Total vegetation cover soil protection
Region:NRM Riverina NSW   Date: November 2013

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.
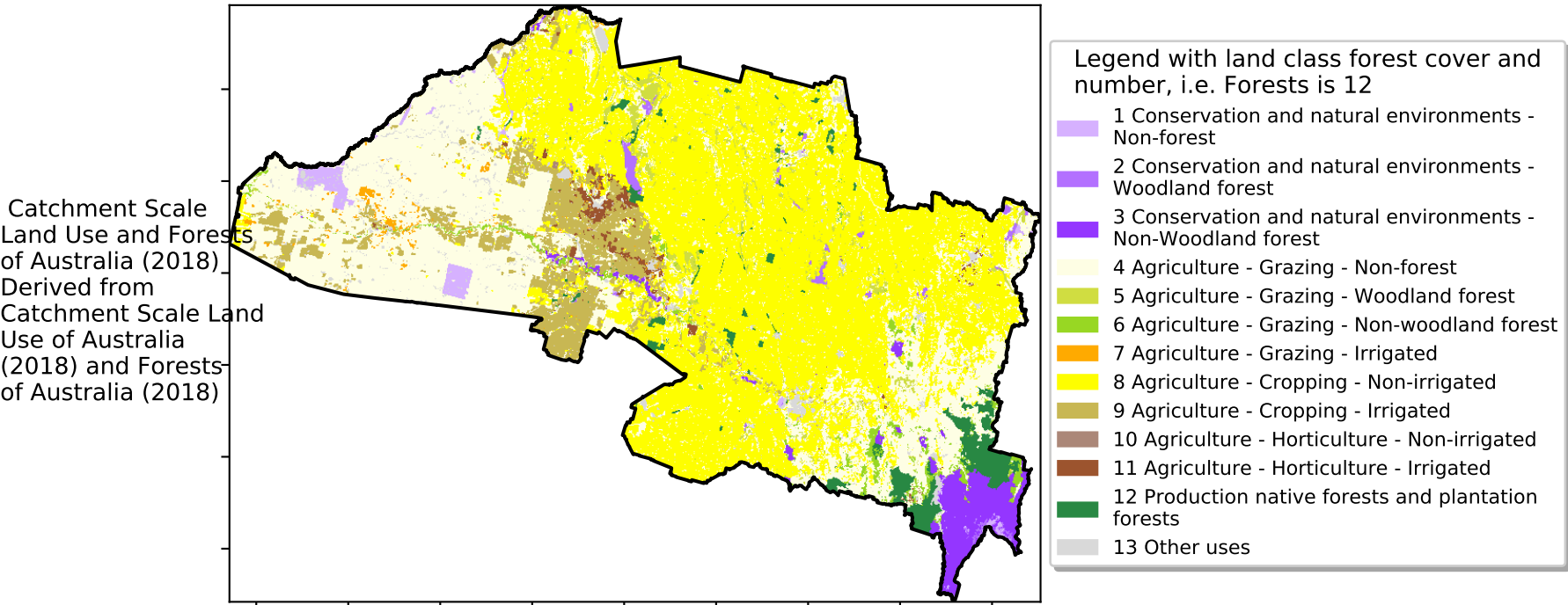• the percentage area with pixels greater than 95% total cover.

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
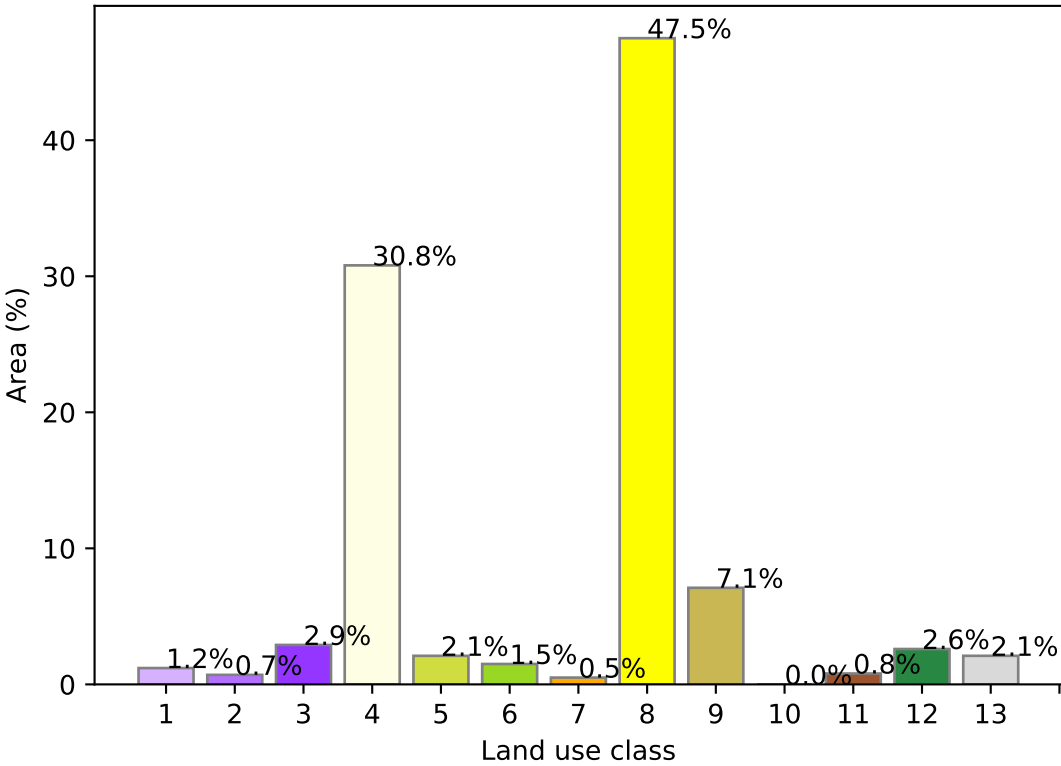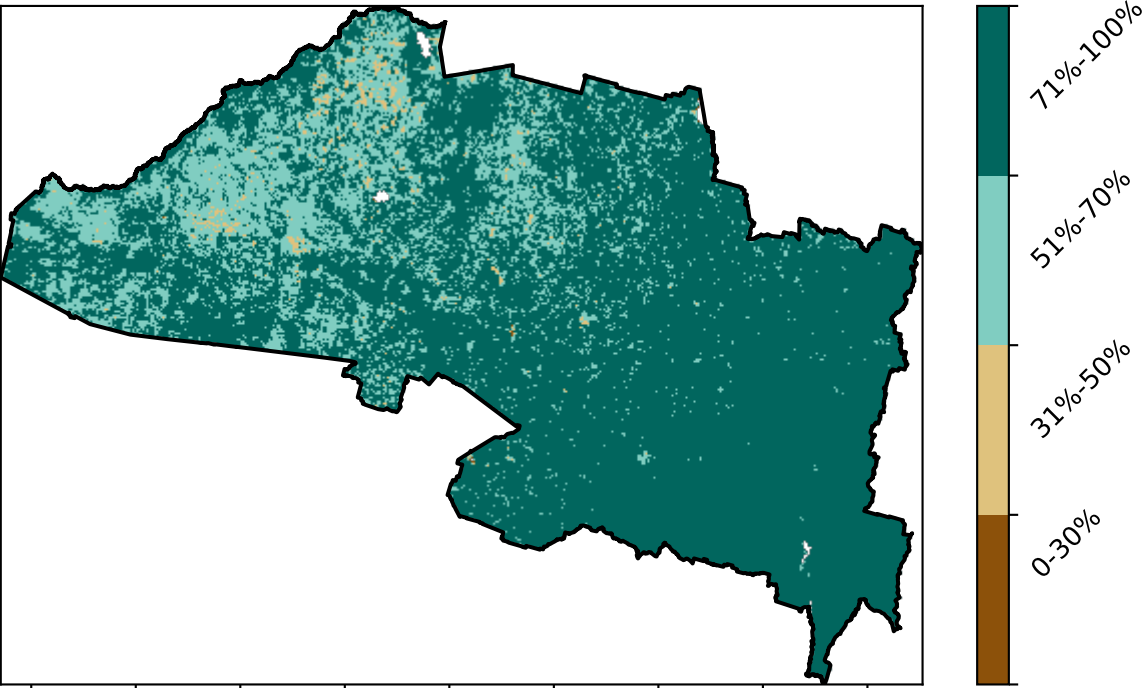
4. MODIS Fractional cover algorithm:

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

Vegetation Cover Nov 2013

Land use and forest cover

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

Legend with land class forest cover and
number, i.e. Forests is 12
- 1 Conservation and natural environments - Non-forest
- 2 Conservation and natural environments - Woodland forest
- 3 Conservation and natural environments - Non-Woodland forest
- 4 Agriculture - Grazing - Non-forest
- 5 Agriculture - Grazing - Woodland forest
- 6 Agriculture - Grazing - Non-woodland forest
- 7 Agriculture - Grazing - Irrigated
- 8 Agriculture - Cropping - Non-irrigated
- 9 Agriculture - Cropping - Irrigated
- 10 Agriculture - Horticulture - Non-irrigated
- 11 Agriculture - Horticulture - Irrigated
- 12 Production native forests and plantation forests
- 13 Other uses

Proportion of each land class in area

Total Vegetation Cover [%]

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

Proportion of vegetation cover class in area

% Area protected from water erosion (>70%)

Area not
protected
22.2% of
region
(1,486,073
ha)

Area
protected
77.8% of
region
(5,207,951
ha)

% Area protected from wind erosion (>50%)

Area not
protected
1.0% of
region
(66,940
ha)

Area
protected
99.0% of
region
(6,627,084
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

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

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

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

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

Monthly rainfall from 2001 to 2019

Rainfall: historical monthly

3

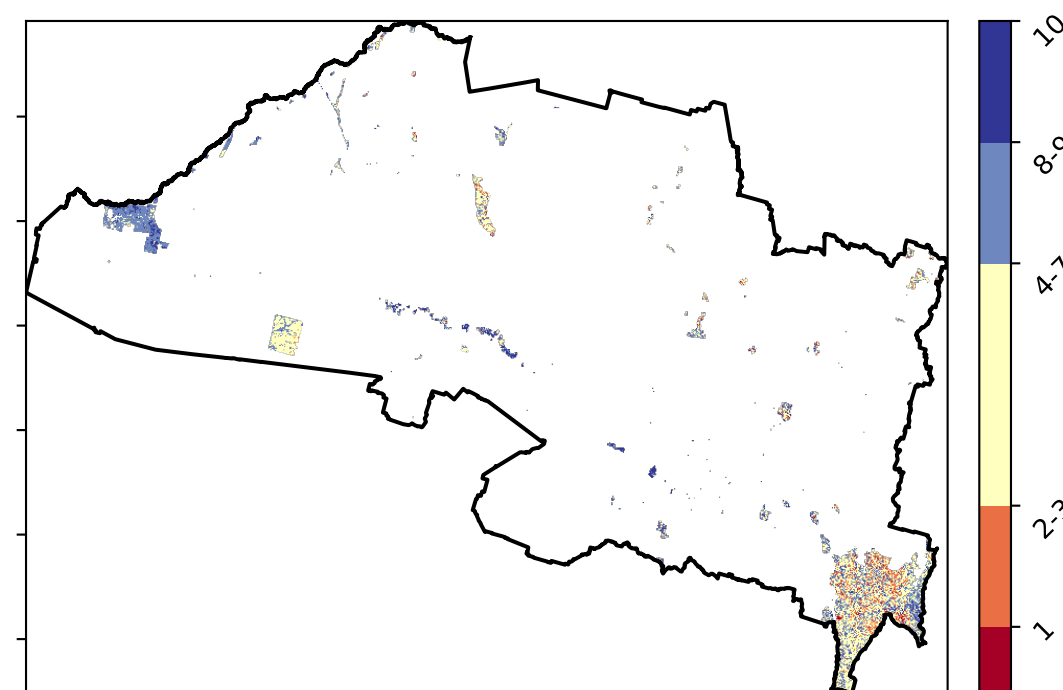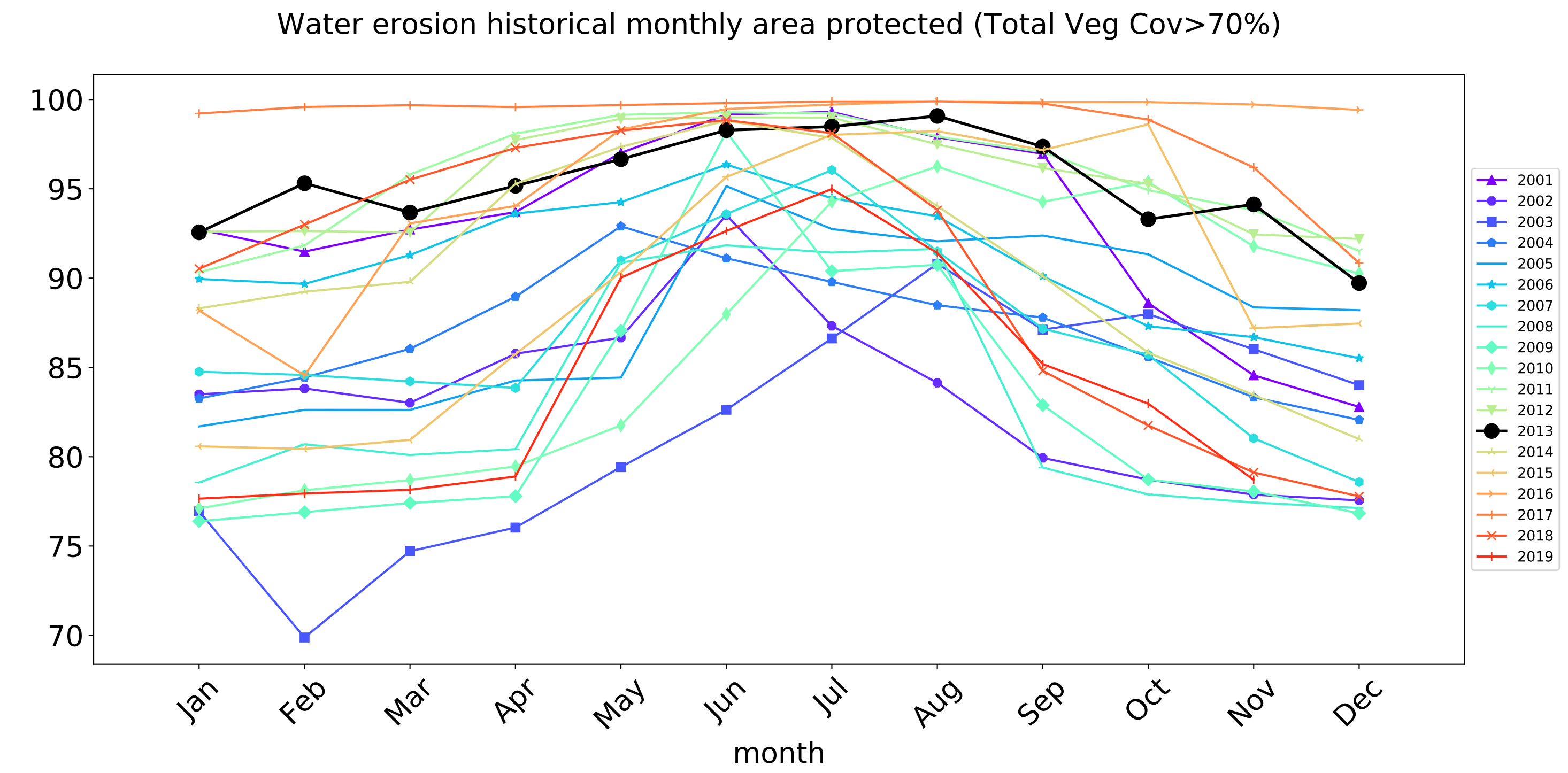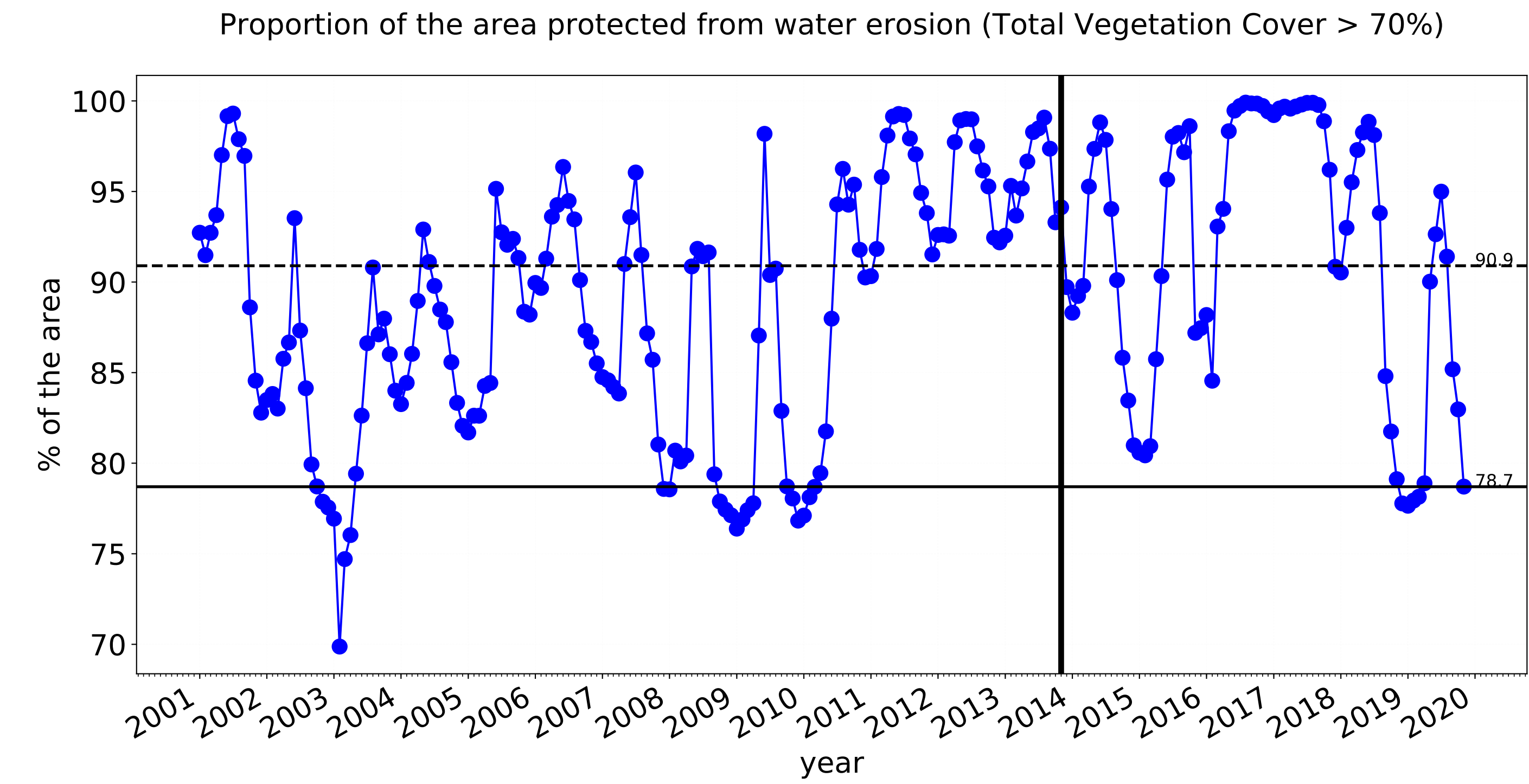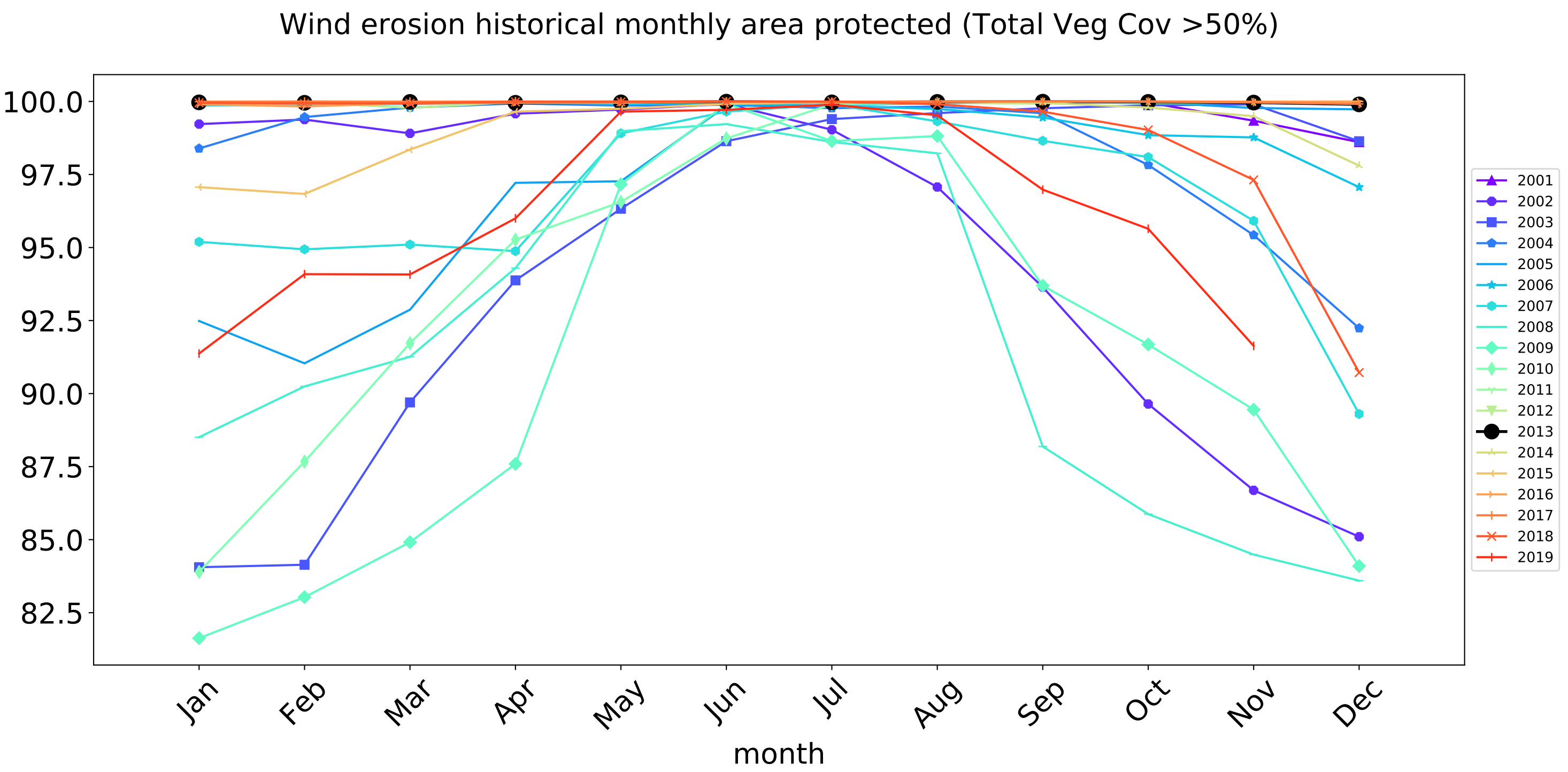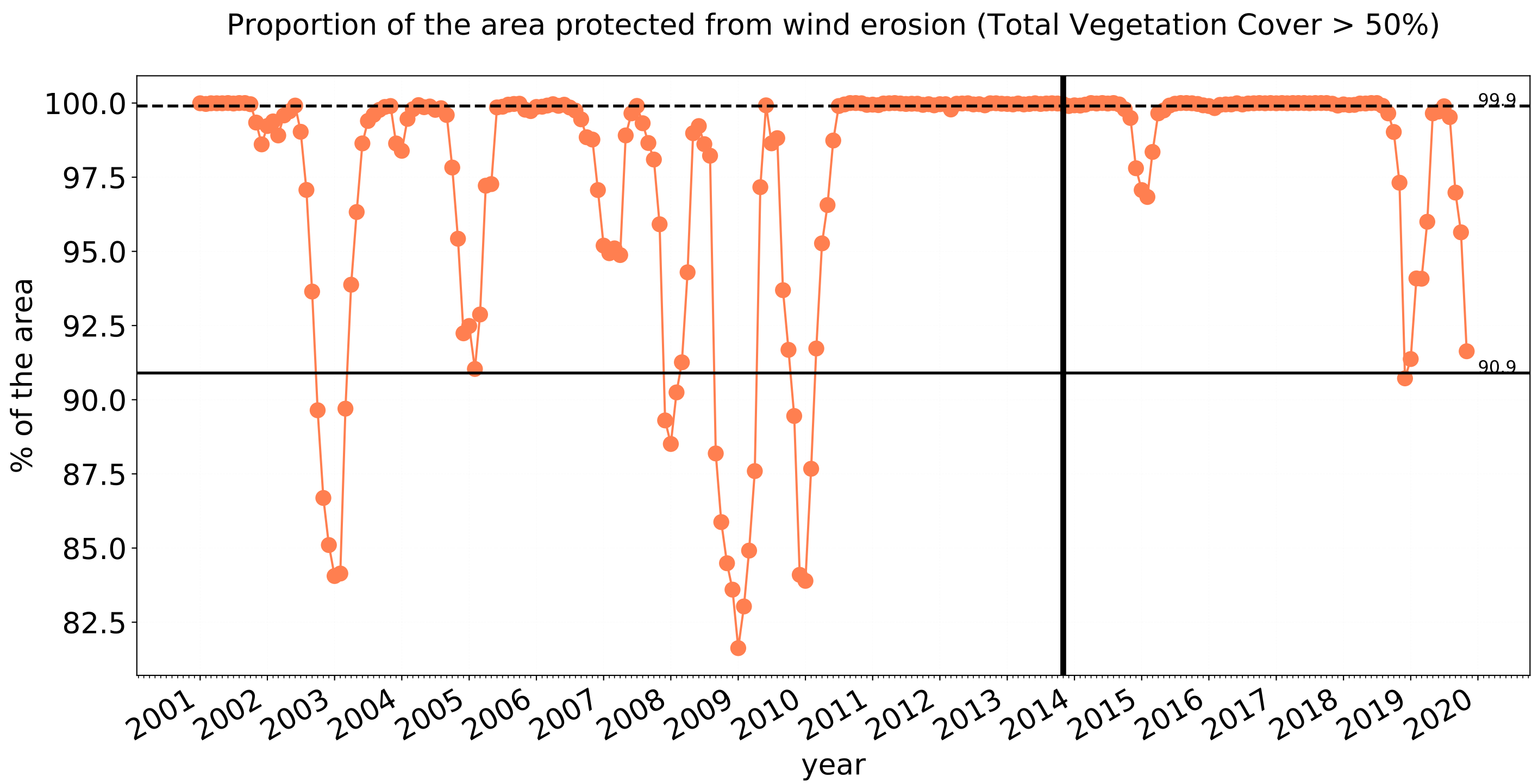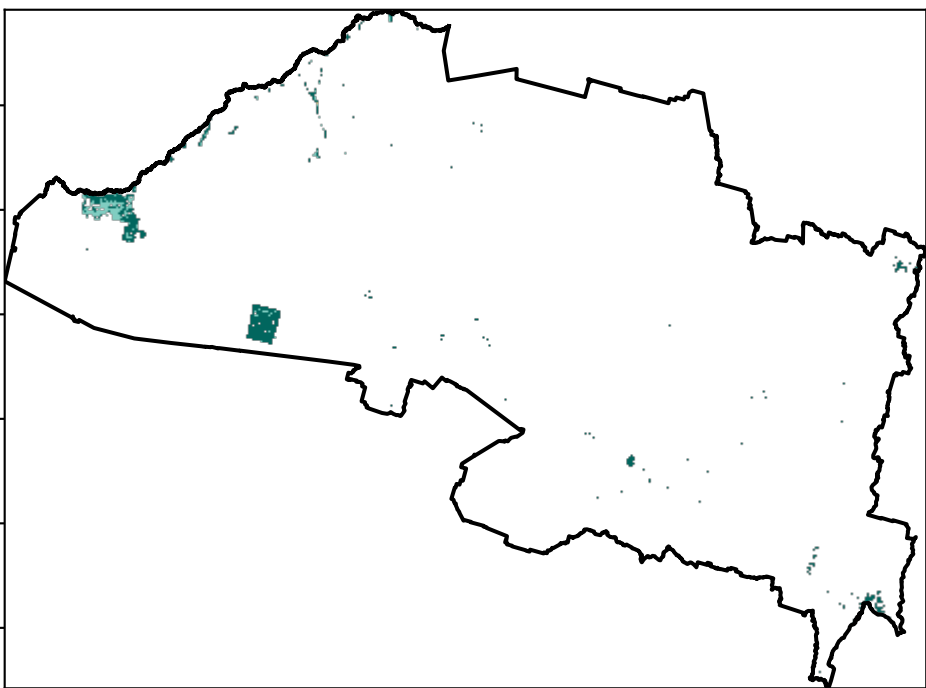# Conservation and natural environments

Land use and forest cover

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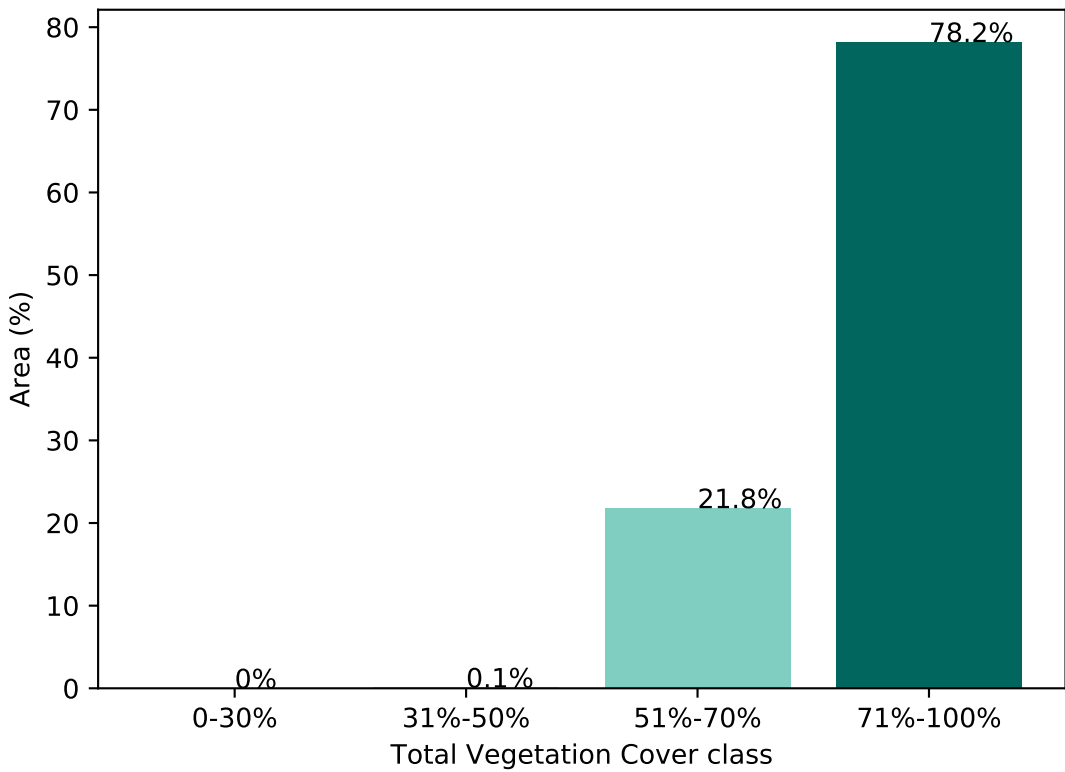Use of Australia
(2018) and Forests
of Australia (2018)
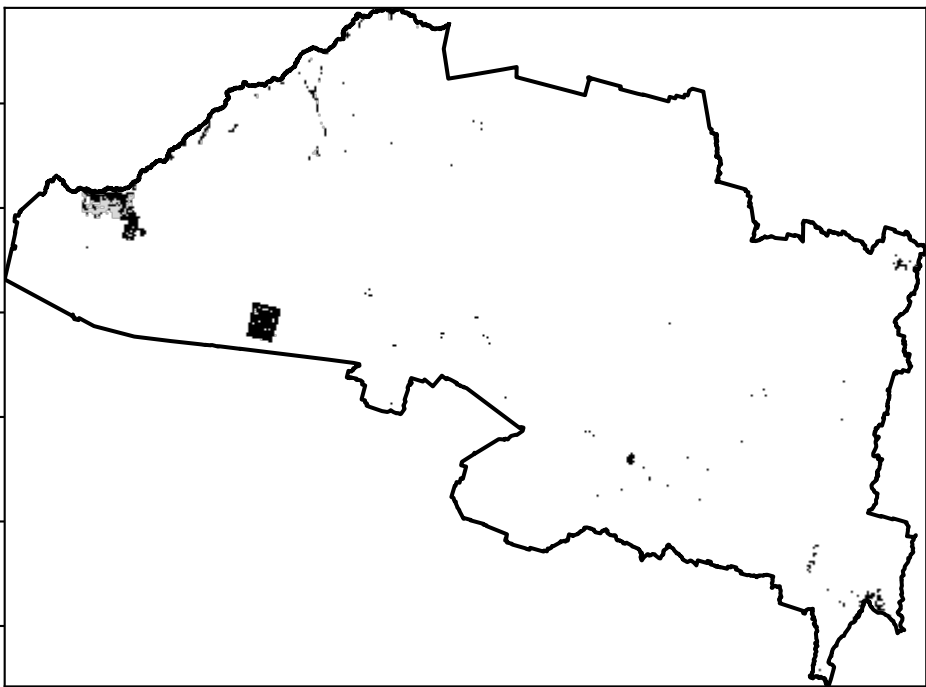
1 Conservation and natural environments - Non-forest
2 Conservation and natural environments - Woodland forest
3 Conservation and natural environments - Non-woodland forest

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

94.1%
0.1%
0.0%
5.8%

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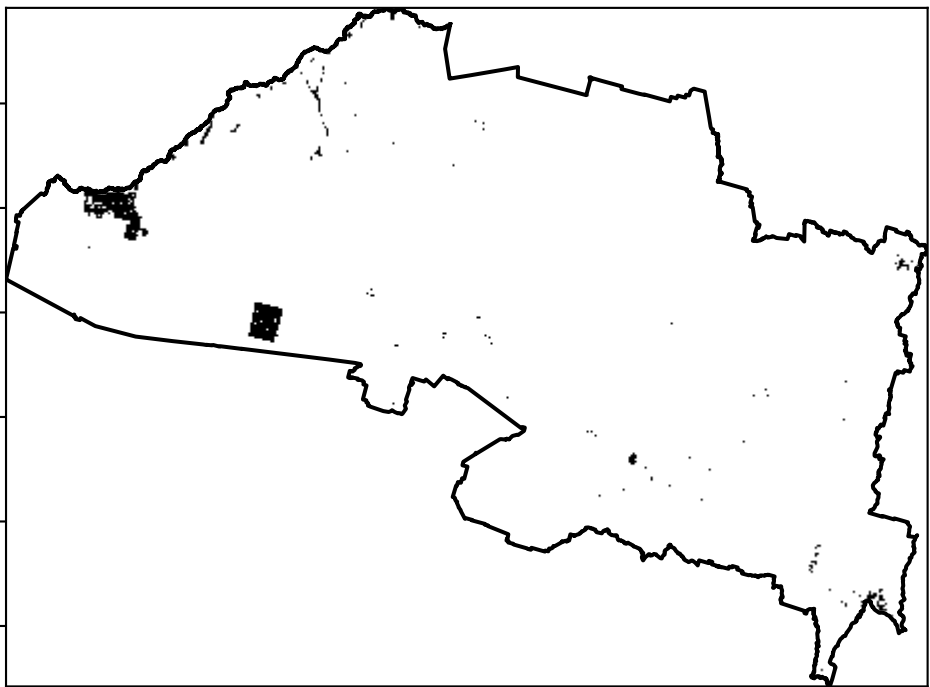0-30% 31%-50% 51%-70% 71%-100%

% Area protected from water erosion (>70%)

Area not protected 5.9% of region (19,061 ha)

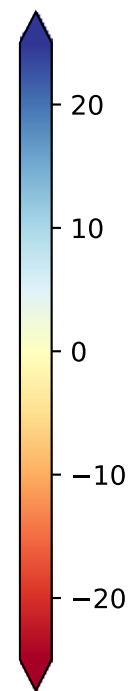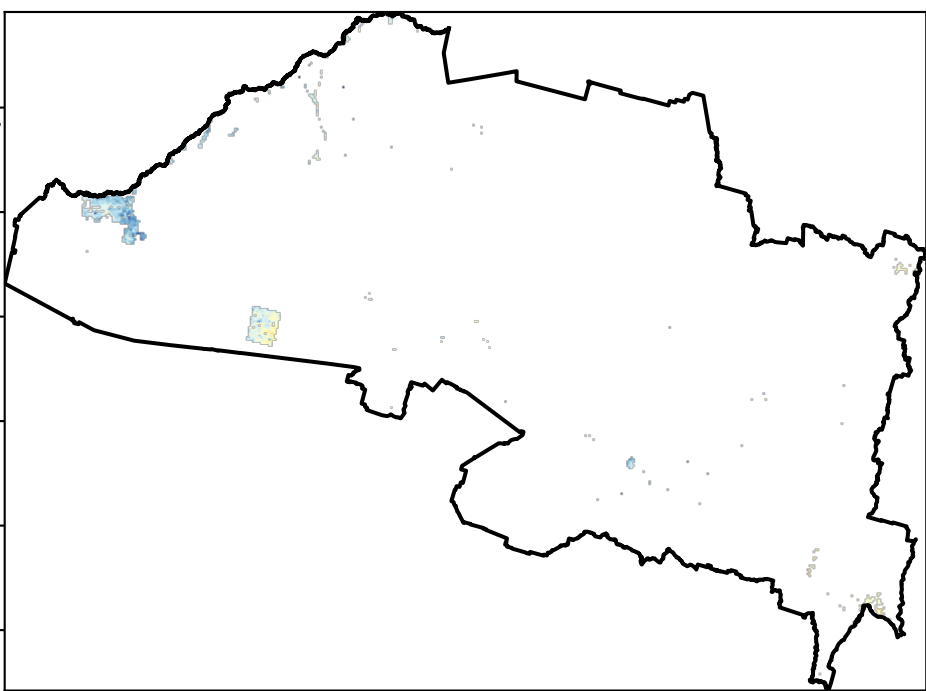Area protected 94.1% of region (304,013 ha)

% Area protected from wind erosion (>50%)

Area not protected 0.0% of region (0 ha)
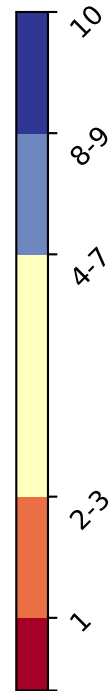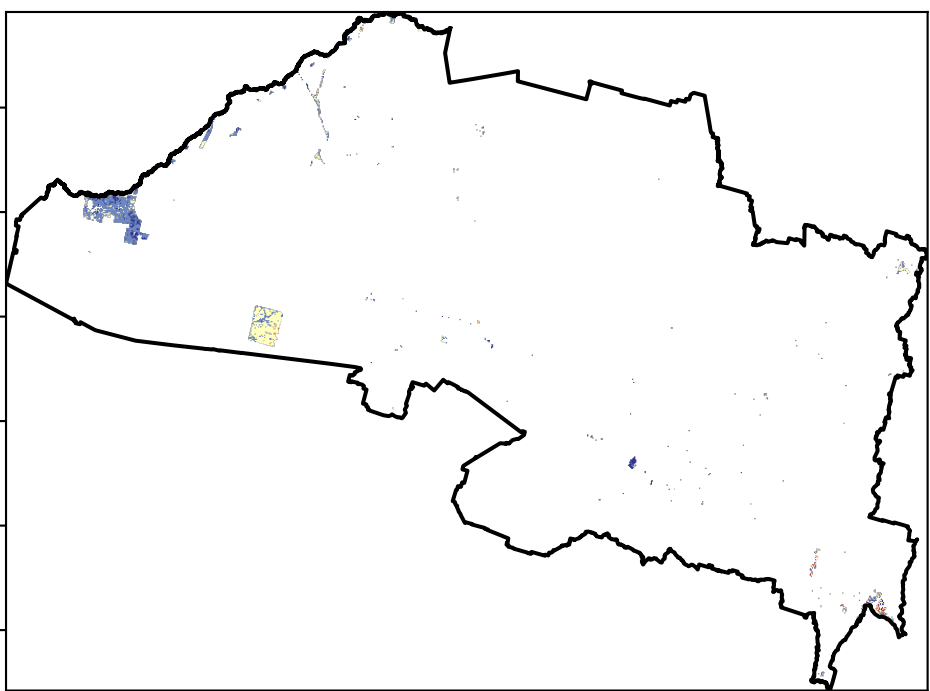
Area protected 100.0% of region (323,075 ha)

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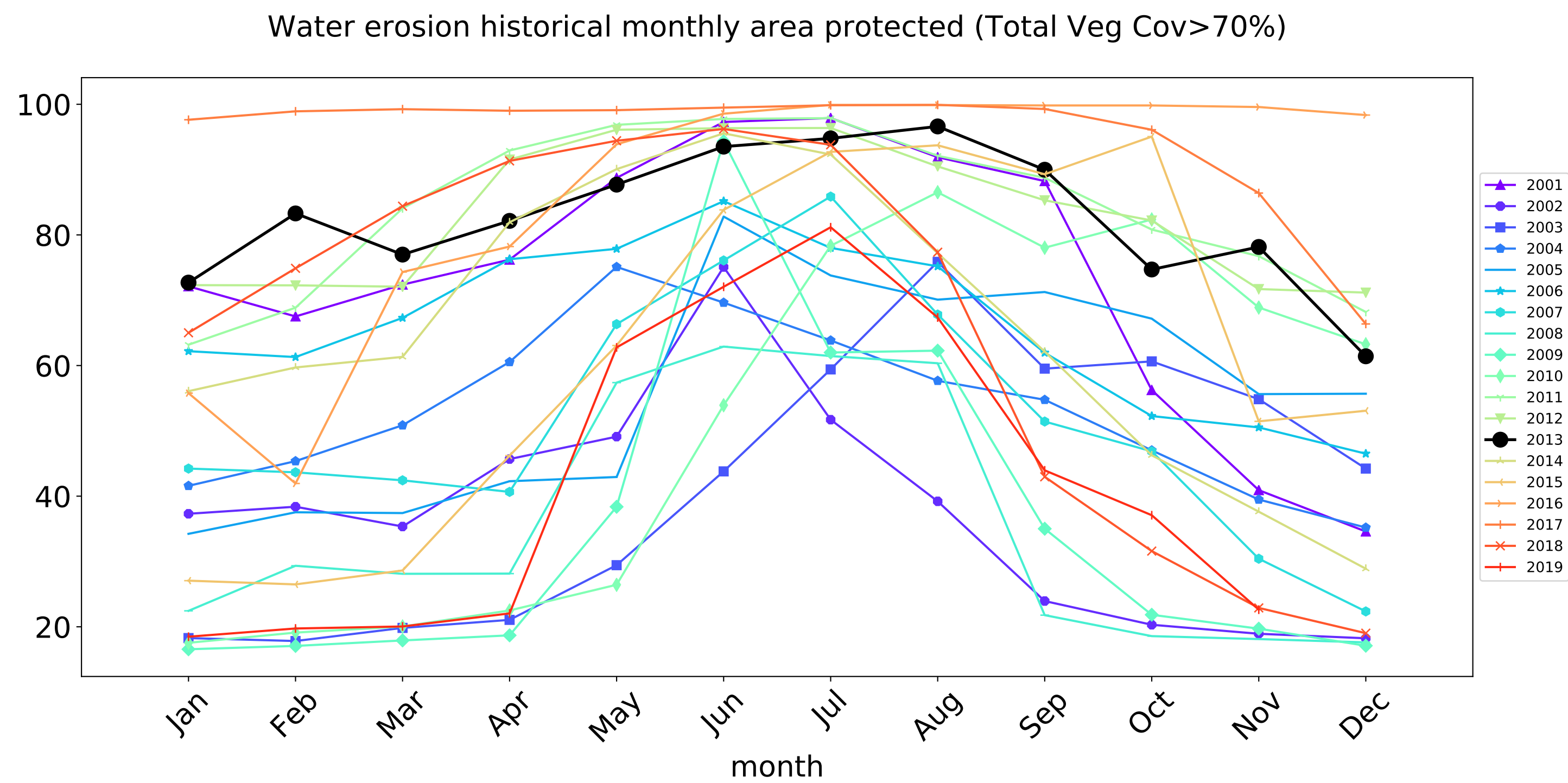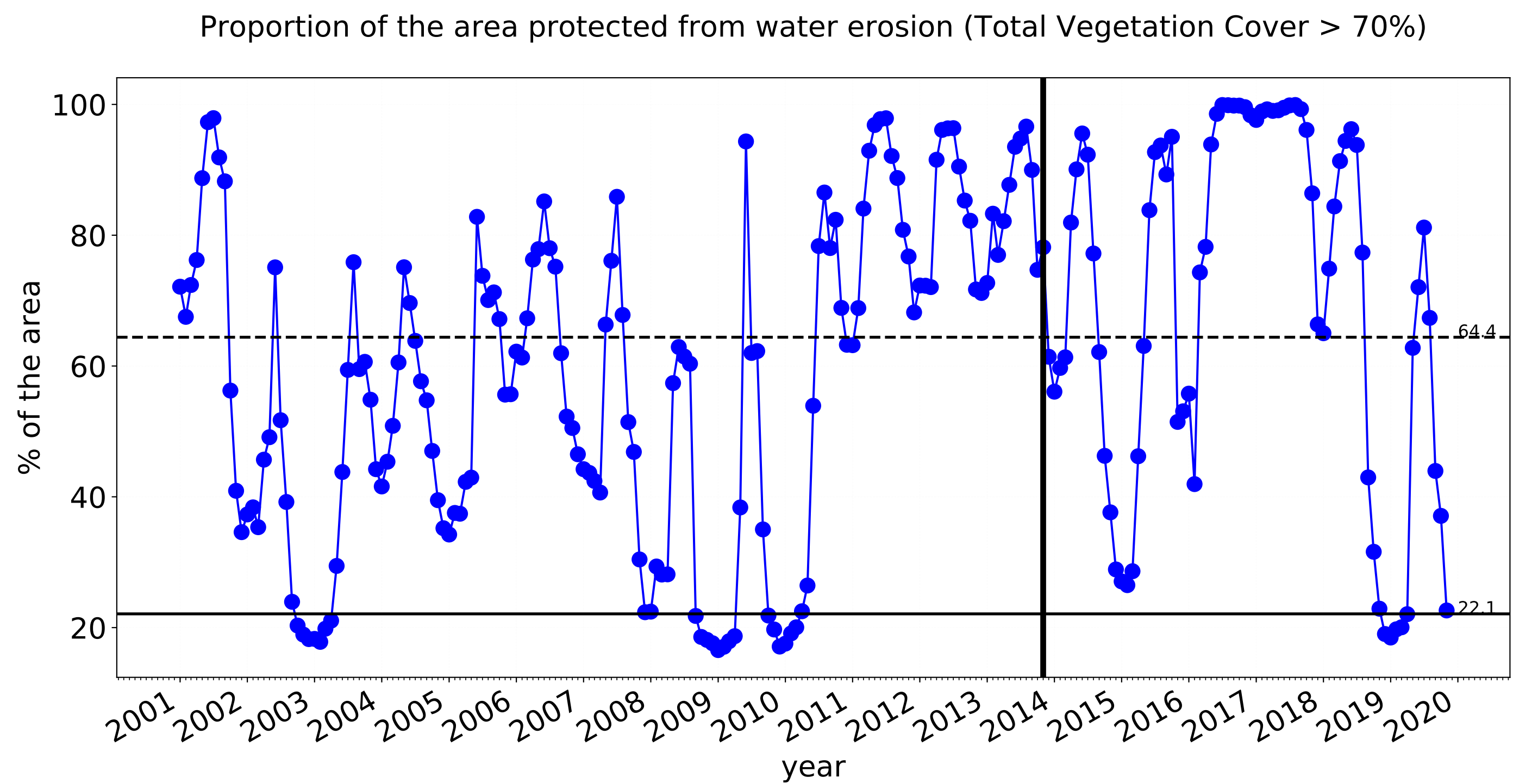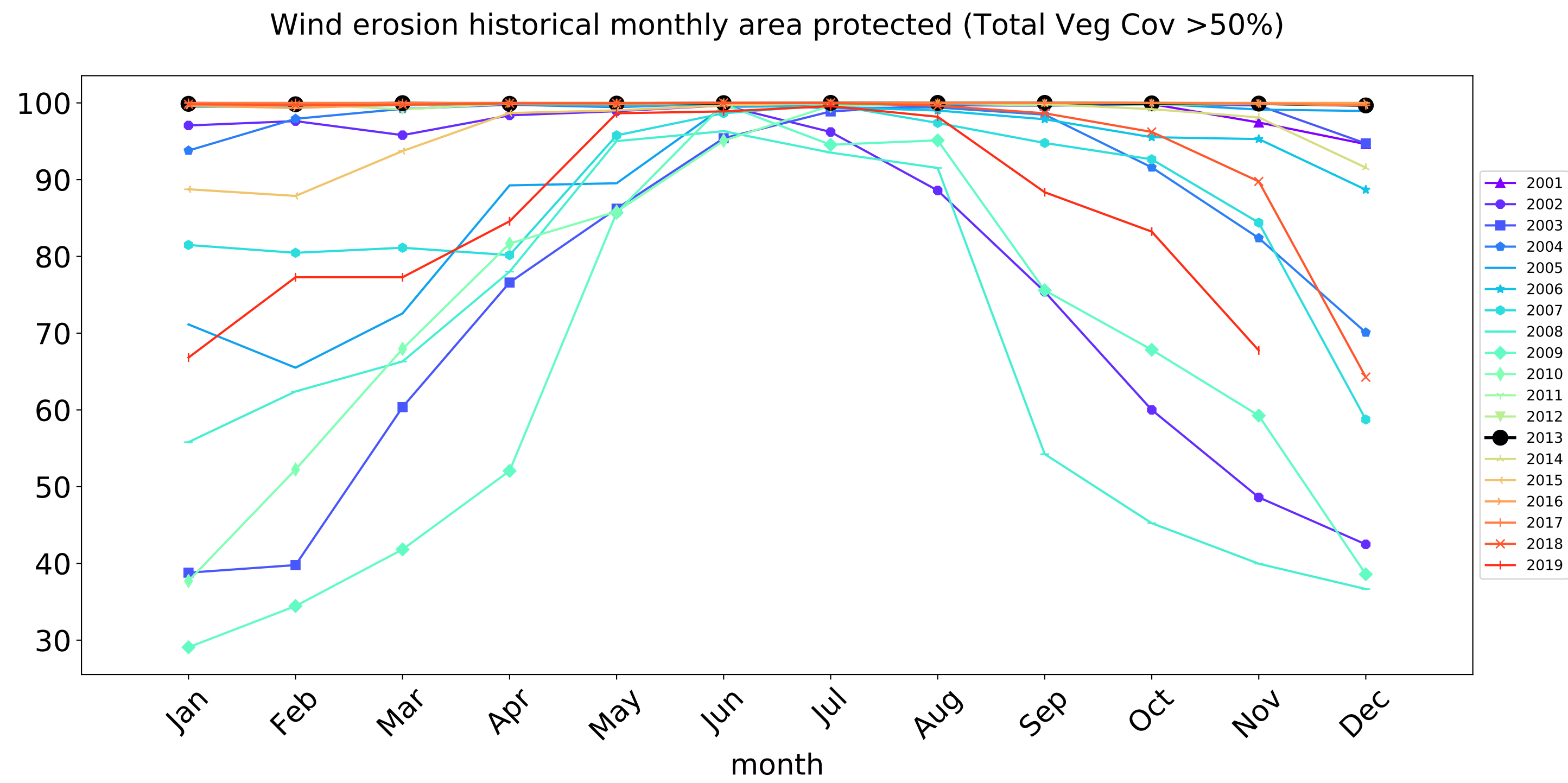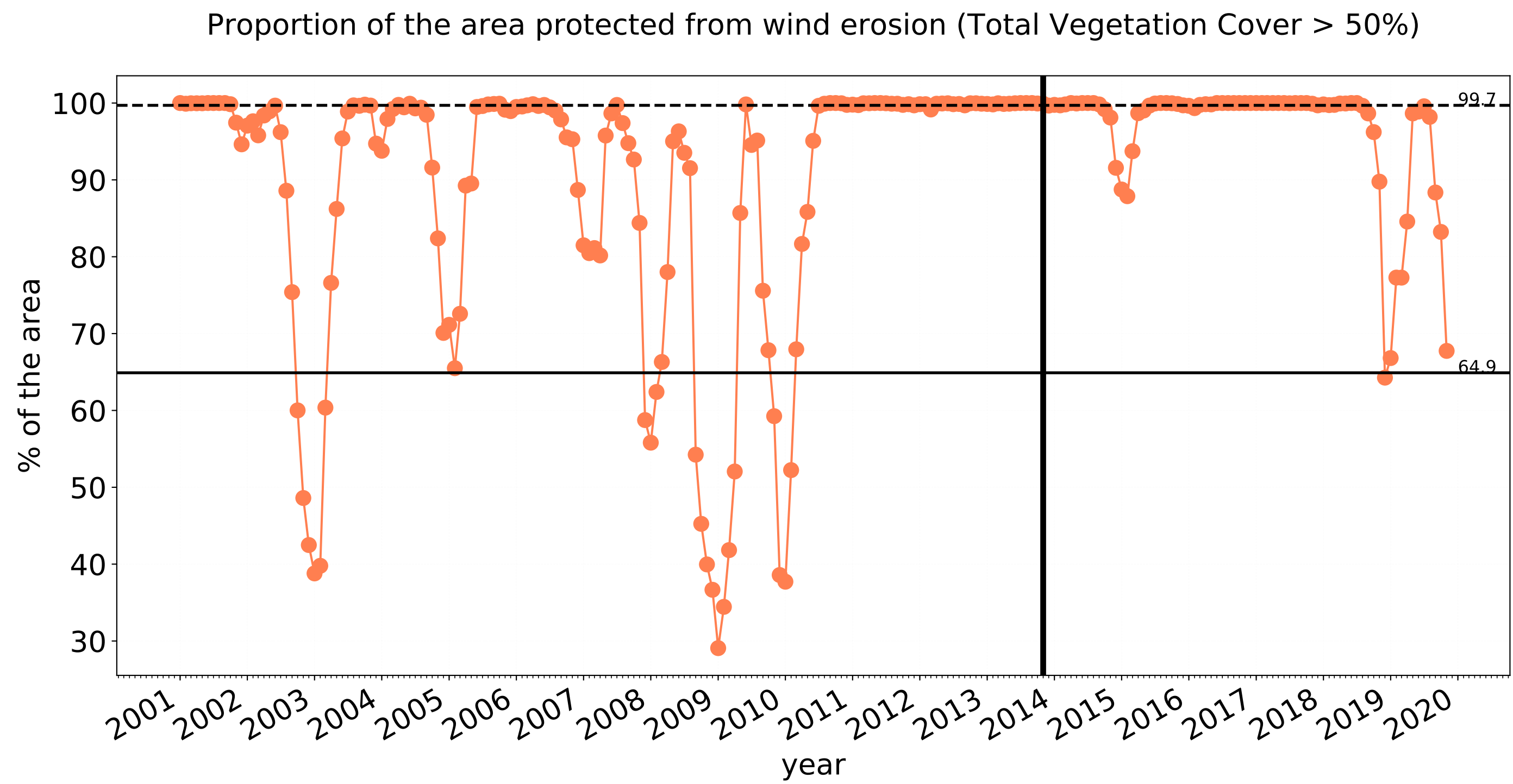records for that month of
the map using baseline
from 2001 to 2019.

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%)
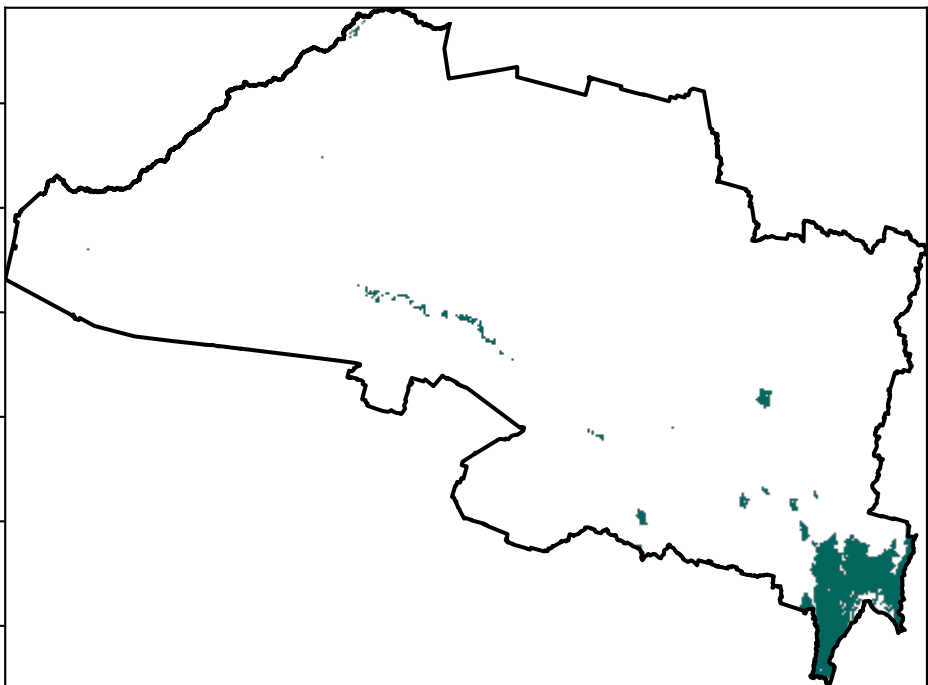
Conservation and natural environments non forest

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

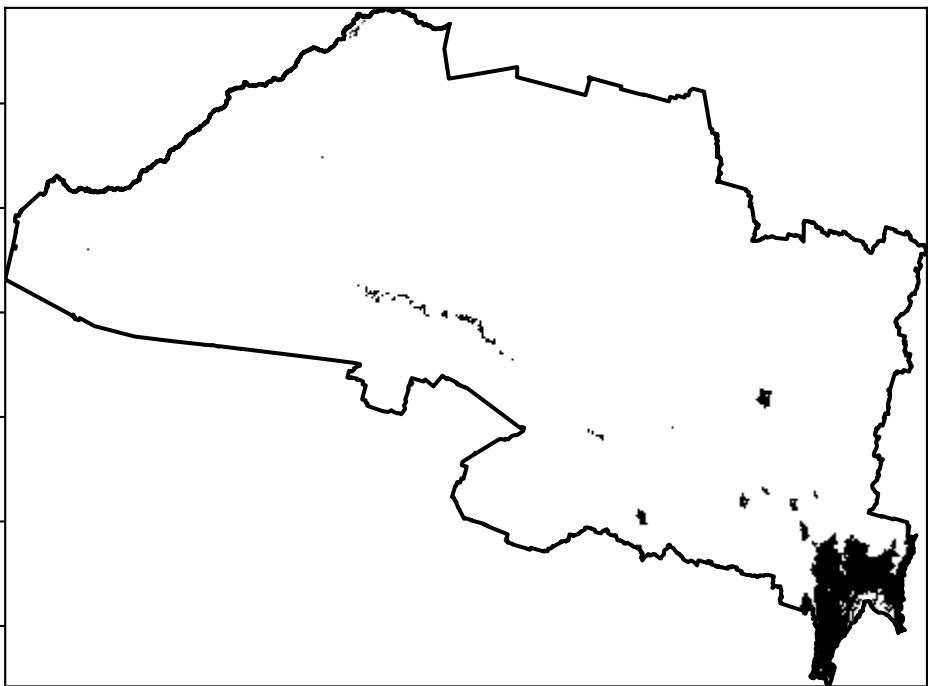## Total Vegetation Cover [%]

71%-100%

51%-70%

31%-50%

0-30%

Proportion of vegetation cover class in area

78.2%

21.8%

0%   0.1%

Area (%)

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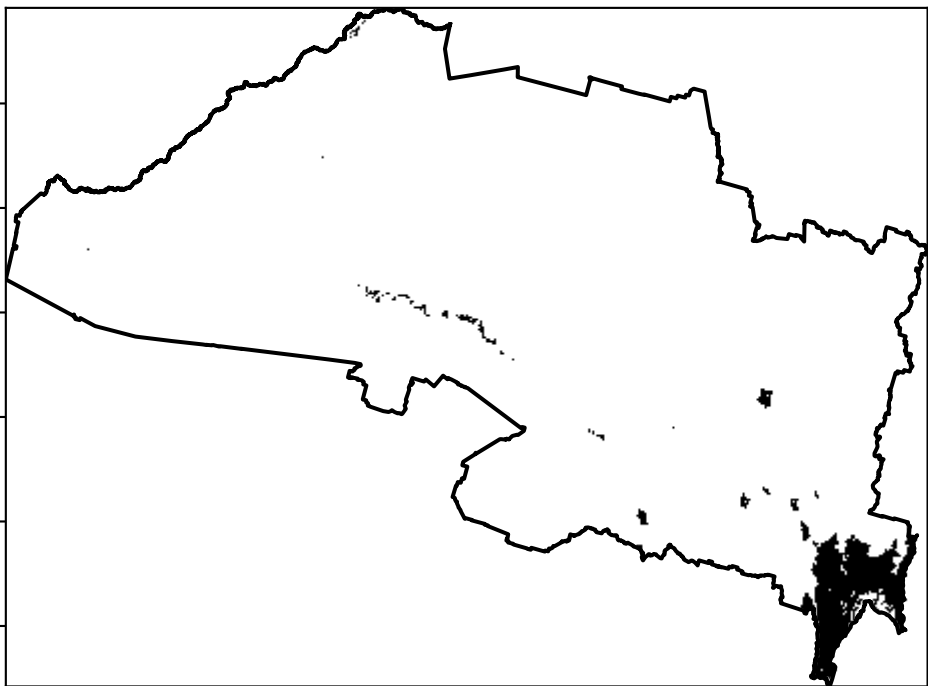
Total Vegetation Cover class

% Area protected from water erosion (>70%)

Area not
protected
21.8% of
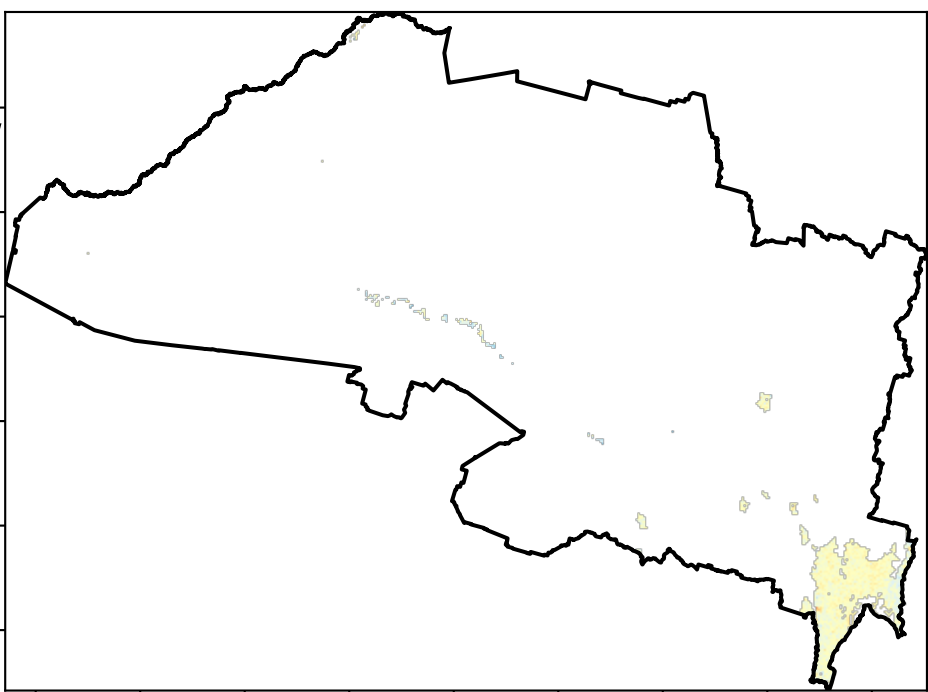region
(18,164
ha)

Area
protected
78.2% of
region
(65,160
ha)

% Area protected from wind erosion (>50%)

Area not
protected
0.0% of
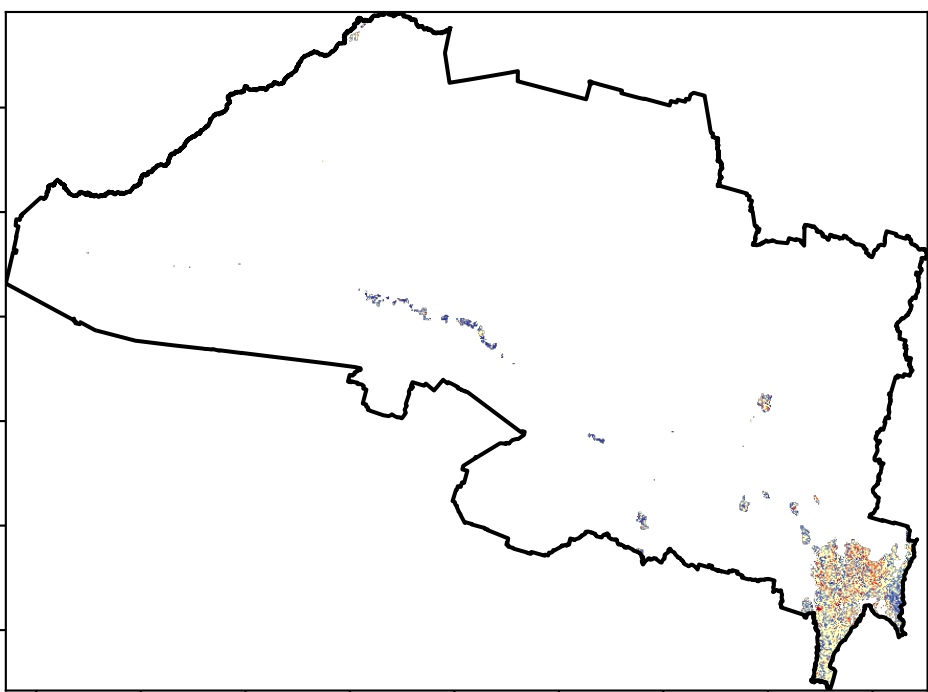region (0
ha)

Area
protected
100.0% of
region
(83,325
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.

20

10

0

-10

-20

Total Vegetation Cover Decile [%]

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

10

8-9

4-7

2-3

1

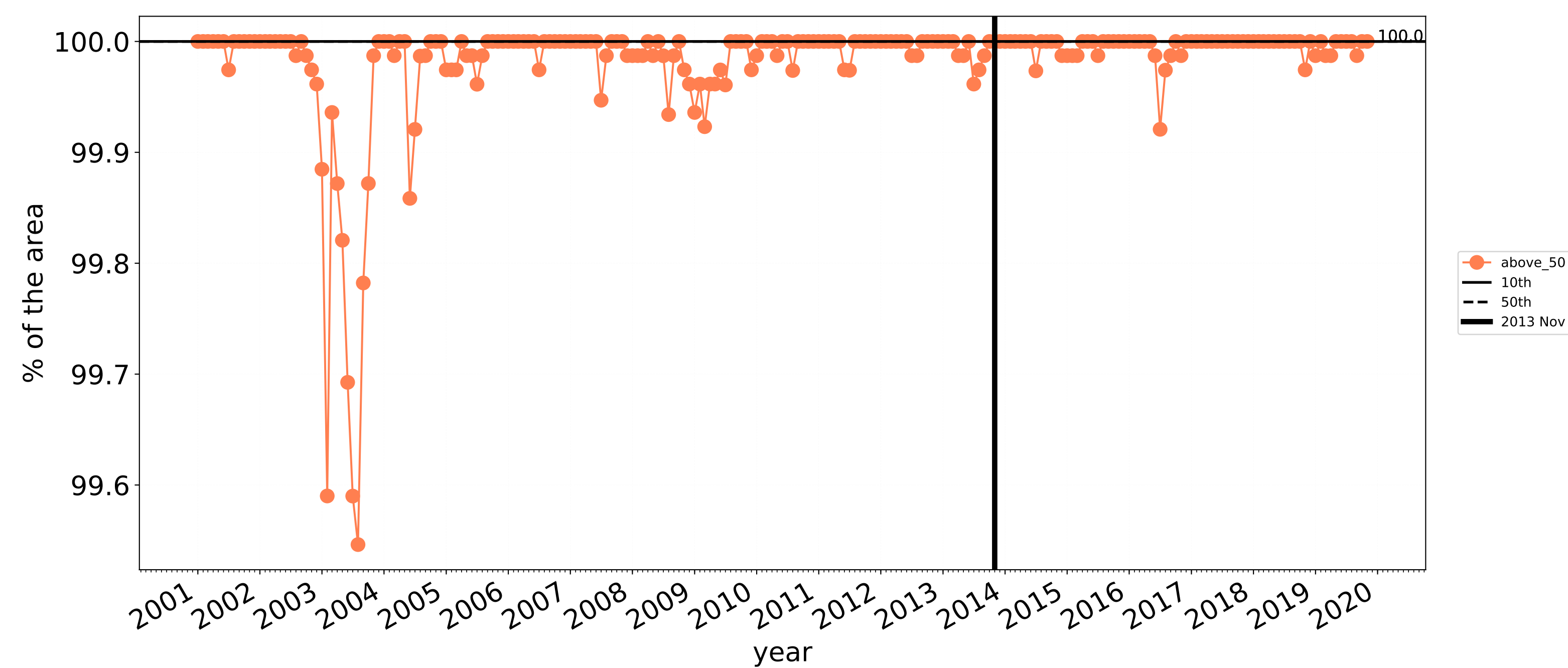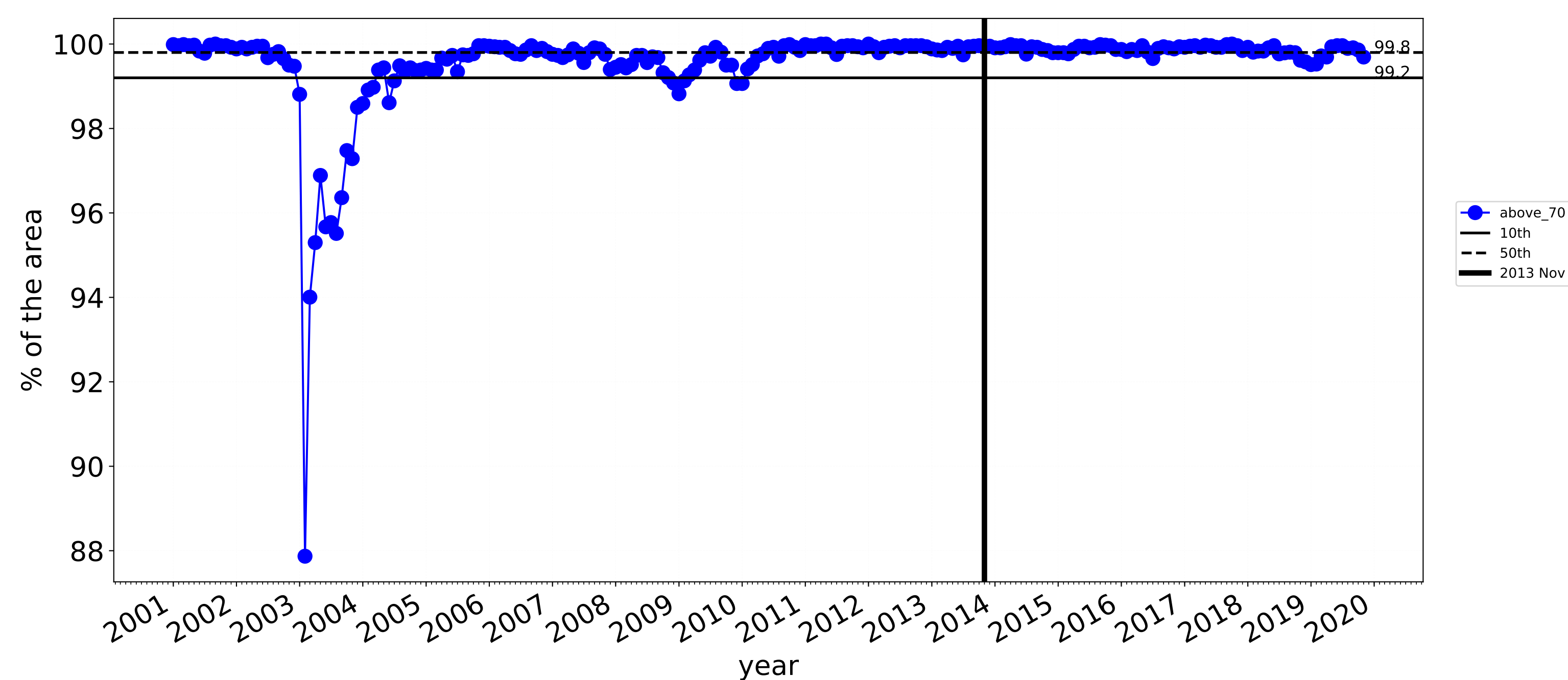# Conservation and natural environments non forest timeseries

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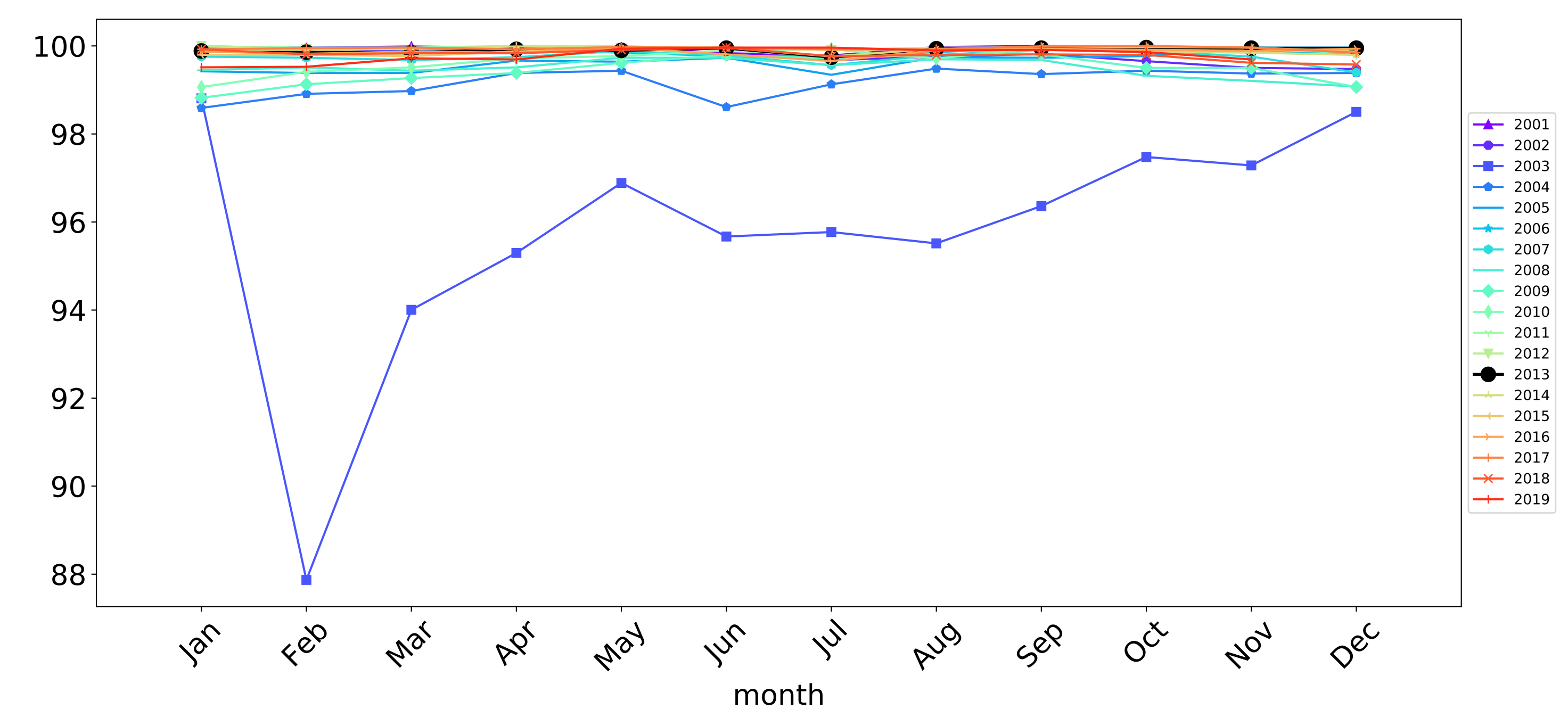
Wind erosion historical monthly area protected (Total Veg Cov >50%)

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)
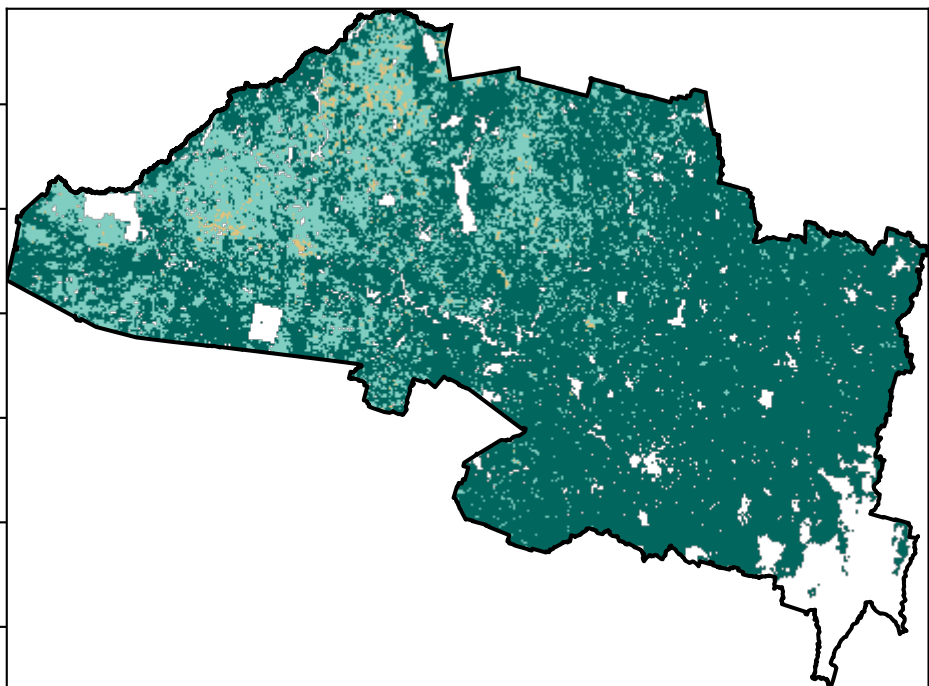
Land use and forest cover

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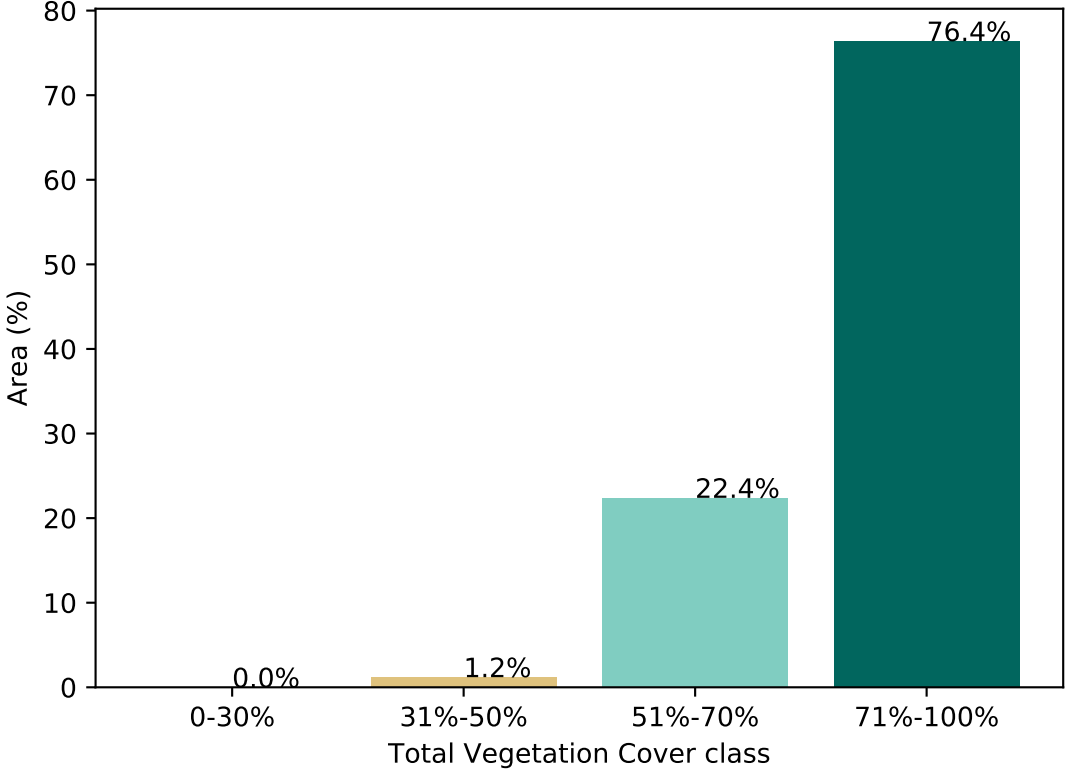Use of Australia
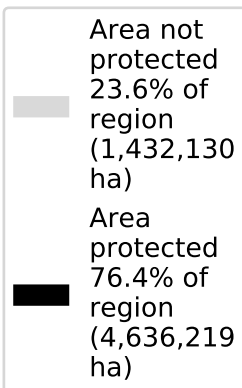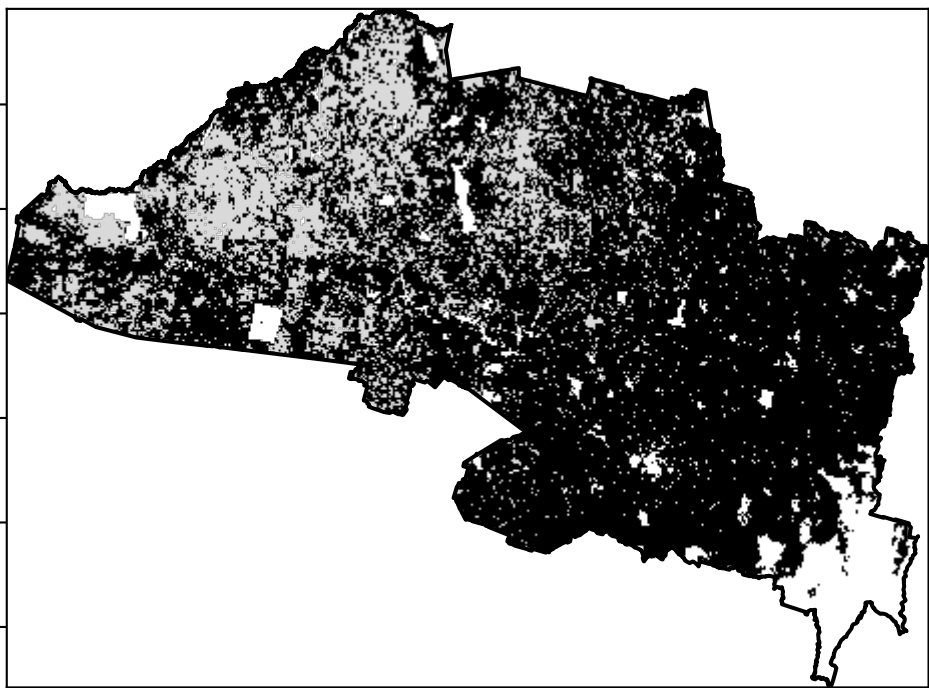(2018) and Forests
of Australia (2018)

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
(195,054
ha)

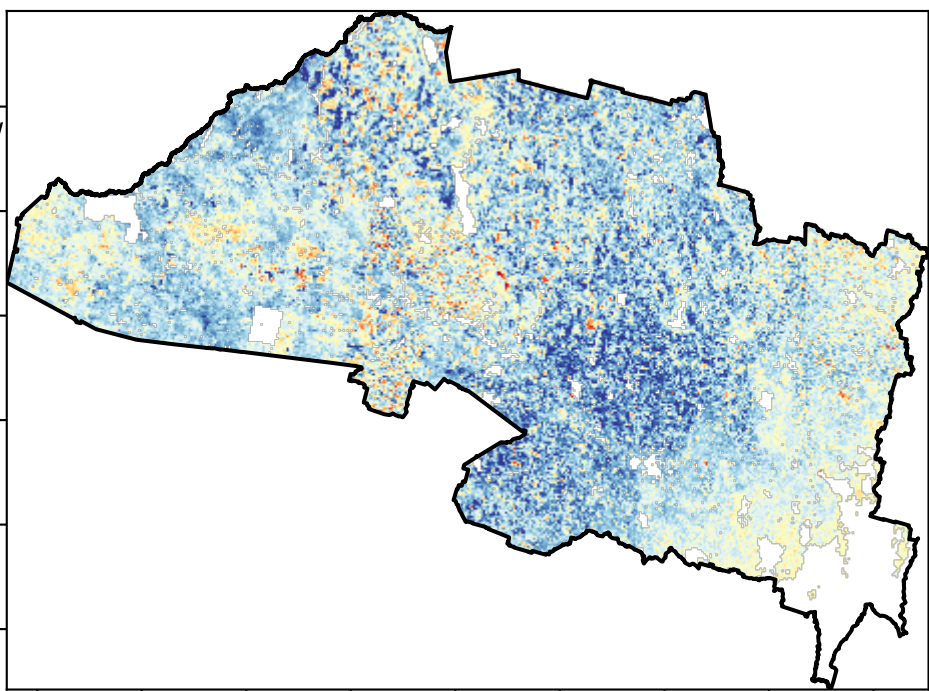## % Area protected from wind erosion (>50%)
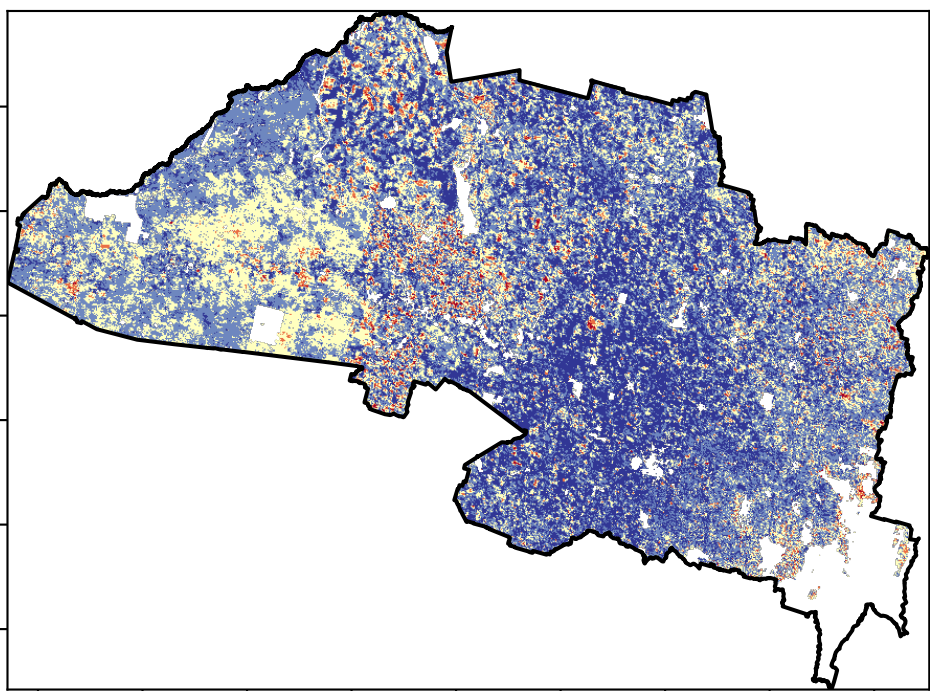
Area
protected
100.0% of
region
(195,250
ha)

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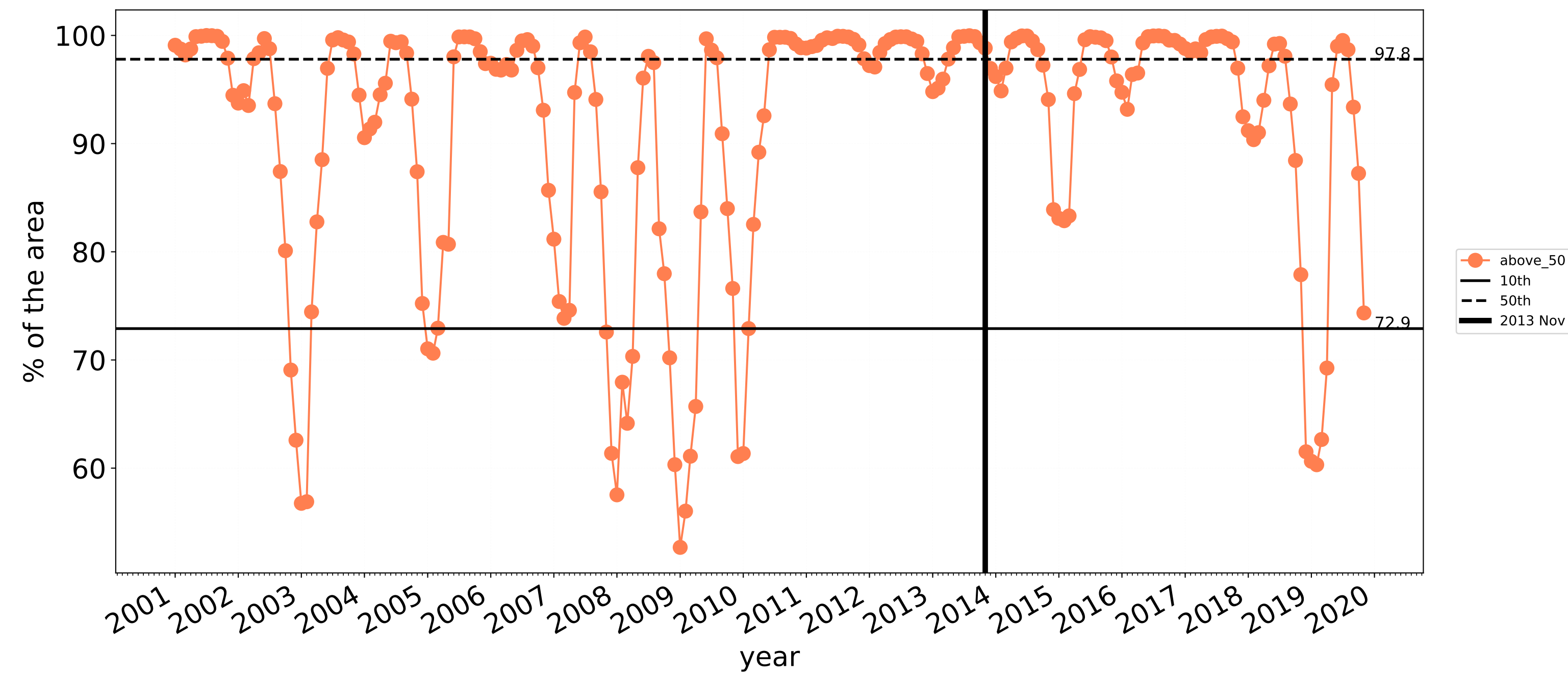records for that month of
the map using baseline
from 2001 to 2019.

10

8-9

4-7

2-3

1

Conservation and natural environments Forest (non woodland) timeseries
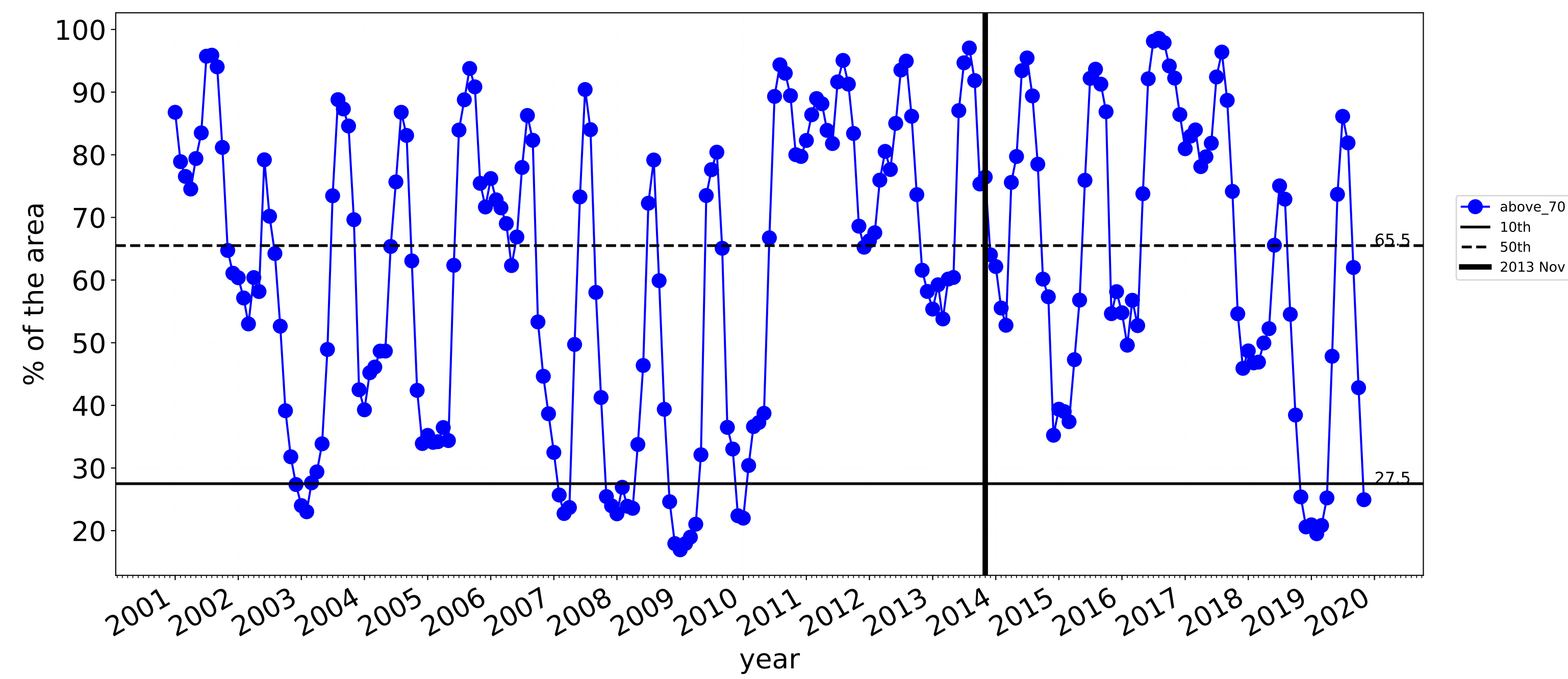

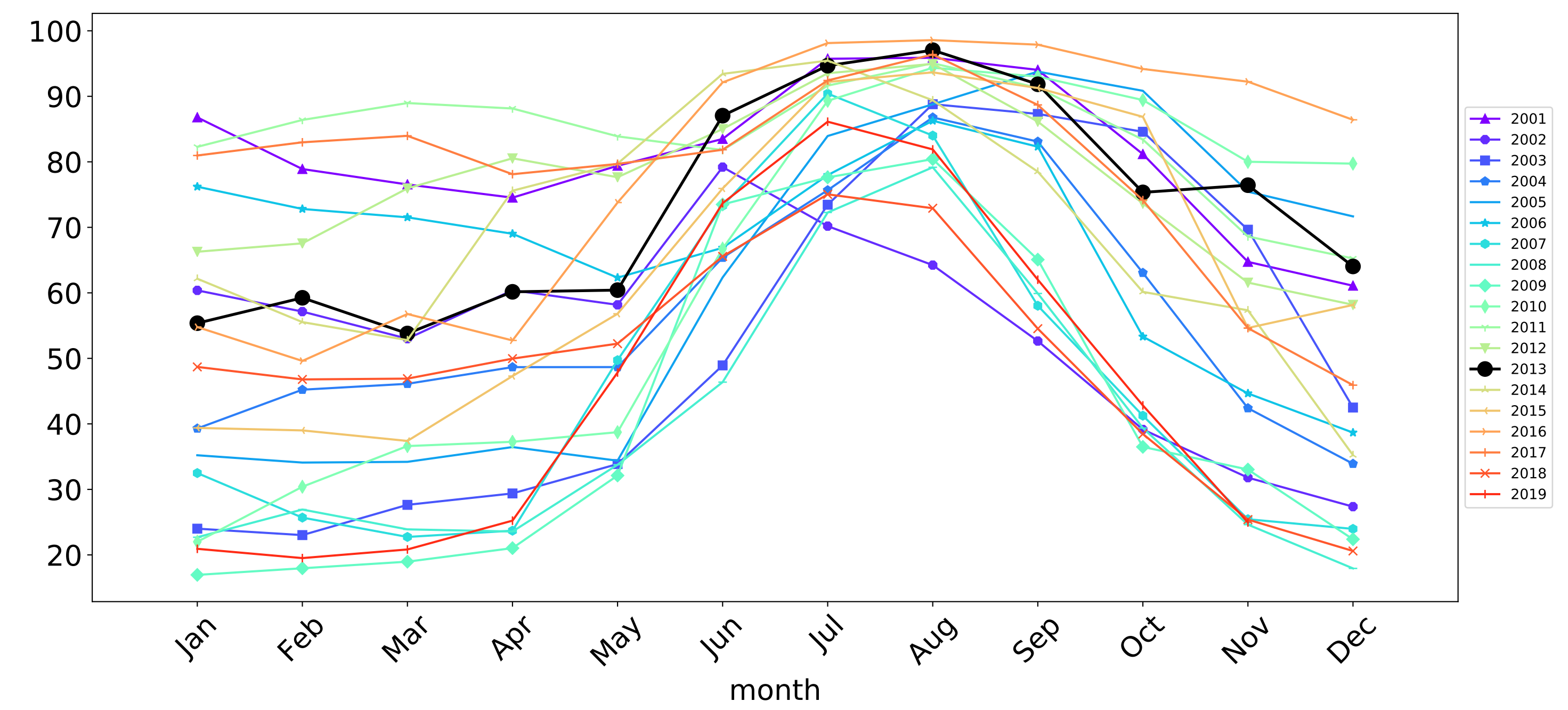Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)

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)
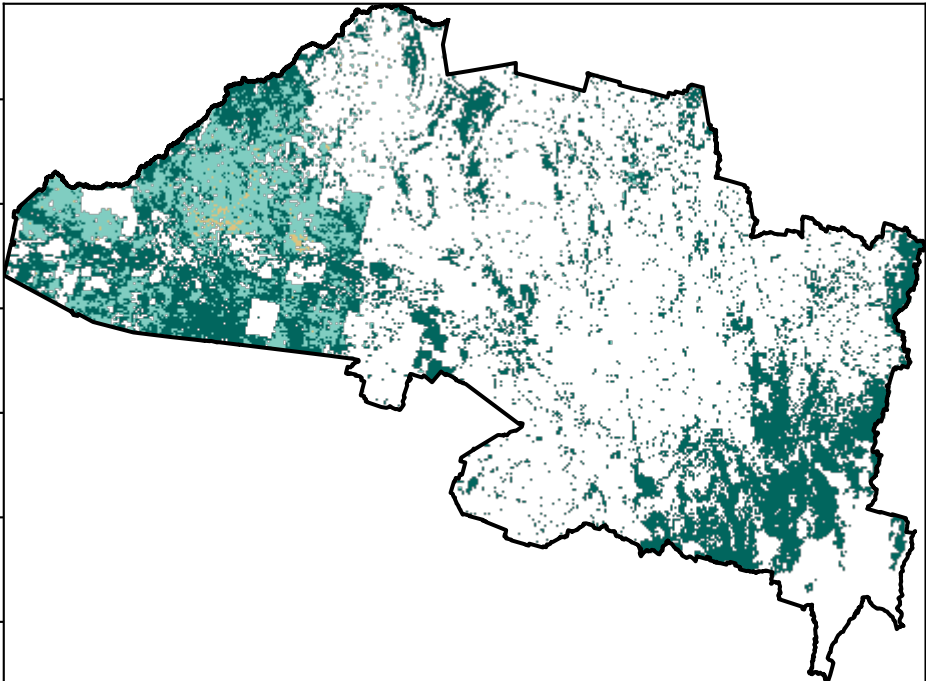
1 Agriculture - Grazing - Non forest
2 Agriculture - Grazing - Woodland forest
3 Agriculture - Grazing - Non-woodland forest
4 Agriculture - Grazing - Irrigated
5 Agriculture - Cropping - Non-irrigated
6 Agriculture - Cropping - Irrigated
7 Agriculture - Horticulture - Non-irrigated
8 Agriculture - Horticulture - 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 23.6% of region (1,432,130 ha)

Area protected 76.4% of region (4,636,219 ha)

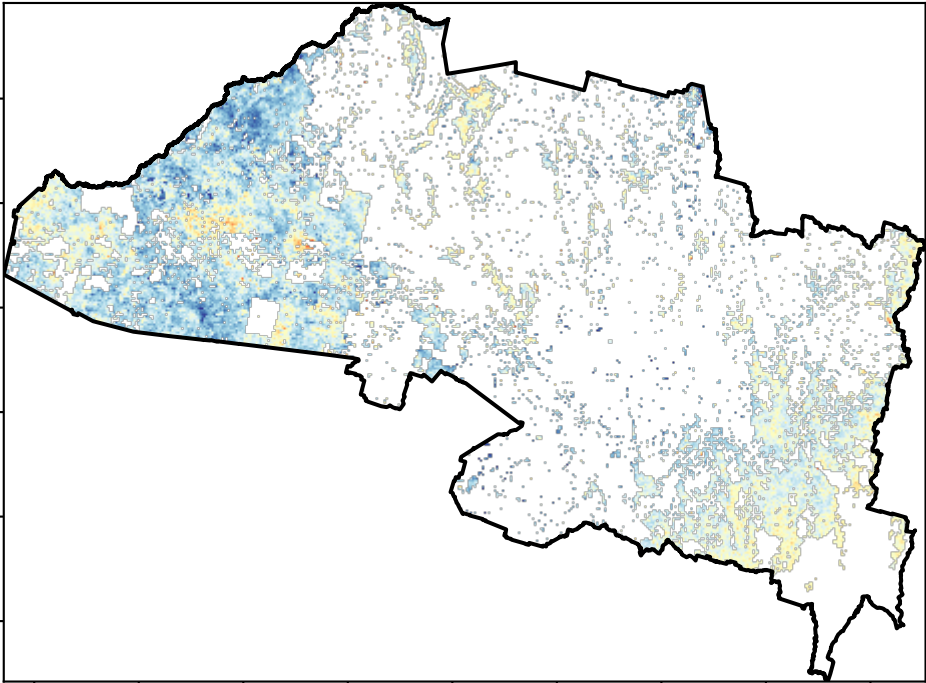## % Area protected from wind erosion (>50%)

Area not protected 1.0% of region (60,683 ha)
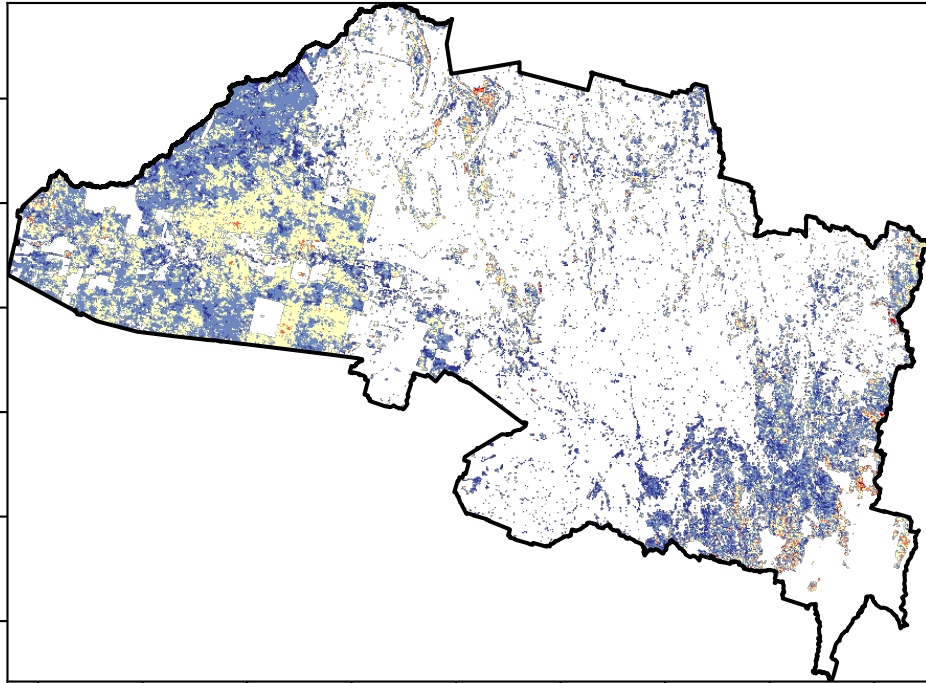
Area protected 99.0% of region (6,007,666 ha)

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%

Area (%)

Land use class

Total Vegetation Cover [%]

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

Proportion of vegetation cover class in area

73.3%
25.9%
0.0%
0.8%

Area (%)

Total Vegetation Cover class
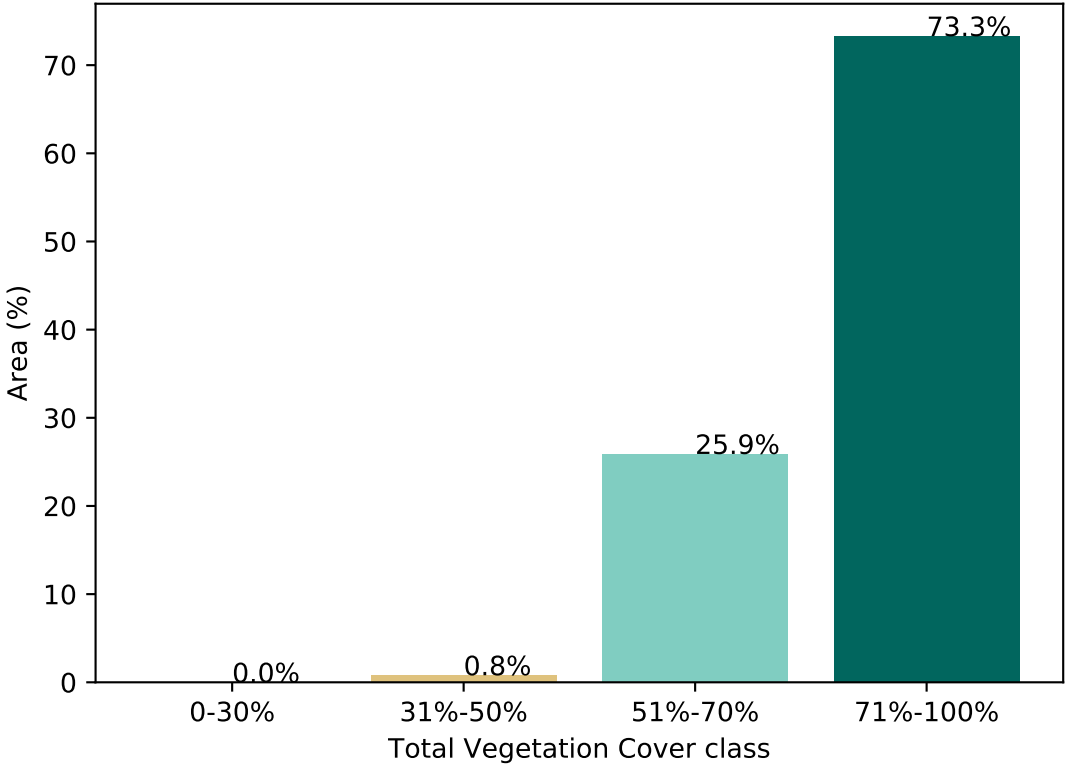
% Area protected from water erosion (>70%)
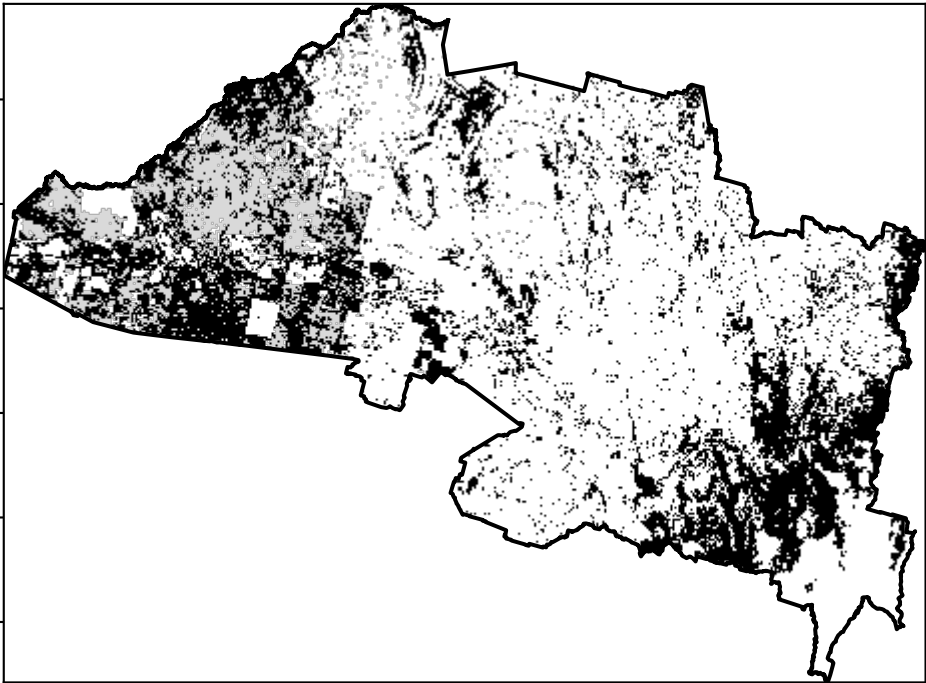
Area not protected 26.7% of region (617,297 ha)

Area protected 73.3% of region (1,694,677 ha)

% Area protected from wind erosion (>50%)
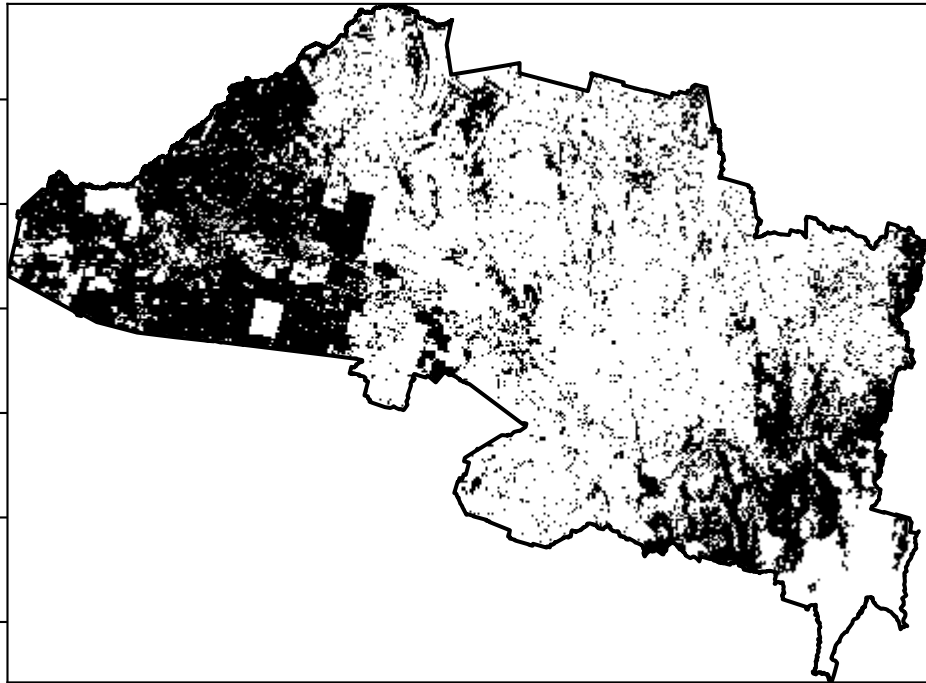
Area not protected 1.0% of region (23,119 ha)

Area protected 99.0% of region (2,288,855 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.
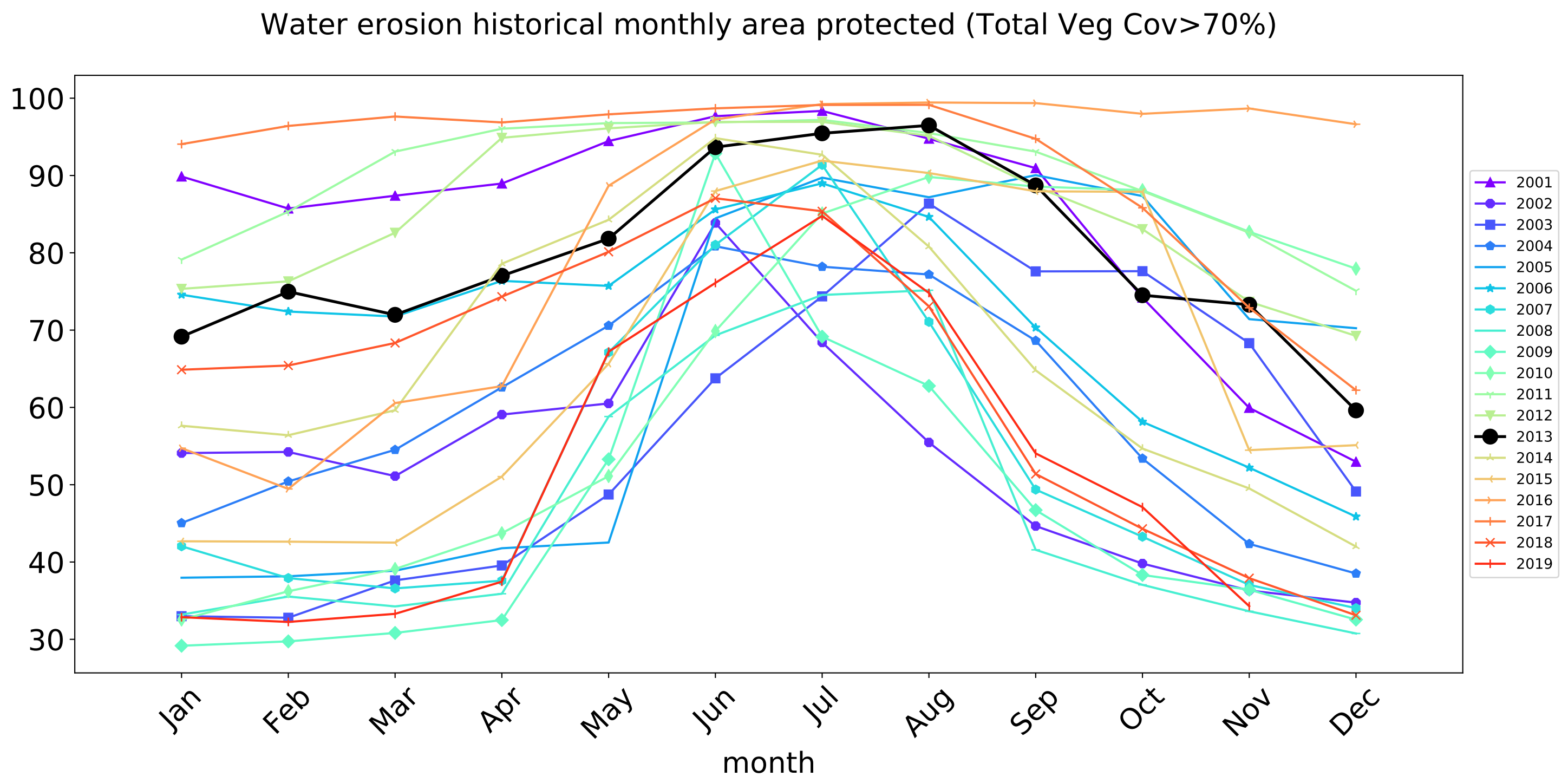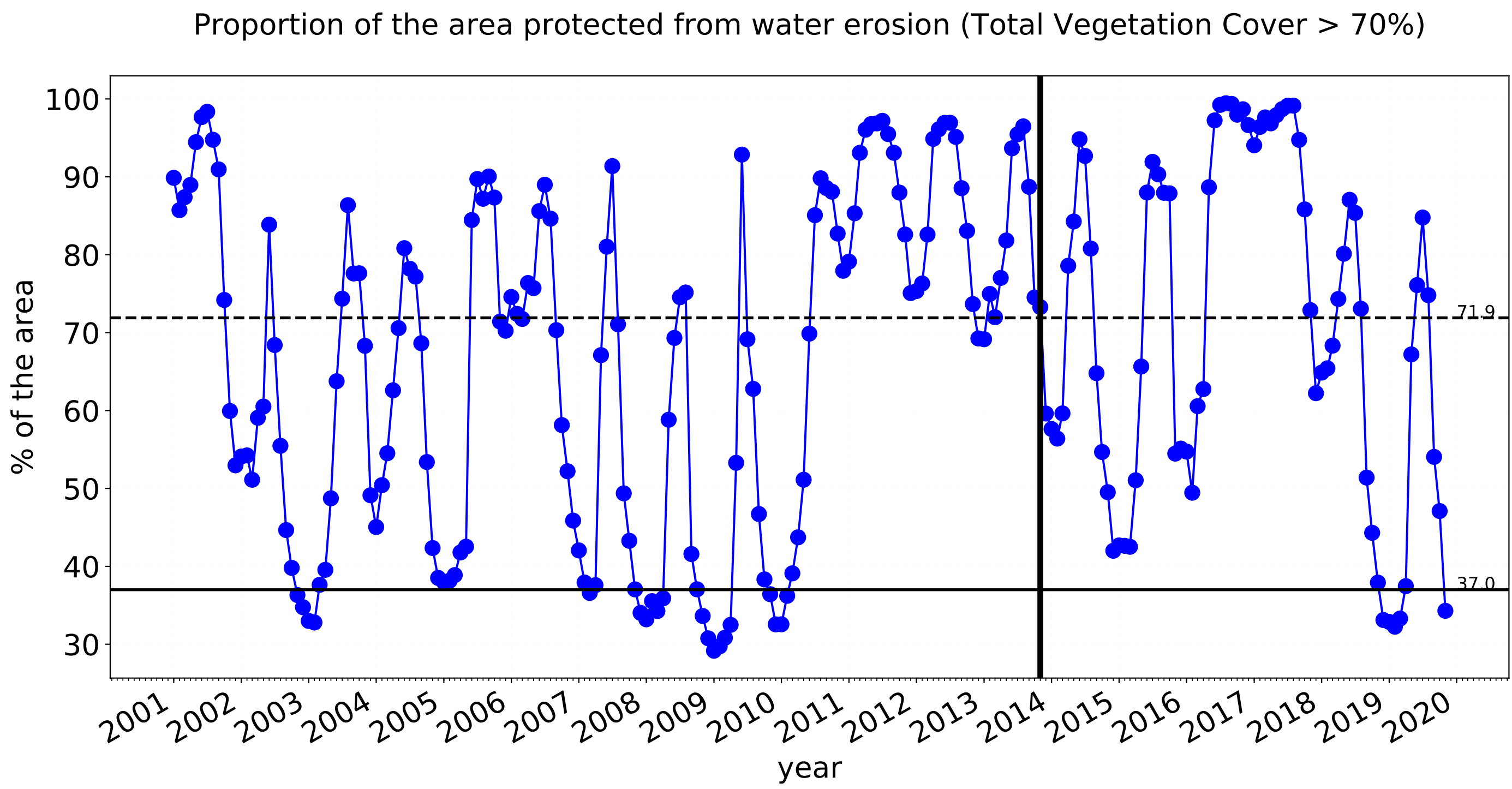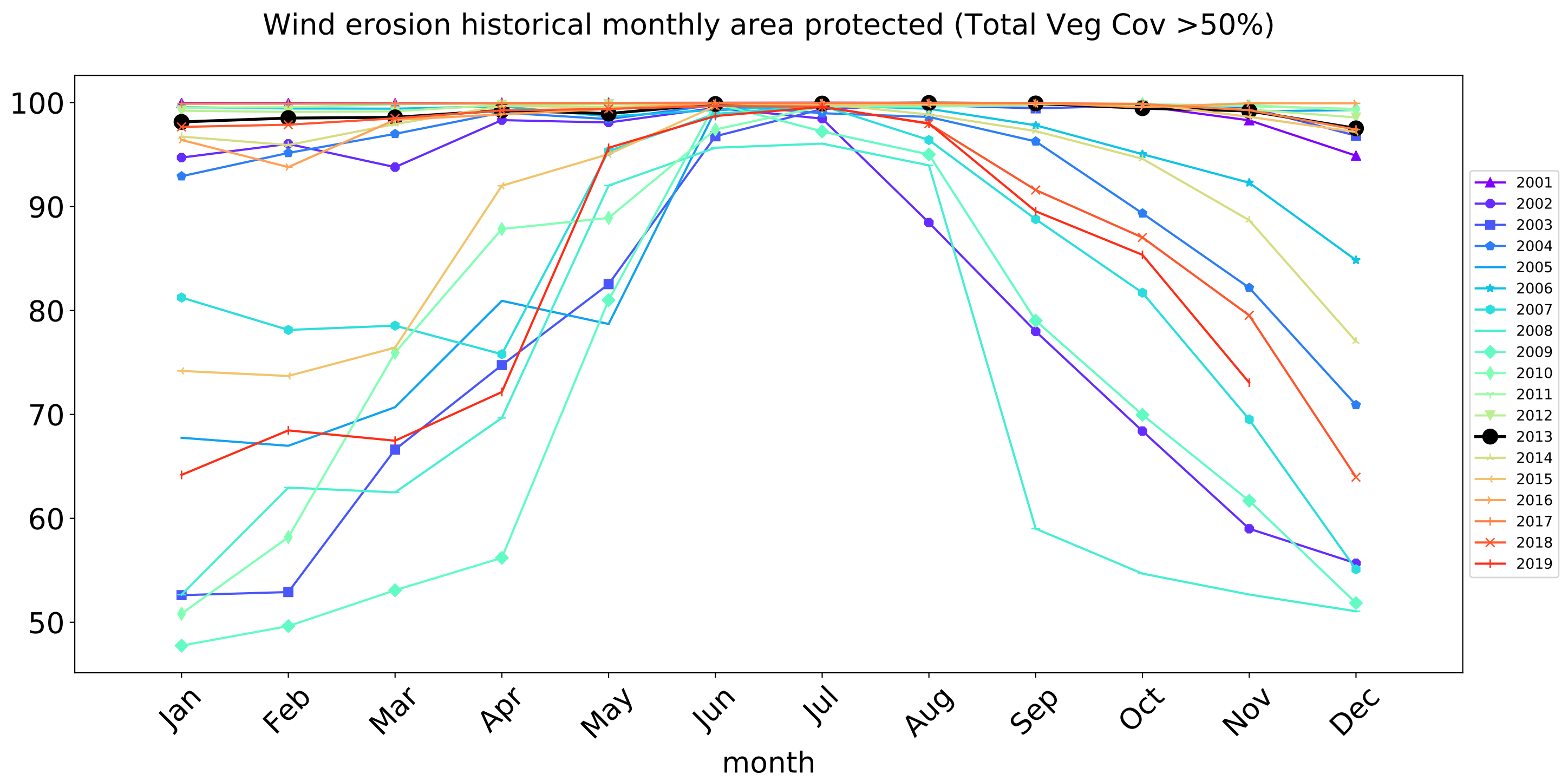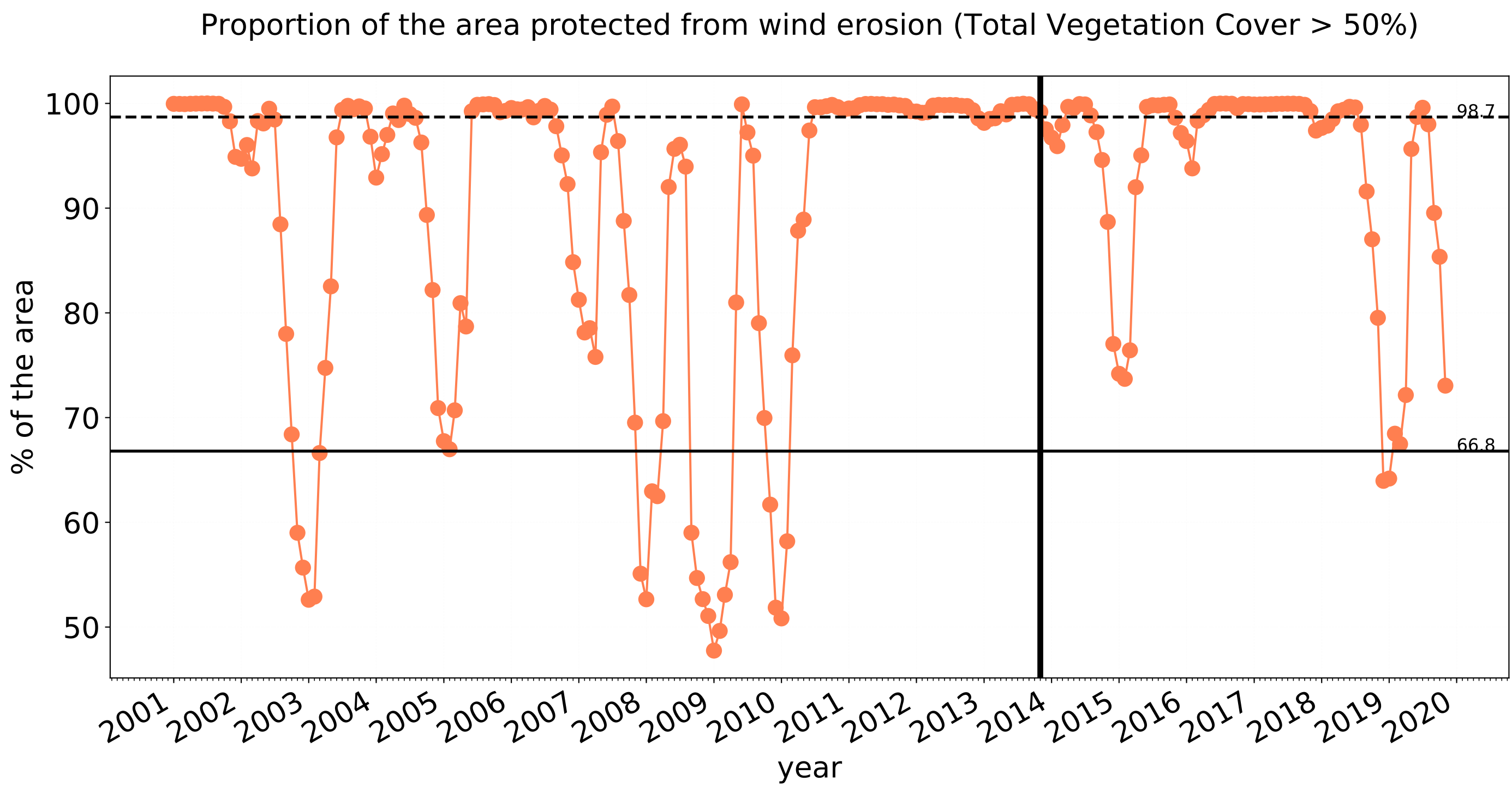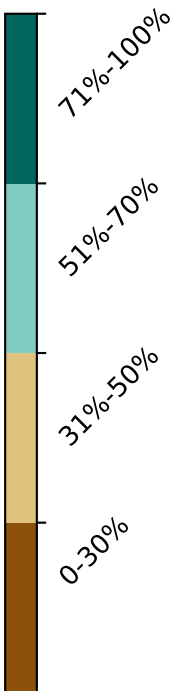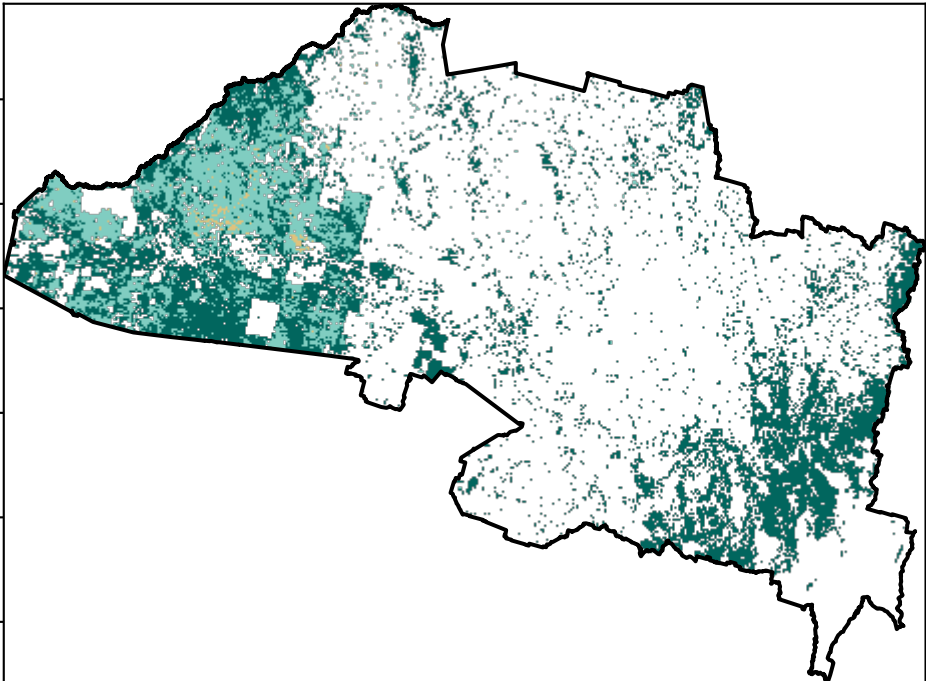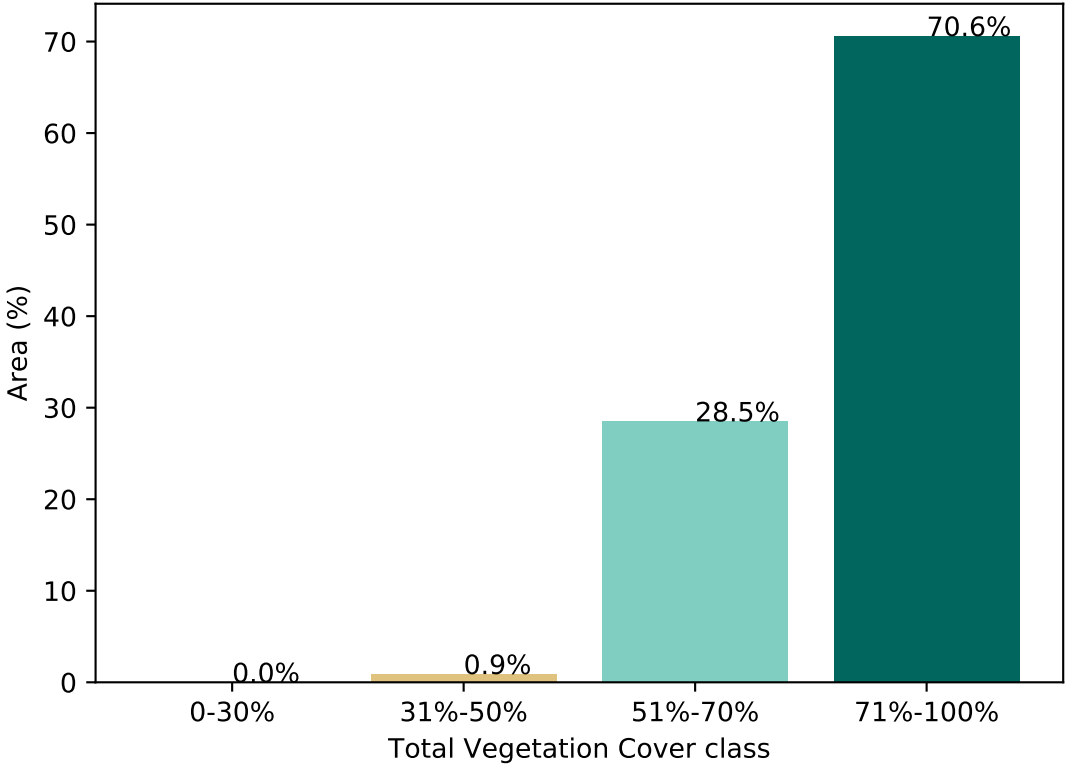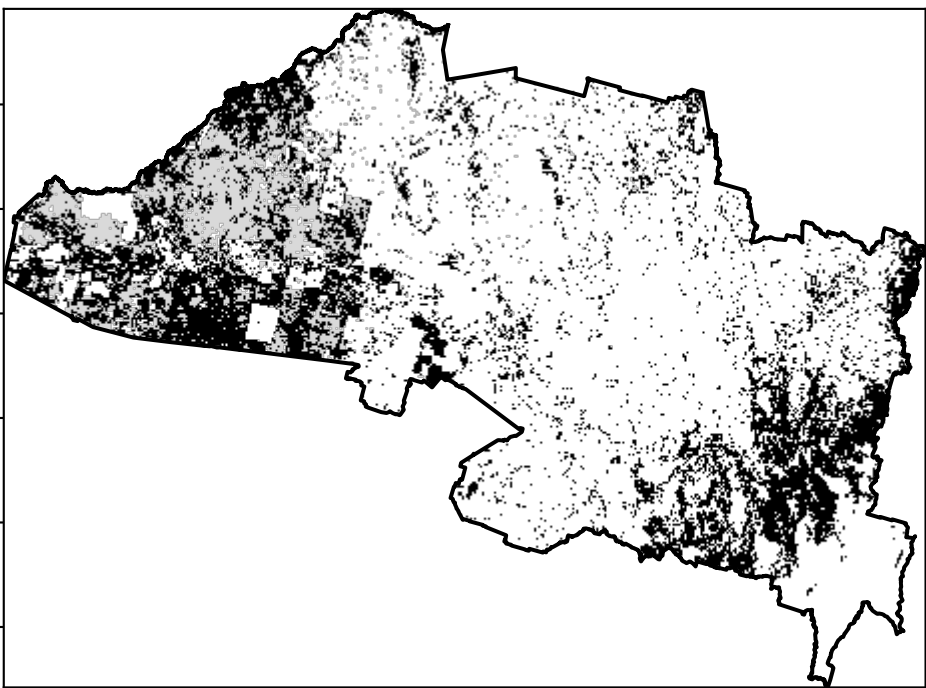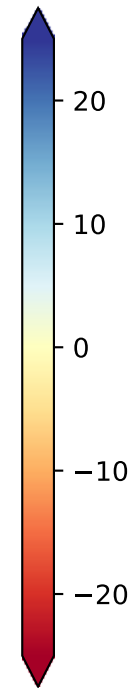
10
8-9
4-7
2-3
1

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%)

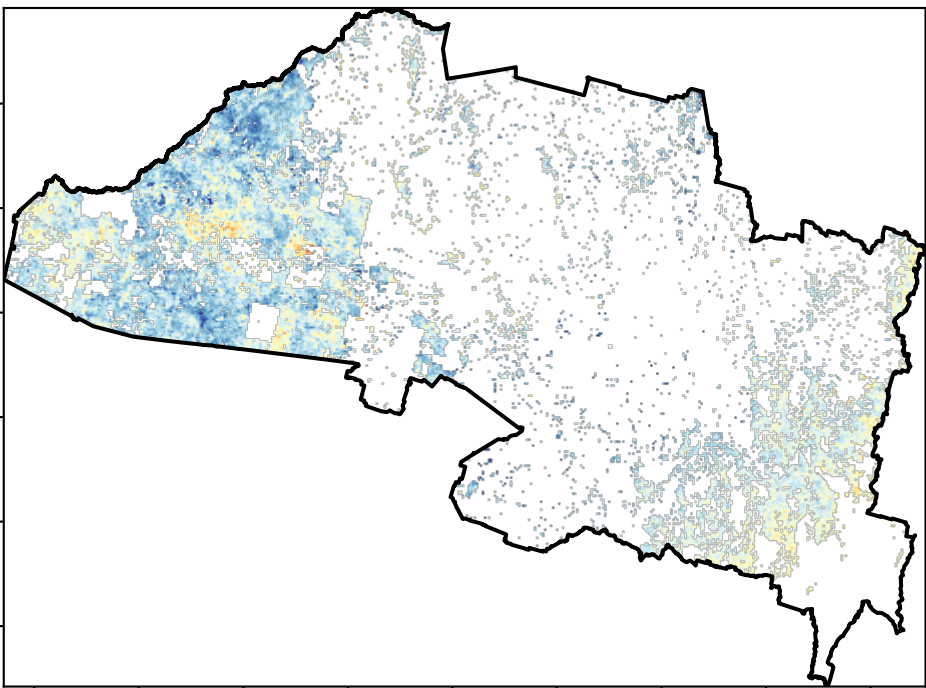Area not protected 29.4% of region (607,690 ha)

Area protected 70.6% of region (1,459,284 ha)

% Area protected from wind erosion (>50%)
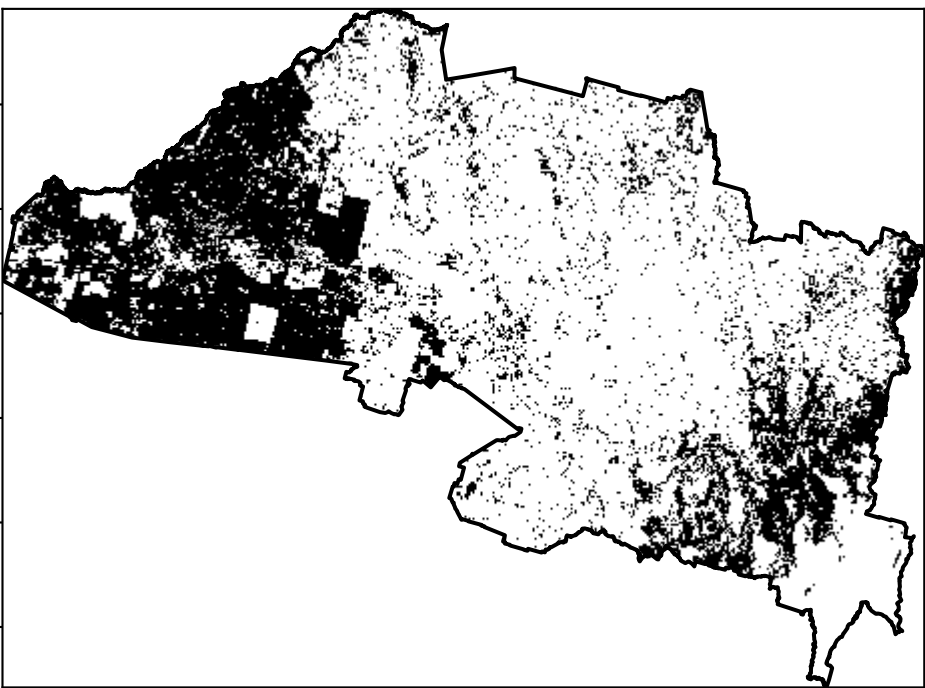
Area not protected 1.0% of region (20,669 ha)

Area protected 99.0% of region (2,046,305 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.
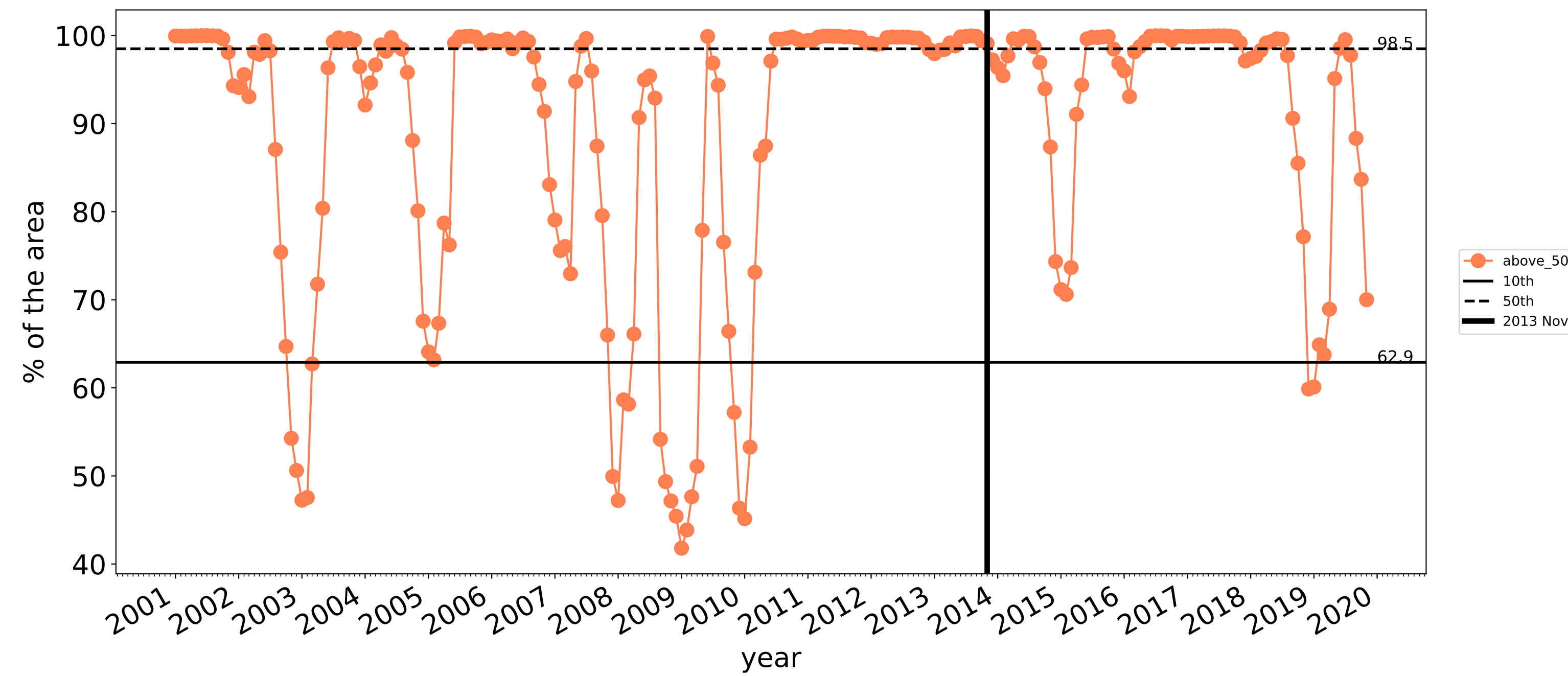
10
8-9
4-7
2-3
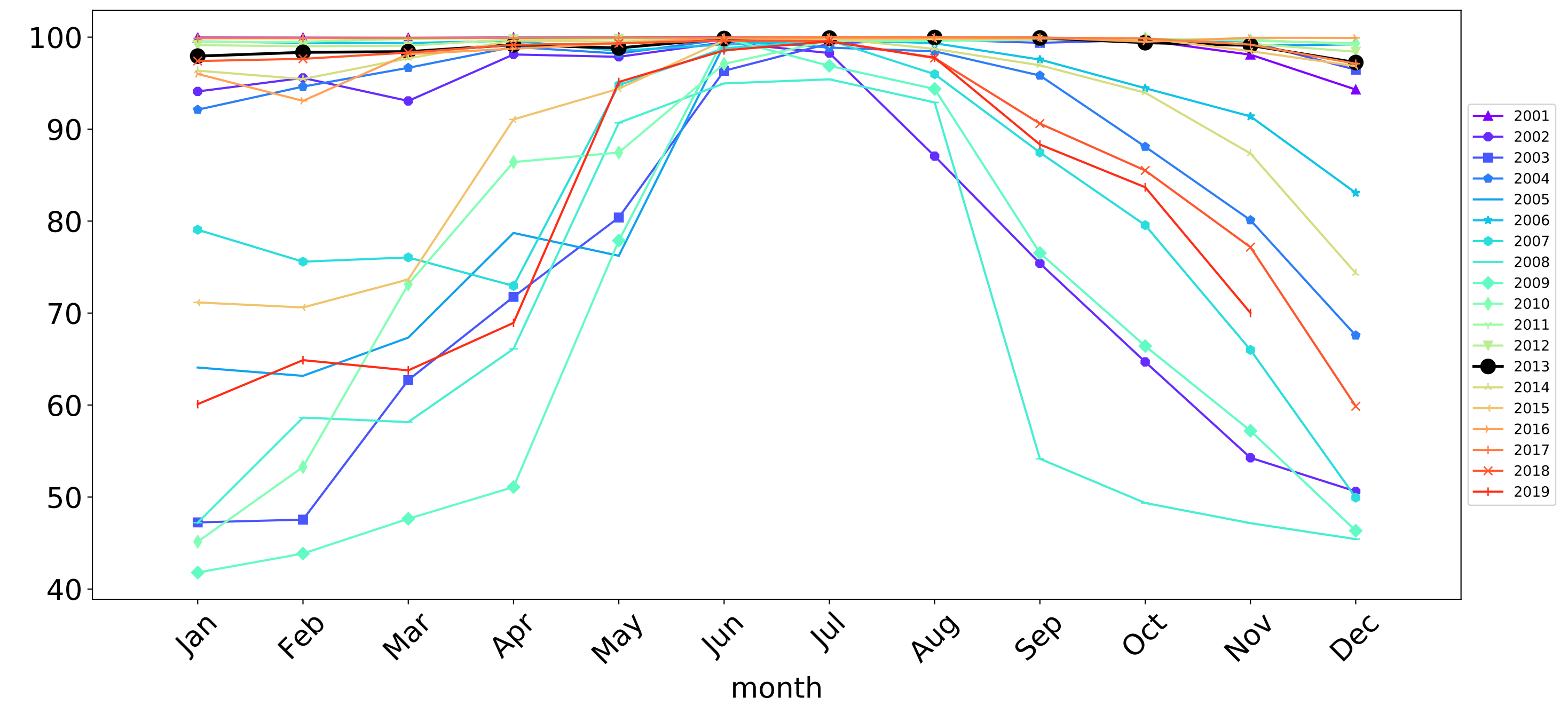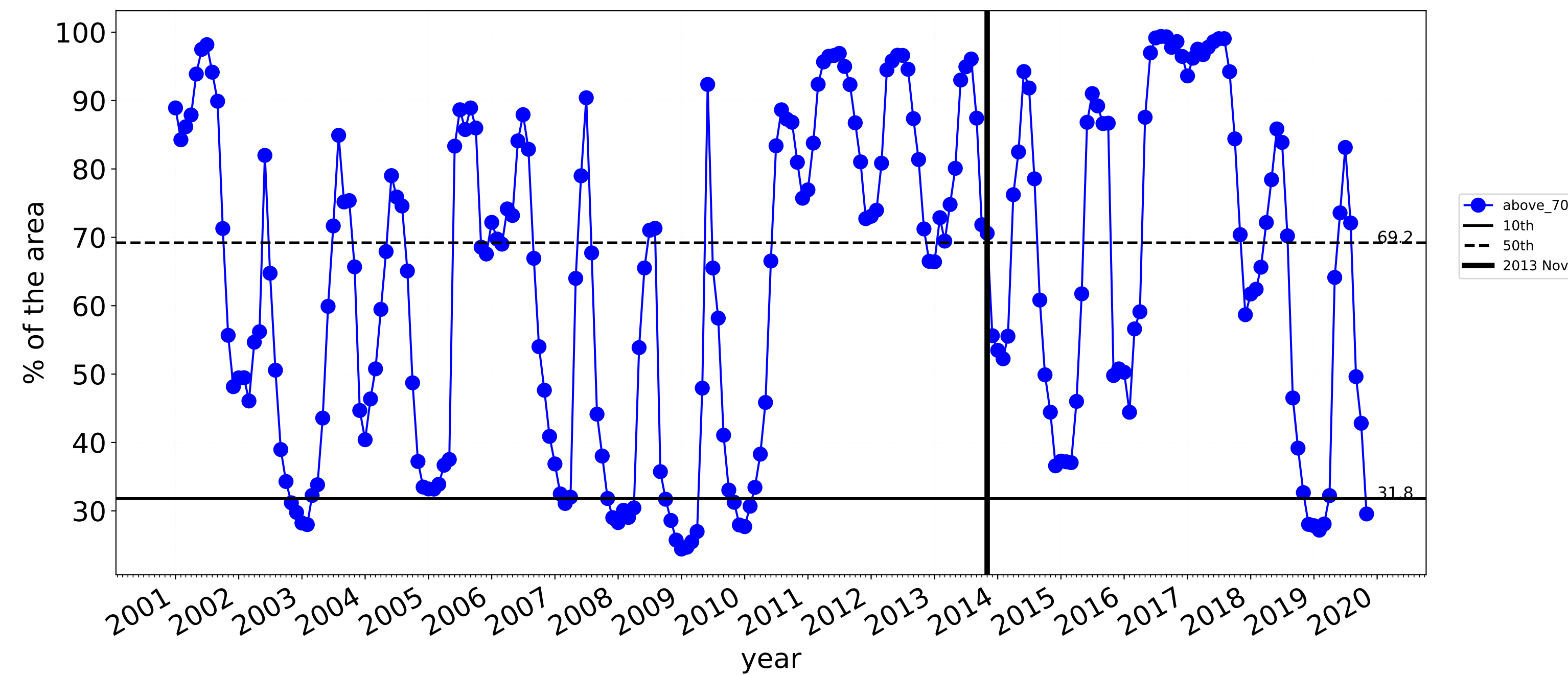1

Grazing non forest timeseries

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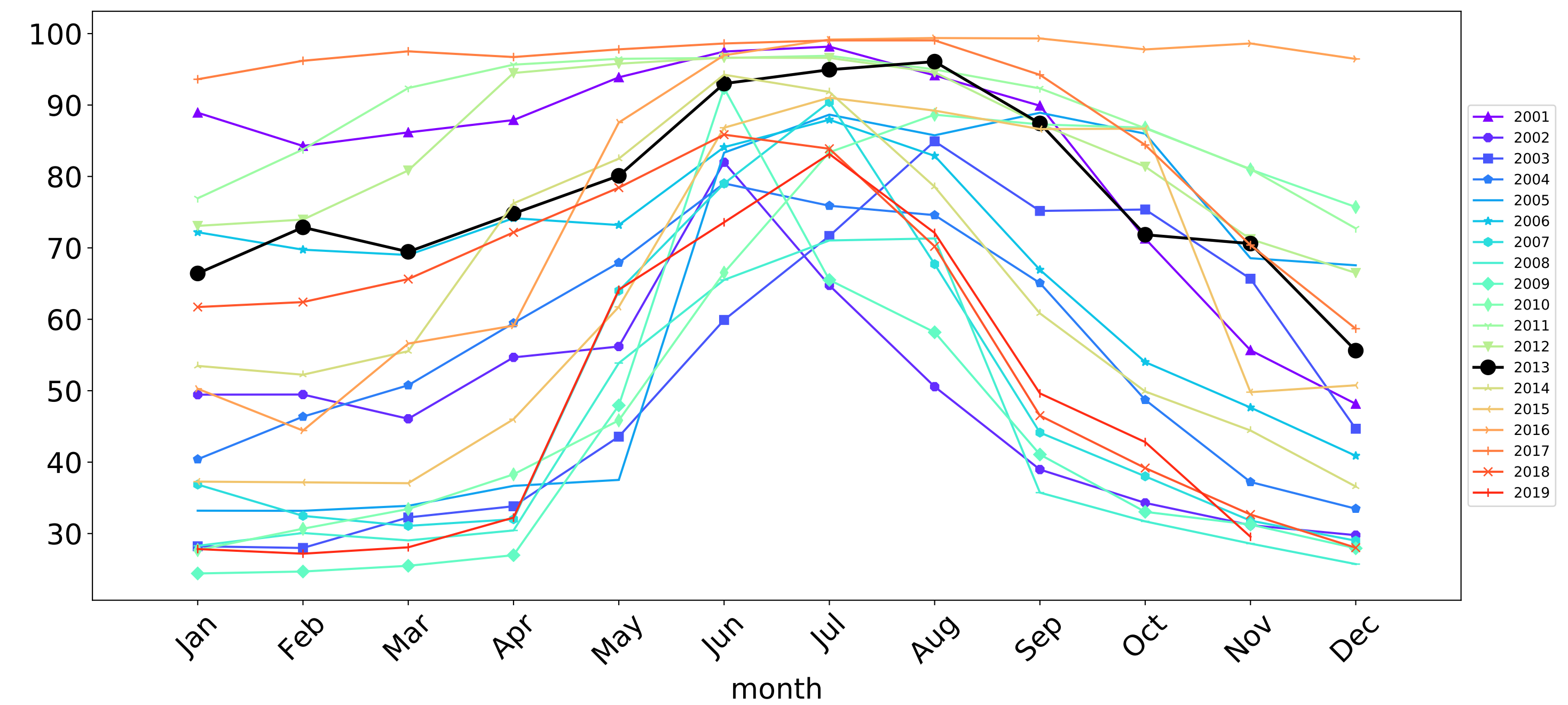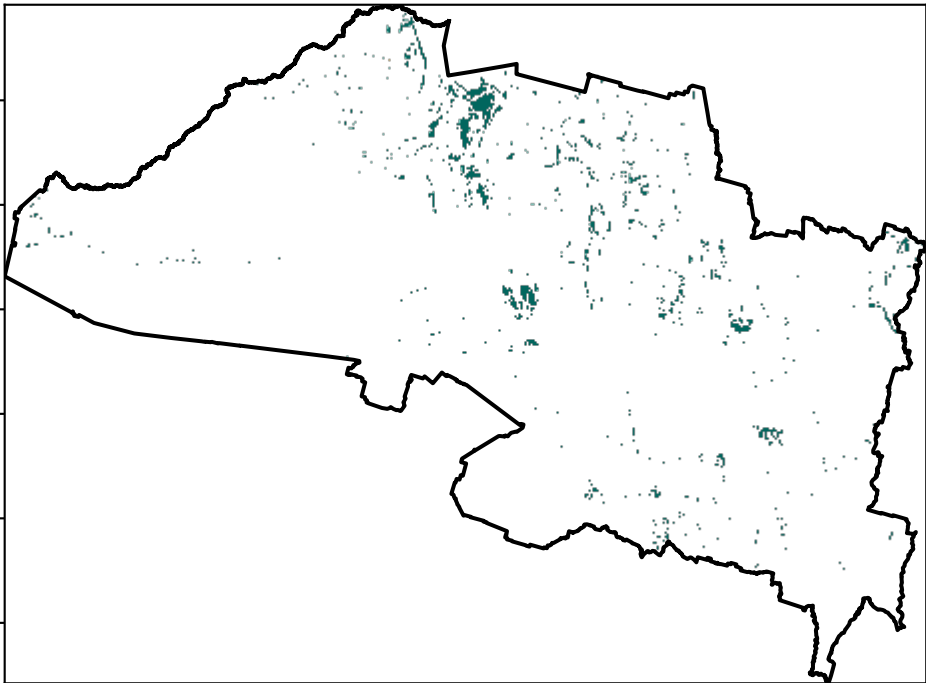

Wind erosion historical monthly area protected (Total Veg Cov >50%)

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)
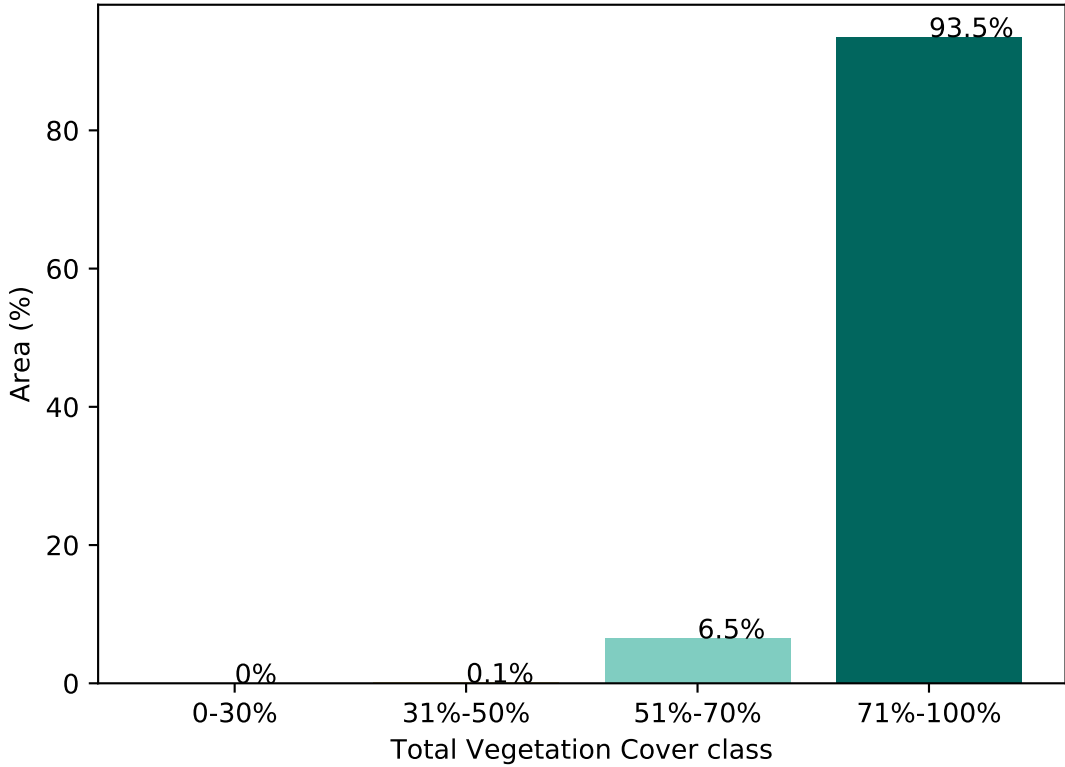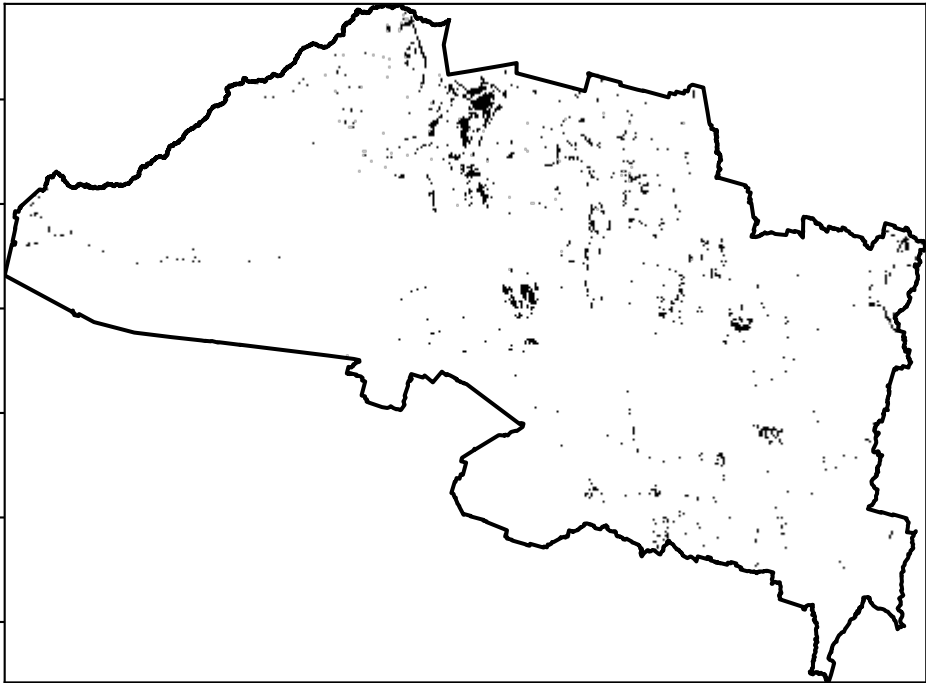
1 Agriculture - Grazing - Woodland forest

Total Vegetation Cover [%]

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

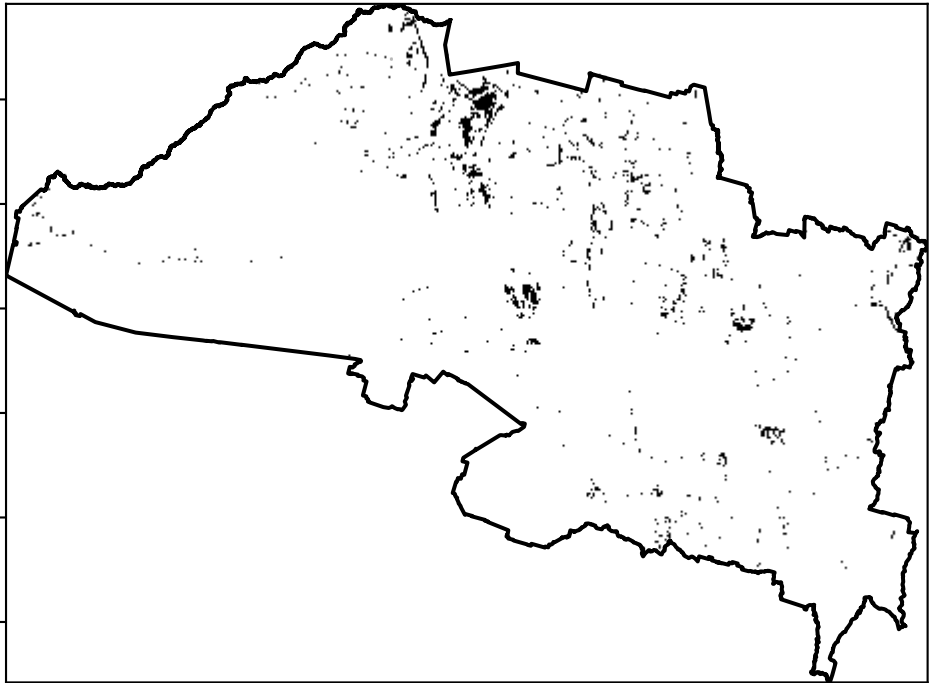## Proportion of vegetation cover class in area

% Area protected from water erosion (>70%)

Area not protected 6.5% of region (9,207 ha)

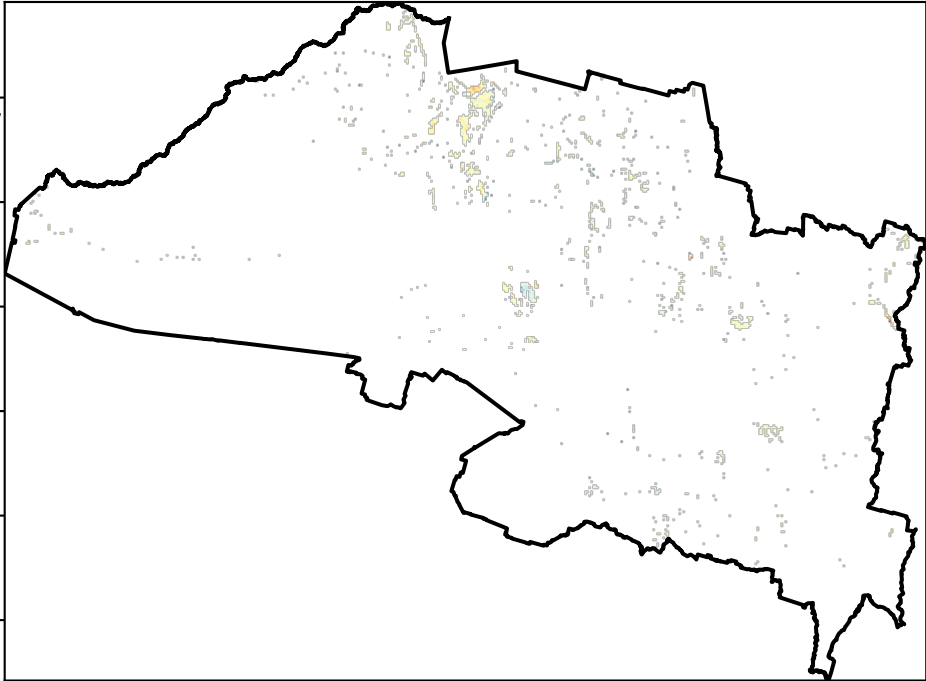Area protected 93.5% of region (132,442 ha)

% Area protected from wind erosion (>50%)

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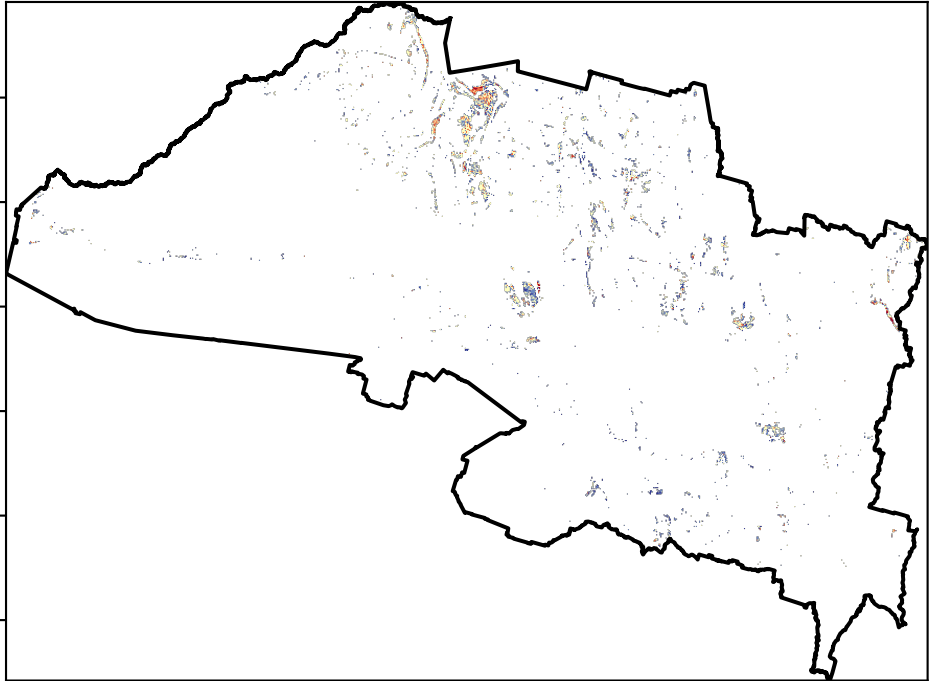
Area protected 100.0% of region (141,650 ha)

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.
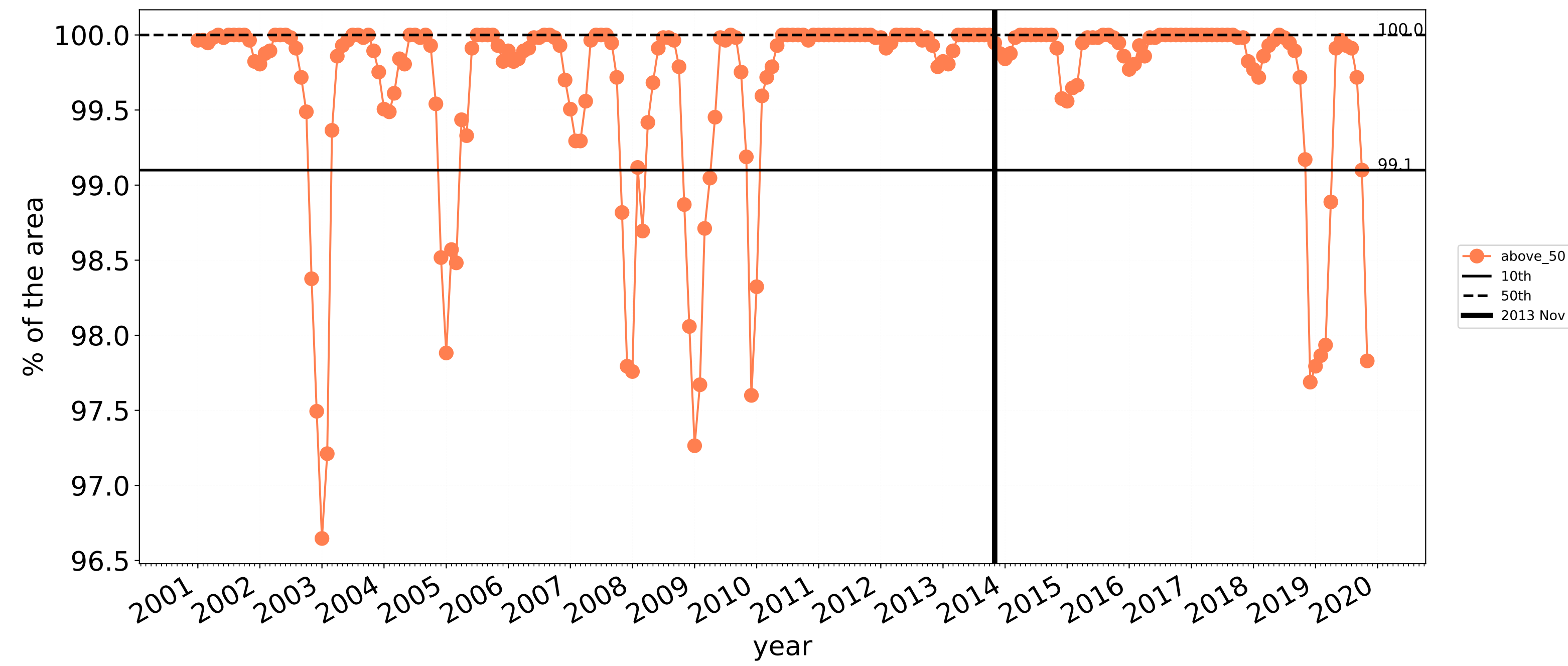
10
8-9
4-7
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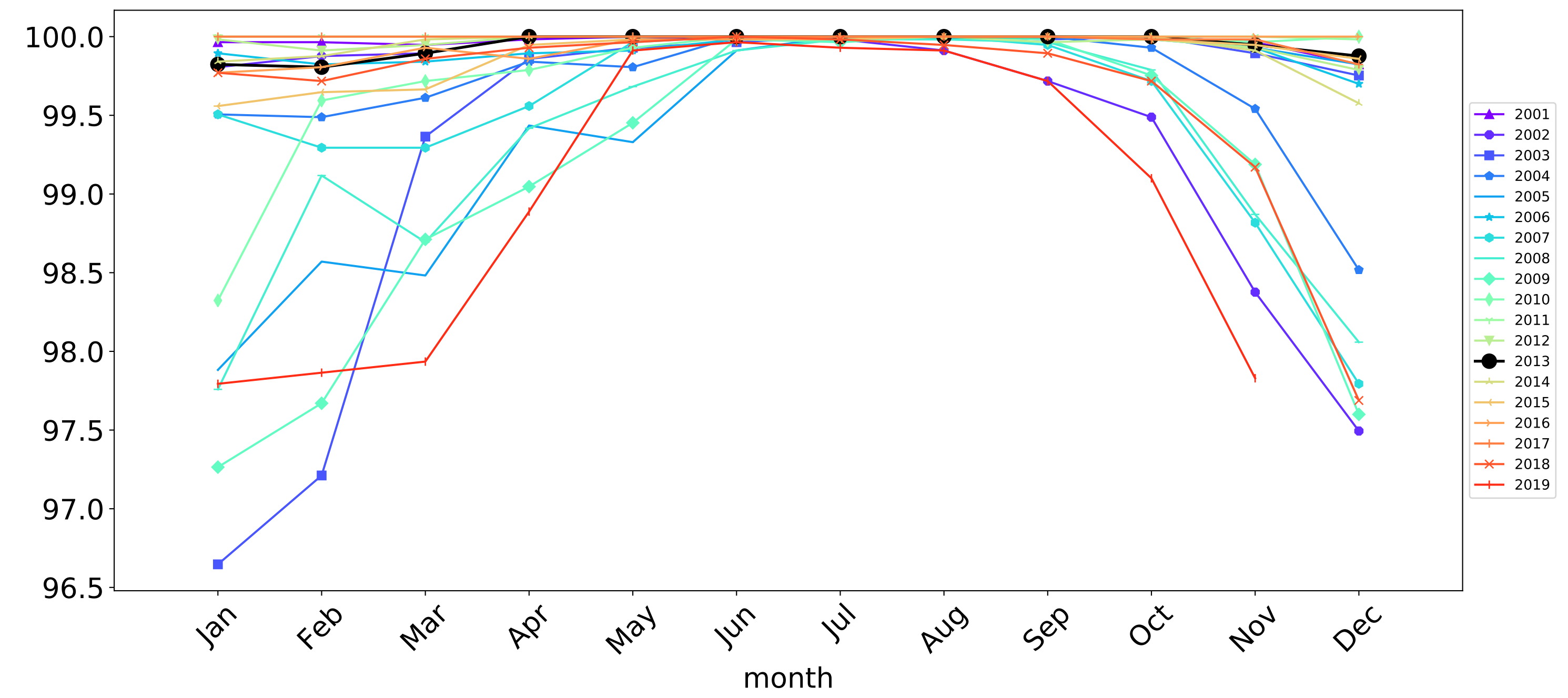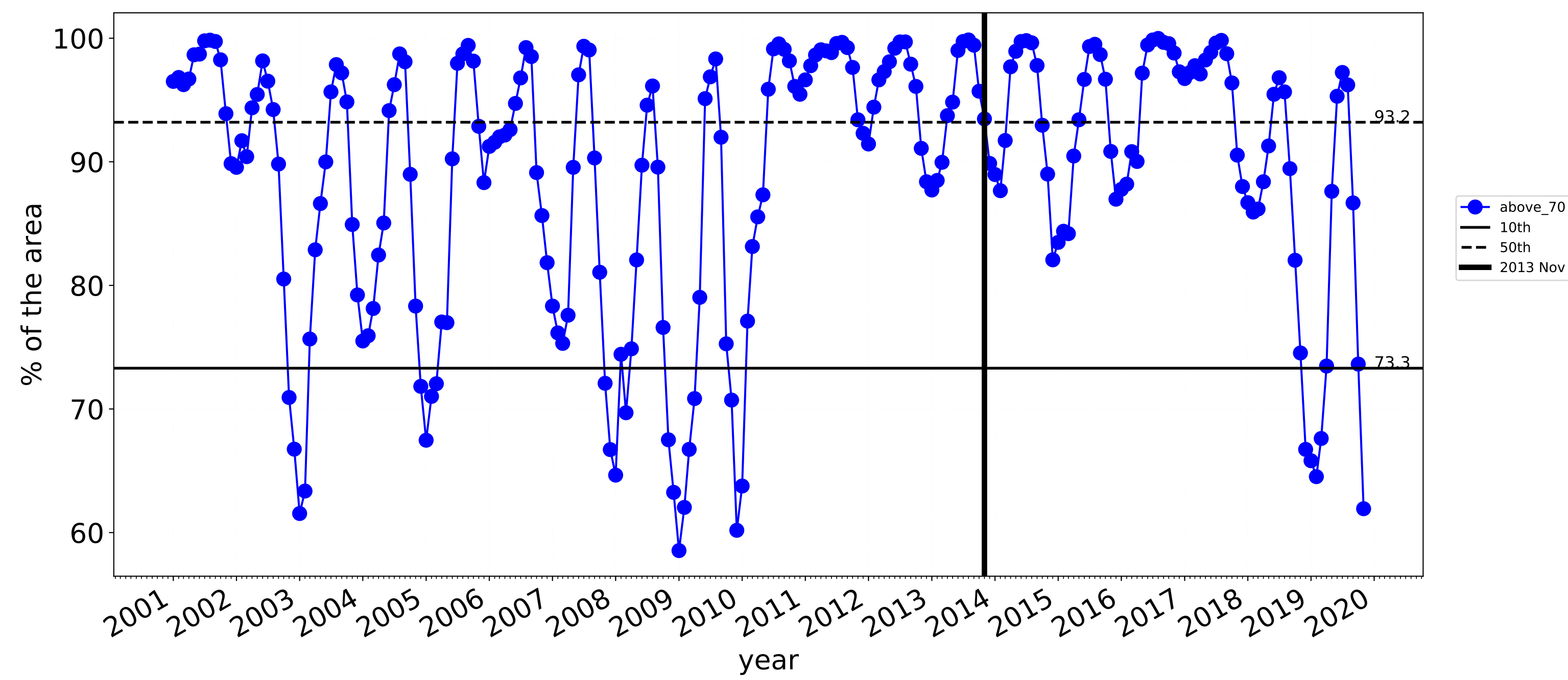1

Grazing Woodland forest timeseries

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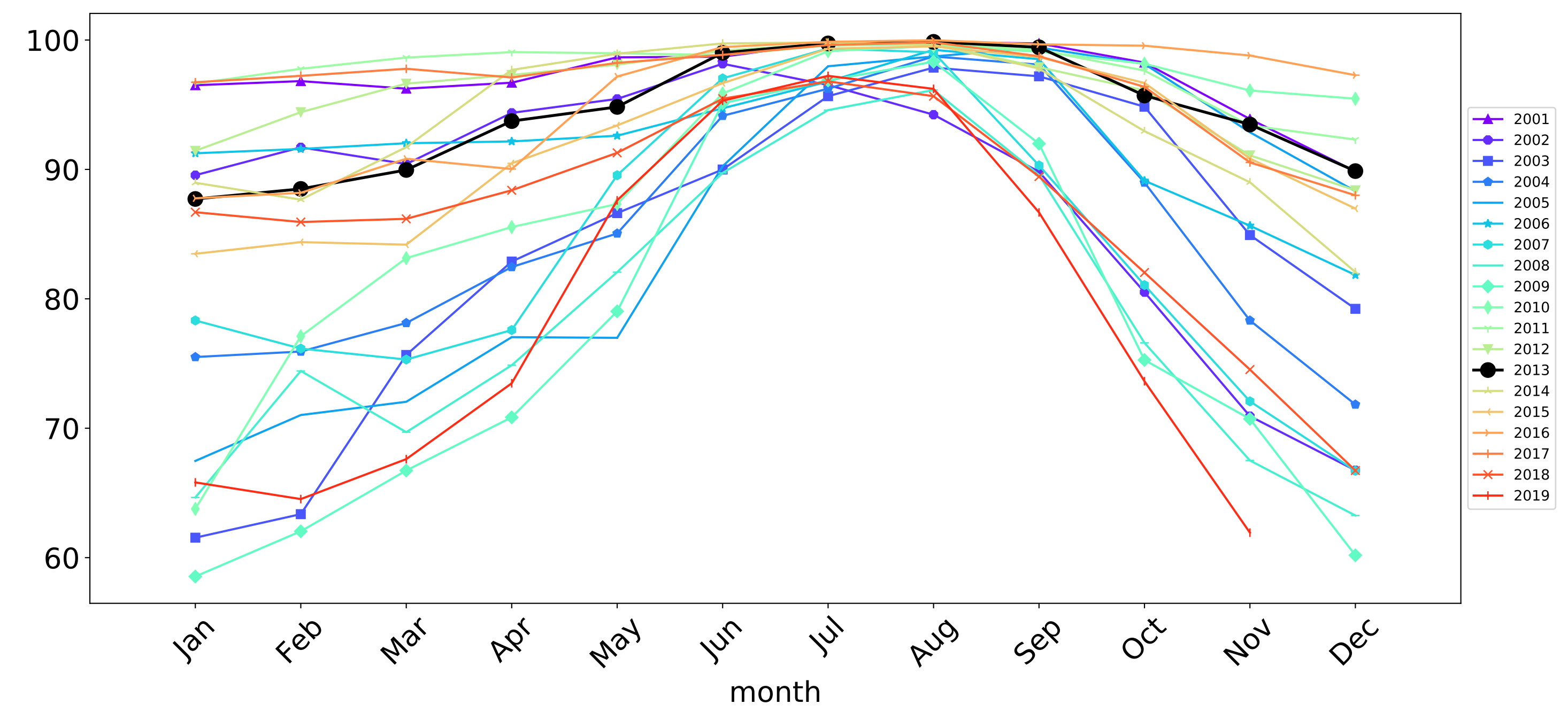

Wind erosion historical monthly area protected (Total Veg Cov >50%)

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

Water erosion historical monthly area protected (Total Veg Cov>70%)
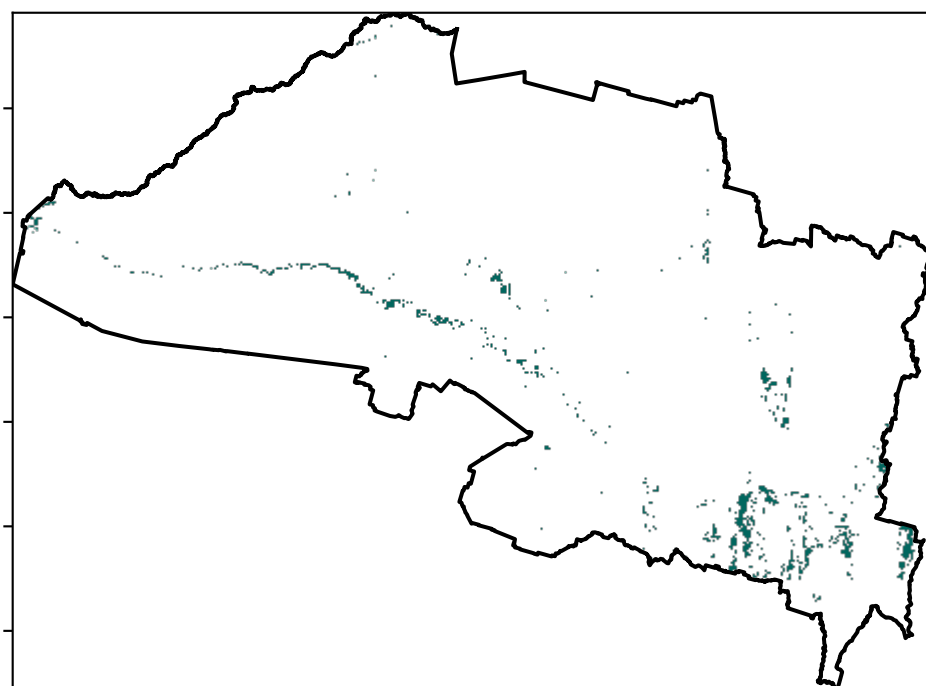
Grazing - Forest (non woodland)

Land use and forest cover

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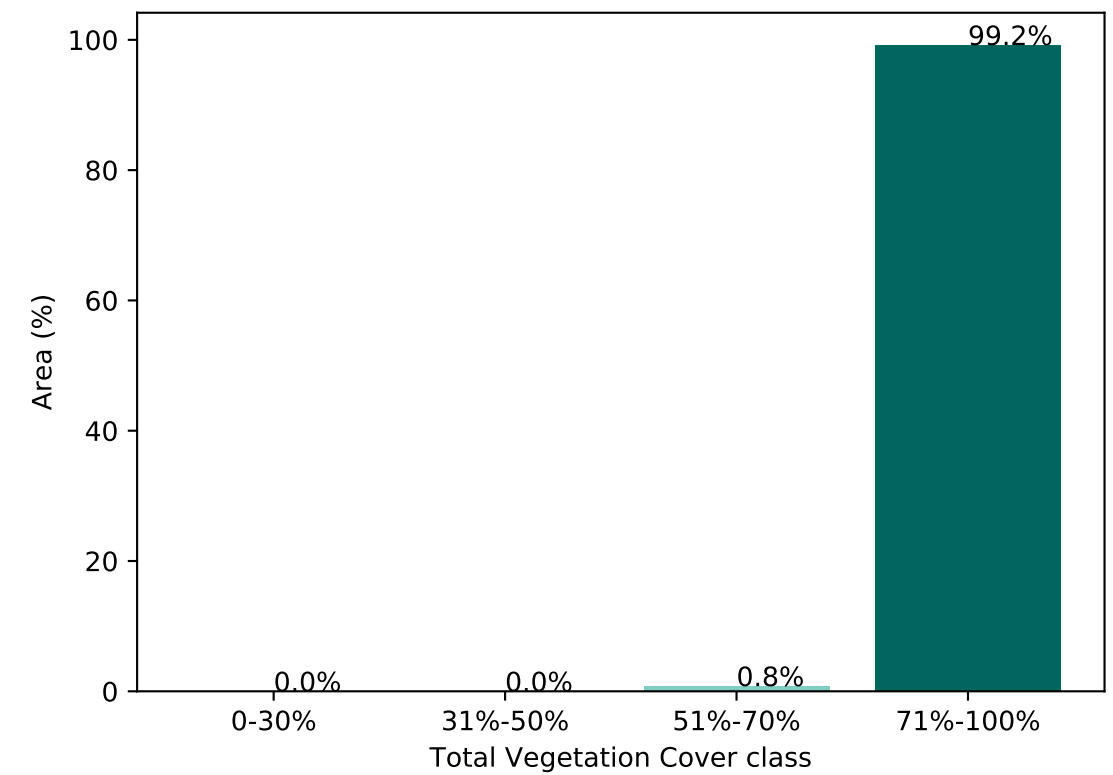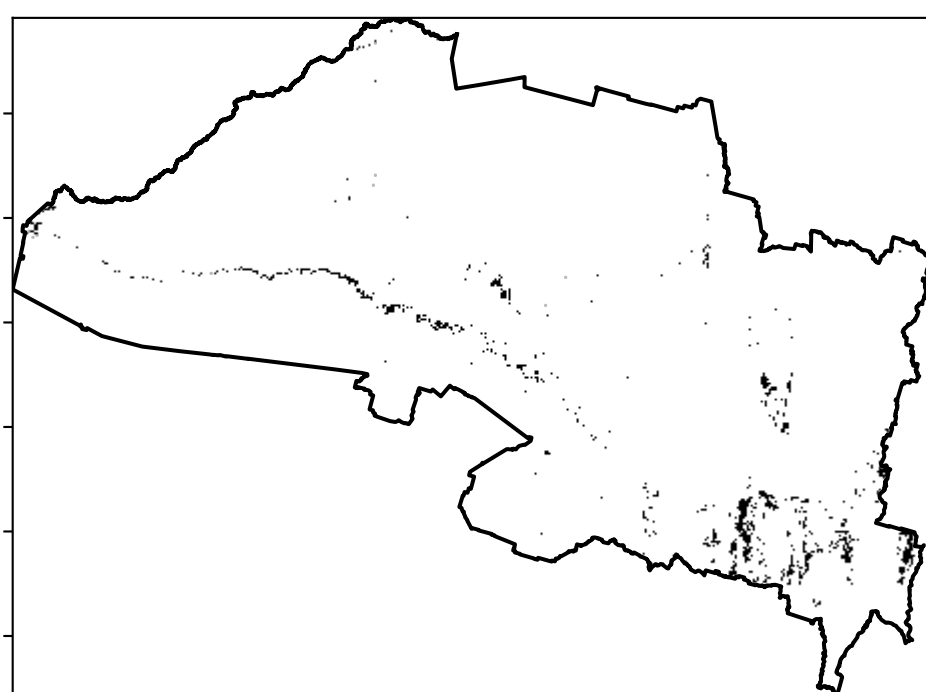
1 Agriculture - Grazing - Non-woodland forest

Total Vegetation Cover [%]

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

Proportion of vegetation cover class in area

Area (%)

0.0%   0.0%   0.8%   99.2%

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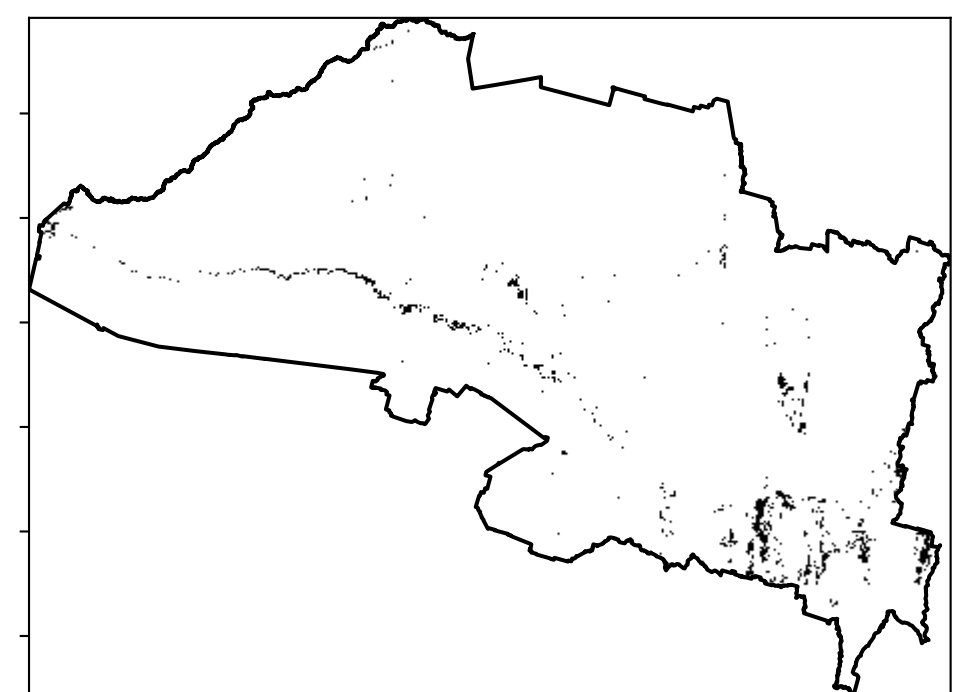Total Vegetation Cover class

% Area protected from water erosion (>70%)

Area not protected 0.8% of region (826 ha)

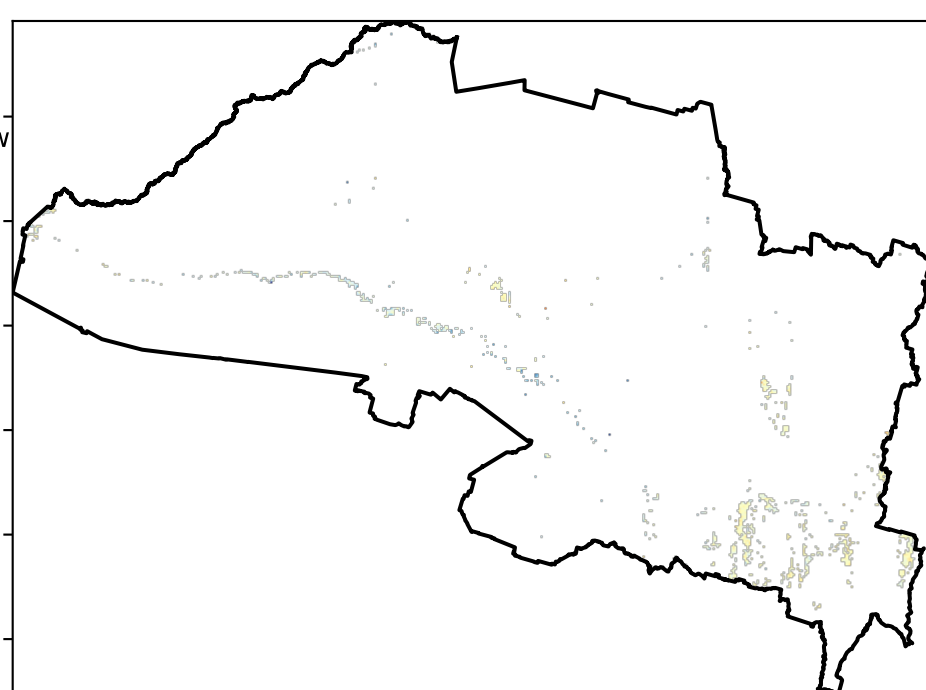Area protected 99.2% of region (102,523 ha)

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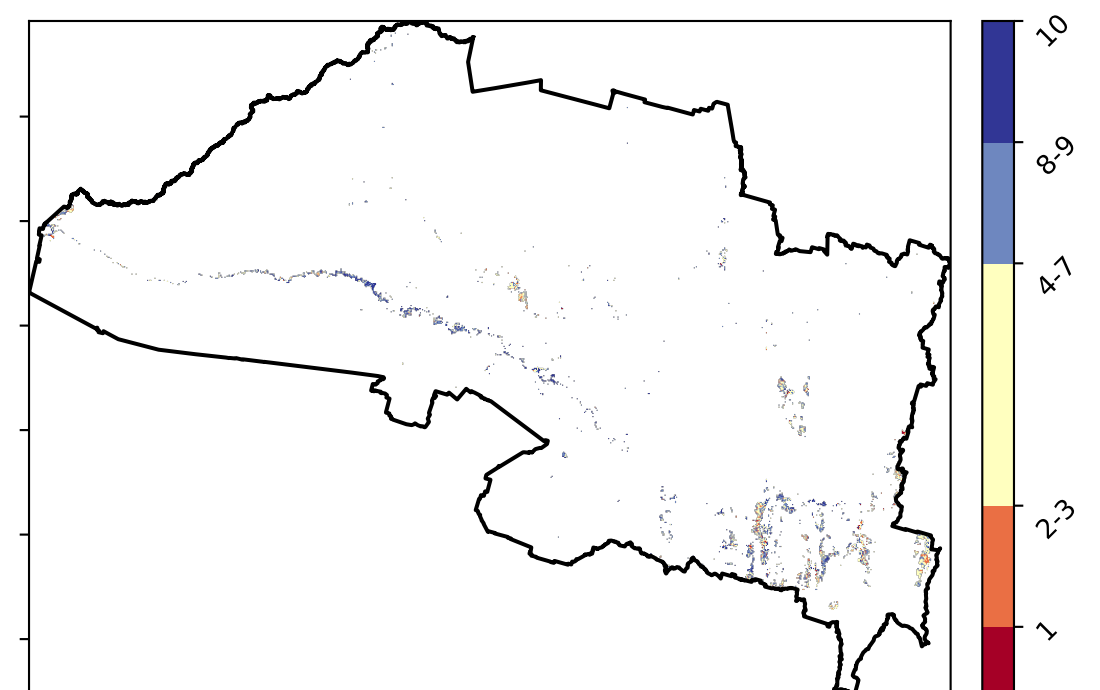
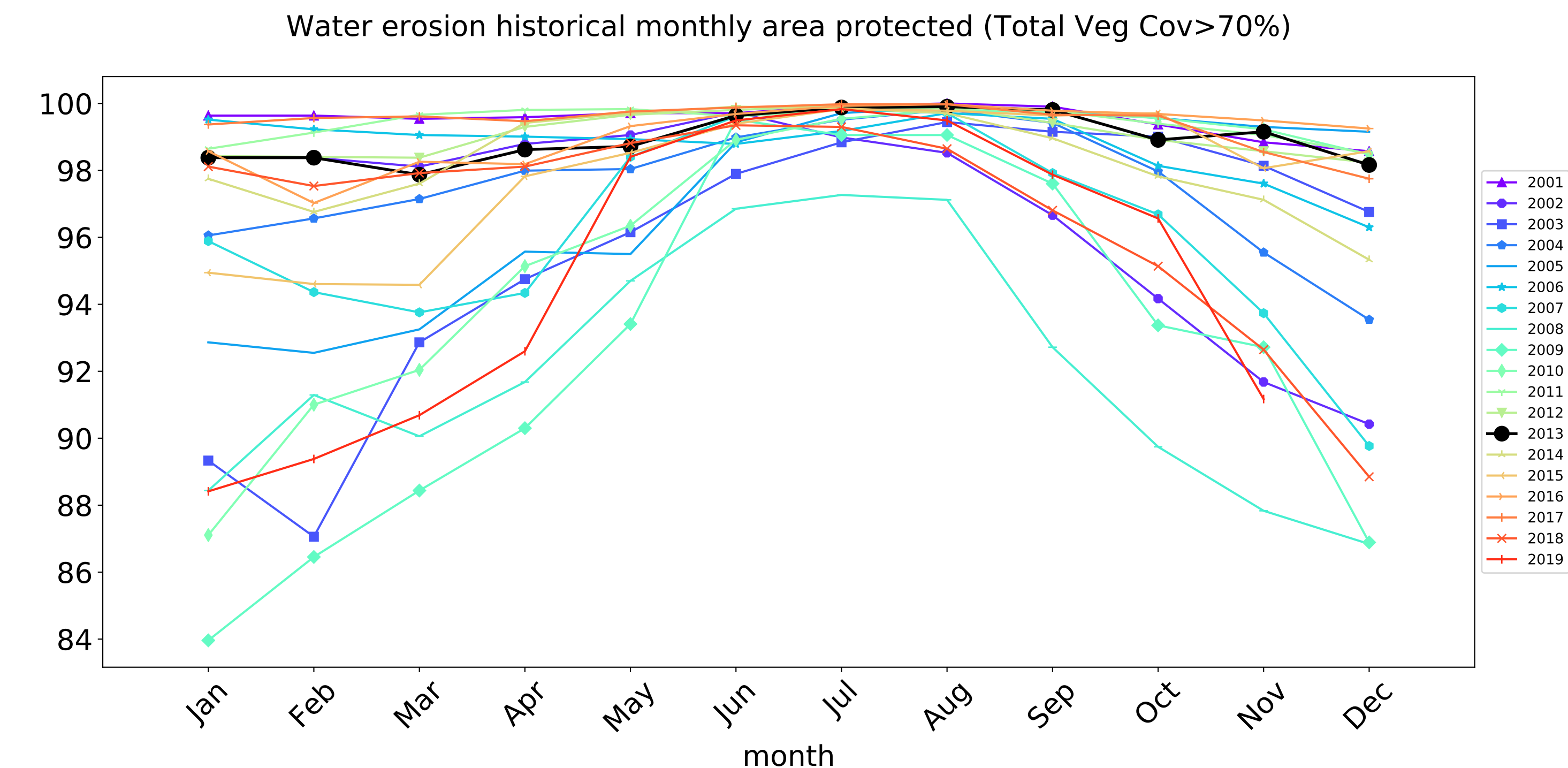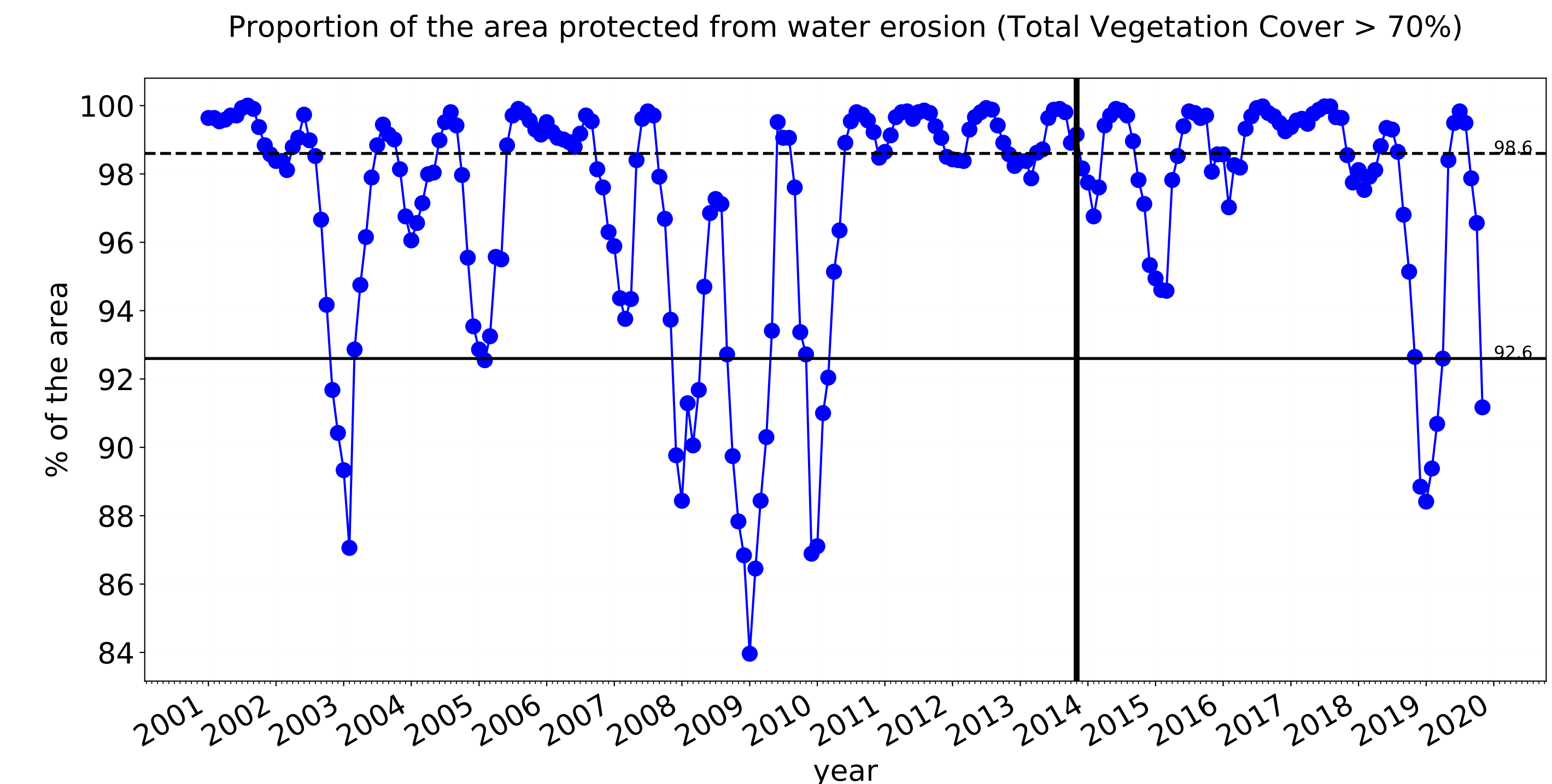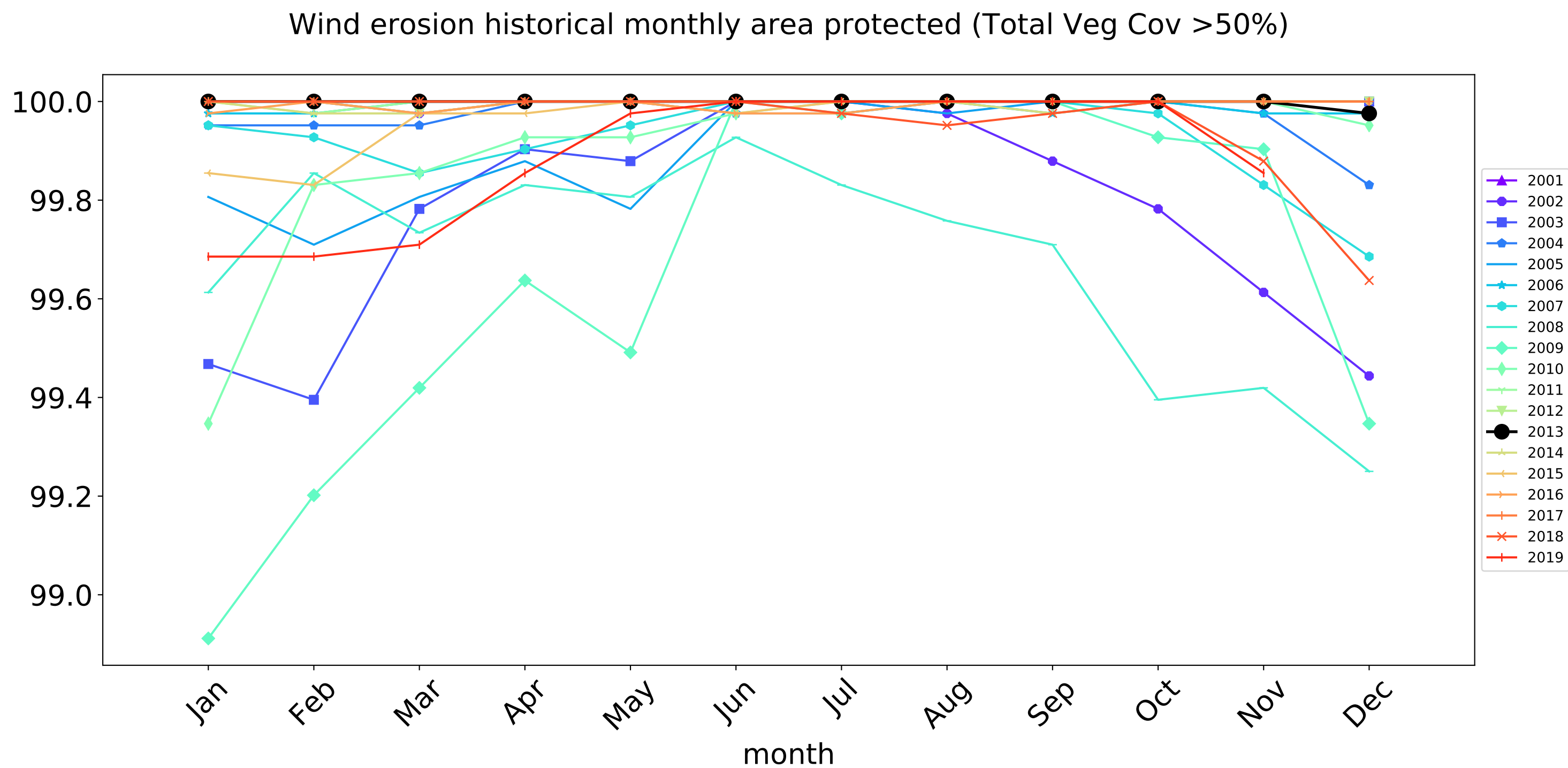CSIRO   TERN   Australian Government   National Landcare Programme   NSW GOVERNMENT | Planning, Industry & Environment

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%)

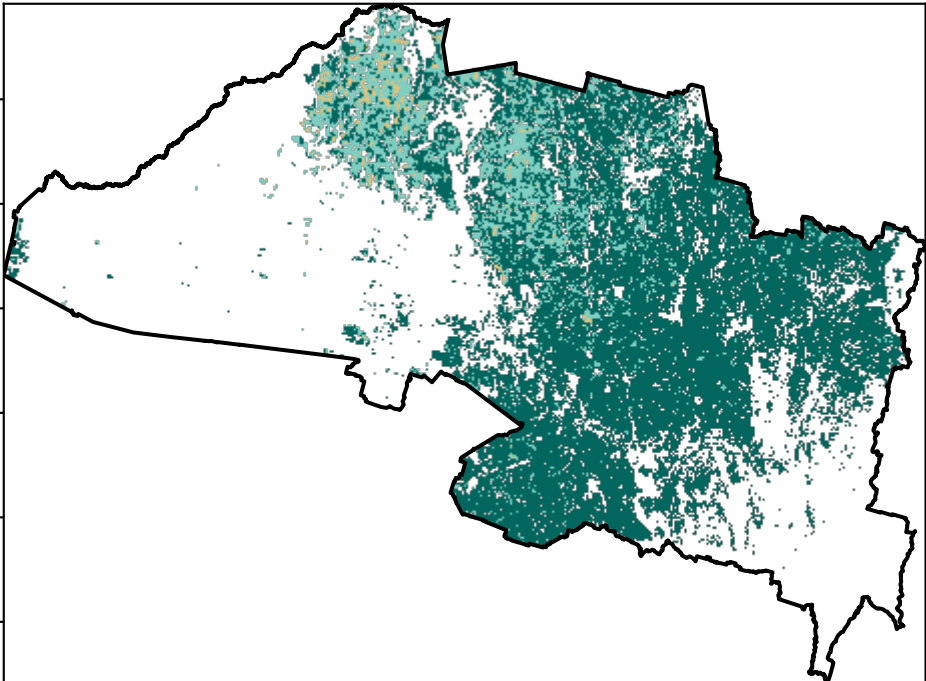### Water erosion historical monthly area protected (Total Veg Cov>70%)
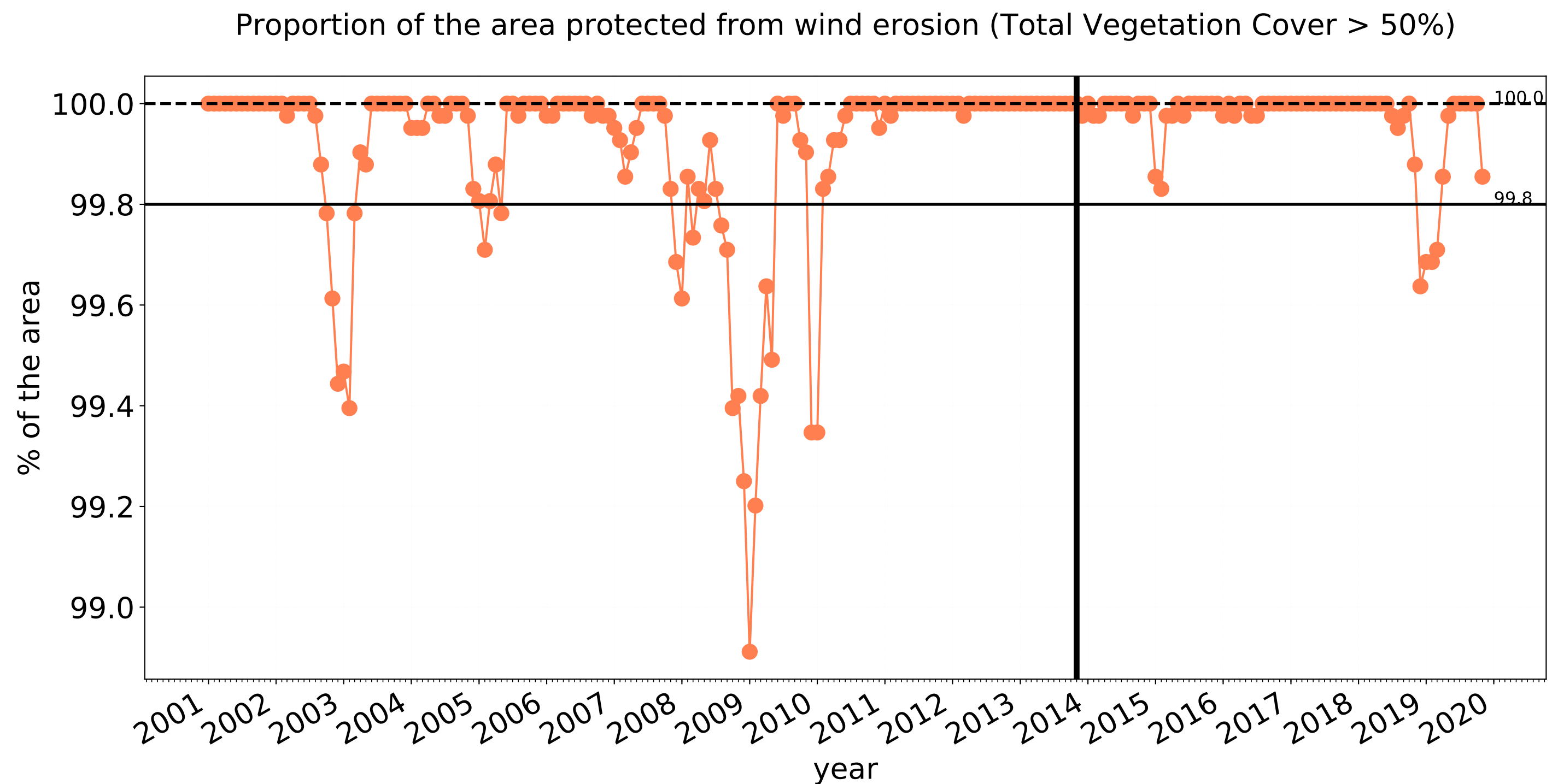
Cropping

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)
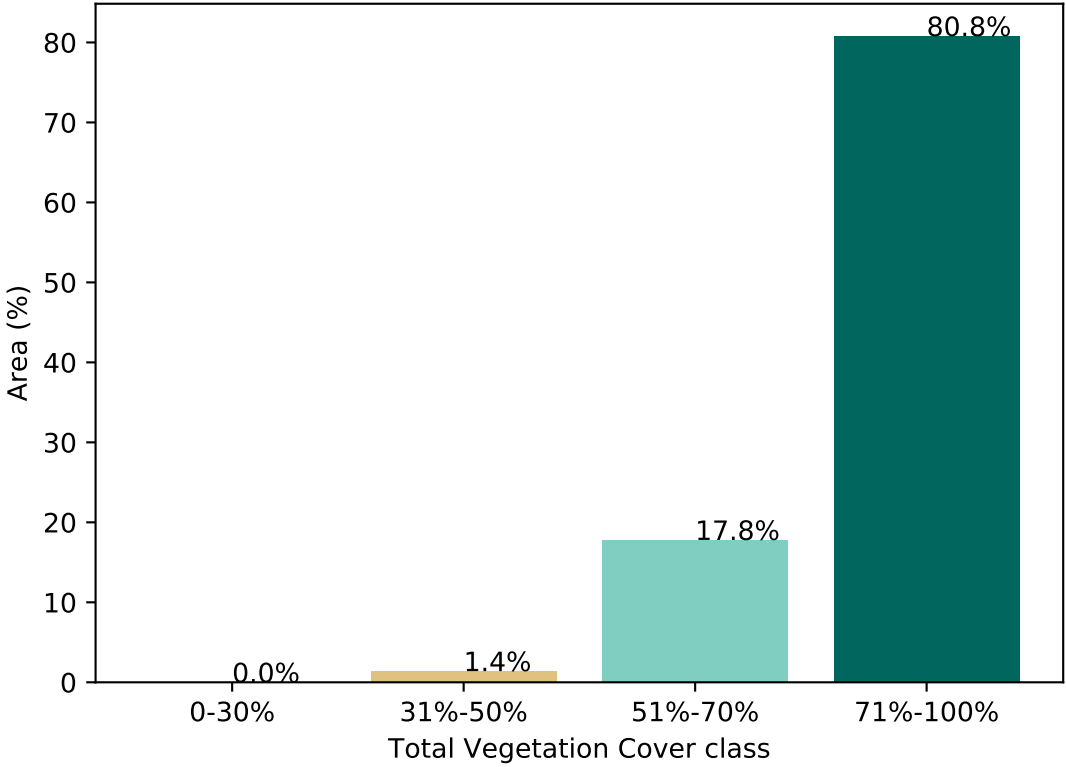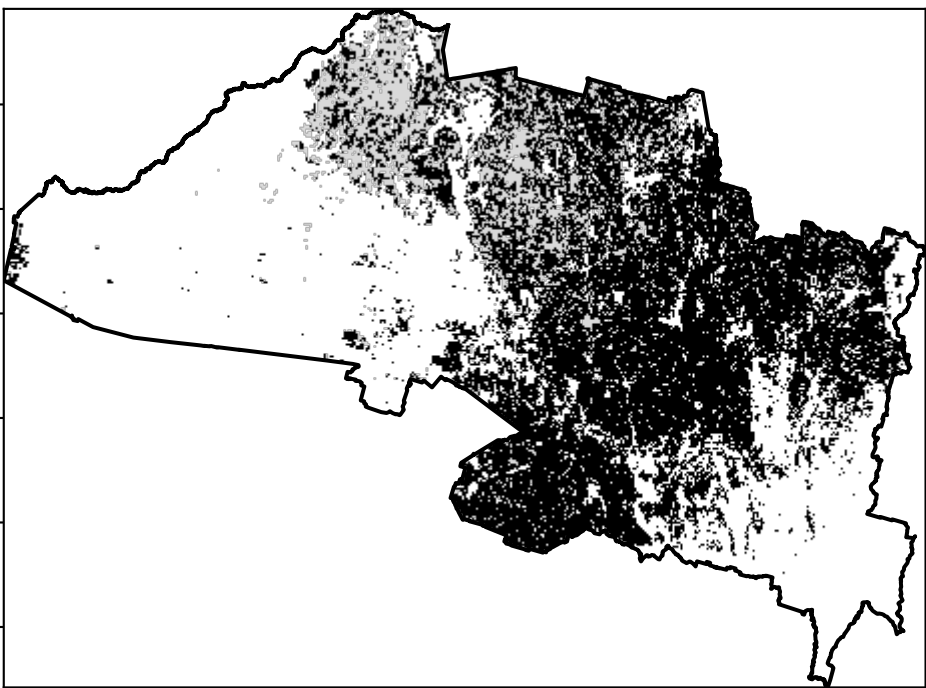
1 Agriculture - Cropping - Non-irrigated

Total Vegetation Cover [%]

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

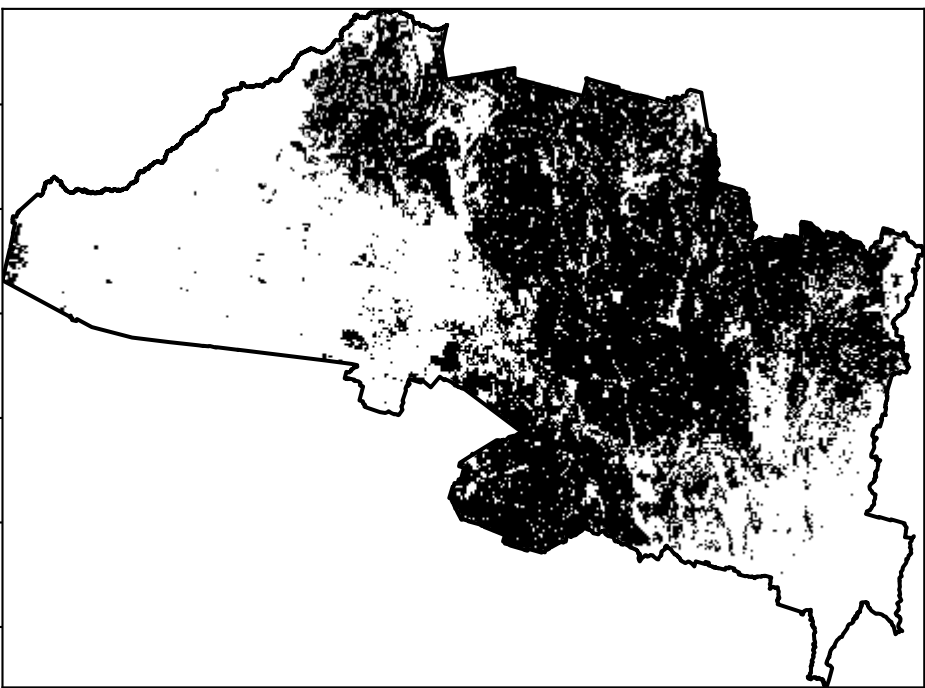## Proportion of vegetation cover class in area

% Area protected from water erosion (>70%)

Area not protected 19.2% of region (611,899 ha)

Area protected 80.8% of region (2,575,075 ha)
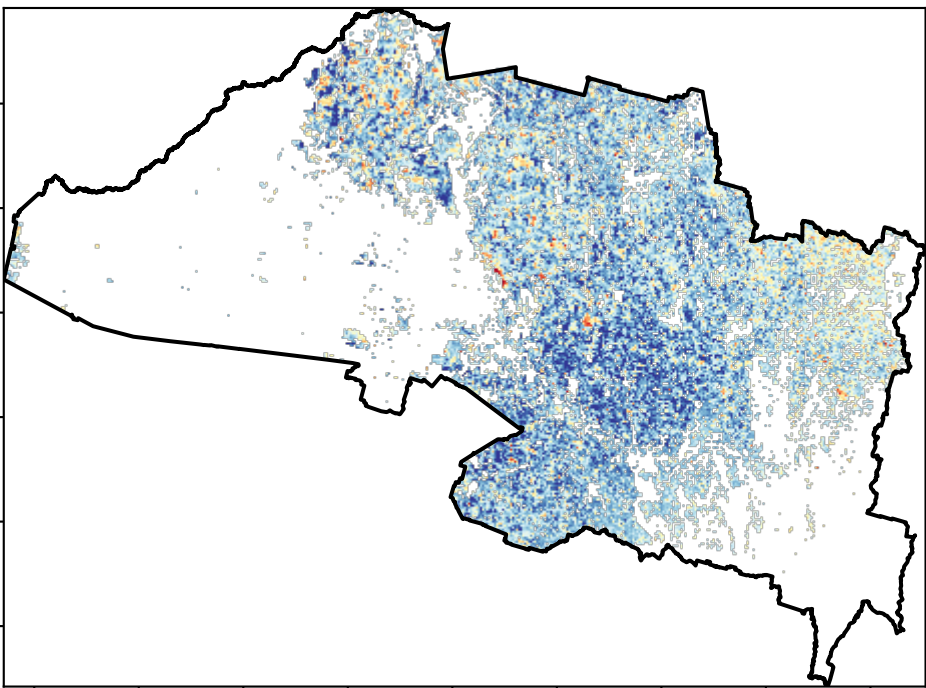
% Area protected from wind erosion (>50%)

Area not protected 1.0% of region (31,869 ha)
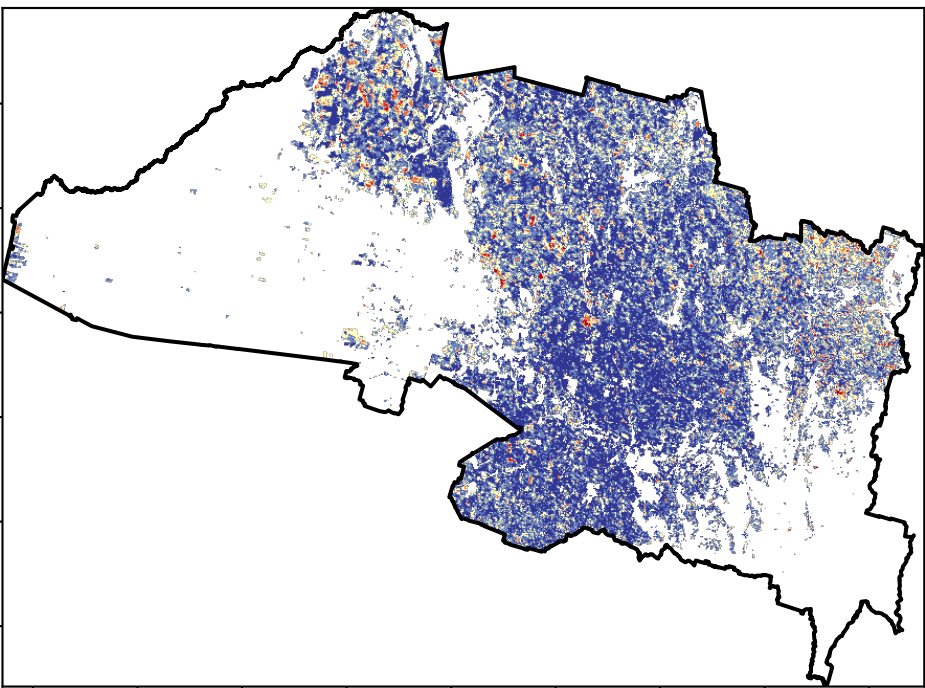
Area protected 99.0% of region (3,155,105 ha)

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
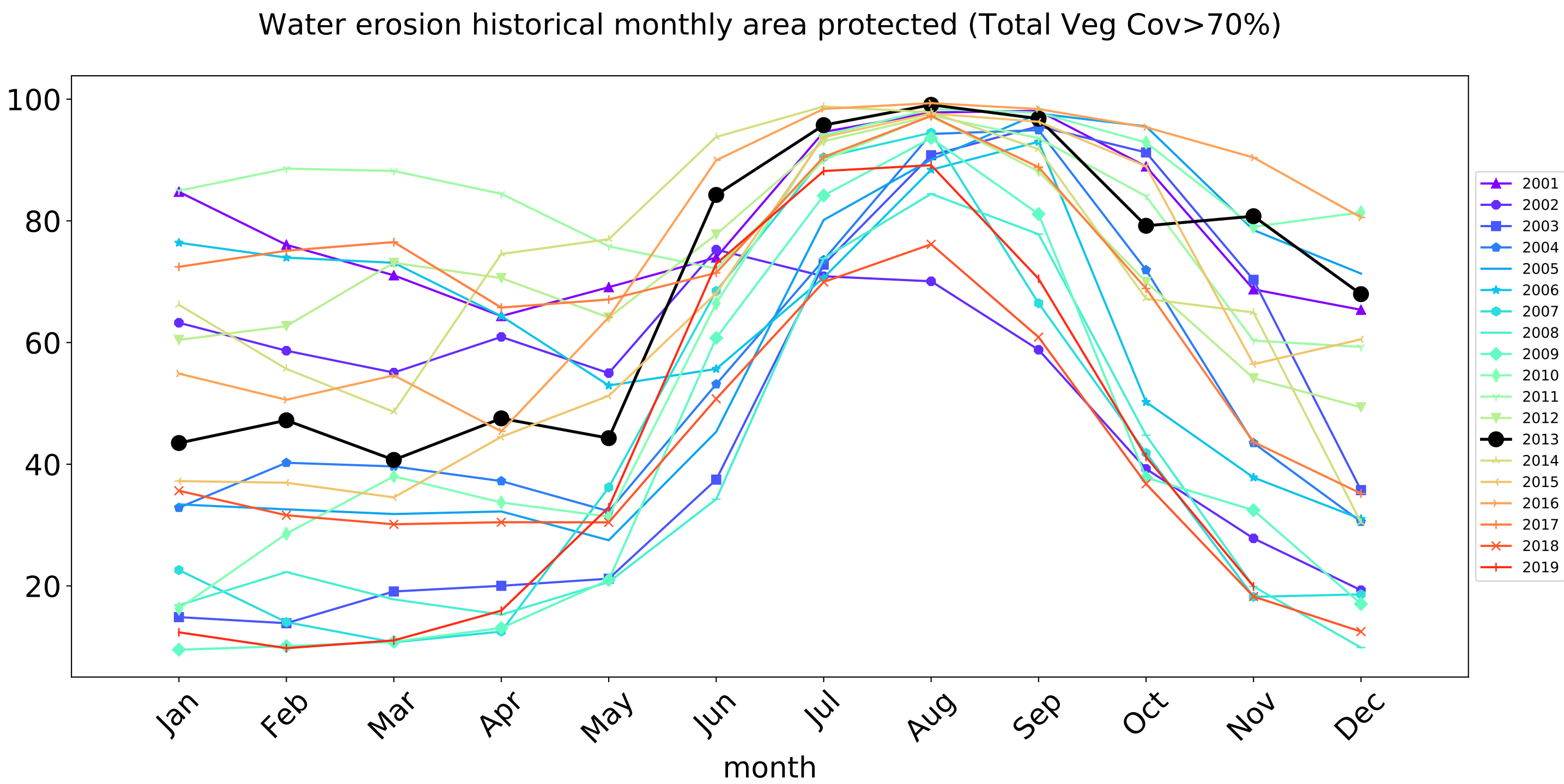

Proportion of the area protected from wind erosion (Total Vegetation Cover > 50%)

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)

Legend:
- 1 Agriculture - Grazing - Irrigated
- 2 Agriculture - Cropping - Irrigated
- 3 Agriculture - Horticulture - Irrigated

Proportion of each land class in area

83.9%

6.4%

9.7%

Area (%) / Land use class

Total Vegetation Cover [%]

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

Proportion of vegetation cover class in area

65.1%

33.5%

0.0%   1.4%

Area (%) / Total Vegetation Cover class
0-30%   31%-50%   51%-70%   71%-100%
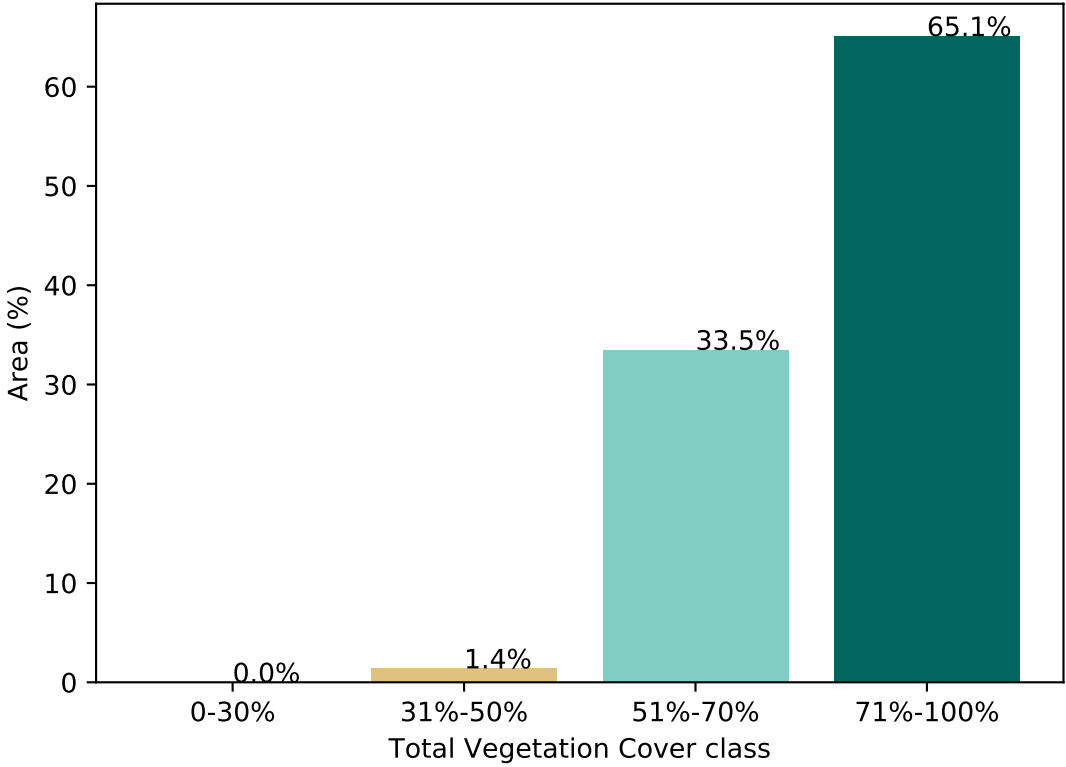
% Area protected from water erosion (>70%)
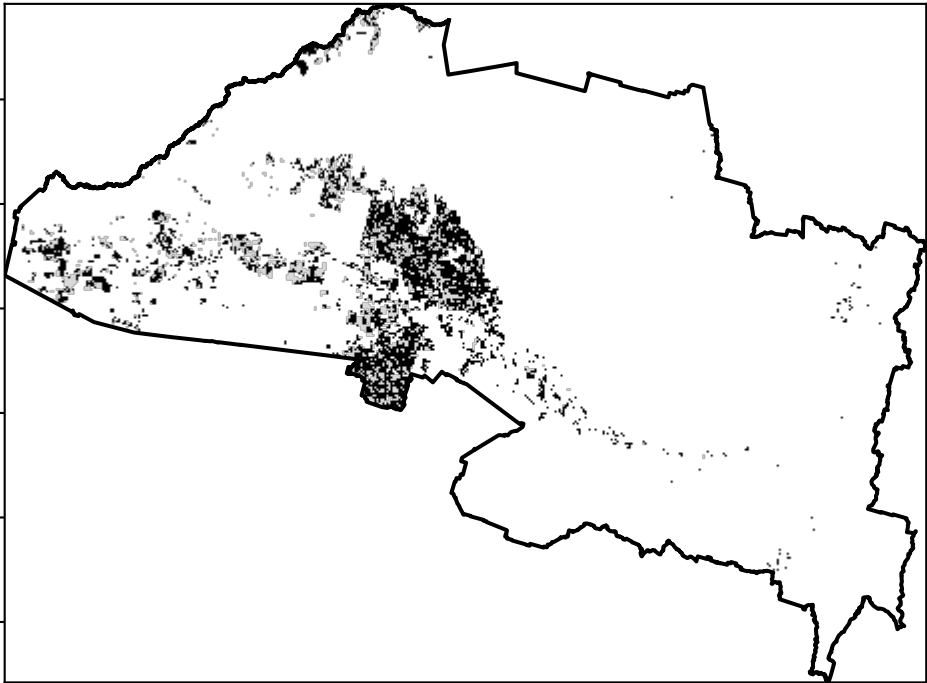
Area not protected 34.9% of region (198,083 ha)

Area protected 65.1% of region (369,491 ha)

% Area protected from wind erosion (>50%)
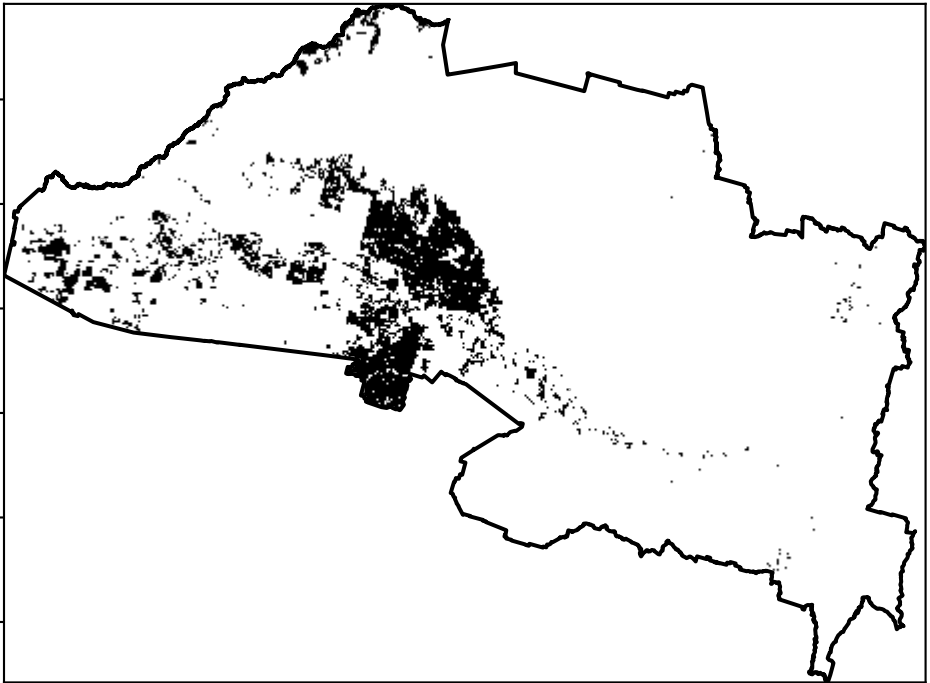
Area not protected 1.0% of region (5,675 ha)

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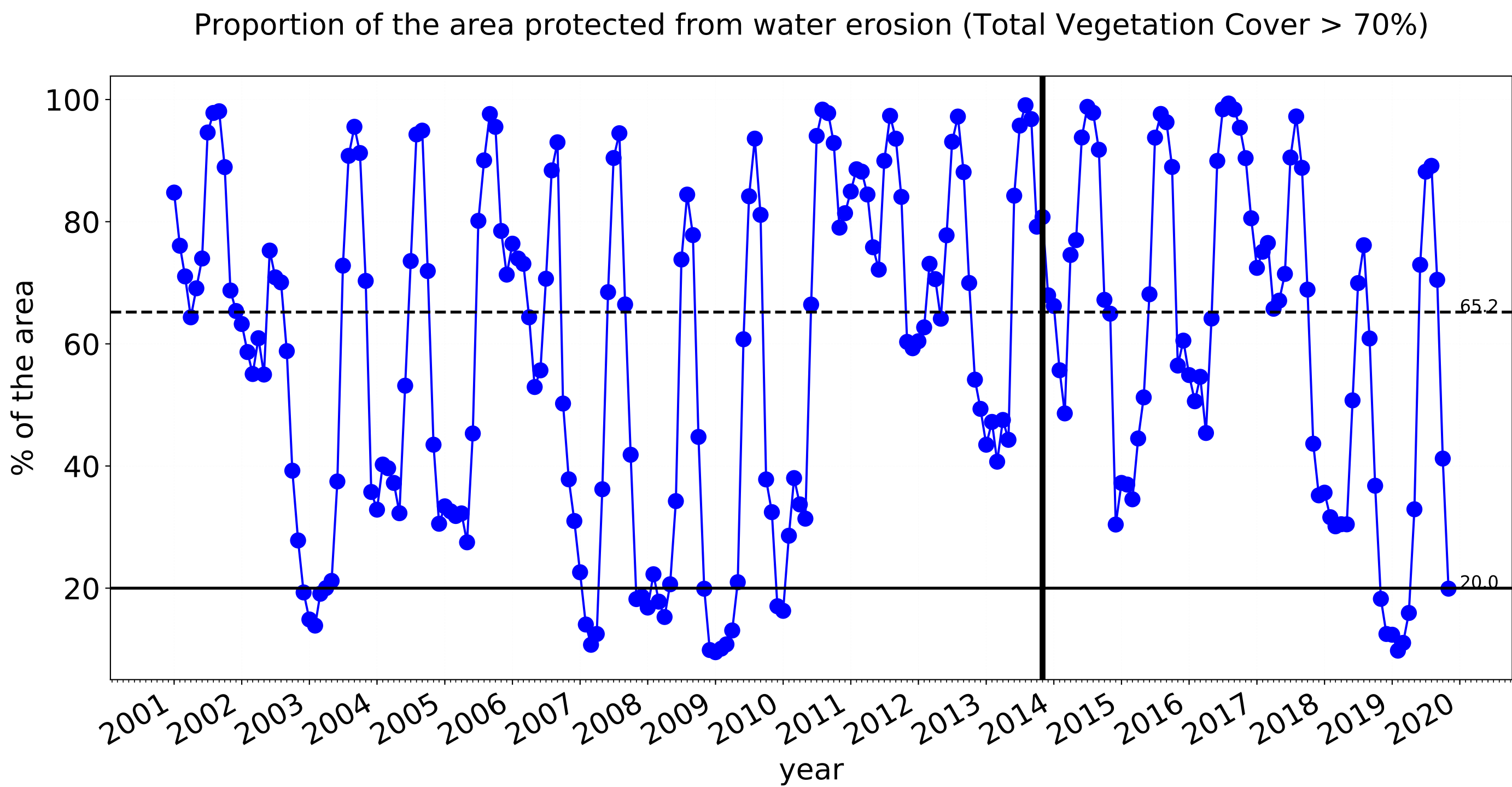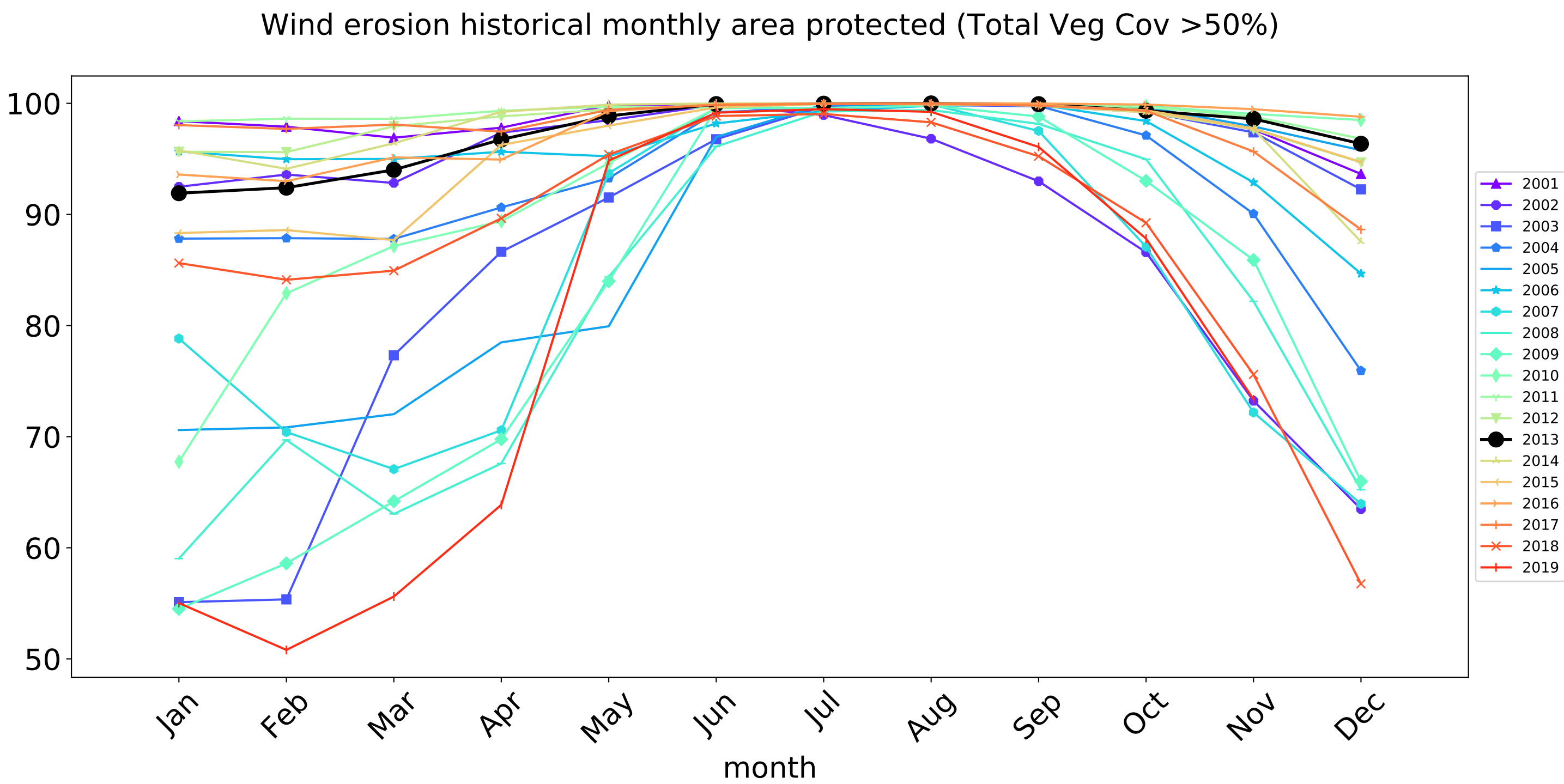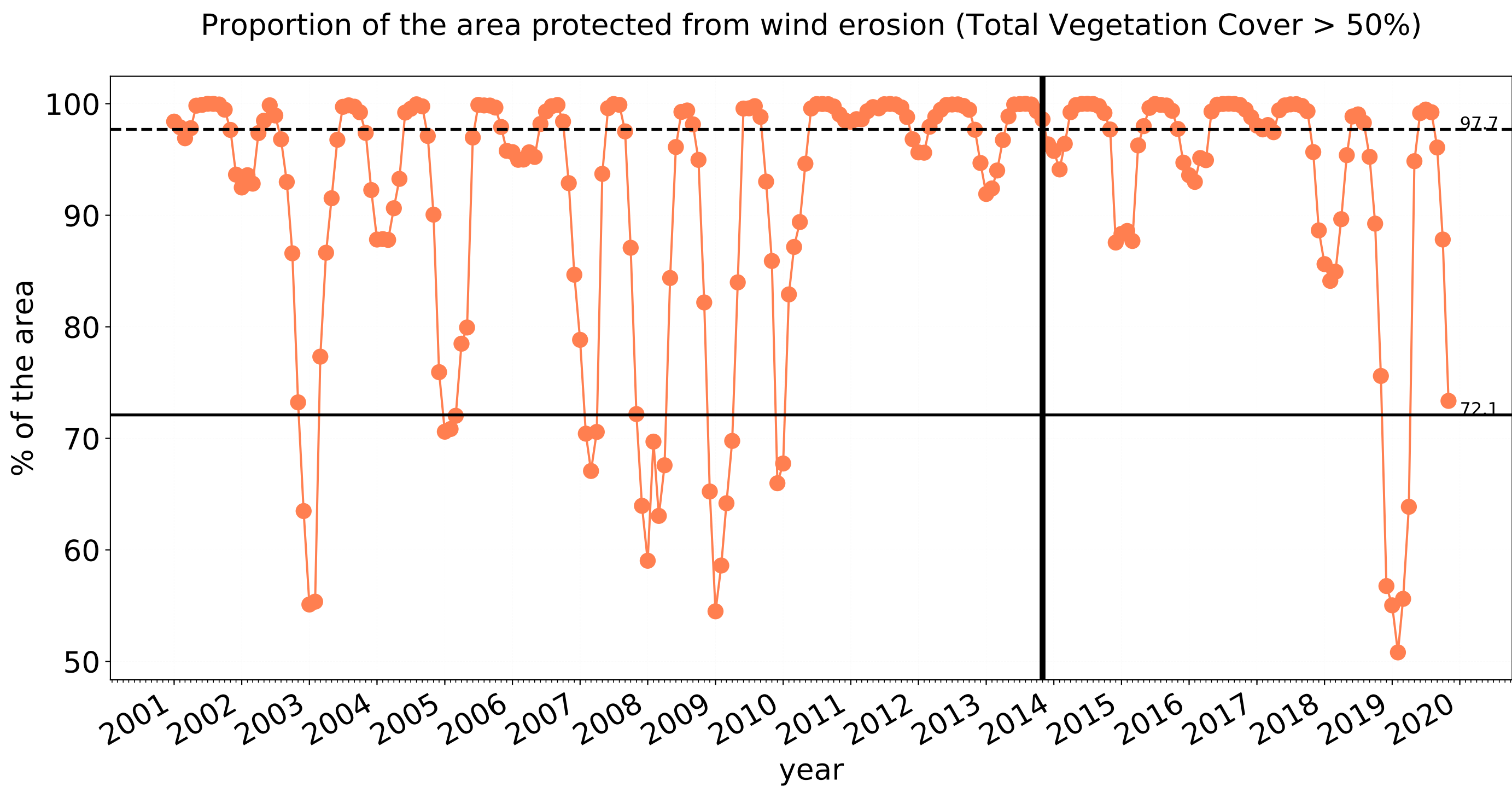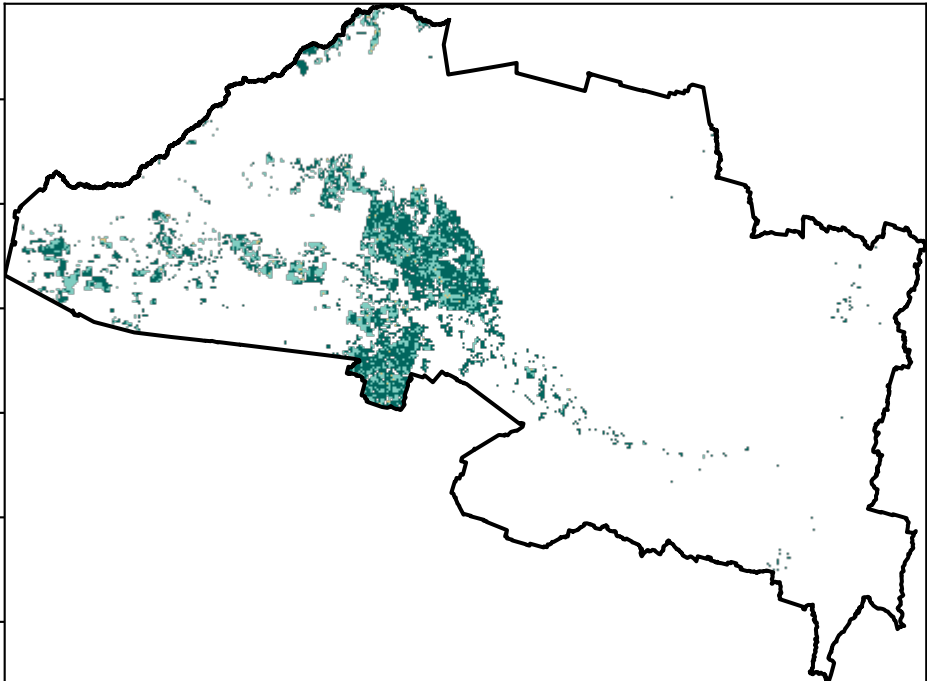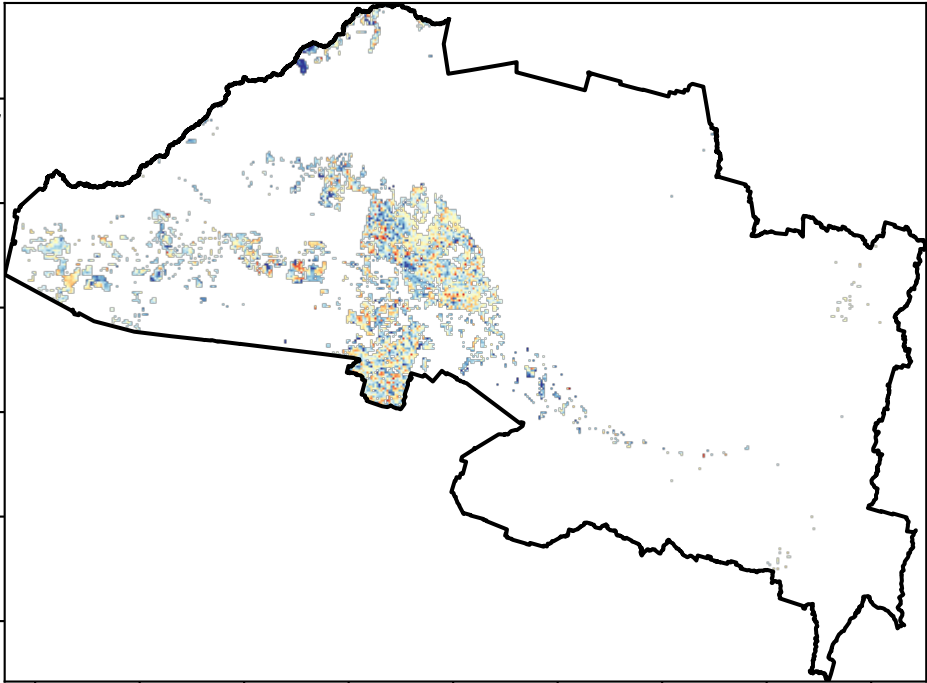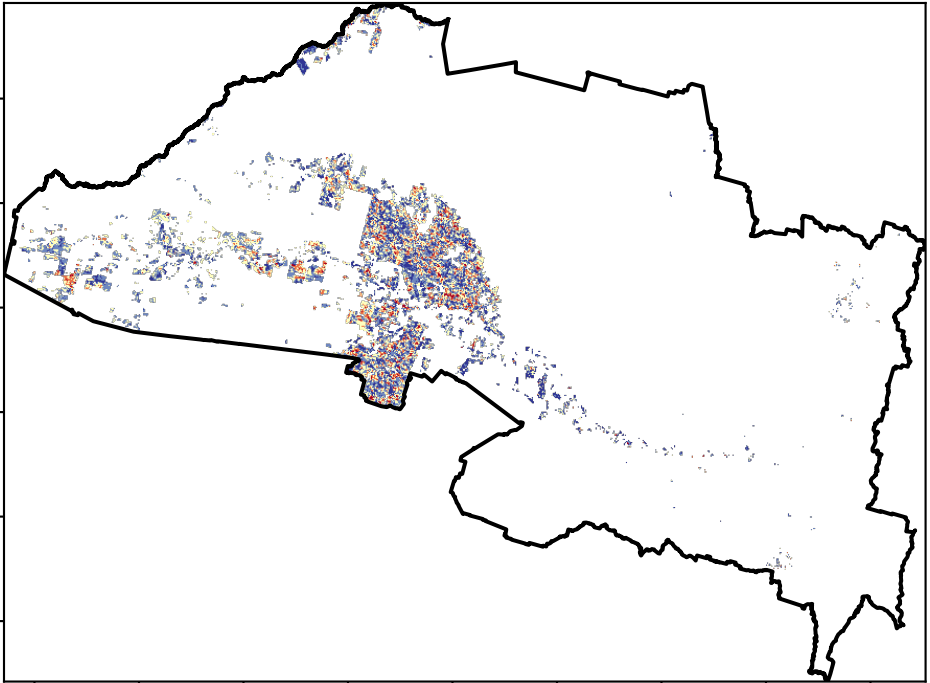
- 10
- 8-9
- 4-7
- 2-3
- 1

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

% Area protected from water erosion (>70%)

Area not protected 1.2% of region (2,073 ha)

Area protected 98.8% of region (170,726 ha)

% Area protected from wind erosion (>50%)

Area protected 100.0% of region (172,800 ha)

Total Vegetation Cover Anomaly [%]

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

Total Vegetation Cover Decile [%]

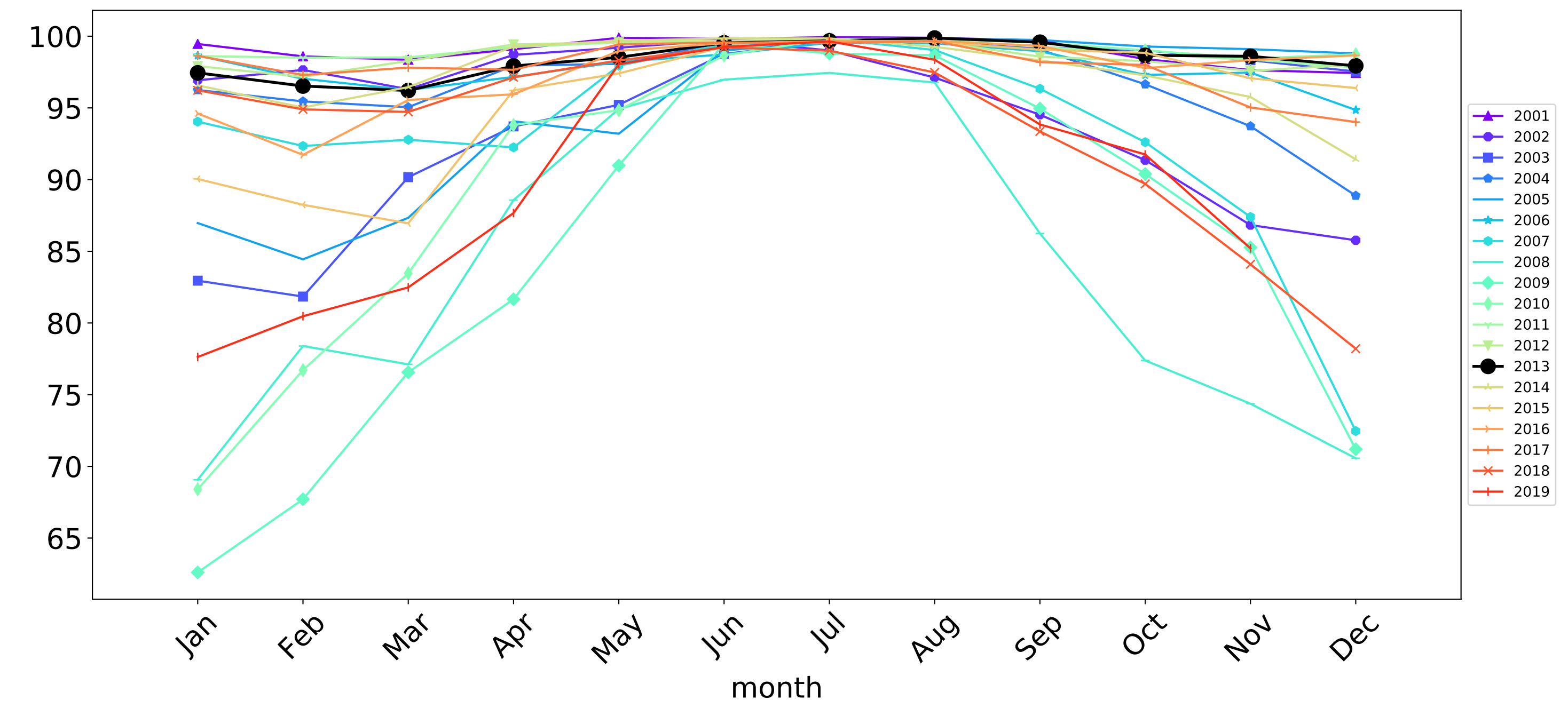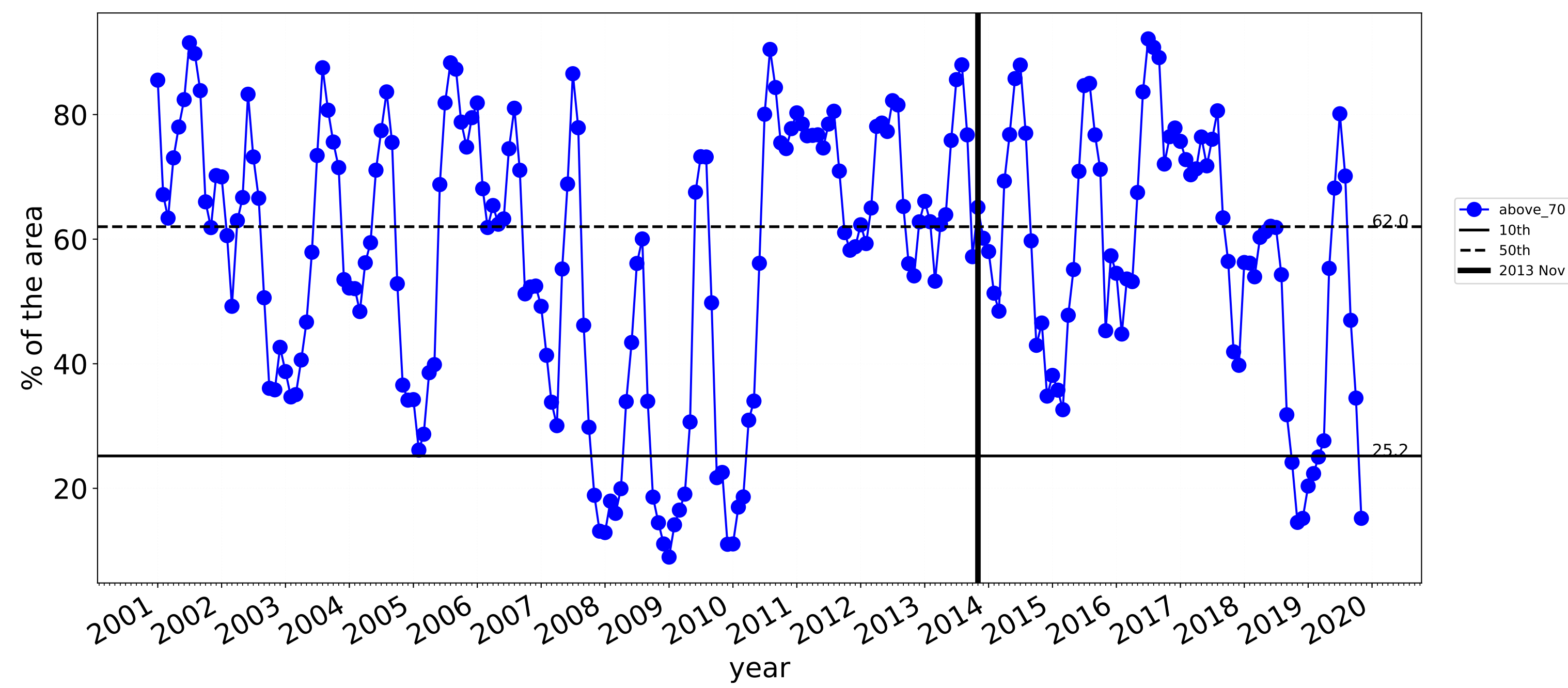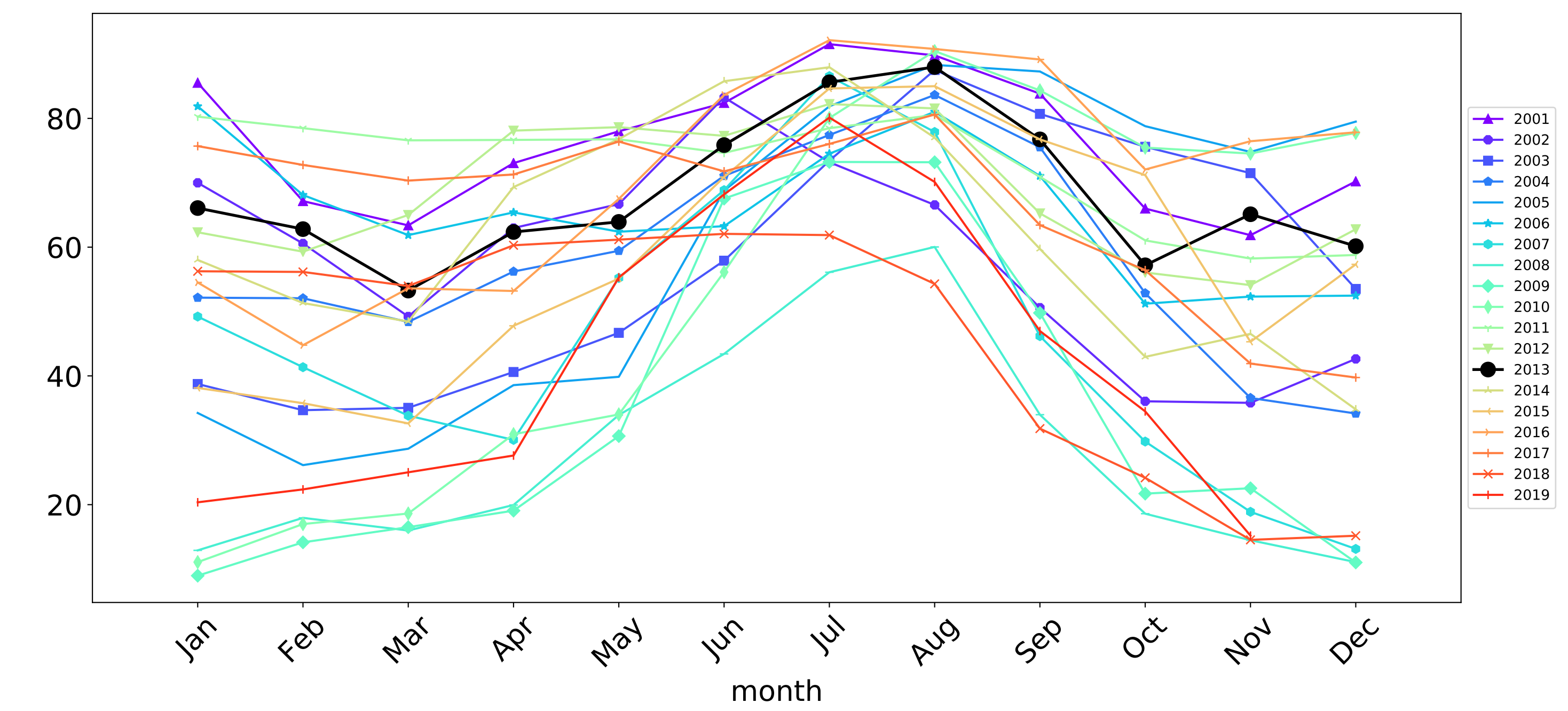Deciles show where the pixel value lies in the record, from highest to lowest, for that month. That is, red pixels are in the lowest 10% of records for that month of the map using baseline from 2001 to 2019.

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

Production native forests and plantation forests timeseries

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

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

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

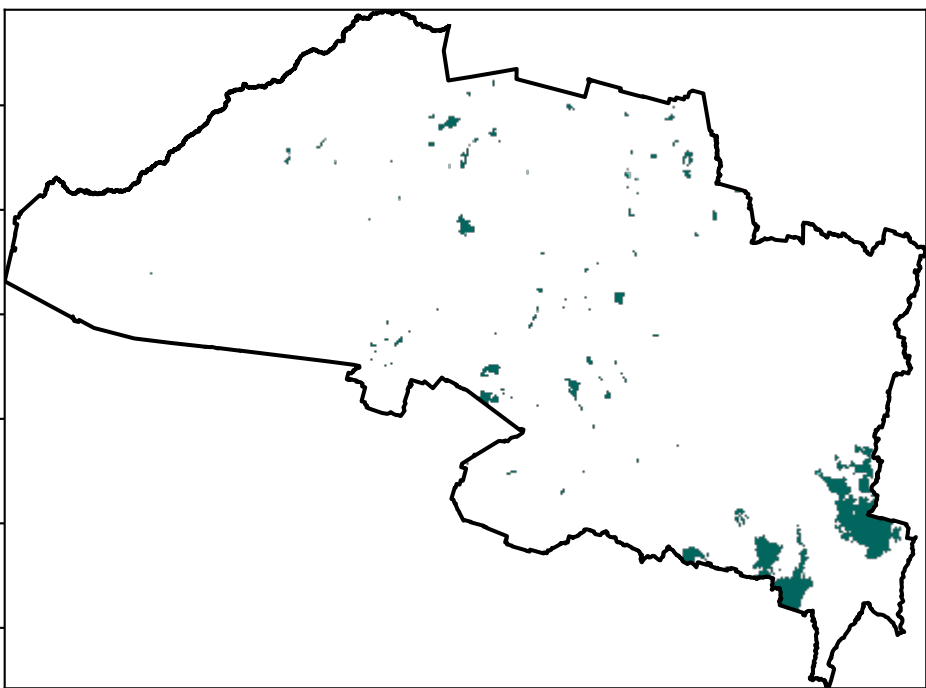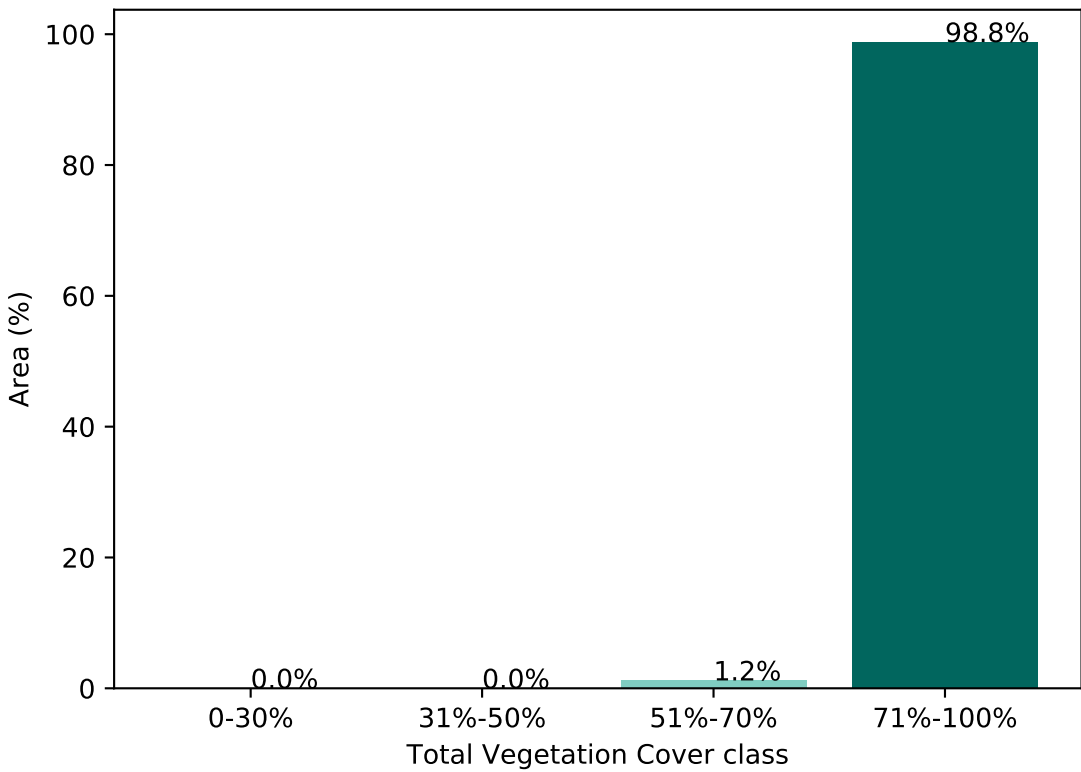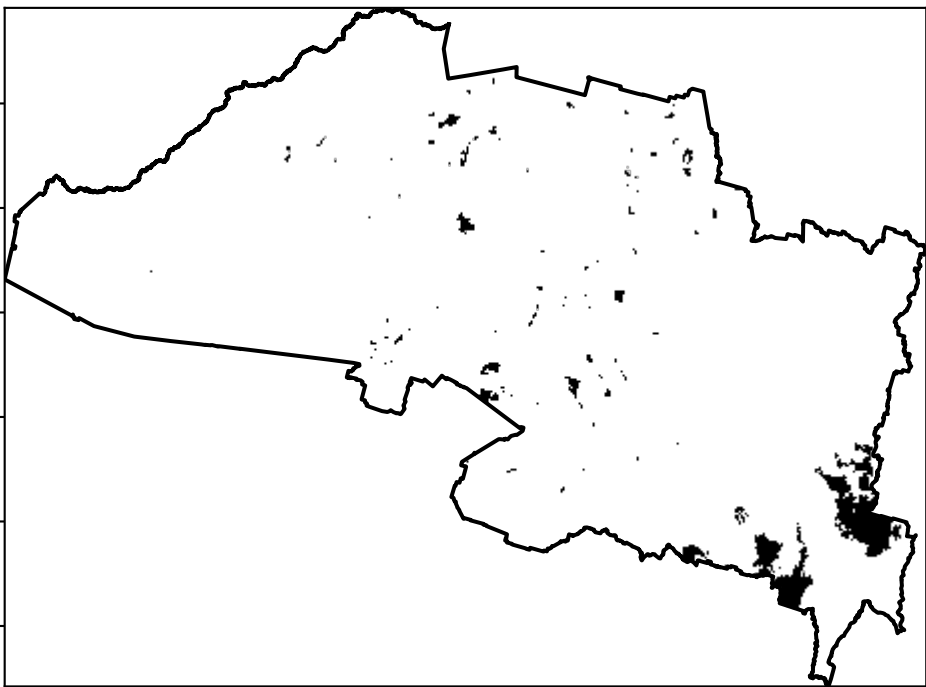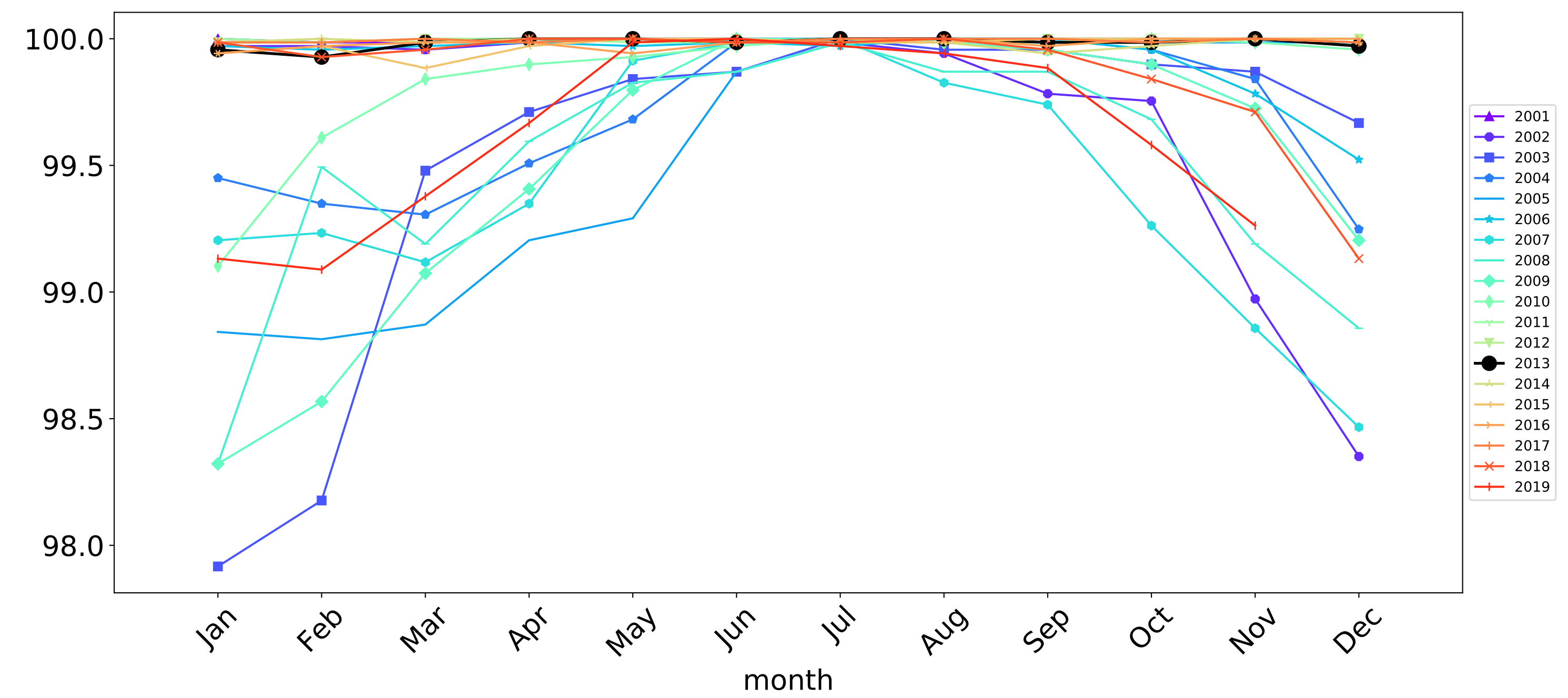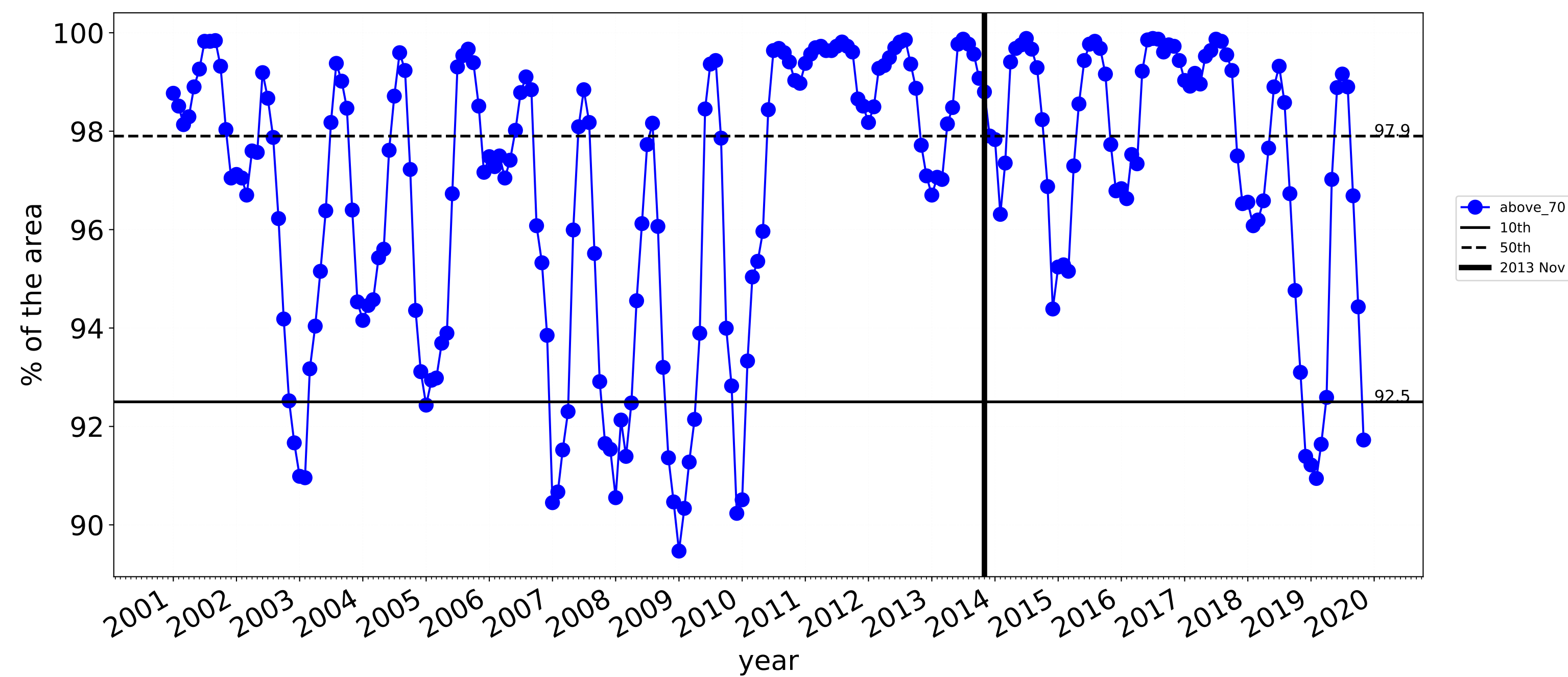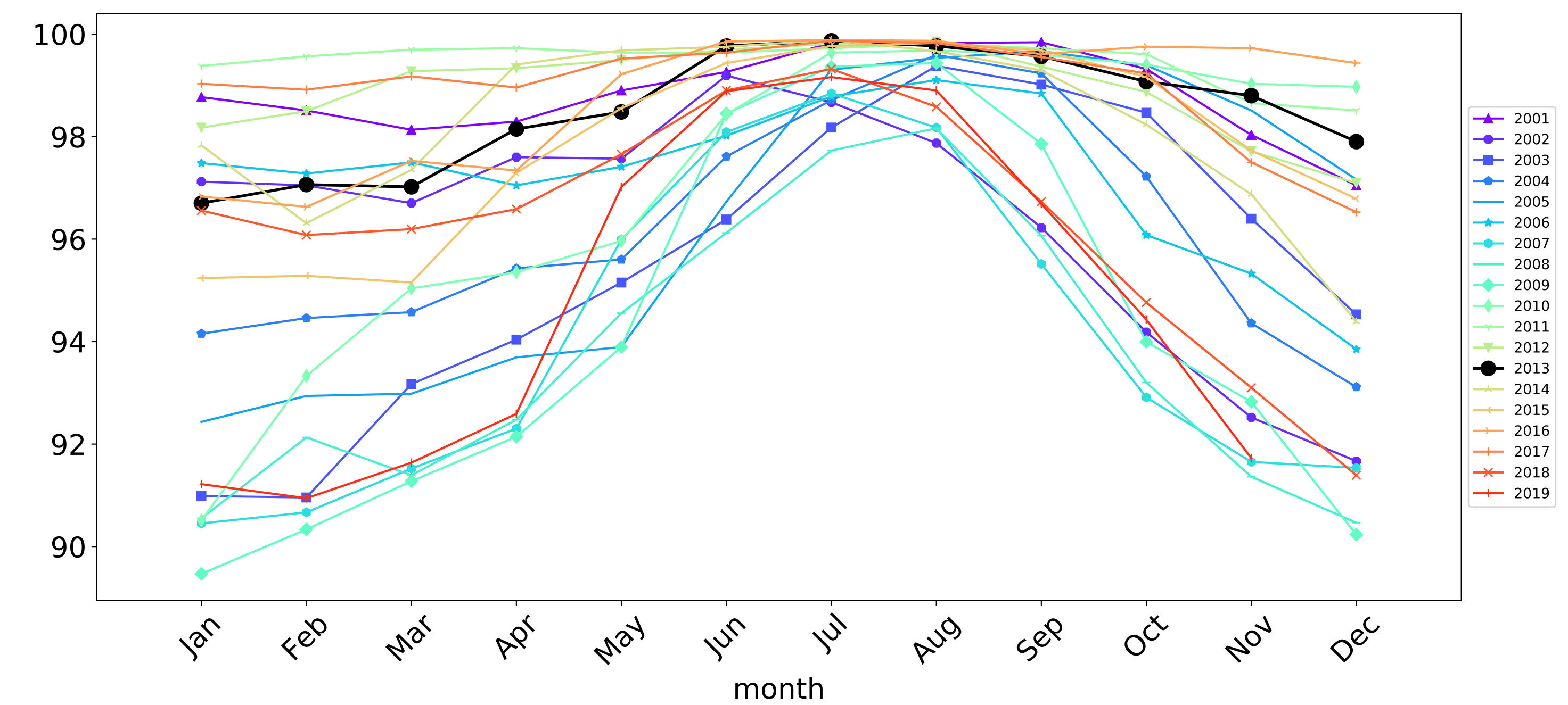Water erosion historical monthly area protected (Total Veg Cov>70%)

Riverina (6,694,025 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	100.0% 6,692,150	98.9% 6,618,369	77.8% 5,206,883	50.7% 3,391,601	25.4% 1,697,512	11.9% 794,095
Conservation and natural environments	323,075	100.0% 323,075	100.0% 322,950	94.1% 304,100	79.8% 257,800	61.3% 198,175	23.3% 75,350
Conservation and natural environments non forest	83,325	100.0% 83,325	99.9% 83,250	78.2% 65,125	29.0% 24,150	14.3% 11,925	7.4% 6,200
Conservation and natural environments Forest (non woodland)	195,250	100.0% 195,250	100.0% 195,250	99.9% 195,150	99.4% 194,050	88.9% 173,500	34.6% 67,650
Agriculture	6,068,350	100.0% 6,067,900	98.8% 5,997,075	76.4% 4,638,400	48.0% 2,915,750	22.5% 1,365,275	10.9% 660,000
Grazing	2,311,975	100.0% 2,311,700	99.2% 2,293,400	73.3% 1,694,200	44.6% 1,030,175	25.0% 577,225	11.4% 263,550
Grazing non forest	2,066,975	100.0% 2,066,700	99.1% 2,048,475	70.6% 1,459,325	40.8% 844,050	24.2% 501,100	11.9% 246,700
Grazing Woodland forest	141,650	100.0% 141,650	99.9% 141,575	93.5% 132,400	64.8% 91,775	13.6% 19,200	2.3% 3,225
Grazing - Forest (non woodland)	103,350	100.0% 103,350	100.0% 103,350	99.2% 102,475	91.3% 94,350	55.1% 56,925	13.2% 13,625
Cropping	3,186,975	100.0% 3,186,925	98.6% 3,142,350	80.8% 2,573,950	53.9% 1,716,800	23.5% 747,800	12.0% 381,425
Irrigation	567,575	100.0% 567,450	98.6% 559,625	65.1% 369,550	29.7% 168,500	7.1% 40,200	2.6% 15,000
Production native forests and plantation forests	172,800	100.0% 172,800	100.0% 172,800	98.8% 170,725	92.6% 160,075	64.5% 111,525	28.9% 50,025