

# Extinction by electorate



## EXECUTIVE SUMMARY

Australia's national environmental law, the Environment Protection and Biodiversity Conservation Act (EPBC Act) was introduced in 2000 with a key objective to protect and restore our nationally threatened species. Analysis completed by a coalition of leading environmental organisations and research scientists at the University of Queensland found it has patently failed in this task.<sup>1</sup>

Since the EPBC Act came into effect, 7.47 million hectares of habitat for threatened species has been destroyed nationally between 2000 and 2017. This is an area larger than the state of Tasmania and the majority of this destruction has not been regulated under national law. As habitat destruction is the primary driver of species extinction in Australia, this is a catastrophic policy failure.<sup>2</sup>

Analysis of threatened species habitat destruction within each federal electorate paints a revealing and alarming picture of where destruction has occurred. Our analysis found the vast majority (93 per cent) of threatened species habitat destruction has been concentrated in just 12 electorates. Most of these electorates have historically been held by the Liberal and National parties with only two held by Labor and one by an independent.

The worst performing electorate is the seat of Maranoa, currently held by Federal Agriculture Minister David Littleproud. In Maranoa, almost two million hectares of threatened species habitat has been destroyed since the EPBC Act took effect. This represents a 43 per cent decline in threatened species habitat availability in that single electorate in the last 17 years. This has impacted at least 85 threatened species that occur in the electorate, including Koala, Greater Bilby, Black-throated Finch and Long-nosed Potoroo.

The north Queensland electorate of Kennedy is not far behind with 1.6 million hectares destroyed. Our analysis found regional electorates, particularly those in Queensland, are where the bulk of habitat loss has occurred, primarily due to weak national and state environmental laws.

The electorate of Durack in Western Australia, the seat of Environment Minister Melissa Price, comes seventh on our analysis. This is Australia's largest electorate. More than 310,000 hectares of threatened species habitat has been destroyed there over 17 years, impacting iconic animals such as Northern Quoll, Carnaby's Black Cockatoo and the elusive Night Parrot.

<sup>1</sup> ACF, TWS, WWF and UQ (2018): Fast Tracking Extinction: Australia's National Environmental Law

<sup>2</sup> Megan C. Evans, James E. M. Watson, Richard A. Fuller, Oscar Venter, Simon C. Bennett, Peter R. Marsack & Hugh P. Possingham (2011) The Spatial Distribution of Threats to Species in Australia. *BioScience* 61 (4). 281–289

Outer metropolitan and smaller regional electorates also contribute to Australia's extinction crisis. Significant proportions of threatened species habitat have been wiped out through suburban expansion, agriculture, and logging operations. Electorates in south-east Queensland and outer Brisbane are hotspots for habitat loss, especially for koalas.

This analysis highlights that Australia will need to implement stronger national environmental laws to address the ongoing destruction of threatened species habitat.

### Australia's extinction crisis

Australia's national environmental law, the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) was established to protect threatened species and protect important places for their survival, but it has failed in this fundamental task. At present nearly 2000 animals, plants and ecosystems are listed under our national environmental law as threatened with extinction.

Australia is a global extinction hotspot, leading the world on mammal extinctions.<sup>3</sup> Despite being one of the few developed megadiverse countries in the world, Australia has a terrible track record of protecting wildlife and preventing extinction. In the past decade, three Australian animals have gone extinct – Christmas Island Pipistrelle, Christmas Island Skink and Bramble Cay Melomys, with the Melomys being the first mammal declared extinct due to climate change.

### Habitat loss is a major driver of species decline

Habitat loss and fragmentation are major drivers of biodiversity loss in Australia. Other major drivers include invasive species, disease, pollution, over-harvesting, and climate change all of which are caused or enhanced, in part, by habitat loss and fragmentation<sup>4</sup>.

Our analysis has found that since the EPBC Act has been in operation, more than seven million hectares of threatened species habitat has been destroyed across Australia. This is an area larger than the state of Tasmania. Habitat destruction and deforestation have been facilitated by weak environmental laws, under-resourced regulators, and poor enforcement. Australia now has the inglorious title of being the only developed nation to be classified as a global deforestation hotspot.<sup>5</sup>

In the last 20 years, since Australia's national environmental law has been in operation, almost a million hectares of koala habitat has been destroyed. There were approximately 10 million koalas in Australia at the time of European settlement. Today, we have approximately 50,000.<sup>6</sup>

Koalas are not the only charismatic mammal species being pushed to extinction. Australia is rich in reptiles and amphibians, yet we don't track these species well. In fact, they don't feature in the Federal Coalition Government's Threatened Species Strategy. New species of reptiles are still being discovered in Australia. It is likely we are significantly underestimating the number of threatened species in this country. We are likely losing species before we give them a name.

### Threatened species habitat loss across Australian electorates

Cross-referencing threatened species habitat data with federal electorates provides an insight into the nexus of real world environmental problems and political representation. How well do members of parliament stand up for the wildlife that is found in their electorates and loved by their constituents? And in which electorates is the bulk of contemporary habitat destruction occurring?

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<sup>3</sup> International Union for the Conservation of Nature. 2018. Red List of Threatened Species.

<sup>4</sup> Kearney Stephen G., Cawardine Josie, Reside April E., Fisher Diana O., Maron Martine, Doherty Tim S., Legge Sarah, Silcock Jennifer, Woinarski John C. Z., Garnett Stephen T., Wintle Brendan A., Watson James E. M. (2018) The threats to Australia's imperilled species and implications for a national conservation response. *Pacific Conservation Biology*

<sup>5</sup> WWF. 2018. Living Planet Report - 2018: Aiming Higher. Grooten, M. and Almond, R.E.A.(Eds). WWF, Gland, Switzerland.

<sup>6</sup> Senate Standing Committees of Environment and Communications. 2019. Interim Report: Australia's faunal extinction crisis. 2.20.

## Worst performers by area of threatened species loss

The concentration of most significant habitat loss, when measured by area, has been across regional electorates. Just twelve electorates account for the vast majority (93 per cent) of threatened species habitat lost under Australia's national environmental law.

The regional seat of **Maranoa** in south-west Queensland, a safe seat held by the Nationals and Agriculture and Water Minister David Littleproud, has lost the most threatened species habitat with almost two million hectares, or 43 per cent of habitat in the electorate, wiped out over a 17-year period. This electorate is home to at least 85 threatened species, including Koala, Greater Bilby, Black-throated Finch and Long-nosed Potoroo.

The seat of **Durack** in Western Australia is held by Environment Minister Melissa Price and ranks seventh on the list when measured by area of threatened species habitat lost. More than 300,000 hectares of threatened species habitat has been destroyed within the seat of Durack. Species affected include the Western Quoll (chuditch), Carnaby's Black Cockatoo, the Great Desert Skink and Night Parrot.

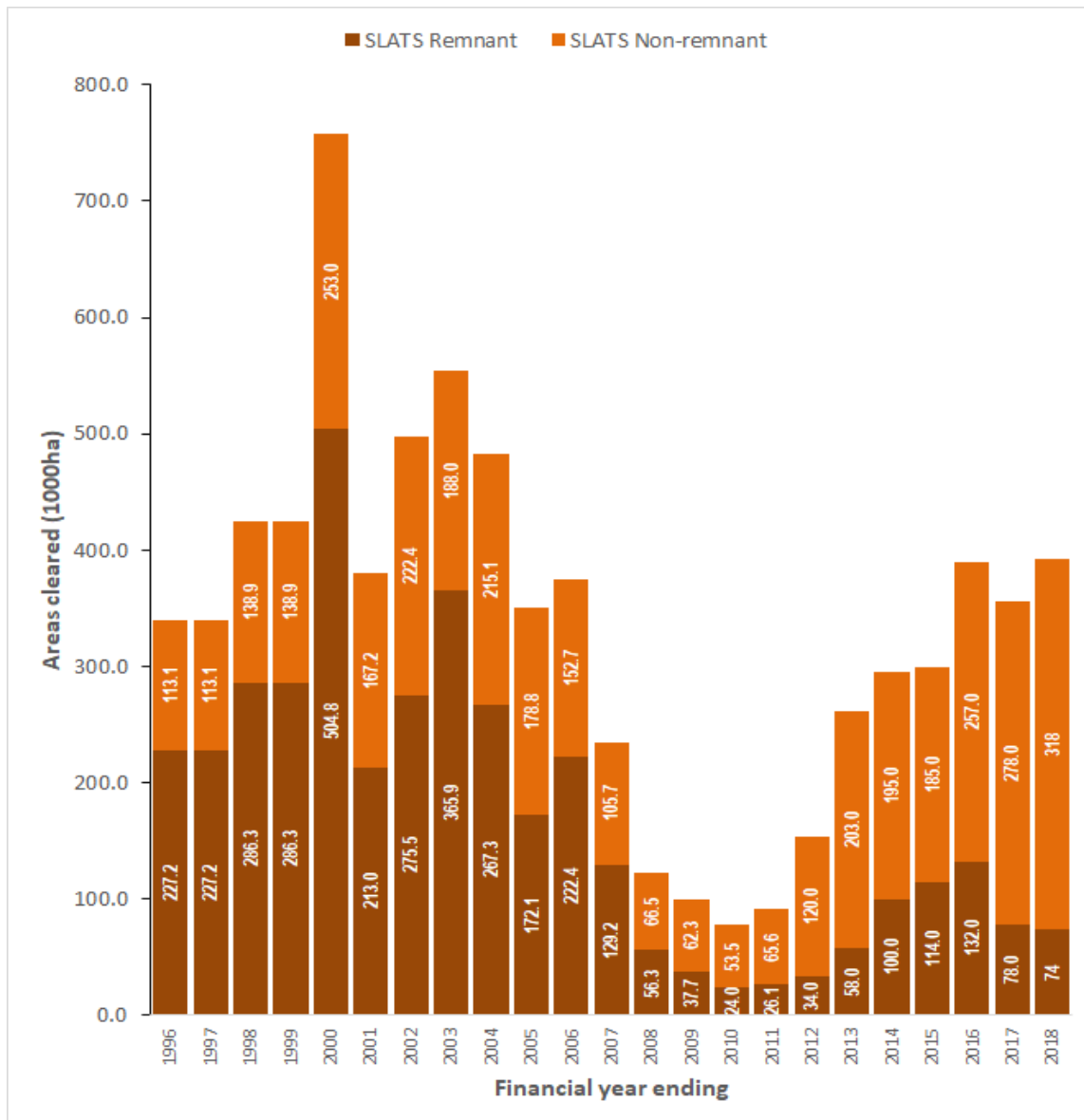
Out of the dozen electorates, the majority are held by the Liberal or National parties. The two seats within NSW, (**Parkes** and **Farrer**) are both held by the Coalition. Two seats are held by Labor (**Lingiari** in the Northern Territory and **Lyons** in Tasmania) and one seat by Katter's Australian Party (**Kennedy**).

The majority of the loss of threatened species habitat in Queensland electorates (**Maranoa, Kennedy, Capricornia, Flynn, Leichhardt, Dawson**) can be attributed to high rates of deforestation – a direct result of weak land clearing laws. Queensland's rates of deforestation were very high from 2000 to 2008 and accelerated again from 2012 following the former Newman Government's weakening of land clearing regulations (see Chart 1). Strengthened native vegetation regulation was introduced at the state level in 2018.

Table 1: Top 12 electorates for threatened species habitat loss by area 2000 - 2017

ELECTORATE	STATE	HELD BY	ELECTORATE SIZE (HA)	THREATENED SPECIES HABITAT LOSS (HA)
Maranoa	Qld	D. Littleproud (LNP)	72,989,498	1,961,526
Kennedy	Qld	B. Katter (KAP)	62,743,901	1,650,539
O'Connor	WA	R. Wilson (LP)	86,760,758	749,527
Capricornia	Qld	M. Landry (LNP)	15,151,447	728,228
Flynn	Qld	K. O'Dowd (LNP)	16,002,654	579,065
Parkes	NSW	M. Coulton (NP)	39,304,990	424,984
Durack	WA	M. Price (LP)	162,597,228	310,444
Leichhardt	Qld	W. Entsch (LNP)	30,096,838	267,409
Lingiari	NT	W. Snowdon (ALP)	134,815,795	234,616
Farrer	NSW	S. Ley (LP)	12,656,197	84,998
Dawson	Qld	G. Christensen (LNP)	6,741,157	81,745
Lyons	Tas	B. Mitchell (ALP)	3,196,885	79,966

Chart 1: Deforestation in Queensland, 1996 - 2018



Source: Queensland Statewide Landcover and Trees Study (SLATS)

Significant habitat loss was also observed in the Tasmanian electorate of **Lyons** (79,966 hectares). This area is notorious for logging of known breeding habitat of the critically endangered Swift Parrot. The logging is conducted under exemptions to the EPBC Act created through Commonwealth-state Regional Forest Agreements. There are believed to be just 1,000-2,000 Swift Parrots remaining in the wild.<sup>7</sup>

Deforestation and land clearing is also known to be a significant problem in western NSW, which is covered by the electorates of **Parkes** and **Farrer**.

### Worst performers by percentage of habitat destroyed within an electorate

When we look at the percentage of habitat lost within an electorate, a number of regional and urban fringe (or peri-urban) electorates emerge as problem areas.

<sup>7</sup> Webb Matthew H., Stojanovic Dejan, Heinsohn Robert (2018) Policy failure and conservation paralysis for the critically endangered swift parrot. Pacific Conservation Biology, <https://doi.org/10.1071/PC18020>

The regional electorate of **Indi** in Victoria has lost 5.29 per cent of its threatened species habitat over the period under investigation, making it the worst performer in Victoria with more than 42,000 hectares of habitat destroyed. This region is home to a host of important and exceptionally vulnerable high country species including Mountain Pygmy-possum, Alpine she-oak Skink and Alpine Tree Frog. The region is also host to a range of native forest logging operations that have detrimental impacts on threatened species.

The electorate of **Pearce** on the northern outskirts of Perth in WA also has a high proportion of threatened species habitat loss at 6.19 per cent. Important banksia shrublands that are home to iconic threatened species such as Carnaby's Black Cockatoo and Baudin's Black Cockatoo have been bulldozed to make way for new suburbs.

**Bass, Braddon and Lyons** in Tasmania also have high percentages of threatened species habitat loss (5.8 per cent, 4.8 per cent and 3.54 per cent respectively). Native forests in all three electorates are subject to logging, which is destroying habitats. The **Braddon** electorate covers King Island, where there has been a significant loss of habitat for two of Australia's most endangered birds, the King Island Thornbill and King Island Scrubtit. Both species are at risk of extinction in the next 20 years.<sup>8</sup>

The worst performing urban fringe electorates were in outer Brisbane. **Oxley** and **Petrie** have lost a significant proportion of threatened species habitat (9.12 per cent and 5.12 per cent respectively). **Longman** is not far behind at 3.62 per cent. Native bushland in these electorates has been destroyed predominantly for urban expansion and infrastructure.

Similar drivers and impacts have occurred in electorates along the Sunshine Coast and Gold Coast in Queensland, where moderately high rates of habitat loss proportional to electorate size have occurred in **Hinkler** (3.52 per cent), **Wide Bay** (3.52 per cent) and **Fadden** (4.61 per cent). The number of Koalas found in these south-east Queensland electorates has declined dramatically as the suburbs have spread and infrastructure projects have razed the much-loved marsupial's natural habitat.

The region encompassed within the new electorate of Bean in the ACT has also experienced significant habitat loss (3.66 per cent), most likely through the expansion of suburbs in the western part of Canberra for the Molonglo housing development. These areas were previously known to contain endangered grasslands as well as species such as the Pink-tailed Worm Lizard, Swift Parrot and Superb Parrot.

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<sup>8</sup> Geyle Hayley M., Woinarski John C. Z., Baker G. Barry, Dickman Chris R., Dutson Guy, Fisher Diana O., Ford Hugh, Holdsworth Mark, Jones Menna E., Kutt Alex, Legge Sarah, Leiper Ian, Loyn Richard, Murphy Brett P., Menkhorst Peter, Reside April E., Ritchie Euan G., Roberts Finley E., Tingley Reid, Garnett Stephen T. (2018) Quantifying extinction risk and forecasting the number of impending Australian bird and mammal extinctions. *Pacific Conservation Biology* 24, 157-167.

Table 2: The 30 worst performing electorates by percentage of threatened species habitat destroyed, 2000 - 2017

ELECTORATE	STATE	HELD BY (SURNAME, PARTY)	THREATENED SPECIES HABITAT LOSS (% PROPORTIONAL TO HABITAT IN ELECTORATE)	THREATENED SPECIES HABITAT LOSS (HA)	FEDERAL BIODIVERSITY GRANT FUNDING (2011-2019)	NUMBER OF THREATENED SPECIES IN ELECTORATE
Maranoa	Qld	D. Littleproud (LNP)	43.69	1,961,526	\$10,428,260	85
O'Connor	WA	R. Wilson (LP)	31.41	749,527	\$27,571,452	165
Capricornia	Qld	M. Landry (LNP)	26.20	728,228	\$25,227,008	49
Kennedy	Qld	B. Katter (KAP)	22.84	1,650,539	\$76,055,024	89
Dawson	Qld	G. Christensen (LNP)	18.95	81,745	\$23,392,900	25
Flynn	Qld	K. O'Dowd (LNP)	16.43	579,065	\$45,065,416	70
Leichhardt	Qld	W. Entsch (LNP)	11.85	267,409	\$27,605,236	84
Herbert	Qld	C. O'Toole (ALP)	9.70	6,439	\$3,397,000	17
Oxley	Qld	M. Dick (ALP)	9.12	1,447	\$2,163,513	6
Parkes	NSW	M. Coulton (NP)	8.25	424,984	\$18,363,500	53
Pearce	WA	C. Porter (LP)	6.19	13,563	\$9,149,920	49
Bass	Tas	R. Hart (ALP)	5.80	32,746	\$5,687,800	39
Indi	Vic	C. McGowan (Ind)	5.29	42,082	\$8,870,205	43
Petrie	Qld	L. Howarth (LNP)	5.12	757	\$0	14
Braddon	Tas	J. Keay (ALP)	4.80	53,650	\$2,290,700	43
Fadden	Qld	S. Robert (LNP)	4.61	1,481	\$150,000	20
Bean	ACT	New seat (ALP)*	3.66	2,357	\$2,437,500	22
Longman	Qld	S. Lamb (ALP)	3.62	3,986	\$0	24
Farrer	NSW	S. Ley (LP)	3.54	84,998	\$8,949,738	33
Lyons	Tas	B. Mitchell (ALP)	3.54	79,966	\$12,384,320	81

Hinkler	Qld	K. Pitt (LNP)	<b>3.52</b>	11,994	\$1,842,070	25
Ballarat	Vic	C. King (ALP)	<b>3.42</b>	3,751	\$2,211,000	23
Forrest	WA	N. Marino (LP)	<b>3.24</b>	14,389	\$4,868,472	67
Gippsland	Vic	D. Chester (Nats)	<b>3.21</b>	35,347	\$1,310,500	64
Rankin	Qld	J. Chalmers (ALP)	<b>3.19</b>	418	\$2,578,314	9
Durack	WA	M. Price (LP)	<b>3.17</b>	310,444	\$26,132,503	192
Franklin	Tas	J. Collins (ALP)	<b>2.93</b>	10,443	\$4,021,980	42
Wide Bay	Qld	L. O'Brian (LNP)	<b>2.63</b>	28,665	\$4,591,170	48
Monash	Vic	New seat (LP)*	<b>2.58</b>	5,551	\$1,519,200	40
McPherson	Qld	K. Andrews (LNP)	<b>2.28</b>	522	\$86,000	

\* New seats allocated notionally based on historical voting data for the region.

Table 3: The species most affected by habitat loss across Australia

SPECIES	STATUS	LIKELY HABITAT LOSS (HA)	KNOWN HABITAT LOSS (HA)	TOTAL HABITAT LOSS (HA)
Koala	Vulnerable	546,042	391,709	937,751
Cassowary	Endangered	5,901	3,527	9,428
Carnaby's cockatoo	Endangered	46,230	2,057	48,287
Grey-headed flying fox	Vulnerable	166,417	154,830	321,247
Growing grass frog	Vulnerable	188,878	5,084	193,962
Regent honeyeater	Critically Endangered	96,522	15,140	111,662
Greater glider	Vulnerable	195,069	12,010	207,079
Spot-tailed quoll	Endangered (Mainland), Vulnerable (Tasmania), North QLD (Endangered)	148,472	77,793	226,265
Painted honeyeater	Vulnerable	1,241,302	42,584	1,283,886
Squatter pigeon	Vulnerable	1,077,468	174,991	1,252,459
Australasian bittern	Endangered	178,250	97,729	275,979
Red goshawk	Vulnerable	3,081,906	82,394	3,164,300
Yakka skink	Vulnerable	644,907	13,943	658,850
Ghost bat	Vulnerable	3,063,932	0	3,063,932
Gouldian finch	Endangered	267,504	121,897	389,401

Analysis completed by: Ward, M., Kearney, S., Williams, B., Watson, B. (2019).

## Methods

To evaluate total habitat loss for threatened species and electorates, a number of spatial datasets were used (Table 4)



Table 4: Overview of datasets used for analysis

NAME	SOURCE	RESOLUTION/SCALE	YEAR(S)
Burnt areas	AusCover and University of Maryland MODIS burned areas collection 45	250m - 500m	2000-2017
Species of National Environmental Significance	Department of Environment and Energy	100m	2018
EPBC Act Referrals Spatial Dataset	Department of Environment and Energy	1km	2018
Forest cover	Department of Environment and Energy, National Greenhouse Gas Inventory (NCAS)	0.00025 dec. degr.	1991-2018
Land use	Australian Bureau of Agricultural and Resource Economics and Sciences	50m & 1000m	1997-2015
Major Vegetation Subgroups v5 preclearing	Department of Environment and Energy, National Vegetation Information System (NVIS)	100m	pre-clearing
<b>Federal electoral boundaries GIS data as at January 2019</b>	Australian Electoral Commission	-	2019

For full methodology see: ACF, TWS, WWF and UQ (2018): [Fast Tracking Extinction: Australia's National Environmental Law.](#)

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