Total vegetation cover soil protection
Region:NRM Riverina NSW   Date: October 2019

This report describes vegetation protecting the soil surface from erosion during a chosen month compared to previous years. This report has been generated using MODIS fractional vegetation cover information available in Rangelands and Pasture Productivity (RAPP) map tool https://map.geo-rapp.org/#australia. The report is based on 500 metre pixel data on monthly time steps.
Land use forest cover:

Results can be shown for the whole region (polygon), and separated by land use and forest cover classes which are likely to show different cover patterns and targets. Land use is divided into four broad classes: Conservation and natural environments, Agriculture, production native forests and plantation forests (no report), and other (no report). Agriculture is divided into grazing, crops and horticulture which are sub-divided into non-irrigated and irrigated. If forest is present land use is further divided into: non-forest, woodland forest and non-woodland forest. The area of each land use and forest class are shown as a map and chart. The report content is repeated for each land use and forest cover class that covers at least 1% of the area of the chosen region.
Total vegetation Cover:

The total vegetation cover indicates where soil is likely to be protected from wind and or water hillslope erosion. Total vegetation cover for this month is shown on a map and chart classified into 4 classes.
    • 71-100% High cover – protected from wind and usually water erosion (high rainfall, steep
slopes, and erodible soils may need greater than 80, 90, 95 and up to 100% cover)
    • 51-70% Moderate cover – protected from wind erosion
    • 31-50% Low cover – not protected
    • 0-30% Very Low cover – not protected
Erosion protection: Wind erosion 50% total vegetation cover

The vegetation cover threshold required to prevent soil erosion is usually 50% to reduce wind erosion, 70% or 80% to reduce water (hillslope) erosion depending on the steepness and rainfall. Areas protected from erosion for the month:
    • Map: water erosion protection (>70% cover) percentage area and hectares.
    • Map: wind erosion protection (>50% cover) percentage area and hectares.
Comparison with previous years:

    • Map: anomaly comparing this month to the average cover from the same month in previous years.
    • Map: deciles rank of month against the same month in previous years.
Anomalies and deciles until September 2019 are calculated comparing to the same months 2001 to 2019. Extra monthly data will be used to calculate anomalies and deciles post September 2019 as they become available.
Time series monthly from January 2001 to current:

Erosion protection
    • Wind erosion protection time series: percentage of the area of the region with greater than 50% cover for
      each month (orange lines). Horizontal lines are 10th (cover target) and 50th percentiles.
    • Water erosion protection time series: percentage of the area of the region with greater than 70% cover for
      each month (blue line). Horizontal lines are 10th (cover target) and 50th percentiles.
Rainfall
    • Millimetres rainfall each month (black line).
Each time series is also stacked by year. The black line shows the current year of data.
Water erosion protection for higher rainfall and steeper slopes:

Water erosion protection on higher slopes. As slope increases, more cover is required to control water erosion. The thresholds reported are:
    • the percentage area with pixels greater than 80% total cover.
    • the percentage area with pixels greater than 90% total cover.
    • the percentage area with pixels greater than 95% total cover.

Acknowledgment of data:

1. http://www.agriculture.gov.au/abares/aclump/land-use/alum-classification

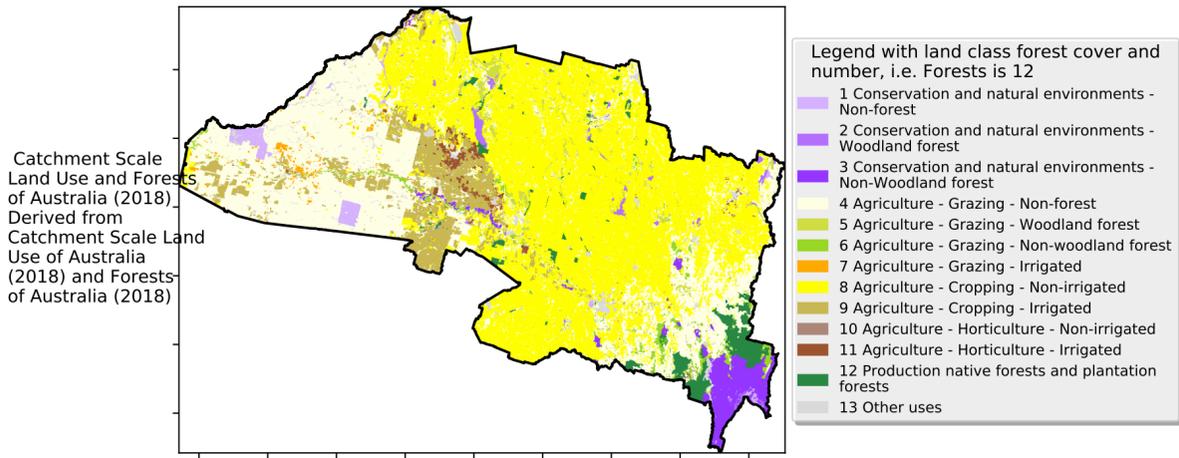2. http://www.agriculture.gov.au/abares/forestsaustralia/sofr/sofr-2018

3. https://www.dpi.nsw.gov.au/agriculture/pastures-and-rangelands/establishment-mgmt/production-management2/groundcover
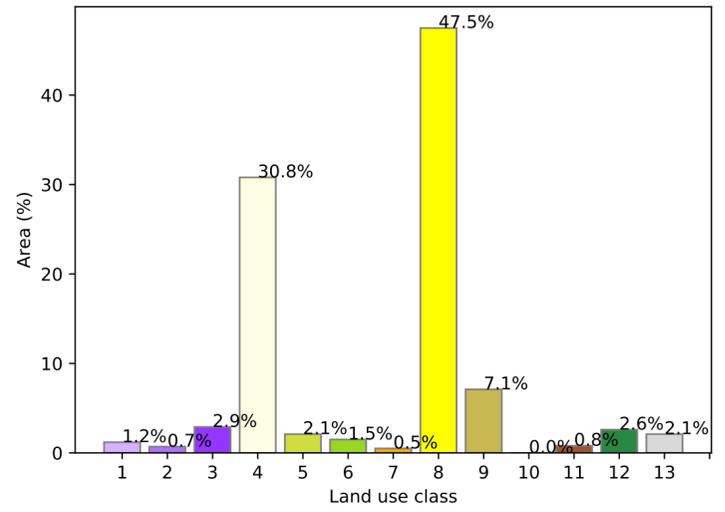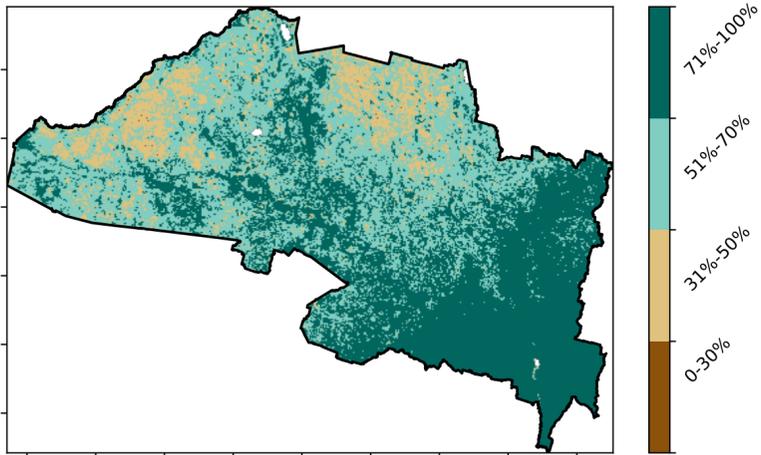
4. MODIS Fractional cover algorithm:

    https://doi.org/10.4225/08/5848a3f19a7b3

Vegetation Cover Oct 2019

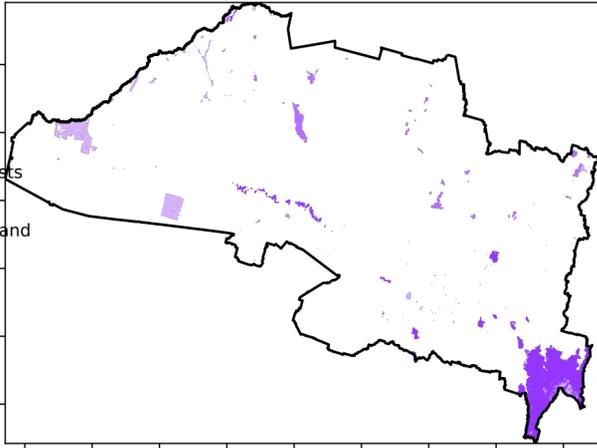## Land use and forest cover

Catchment Scale
Land Use and Forests
of Australia (2018).
Derived from
Catchment Scale Land
Use of Australia
(2018) and Forests
of Australia (2018)

Legend with land class forest cover and number, i.e. Forests is 12

1 Conservation and natural environments - Non-forest
2 Conservation and natural environments - Woodland forest
3 Conservation and natural environments - Non-Woodland forest
4 Agriculture - Grazing - Non-forest
5 Agriculture - Grazing - Woodland forest
6 Agriculture - Grazing - Non-woodland forest
7 Agriculture - Grazing - Irrigated
8 Agriculture - Cropping - Non-irrigated
9 Agriculture - Cropping - Irrigated
10 Agriculture - Horticulture - Non-irrigated
11 Agriculture - Horticulture - Irrigated
12 Production native forests and plantation forests
13 Other uses

Proportion of each land class in area

Total Vegetation Cover [%]

71%-100%
51%-70%
31%-50%
0-30%

Proportion of vegetation cover class in area


% Area protected from water erosion (>70%)

Area not protected 53.8% of region (3,601,372 ha)
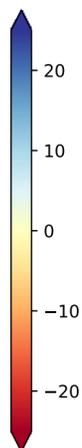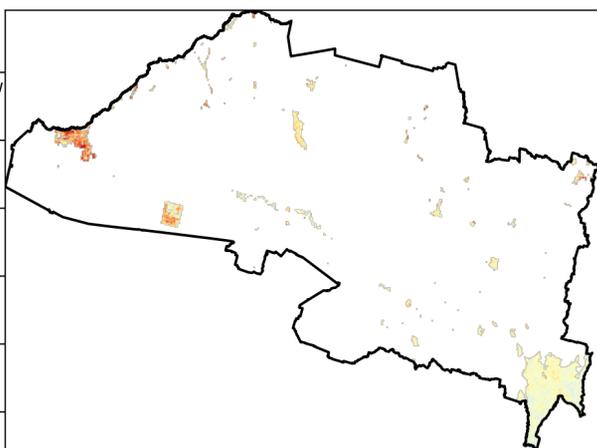
Area protected 46.2% of region (3,092,628 ha)

% Area protected from wind erosion (>50%)

Area not protected 12.0% of region (803,280 ha)

Area protected 88.0% of region (5,890,720 ha)

Total Vegetation Cover Anomaly [%]

Anomaly show how many percetage points each pixel is from the mean. That is, red pixels are about 20% lower than the mean of that pixel. The mean is only for the month of the map using baseline from 2001 to 2019.

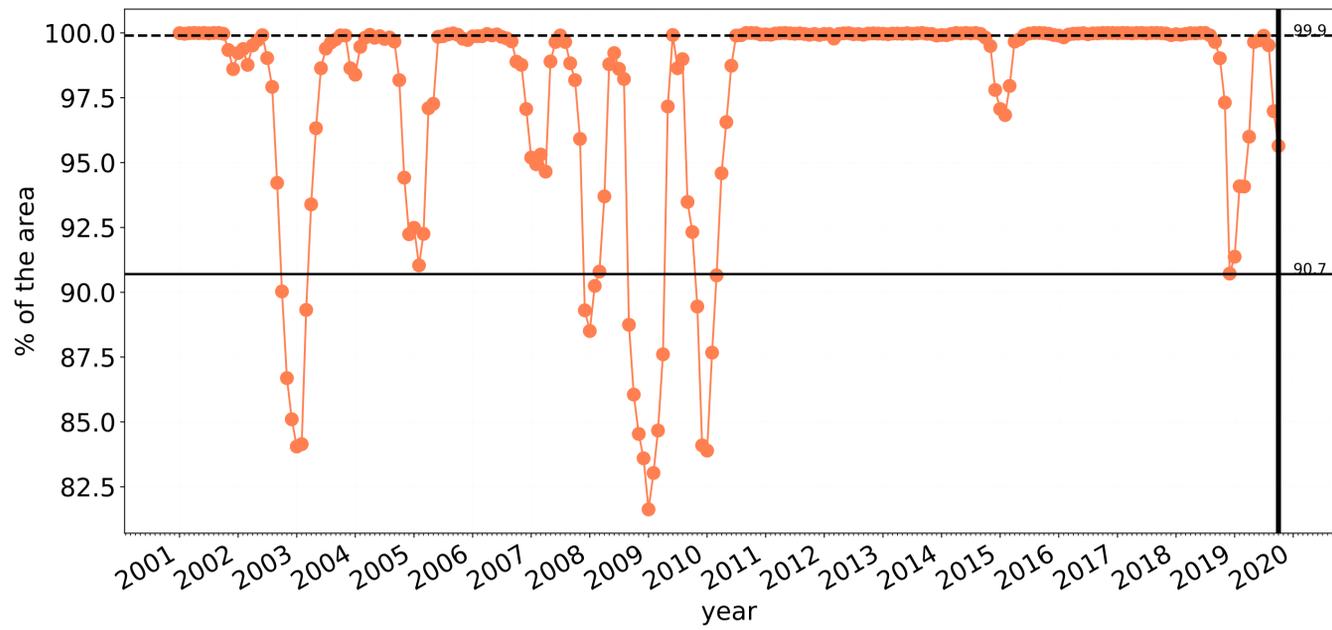## Total Vegetation Cover Decile [%]

Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the map using baseline from 2001 to 2019.
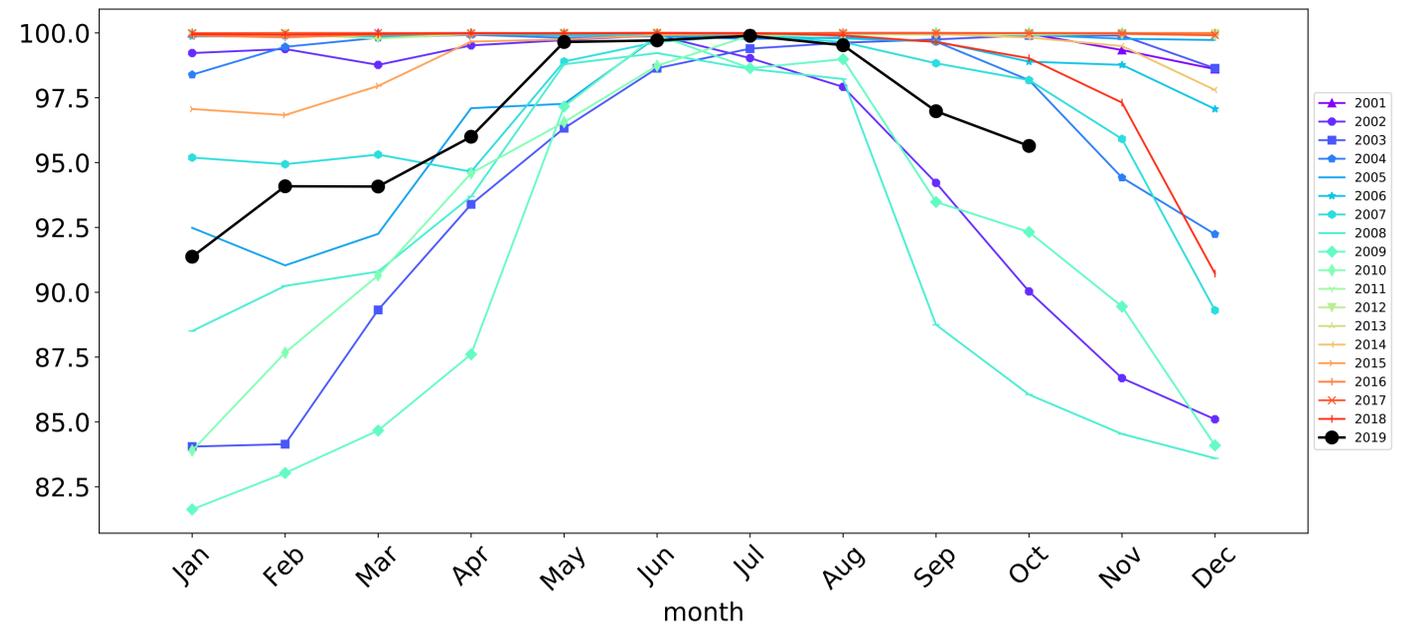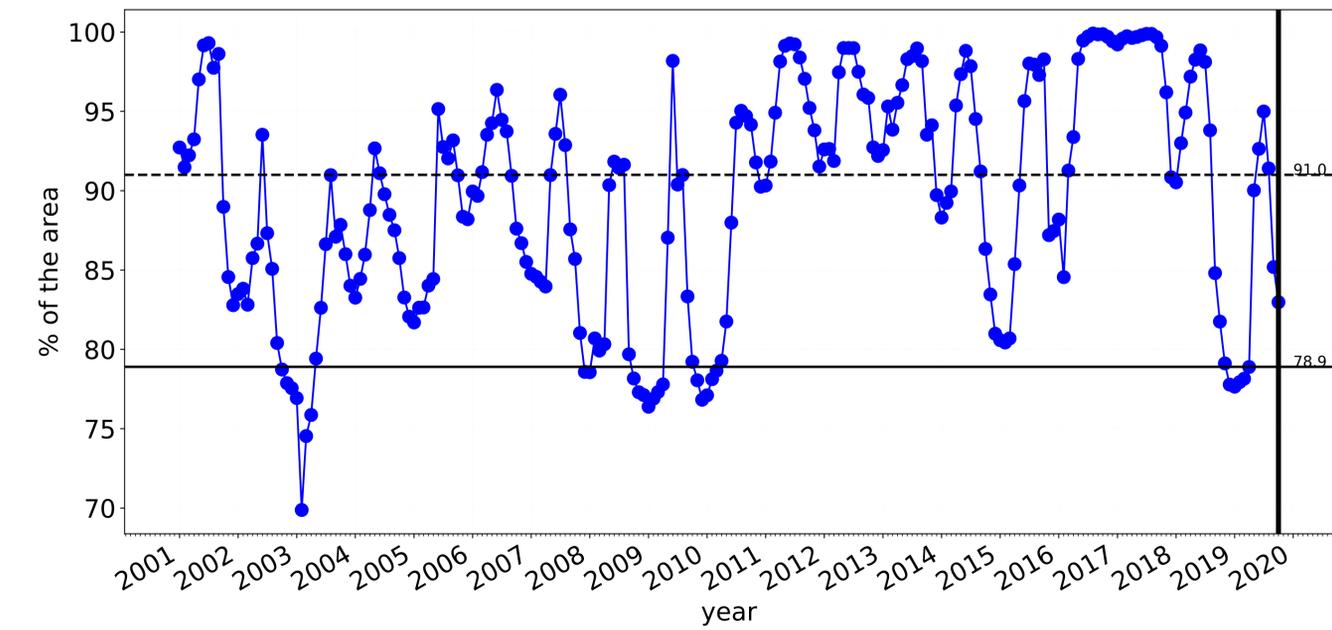

2

Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)

Wind erosion historical monthly area protected (Total Veg Cov >50%)

Proportion of the area protected from water erosion (Total Vegetation Cover > 70%)

Water erosion historical monthly area protected (Total Veg Cov>70%)

Monthly rainfall from 2001 to 2019

Rainfall: historical monthly

Conservation and natural environments

Land use and forest cover

Catchment Scale Land Use and Forests of Australia (2018) Derived from Catchment Scale Land Use of Australia (2018) and Forests of Australia (2018)

- Conservation and natural environments - Non-forest
- Conservation and natural environments – Woodland forest
- Conservation and natural environments – Non-woodland forest

Total Vegetation Cover [%]

71%-100%
51%-70%
31%-50%
0-30%

Proportion of vegetation cover class in area

Area (%)

Total Vegetation Cover class

0-30%: 0.0%
31%-50%: 4.3%
51%-70%: 12.7%
71%-100%: 83.0%
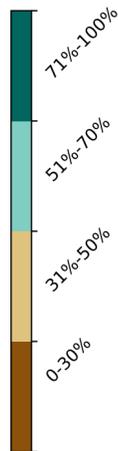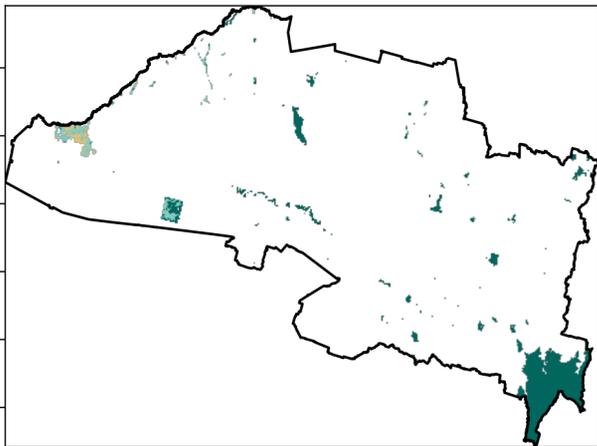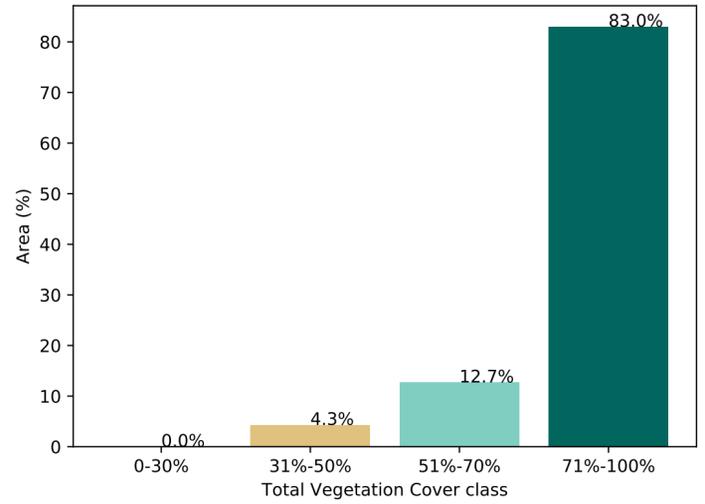
% Area protected from water erosion (>70%)
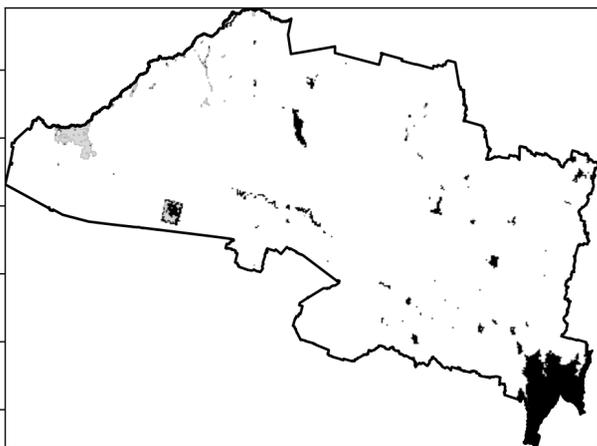
Area not protected 17.0% of region (54,918 ha)

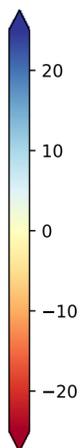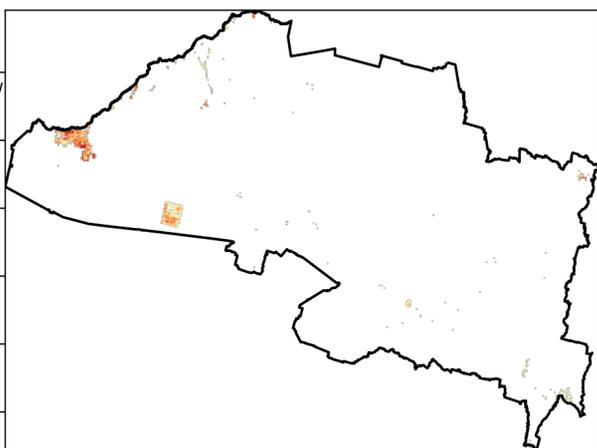Area protected 83.0% of region (268,131 ha)

% Area protected from wind erosion (>50%)
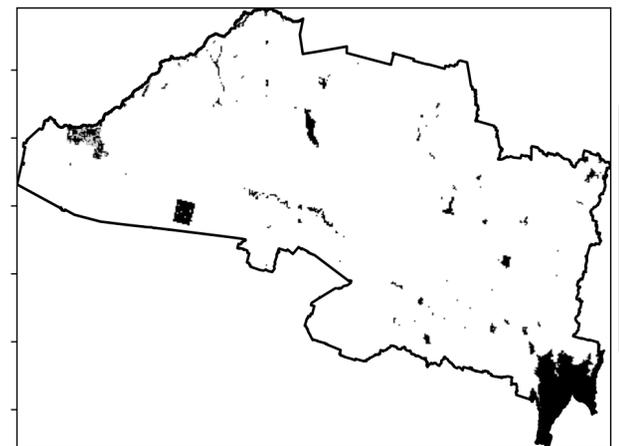
Area not protected 4.0% of region (12,922 ha)
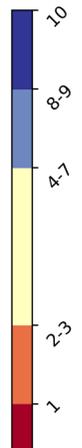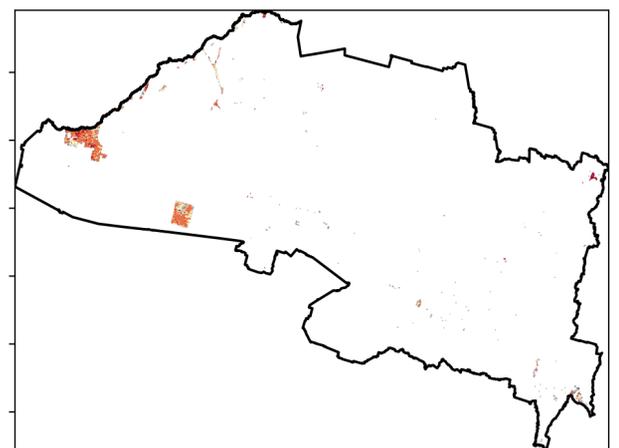
Area protected 96.0% of region (310,128 ha)

Total Vegetation Cover Anomaly [%]

Anomaly show how many percetage points each pixel is from the mean. That is, red pixels are about 20% lower than the mean of that pixel. The mean is only for the month of the map using baseline from 2001 to 2019.
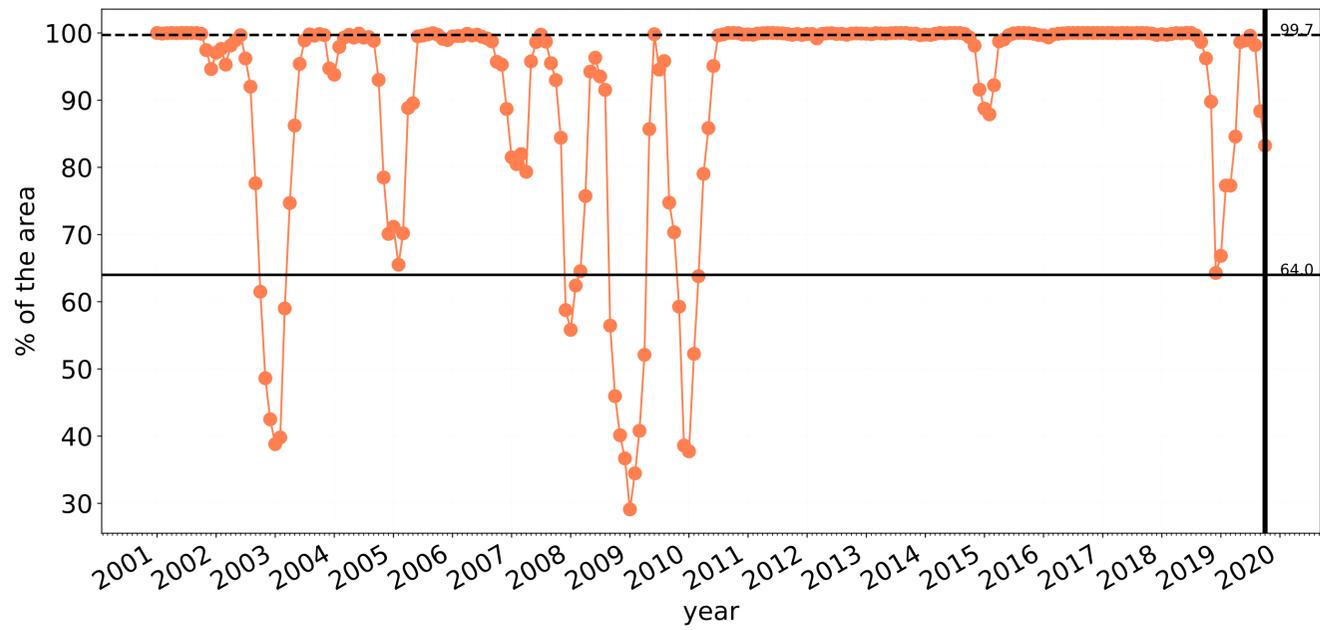
Total Vegetation Cover Decile [%]

Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the map using baseline from 2001 to 2019.

10
8-9
4-7
2-3
1
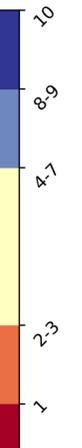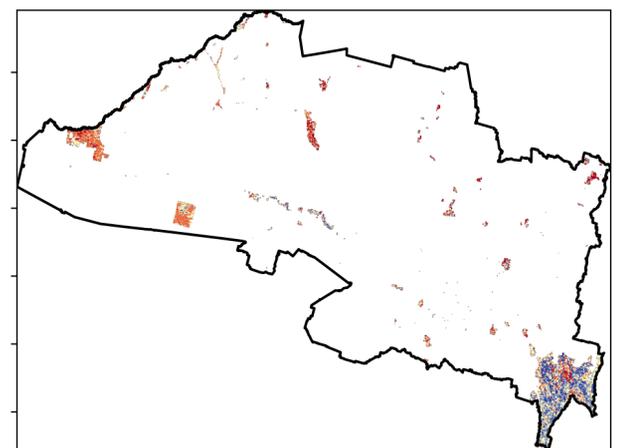
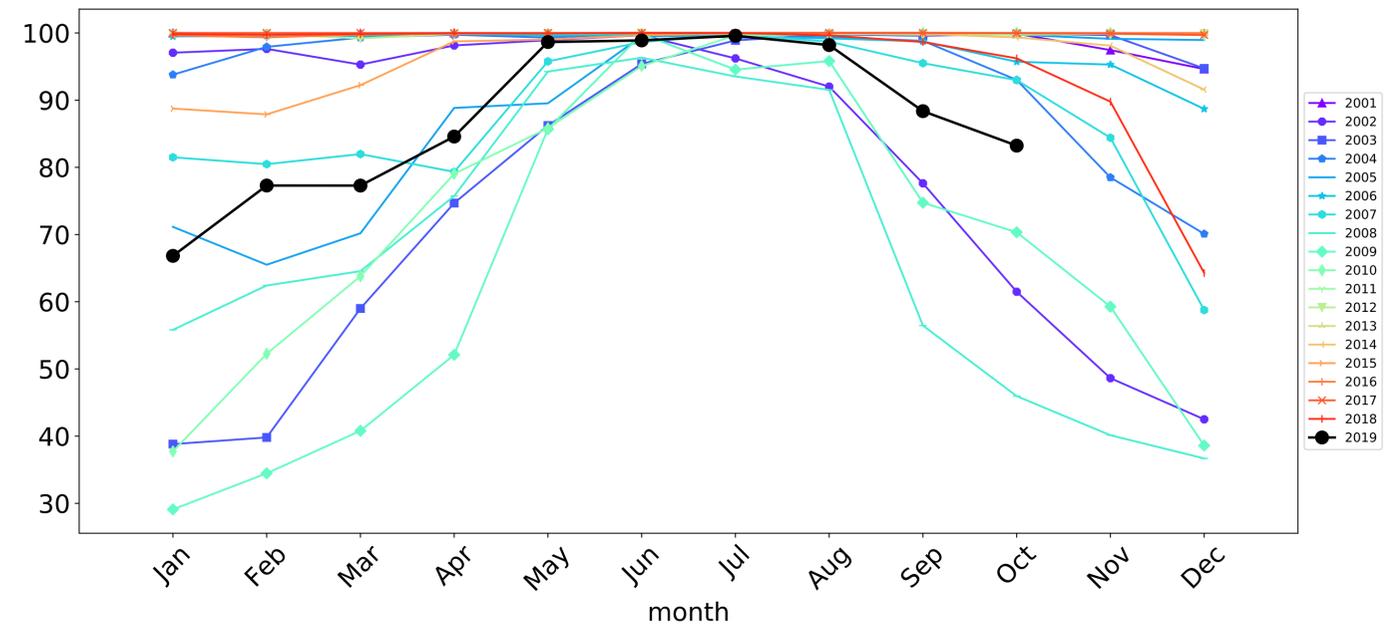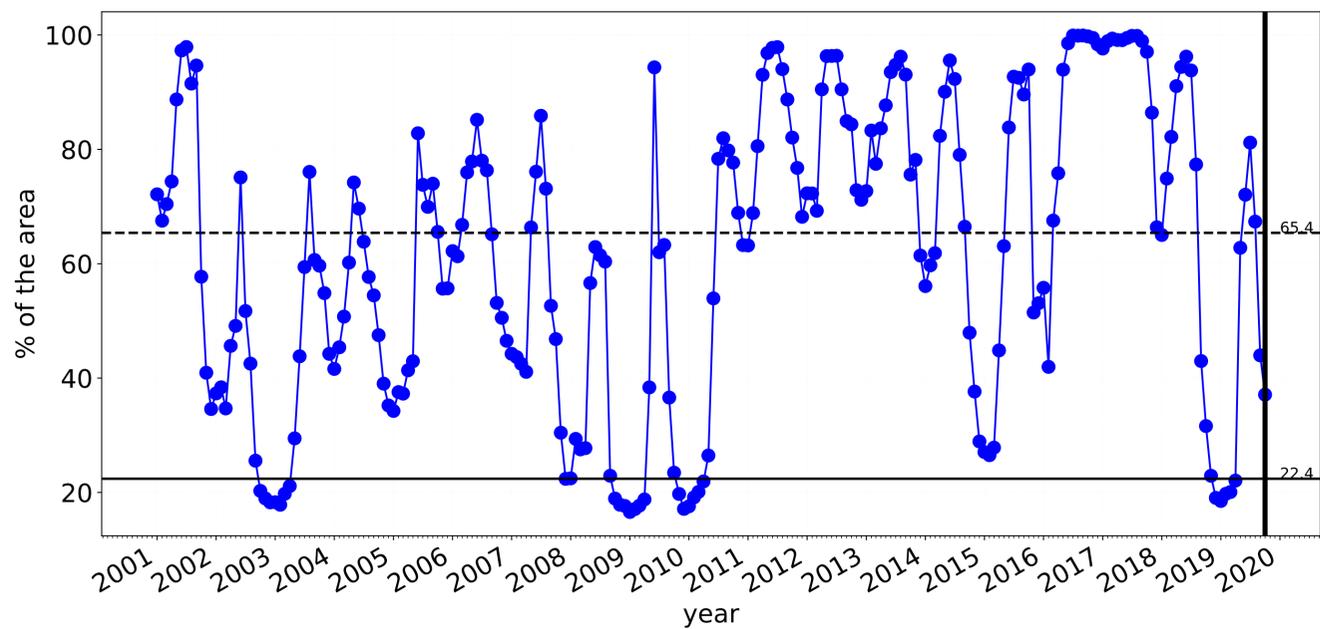**Conservation and natural environments timeseries**

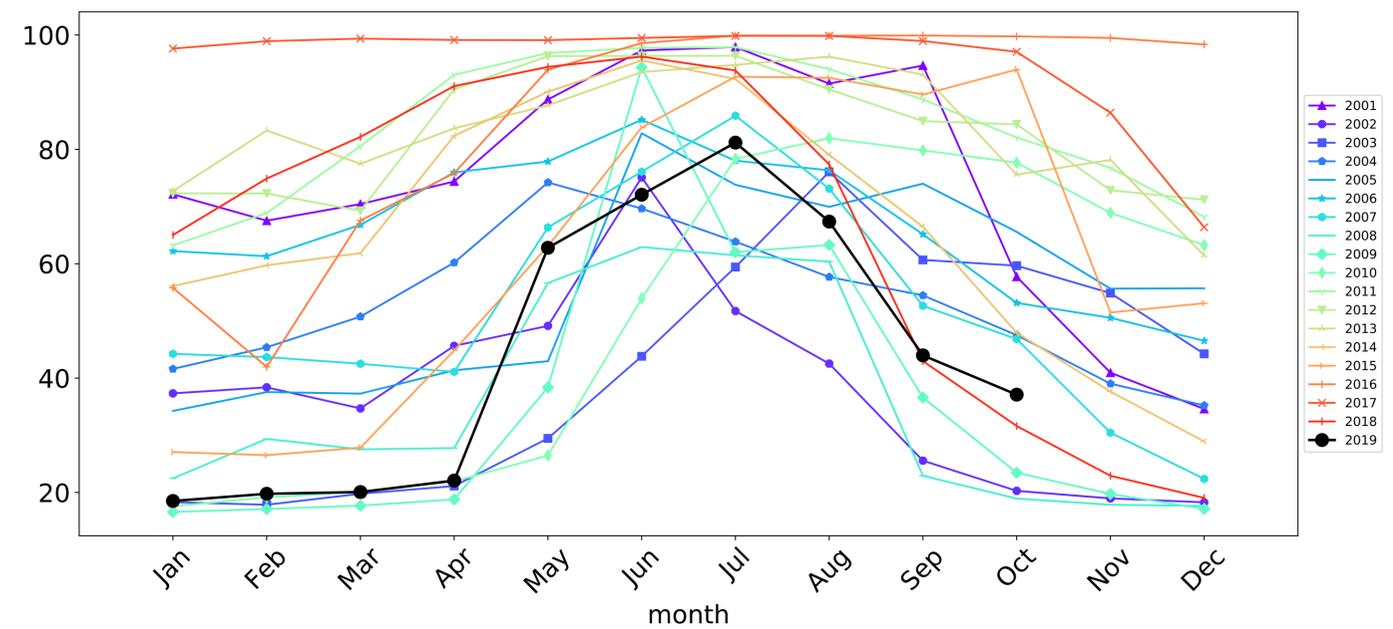Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)

Wind erosion historical monthly area protected (Total Veg Cov >50%)

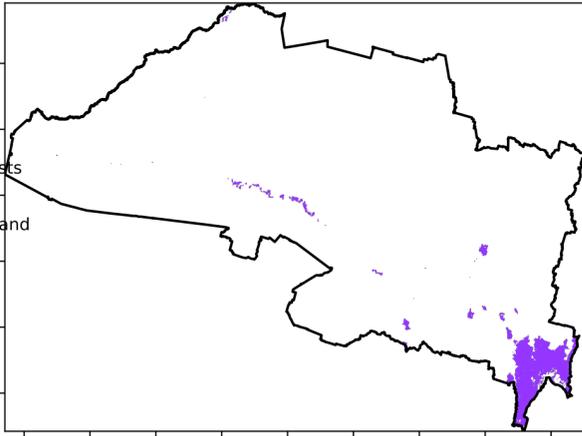Proportion of the area protected from water erosion (Total Vegetation Cover > 70%)

Water erosion historical monthly area protected (Total Veg Cov>70%)
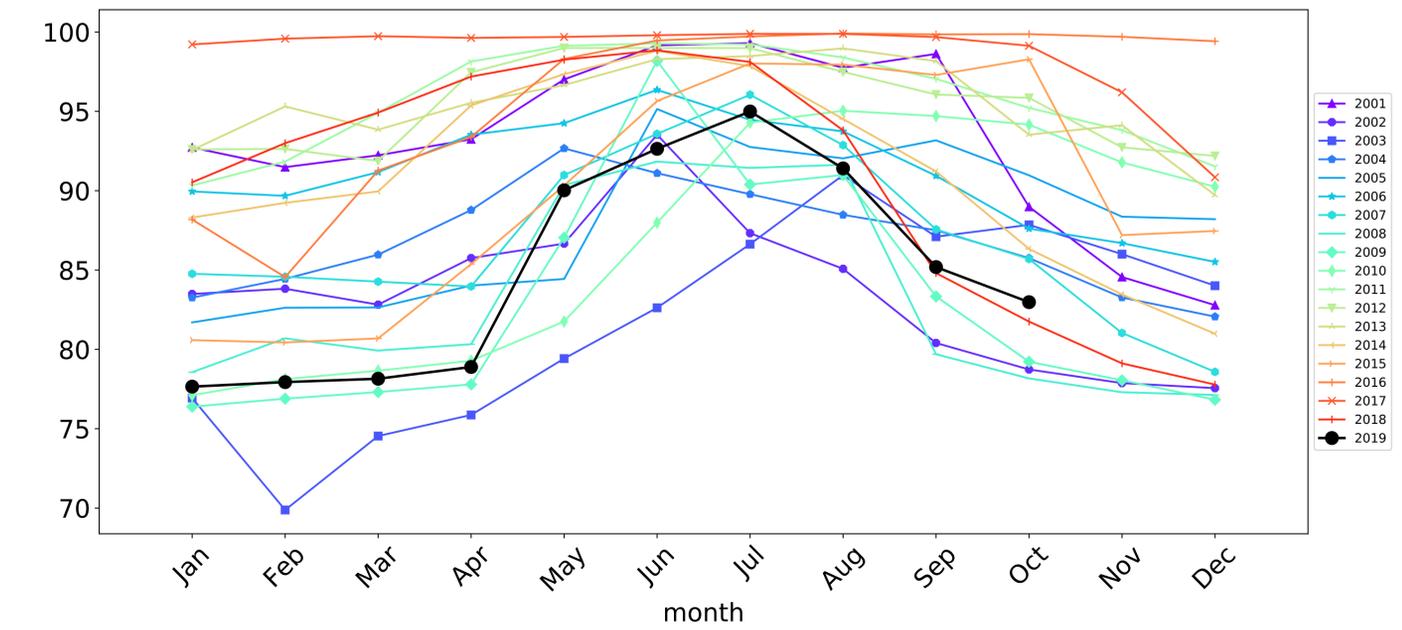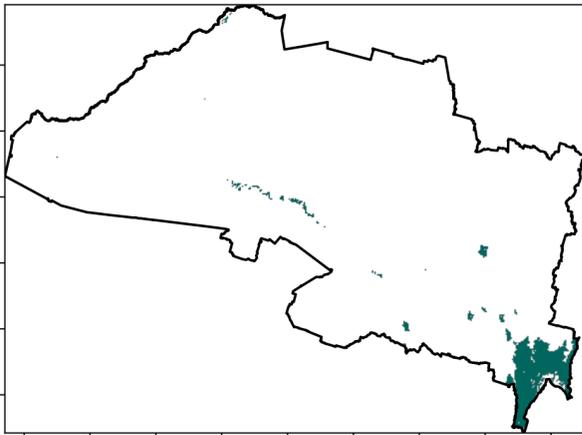
Conservation and natural environments non forest

Land use and forest cover

Catchment Scale
Land Use and Forests
of Australia (2018)
Derived from
Catchment Scale Land
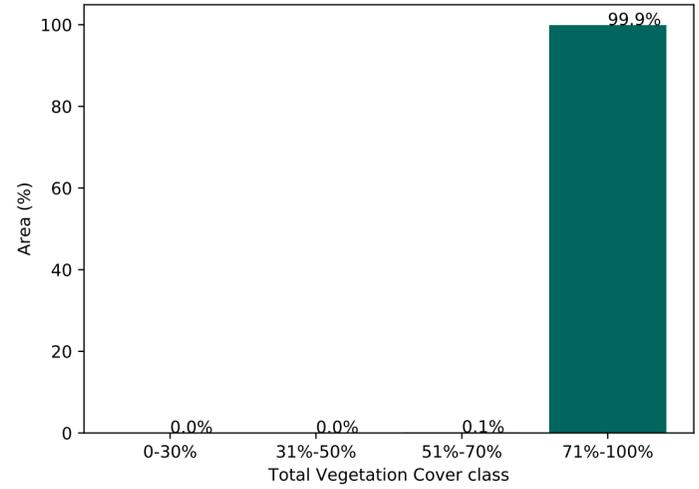Use of Australia
(2018) and Forests
of Australia (2018)
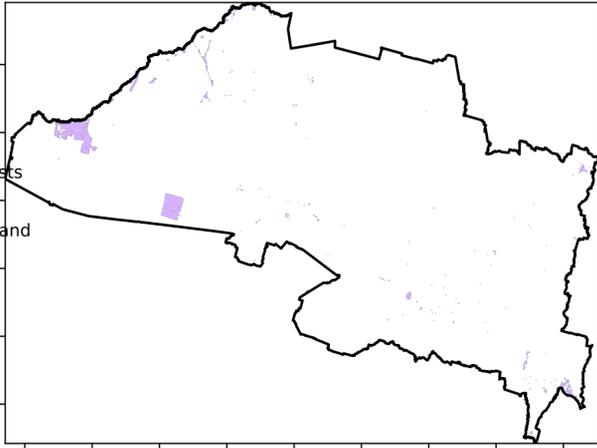
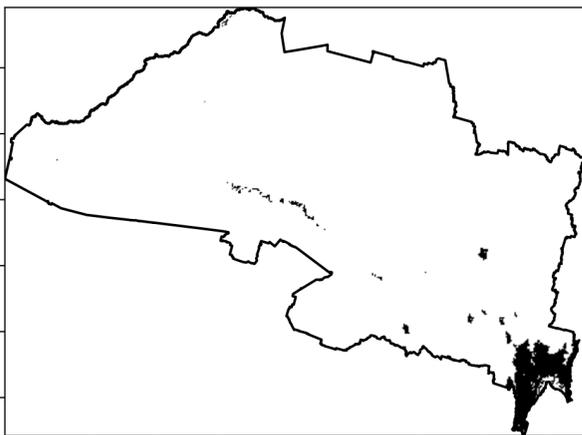Conservation and natural environments - Non-forest

Total Vegetation Cover [%]
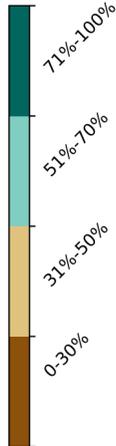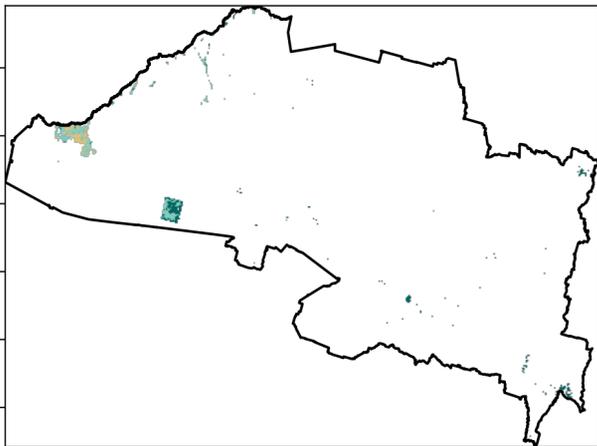
71%-100%

51%-70%

31%-50%

0-30%

Proportion of vegetation cover class in area
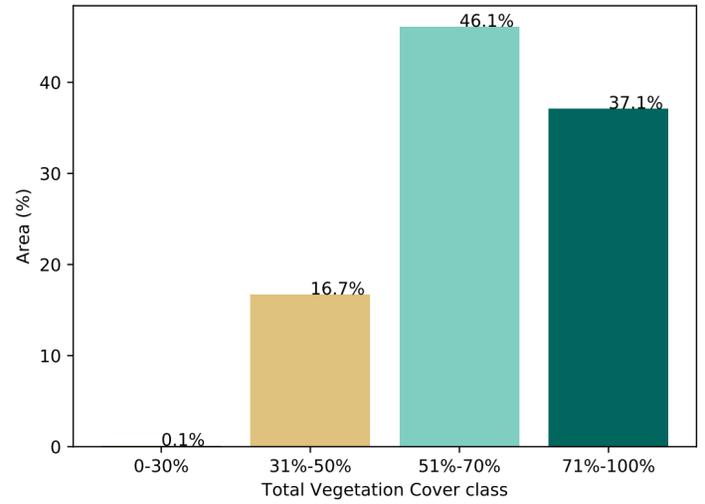
% Area protected from water erosion (>70%)
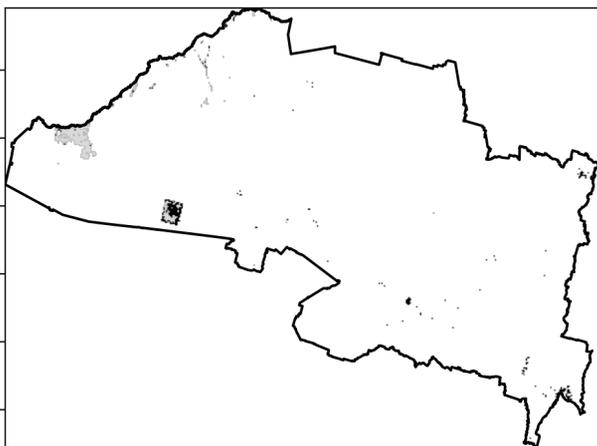
Area not
protected
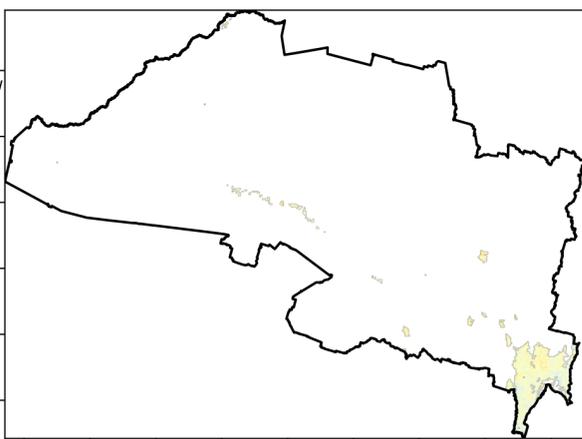62.9% of
region
(52,427
ha)

Area
protected
37.1% of
region
(30,922
ha)

% Area protected from wind erosion (>50%)
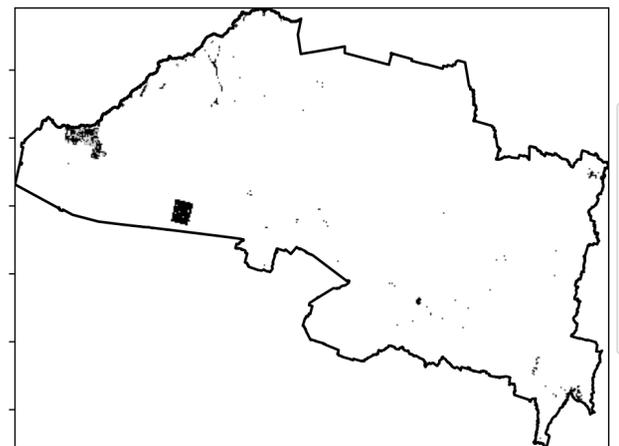
Area not
protected
17.0% of
region
(14,169
ha)

Area
protected
83.0% of
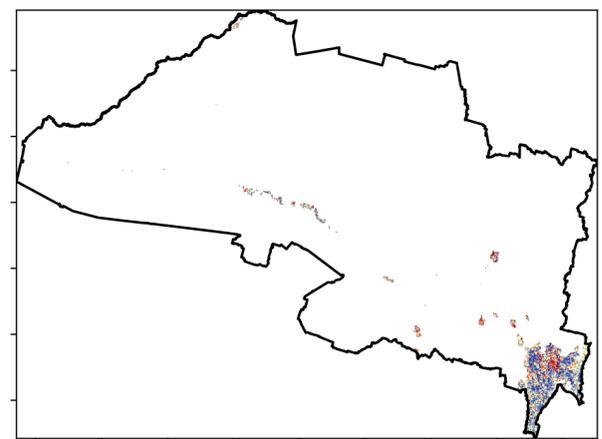region
(69,180
ha)

Total Vegetation Cover Anomaly [%]

Anomaly show how
many percetage
points each
pixel is from
the mean. That
is, red pixels
are about 20%
lower than the
mean of that
pixel. The mean
is only for the
month of the map
using baseline
from 2001 to
2019.

Total Vegetation Cover Decile [%]

Deciles show where the
pixel value lies in the
record, from highest to
lowest, for that month.
That is, red pixels are
in the lowest 10% of
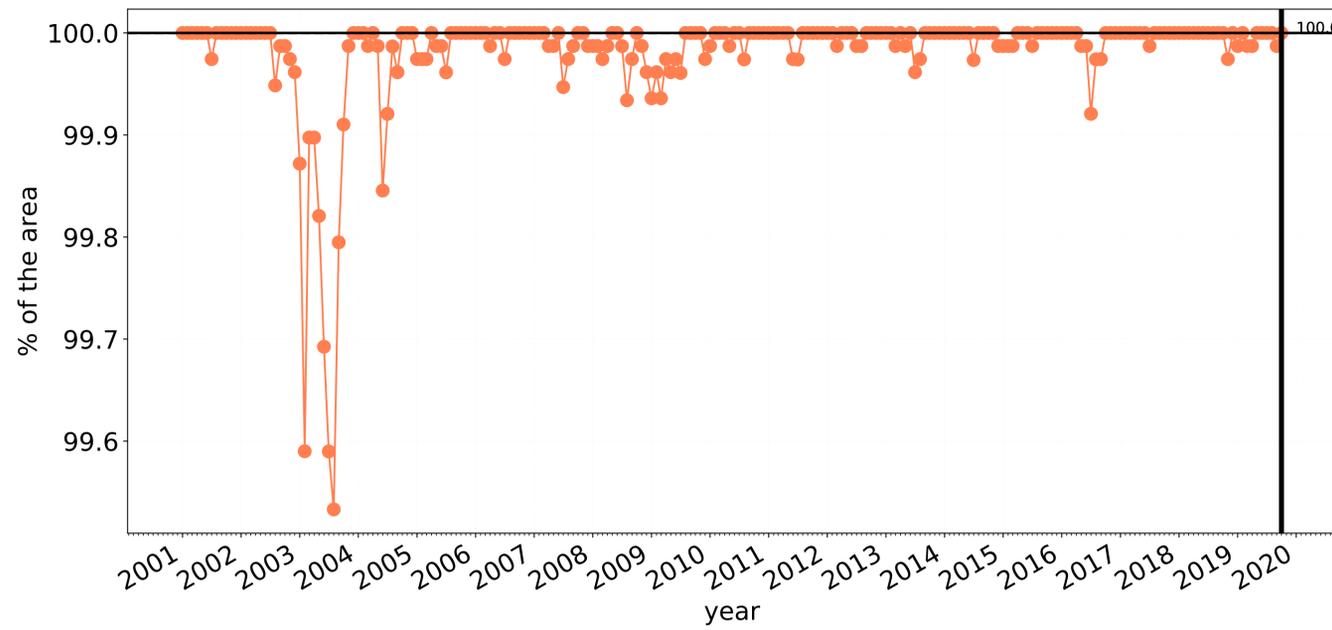records for that month of
the map using baseline
from 2001 to 2019.

10

8-9

4-7

2-3

1
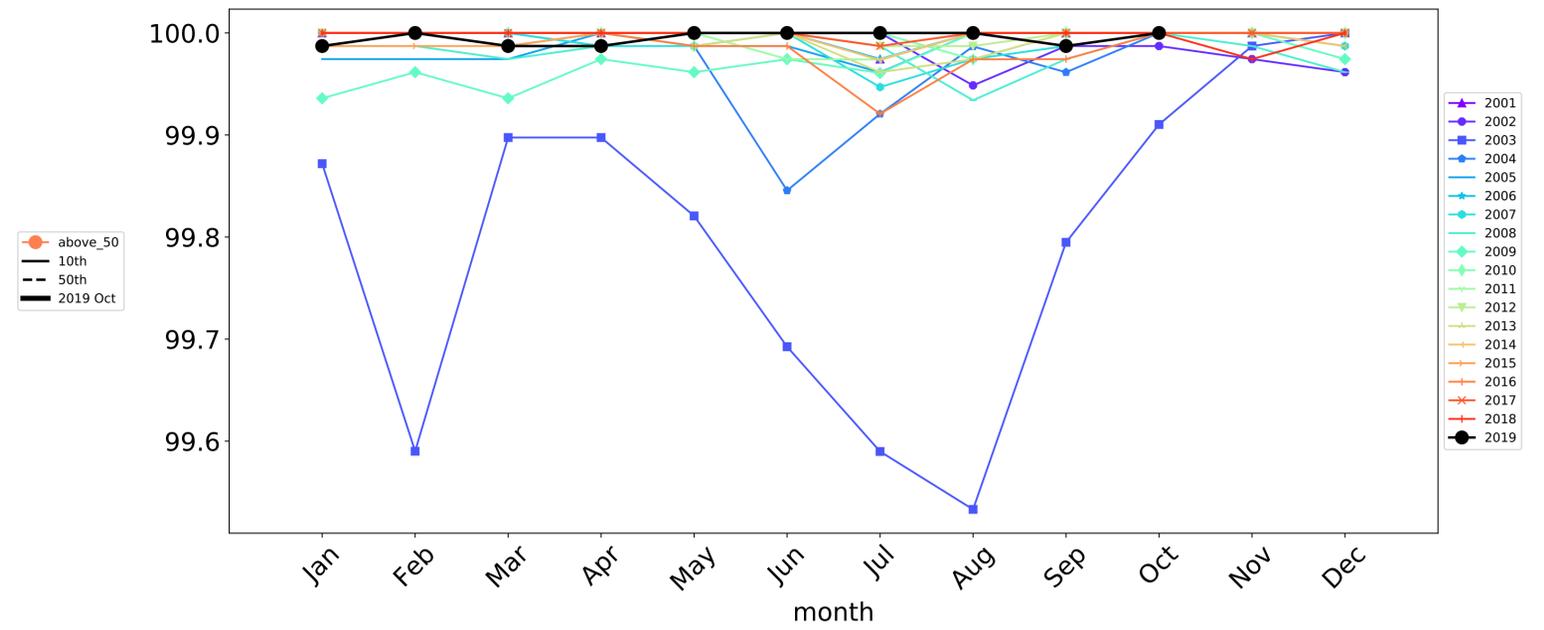
Conservation and natural environments non forest timeseries
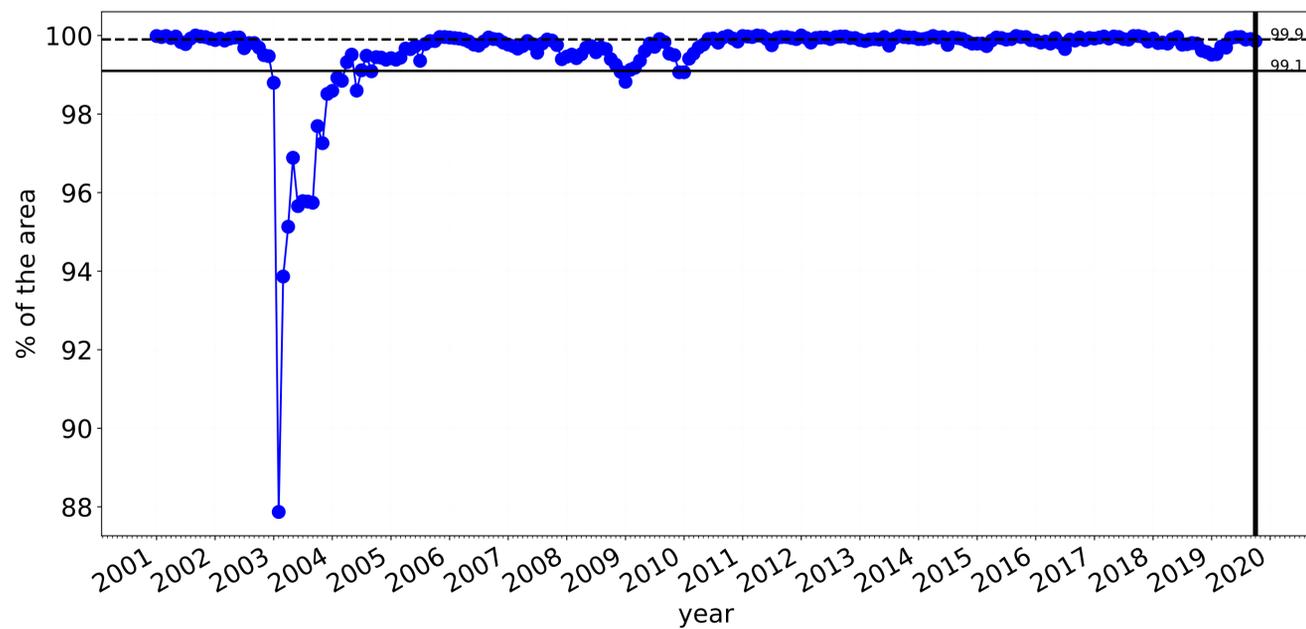

Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)
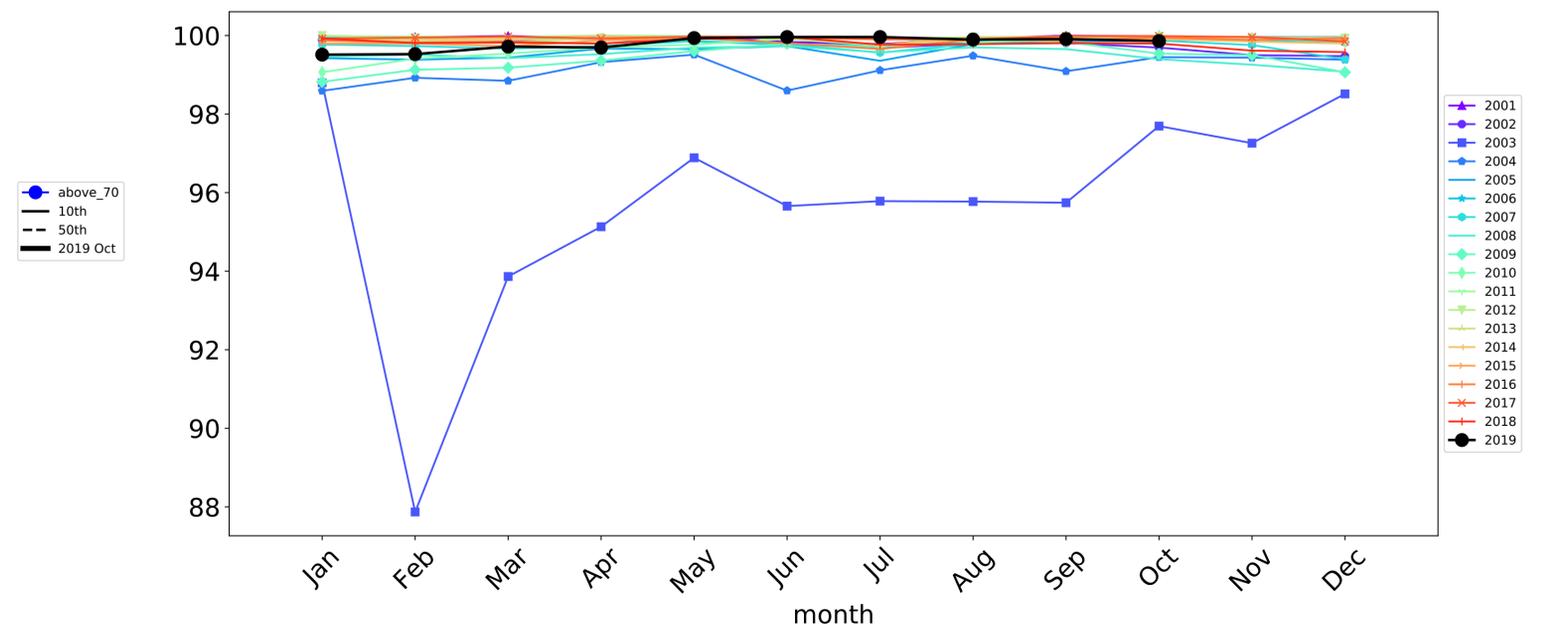

Wind erosion historical monthly area protected (Total Veg Cov >50%)

Proportion of the area protected from water erosion (Total Vegetation Cover > 70%)


Water erosion historical monthly area protected (Total Veg Cov>70%)

# Conservation and natural environments Forest (non woodland)

Land use and forest cover

Catchment Scale
Land Use and Forests
of Australia (2018)
Derived from
Catchment Scale Land
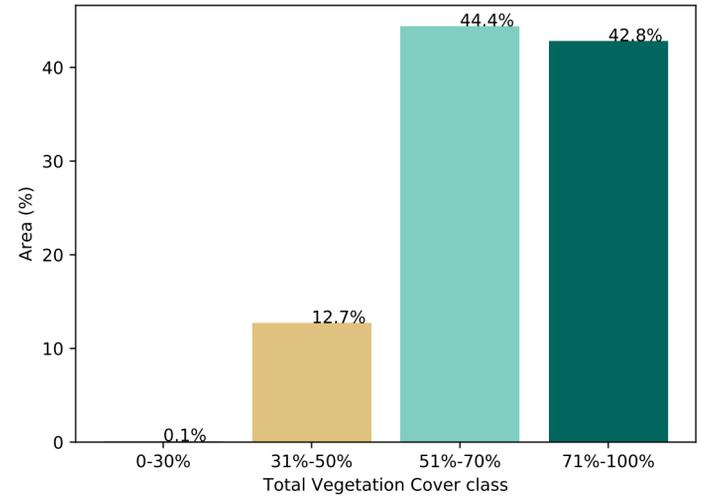Use of Australia
(2018) and Forests
of Australia (2018)

Conservation and natural environments – Non-woodland forest

Total Vegetation Cover [%]

71%-100%

51%-70%

31%-50%

0-30%

Proportion of vegetation cover class in area

99.9%

0.0%   0.0%   0.1%
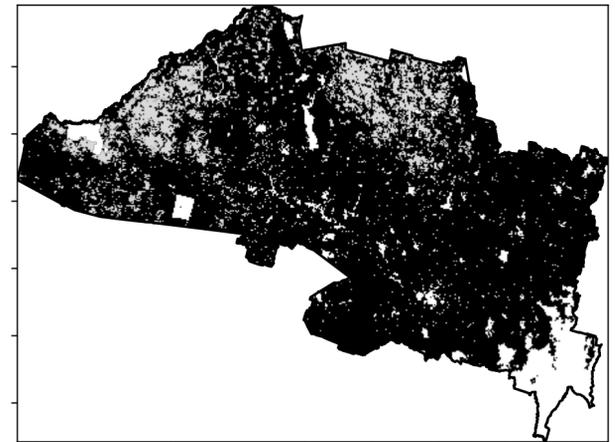
Total Vegetation Cover class

Area (%)

% Area protected from water erosion (>70%)

Area not
protected
0.1% of
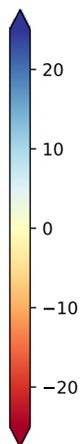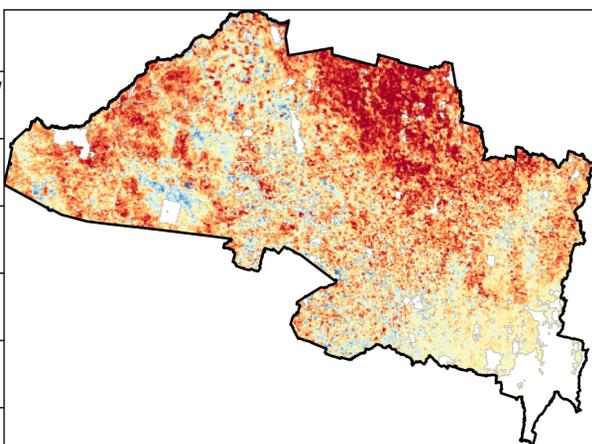region
(195 ha)

Area
protected
99.9% of
region
(195,004
ha)

% Area protected from wind erosion (>50%)
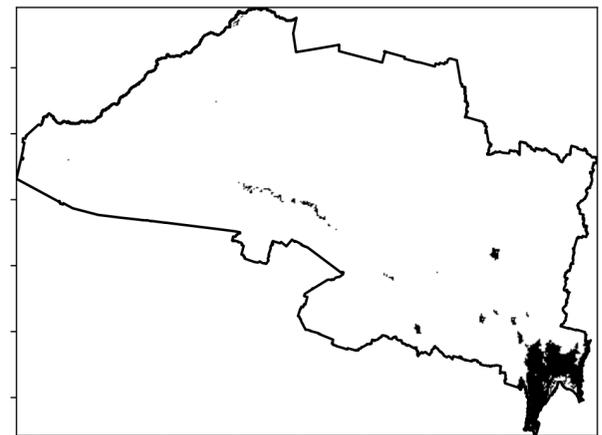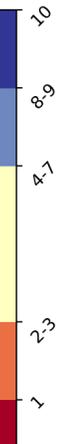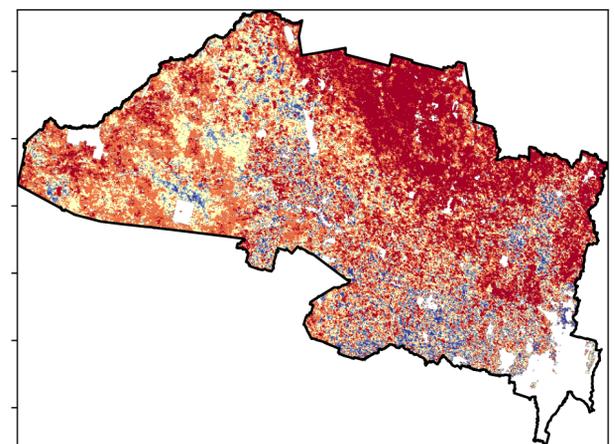
Area
protected
100.0% of
region
(195,200
ha)

Total Vegetation Cover Anomaly [%]

Anomaly show how
many percetage
points each
pixel is from
the mean. That
is, red pixels
are about 20%
lower than the
mean of that
pixel. The mean
is only for the
month of the map
using baseline
from 2001 to
2019.

Total Vegetation Cover Decile [%]

Deciles show where the
pixel value lies in the
record, from highest to
lowest, for that month.
That is, red pixels are
in the lowest 10% of
records for that month of
the map using baseline
from 2001 to 2019.

10

8-9

4-7

2-3

1

Conservation and natural environments Forest (non woodland) timeseries
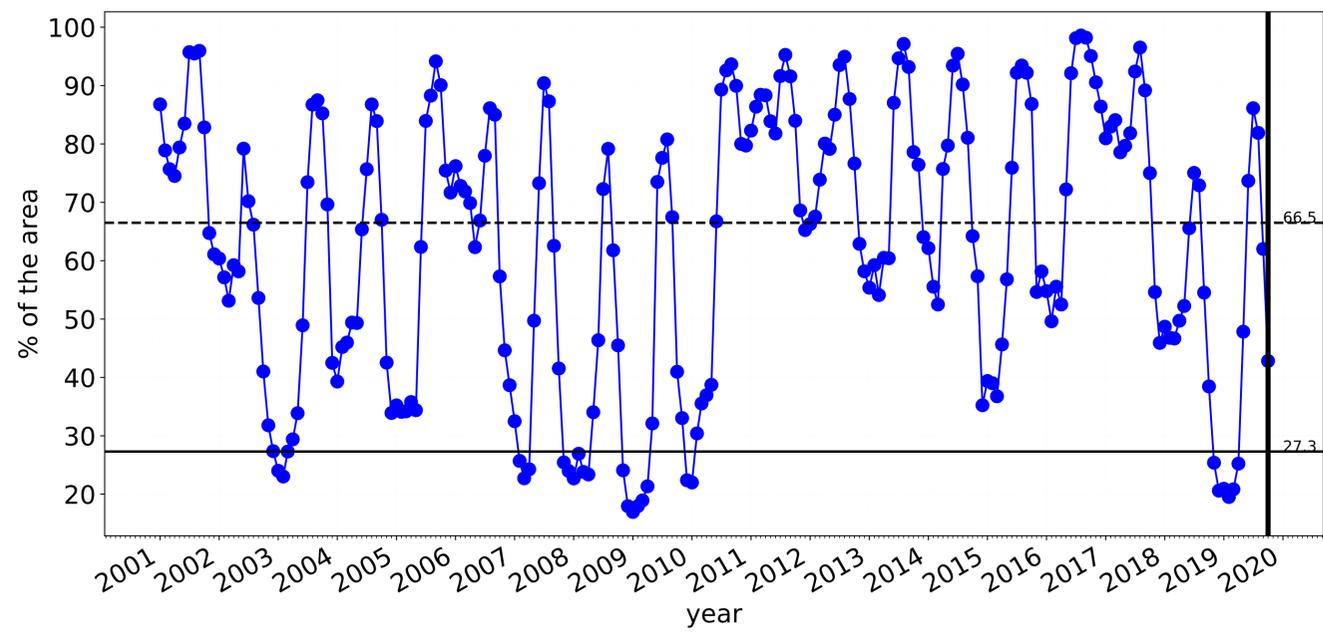

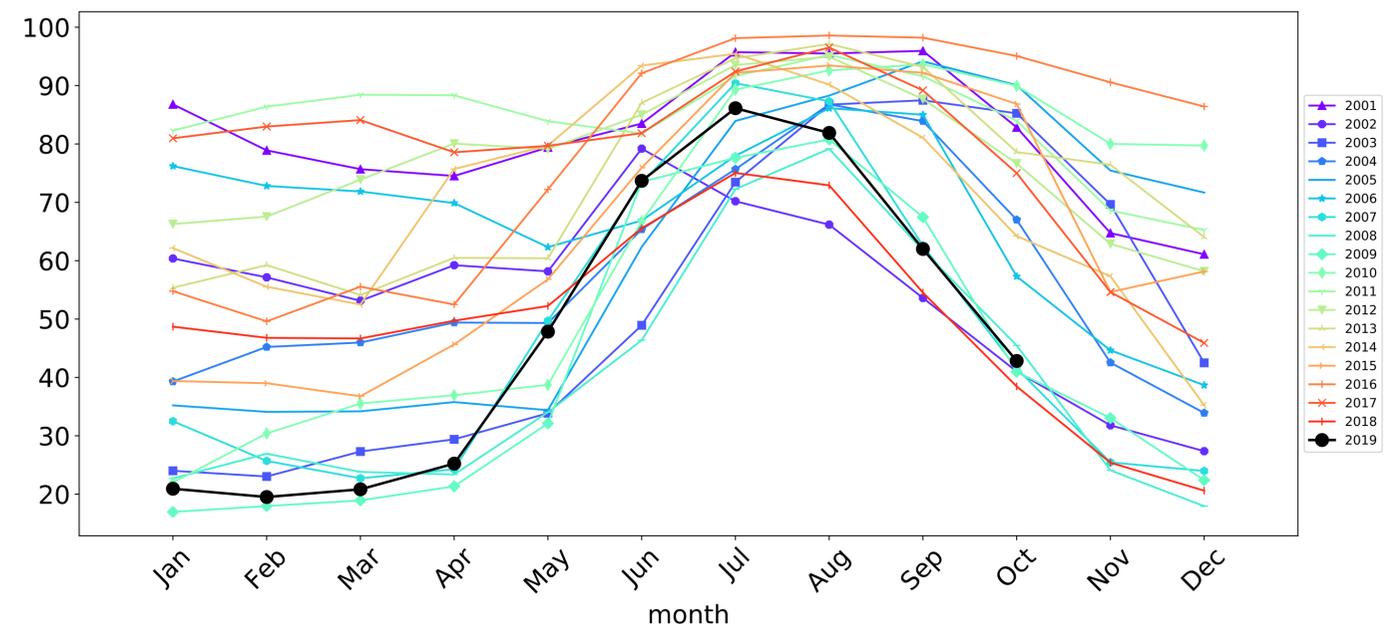Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)

Wind erosion historical monthly area protected (Total Veg Cov >50%)

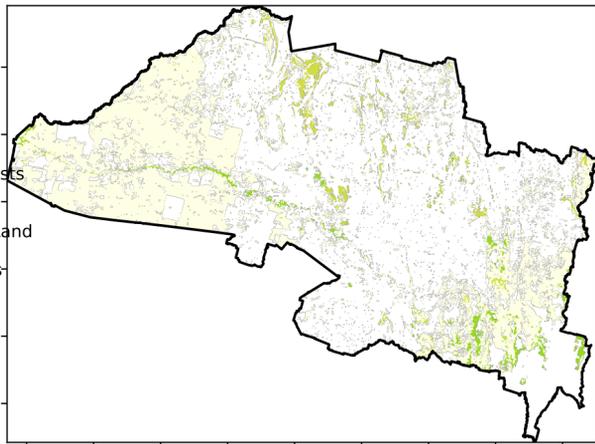Proportion of the area protected from water erosion (Total Vegetation Cover > 70%)

Water erosion historical monthly area protected (Total Veg Cov>70%)

Agriculture

Land use and forest cover

Catchment Scale
Land Use and Forests
of Australia (2018)
Derived from
Catchment Scale Land
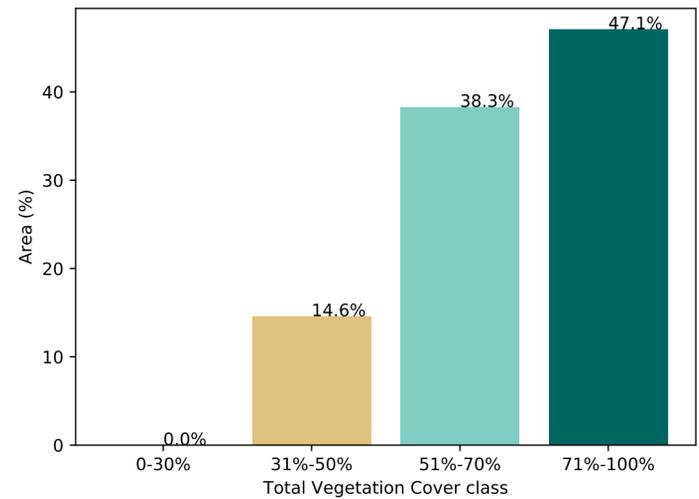Use of Australia
(2018) and Forests
of Australia (2018)
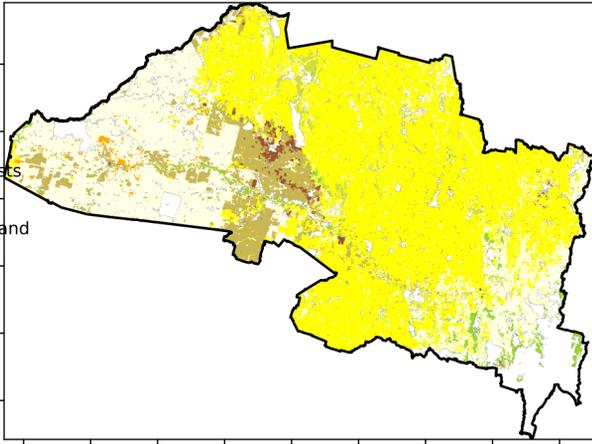
Agriculture - Grazing - Non forest
Agriculture - Grazing - Woodland forest
Agriculture - Grazing - Non-oodland forest
Agriculture - Grazing - Irrigated
Agriculture - Cropping - Non-irrigated
Agriculture - Cropping - Irrigated
Agriculture - Horticulture - Non-irrigated
Agriculture - Horticulture - Irrigated
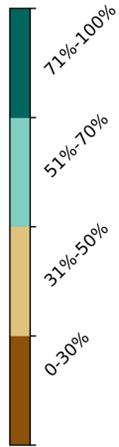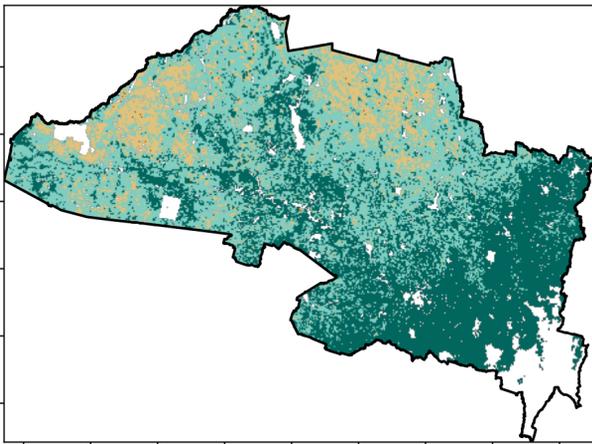
Total Vegetation Cover [%]

71%-100%
51%-70%
31%-50%
0-30%

Proportion of vegetation cover class in area

0.1%   12.7%   44.4%   42.8%

Area (%)

Total Vegetation Cover class

0-30%   31%-50%   51%-70%   71%-100%

% Area protected from water erosion (>70%)
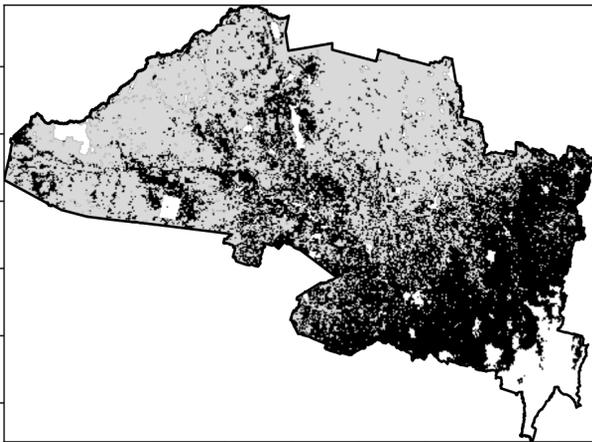
Area not
protected
57.2% of
region
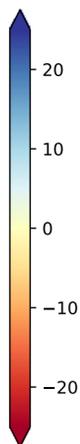(3,470,824
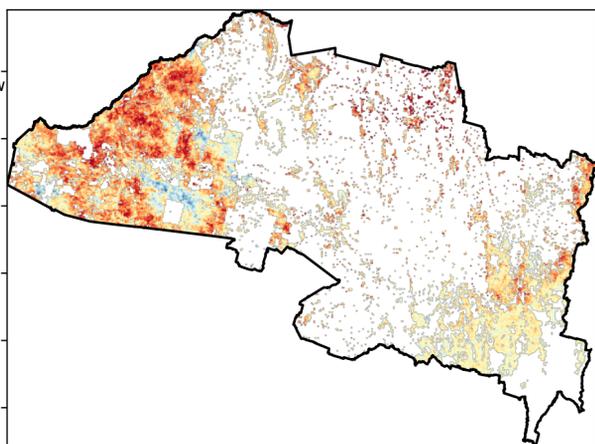ha)

Area
protected
42.8% of
region
(2,597,050
ha)

% Area protected from wind erosion (>50%)

Area not
protected
13.0% of
region
(788,823
ha)

Area
protected
87.0% of
region
(5,279,051
ha)

Total Vegetation Cover Anomaly [%]

Anomaly show how
many percetage
points each
pixel is from
the mean. That
is, red pixels
are about 20%
lower than the
mean of that
pixel. The mean
is only for the
month of the map
using baseline
from 2001 to
2019.

Total Vegetation Cover Decile [%]

Deciles show where the
pixel value lies in the
record, from highest to
lowest, for that month.
That is, red pixels are
in the lowest 10% of
records for that month of
the map using baseline
from 2001 to 2019.

10
8,9
4-7
2-3
1

Agriculture timeseries

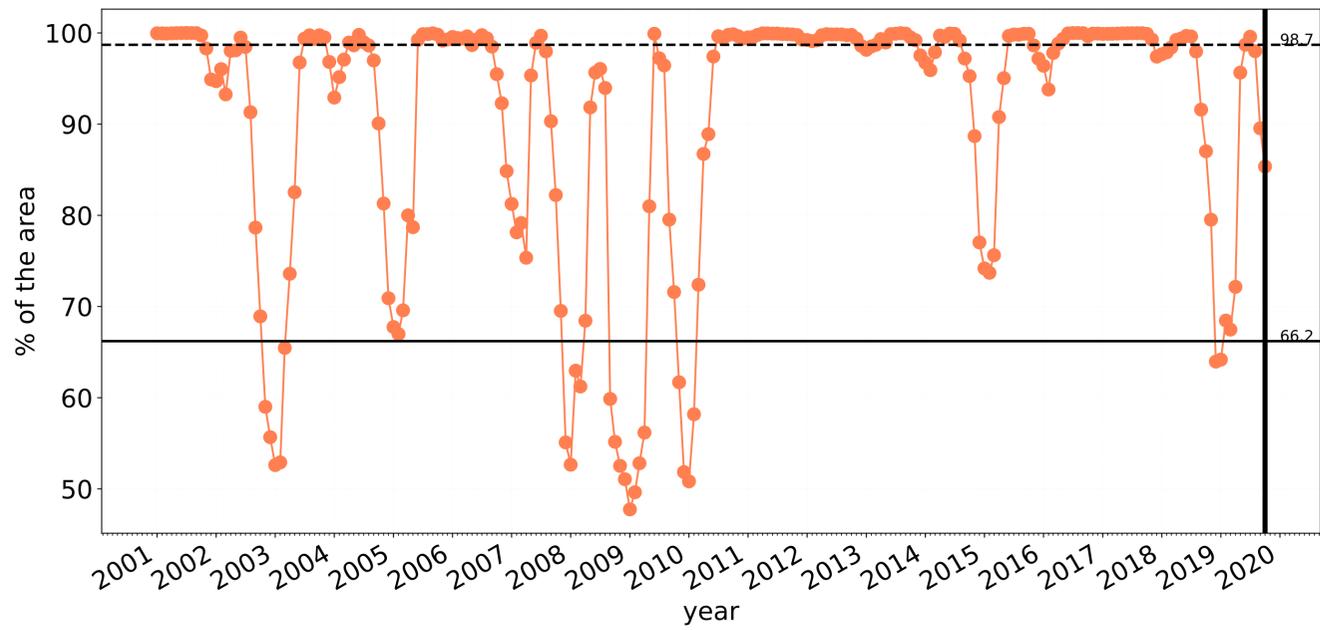## Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)
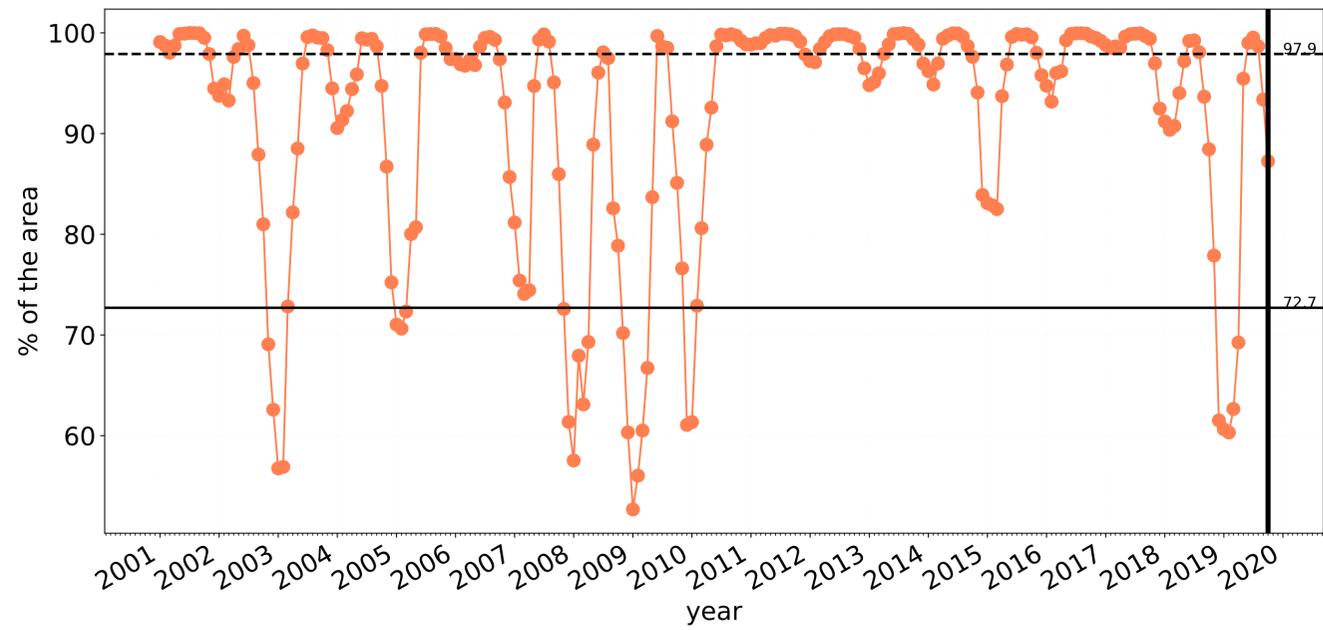
Wind erosion historical monthly area protected (Total Veg Cov >50%)
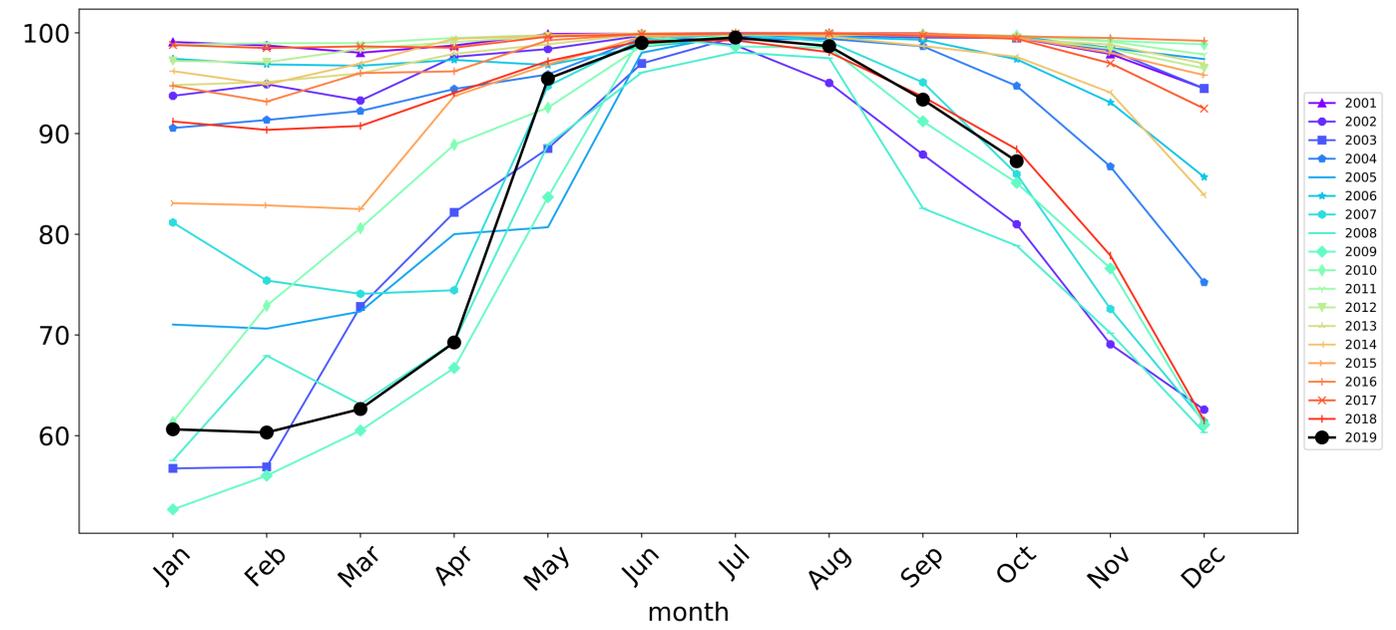
Proportion of the area protected from water erosion (Total Vegetation Cover > 70%)

Water erosion historical monthly area protected (Total Veg Cov>70%)

Grazing

Land use and forest cover

Catchment Scale Land Use and Forests of Australia (2018) Derived from Catchment Scale Land Use of Australia (2018) and Forests of Australia (2018)

- Agriculture - Grazing - Non forest
- Agriculture - Grazing - Woodland forest
- Agriculture - Grazing - Non-oodland forest

Total Vegetation Cover [%]

71%-100%
51%-70%
31%-50%
0-30%

Proportion of vegetation cover class in area

0.0%   14.6%   38.3%   47.1%
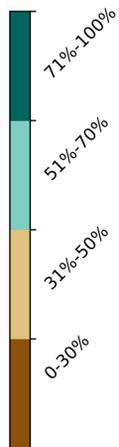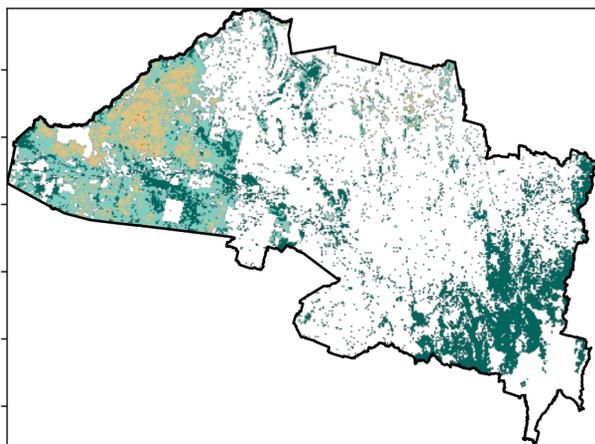
Area (%)

Total Vegetation Cover class
0-30%   31%-50%   51%-70%   71%-100%

% Area protected from water erosion (>70%)
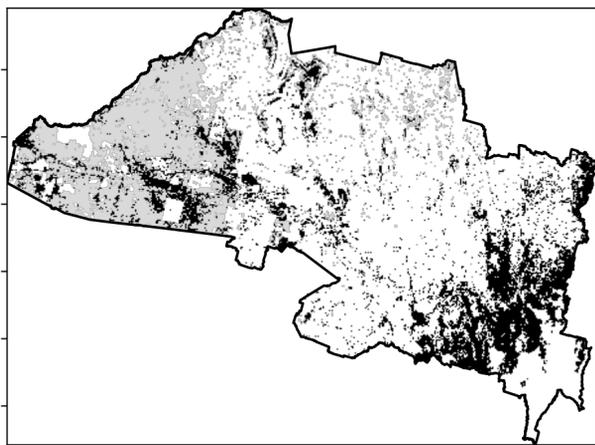
Area not protected 52.9% of region (1,222,796 ha)

Area protected 47.1% of region (1,088,728 ha)

% Area protected from wind erosion (>50%)
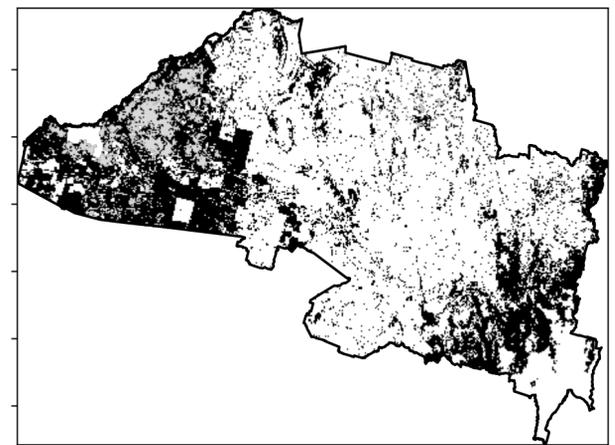
Area not protected 15.0% of region (346,728 ha)

Area protected 85.0% of region (1,964,796 ha)

Total Vegetation Cover Anomaly [%]

Anomaly show how many percetage points each pixel is from the mean. That is, red pixels are about 20% lower than the mean of that pixel. The mean is only for the month of the map using baseline from 2001 to 2019.

Total Vegetation Cover Decile [%]

Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the map using baseline from 2001 to 2019.
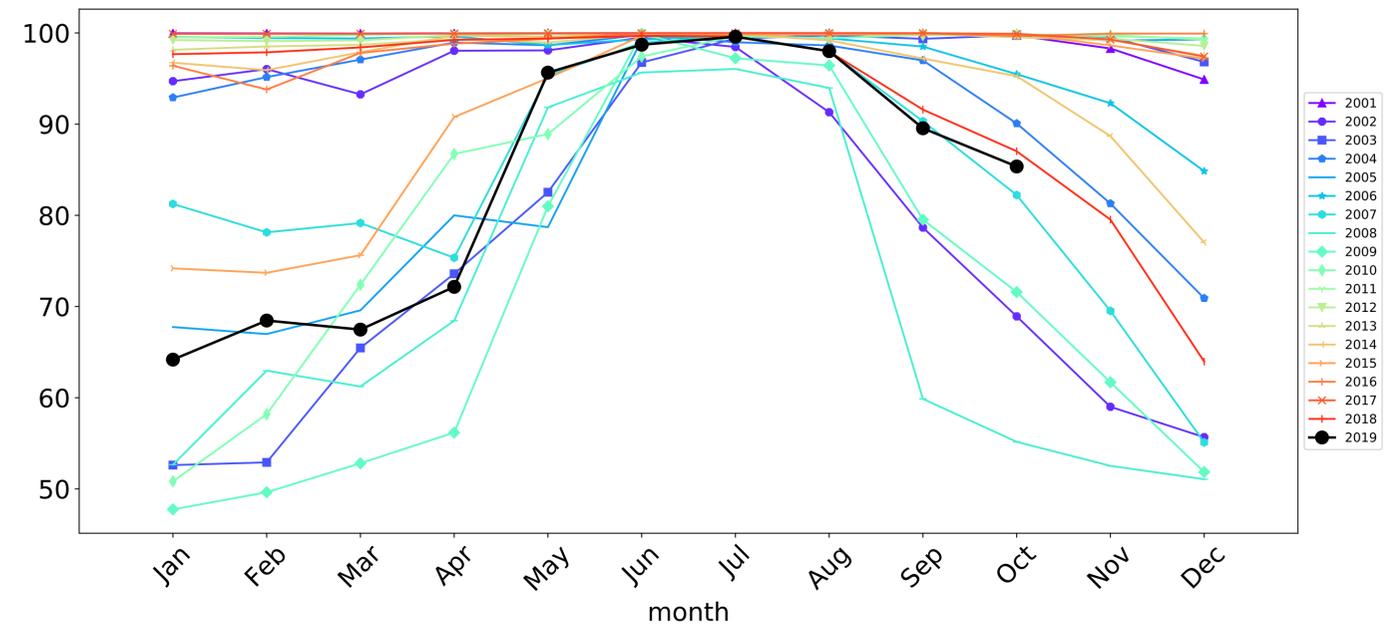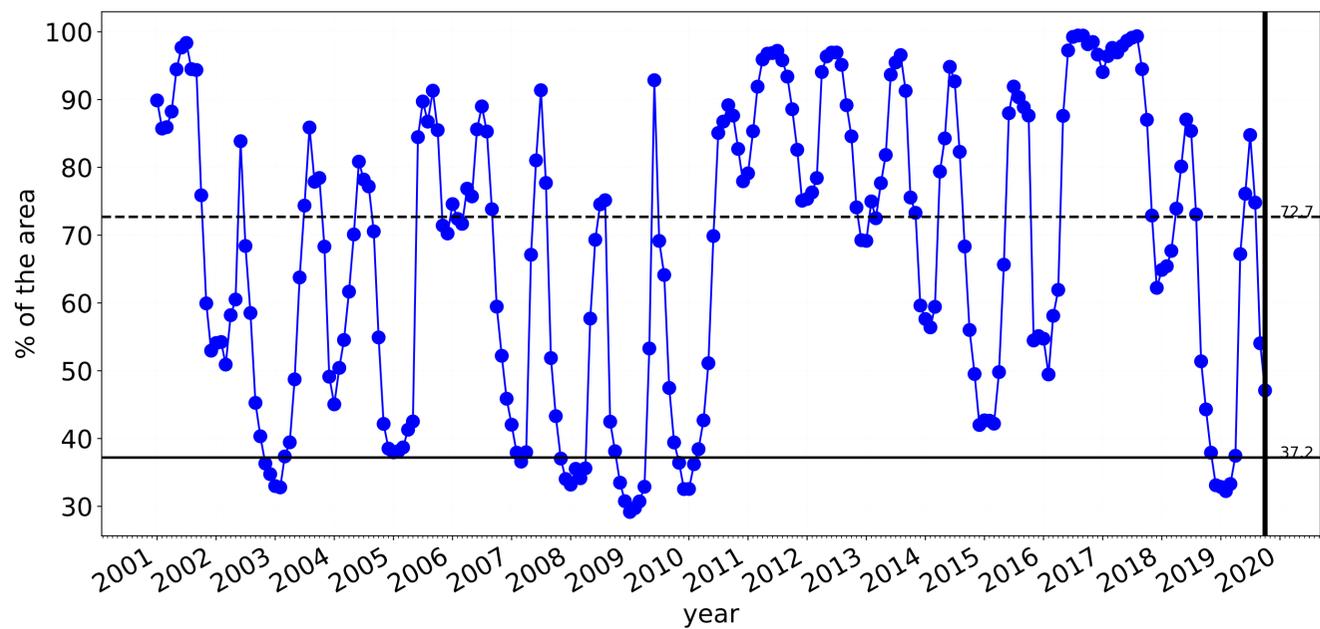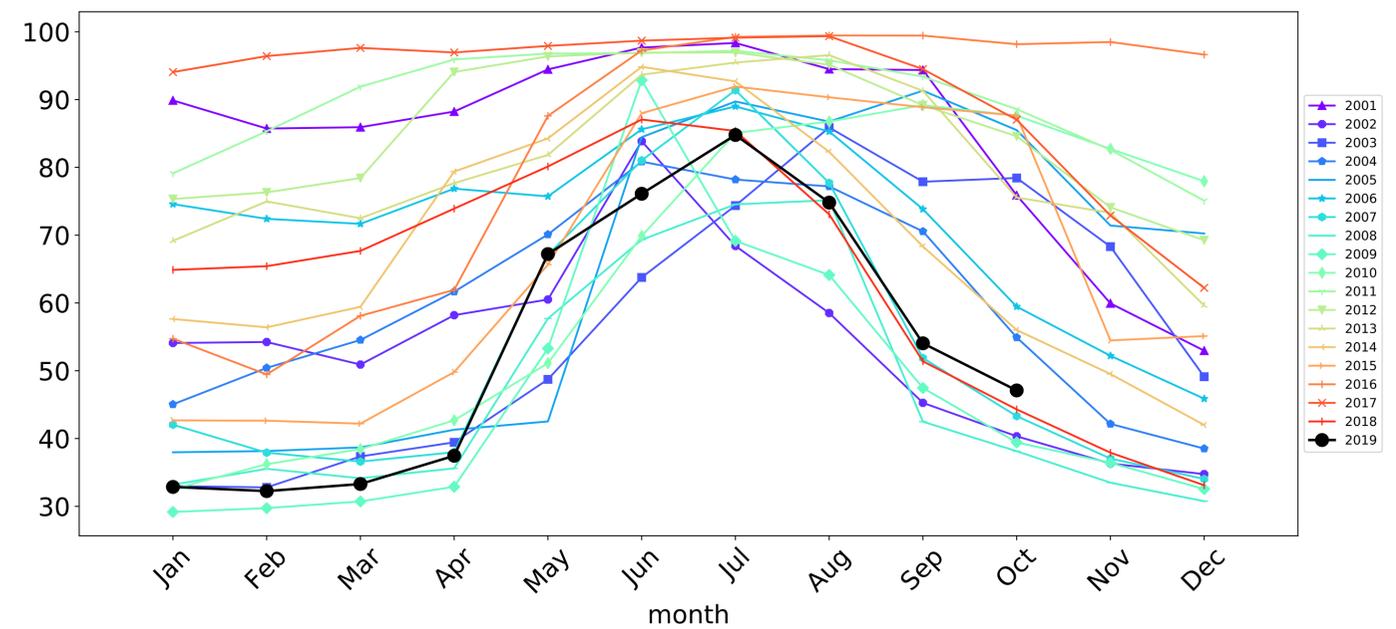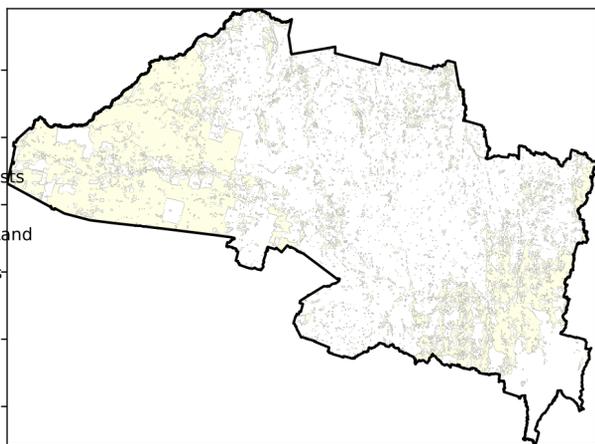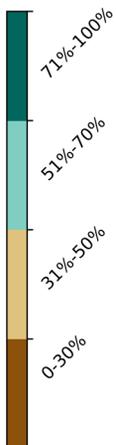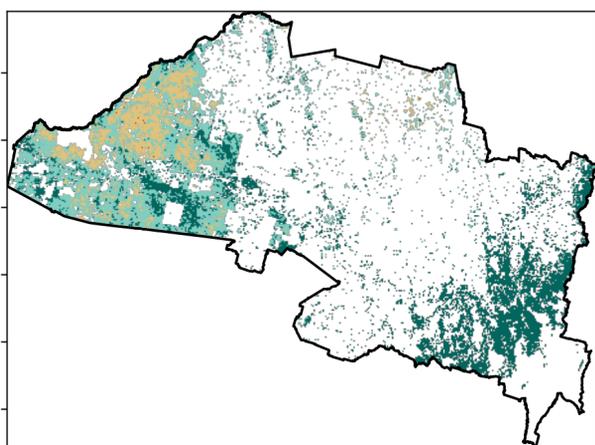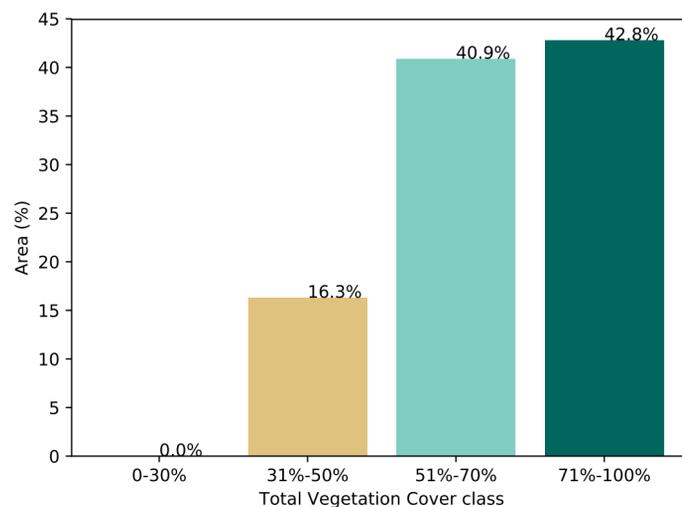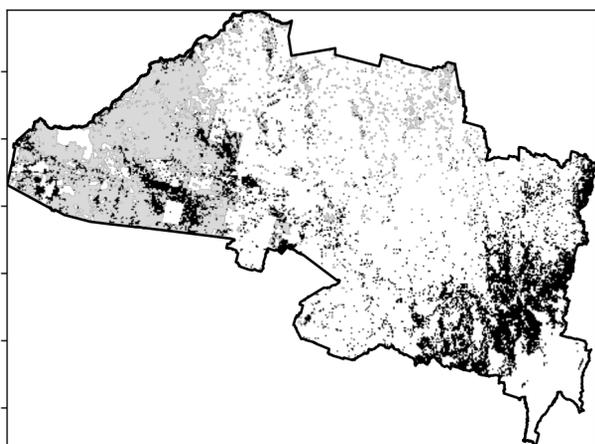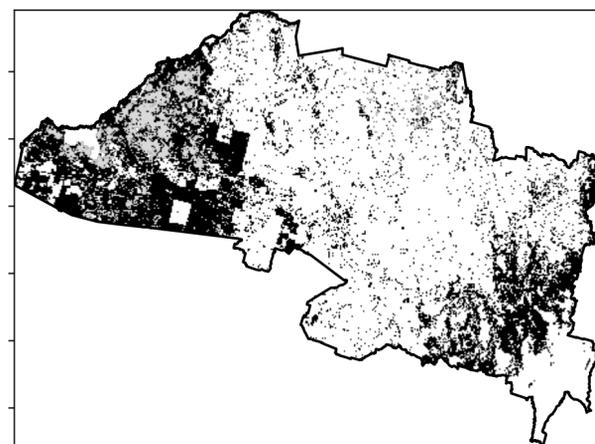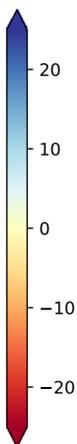
10
8-9
4-7
2-3
1
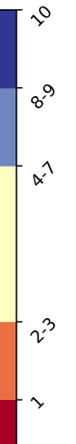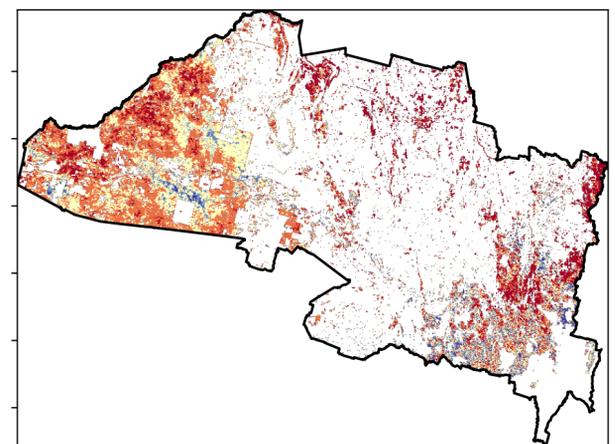
Grazing timeseries

Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)

Wind erosion historical monthly area protected (Total Veg Cov >50%)

Proportion of the area protected from water erosion (Total Vegetation Cover > 70%)

Water erosion historical monthly area protected (Total Veg Cov>70%)

Grazing non forest

Land use and forest cover

Catchment Scale
Land Use and Forests
of Australia (2018)
Derived from
Catchment Scale Land
Use of Australia
(2018) and Forests
of Australia (2018)

Agriculture - Grazing - Non forest

Total Vegetation Cover [%]

71%-100%

51%-70%

31%-50%

0-30%

Proportion of vegetation cover class in area

45
40
35
30
25
20
15
10
5
0

Area (%)

0.0%   16.3%   40.9%   42.8%

0-30%   31%-50%   51%-70%   71%-100%

Total Vegetation Cover class

% Area protected from water erosion (>70%)

Area not
protected
57.2% of
region
(1,182,052
ha)

Area
protected
42.8% of
region
(884,472
ha)

% Area protected from wind erosion (>50%)

Area not
protected
16.0% of
region
(330,644
ha)

Area
protected
84.0% of
region
(1,735,881
ha)

Total Vegetation Cover Anomaly [%]

Anomaly show how
many percetage
points each
pixel is from
the mean. That
is, red pixels
are about 20%
lower than the
mean of that
pixel. The mean
is only for the
month of the map
using baseline
from 2001 to
2019.

20
10
0
−10
−20

Total Vegetation Cover Decile [%]

Deciles show where the
pixel value lies in the
record, from highest to
lowest, for that month.
That is, red pixels are
in the lowest 10% of
records for that month of
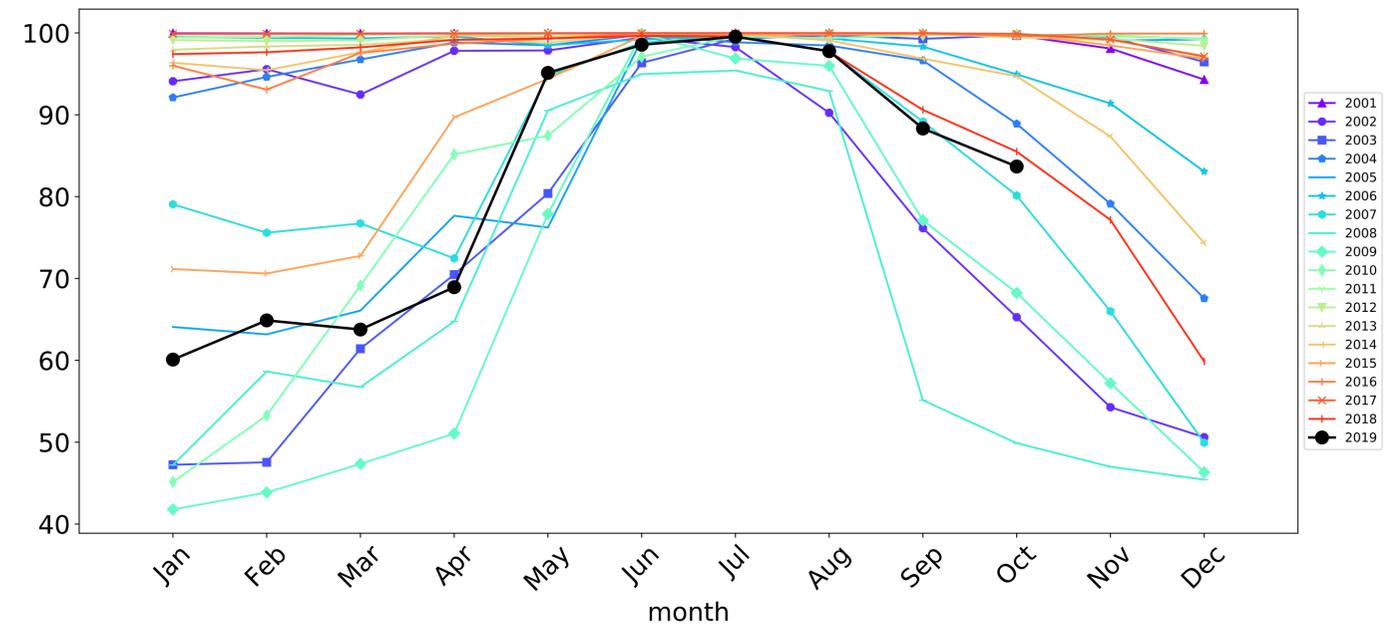the map using baseline
from 2001 to 2019.

10
8-9
4-7
2-3
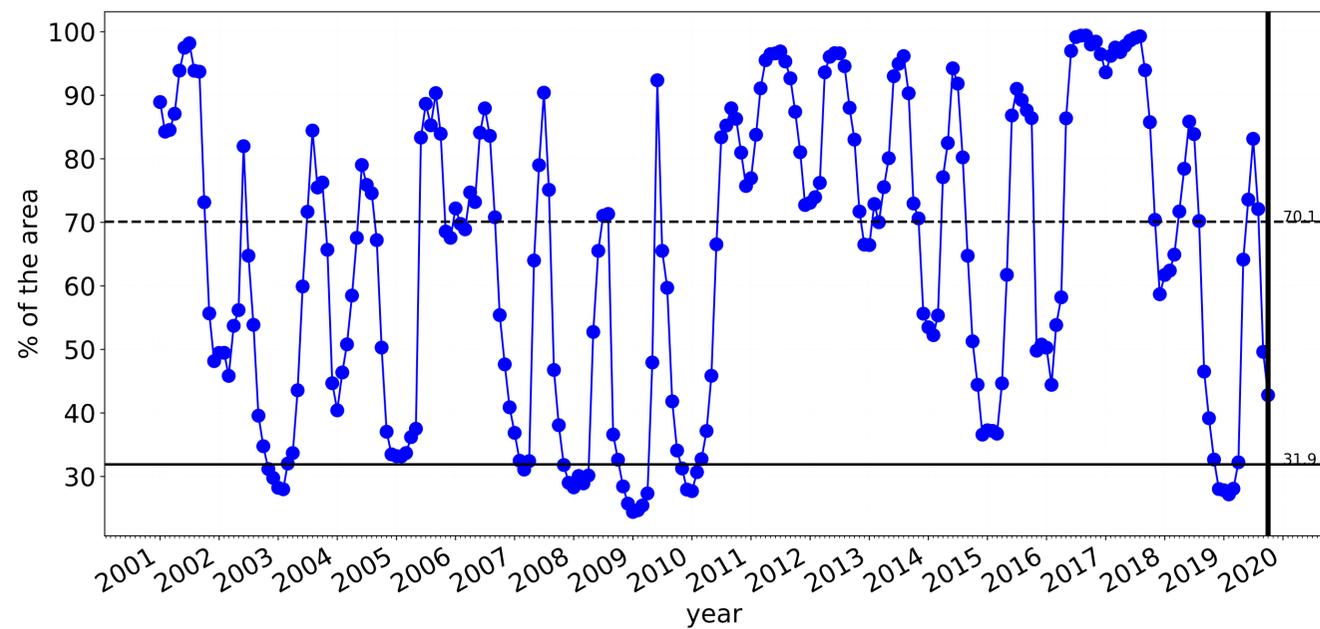1
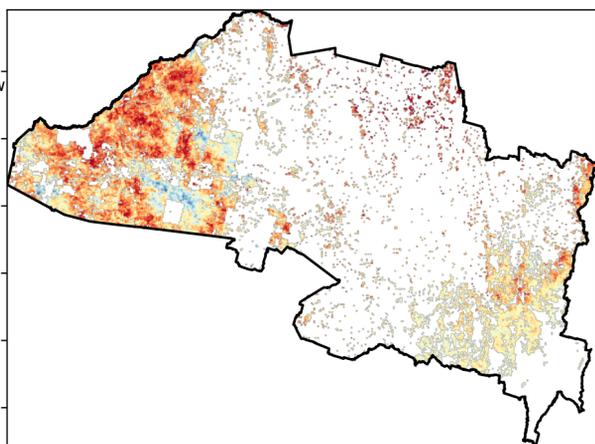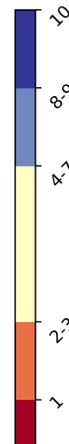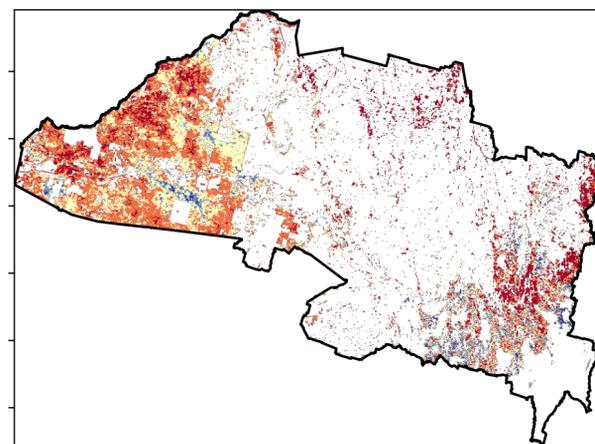
Grazing non forest timeseries

Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)
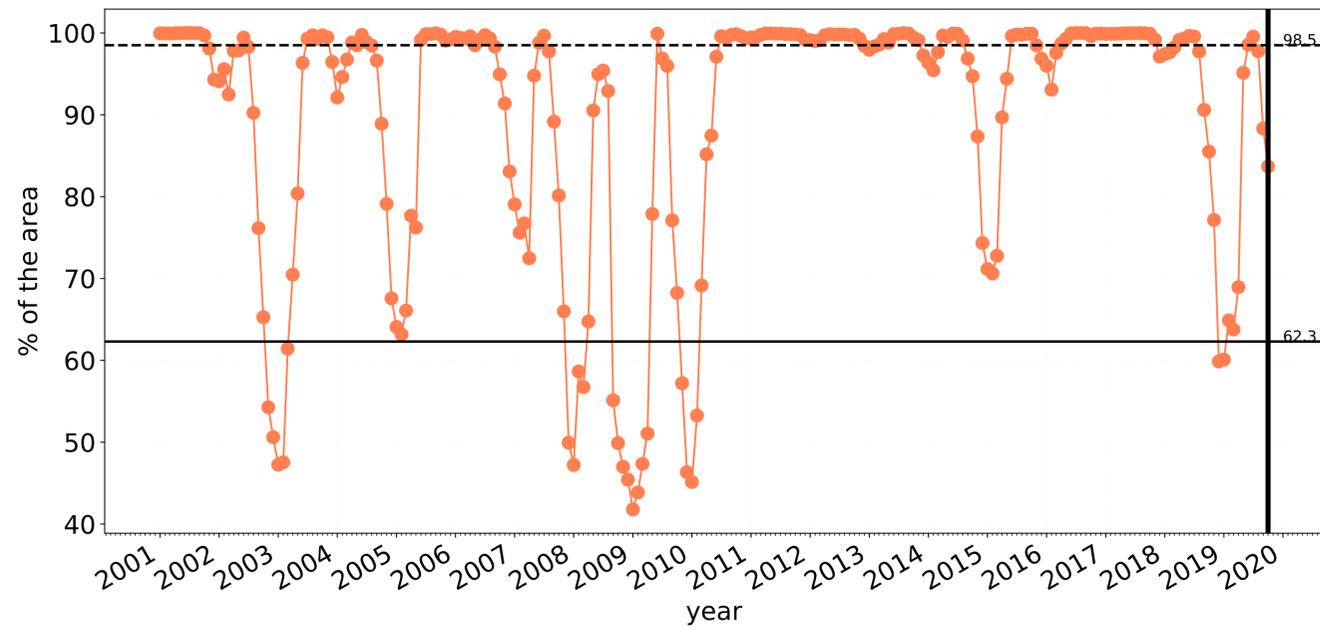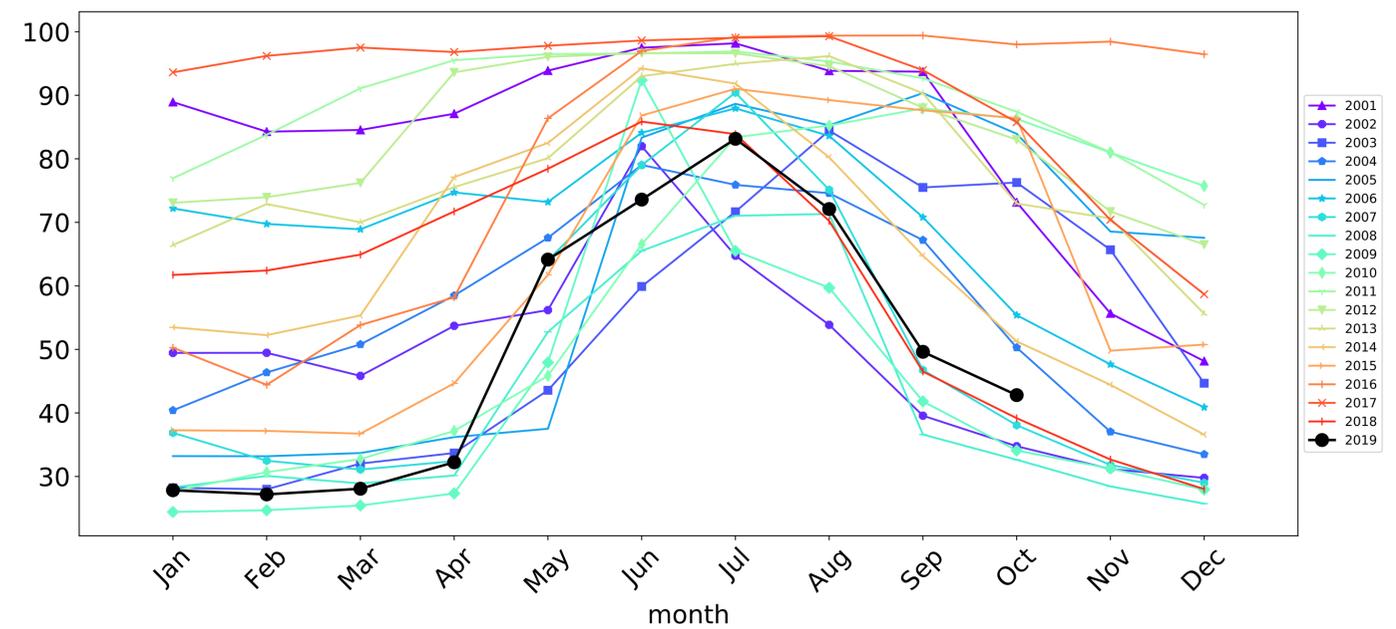

Wind erosion historical monthly area protected (Total Veg Cov >50%)

Proportion of the area protected from water erosion (Total Vegetation Cover > 70%)
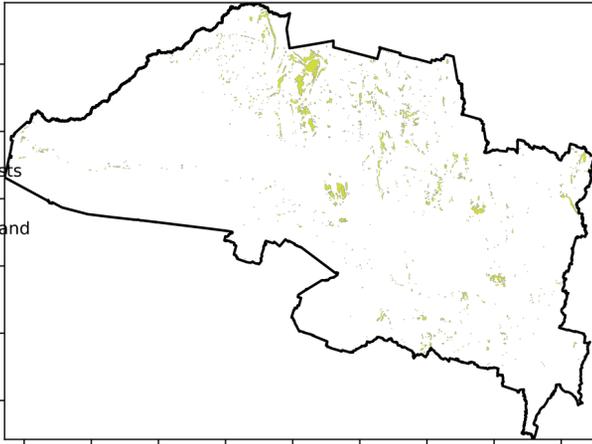

Water erosion historical monthly area protected (Total Veg Cov>70%)

Grazing Woodland forest

Land use and forest cover

Catchment Scale Land Use and Forests of Australia (2018) Derived from Catchment Scale Land Use of Australia (2018) and Forests of Australia (2018)

Agriculture - Grazing - Woodland forest

Total Vegetation Cover [%]

71%-100%
51%-70%
31%-50%
0-30%

Proportion of vegetation cover class in area

73.6%
25.5%
0.0%   0.9%
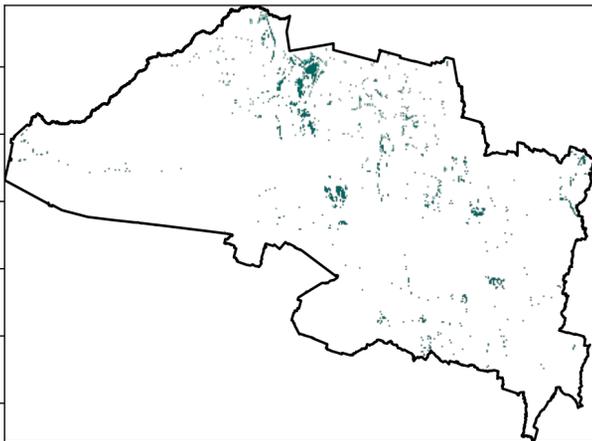
Area (%)

Total Vegetation Cover class
0-30%   31%-50%   51%-70%   71%-100%
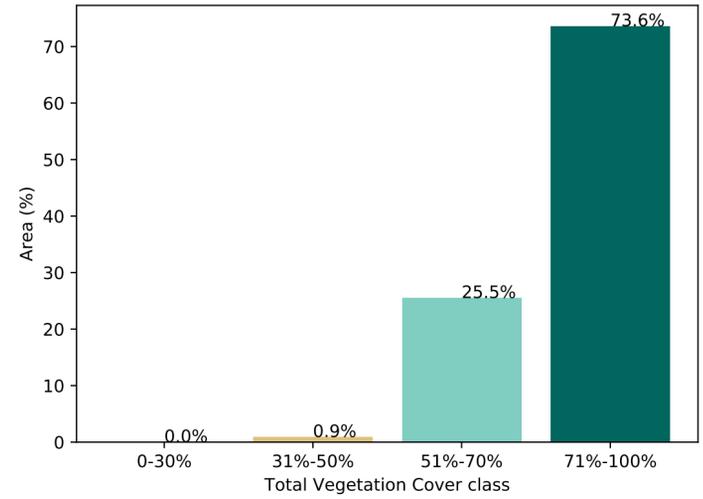
% Area protected from water erosion (>70%)
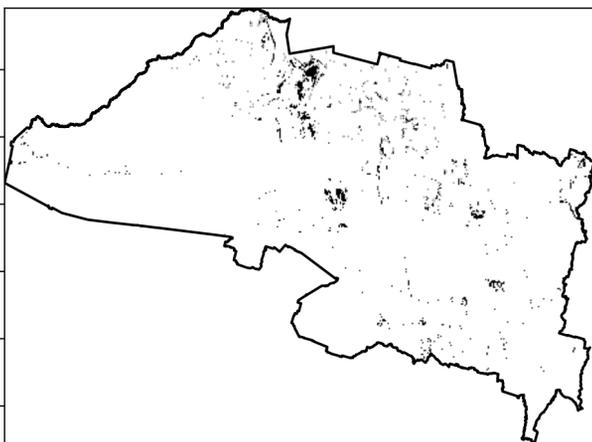
Area not protected 26.4% of region (37,395 ha)

Area protected 73.6% of region (104,254 ha)

% Area protected from wind erosion (>50%)
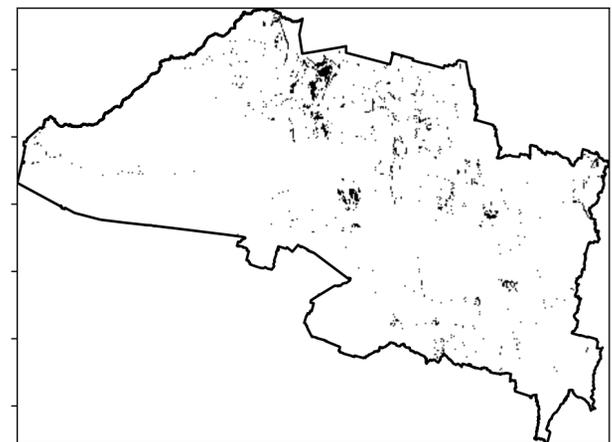
Area not protected 1.0% of region (1,416 ha)

Area protected 99.0% of region (140,233 ha)

Total Vegetation Cover Anomaly [%]

Anomaly show how many percetage points each pixel is from the mean. That is, red pixels are about 20% lower than the mean of that pixel. The mean is only for the month of the map using baseline from 2001 to 2019.
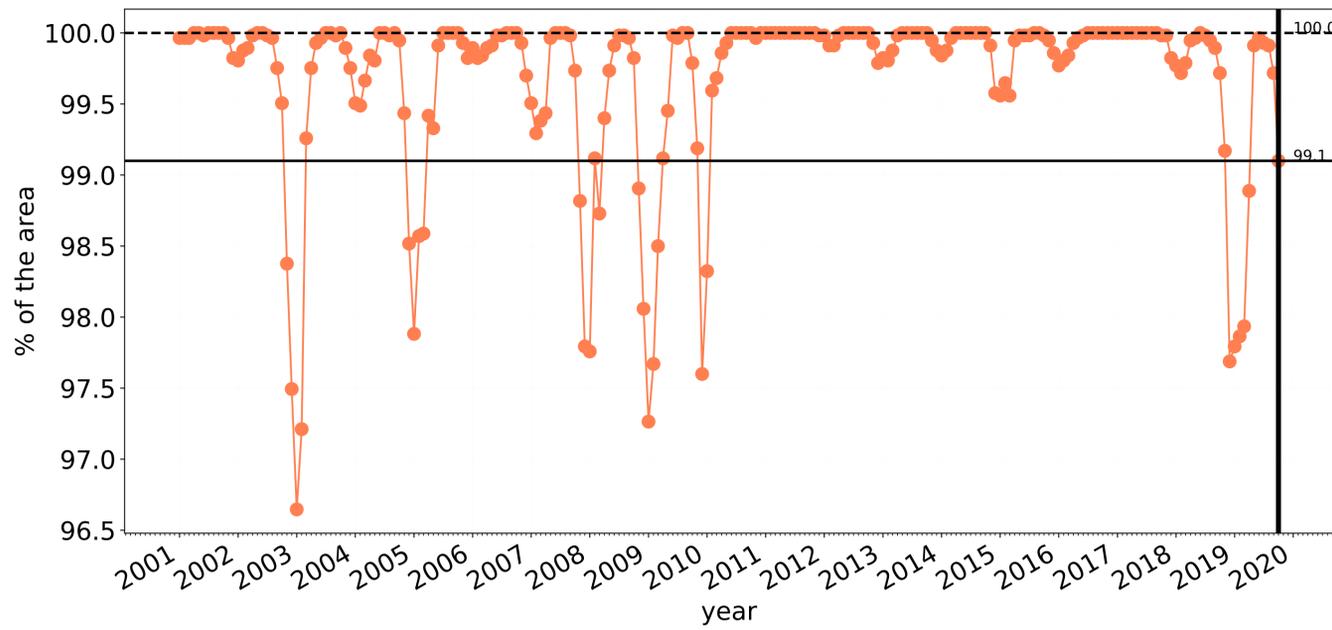
Total Vegetation Cover Decile [%]

Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the map using baseline from 2001 to 2019.
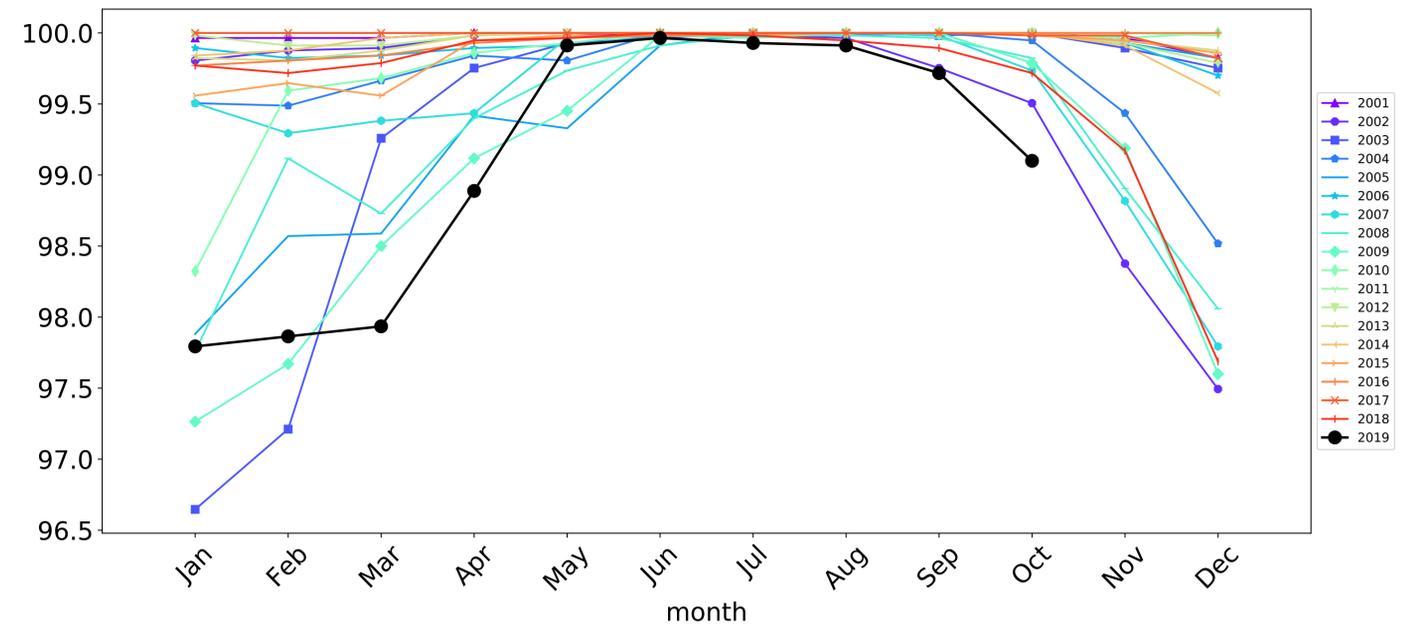
10
8-9
4-7
2-3
1
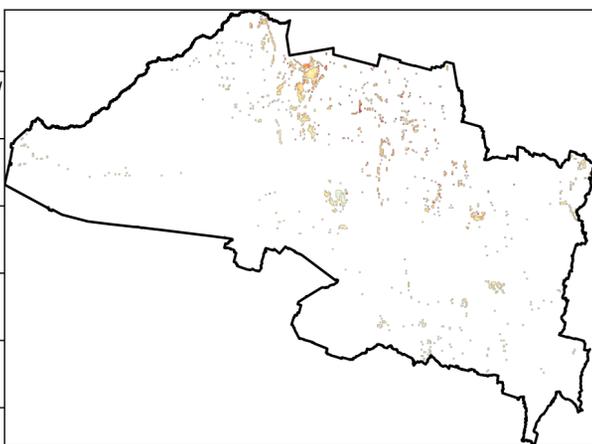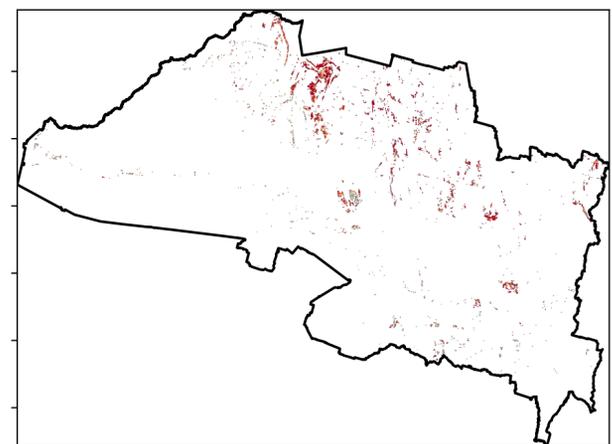
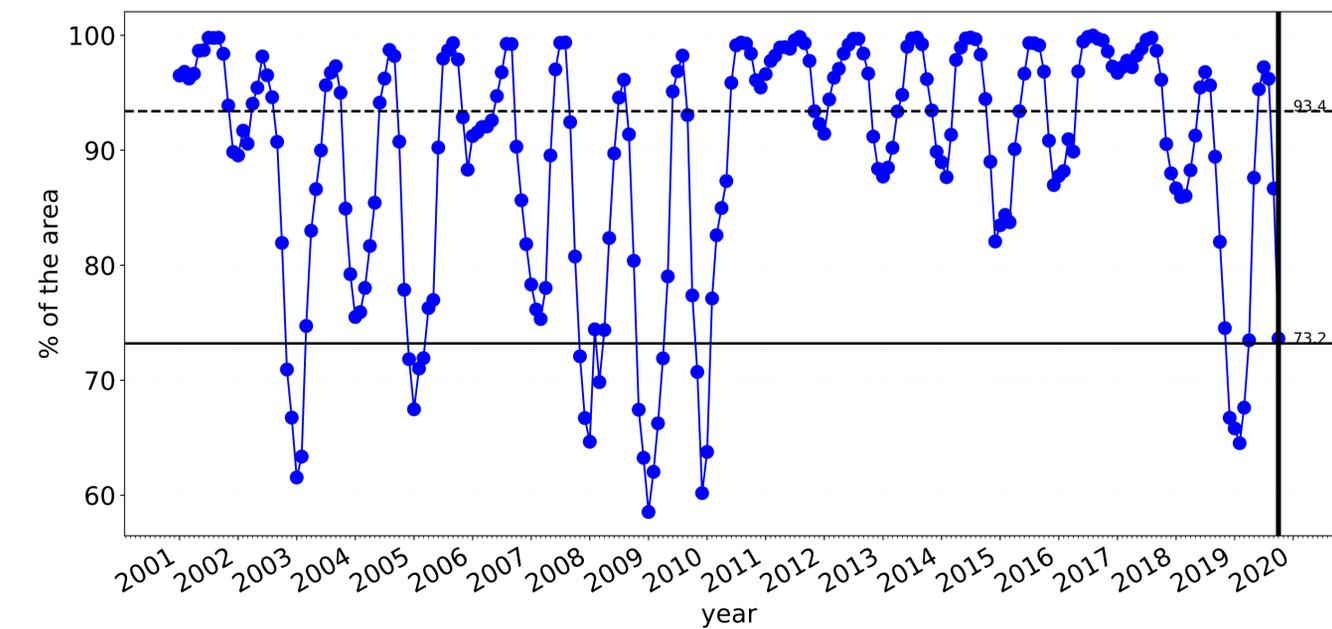# Grazing Woodland forest timeseries

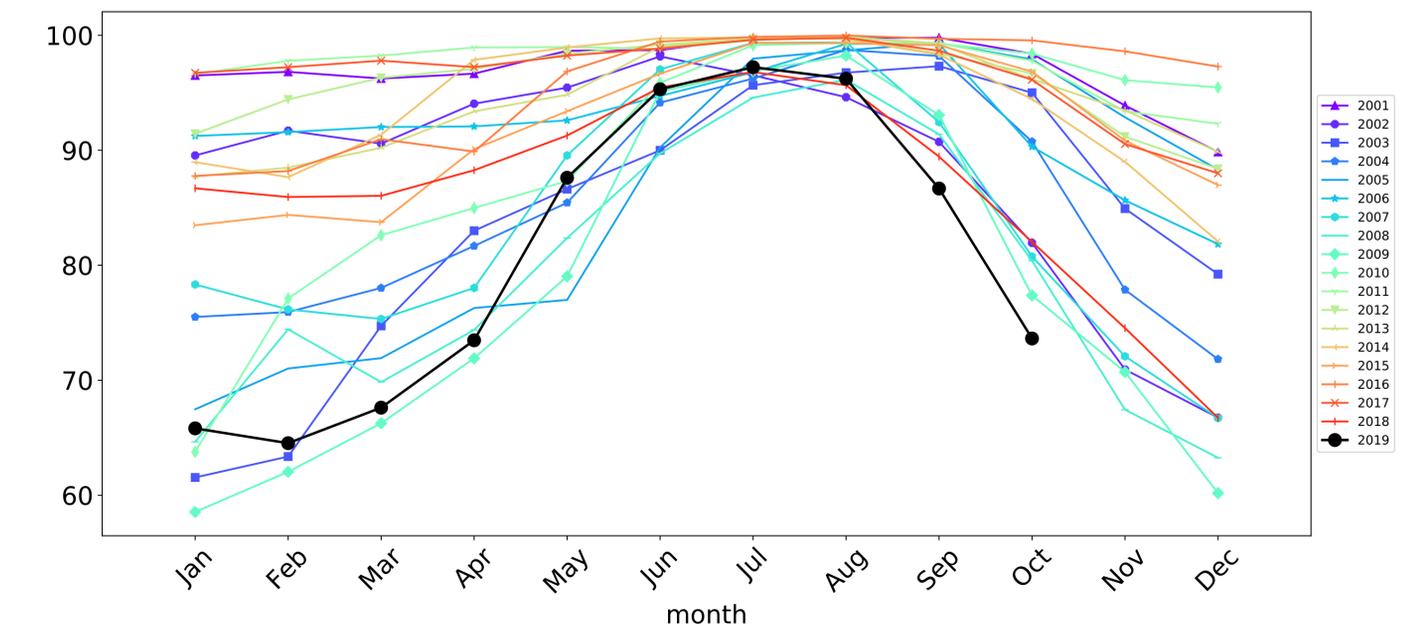Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)

Wind erosion historical monthly area protected (Total Veg Cov >50%)

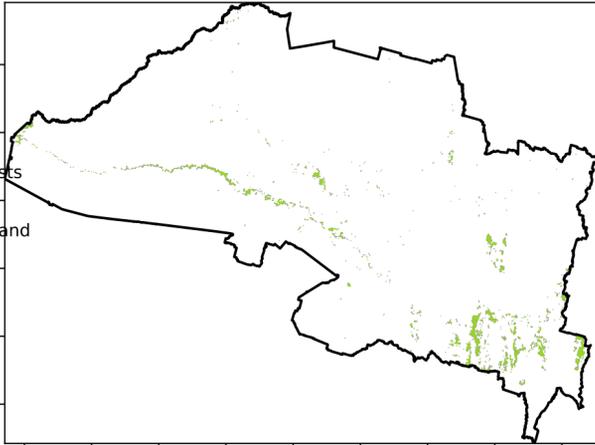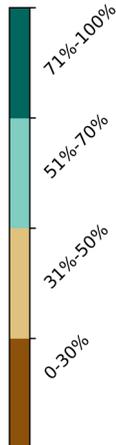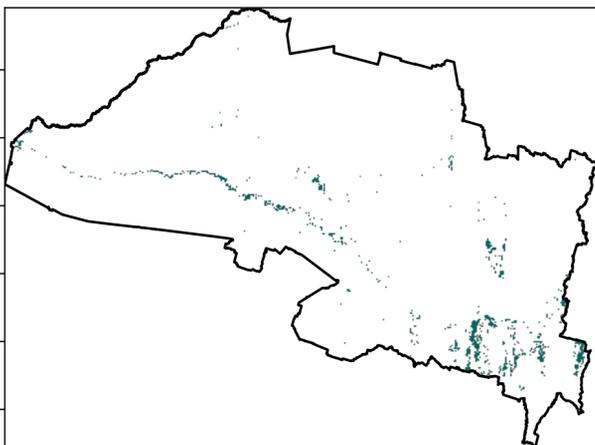Proportion of the area protected from water erosion (Total Vegetation Cover > 70%)

Water erosion historical monthly area protected (Total Veg Cov>70%)

Grazing - Forest (non woodland)

Land use and forest cover

Catchment Scale Land Use and Forests of Australia (2018) Derived from Catchment Scale Land Use of Australia (2018) and Forests of Australia (2018)
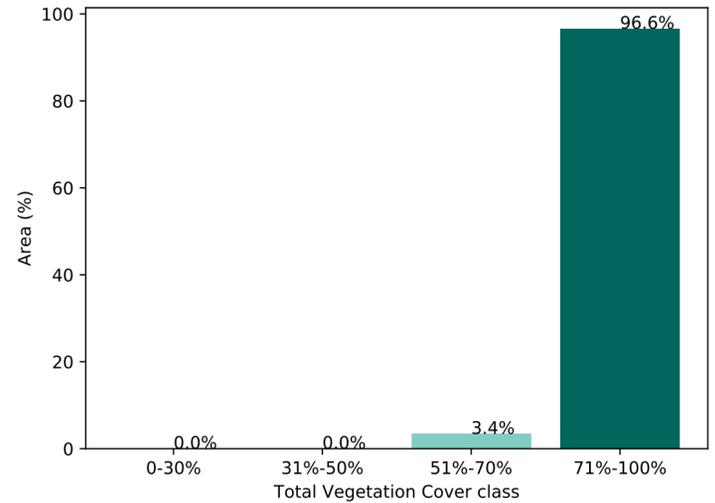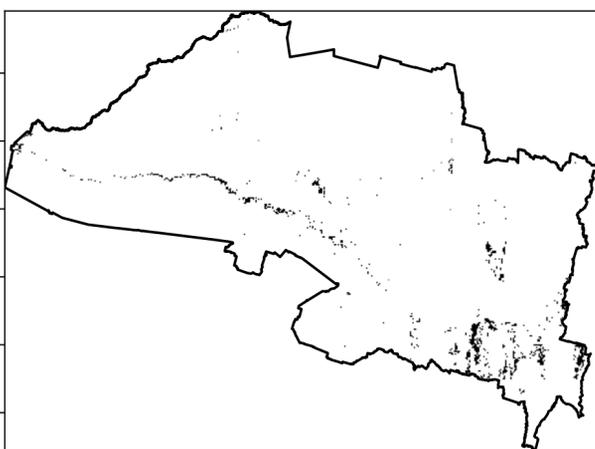
Agriculture - Grazing - Non-oodland forest

Total Vegetation Cover [%]

71%-100%

51%-70%

31%-50%

0-30%

Proportion of vegetation cover class in area

96.6%

3.4%

0.0%   0.0%

Area (%)

Total Vegetation Cover class

0-30%   31%-50%   51%-70%   71%-100%

% Area protected from water erosion (>70%)

Area not protected 3.4% of region (3,513 ha)

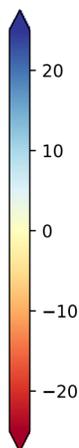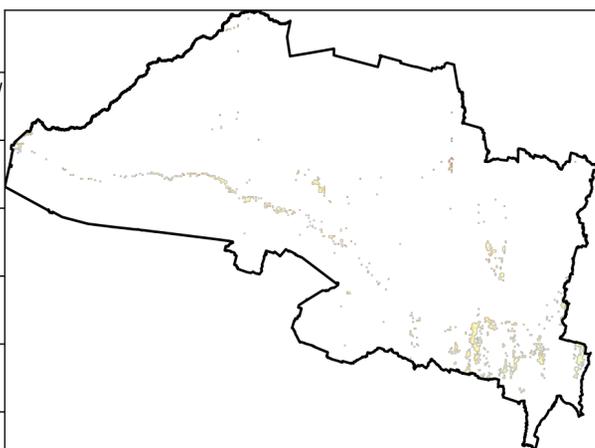Area protected 96.6% of region (99,836 ha)

% Area protected from wind erosion (>50%)
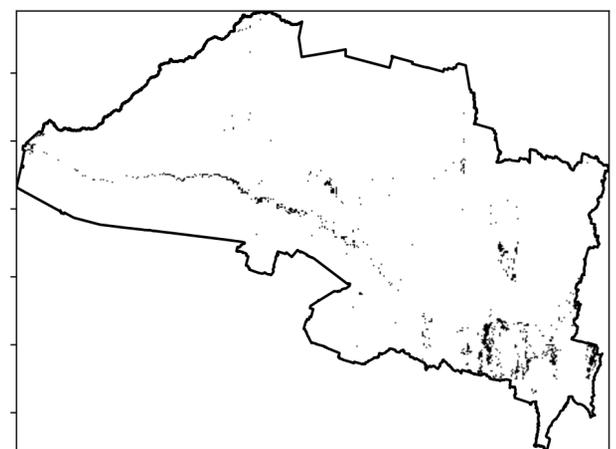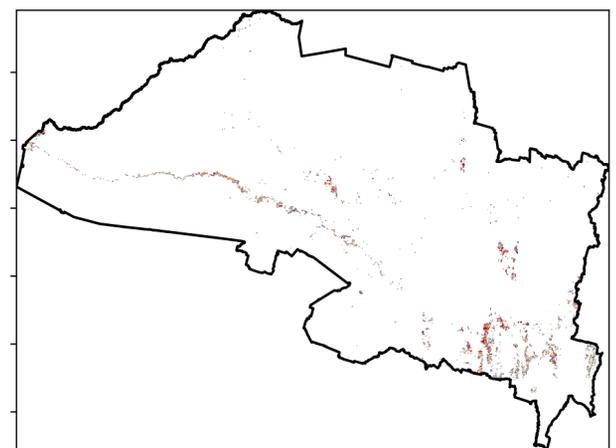
Area protected 100.0% of region (103,350 ha)

Total Vegetation Cover Anomaly [%]

Anomaly show how many percetage points each pixel is from the mean. That is, red pixels are about 20% lower than the mean of that pixel. The mean is only for the month of the map using baseline from 2001 to 2019.

20

10

0

-10
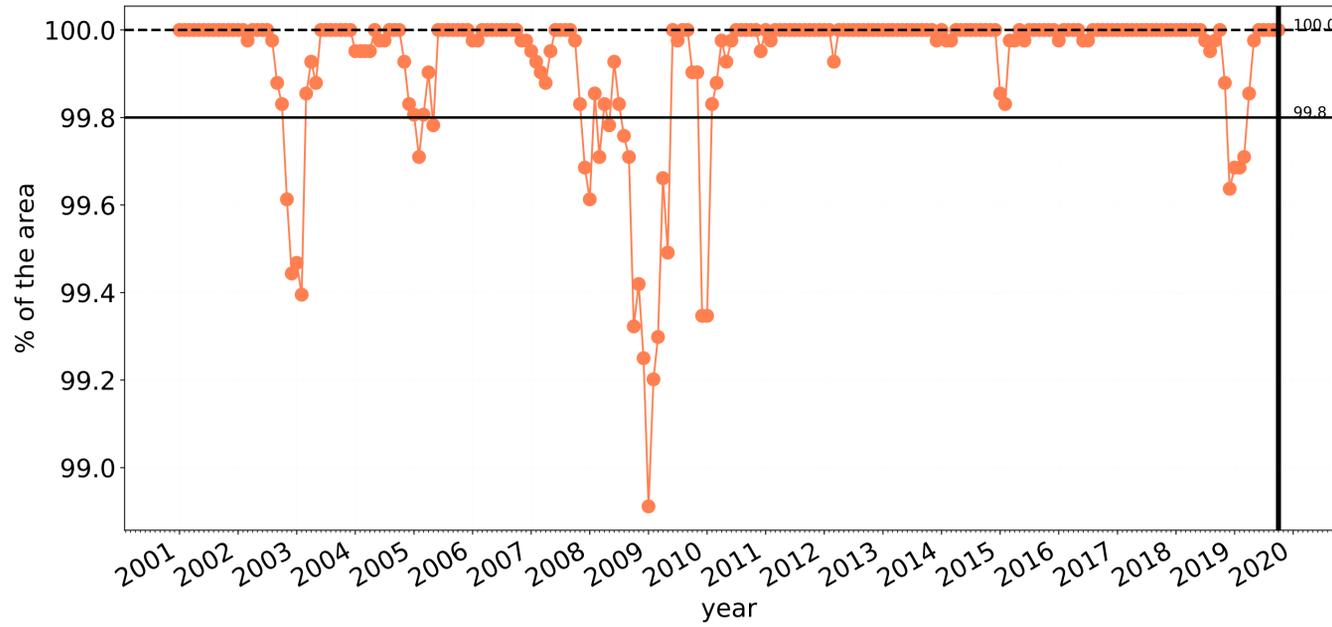
-20

Total Vegetation Cover Decile [%]

Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the map using baseline from 2001 to 2019.
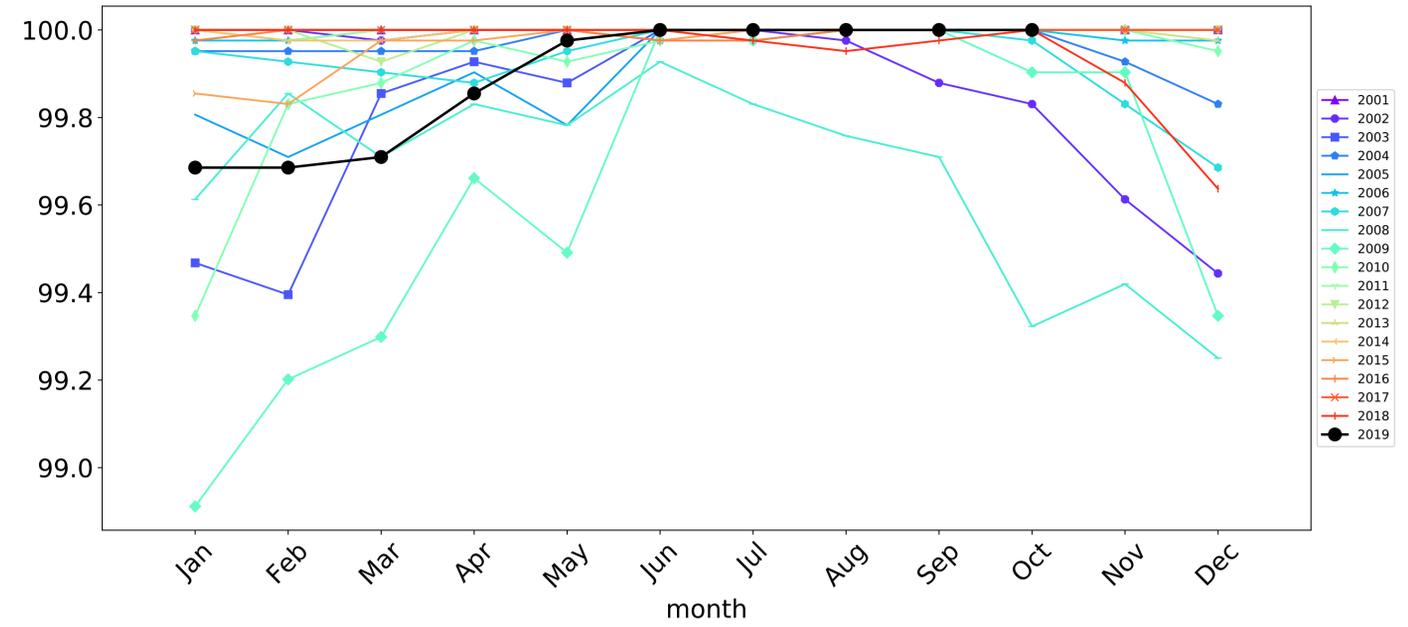
10

8-9

4-7

2-3
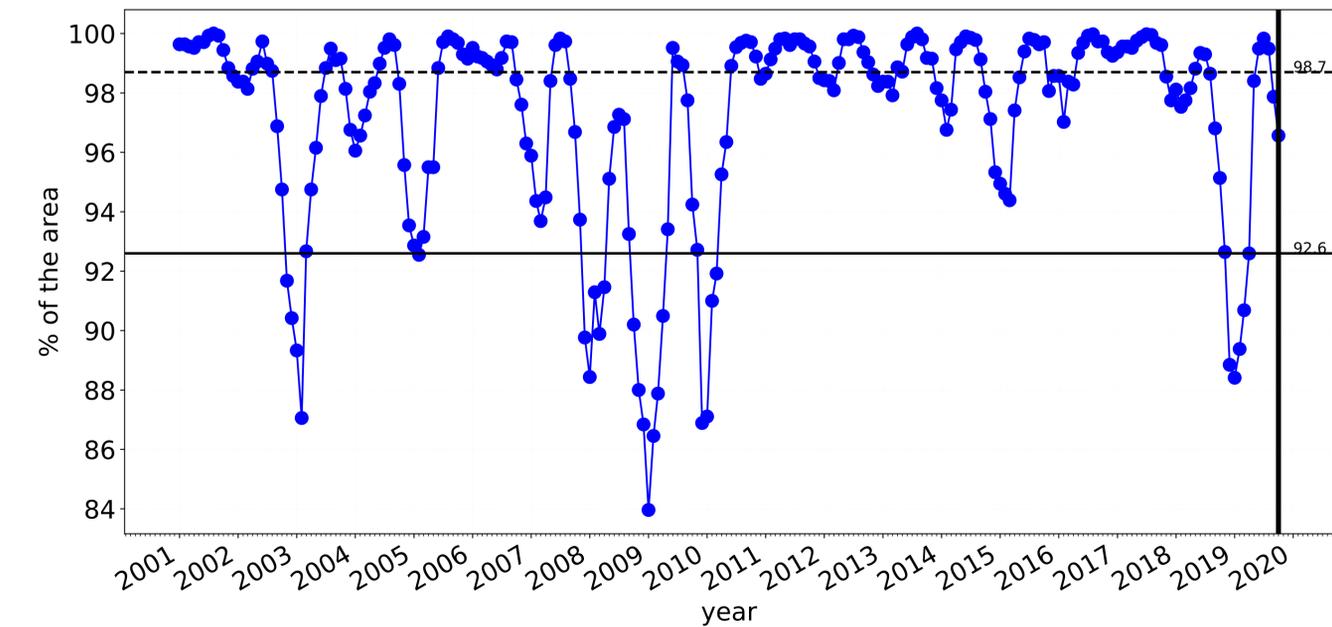
1

Grazing - Forest (non woodland) timeseries

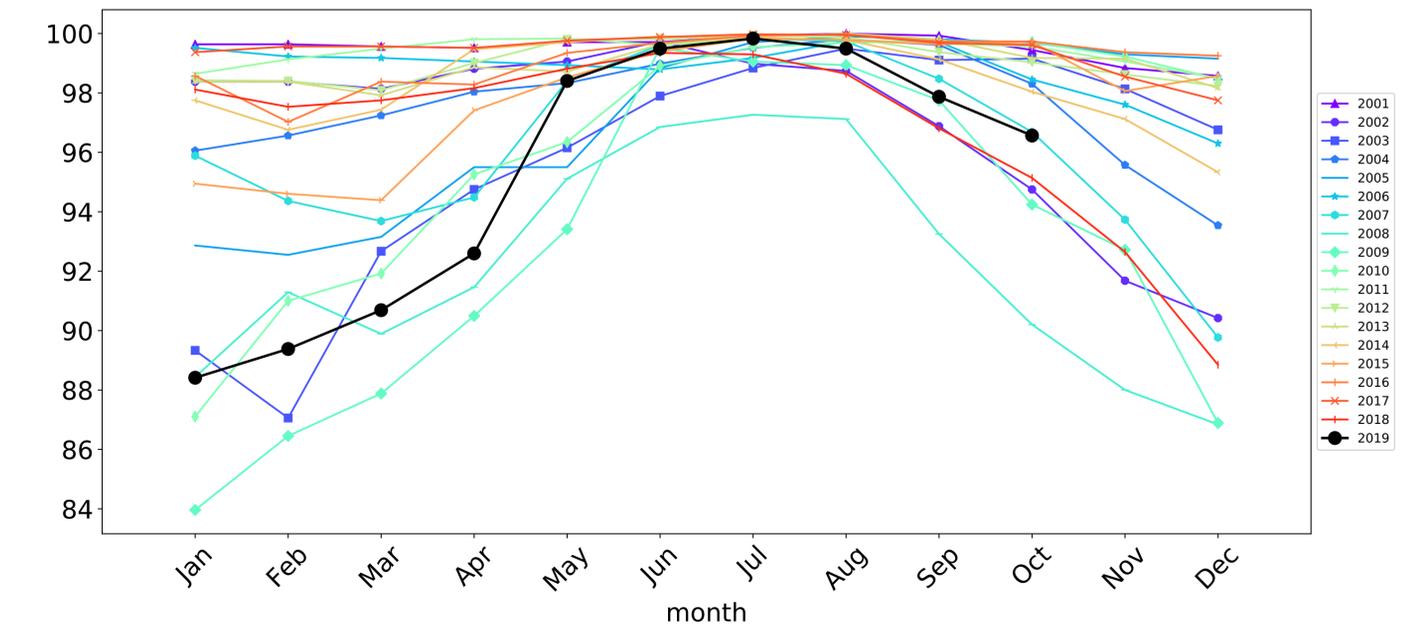### Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)

Wind erosion historical monthly area protected (Total Veg Cov >50%)

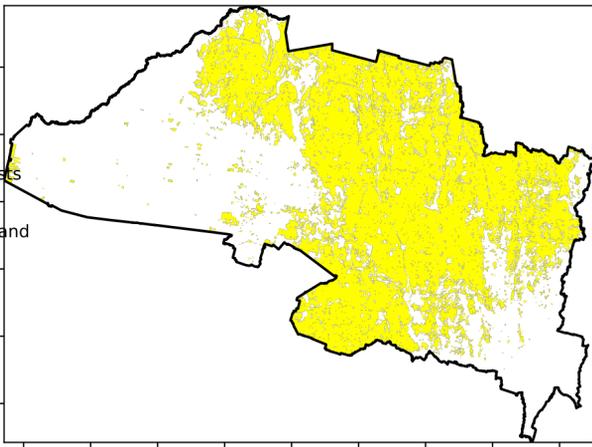### Proportion of the area protected from water erosion (Total Vegetation Cover > 70%)

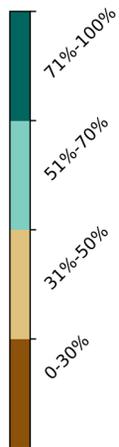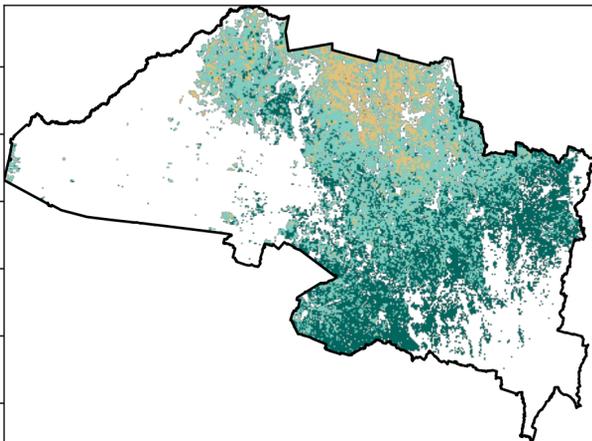### Water erosion historical monthly area protected (Total Veg Cov>70%)

Cropping

Land use and forest cover

Catchment Scale Land Use and Forests of Australia (2018) Derived from Catchment Scale Land Use of Australia (2018) and Forests of Australia (2018)
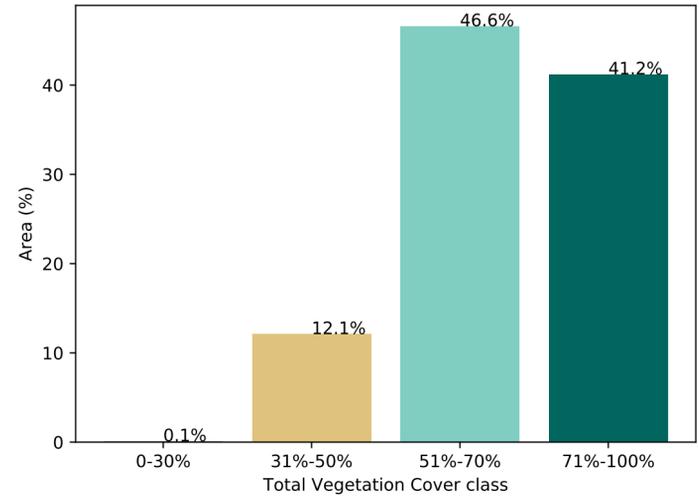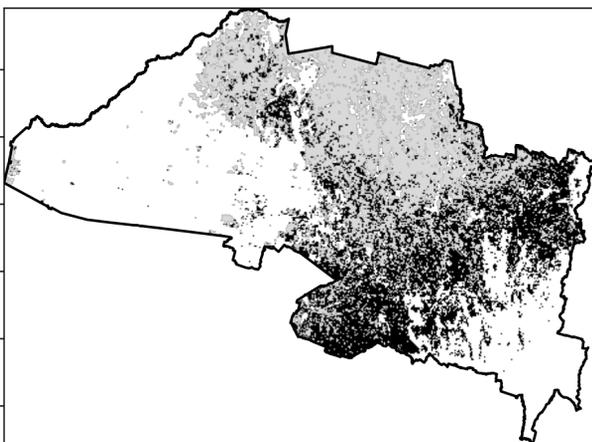
Agriculture - Cropping - Non-irrigated

Total Vegetation Cover [%]

71%-100%
51%-70%
31%-50%
0-30%

Proportion of vegetation cover class in area
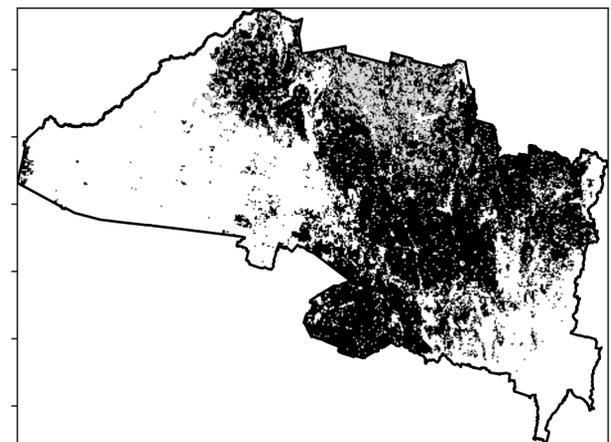

% Area protected from water erosion (>70%)

Area not protected 58.8% of region (1,873,956 ha)

Area protected 41.2% of region (1,313,044 ha)
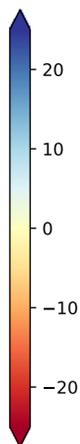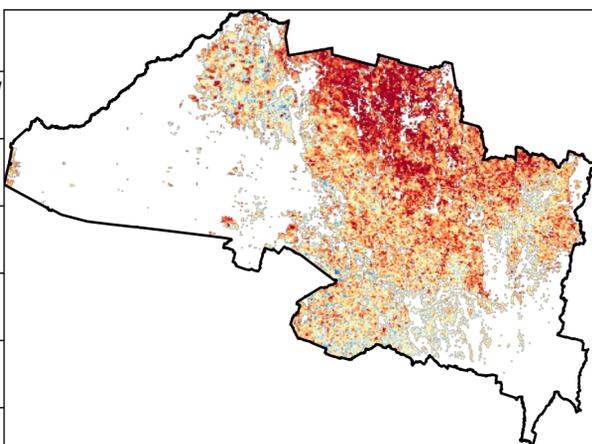
% Area protected from wind erosion (>50%)

Area not protected 12.0% of region (382,440 ha)

Area protected 88.0% of region (2,804,560 ha)

Total Vegetation Cover Anomaly [%]

Anomaly show how many percetage points each pixel is from the mean. That is, red pixels are about 20% lower than the mean of that pixel. The mean is only for the month of the map using baseline from 2001 to 2019.
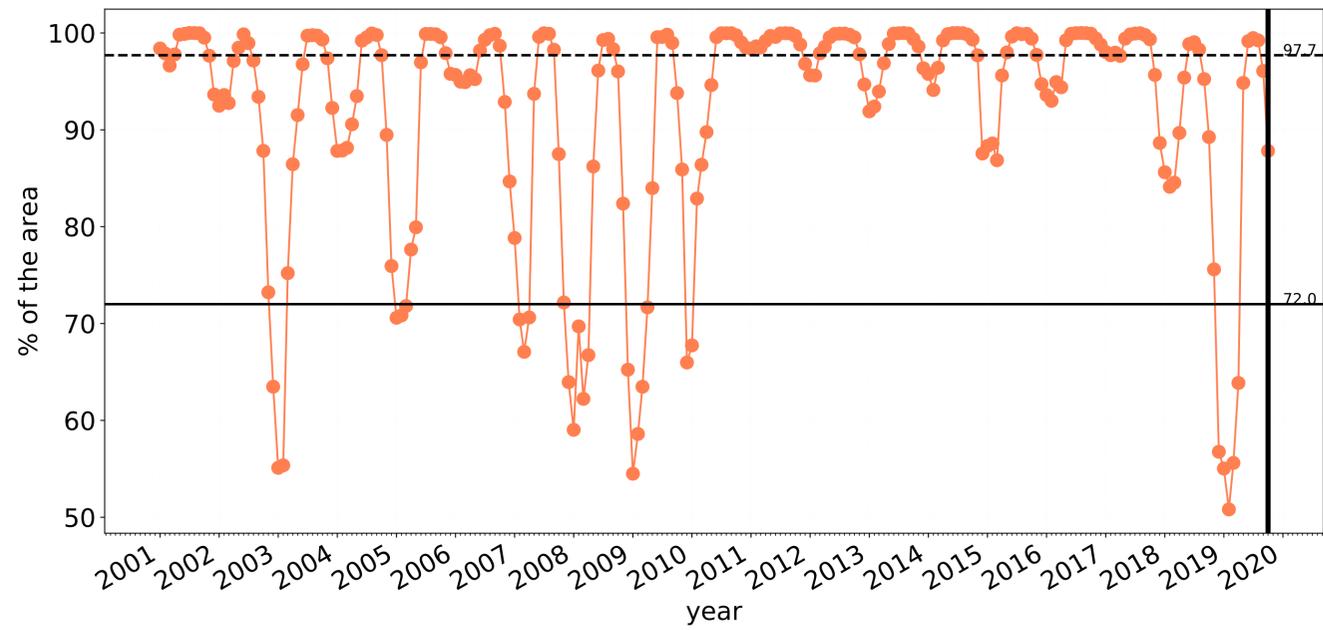
Total Vegetation Cover Decile [%]

Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the map using baseline from 2001 to 2019.
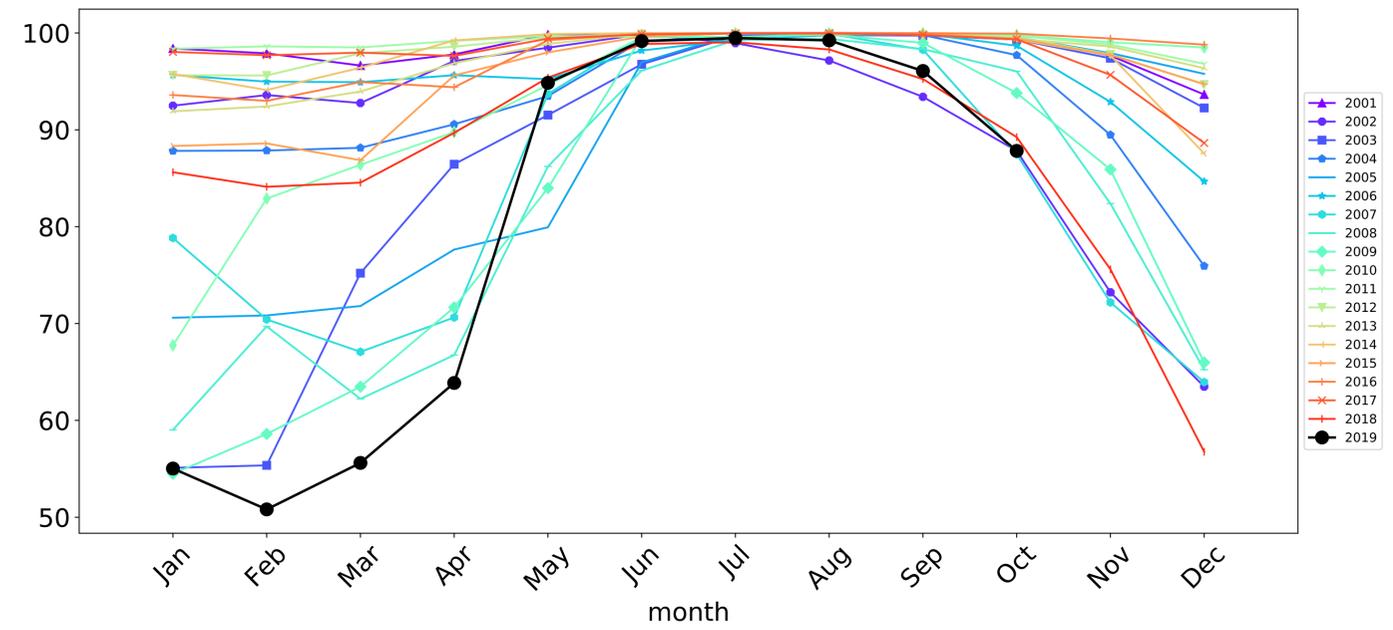
10
8-9
4-7
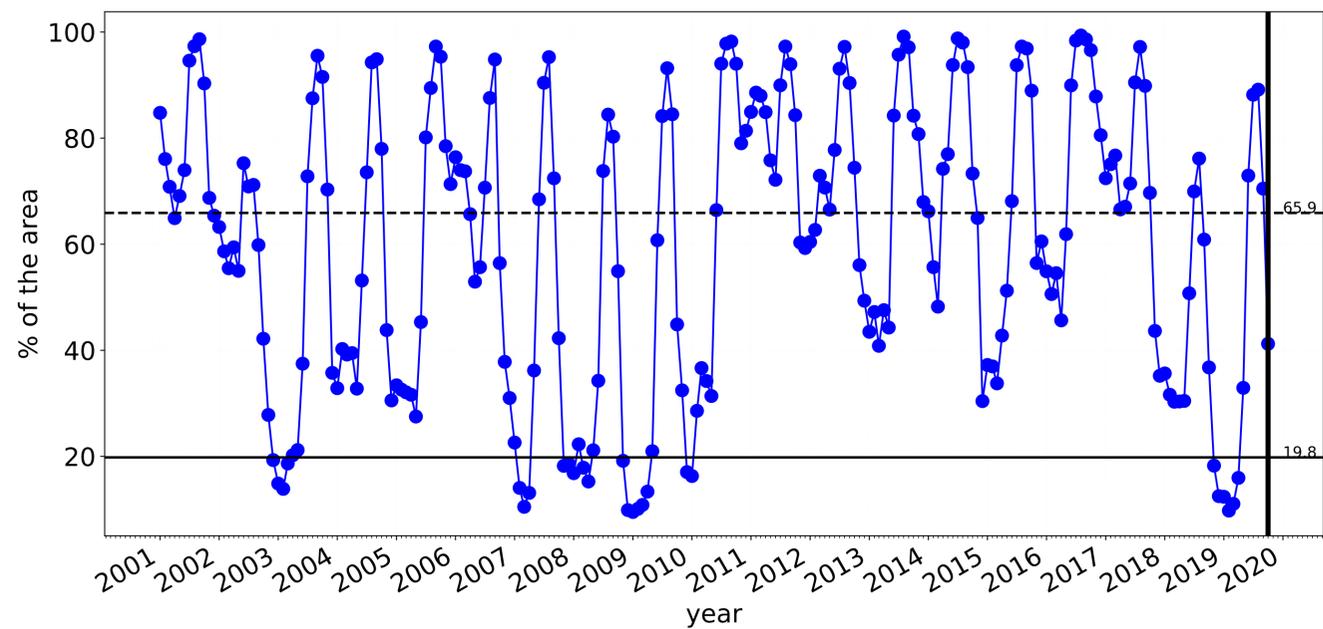2-3
1
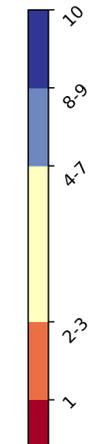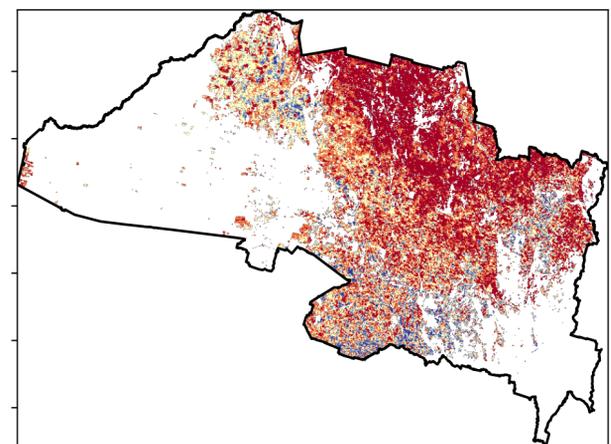
Cropping timeseries

Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)
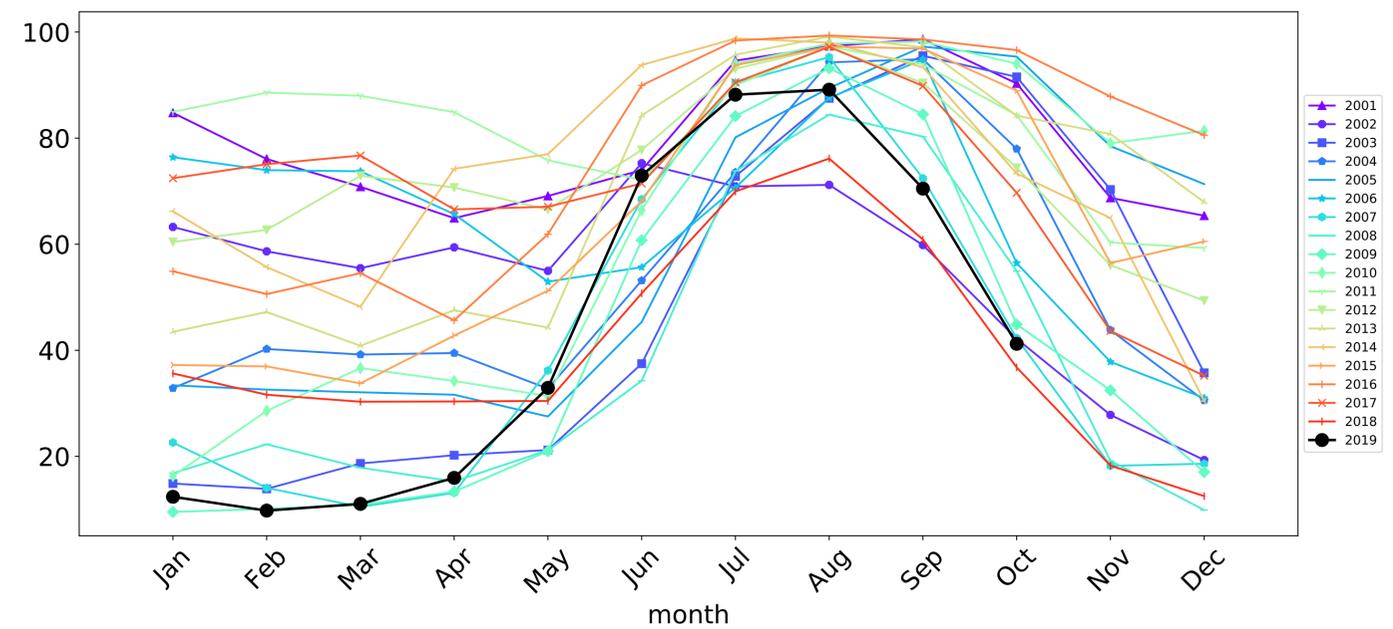

Wind erosion historical monthly area protected (Total Veg Cov >50%)

Proportion of the area protected from water erosion (Total Vegetation Cover > 70%)
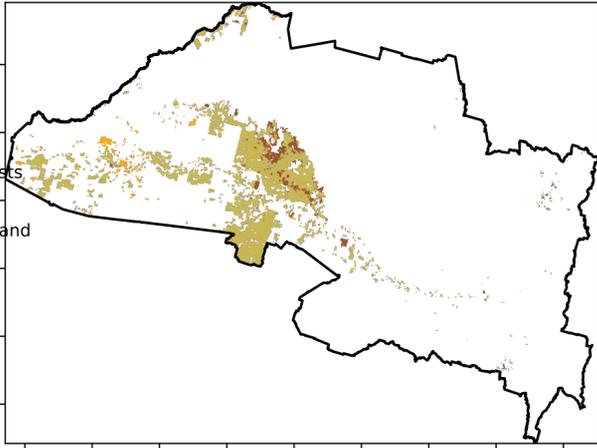

### Water erosion historical monthly area protected (Total Veg Cov>70%)

Irrigation

Land use and forest cover

Catchment Scale Land Use and Forests of Australia (2018) Derived from Catchment Scale Land Use of Australia (2018) and Forests of Australia (2018)
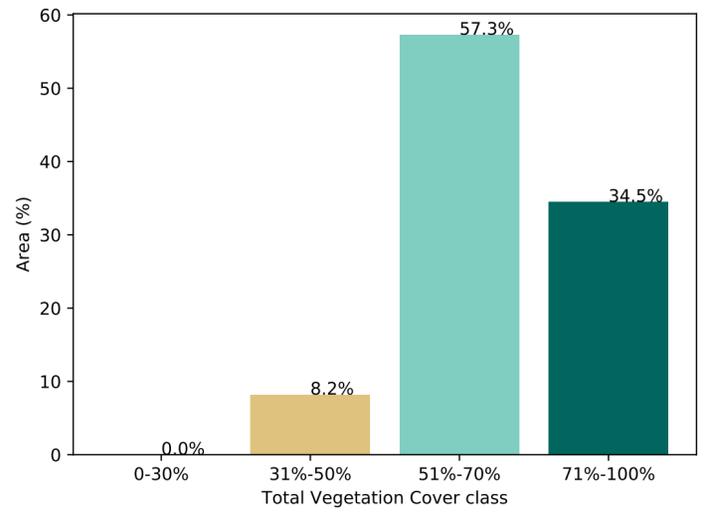
Agriculture - Grazing - Irrigated
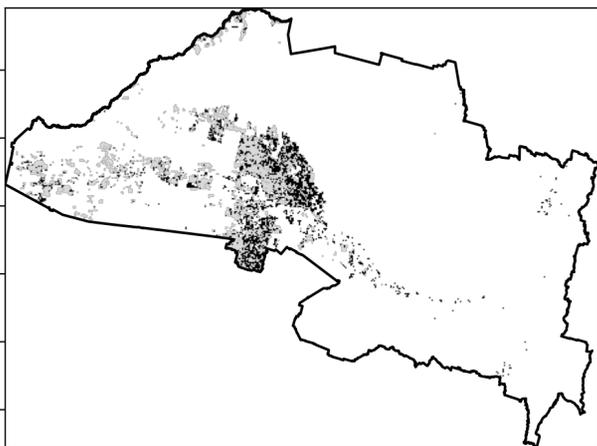Agriculture - Cropping - Irrigated
Agriculture - Horticulture - Irrigated

Total Vegetation Cover [%]

71%-100%
51%-70%
31%-50%
0-30%
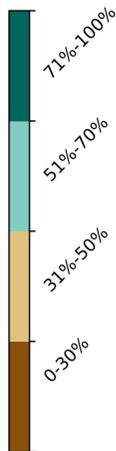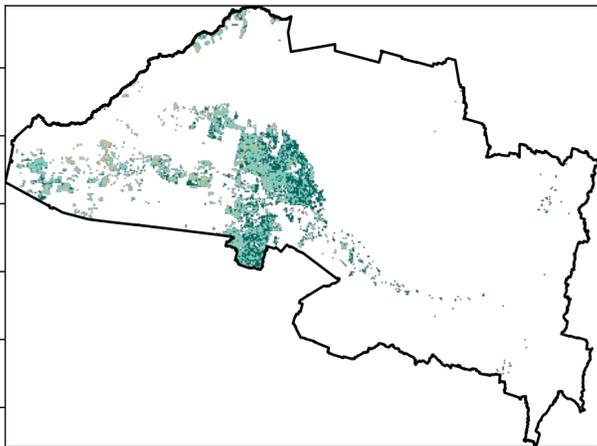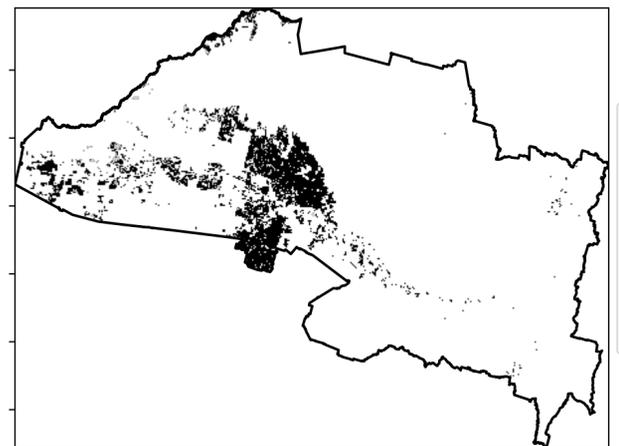
Proportion of vegetation cover class in area

% Area protected from water erosion (>70%)

Area not protected 65.5% of region (371,728 ha)

Area protected 34.5% of region (195,796 ha)

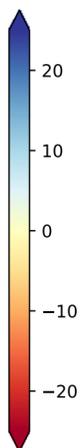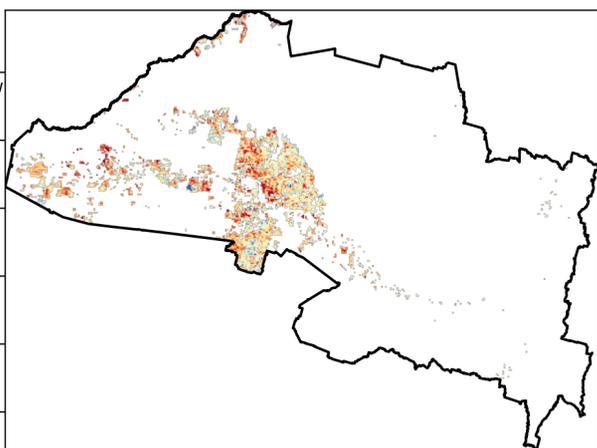## % Area protected from wind erosion (>50%)

Area not protected 8.0% of region (45,402 ha)

Area protected 92.0% of region (522,123 ha)

Total Vegetation Cover Anomaly [%]

Anomaly show how many percetage points each pixel is from the mean. That is, red pixels are about 20% lower than the mean of that pixel. The mean is only for the month of the map using baseline from 2001 to 2019.

Total Vegetation Cover Decile [%]

Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the map using baseline from 2001 to 2019.

10
8-9
4-7
2-3
1
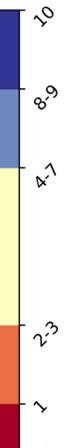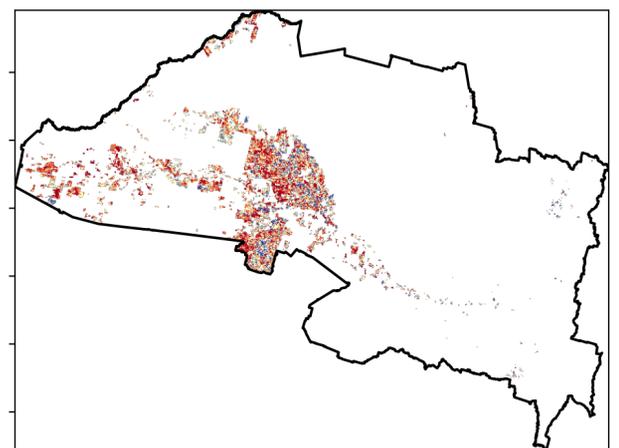
Irrigation timeseries

Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)
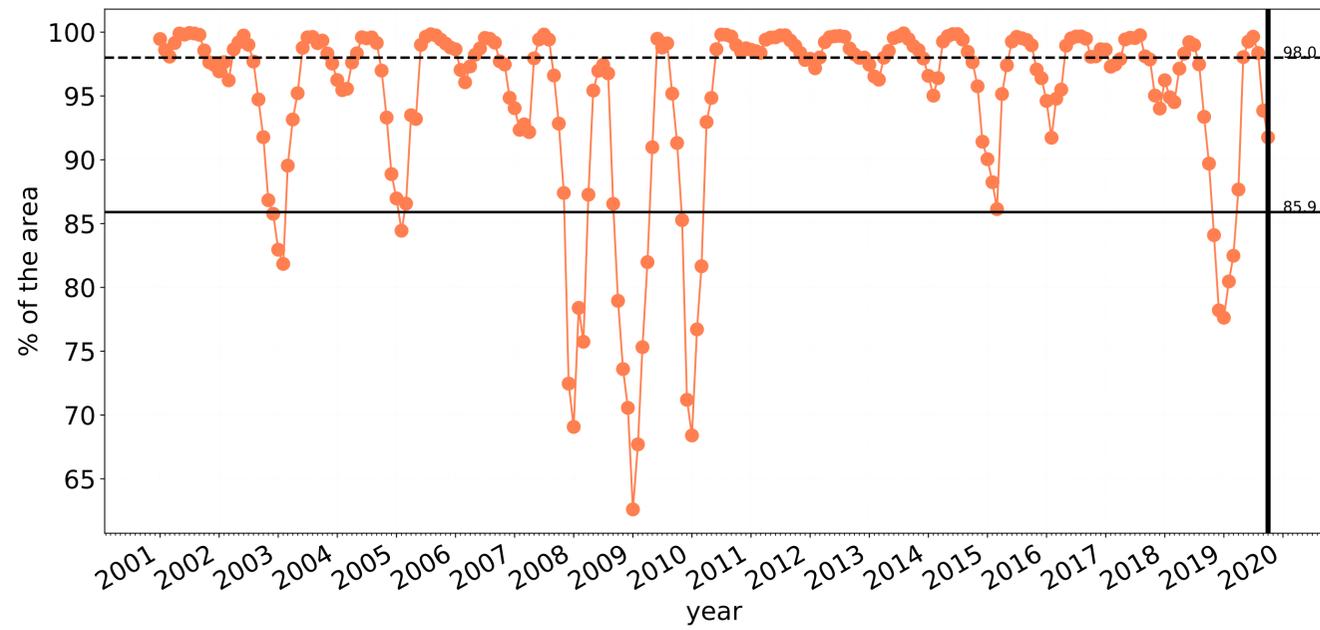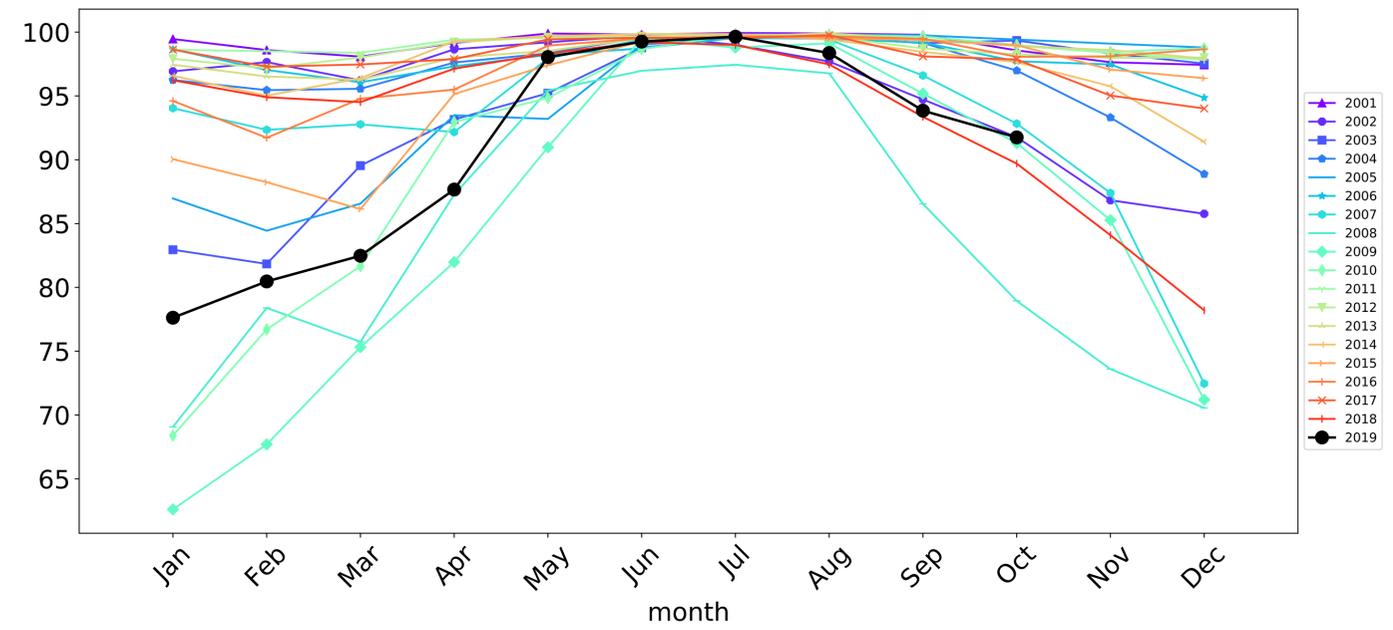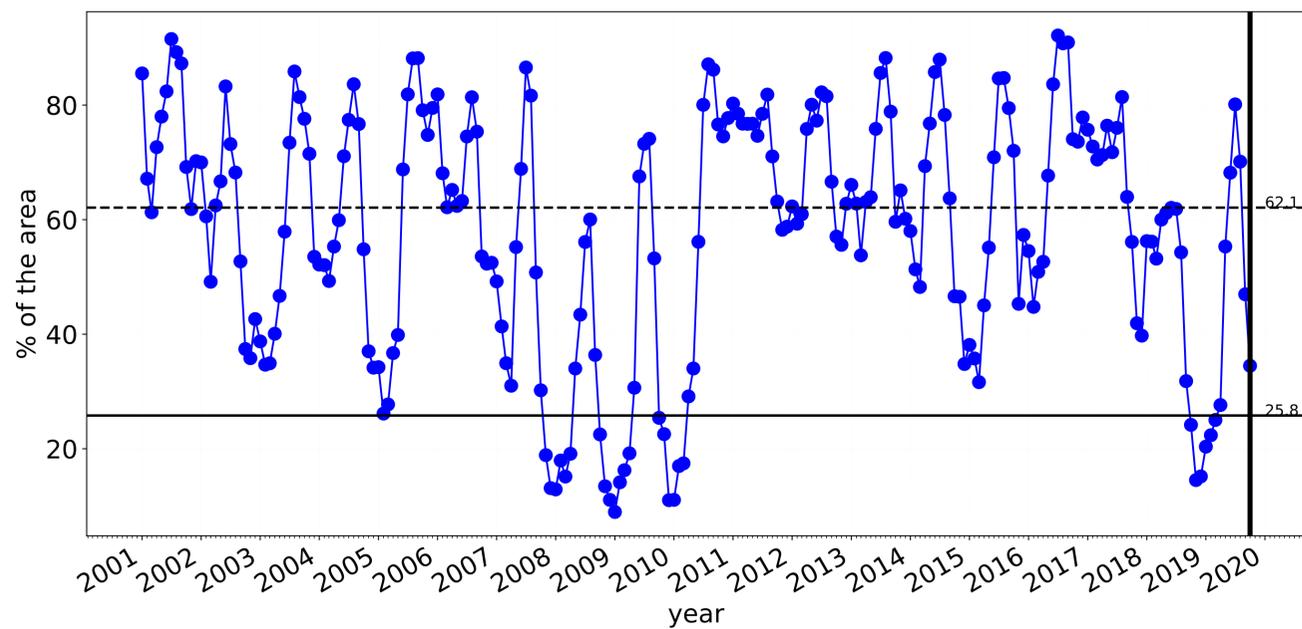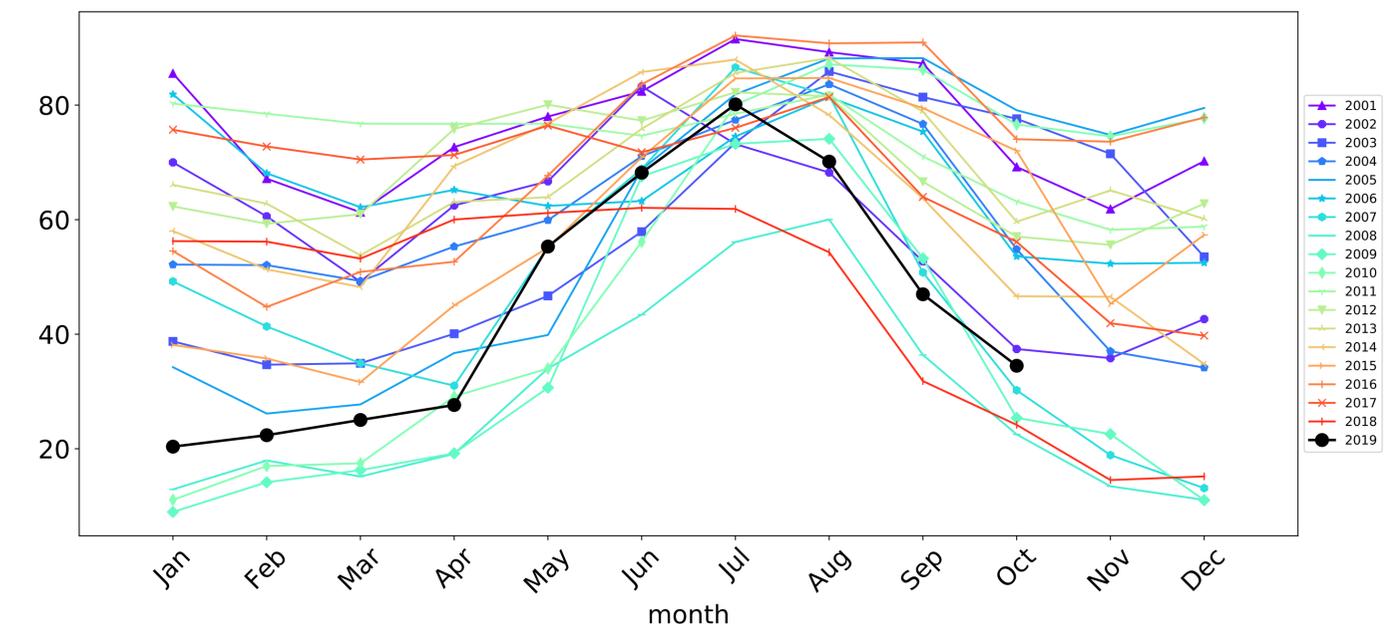
Wind erosion historical monthly area protected (Total Veg Cov >50%)

Proportion of the area protected from water erosion (Total Vegetation Cover > 70%)

Water erosion historical monthly area protected (Total Veg Cov>70%)

Production native forests and plantation forests

Land use and forest cover

Catchment Scale Land Use and Forests of Australia (2018) Derived from Catchment Scale Land Use of Australia (2018) and Forests of Australia (2018)

Production native forests and plantation forests

Total Vegetation Cover [%]

71%-100%
51%-70%
31%-50%
0-30%

Proportion of vegetation cover class in area

Area (%)

0.0% 0.4% 5.2% 94.4%

0-30%   31%-50%   51%-70%   71%-100%

Total Vegetation Cover class
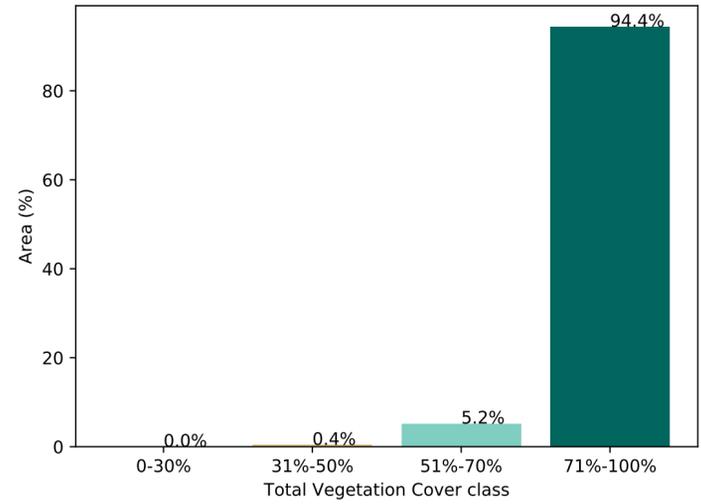
% Area protected from water erosion (>70%)
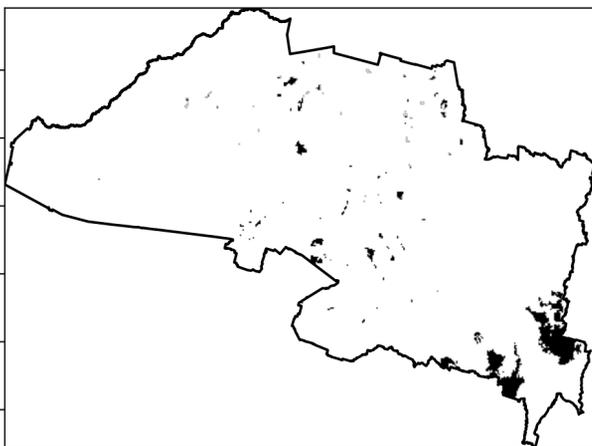
Area not protected 5.6% of region (9,678 ha)

Area protected 94.4% of region (163,146 ha)

% Area protected from wind erosion (>50%)
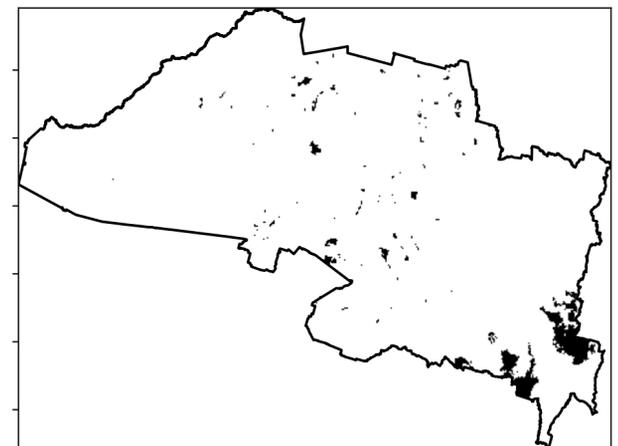
Area not protected 0.0% of region (0 ha)

Area protected 100.0% of region (172,825 ha)

Total Vegetation Cover Anomaly [%]

Anomaly show how many percetage points each pixel is from the mean. That is, red pixels are about 20% lower than the mean of that pixel. The mean is only for the month of the map using baseline from 2001 to 2019.

Total Vegetation Cover Decile [%]

Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the map using baseline from 2001 to 2019.

10
8-9
4-7
2-3
1
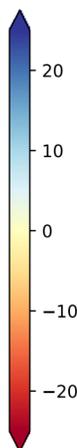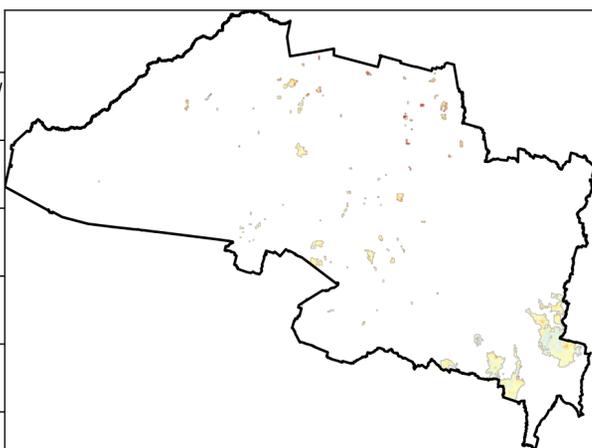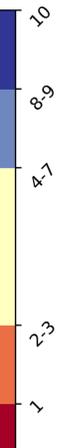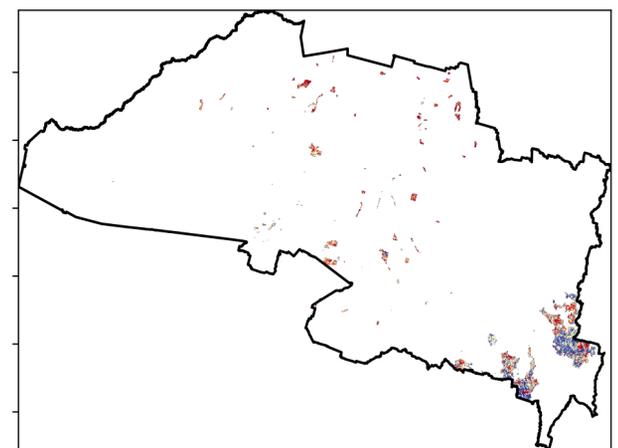
Production native forests and plantation forests timeseries

Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)
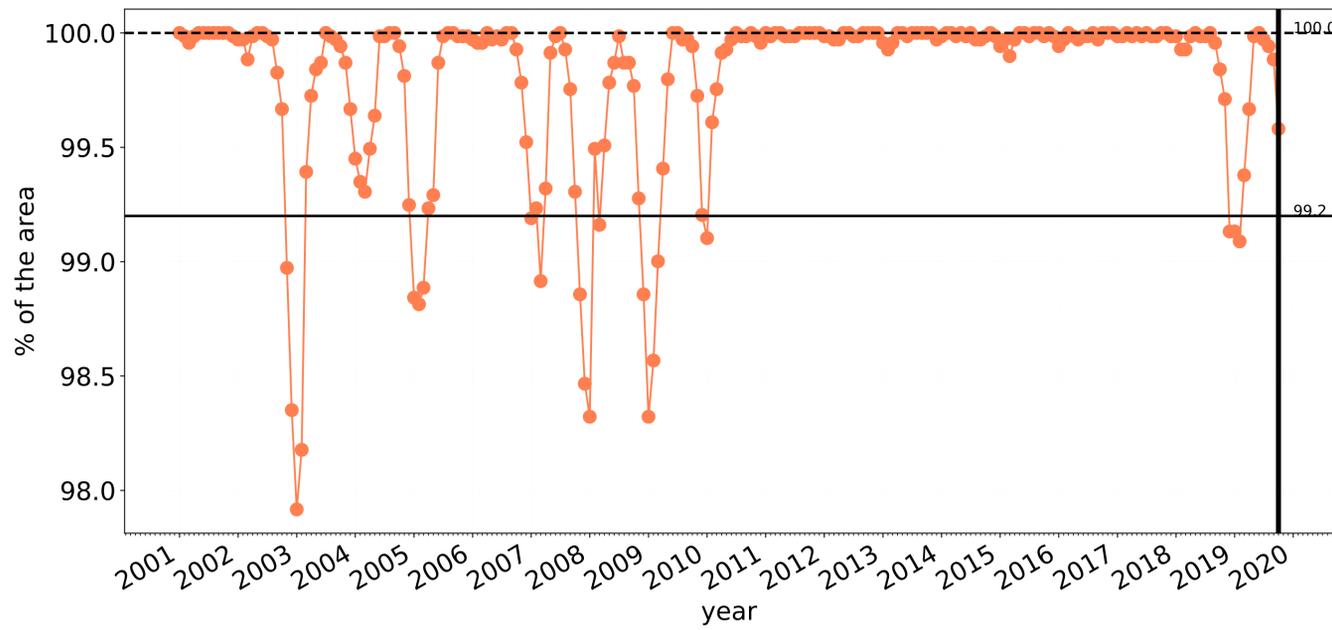
Wind erosion historical monthly area protected (Total Veg Cov >50%)

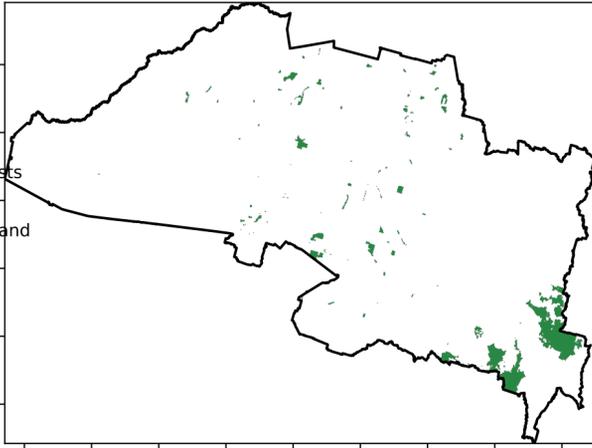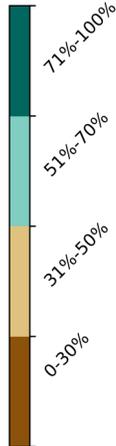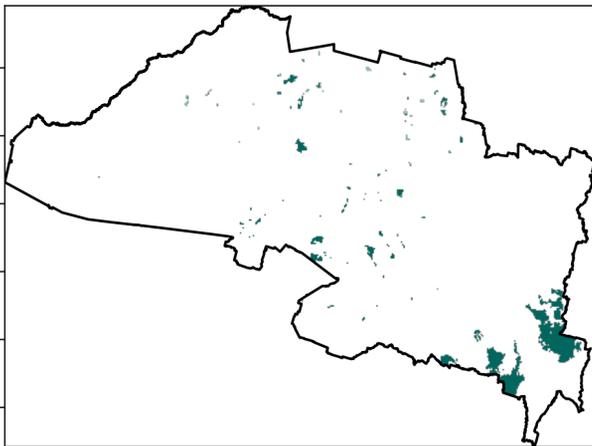Proportion of the area protected from water erosion (Total Vegetation Cover > 70%)

Water erosion historical monthly area protected (Total Veg Cov>70%)

Riverina (6,694,000 ha and no data 14,335 ha) Percentage area and hectares protected with TVC threshold 30,50,70,80,90 and 95%

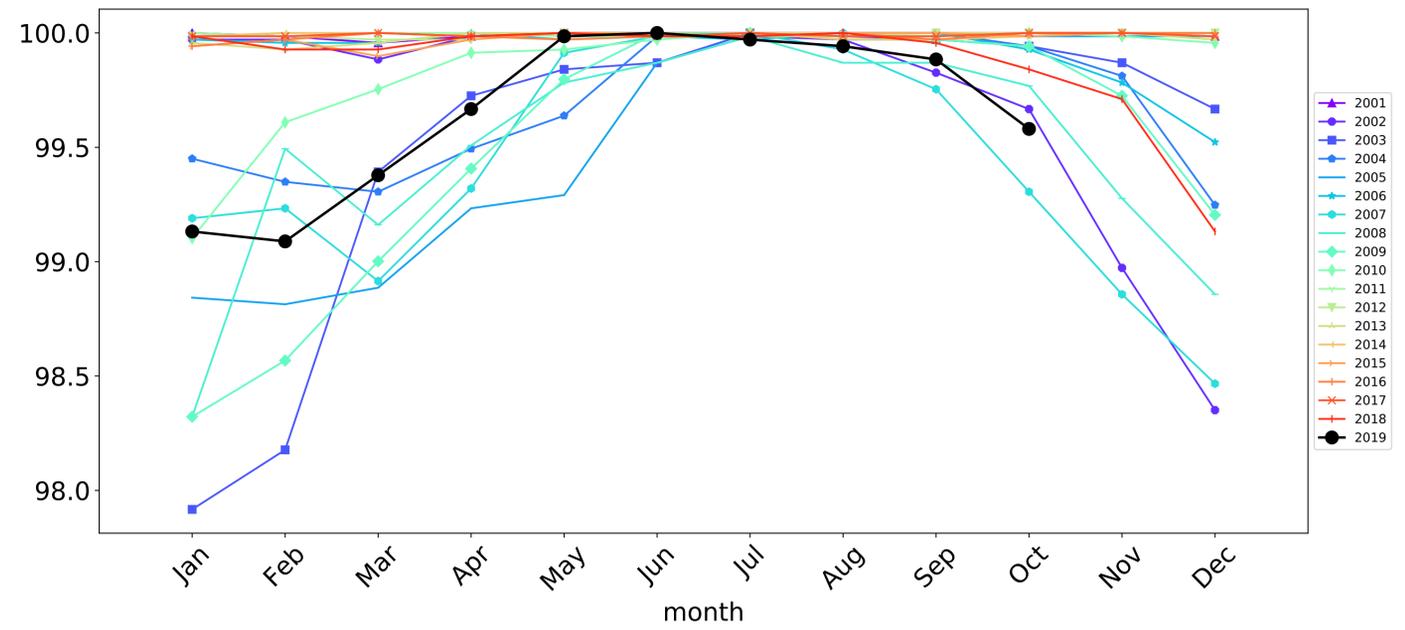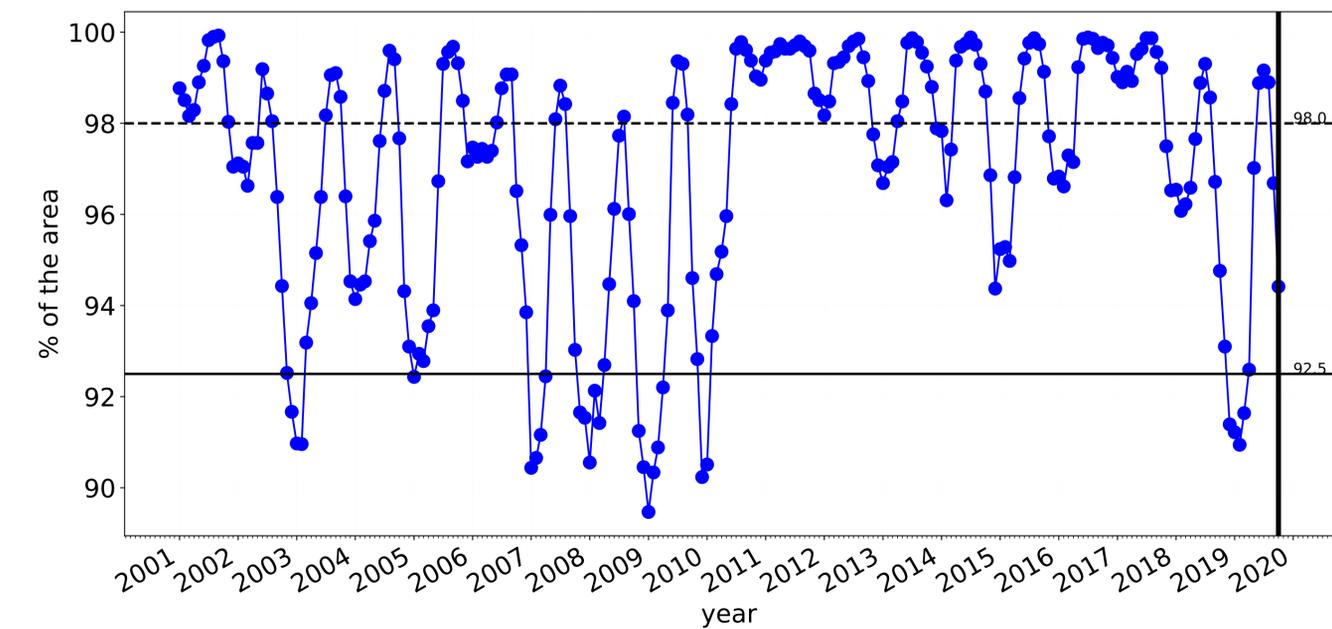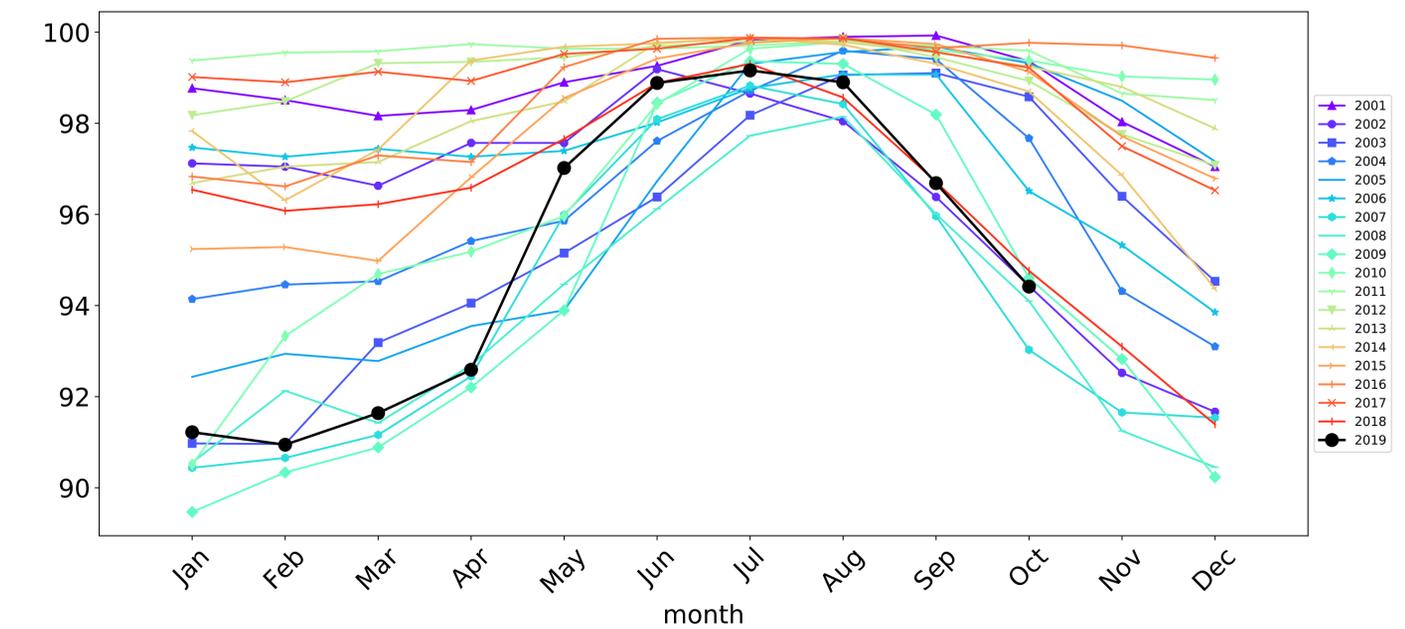| Land use and forest cover Class	area(ha)	above_30	above_50	above_70	above_80	above_90	above_95
Entire region	6,694,000	100.0% 6,691,275	88.0% 5,892,000	46.2% 3,095,925	26.4% 1,766,100	10.9% 729,875	3.9% 261,650
Conservation and natural environments	323,050	100.0% 323,025	95.6% 308,975	83.0% 268,050	75.5% 243,900	57.9% 187,150	26.8% 86,425
Conservation and natural environments non forest	83,350	100.0% 83,325	83.2% 69,375	37.1% 30,925	19.0% 15,875	8.9% 7,400	4.5% 3,725
Conservation and natural environments Forest (non woodland)	195,200	100.0% 195,200	100.0% 195,200	99.9% 194,925	99.0% 193,250	86.2% 168,275	41.4% 80,750
Agriculture	6,067,875	100.0% 6,065,325	87.2% 5,294,150	42.8% 2,598,325	22.1% 1,339,800	7.0% 423,175	1.8% 112,100
Grazing	2,311,525	99.9% 2,310,250	85.4% 1,973,000	47.1% 1,088,675	29.7% 685,925	10.7% 248,200	2.5% 57,050
Grazing non forest	2,066,525	99.9% 2,065,250	83.7% 1,729,275	42.8% 884,575	26.4% 545,875	9.9% 203,775	2.4% 48,875
Grazing Woodland forest	141,650	100.0% 141,650	99.1% 140,375	73.6% 104,300	39.6% 56,125	4.7% 6,625	0.5% 700
Grazing - Forest (non woodland)	103,350	100.0% 103,350	100.0% 103,350	96.6% 99,800	81.2% 83,925	36.6% 37,800	7.2% 7,475
Cropping	3,187,000	100.0% 3,185,900	87.8% 2,798,975	41.2% 1,313,675	18.8% 599,350	5.3% 170,100	1.7% 54,000
Irrigation	567,525	100.0% 567,350	91.8% 520,725	34.5% 195,725	9.6% 54,400	0.9% 4,825	0.2% 1,025
Production native forests and plantation forests	172,825	100.0% 172,825	99.6% 172,100	94.4% 163,175	86.6% 149,625	65.6% 113,425	35.9% 62,000