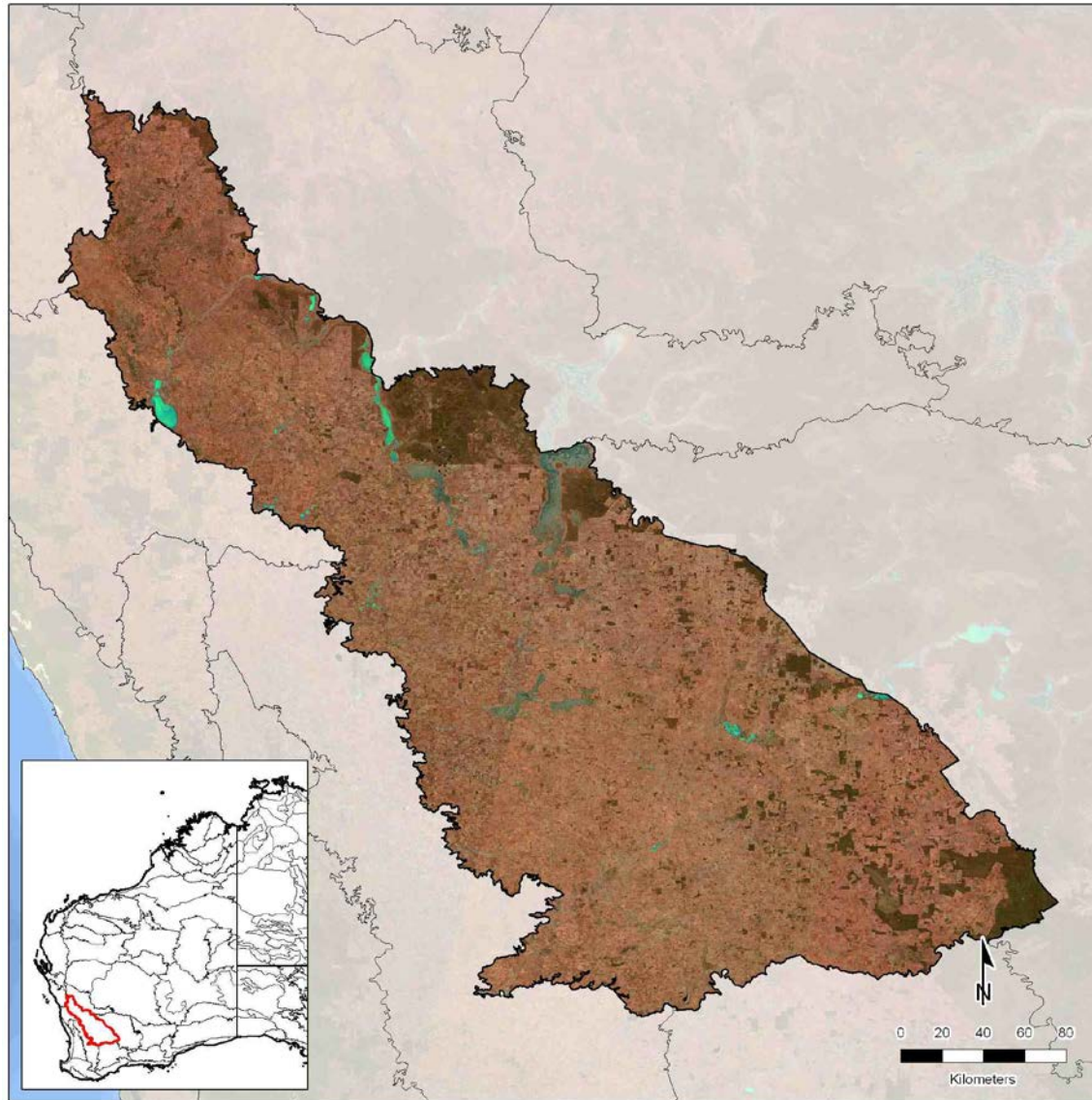


Avon Wheatbelt 1 Sub-region



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) (%)
6,524,176	2.58	100	24.19	1.88

*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)	89,938	1.38	28,284	0.43	118,222	1.81
	DEC-managed lands proposed for conservation	24,078	0.37	4,477	0.07	28,555	0.44
	Conservation reserves (IUCN V & VI)	80	0.00	0	0.00	80	0.00
	Other DEC-managed lands	10,719	0.16	368	0.01	11,087	0.17
Native vegetation on other public lands		350,822	5.38	116,166	1.78	466,988	7.16
Native vegetation on leasehold lands		257,415	3.95	9,486	0.15	266,901	4.09
Native vegetation on freehold lands		635,717	9.74	50,403	0.77	686,120	10.52
Native vegetation with no tenure category assigned		19	0.00	0	0.00	19	0.00
Cleared areas		-	-	-	-	4,946,208	75.81
Total		1,368,788	21	209,184	3	6,524,180	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)		106,810	122,917	16,107	1.64	1.88	0.24	250	268	18
	DEC-managed lands proposed for conservation		0	28,704	28,704	0.00	0.44	0.44	0	7	7
	Conservation reserves (IUCN V & VI)		0	128	128	0.00	0.00	0.00	0	5	5
	State forest / timber reserves		11,226	11,117	-109	0.17	0.17	0.00	1	1	0
	Other DEC-managed lands		111	5	-106	0.00	0.00	0.00	3	2	-1
Other lands	Unallocated crown lands		326,475	329,321	2,846	5.00	5.05	0.05	-	-	-
	Other crown reserves		117,257	113,383	-3,874	1.80	1.74	-0.06	-	-	-
		Crown reserves vested in Aboriginal Lands Trust*	-	906	-	-	0.01	-	-	-	-
	Pastoral leases^		274,821	254,942	-19,879	4.21	3.91	-0.30	-	-	-
		Pastoral leases held by Aboriginal Lands Trust*	-	0	-	-	0.00	-	-	-	-
	Other leasehold lands^		0	51,440	51,440	0.00	0.79	0.79	-	-	-
		General purpose leases held by Aboriginal Lands Trust*	-	0	-	-	0.00	-	-	-	-
	Freehold lands		5,569,271	5,514,811	-54,460	85.36	84.53	-0.83	-	-	-
		Freehold lands held by Aboriginal Lands Trust*	-	101	-	-	0.00	-	-	-	-
	Commonwealth lands (defence)		0	0	0	0.00	0.00	0.00	-	-	-
	Other public lands (roads and water bodies)		32,774	97,375	64,601	0.50	1.49	0.99	-	-	-
	No tenure category assigned†		85,435	36	-85,399	1.31	0.00	-1.31	-	-	-
Total			6,524,180	6,524,179	-	100	100	-	254	283	-

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	72	N/A	71	N/A	-1	2	1	-1	0	0	0	0	0	0	0	0	0
	Exploration	63	N/A	265	N/A	202	9	43	34	0	7	7	2	1	-1	0	8	8
	Mining	131	N/A	151	N/A	20	5	4	-1	2	1	-1	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	2	N/A	0	N/A	-2	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	222,141	3.40	1,664,897	25.52	22.12	9,602	21,504	11,902	168	8,703	8,535	27	1	-26	0	858	858
	Petroleum (active) titles	1,847	0.03	0	0.00	-0.03	0	0	0	0	0	0	0	0	0	0	0	0
	Mining (live) tenements and petroleum (active) titles*	222,532	3.41	1,664,897	25.52	22.11	9,602	21,504	11,902	168	8,703	8,535	27	1	-26	0	858	858

*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
Agriculture (intensive use)	3,452,407	5,112,726	1,660,319	52.92	78.37	25.45
Miscellaneous (non-intensive use)*	606,339	922,832	316,493	9.29	14.14	4.85
Conservation	219,099	237,016	17,917	3.36	3.63	0.27
Pastoralism	2,188,410	208,543	-1,979,867	33.54	3.20	-30.34
Water (not classified)	35,926	23,648	-12,278	0.55	0.36	-0.19
Native forestry	13,939	13,925	-14	0.21	0.21	0.00
Plantation forestry	0	3,600	3,600	0.00	0.06	0.06
Urban	7,100	990	-6,110	0.11	0.02	-0.09
Mining	960	900	-60	0.01	0.01	0.00
Traditional indigenous use	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	6,524,180	6,524,180	-	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)	31,614	6,524,176	0.0048
Roads (Strategic Survey Roads in national parks, conservation parks and nature reserves)	212	122,913	0.0017
Railways (sub-region)	1,275	6,524,176	0.0002

Complementary conservation initiatives to the formal conservation reserve system

	Extent (ha)			Extent (%)		
	2002	2012	Change	2002	2012	Change
Private conservation organisations' land	95,145	148,844	53,699	1.46	2.28	0.82
Nature Conservation covenants	394	8,104	7,710	0.01	0.12	0.11
Land for Wildlife properties	75,280	88,766	13,486	1.15	1.36	0.21
Combined total*	118,212	190,720	72,508	1.81	2.92	1.11

* 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	4,545	4,545	0.00	0.07	0.07

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)	13.10	14.68	16.53	1.46	3.04	4.89	1.26 - 1.60	2.63 - 3.33	4.23 - 5.35
Maximum Temperature (degrees C)	27.54	29.32	31.41	1.65	3.43	5.52	1.35 - 1.84	2.82 - 3.82	4.53 - 6.15
Precipitation (mm)	276.07	236.37	200.90	-47.30	-87.00	-122.47	-58.40 - -35.09	-108.70 - -64.60	-154.70 - -90.60
	Medium impact scenario								
Minimum Temperature (degrees C)	12.80	13.62	14.41	1.16	1.98	2.77	1.01 - 1.27	1.71 - 2.17	2.40 - 3.03
Maximum Temperature (degrees C)	27.20	28.12	29.01	1.31	2.23	3.13	1.08 - 1.46	1.83 - 2.49	2.57 - 3.48
Precipitation (mm)	284.78	261.91	242.50	-38.60	-61.46	-80.87	-47.60 - -28.60	-76.19 - -45.60	-100.80 - -60.00

* Base Climate is 1990

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

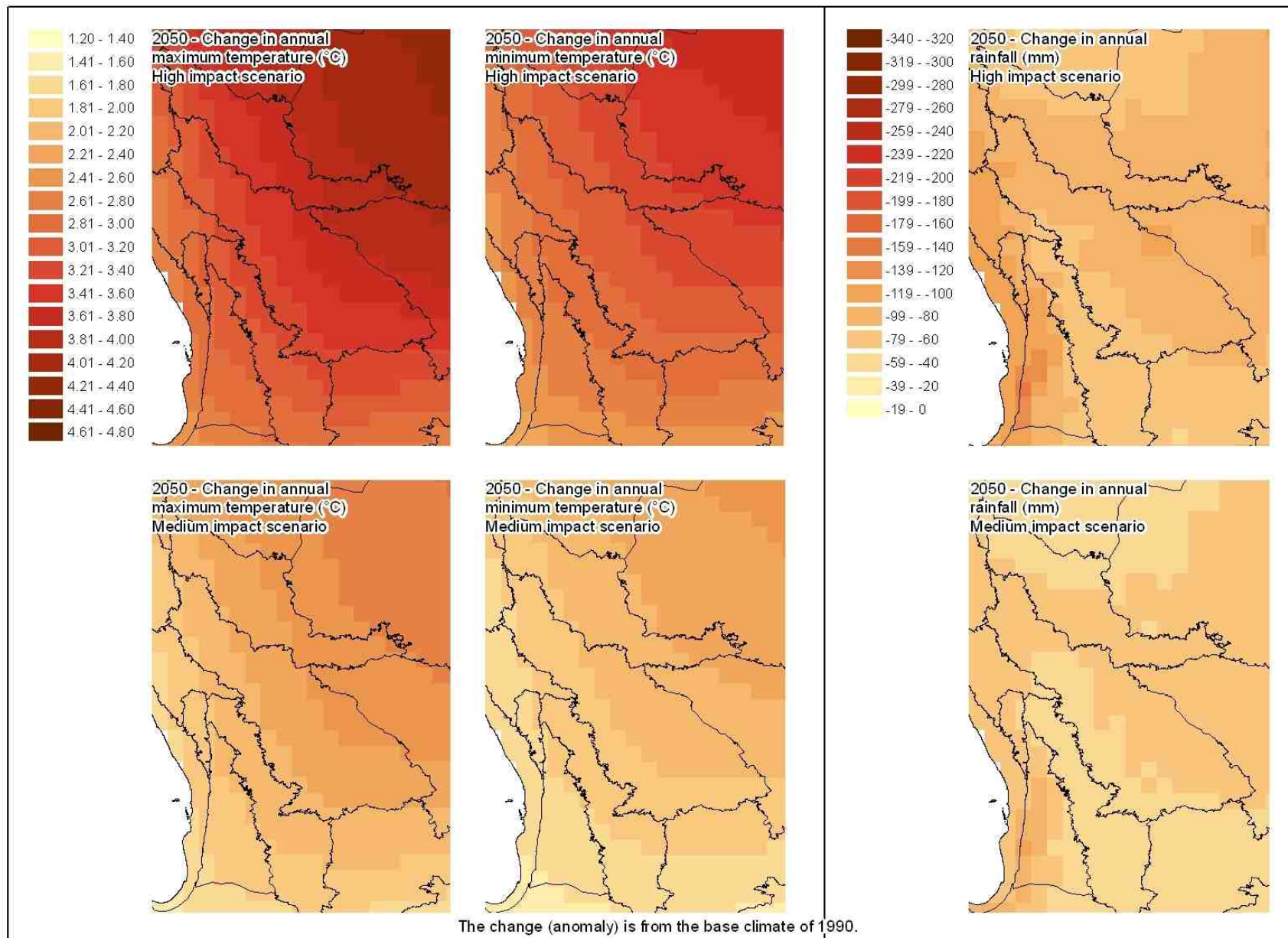
For more information see <https://wiki.csiro.au/confluence/display/ozclim/Science#Science-CSIRO35>

Medium Impact Scenario:

- *Emission Scenario:* Medium 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
1024	90.31	670,961	77,434	11.54	4,501	0	0	0	20,118	8,091	44,724
1049	69.35	577,982	36,268	6.27	2,999	0	0	0	5,009	64	28,195
1413	32.54	546,676	174,214	31.87	12,309	451	0	0	70,056	2,634	88,760
142	52.47	413,442	63,138	15.27	1,936	0	0	0	10,798	21,748	28,656
1023	24.91	398,944	26,400	6.62	2,585	0	0	0	4,196	453	19,167
8	50.94	353,872	50,086	14.15	3,585	430	0	0	10,991	530	34,541
36	60.75	300,997	72,785	24.18	9,336	307	51	0	30,044	7	33,040
352	40.41	292,706	72,882	24.90	792	3,997	0	4,677	10,501	31,383	21,531
435	25.74	255,984	29,716	11.61	3,795	1,352	0	0	4,507	2,077	17,985
141	21.63	250,615	77,323	30.85	1,134	0	0	0	16,610	43,803	15,776
551	80.81	244,380	49,141	20.11	3,268	0	0	94	7,403	1,479	36,897
437	34.57	174,686	144,376	82.65	2,226	585	0	327	40,379	94,618	6,240
125	4.26	148,564	13,695	9.22	1,196	344	0	210	3,986	2,248	5,711
1057	100.00	145,311	17,637	12.14	2,844	0	0	0	2,462	28	12,303
684	95.06	136,605	35,509	25.99	554	0	0	0	1,937	519	32,495
1055	100.00	136,169	18,135	13.32	1,287	0	9	0	5,865	40	10,934
676	6.03	124,377	30,358	24.41	391	0	0	0	8,632	7,975	13,360
511	13.68	95,826	17,867	18.65	2,988	0	0	0	4,252	6	10,621
631	86.31	92,230	47,132	51.10	490	5,266	0	719	5,235	4,609	30,813
354	99.28	91,254	10,783	11.82	895	0	0	0	952	142	8,794
955	60.91	84,864	8,026	9.46	756	0	0	0	952	184	6,135

694	22.93	79,456	5,245	6.60	752	0	15	0	505	4	3,967
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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
1057	100.00	145,311	17,637	12.14	2,844	0	0	0	2,462	28	12,303
1055	100.00	136,169	18,135	13.32	1,287	0	9	0	5,865	40	10,934
1143	100.00	65,458	4,196	6.41	112	0	0	0	91	19	3,975
1061	100.00	42,747	20,361	47.63	5,322	0	0	0	5,257	646	9,136
1154	100.00	39,049	3,636	9.31	262	0	0	0	414	90	2,870
1062	100.00	22,527	10,642	47.24	1,684	0	0	0	2,088	25	6,844
1056	100.00	21,073	4,041	19.18	994	0	0	0	371	0	2,675
1081	100.00	15,148	2,674	17.65	423	0	0	0	248	0	2,002
145	100.00	8,054	495	6.15	0	0	0	0	176	0	319
1155	100.00	7,812	3,105	39.75	0	0	0	0	20	980	2,105
374	100.00	4,930	2,257	45.78	110	338	0	593	72	0	1,143
693	100.00	4,396	3,158	71.84	0	0	0	0	21	1,458	1,679
356	100.00	4,330	2,114	48.82	101	0	0	0	1,129	0	884
692	100.00	2,880	1,752	60.83	74	0	0	0	4	0	1,674
1059	100.00	2,260	10	0.44	0	0	0	0	0	0	10
1164	100.00	2,008	51	2.54	0	0	0	0	0	0	51
1156	100.00	1,730	352	20.35	0	0	0	0	9	0	343
1065	100.00	863	435	50.41	377	0	0	0	2	0	55
695	100.00	658	98	14.89	0	0	0	0	3	0	96
438	100.00	330	169	51.21	0	0	0	0	9	0	161
956	99.99	25,554	3,383	13.24	1,146	0	4	0	225	0	2,008
354	99.28	91,254	10,783	11.82	895	0	0	0	952	142	8,794
495	99.03	8,411	8,411	100.00	0	0	0	0	1,559	6,730	122
951	98.97	27,224	11,128	40.88	1,928	0	0	0	844	112	8,244
698	98.67	11,193	2,074	18.53	69	0	0	0	897	0	1,108
954	95.31	6,197	1,556	25.11	329	0	0	0	108	0	1,119
684	95.06	136,605	35,509	25.99	554	0	0	0	1,937	519	32,495
1025	90.47	1,737	1,074	61.83	0	0	0	0	10	0	1,064
1024	90.31	670,961	77,434	11.54	4,501	0	0	0	20,118	8,091	44,724
696	88.67	2,700	915	33.89	90	0	0	0	8	0	816
631	86.31	92,230	47,132	51.10	490	5,266	0	719	5,235	4,609	30,813

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
950	27.77	138	27	19.57	23	0	0	0	0	0	3
438	100.00	330	169	51.21	0	0	0	0	9	0	161
1080	8.88	351	75	21.37	0	0	0	0	1	0	75
413	10.79	375	87	23.20	0	0	0	0	50	0	37
412	4.36	410	172	41.95	0	0	0	0	1	72	100
695	100.00	658	98	14.89	0	0	0	0	3	0	96
1065	100.00	863	435	50.41	377	0	0	0	2	0	55
3041	15.85	1,010	254	25.15	44	0	0	0	38	0	172
392	34.73	1,066	263	24.67	0	0	0	0	1	0	262
314	15.72	1,170	1,086	92.82	0	0	0	0	120	965	0
1156	100.00	1,730	352	20.35	0	0	0	0	9	0	343
1025	90.47	1,737	1,074	61.83	0	0	0	0	10	0	1,064
1164	100.00	2,008	51	2.54	0	0	0	0	0	0	51
1041	46.77	2,236	758	33.90	241	0	0	0	29	0	487
1059	100.00	2,260	10	0.44	0	0	0	0	0	0	10
696	88.67	2,700	915	33.89	90	0	0	0	8	0	816
692	100.00	2,880	1,752	60.83	74	0	0	0	4	0	1,674
356	100.00	4,330	2,114	48.82	101	0	0	0	1,129	0	884
693	100.00	4,396	3,158	71.84	0	0	0	0	21	1,458	1,679
959	37.07	4,853	2,573	53.02	800	0	0	0	33	11	1,729
374	100.00	4,930	2,257	45.78	110	338	0	593	72	0	1,143
1067	39.47	6,028	4,175	69.26	2	0	0	0	4,049	0	125
954	95.31	6,197	1,556	25.11	329	0	0	0	108	0	1,119
1155	100.00	7,812	3,105	39.75	0	0	0	0	20	980	2,105
145	100.00	8,054	495	6.15	0	0	0	0	176	0	319
495	99.03	8,411	8,411	100.00	0	0	0	0	1,559	6,730	122
686	67.00	8,800	4,157	47.24	501	0	0	0	2,171	801	684
1198	44.64	10,078	9,162	90.91	0	4,355	0	0	837	2,862	1,108
1053	77.20	10,672	2,417	22.65	362	0	0	0	50	261	1,744
1048	80.52	11,124	4,853	43.63	30	0	0	0	129	0	4,694
536	84.77	11,171	3,970	35.54	1,277	0	0	0	2,071	8	613
698	98.67	11,193	2,074	18.53	69	0	0	0	897	0	1,108
1081	100.00	15,148	2,674	17.65	423	0	0	0	248	0	2,002

1056	100.00	21,073	4,041	19.18	994	0	0	0	371	0	2,675
1062	100.00	22,527	10,642	47.24	1,684	0	0	0	2,088	25	6,844
956	99.99	25,554	3,383	13.24	1,146	0	4	0	225	0	2,008