The Guardian

Environment groups accuse government of 'denying the facts' on land clearing

Environment department 'cherry picked' data to claim clearing has decreased, but figures show recent steady increase

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Two of Australia's largest environment groups have accused the federal environment department of providing inaccurate information about land clearing to the Senate, and of not acting to reduce habitat loss.

The Australian Conservation Foundation and WWF Australia say the department has "cherry picked" data to claim that land clearing in Queensland has decreased, when national figures on land clearing rates in that state in fact show increases since 2011.

The groups say it highlights the need for an independent environmental protection authority, something the Labor party has promised if it wins the next federal election.

The department is sticking by its statements, first made to a hearing last year of the fauna extinctions inquiry that is currently before the Senate.

The department's deputy secretary, Dean Knudson, told a hearing "rates of land clearing have actually declined" nationally and "there's an absolute decline in clearing in Queensland".

To make this argument the department is working from a baseline of 2004-05, when land clearing rates in Queensland had exploded to a high point - according to the department's data - before steadily decreasing.

Annual clearing rates started increasing again after 2011 when state laws were wound back by the Newman government. New laws introduced by the Palaszczuk government aimed at curbing land clearing began to take effect only last year.

The chief executives of ACF and WWF Australia wrote to the Senate committee contesting the statements, and raised the matter again in Senate estimates hearings a fortnight ago.

"Mr Knudson's claims that 'when we take a look at land clearing in the entire country, the rates of land clearing have actually declined' and that 'there's an absolute decline in clearing in Queensland' have both been proven conclusively false by the Federal Government's own data and by the Queensland Government data," they wrote.

The department replied, defending its statements.

There are two sources of land clearing data for Australia and Queensland.

National and state-by-state data is produced as part of Australia's national emissions accounting system. The Queensland government also tracks land clearing through its Slats (statewide landcover and trees study) record-keeping system.

Numerous environment groups have pointed out inconsistencies between federal and state records.

The environment department's data through the national carbon accounting system lists primary clearing (of intact, remnant or old growth forest), secondary clearing (forests that have regenerated after logging) and emerging regrowth.

Those records show that combined figures of primary and secondary clearing skyrocketed to 813,000 hectares nationally in 2005, 570,000 hectares of which was in Queensland.

The Queensland figure declined to 205,000 hectares by 2011, but climbed back up to 303,000 hectares in 2013 before falling slightly to 269,000 and 253,000 in 2014 and 2015 respectively, and increasing again to 301,000 in 2016.

A similar pattern can be observed in the national landclearing totals.

The Slats data shows annual clearing rates increased every year in Queensland from 2009-10 until 2015-16, before decreasing slightly in 2016-17 and increasing again last year. The most recent summary listed combined primary and secondary clearing at 392,000 hectares in 2017-18.

"The fact is, tree clearing may have come down since the last decade but in Queensland it went up meteorically after the former Newman government took an axe to the laws," said Martin Taylor, a conservation scientist at WWF Australia.

"To sit there and pretend it didn't happen is dishonest."

James Trezise, a policy analyst at the Australian Conservation Foundation, said the department's response was disappointing.

"The data clearly shows land clearing exploded after the Newman government unpicked native vegetation laws in Queensland. Denying the facts undermines trust in our public institutions," he said.

"The department has cherry picked data to support its narrative that land clearing in Queensland hasn't been a significant issue for the past seven years."

He said it was another example of how Australia's environment laws were failing to protect threatened species and their habitat.

"This episode highlights why we need an independent federal EPA to provide frank and fearless advice on environmental issues," he said.

But a spokesperson for the environment department said it "stands by its statements on land clearing".

"The national dataset shows that clearing of primary forest (forests not observed to have been previously cleared) has experienced long-term decline since at least 2004-05," the department said.

The department said its data showed primary clearing had fallen steadily in Queensland from 228,000 hectares to 35,000 hectares in 2014-15 and 36,000 hectares in 2015-16.

"The dataset also shows that clearing of secondary forests (forests that have been observed to have been previously cleared) in Queensland has declined somewhat since 2004-05 falling from 343,000 hectares in 2004-05 to 265,000 hectares in 2015-16," it said.

The department said a forthcoming publication showed a large portion of this clearing was of vegetation that had been forest for "five years or less".

"Over the last nine years, the area of land under emerging forest regrowth across Queensland has also grown quickly - on average by 308,000 hectares a year - which is in excess of the average rate of clearing."

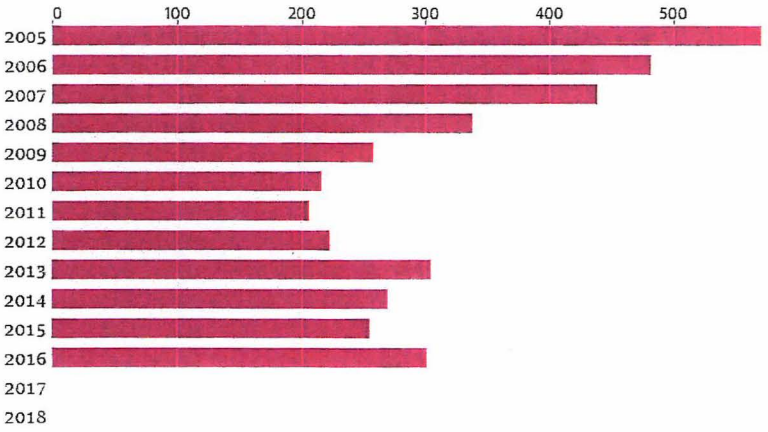
Topics

- Trees and forests
- Queensland
- news

1

National Greenhouse Gas Inventory data

Areas cleared in 1000ha

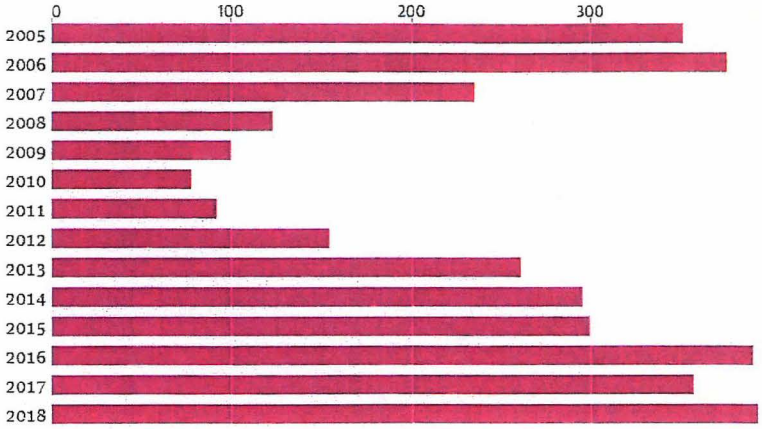


Guardian graphic | Source: LULUCF Activity Table 1990 - 2016

2

Statewide Landcover and Tree Study (SLATS) data

Areas cleared in 1000ha



Guardian graphic | Source: SLATS

Land Use, Land Use Change and Forestry
Activity Table: 1990-2016

	Annual areas of forest cleared over the period 1990 to 2016 (kha)																	
	National		NSW		NT		QLD		SA		TAS		VIC		WA		ACT	
	Primary Conversion	Reclearing	Primary Conversion	Reclearing	Primary Conversion	Reclearing	Primary Conversion	Reclearing	Primary Conversion	Reclearing	Primary Conversion	Reclearing	Primary Conversion	Reclearing	Primary Conversion	Reclearing	Primary Conversion	Reclearing
1990	587.8	320.0	65.1	62.5	2.3	2.1	419.5	208.2	13.2	7.2	11.9	4.5	16.9	15.1	58.7	20.1	0.2	0.3
1991	474.0	342.3	50.4	72.3	1.9	2.0	338.4	215.0	9.6	7.1	14.0	7.2	13.3	16.9	46.4	21.5	0.1	0.4
1992	372.1	375.1	38.9	77.1	2.8	2.8	279.6	241.3	6.8	8.3	6.5	7.8	10.5	19.0	26.9	18.4	0.1	0.4
1993	262.9	315.0	25.4	56.7	1.0	1.7	198.6	210.5	4.3	6.2	5.4	5.6	7.0	18.0	21.1	16.1	0.1	0.2
1994	267.6	343.2	26.3	61.2	1.0	1.8	203.9	232.5	3.7	5.9	4.7	4.9	6.0	20.0	22.0	16.8	0.0	0.2
1995	214.1	273.9	19.3	52.8	0.9	1.7	161.9	177.2	3.1	5.3	4.7	5.1	5.3	16.1	18.9	15.5	0.0	0.2
1996	219.4	274.7	17.7	51.2	1.3	2.3	170.8	183.1	2.7	5.1	3.7	3.9	5.5	13.7	17.6	15.3	0.0	0.2
1997	218.1	281.0	17.9	53.0	1.4	2.4	168.5	186.1	2.8	5.3	4.2	4.1	5.7	14.5	17.6	15.3	0.1	0.2
1998	221.7	296.6	16.6	54.3	1.0	1.8	177.5	203.6	2.7	5.8	3.7	3.8	5.4	13.5	14.7	13.6	0.1	0.3
1999	258.5	343.9	18.9	62.8	0.9	1.9	213.7	242.6	3.0	6.9	3.3	4.1	5.7	12.3	12.9	13.0	0.1	0.3
2000	264.6	337.2	17.0	57.2	0.8	2.2	224.1	240.8	2.6	6.7	3.0	3.4	4.5	10.6	12.5	16.1	0.1	0.3
2001	306.3	375.1	17.7	57.6	0.9	2.5	263.6	271.6	3.2	8.6	3.2	3.6	4.2	10.1	13.6	20.8	0.0	0.4
2002	275.7	353.6	15.9	54.3	0.8	2.3	228.1	245.2	2.9	8.8	3.1	4.4	11.2	16.2	13.7	22.0	0.1	0.5
2003	221.4	350.4	15.2	55.8	0.9	2.4	156.6	223.3	2.6	9.2	3.7	6.3	26.4	26.3	15.9	26.3	0.2	0.8
2004	229.6	392.8	17.0	67.6	0.9	3.0	171.4	246.6	3.0	12.0	4.2	6.7	16.9	27.2	16.2	28.8	0.2	0.8
2005	282.8	530.2	20.0	85.6	1.4	4.8	227.9	342.8	3.6	16.3	5.0	8.2	7.3	34.4	17.5	37.2	0.1	0.8
2006	238.0	517.1	17.0	99.3	1.2	6.7	184.3	297.1	4.0	17.9	4.1	8.4	9.4	41.9	17.9	45.1	0.1	0.7
2007	200.9	481.9	16.0	94.9	1.6	5.5	152.0	286.4	3.6	14.2	4.0	8.6	6.5	30.2	17.1	41.6	0.0	0.6
2008	139.2	380.8	11.1	63.9	1.4	3.8	102.9	234.7	2.1	9.2	4.2	10.6	5.1	23.2	12.4	35.2	0.0	0.2
2009	104.5	340.9	9.6	69.0	0.9	3.5	70.2	187.2	2.2	9.7	3.8	8.6	6.9	27.1	10.9	35.4	0.0	0.4
2010	81.6	329.1	8.6	76.2	0.7	3.5	50.1	165.1	2.0	11.2	3.6	9.2	4.9	26.4	11.6	37.2	0.0	0.3
2011	66.0	312.9	8.9	76.5	0.5	2.2	40.2	165.2	1.6	11.5	2.6	7.6	1.8	17.4	10.5	32.1	0.0	0.2
2012	57.1	324.9	9.2	74.6	0.4	2.7	36.0	185.5	1.5	12.4	1.4	5.3	1.3	16.6	7.2	27.6	0.0	0.2
2013	59.9	418.2	8.6	72.9	0.5	2.9	39.2	264.5	1.8	16.7	1.5	5.7	1.5	25.9	6.8	29.5	0.0	0.1
2014	59.6	374.8	7.9	54.5	0.5	2.9	37.7	231.2	2.7	18.2	1.8	6.5	2.1	30.4	6.8	30.9	0.0	0.1
2015	58.1	349.9	7.6	45.4	0.7	3.9	34.8	218.8	2.3	14.3	1.6	7.4	2.0	26.0	9.2	33.9	0.0	0.1
2016	60.2	395.2	8.7	48.8	1.1	5.3	36.4	264.6	0.7	10.5	1.4	7.9	1.5	23.3	10.4	34.8	0.0	0.1

Land cover change in Queensland

Statewide Landcover and Trees Study Summary Report: 2016–17 and 2017–18

PREFACE

The Statewide Landcover and Trees Study (SLATS) is a vegetation monitoring initiative of the Queensland Government, undertaken by the Remote Sensing Centre (RSC) in the Department of Environment and Science (DES). The primary objective of the study is to map the location and extent of woody vegetation clearing across Queensland and report annualised rates of clearing. It supports the *Vegetation Management Act 1999* (VMA), administered by the Department of Natural Resources, Mines and Energy (DNRME), and other land management initiatives.

SLATS detects changes in woody vegetation by comparing Landsat satellite imagery captured approximately one year apart. It is informed by ancillary data including higher spatial resolution satellite imagery such as Sentinel 2A and 2B. SLATS is based on scientific approaches which have been peer-reviewed by international remote sensing experts. It includes a combination of automated and manual analyses with rigorous quality assurance checking by experienced remote sensing scientists.

KEY FINDINGS

The annualised woody vegetation clearing rates for Queensland for the periods 2016–17 and 2017–18 are shown in Table 1. Woody vegetation clearing rates for 2015–16 are also included for comparison.

Table 1: Annualised clearing rates[1] by woody vegetation type (% of total clearing rate)

Period	Non-remnant	Remnant[2]	Total
2015–16	257 000 (66%)	132 000 (34%)	390 000
2016–17	278 000 (78%)	78 000 (22%)	356 000
2017–18	318 000 (81%)	74 000 (19%)	392 000

[1]All rates are reported in hectares per year (ha/year) and are rounded to the nearest 1000 ha/year. Percentages are rounded to the nearest whole percentage. Refer to DES (2018) for information about the calculation of the annualised woody vegetation clearing rates and adjustment to previous years' rates.

[2]All remnant woody vegetation clearing rates reported are based on Queensland Herbarium Remnant Vegetation Cover of Queensland, Version 11.0.

In 2016–17, the statewide clearing rate was 356 000 ha/year. This is a 9% decrease from the 2015–16 woody vegetation clearing rate of 390 000 ha/year (Figure 1 and Table 1). The woody vegetation clearing rate in 2017–18 was 392 000 ha/year. This is a 10% increase from the 2016–17 woody vegetation clearing rate of 356 000 ha/year.

The statewide remnant woody vegetation clearing rate for 2016–17 was 78 000 ha/year. This represents 22% of the total woody vegetation clearing rate for that period. The remnant clearing rate in 2017–18 was 74 000 ha/year, representing 19% of the total woody vegetation clearing rate for that period.

Approximately 91% and 93% of the clearing mapped in 2016–17 and 2017–18, respectively, was assigned to the replacement land cover class *pasture*. The remainder was assigned to the other classes of *crops, forestry, mining, infrastructure* and *settlement*.

Approximately 36% and 41% of woody vegetation clearing in 2016–17 and 2017–18, respectively, had previously been cleared one or more times since 1988.

WOODY VEGETATION CLEARING

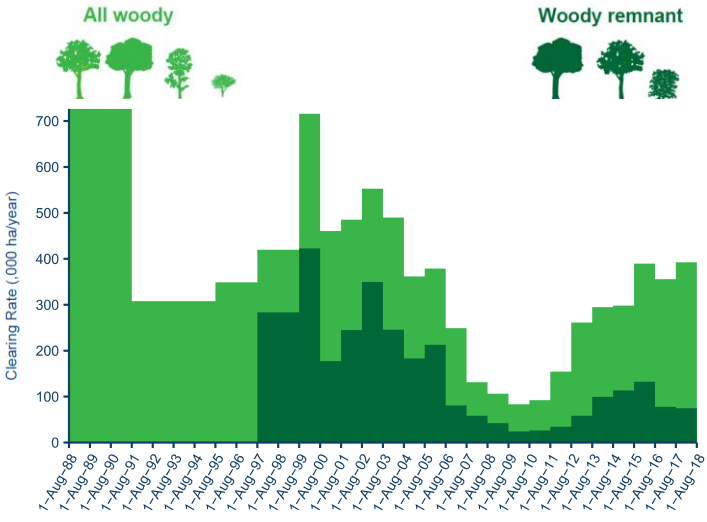


Figure 1: Historic woody vegetation clearing rates in Queensland

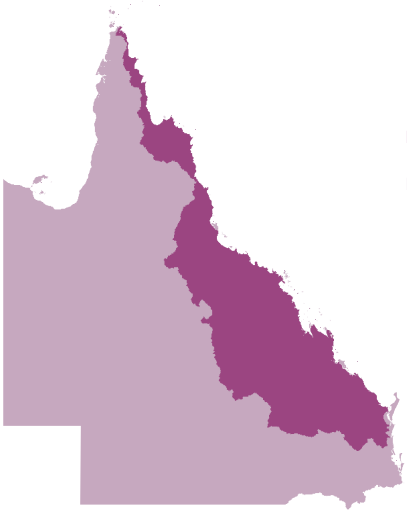
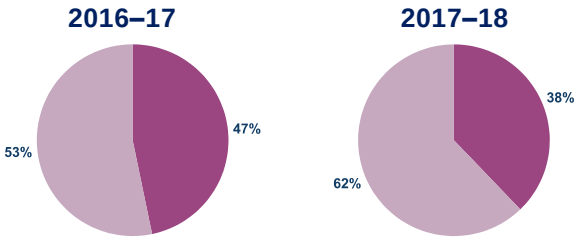


Figure 2. Woody vegetation clearing rate in the Great Barrier Reef catchments as a percentage of the total clearing rate in Queensland

GREAT BARRIER REEF (GBR) CATCHMENTS

The woody vegetation clearing rate in the Great Barrier Reef catchments was 166 000 ha/year in 2016–17 and 148 000 ha/year in 2017–18. This represented 47% and 38% of the total statewide woody vegetation clearing rates in 2016–17 and 2017–18, respectively (Figure 2). The 2015–16 woody vegetation clearing rate was 158 000 ha/year.



*The GBR catchments are a subset of the North East Coast drainage division indicated in Figure 4.

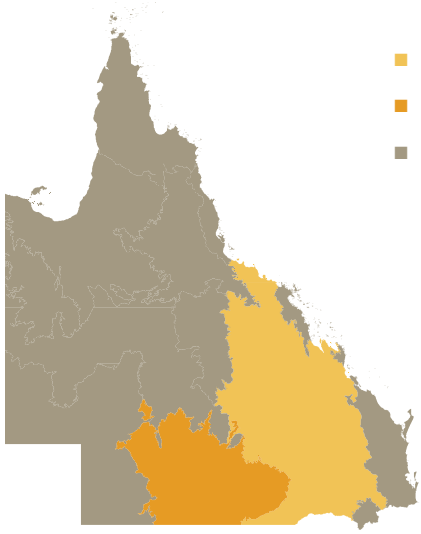
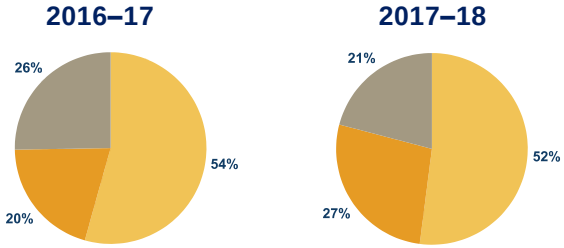


Figure 3. Woody vegetation clearing rate in key bioregions as a percentage of the total clearing rate in Queensland

BIOREGIONS

Of Queensland's 13 bioregions, the Brigalow Belt and Mulga Lands recorded the highest woody vegetation clearing rates in the 2016–17 and 2017–18 periods (Figure 3). The Brigalow Belt's clearing rate was 193 000 ha/year in 2016–17, and 204 000 ha/year in 2017–18. The Mulga Lands' clearing rate was 73 000 ha/year in 2016–17 and 106 000 ha/year in 2017–18.



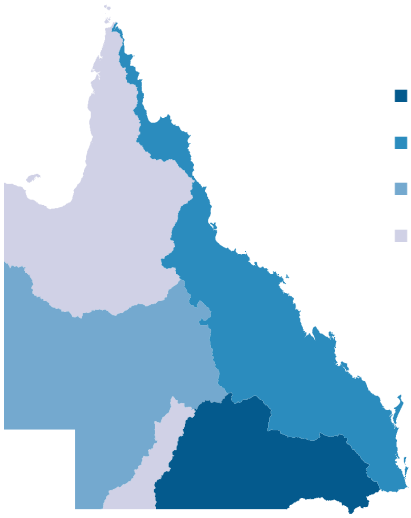
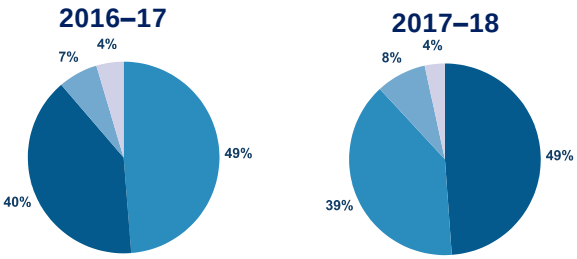


Figure 4. Woody vegetation clearing rate in key drainage divisions as a percentage of the total clearing rate in Queensland

DRAINAGE DIVISIONS

The Murray-Darling and North East Coast drainage divisions recorded the highest woody vegetation clearing rates in 2016–17 and 2017–18. The woody vegetation clearing rate in the Murray-Darling was 142 000 ha/year in 2016–17 and 192 000 ha/year in 2017–18. The North East Coast division's clearing rate was 173 000 ha/year in 2016–17 and 154 000 ha/year in 2017–18.



STATEWIDE WOODY VEGETATION CLEARING

The spatial distribution of woody vegetation clearing rates in Queensland for the 2016–17 and 2017–18 periods is shown in Figure 5.

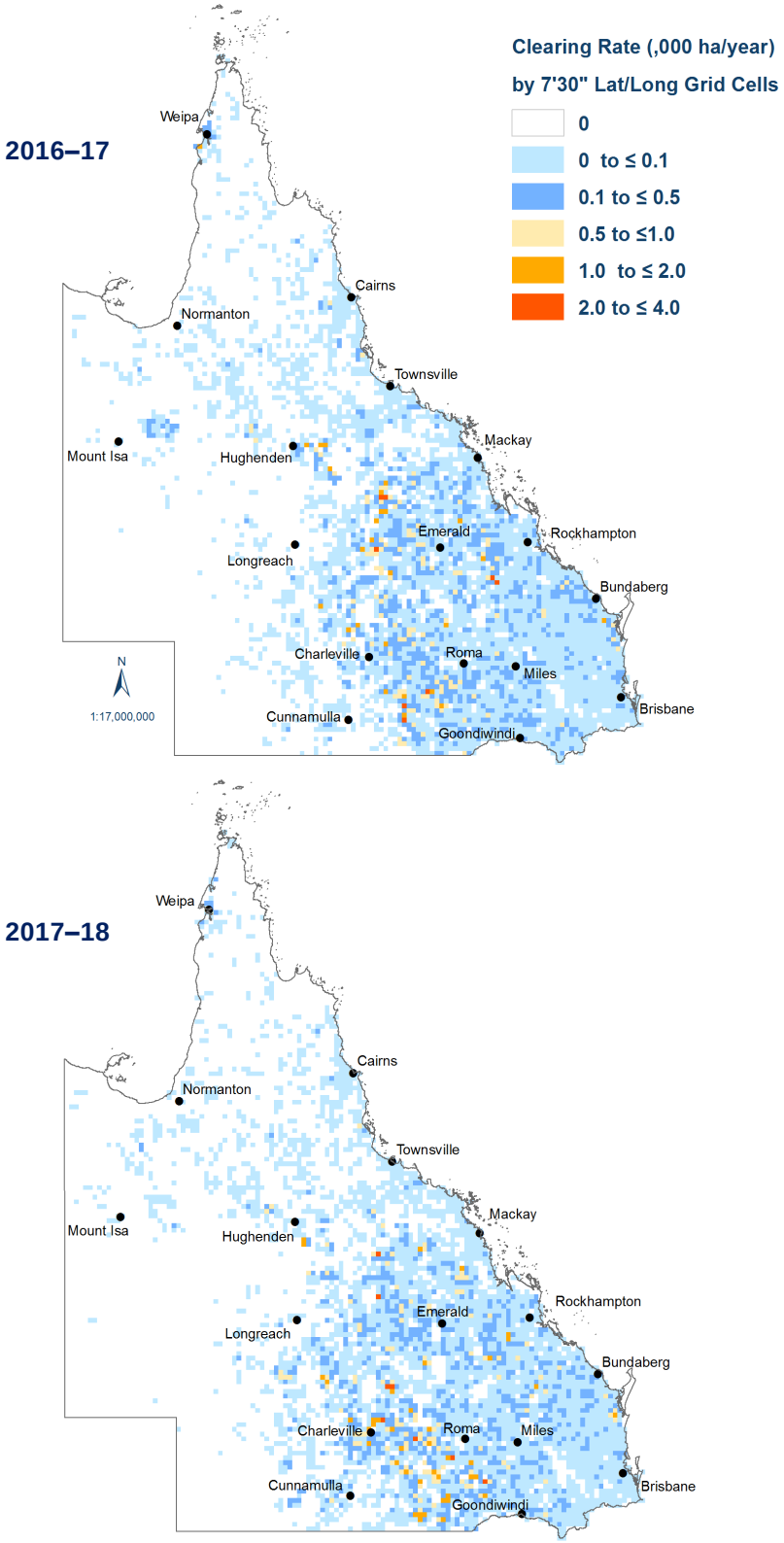


Figure 5. Woody vegetation clearing rates in Queensland 2016–17 (top) and 2017–18 (bottom).

Individual cell area = 17 500 hectares

FUTURE DIRECTIONS

The Queensland Government is committed to enhancing the scope of SLATS and vegetation information to support evidence-based decision-making. New earth observation and computing technologies are available to enhance woody vegetation extent mapping and to develop new regrowth and vegetation condition monitoring methods for the state. This will inform a more comprehensive monitoring and reporting framework for the management of Queensland's vegetation.

REPORTS AND SPATIAL PRODUCTS

For further information about SLATS, refer to: https://www.qld.gov.au/environment/land/management/mapping/statewide-monitoring/slats

Data summaries to accompany this Summary Report, SLATS methodology and previous reports are available at: https://www.qld.gov.au/environment/land/management/mapping/statewide-monitoring/slats/slats-reports

SLATS spatial data products can be downloaded from the Queensland Spatial Data Catalogue (QSpatial): http://qldspatial.information.qld.gov.au/catalogue/custom/index.page

Reference:

Queensland Department of Environment and Science. 2018. Statewide Landcover and Trees Study: Overview of Methods. DES, Brisbane.

Department of Environment and Science

Citation: Queensland Department of Environment and Science. 2018. Land cover change in Queensland 2016–17 and 2017–18: a Statewide Landcover and Trees Study (SLATS) Summary Report. DES, Brisbane.

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