# Dampierland 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	Percentage of WA covered by	Percentage of sub-region	Percentage of sub-region covered by	Percentage of sub-region within DEC-managed
WA (ha)	sub-region (%)	within WA (%)	intact habitat* (%)	conservation reserves (IUCN Ia - IV) (%)
4,928,785	1.95	100	99.65	

\*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 veget		Extent of additional intact habitats (wetlands) not mapped in the remnant vegetation dataset		Total e	extent
		(ha) (%) (ha) (%)			(ha)	(%)	
Native vegetation on DEC-managed lands	Conservation reserves (IUCN Ia - IV)	28,151	0.57	0	0.00	28,151	0.57
	DEC-managed lands proposed for conservation	2,299	0.05	164	0.00	2,463	0.05
	Conservation reserves (IUCN V & VI)	0	0.00	0	0.00	0	0.00
	Other DEC-managed lands	12,445	0.25	409	0.01	12,854	0.26
Native vegetation on other public lands		2,047,127	41.53	471	0.01	2,047,598	41.54
Native vegetation on leasehold lands		2,803,579	56.88	470	0.01	2,804,049	56.89
Native vegetation on freehold lands		12,661	0.26	0	0.00	12,661	0.26
Native vegetation with no tenure category assigned		3,013	0.06	816	0.02	3,829	0.08
Cleared areas		-	-	-	-	17,122	0.35
Unmapped islands*		-	-	-	-	58	0.00
Total		4,909,275	100	2,330	0	4,928,785	100

NB: some rounding errors may occur.

 $\ensuremath{^*}\xspace$  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:

• <u>Statewide Vegetation Statistics (Full report)</u>. Statistic: Extent of Remnant Vegetation including on DEC-managed lands.

#### Tenure

				Extent (ha)			Extent (%)		Num	ber of res	erves
			2002	2012	Change	2002	2012	Change	2002	2012	Change
DEC-managed	Conservation reserves (IUCN Ia - IV)		28,125	28,317	192	0.57	0.57	0.00	4	5	1
lands	DEC-managed lands proposed for										
	conservation		0	4,929	4,929	0.00	0.10	0.10	0	1	1
	Conservation reserves (IUCN V & VI)		0	< 1	< 1	0.00	0.00	0.00	0	1	1
	State forest / timber reserves		0	0	0	0.00	0.00	0.00	0	0	0
	Other DEC-managed lands		21	13,040	13,019	0.00	0.26	0.26	3	6	3
Other lands	Unallocated crown lands		1,282,180	1,573,816	291,636	26.01	31.93	5.92	-	-	-
	Other crown reserves		478,778	471,604	-7,174	9.71	9.57	-0.14	-	-	-
		Crown reserves vested in									
		Aboriginal Lands Trust*	-	365,511	-	-	7.42	-	-	-	-
	Pastoral leases^		2,834,400	2,742,702	-91,698	57.51	55.65	-1.86	-	-	-
		Pastoral leases held by									
		Aboriginal Lands Trust*	-	0	-	-	0.00	-	-	-	-
	Other leasehold lands <sup>^</sup>		0	67,155	67,155	0.00	1.36	1.36	-	-	-
		General purpose leases held by Aboriginal Lands Trust*	-	0	_	-	0.00	-	-	_	_
	Freehold lands		285,447	14,255	-271,192	5.79	0.29	-5.50	-	-	-
		Freehold lands held by Aboriginal Lands Trust*	_	272		-	0.01	-	-	-	-
	Commonwealth lands (defence)		0	0	0	0.00	0.00	0.00	-	-	-
	Other public lands (roads and water										
	bodies)		50	7,934	7,884	0.00	0.16	0.16	-	-	-
	No tenure category assigned <sup>†</sup>		19,785	5,033	-14,752	0.40	0.10	-0.30	-	-	-
Total			4,928,786	4,928,785	-	100	100	-	7	13	-

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.

<sup>+</sup> 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	Prospecting	1	N/A	0	N/A	-1	0	0	0	0	0	0	0	0	0	0	0	0
mining (live)	Exploration	7	N/A	42	N/A	35	0	0	0	0	0	0	0	0	0	1	0	-1
tenements	Mining	45	N/A	41	N/A	-4	0	0	0	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	Exploration	2	N/A	12	N/A	10	0	1	1	0	1	1	0	0	0	0	3	3
petroleum (active) titles	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	30,138	0.61	348,747	7.08	6.47	0	0	0	0	0	0	0	0	0	8	0	-8
	Petroleum (active) titles	16,048	0.33	2,171,163	44.05	43.72	0	3	3	0	2,057	2,057	0	0	0	0	11,657	11,657
	Mining (live) tenements and petroleum (active) titles*	46,187	0.94	2,371,616	48.12	47.18	0	3	3	0	2,057	2,057	0	0	0	8	11,657	11,649

\*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	3,034,916	3,004,862	-30,054	61.58	60.97	-0.61
Miscellaneous (non-intensive use)*	1,349,255	1,437,624	88,369	27.38	29.17	1.79
Traditional indigenous use	371,023	388,147	17,124	7.53	7.88	0.35
Conservation	48,728	42,645	-6,083	0.99	0.87	-0.12
Water (not classified)	27,341	20,668	-6,673	0.55	0.42	-0.13
Agriculture (intensive use)	79,206	12,617	-66,589	1.61	0.26	-1.35
Urban	469	1,245	776	0.01	0.03	0.02
Native forestry	85	151	66	0.00	0.00	0.00
Plantation forestry	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	17,762	20,828	3,066	0.36	0.42	0.06
Total	4,928,785	4,928,787	-	100	100	-

NB: some rounding errors may occur.

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

See the methods document available  $\underline{here}$  for definitions of the categories.

### Linear infrastructure

	Length (km)	Area of reporting region (ha)	Length per hectare (km/ha)
Roads (sub-region)	8,335	4,928,785	0.0017
Roads (Strategic Survey Roads in national parks,			
conservation parks and nature reserves)	11	28,309	0.0004
Railways (sub-region)	0	4,928,785	0.0000

## 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	2	2	0	0.00	0.00	0.00		
Combined total*	2	2	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	17,933	17,933	0.00	0.36	0.36	
	On all other lands	895,104	2,405,473	1,510,369	18.16	48.80	30.64	
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	Pro	jected (Avera	ge)	Change from	n Base Climate	e* (Average)	Chan	ge from Base Climate*	(range)				
	2030	2050	2070	2030	2050	2070	2030	2050	2070				
	High impact s	igh impact scenario											
Minimum Temperature (degrees C)	21.91	23.43	25.22	1.41	2.93	4.72	1.14 - 1.61	2.35 - 3.34	3.80 - 5.38				
Maximum Temperature (degrees C)	35.16	36.86	38.86	1.58	3.28	5.27	1.22 - 1.85	2.54 - 3.84	4.09 - 6.17				
Precipitation (mm)	528.65	454.05	387.81	-91.44	-166.03	-232.27	-120.6058.00	-220.2098.20	-310.29127.40				
	Medium imp	act scenario											
Minimum Temperature (degrees C)	21.62	22.41	23.17	1.12	1.91	2.67	0.90 - 1.28	1.54 - 2.18	2.15 - 3.05				
Maximum Temperature (degrees C)	34.84	35.72	36.57	1.26	2.13	2.99	0.97 - 1.47	1.65 - 2.50	2.31 - 3.49				
Precipitation (mm)	545.16	501.94	465.52	-74.93	-118.13	-154.56	-98.7048.20	-156.0073.19	-204.8092.50				

\* Base Climate is 1990

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

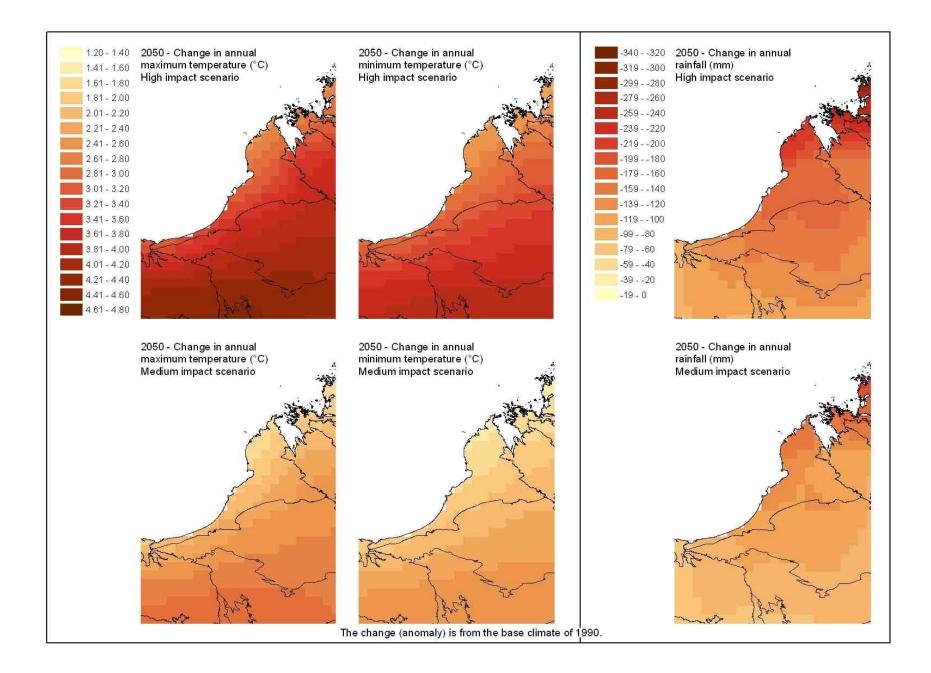
For more information see <a href="https://wiki.csiro.au/confluence/display/ozclim/Science#Science-CSIRO35">https://wiki.csiro.au/confluence/display/ozclim/Science#Science-CSIRO35</a>

#### 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 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:

• <u>Statewide Vegetation Statistics (Full report)</u>. 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).

	Percentage of	Pre-			Currer	ntly remaining on DE	Currently re	ntly remaining on other lands (ha)			
Beard's veg assoc no.	veg assoc within sub- region (%)	European extent (ha)	Current extent (ha)	Percentage remaining (%)	IUCN Ia-IV	Proposed for conservation	IUCN V-VI	Non-IUCN	Public lands	Leasehold lands	Freehold lands
699	90.42	1,796,195	1,794,994	99.93	0	0	0	7	786,941	1,004,654	2,902
750	99.23	1,221,734	1,217,844	99.68	27,849	0	0	348	652,706	532,528	4,324
7001	99.29	419,042	419,042	100.00	0	0	0	0	23,846	394,859	337
700	59.74	358,797	358,797	100.00	0	0	0	0	213,930	144,867	0
32	99.73	244,297	244,265	99.99	0	0	0	0	22,627	218,962	2,675
73	92.64	240,284	239,717	99.76	0	740	0	9,802	30,543	197,870	581

#### 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).

	Percentage of	Pre-			Currer	ntly remaining on DE	C-managed land	ls (ha)	Currently re	maining on othe	er lands (ha)
Beard's veg assoc no.	veg assoc within sub- region (%)	European extent (ha)	Current extent (ha)	Percentage remaining (%)	IUCN Ia-IV	Proposed for conservation	IUCN V-VI	Non-IUCN	Public lands	Leasehold lands	Freehold lands
67	100.00	27,285	27,240	99.84	0	0	0	0	12,542	14,465	234
751	100.00	16,045	15,995	99.69	0	0	0	0	642	15,318	35
767	100.00	570	570	100.00	0	0	0	0	0	570	0
701	99.97	108,338	108,338	100.00	0	0	0	0	95,298	13,040	0
32	99.73	244,297	244,265	99.99	0	0	0	0	22,627	218,962	2,675
752	99.59	6,781	6,757	99.65	0	0	0	0	536	6,220	0
7001	99.29	419,042	419,042	100.00	0	0	0	0	23,846	394,859	337
750	99.23	1,221,734	1,217,844	99.68	27,849	0	0	348	652,706	532,528	4,324
704	98.57	60,562	60,351	99.65	0	0	0	0	12,269	48,083	0
771	97.86	34,907	34,673	99.33	0	0	0	0	25,306	8,418	902
770	97.05	757	686	90.62	0	0	0	100	553	0	33
104	93.78	84,786	84,708	99.91	0	0	0	0	40,100	44,545	63
73	92.64	240,284	239,717	99.76	0	740	0	9,802	30,543	197,870	581
699	90.42	1,796,195	1,794,994	99.93	0	0	0	7	786,941	1,004,654	2,902

#### 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.

	Percentage of	Pre-			Currer	ntly remaining on DE	C-managed land	ls (ha)	Currently re	maining on othe	er lands (ha)
Beard's veg assoc no.	veg assoc within sub- region (%)	European extent (ha)	Current extent (ha)	Percentage remaining (%)	IUCN la-IV	Proposed for conservation	IUCN V-VI	Non-IUCN	Public lands	Leasehold lands	Freehold lands
742	0.88	74	74	100.00	0	0	0	0	0	72	2
126	1.09	256	256	100.00	0	0	0	0	256	0	0
767	100.00	570	570	100.00	0	0	0	0	0	570	0
770	97.05	757	686	90.62	0	0	0	100	553	0	33
762	78.51	5,347	5,343	99.93	0	0	0	0	16	5,327	0
752	99.59	6,781	6,757	99.65	0	0	0	0	536	6,220	0
751	100.00	16,045	15,995	99.69	0	0	0	0	642	15,318	35