Total vegetation cover soil protection
Region:NRM Riverina NSW   Date: December 2014

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 Dec 2014

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
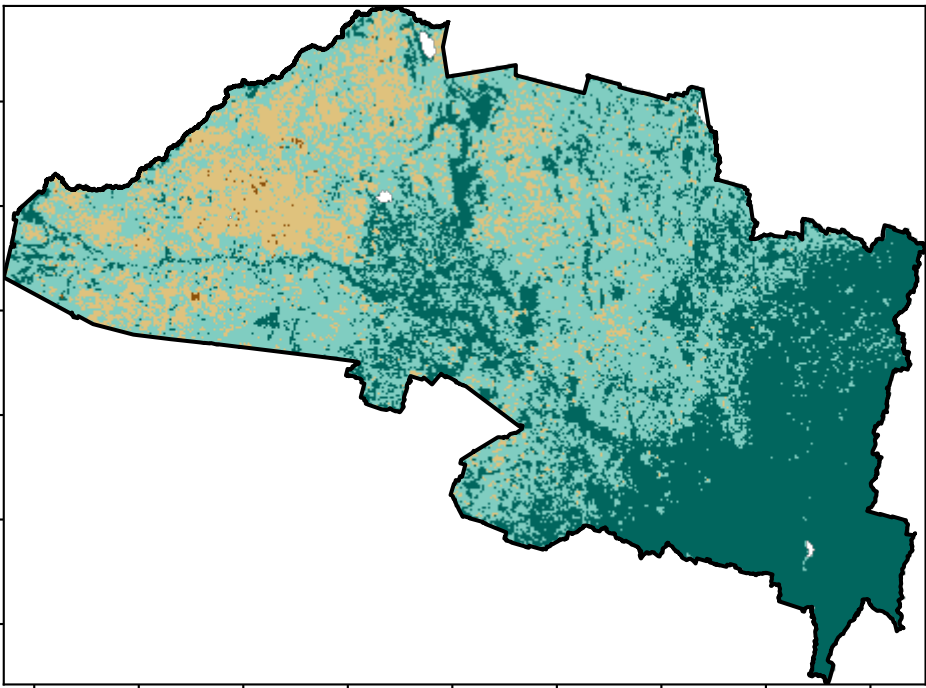
Total Vegetation Cover [%]

Proportion of vegetation cover class in area
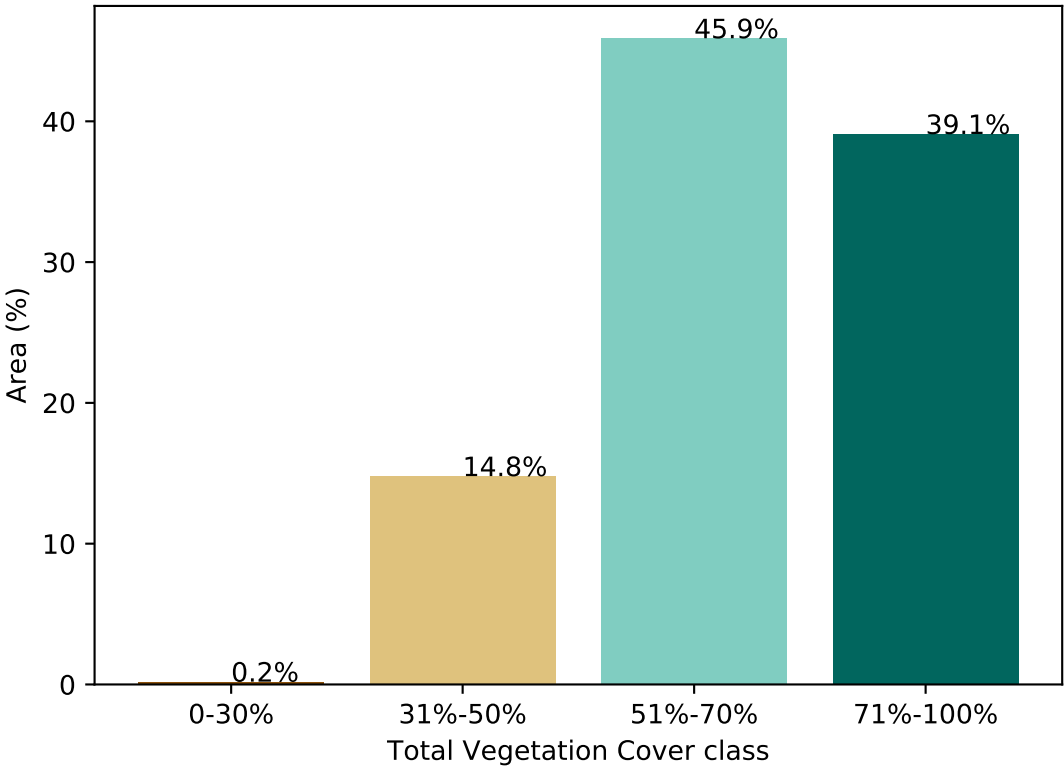
% Area protected from water erosion (>70%)
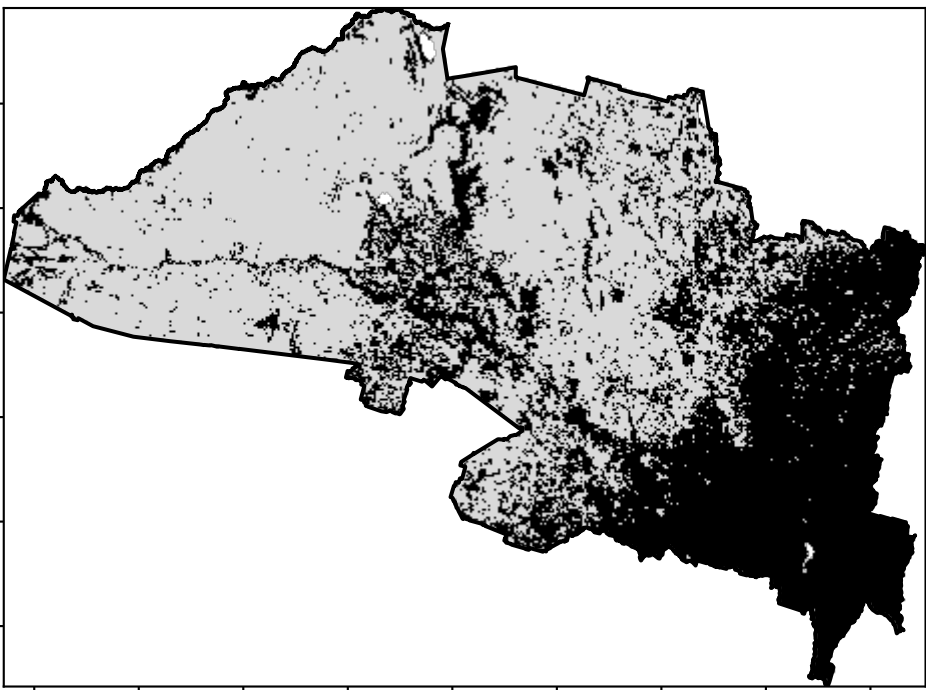
Area not protected 60.9% of region (4,076,661 ha)

Area protected 39.1% of region (2,617,363 ha)

% Area protected from wind erosion (>50%)

Area not protected 15.0% of region (1,004,103 ha)

Area protected 85.0% of region (5,689,921 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.

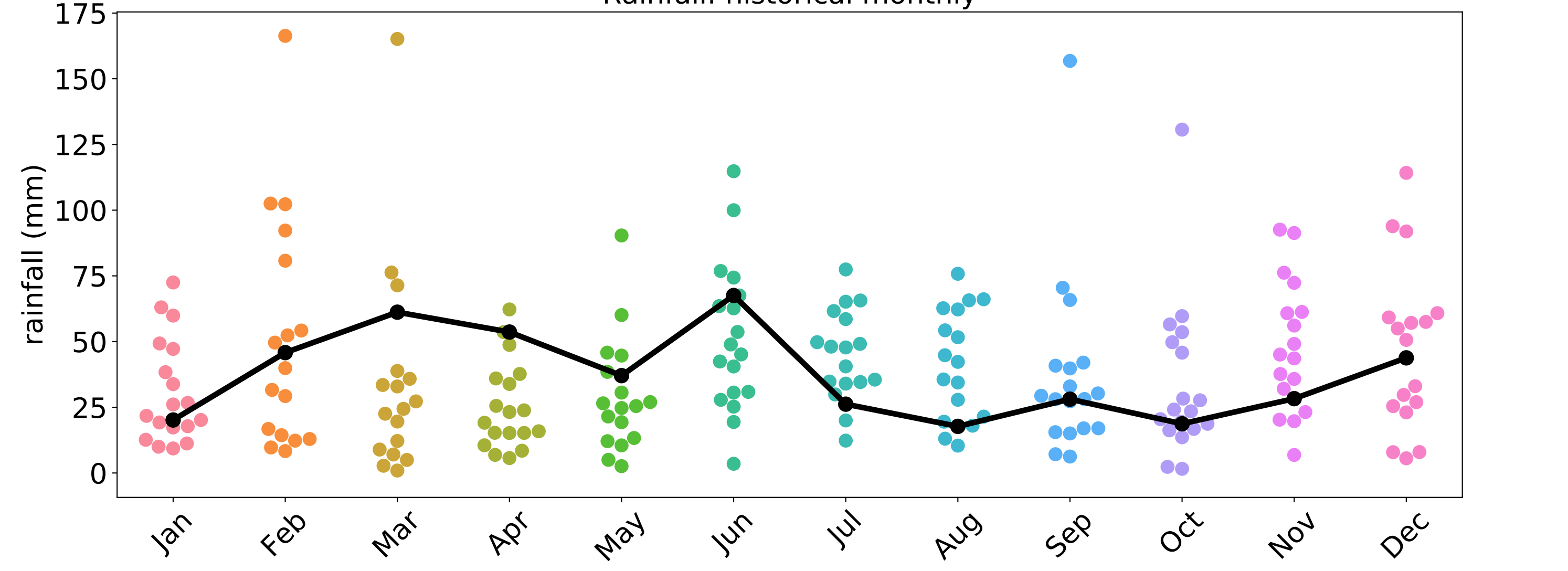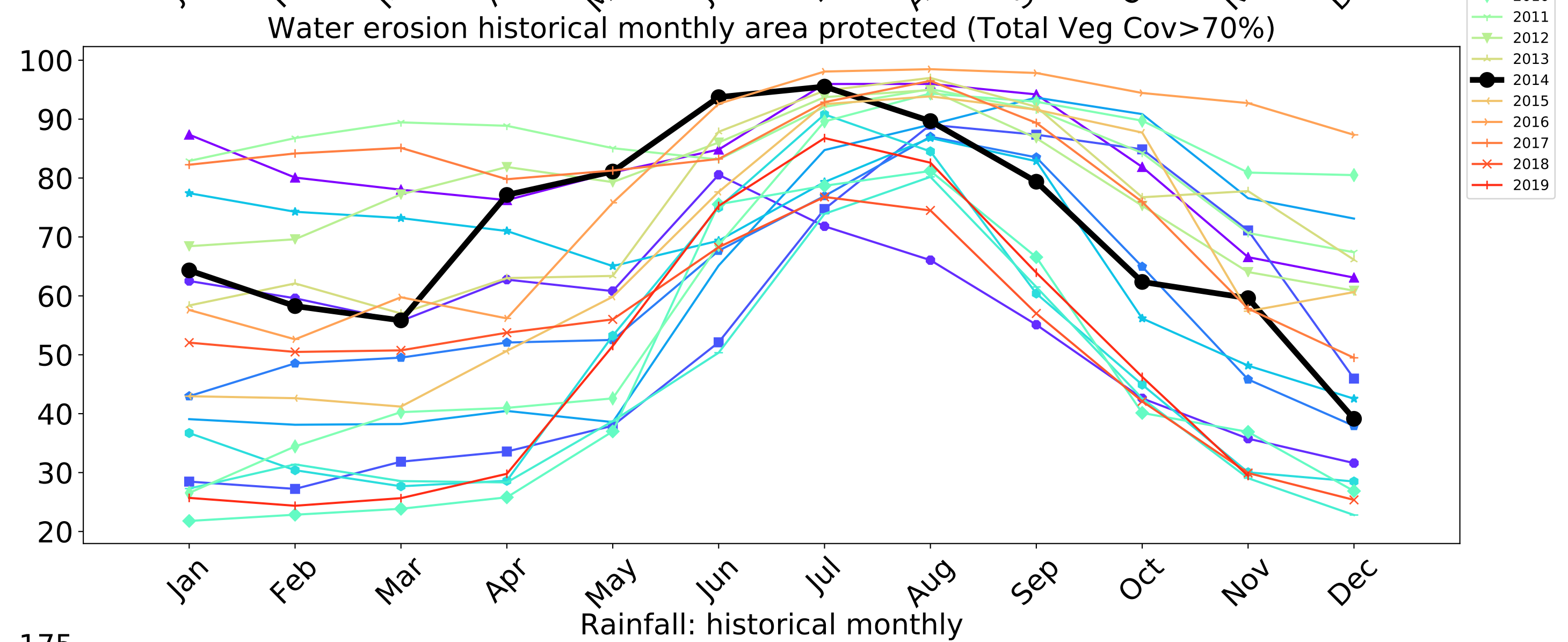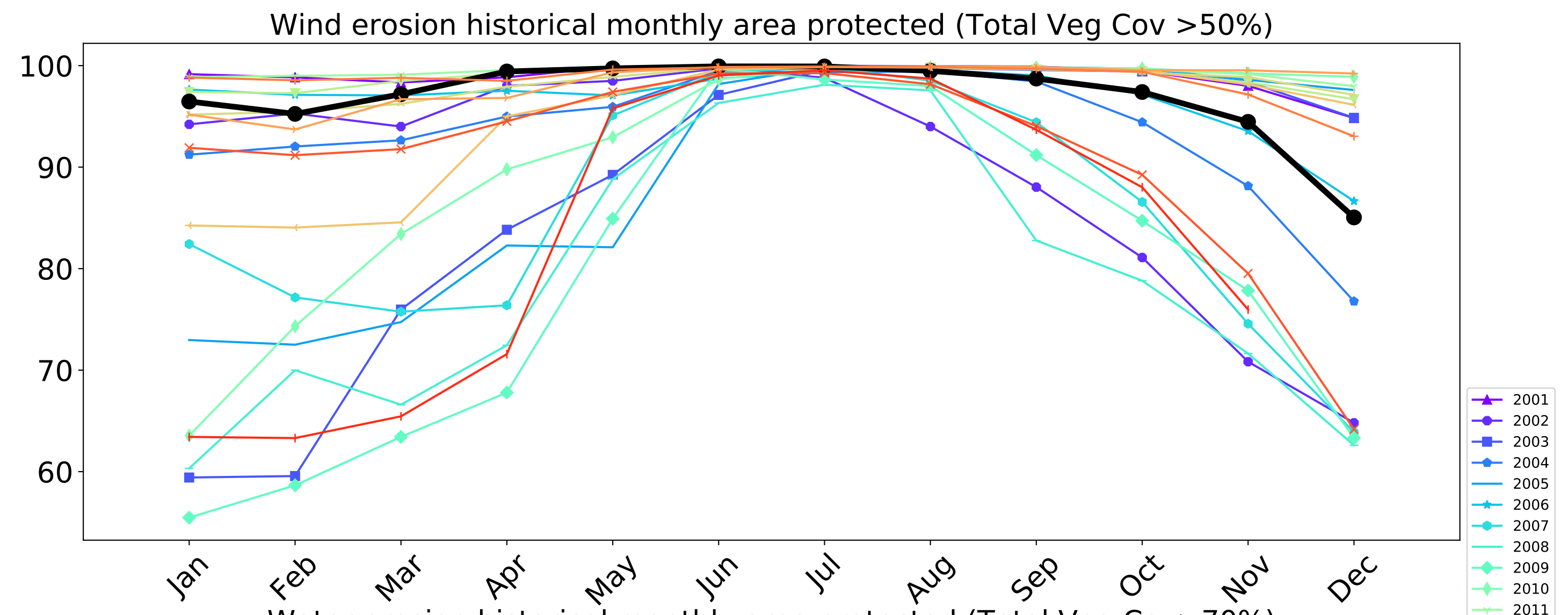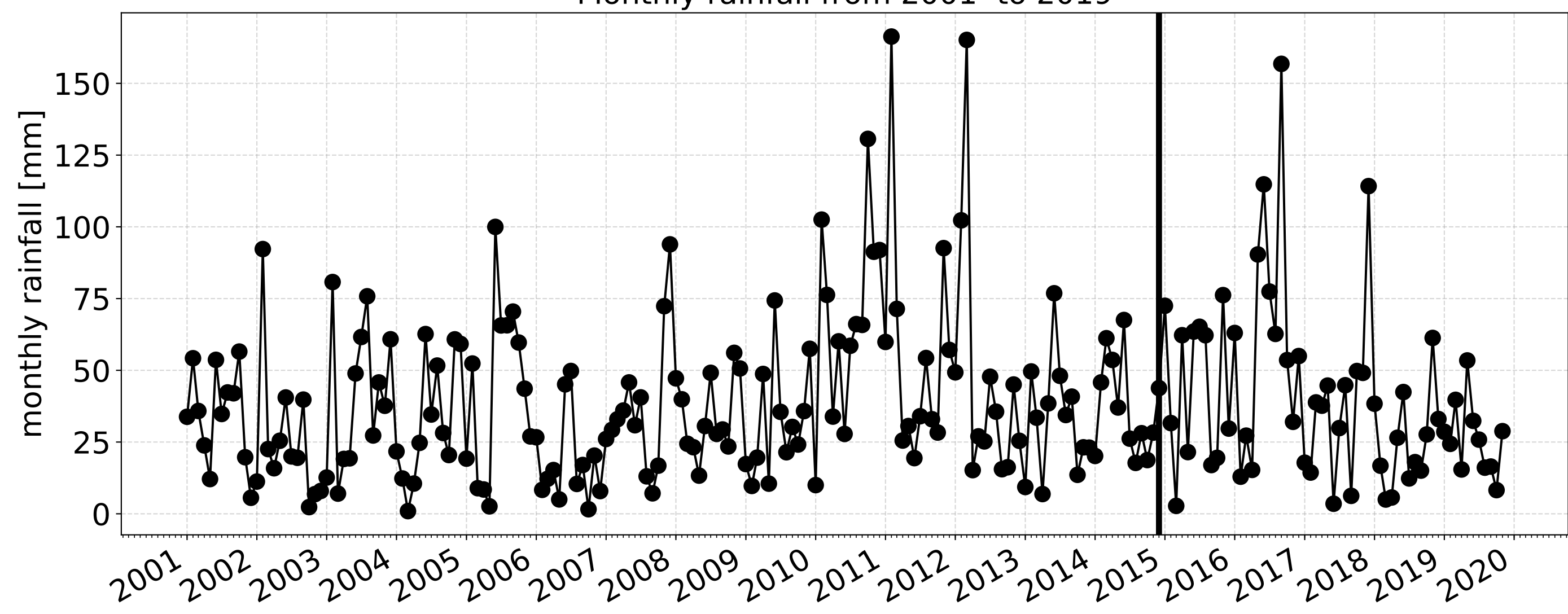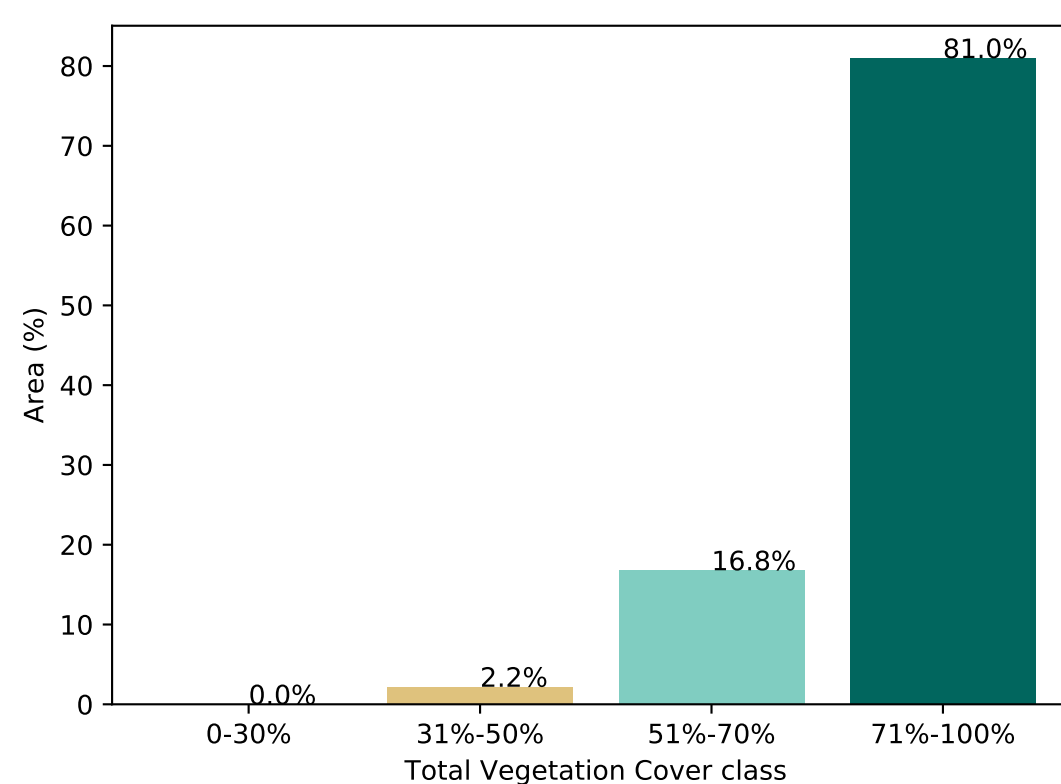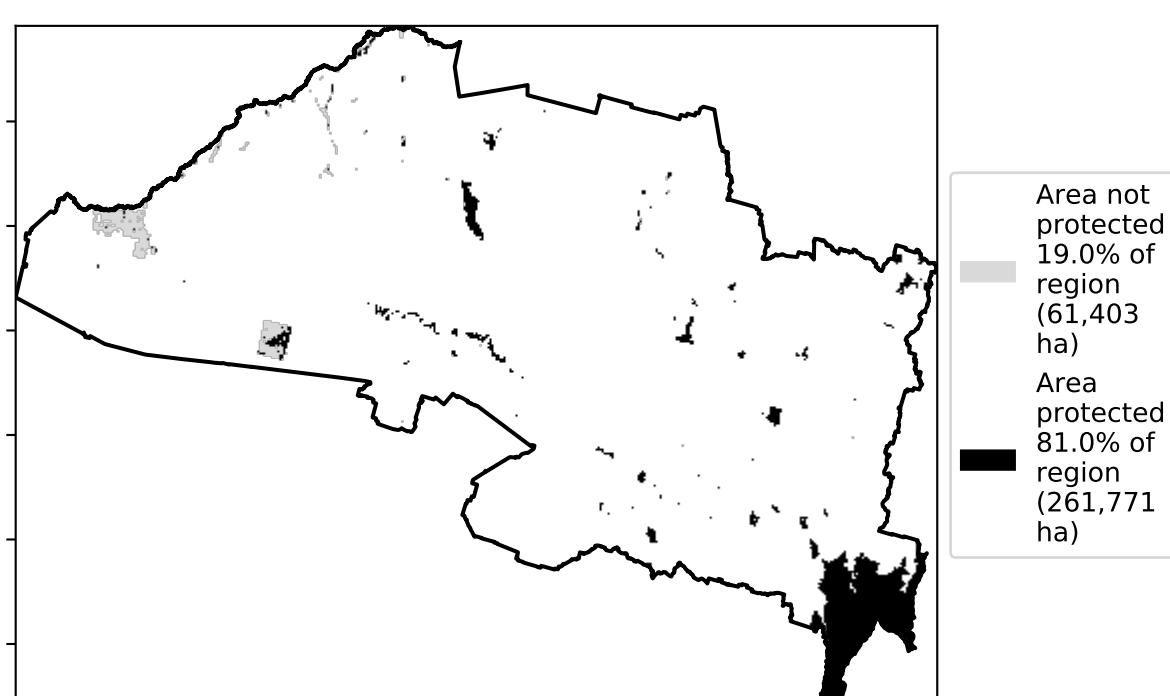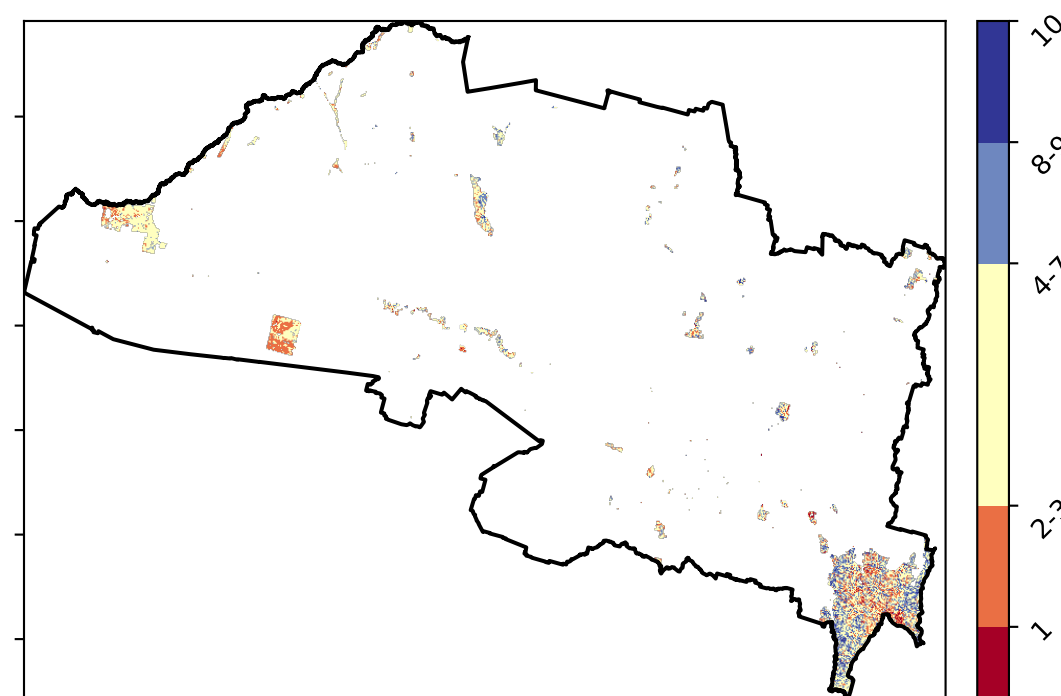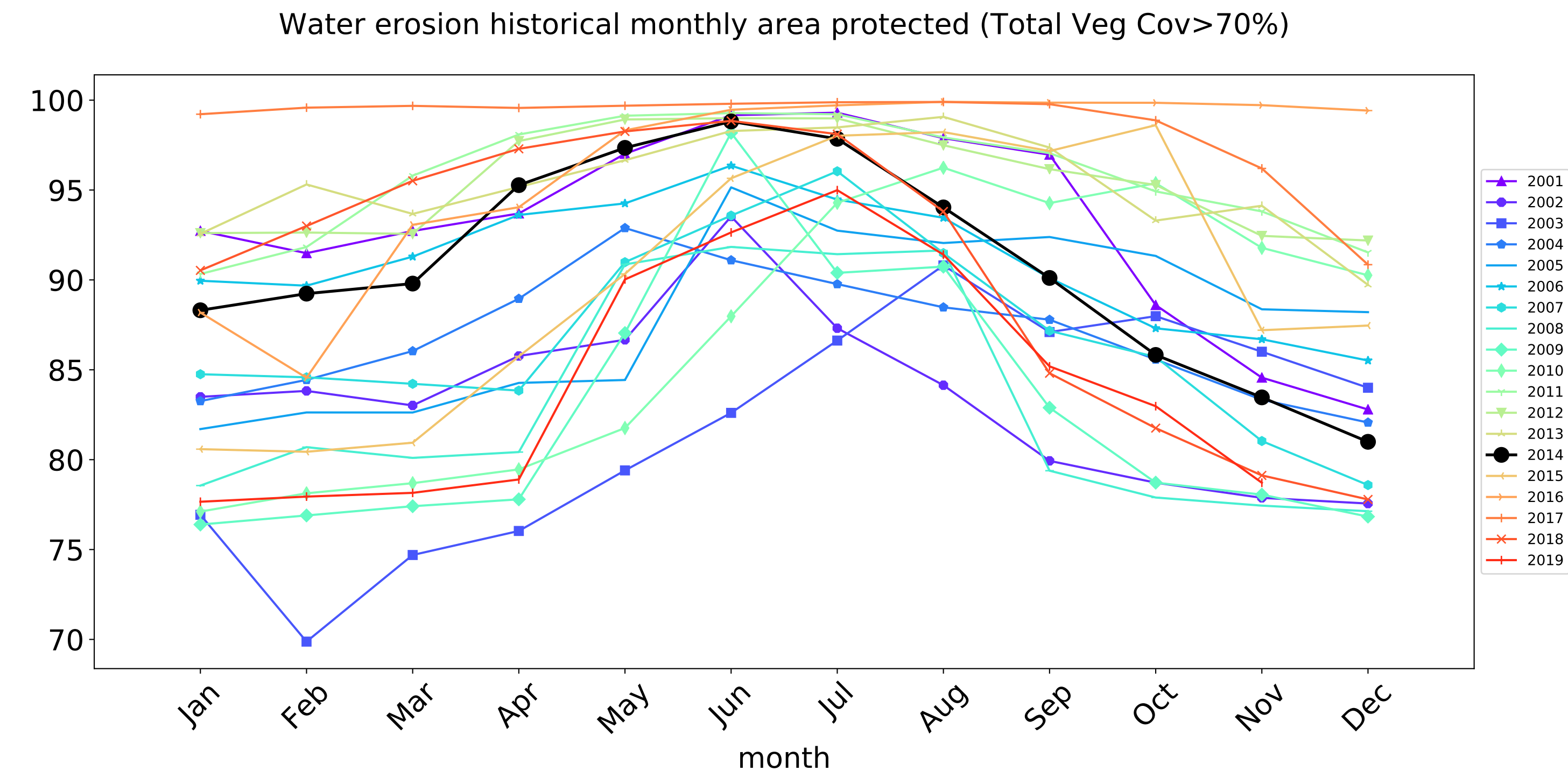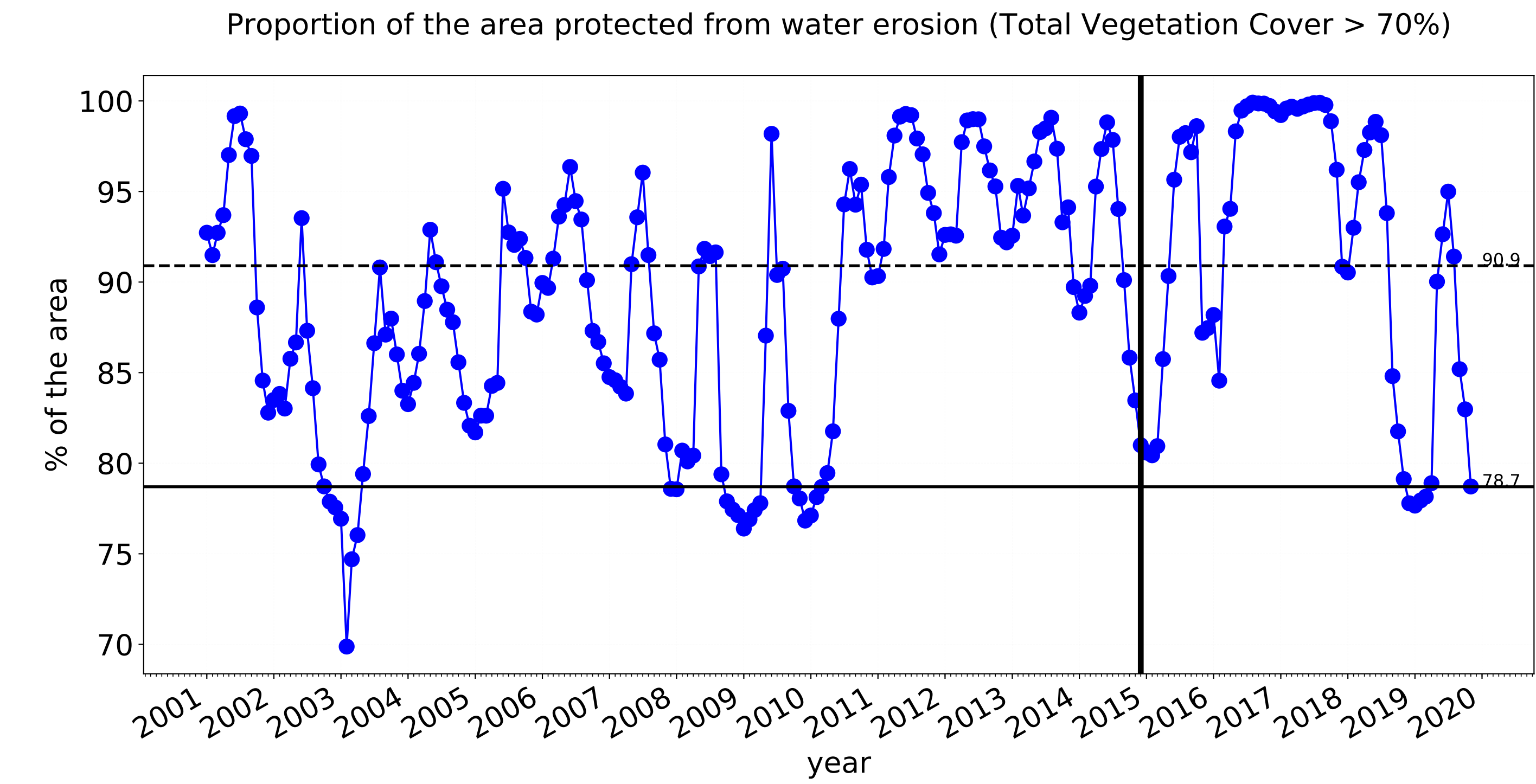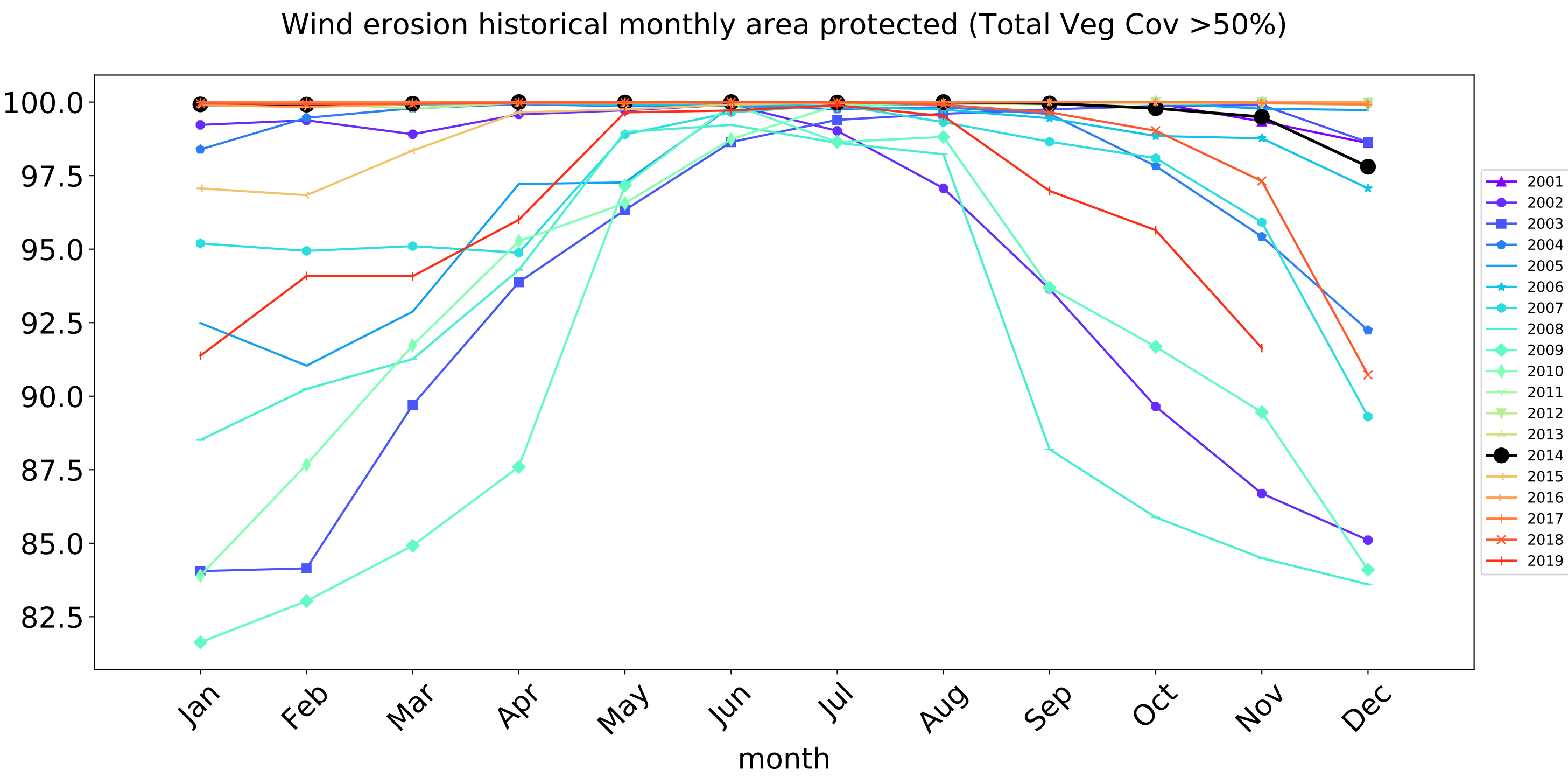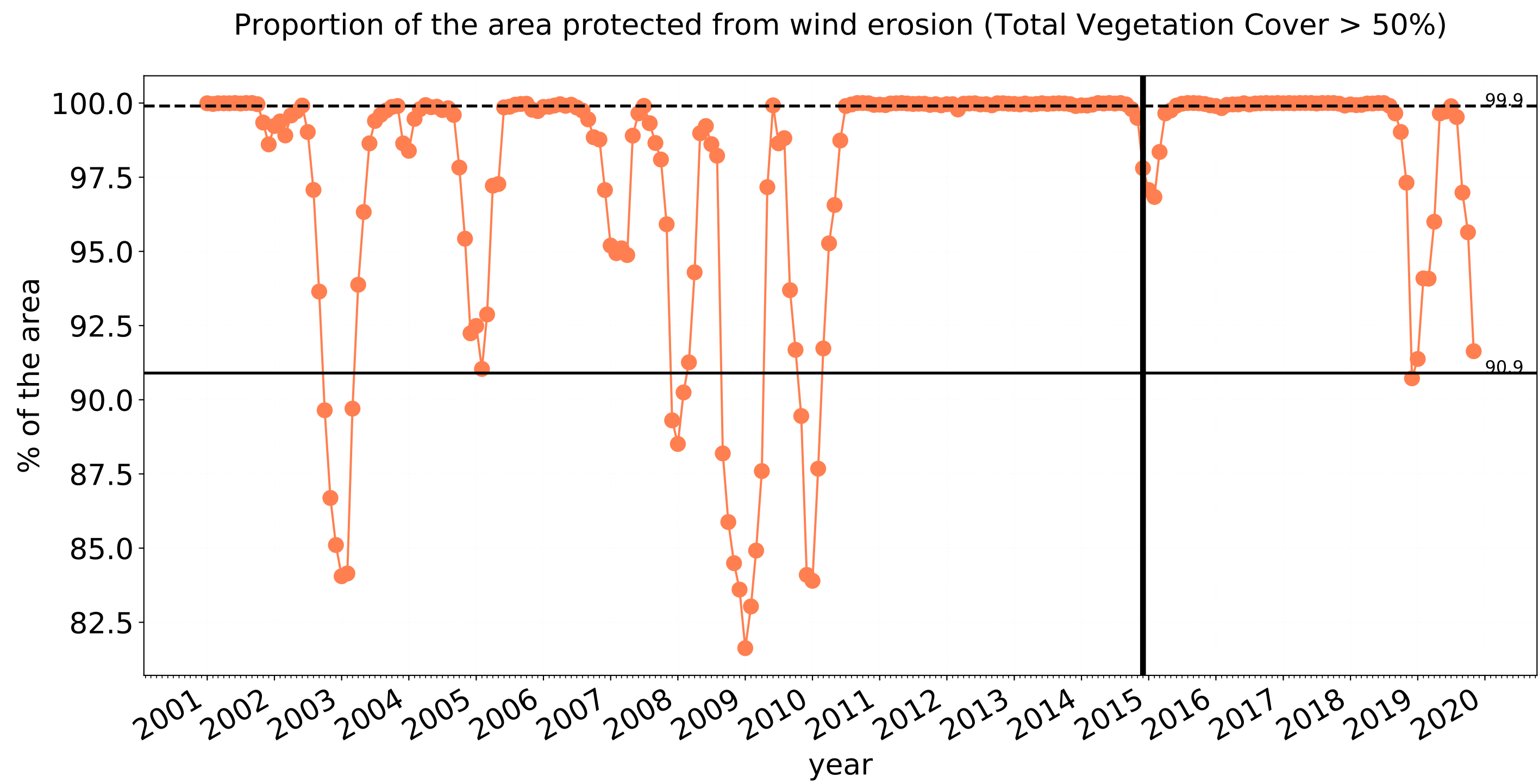Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)

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

Monthly rainfall from 2001 to 2019

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

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

Rainfall: historical monthly
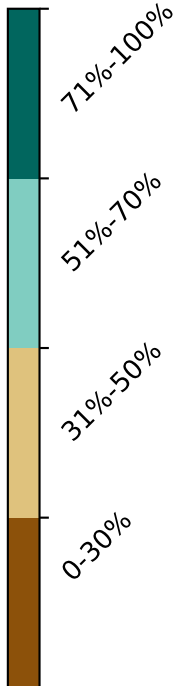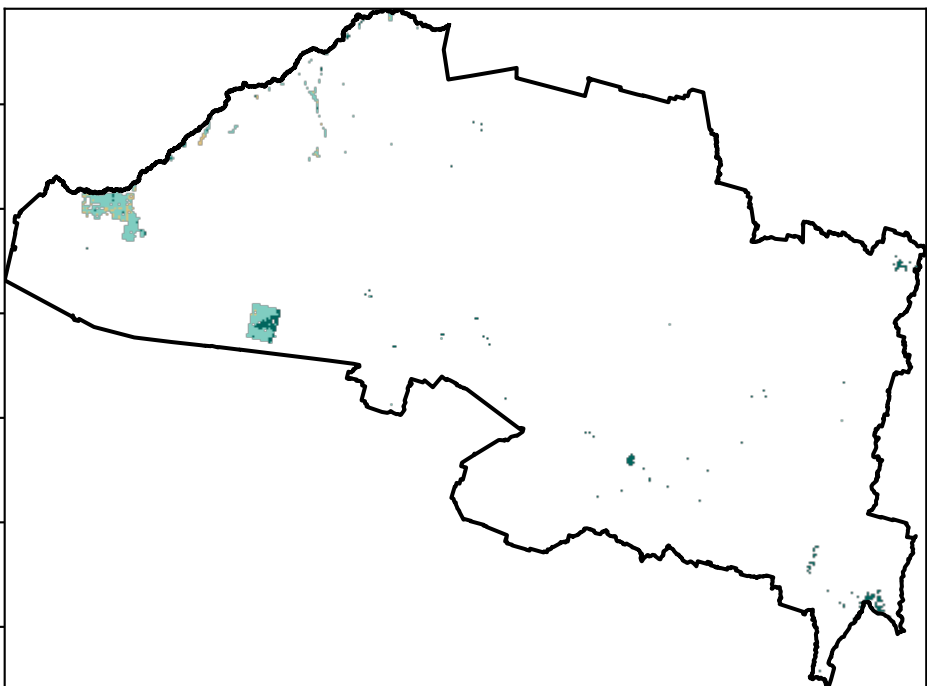
3
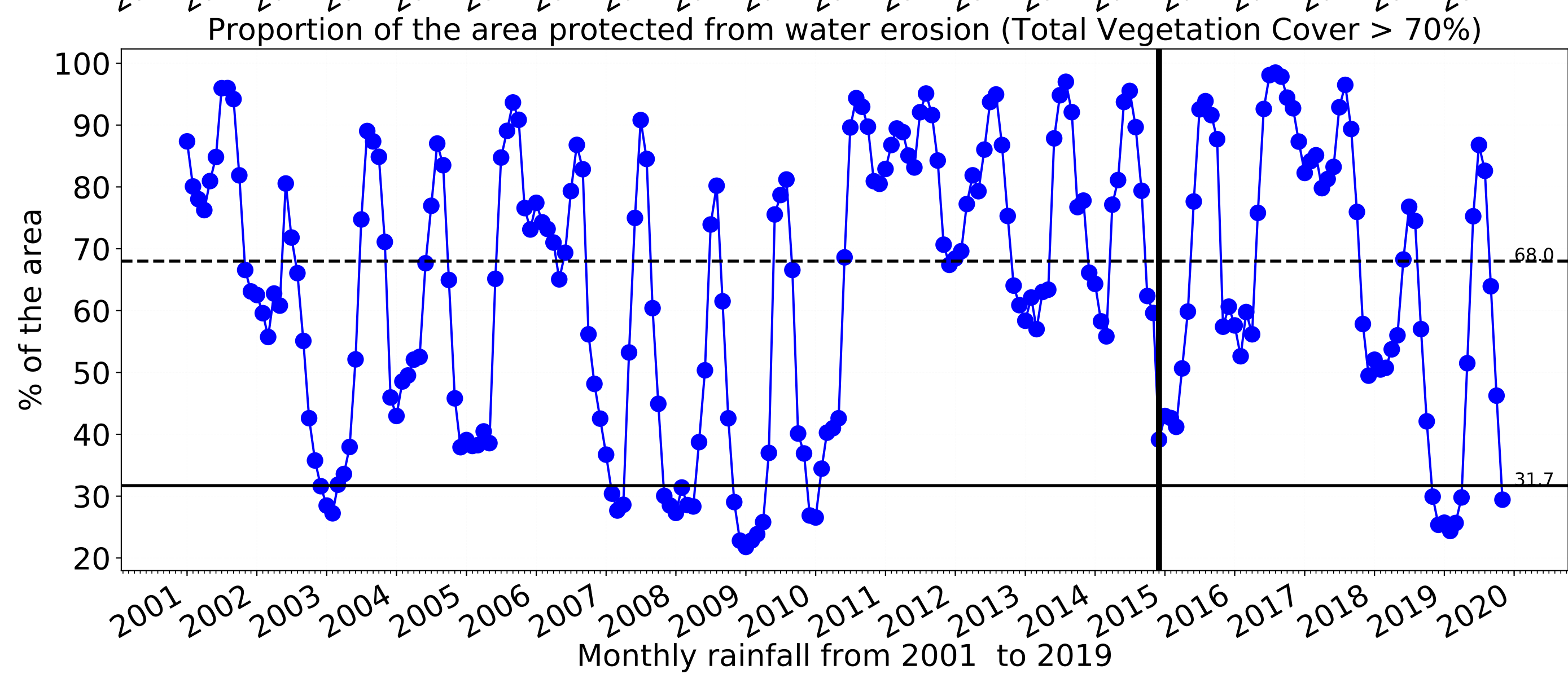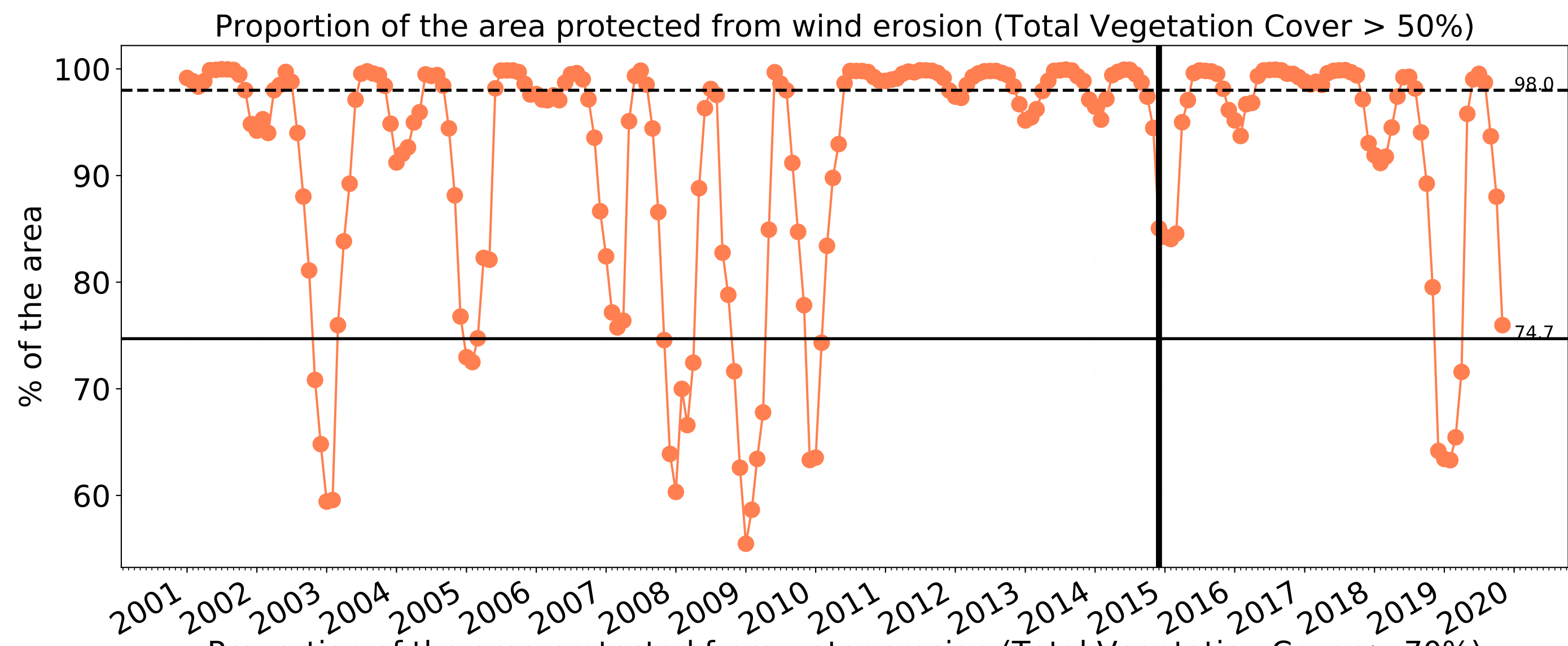
Conservation and natural environments

Land use and forest cover

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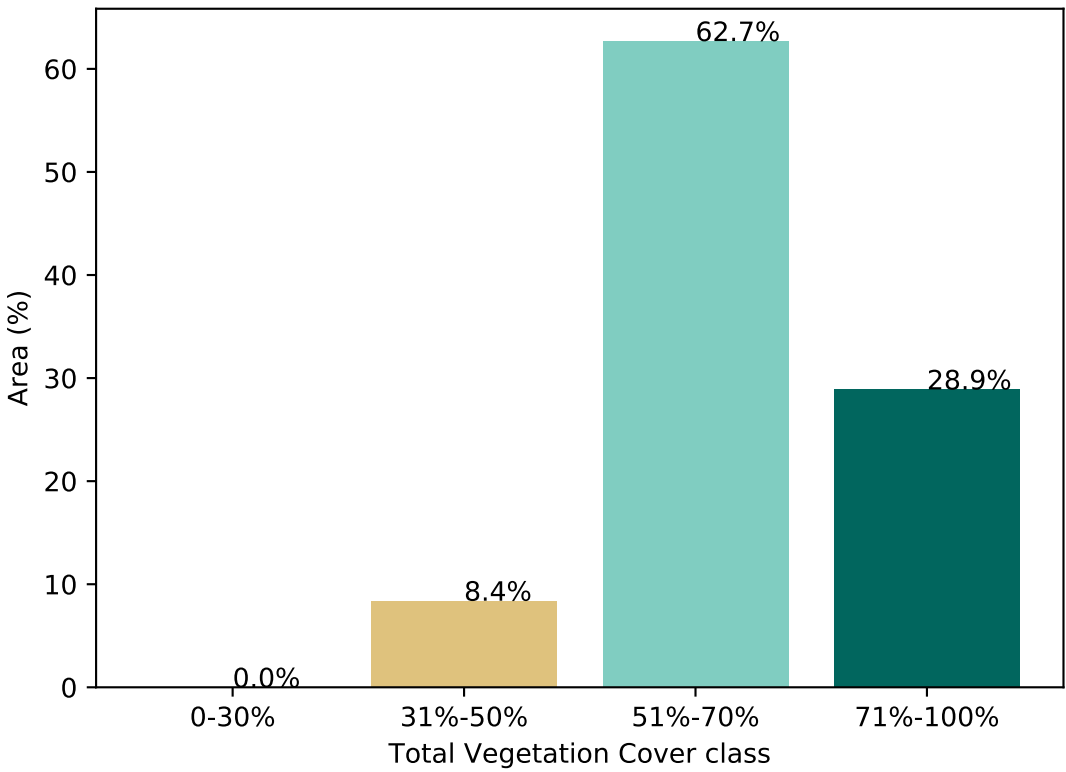Use of Australia
(2018) and Forests
of Australia (2018)

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

25.8%
13.8%
60.4%

Area (%)
Land use class

Total Vegetation Cover [%]

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

Proportion of vegetation cover class in area

81.0%
0.0%
2.2%
16.8%

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

% Area protected from water erosion (>70%)

Area not
protected
19.0% of
region
(61,403
ha)
Area
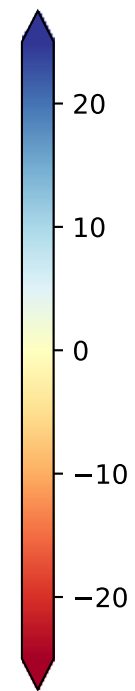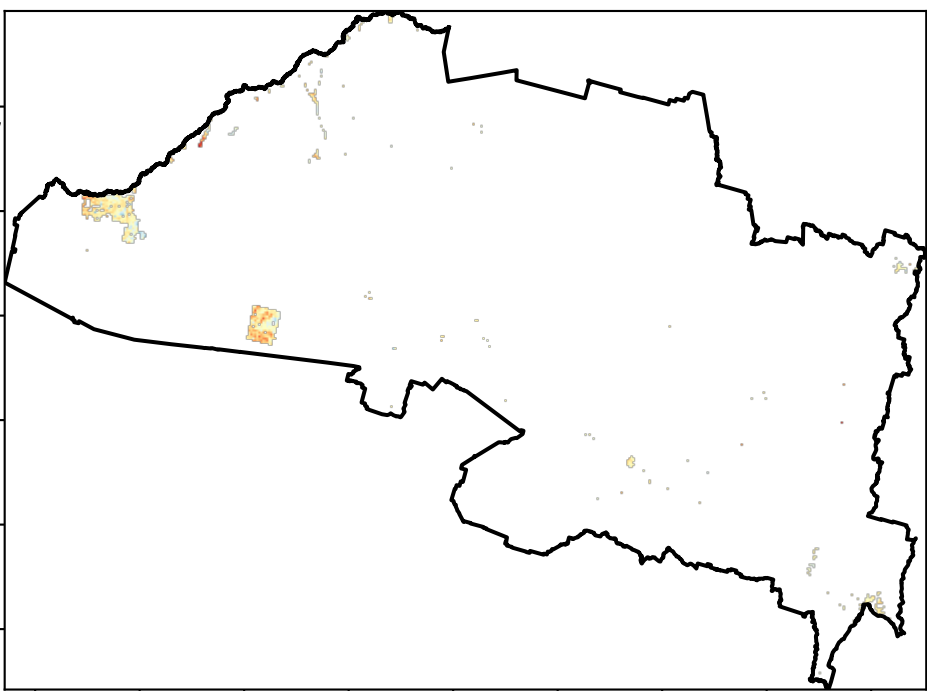protected
81.0% of
region
(261,771
ha)

% Area protected from wind erosion (>50%)

Area not
protected
2.0% of
region
(6,463 ha)
Area
protected
98.0% of
region
(316,711
ha)

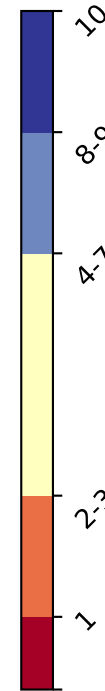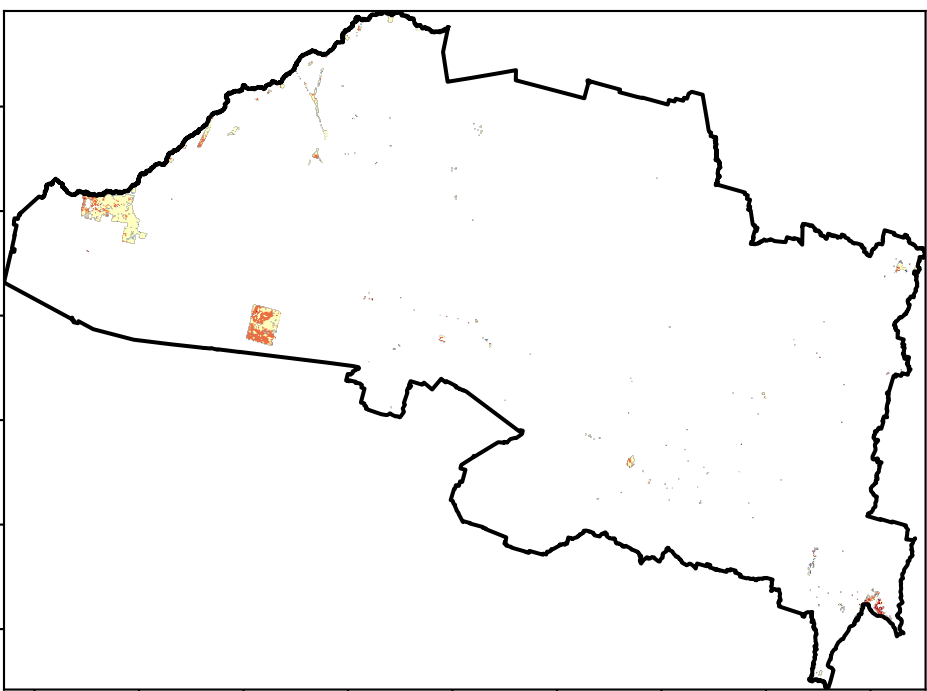### Total Vegetation Cover Anomaly [%]

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
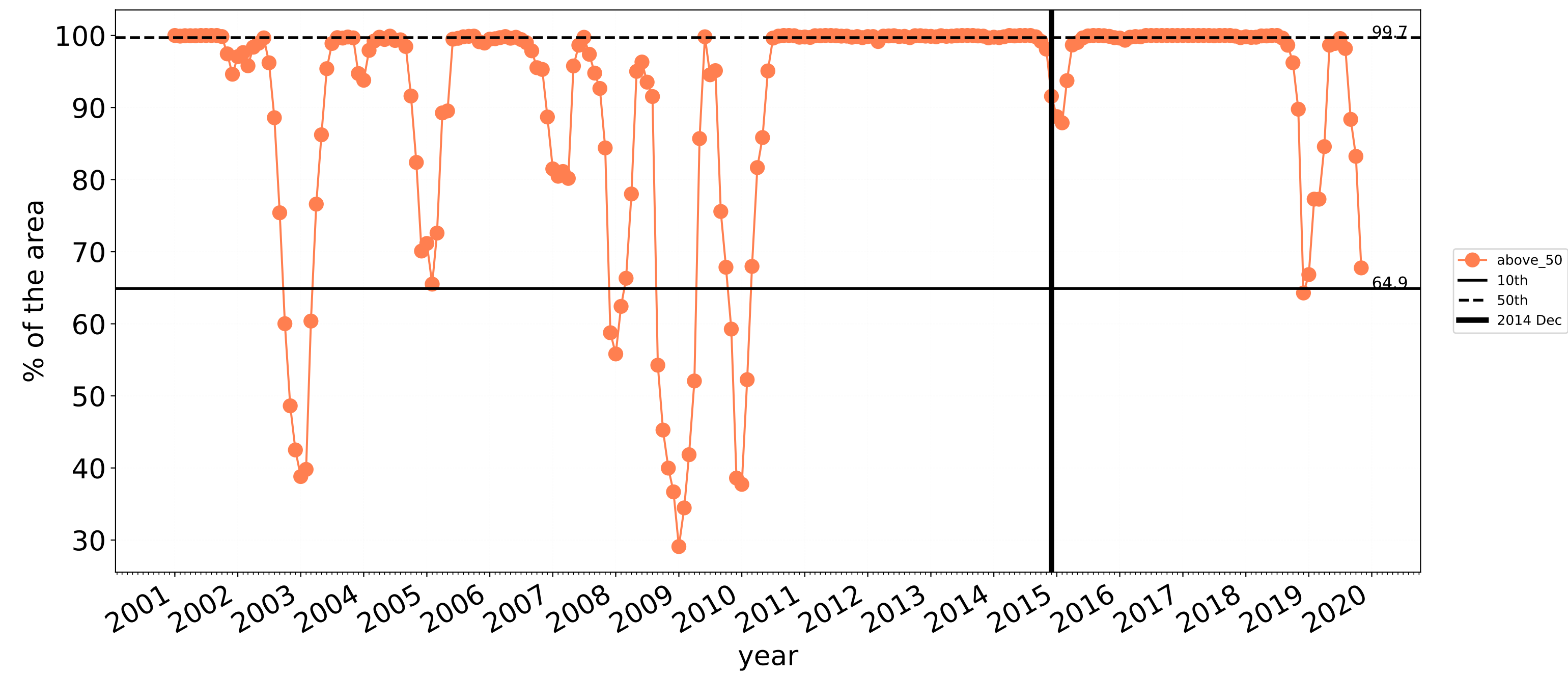

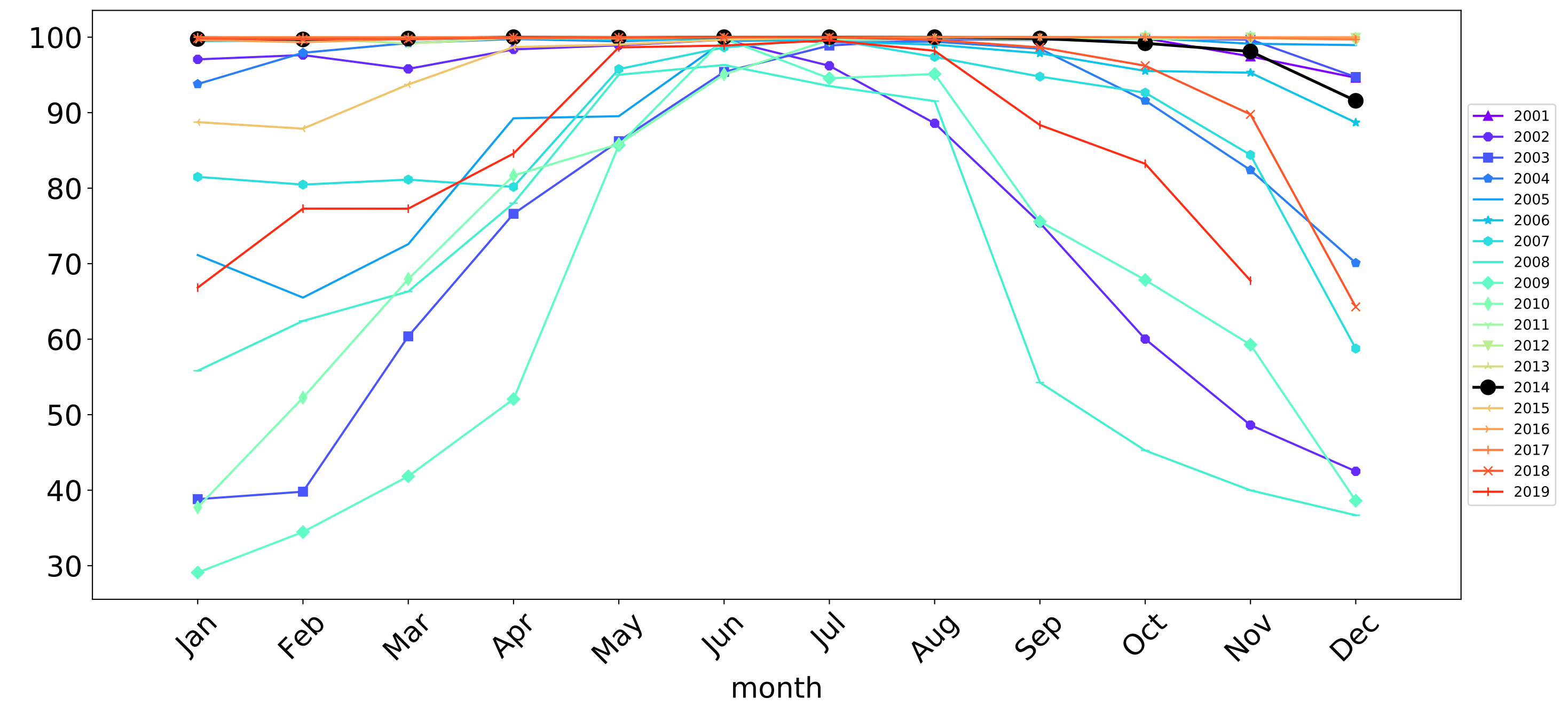CSIRO   TERN   Australian Government   National Landcare Programme   NSW GOVERNMENT   Planning, Industry & Environment

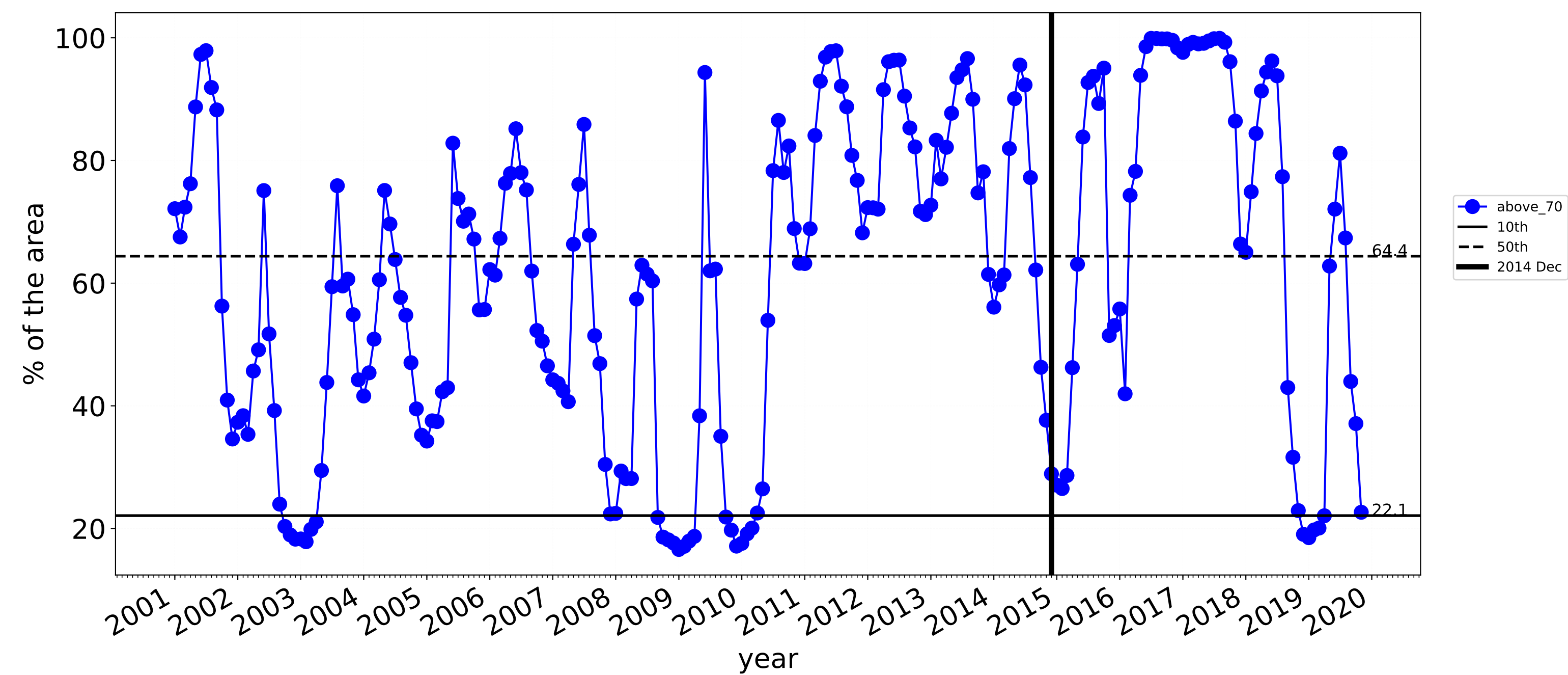# Conservation and natural environments timeseries

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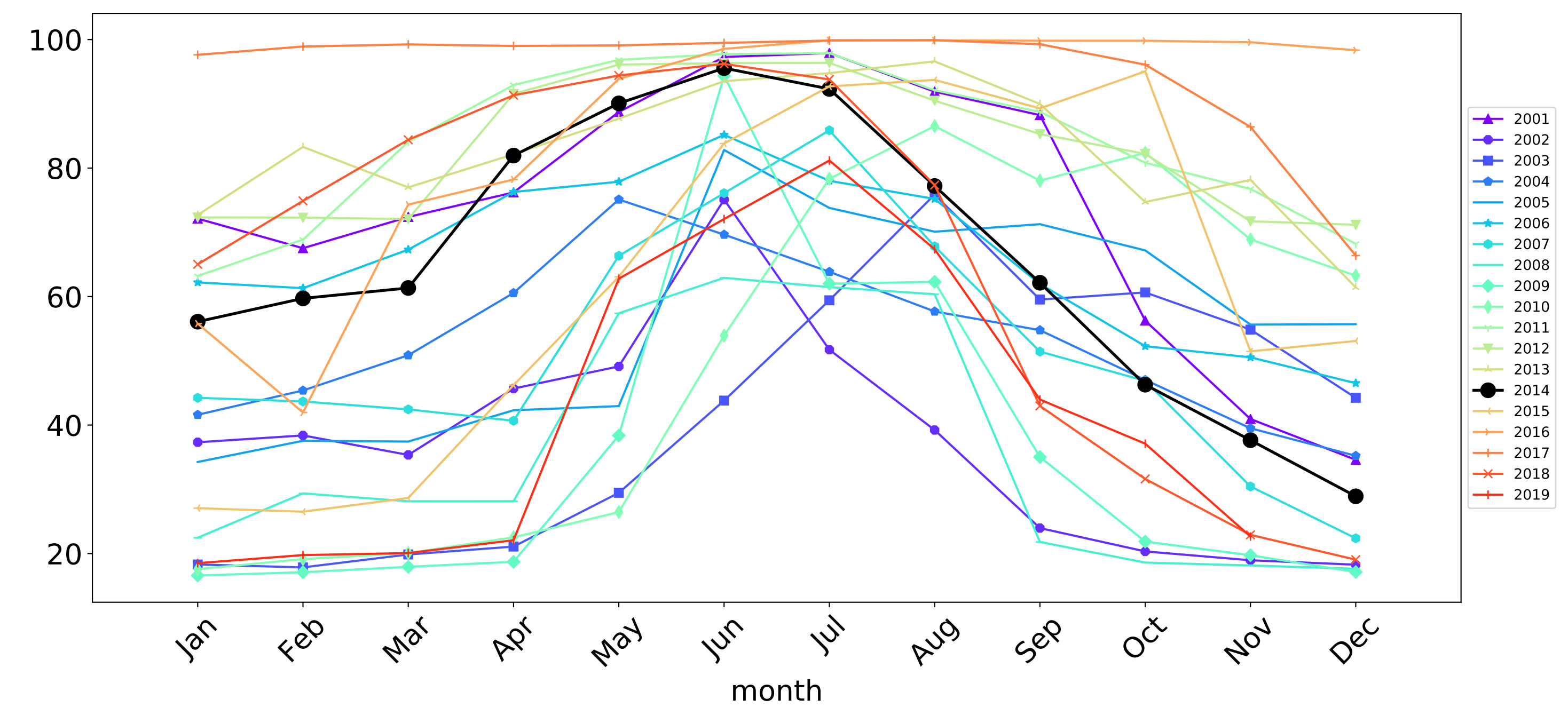

Wind erosion historical monthly area protected (Total Veg Cov >50%)

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

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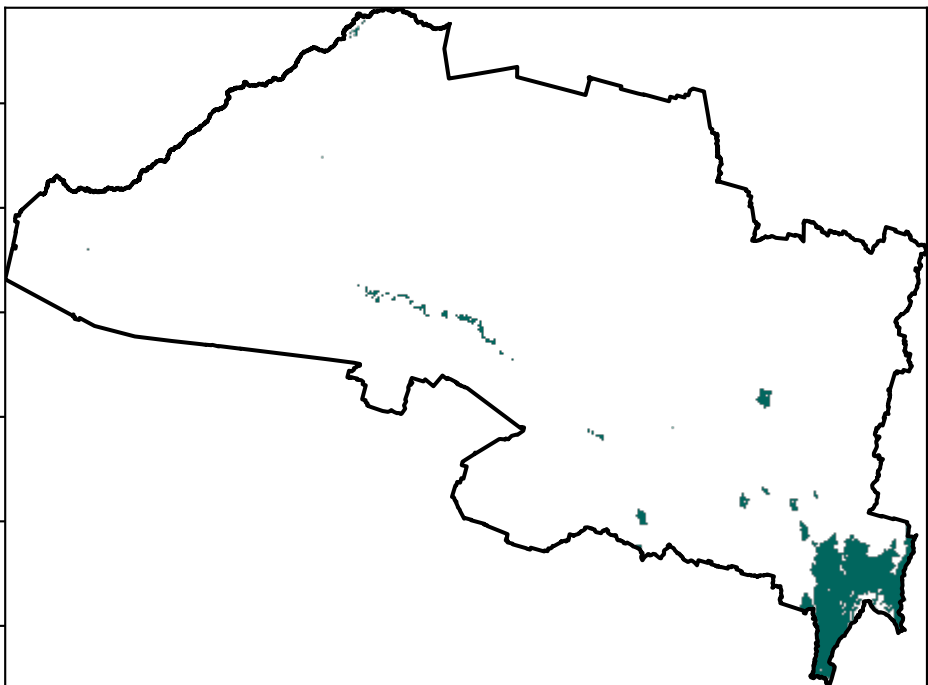
Conservation and natural environments non forest

Land use and forest cover

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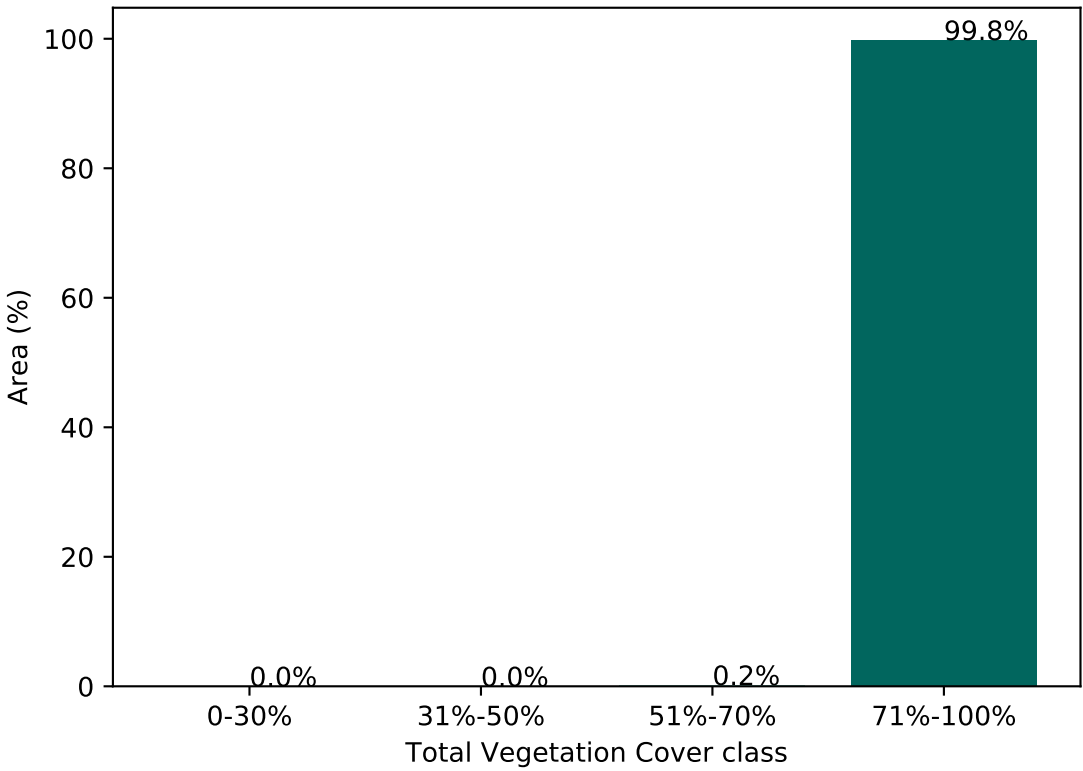Use of Australia
(2018) and Forests
of Australia (2018)

1 Conservation and natural environments - Non-
forest

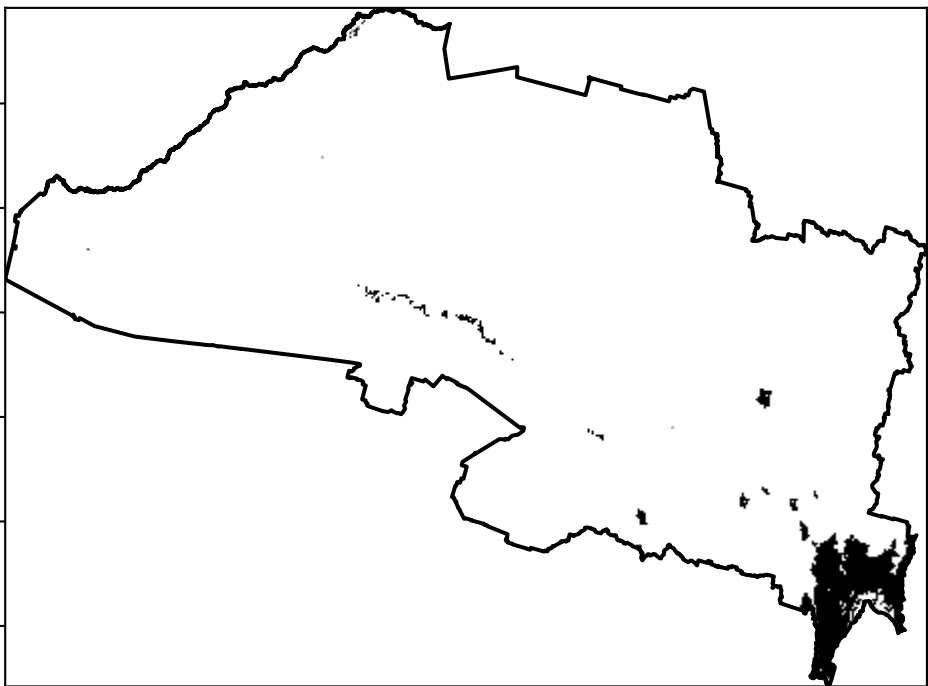## Total Vegetation Cover [%]

71%-100%

51%-70%

31%-50%

0-30%

Proportion of vegetation cover class in area

62.7%

28.9%

8.4%

0.0%

Area (%)

Total Vegetation Cover class

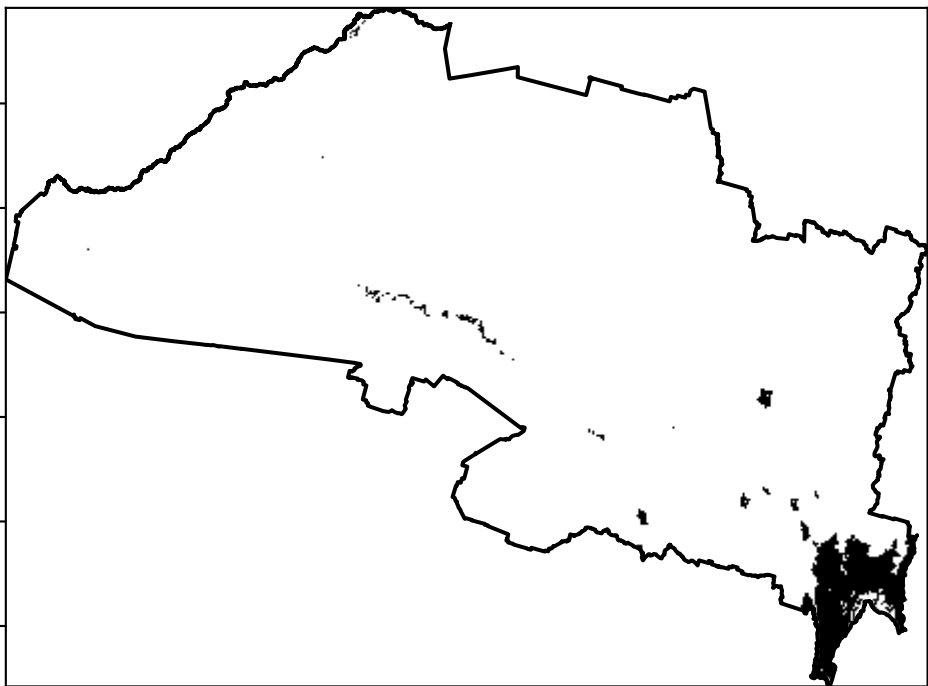0-30%   31%-50%   51%-70%   71%-100%

% Area protected from water erosion (>70%)
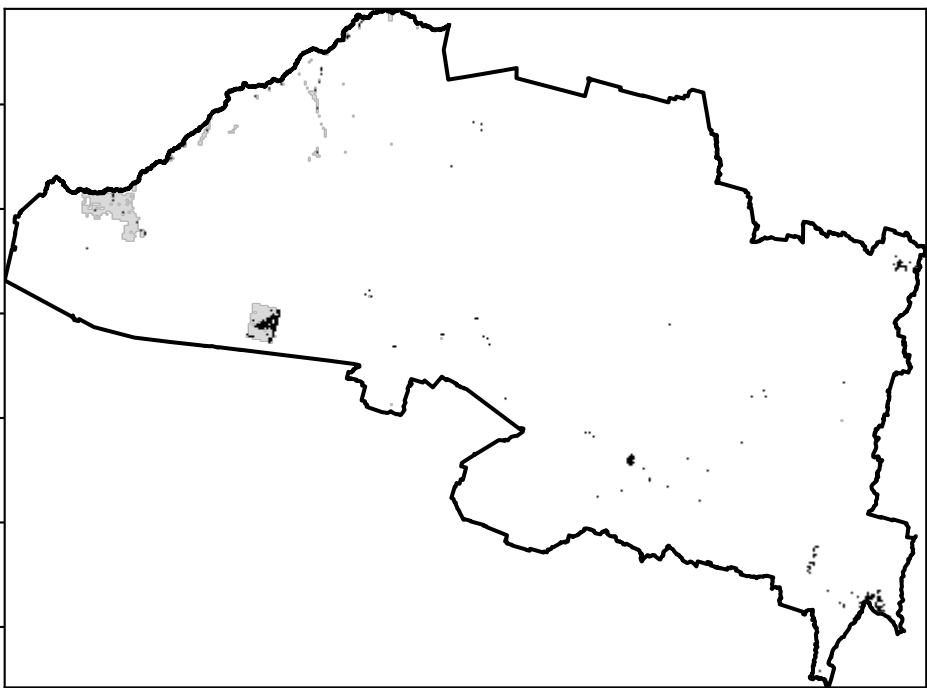
Area not
protected
71.1% of
region
(59,261
ha)

Area
protected
28.9% of
region
(24,088
ha)

% Area protected from wind erosion (>50%)
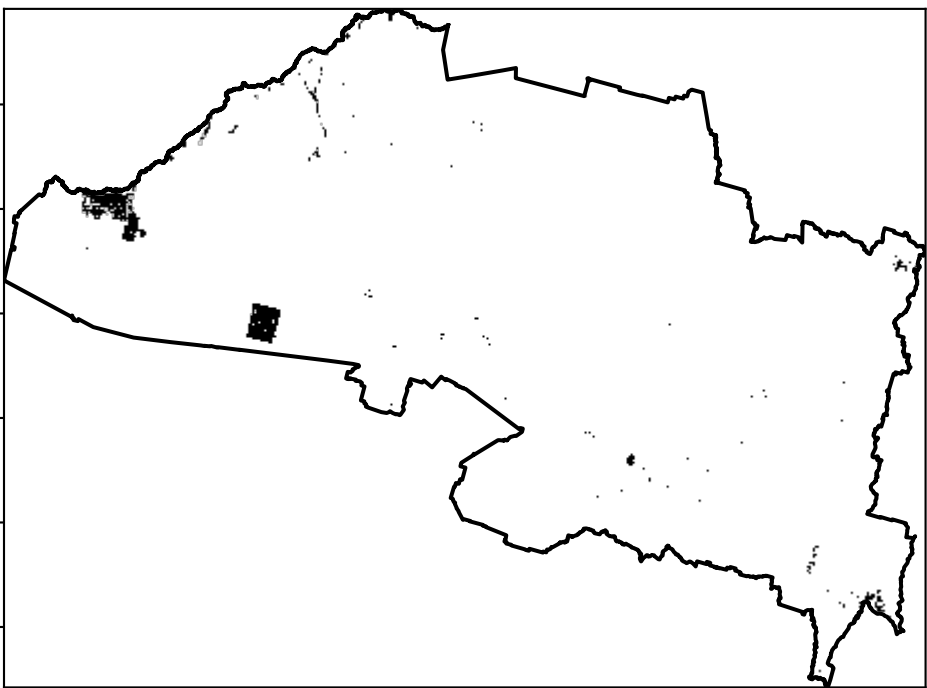
Area not
protected
8.0% of
region
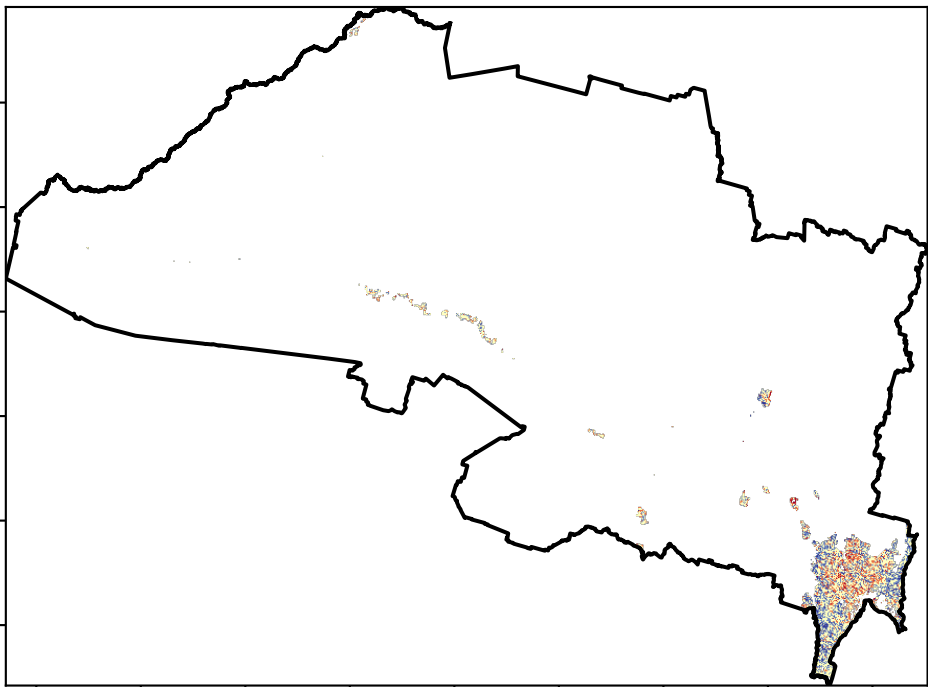(6,668 ha)

Area
protected
92.0% of
region
(76,682
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
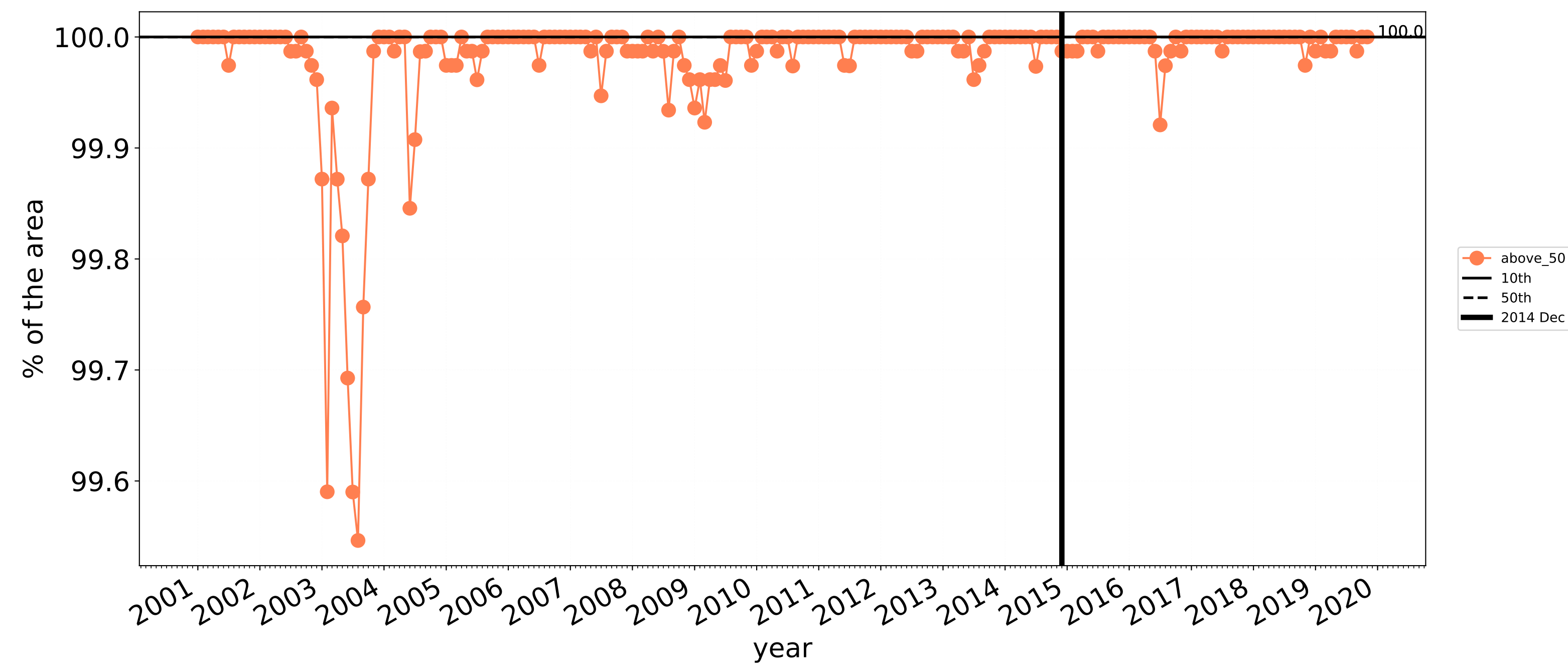records for that month
of the map using baseline
from 2001 to 2019.

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

99.8%

0.0%   0.0%   0.2%

Total Vegetation Cover class

Area (%)

% Area protected from water erosion (>70%)

Area not protected 0.2% of region (390 ha)

Area protected 99.8% of region (194,934 ha)

% Area protected from wind erosion (>50%)

Area protected 100.0% of region (195,325 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
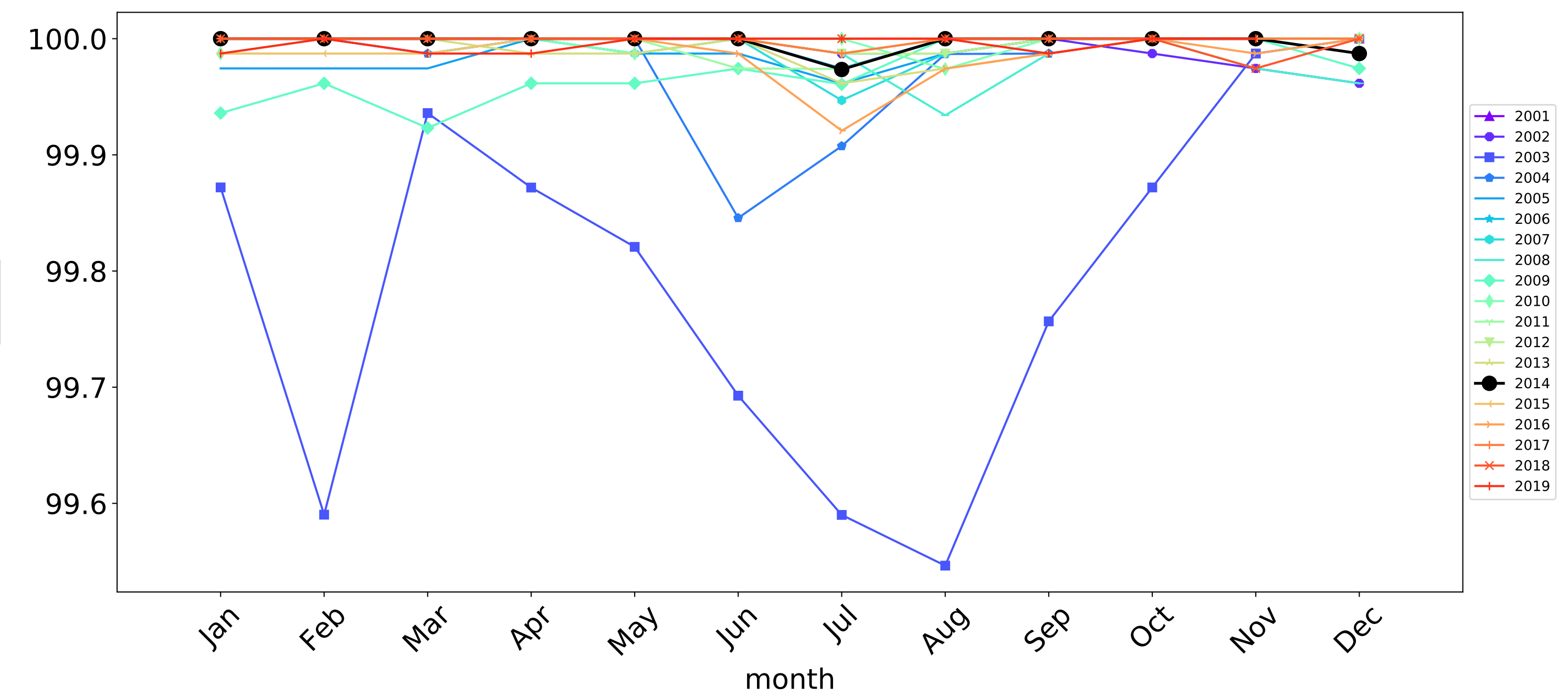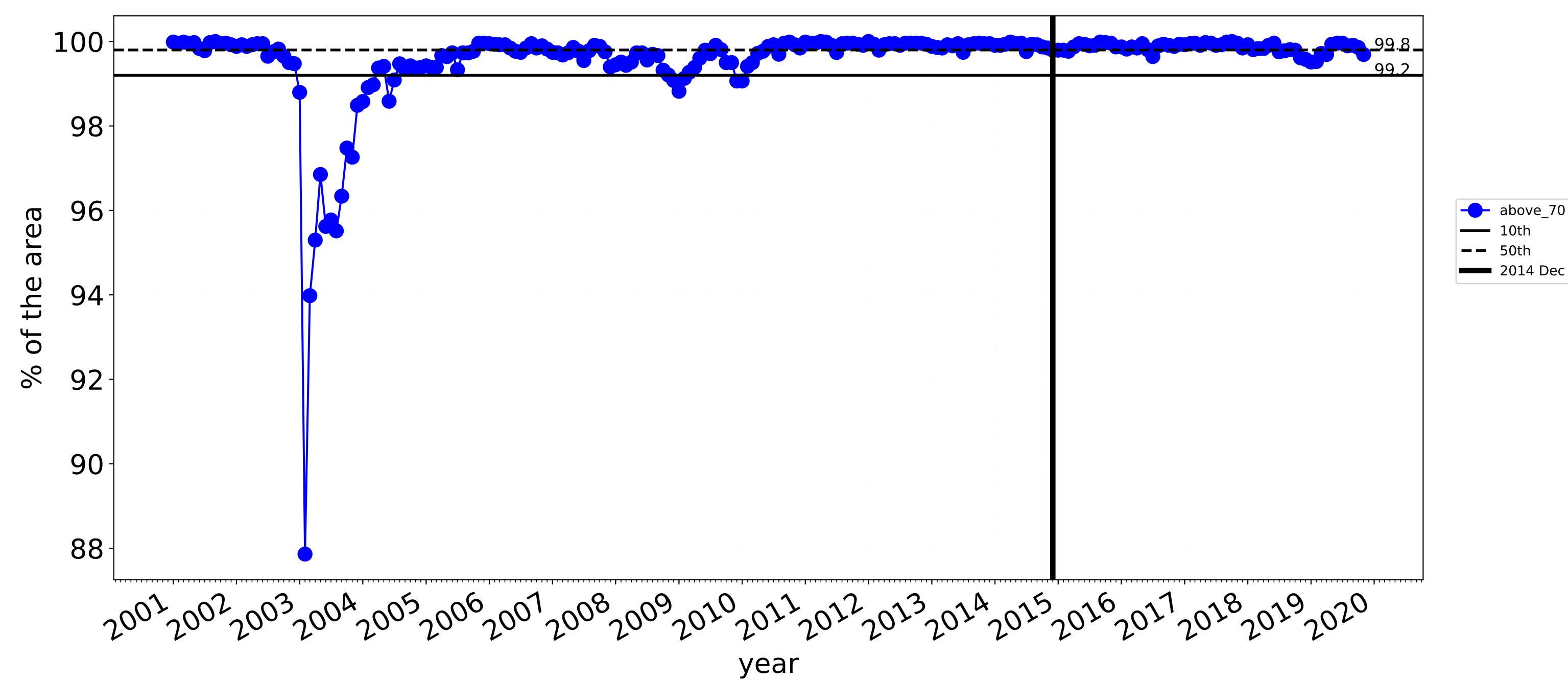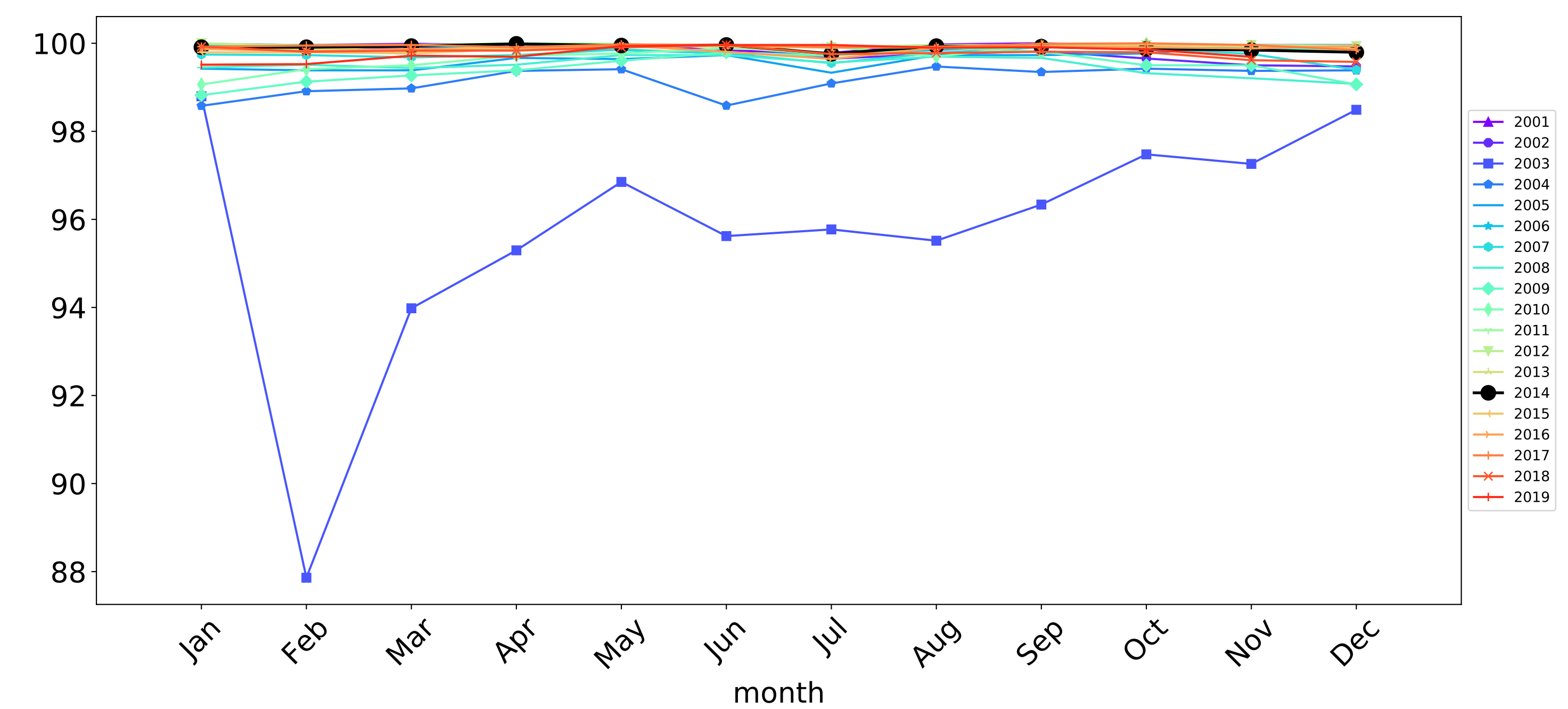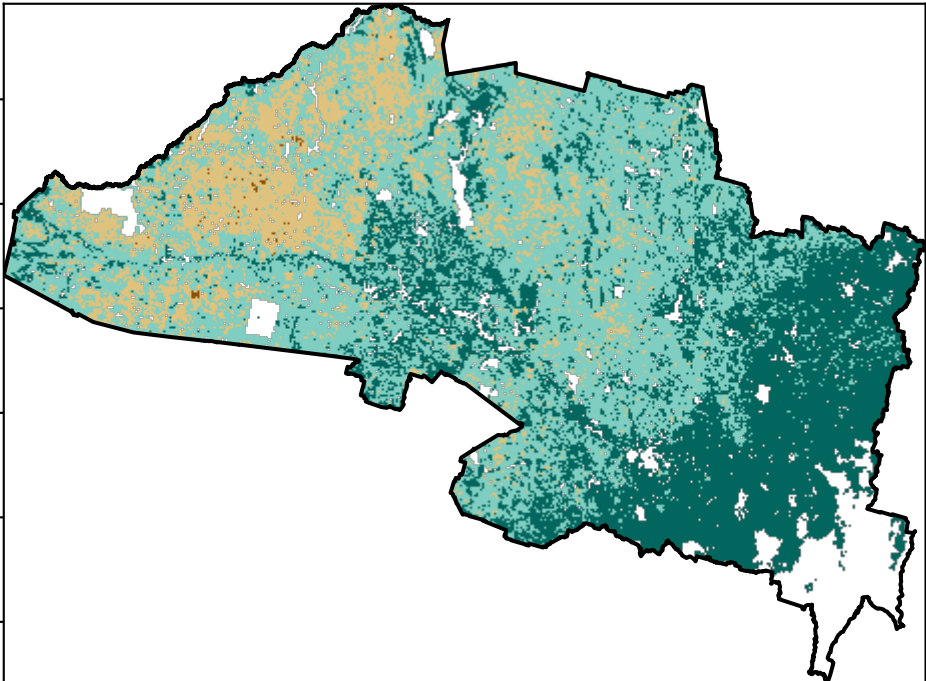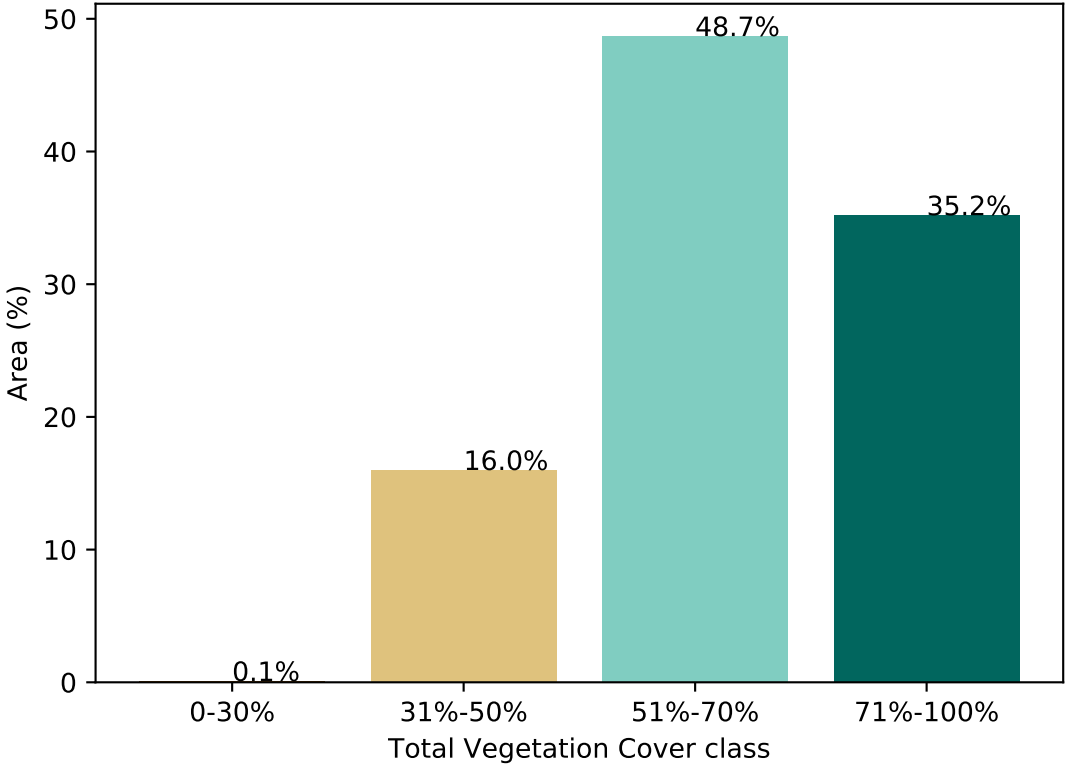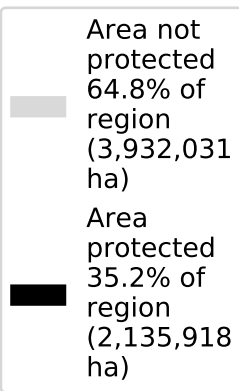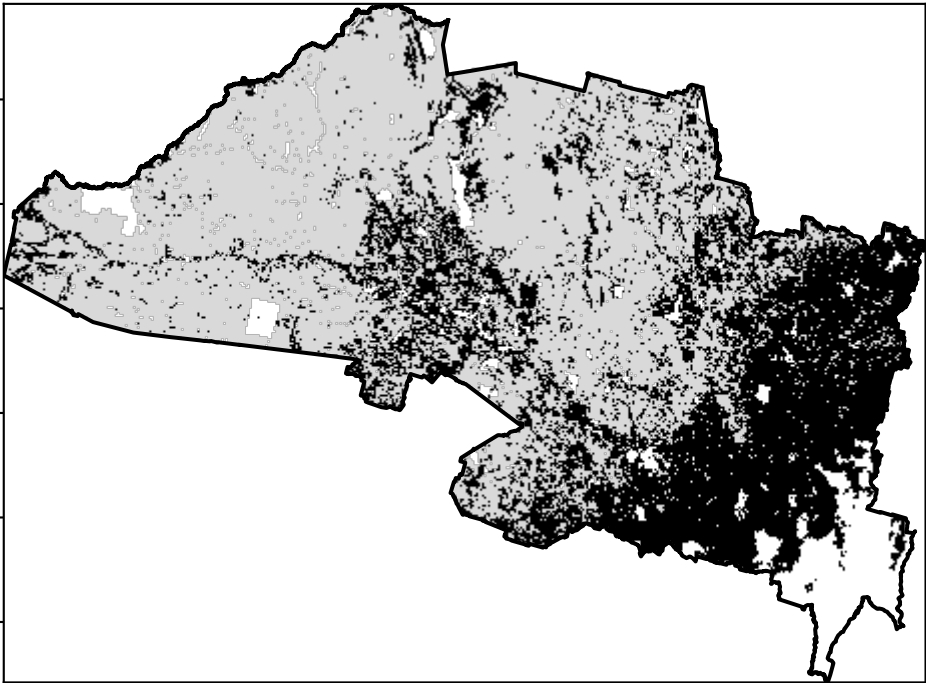1

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)

Legend:
- 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 [%]

Proportion of vegetation cover class in area

% Area protected from water erosion (>70%)

Area not protected 64.8% of region (3,932,031 ha)

Area protected 35.2% of region (2,135,918 ha)

% Area protected from wind erosion (>50%)

Area not protected 16.0% of region (970,872 ha)

Area protected 84.0% of region (5,097,078 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.
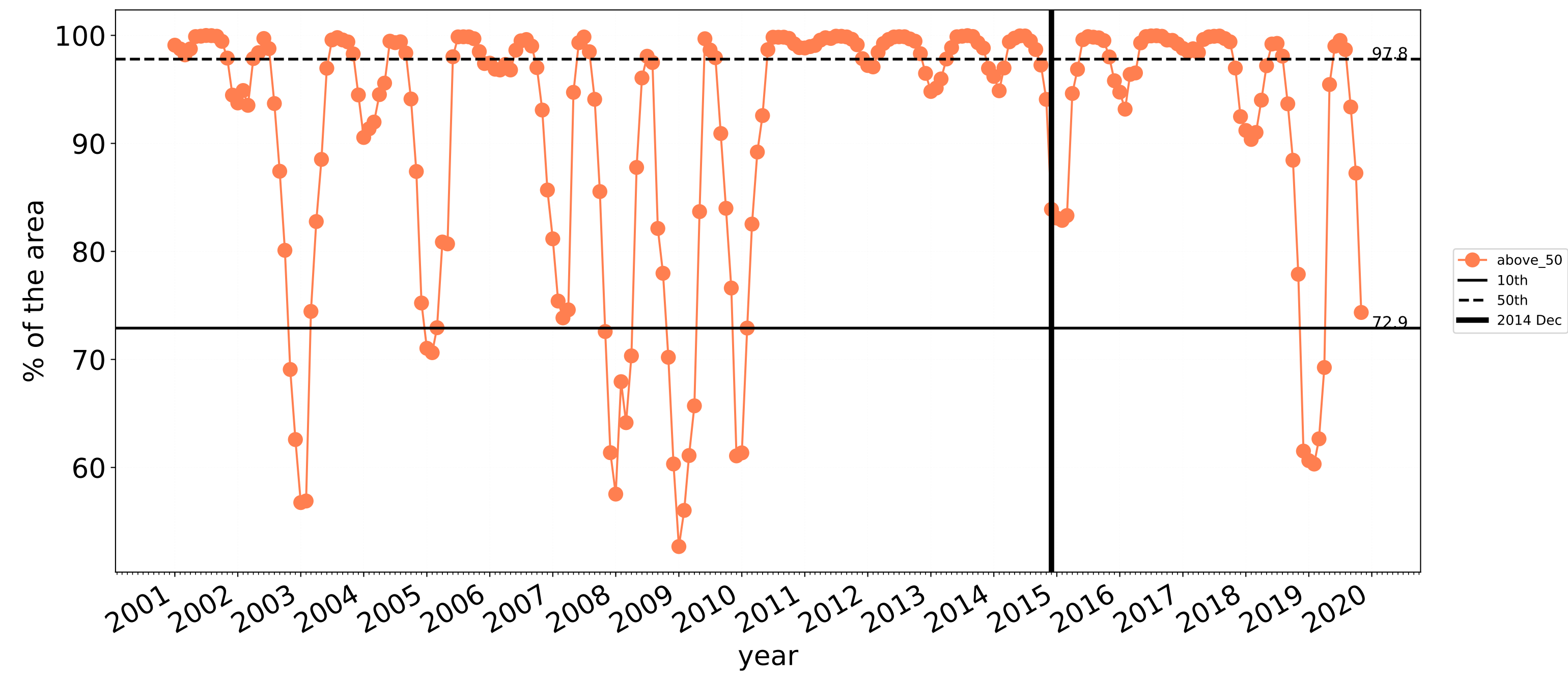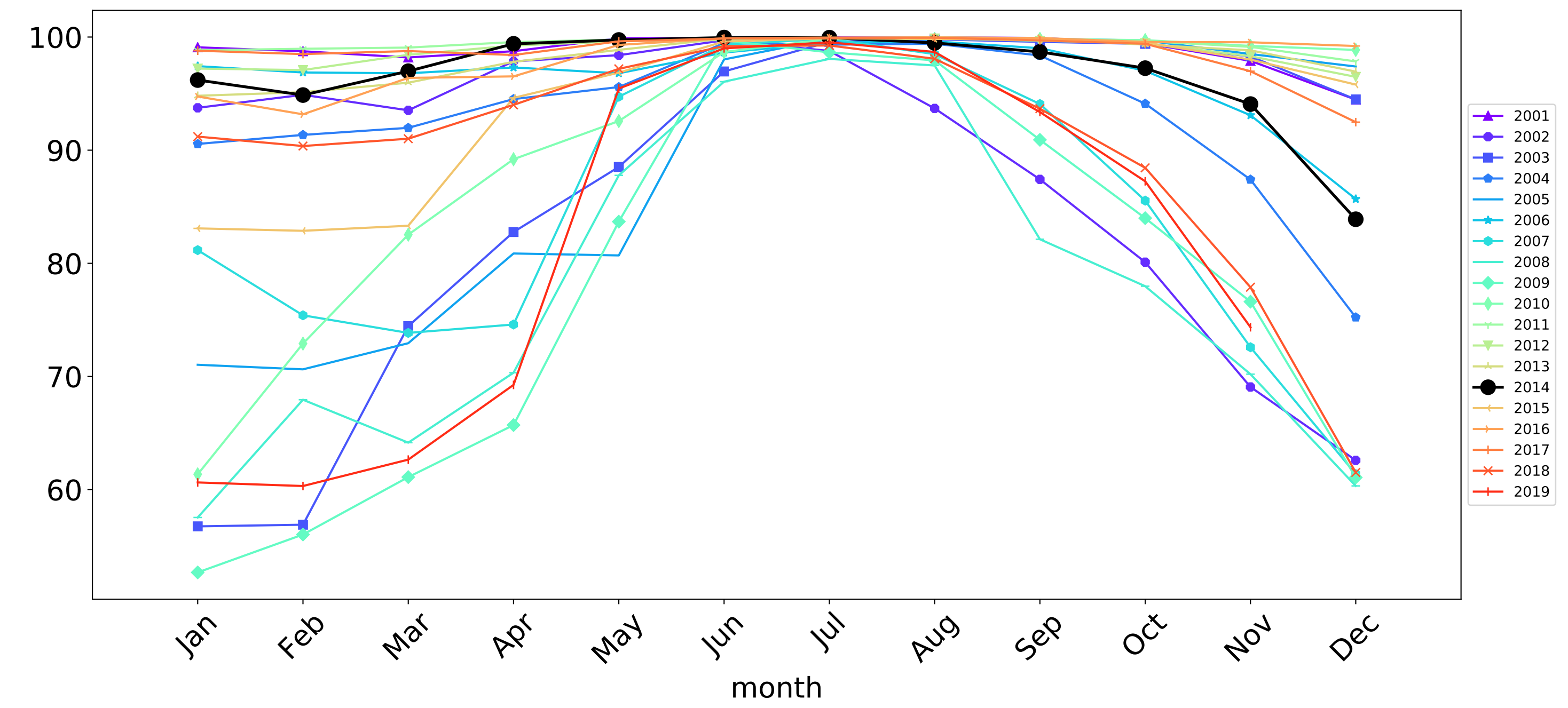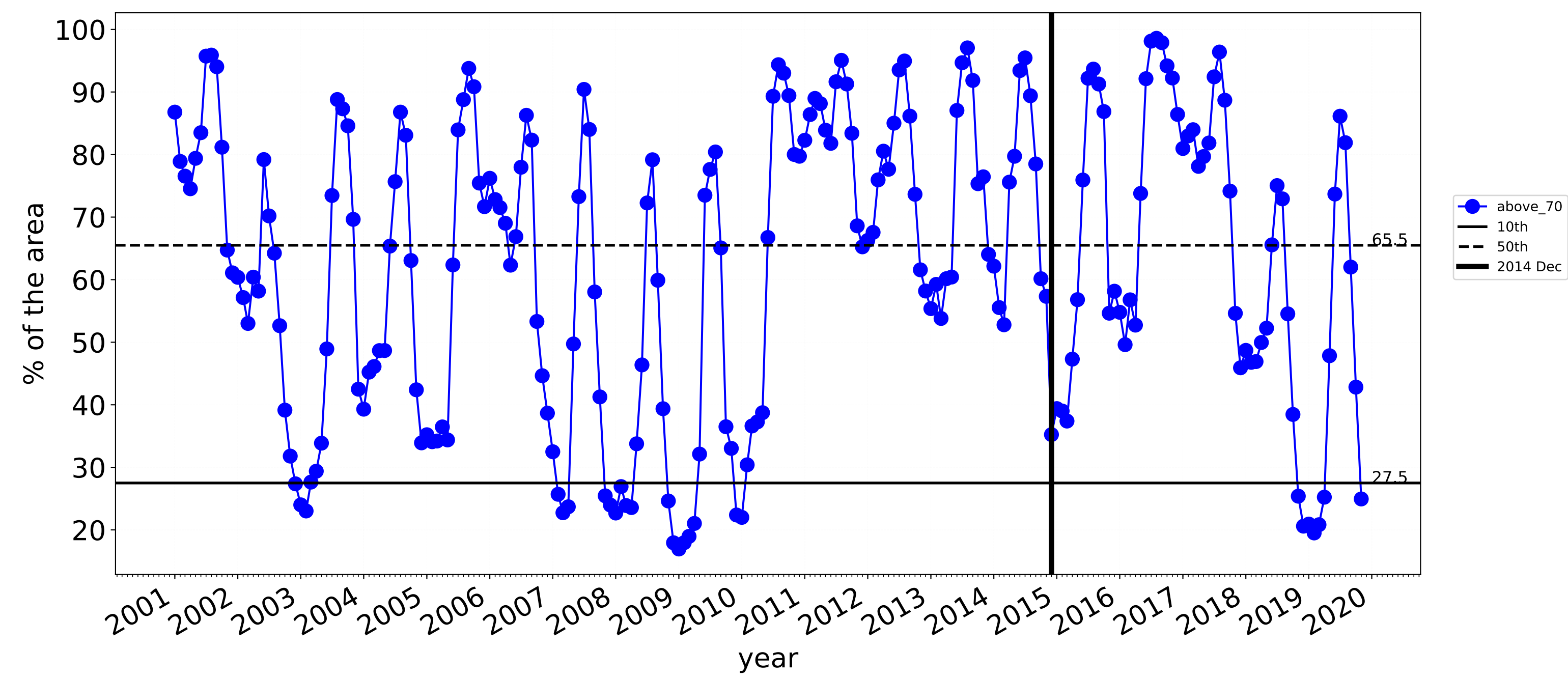
Agriculture timeseries

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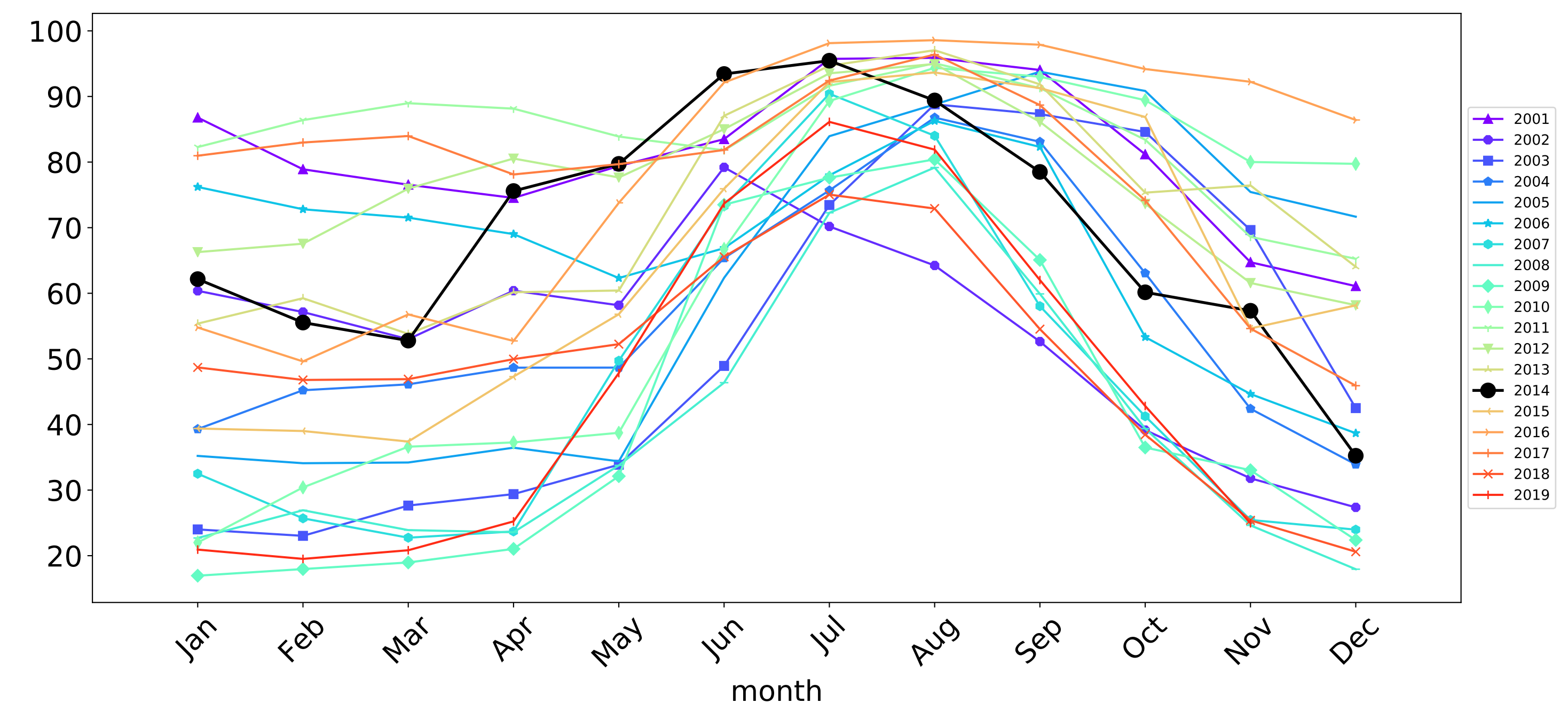

Wind erosion historical monthly area protected (Total Veg Cov >50%)

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)

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

Proportion of each land class in area

89.4%
6.1%
4.5%

Total Vegetation Cover [%]

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

Proportion of vegetation cover class in area

42.0%
35.0%
22.7%
0.3%
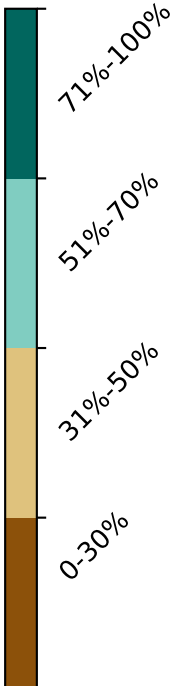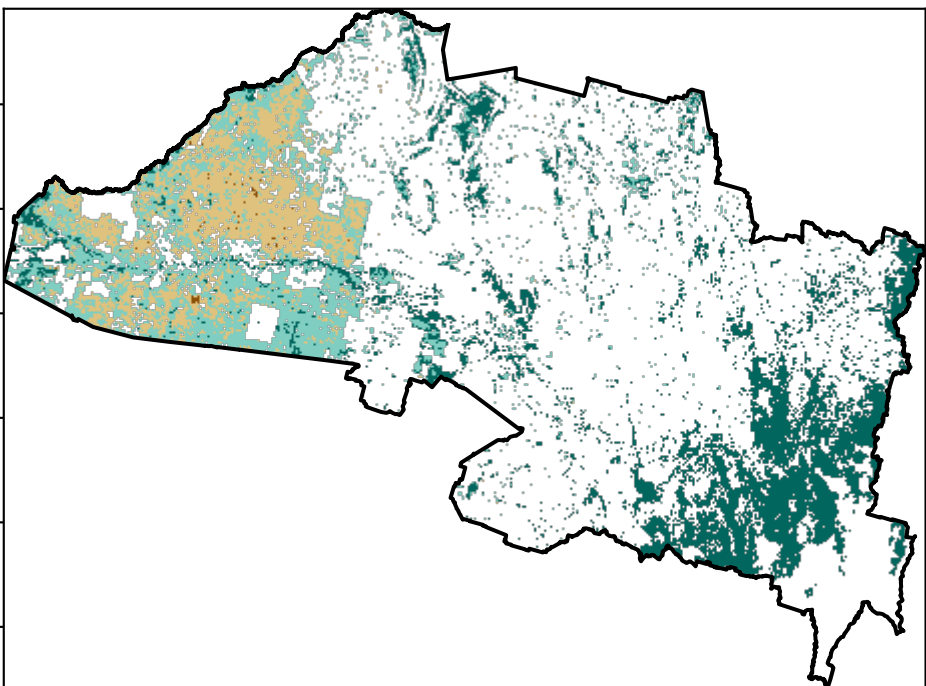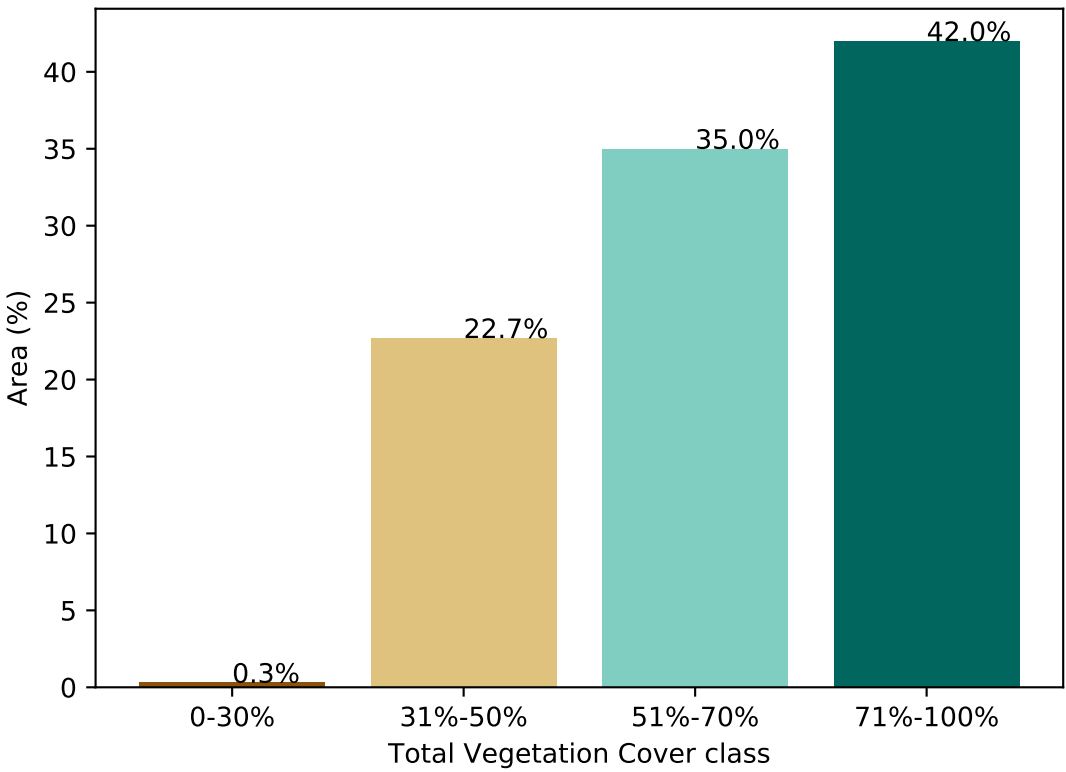
% Area protected from water erosion (>70%)
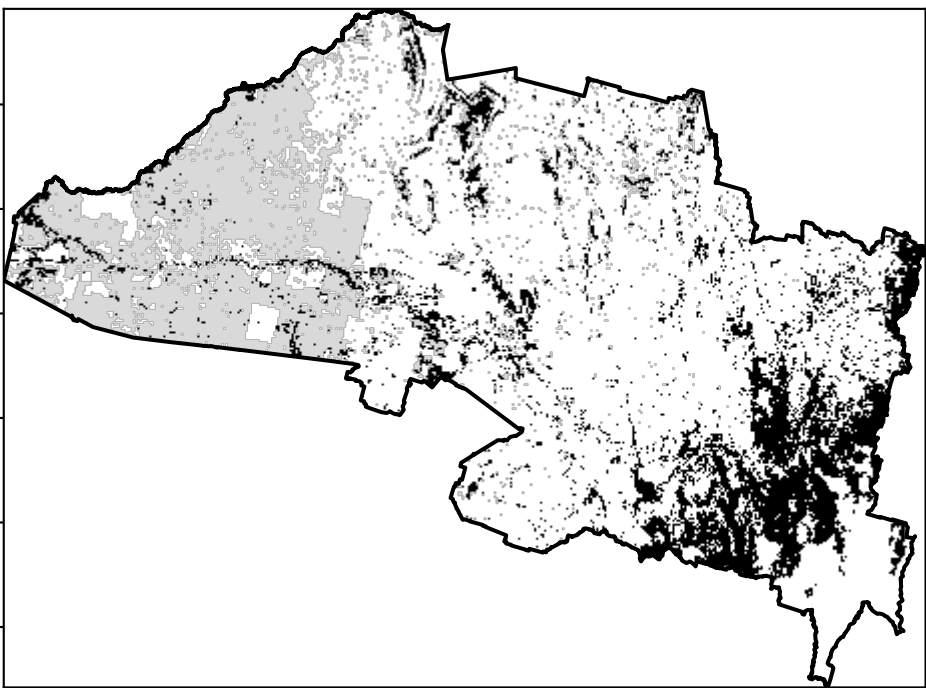
Area not protected 58.0% of region (1,340,713 ha)
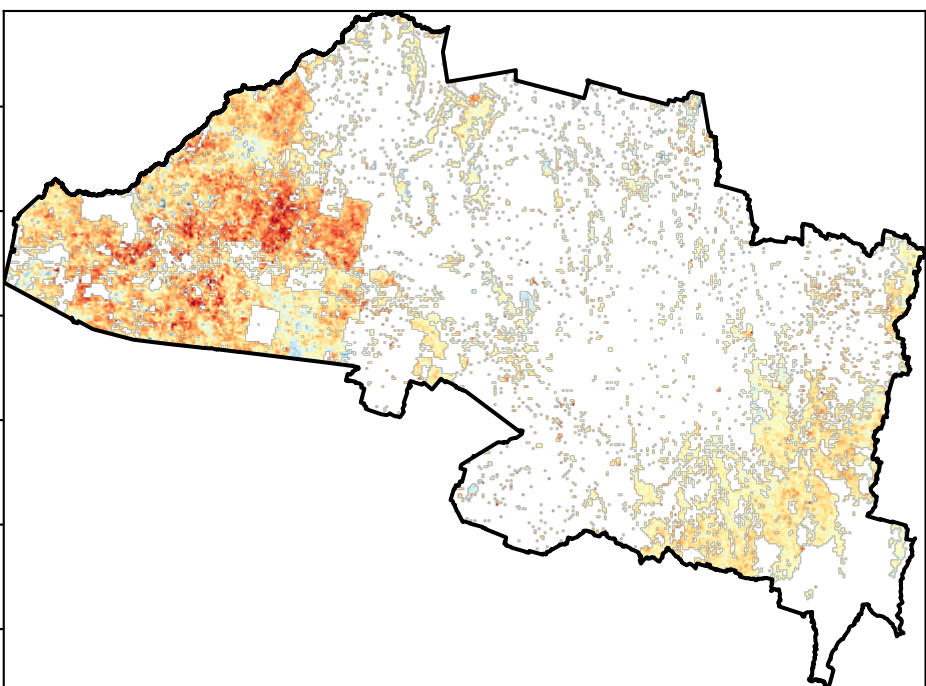
Area protected 42.0% of region (970,861 ha)

% Area protected from wind erosion (>50%)
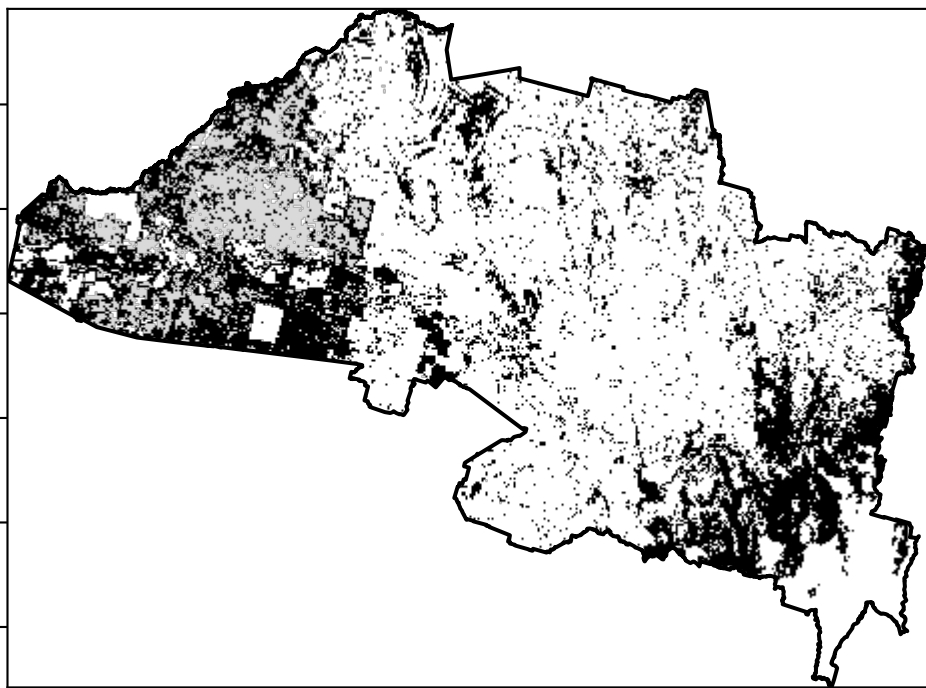
Area not protected 23.0% of region (531,662 ha)
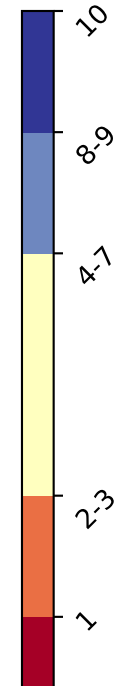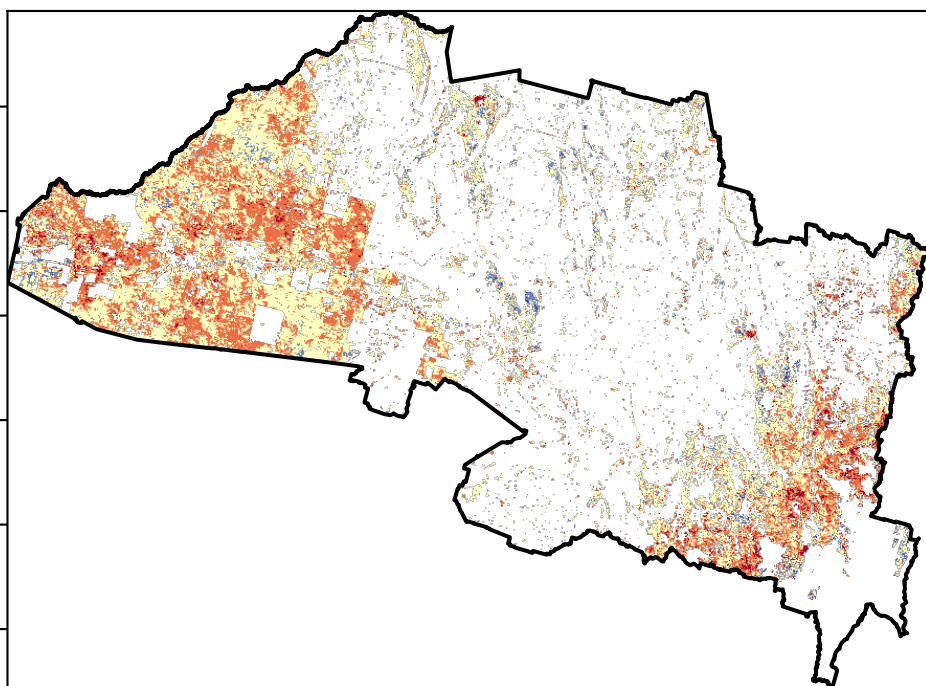
Area protected 77.0% of region (1,779,912 ha)

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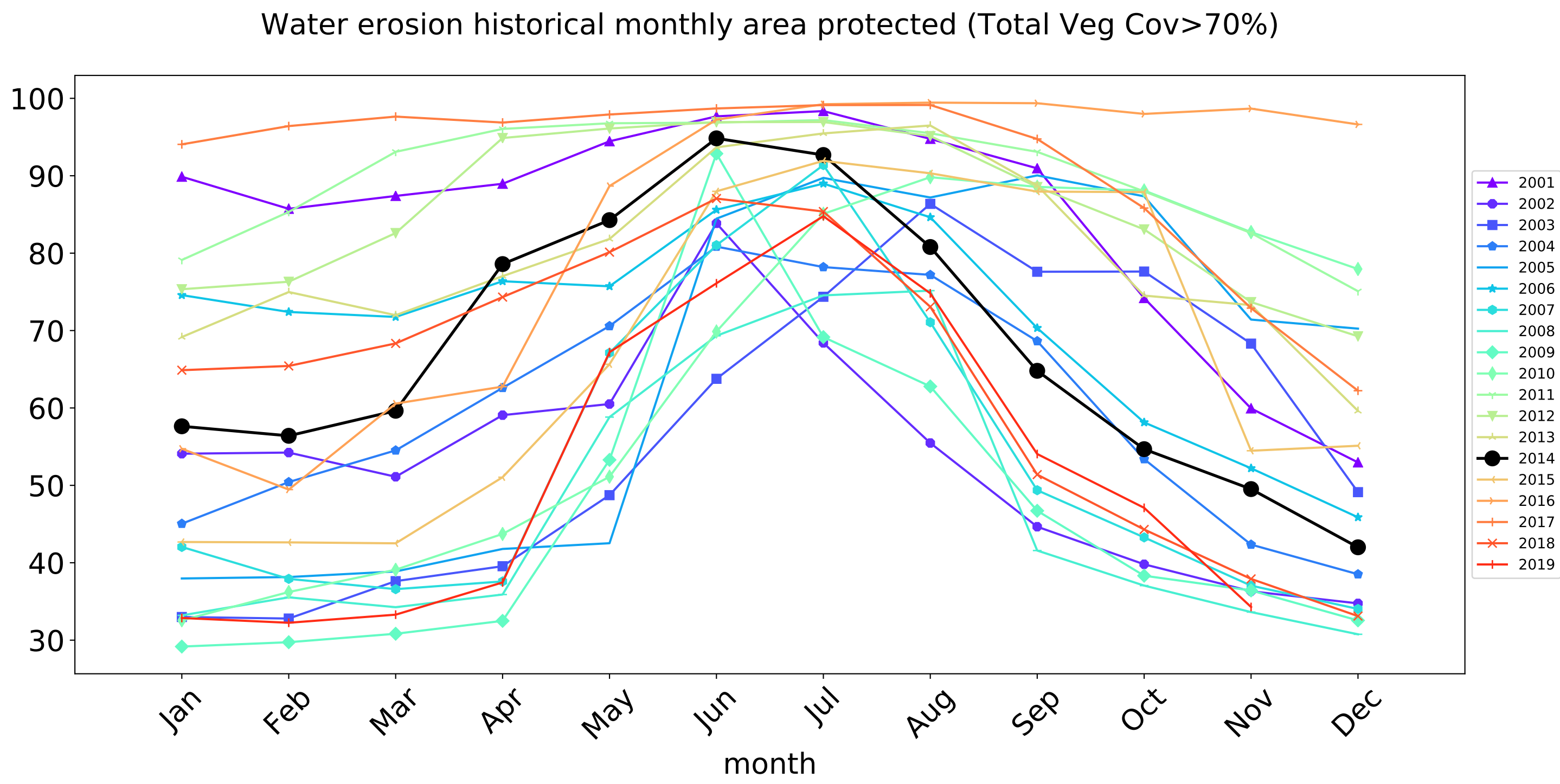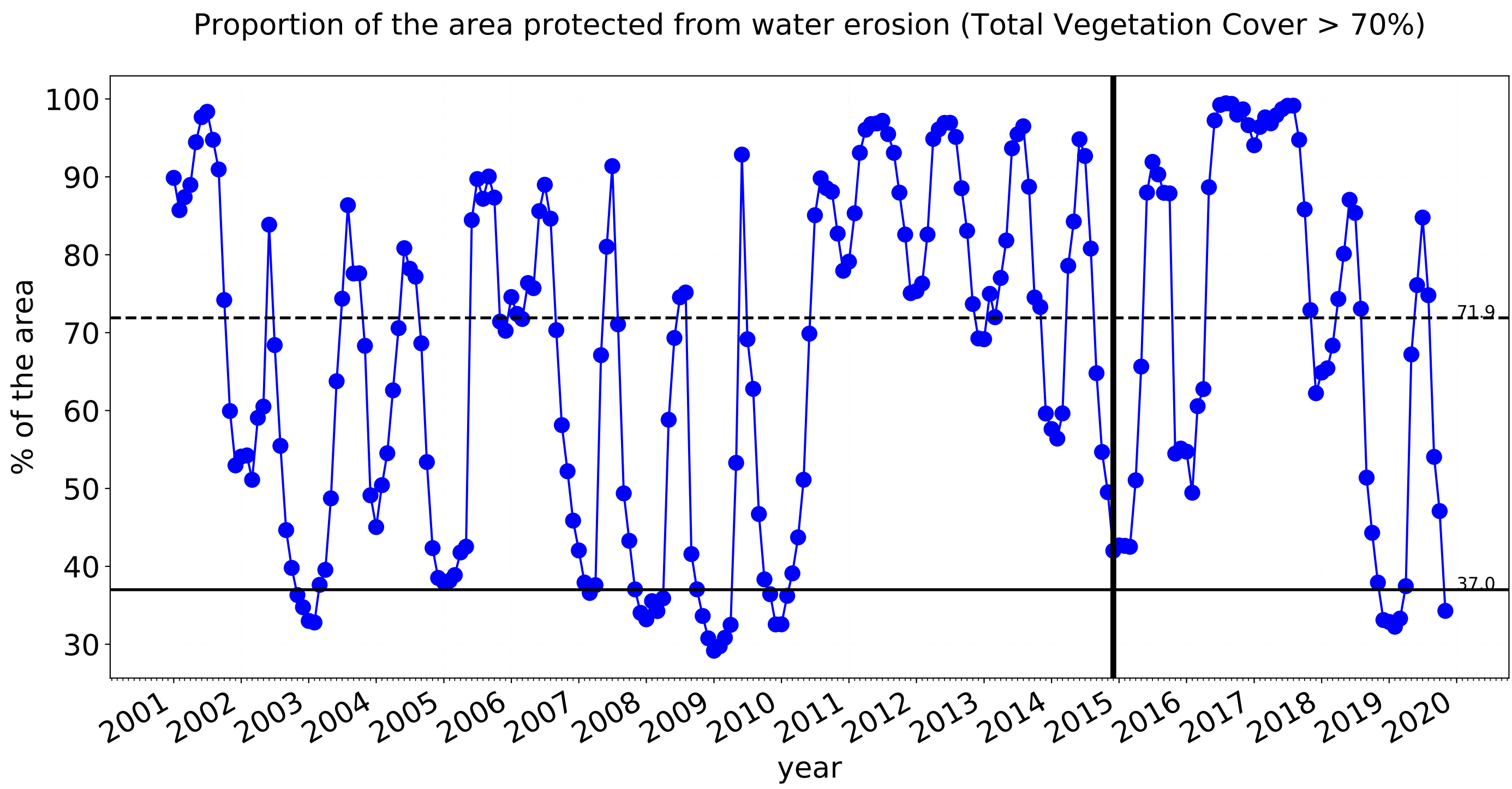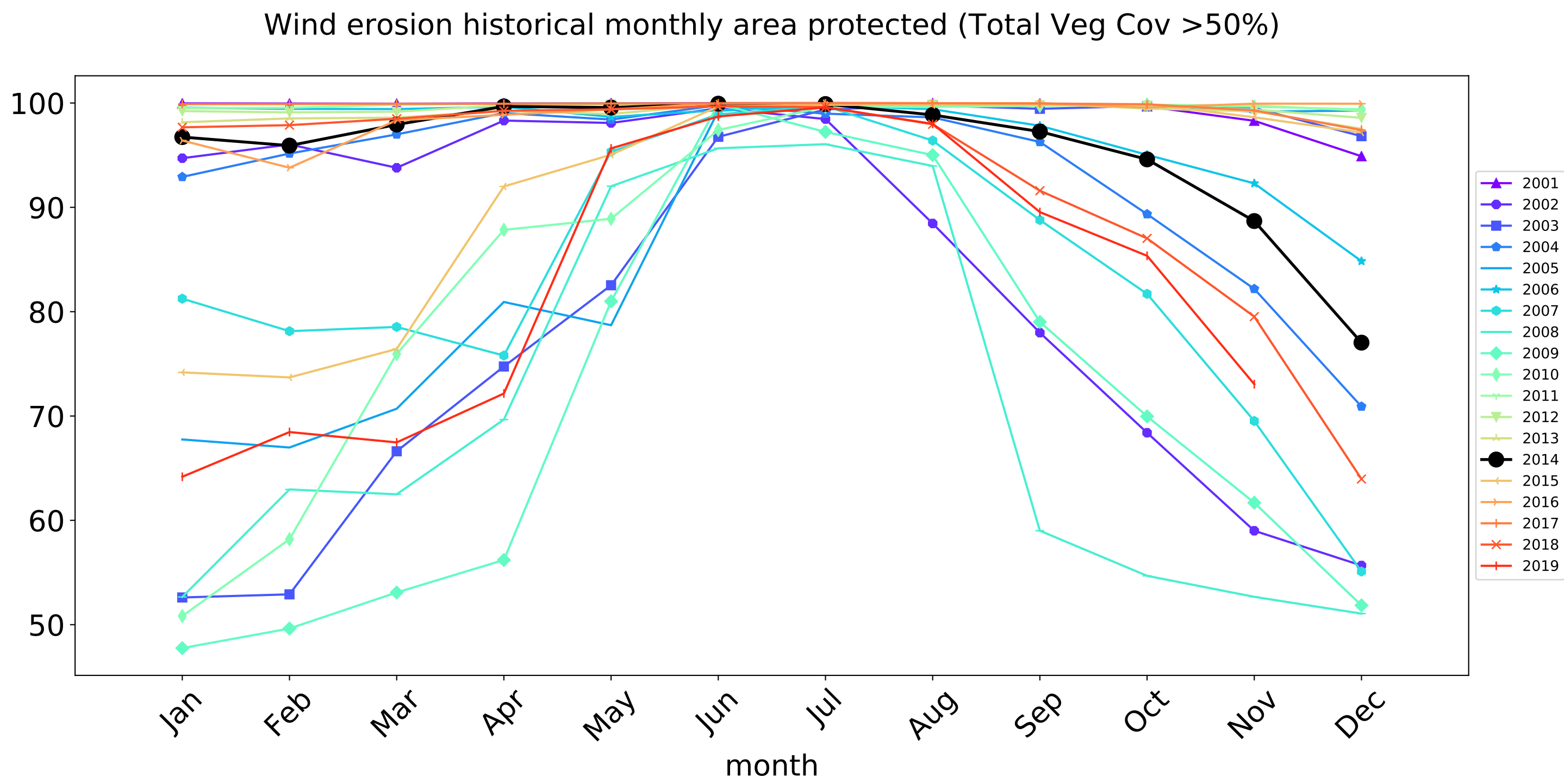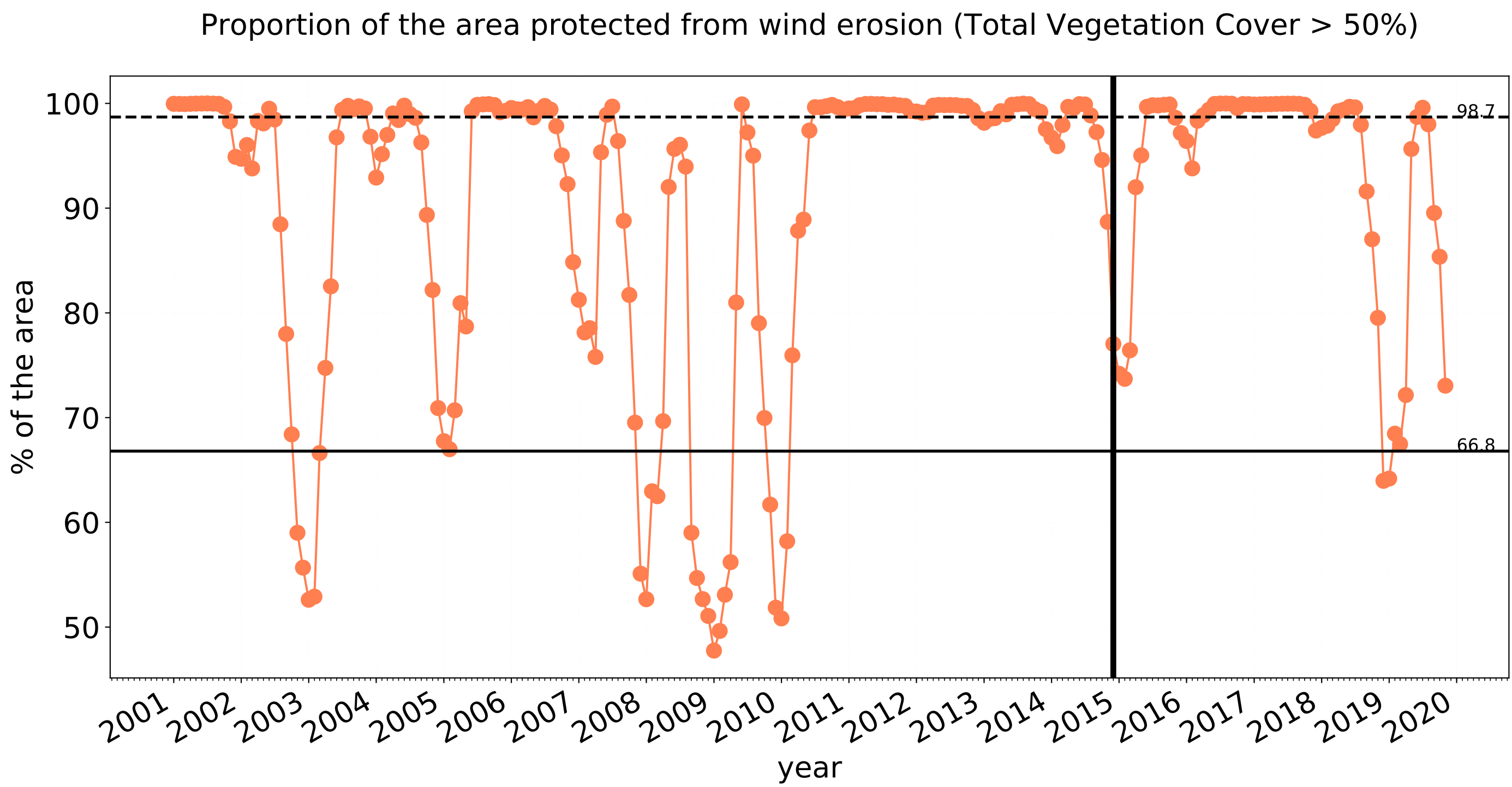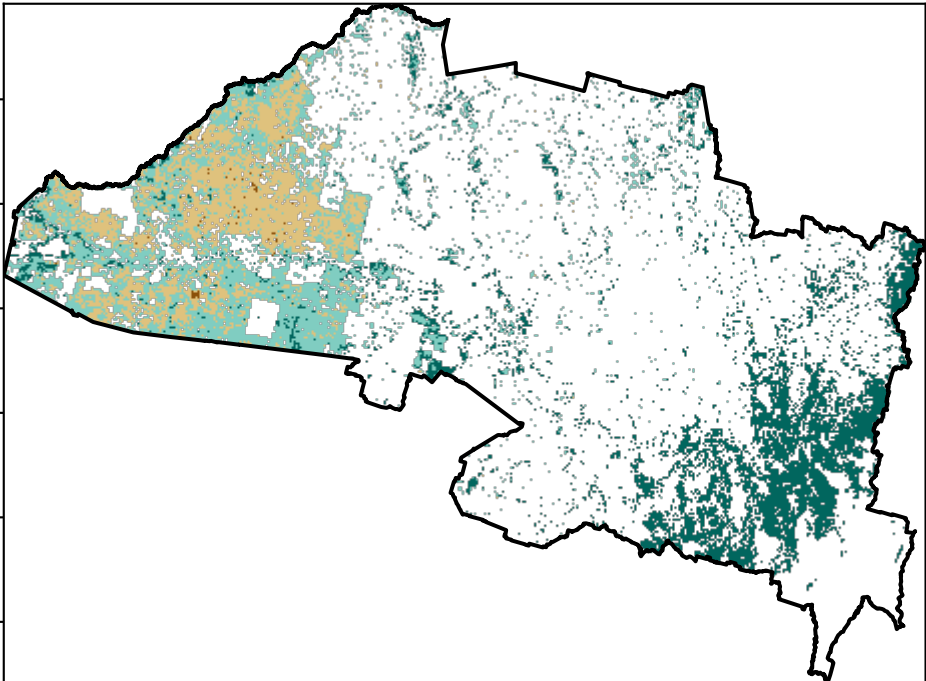
10
8-9
4-7
2-3
1

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)
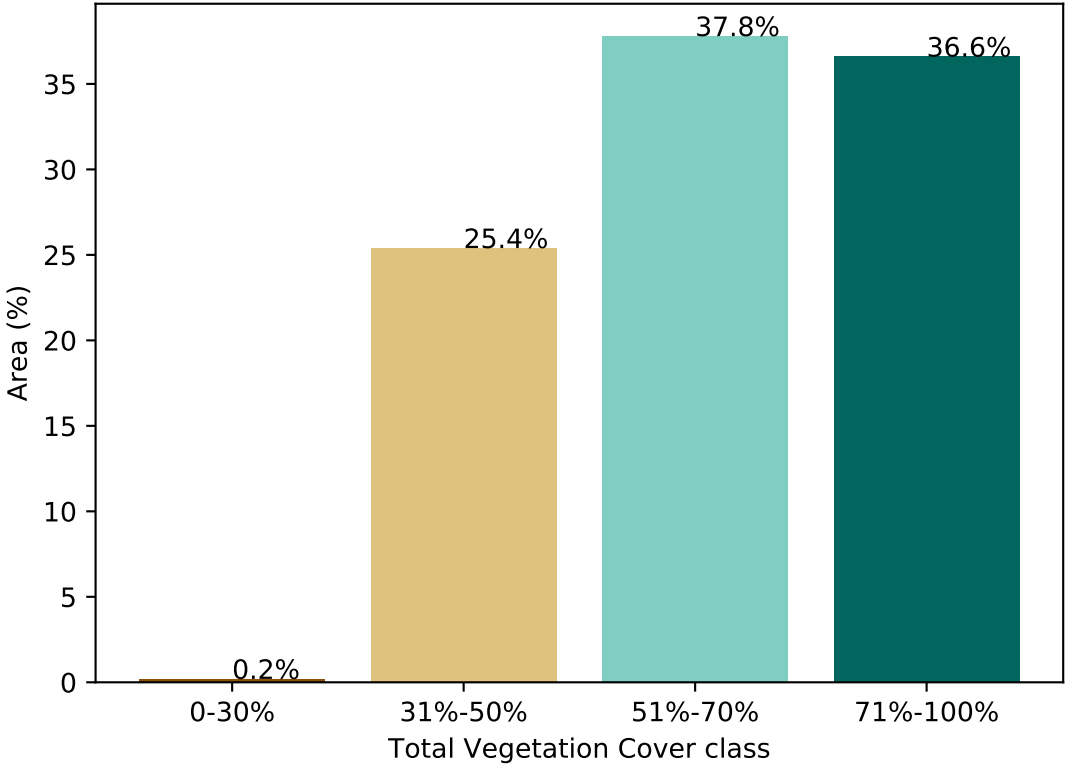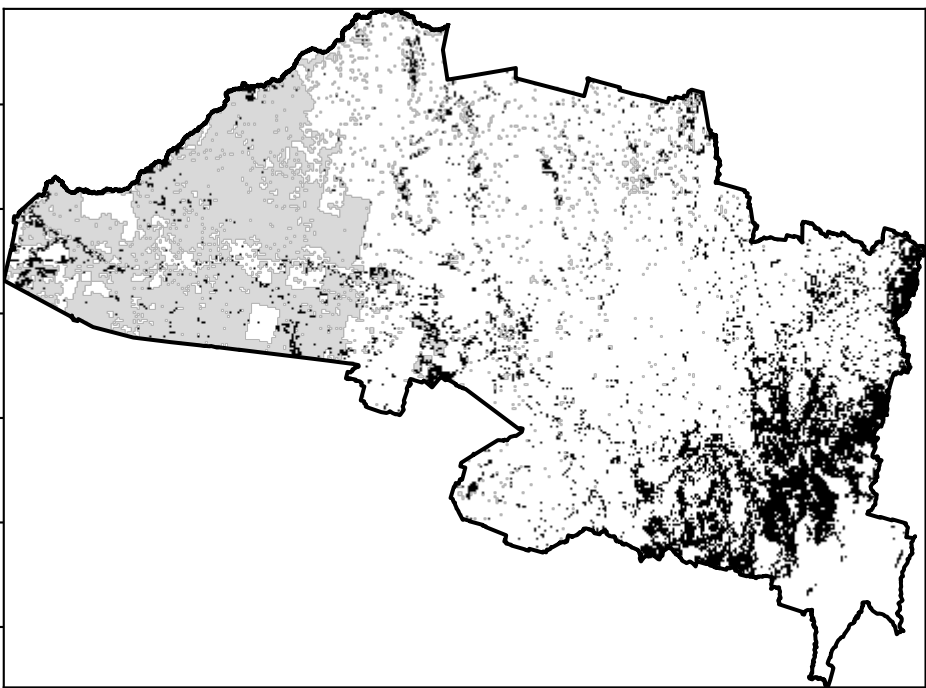
1 Agriculture - Grazing - Non forest

Total Vegetation Cover [%]

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

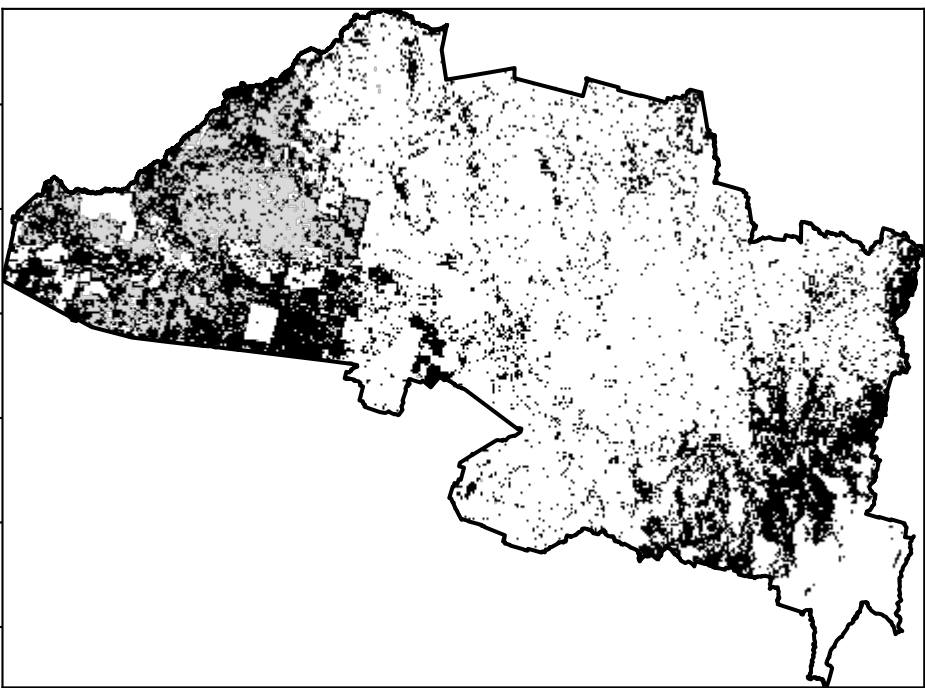## Proportion of vegetation cover class in area

% Area protected from water erosion (>70%)

Area not protected 63.4% of region (1,310,208 ha)

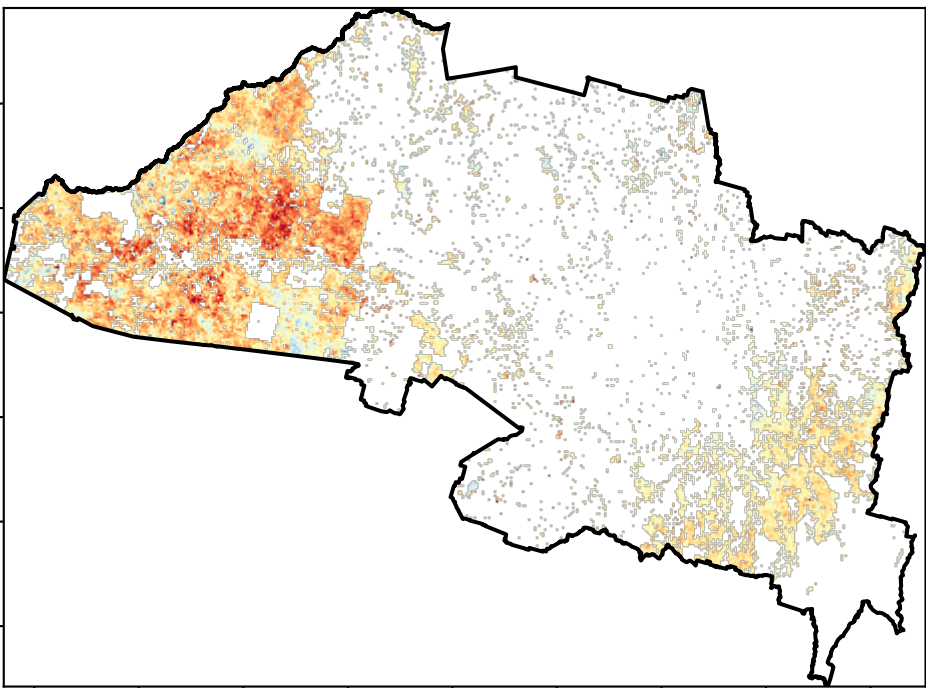Area protected 36.6% of region (756,366 ha)

% Area protected from wind erosion (>50%)

Area not protected 26.0% of region (537,309 ha)
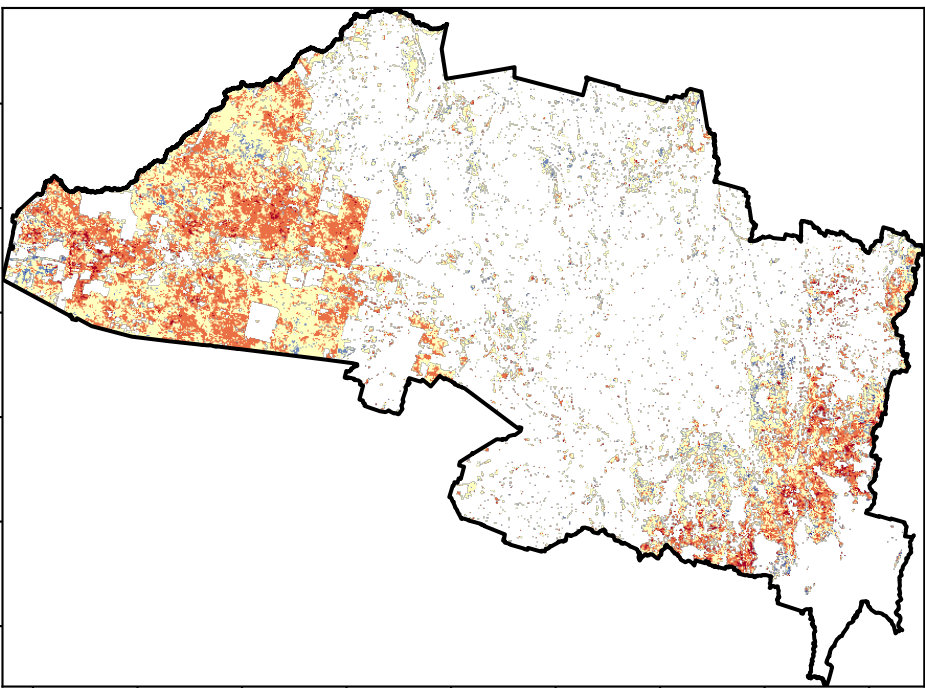
Area protected 74.0% of region (1,529,265 ha)

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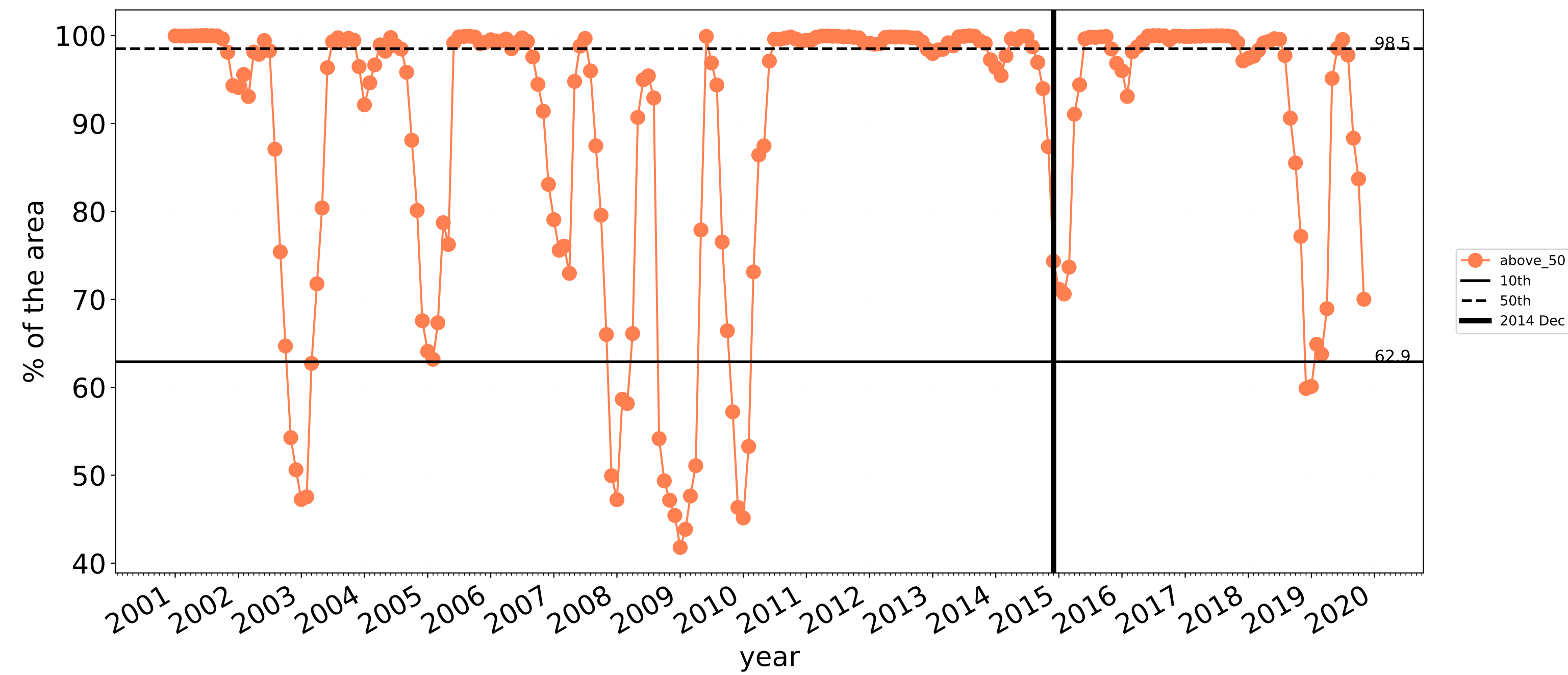
10
8-9
4-7
2-3
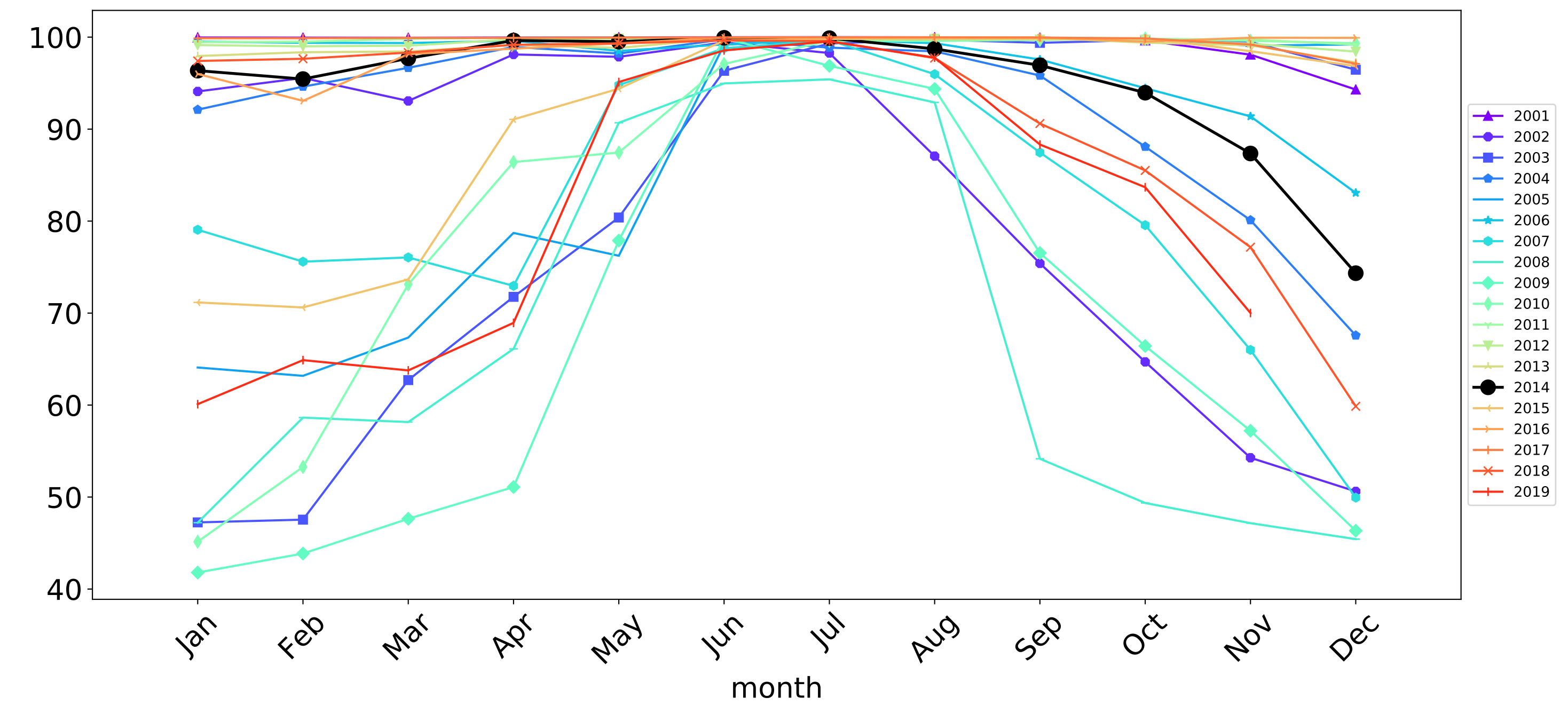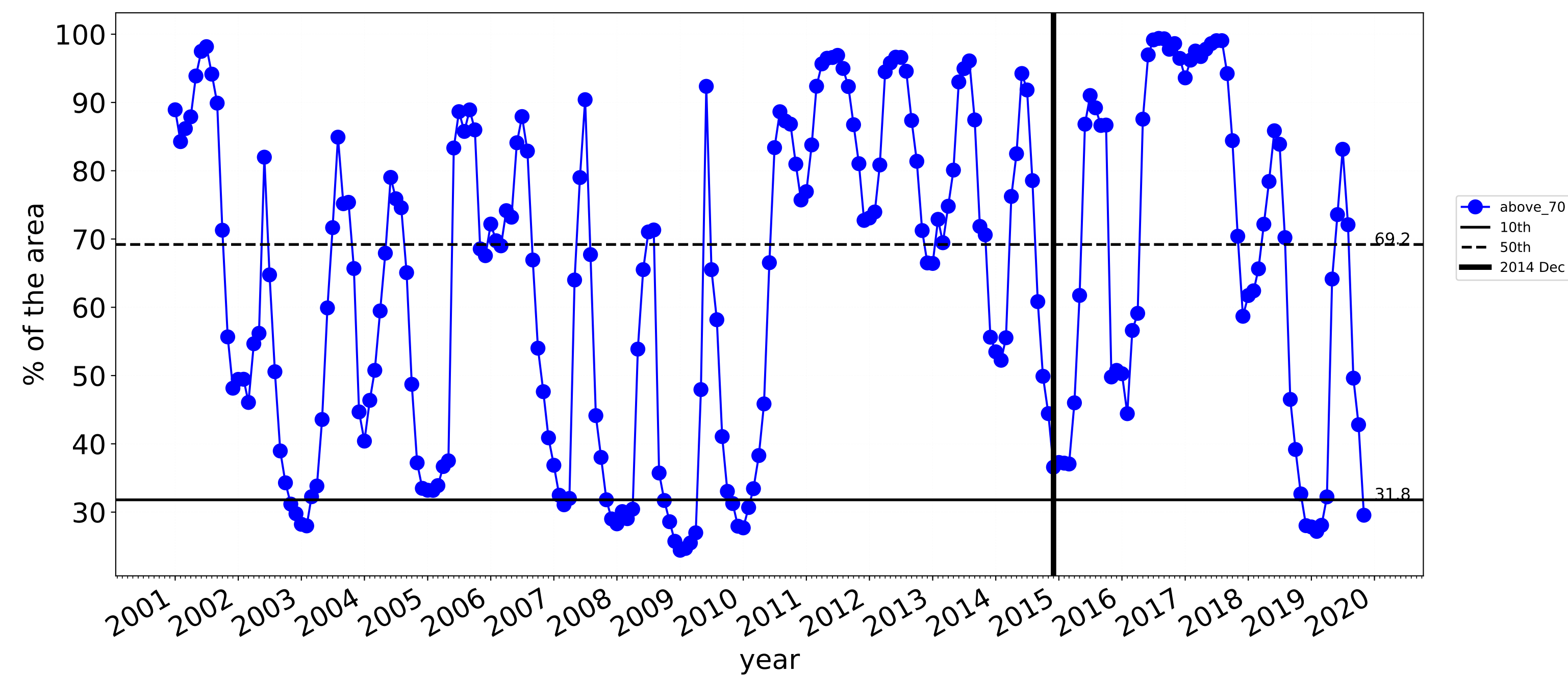1

Grazing non forest timeseries

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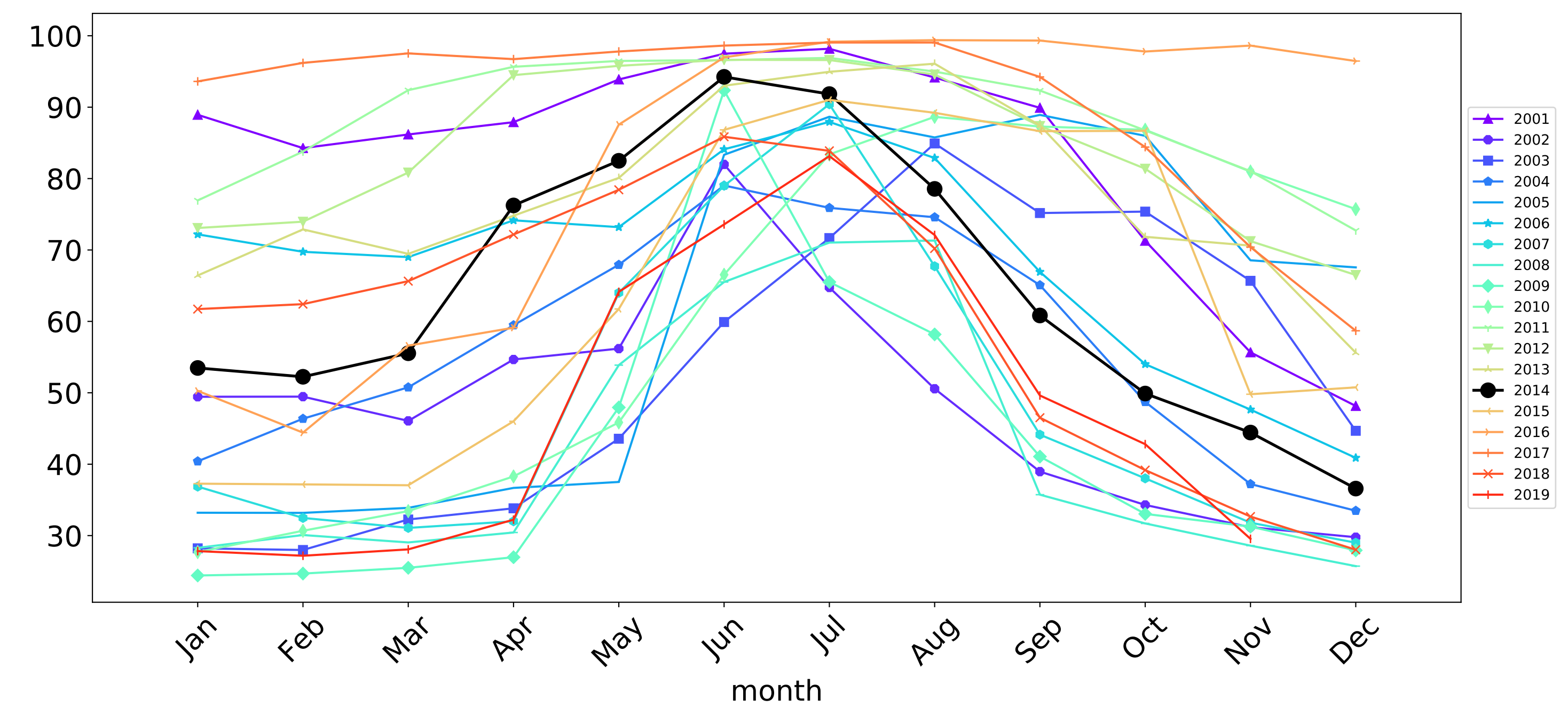
Wind erosion historical monthly area protected (Total Veg Cov >50%)

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

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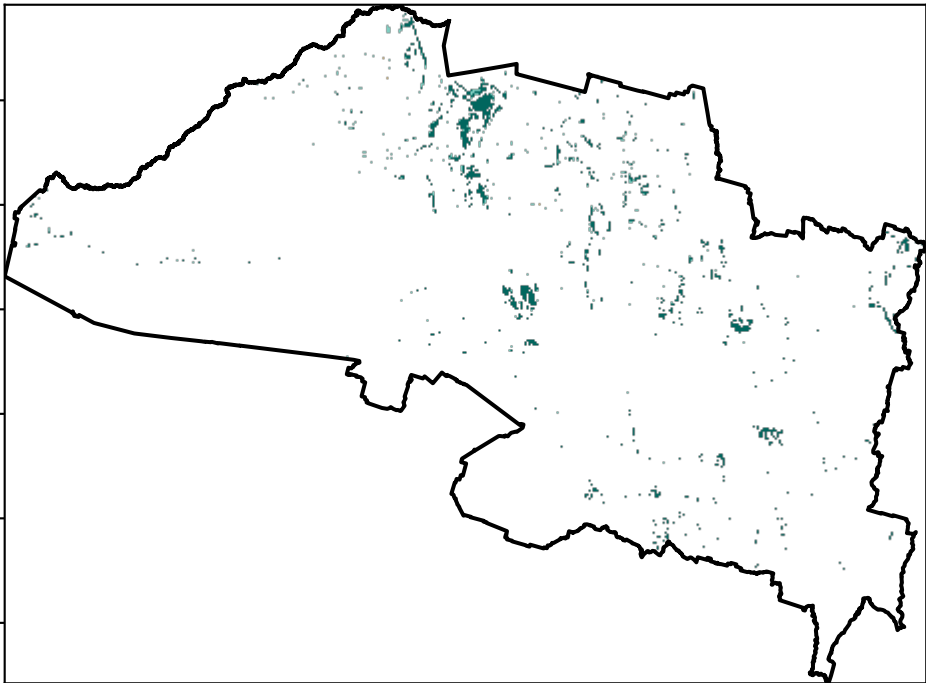
Grazing Woodland forest

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)
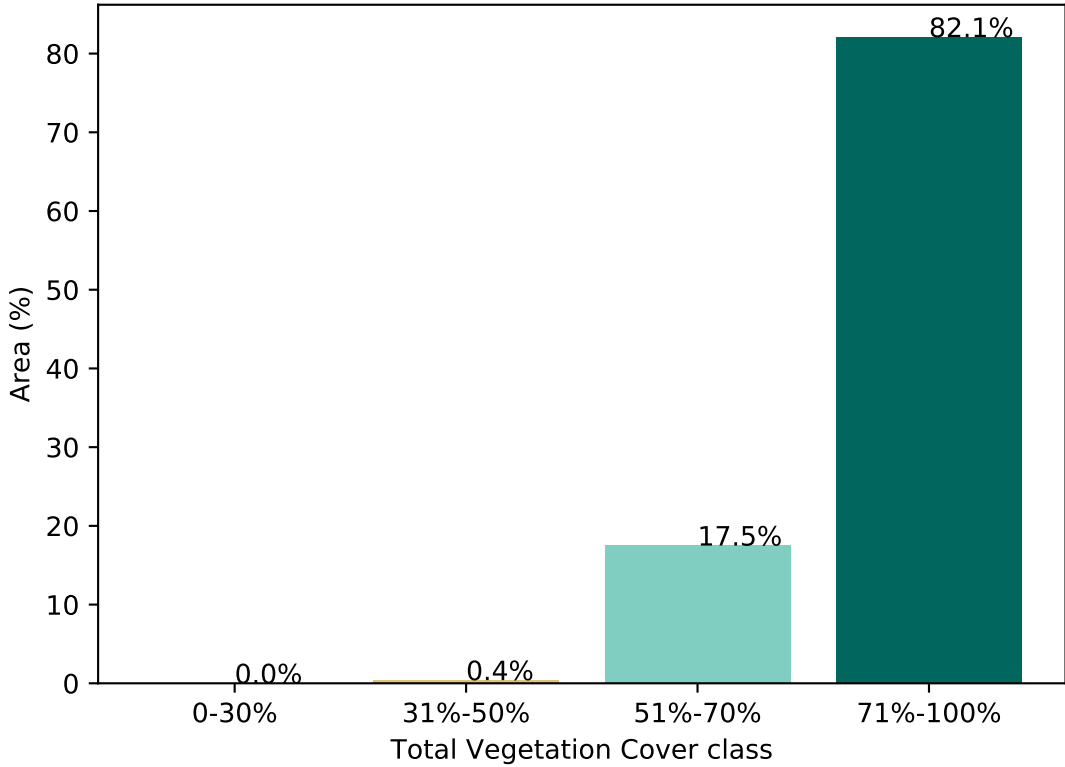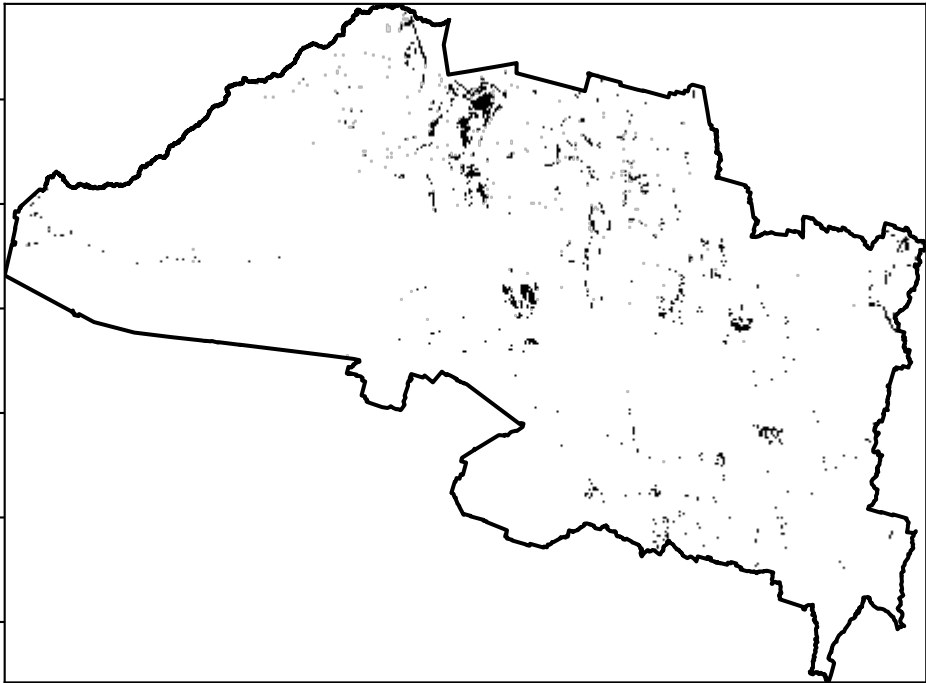
■ 1 Agriculture - Grazing - Woodland forest

Total Vegetation Cover [%]

71%-100%

51%-70%

31%-50%

0-30%

Proportion of vegetation cover class in area
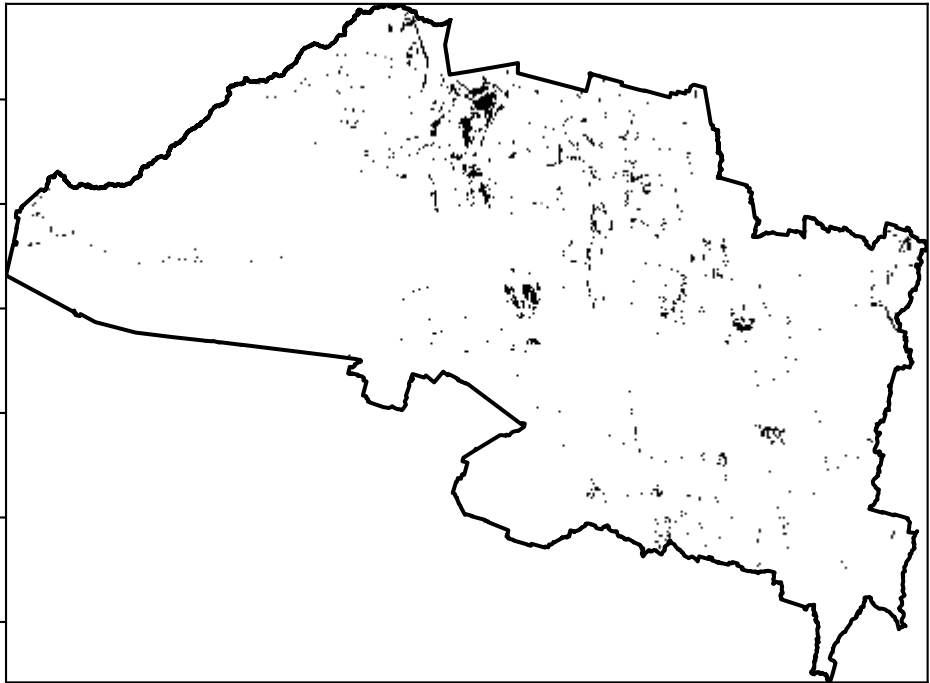

% Area protected from water erosion (>70%)

Area not protected 17.9% of region (25,355 ha)
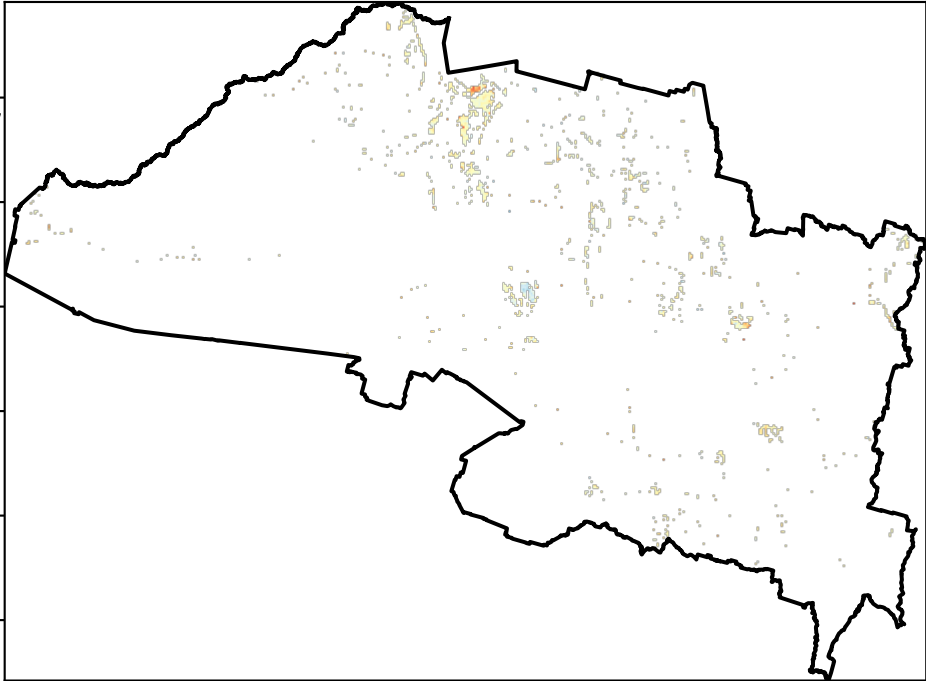
Area protected 82.1% of region (116,294 ha)

% Area protected from wind erosion (>50%)

Area not protected 0.0% of region (0 ha)
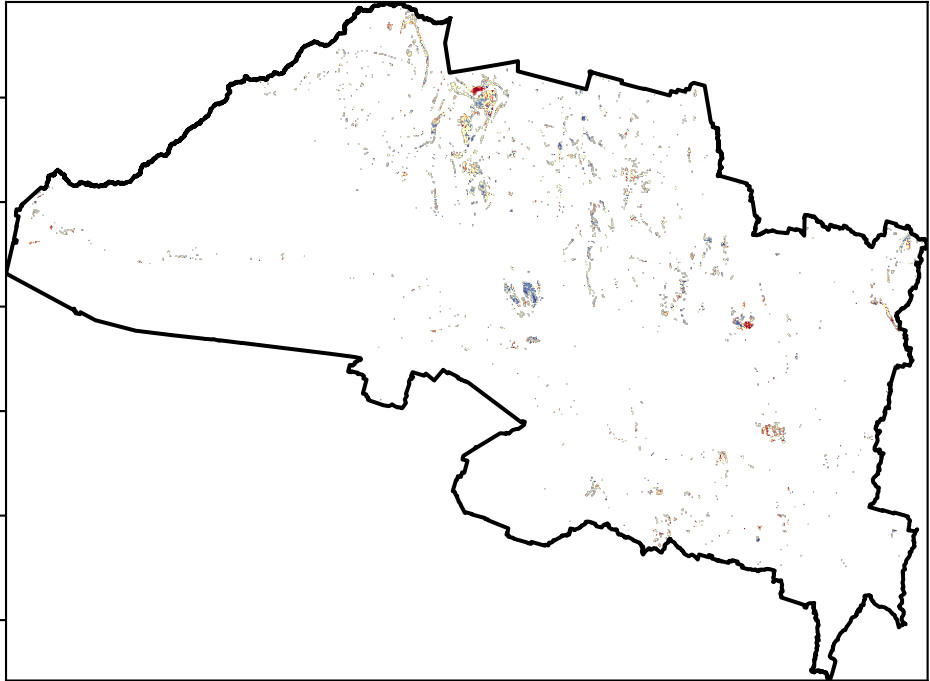
Area protected 100.0% of region (141,650 ha)

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.
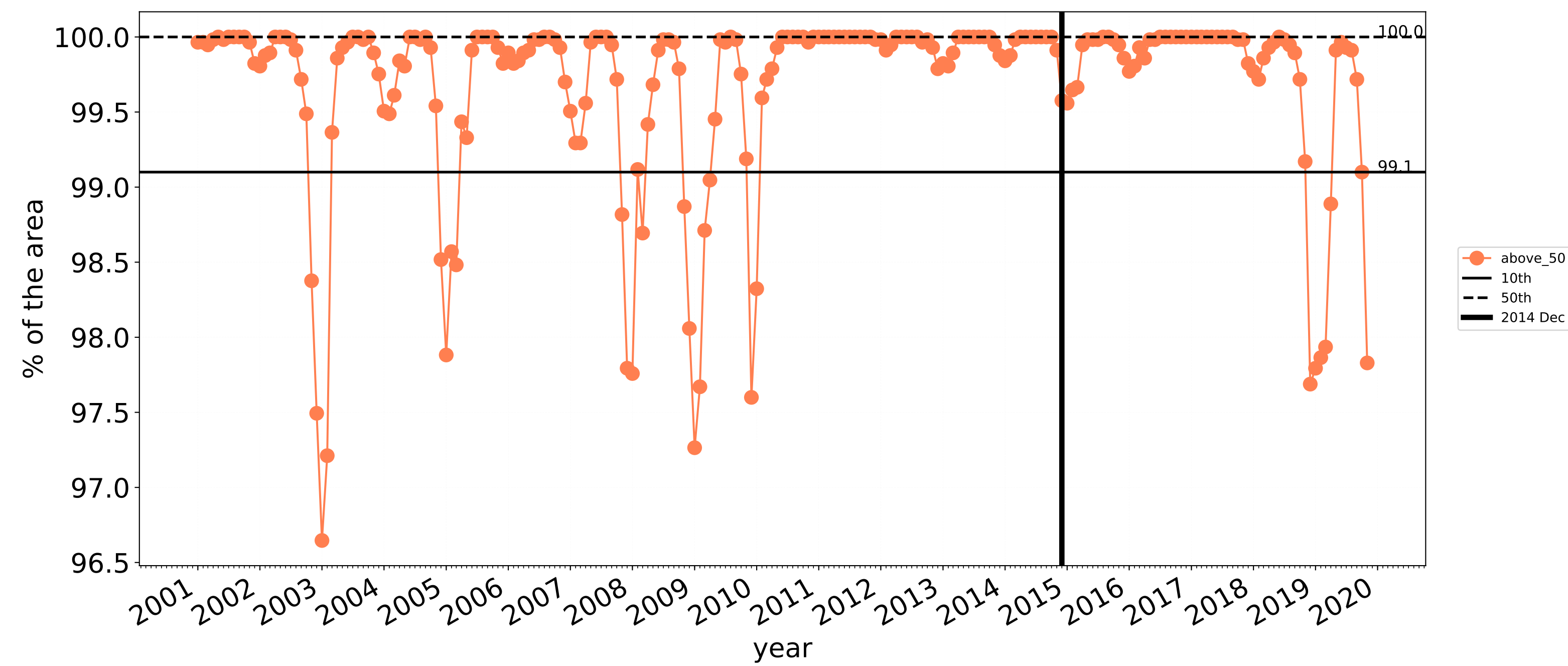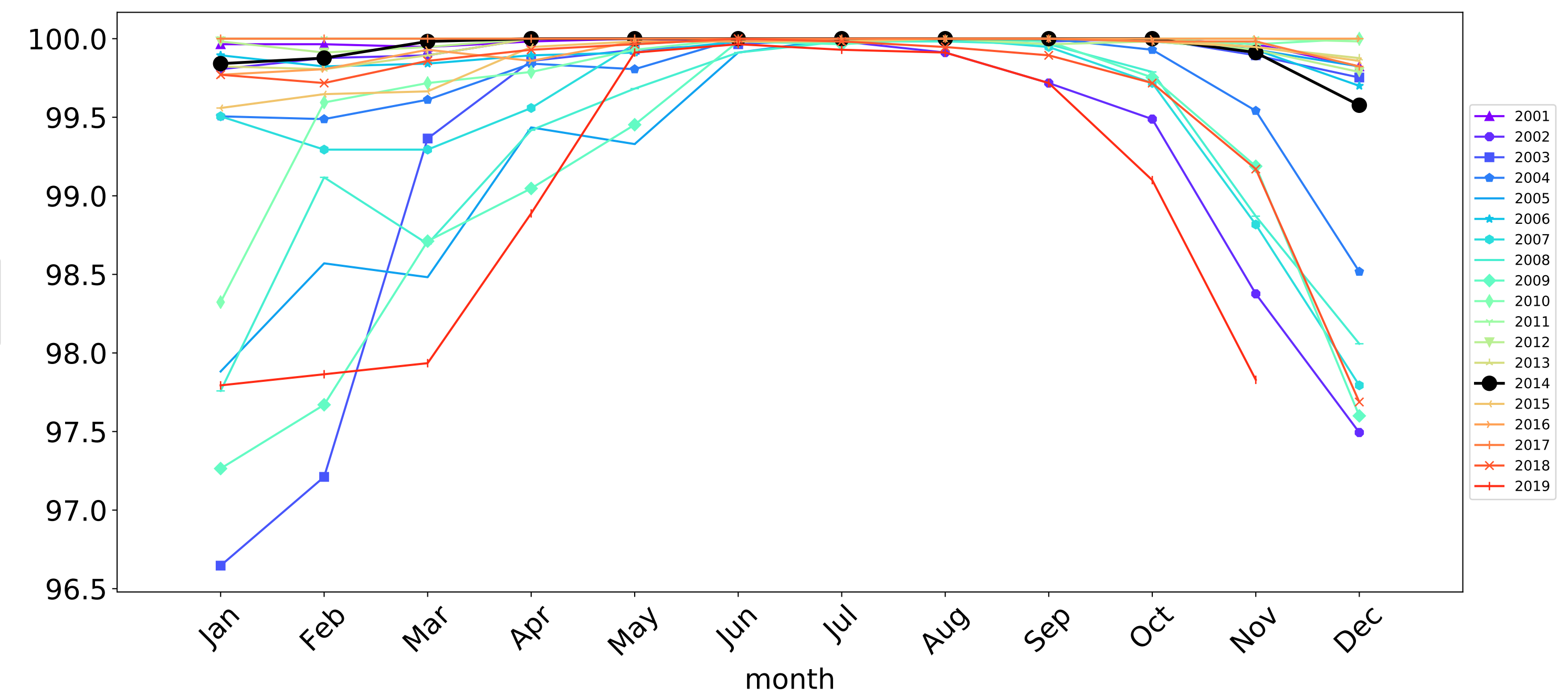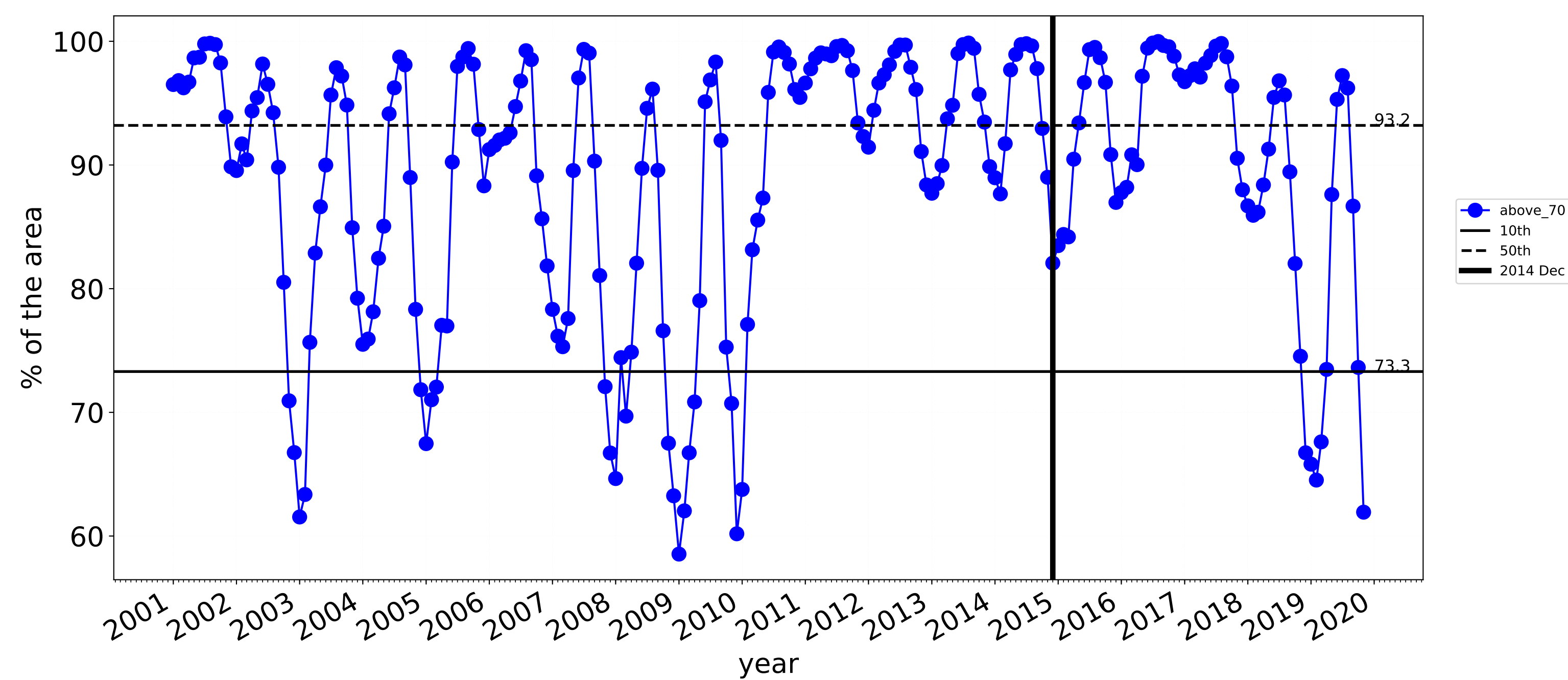
Grazing Woodland forest timeseries

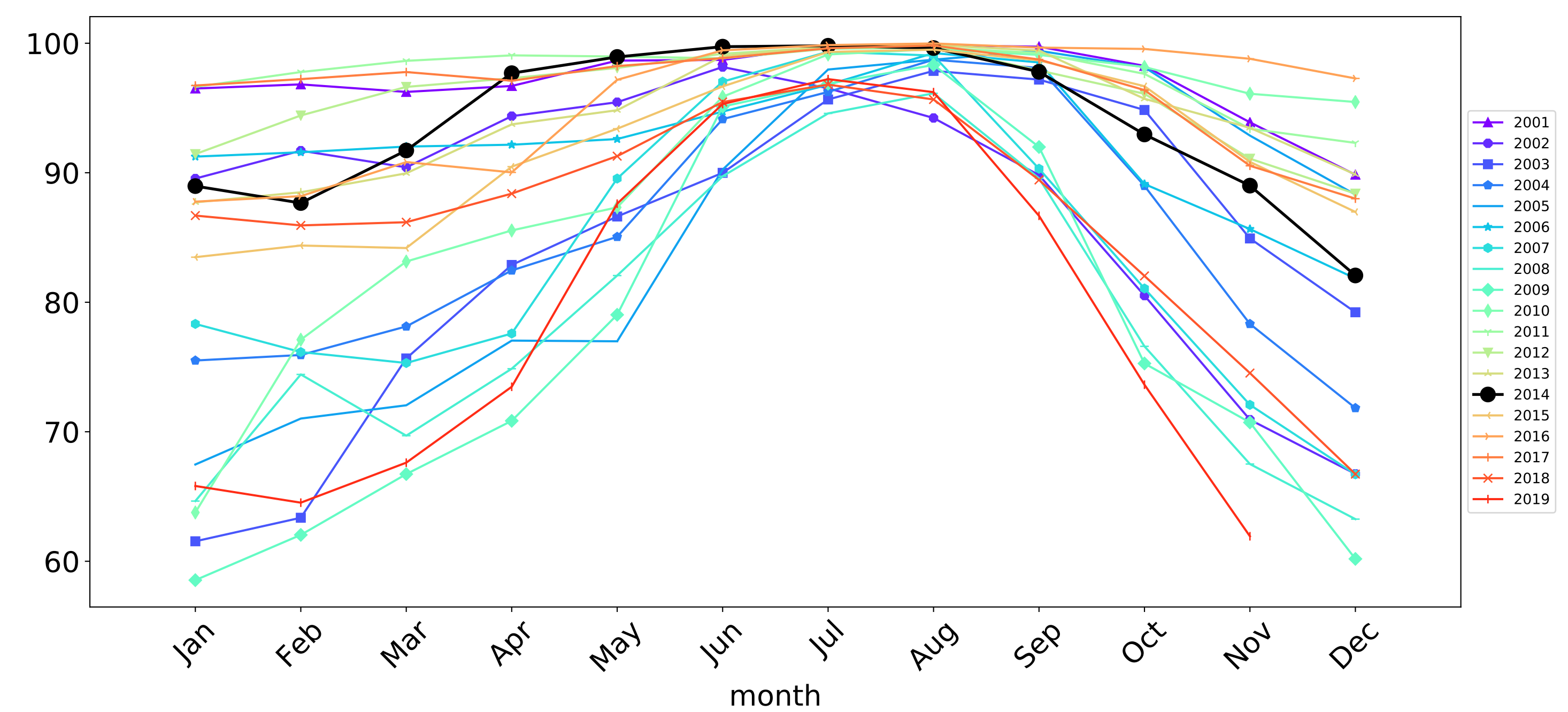Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)

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%)
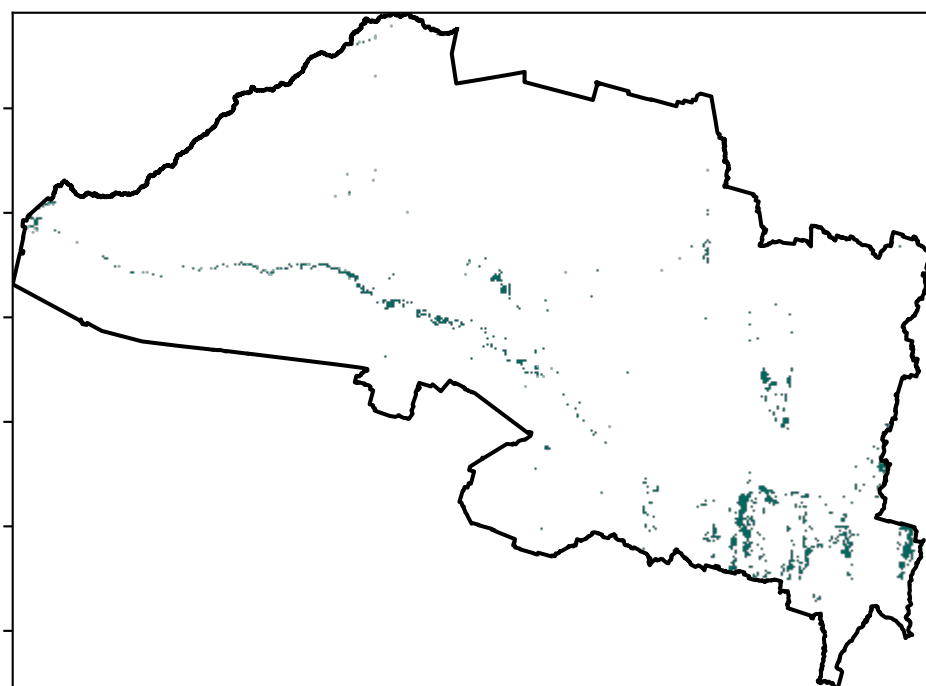
Grazing - Forest (non woodland)

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)
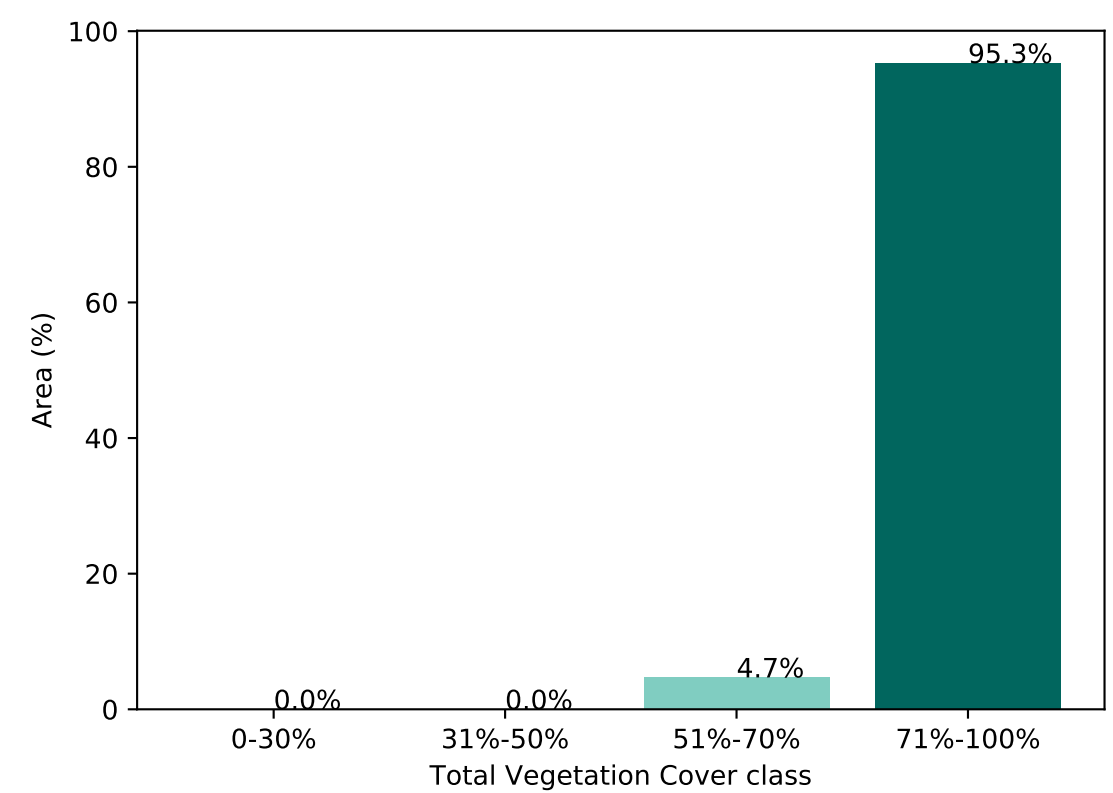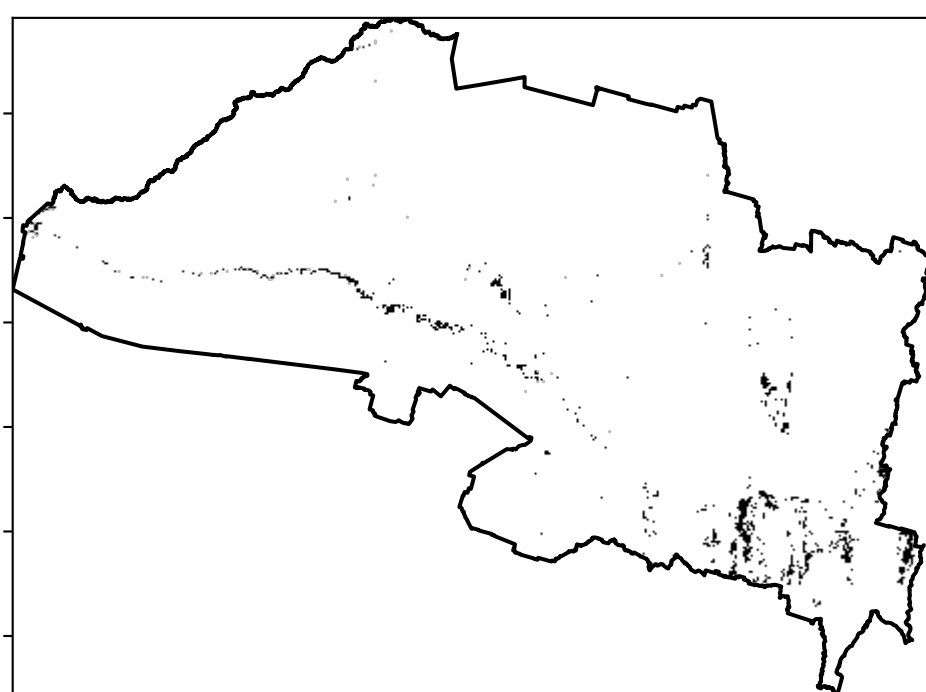

1 Agriculture - Grazing - Non-woodland forest

Total Vegetation Cover [%]

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

Proportion of vegetation cover class in area

0.0% 0.0% 4.7% 95.3%

Area (%) vs Total Vegetation Cover class

% Area protected from water erosion (>70%)

Area not protected 4.7% of region (4,857 ha)

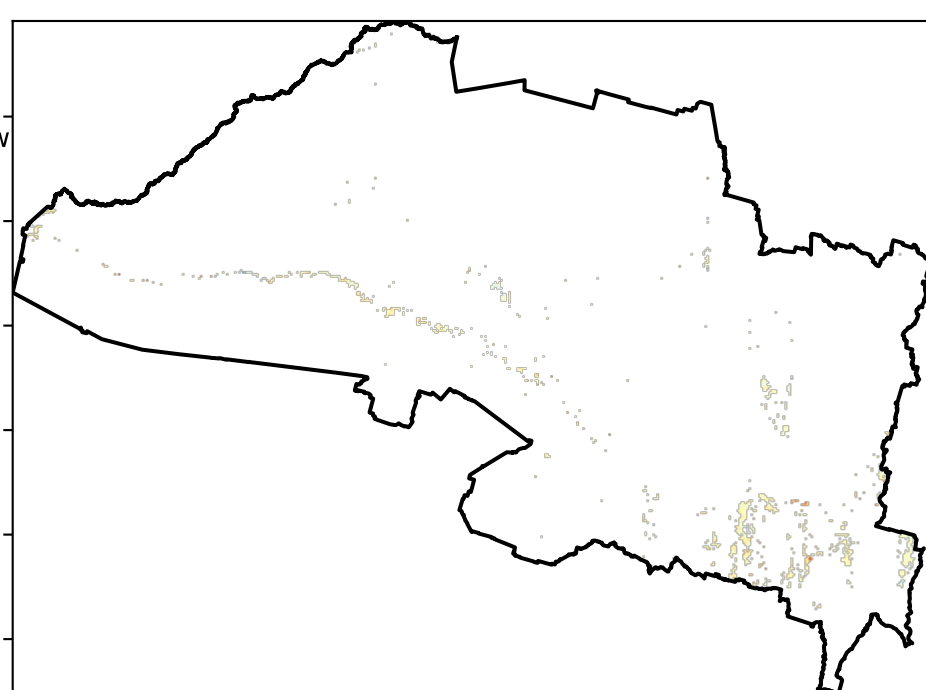Area protected 95.3% of region (98,492 ha)

% Area protected from wind erosion (>50%)
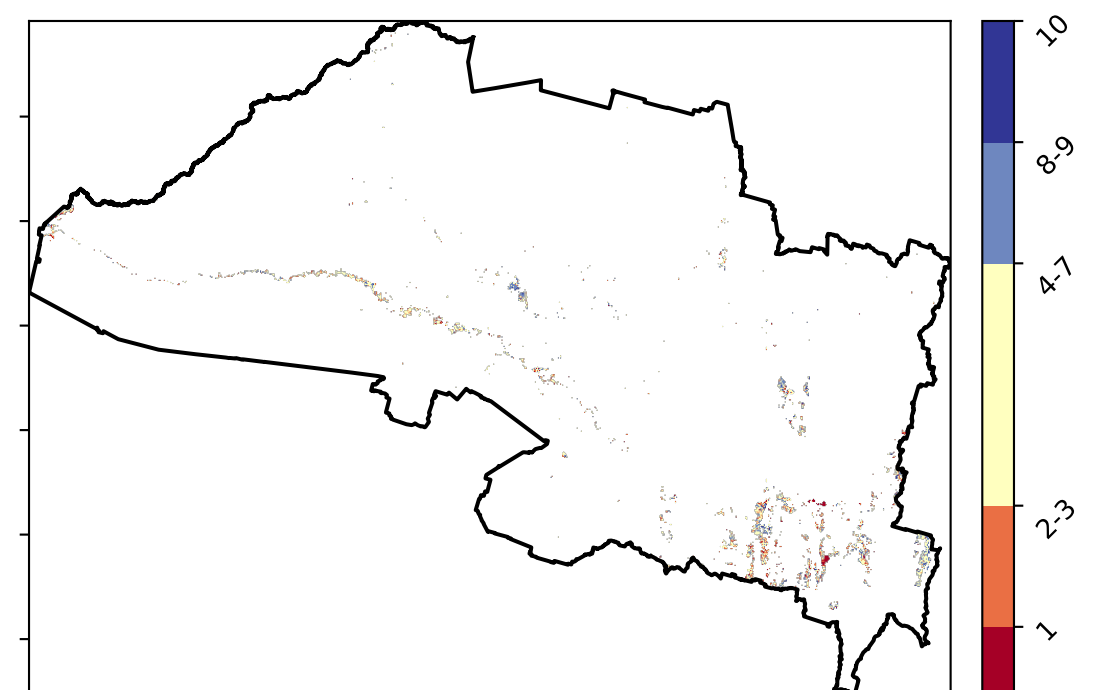

Area protected 100.0% of region (103,350 ha)

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.
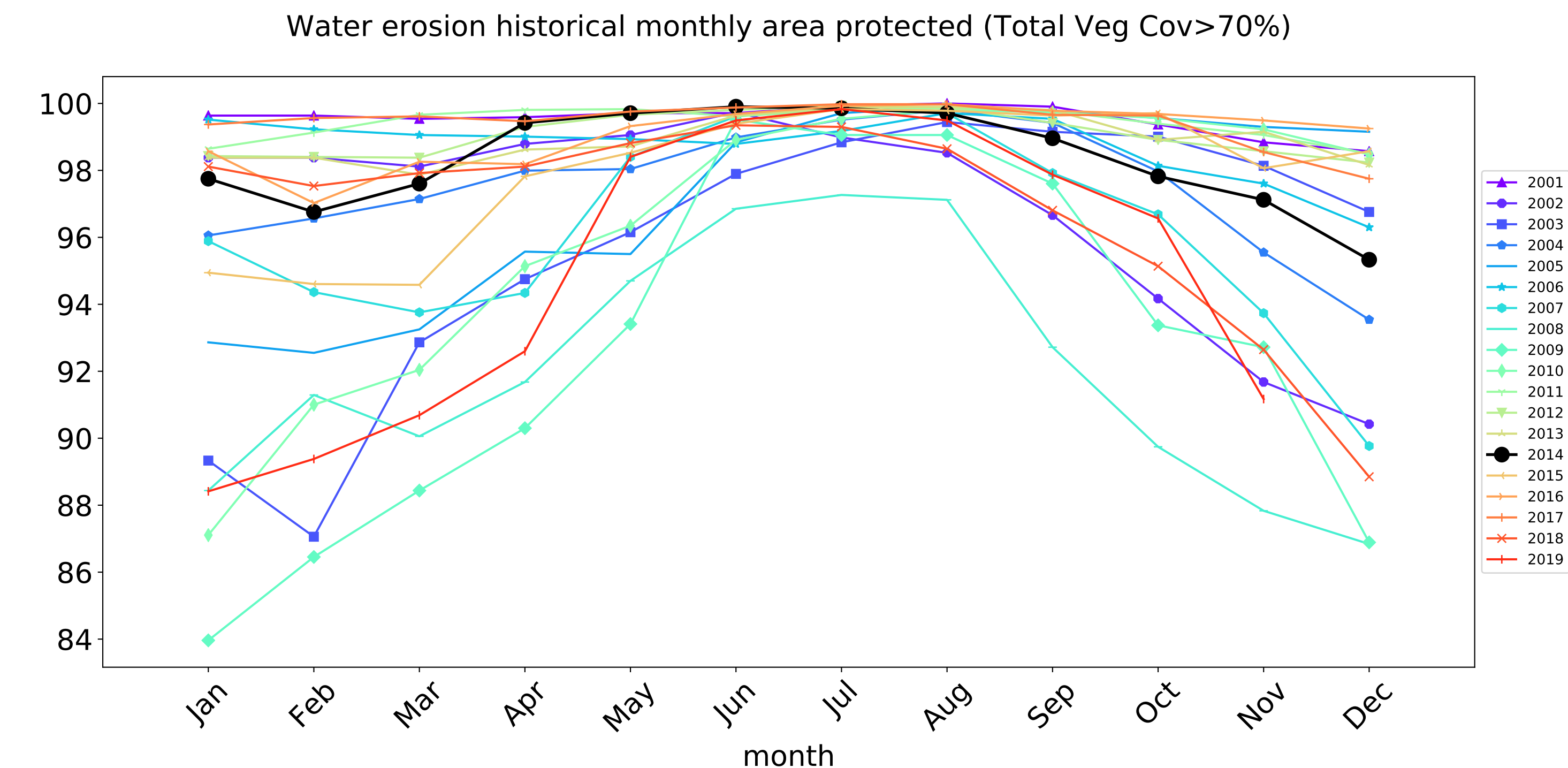

- 10
- 8-9
- 4-7
- 2-3
- 1

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
69.6% of
region
(2,218,117
ha)

Area
protected
30.4% of
region
(968,832
ha)

% Area protected from wind erosion (>50%)

Area not
protected
12.0% of
region
(382,434
ha)

Area
protected
88.0% of
region
(2,804,516
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
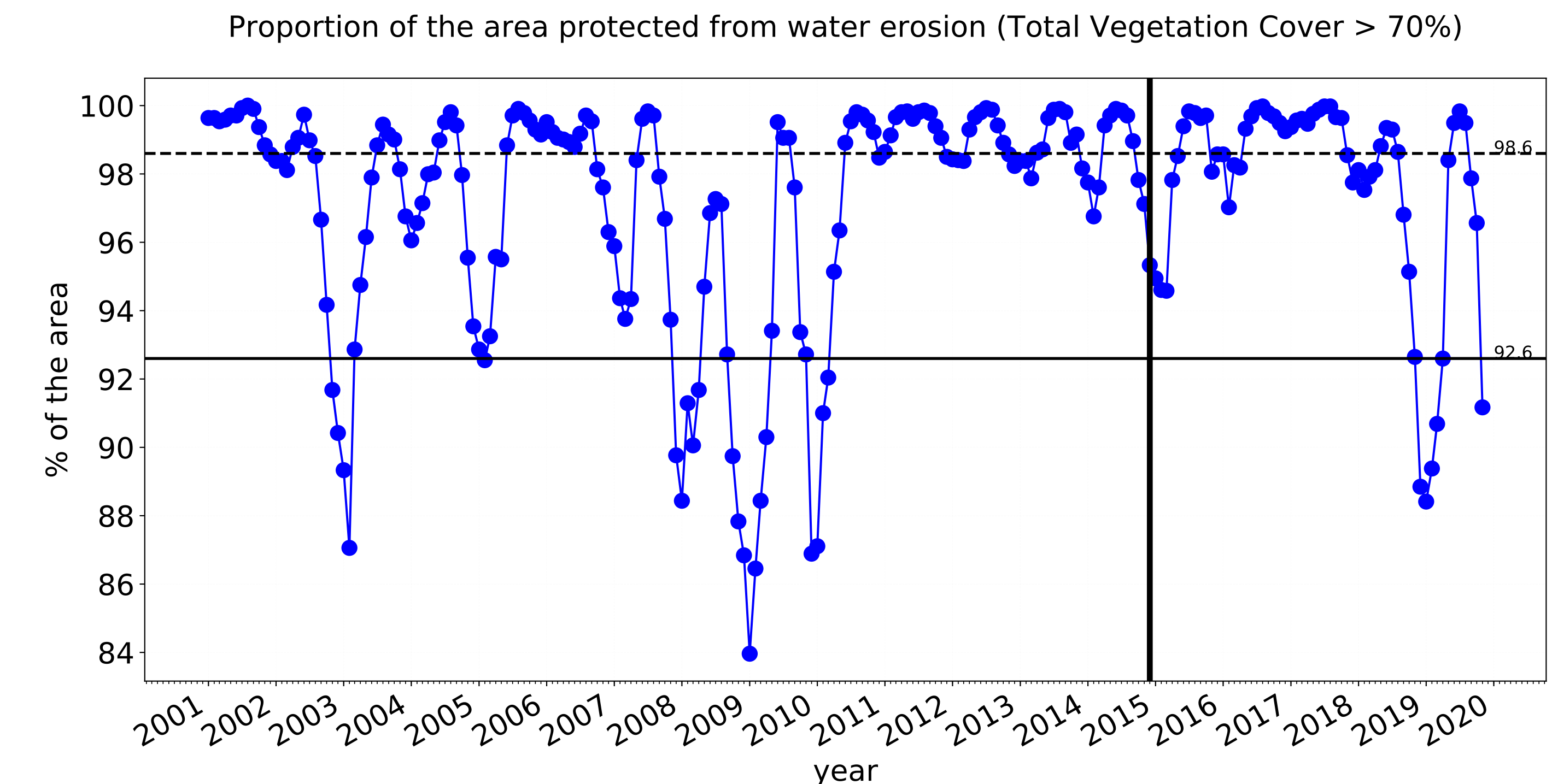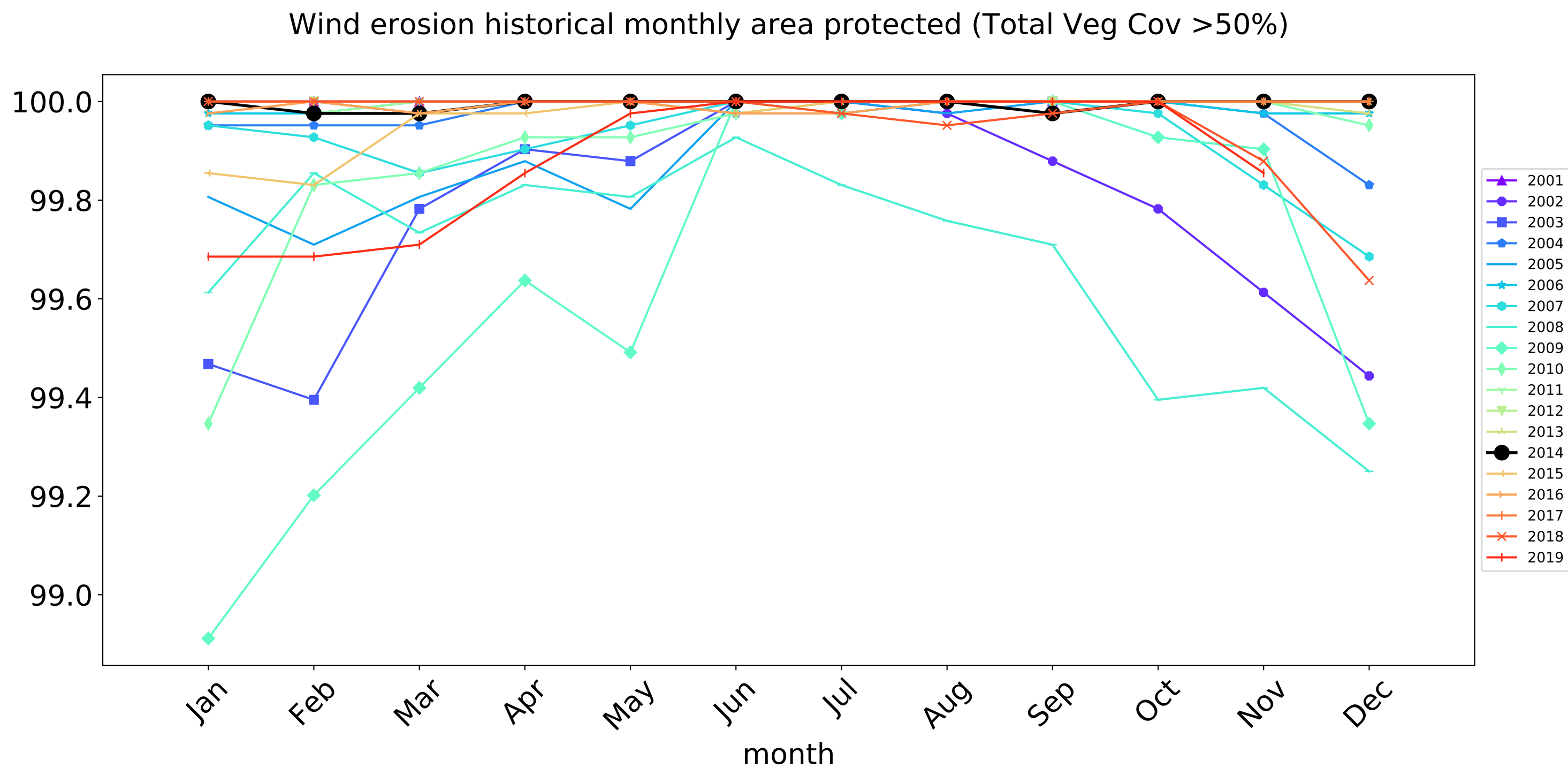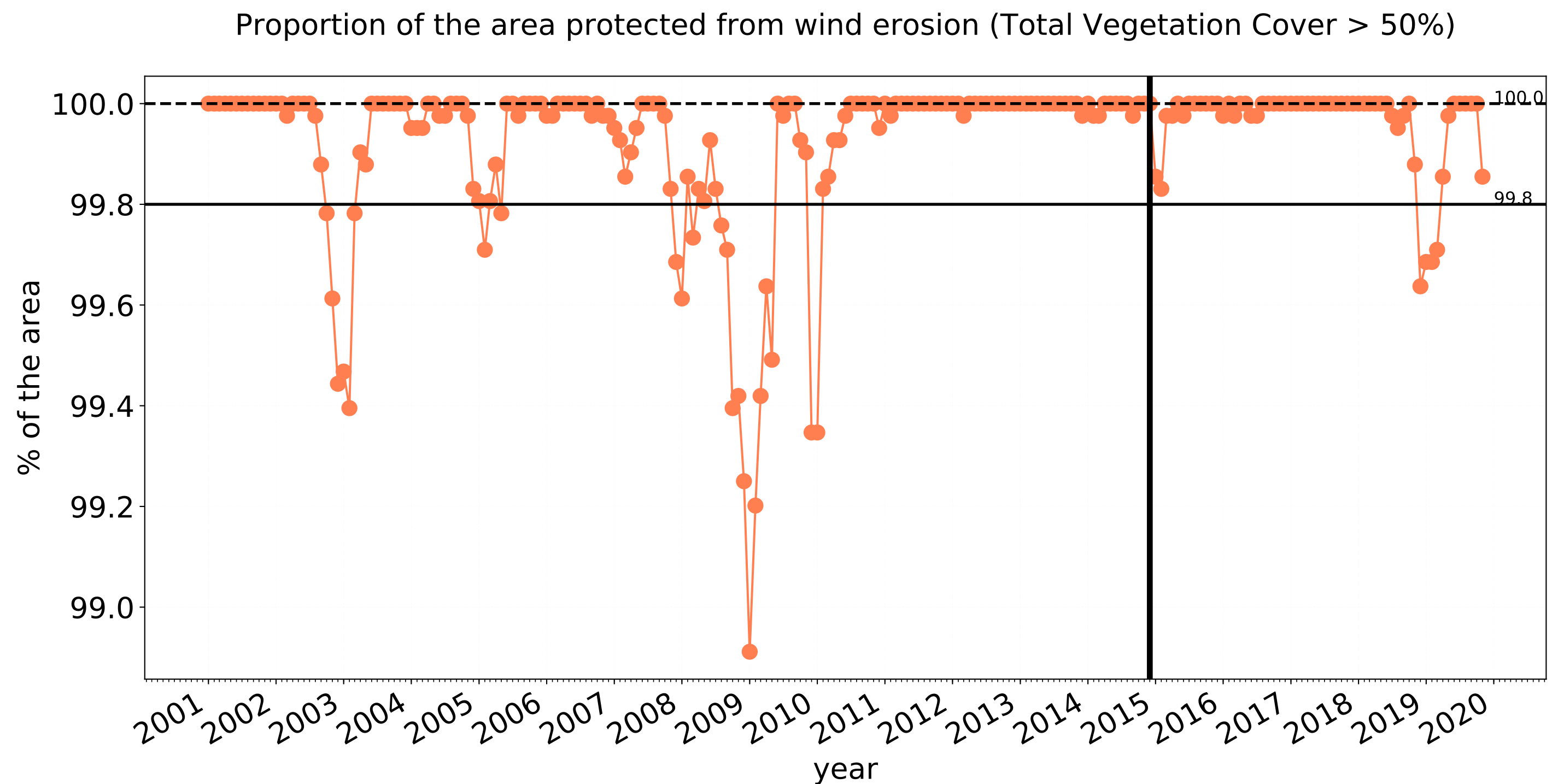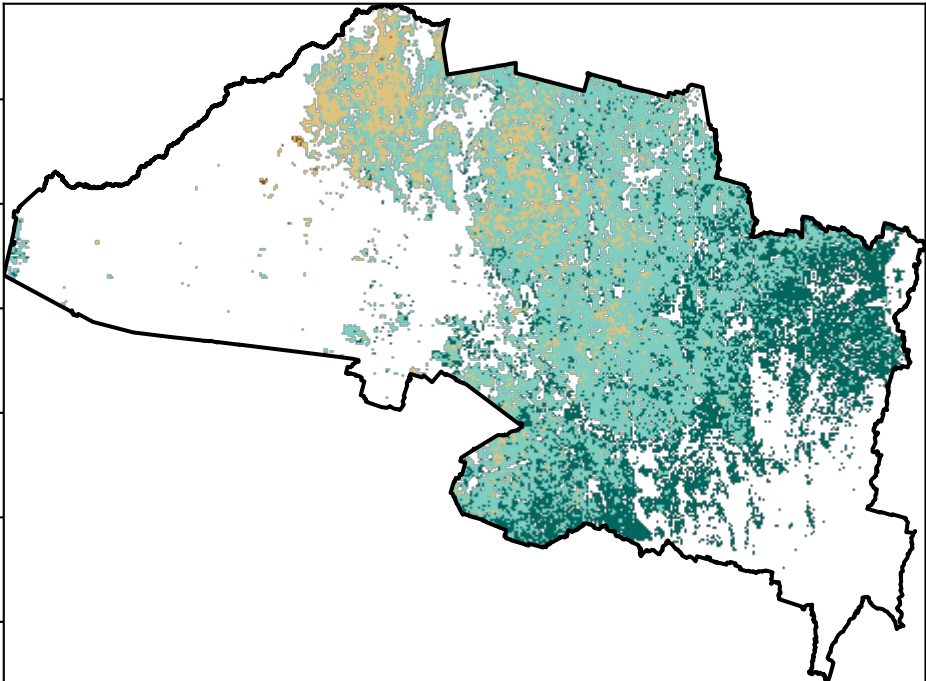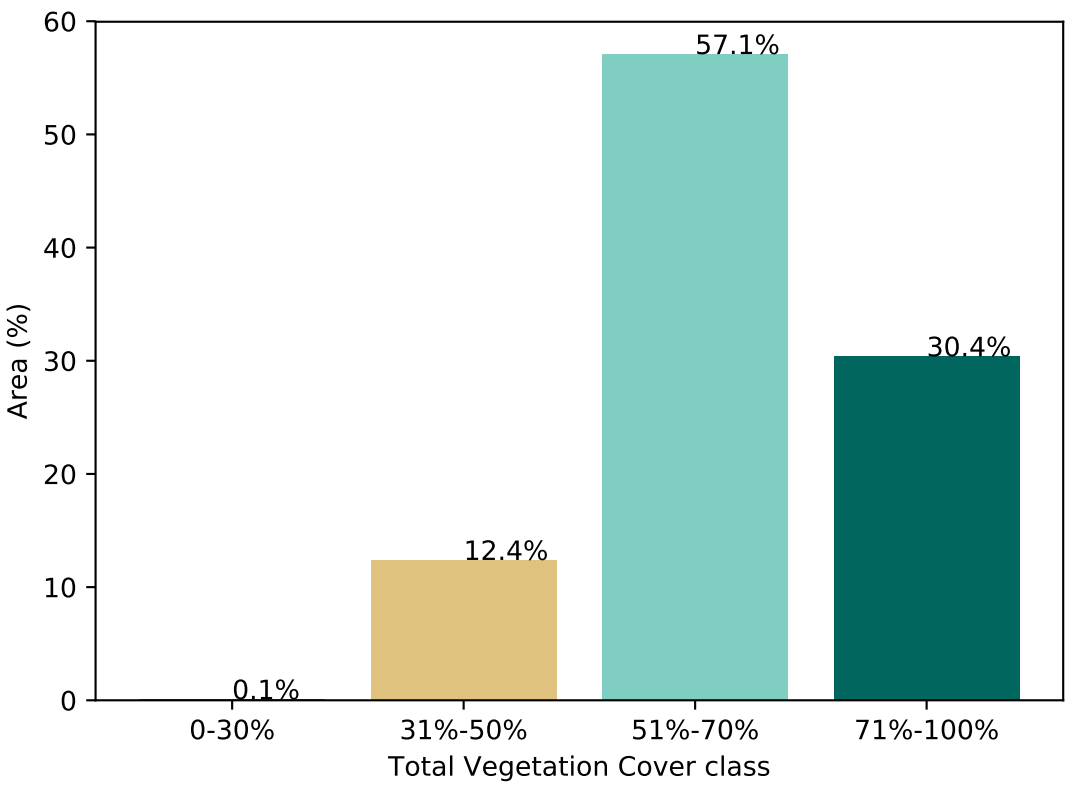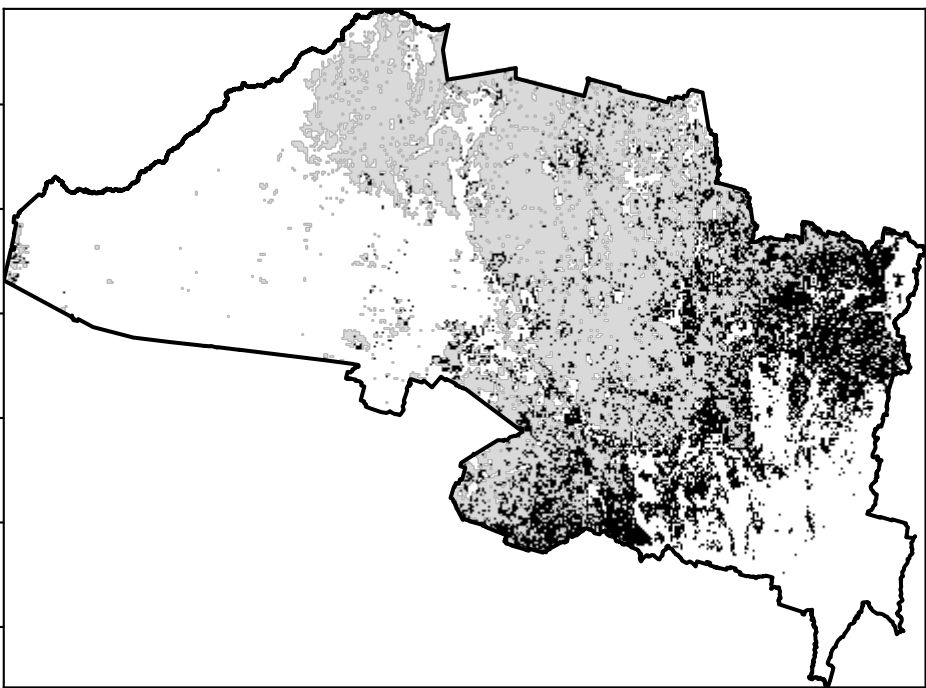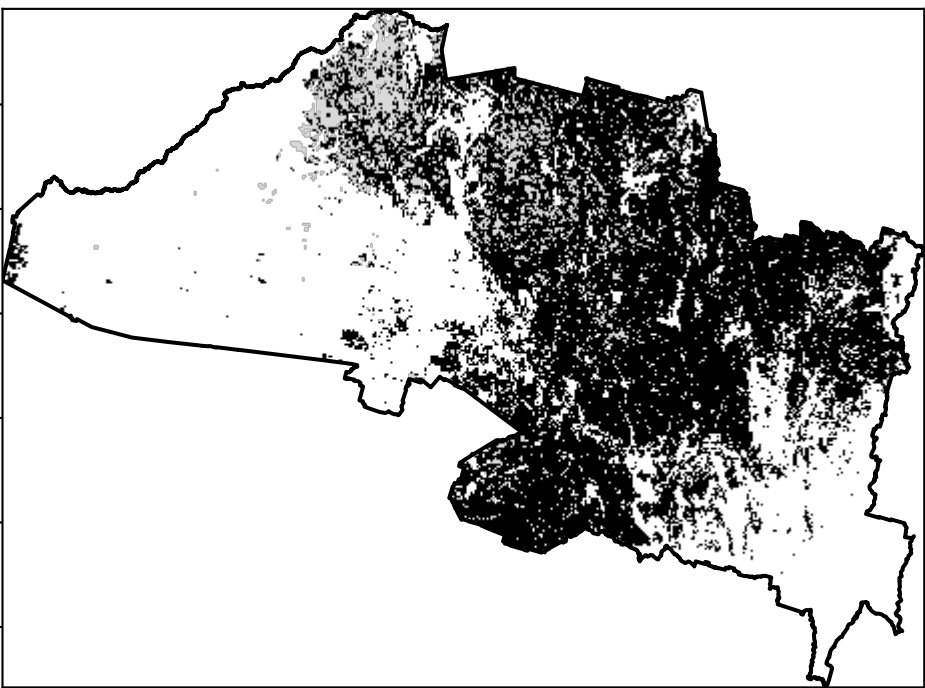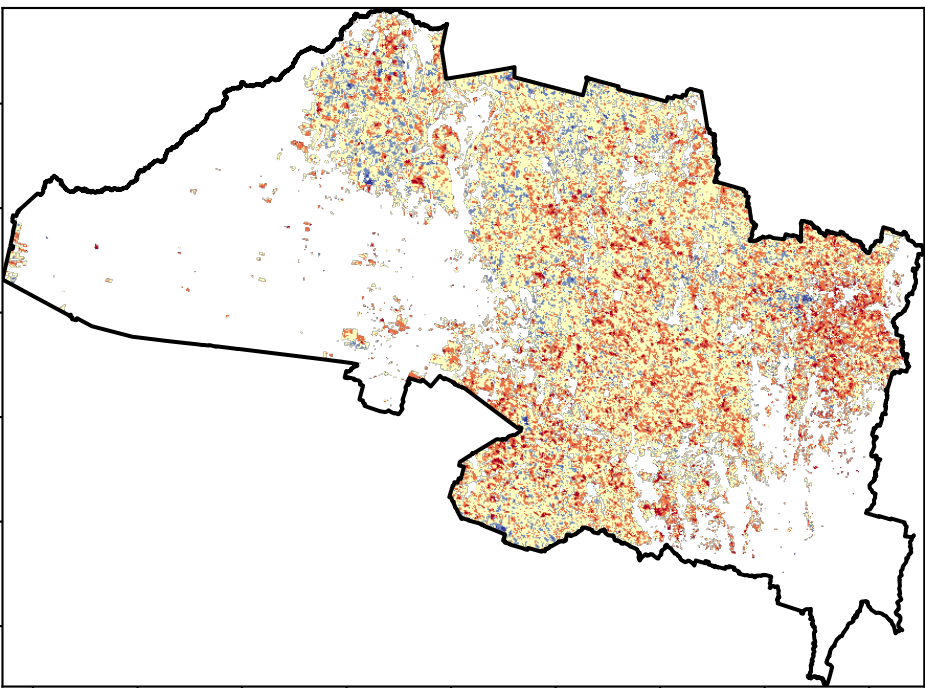the map using baseline
from 2001 to 2019.

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%)
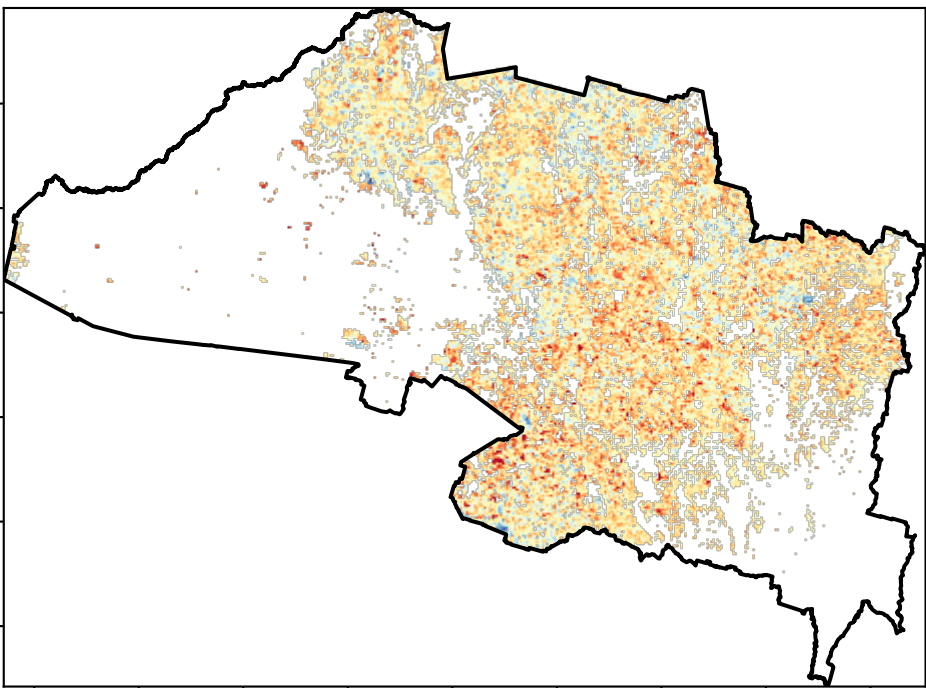
Irrigation

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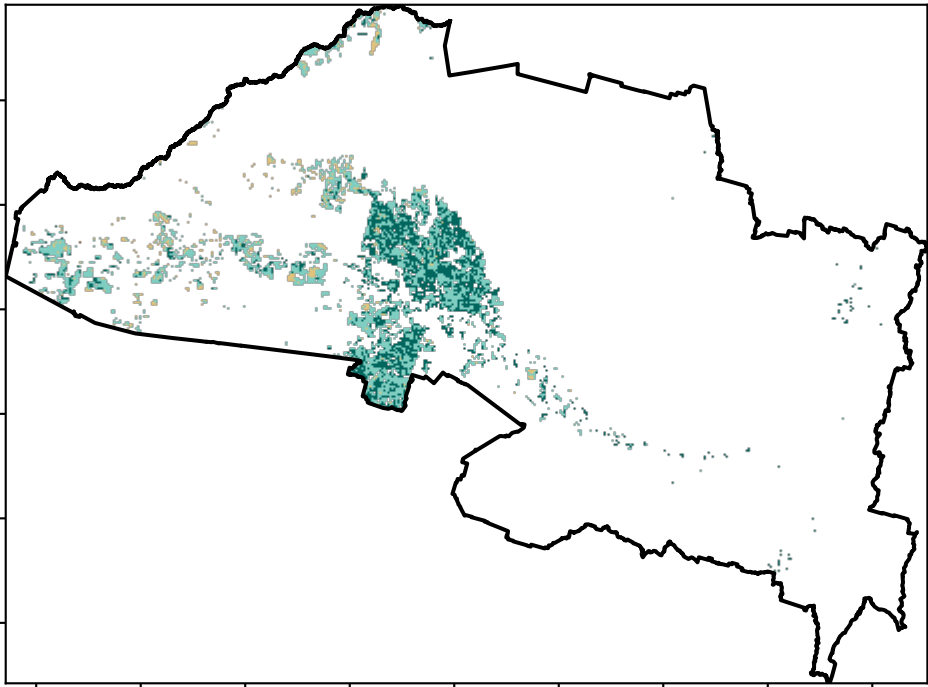
71%-100%
51%-70%
31%-50%
0-30%

Proportion of vegetation cover class in area
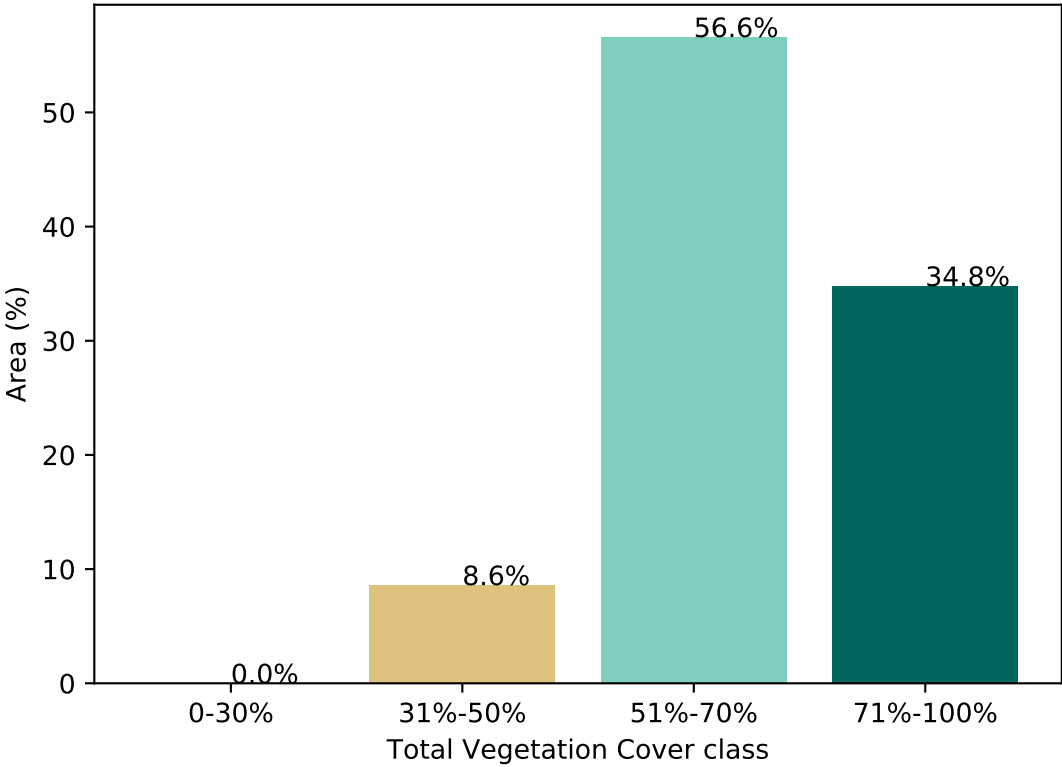
% Area protected from water erosion (>70%)
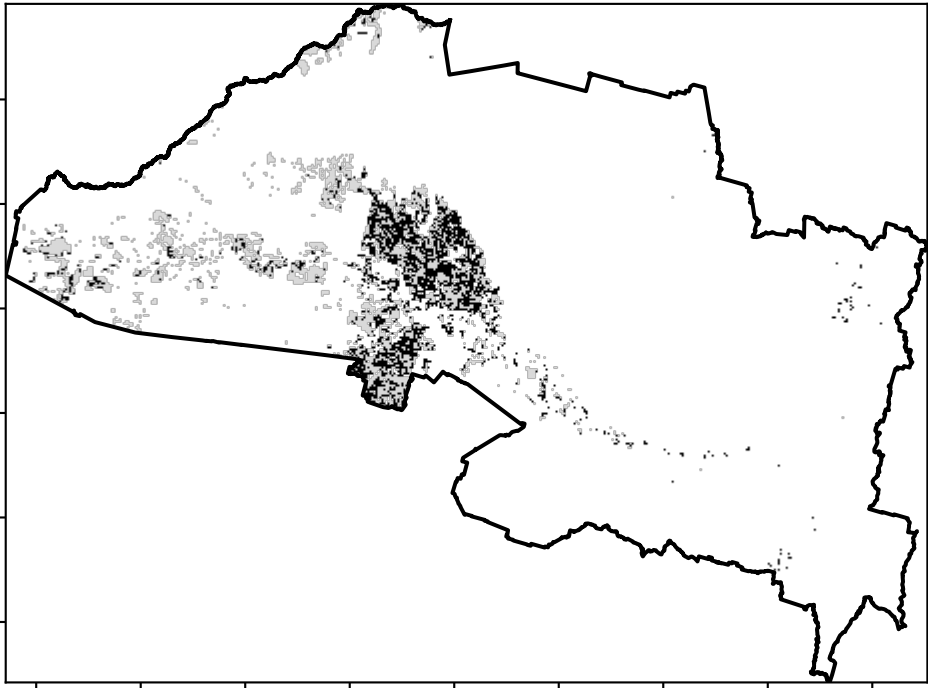
Area not
protected
65.2% of
region
(370,075
ha)

Area
protected
34.8% of
region
(197,524
ha)

% Area protected from wind erosion (>50%)
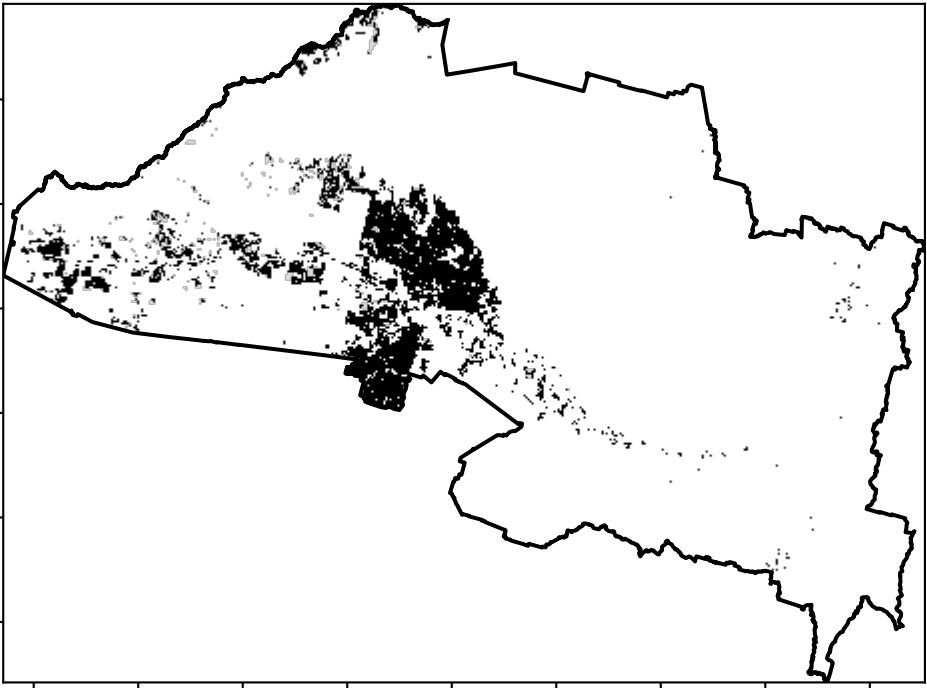
Area not
protected
9.0% of
region
(51,084
ha)

Area
protected
91.0% of
region
(516,516
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
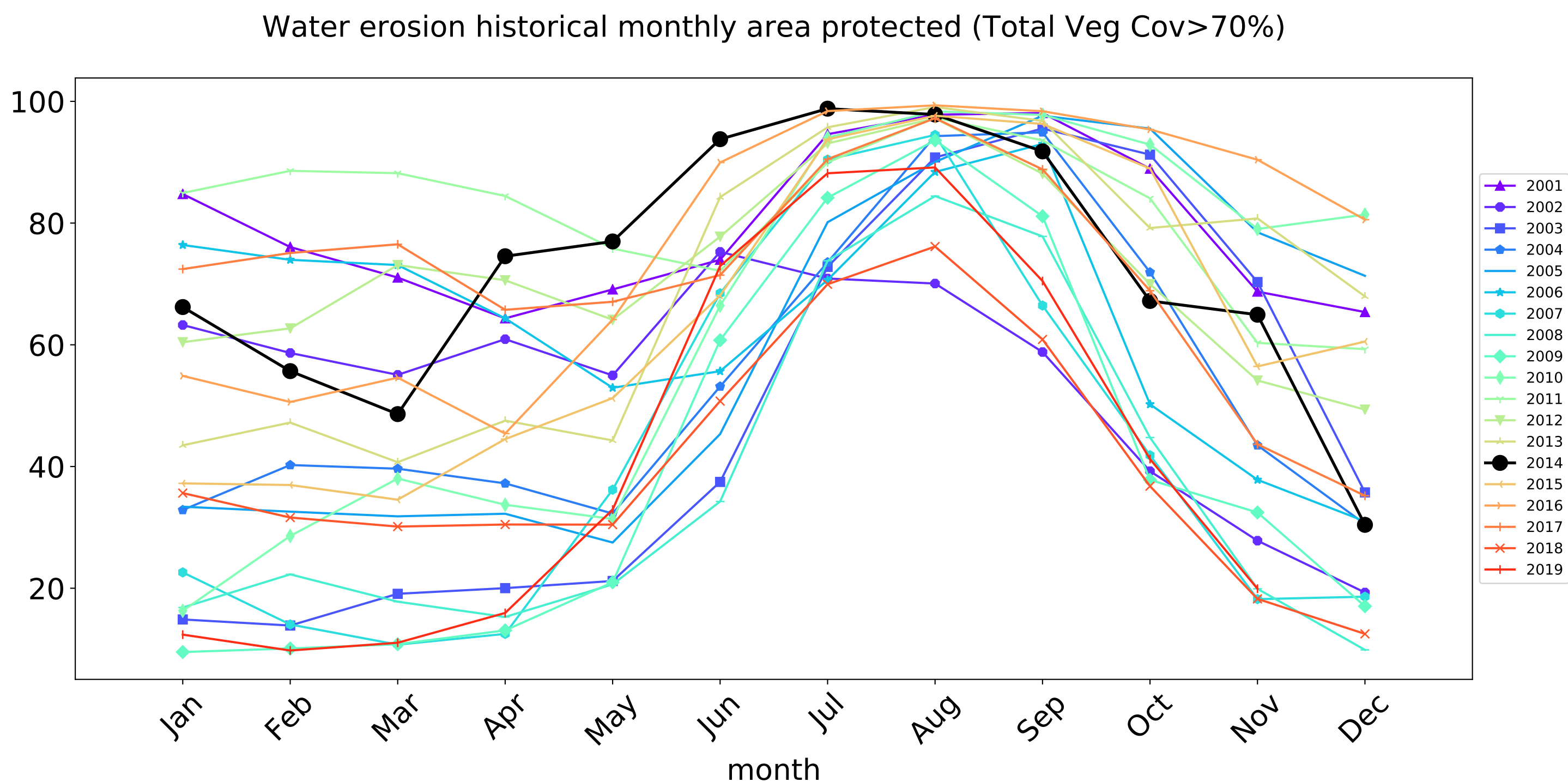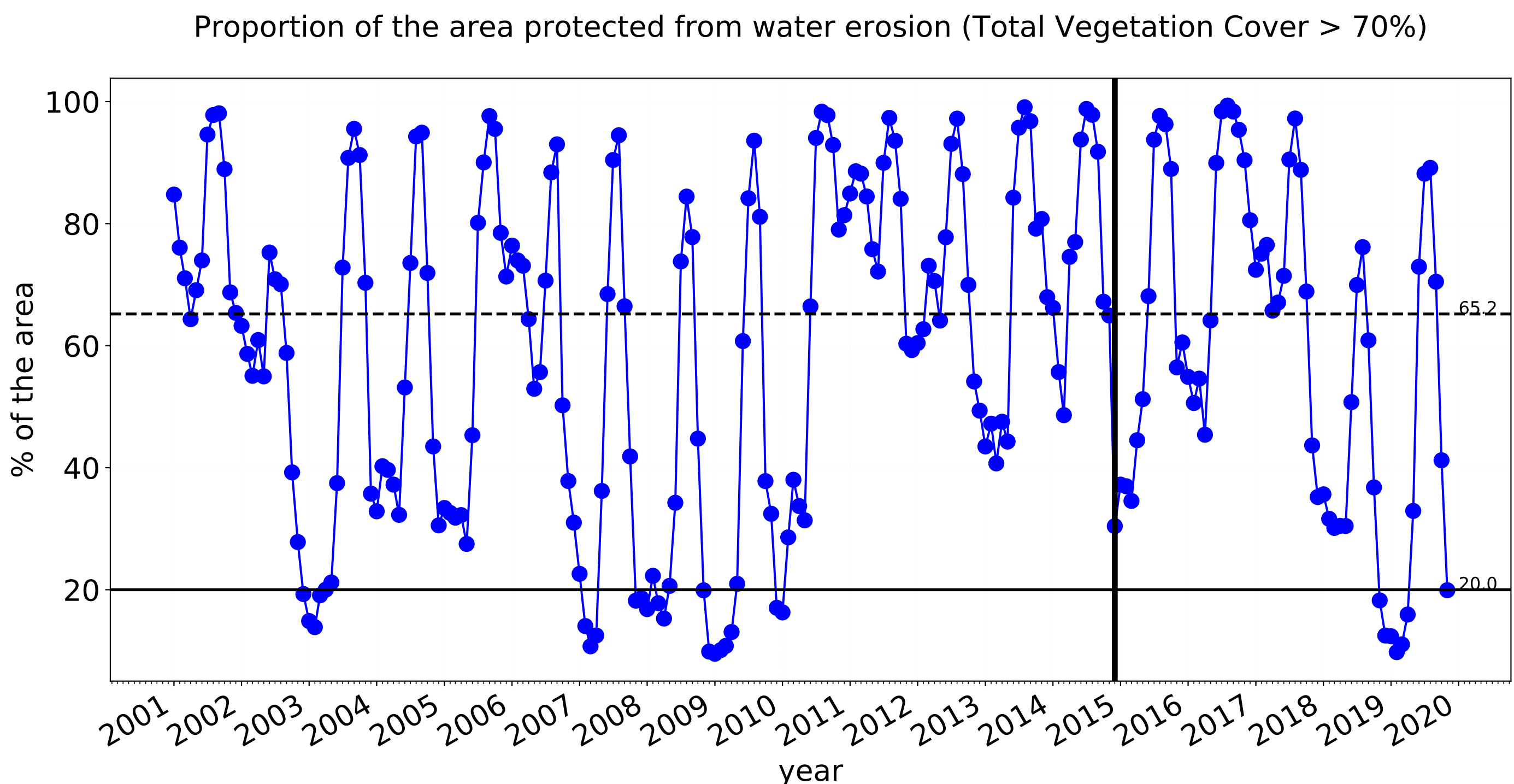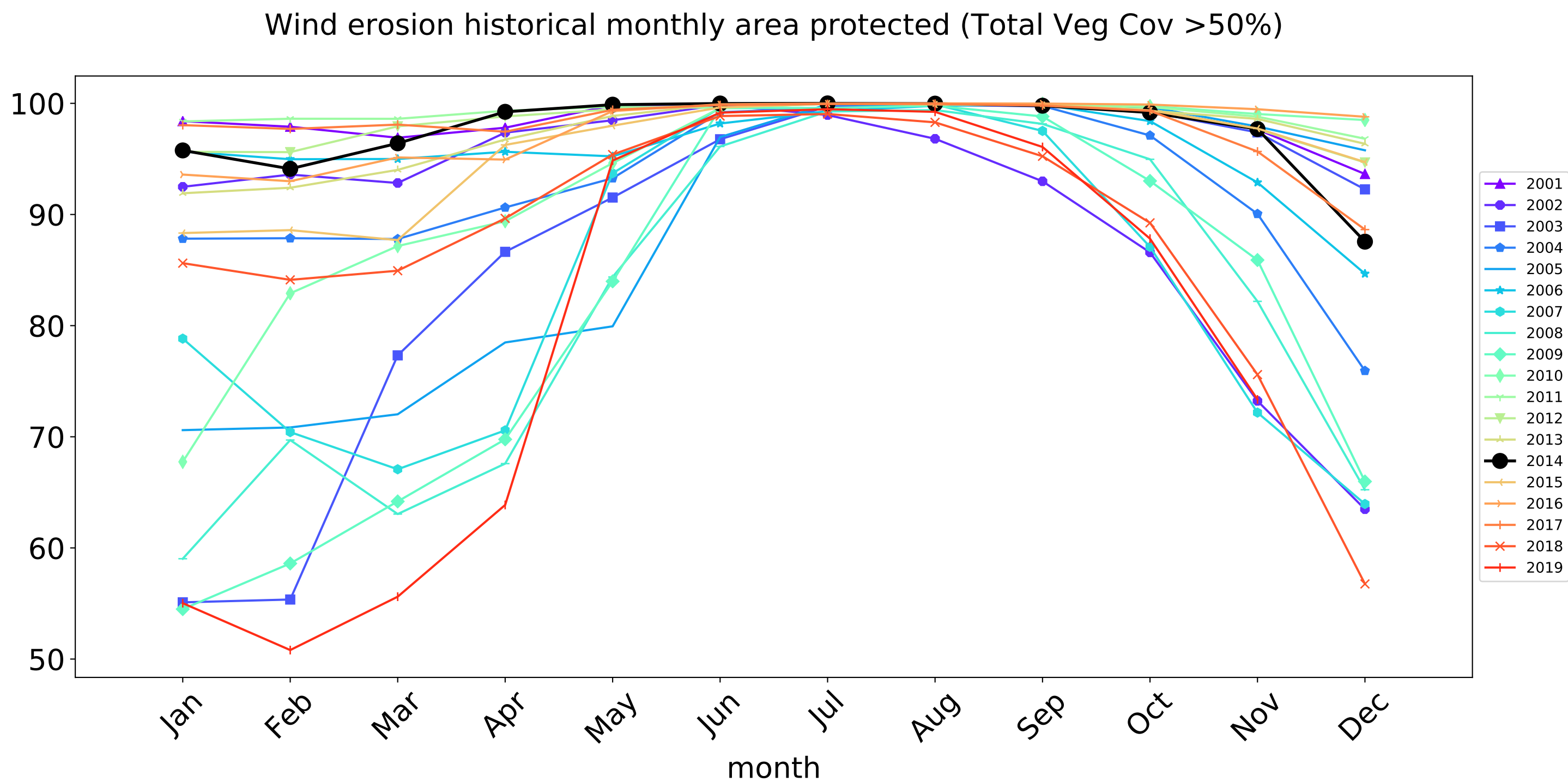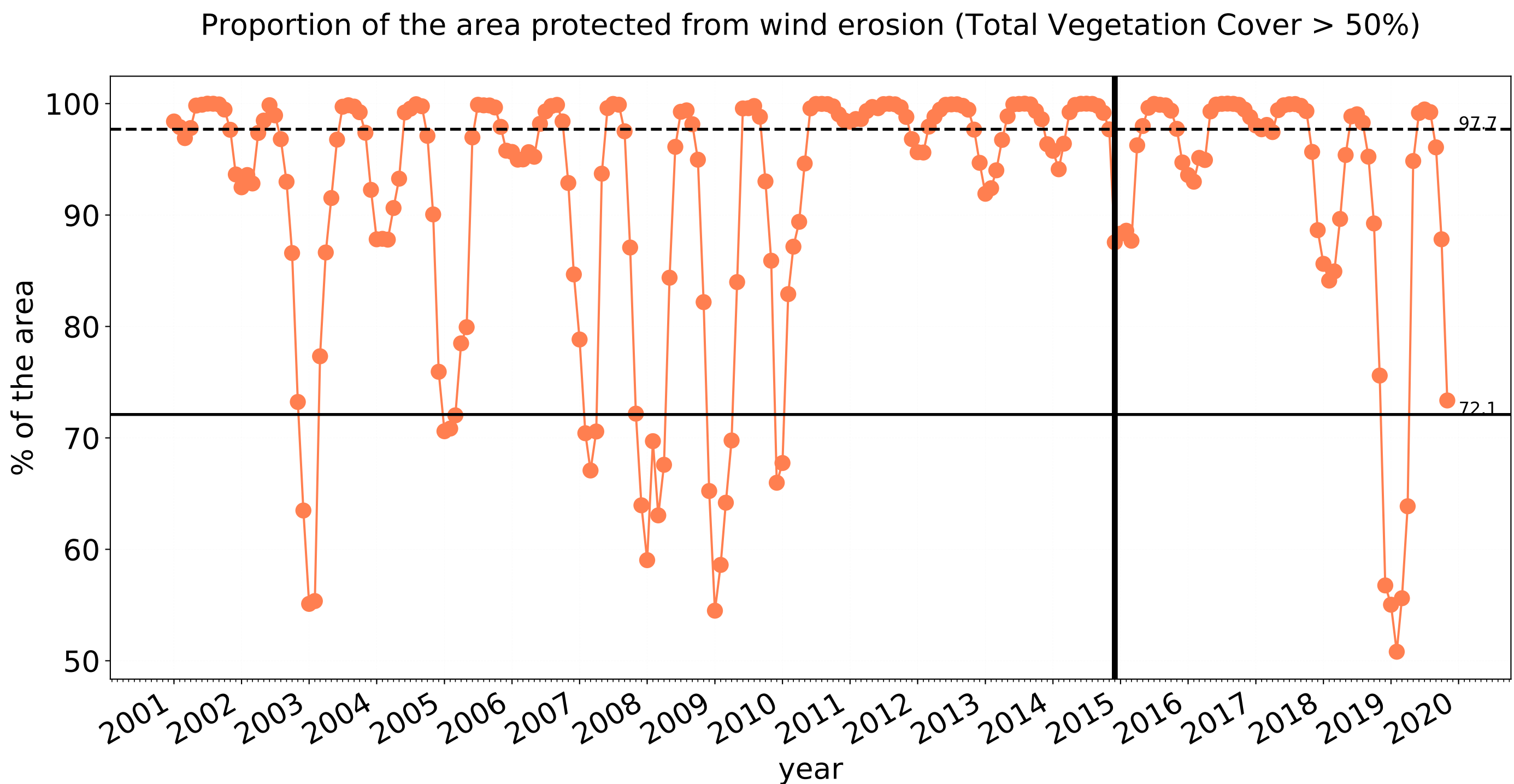the map using baseline
from 2001 to 2019.

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

0.0%   0.0%   5.6%   94.4%

Area (%)

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

% 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.

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8-9
4-7
2-3
1

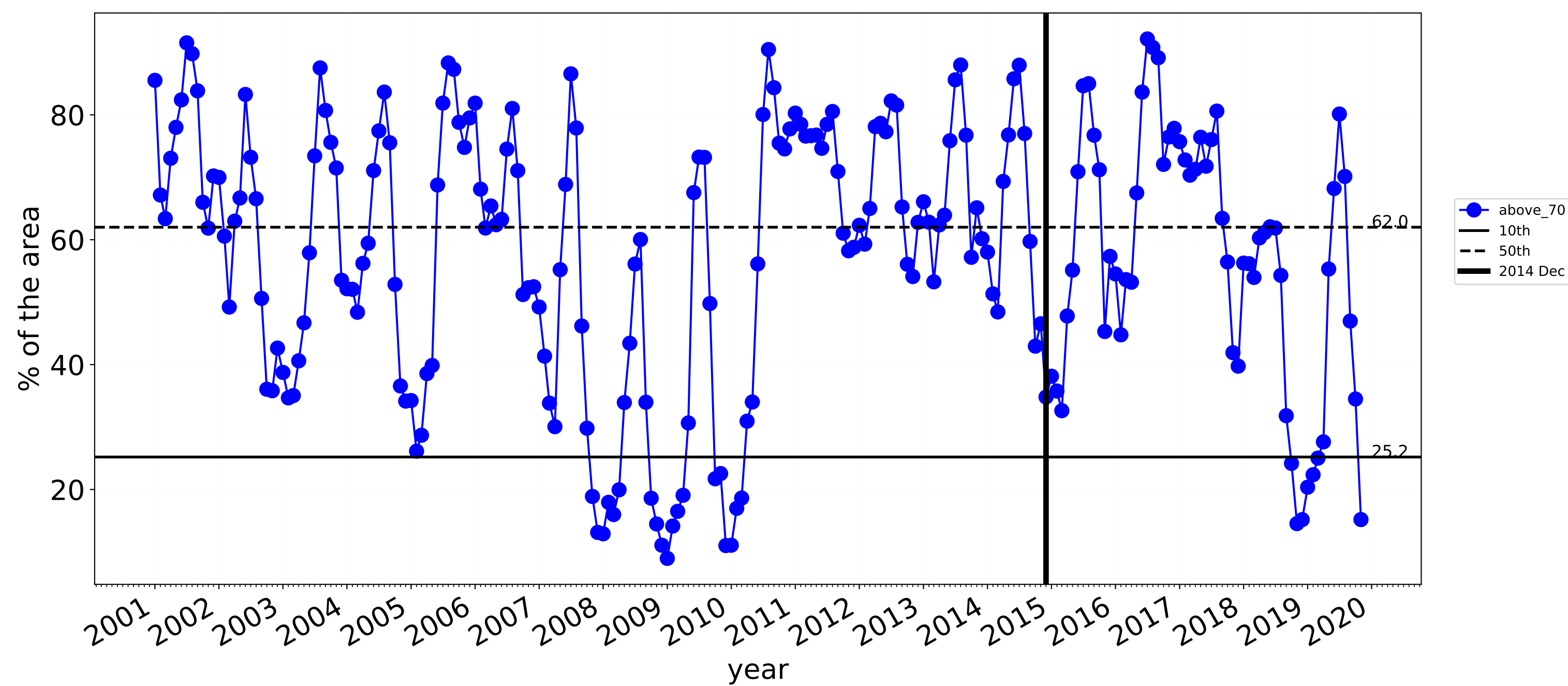# Production native forests and plantation forests timeseries

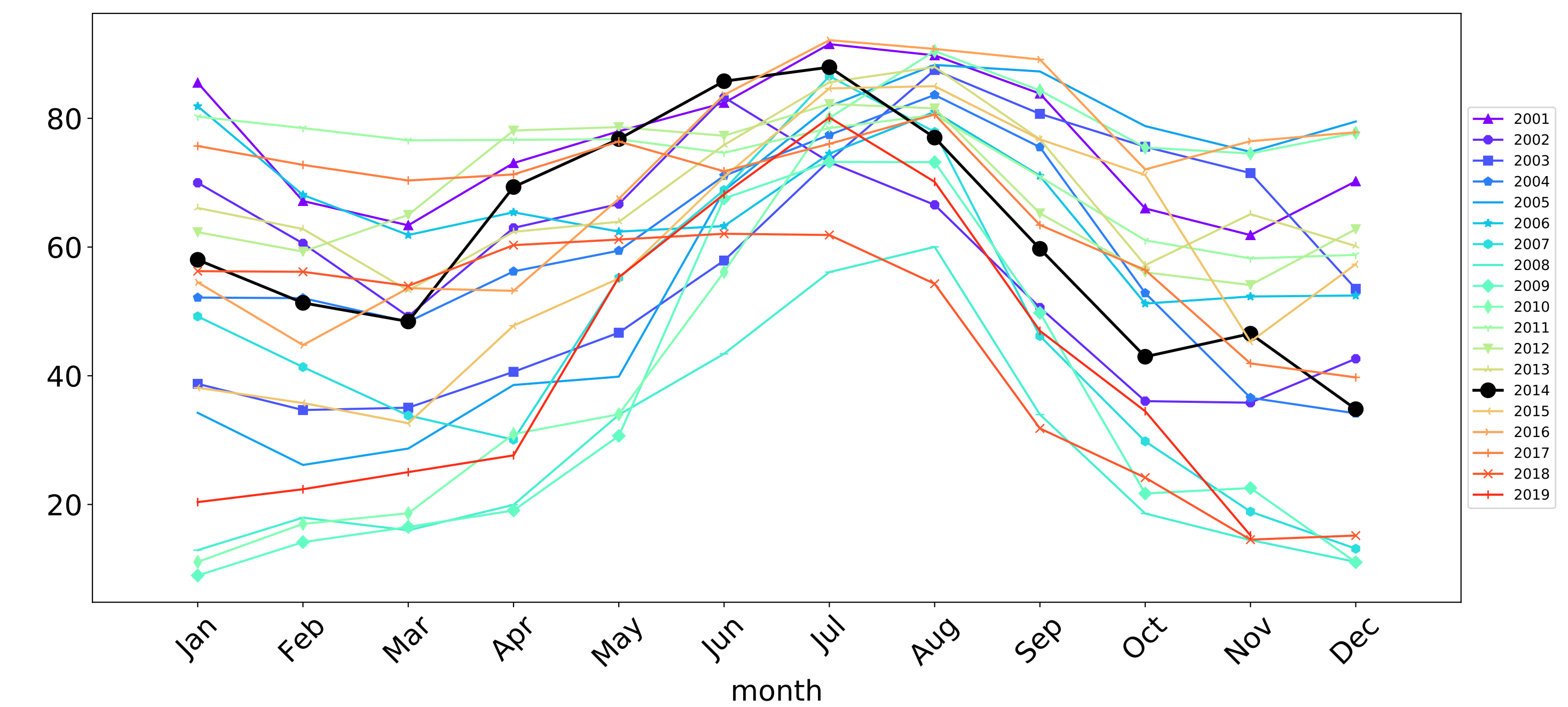Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)

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

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

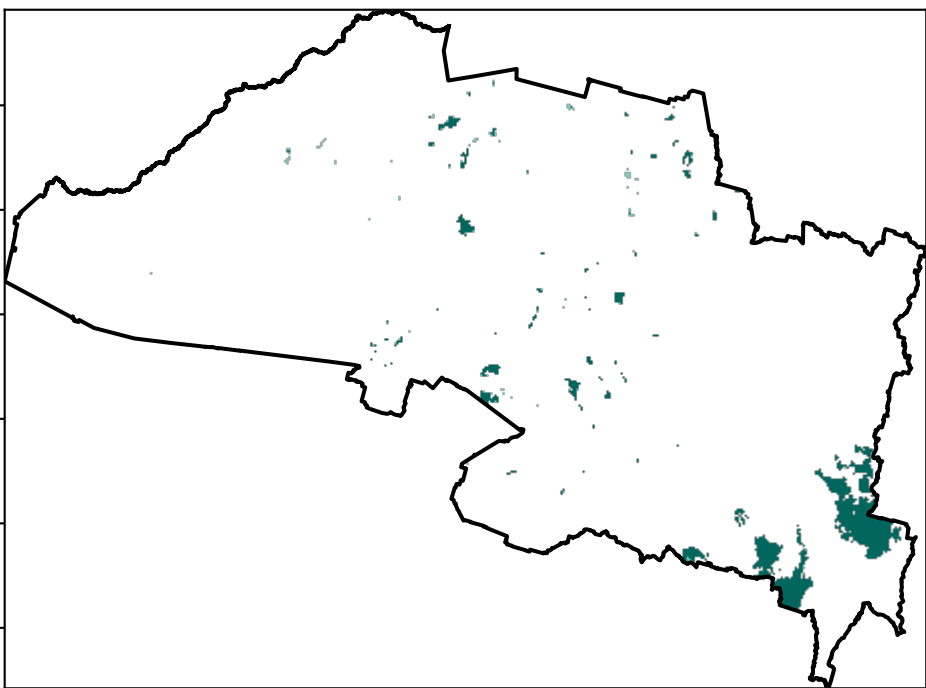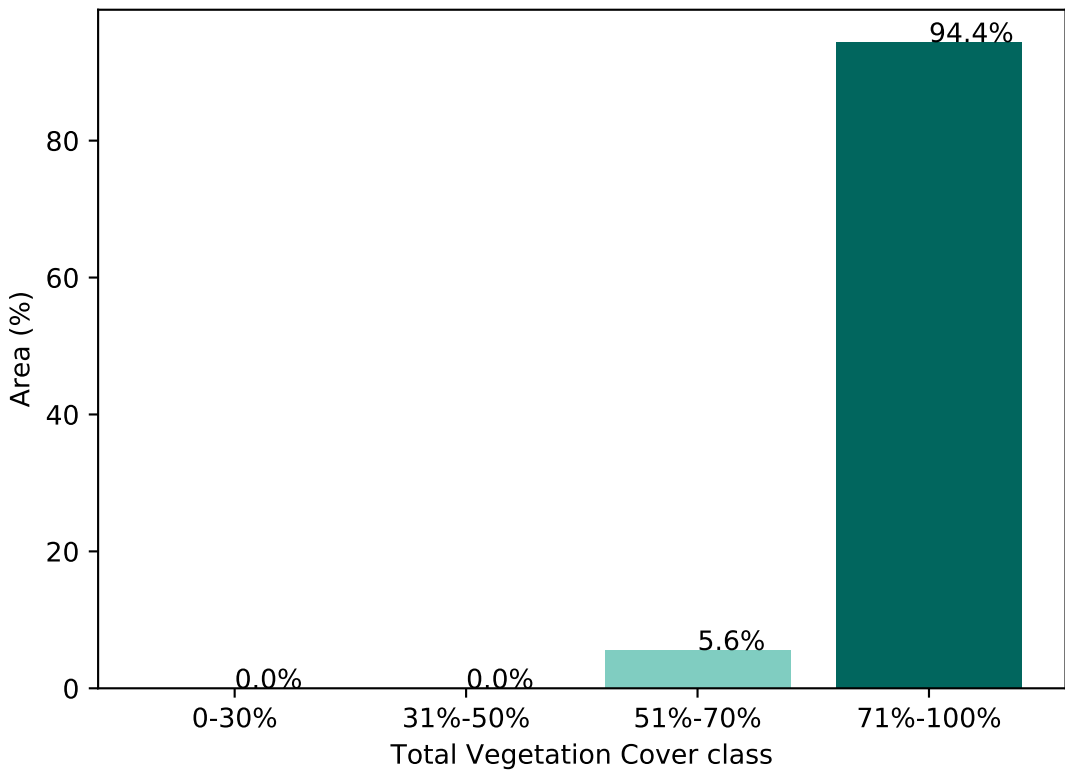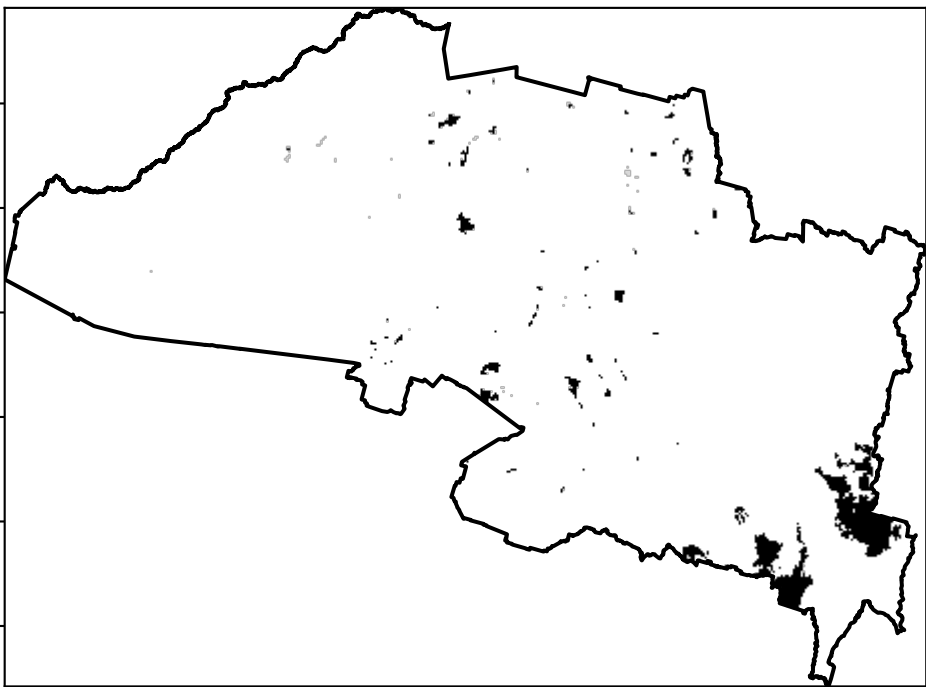Water erosion historical monthly area protected (Total Veg Cov>70%)

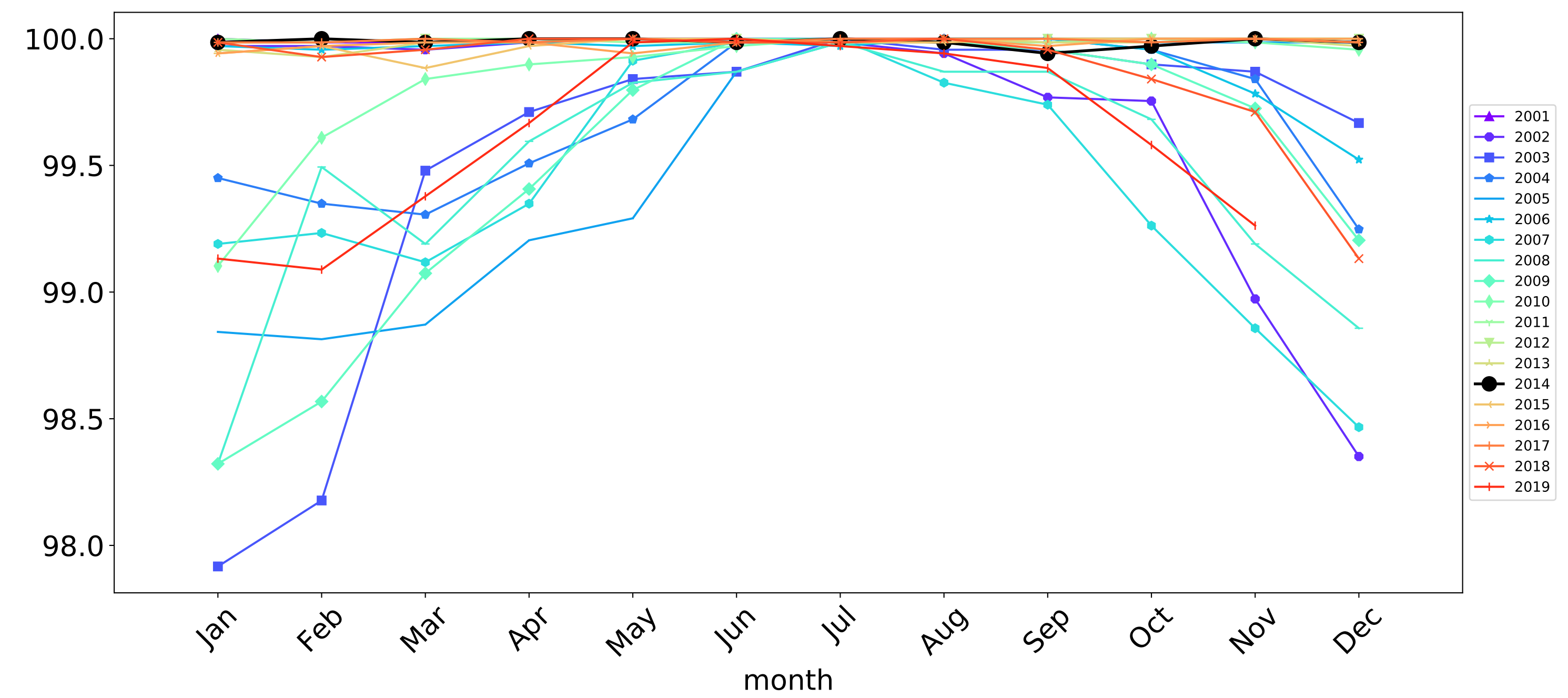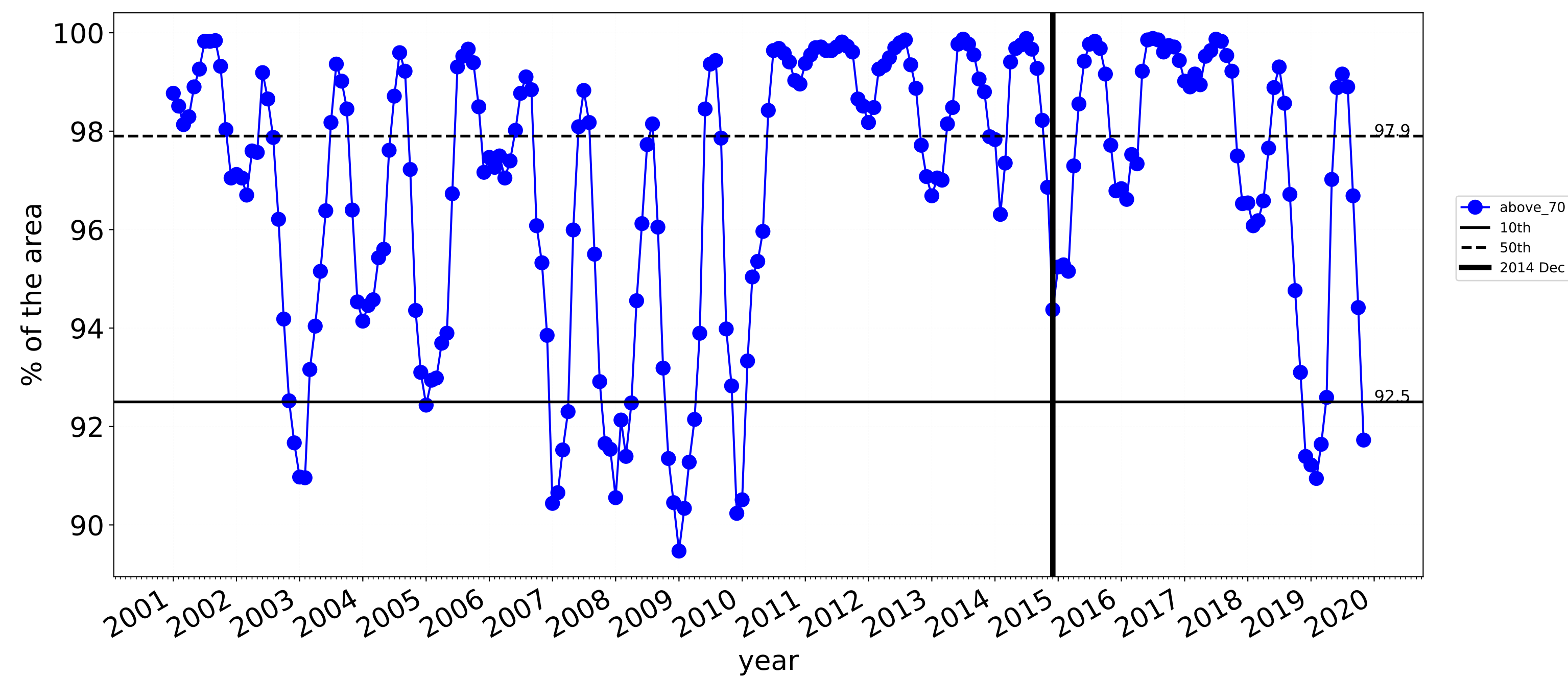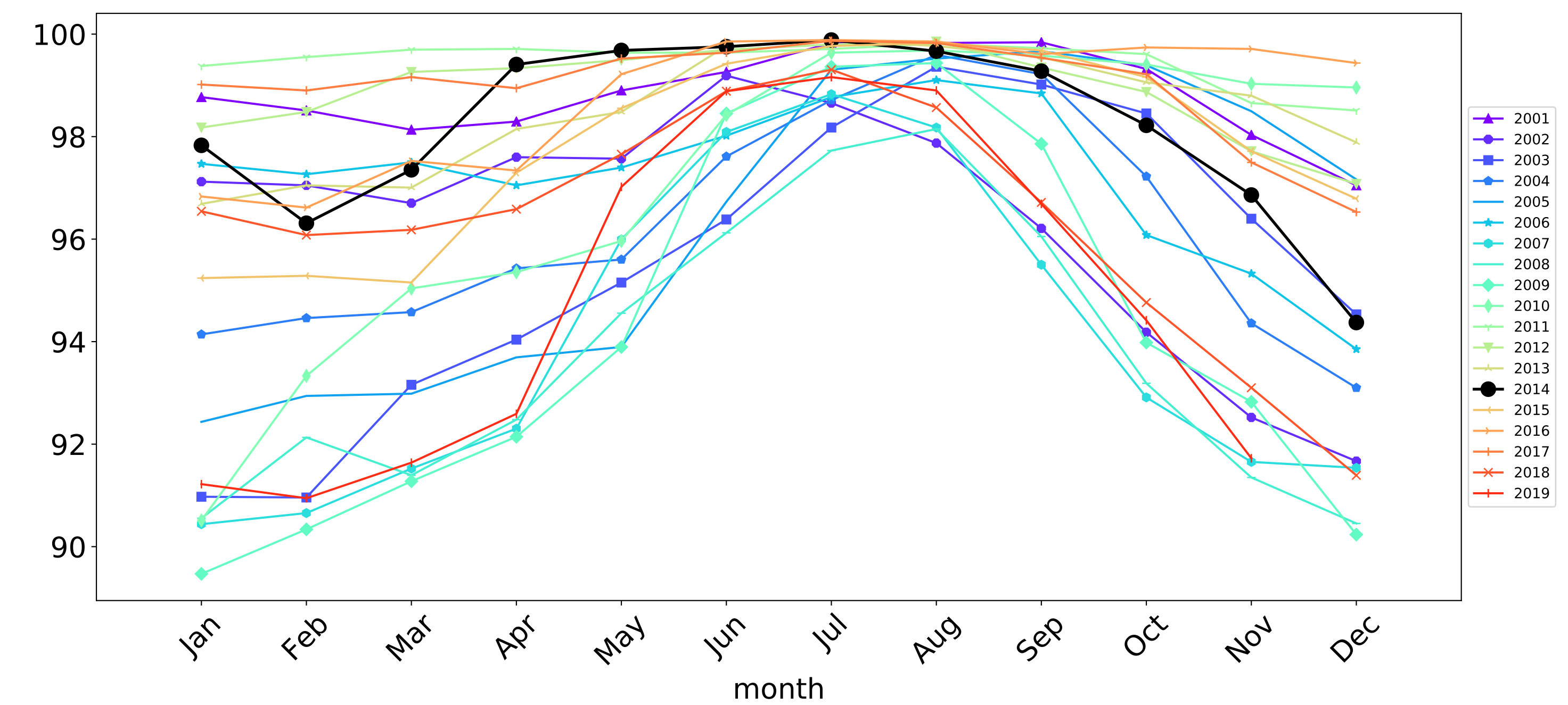# Riverina (6,694,025 ha and no data 14,310 ha) Percentage area and hectares protected with TVC threshold 30,50,70,80,90 and 95%

Land use and forest cover Class	area(ha)	above_30	above_50	above_70	above_80	above_90	above_95
Entire region	6,694,025	99.9% 6,685,250	85.0% 5,692,960	39.1% 2,619,275	20.7% 1,383,306	6.5% 435,212	2.1% 143,687
Conservation and natural environments	323,175	100.0% 323,175	97.8% 316,075	81.0% 261,750	75.5% 243,975	59.1% 190,875	24.7% 79,700
Conservation and natural environments non forest	83,350	100.0% 83,350	91.6% 76,325	28.9% 24,100	16.5% 13,775	10.4% 8,650	3.2% 2,675
Conservation and natural environments Forest (non woodland)	195,325	100.0% 195,325	100.0% 195,300	99.8% 194,925	98.5% 192,450	87.0% 169,950	38.8% 75,800
Agriculture	6,067,950	99.9% 6,059,600	83.9% 5,090,750	35.2% 2,137,975	16.0% 970,000	2.3% 141,850	0.3% 16,525
Grazing	2,311,575	99.7% 2,305,250	77.0% 1,780,650	42.0% 970,850	28.6% 661,250	5.4% 125,275	0.6% 13,975
Grazing non forest	2,066,575	99.7% 2,060,250	74.3% 1,536,250	36.6% 756,075	24.7% 510,325	3.9% 80,625	0.3% 6,700
Grazing Woodland forest	141,650	100.0% 141,650	99.6% 141,050	82.1% 116,250	48.4% 68,500	6.1% 8,700	0.5% 675
Grazing - Forest (non woodland)	103,350	100.0% 103,350	100.0% 103,350	95.3% 98,525	79.8% 82,425	34.8% 35,950	6.4% 6,600
Cropping	3,186,950	99.9% 3,185,100	87.6% 2,790,325	30.4% 969,375	8.4% 267,350	0.4% 11,275	0.0% 1,175
Irrigation	567,600	100.0% 567,425	91.4% 518,875	34.8% 197,575	7.3% 41,325	0.9% 5,300	0.2% 1,375
Production native forests and plantation forests	172,825	100.0% 172,825	100.0% 172,800	94.4% 163,100	86.3% 149,150	57.9% 100,050	27.2% 47,050