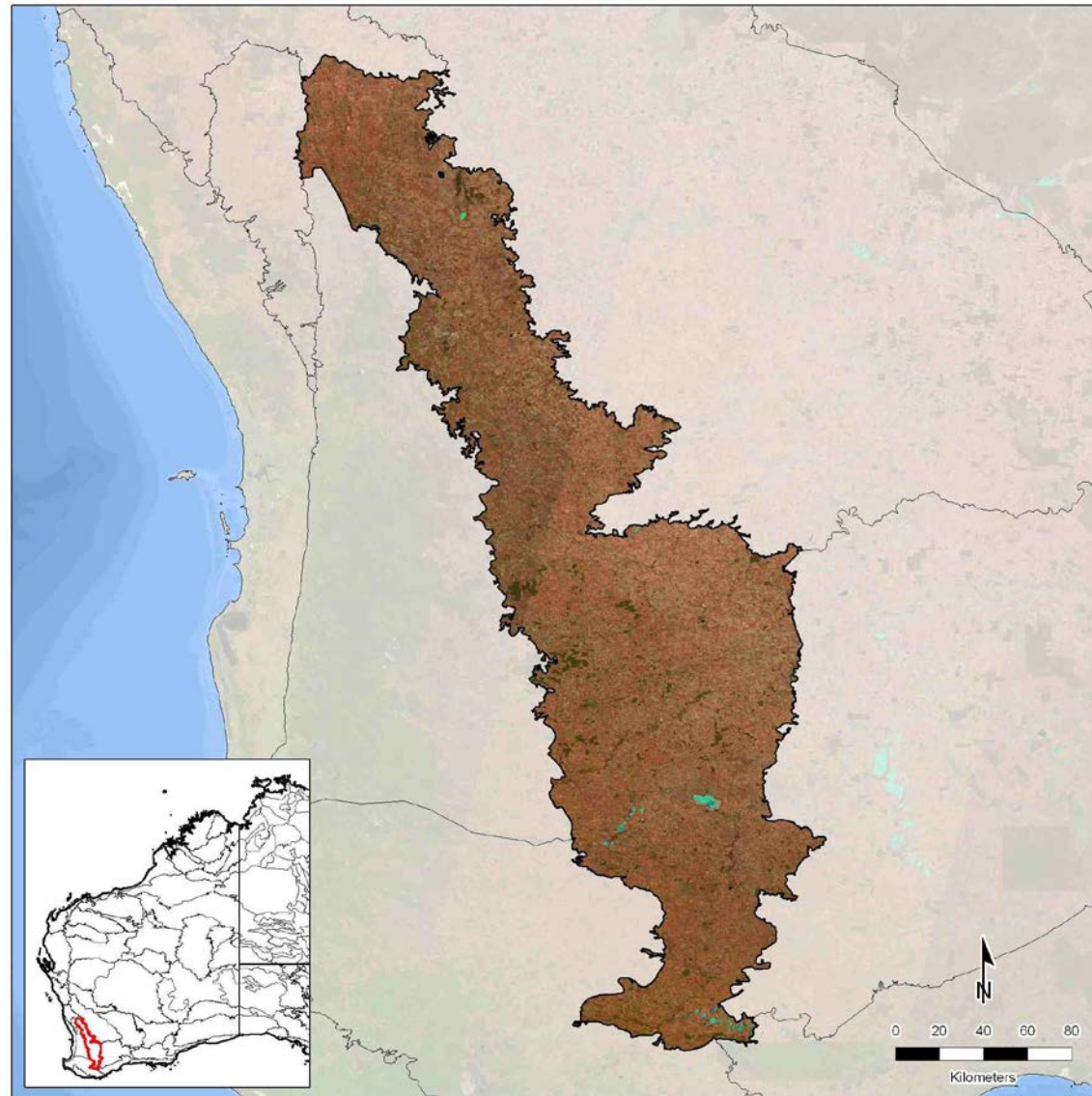


Avon Wheatbelt 2 Sub-region



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) (%)
2,992,929	1.18	100	14.52	1.66

*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)	36,674	1.23	9,623	0.32	46,297	1.55
	DEC-managed lands proposed for conservation	357	0.01	2	0.00	359	0.01
	Conservation reserves (IUCN V & VI)	137	0.00	0	0.00	137	0.00
	Other DEC-managed lands	9,159	0.31	0	0.00	9,159	0.31
Native vegetation on other public lands		50,352	1.68	7,416	0.25	57,768	1.93
Native vegetation on leasehold lands		7,094	0.24	94	0.00	7,188	0.24
Native vegetation on freehold lands		305,846	10.22	7,924	0.26	313,770	10.48
Native vegetation with no tenure category assigned		0	0.00	0	0.00	0	0.00
Cleared areas		-	-	-	-	2,558,251	85.48
Total		409,619	14	25,059	1	2,992,929	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)		47,248	49,784	2,536	1.58	1.66	0.08	193	203	10
	DEC-managed lands proposed for conservation		0	445	445	0.00	0.01	0.01	0	3	3
	Conservation reserves (IUCN V & VI)		0	175	175	0.00	0.01	0.01	0	8	8
	State forest / timber reserves		12,200	12,245	45	0.41	0.41	0.00	3	3	0
	Other DEC-managed lands		309	27	-282	0.01	0.00	-0.01	20	14	-6
Other lands	Unallocated crown lands		10,983	11,674	691	0.37	0.39	0.02	-	-	-
	Other crown reserves		40,090	39,324	-766	1.34	1.31	-0.03	-	-	-
		Crown reserves vested in Aboriginal Lands Trust*	-	32	-	-	0.00	-	-	-	-
	Pastoral leases^		384	0	-384	0.01	0.00	-0.01	-	-	-
		Pastoral leases held by Aboriginal Lands Trust*	-	0	-	-	0.00	-	-	-	-
	Other leasehold lands^		0	56,098	56,098	0.00	1.87	1.87	-	-	-
		General purpose leases held by Aboriginal Lands Trust*	-	0	-	-	0.00	-	-	-	-
	Freehold lands		2,826,306	2,773,264	-53,042	94.43	92.66	-1.77	-	-	-
		Freehold lands held by Aboriginal Lands Trust*	-	9	-	-	0.00	-	-	-	-
	Commonwealth lands (defence)		112	110	-2	0.00	0.00	0.00	-	-	-
	Other public lands (roads and water bodies)		5,394	49,782	44,388	0.18	1.66	1.48	-	-	-
	No tenure category assigned†		49,903	1	-49,902	1.67	0.00	-1.67	-	-	-
Total			2,992,929	2,992,929	-	100	100	-	216	231	-

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	1	N/A	9	N/A	8	0	0	0	0	0	0	0	0	0	0	0	0
	Exploration	35	N/A	163	N/A	128	16	39	23	0	1	1	2	4	2	1	2	1
	Mining	12	N/A	13	N/A	1	2	1	-1	0	0	0	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	1	N/A	0	N/A	-1	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	227,537	7.60	1,526,348	51.00	43.40	5,536	15,415	9,879	0	149	149	103	102	-1	< 1	11	11
	Petroleum (active) titles	2,130	0.07	0	0.00	-0.07	0	0	0	0	0	0	0	0	0	0	0	0
	Mining (live) tenements and petroleum (active) titles*	229,667	7.67	1,526,348	51.00	43.33	5,536	15,415	9,879	0	149	149	103	102	-1	< 1	11	11

*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)	1,930,738	2,647,251	716,513	64.51	88.45	23.94
Miscellaneous (non-intensive use)*	17,633	277,326	259,693	0.59	9.27	8.68
Conservation	48,219	46,712	-1,507	1.61	1.56	-0.05
Native forestry	11,231	8,323	-2,908	0.38	0.28	-0.10
Plantation forestry	0	5,234	5,234	0.00	0.17	0.17
Water (not classified)	4,838	4,127	-711	0.16	0.14	-0.02
Urban	7,568	3,310	-4,258	0.25	0.11	-0.14
Pastoralism	972,703	646	-972,057	32.50	0.02	-32.48
Traditional indigenous use	0	0	0	0.00	0.00	0.00
Mining	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	2,992,930	2,992,929	-	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)	14,945	2,992,929	0.0050
Roads (Strategic Survey Roads in national parks, conservation parks and nature reserves)	500	49,640	0.0101
Railways (sub-region)	1,170	2,992,929	0.0004

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	478	1,671	1,193	0.02	0.06	0.04
Land for Wildlife properties	8,422	16,461	8,039	0.28	0.55	0.27
Combined total*	8,726	17,709	8,983	0.29	0.59	0.30

* 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)	11.67	13.09	14.76	1.31	2.73	4.40	1.12 - 1.44	2.33 - 2.99	3.75 - 4.82
Maximum Temperature (degrees C)	25.20	26.79	28.65	1.47	3.07	4.93	1.24 - 1.62	2.57 - 3.36	4.14 - 5.40
Precipitation (mm)	357.67	325.20	296.41	-38.58	-71.05	-99.84	-52.10 - -32.70	-94.70 - -60.90	-131.60 - -85.70
	Medium impact scenario								
Minimum Temperature (degrees C)	11.41	12.14	12.85	1.05	1.78	2.49	0.89 - 1.15	1.52 - 1.95	2.11 - 2.73
Maximum Temperature (degrees C)	24.90	25.72	26.52	1.17	1.99	2.79	0.99 - 1.29	1.67 - 2.19	2.33 - 3.06
Precipitation (mm)	364.79	346.09	330.21	-31.47	-50.17	-66.04	-42.60 - -26.60	-67.50 - -42.70	-88.20 - -56.50

* Base Climate is 1990

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

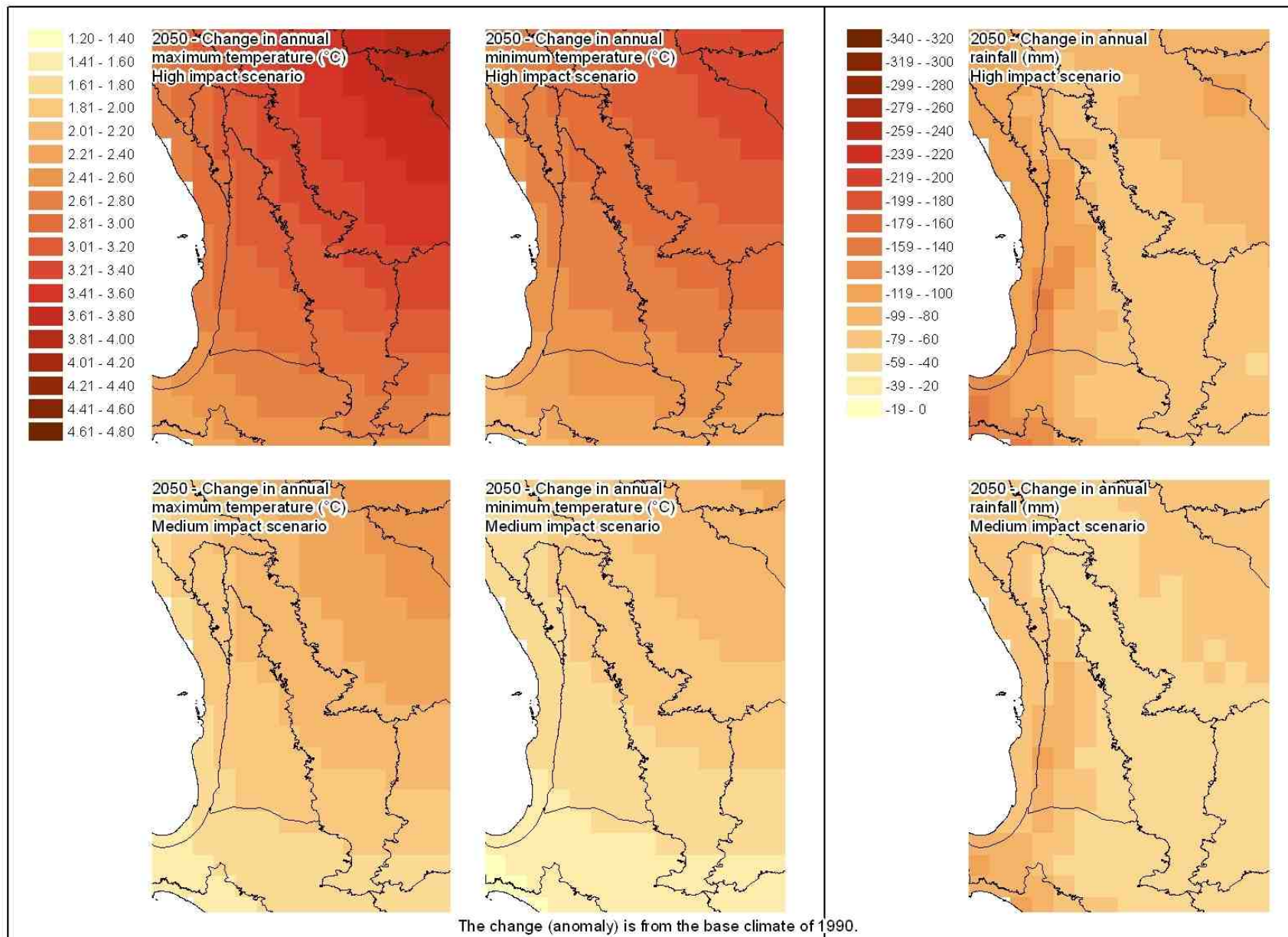
For more information see <https://wiki.csiro.au/confluence/display/ozclim/Science#Science-CSIRO35>

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
1023	70.16	1,123,732	140,417	12.50	9,371	134	49	4,599	21,954	3,397	100,914
352	46.65	337,876	37,247	11.02	716	0	0	10	4,760	271	31,490
1049	30.65	255,403	20,576	8.06	271	0	0	3	1,930	169	18,202
142	28.46	224,266	17,833	7.95	335	0	0	0	772	381	16,345
7	80.13	144,017	17,220	11.96	156	0	0	0	577	879	15,609
697	52.77	98,824	19,882	20.12	151	0	0	0	3,093	148	16,489
694	27.26	94,465	6,948	7.36	807	0	0	0	203	13	5,925
1092	98.78	76,999	8,177	10.62	144	0	30	0	1,676	211	6,116
967	73.88	76,084	11,366	14.94	228	0	7	0	1,044	551	9,535
1024	9.15	67,966	7,322	10.77	1,094	0	0	0	1,101	13	5,114
1085	100.00	51,787	7,942	15.34	16	0	0	0	2,026	0	5,900

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
1085	100.00	51,787	7,942	15.34	16	0	0	0	2,026	0	5,900
1083	100.00	10,380	3,713	35.77	645	0	0	0	593	0	2,475
2093	100.00	9,417	4,545	48.26	1,850	0	0	0	659	0	2,036
1074	100.00	4,625	2,590	56.00	1,437	0	0	0	141	0	1,012
2047	100.00	1,463	921	62.95	457	0	0	0	7	0	457
948	100.00	1,441	443	30.74	7	0	0	0	39	0	397
1046	100.00	862	84	9.74	0	0	0	0	1	0	83
1087	100.00	753	257	34.13	20	0	32	0	82	0	123
1091	100.00	716	293	40.92	1	0	0	0	47	0	245
1022	100.00	456	191	41.89	0	0	0	0	26	0	165
1088	100.00	395	145	36.71	0	0	0	0	20	0	125
1042	100.00	269	54	20.07	0	0	0	0	0	0	54
962	100.00	62	5	8.06	0	0	0	0	2	0	3
947	99.95	34,017	11,775	34.62	2,394	0	0	2,387	1,282	260	5,452
1092	98.78	76,999	8,177	10.62	144	0	30	0	1,676	211	6,116
1967	97.76	24,929	7,530	30.21	279	76	0	0	872	0	6,303
1080	91.12	3,600	603	16.75	0	0	0	0	27	0	577

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
956	0.01	2	0	0.00	0	0	0	0	0	0	0
959	0.08	10	1	10.00	0	0	0	0	0	0	1
126	0.11	25	7	28.00	0	0	0	0	0	0	7
962	100.00	62	5	8.06	0	0	0	0	2	0	3
1025	9.58	184	30	16.30	0	0	0	0	0	0	30
13	60.97	239	67	28.03	0	0	0	0	2	0	65
1042	100.00	269	54	20.07	0	0	0	0	0	0	54
954	4.69	305	60	19.67	0	0	0	0	28	0	32
392	10.59	325	29	8.92	0	0	0	0	0	0	28
1095	17.10	332	133	40.06	0	0	0	0	3	0	130
950	72.23	359	260	72.42	0	0	0	0	27	0	233
1088	100.00	395	145	36.71	0	0	0	0	20	0	125
1149	5.36	405	46	11.36	0	0	0	0	0	0	46
1022	100.00	456	191	41.89	0	0	0	0	26	0	165
1091	100.00	716	293	40.92	1	0	0	0	47	0	245
1087	100.00	753	257	34.13	20	0	32	0	82	0	123
1044	56.24	816	22	2.70	0	0	0	0	1	0	21
1046	100.00	862	84	9.74	0	0	0	0	1	0	83
1077	55.47	1,409	1,025	72.75	0	0	0	0	168	0	857
948	100.00	1,441	443	30.74	7	0	0	0	39	0	397
2047	100.00	1,463	921	62.95	457	0	0	0	7	0	457
976	81.96	1,903	913	47.98	19	0	0	0	59	0	835
953	23.79	2,362	748	31.67	239	0	0	0	49	0	460
1041	53.23	2,545	799	31.39	77	0	0	0	13	0	708
1048	19.47	2,690	729	27.10	0	0	0	0	240	0	489
1053	22.80	3,151	742	23.55	493	10	0	0	44	6	190
1080	91.12	3,600	603	16.75	0	0	0	0	27	0	577
963	63.57	3,860	1,409	36.50	321	0	0	0	81	0	1,008
1074	100.00	4,625	2,590	56.00	1,437	0	0	0	141	0	1,012
3041	84.15	5,364	1,586	29.57	92	15	0	0	117	0	1,361
1093	82.93	6,849	1,587	23.17	427	0	0	0	114	0	1,046
1004	83.03	8,110	2,555	31.50	7	0	0	0	580	0	1,968
25	64.84	8,925	2,108	23.62	31	0	0	0	65	0	2,013

2093	100.00	9,417	4,545	48.26	1,850	0	0	0	659	0	2,036
1083	100.00	10,380	3,713	35.77	645	0	0	0	593	0	2,475
1073	76.34	14,358	5,200	36.22	480	0	0	1,460	448	146	2,665
1967	97.76	24,929	7,530	30.21	279	76	0	0	872	0	6,303