	-
		General purpose leases held by Aboriginal Lands Trust*	-	5,617	-	-	0.07	-	-	-	-
	Freehold lands		47,955	12,063	-35,892	0.57	0.14	-0.43	-	-	-
		Freehold lands held by Aboriginal Lands Trust*	-	0	-	-	0.00	-	-	-	-
	Commonwealth lands (defence)		0	0	0	0.00	0.00	0.00	-	-	-
	Other public lands (roads and water bodies)		197	8,288	8,091	0.00	0.10	0.10	-	-	-
	No tenure category assigned†		8,782	8	-8,774	0.10	0.00	-0.10	-	-	-
<b>Total</b>			<b>8,374,730</b>	<b>8,374,730</b>	<b>-</b>	<b>100</b>	<b>100</b>	<b>-</b>	<b>3</b>	<b>3</b>	<b>-</b>

NB: some rounding errors may occur.

\* Aboriginal Lands Trust data are only available for 2012. The extents shown are a subset of the category they sit below. These values should therefore not be summed since they are not mutually exclusive.

^ In 2002, there is not data to differentiate other leasehold lands. Therefore it is likely that the total extent shown for pastoral leases in 2002 includes both pastoral leases and other leasehold lands.

† The attributing of the state cadastral database has improved considerably over time. Therefore much of the land which had no tenure category assigned in 2002 will have been attributed and consequently distributed between other reporting categories in 2012. Much of this is expected to be distributed to the "Other public lands (roads and water bodies)" category, as road casings are progressively digitised and attributed, though increases in other categories is also possible as attributing improves.

Please see the GIS Branch intranet site for the latest annual statistics in the following report:

- [DPaW-Managed and Other IUCN Terrestrial Lands by IBRA Sub-Regions Report](#). Statistic: DEC-managed lands (extent only).

## Mining and petroleum

		IBRA sub-region					DEC-managed conservation reserves (IUCN Ia - IV)			DEC-managed lands proposed for conservation			DEC-managed conservation reserves (IUCN V & VI)			Other DEC-managed lands		
		2001/02	2001/02 % of IBRA sub-region	2012	2012 % of IBRA sub-region	Change^	2001/02	2012	Change	2001/02	2012	Change	2001/02	2012	Change	2001/02	2012	Change
Number of mining (live) tenements	Prospecting	167	N/A	253	N/A	86	0	0	0	3	3	0	0	0	0	0	0	0
	Exploration	170	N/A	753	N/A	583	4	11	7	5	21	16	0	0	0	0	0	0
	Mining	307	N/A	419	N/A	112	0	0	0	3	3	0	0	0	0	0	0	0
	Other	1	N/A	1	N/A	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of petroleum (active) titles	Exploration	0	N/A	0	N/A	0	0	0	0	0	0	0	0	0	0	0	0	0
	Production	0	N/A	0	N/A	0	0	0	0	0	0	0	0	0	0	0	0	0
Land area (ha)	Mining (live) tenements	856,384	10.23	5,208,290	62.19	51.96	4,691	6,440	1,749	30,975	144,493	113,518	0	0	0	0	0	0
	Petroleum (active) titles	0	0.00	0	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0
	Mining (live) tenements and petroleum (active) titles*	856,384	10.23	5,208,290	62.19	51.96	4,691	6,440	1,749	30,975	144,493	113,518	0	0	0	0	0	0

\*An area of land can have over it both a mining tenement and petroleum title. The combined total represents the land area which is covered by a mining tenement or petroleum title or both.

^For the Land Area "Change" is calculated as the difference in % coverage at the IBRA sub-region scale of the two year dates.

## Current dominant land uses

	Extent (ha)			Extent (%)		
	1996/97	2005/06	Change	1996/97	2005/06	Change
Pastoralism	5,637,288	5,577,430	-59,858	67.31	66.60	-0.71
Miscellaneous (non-intensive use)*	1,865,163	1,920,677	55,514	22.27	22.93	0.66
Traditional indigenous use	478,319	486,548	8,229	5.71	5.81	0.10
Conservation	350,285	349,336	-949	4.18	4.17	-0.01
Water (not classified)	27,313	24,855	-2,458	0.33	0.30	-0.03
Native forestry	13,777	11,711	-2,066	0.16	0.14	-0.02
Water (man-made/man modified)	0	1,500	1,500	0.00	0.02	0.02
Mining	1,395	1,200	-195	0.02	0.01	-0.01
Urban	115	195	80	0.00	0.00	0.00
Plantation forestry	0	0	0	0.00	0.00	0.00
Agriculture (intensive use)	0	0	0	0.00	0.00	0.00
No data	1,073	1,278	205	0.01	0.02	0.01
<b>Total</b>	<b>8,374,728</b>	<b>8,374,730</b>	<b>-</b>	<b>100</b>	<b>100</b>	<b>-</b>

NB: some rounding errors may occur.

\* Largely unmodified natural systems under various land uses. See detailed descriptions.

See the methods document available [here](#) for definitions of the categories.

## Linear infrastructure

	Length (km)	Area of reporting region (ha)	Length per hectare (km/ha)
Roads (sub-region)	10,090	8,374,728	0.0012
Roads (Strategic Survey Roads in national parks, conservation parks and nature reserves)	56	330,866	0.0002
Railways (sub-region)	834	8,374,728	0.0001

## Complementary conservation initiatives to the formal conservation reserve system

	Extent (ha)			Extent (%)		
	2002	2012	Change	2002	2012	Change
Private conservation organisations' land	0	0	0	0.00	0.00	0.00
Nature Conservation covenants	0	0	0	0.00	0.00	0.00
Land for Wildlife properties	0	0	0	0.00	0.00	0.00
Combined total*	0	0	0	0.00	0.00	0.00

\* These conservation initiatives are not mutually exclusive. For example freehold land owned by a private conservation organisation may have a formal nature conservation covenant on its title. Therefore its area will be included in both category totals. The combined total represents the total extent of land which is covered by one or more initiative.

Please see the GIS Branch intranet site for the latest annual statistics in the following report:

- [\*DPaW-Managed and Other IUCN Terrestrial Lands by IBRA Sub-Regions Report\*](#). Statistic: Nature conservation covenants.

## Indigenous

		Extent (ha)			Extent (%)		
		2002	2012	Change	2002	2012	Change
Native Title determinations	On DEC-managed lands	0	280	280	0.00	0.00	0.00
	On all other lands	51,996	787,468	735,472	0.62	9.40	8.78
Commonwealth Indigenous Protected Areas		0	0	0	0.00	0.00	0.00

Please see the GIS Branch intranet site for the latest annual statistics in the following report:

- [\*DPaW-Managed and Other IUCN Terrestrial Lands by IBRA Sub-Regions Report\*](#). Statistic: Commonwealth Indigenous Protected Areas.

## Climate projection 2030, 2050 and 2070

### *Projected climate change scenarios (OzClim)*

ANNUAL	Projected (Average)			Change from Base Climate* (Average)			Change from Base Climate* (range)		
	2030	2050	2070	2030	2050	2070	2030	2050	2070
	High impact scenario								
Minimum Temperature (degrees C)	20.76	22.61	24.77	1.71	3.55	5.71	1.43 - 1.95	2.98 - 4.06	4.79 - 6.52
Maximum Temperature (degrees C)	35.58	37.67	40.12	1.93	4.02	6.47	1.56 - 2.21	3.25 - 4.60	5.22 - 7.39
Precipitation (mm)	315.06	277.71	249.60	-56.03	-93.38	-121.49	-79.60 - -39.50	-137.80 - -65.50	-185.60 - -80.90
	Medium impact scenario								
Minimum Temperature (degrees C)	20.42	21.37	22.29	1.36	2.31	3.23	1.14 - 1.55	1.94 - 2.64	2.71 - 3.69
Maximum Temperature (degrees C)	35.19	36.27	37.31	1.54	2.62	3.66	1.24 - 1.76	2.10 - 2.99	2.96 - 4.19
Precipitation (mm)	324.21	300.97	283.06	-46.89	-70.12	-88.04	-66.10 - -33.00	-101.00 - -49.70	-129.20 - -62.00

\* Base Climate is 1990

The Global Climate Change Model (GCM) used in both scenarios is CSIRO Mk3.5 (CSIRO: CSIRO Mk3.5 on OzClim).

For more information see <https://wiki.csiro.au/confluence/display/ozclim/Science#Science-CSIRO35>

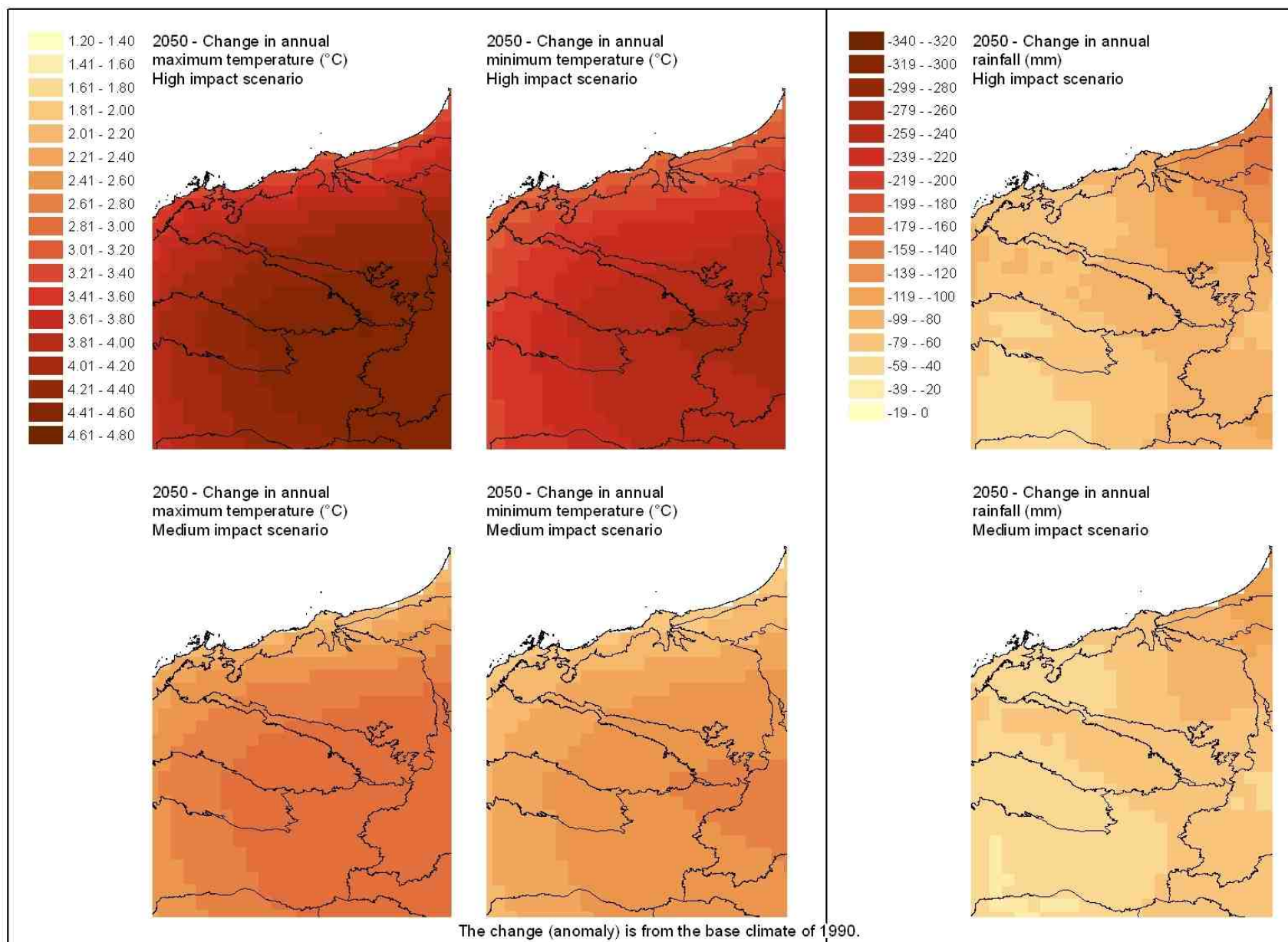
#### Medium Impact Scenario:

- *Emission Scenario*: Medium CO<sub>2</sub> emissions, peaking around 2030 (SRES Marker Scenario A1B)
- *Climate Sensitivity (Rate of Global Warming)*: Moderate rate of global warming corresponds to a global warming of 2.6°C for a doubling of CO<sub>2</sub> from 280 ppm to 560 ppm.

#### High Impact Scenario:

- *Emission Scenario*: High CO<sub>2</sub> emissions, increasing throughout the 21st century (SRES Marker Scenario A1FI)
- *Climate Sensitivity (Rate of Global Warming)*: High rate of global warming corresponds to a global warming of 4.2°C for a doubling of CO<sub>2</sub> from 280 ppm to 560 ppm.





# BIODIVERSITY ASSETS

## Native vegetation

Please see the GIS Branch intranet site for the latest annual statistics in the following report:

- [Statewide Vegetation Statistics \(Full report\)](#). Statistic: All statistics except 'Currently remaining on other lands'.

Vegetation Association descriptions can be viewed [here](#) (worksheet "Veg Assoc Descriptions").

### *Dominant vegetation associations*

Dominant vegetation associations are those which together occupied 85% of the sub-region at the time of European settlement (when sorted from largest to smallest).

Beard's veg assoc no.	Percentage of veg assoc within sub- region (%)	Pre- European extent (ha)	Current extent (ha)	Percentage remaining (%)	Currently remaining on DEC-managed lands (ha)				Currently remaining on other lands (ha)		
					IUCN Ia-IV	Proposed for conservation	IUCN V-VI	Non-IUCN	Public lands	Leasehold lands	Freehold lands
<b>93</b>	96.59	2,940,348	2,936,731	99.88	13,429	46,088	0	0	766,820	2,104,292	6,099
<b>173</b>	99.48	1,744,030	1,739,190	99.72	131,211	107,484	0	0	495,493	1,003,440	1,557
<b>587</b>	98.32	570,997	570,965	99.99	121,285	0	0	0	257,080	192,507	93
<b>82</b>	14.06	360,667	360,323	99.90	0	0	0	0	167,139	193,085	98
<b>171</b>	99.81	331,307	330,026	99.61	0	36,091	0	0	94,761	198,808	367
<b>198</b>	99.98	319,954	319,954	100.00	0	0	0	0	20,945	299,009	0
<b>192</b>	99.99	280,675	280,675	100.00	0	25,538	0	0	162,516	92,581	40
<b>175</b>	43.83	230,988	230,952	99.98	22,183	0	0	0	26,424	182,188	157
<b>177</b>	100.00	169,446	169,141	99.82	0	1,433	0	0	21,704	145,573	431
<b>190</b>	100.00	169,200	169,051	99.91	0	0	0	0	47,441	121,593	17
<b>152</b>	44.09	135,105	135,004	99.93	5,253	0	0	0	46,445	83,261	45

### *Unique vegetation associations*

Unique vegetation associations are those which were largely restricted to only one sub-region at the time of European settlement (i.e.  $\geq 85\%$  of the vegetation association falls within one sub-region).

Beard's veg assoc no.	Percentage of veg assoc within sub- region (%)	Pre- European extent (ha)	Current extent (ha)	Percentage remaining (%)	Currently remaining on DEC-managed lands (ha)				Currently remaining on other lands (ha)		
					IUCN Ia-IV	Proposed for conservation	IUCN V-VI	Non-IUCN	Public lands	Leasehold lands	Freehold lands
177	100.00	169,446	169,141	99.82	0	1,433	0	0	21,704	145,573	431
190	100.00	169,200	169,051	99.91	0	0	0	0	47,441	121,593	17
626	100.00	117,724	117,198	99.55	18,348	0	0	0	48,228	50,583	39
179	100.00	75,309	75,309	100.00	0	0	0	0	4,708	70,601	0
192	99.99	280,675	280,675	100.00	0	25,538	0	0	162,516	92,581	40
198	99.98	319,954	319,954	100.00	0	0	0	0	20,945	299,009	0
171	99.81	331,307	330,026	99.61	0	36,091	0	0	94,761	198,808	367
173	99.48	1,744,030	1,739,190	99.72	131,211	107,484	0	0	495,493	1,003,440	1,557
196	98.58	86,158	86,158	100.00	1,174	0	0	0	7,650	77,334	0
607	98.54	119,022	118,833	99.84	15,509	0	0	0	56,626	46,682	16
587	98.32	570,997	570,965	99.99	121,285	0	0	0	257,080	192,507	93
93	96.59	2,940,348	2,936,731	99.88	13,429	46,088	0	0	766,820	2,104,292	6,099
649	95.28	38,457	38,271	99.52	0	0	0	0	445	37,185	640

### *Rare vegetation associations*

Rare vegetation associations are those which together occupied  $\leq 1\%$  of the state at the time of European settlement. The table below lists any rare vegetation associations which fall within this sub-region.

Beard's veg assoc no.	Percentage of veg assoc within sub- region (%)	Pre- European extent (ha)	Current extent (ha)	Percentage remaining (%)	Currently remaining on DEC-managed lands (ha)				Currently remaining on other lands (ha)		
					IUCN Ia-IV	Proposed for conservation	IUCN V-VI	Non-IUCN	Public lands	Leasehold lands	Freehold lands
640	77.12	13,500	13,500	100.00	0	0	0	0	70	13,430	0
188	53.50	13,718	13,718	100.00	0	0	0	0	0	13,718	0