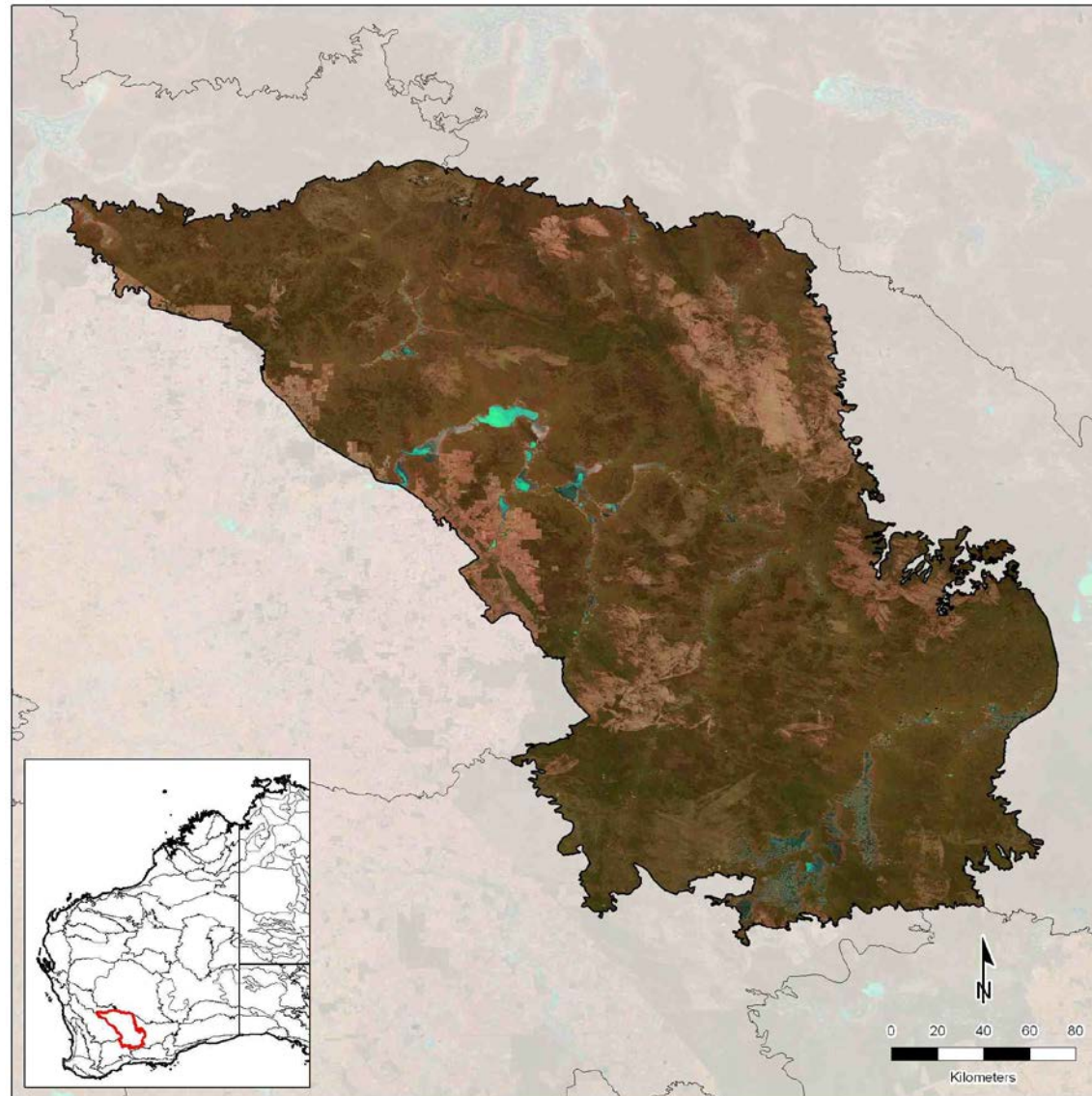


Coolgardie 2 Sub-region



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) (%)
6,010,838	2.38	100	96.81	16.23

*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)	974,247	16.21	959	0.02	975,206	16.22
	DEC-managed lands proposed for conservation	372,946	6.20	0	0.00	372,946	6.20
	Conservation reserves (IUCN V & VI)	1,458	0.02	0	0.00	1,458	0.02
	Other DEC-managed lands	0	0.00	0	0.00	0	0.00
Native vegetation on other public lands		4,000,788	66.56	30,897	0.51	4,031,685	67.07
Native vegetation on leasehold lands		382,922	6.37	11,865	0.20	394,787	6.57
Native vegetation on freehold lands		41,472	0.69	1,585	0.03	43,057	0.72
Native vegetation with no tenure category assigned		7	0.00	0	0.00	7	0.00
Cleared areas		-	-	-	-	191,687	3.19
Total		5,773,840	96	45,306	1	6,010,833	100

NB: some rounding errors may occur.

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)		829,939	975,313	145,374	13.81	16.23	2.42	24	27	3
	DEC-managed lands proposed for conservation		28,049	373,257	345,208	0.47	6.21	5.74	2	4	2
	Conservation reserves (IUCN V & VI)		0	1,458	1,458	0.00	0.02	0.02	0	1	1
	State forest / timber reserves		0	0	0	0.00	0.00	0.00	0	0	0
	Other DEC-managed lands		1,459	0	-1,459	0.02	0.00	-0.02	1	0	-1
Other lands	Unallocated crown lands		4,247,082	3,931,042	-316,040	70.66	65.40	-5.26	-	-	-
	Other crown reserves		98,484	94,272	-4,212	1.64	1.57	-0.07	-	-	-
		Crown reserves vested in Aboriginal Lands Trust*	-	0	-	-	0.00	-	-	-	-
	Pastoral leases^		557,193	387,540	-169,653	9.27	6.45	-2.82	-	-	-
		Pastoral leases held by Aboriginal Lands Trust*	-	0	-	-	0.00	-	-	-	-
	Other leasehold lands^		0	10,360	10,360	0.00	0.17	0.17	-	-	-
		General purpose leases held by Aboriginal Lands Trust*	-	0	-	-	0.00	-	-	-	-
	Freehold lands		233,624	222,847	-10,777	3.89	3.71	-0.18	-	-	-
		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)		507	14,724	14,217	0.01	0.24	0.23	-	-	-
	No tenure category assigned†		14,495	20	-14,475	0.24	0.00	-0.24	-	-	-
Total			6,010,832	6,010,833	-	100	100	-	27	32	-

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	187	N/A	378	N/A	191	3	25	22	9	39	30	0	0	0	0	0	0
	Exploration	250	N/A	635	N/A	385	21	87	66	22	100	78	1	3	2	0	0	0
	Mining	331	N/A	372	N/A	41	6	6	0	12	29	17	0	0	0	0	0	0
	Other	0	N/A	0	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	459,540	7.65	2,159,400	35.93	28.28	26,927	225,985	199,058	22,225	173,405	151,180	99	1,200	1,101	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*	459,540	7.65	2,159,400	35.93	28.28	26,927	225,985	199,058	22,225	173,405	151,180	99	1,200	1,101	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
Miscellaneous (non-intensive use)*	4,013,247	3,975,414	-37,833	66.77	66.14	-0.63
Conservation	844,879	1,130,978	286,099	14.06	18.82	4.76
Pastoralism	863,555	607,586	-255,969	14.37	10.11	-4.26
Agriculture (intensive use)	172,760	224,885	52,125	2.87	3.74	0.87
Native forestry	86,694	43,000	-43,694	1.44	0.72	-0.72
Water (not classified)	28,221	27,070	-1,151	0.47	0.45	-0.02
Mining	1,476	1,600	124	0.02	0.03	0.01
Plantation forestry	0	300	300	0.00	0.00	0.00
Traditional indigenous use	0	0	0	0.00	0.00	0.00
Urban	0	0	0	0.00	0.00	0.00
Water (man-made/man modified)	0	0	0	0.00	0.00	0.00
No data	0	0	0	0.00	0.00	0.00
Total	6,010,832	6,010,833	-	100	100	-

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)	8,815	6,010,838	0.0015
Roads (Strategic Survey Roads in national parks, conservation parks and nature reserves)	464	975,313	0.0005
Railways (sub-region)	206	6,010,838	< 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	21	21	0.00	0.00	0.00
Land for Wildlife properties	698	45,739	45,041	0.01	0.76	0.75
Combined total*	698	45,760	45,062	0.01	0.76	0.75

* 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	0	0	0.00	0.00	0.00
	On all other lands	0	0	0	0.00	0.00	0.00
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)	12.61	14.25	16.18	1.53	3.17	5.10	1.30 - 1.68	2.71 - 3.49	4.36 - 5.61
Maximum Temperature (degrees C)	26.96	28.87	31.11	1.77	3.68	5.91	1.49 - 1.96	3.10 - 4.07	4.98 - 6.55
Precipitation (mm)	256.01	217.90	185.48	-48.40	-86.50	-118.93	-58.80 - -34.50	-101.80 - -61.90	-141.00 - -84.20
	Medium impact scenario								
Minimum Temperature (degrees C)	12.30	13.15	13.97	1.21	2.07	2.89	1.04 - 1.33	1.76 - 2.27	2.47 - 3.17
Maximum Temperature (degrees C)	26.60	27.59	28.54	1.41	2.39	3.35	1.19 - 1.56	2.02 - 2.65	2.82 - 3.71
Precipitation (mm)	264.66	242.17	223.65	-39.75	-62.23	-80.75	-48.70 - -28.30	-74.50 - -44.60	-95.10 - -57.90

* Base Climate is 1990

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

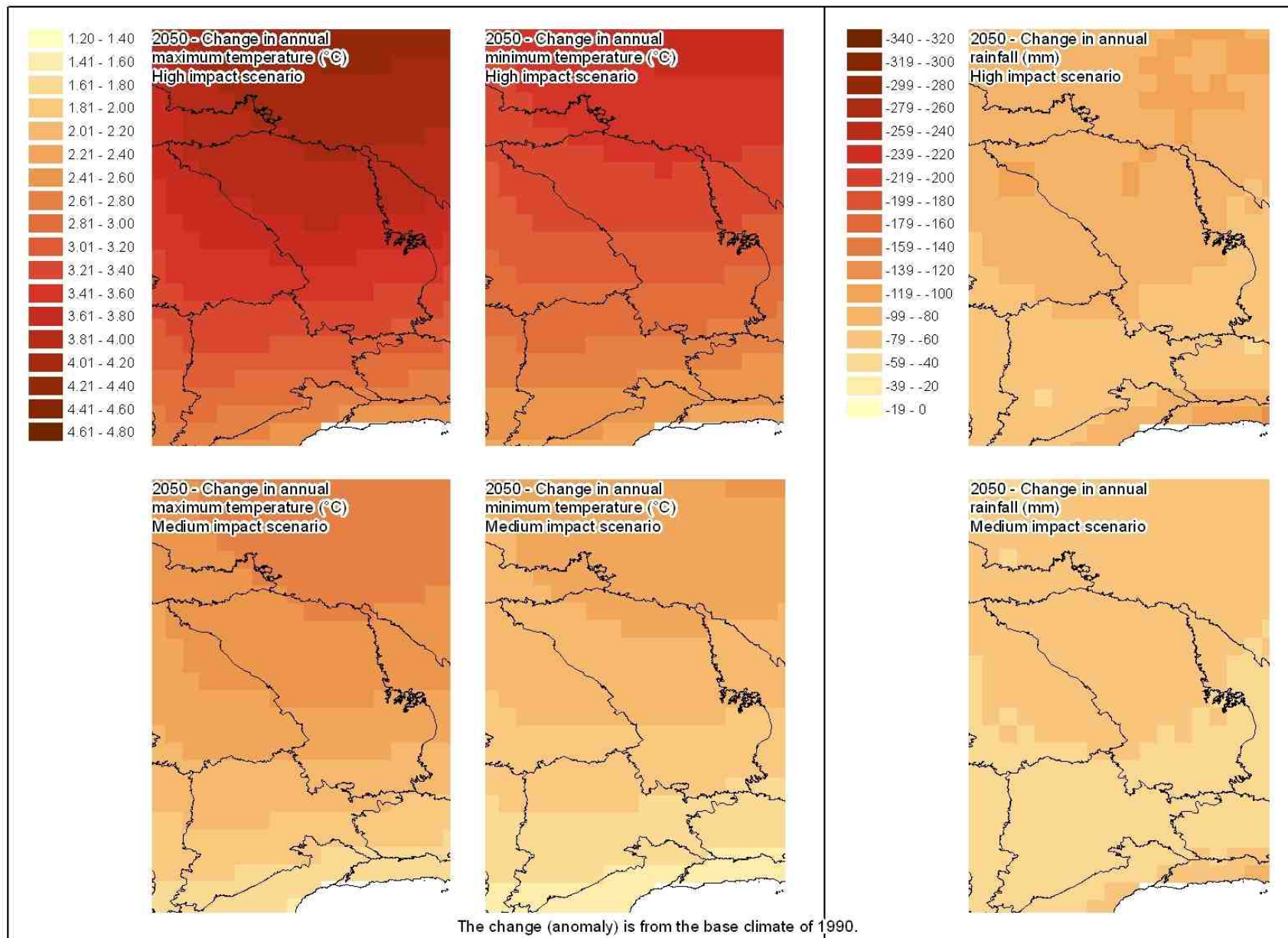
For more information see <https://wiki.csiro.au/confluence/display/ozclim/Science#Science-CSIRO35>

Medium Impact Scenario:

- *Emission Scenario:* Medium CO₂ 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 CO₂ from 280 ppm to 560 ppm.

High Impact Scenario:

- *Emission Scenario:* High CO₂ 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 CO₂ 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
1413	56.74	953,238	934,827	98.07	178,211	5,518	1,041	0	726,994	16,979	6,083
141	76.21	883,086	858,525	97.22	137,815	238,993	0	0	333,670	145,168	2,875
435	73.61	732,096	726,352	99.22	129,816	59,905	0	0	474,506	57,456	4,670
522	67.67	480,232	480,206	99.99	29,593	5,154	306	0	441,095	3,616	442
511	66.28	464,424	435,177	93.70	81,067	3,086	0	0	313,460	31,943	5,621
437	61.91	312,851	312,826	99.99	53,874	4,905	0	0	245,663	8,384	0
936	39.48	275,894	275,877	99.99	2,055	323	56	0	271,256	2,125	61
1148	97.91	254,932	252,776	99.15	42,791	878	0	0	206,847	435	1,823
125	6.68	232,862	196,591	84.42	13,312	10,398	0	0	159,019	13,324	538
1068	72.14	193,988	104,804	54.03	14,154	0	0	0	72,467	6,367	11,813
1063	99.10	170,926	161,867	94.70	126,721	0	0	0	9,853	23,588	1,704
128	47.35	156,193	155,552	99.59	20,949	7,976	52	0	119,790	6,467	318

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
535	100.00	24,346	23,536	96.67	0	0	0	0	3,599	18,905	1,033
144	100.00	3,988	3,988	100.00	303	0	0	0	3,682	3	0
436	100.00	1,059	1,059	100.00	0	1,013	0	0	47	0	0
554	100.00	1,017	1,017	100.00	1,009	0	0	0	8	0	0
1071	100.00	762	762	100.00	263	401	0	0	99	0	0
1078	100.00	757	757	100.00	757	0	0	0	0	0	0
537	100.00	701	496	70.76	0	0	0	0	43	143	310
148	100.00	320	320	100.00	0	0	0	0	320	0	0
491	99.93	67,120	67,021	99.85	0	0	0	0	67,021	0	0
1063	99.10	170,926	161,867	94.70	126,721	0	0	0	9,853	23,588	1,704
1148	97.91	254,932	252,776	99.15	42,791	878	0	0	206,847	435	1,823
504	88.85	39,500	39,487	99.97	0	11,822	0	0	27,665	0	0
147	88.13	31,268	25,929	82.93	1,136	0	0	0	15,249	9,414	130
538	86.51	127,882	124,867	97.64	16,993	15,130	0	0	73,828	17,449	1,467

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
148	100.00	320	320	100.00	0	0	0	0	320	0	0
537	100.00	701	496	70.76	0	0	0	0	43	143	310
1078	100.00	757	757	100.00	757	0	0	0	0	0	0
1071	100.00	762	762	100.00	263	401	0	0	99	0	0
2009	11.60	819	819	100.00	0	0	0	0	819	0	0
554	100.00	1,017	1,017	100.00	1,009	0	0	0	8	0	0
436	100.00	1,059	1,059	100.00	0	1,013	0	0	47	0	0
536	15.23	2,007	1,463	72.89	0	0	0	0	1,203	0	260
507	35.00	3,292	3,292	100.00	0	0	0	0	3,292	0	0
144	100.00	3,988	3,988	100.00	303	0	0	0	3,682	3	0
314	70.20	5,224	4,903	93.86	1,084	0	0	0	4	3,815	0
1067	60.53	9,244	9,244	100.00	1,554	0	0	0	2,591	5,099	0
535	100.00	24,346	23,536	96.67	0	0	0	0	3,599	18,905	1,033