Total vegetation cover soil protection
Region:NRM Riverina NSW   Date: May 2016

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
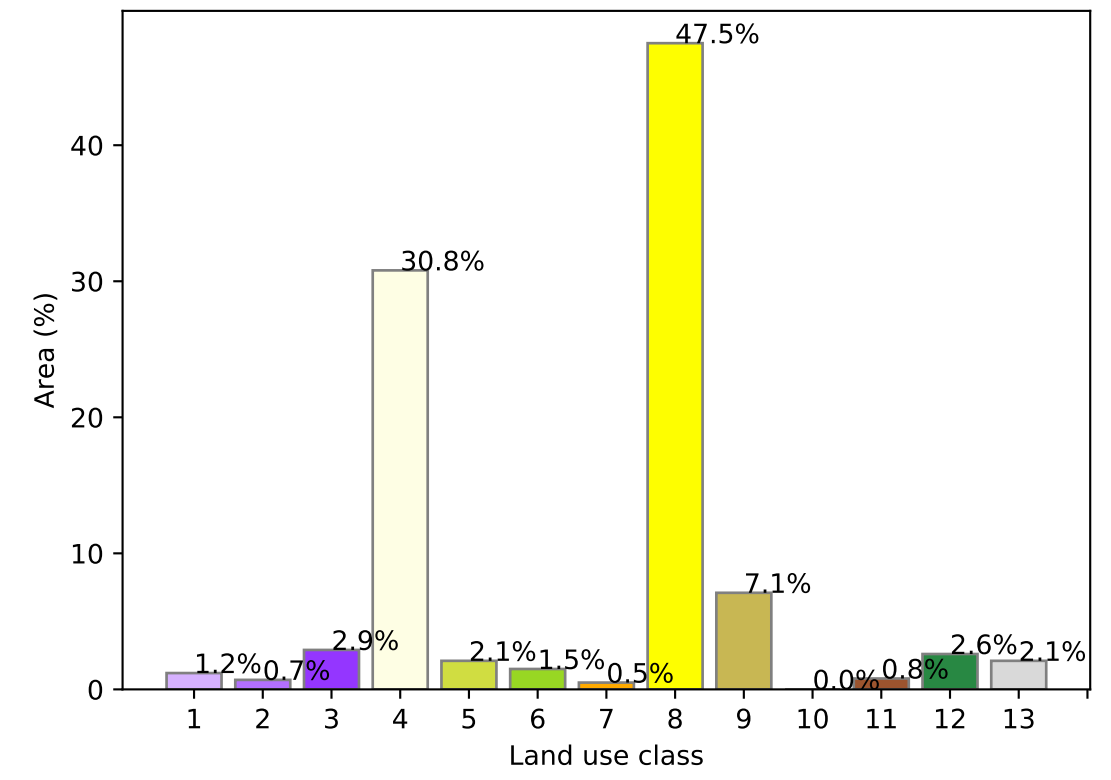
4. MODIS Fractional cover algorithm:

   https://doi.org/10.4225/08/5848a3f19a7b3
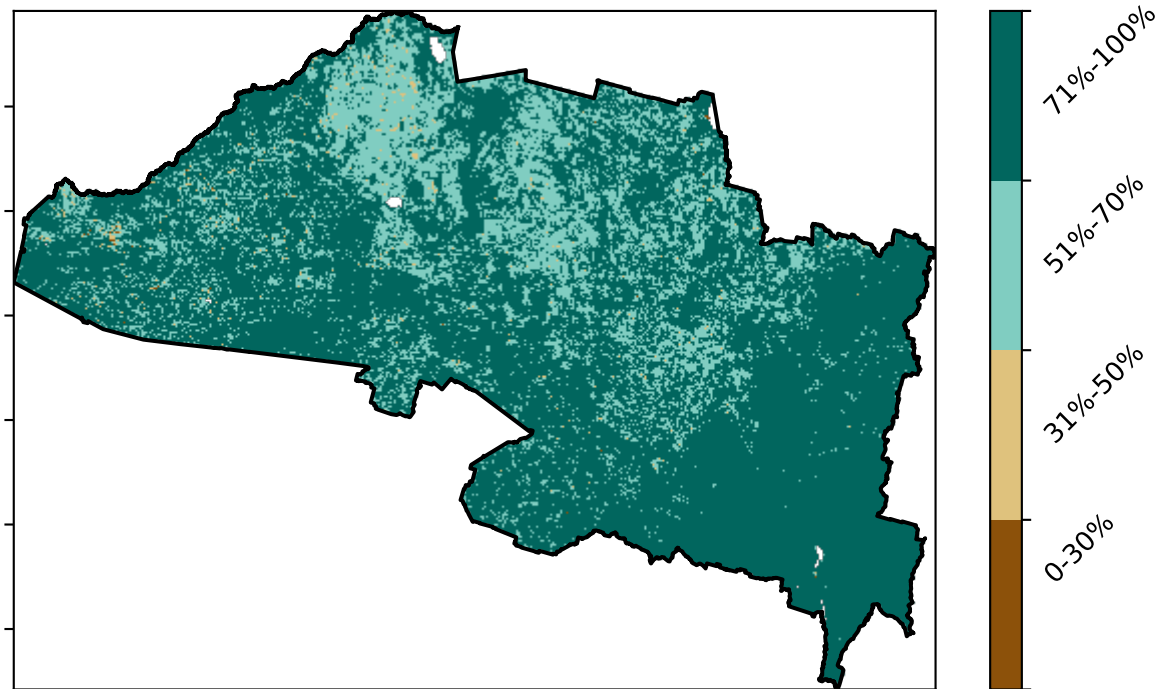
Vegetation Cover May 2016

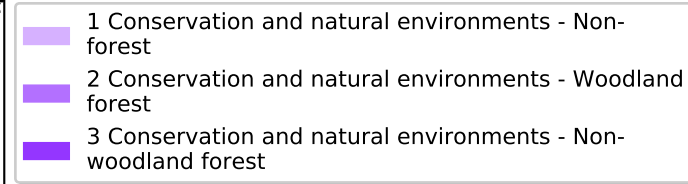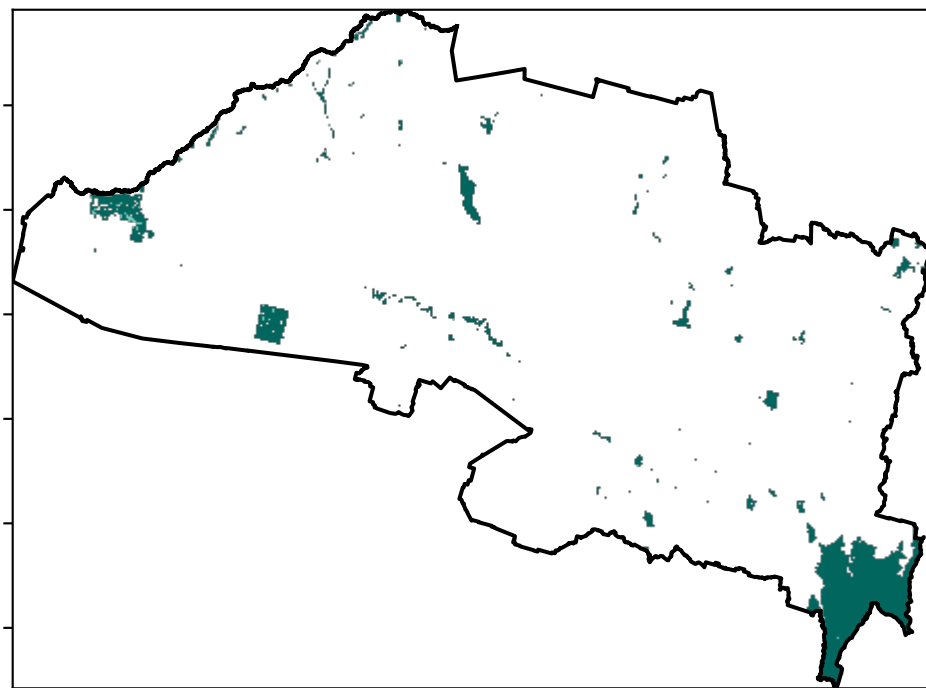## Land use and forest cover

Catchment Scale Land Use and Forests of Australia (2018). Derived from Catchment Scale Land Use of Australia (2018) and Forests of Australia (2018)
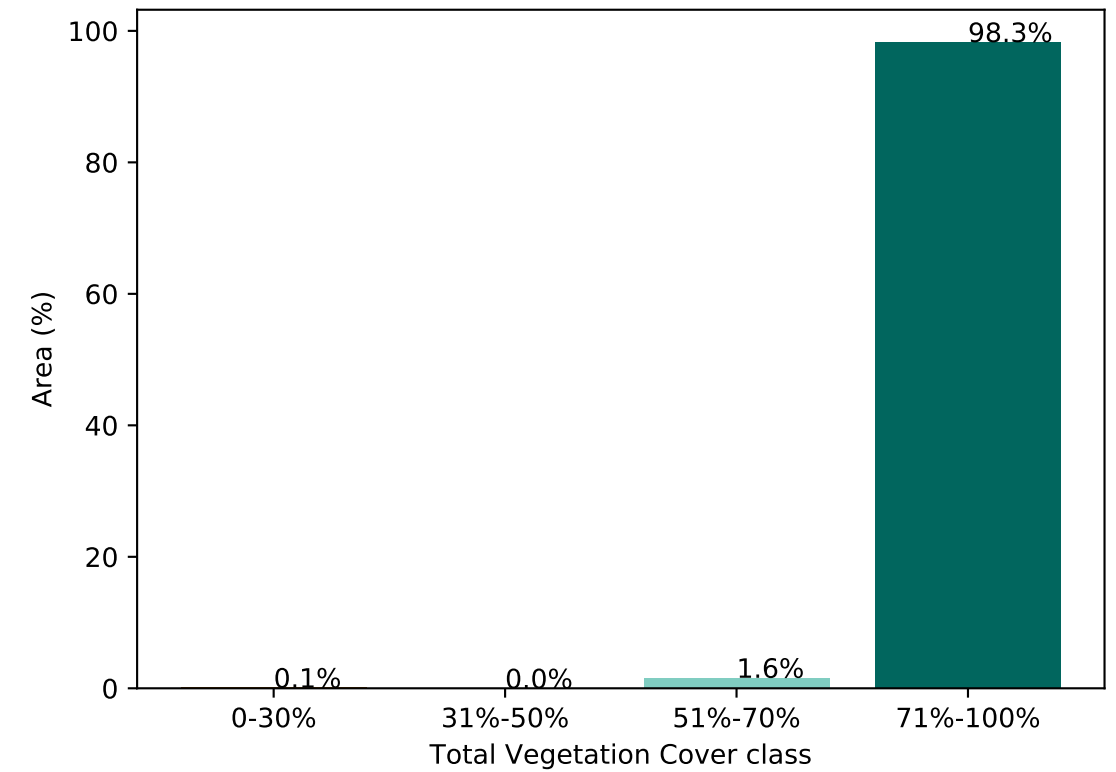
Legend with land class forest cover and number, i.e. Forests is 12

- 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

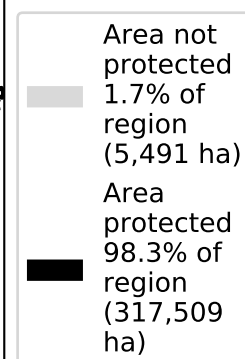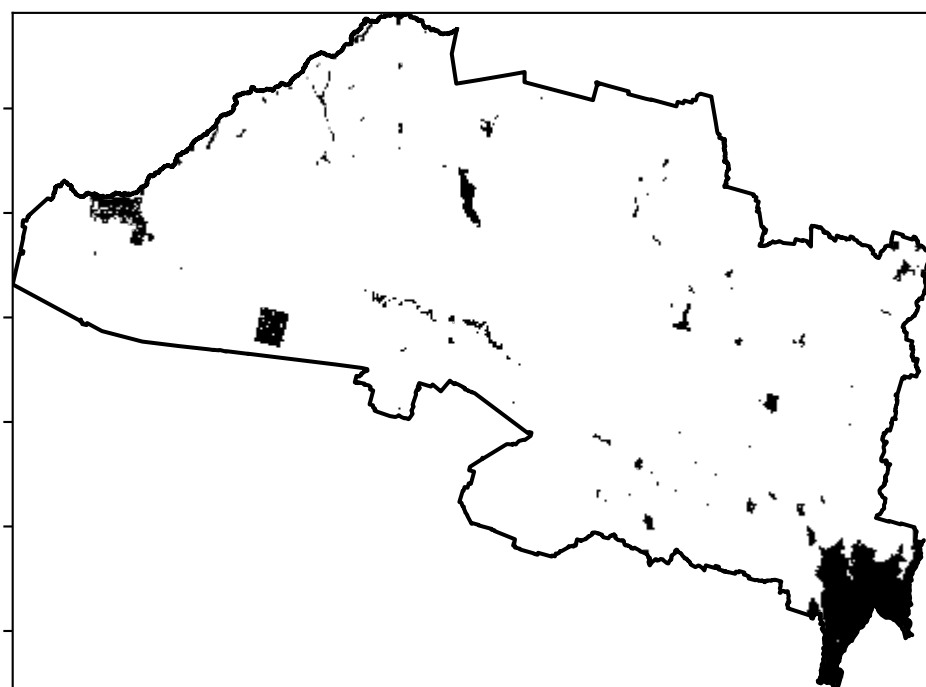## Proportion of each land class in area

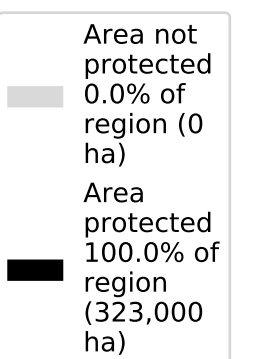## Total Vegetation Cover [%]

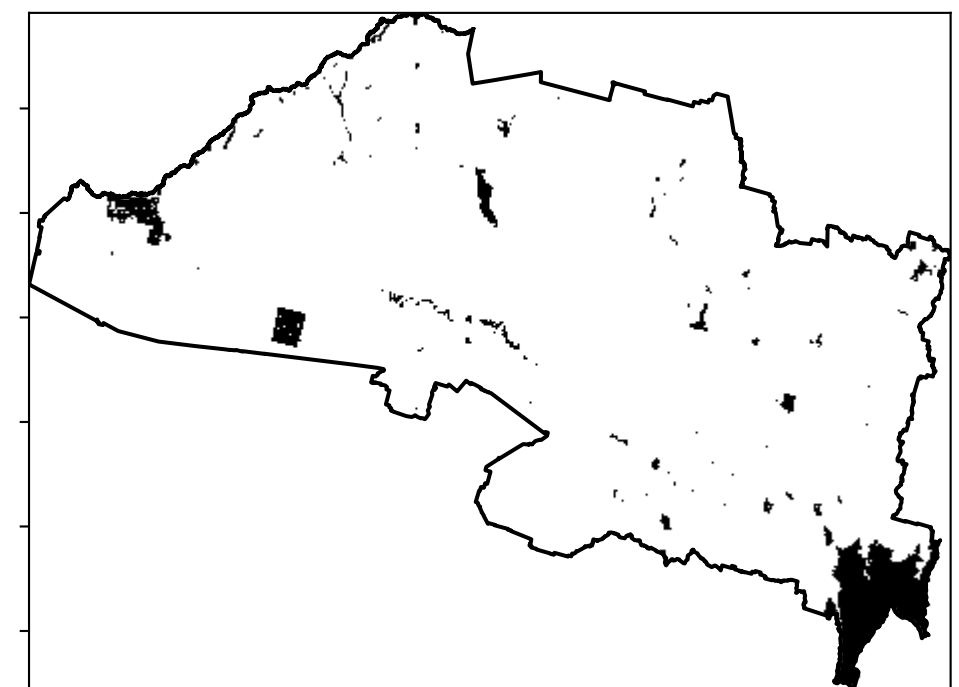## Proportion of vegetation cover class in area

% Area protected from water erosion (>70%)

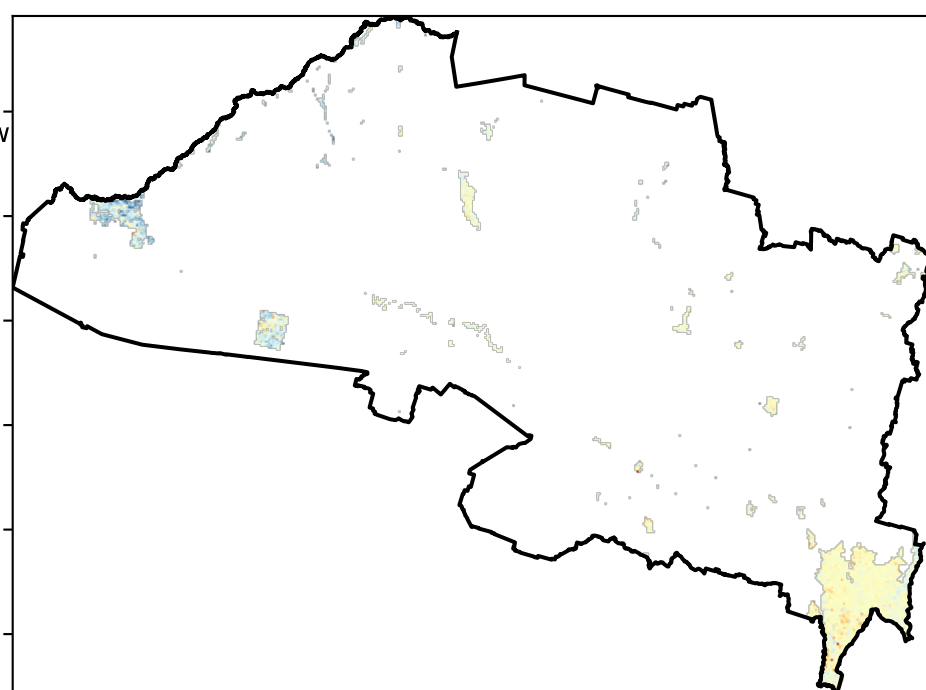Area not protected 24.2% of region (1,600,358 ha)

Area protected 75.8% of region (5,012,691 ha)

% Area protected from wind erosion (>50%)

Area not protected 1.0% of region (66,130 ha)
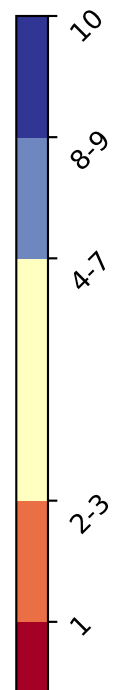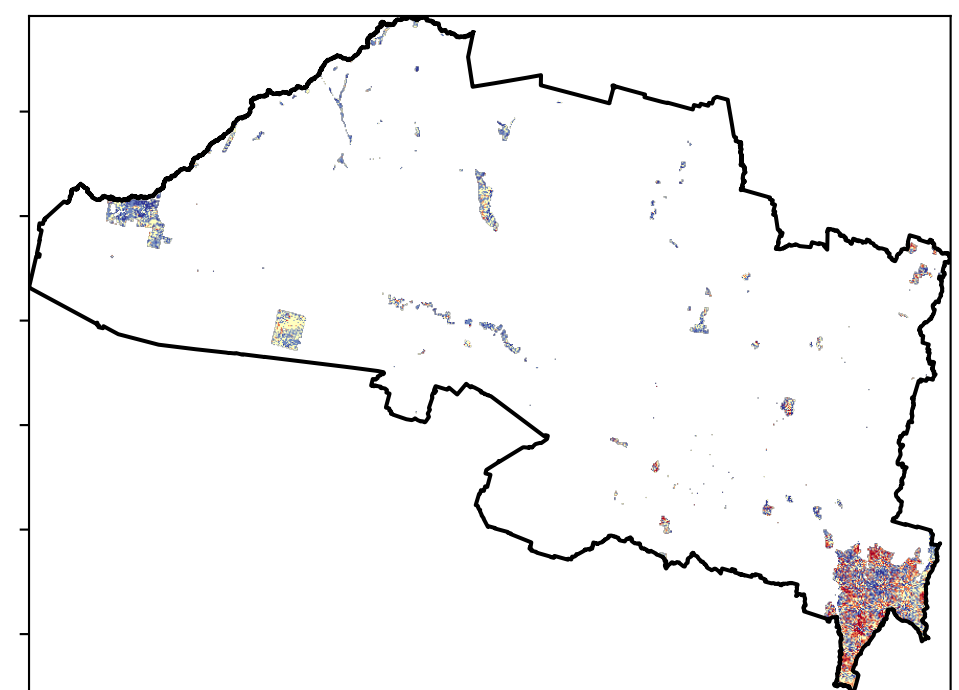
Area protected 99.0% of region (6,546,919 ha)

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.
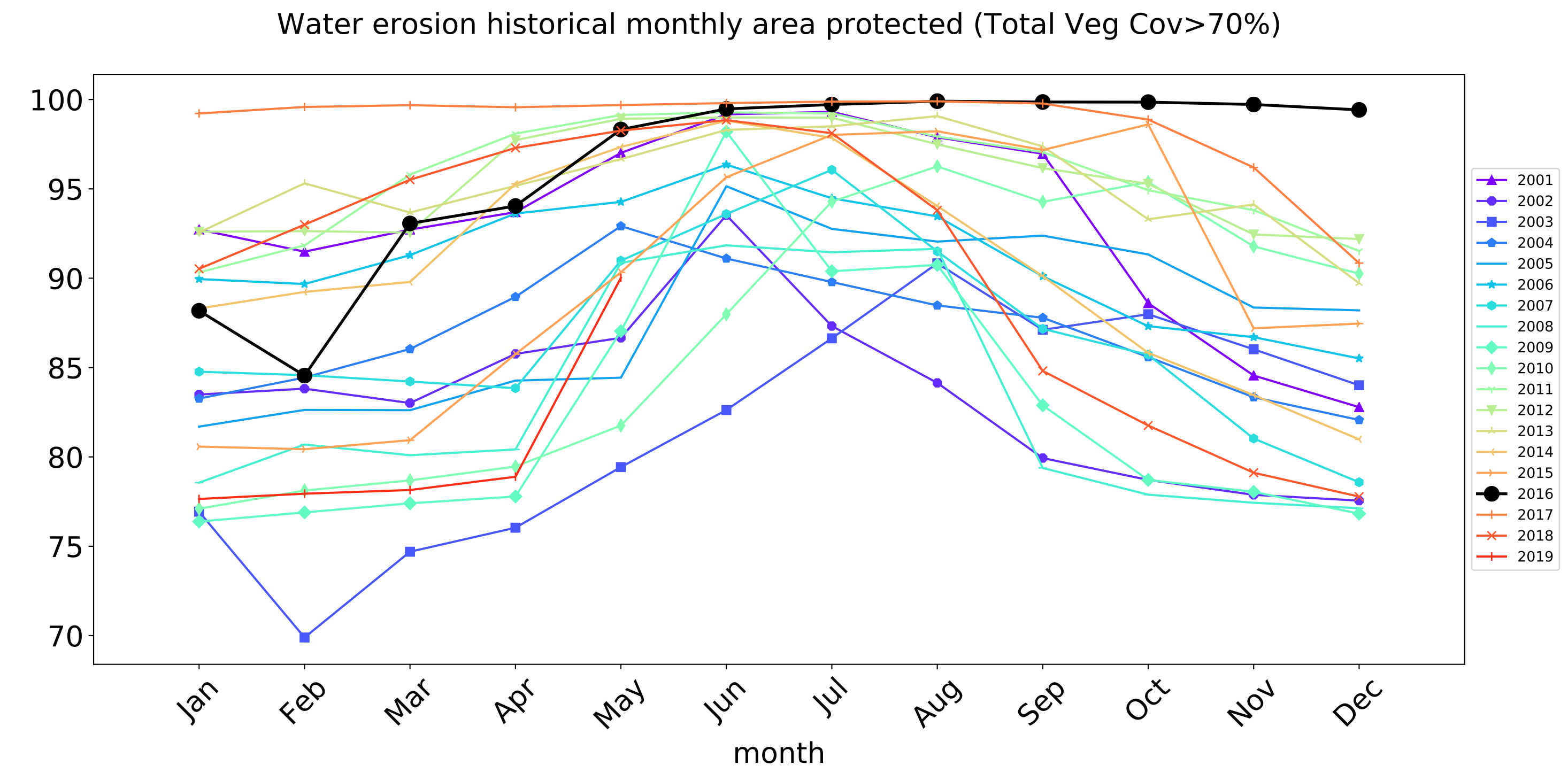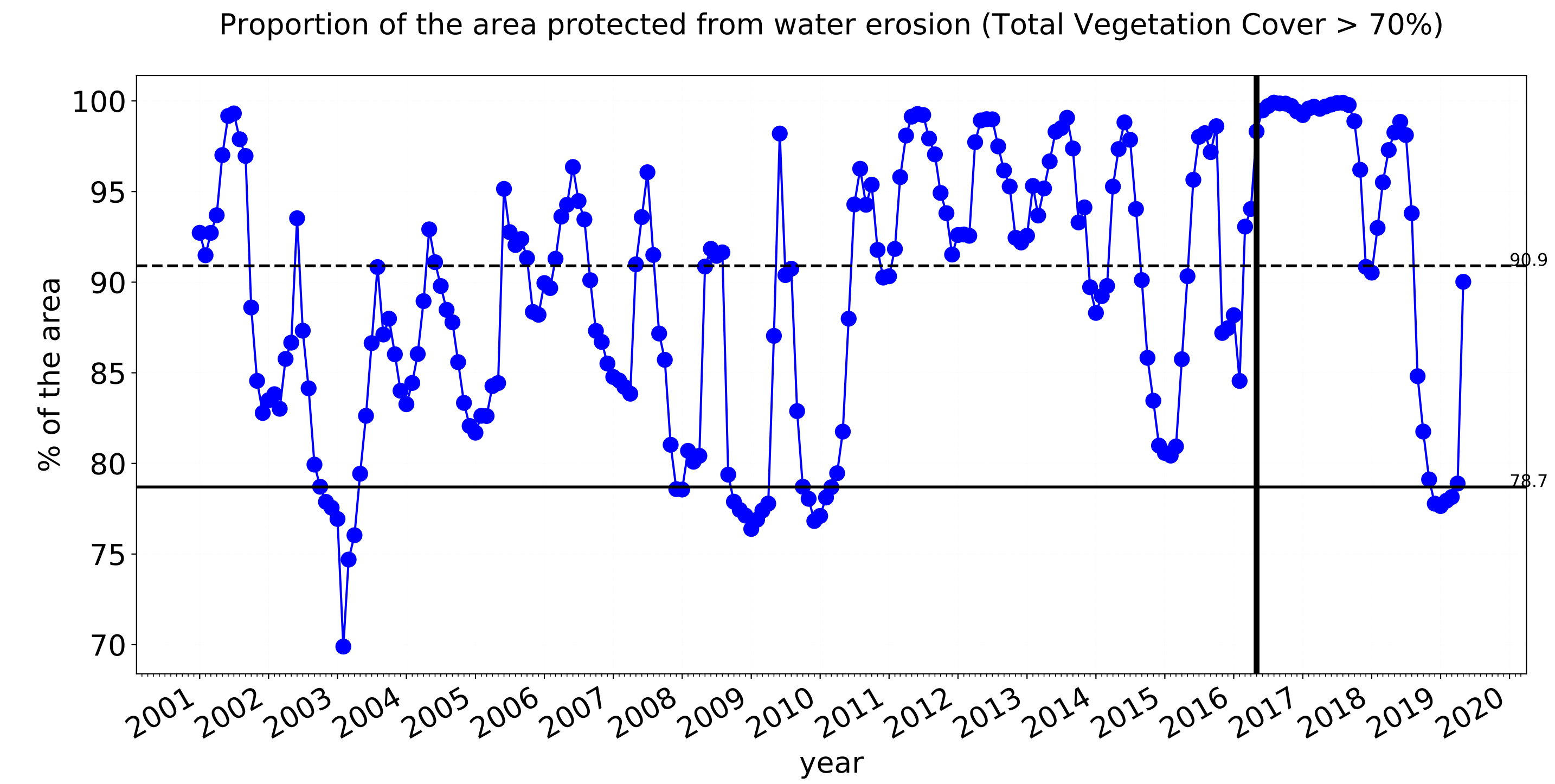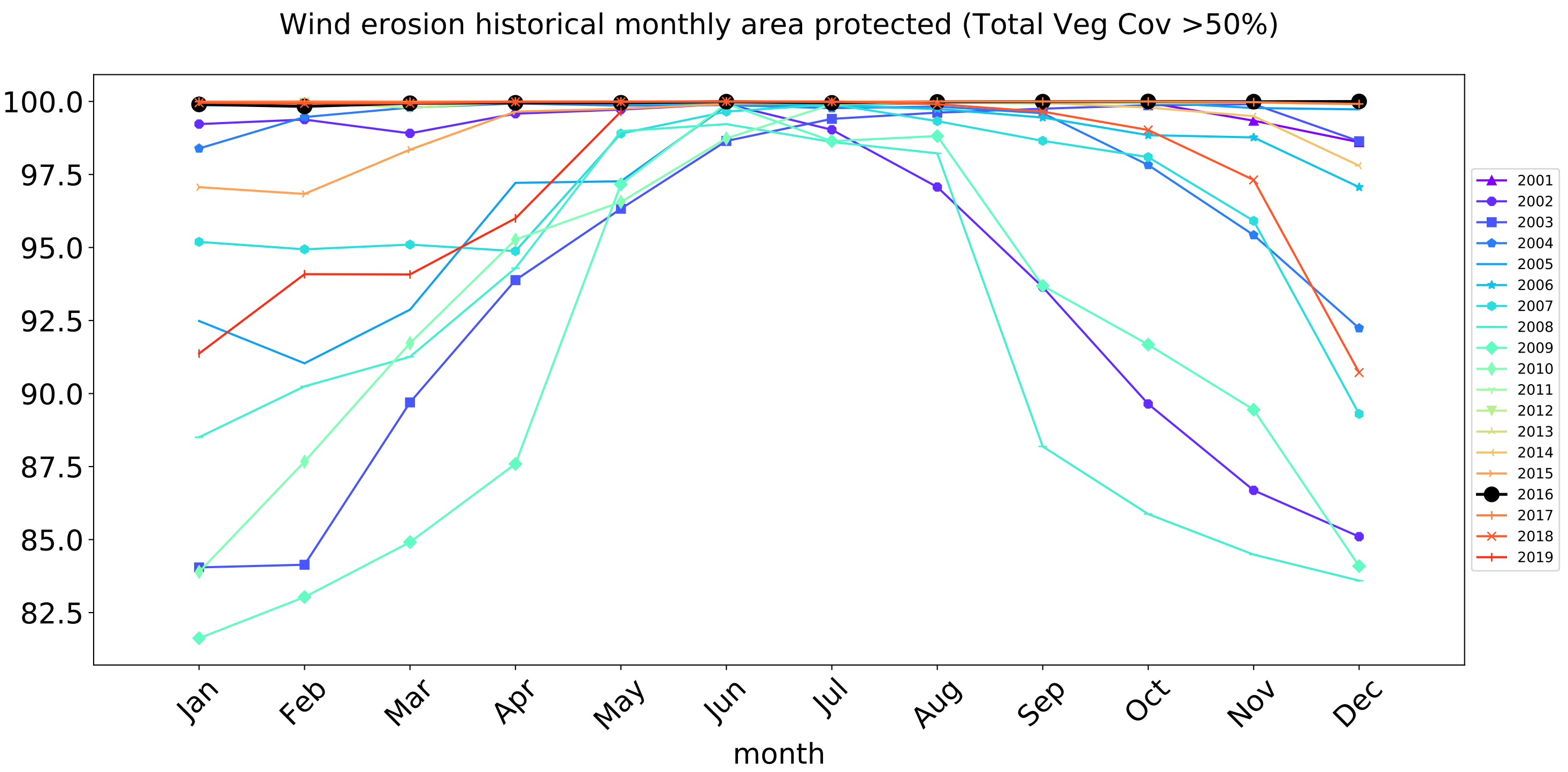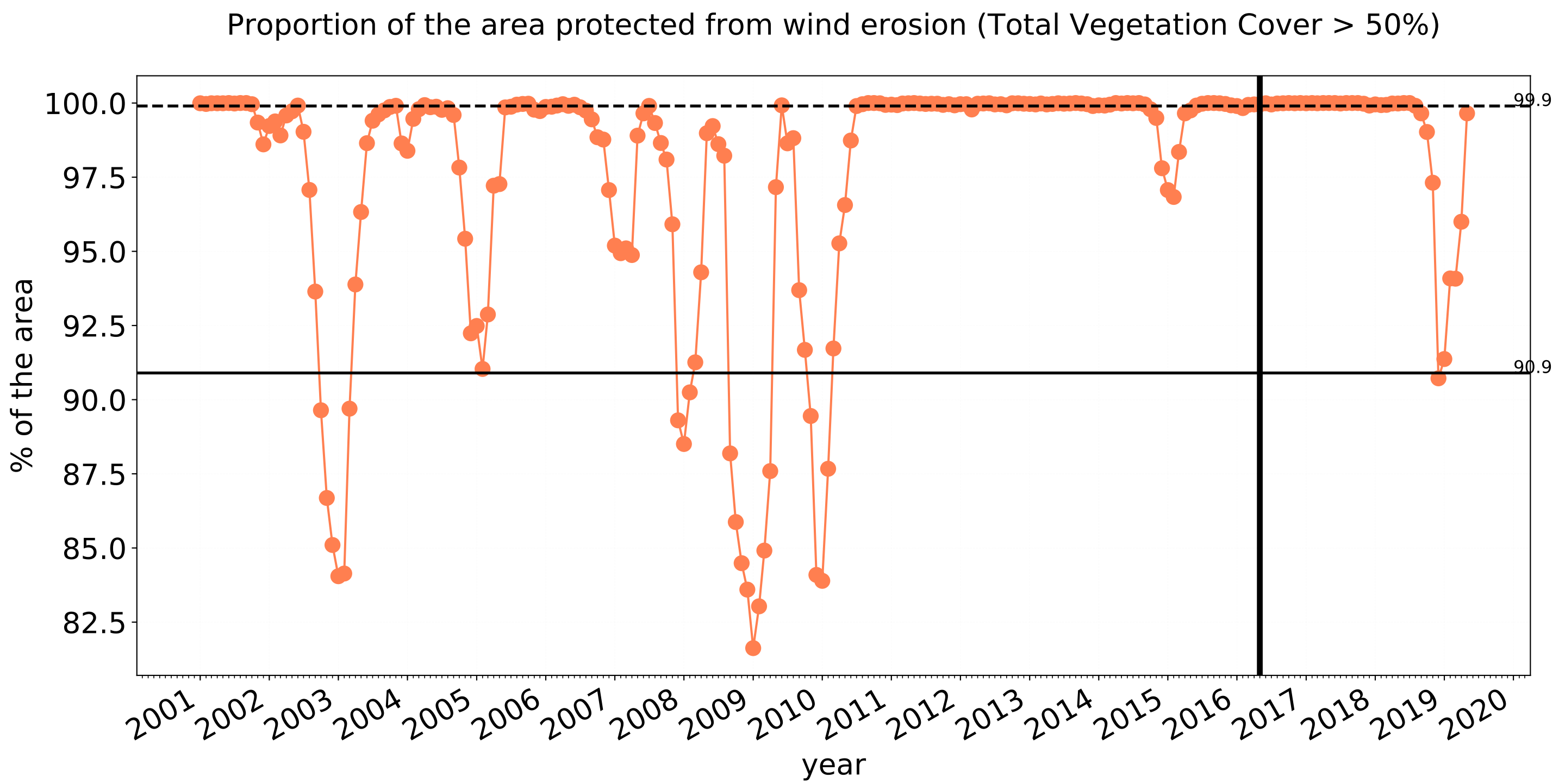
Figure showing six panels: (top-left) Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%); (middle-left) Proportion of the area protected from water erosion (Total Vegetation Cover > 70%); (bottom-left) Monthly rainfall from 2001 to 2019; (top-right) Wind erosion historical monthly area protected (Total Veg Cov >50%); (middle-right) Water erosion historical monthly area protected (Total Veg Cov>70%); (bottom-right) Rainfall: historical monthly.

3

Conservation and natural environments

Land use and forest cover

Catchment Scale
Land Use and Forests
of Australia (2018)
Derived from
Catchment Scale Land
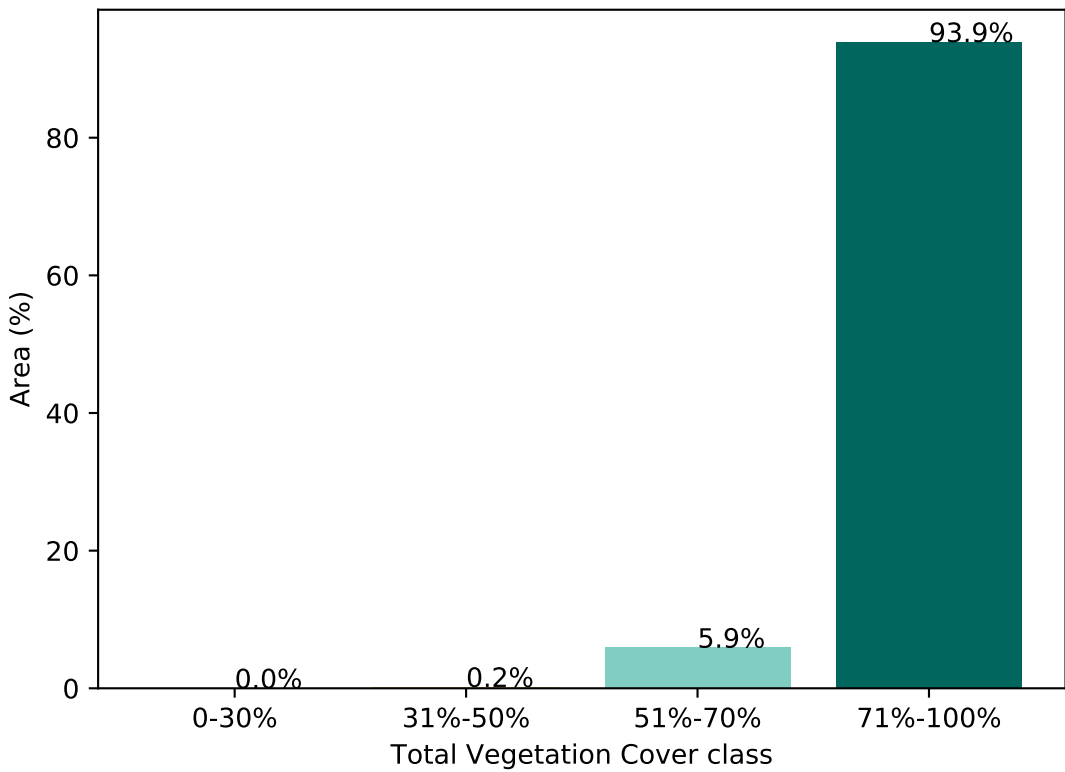Use of Australia
(2018) and Forests
of Australia (2018)
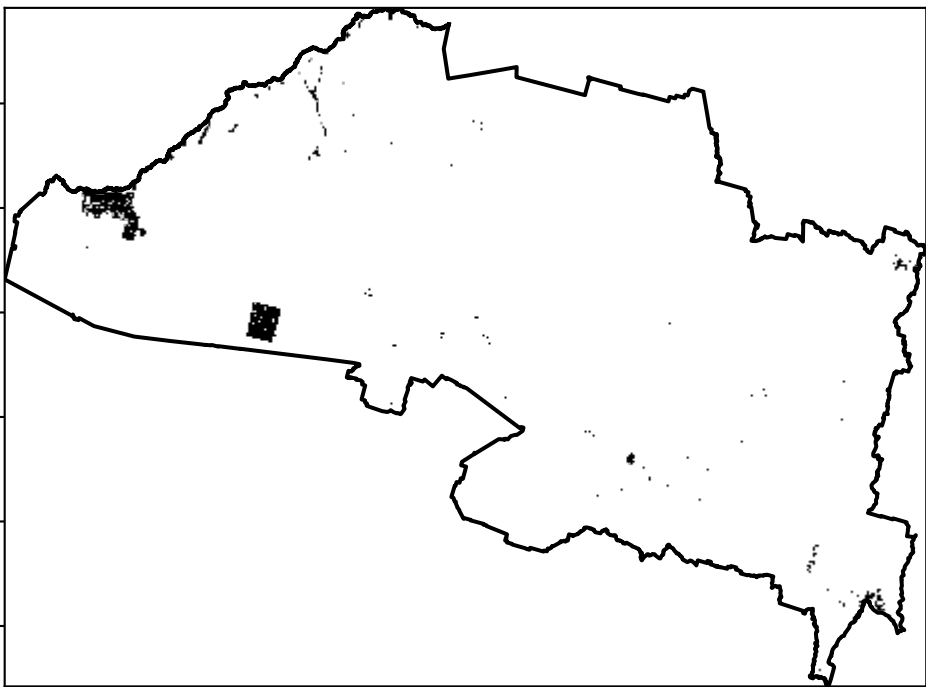
1 Conservation and natural environments - Non-forest
2 Conservation and natural environments - Woodland forest
3 Conservation and natural environments - Non-woodland forest

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
1.7% of
region
(5,491 ha)
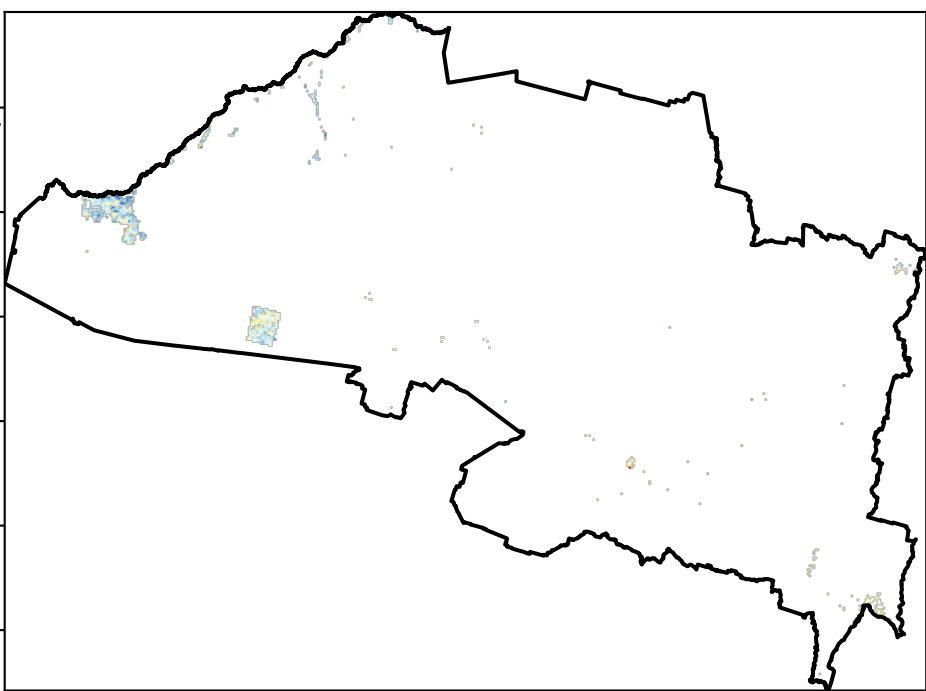
Area
protected
98.3% of
region
(317,509
ha)

% Area protected from wind erosion (>50%)

Area not
protected
0.0% of
region (0
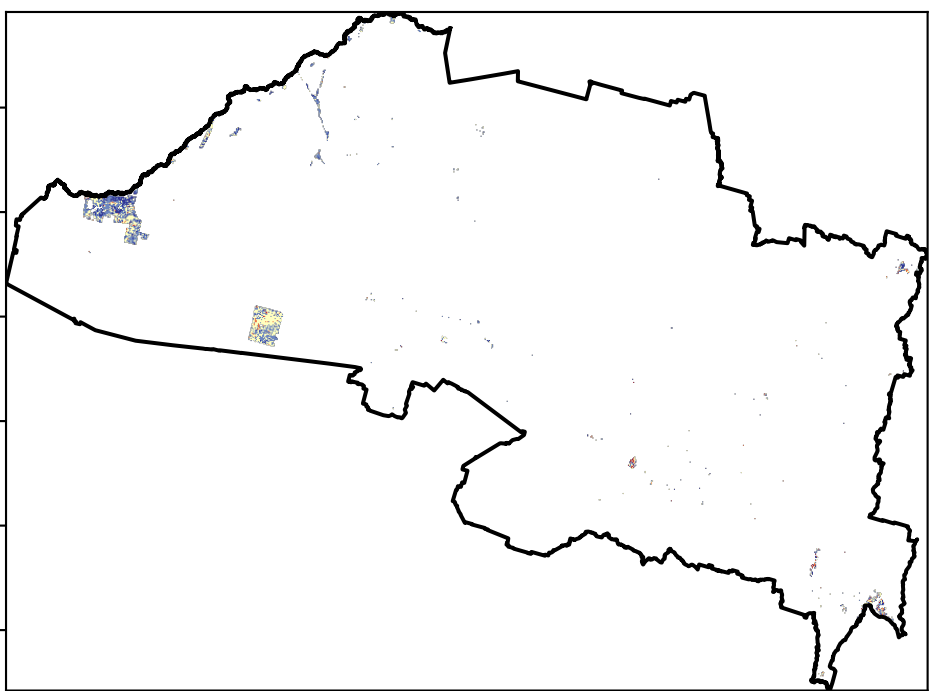ha)

Area
protected
100.0% of
region
(323,000
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
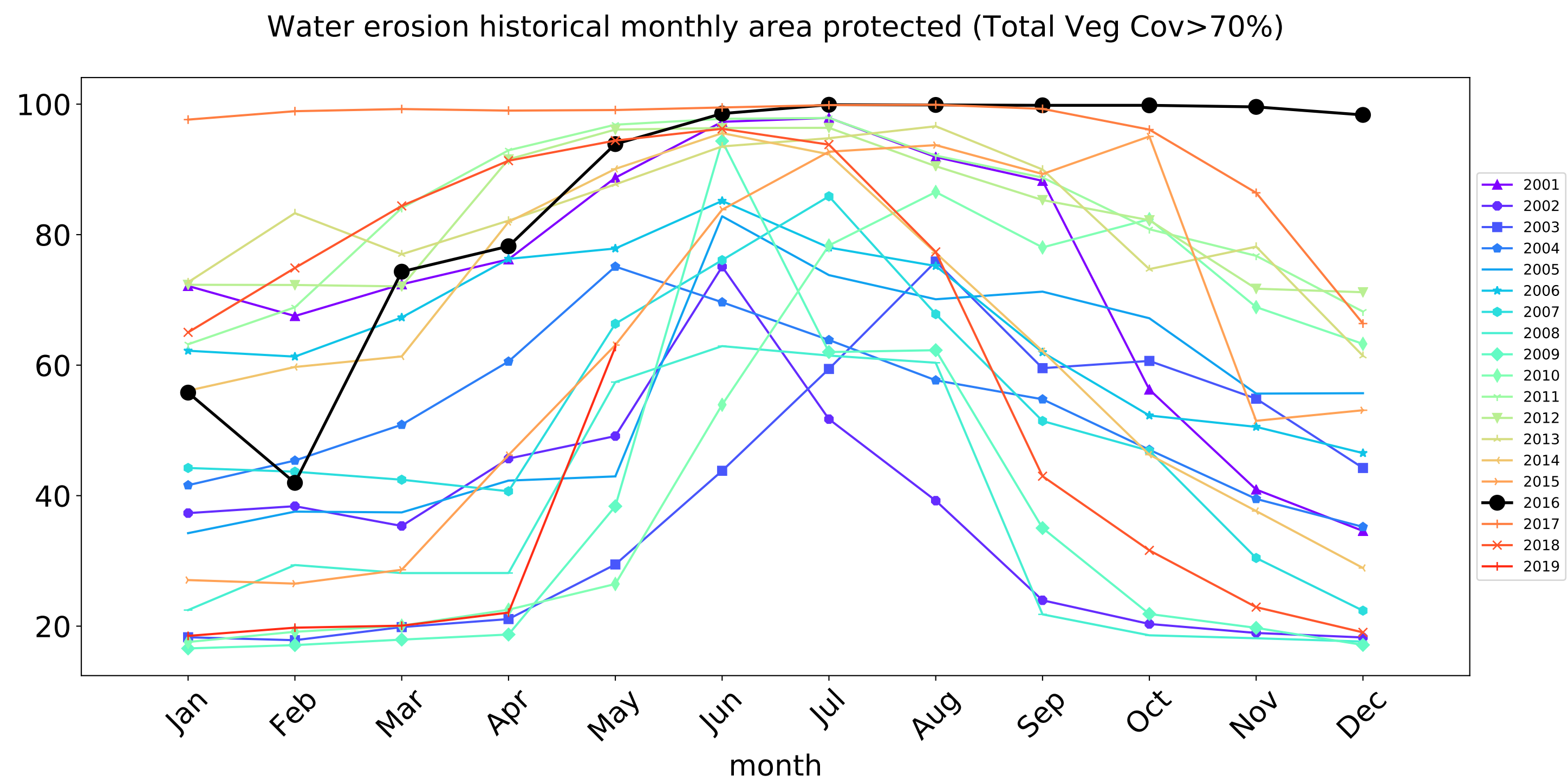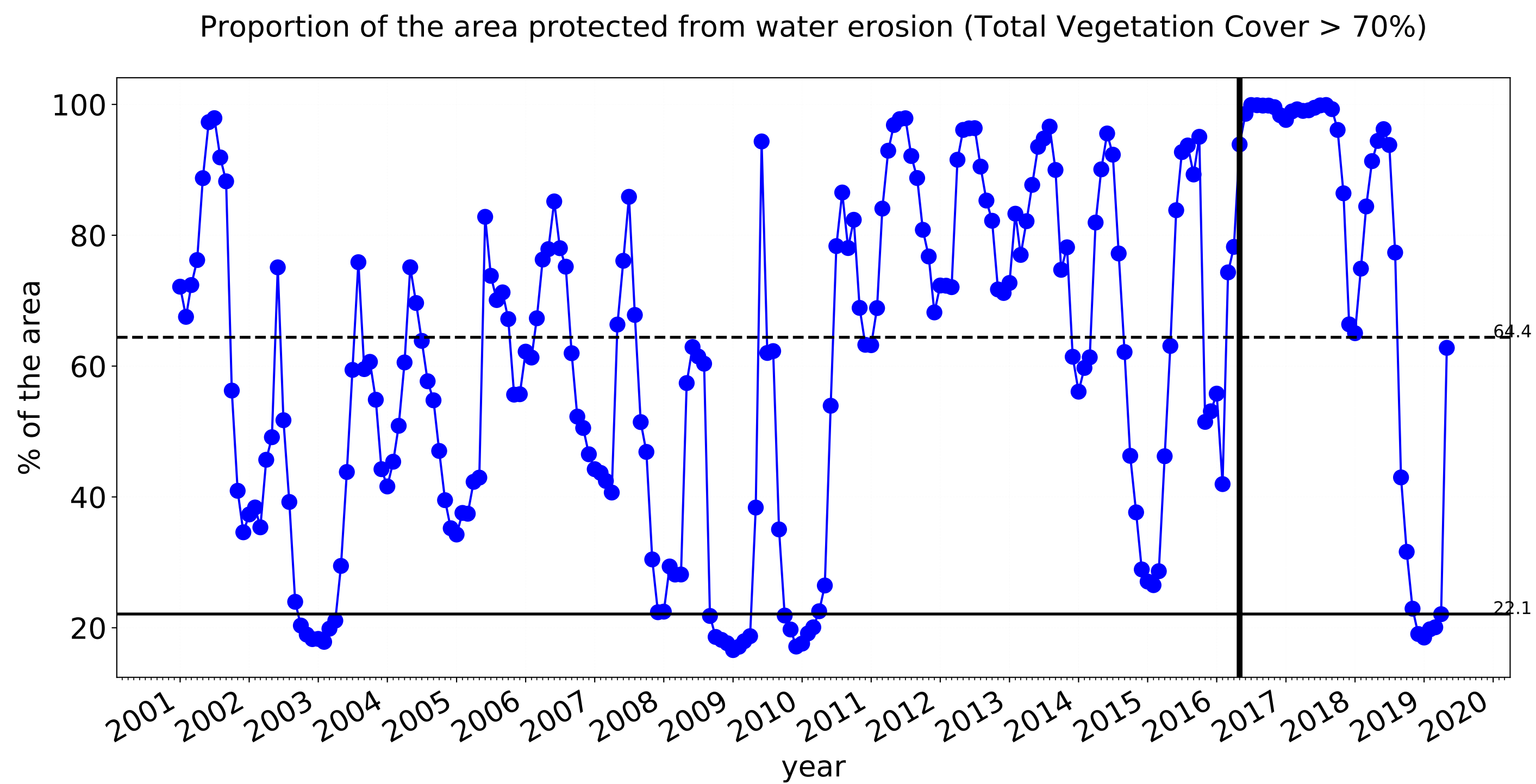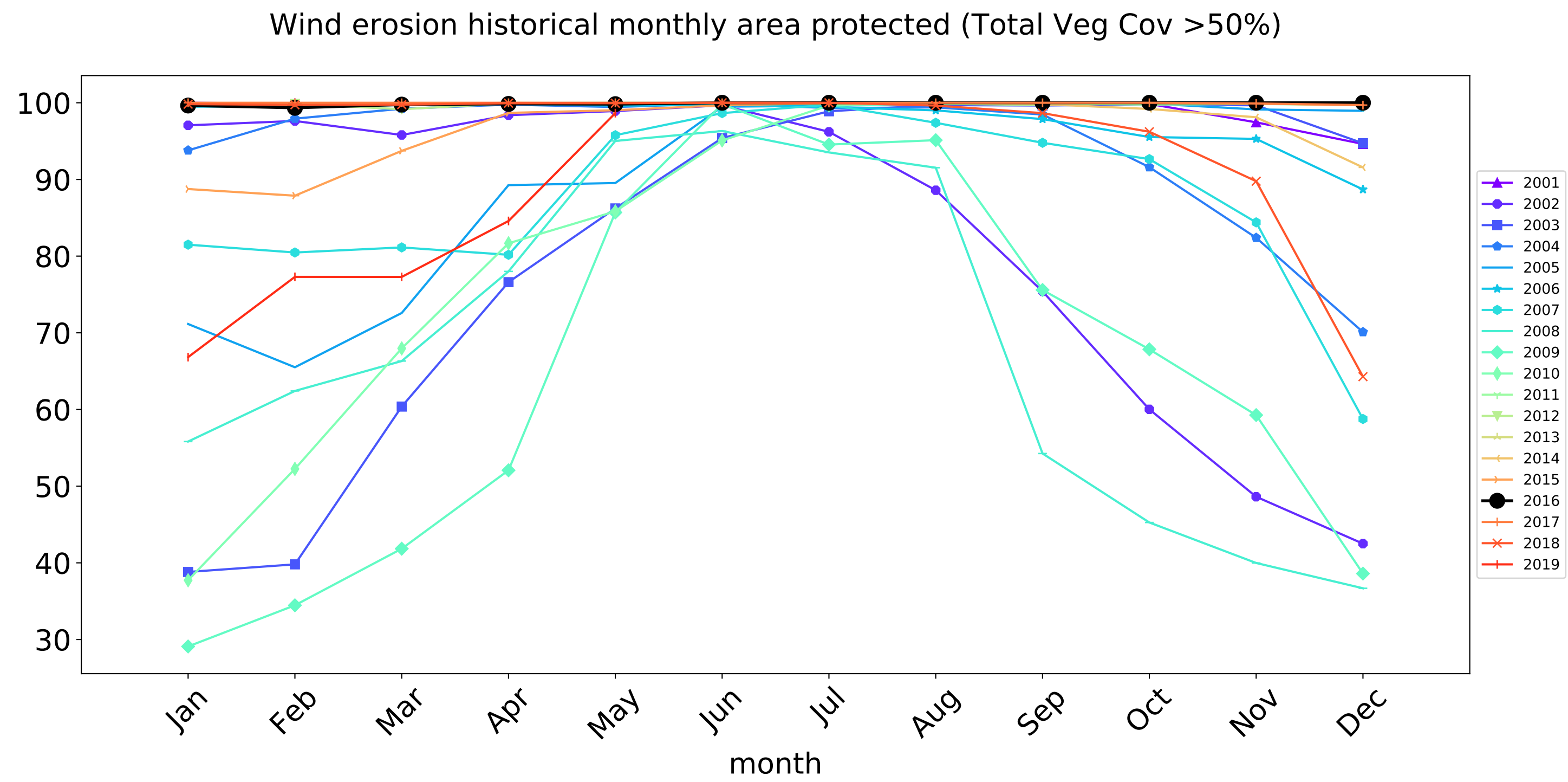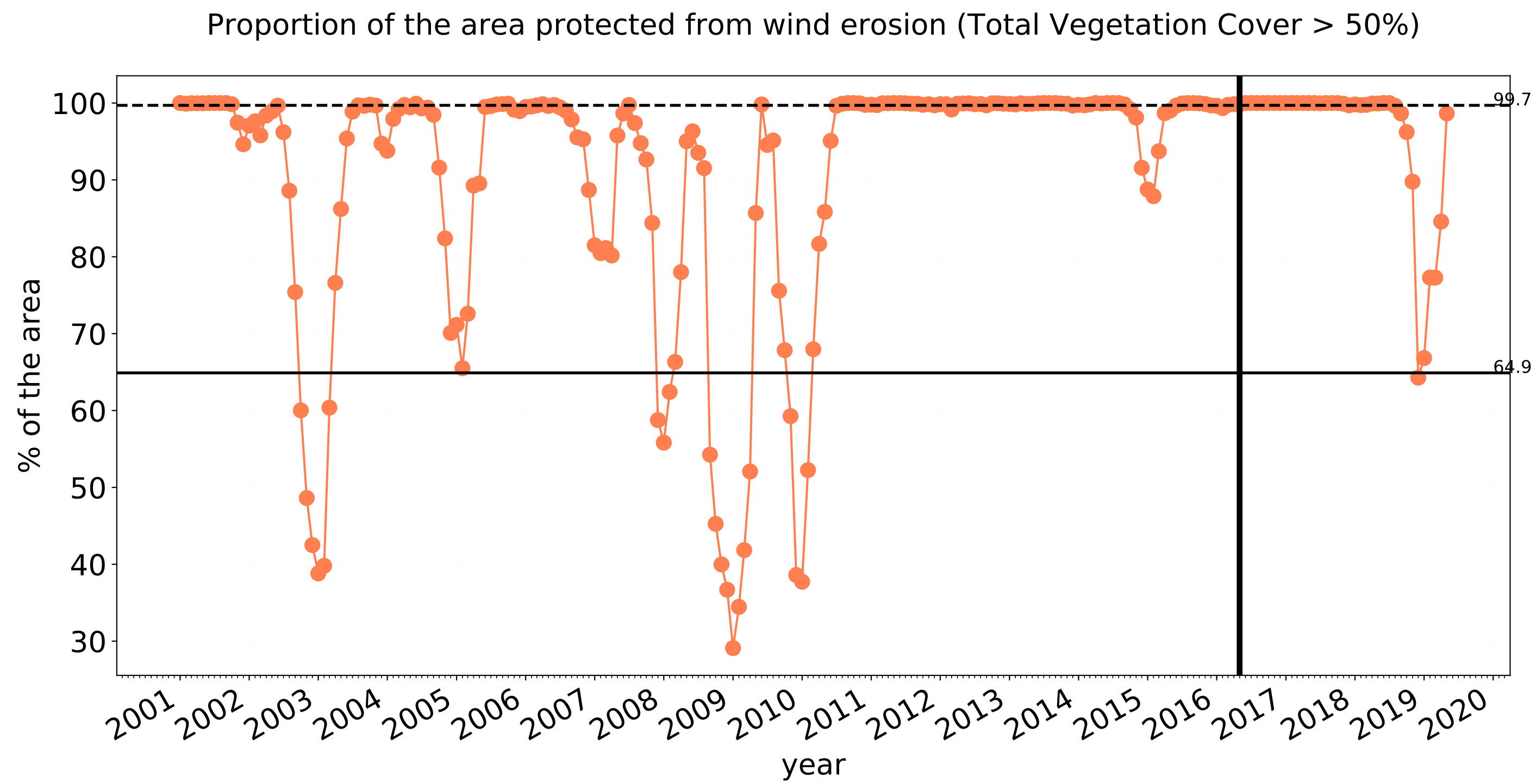records for that month of
the map using baseline
from 2001 to 2019.

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%)
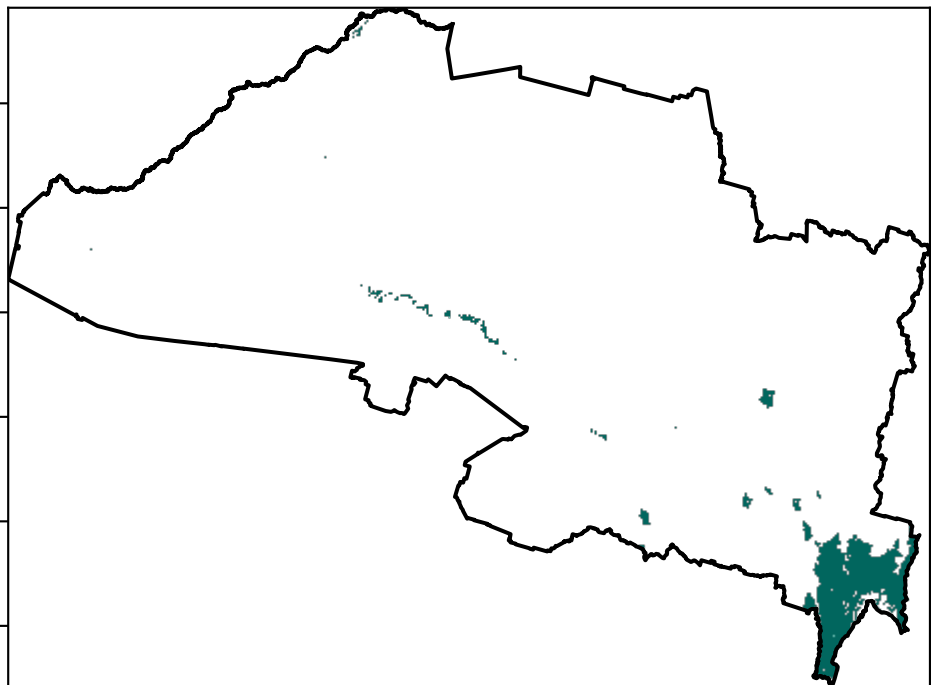
Conservation and natural environments non forest

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)
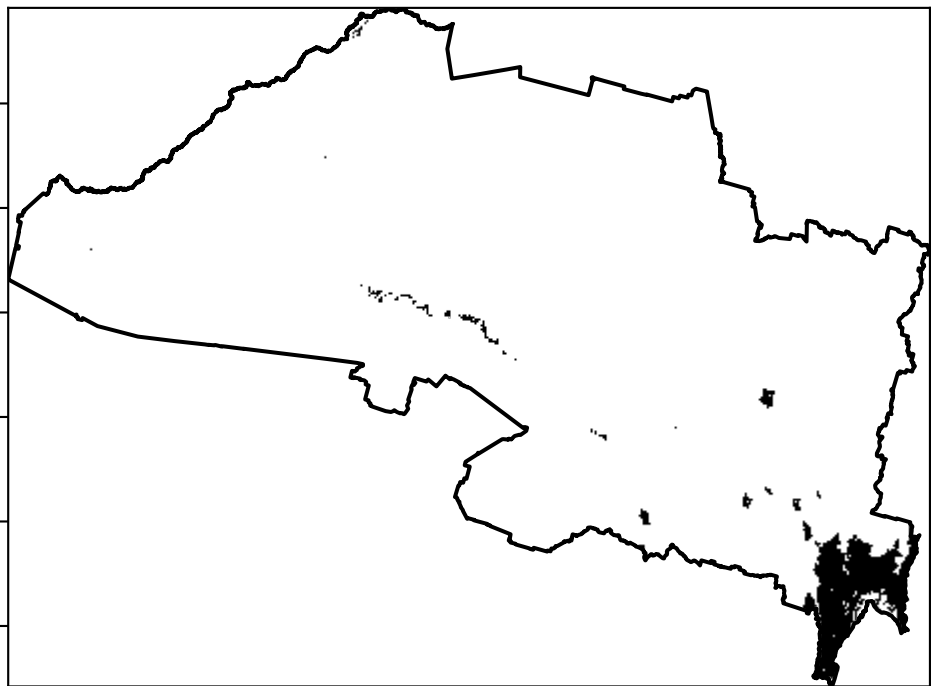
1 Conservation and natural environments - Non-forest

Total Vegetation Cover [%]
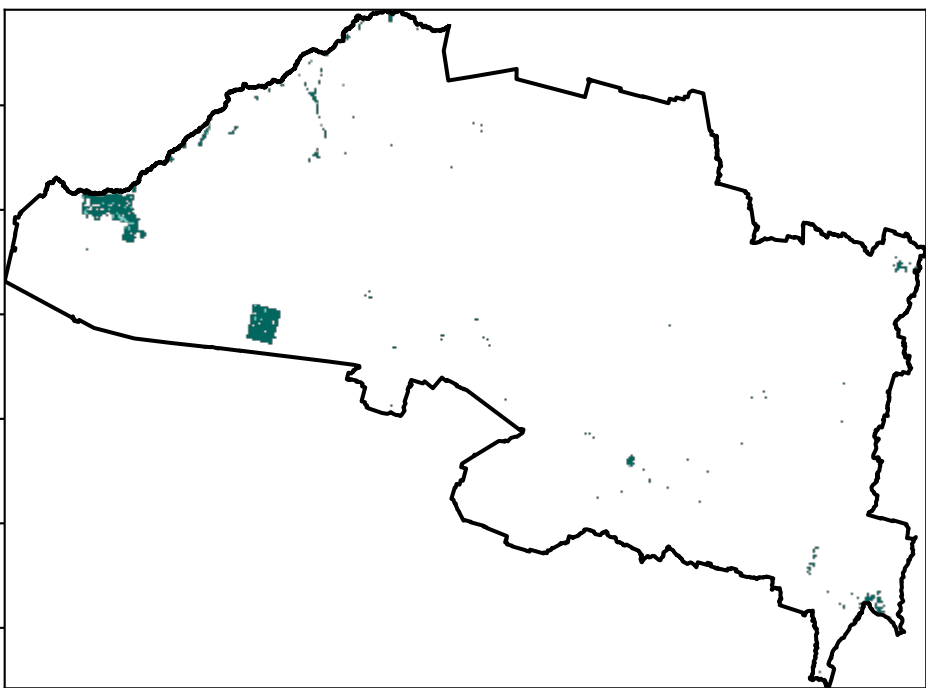
71%-100%

51%-70%

31%-50%

0-30%

## Proportion of vegetation cover class in area

% Area protected from water erosion (>70%)

Area not protected 6.1% of region (5,084 ha)

Area protected 93.9% of region (78,265 ha)
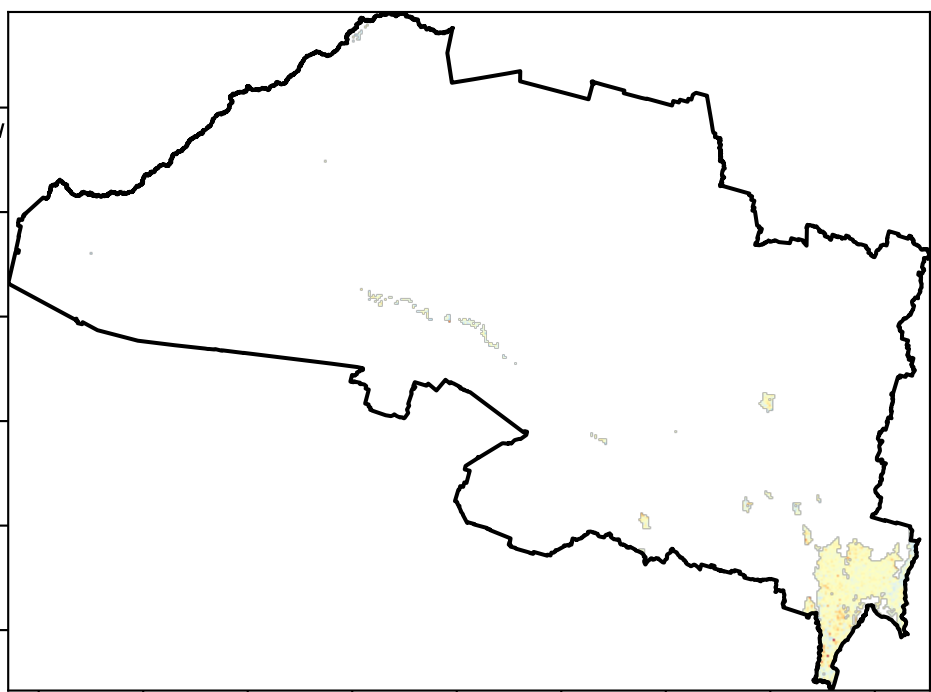
% Area protected from wind erosion (>50%)
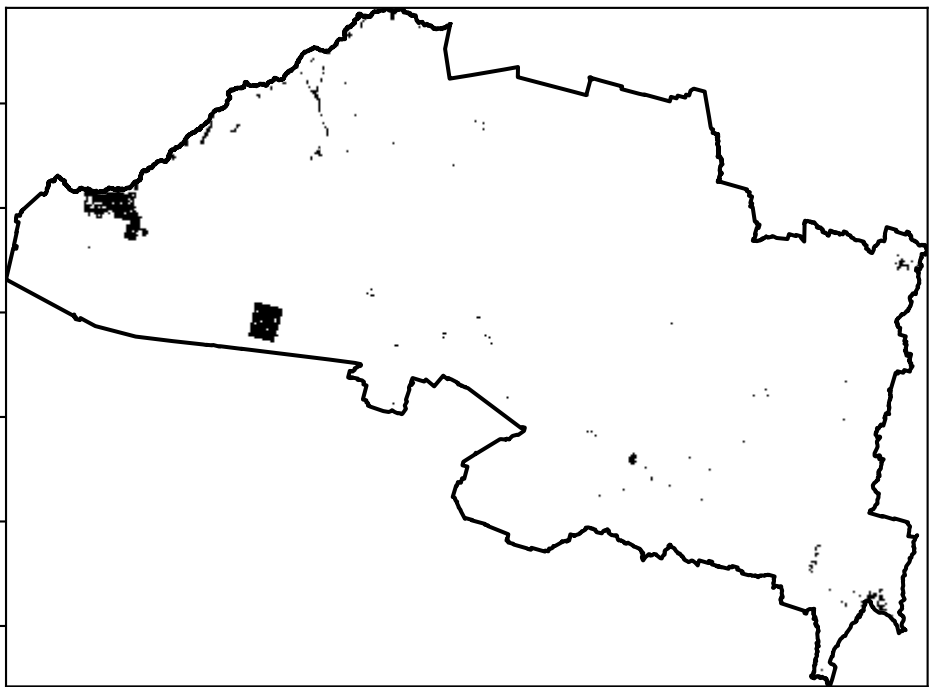
Area not protected 0.0% of region (0 ha)
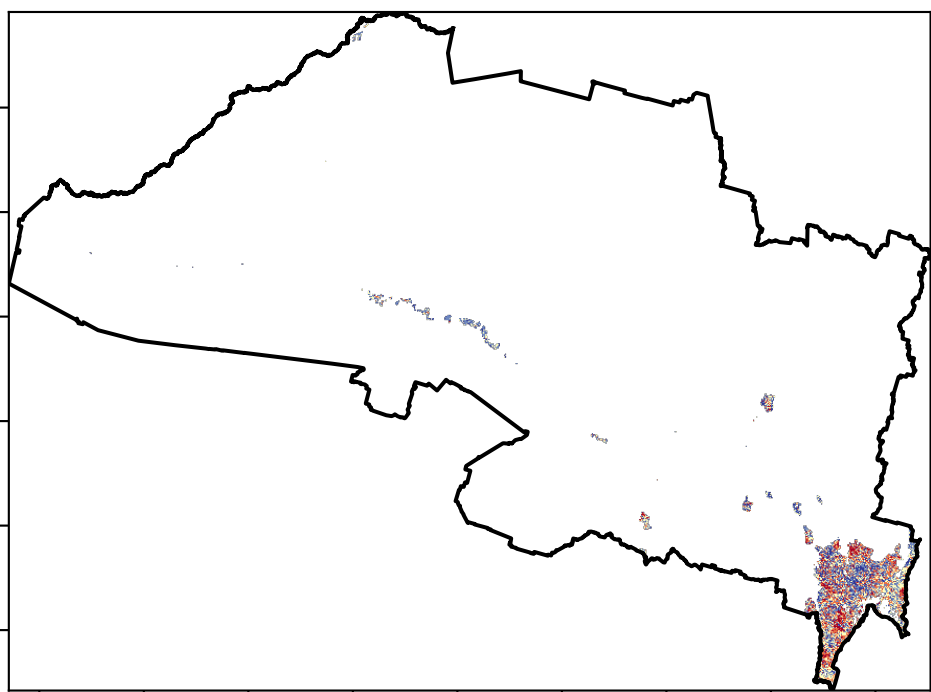
Area protected 100.0% of region (83,350 ha)

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.

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.
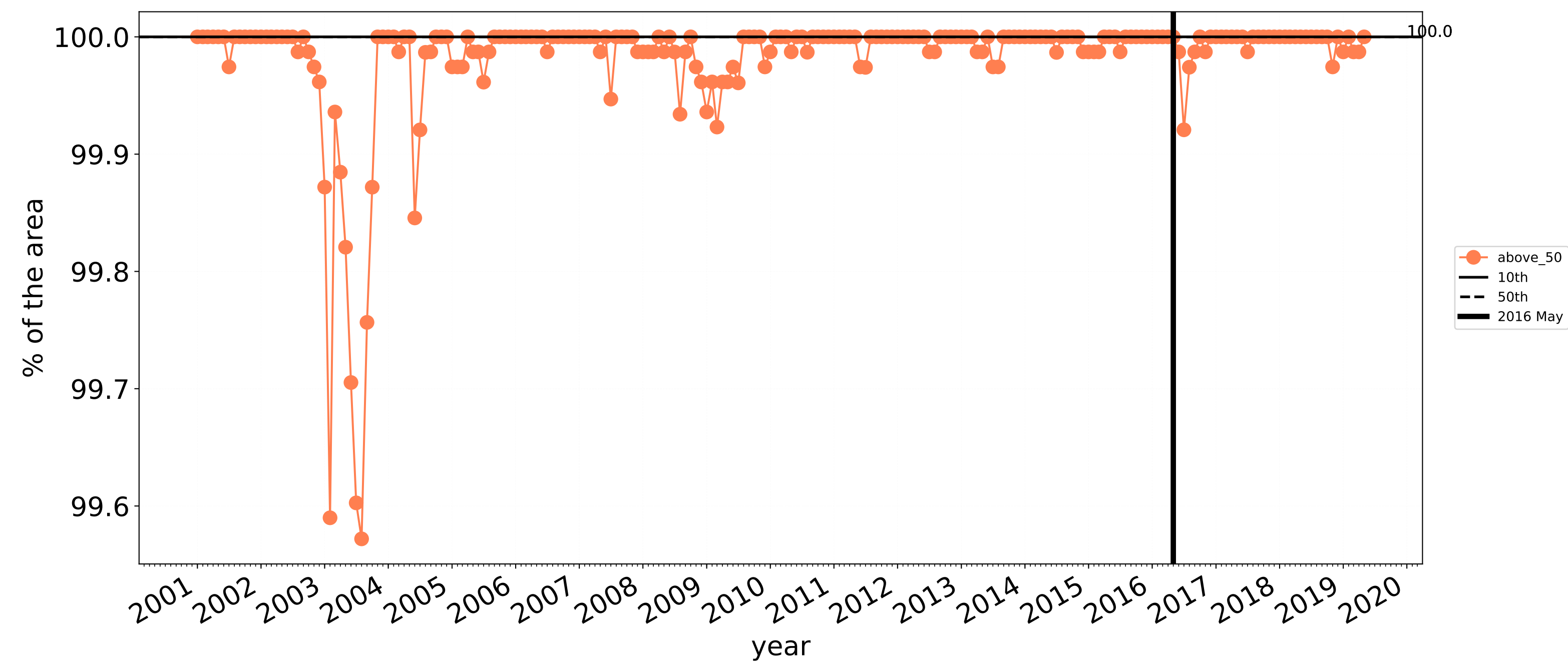
10

8-9

4-7

2-3

1

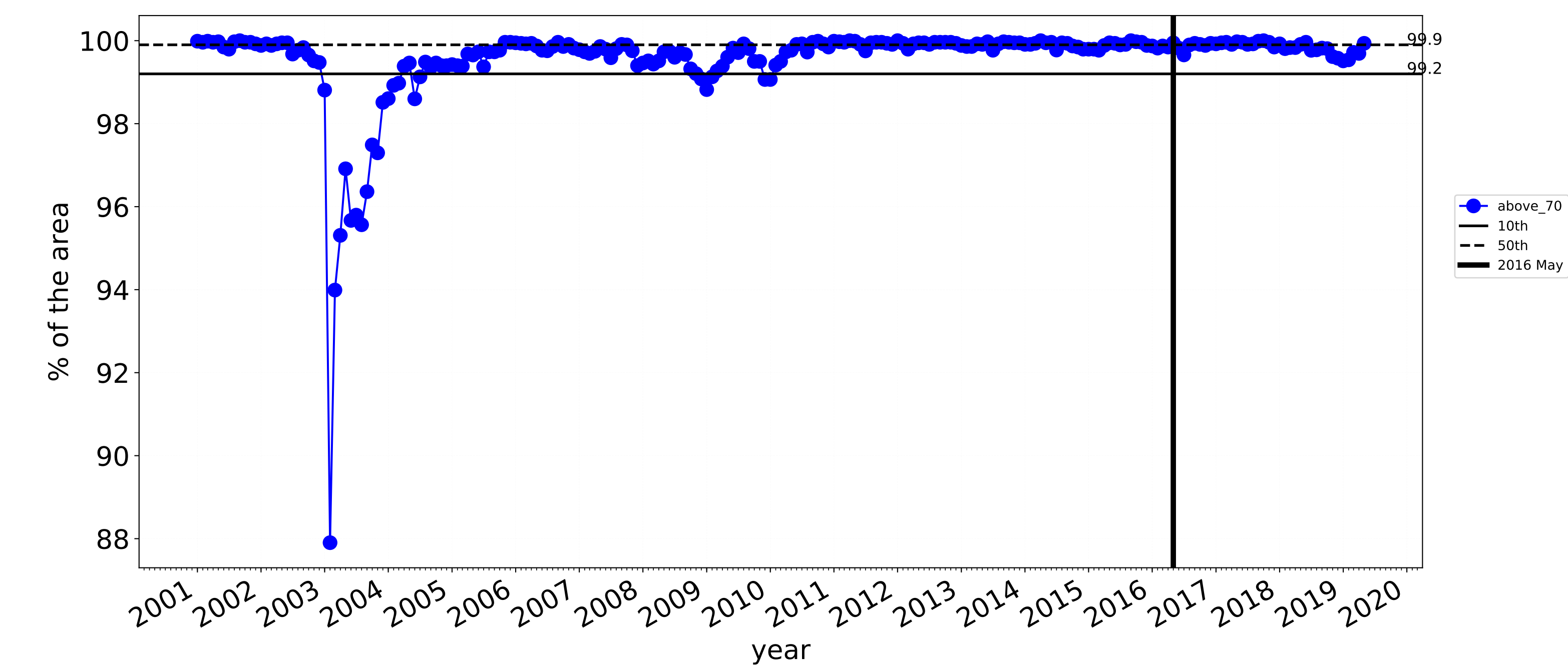# Conservation and natural environments non forest timeseries

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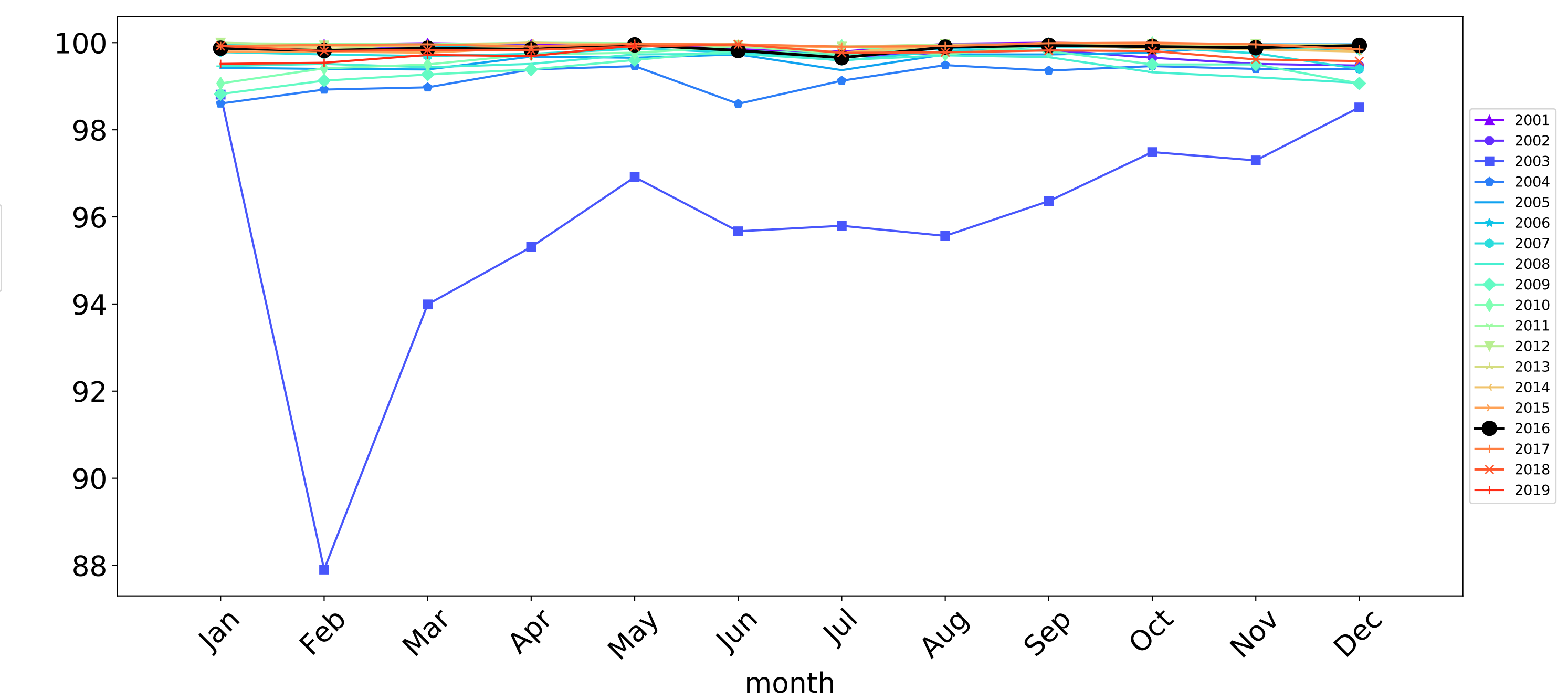
Wind erosion historical monthly area protected (Total Veg Cov >50%)

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)

1 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%

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

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
(194,954
ha)

## % Area protected from wind erosion (>50%)
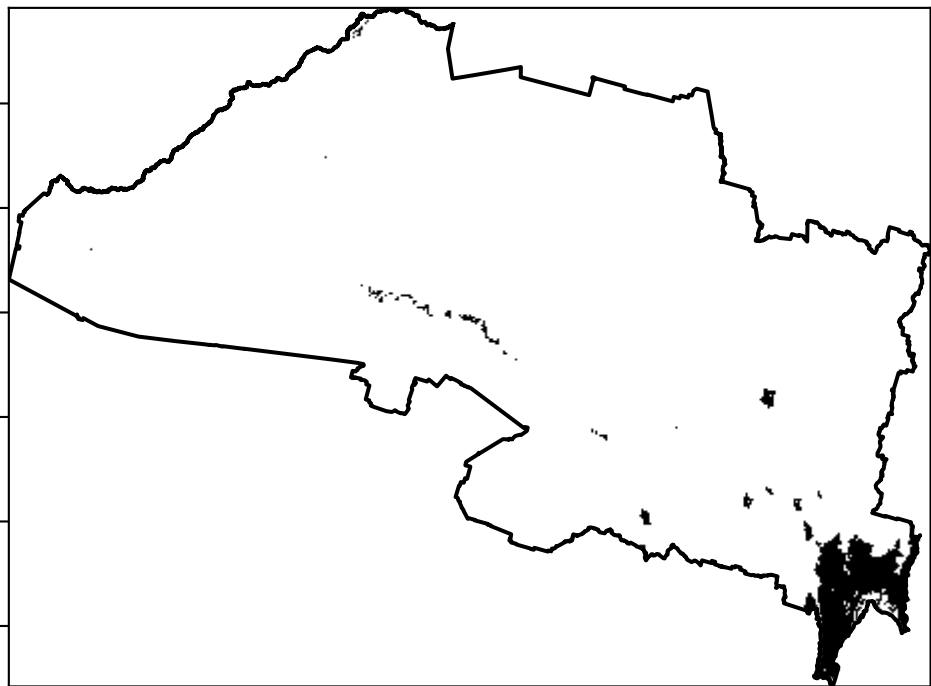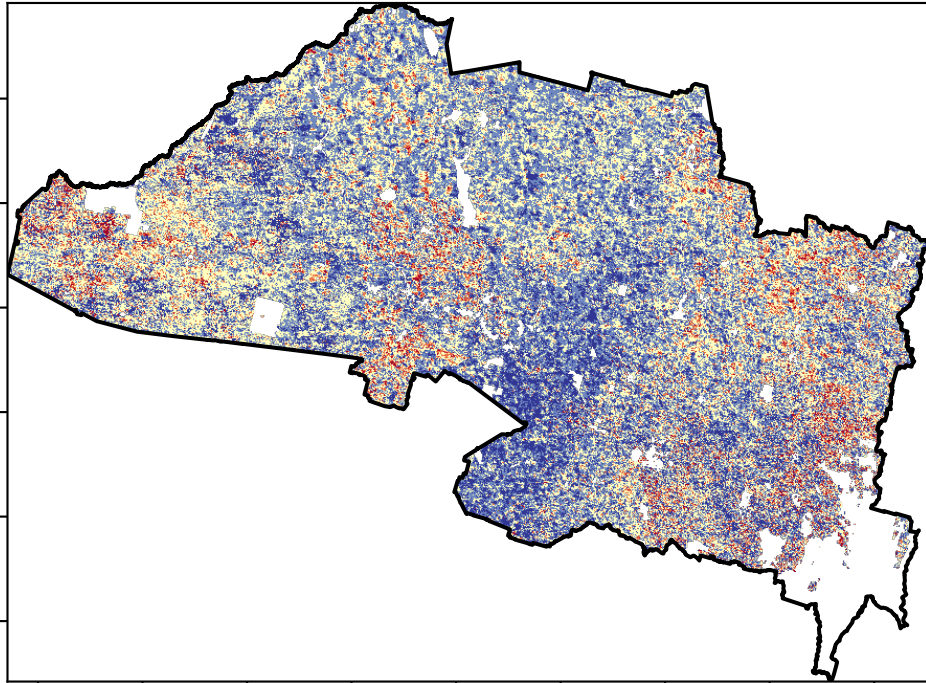
Area
protected
100.0% of
region
(195,150
ha)

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
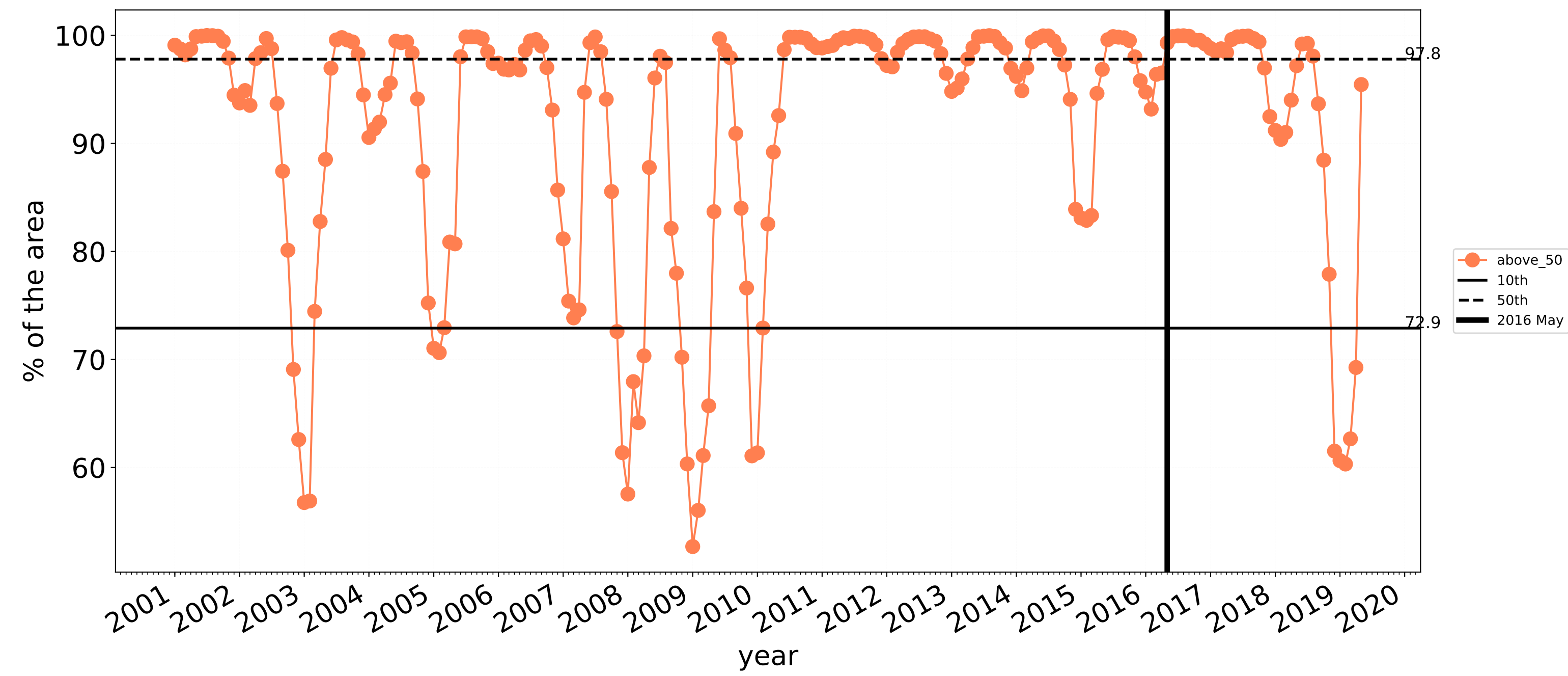records for that month of
the map using baseline
from 2001 to 2019.

10

8-9

4-7

2-3

1

# Conservation and natural environments Forest (non woodland) timeseries

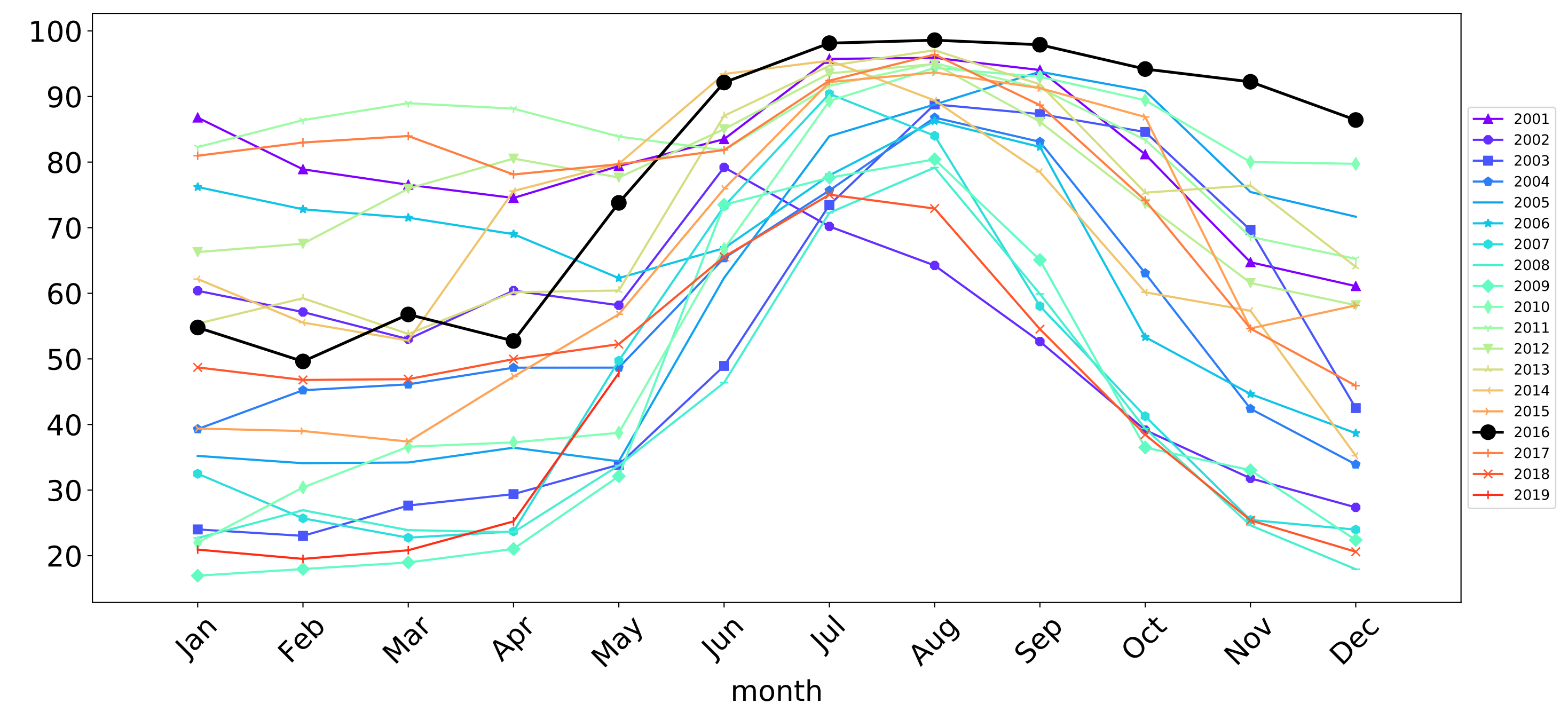Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)

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
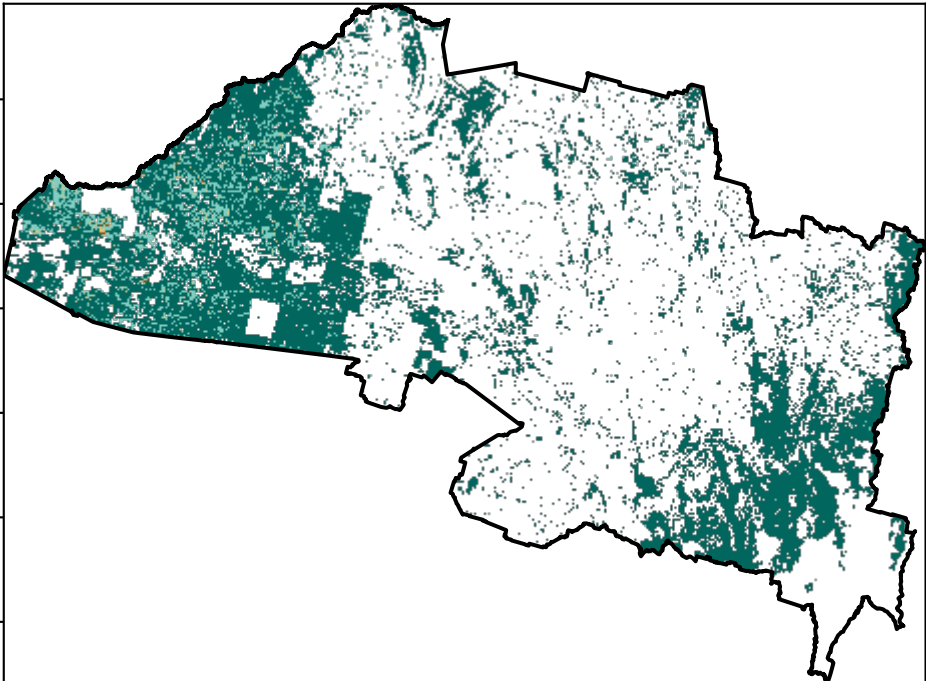Use of Australia
(2018) and Forests
of Australia (2018)

- 1 Agriculture - Grazing - Non forest
- 2 Agriculture - Grazing - Woodland forest
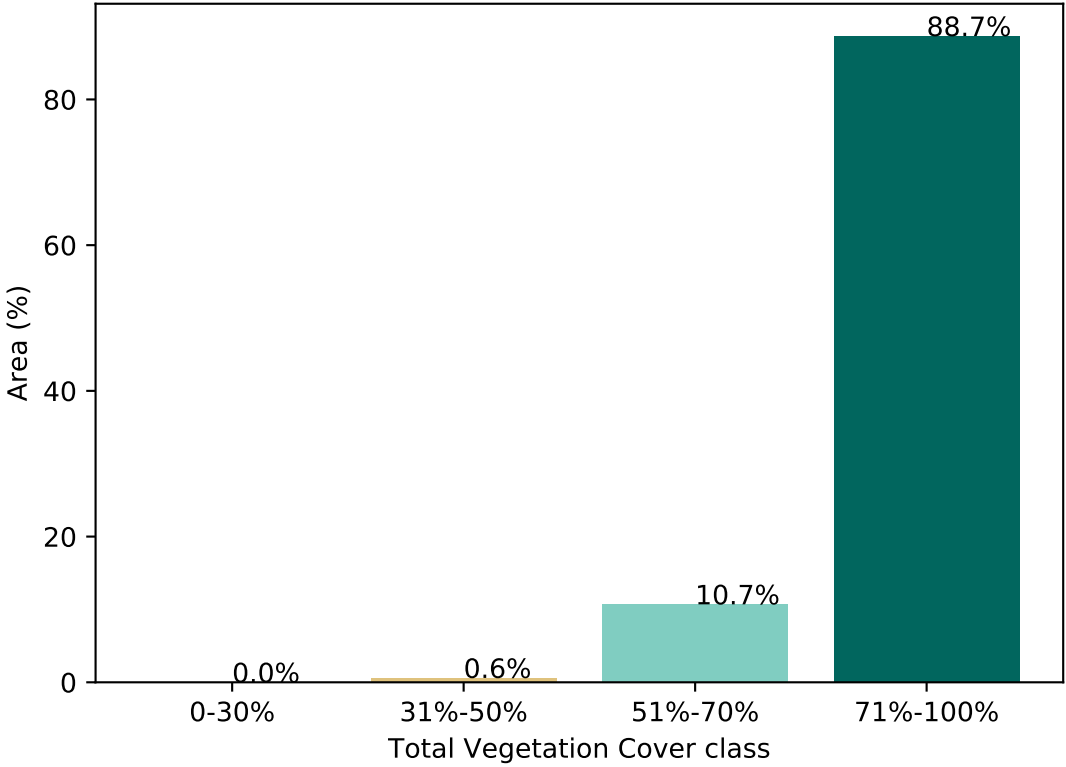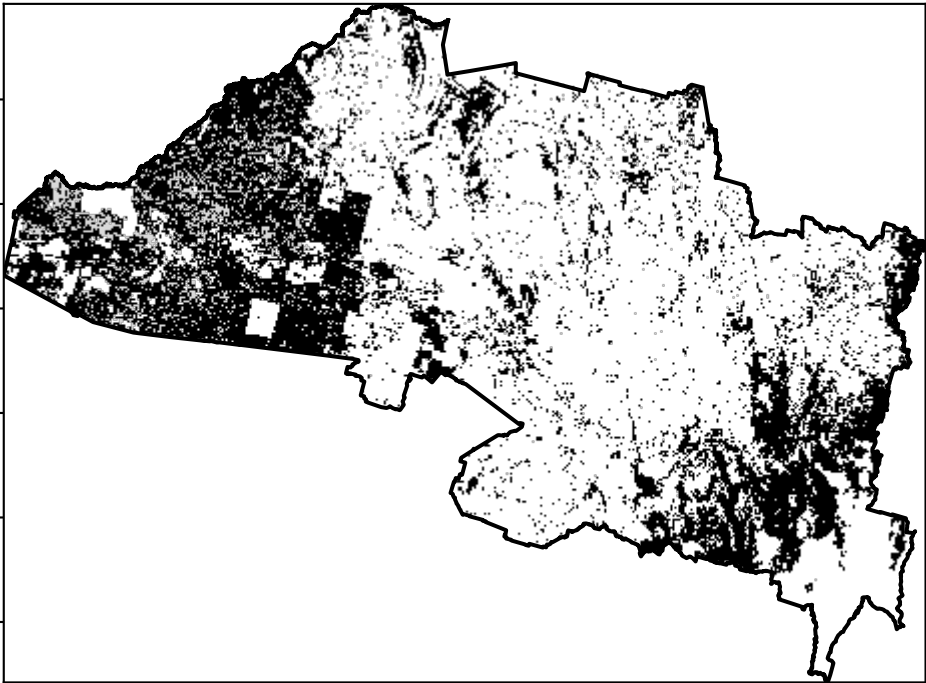- 3 Agriculture - Grazing - Non-woodland forest
- 4 Agriculture - Grazing - Irrigated
- 5 Agriculture - Cropping - Non-irrigated
- 6 Agriculture - Cropping - Irrigated
- 7 Agriculture - Horticulture - Non-irrigated
- 8 Agriculture - Horticulture - Irrigated

Proportion of each land class in area

Total Vegetation Cover [%]

- 71%-100%
- 51%-70%
- 31%-50%
- 0-30%
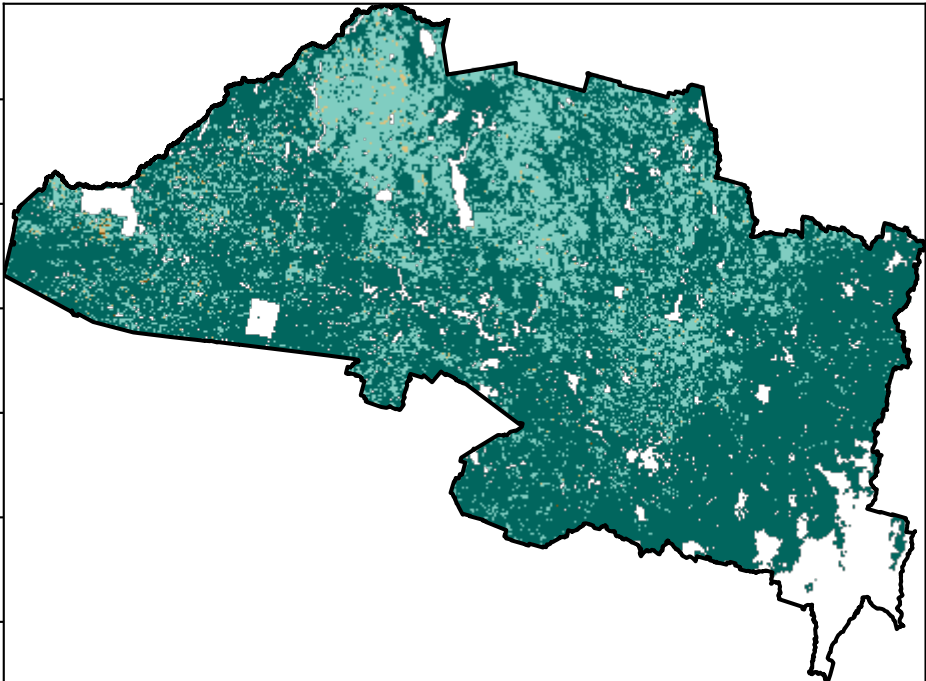
## Proportion of vegetation cover class in area
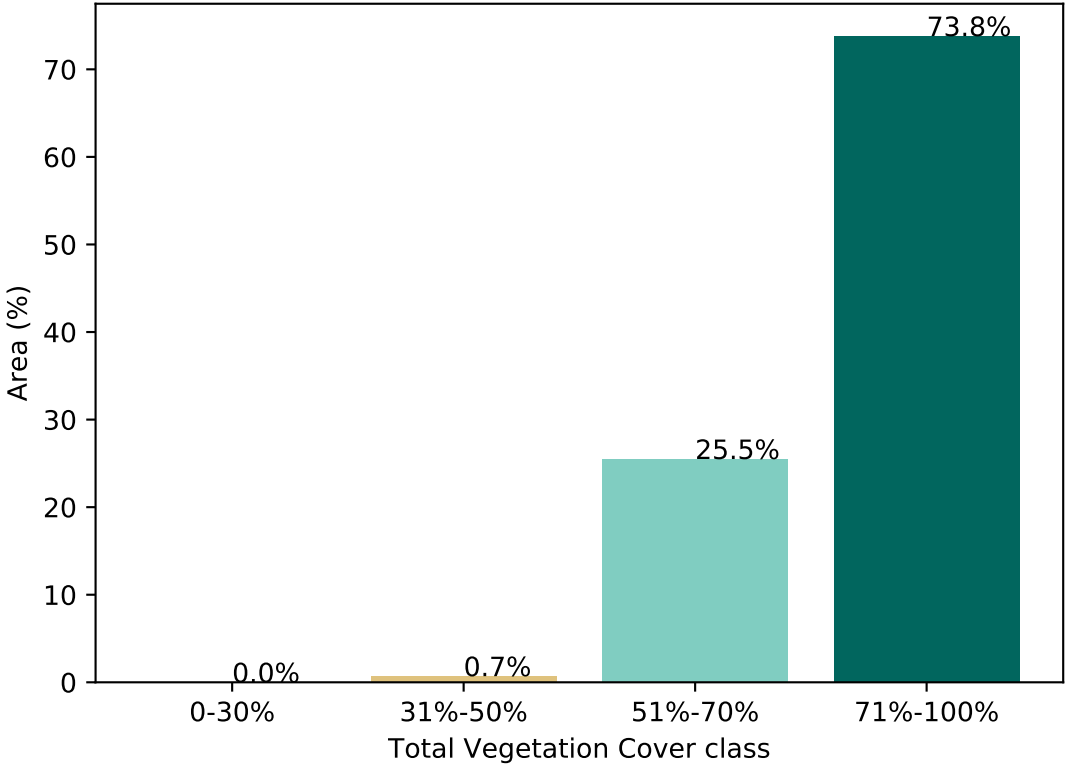
% Area protected from water erosion (>70%)
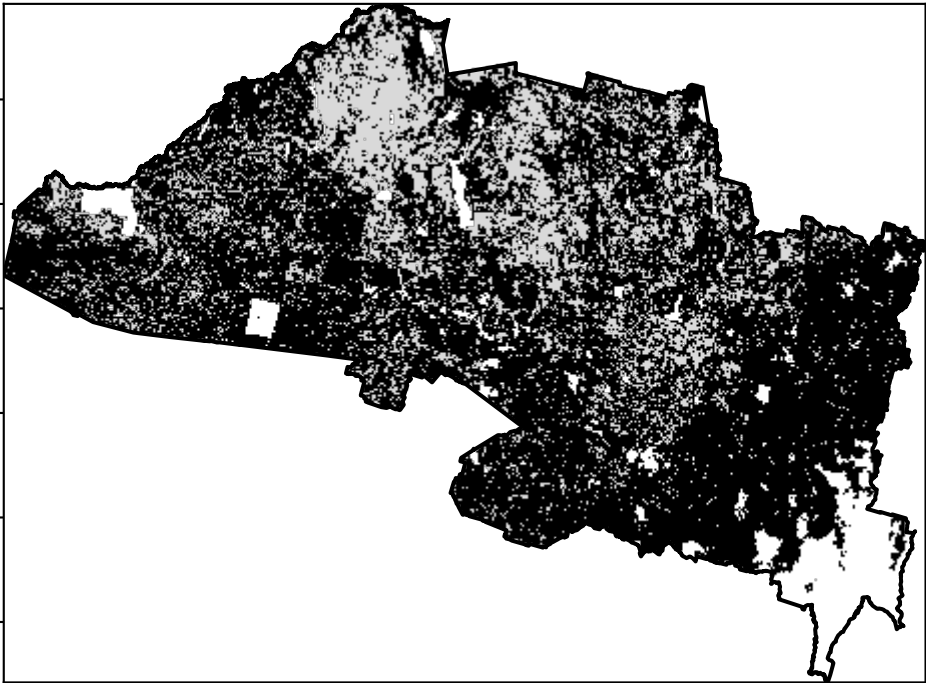
Area not
protected
26.2% of
region
(1,589,652
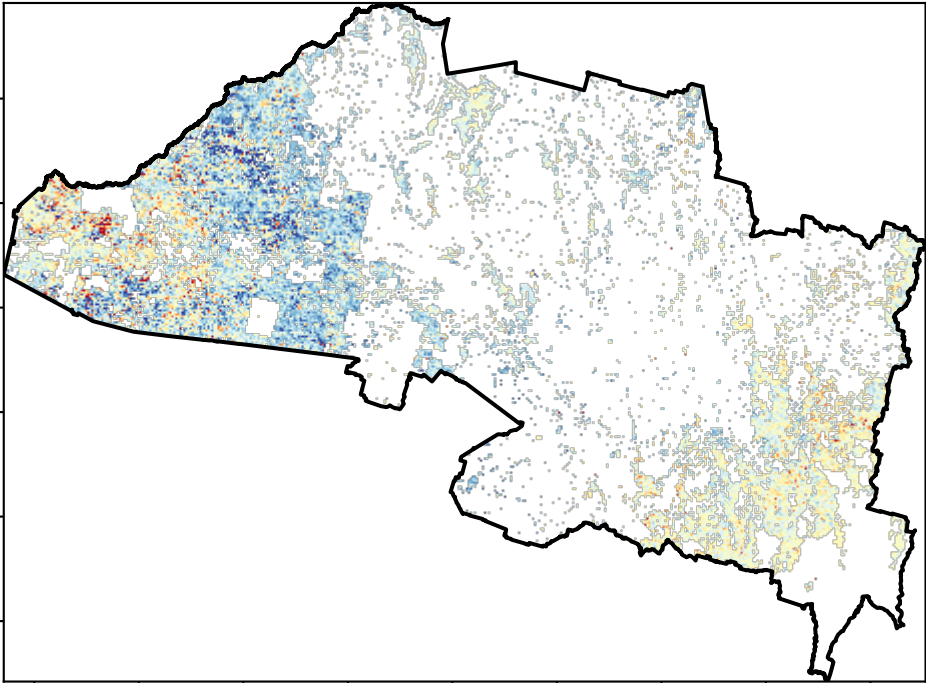ha)

Area
protected
73.8% of
region
(4,477,722
ha)

% Area protected from wind erosion (>50%)

Area not
protected
1.0% of
region
(60,673
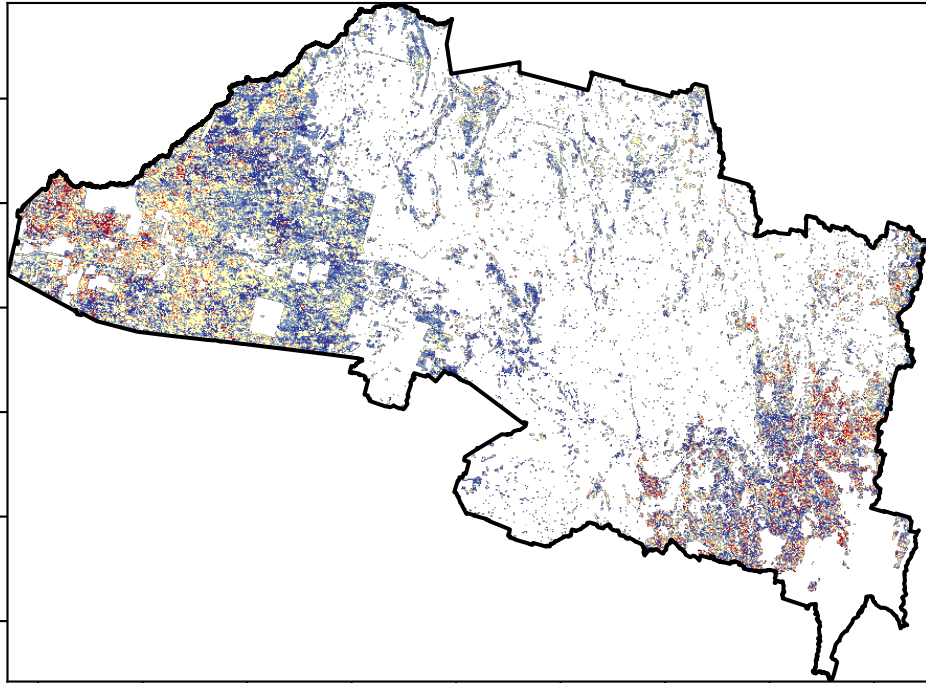ha)

Area
protected
99.0% of
region
(6,006,701
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.
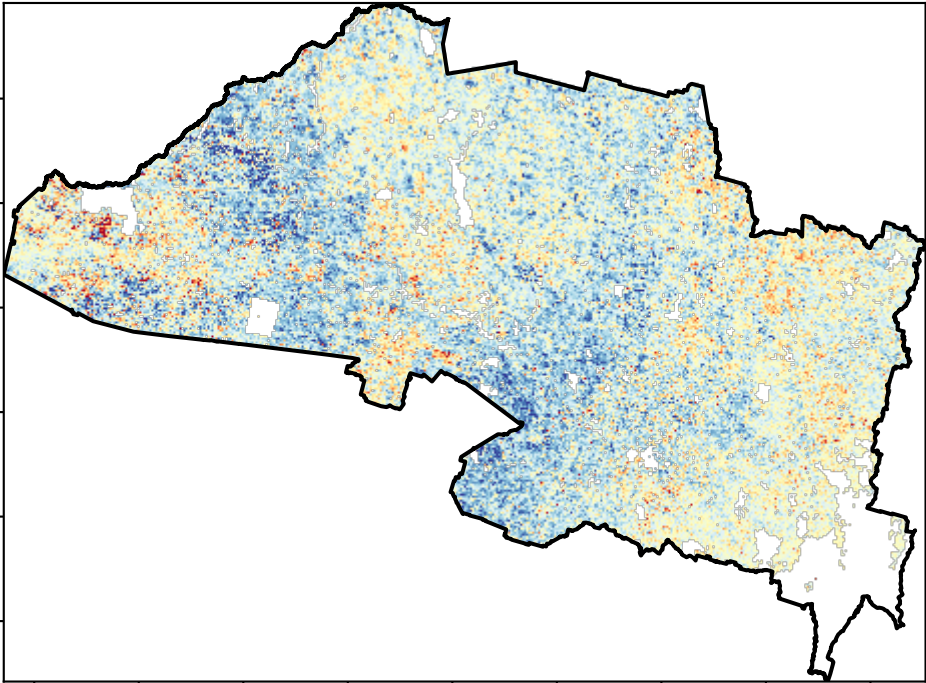
Total Vegetation Cover Decile [%]

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
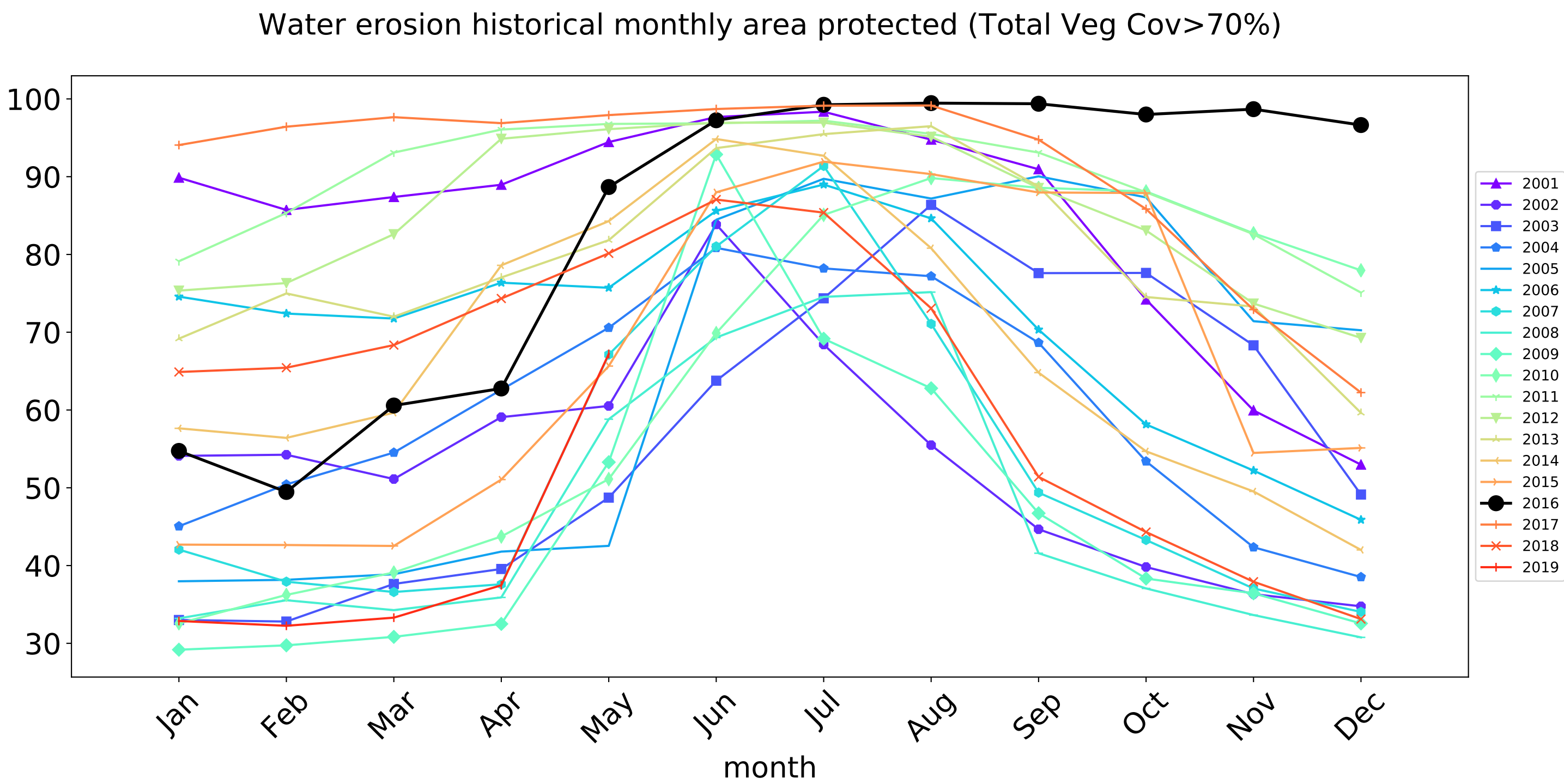the map using baseline
from 2001 to 2019.

Agriculture timeseries

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

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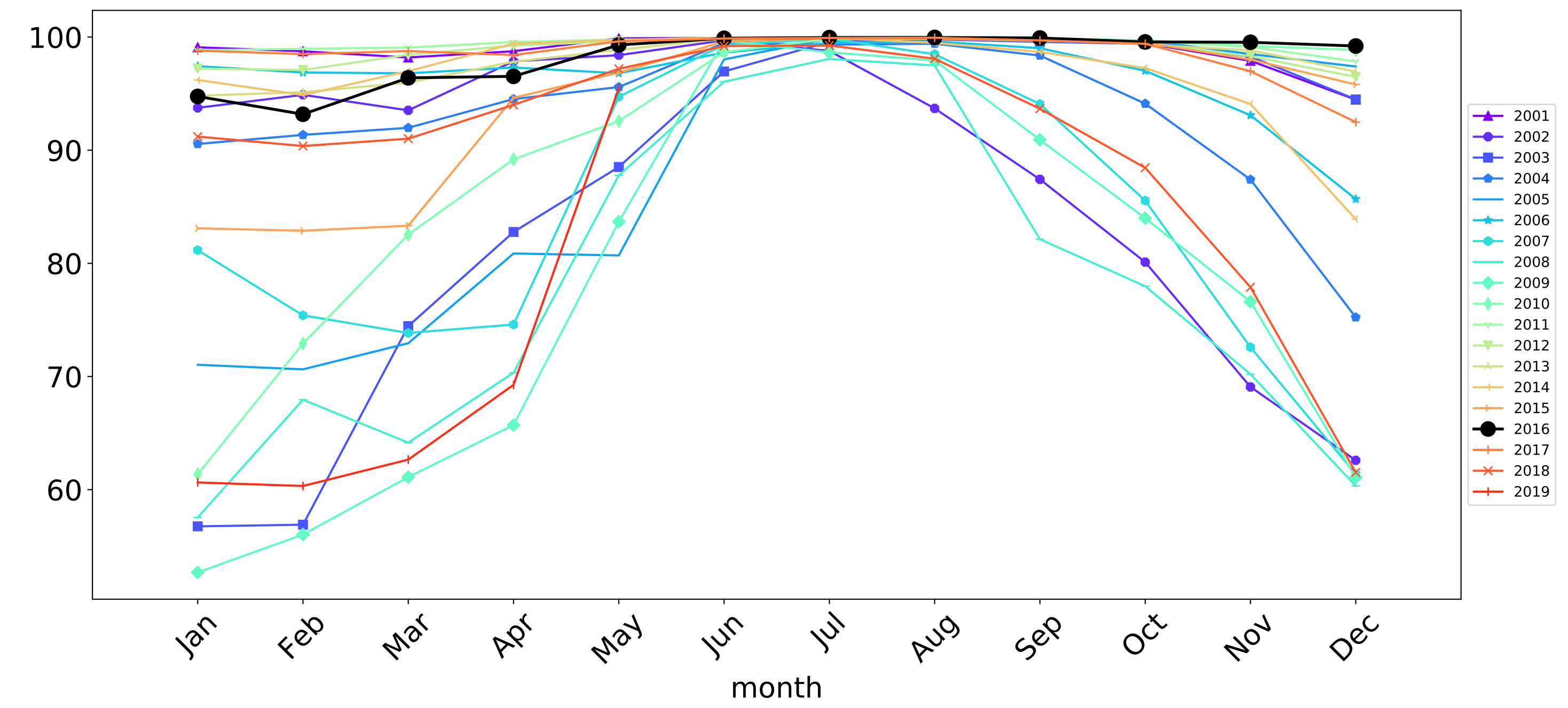
Proportion of the area protected from water erosion (Total Vegetation Cover > 70%)
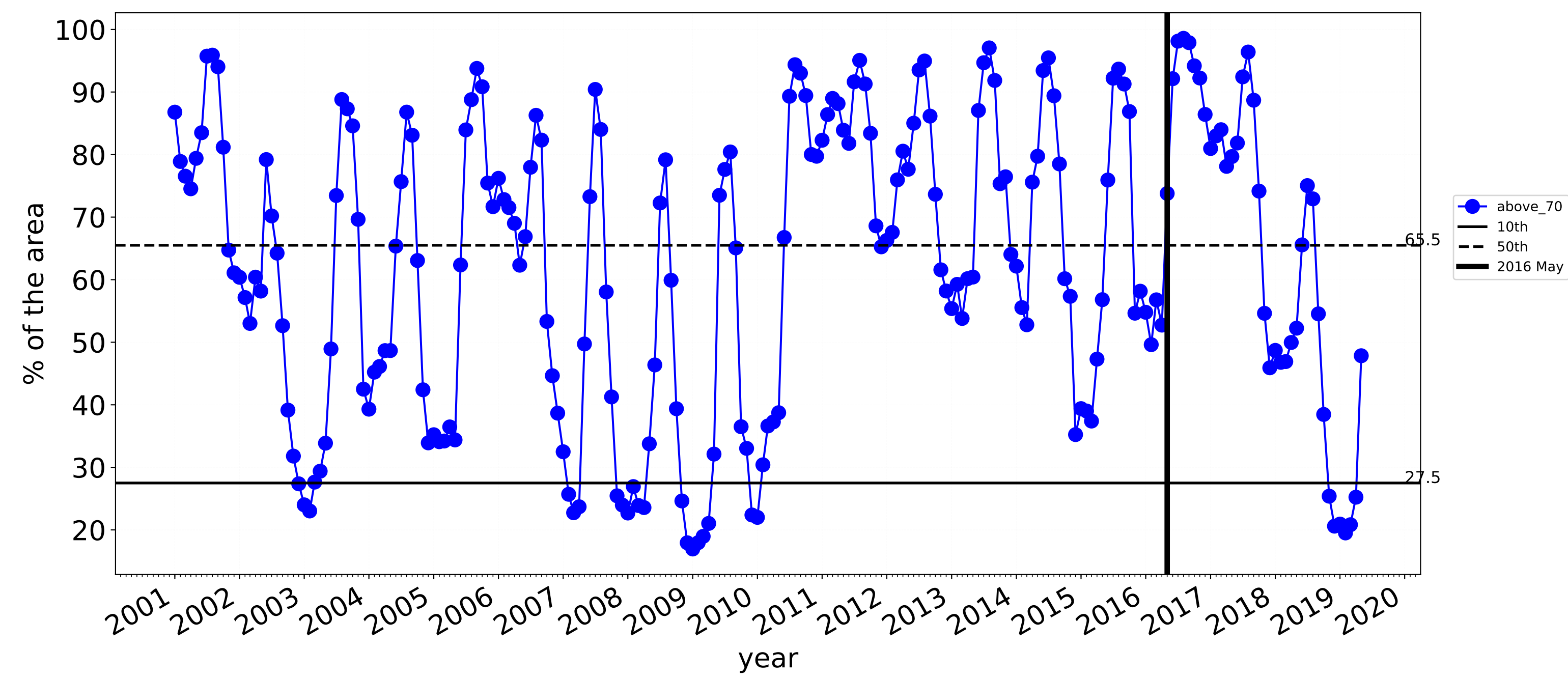
Water erosion historical monthly area protected (Total Veg Cov>70%)

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)

Legend:
- 1 Agriculture - Grazing - Non forest
- 2 Agriculture - Grazing - Woodland forest
- 3 Agriculture - Grazing - Non-woodland forest

Proportion of each land class in area

Area (%)
- 1: 89.4%
- 2: 6.1%
- 3: 4.5%

Land use class

Total Vegetation Cover [%]

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

Proportion of vegetation cover class in area

Area (%)
- 0-30%: 0.0%
- 31%-50%: 0.6%
- 51%-70%: 10.7%
- 71%-100%: 88.7%

Total Vegetation Cover class

% Area protected from water erosion (>70%)

Area not protected 11.3% of region (261,148 ha)

Area protected 88.7% of region (2,049,901 ha)

% Area protected from wind erosion (>50%)
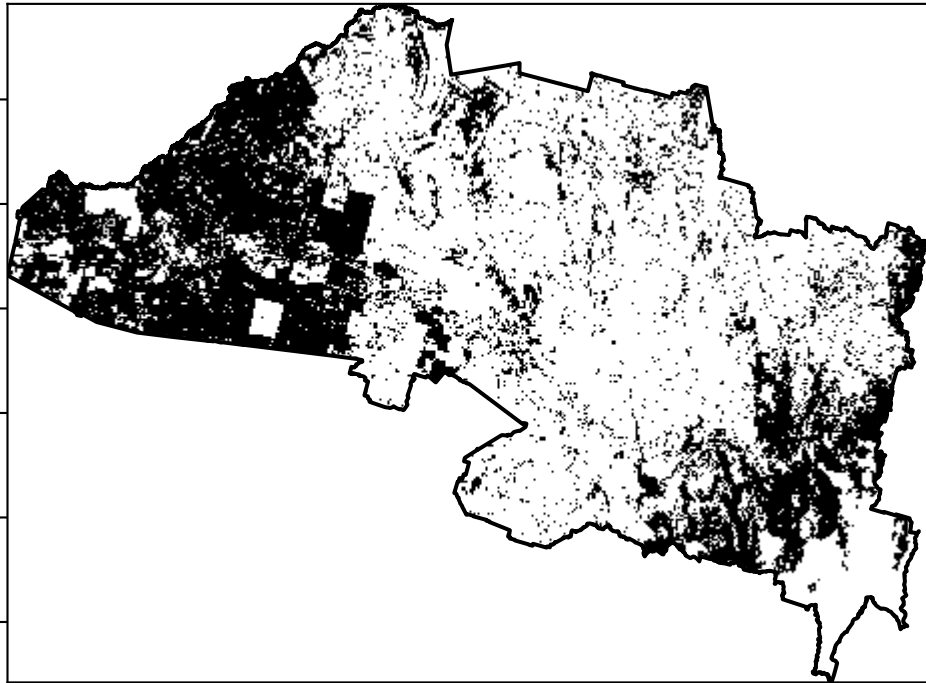
Area not protected 1.0% of region (23,110 ha)

Area protected 99.0% of region (2,287,939 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.
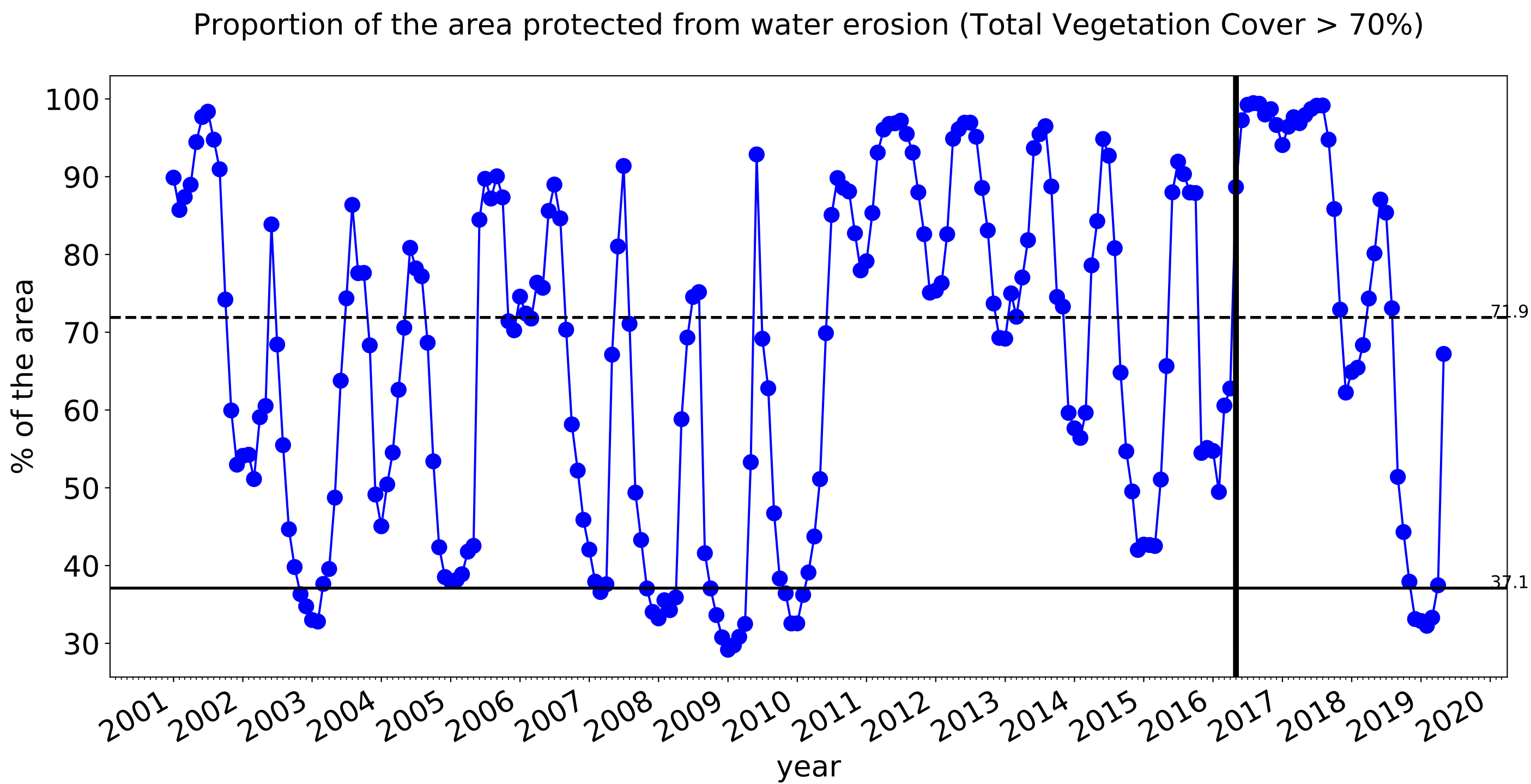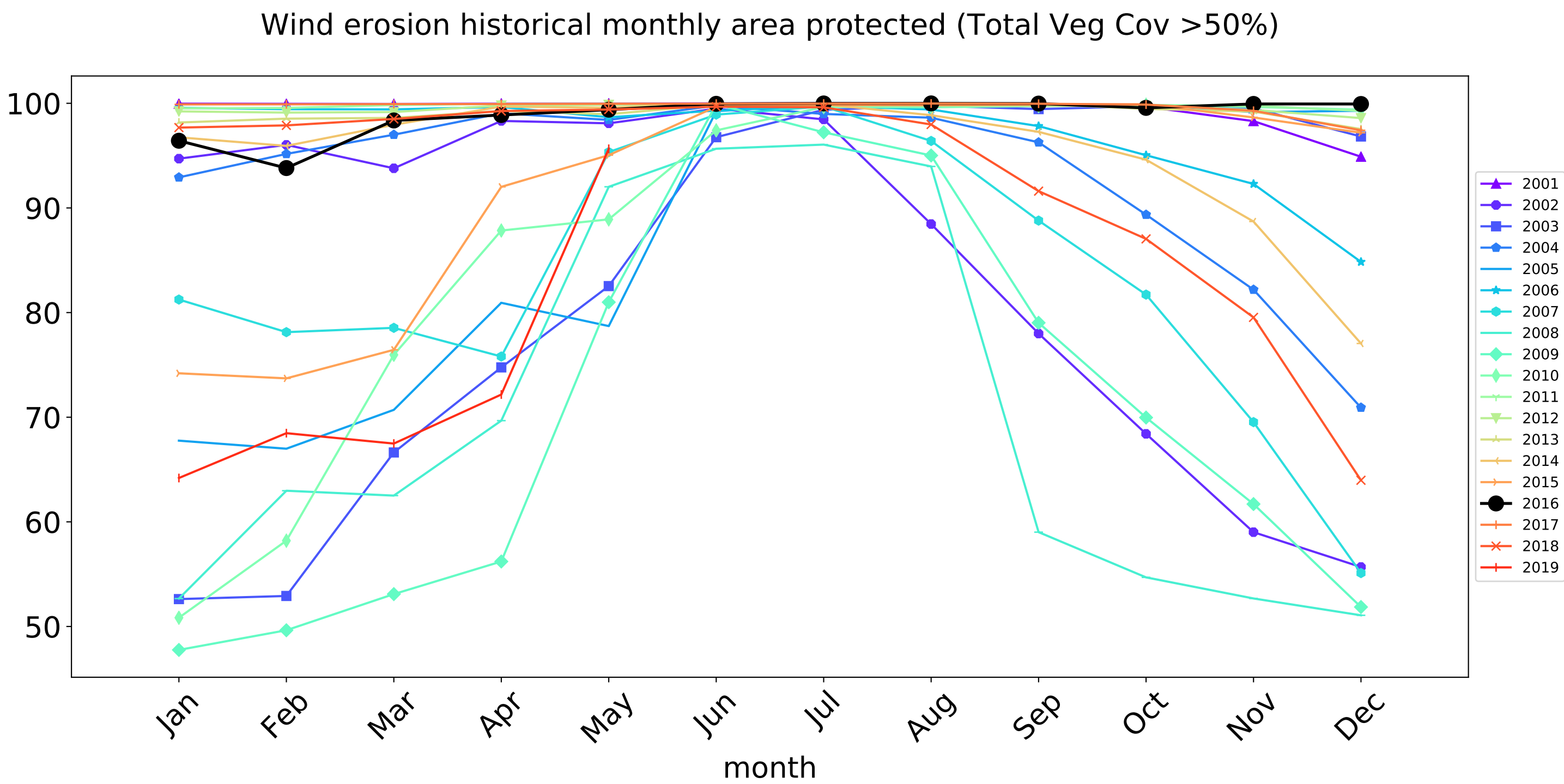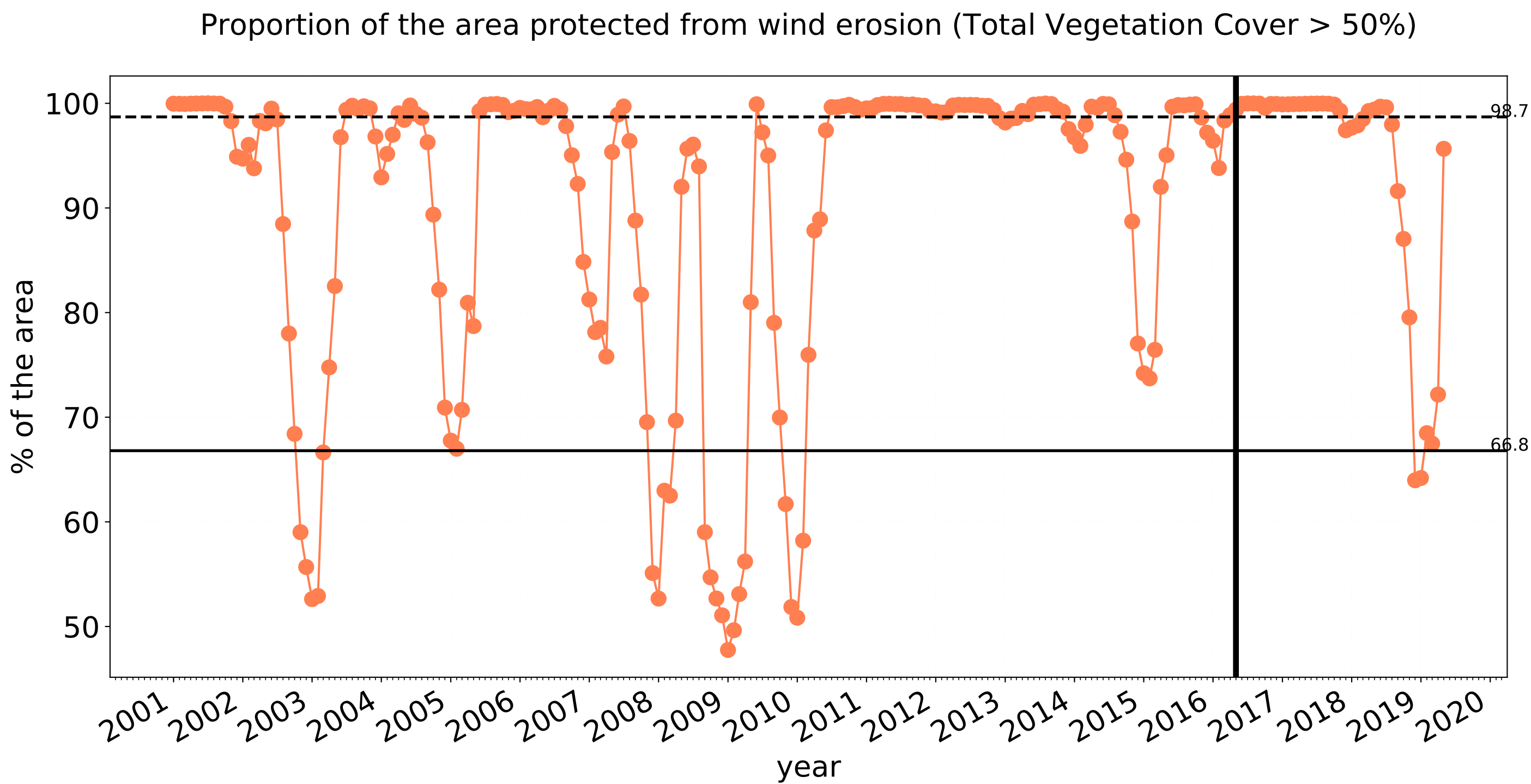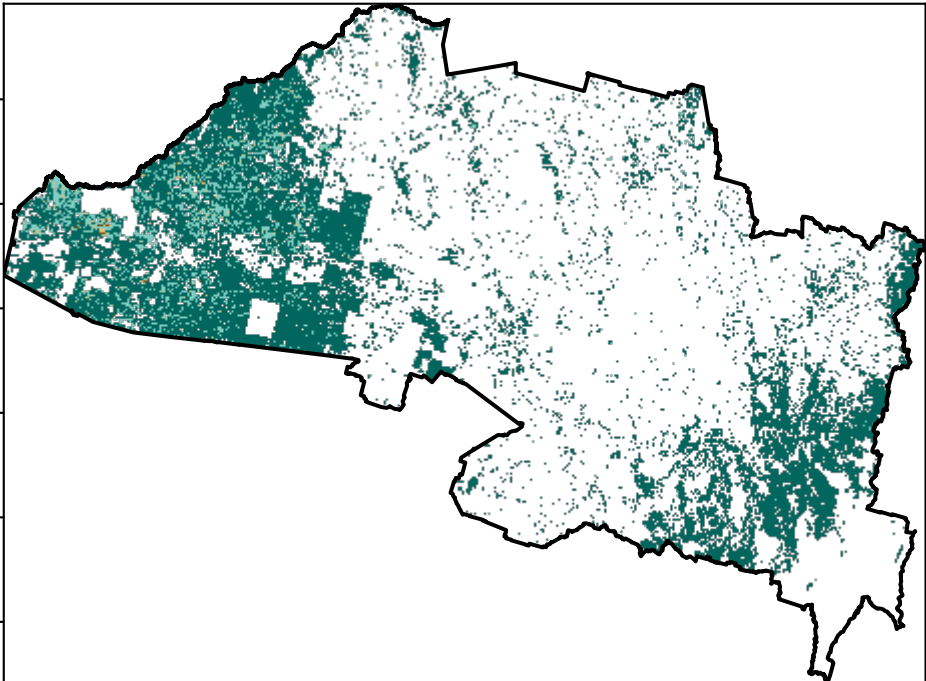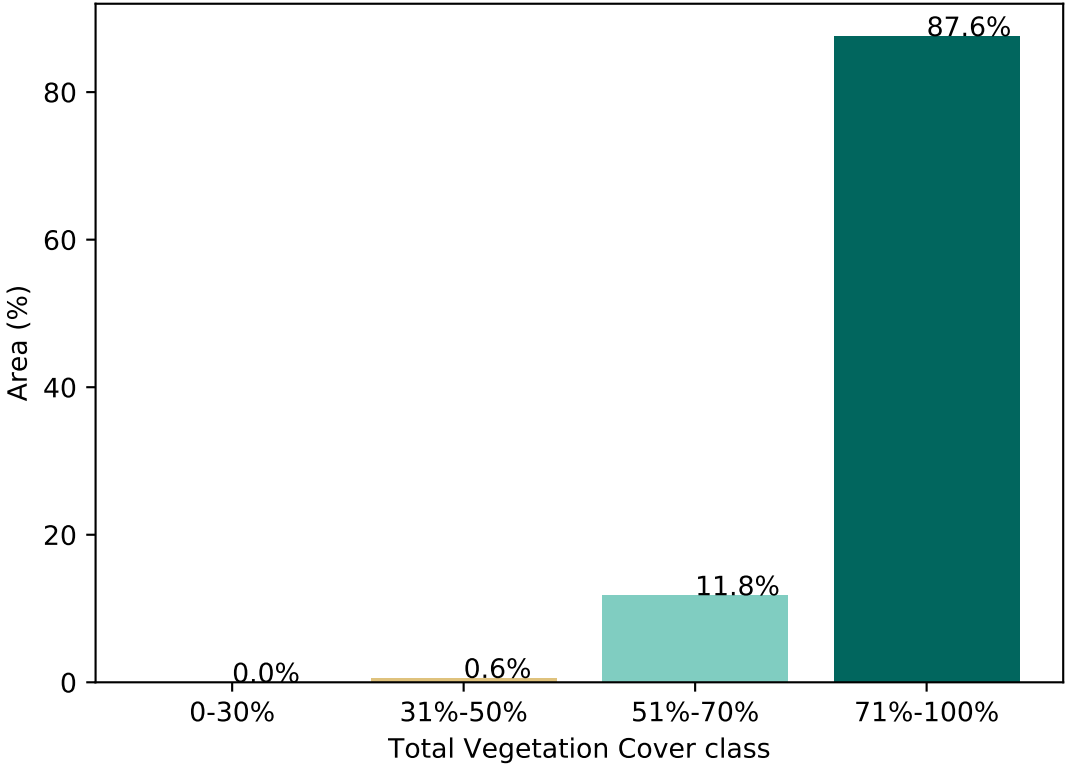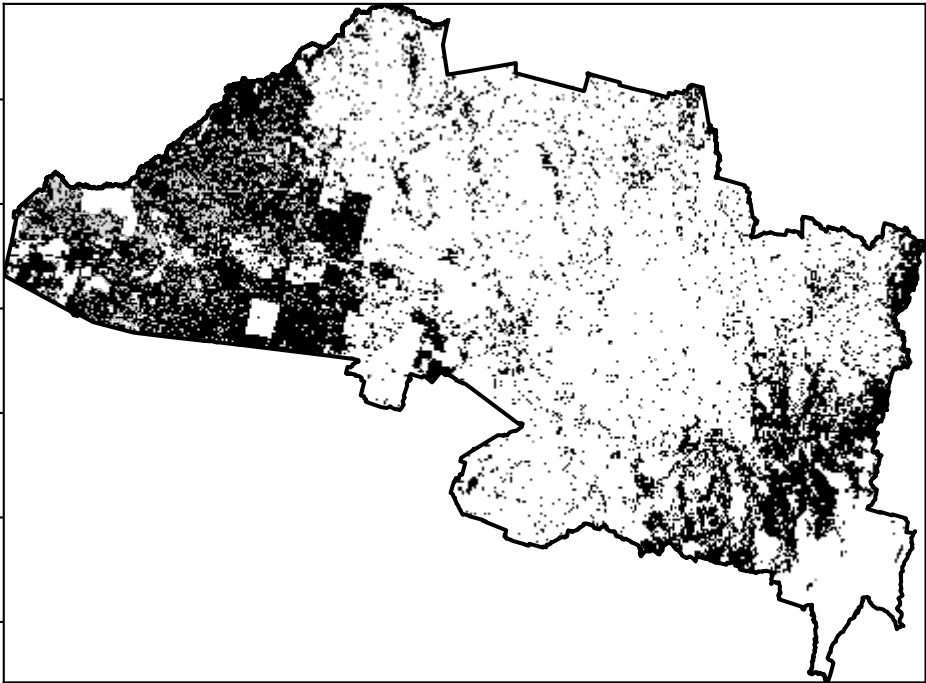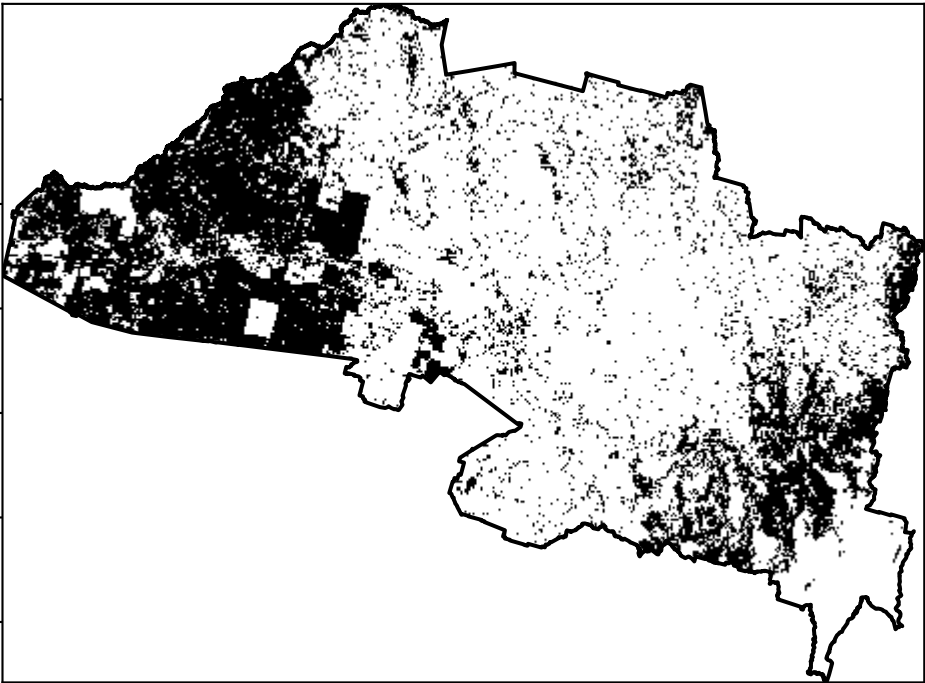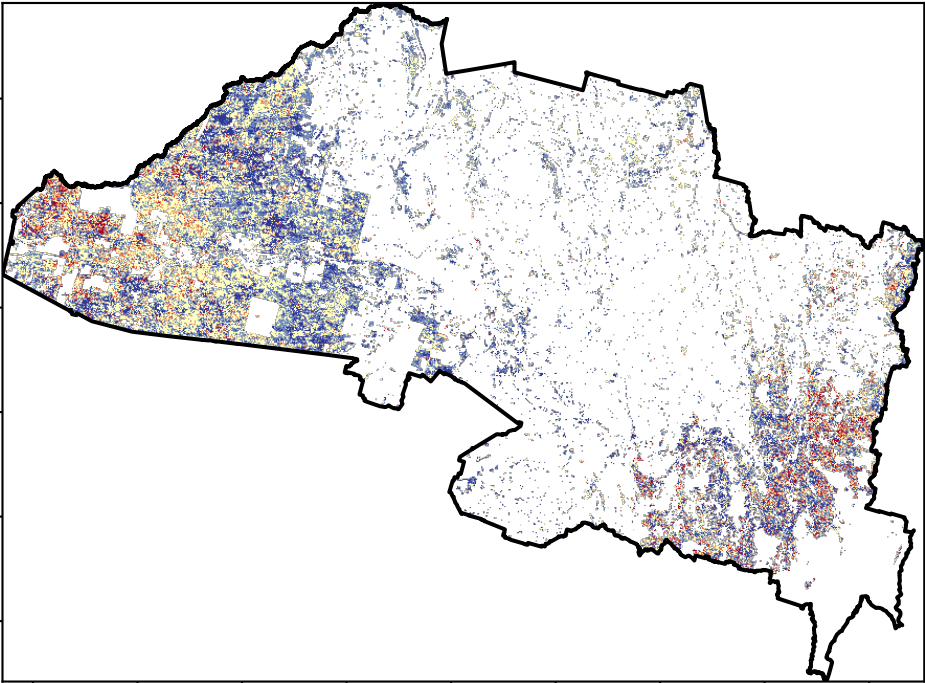
Legend:
- 10
- 8-9
- 4-7
- 2-3
- 1

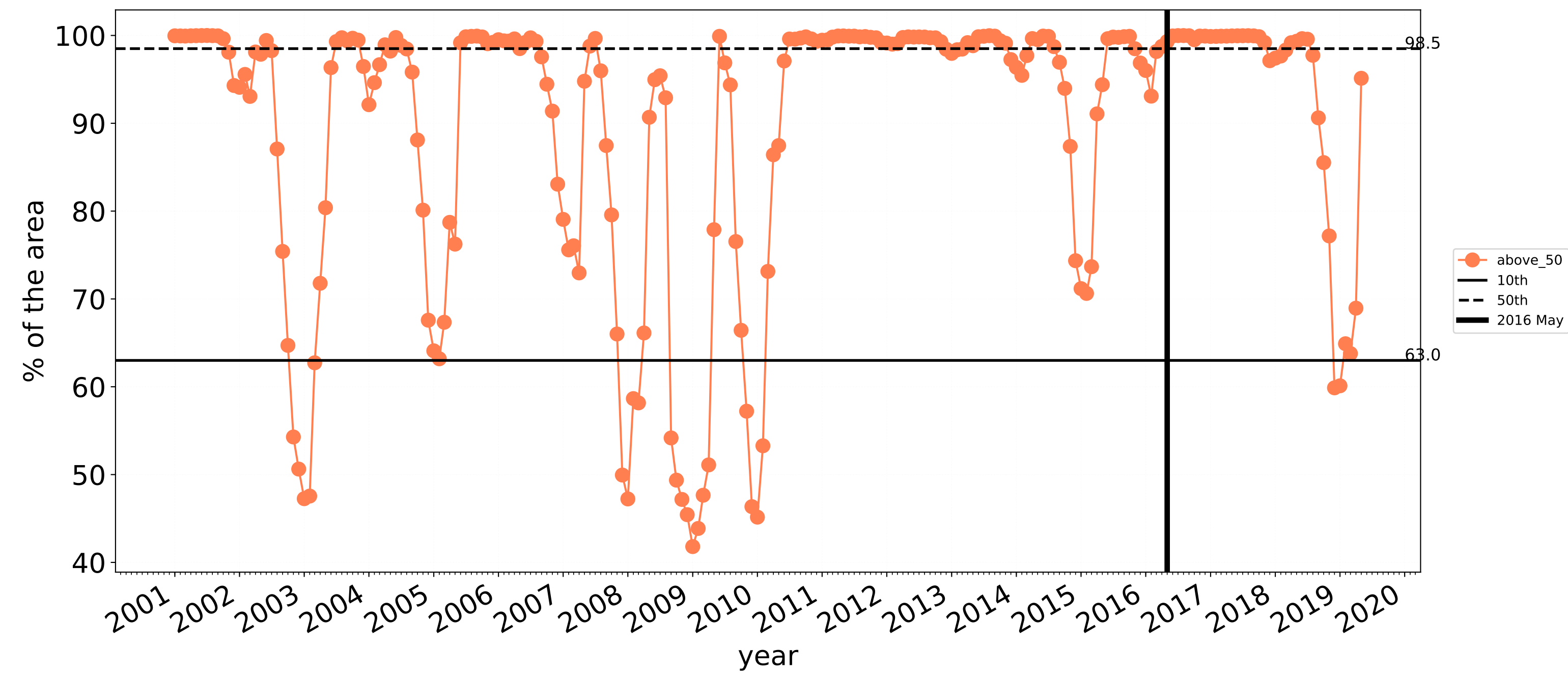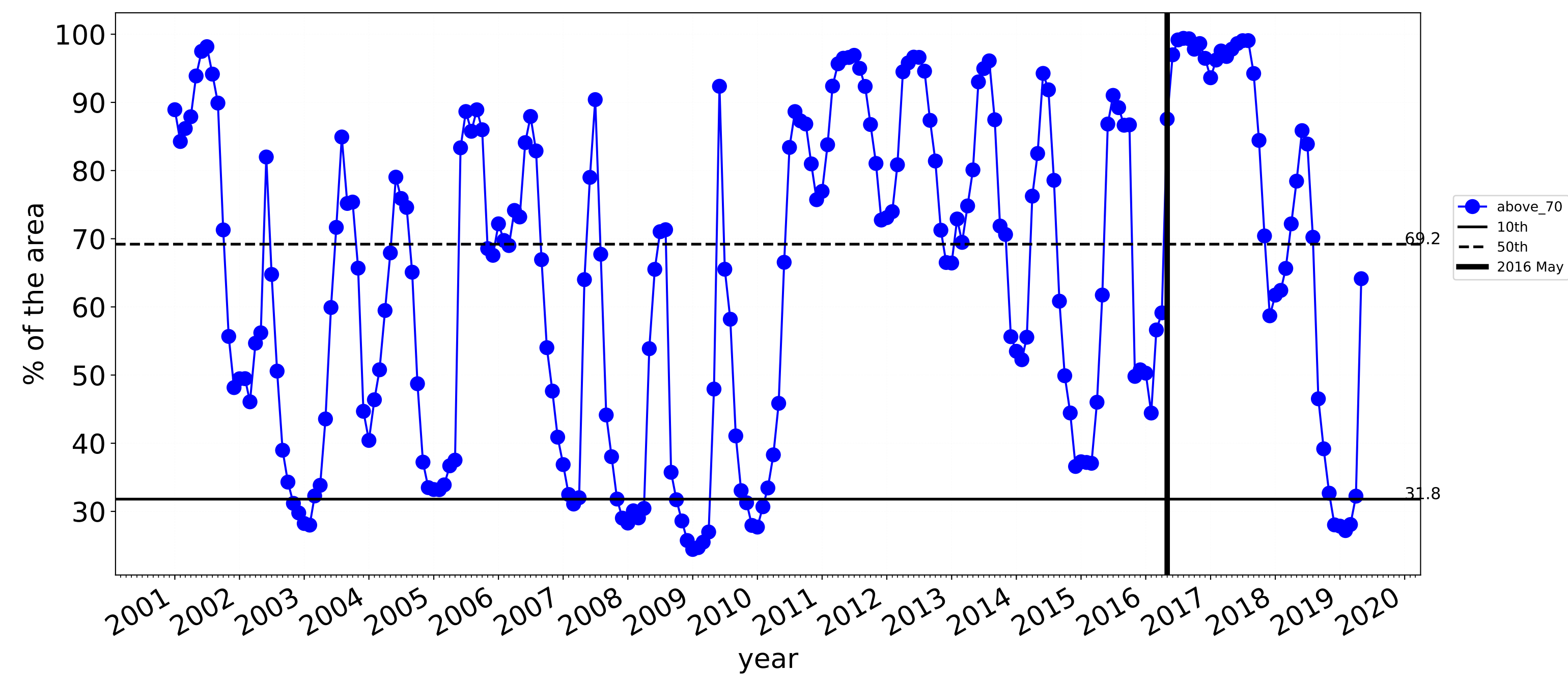# Grazing timeseries

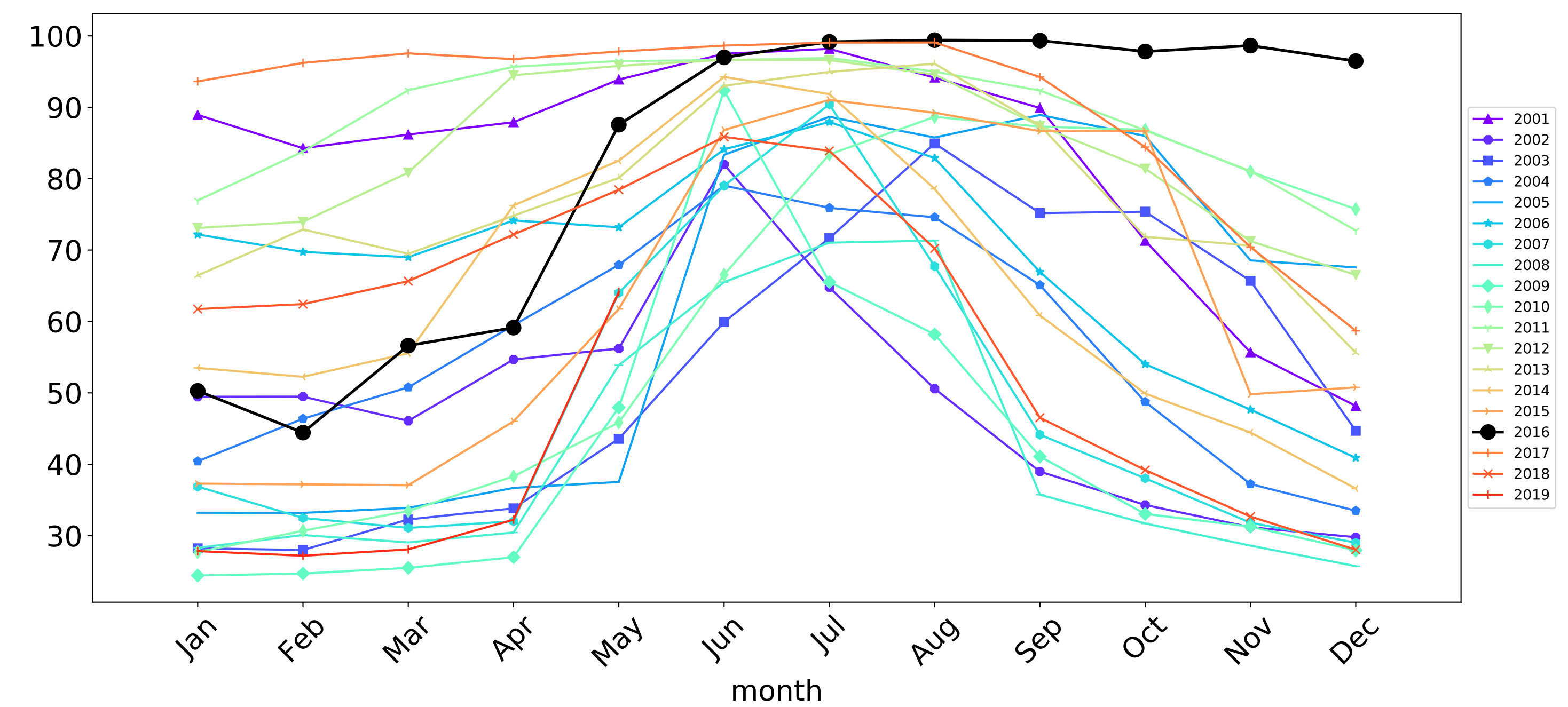**Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)**

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)

1 Agriculture - Grazing - 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
12.4% of
region
(256,190
ha)

Area
protected
87.6% of
region
(1,809,859
ha)

% Area protected from wind erosion (>50%)

Area not
protected
1.0% of
region
(20,660 ha)

Area
protected
99.0% of
region
(2,045,389
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 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)

1 Agriculture - Grazing - Woodland forest

Total Vegetation Cover [%]

71%-100%
51%-70%
31%-50%
0-30%
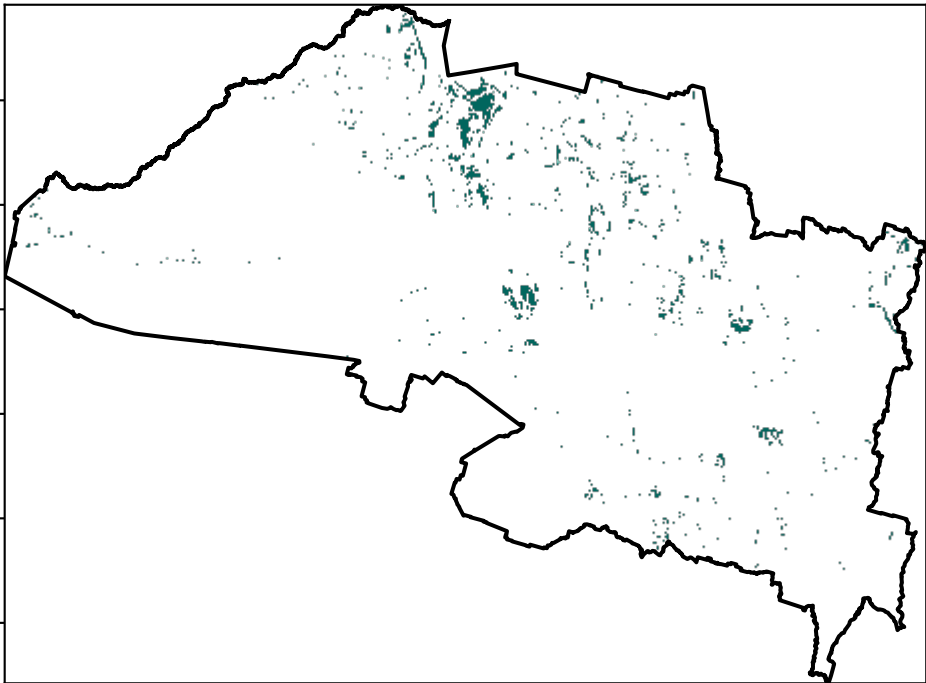
Proportion of vegetation cover class in area
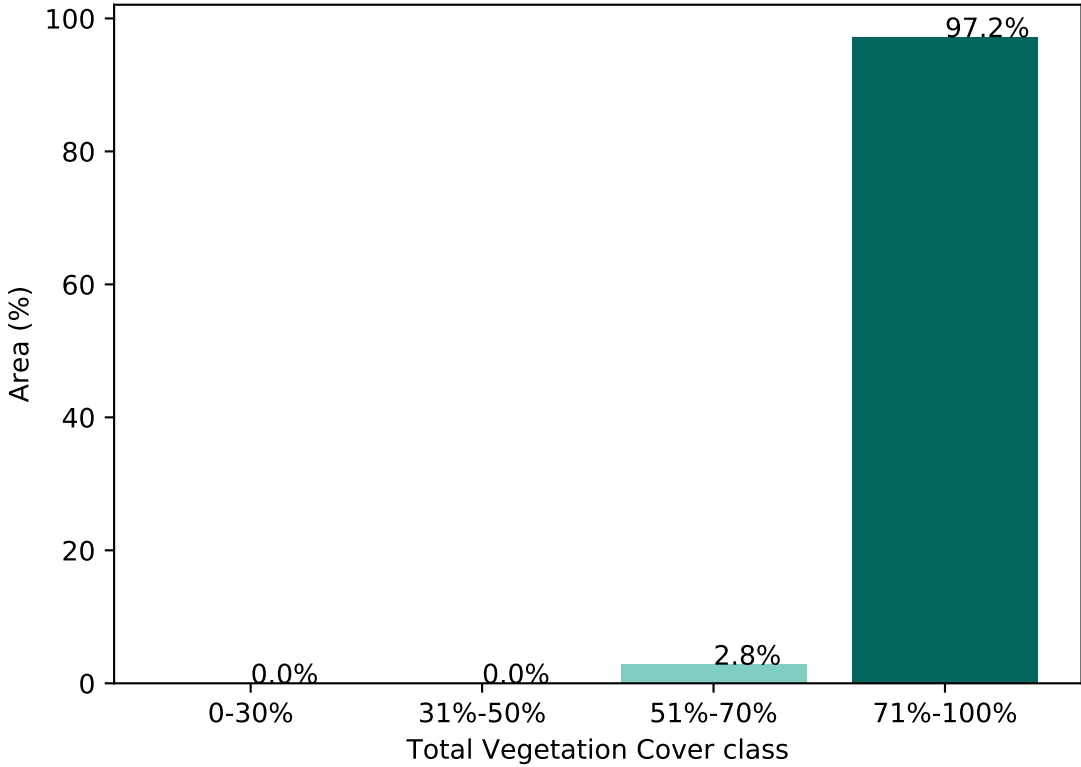
% Area protected from water erosion (>70%)
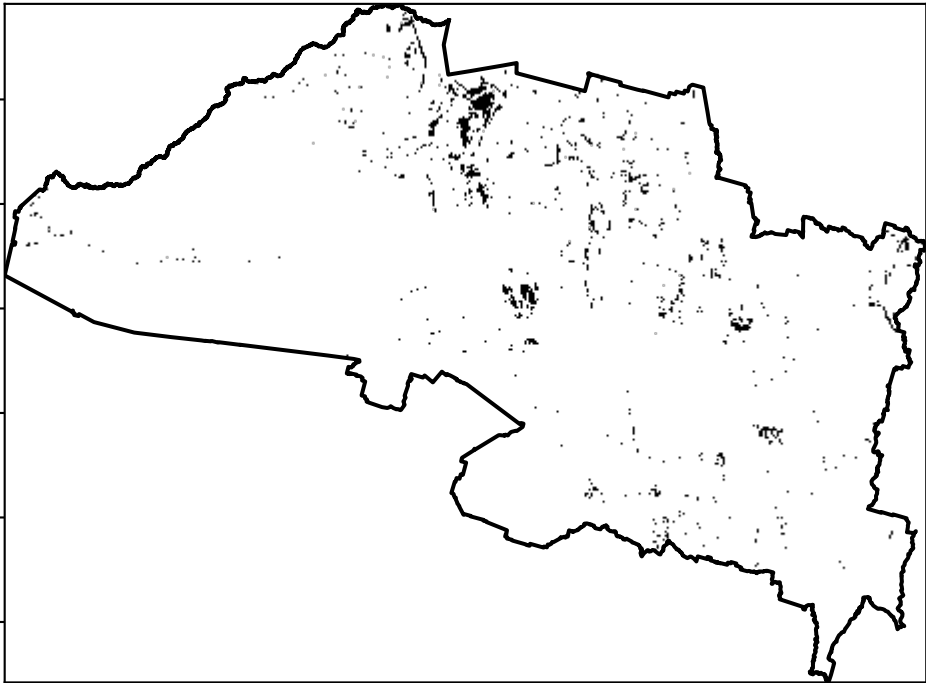
Area not protected 2.8% of region (3,966 ha)

Area protected 97.2% of region (137,683 ha)

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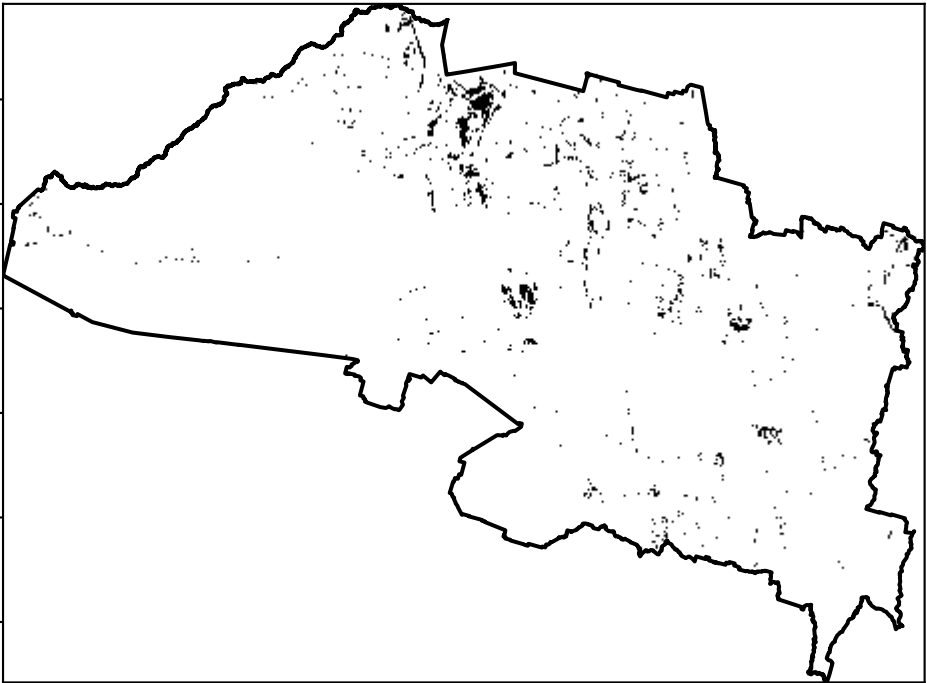
Area not protected 0.0% of region (0 ha)

Area protected 100.0% of region (141,650 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.
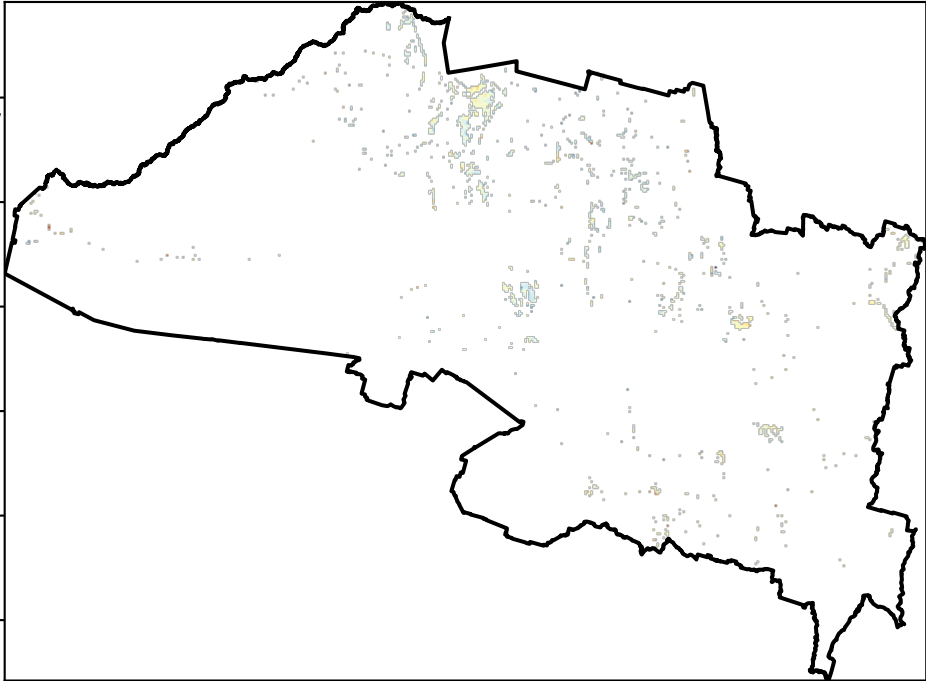
Total Vegetation Cover Decile [%]

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.
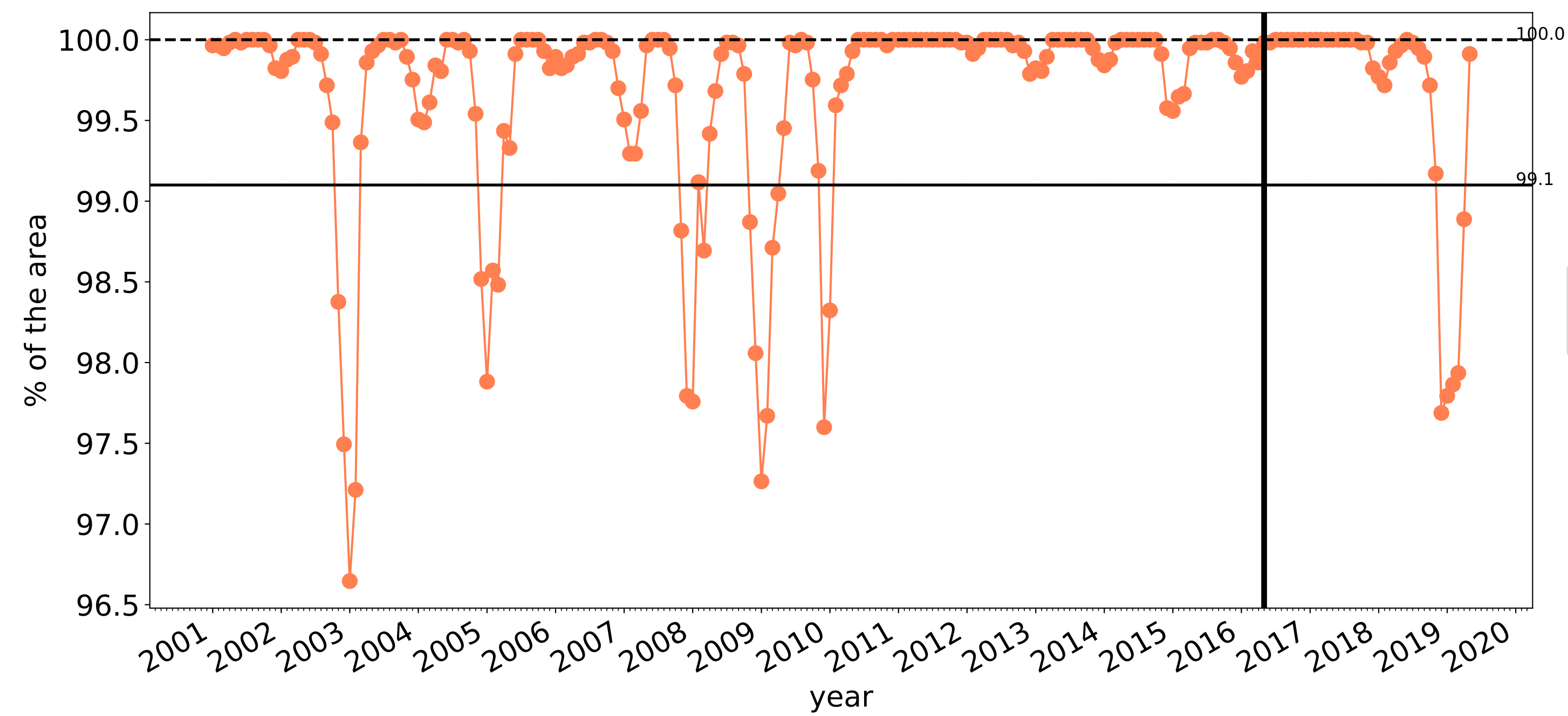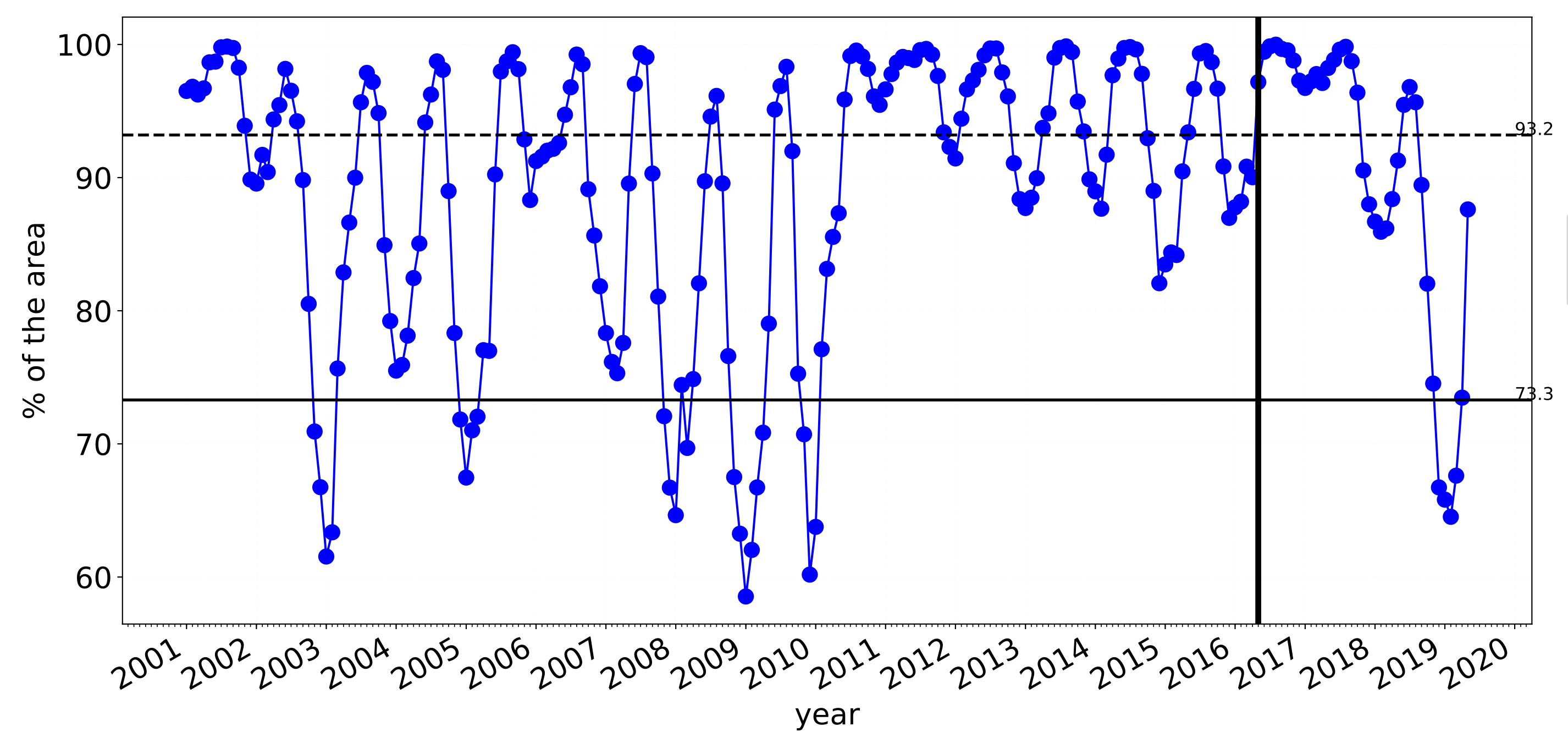
Grazing Woodland forest timeseries

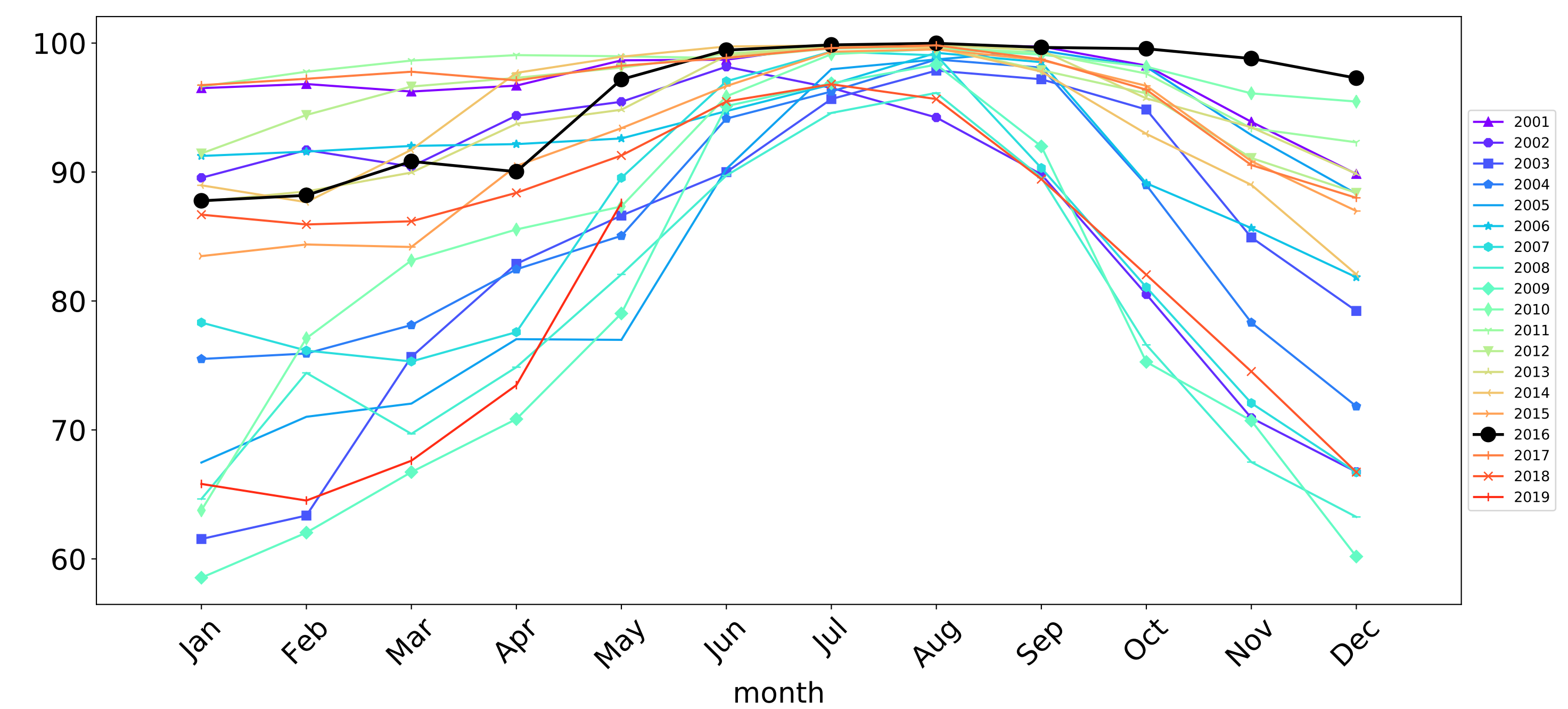Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)

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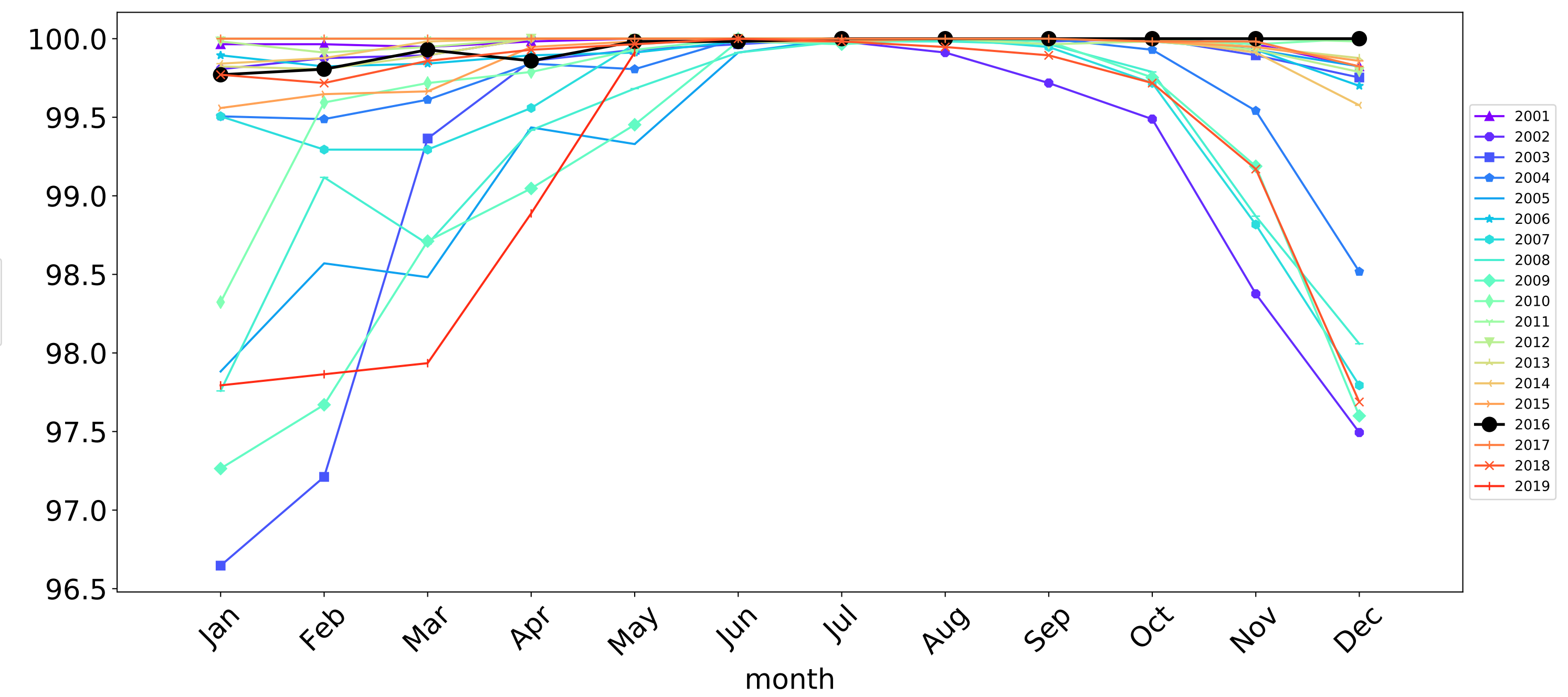
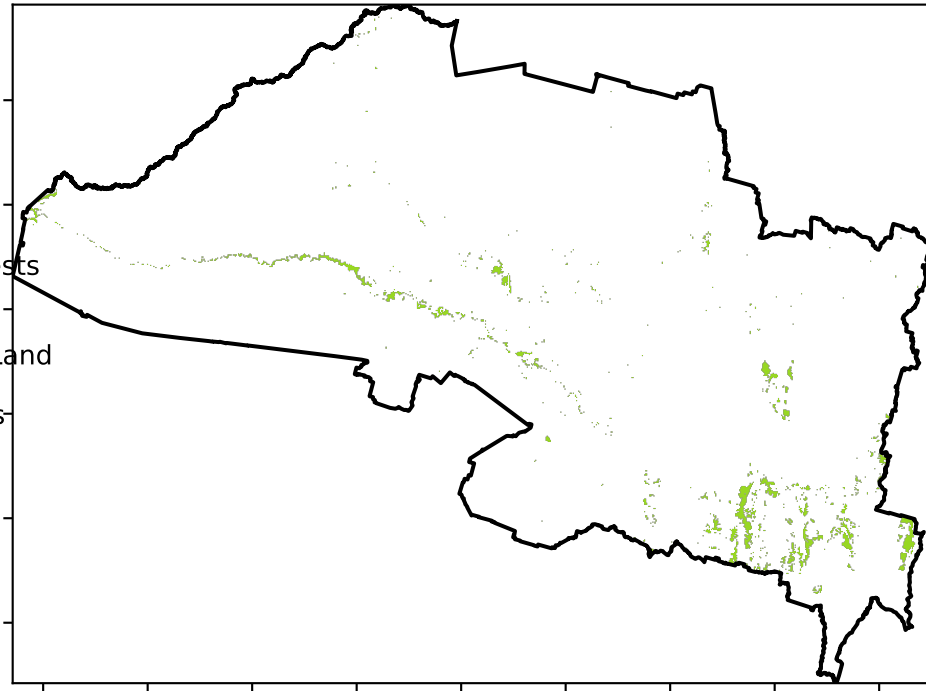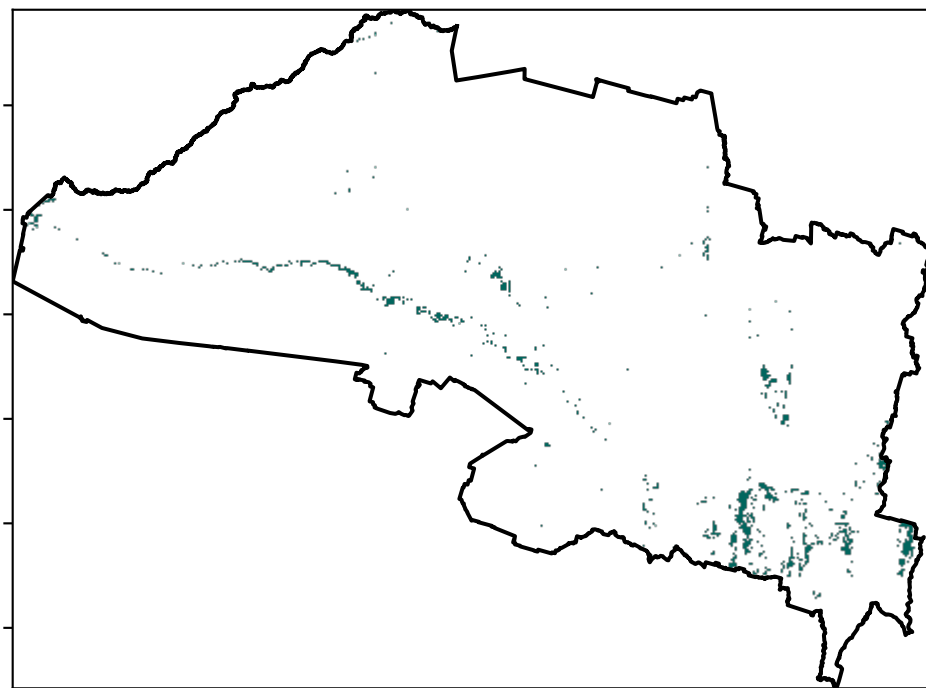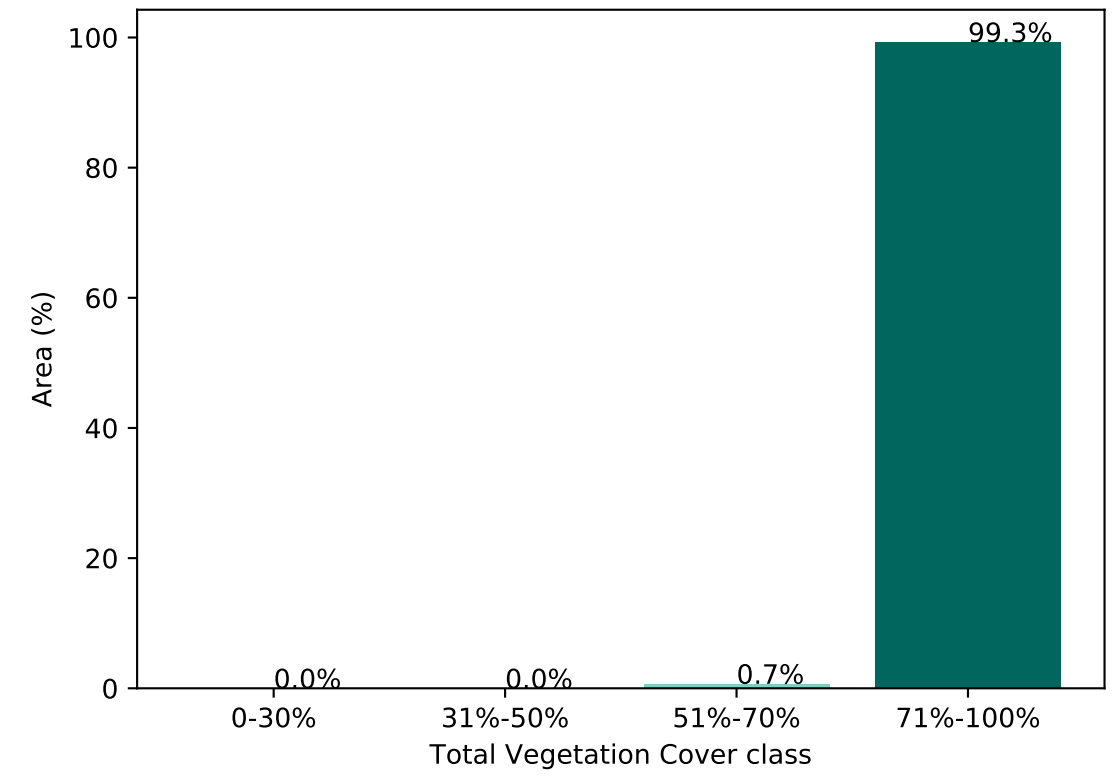Proportion of the area protected from water erosion (Total Vegetation Cover > 70%)

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)
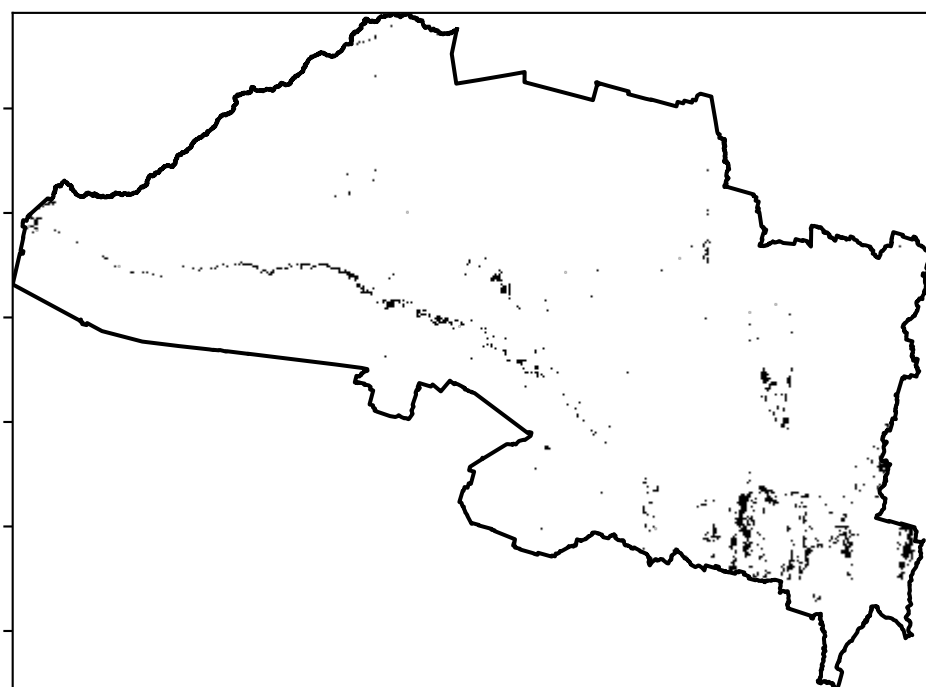
1 Agriculture - Grazing - Non-woodland forest

Total Vegetation Cover [%]

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

Proportion of vegetation cover class in area

Area (%)

0.0%   0.0%   0.7%   99.3%

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

Total Vegetation Cover class

% Area protected from water erosion (>70%)

Area not protected 0.7% of region (723 ha)
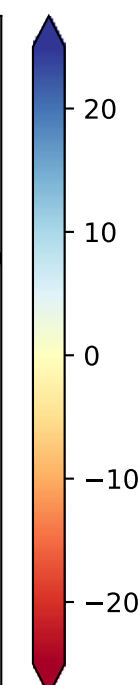
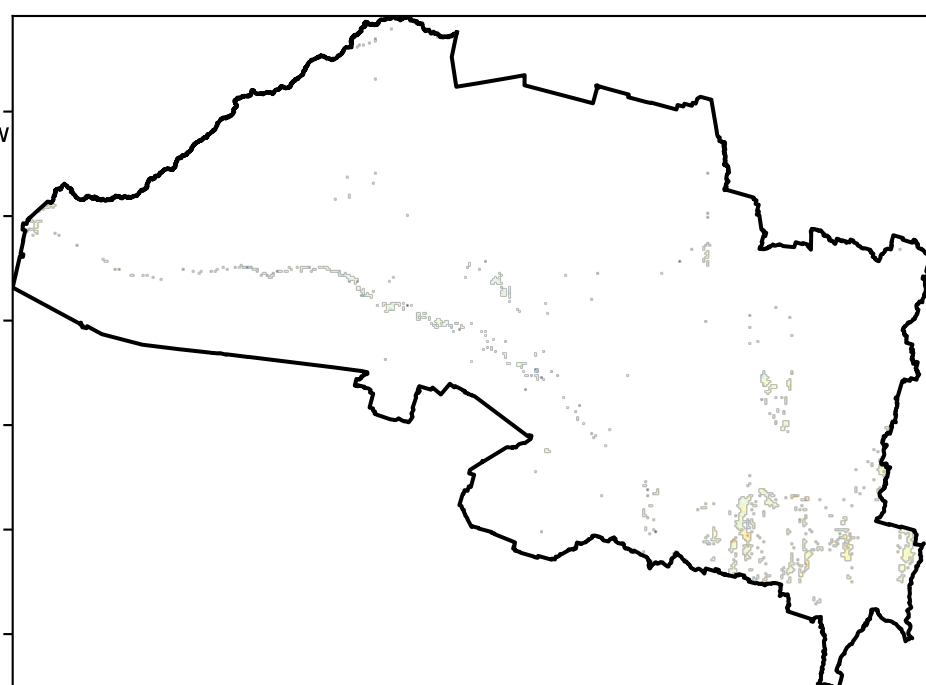Area protected 99.3% of region (102,626 ha)

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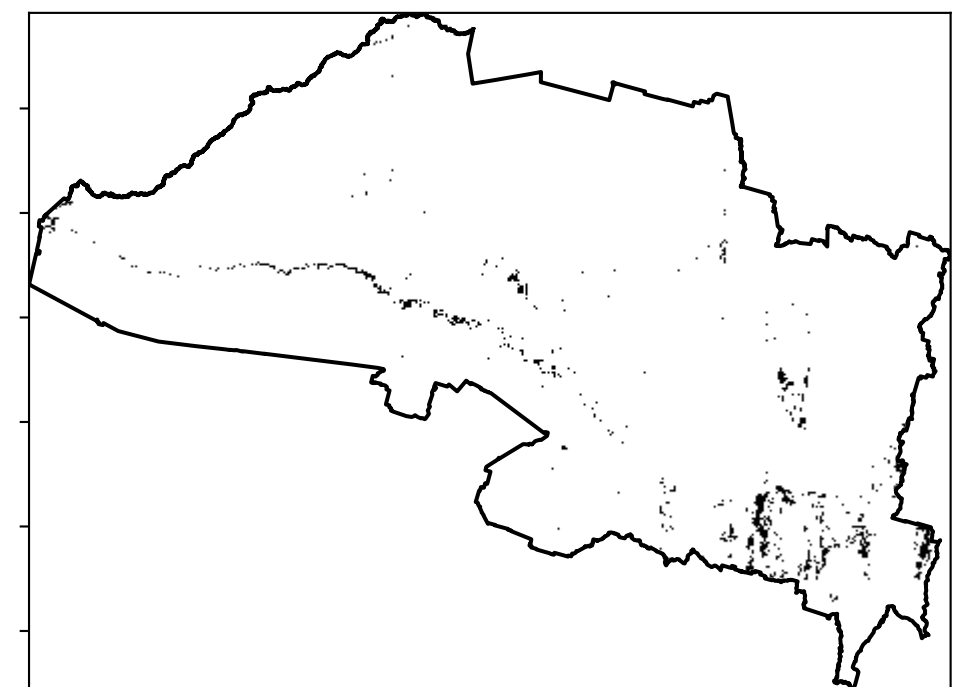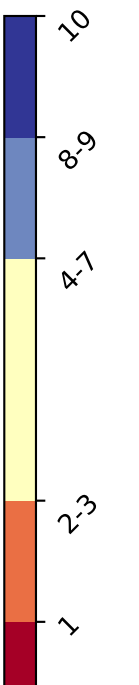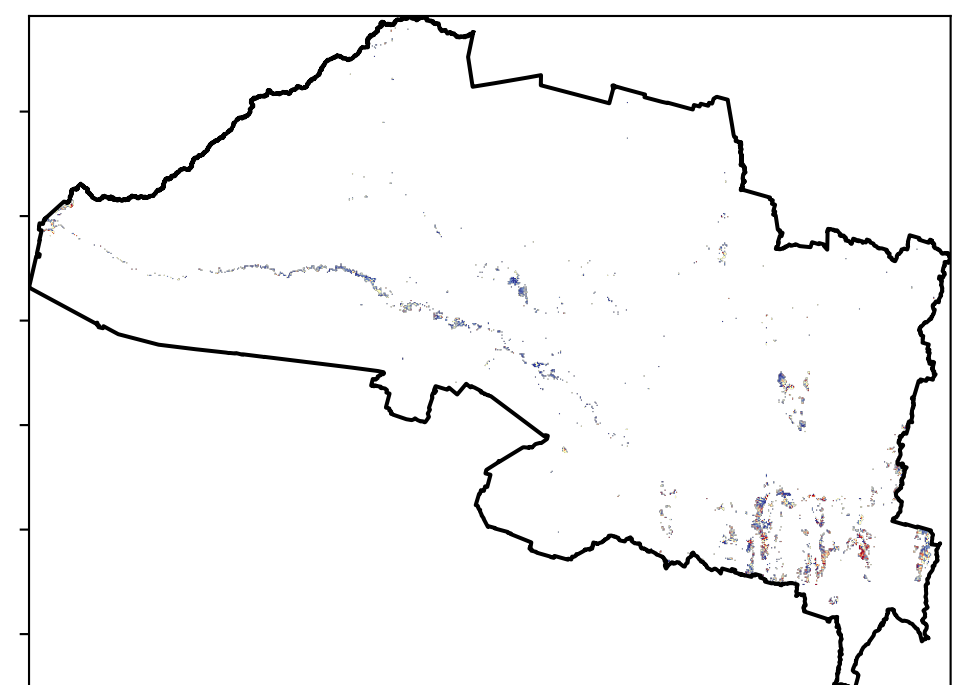
Area protected 100.0% of region (103,350 ha)

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.

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.
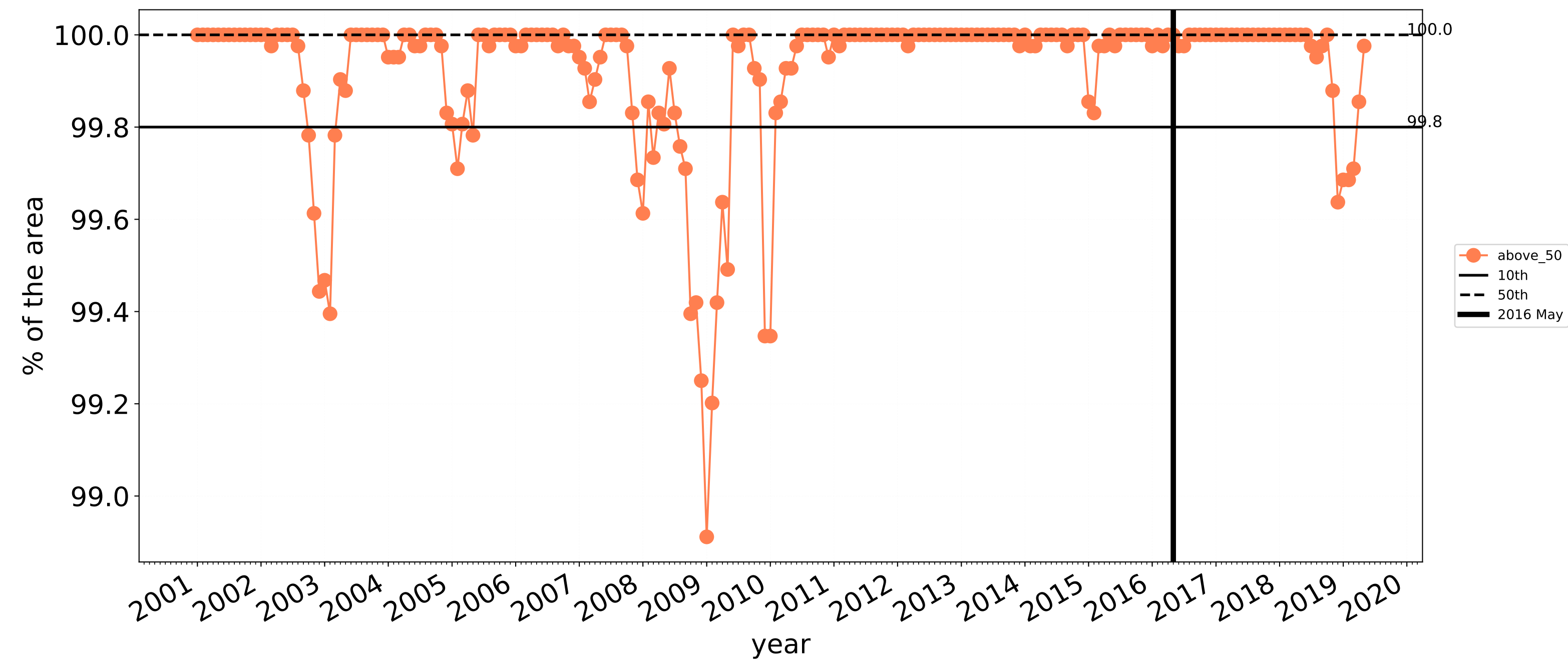
10
8-9
4-7
2-3
1

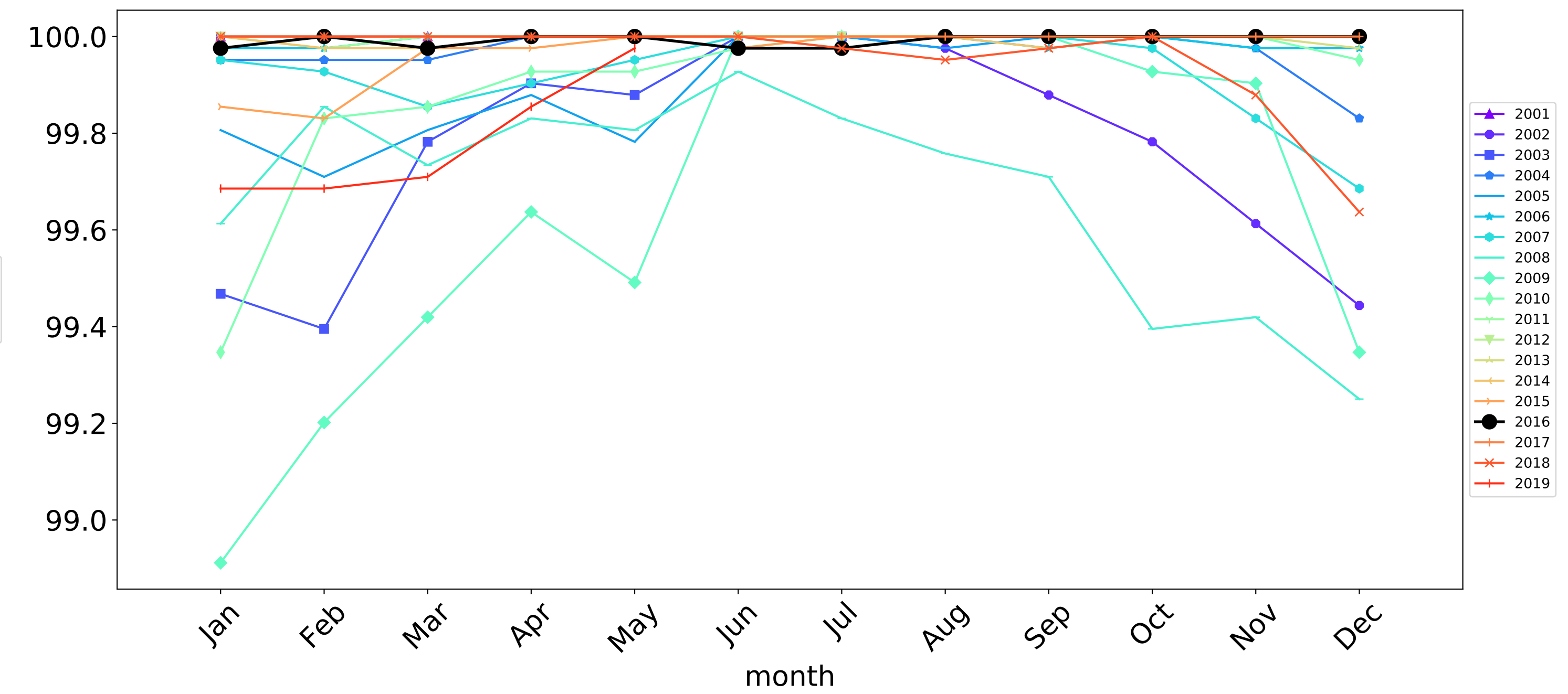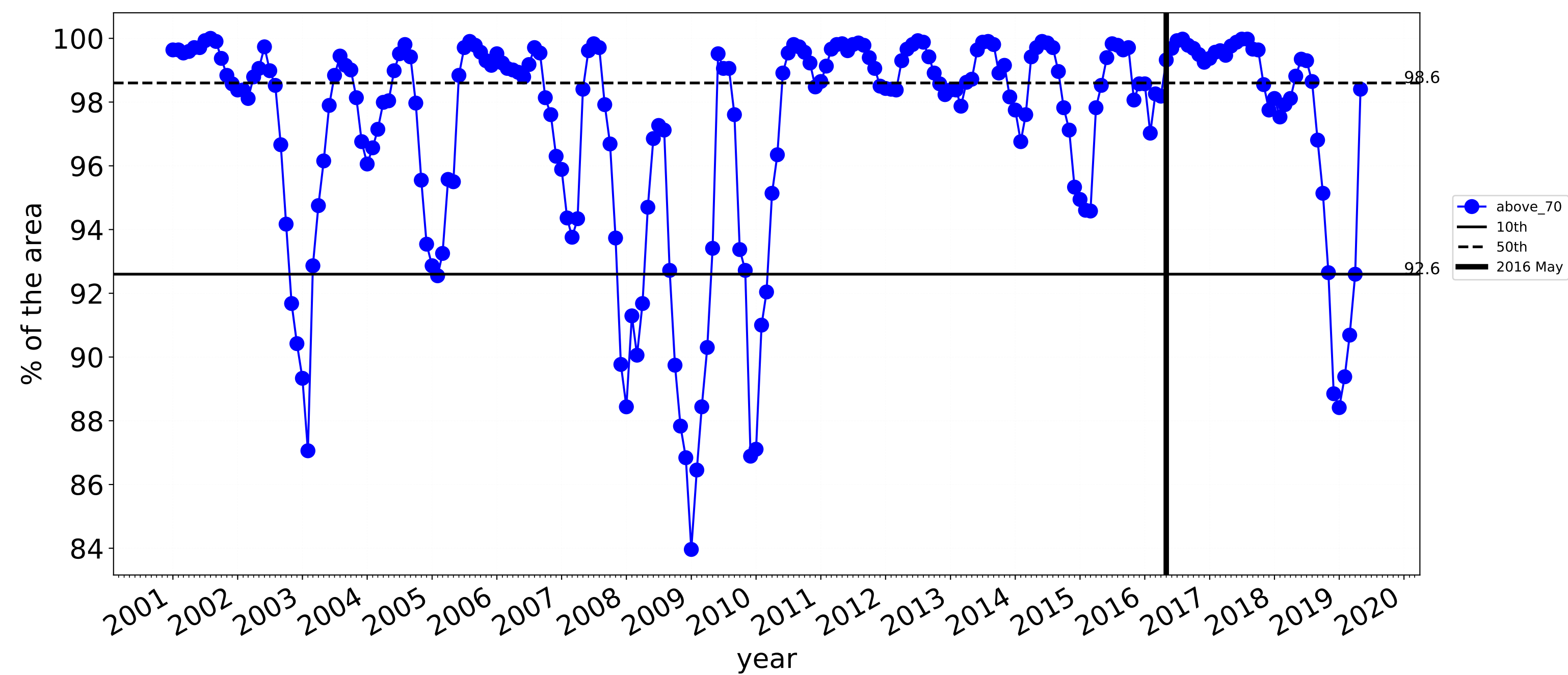**Grazing - Forest (non woodland) timeseries**

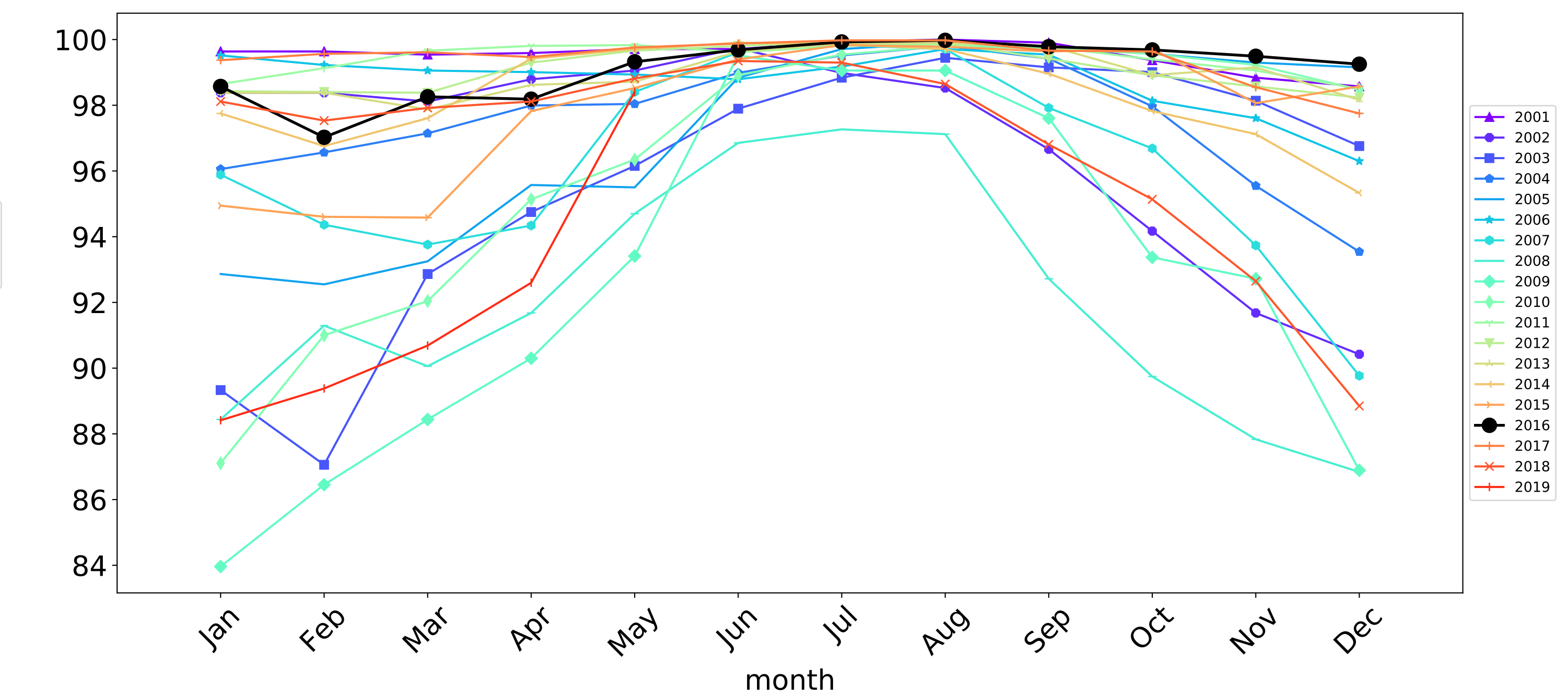Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)

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

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

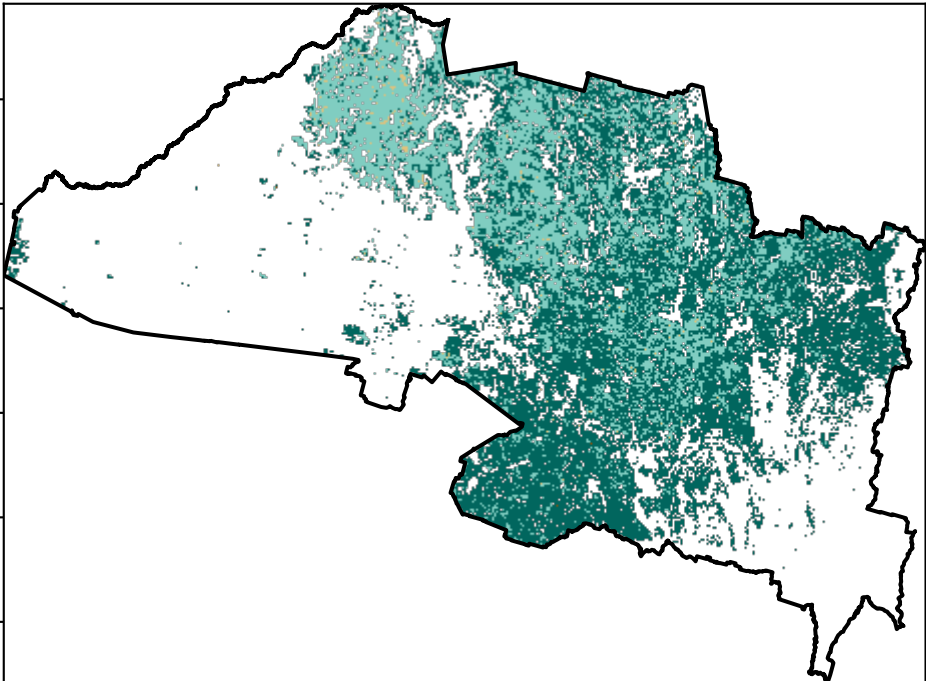Water erosion historical monthly area protected (Total Veg Cov>70%)

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)
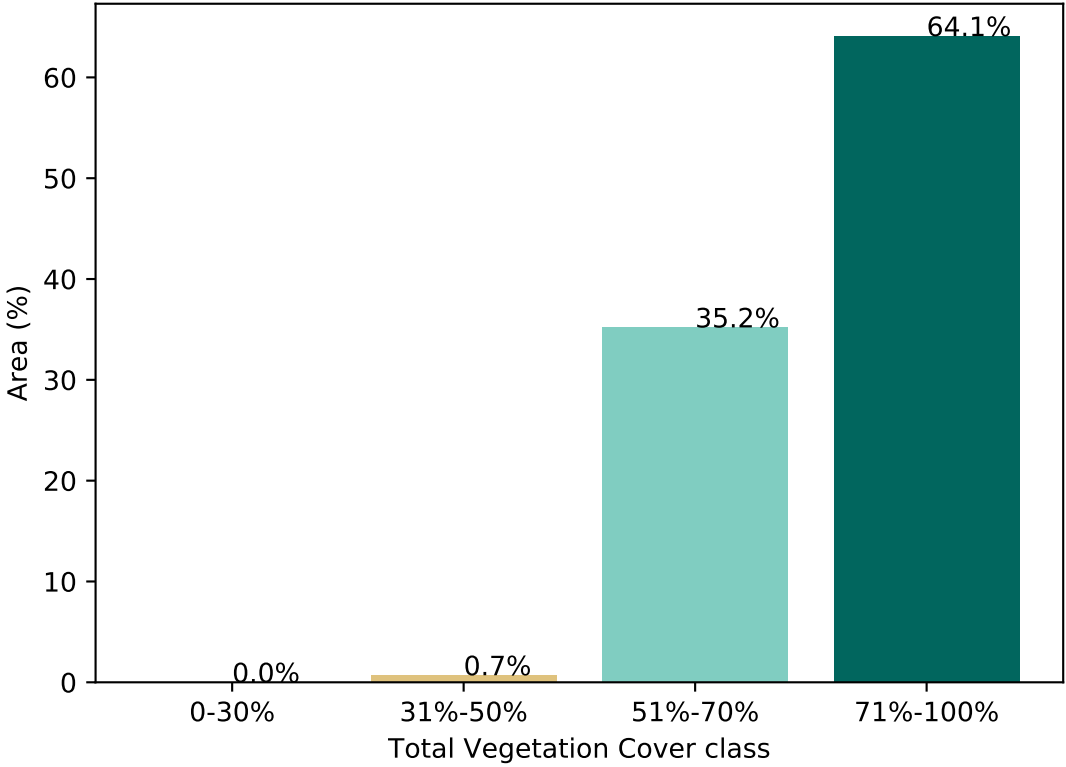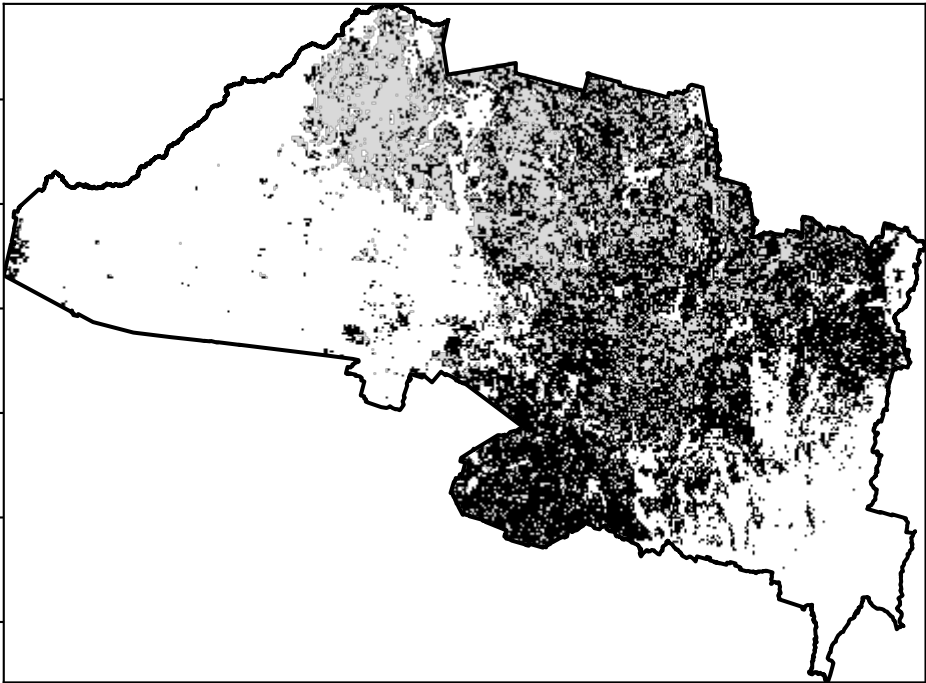
1 Agriculture - Cropping - Non-irrigated

Total Vegetation Cover [%]

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

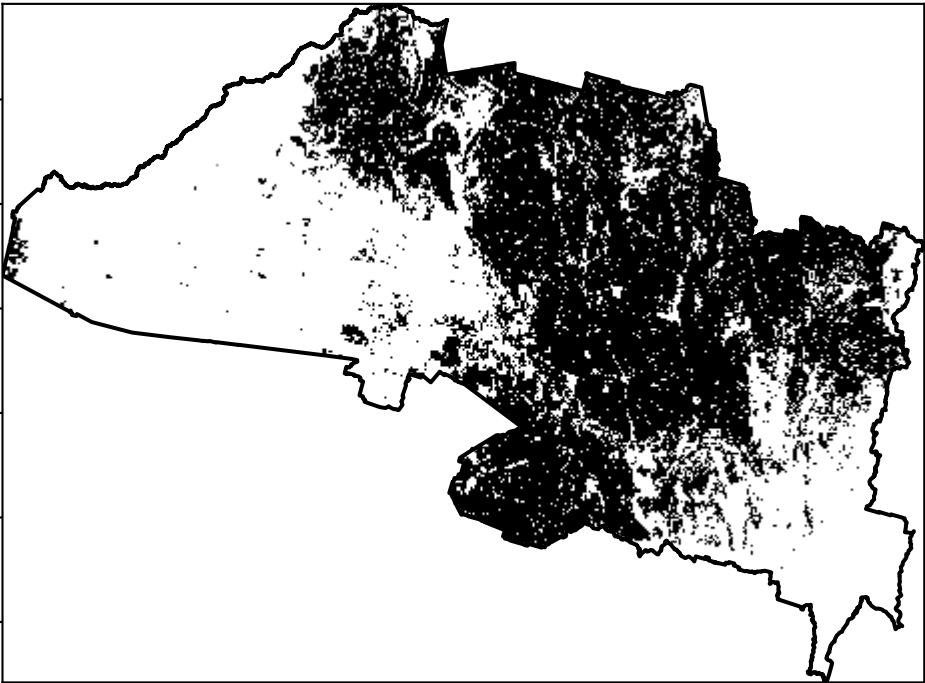## Proportion of vegetation cover class in area

% Area protected from water erosion (>70%)

Area not protected 35.9% of region (1,144,106 ha)

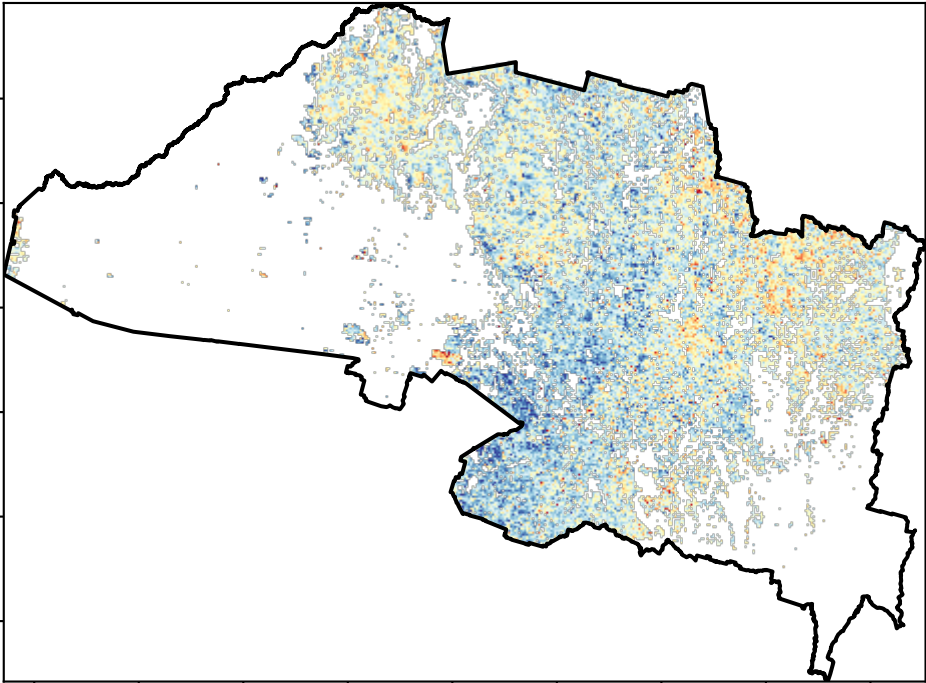Area protected 64.1% of region (2,042,818 ha)

% Area protected from wind erosion (>50%)

Area not protected 1.0% of region (31,869 ha)
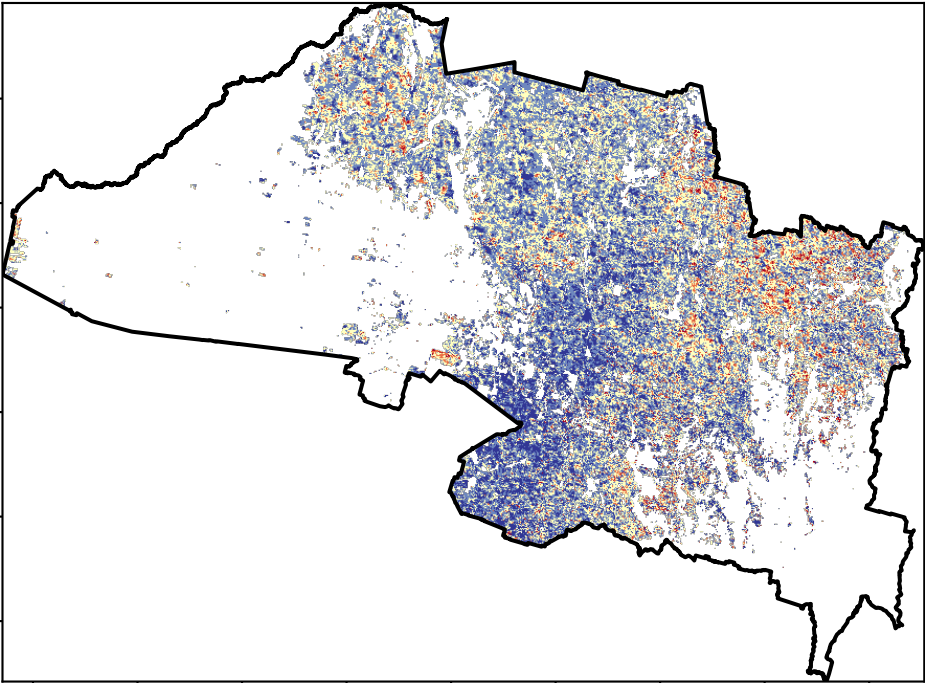
Area protected 99.0% of region (3,155,055 ha)

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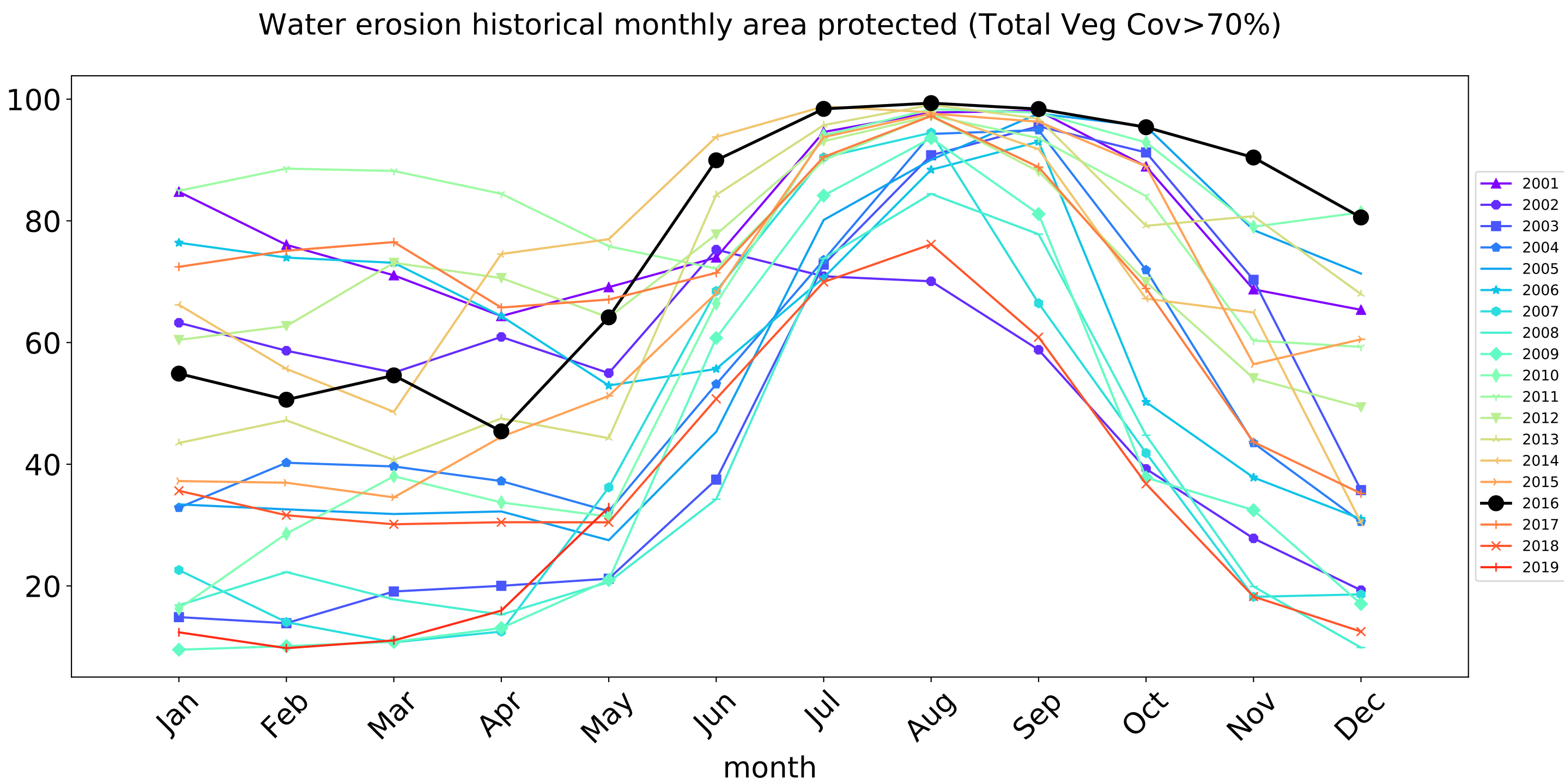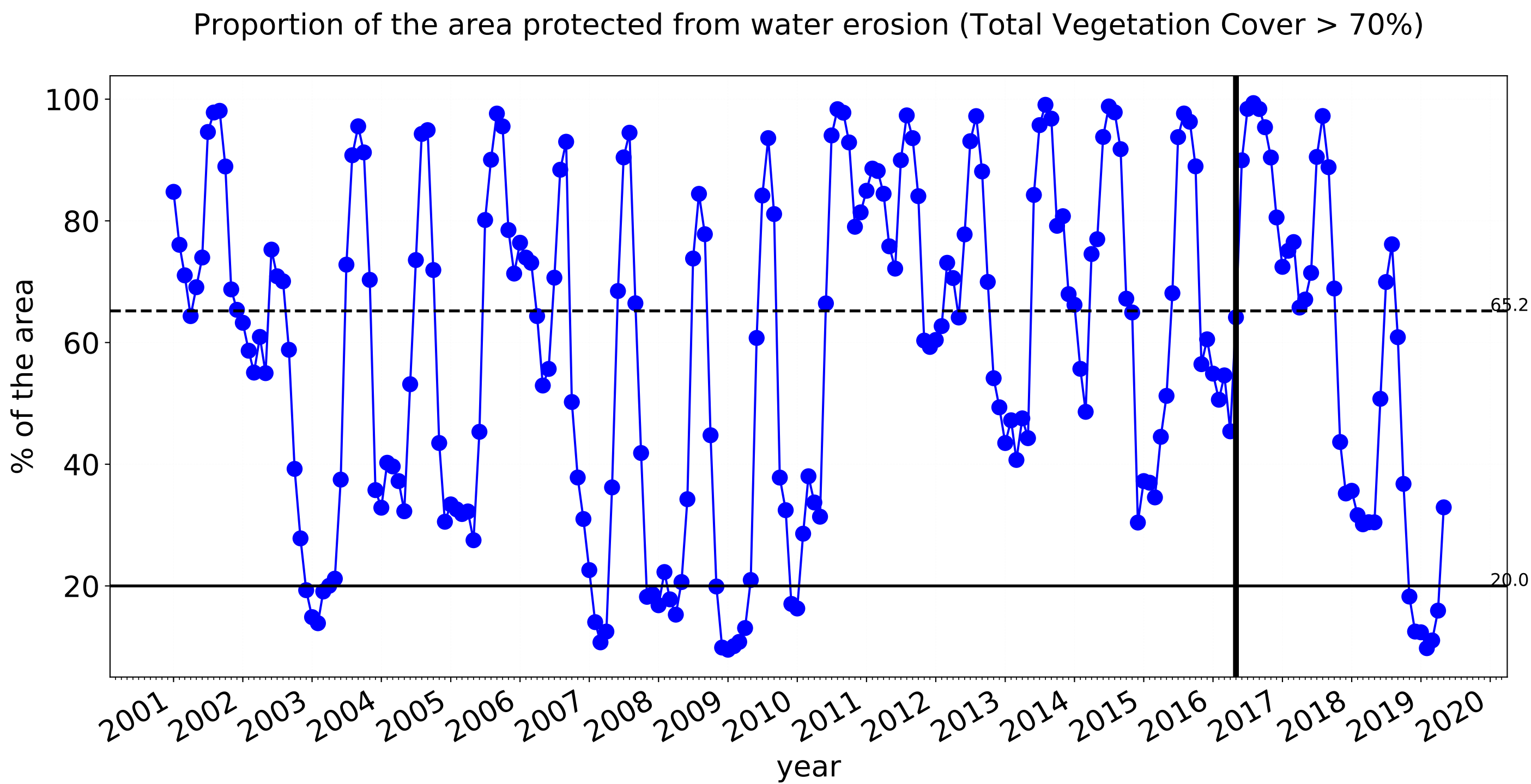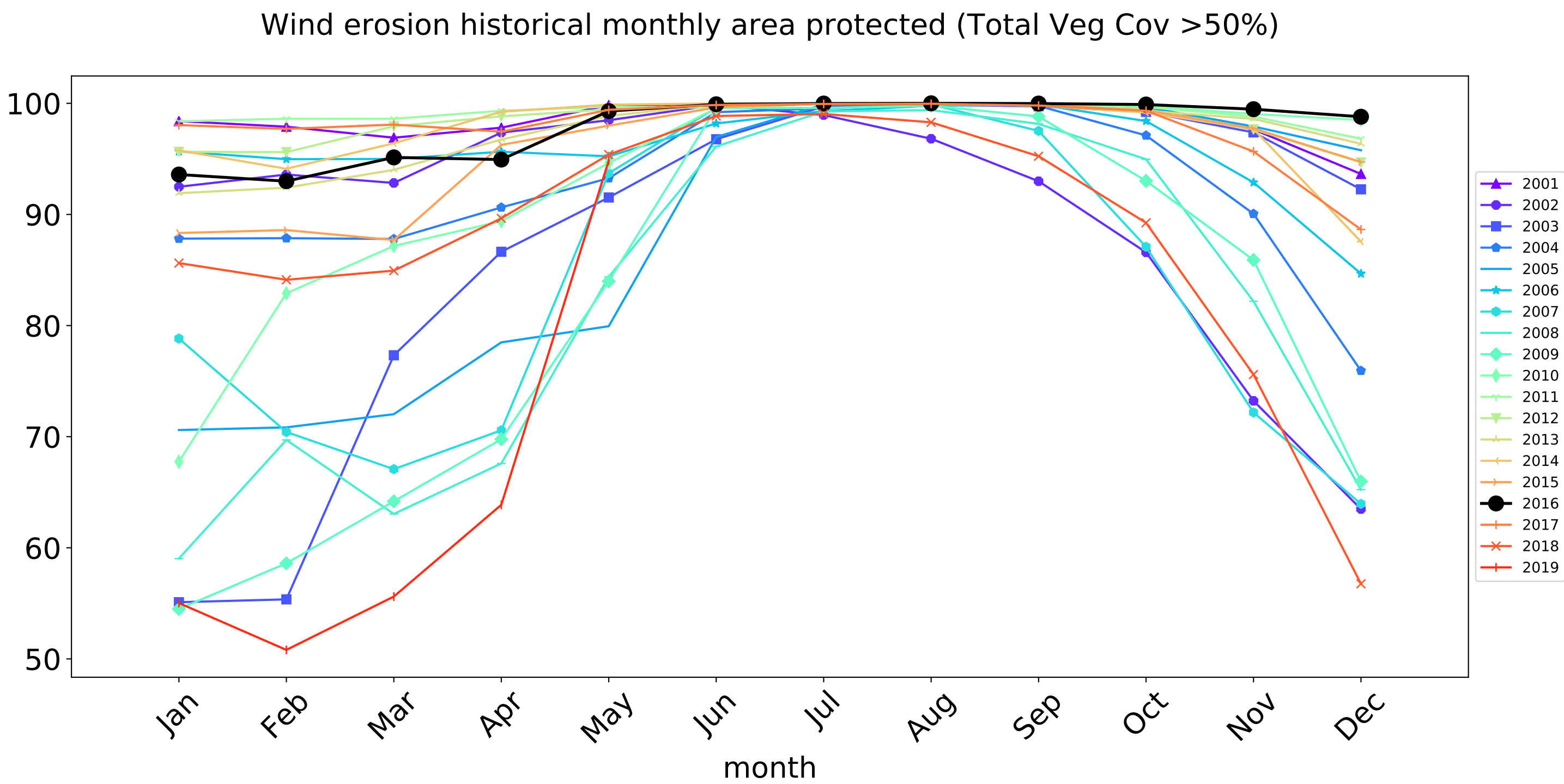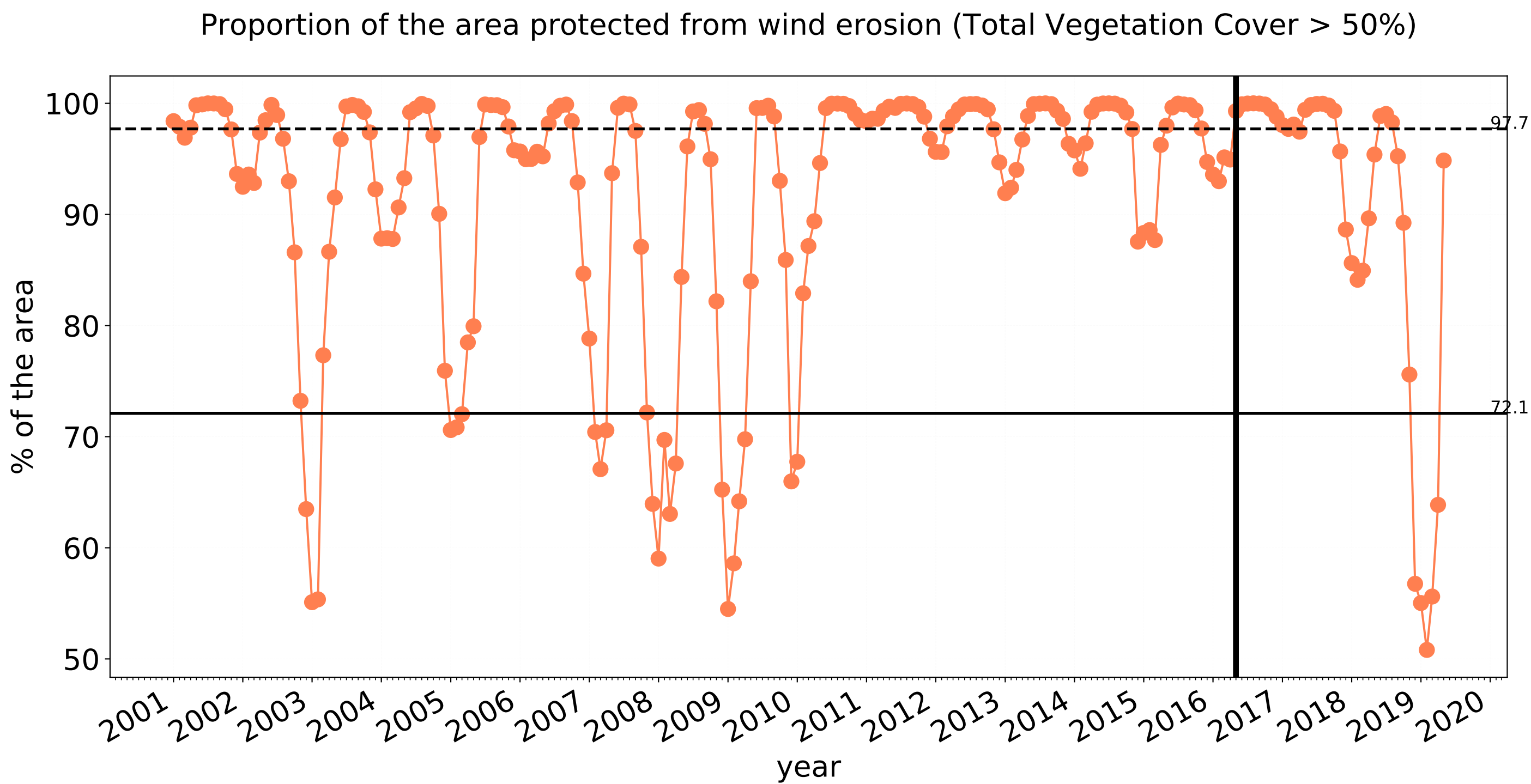
Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)

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

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

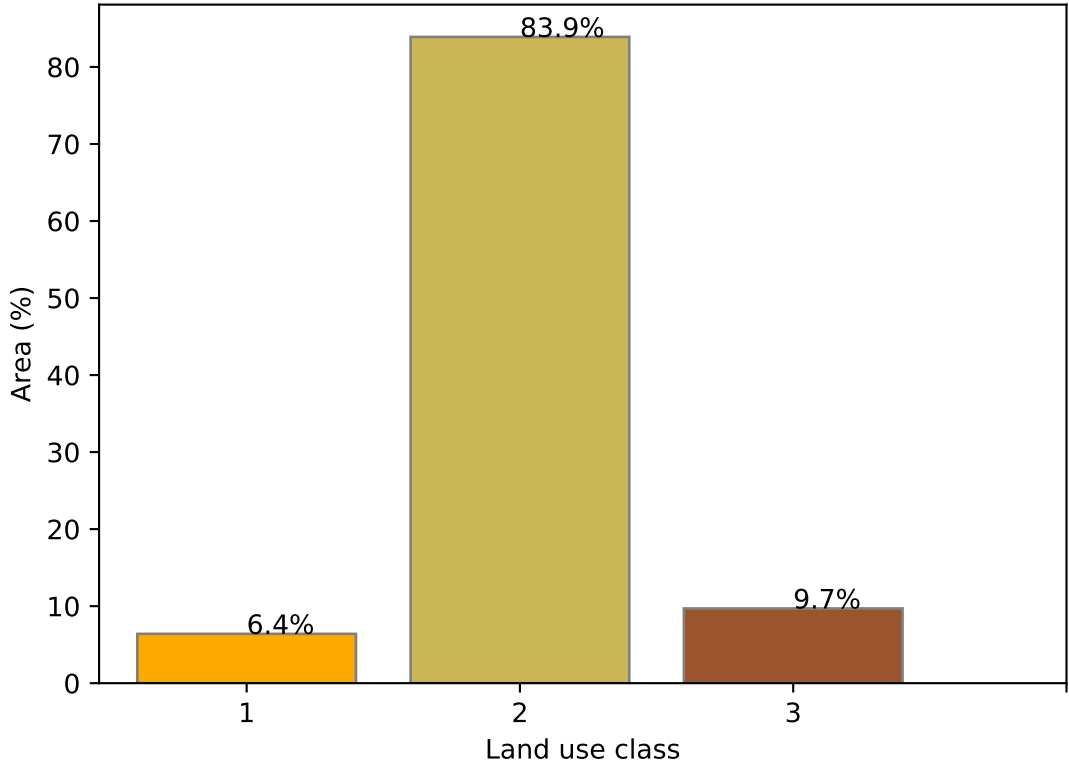## Water erosion historical monthly area protected (Total Veg Cov>70%)

Irrigation

Land use and forest cover

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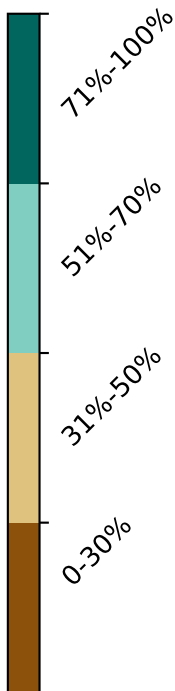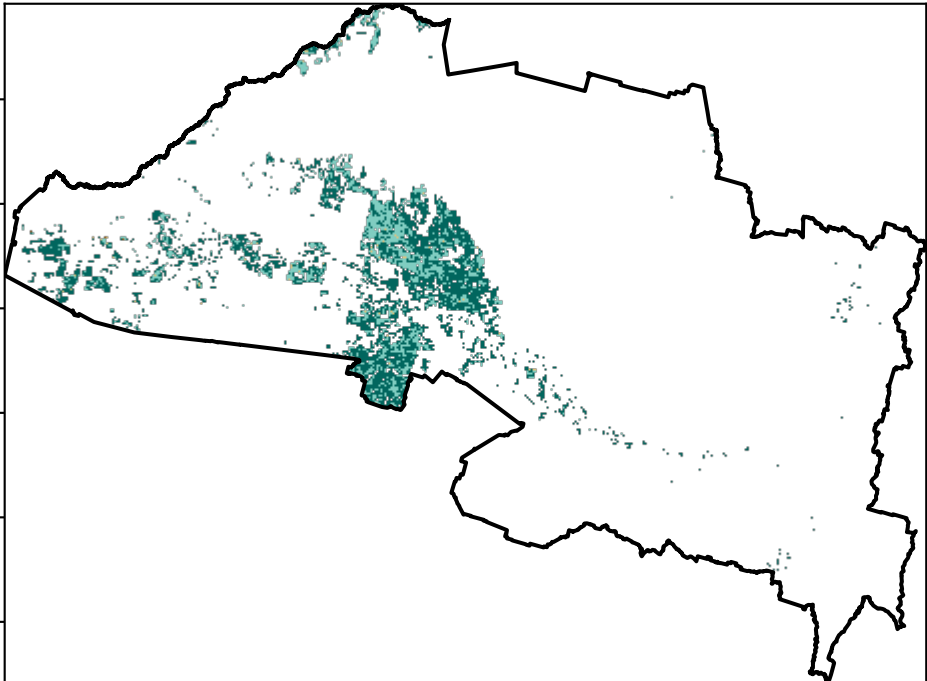Use of Australia
(2018) and Forests
of Australia (2018)

- 1 Agriculture - Grazing - Irrigated
- 2 Agriculture - Cropping - Irrigated
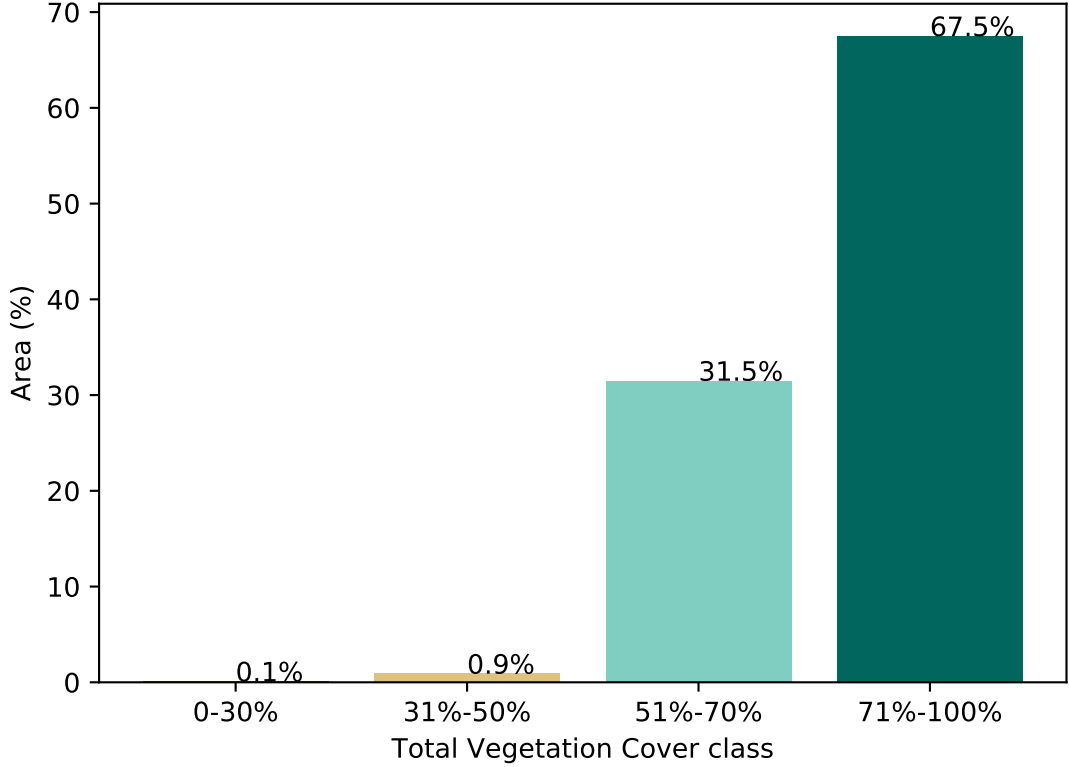- 3 Agriculture - Horticulture - Irrigated
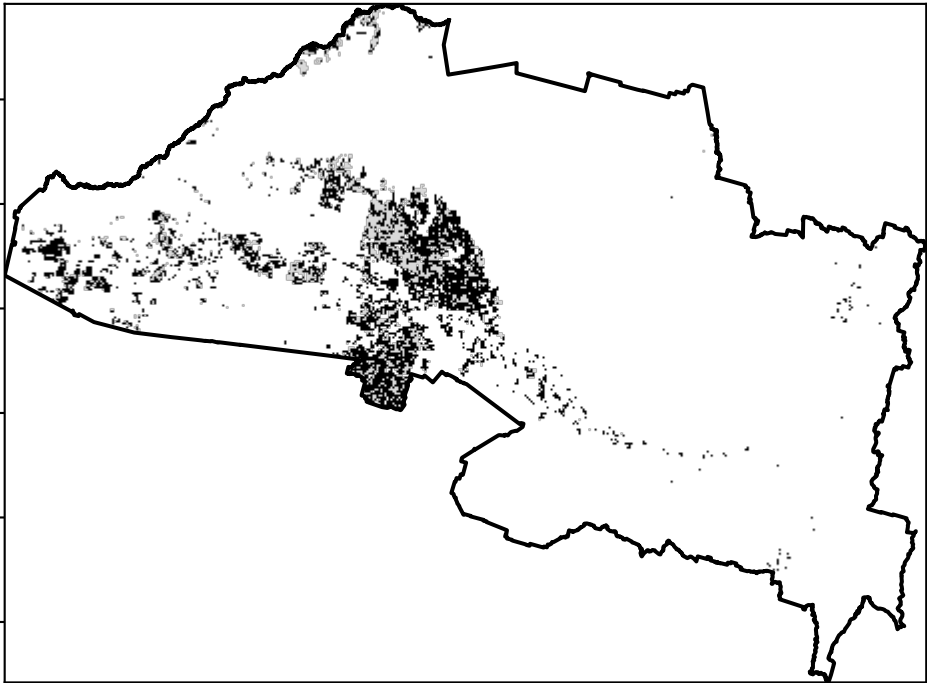
Proportion of each land class in area

Total Vegetation Cover [%]

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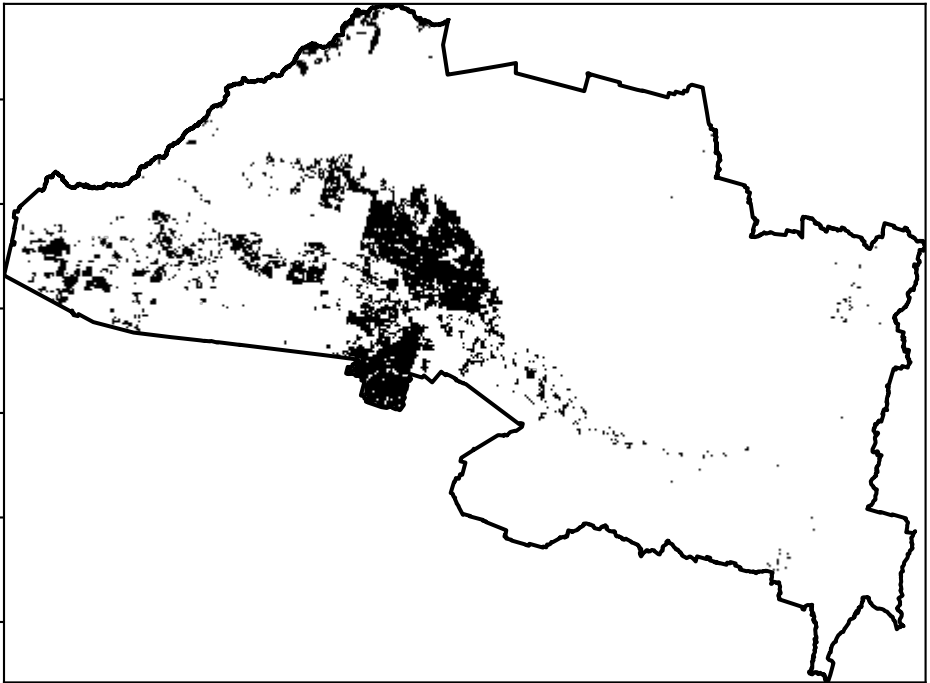
Proportion of vegetation cover class in area

% Area protected from water erosion (>70%)

Area not
protected
32.5% of
region
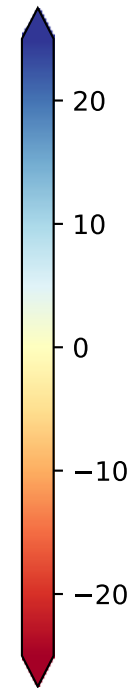(184,461
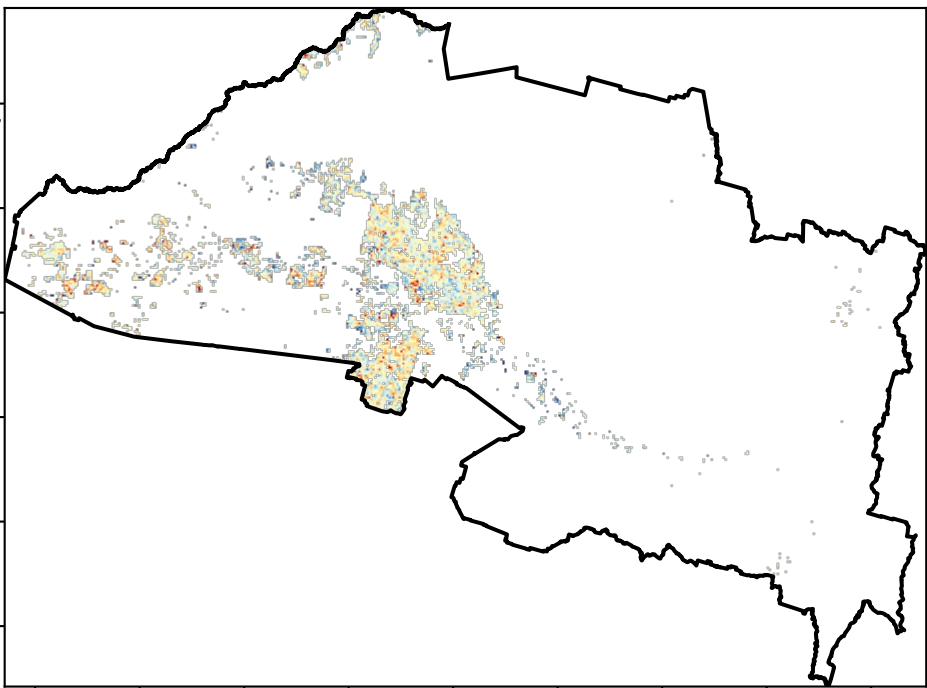ha)

Area
protected
67.5% of
region
(383,113
ha)

% Area protected from wind erosion (>50%)

Area not
protected
1.0% of
region
(5,675 ha)

Area
protected
99.0% of
region
(561,899
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
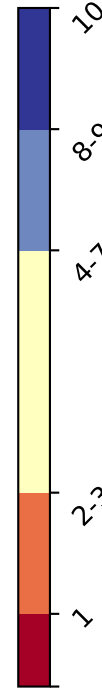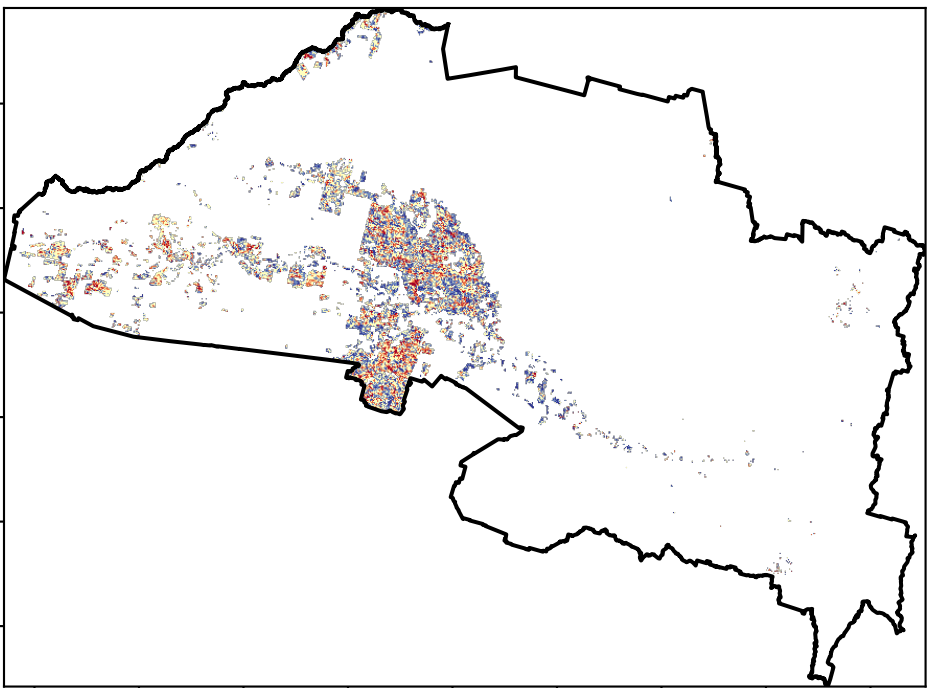
Irrigation timeseries

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)

■ 1 Production native forests and plantation forests

Total Vegetation Cover [%]

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

Proportion of vegetation cover class in area

99.2%

0.1%   0.0%   0.7%

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

Total Vegetation Cover class

Area (%)

% Area protected from water erosion (>70%)

Area not protected 0.8% of region (1,382 ha)

Area protected 99.2% of region (171,392 ha)

% Area protected from wind erosion (>50%)

Area not protected 0.0% of region (0 ha)

Area protected 100.0% of region (172,775 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.
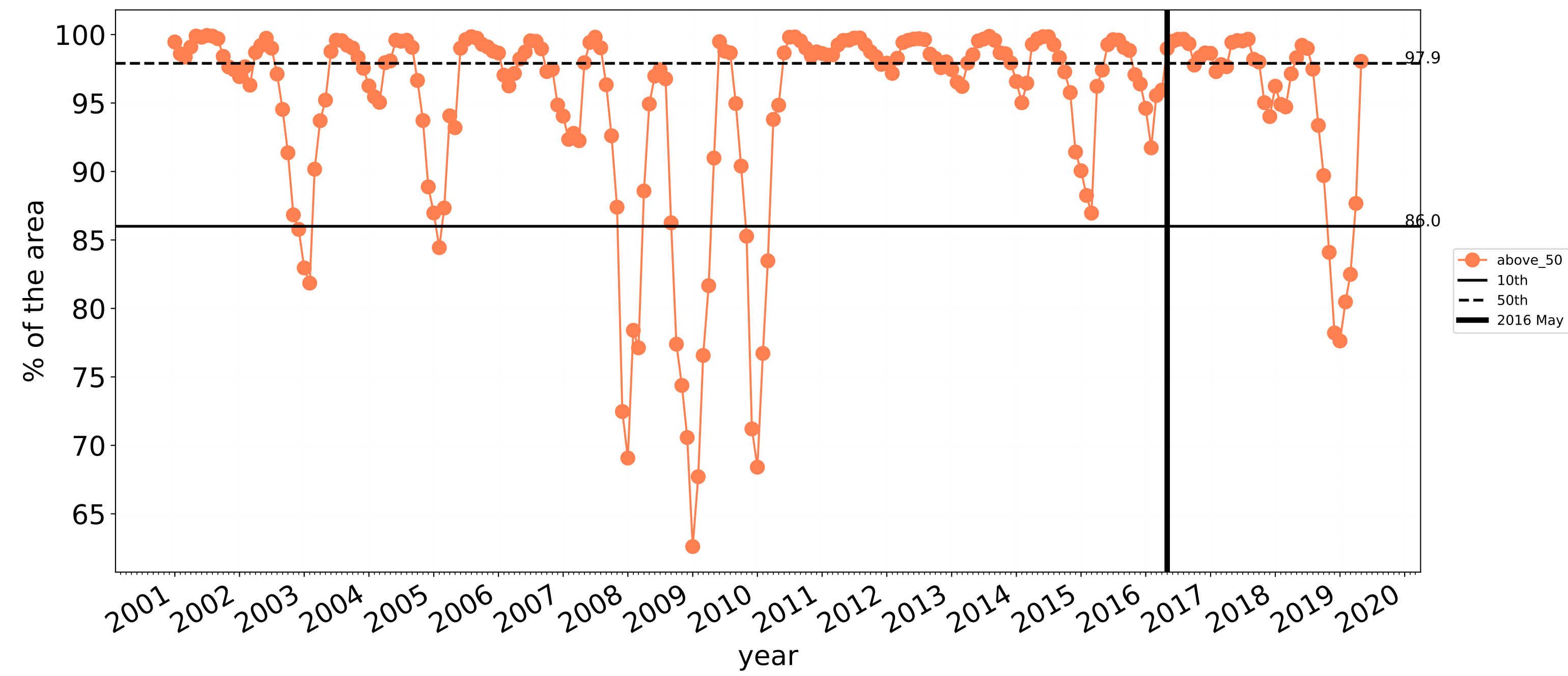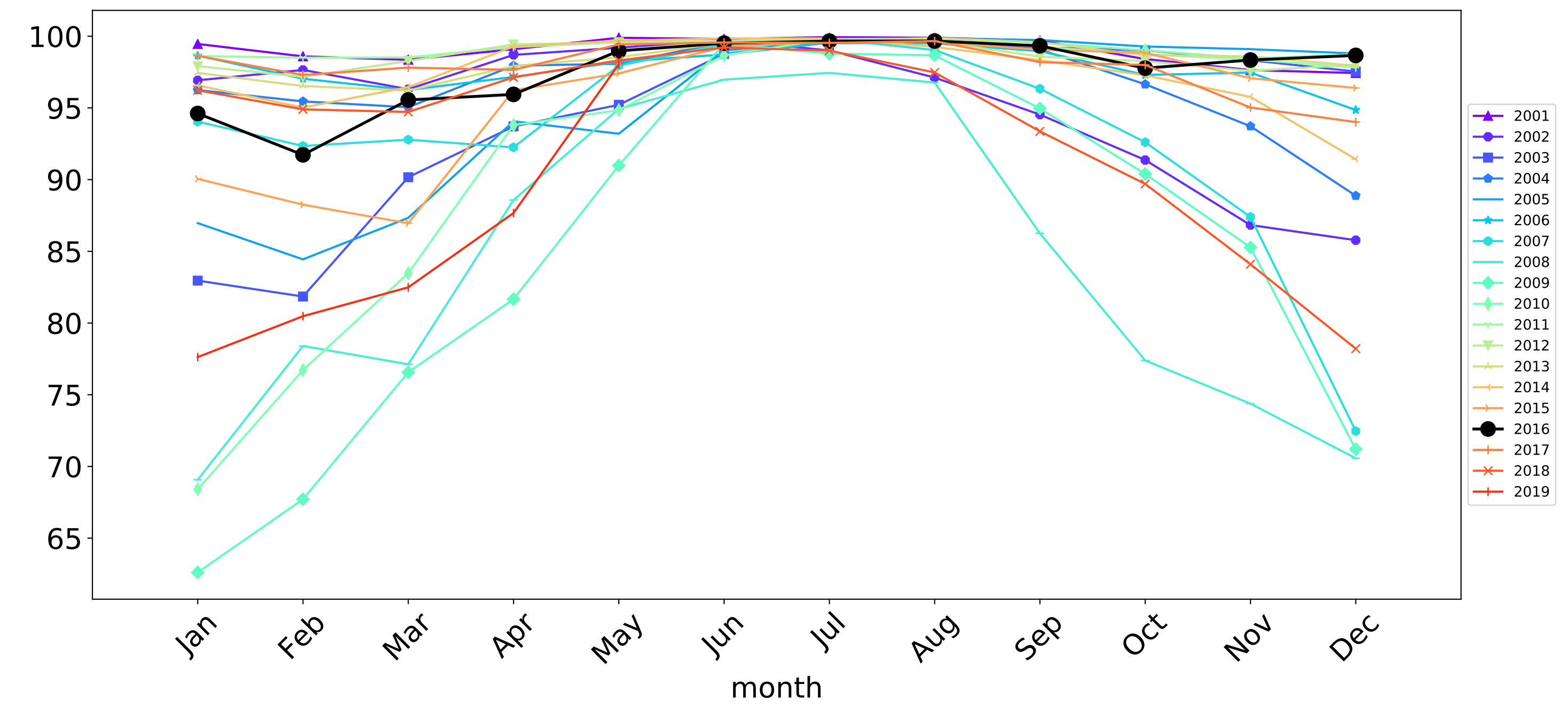
10
8-9
4-7
2-3
1

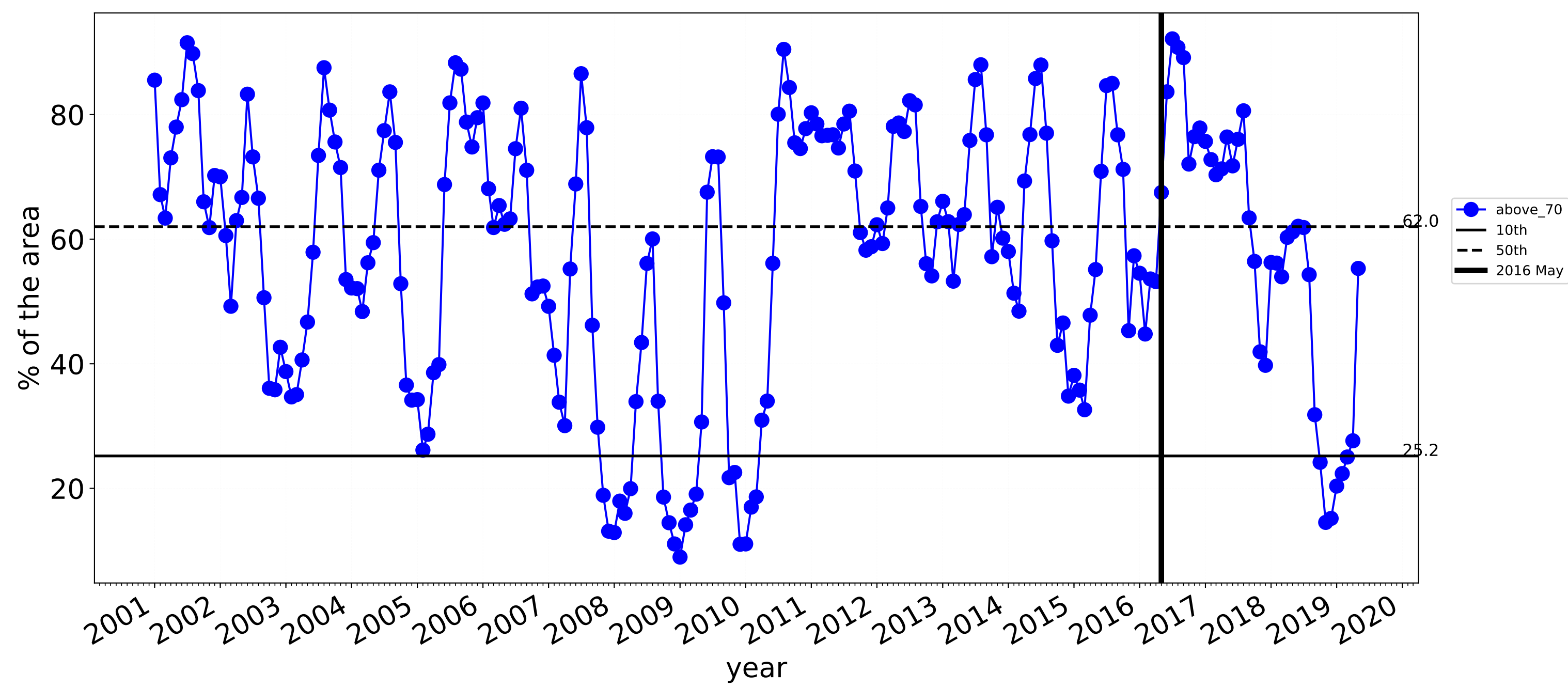# Production native forests and plantation forests timeseries

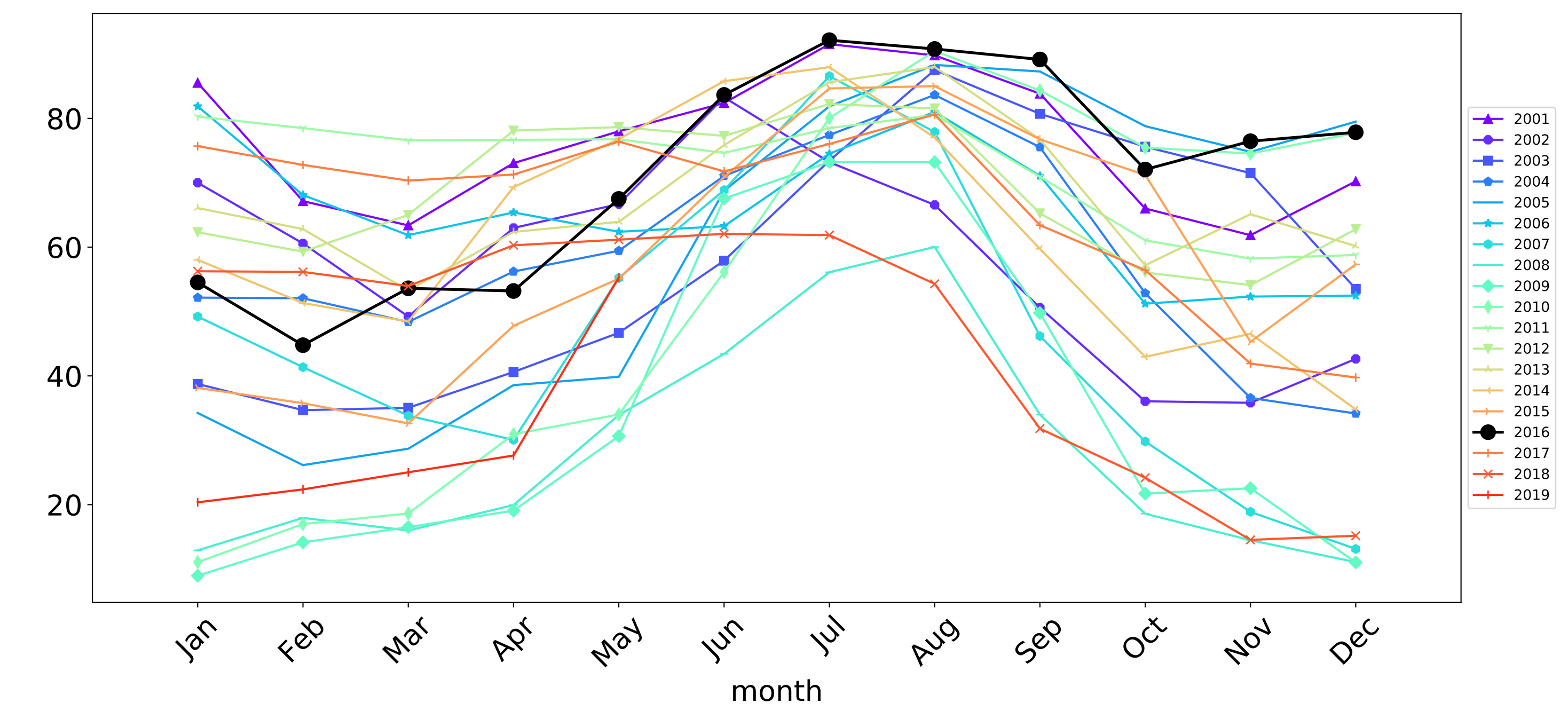Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)
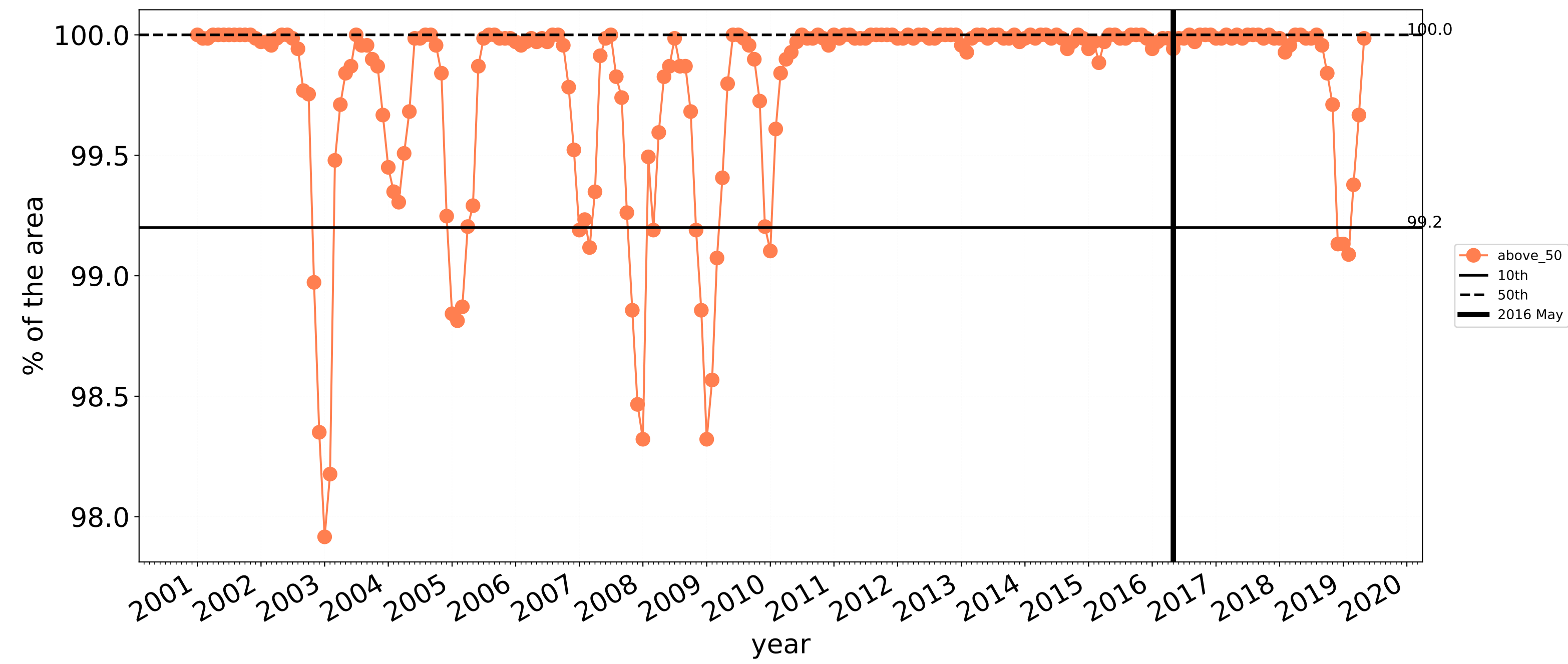
Wind erosion historical monthly area protected (Total Veg Cov >50%)

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

Water erosion historical monthly area protected (Total Veg Cov>70%)
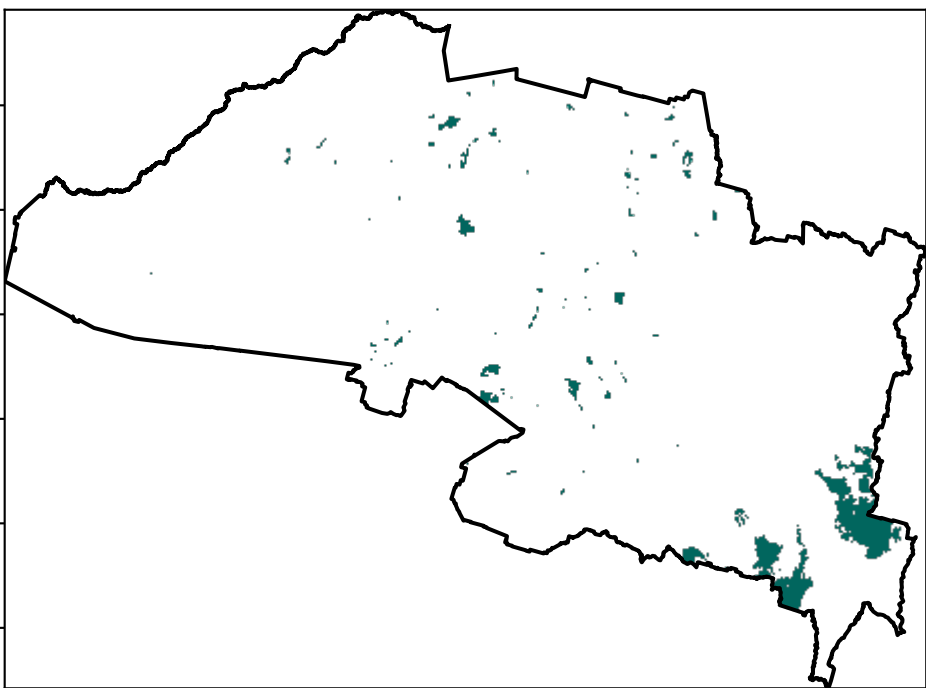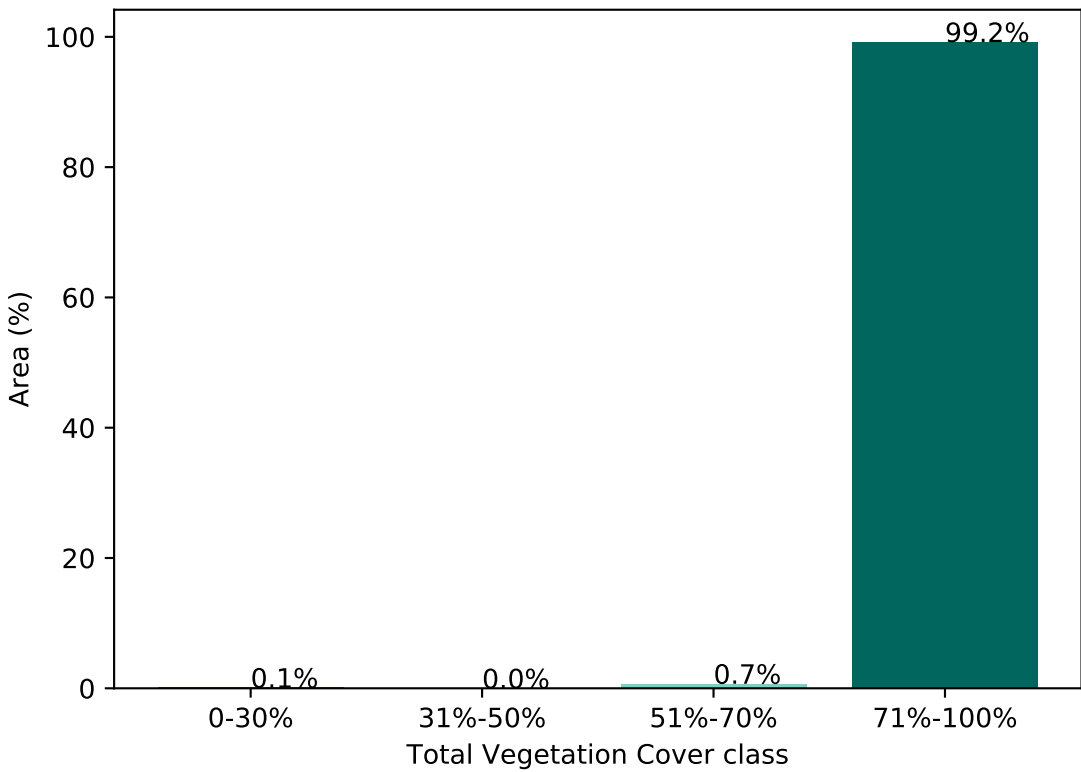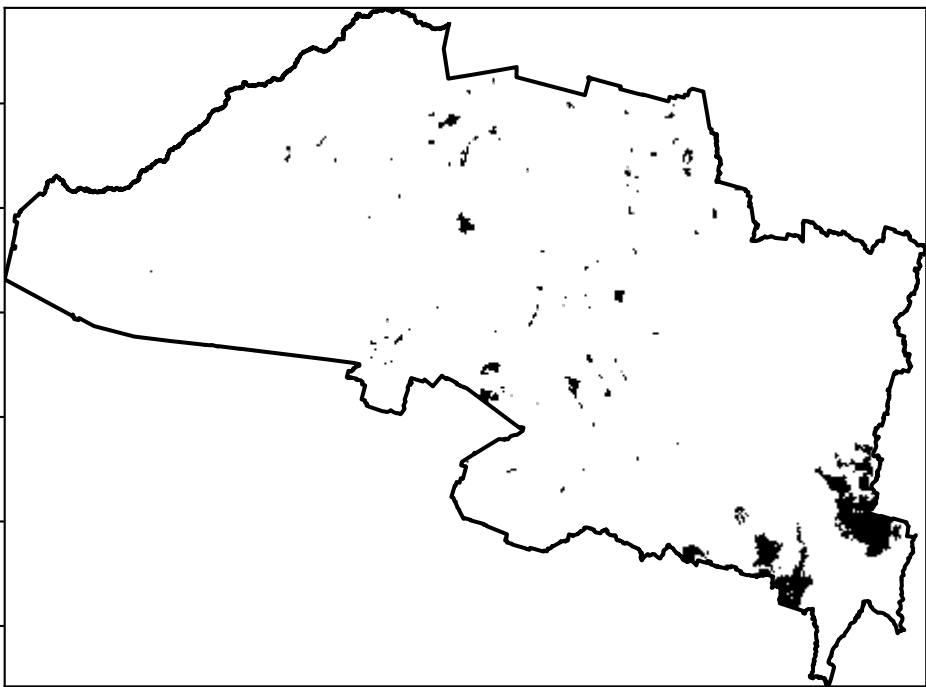
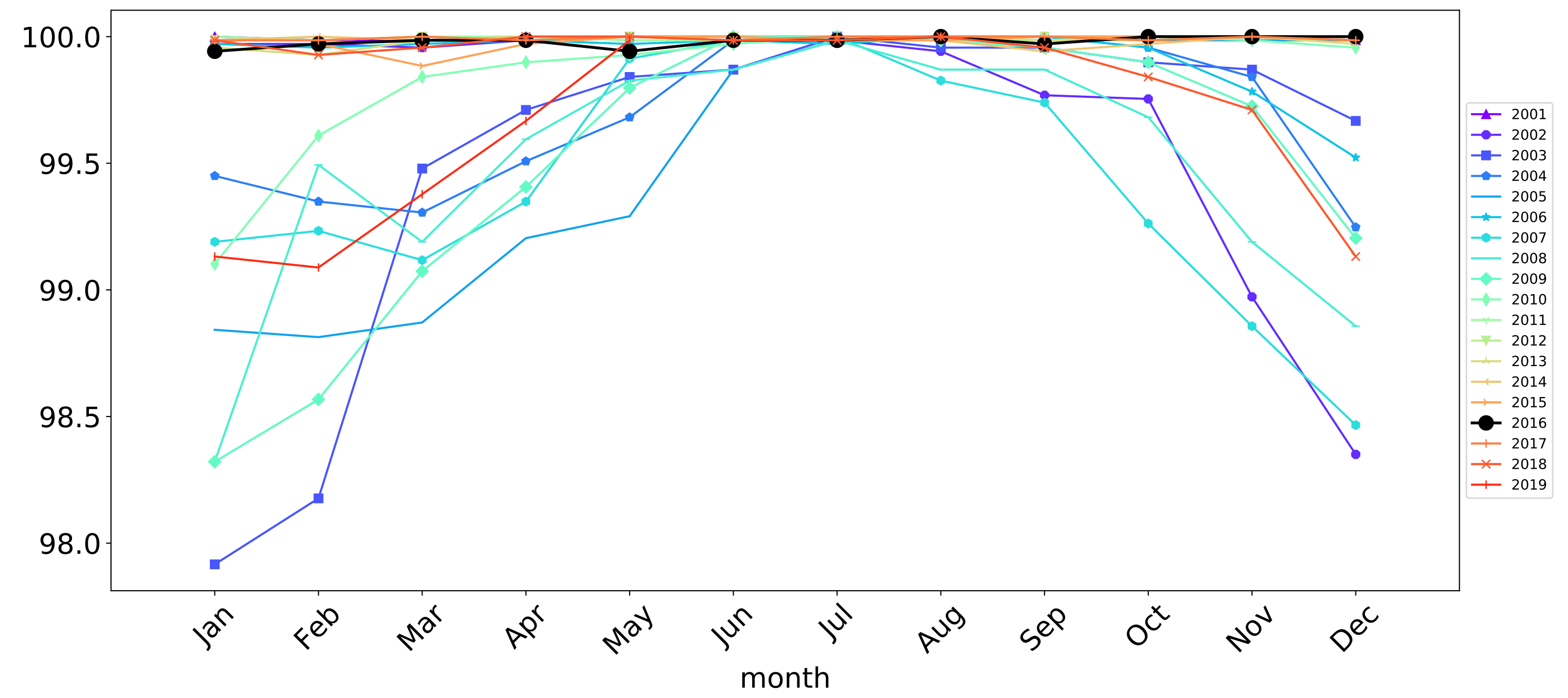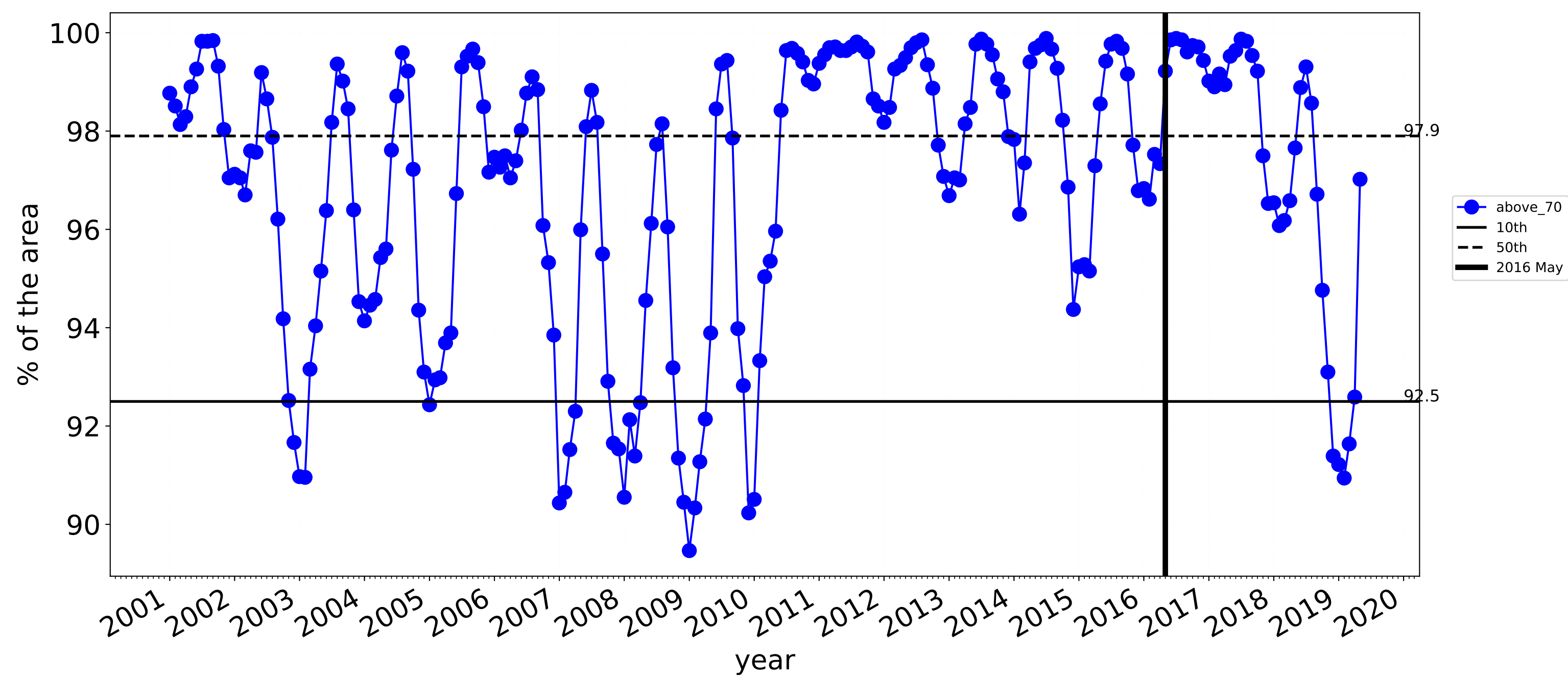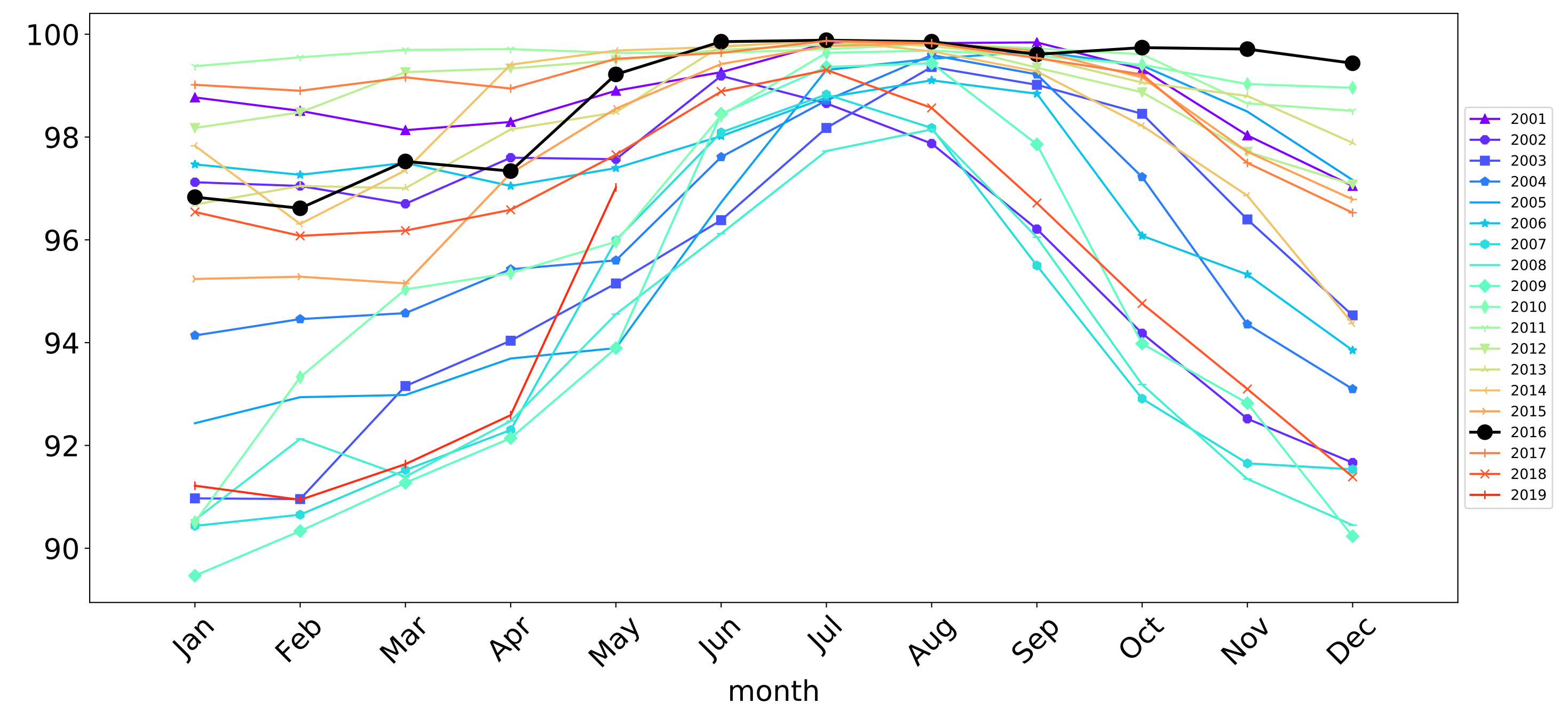## Riverina (6,613,050 ha and no data 95,285 ha) Percentage area and hectares protected with TVC threshold 30,50,70,80,90 and 95%

Land use and forest cover Class	area(ha)	above_30	above_50	above_70	above_80	above_90	above_95
Entire region	6,613,050	100.0% 6,610,160	99.3% 6,569,207	75.8% 5,012,923	46.4% 3,071,416	17.8% 1,177,679	7.4% 486,371
Conservation and natural environments	323,000	100.0% 323,000	100.0% 322,850	98.3% 317,575	88.5% 285,725	68.3% 220,625	41.1% 132,900
Conservation and natural environments non forest	83,350	100.0% 83,350	99.8% 83,200	93.9% 78,250	59.1% 49,275	18.1% 15,050	7.3% 6,125
Conservation and natural environments Forest (non woodland)	195,150	100.0% 195,150	100.0% 195,150	99.9% 195,050	99.3% 193,800	91.6% 178,800	61.0% 119,075
Agriculture	6,067,375	100.0% 6,065,025	99.3% 6,025,100	73.8% 4,476,875	42.7% 2,591,600	13.5% 820,425	4.3% 261,575
Grazing	2,311,050	99.9% 2,309,675	99.4% 2,296,950	88.7% 2,049,225	61.9% 1,429,750	24.7% 571,700	8.5% 196,550
Grazing non forest	2,066,050	99.9% 2,064,675	99.3% 2,051,975	87.6% 1,808,925	58.7% 1,213,700	21.9% 453,300	7.6% 157,250
Grazing Woodland forest	141,650	100.0% 141,650	100.0% 141,625	97.2% 137,650	82.6% 117,050	34.8% 49,300	7.4% 10,475
Grazing - Forest (non woodland)	103,350	100.0% 103,350	100.0% 103,350	99.3% 102,650	95.8% 99,000	66.9% 69,100	27.9% 28,825
Cropping	3,186,925	100.0% 3,186,400	99.3% 3,164,700	64.1% 2,044,175	31.1% 991,900	7.0% 223,675	1.8% 57,575
Irrigation	567,575	99.9% 567,125	99.0% 561,775	67.5% 383,075	29.9% 169,775	4.4% 25,050	1.3% 7,450
Production native forests and plantation forests	172,775	100.0% 172,700	99.9% 172,675	99.2% 171,425	95.4% 164,825	77.5% 133,850	53.8% 92,950