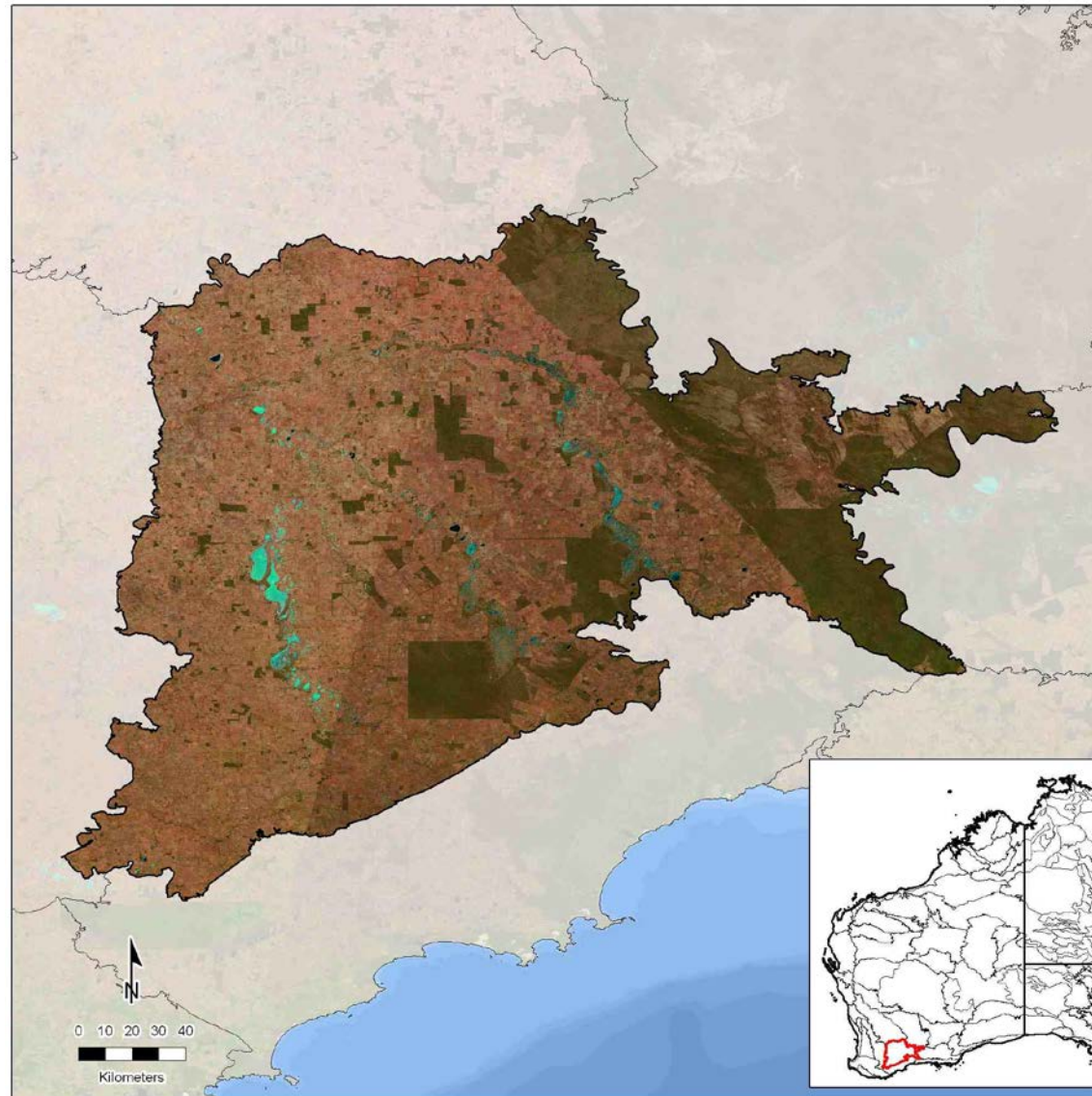


## Mallee 2 Sub-region



*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) (%)
3,981,719	1.58	100	39.37	9.97

\*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)	360,046	9.04	32,700	0.82	392,746	9.86
	DEC-managed lands proposed for conservation	706	0.02	48	0.00	754	0.02
	Conservation reserves (IUCN V & VI)	293	0.01	23	0.00	316	0.01
	Other DEC-managed lands	50	0.00	0	0.00	50	0.00
Native vegetation on other public lands		825,840	20.74	29,429	0.74	855,269	21.48
Native vegetation on leasehold lands		10,578	0.27	664	0.02	11,242	0.28
Native vegetation on freehold lands		278,587	7.00	28,790	0.72	307,377	7.72
Native vegetation with no tenure category assigned		0	0.00	0	0.00	0	0.00
Cleared areas		-	-	-	-	2,413,963	60.63
<b>Total</b>		<b>1,476,100</b>	<b>37</b>	<b>91,654</b>	<b>2</b>	<b>3,981,717</b>	<b>100</b>

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)		389,832	396,818	6,986	9.79	9.97	0.18	129	142	13
	DEC-managed lands proposed for conservation		0	766	766	0.00	0.02	0.02	0	3	3
	Conservation reserves (IUCN V & VI)		0	725	725	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		1,381	51	-1,330	0.03	0.00	-0.03	3	2	-1
Other lands	Unallocated crown lands		763,019	763,226	207	19.16	19.17	0.01	-	-	-
	Other crown reserves		57,784	53,252	-4,532	1.45	1.34	-0.11	-	-	-
		Crown reserves vested in Aboriginal Lands Trust*	-	1,013	-	-	0.03	-	-	-	-
	Pastoral leases^		0	0	0	0.00	0.00	0.00	-	-	-
		Pastoral leases held by Aboriginal Lands Trust*	-	0	-	-	0.00	-	-	-	-
	Other leasehold lands^		0	78,336	78,336	0.00	1.97	1.97	-	-	-
		General purpose leases held by Aboriginal Lands Trust*	-	0	-	-	0.00	-	-	-	-
	Freehold lands		2,700,948	2,622,956	-77,992	67.83	65.87	-1.96	-	-	-
		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)		5,653	65,587	59,934	0.14	1.65	1.51	-	-	-
	No tenure category assigned†		63,102	0	-63,102	1.58	0.00	-1.58	-	-	-
<b>Total</b>			<b>3,981,719</b>	<b>3,981,717</b>	<b>-</b>	<b>100</b>	<b>100</b>	<b>-</b>	<b>132</b>	<b>148</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	6	N/A	23	N/A	17	0	0	0	0	0	0	0	0	0	0	0	0
	Exploration	62	N/A	141	N/A	79	17	30	13	1	2	1	0	0	0	0	0	0
	Mining	37	N/A	29	N/A	-8	5	4	-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	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	339,575	8.53	910,503	22.87	14.34	2,597	48,421	45,824	100	451	351	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*	339,575	8.53	910,503	22.87	14.34	2,597	48,421	45,824	100	451	351	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
Agriculture (intensive use)	1,884,744	2,474,397	589,653	47.33	62.14	14.81
Miscellaneous (non-intensive use)*	780,058	1,056,509	276,451	19.59	26.53	6.94
Conservation	428,242	432,770	4,528	10.76	10.87	0.11
Water (not classified)	13,381	12,600	-781	0.34	0.32	-0.02
Native forestry	3,118	2,400	-718	0.08	0.06	-0.02
Plantation forestry	302	2,112	1,810	0.01	0.05	0.04
Pastoralism	870,111	829	-869,282	21.85	0.02	-21.83
Urban	1,760	100	-1,660	0.04	0.00	-0.04
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
<b>Total</b>	<b>3,981,716</b>	<b>3,981,717</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)	12,499	3,981,719	0.0031
Roads (Strategic Survey Roads in national parks, conservation parks and nature reserves)	1,154	396,818	0.0029
Railways (sub-region)	306	3,981,719	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	137	3,222	3,085	0.00	0.08	0.08
Land for Wildlife properties	5,523	8,283	2,760	0.14	0.21	0.07
Combined total*	5,624	10,763	5,139	0.14	0.27	0.13

\* 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)	11.15	12.55	14.18	1.29	2.68	4.32	1.14 - 1.44	2.36 - 3.00	3.82 - 4.82
Maximum Temperature (degrees C)	24.50	26.08	27.93	1.46	3.04	4.89	1.26 - 1.66	2.62 - 3.46	4.21 - 5.56
Precipitation (mm)	316.29	283.96	254.95	-38.15	-70.47	-99.48	-48.10 - -31.70	-87.80 - -59.30	-123.00 - -82.50
	Medium impact scenario								
Minimum Temperature (degrees C)	10.89	11.61	12.31	1.03	1.75	2.44	0.91 - 1.15	1.55 - 1.95	2.16 - 2.73
Maximum Temperature (degrees C)	24.21	25.02	25.81	1.16	1.98	2.77	1.00 - 1.32	1.71 - 2.25	2.39 - 3.15
Precipitation (mm)	323.34	304.79	288.97	-31.10	-49.65	-65.48	-39.30 - -25.80	-62.30 - -41.50	-81.69 - -55.00

\* 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>

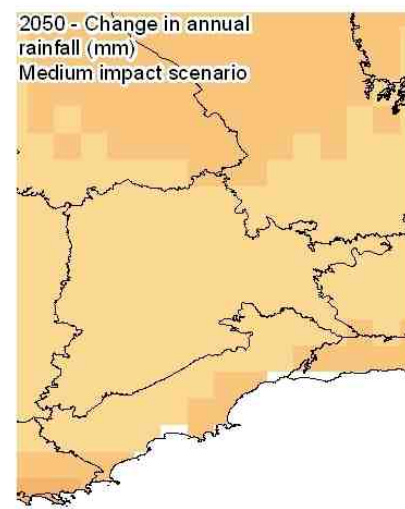
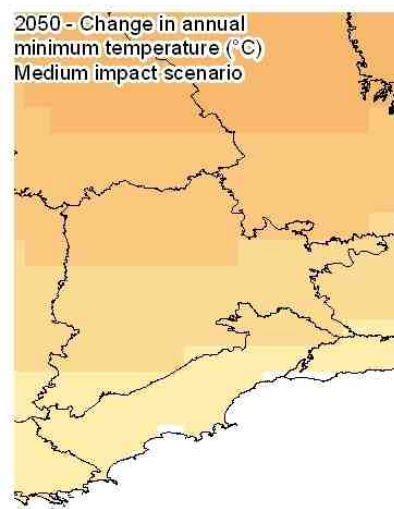
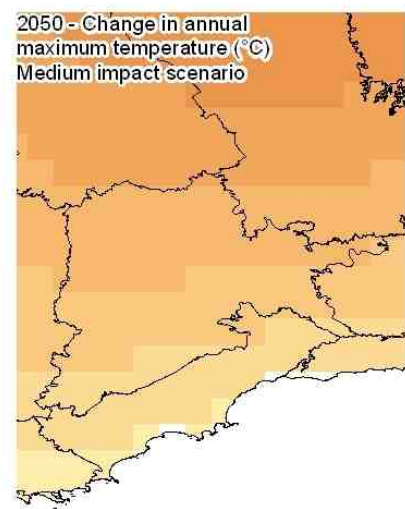
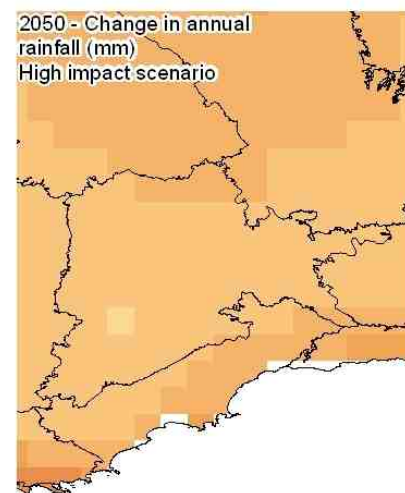
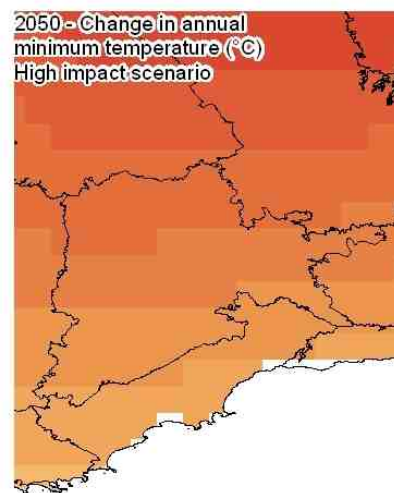
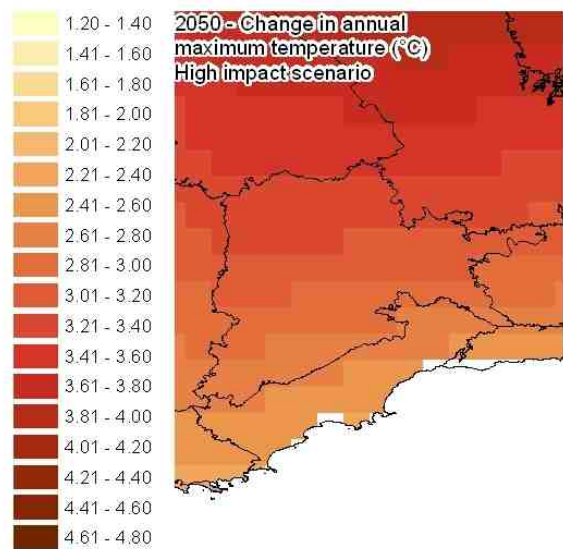
#### Medium Impact Scenario:

- *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.





The change (anomaly) is from the base climate of 1990.

# 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>519</b>	67.01	1,563,571	782,989	50.08	195,775	0	178	0	496,799	3,264	86,973
<b>1075</b>	98.11	517,042	78,388	15.16	27,936	98	0	40	13,482	2,841	33,992
<b>2048</b>	97.35	313,693	154,909	49.38	24,481	0	0	0	117,421	90	12,917
<b>960</b>	96.05	211,735	29,270	13.82	10,560	387	0	0	2,699	232	15,391
<b>1200</b>	99.91	161,515	21,828	13.51	1,671	0	0	0	3,556	73	16,528
<b>945</b>	80.04	141,354	27,752	19.63	2,415	0	0	0	11,065	10	14,262
<b>511</b>	19.96	139,877	67,524	48.27	12,345	0	0	0	33,173	649	21,356
<b>131</b>	61.56	111,512	10,027	8.99	1,159	0	0	0	1,585	220	7,063
<b>125</b>	2.34	81,605	30,384	37.23	17,233	5	0	0	8,177	710	4,259
<b>516</b>	11.05	67,113	6,534	9.74	414	0	0	0	484	59	5,578
<b>1094</b>	92.22	64,865	6,145	9.47	89	0	0	0	1,188	238	4,630
<b>1023</b>	4.00	63,990	4,688	7.33	243	111	0	0	672	146	3,516

### *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
1098	100.00	13,997	5,474	39.11	2,212	0	0	0	336	43	2,882
1079	100.00	10,435	6,859	65.73	3,565	0	0	0	737	0	2,558
974	100.00	7,218	866	12.00	0	0	0	0	106	0	760
966	100.00	7,087	1,372	19.36	0	0	0	0	105	0	1,268
494	100.00	2,575	2,575	100.00	2,524	0	0	0	51	0	0
993	100.00	2,119	792	37.38	0	0	0	0	162	0	630
1096	100.00	356	129	36.24	0	0	0	0	35	0	93
939	100.00	120	12	10.00	0	0	0	0	0	0	12
981	99.95	10,526	1,319	12.53	0	0	0	0	154	0	1,165
1200	99.91	161,515	21,828	13.51	1,671	0	0	0	3,556	73	16,528
1075	98.11	517,042	78,388	15.16	27,936	98	0	40	13,482	2,841	33,992
2048	97.35	313,693	154,909	49.38	24,481	0	0	0	117,421	90	12,917
960	96.05	211,735	29,270	13.82	10,560	387	0	0	2,699	232	15,391
961	93.97	26,123	4,674	17.89	2,787	5	0	0	295	11	1,577
1094	92.22	64,865	6,145	9.47	89	0	0	0	1,188	238	4,630

### *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
126	0.14	32	12	37.50	0	0	0	0	0	0	12
25	0.73	101	48	47.52	0	0	0	0	2	0	46
939	100.00	120	12	10.00	0	0	0	0	0	0	12
1096	100.00	356	129	36.24	0	0	0	0	35	0	93
1005	67.47	531	87	16.38	0	0	0	0	4	0	83
934	8.37	777	276	35.52	0	0	0	0	214	0	62
493	6.14	1,197	1,197	100.00	624	0	0	0	573	0	0
1093	17.07	1,410	57	4.04	0	0	0	0	3	0	54
1095	82.90	1,609	396	24.61	0	0	0	0	54	0	342
993	100.00	2,119	792	37.38	0	0	0	0	162	0	630
494	100.00	2,575	2,575	100.00	2,524	0	0	0	51	0	0
929	45.90	4,927	4,221	85.67	19	0	0	0	3,953	1	248
966	100.00	7,087	1,372	19.36	0	0	0	0	105	0	1,268
974	100.00	7,218	866	12.00	0	0	0	0	106	0	760
953	76.21	7,566	2,485	32.84	147	0	0	0	143	0	2,196
959	62.86	8,229	3,093	37.59	962	100	0	0	118	20	1,893
1079	100.00	10,435	6,859	65.73	3,565	0	0	0	737	0	2,558
981	99.95	10,526	1,319	12.53	0	0	0	0	154	0	1,165
1098	100.00	13,997	5,474	39.11	2,212	0	0	0	336	43	2,882